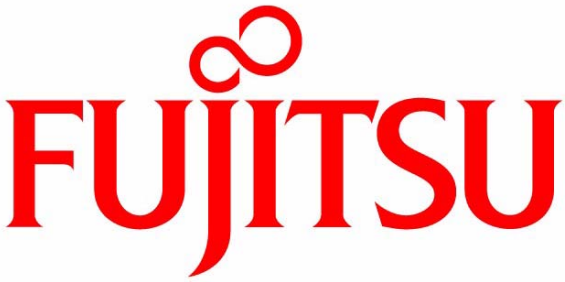
U-SCAN®

Genesis Site Preparation and Installation Guide

Document D900000310
Revision 7.3

FUJITSU



Title:	U-Scan Genesis Site Preparation and Installation Guide
Date:	January 17, 2012
Version:	Version 7.3
Audience:	Corporate clients and field engineers

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1 Introduction

The U-Scan® Self-Checkout system is an automated self-service checkout solution for the retail customer. Once installed, the U-Scan system enables customer self-service and requires minimal intervention by store personnel.

U-Scan Supported POS Systems

The typical store layout for the U-Scan system includes one Attendant Station with four Customer Stations.

The U-Scan system currently supports the following POS applications:

- Fujitsu (supports: Fujitsu GlobalSTORE, Retalix, ISS45 Storeline)
- IBM 4680/90 (supports: ACE, SMA, GSA, and CSA)
- ICL ISS400
- NCR Unity
- POS 6300
- POS Plus (Retail for Windows)
- Proprietary DOS
- Radiant
- UNIX ACR
- UNIX Innovax/Aurora

This document includes:

- Physical dimensions of the major components
- Space requirements
- Electrical power requirements
- Cabling requirements
- System network requirements necessary for installation of U-Scan

Document Updates

Version 7.3

- Updated Mini Carousel with respect to Shekel scales (special packaging materials to remove; new Shekel scale calibration procedures chapter added).
- Removed warnings about cable interference with Expansion port (bracket has been changed to eliminate this problem).
- Updated TP3600 connection diagrams.

Version 7.2

- Updated unpacking instructions and packing dimensions table.
- Updated TP3600 Series connection info.
- Added new printer shelf and external pole display installation instructions.
- Updated UPS bracket and leveler instructions.
- Added Network Topology diagrams to pages 112-113.

Version 7

- Added installation instructions for Universal bag scales and optional skirts. GBU 1.0 information replaced with GBU 2.0 information.
- Added ANSI installation Chapter 4; updated robot cabling information throughout.
- Added warnings about air movement, vibration, and light possibly affecting the stations.
- Added TP36xx computer cable connection diagrams (and others).
- Removed references to AC cable routing into Customer Stations (this is not permitted).
- Replaced standard bag scale floor plans with Universal bag scale floor plans; added Mini Carousel and GBU 2.0 floor plans. Added door alignment information (page 108).
- Added instructions for connecting the second computer bag scale fan to the robot fan (Universal Bag Scale and Mini Carousel).

Definitions

- Customer Station, Payment Station: Self-checkout machines used by store customers
- Attendant Station: U-Scan station used by store personnel (cashier)
- EAS: Electronic Article Surveillance
- LAN: Local Area Network: a store’s internal computer network
- POS (Point of Sale) system: a store’s electronic sales/inventory system
- USB: Universal Serial Bus / USB Hub: a device that connects several USB devices
- EFT: Electronic Funds Transfer
- UPS: Uninterruptible Power Supply (temporary electricity during power outages)

Other Resources

- *Genesis Assembly Guide.* Document D900000311.
- *Genesis Hardware Manual.* Document D900000309.
- *Genesis Universal Bag Scales Assembly Manual* D900000314
- *Genesis Mini Carousel Assembly Manual* D900000312
- *Genesis Mini Carousel (Shekel) Assembly Manual* D900000448
- *Genesis Belted Unit Installation Manual* D900000393
- *Genesis Belted Unit Maintenance Manual* D900000394

2
Site Preparation

Site Layout

Regular Self-Checkout - Attendant and Customer Stations

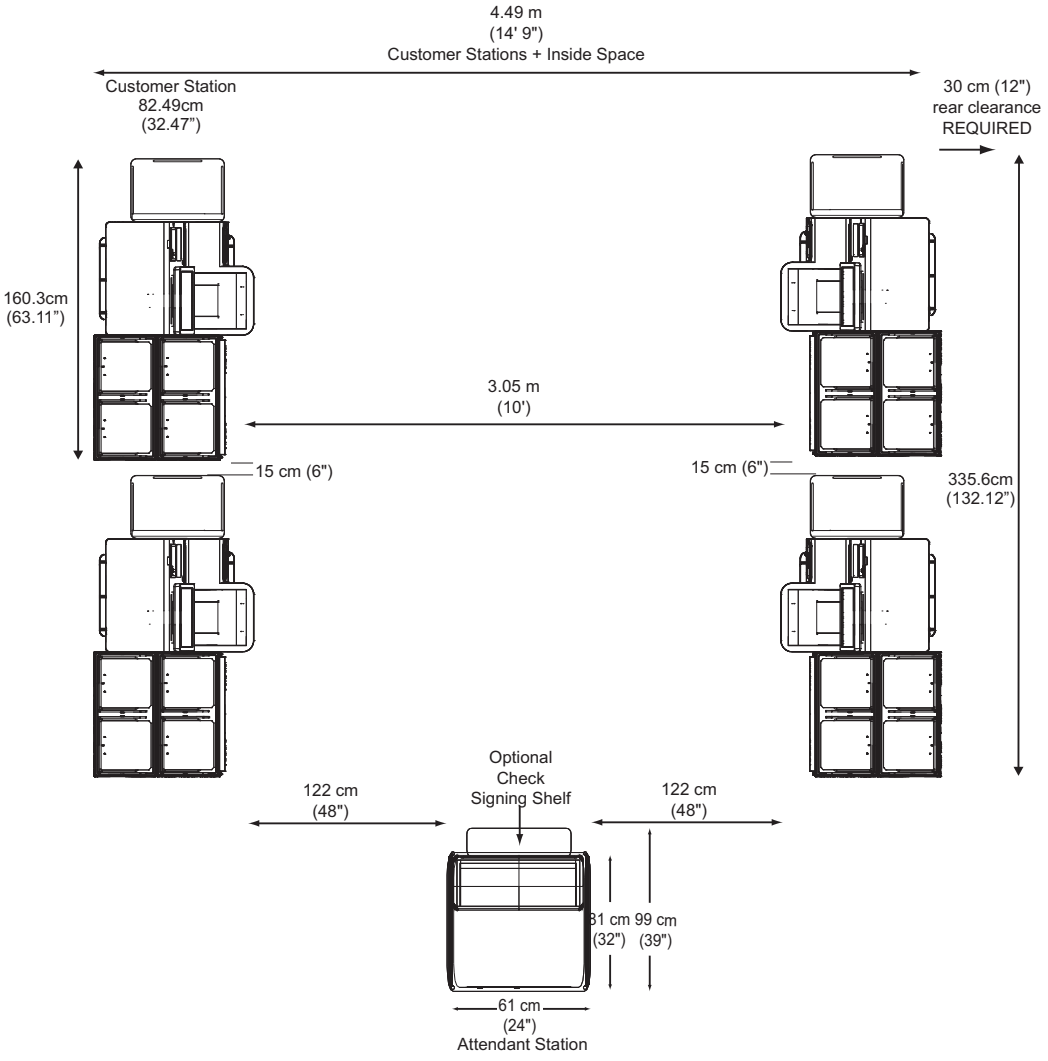


Figure 2.1 Four U-Scan4 Customer Stations with Attendant Station (A)

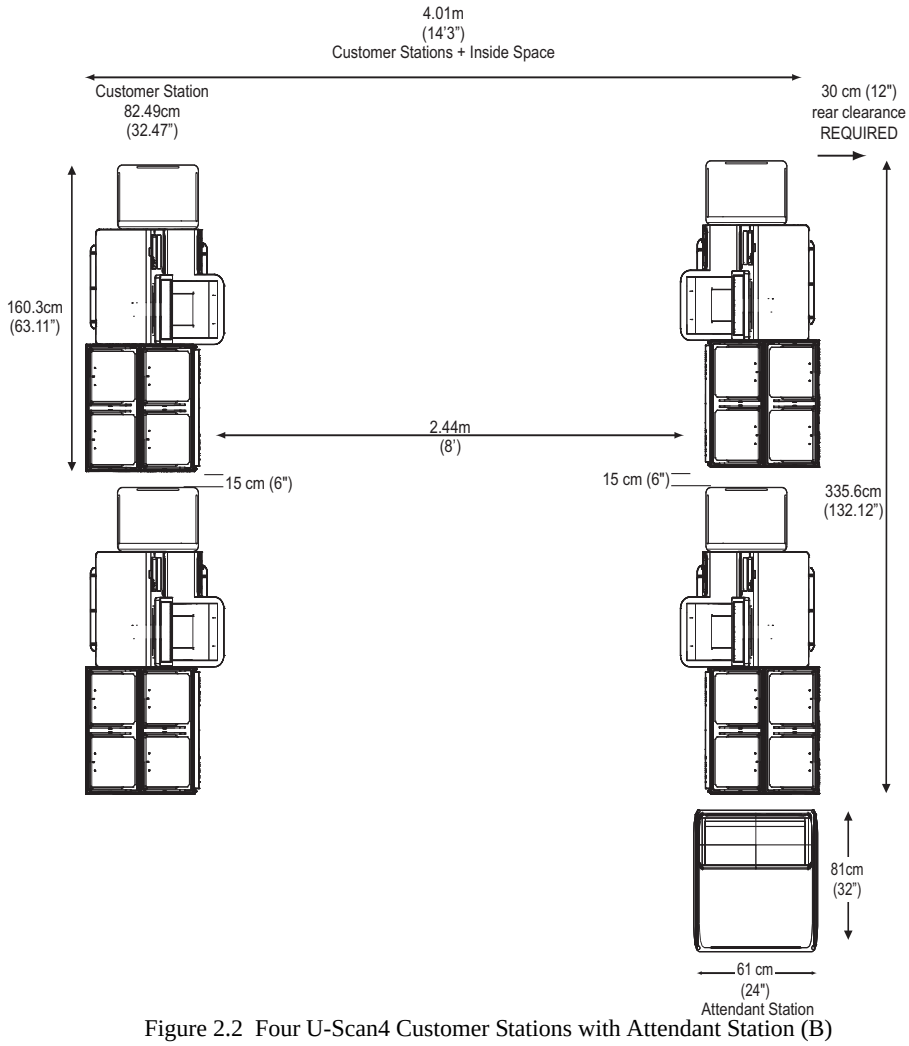


Figure 2.2 Four U-Scan4 Customer Stations with Attendant Station (B)

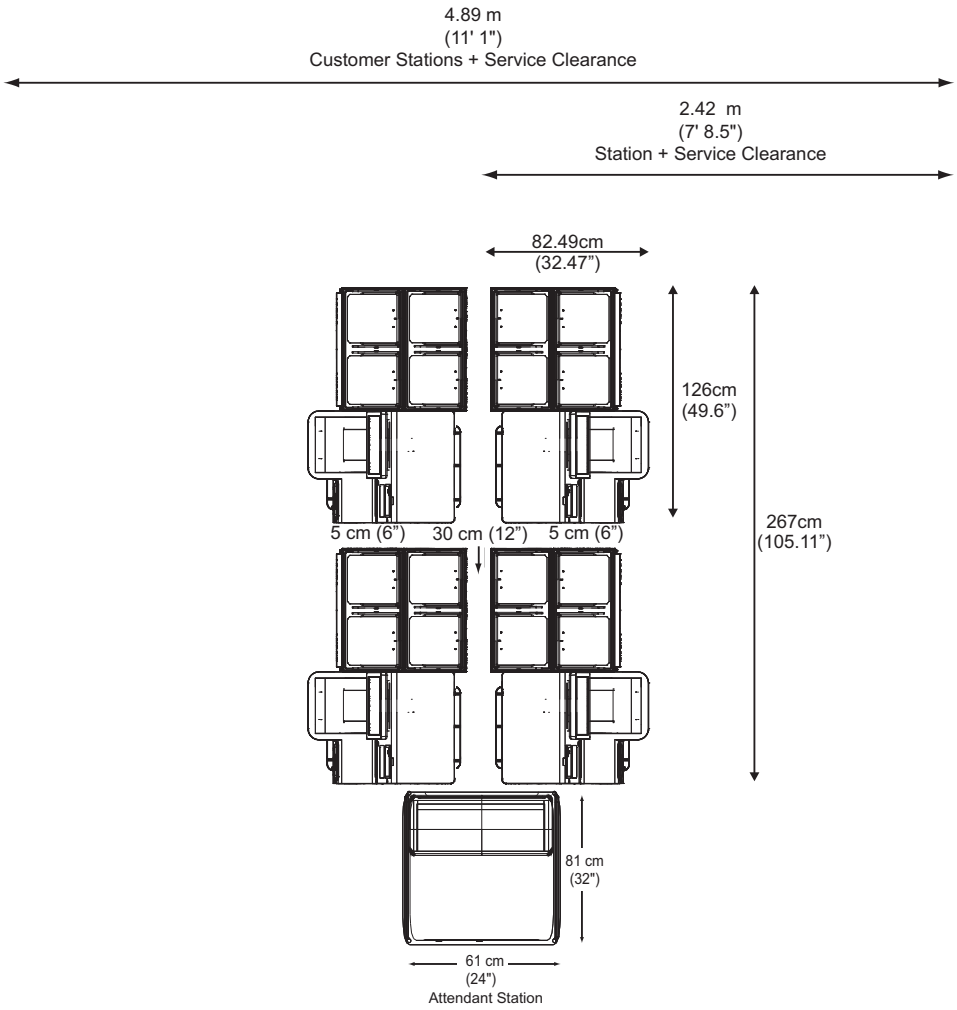


Figure 2.3 Four U-Scan4 Customer Stations with Attendant Station (C)

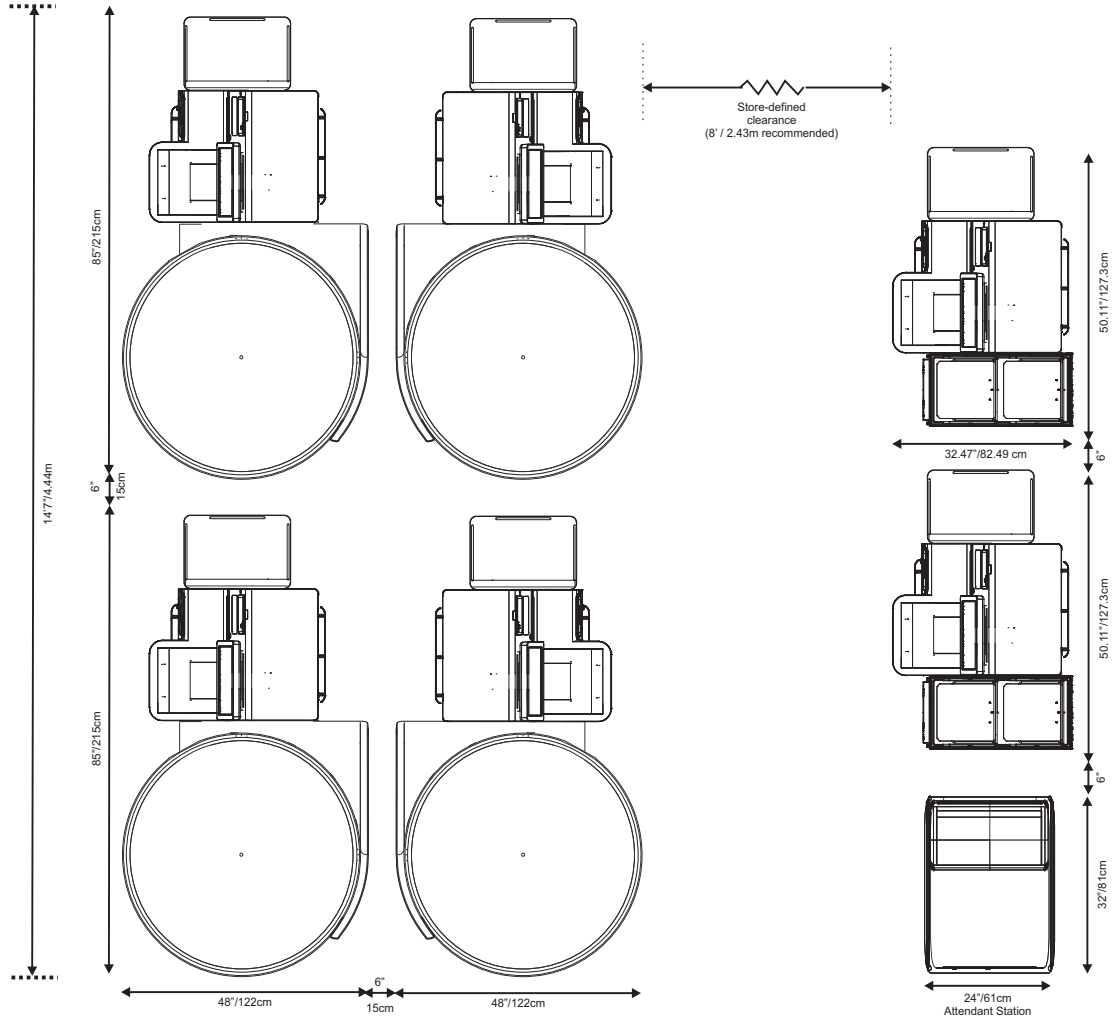


Figure 2.4 Four U-Scan Carousel, two U-Scan 1+ Customer Stations w. Attendant Station

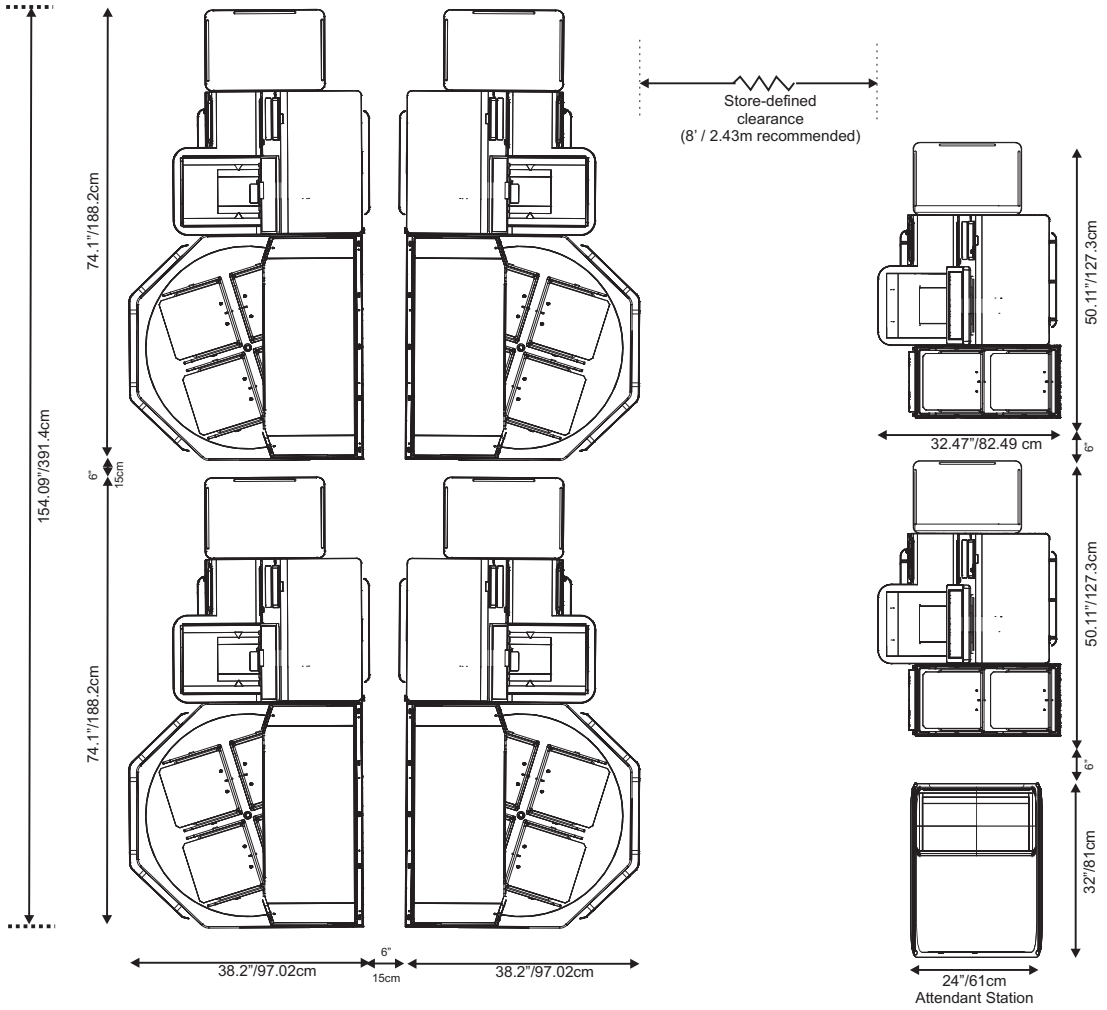


Figure 2.5 Four U-Scan Mini Carousel, two U-Scan 1+ Customer Stations w. Attendant Station

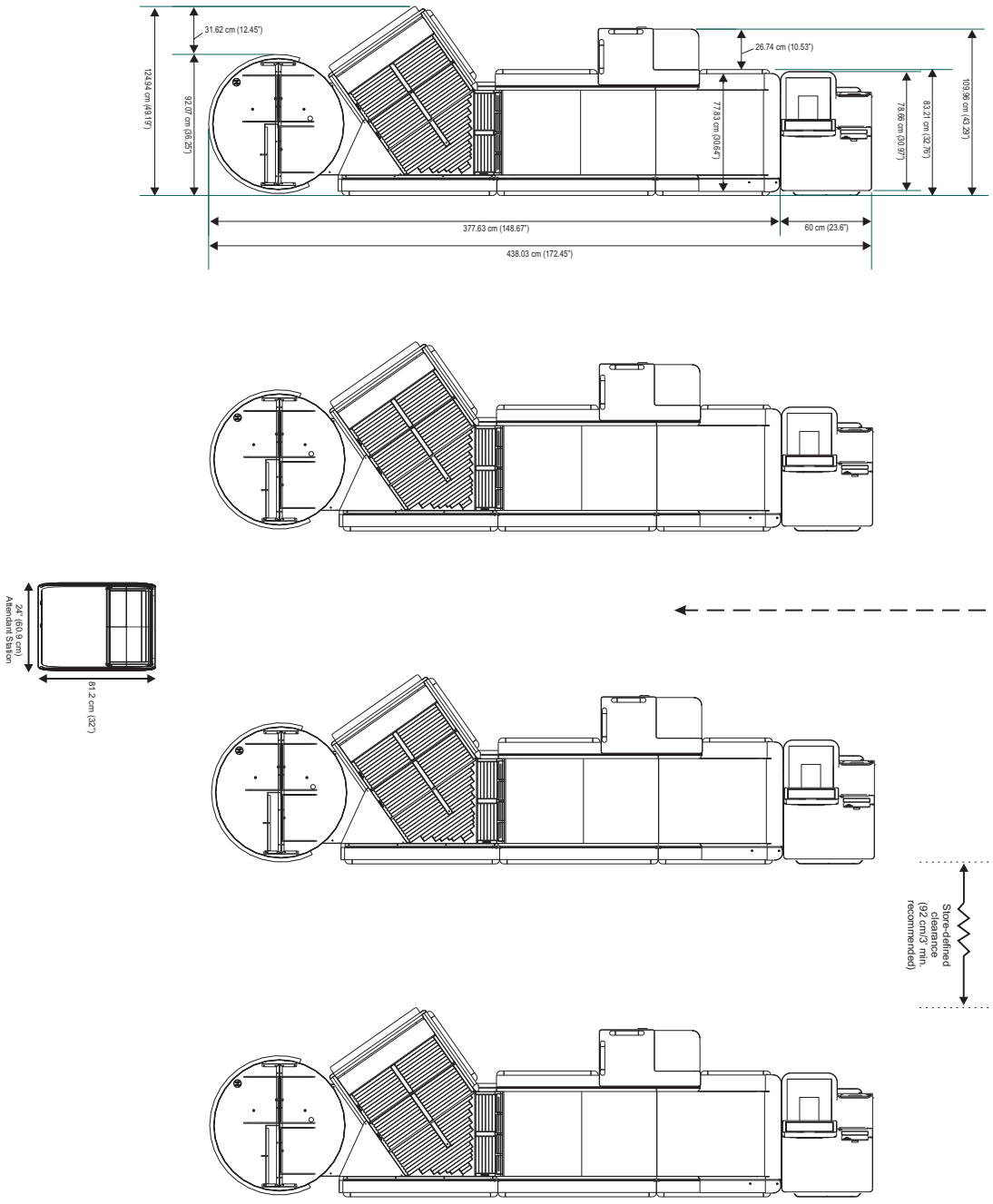


Figure 2.6 Four U-Scan GBU w. Attendant Station

Payment Station

The Payment Station dimensions and required service clearance are illustrated below (in this example, no rear bumper has been installed):

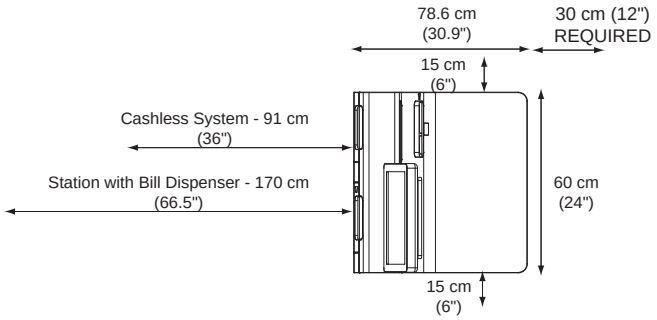


Figure 2.7 Payment Station Service Clearance

Your site may require a different look due to unique characteristics of your store and available floor space. Fujitsu performs a site survey prior to installation to assist in site planning and integration of the U-Scan system into your store's existing traffic flow patterns.

Local Codes

During installation, follow the local fire department and building department fire, safety, and electrical codes applicable in your area.

Critical Layout Issues

Adhering to the following recommendations will help ensure successful installation and operation. The space requirements critical to traffic flow and maintenance access are:

- A traffic flow area equal to at least three times the width of a shopping cart between facing Customer Stations.
- There must be a distance of 122 mm (48") between the Attendant Station and the nearest spot on the Customer Station casing when the Attendant Station is configured as in Figure 2.1 on page 5. This distance ensures adequate space for customers to exit the self-checkout area. This space may be calculated diagonally.
- We **require a clearance of 30 cm (one foot) behind** the Attendant Station and Customer Stations if the Attendant Station and Customer Stations are backed against a wall.

Communication and Cabling Access

Customer Station (Regular Self-Checkout or Payment Station)

Clearance space between the floor and the Genesis Station cabinet can vary between 4 - 13 mm (1.5 - 5”). Cable routing into the Station, ***from the bag scales only***, is through a laser knockout opening on the bag scale side.

WARNING: *Under NO circumstances should electrical wiring be routed into the Customer Station (robot) unit. Provision has been made in the bag scale units for both isolated ground (Customer Station UPS only) and unregulated (Catalina printer, lane light, EAS, etc.) power.*

Openings in the internal cabinet walls and permanently fixed cable fasteners facilitate cable routing within the cabinet. Once the Customer Station is installed, its adjustable levelers (feet) are used to bring the Station to the correct height.

- See the Note on page 16 for more information on leveling a Station. Optional metal skirts can be installed around the base of the Station, if desired (see page 102).
- Please also refer to Chapter 4 for installations that must be ANSI A117.1 (308.3.2) compliant.

Critical Installation Issues

ELECTRICAL BOXES

WARNING: *Absolutely no AC junction boxes, cables, conduits, or other external devices are to be installed inside the main Genesis Customer Station ("robot") casing.*

External power sources: A dedicated, insulated/isolated duplex junction box is to be installed to supply power to the U-Scan Genesis. If a utility junction box is required, it may be installed to power external devices such as secondary printers, lane light, EAS Controller, etc.

IMPORTANT: *None of these boxes or cables may be located inside the main Genesis Customer Station casing.*

Suggested locations for these outlets and cables include:

- Underneath the station, on or in the store flooring
- In the bag scale base cabinet or in the front pedestal of the Genesis Belted Unit (GBU).

EAS CONTROLLER

The EAS Controller must be installed in the bag scale base cabinet so as not to interfere with the operation of the Genesis sub-assemblies.

IMPORTANT: *Cable routing for any of the above mentioned devices or outlets **MUST NOT** interfere with the front service access to the Genesis sub-assemblies. In addition, no excess cable or conduit is to be placed inside the main Genesis Customer Station casing.*

ENVIRONMENTAL CONDITIONS

When planning a Customer Station installation, you must consider surrounding conditions that could adversely impact proper operation. Some examples are (but are not limited to):

- **Scale stability**: bag scales can give unstable readings (leading to interrupted transactions) if they are affected by:
  - floor vibration
  - station casing contact with a vibrating device (refrigerator, coffee bean grinder, etc.).
  - air movement (air conditioning/heating ducts or exterior doors in close proximity)

- **LCD monitor legibility**: The touch screen monitor can become difficult to view if it is subjected to bright light sources, such as:
  - sunlight (in both winter and summer)
  - very bright store ceiling fixtures, spotlights directed too close to the screen

Attendant Station

Clearance space between the floor and the Attendant Station cabinet for a power or communication outlet can vary between 8 - 13 mm (3 - 5”). Cable routing into the Attendant Station is through the bottom of the cabinet. The removable panels allow cable routing into the cabinet.

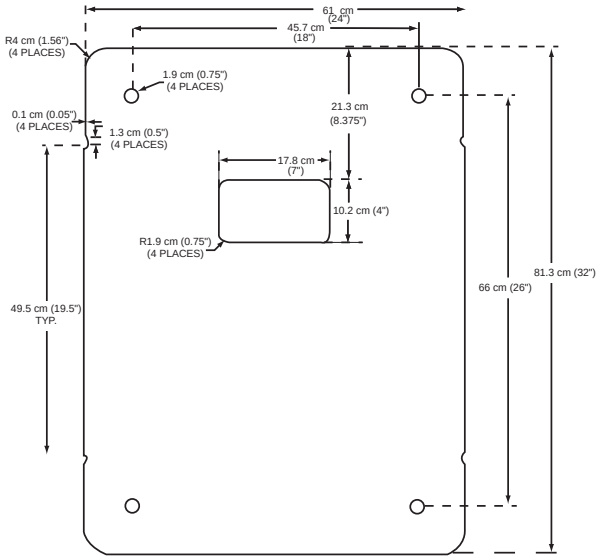


Figure 2.8 Attendant Station communication and cabling access (bottom)

Openings in the cabinet walls facilitate routing cables within the cabinet. Once the Attendant Station is installed, its adjustable levellers (feet) are used to bring the station flush with the duct work. Optional metal skirts can be installed around the base of the Station, if desired (see page 32).

Electrical Power Requirements

Before installing the U-Scan system, verify that your electrical service matches the U-Scan system's requirements.

Each U-Scan Customer Station requires:

Region	Recommended Installation
North America	• One (1) single gang junction box with one isolated 15 amp ground receptacle. ***Only the power cable of the Customer Station UPS is to be routed to and connected to this box***. • One (1) two gang junction box with four conventional receptacles. All other external devices (such as Catalina printer, lane light, EAS, and so on) should be routed to and connected to this box. **isolated ground junction box**   **unregulated power junction box**

WARNING: *Under NO circumstances should electrical wiring be routed into the Customer Station (robot) unit. Provision has been made in the bag scale units for both isolated ground (Customer Station UPS only) and unregulated (Catalina printer, lane light, EAS, etc.) power.*

The recommended system configuration includes four or more Customer Stations and one or more Attendant Stations.

WARNING: *DO **NOT** CONNECT devices that are not authorized by Fujitsu to be **powered directly** by U-Scan to the U-Scan power strips or UPS units. See "Customer Station Electrical Connections" on page 55.*

CAUTION: *Safe operation of your U-Scan system requires properly grounded electrical outlets. You must have a qualified electrician certify the earth-ground connection on the AC circuits used to power your system.*

AC Power Supply

Several power supply options are available, including: Uninterrupted Power Supply (UPS) and UPS with built-in Power Conditioner. The power cord that connects the power supply to the AC outlet is the only part that may be unique to your installation.

The input ratings of the U-Scan power supply are:

Region	Voltage	Frequency	Current (RMS)
North America	100 - 130 VAC	60 HZ +5%	15 Amps @ 110V

Every effort is made to ensure that your U-Scan system is compatible with your electrical system. If the power cord will not plug into your AC power receptacle, contact Fujitsu immediately.

Delivery Issues

Access from the loading area to the installation site requires a minimum allowance of the following dimensions:

Module	Height	Width	Depth
Regular SCO robot base unit (height includes 'do not stack' cone)	175.3 cm (69")	76.2 cm (30")	91.4 cm (36")
Universal bag scale (each module)	99.1 cm (39")	81.3 cm (32")	76.2 cm (30")
Carousel*	125 cm (49")	4.6 m (181")	1.07 m (42")
Mini Carousel*	93.9 cm (37")	93.9 cm (37")	1.34 m (53")

* Does not include pallet/packaging dimensions.

Labels on the casing show the proper placement of the forklift bars when removing the Station or scale from the shipping pallet. The Attendant Station and Customer Stations are shipped on wheels for ease of movement. Once on site, the Stations are stabilized on the built-in adjustable levelers (feet). Removing the shipping wheels is optional but recommended.

NOTE: *A Customer or Payment Station that is not level can experience coin dispenser jamming issues, scale inaccuracies, and other problems. Use a level to verify the levelness of the Station from side-to-side and from front-to-back — see* *"Removing the shipping wheels and leveling the Customer Station" on page 109*.

Unpacking

NOTE: *The system should be inspected for damage on arrival. If unable to do so, acknowledge receipt on the waybill but indicate that the system has* ***not*** *been inspected for damage.*

Required tools

- Scissors or cutters to cut the shipping straps
- Phillips screwdriver (magnetic tip recommended) for removing the shipping brackets.
- A drill with a flexible bit or universal joint (1/4” - 6.35 mm hex Allen wrench bit socket - or 1/4” socket or nut driver for Genesis3 or later casings) is recommended for adjusting the leveling feet.
- A carpenter’s level is required to ensure that the system is level.

Unpack the unit

The Genesis unit is shipped in a plastic bag on a wooden pallet, encased in a cardboard box that is secured with strapping. A stack protector prevents units from being stacked on top of one another.

- Inspect the packaging for obvious damage, and examine the Shock Watch sticker that is attached to the side of the box. If the Shock Watch indicator is RED, this means that trauma was sustained during transit, but does not necessarily indicate damage to the unit itself. You should verify the shipment right away. Only if damage is found should you refuse the shipment.

- Cut the two poly bands (black plastic strapping) below the cut line indicated near the bottom of the box. Discard the bands, stack protector, and cardboard edge protectors.

- Remove the cardboard lid from the top of the Genesis by pulling it up and lifting it away.

- Cut away the sleeve at the base, following the printed cut lines. Pull the sleeve over the unit and remove the leftover cardboard in front of the base of the unit.

- At the ***front*** of the unit, using a screwdriver, remove the four screws (2 on right; 2 on left) from the attached wooden bracket that is secured to the pallet base.
- After you've removed the screws, pull the pallet bracket away from the unit.

- Remove the plastic bag by pulling it over the unit.

- At the front, locate the two notched slots on the pallet base. Insert the hinged ends of the ramps into the slots. Ensure that the ramps are properly seated.

Roll the unit off the pallet

NOTE: *For information on unloading the Mini Carousel bag scale, see* *"Remove the Mini Carousel from the Shipping Pallet" on page 72*

- From behind, push the Genesis unit up to the start of the ramps.
- Standing in front of the unit between the ramps, line up the Genesis wheels front to back.
- Pull the unit onto the ramps, carefully guiding the unit straight down the ramps to the floor. Do no allow the unit to move from side to side while rolling.

Removing the Shipping Brackets

Shipping brackets hold the printer and bill dispenser, and Coin XPress coin hopper (if applicable) in place. These brackets must be removed on site.

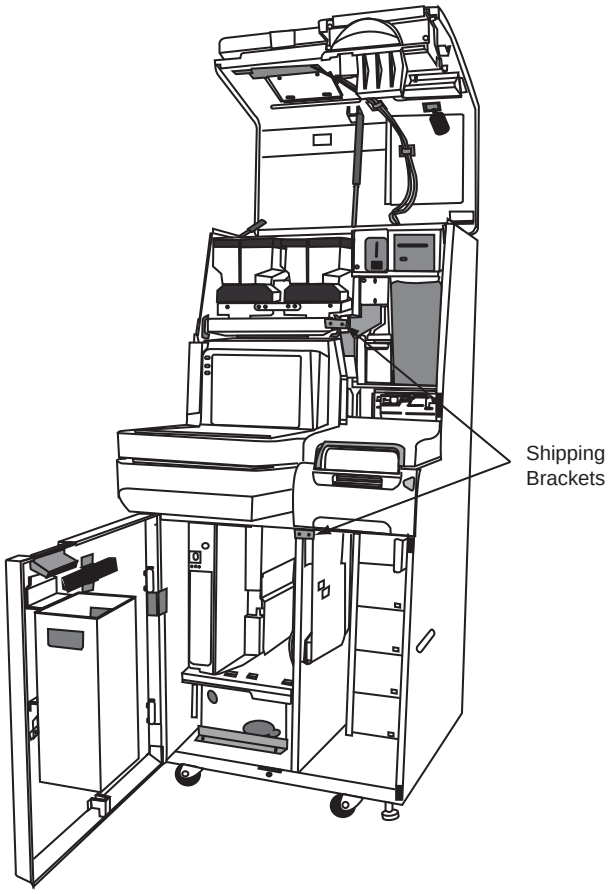


Figure 2.9 Shipping Brackets

Use a Phillips screwdriver to remove the two screws that secure each shipping bracket. We recommend re-installing the bracket with one screw and rotating it sideways so that it does not interfere with the movement of the rails but is available if the system needs to be moved to another site.

System Cable Requirements

Regular Self-Checkout or Payment Station (Store LAN and U-Scan LAN)

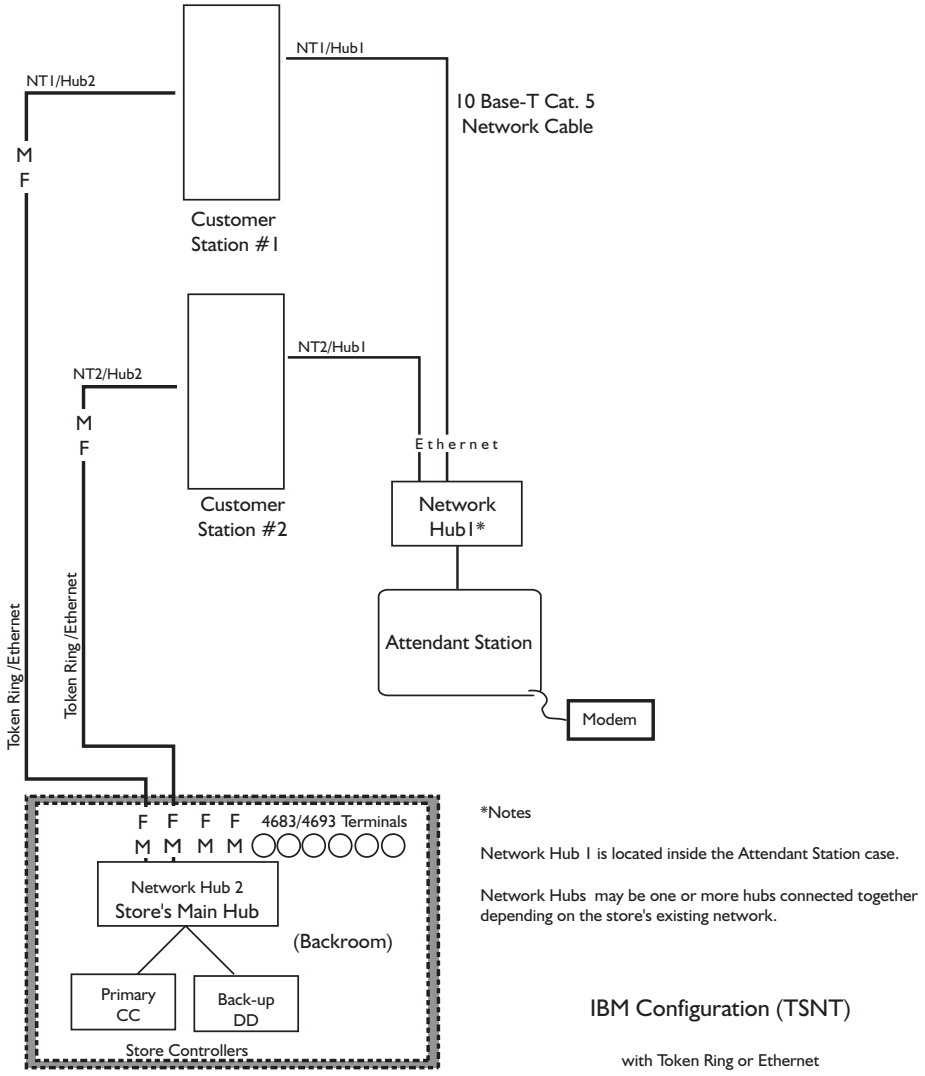


Figure 2.10 U-Scan system network connections

Figure 2.10 demonstrates the network cable requirements for the U-Scan system. Cabling for the Customer Station's EFT device must be installed by the store and is not included in the diagram. The overall network hub configuration may vary from site to site.

Regular Self-Checkout or Payment Station (no separate U-Scan LAN)

Some stores connect each Station directly to the Store network and eliminate the separate U-Scan network. In this case, each Customer Station has only one network card, and there is no network hub at the Attendant Station.

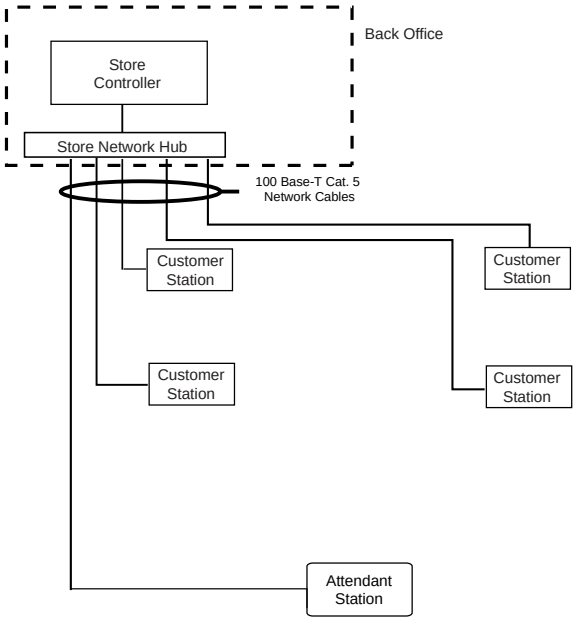


Figure 2.11 Regular U-Scan self-checkout system cable connections - no U-Scan LAN

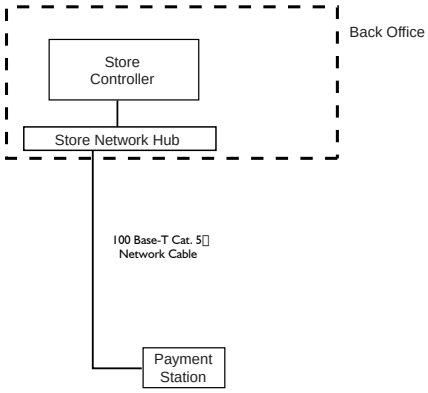


Figure 2.12 Payment Station system

Cabling for the Customer Station EFT devices must be installed by the store and is not included in the diagram. The overall network hub configuration may vary from site to site.

3
Installation

Pre-Installation Check

Before installing the Customer Stations, verify that:

- AC Power plugs are plugged into the appropriate receptacles.
- System cables are routed between the U-Scan site and the Store Controller.
- System cables are labeled properly.

> **NOTE:** *Your store's configuration may not include all of the Station types or components described in this chapter. Refer only to the Station types and components that apply to your particular installation.*

Local Codes

During installation, follow the local fire department and building department fire, safety, and electrical codes applicable in your area.

Attendant Station

Most of the Attendant Station's core components are mounted in the cabinet at the installation site. The core and optional components include:

- Computer
- Touch Screen monitor
- Keyboard and mouse
- Network Hub
- Handheld Scanner
- Receipt Printer/Check Endorser
- Cash Drawer
- Uninterruptible Power Source (UPS)
- Modem
- Mobile Attendant handheld device
- Mobile Attendant wireless hub
- Electronic fob key

Figure 3.1 shows the core components of the Attendant Station.

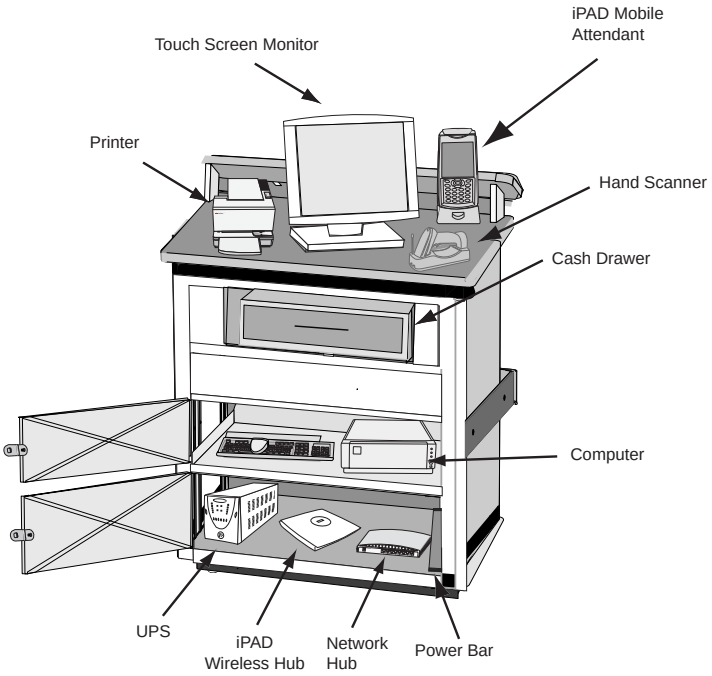


Figure 3.1 Attendant Station core components

Attendant Station Cable Connections (TP3K)

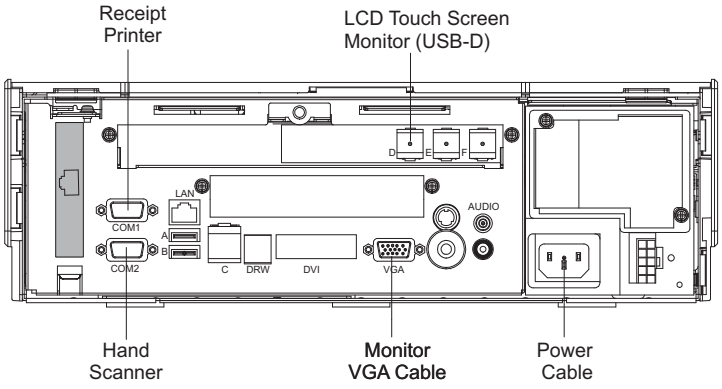


Figure 3.2 Attendant Station Computer (Back)

NOTE: *The above illustration is based on controlled document D900000261.*

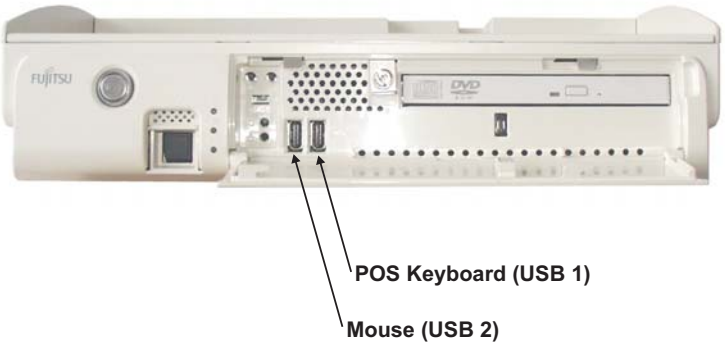


Figure 3.3 Attendant Station Computer cable connections (Front)

Attendant Station Cable Connections (TP3600 Series)

The cables and AC plugs of site-installed components are in the cabinet, ready to be connected.

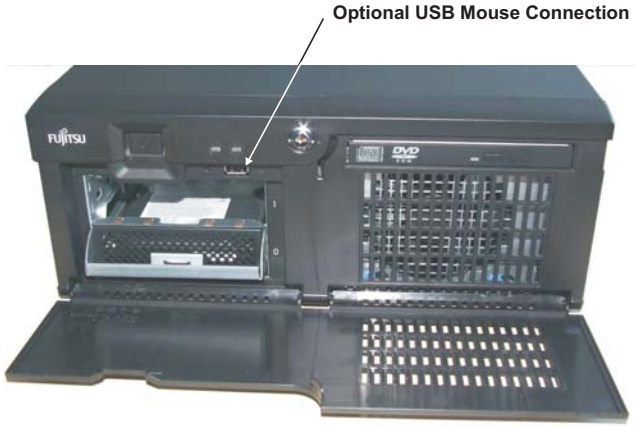


Figure 3.4 TP3600 Series computer (Front)

NOTE: *Your store's Attendant Station may not include all of the devices listed in this section. These connection illustrations are based on controlled document D900000388.*

Attendant Station with Serial Printer

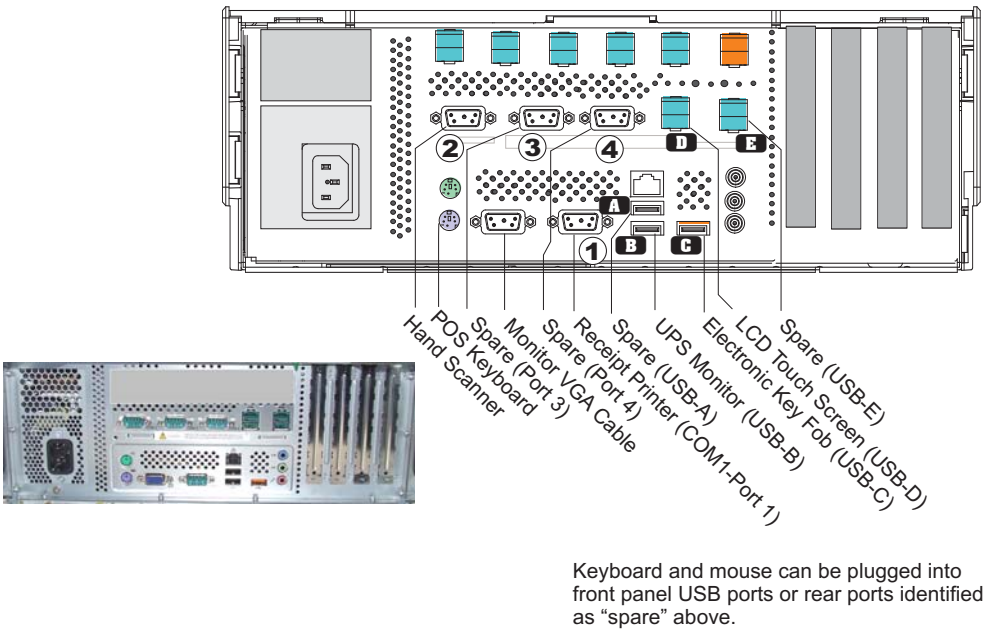


Figure 3.5 Attendant Station computer cable connections (serial printer) (TP3600 Series) (Back)

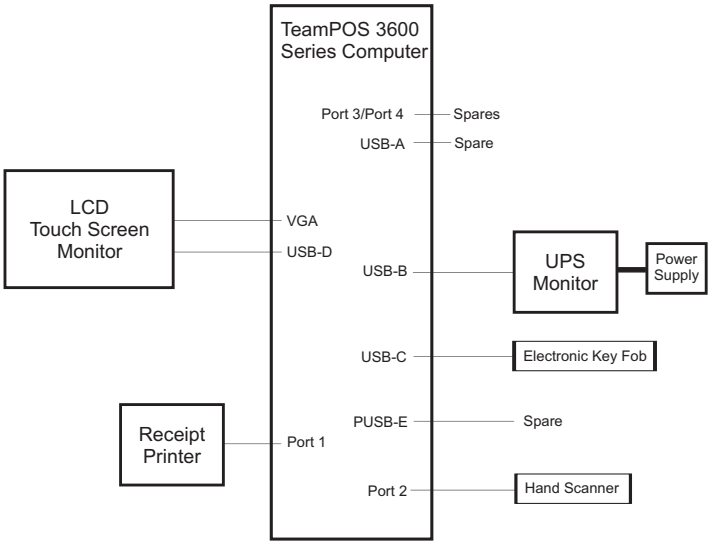


Figure 3.6 Attendant Station computer cable connections (serial printer) (TP3600 Series)

Attendant Station with Powered USB Printer

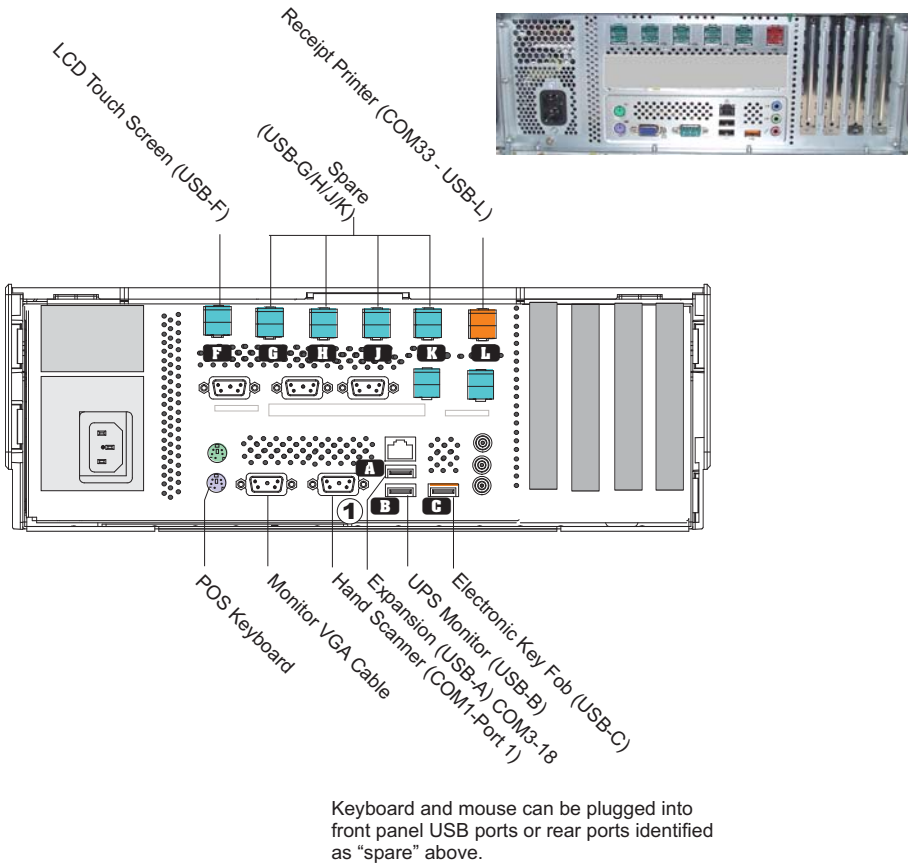


Figure 3.7 Attendant Station computer cable connections (serial printer) (TP3600 Series) (Back)

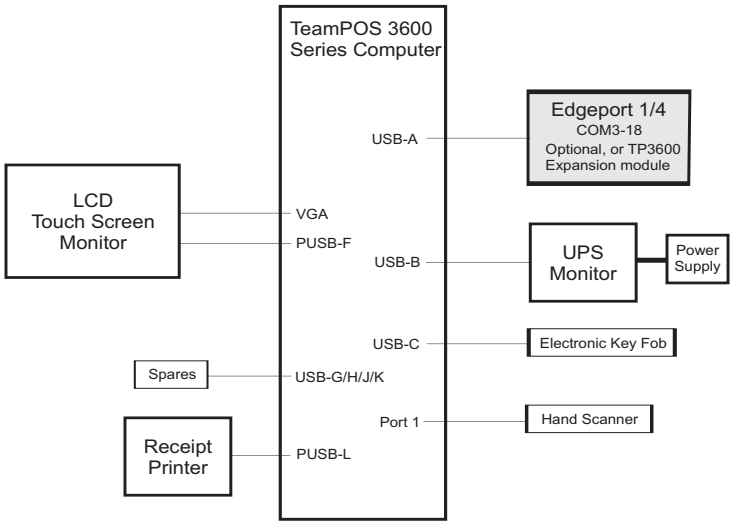


Figure 3.8 Attendant Station computer cable connections (powered USB printer) (TP3600 Series)

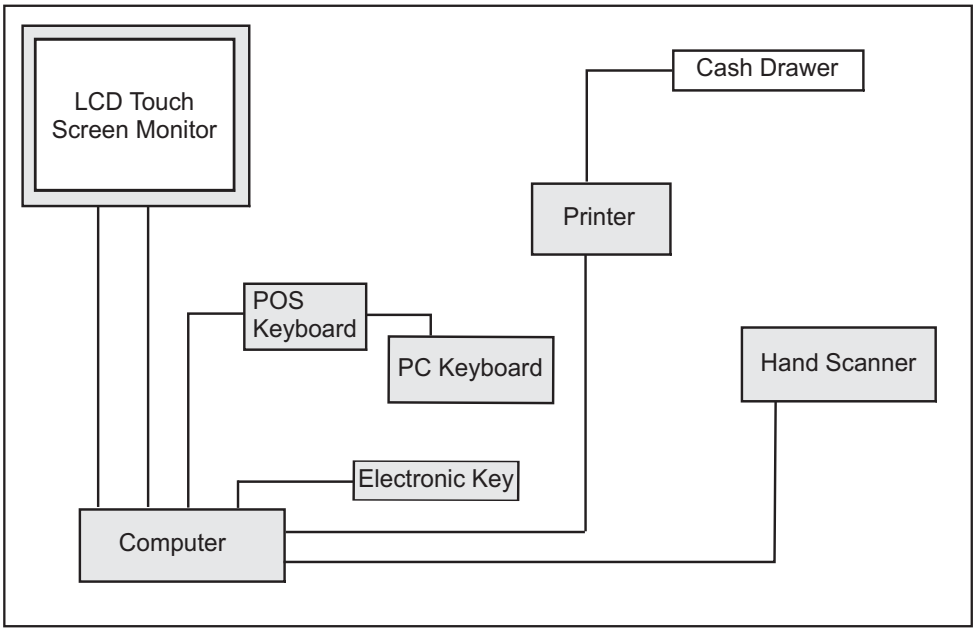


Figure 3.9 Attendant Station cable requirements

NOTE: *If your Attendant Station is equipped with an older model computer, this illustration may not apply — see your original documentation.*

UL Regulations

In accordance with UL regulations, locks must be installed on the U-Scan Attendant Station casing. Ensure that locks are installed on the Attendant Station.

Touch Screen Monitor

To install the Touch Screen Monitor:

1. Position the monitor on the Attendant Station counter-top.
2. Plug the USB cable into the USB port on the underside of the Monitor.
3. Plug the 15-pin (male) connector into the VGA port on the Monitor.
4. Route the two monitor cables (USB and VGA) through the counter-top access hole to the Attendant Station Computer (see Figure 2.8 on page 14).
5. Plug the USB cable into USB Port D on the computer.
6. Plug the 15-pin cable (male) into the computer's monitor port.

Keyboard

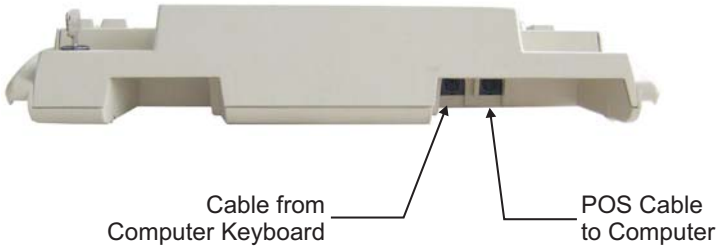


Figure 3.10 Rear of POS Keyboard

To connect the Computer keyboard and the POS keyboard:

The computer keyboard connects to the POS keyboard, which in turn connects to the computer's keyboard port.

1. Place the POS keyboard on the countertop and route its cable through the countertop access hole to the Attendant Station's computer.
2. Plug the POS keyboard into the Attendant Station computer as shown above.
3. Place the standard computer keyboard in the Attendant Station's case.
4. Route the computer keyboard cable upward through the countertop access hole to the location of the POS keyboard.
5. Insert the computer keyboard cable into the POS keyboard as shown in Figure 3.10. We recommend you add the clamp described below to prevent damage to the POS keyboard or even to the computer (if the cable is plugged into the wrong port).

NOTE: *A Cable Clamp is available that can be installed on the Computer keyboard cable that connects to the POS keyboard. The clamp consists of two parts that fit together over the cable connector in such a way as to allow the clamp to rotate 90^{o}, which locks the connector into the keyboard. Once installed on the cable, add a small drop of adhesive (Super Glue) to each side, to make sure the clamp does not come apart and get lost when removed. Make sure that the glue does not contact the cable itself.*

Printer, Check Endorser, Cash Drawer

To install the printer and check endorser:

1. Route the printer cable through the countertop access hole to the computer.
2. For a USB printer, plug the USB cable into USB Port C of the TeamPOS 3000 computer. Plug a serial printer into COM 1.
3. Plug the cash drawer into the printer.

Handheld Scanner

To install the handheld scanner:

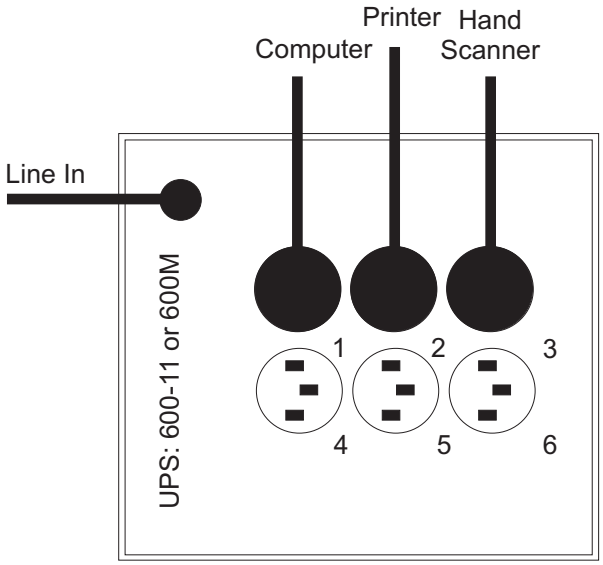
1. Route the handheld scanner cable through the counter top access hole to the computer.
2. Plug the RS-232 cable into COM 2 of the TeamPOS 3000 computer.
3. Plug the AC Adapter mini plug into the side of the RS-232 cable.

Electrical Connections

This section provides a reference for the U-Scan Genesis electrical connections.

The default U-Scan Genesis electrical connection setup utilizes one power bar to provide electrical power to the Attendant Station devices. We recommend using a UPS or Power Conditioner.

Attendant Station UPS connection



Plug #	Location	Device	Cable	Adapter
1	UPS	Computer	11000049	—
2	UPS	Receipt Printer	system	—
3	UPS	Hand Scanner	system	—

Upon request by a customer, the UPS option can be removed if a sufficiently-protected in-store power source is available. In that case, a power bar is used instead of a UPS.

NOTE: *The above illustration is based on controlled document D900000262.*

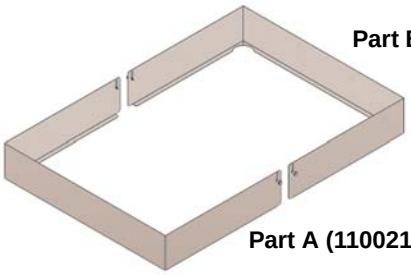
Installing the Optional Skirt Kit

The optional Skirt Kit is designed to hide the legs and wheels of the unit, as well as to prevent objects from becoming lodged beneath the Station.

24" Attendant Station Skirt Kit

1. Locate an Attendant Station skirt kit (11000788), which consists of two identical sheet metal parts (A and B), and four M4 screws.

Attendant Station Skirts, Exploded View



2. Ensure that the Attendant Station is level (as explained on page 109), and that the Station has been raised high enough off the floor to accommodate the skirts. If the Station height must be adjusted, follow the steps on page 109 to adjust the feet.
3. From the front, slide Skirt A around the Attendant Station to encompass the entire unit.
4. Secure it in place with two screws, but do not completely tighten until the other skirt has been attached.
5. Attach Skirt B to the rear of the Attendant Station casing. Secure the skirt with two screws, then completely tighten all four screws.

Customer Station

Regular Self-Checkout

Most of the regular self-checkout Customer Station's core components are mounted in the cabinet at the factory. The Customer Station core components include:

- Computer
- Touch Screen monitor
- Scanner Scale
- Bill Acceptor
- Coin Acceptor
- Bag Scale
- Speaker
- Bill Dispenser
- Coin Dispenser
- Receipt Printer (optional)
- Signature Capture (optional)
- Coupon Detector (optional)
- Proximity Sensor (optional)
- USB Hub
- UPS

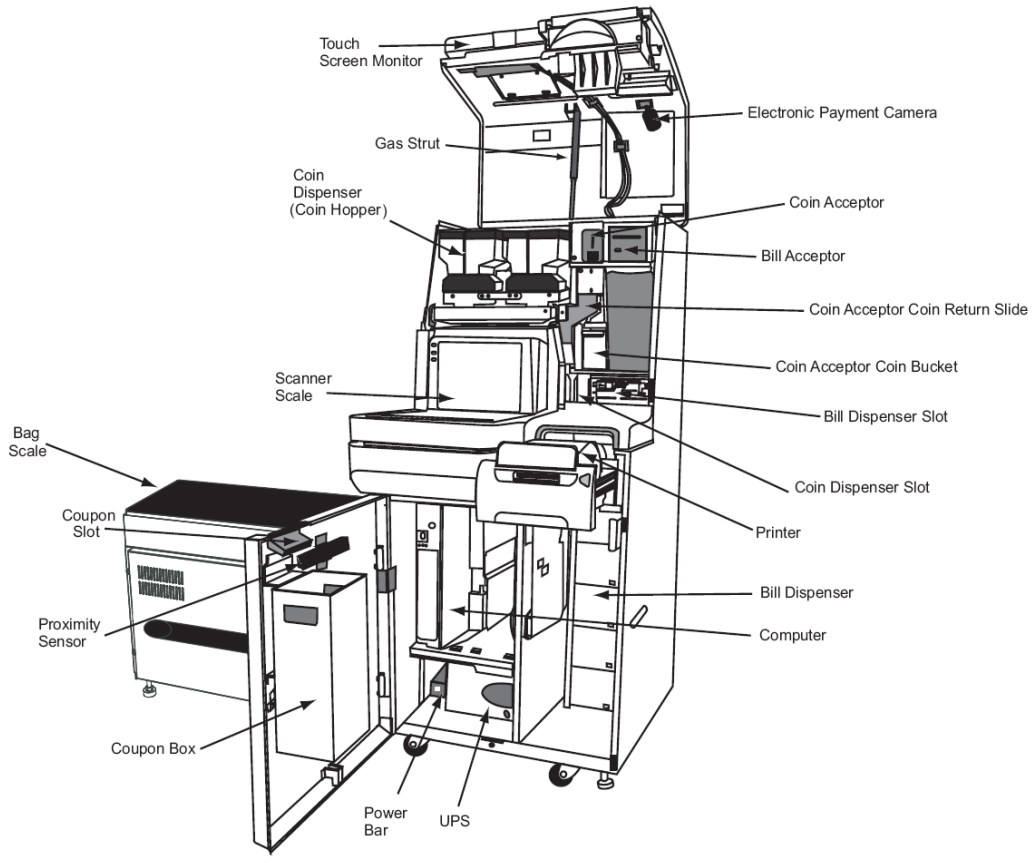


Figure 3.11 Customer Station components

Regular Self-Checkout with Cash Recyclers

Most of the regular self-checkout Customer Station with recycler's core components are mounted in the cabinet at the factory. The cash recycling Customer Station core components include:

- Computer
- Touch Screen monitor
- Scanner Scale
- Bill Recycler
- Coin Recycler
- Bag Scale
- Speaker
- External receipt printer (optional)
- Signature Capture (optional)
- USB Hub
- UPS

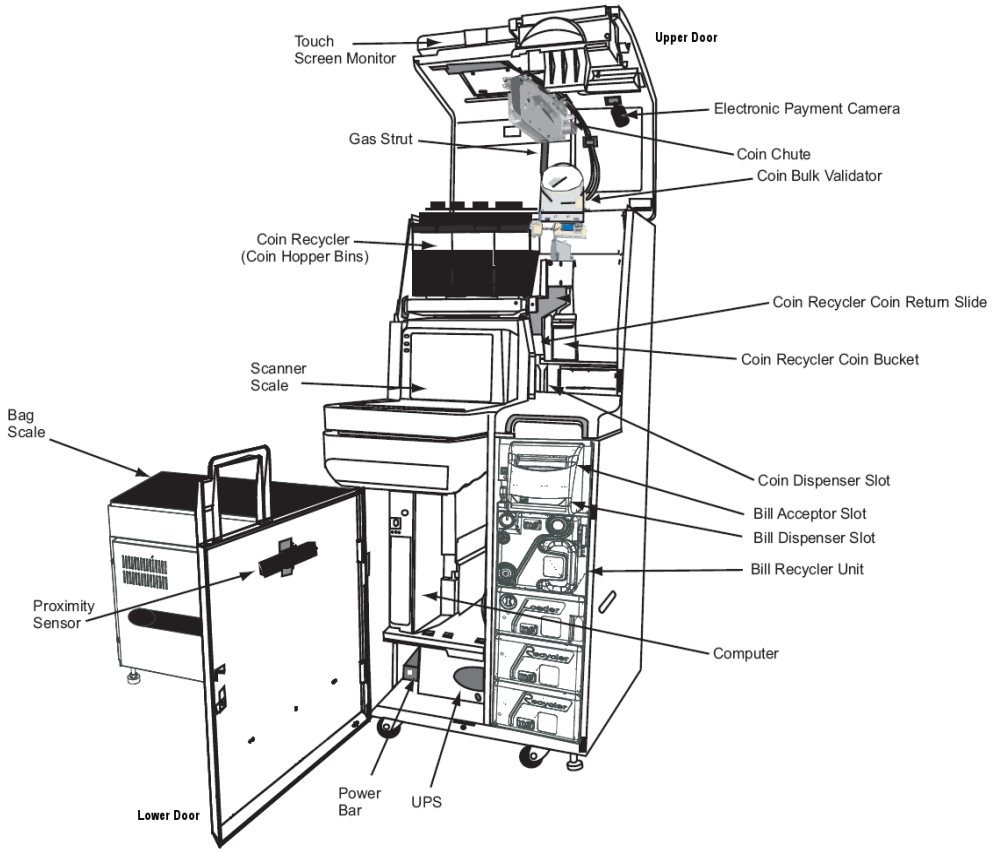


Figure 3.12 Customer Station (with cash recyclers) components

Payment Station

The Payment Station includes most of the components found in the regular self-checkout Station. Most notably, the Bag Scale is eliminated and the Scanner Scale is replaced by a Bar Code Scanner. The Payment Station core components include:

- Computer
- Touch Screen Monitor
- Bar Code Scanner
- Bill Acceptor
- Coin Acceptor
- Speaker
- Bill Dispenser
- Coin Dispenser
- Receipt Printer
- Signature Capture (optional)
- Coupon Detector (optional)
- Proximity Sensor (optional)
- USB Hub
- UPS

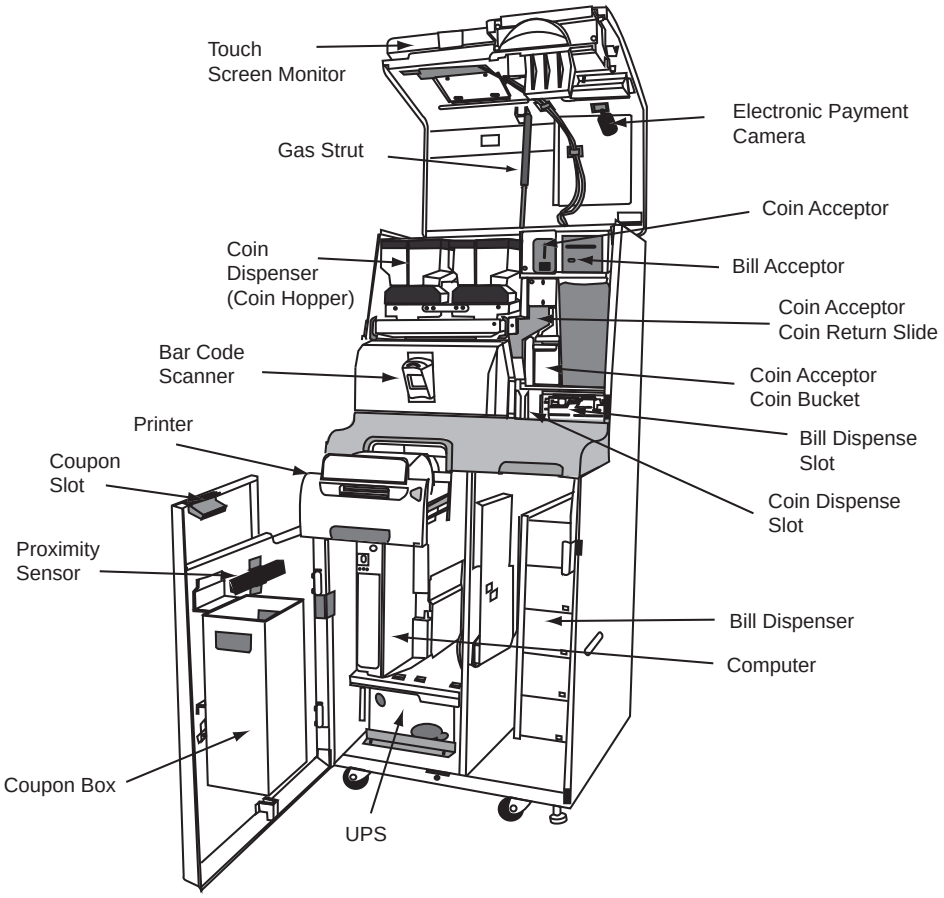


Figure 3.13 Payment Station components

NOTE: *A cash recycling version of the Payment Station is also available.*

Locks

In accordance with UL regulations, locks must be installed on the U-Scan Station casing. Ensure that locks are installed on all Stations.

Removing the Back Panel (Regular Self-Checkout and Payment Stations)

In order to access the cable routing, you may need to remove the back panel of the Customer Station.

1. Unlock and open the upper door.

   NOTE: *Be sure to push in the release handle when you open and close the upper door of the Genesis Station. The release handle is located beside the Scanner Scale, just above the Change Out compartment. Failure to push in this handle can break the locking mechanism.*

2. If applicable, slide the coin hopper tray forward to gain access to the back panel's retaining screw.

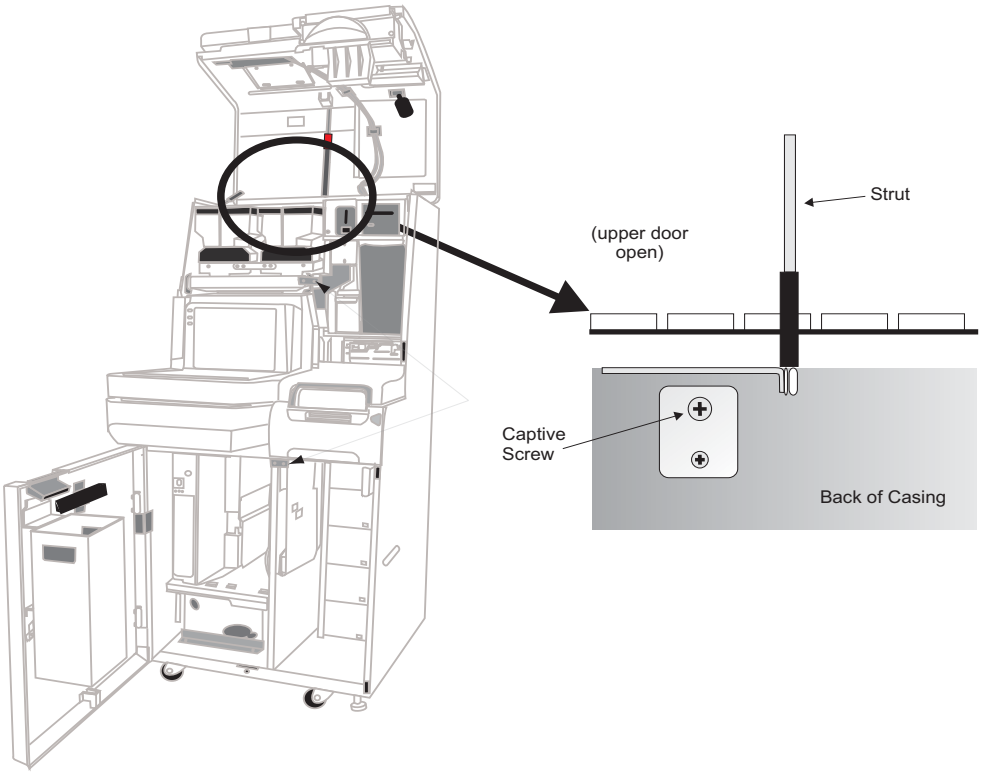


Figure 3.14 Customer Station — Removing the back panel, part 1

3. From the front of the Customer Station, reach in to the back of the casing and ***loosen*** the captive screw until it no longer holds the panel.

   NOTE: *Do not completely remove the screw so that it falls out. It should remain in place, protruding through the casing.*

4. From the back of the Station, grasp the handle and pull the panel toward you (see page 36). If it resists, ensure that the captive screw is no longer holding the panel in place.

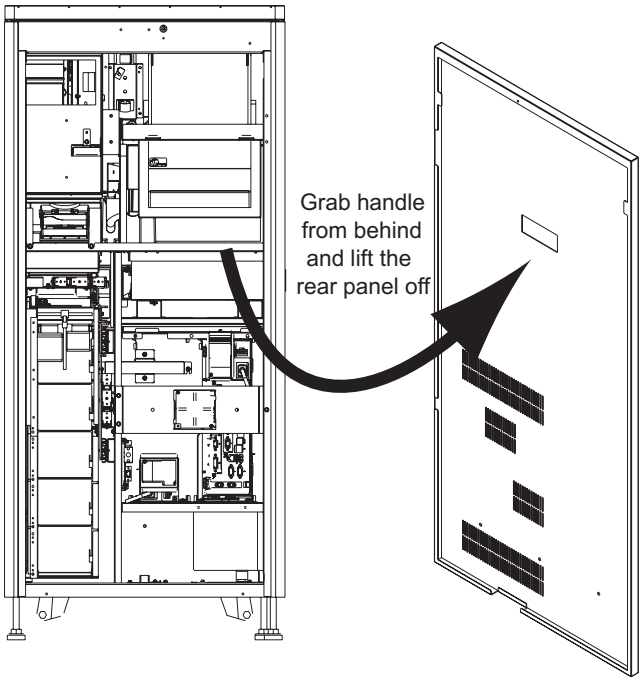


Figure 3.15 Customer Station — Removing the back panel, part 2

You now have access to all of the internal cables and cable routing.

WARNING: *Do not connect the UPS to the AC power unless the UPS jumper strap has been connected as described on page 122. (This does not apply to units with serial numbers higher than 5406093R-0930001 - firmware version PV58V11FB. See the Genesis Hardware Manual (UPS chapter) for more details.)*

Customer Station Cable Connections (Platform Bag Scales-TP3K)

The cables and AC plugs of site-installed components are in the cabinet, ready to be connected. The store must provide the EFT equipment, which is installed on site.

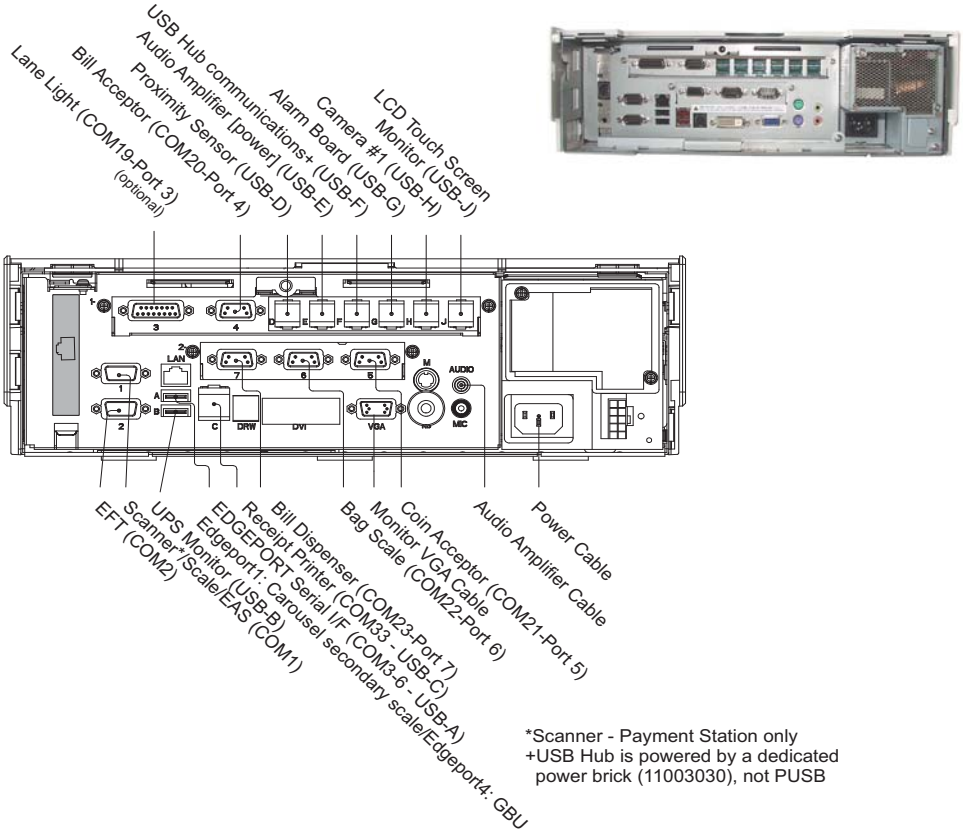


Figure 3.16 Customer Station computer cable connections TP3K (Back)

NOTE: *The above illustration is based on controlled document D900000257.*

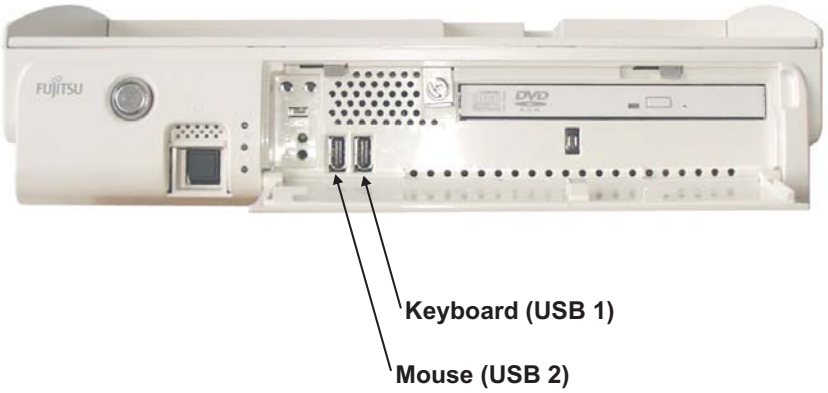


Figure 3.17 Customer Station computer cable connections TP3K (Front)

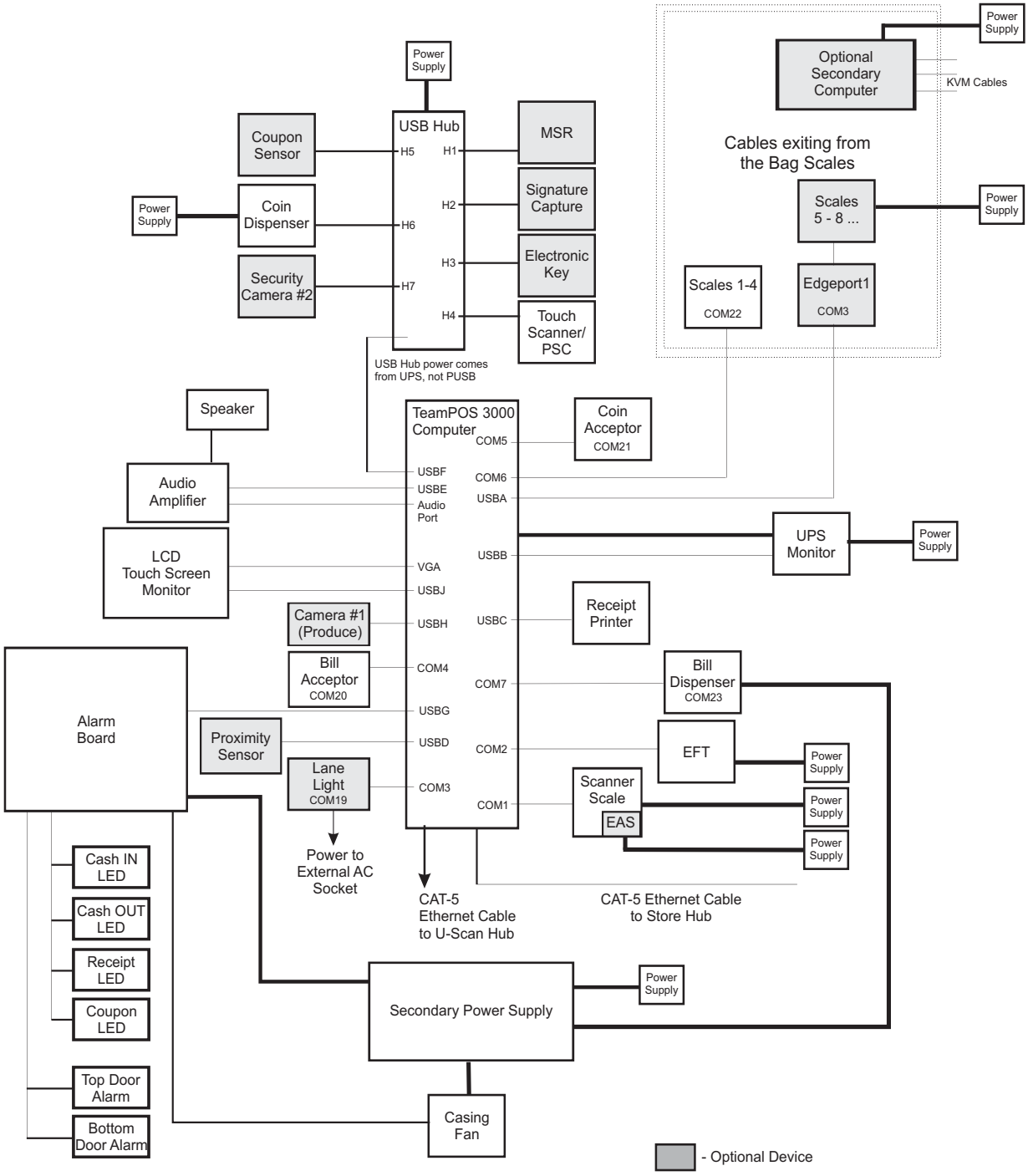


Figure 3.18 Customer Station cable requirements TP3K

NOTE: *Your store's Customer Station may not include all of the devices listed above. The boxes representing the **devices** are identified by their **virtual COM port** designations; the labels in the box that represents the **computer** refer to **physical COM port** designations. This illustration is based on controlled document D900000260.*

Component	Connects To	Cable No.	Description	Length (m)	Connection Port	Virtual Port	DLL	B,P, DB, SB
1 Monitor (VGA)	TP3K	11001758	15-pin D-sub (M) VGA	3.00	VGA	--	--	--
2 Audio cable	TP3K	11001668	-	2.20	Audio (J6)	--	--	--
3 Scanner Scale	TP3K	system-supplied	DB9-M RS-232	--	COM1	COM1	NCRCOMPLIANT_SS.DLL	9600,O,7,1
4 EFT Pinpad	TP3K	customer-supplied	DB9-M RS-232	--	COM2	COM2	--	9600,7,O,1
5 PATLITE Lane Light	TP3K COMBO	11001392	DB15-F RS-232 +24V D-Sub 15 serial	3.00	COM3	COM19	PATLITE.DLL	9600,N,8,1
6 Bill Acceptor	TP3K COMBO	11001407	+12V DE-9 (M) powered RS-232 serial	3.20	COM4	COM20	CCMFL.DLL	9600,N,8,1
7 Coin Acceptor	TP3K COM card	11001354	+12V DE-9 (M) powered RS-232 serial	3.00	COM5	COM21	MCSR3.DLL	9600,N,8,1
8 Bag Scale	TP3K COM card	11001397	+12V DE-9 (M) powered RS-232 serial	2.00	COM6	COM22	SCALTRON.DLL	9600,E,7,1
8 Bag Scale (2nd transmitter)	Edgeport1	11000405	RS-232 Extension cable	3.00	--	--	SCALTRON.DLL	--
8 Bag Scale (GBU)	Edgeport4	system-supplied	USB	--	USB-A	COM3-6	--	--
9 Bill Dispenser	TP3K COM card	11001411	DE-9 (F) RS-232 serial	4.00	COM7	COM23	F56BD.DLL	9600,E,8,1
10 Edgeport1/Edgeport4	TP3K	system-supplied	USB	--	USB-A	COM3-6	--	--
11 UPS monitor	TP3K	11001398	+5V USB A-B	2.00	USB-B	--	--	--
12 Receipt Printer	TP3K	11002783	+24V powered USB	3.00	USB-C	COM33	PRN7193.DLL	9600,N,8,1
13 Proximity Sensor	TP3K COMBO	11000267	+5V powered USB	3.00	USB-D	--	FUJITPS.DLL	--
14 Amplifier 12V Supply	TP3K COMBO	11002806	+12V powered USB	2.00	USB-E	--	--	--
15 USB Hub (power brick)	TP3K COMBO	system-supplied	Mini USB-A	--	USB-F	--	--	--
16 Alarm Board	TP3K COMBO	11002808	+12V powered USB	1.90	USB-G	COM24/25	ALARM_BOARD.DLL	--
17 Produce Camera (#1)	TP3K COMBO	11000145	+5V USB A-B	3.50	USB-H	--	--	--
18 Monitor (touch screen)	TP3K COMBO	11002807	+12V powered USB	3.00	USB-J	--	--	--
19 2ND PSU Interface (PS-ON)	Alarm Board	11001423	I/F 10-pin	1.00	PSUPWR	--	--	--
20 2ND PSU Fan Alarm	Alarm Board	11001424	5 VSB, 5 VB 16-pin power cable	1.00	PSUCTL	--	--	--
21 LEDs (1-4)	Alarm Board	11001427	8-pin	3.00	LED	--	--	--
22 Bill Exit Sensors	Alarm Board	11001416	6-pin	3.00	BLSENS	--	--	--
23 Chassis Fan	Alarm Board	11001351	3-pin	1.00	CHFAN	--	--	--
24 Door Sensors (2)	Alarm Board	11001391	6-pin	3.00	DRSNS	--	--	--
25 MSR/MCR	USB Hub	system-supplied	USB	3.00	USB HUB-1	--	MTEK211.DLL	
26 Signature Capture extension	USB Hub	11000267	USB	3.00	USB HUB-2	--	TOPAZ.DLL	--
27 Electronic Key	USB Hub	11000267	USB	3.00	USB HUB-3	--	--	--
28 1000i Scanner (Payment Station)	USB Hub	system-supplied	USB	3.00	USB HUB-4	--	IBMUSB_HS.DLL	--
29 Coupon Detector	USB Hub	11000267	USB	3.00	USB HUB-5	--	CPNDETECT.DLL	--
30 Coin Dispenser	USB Hub	11000267	USB (right-angle USB for CoinXpress)	3.00	USB HUB-6	--	TRANSACT.DLL	9600,E,7,1
31 Payment Camera (#2)	USB Hub	11000267	USB	3.00	USB HUB-7	--	--	--
32 Speaker	Amplifier	11001309	RCA to 2-terminal speaker cable	1.00	--	--	--	--
33 Bill Dispenser	2ND PSU	11001412	+24 V 8-pin/18-pin power	4.00	--	--	--	--

Notes: Certain USB devices have virtual COM port assignments. DLL for Metrologic Scanner Scale is NCRCOMPLIANT_SS.DLL; DLL for Magellan Scanner Scales is MAGELLAN.DLL. Magellan cable is 11001389.

Customer Station Cable Connections (Cash Recyclers-TP3K)

The cables and AC plugs of site-installed components are in the cabinet, ready to be connected. The store must provide the EFT equipment, which is installed on site.

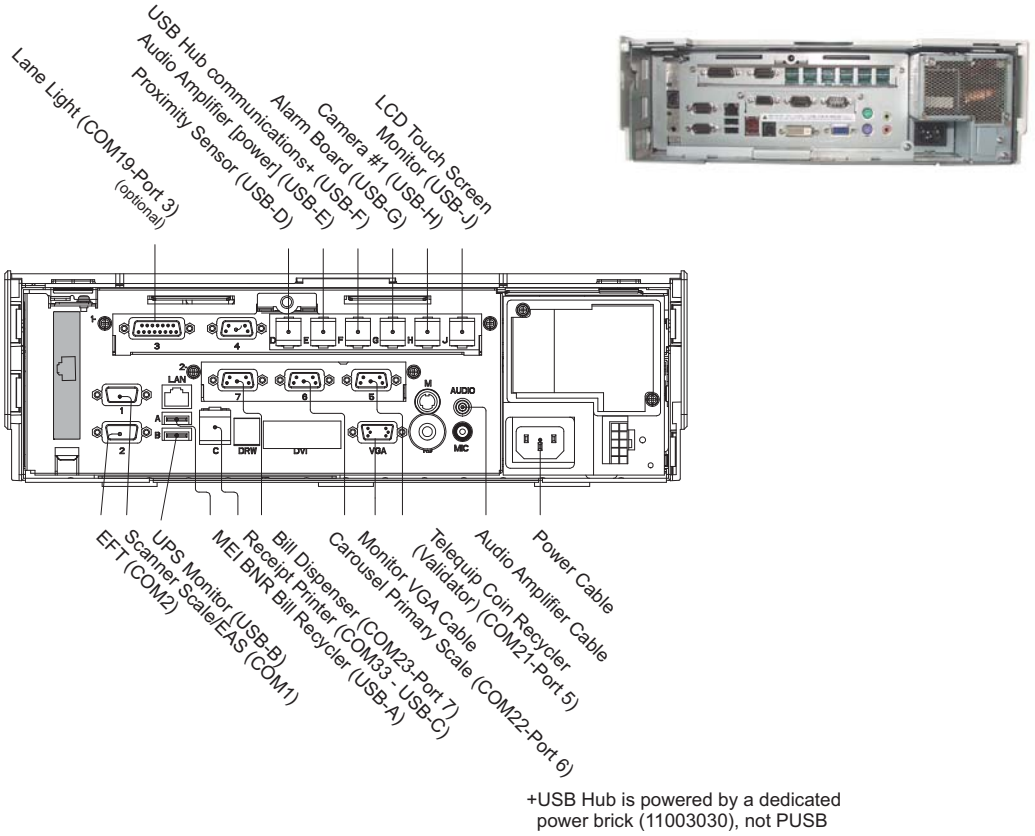


Figure 3.19 Customer Station computer cable connections TP3K (Back)

NOTE: *The above illustration is based on controlled document D900000257 - special edition.*

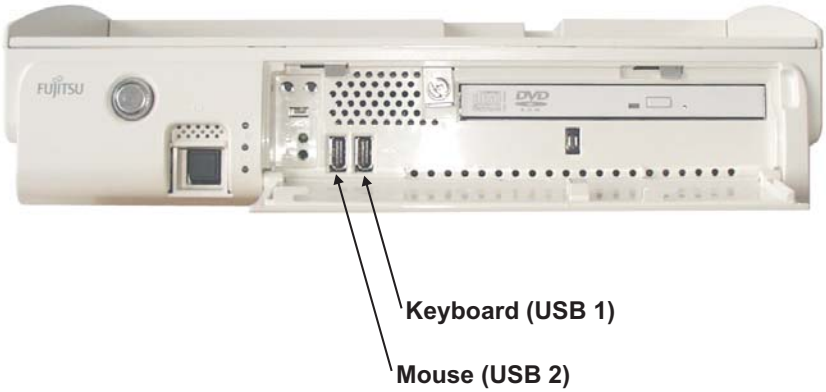


Figure 3.20 Customer Station computer cable connections TP3K (Front)

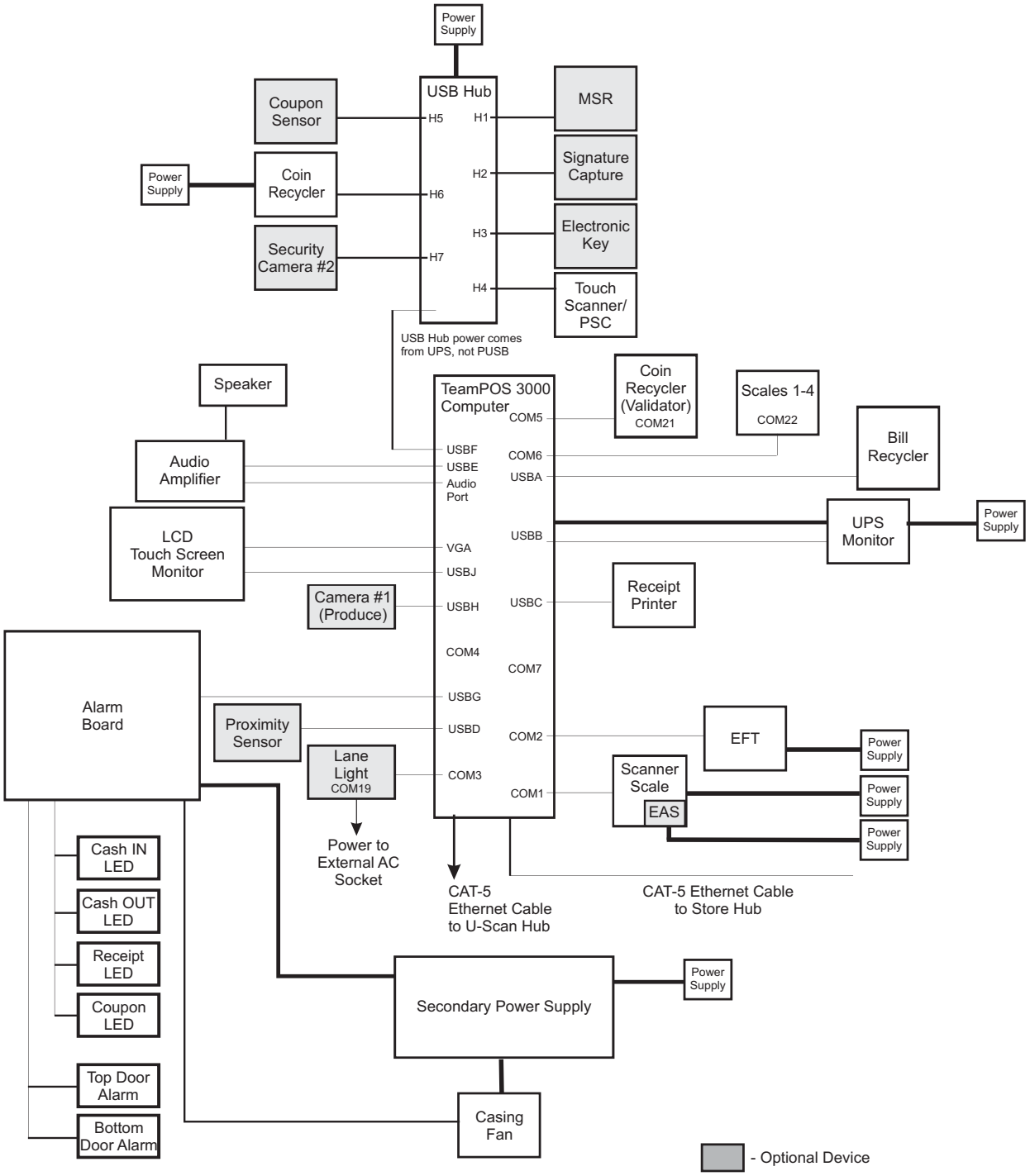


Figure 3.21 Customer Station (Cash Recyclers) cable requirements (TP3K)

NOTE: *Your store's Customer Station may not include all of the devices listed above.*
*The boxes representing the **devices** are identified by their **virtual COM port** designations; the labels in the box that represents the **computer** refer to **physical COM port** designations. This illustration is based on controlled document D900000xxx - TBD.*

Cashless Station Cable Connections - TP3K

Both the Customer Station and Payment Station are available in “cashless” configurations. In such cases there are no cash devices like the bill and coin acceptors or bill and coin dispensers. Also, no secondary power supply is required.

The cables and AC plugs of site-installed components are in the cabinet, ready to be connected. The store must provide the EFT equipment, which is installed on site.

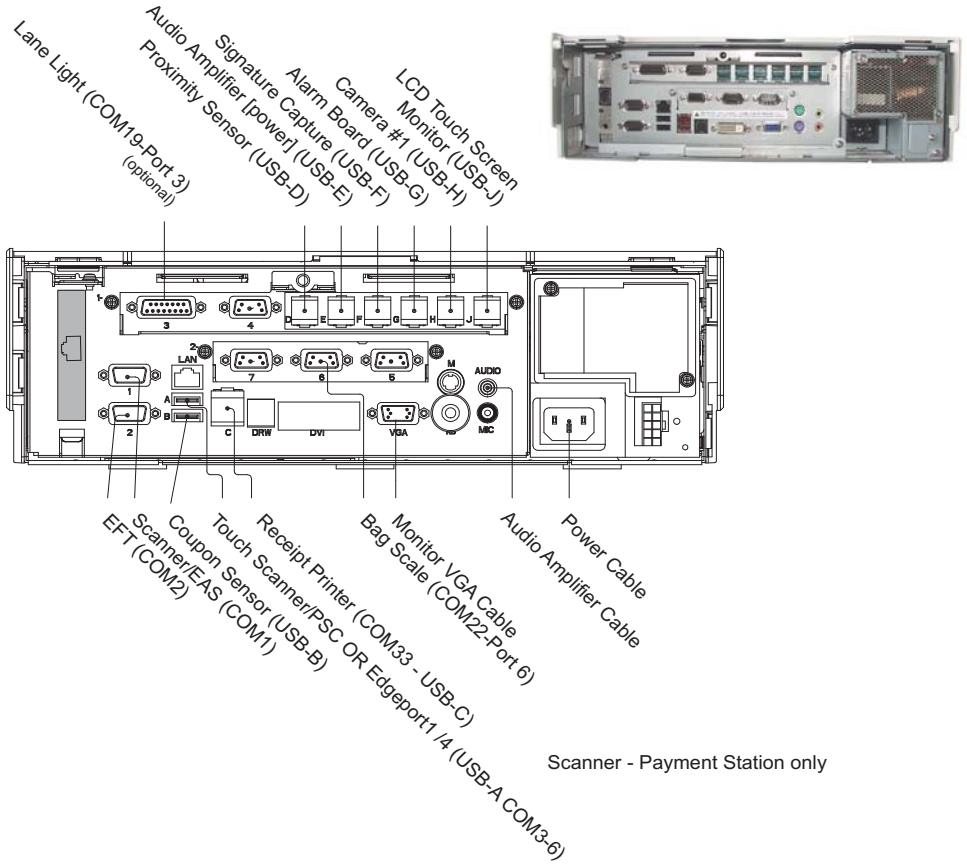


Figure 3.22 Cashless Station computer cable connections TP3K (Back)

NOTE: *The above illustration is based on controlled document D900000300.*

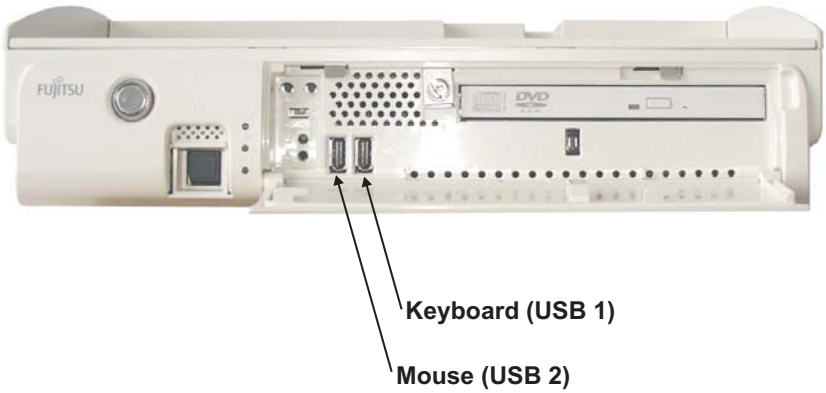


Figure 3.23 Cashless Station computer cable connections TP3K (Front)

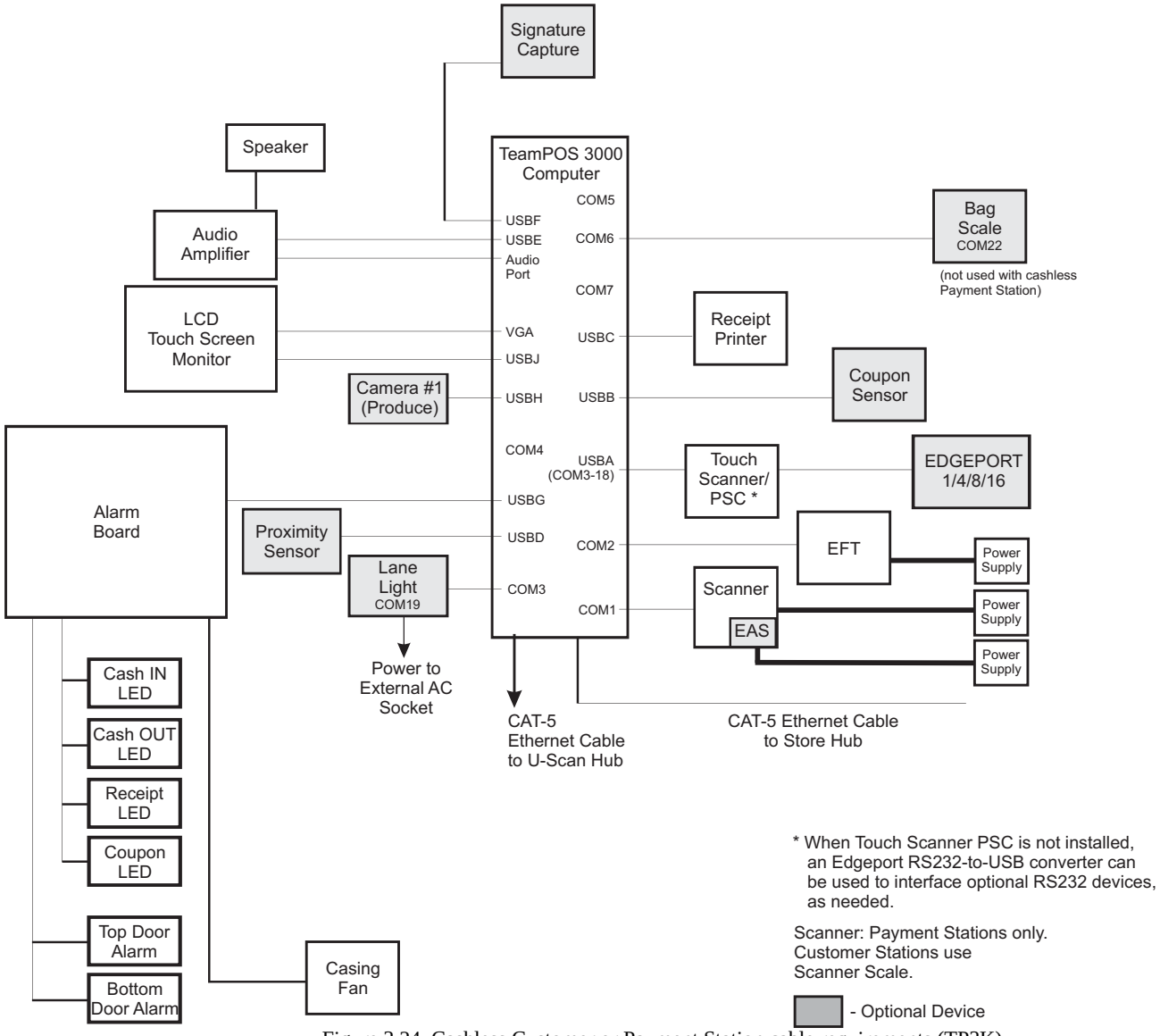


Figure 3.24 Cashless Customer or Payment Station cable requirements (TP3K)

NOTE: *Your store's Cashless Customer or Payment Station may not include all of the devices listed above.*
The boxes representing the ***devices*** *are identified by their* ***virtual COM port*** *designations; the labels in the box that represents the* ***computer*** *refer to* ***physical COM port*** *designations. This illustration is based on controlled document D900000300.*

Carousel Station Cable Connections - TP3K

When a Customer Station is attached to a standard Carousel scale, the following cable connections apply.

The cables and AC plugs of site-installed components are in the cabinet, ready to be connected. The store must provide the EFT equipment, which is installed on site.

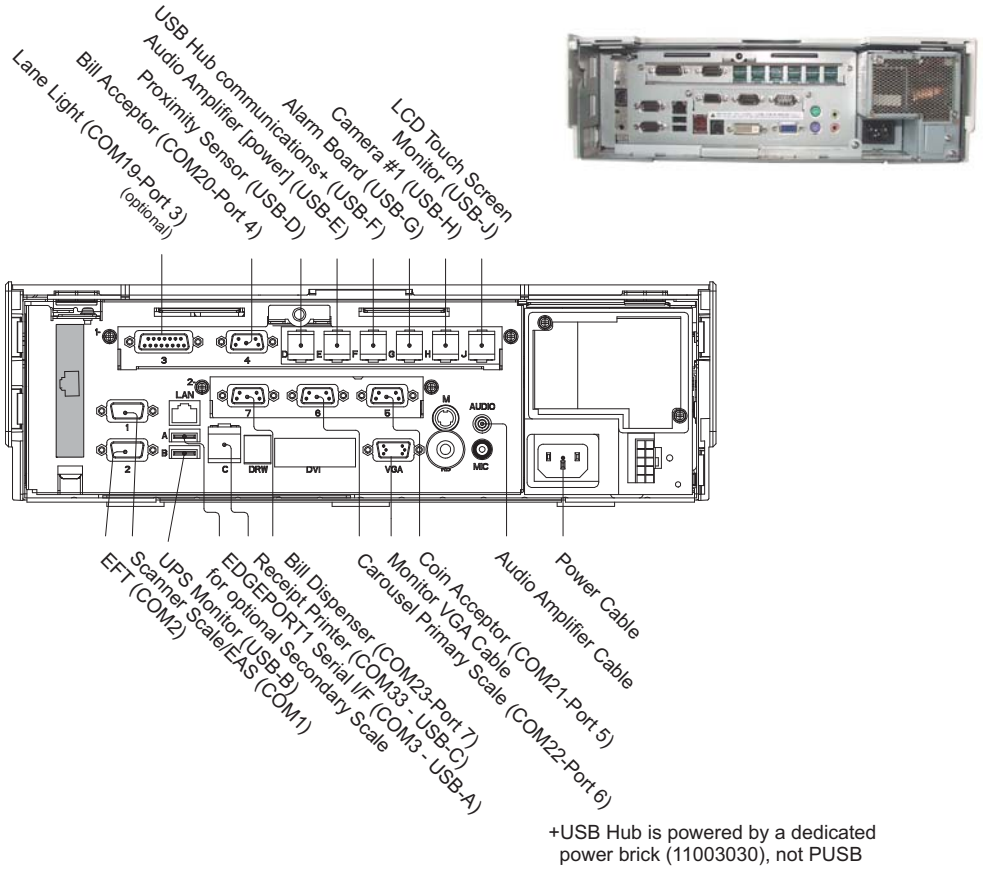


Figure 3.25 Carousel Station computer cable connections TP3K (Back)

NOTE: *The above illustration is based on controlled document D900000257.*

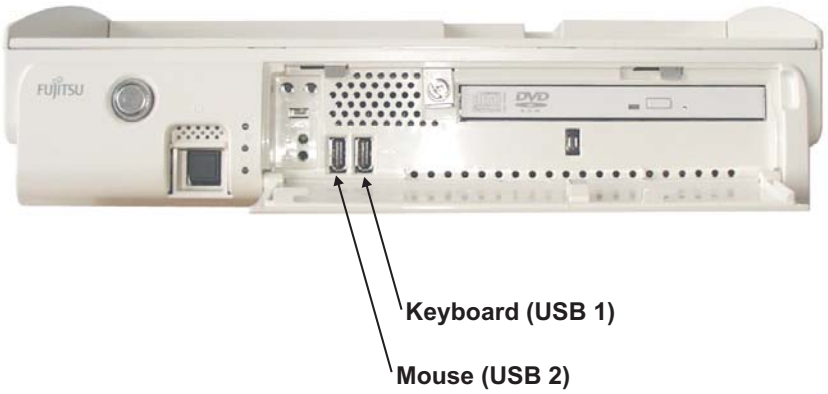


Figure 3.26 Carousel Station computer cable connections TP3K (Front)

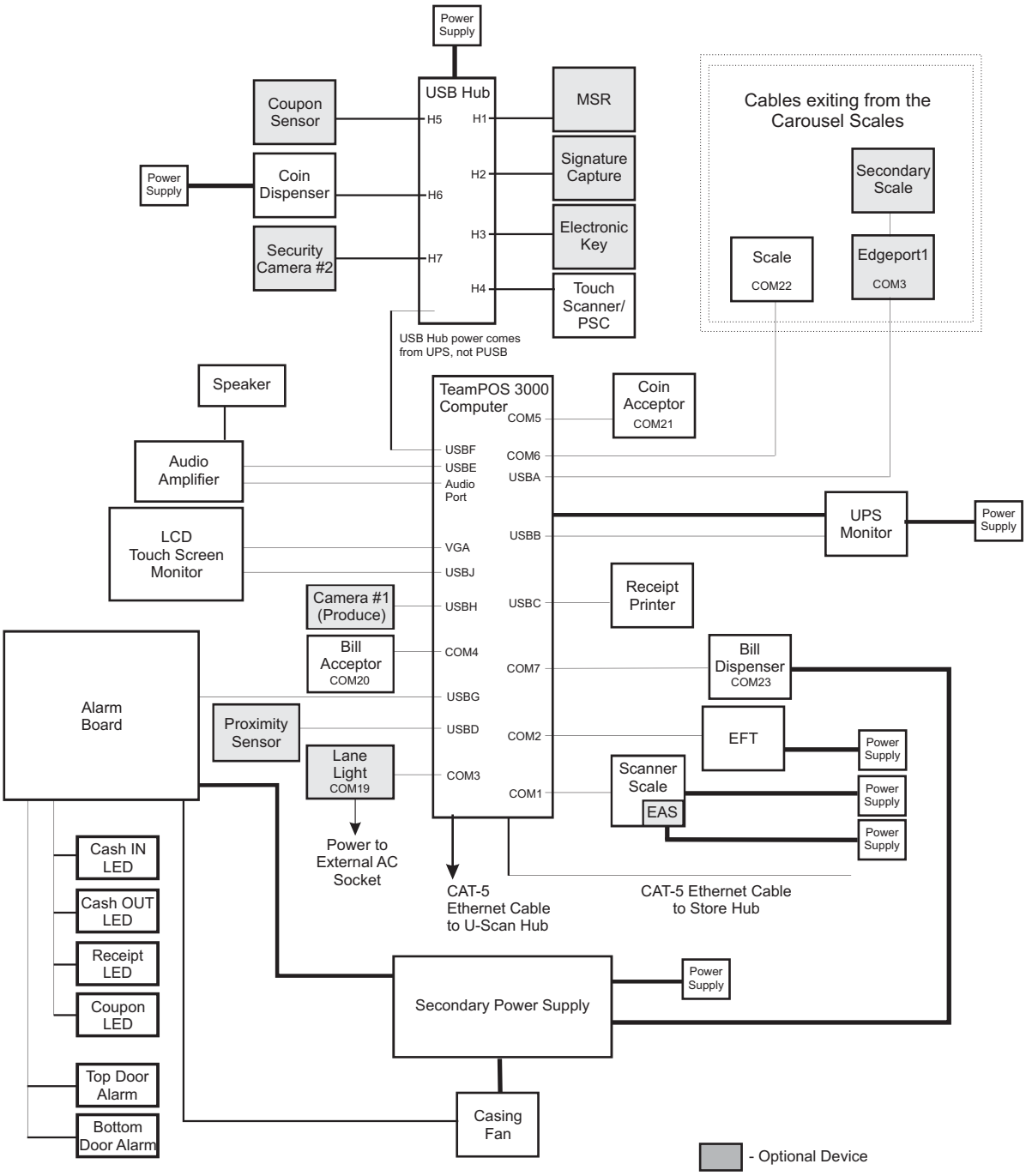


Figure 3.27 Customer Station (Carousel) cable requirements (TP3K)

NOTE: *Your store's Customer Station may not include all of the devices listed above.*

*The boxes representing the **devices** are identified by their **virtual COM port** designations; the labels in the box that represents the **computer** refer to **physical COM port** designations. This illustration is based on controlled document D900000260.*

Mini Carousel Station Cable Connections - TP3K

When a Customer Station is attached to a Mini Carousel scale, the following cable connections apply.

The cables and AC plugs of site-installed components are in the cabinet, ready to be connected. The store must provide the EFT equipment, which is installed on site.

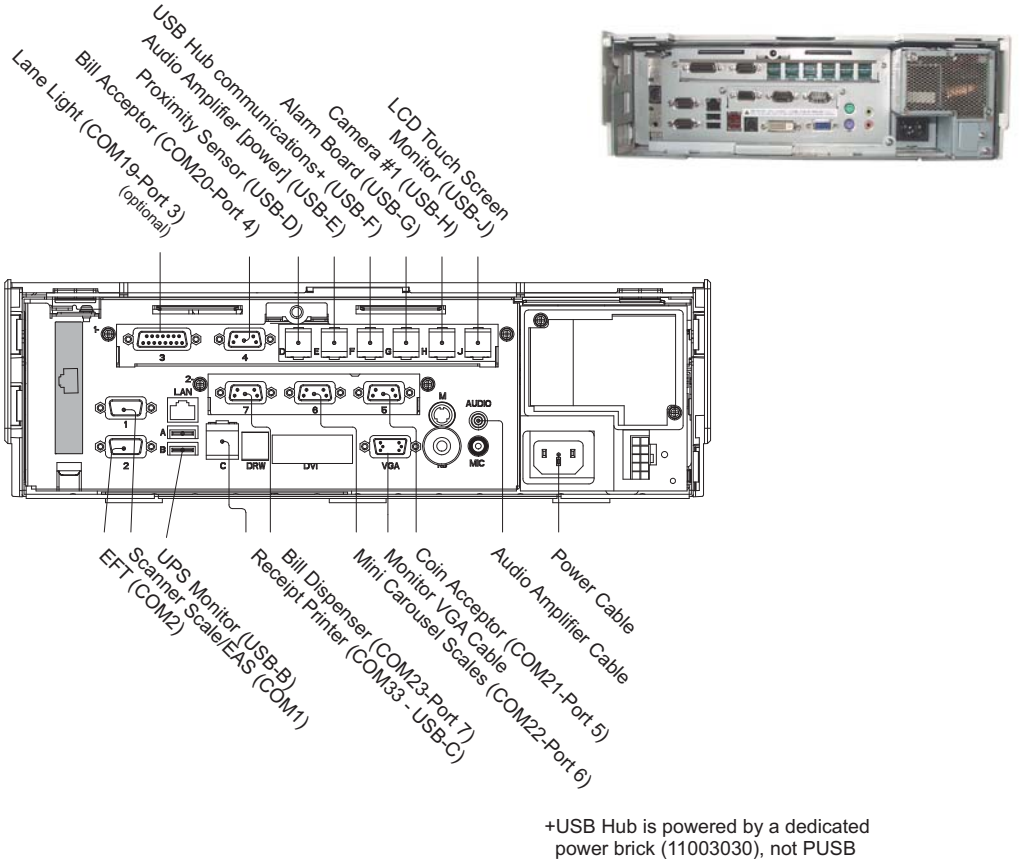


Figure 3.28 Mini Carousel Station computer cable connections TP3K (Back)

NOTE: *The above illustration is based on controlled document D900000257.*

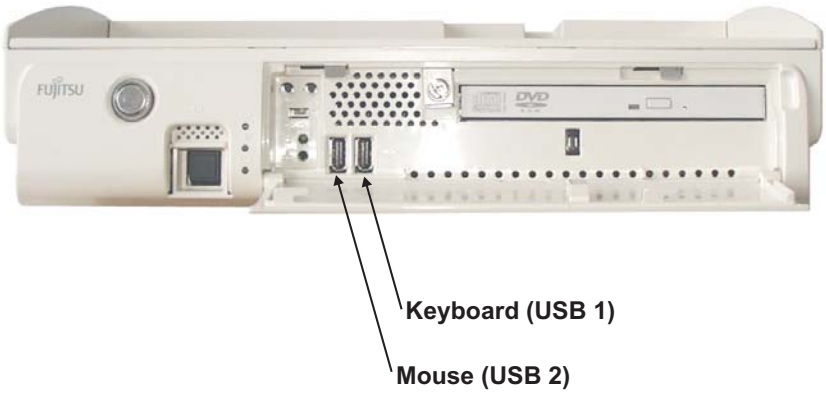


Figure 3.29 Mini Carousel Station computer cable connections TP3K (Front)

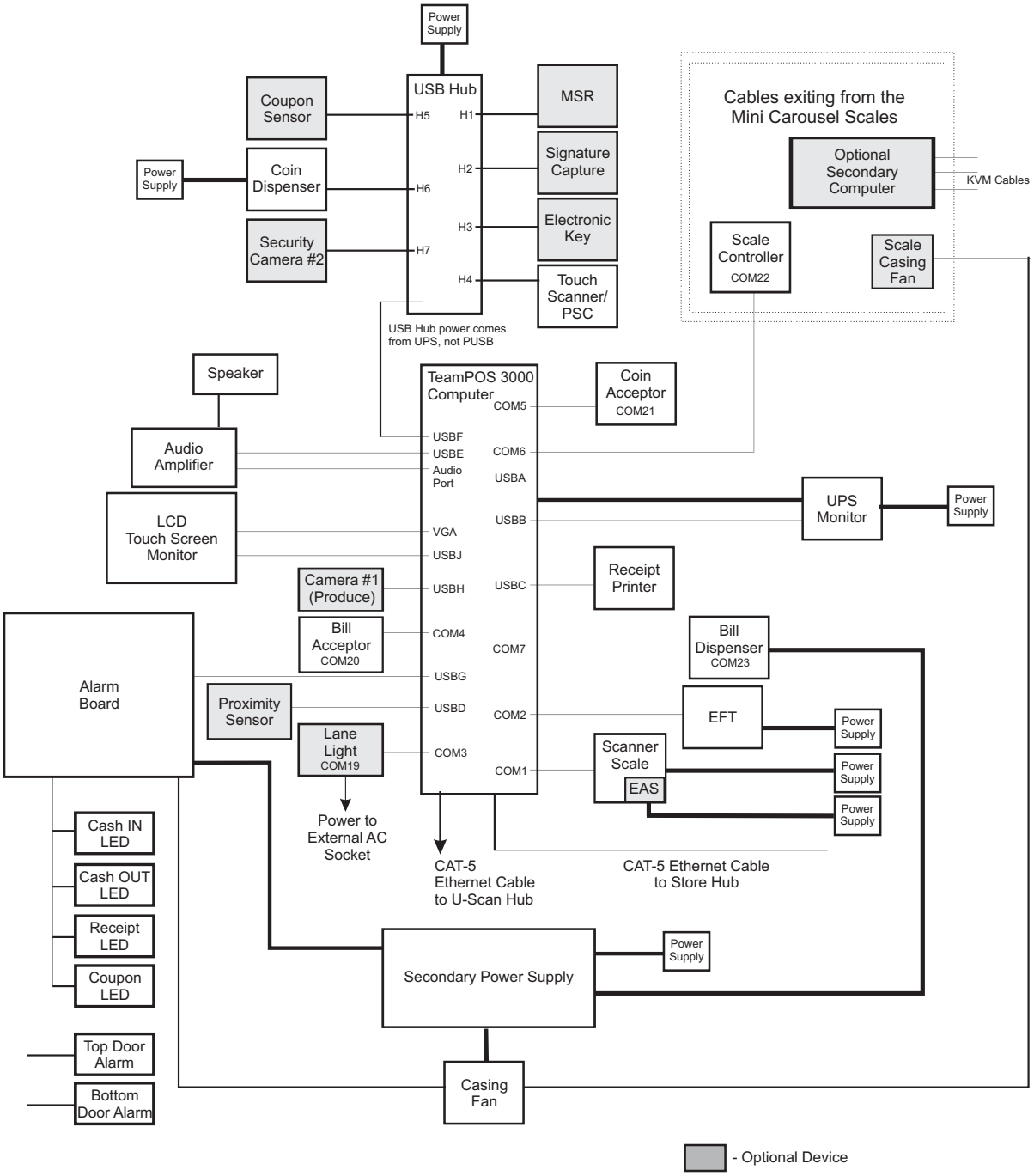


Figure 3.30 Customer Station (Mini Carousel) cable requirements (TP3K)

NOTE: *Your store's Customer Station may not include all of the devices listed above.*
*The boxes representing the **devices** are identified by their **virtual COM port** designations; the labels in the box that represents the **computer** refer to **physical COM port** designations. This illustration is based on controlled document D900000260.*

GBU Station Cable Connections - TP3K

When a Customer Station is attached to a GBU (Genesis Belted Unit) conveyor, the following cable connections apply.

The cables and AC plugs of site-installed components are in the cabinet, ready to be connected. The store must provide the EFT equipment, which is installed on site.

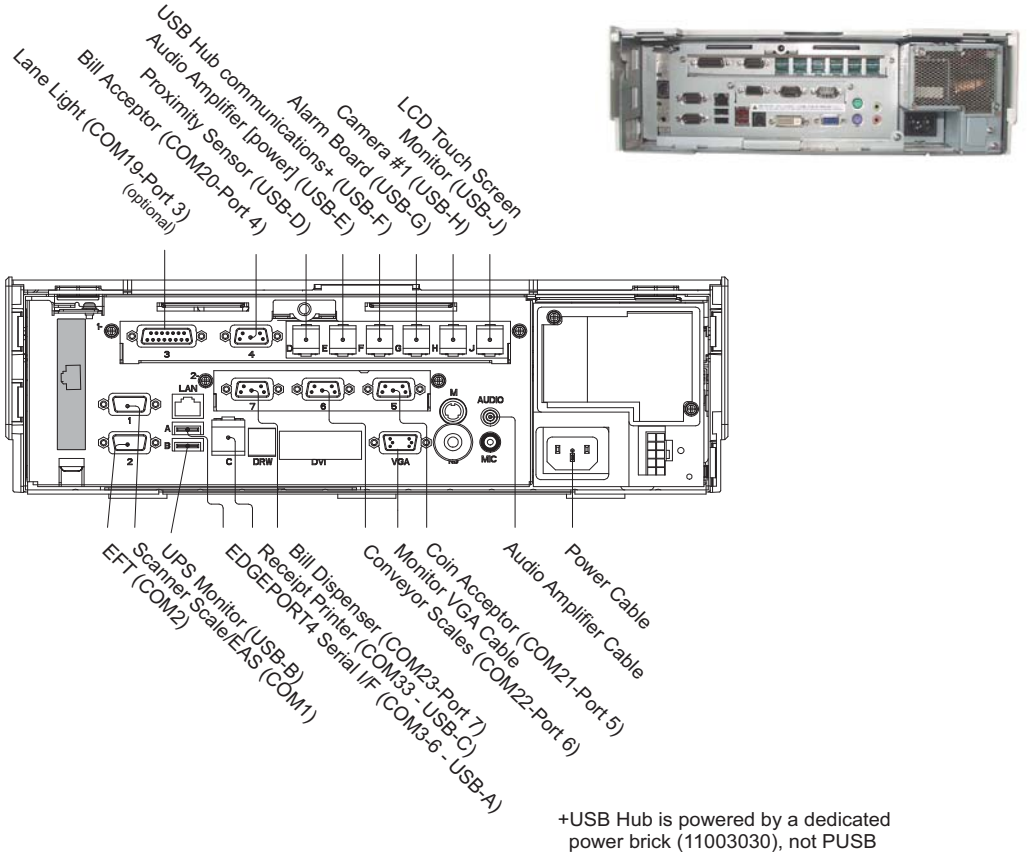


Figure 3.31 GBU Station computer cable connections TP3K (Back)

NOTE: *The above illustration is based on controlled document D900000257.*

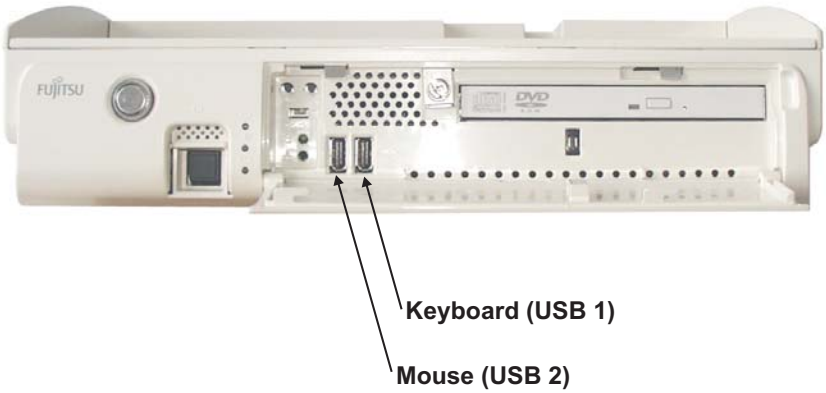


Figure 3.32 GBU Station computer cable connections TP3K (Front)

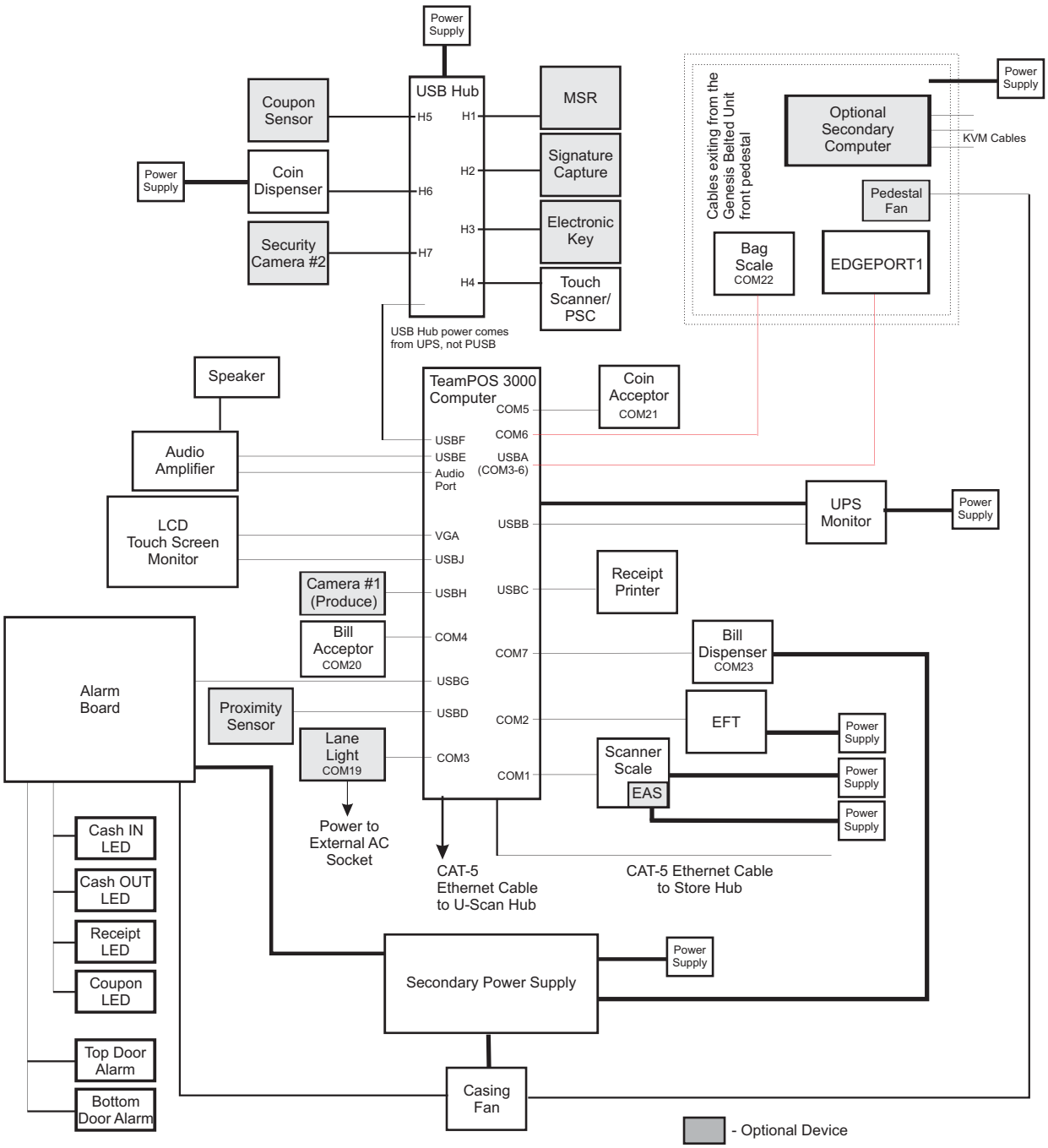


Figure 3.33 Customer Station (GBU) cable requirements (TP3K)

NOTE: *Your store's Customer Station may not include all of the devices listed above.*
*The boxes representing the **devices** are identified by their **virtual COM port** designations; the labels in the box that represents the **computer** refer to **physical COM port** designations. This illustration is based on controlled document D900000260.*

Customer Station Cable Connections (SCO-TP3600 Series)

The cables and AC plugs of site-installed components are in the cabinet, ready to be connected. The store must provide the EFT equipment, which is installed on site.

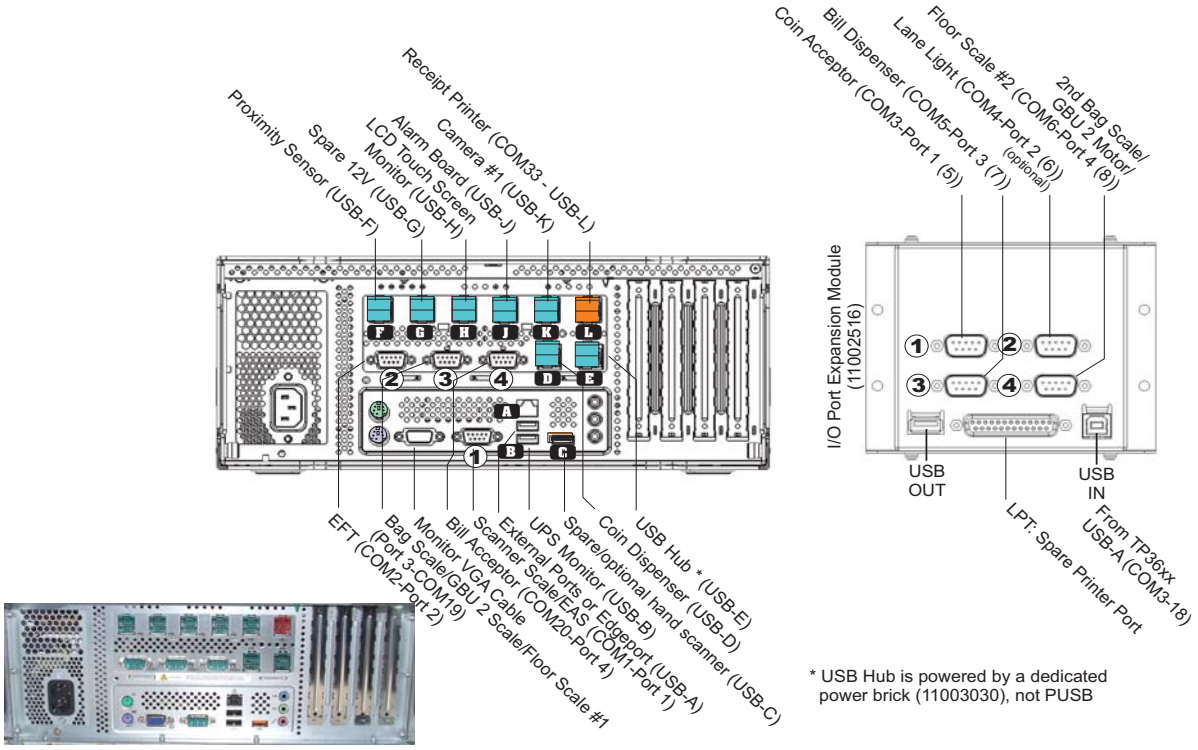


Figure 3.34 Customer Station computer cable connections TP3600 Series (Back)

NOTE: *The above illustration is based on controlled document D900000371.*

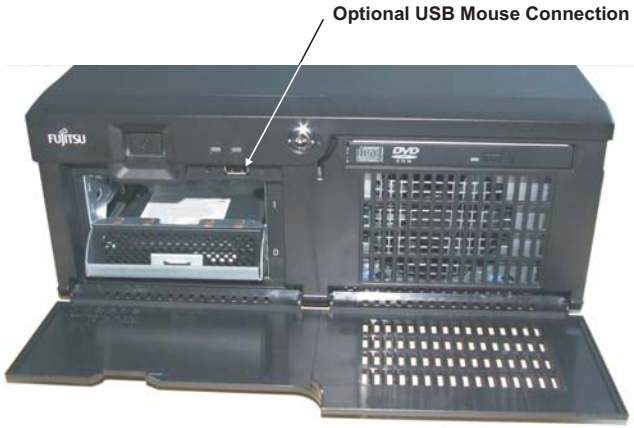


Figure 3.35 Customer Station computer cable connection TP3600 Series (Front)

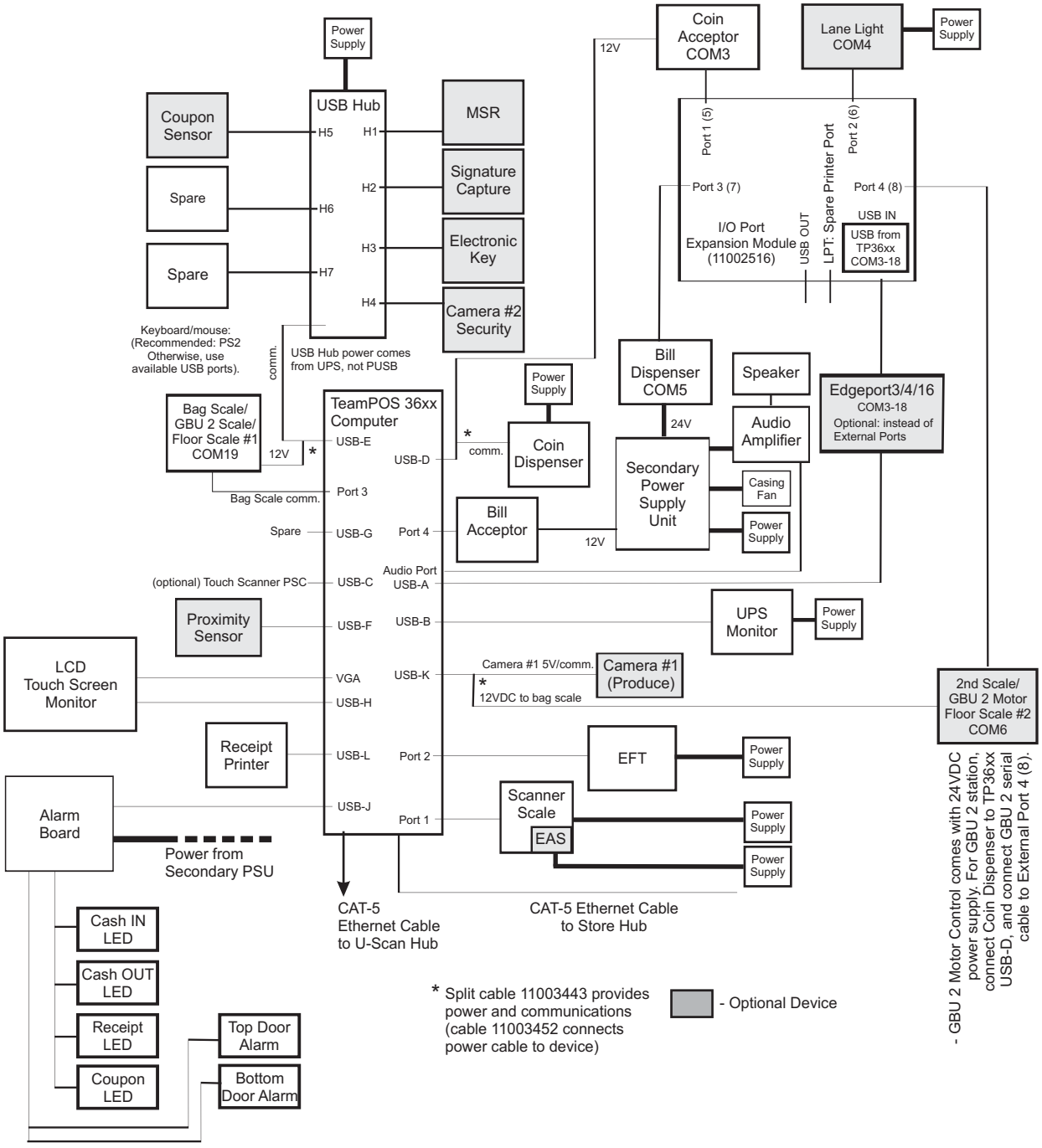


Figure 3.36 Customer Station cable requirements (TP3600 Series)

NOTE: *Your store's Customer Station may not include all of the devices listed above. The boxes representing the* ***devices*** *are identified by their* ***virtual COM port*** *designations; the labels in the box that represents the* ***computer*** *refer to* ***physical COM port*** *designations. This illustration is based on controlled document D900000371.*

Customer Station Cable Connections (Cash Recycler-TP3600 Series)

The cables and AC plugs of site-installed components are in the cabinet, ready to be connected. The store must provide the EFT equipment, which is installed on site.

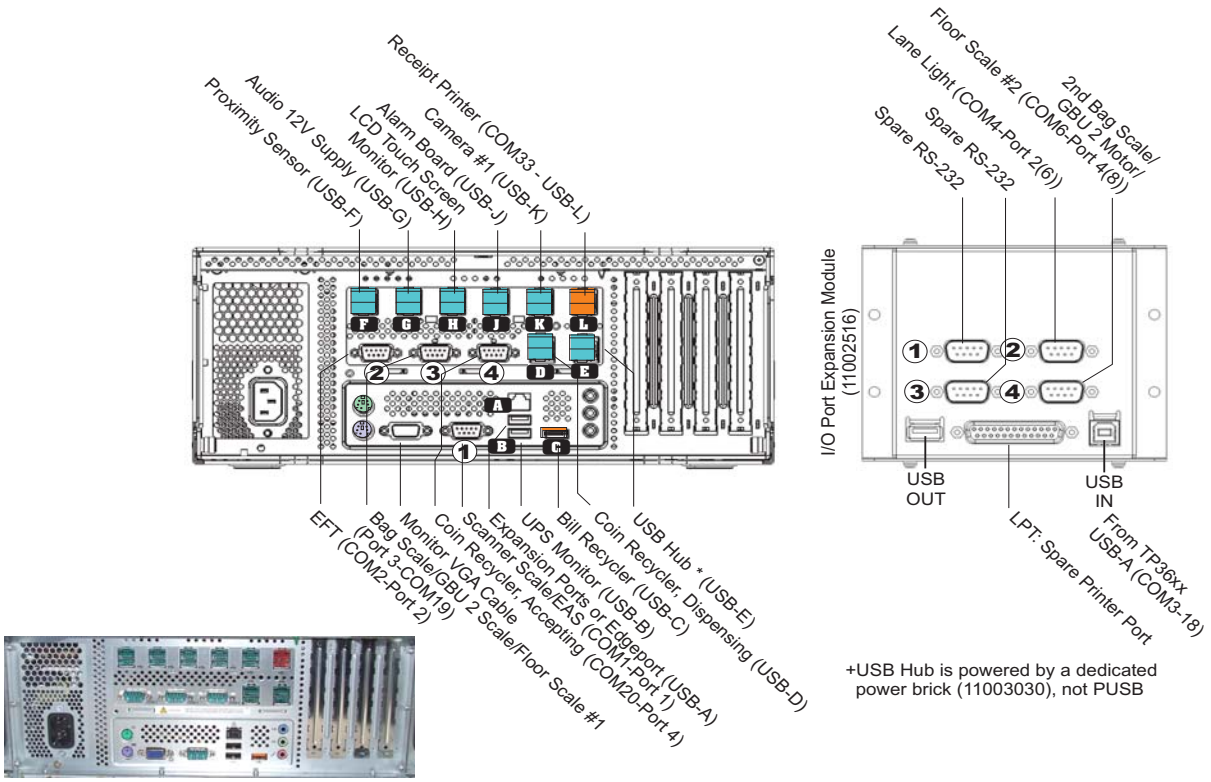


Figure 3.37 Customer Station computer cable connections TP3600 Series (Back)

NOTE: *The above illustration is based on controlled document D900000371.*

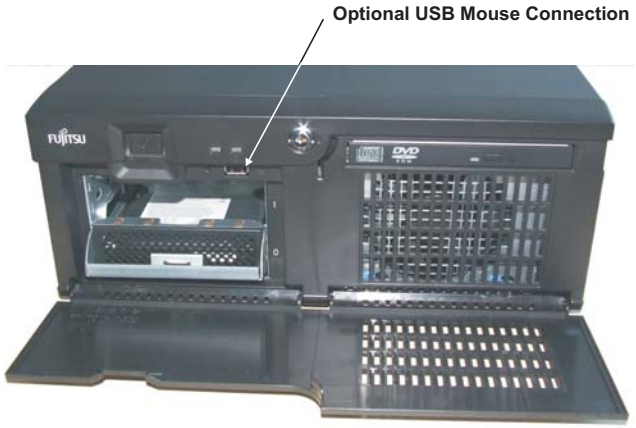


Figure 3.38 Customer Station computer cable connection TP3600 Series (Front)

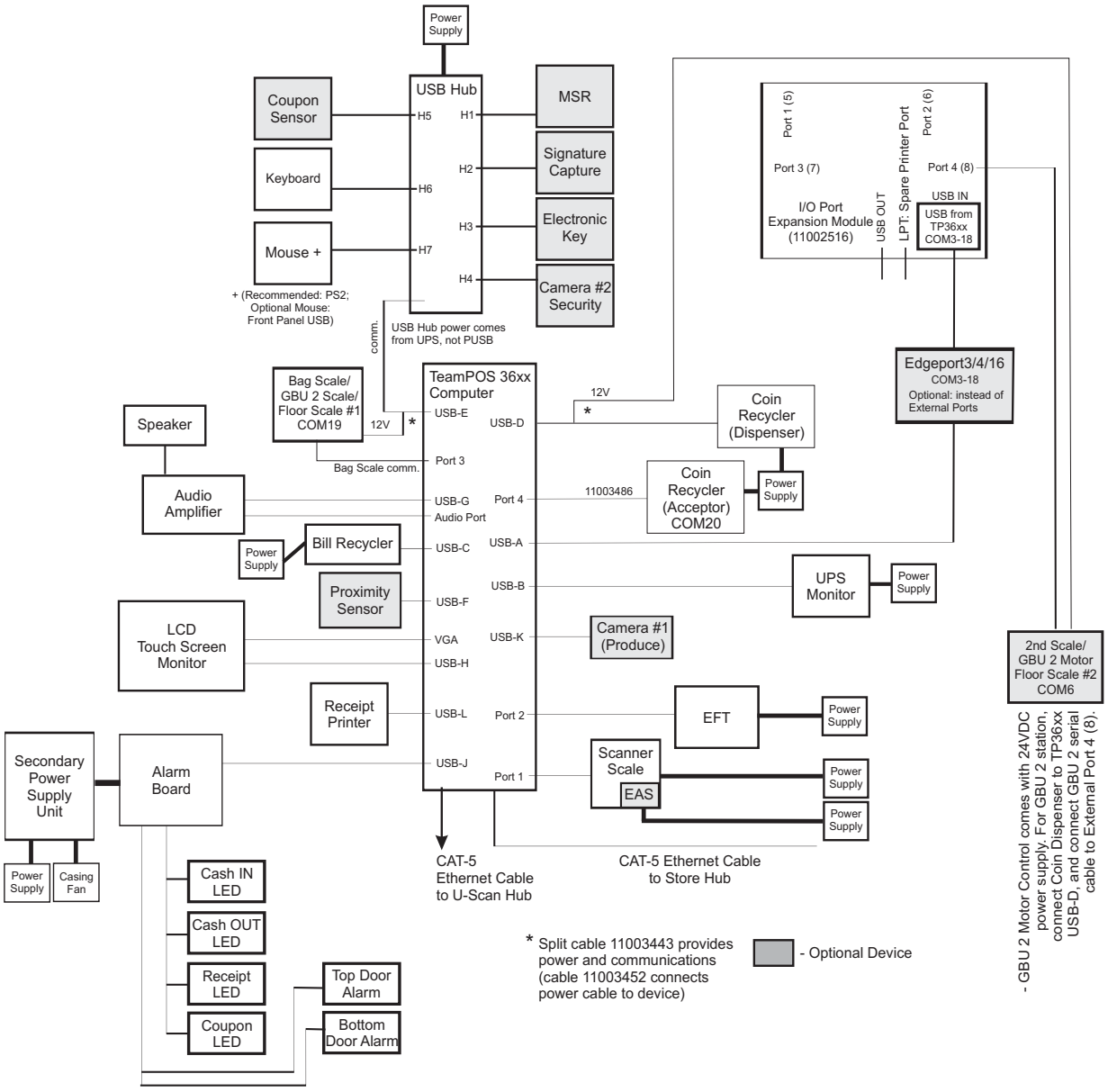


Figure 3.39 Customer Station cable requirements (TP3600 Series)

NOTE: *Your store's Customer Station may not include all of the devices listed above. The boxes representing the* ***devices*** *are identified by their* ***virtual COM port*** *designations; the labels in the box that represents the* ***computer*** *refer to* ***physical COM port*** *designations. This illustration is based on controlled document D900000372.*

Customer Station Electrical Connections

This section provides a reference for the U-Scan Genesis electrical connections. This information is based upon revision controlled document D900000258, *Genesis System Wiring Diagram - 115VAC Power Distribution*. Note that some field-installed units may use a different electrical connection layout.

The default Genesis electrical connection setup utilises two power strips to provide electrical power to the system devices. We recommend using a UPS or UPS/Conditioner.

UPS and Power Strip Connection, Table

Plug #	Location	Device	Cable	Adapter
1	UPS	TP3K Computer	11000049	—
2	UPS	Secondary Power Supply (supplies 24V to Bill Dispenser)	11000049*	—
4	UPS	Power strip	11000049	—
7	Power strip	Scanner Scale PSU	11002435	—
8	Power strip	Coin Dispenser PSU	11002435	—
9	Power strip	USB Hub PSU	11002435	—
11	Power strip	EFT PSU	—	11002433

* When two power strips are used, PSU cable 11002435 is used instead of 11000049.

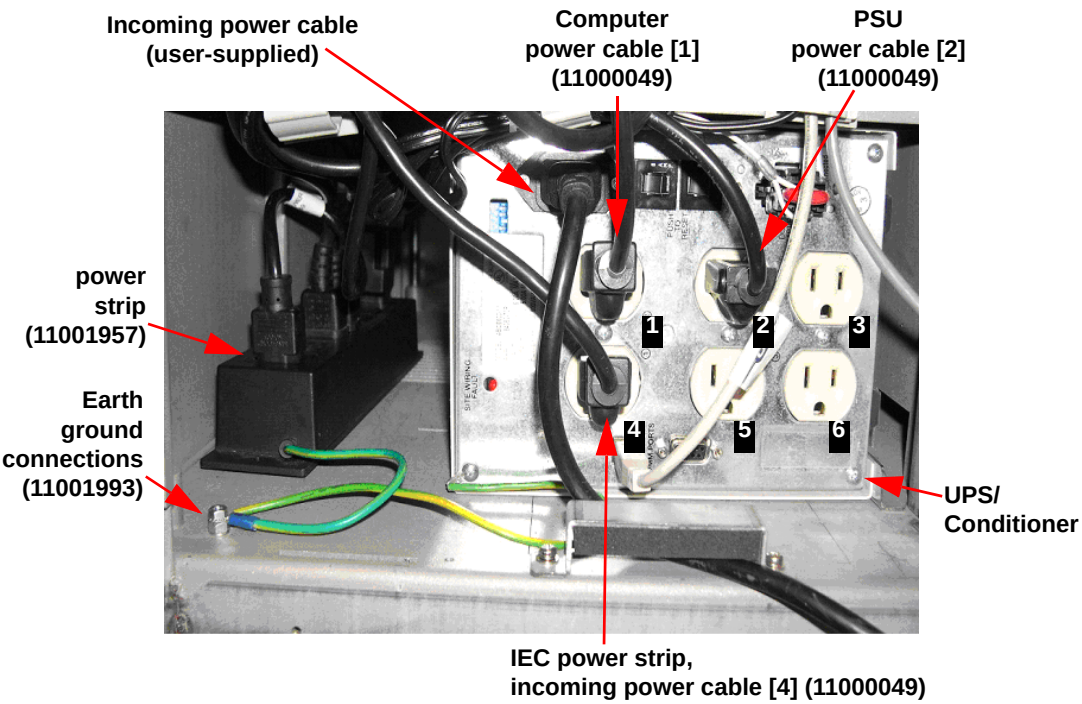
Upon request by a customer, the UPS option can be removed if a sufficiently-protected in-store power source is available. In that case, two power strips are used instead of a UPS and a single power strip.

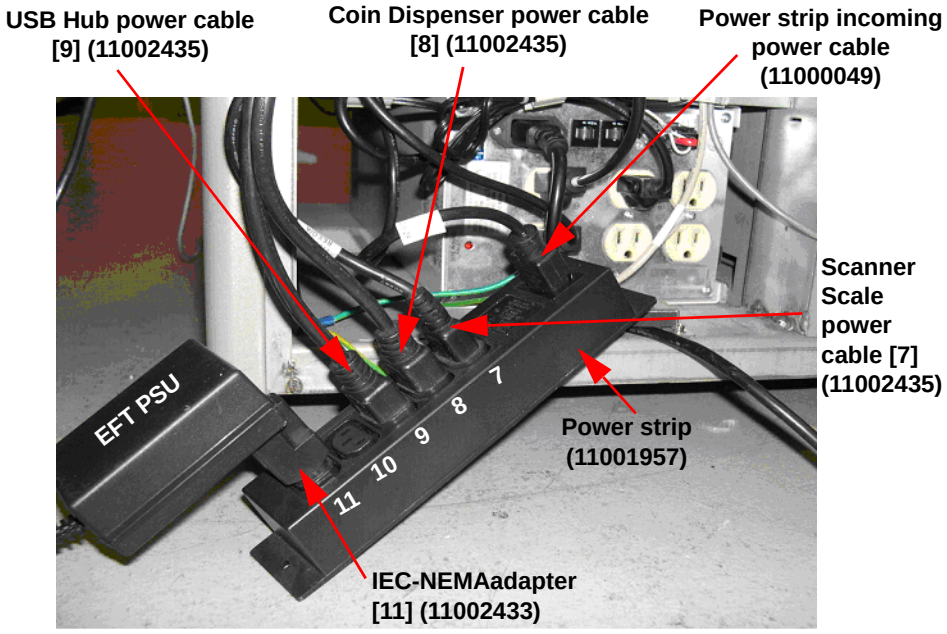
NOTE: *A number of devices are authorized by Fujitsu to be **powered directly** by U-Scan. Depending on their power connection (NEMA or IEC) and on their physical size, electrical connections could be made to available IEC outlets on the power strip, or directly to available NEMA power outlets on the UPS. Use AC power adapter (11002433) to convert IEC to NEMA, as required.*

WARNING: *DO **NOT** CONNECT devices that are not authorized to be powered directly by U-Scan to the U-Scan power strips or UPS. These include devices such as PATLITE lane light, EAS controller, Catalina printer, etc. When such devices are installed by a customer or at the request of a customer, it is the customer's responsibility to provide an adequate power source, external to U-Scan, which respects all applicable safety regulations.*

NOTE: *It is very important to connect the DC battery jumper **before** applying AC power to the unit. If this is not done in the correct order, the battery will not charge. If the power is applied but the jumper is not connected, you must remove AC power for 10 minutes, then connect the battery jumper and then connect the AC power to reset the charging circuit.*
THIS DOES NOT APPLY to units with serial numbers higher than [North America: 5406093R-0930001 (firmware version PV58V11FB)]
[Europe: 5506060R-0930001 (firmware version PV58V11FB)].

UPS and Power Strip Connection, Photographs



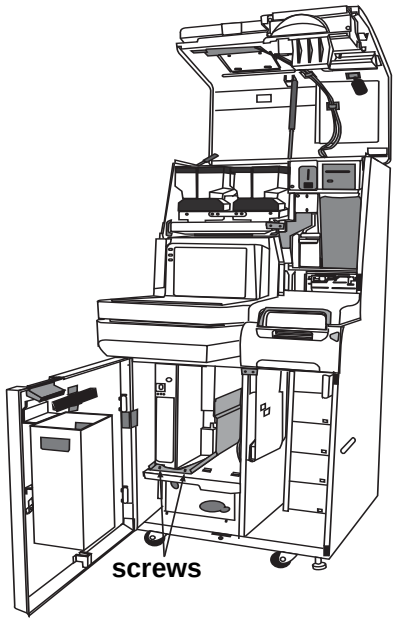


NOTES: *- The power strip removed from the Genesis enclosure, the earth ground connection, and the specific EFT PSU shown are for illustration purposes only.*
- Available NEMA spare outlets (UPS #3,5,6; Power Strip #10 could be used to plug in other Fujitsu-authorized devices. IEC-NEMA adapter 11002433 could be used as needed. See the first Warning on the previous page.

Installing the Standard Bag Scale

The bag scale module is assembled at the U-Scan assembly facility and shipped separately from the main unit. Follow the steps below to secure the bag scale module to the main unit and connect the cable. Instructions on securing the other scale models to the main unit are given later on.

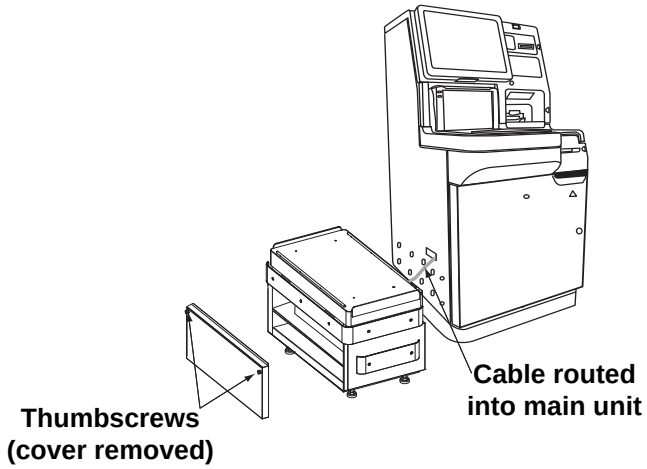
1. Use a Phillips screwdriver to remove the two screws that secure the computer bracket to the shelf.



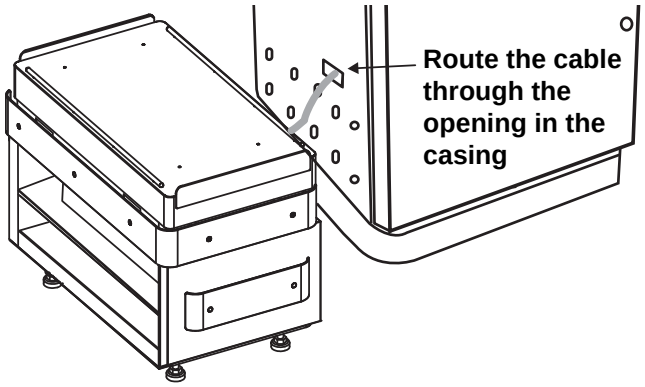
2. Pull out the computer, setting it in front of the Station so that you can access the connectors on the rear of the computer. The cables will have been gathered and tied into a service loop and should be long enough to allow this. Take care not to interfere with the cable bundle when moving the computer.

3. Slide the bag scale module into position. It is installed on the monitor side.

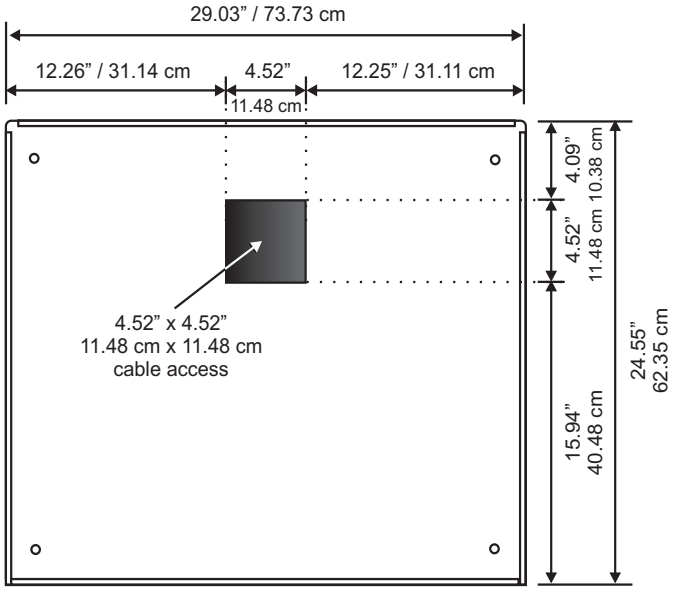
4. Loosen the two thumbscrews on the cover. The cover will be on the front or side, depending on the bag scale configuration (1 bag, or 2 or 4 bags). Remove the cover.



5. Route the bag scale cable from the bag scale module into the cutout on the side of the casing as shown below. Add tie wraps to secure this cable to the inside of the Customer Station casing to keep the cable from getting caught on the computer when it is removed and replaced.



6. If cable access from underneath is required, a knockout is available. In a 4 bag scale, a 4.52” × 4.52” (11.5 cm × 11.5 cm) opening is located toward the rear, as shown below:



Front of 4 Bag Scale
(Overhead View of
Bottom of Unit)

7. Based on the information below, secure the bag scale to the main unit with the M5 x 10 mm SEMS screws (F6-SW2N5-10121) provided:

   a. For a one-bag or two-bag unit, secure four M5 screws from the Bag Scale side into the PEM nuts on the main unit.

   b. For a four-bag unit, secure four M5 screws from the bag scale side into the PEM nuts on the main unit, and two from the inside of the main unit into the PEM nuts on the bag scale module.

8. Replace the bag scale module cover and tighten the thumbscrews.

9. Connect the bag scale communication cable to powered Serial Port 6 of the computer. Attach the cable loosely to the computer cable service loop.
10. Secure the cable in the clamps installed on the inside of the casing.
11. Replace the computer and slide the computer bracket back into the casing. Take care not to pinch or otherwise interfere with the service loop when manipulating the computer.
12. Replace the two screws that secure the bracket to the shelf.

To remove the bag scale, follow the preceding instructions in reverse.

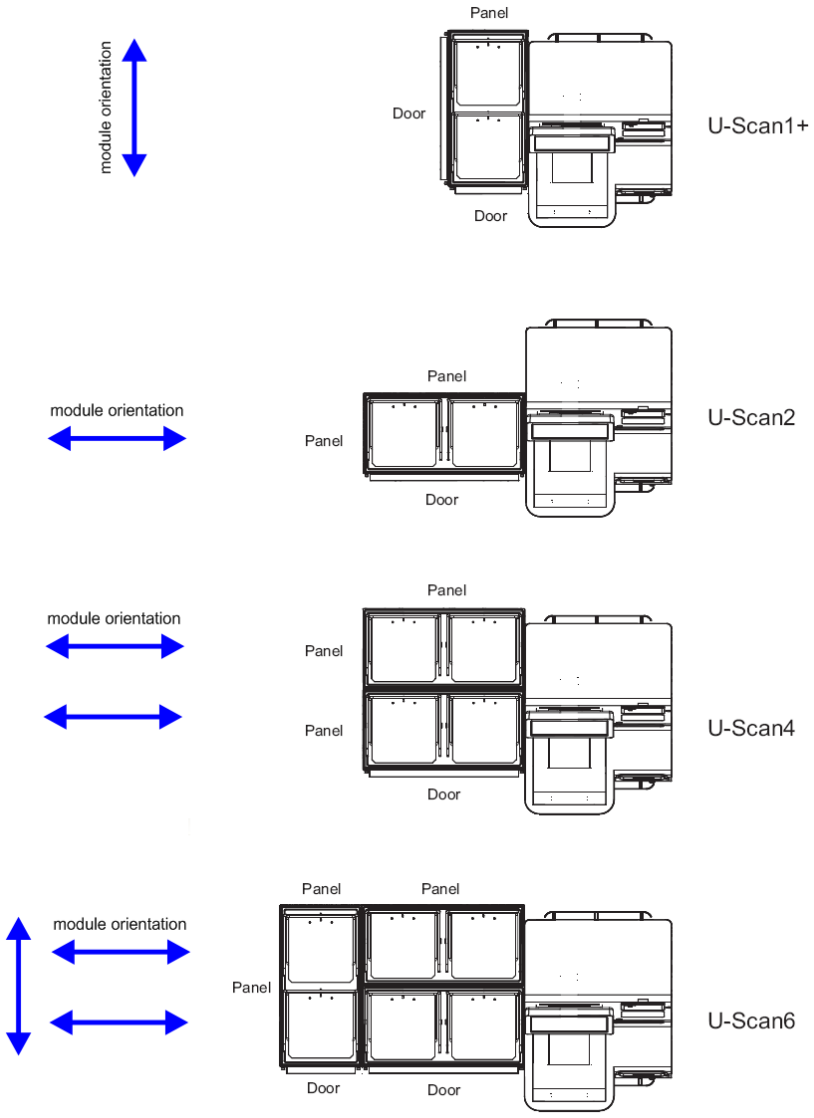
Preparing the Universal Bag Scales

IMPORTANT: This section applies to standard Customer Stations only.
For ANSI A117 (308.3.2) compliant stations, see Chapter 4.

Recommended tools: #2 Phillips screwdriver, tool or implement to clean thread holes, ratchet (M4/M5/M6 sockets) or adjustable wrench, 4' level.

The Universal bag scale modules are assembled at the U-Scan assembly facility and shipped separately from the main unit. Follow the steps in this section to attach the Universal bag scale to the main robot unit and connect the cable(s). Instructions on attaching the other bag scale models to the main unit are given later in this chapter.

The following illustration identifies the default Universal bag scale configurations, and identifies the bag scale door and panel placement:

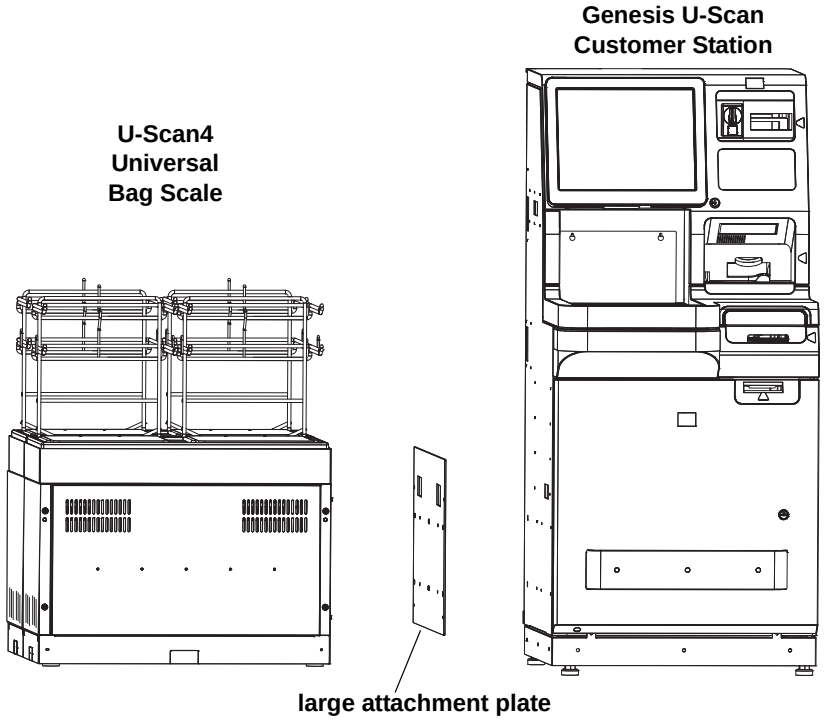


Prepare the Robot unit if necessary

- ***If the attachment plate has been attached*** to the bag scale unit for shipping, you must remove it before proceeding with the rest of the steps in this section. If the attachment plate has been packaged separately with the scale at the Assembly facility, continue to follow the steps in this section.

The attachment plate must be connected to the side of the robot unit. The attachment plate is designed to be used on both right- and left-hand robots. Redundant holes have been machined in order to accommodate both configurations.

> **Caution:** *The Customer Station and the Universal bag scales are shipped separately. If an assembled Station must be relocated, the Universal bag scale unit should be removed from the robot.*



1. Locate the appropriate scale attachment plate (large plate, 11003488, for U-Scan1+, U-Scan4, and U-Scan6; small plate, 11003487, for U-Scan2).
2. Locate four flat head M5 x 10mm screws. For the large attachment plate only, also locate two M5 x 10mm pan head screws.
3. Remove any excess paint from the four threaded holes in the Genesis robot casing that you will be using. This is to prevent the threads from stripping.

   See Figure 3.40 to determine which holes to use on the robot casing. The PEM studs attached to the attachment plate face outward — at the customer site, they will pass through holes in the scale frame and be secured with nuts.

   The following illustration shows the attachment plates and screws for the non-ANSI robot: the blue circles/blue arrows indicate the flat head screw locations. The two red circles (large attachment plate) indicate where the pan head screws are attached from behind, and the red box identifies the robot knockout location.

The dimension is provided as a guideline.

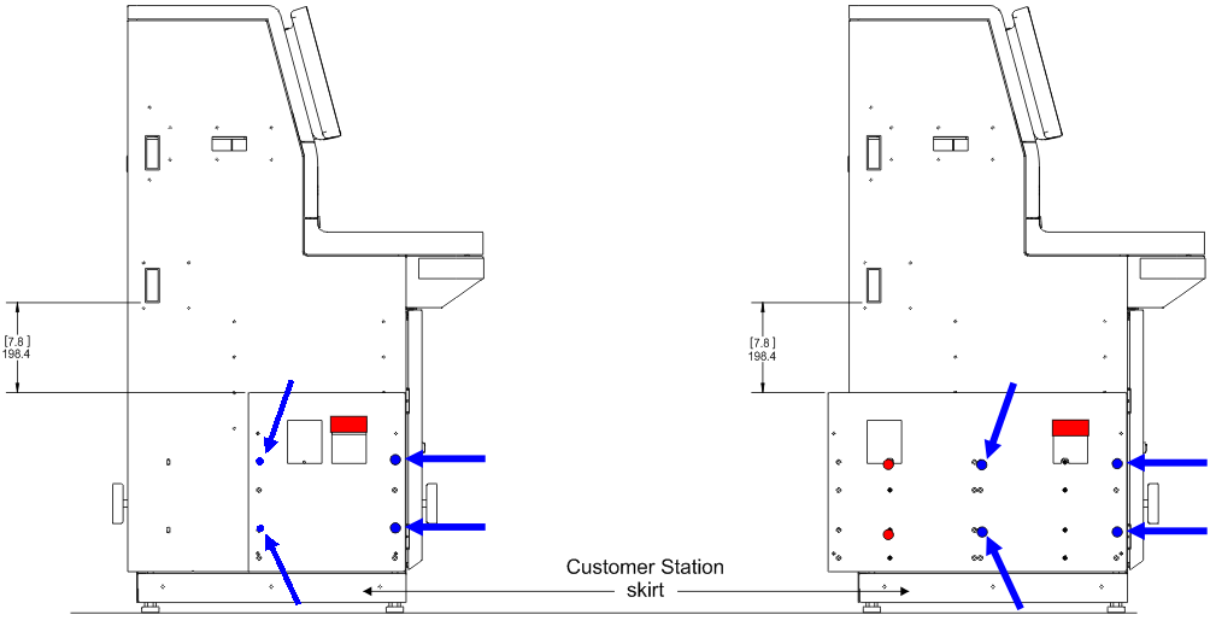
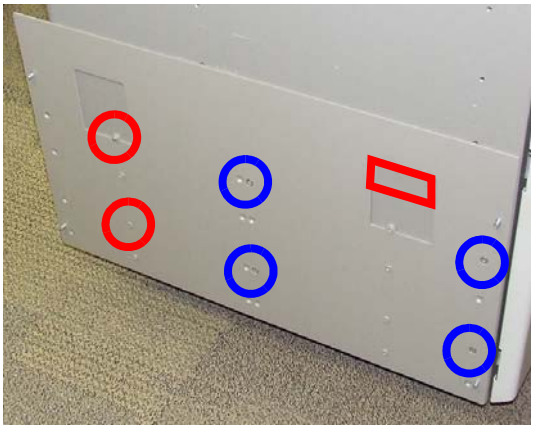


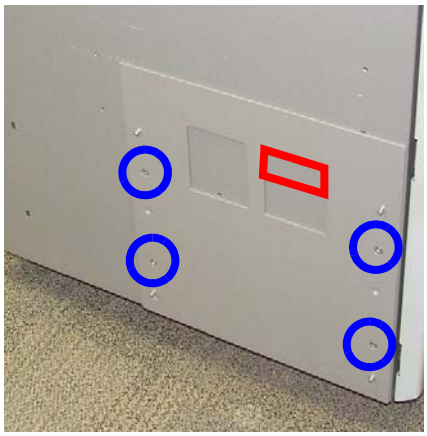
Figure 3.40 Standard Robot attachment points

Secure the appropriate attachment plate to the Customer Station as shown in Figure 3.40 and in the photos below.

large attachment plate, installed (red rectangle indicates cable knockout location)



small attachment plate, installed (red rectangle indicates cable knockout location)



4. Affix a flat head M5 screw to one of the front center holes of the attachment plate and loosely tighten the screw using a Phillips screwdriver or drill. This allows you to pivot the plate to better align the remaining holes:

Photo orientation: front/bottom, Customer Station

5. Attach the three remaining flat head M5 screws. Once each screw is in place, finish tightening them all.

6. If the back panel of the Genesis robot has been installed, remove it as explained in "Removing the Back Panel (Regular Self-Checkout and Payment Stations)" on page 36.

   a. For the large attachment plate only: from the inside of the robot casing, insert two pan head M5 SEMS screws through the slots and screw them into the threaded holes at the back of the attachment plate.

   b. After securing the M5 screws, replace the back panel of the robot. Reaching in from the front of the robot, connect and then tighten the captive screw that secures the panel in place.

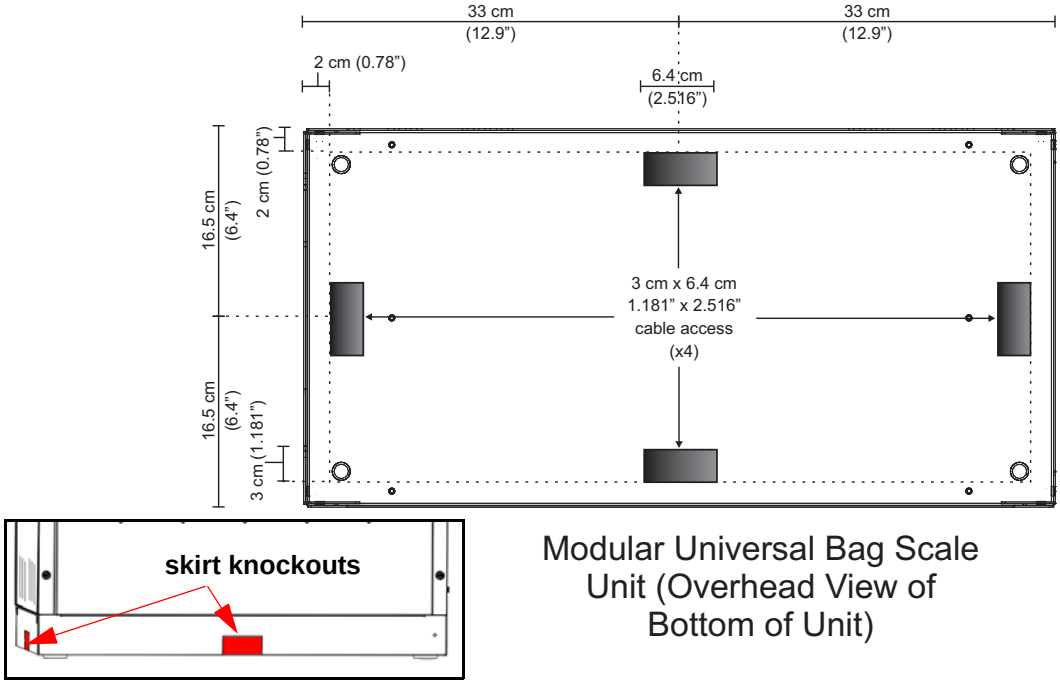
Electrical Connections

WARNING: *Under NO circumstances should electrical wiring be routed into the Customer Station (robot) unit. Provision has been made in the bag scale units for both isolated ground (Customer Station UPS only) and unregulated (Catalina printer, lane light, EAS, etc.) power.*

1. If the power lines are coming from below the station, route the cables through the bottom knockouts on the floor of the bag scale.

2. If the power lines are coming from the side or from above, first route the cables through the mouse hole knockouts in the bag scale skirts, then through the bottom knockouts on the floor of the bag scale.

3. Below are the floor knockout locations for each Universal bag scale module. The skirt mouse hole knockouts, when installed, align with the floor knockouts:



Modular Universal Bag Scale Unit (Overhead View of Bottom of Unit)

4. The recommended power installation is shown below:
   a. One (1) single gang junction box with one isolated 15 amp ground receptacle. ***Only the power cable of the Customer Station UPS*** is to be routed to and connected to this box. The extra outlet should be blocked.

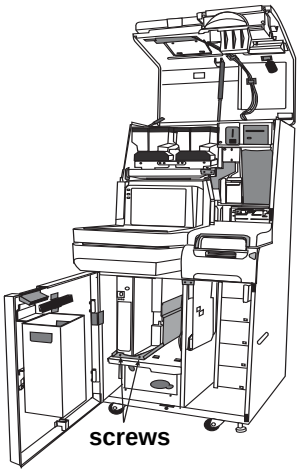
   b. One (1) two gang junction box with four conventional receptacles. All other external devices (such as Catalina printer, lane light, EAS, and so on) should be routed to and connected to this box.

isolated ground junction box

unregulated power junction box

Installing the Universal Bag Scales

1. Use a Phillips screwdriver to remove the two screws that secure the computer bracket to the shelf.



2. Pull out the computer, setting it in front of the Station so that you can access the connectors on the rear of the computer. The cables will have been gathered and tied into a service loop and should be long enough to allow this. Take care not to interfere with the cable bundle when moving the computer.

3. Using a rubber hammer and punch, remove the frontmost knockout on the robot casing (it aligns with the frontmost rectangular hole in the attachment plate).

Large attachment plate: Remove this knockout and route the bag scale cable(s) through the opening

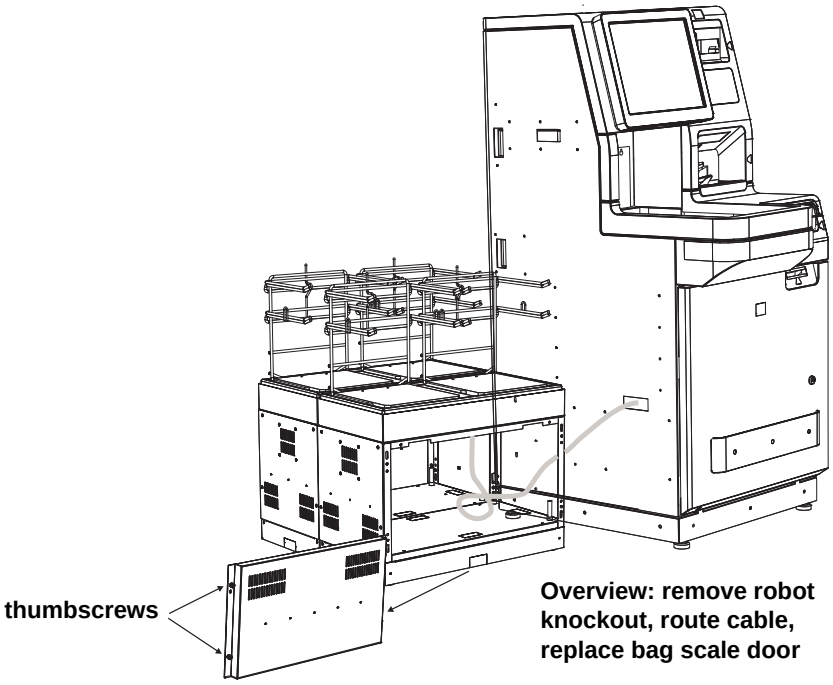
Small attachment plate: Remove this knockout and route the bag scale cable(s) through the opening

4. Position the Universal bag scale unit close to the robot unit on the appropriate side of the robot, according to your work order. The side of the bag scale that connects to the main robot unit has no panel attached.

   The bag scale will have been properly leveled with the height set to match the robot unit. (The height of the bag scale levellers is pre-set during assembly.)

5. Loosen the four thumbscrews on the front door of the bag scale, then remove it.

   (The U-Scan6 bag scale has two front doors — remove the larger door that is installed closest to the main robot unit.)



6. If the optional skirts are used, they must be installed on the bag scale before it is attached to the robot unit. Follow the instructions on page 102 (robot skirts) and page 103 (Universal bag scale skirts).

7. Align the units so that the four PEM studs in the robot's attachment plate pass through the holes in the bag scale frame. Secure them with four M6 Keps nuts.

8. Route the bag scale cable(s) from the bag scale into the front knockout on the side of the robot casing that you removed in step 3. Add tie wraps to secure the cable(s) to the inside of the robot casing to keep the cable from getting caught on the computer when it is pulled out and put back in.

   NOTE: *If you need to access the scale controller, you must remove the bag racks and platter from the Universal bag scale module that is in the front. For a U-Scan6 system, a second scale controller is located in the bag scale module that is farthest from the robot. To access any of the scale bars, you must also remove the bag rack(s) and platter(s).*

9. If applicable, install any required external equipment such as an EAS controller or electrical junction box.

10. Remove the plastic protective film from the bumpers.

Communication connection

1. Connect the bag scale communication cable [TP3K: powered Serial Port 6 (COM22); TP3600 Series: powered Serial Port 3 (COM22)] on the computer.

   a. For a U-Scan6 unit that has two scale transmitters, also connect the cable from the Edgeport1 to USB Port A on the computer.

   b. For a bag scale that will receive an optional second computer, install the computer, connect the supplied KVM unit, and connect the bag scale fan cable to the Y-cable that is attached to the robot fan.

2. Attach the cable(s) loosely to the computer cable service loop.

3. Replace the computer, sliding the computer bracket back into the casing. Take care not to pinch or otherwise interfere with the service loop when manipulating the computer.

Final level check

1. Now the entire unit must be leveled:

   a. Clean the floor as well as the bottoms of all the feet to ensure good contact.

   b. Using the ¼" Allen key or flexible drill bit, turn the foot screws clockwise to lower the feet until they just touch the floor.

Figure 3.41 Leveling the feet

Note that bag scale units with more than two platforms are equipped with additional feet in the middle.

c. Place a 4’ level on the bagging platform. If a 4’ level is not available, you can increase a shorter level’s effective length by placing it on a solid metal bar or other firm flat object.

d. Adjust the feet until the entire unit is level and seated solidly on the floor.

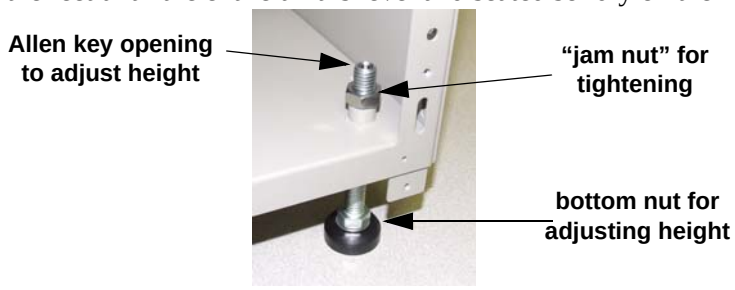


Figure 3.42 Jam nut

e. Tighten the feet hand-tight using the jam nuts.

f. Push against the U-Scan at various points. If the unit moves, continue adjusting the feet until the entire unit is fixed firmly in place.

g. Close the doors on the robot casing. If there are any alignment problems, lay the level across the casing frame. Adjust the feet (of the robot casing only) if necessary until all of the doors close easily.

Figure 3.43 Adjustable feet

h. Tighten all of the feet firmly to their final positions using a wrench on the jam nuts (identified in Figure 3.52 on the previous page).

2. Replace the bag scale door and tighten the four thumbscrews.

3. For a Shekel scale unit, calibrate as explained in Chapter 5.

Removal

To remove the bag scale, follow the preceding instructions in reverse.

IMPORTANT: This section applies to standard Customer Stations only.
For ANSI A117 (308.3.2) compliant stations, see Chapter 4.

Prepare the Robot unit if necessary

Recommended tools: Phillips screwdriver, rubber hammer, punch, tool or implement to clean thread holes, nut driver, ¾" wrench, ¼" Allen key, ratchet, 6" ratchet extension, level.

If the attachment plates have already been attached to the robot at the Assembly facility, ***skip this section*** and continue at "Installing the Mini Carousel Bag Scale Module" on page 71.

Connecting the attachment plates to the Genesis robot is usually done at the Assembly facility. If this has not been done, follow the instructions in this subsection. The attachment plates are designed to be used on both right-and left-hand units. Redundant holes have been machined in order to accommodate both configurations.

1. Locate seven flat-head M5 x 10mm SEMS screws, two pan-head M5 x 10mm SEMS screws, two 5/16" fender (oversized) washers and two serrated hex nuts from the equipment bins. (If this is a single-scale unit, locate seven flat-head screws, four washers and four serrated hex nuts.)

2. Locate the primary scale (lower) attachment plate (11002762), the secondary scale (upper) attachment plate (11002766), and three shim plates (11002768). (If this is a single-scale unit, here will only be one attachment plate and no shims.)

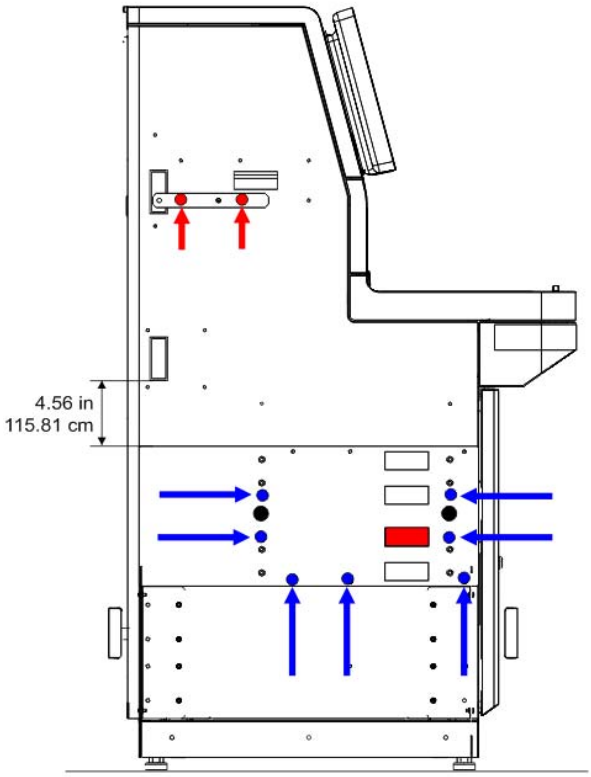
3. Remove any excess paint from the nine threaded holes in the Genesis robot casing that you will be using. This is to prevent the threads from stripping.

   To determine which holes to use on the robot casing, hold the attachment plates against the side of the robot casing that will receive the Mini Carousel scale.

   You will be able to identify the holes on the plate(s) that align with the holes in the robot casing.

The following illustration shows the locations of the attachment plates and screws for the standard robot: the red circles and short red arrows indicate the pan head screw locations; the blue circles and long blue arrows indicate the flat head screw locations, and the red box identifies the robot knockout location. The PEM stud locations are indicated by larger black circles. Note the dimension, which is provided as a guideline.

Upper (Secondary scale) attachment plate



Standard Robot

(Only applicable to two-scale Mini Carousel installation)

1. Affix a flat-head M5 SEMS screw to one side of the upper attachment plate and loosely secure the screw using a Phillips screwdriver. Secure the other M5 screw to the other hole and tighten both screws.

2. For a two scale Mini Carousel installation, add two shim plates (11002768) to the secondary scale attachment plate. At a later point, they will be secured from the inside of the Mini Carousel unit with fender washers, serrated hex nuts, and a third shim plate.

Photo orientation: side/top, scale side of the Genesis robot

Lower (base) attachment plate (Applicable to all Mini Carousel installations)

1. Affix a flat-head M5 SEMS screw to one of the front center holes of the lower attachment plate and loosely tighten the screw using a Phillips screwdriver. This allows you to pivot the plate to better align the remaining holes:

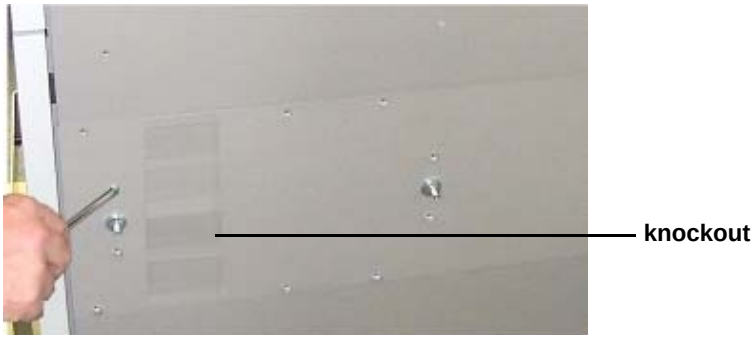


Photo orientation: side/bottom, scale side of the Genesis robot

2. Attach the six remaining flat-head M5 SEMS screws to affix the remaining holes. Once each screw is in place, finish tightening them all.

Installing the Mini Carousel Bag Scale Module

If you are already familiar with the installation procedure for the standard Genesis Carousel, there are a few important differences you should keep in mind when installing the Mini Carousel scale:

- There is an additional attachment plate for a two scale unit. Three shims are employed, as described on page 87. (Two are located between the robot and the scale, and a third is located inside the scale unit).
- The center bolt assembly is different for the Mini Carousel. The thrust bearing is sandwiched between two washers and installed ***above*** the platter as shown on page 92 (rather than underneath the platter, which is the case for the standard Genesis Carousel scale).

- The unit has adjustable feet rather than casters, so it cannot be rolled into position during installation. The jam nuts on the feet are located ***underneath*** the Mini Carousel unit (whereas they are located ***inside*** the standard Genesis Carousel unit).

Remove the Mini Carousel from the Shipping Pallet

1. The Mini Carousel unit arrives on site on a shipping palette. The recommended procedure for removing the unit from the pallet is for one person to tilt the unit while another person pulls the pallet away:

   a. Remove any packaging material and unscrew the four anchoring plates from the pallet.

   b. Gently slide the Mini Carousel off the pallet so that the unit's levellers touch the floor.

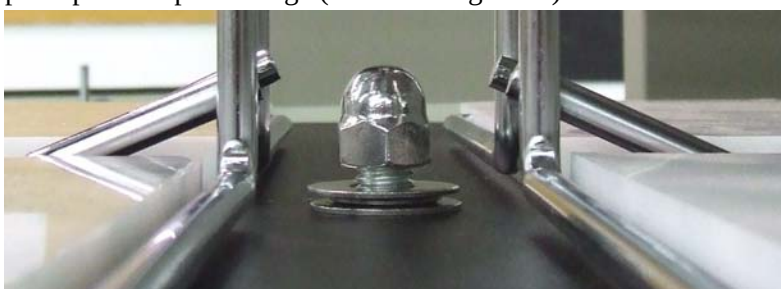
   c. Tilt the Mini Carousel back so that the front levelers are not touching the pallet.

   d. Hold the unit steady while another person slides the pallet out and way from the Mini Carousel.

   e. Gently lower the Mini Carousel onto the floor and slide it into its approximate final position, but not up against the Genesis robot yet.

Initial preparations

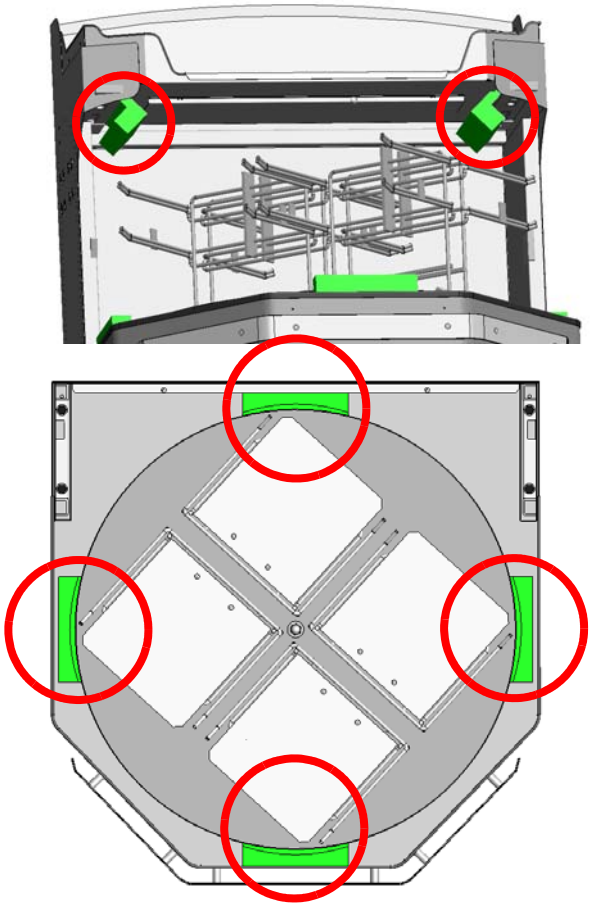
1. You will need to remove the rotating platter before continuing. To do so, undo the center bolt acorn nut and note the locations of each hardware component as shown below. Carefully pull up on the platter edge (or on the bag racks) from two sides and set it aside.



2. Locate the transportation safety features:

   a. For an RL Scales unit: remove the protective padding, tape, and wooden blocks that prevent the four stopper bolts on the bottom bars of the scale unit from hitting the top bars of the scale.

   b. For a Shekel Scales unit: remove the six protective foam inserts, which are installed between the upper platform and the platform supports at each end, and at the four cardinal points around the rotating platter, as indicated by the green blocks below:



3. Locate the attachment plates that have already been installed on the appropriate side of the Customer Station (robot). Remove any protective material from the four PEM studs.

Caution: *The Customer Station and the Mini Carousel bag scale are shipped separately. If an assembled Station must be relocated, the Mini Carousel unit must be removed from the robot.*

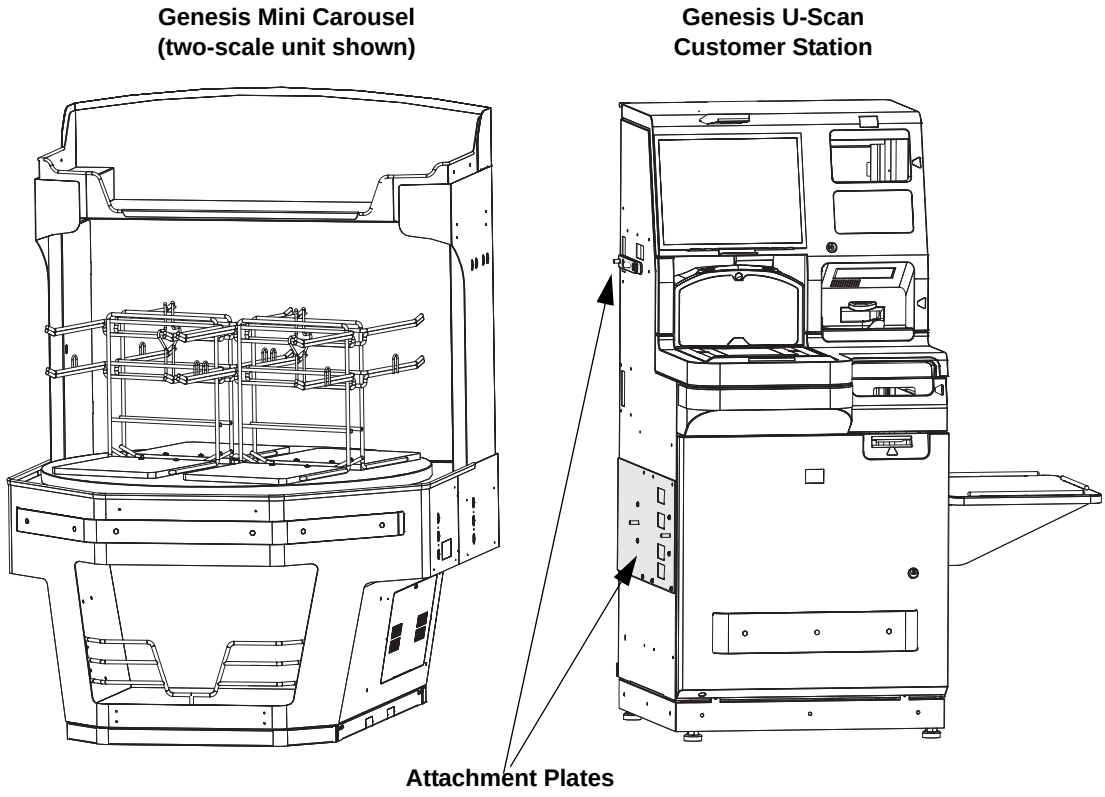


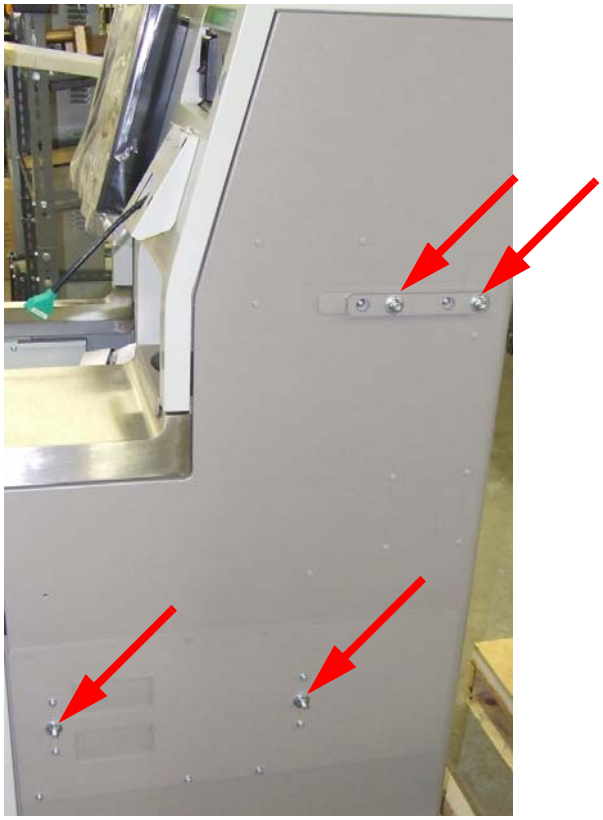
Figure 3.44 Genesis Customer Station and Mini Carousel scale

NOTE: *Note: if the attachment plates have not be installed on the robot unit, attach them as explained at the beginning of this section.*

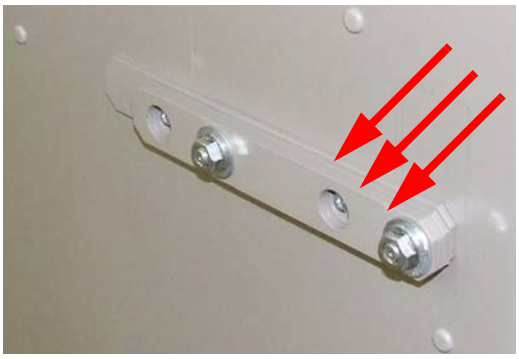
Identify the pre-installed hardware

The hardware required for the U-Scan Genesis Mini Carousel installation has been pre-installed for re-use on site.

1. Locate, remove and set aside the serrated nuts and fender washers that were attached to the PEM studs on the two attachment plates on the robot. Set them aside.

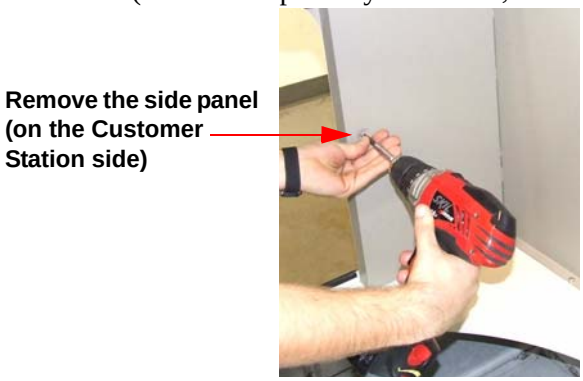


2. For a two-scale Mini Carousel installation, locate, remove and set aside the third shim that was attached to the two PEM studs on the upper attachment plate on the robot unit. Leave two of the shims on the robot, as shown below on the right.



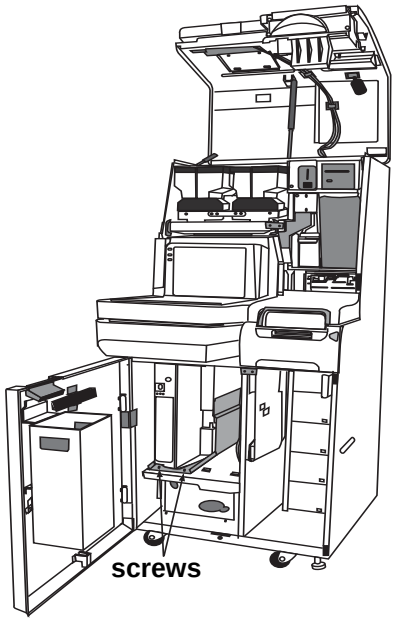
3. Level the Customer Station (see page 109) and the Mini Carousel (see page 88) as necessary.

4. For a two-scale Mini Carousel installation, remove the side panel that is closest to the Customer Station (it is held in place by one screw, in the middle).



Remove the Customer Station knockout

1. Use a Phillips screwdriver to remove the two screws that secure the computer bracket to the shelf.



2. Pull out the computer, setting it in front of the Station so that you can access the connectors on the rear of the computer. The cables will have been gathered and tied into a service loop and should be long enough to allow this. Take care not to interfere with the cable bundle when moving the computer.

3. Using a punch tool and a rubber hammer, knock out the rectangular knockout on the robot that aligns with the second-from-the-bottom rectangular opening on the lower attachment plate (the knockouts are identified on page 71). Be careful not to damage any of the internal components.

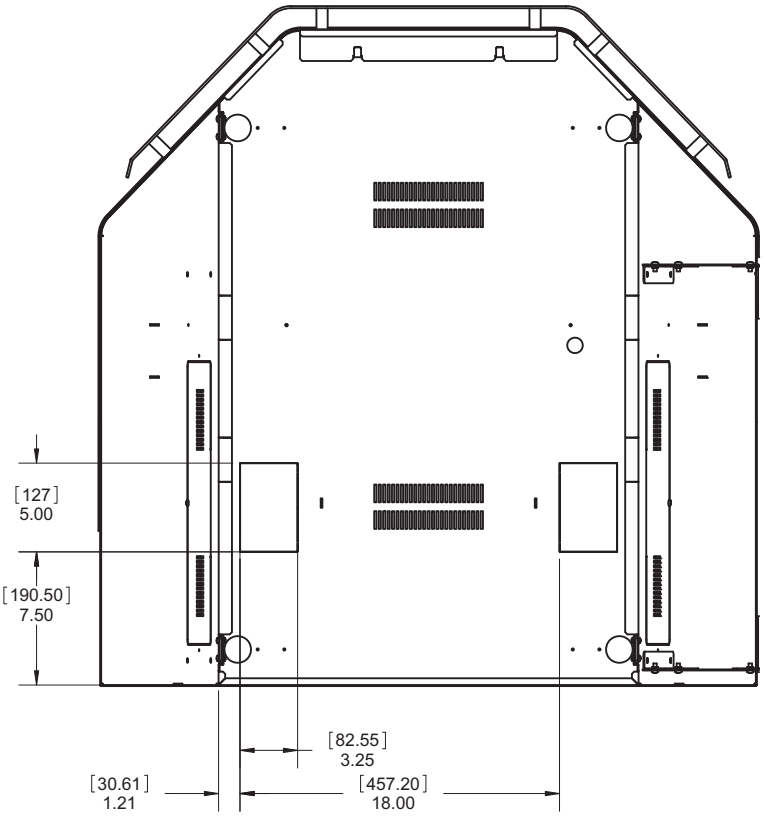
Electrical Connections

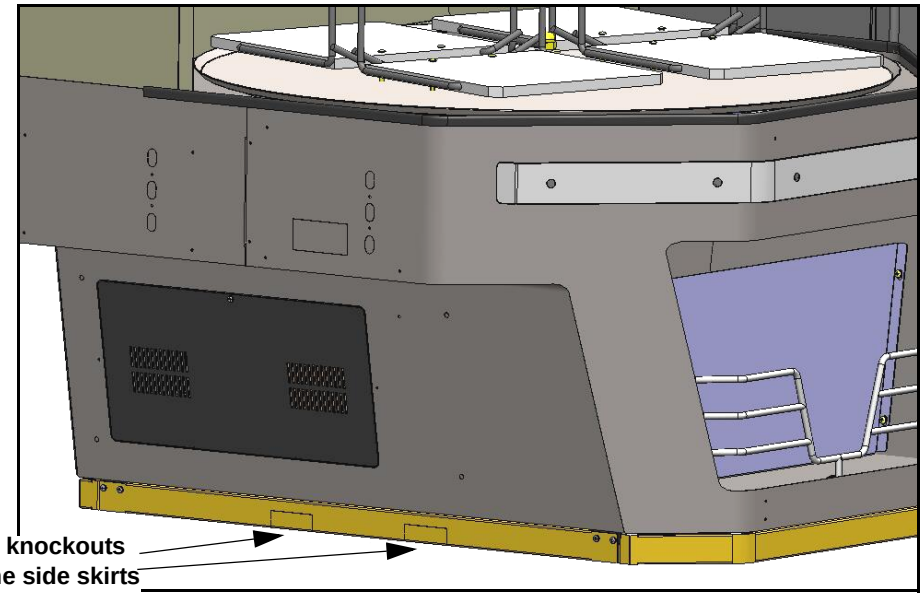
WARNING: *Under NO circumstances should electrical wiring be routed into the Customer Station (robot) unit. Provision has been made in the bag scale units for both isolated ground (Customer Station UPS only) and unregulated (Catalina printer, lane light, EAS, etc.) power.*

1. If the power lines are coming from below the station, route the cables through the bottom knockouts on the floor of the bag scale.

2. If the power lines are coming from the side or from above, first route the cables through the mouse hole knockouts in the bag scale skirts, then through the bottom knockouts on the floor of the bag scale.

3. Below are the floor knockout locations for the Mini Carousel. The skirt mouse hole knockouts, when installed, align with the floor knockouts:





4. The recommended power installation is shown below:
   a. One (1) single gang junction box with one isolated 15 amp ground receptacle. ***Only the power cable of the Customer Station UPS*** is to be routed to and connected to this box. The extra outlet should be blocked.

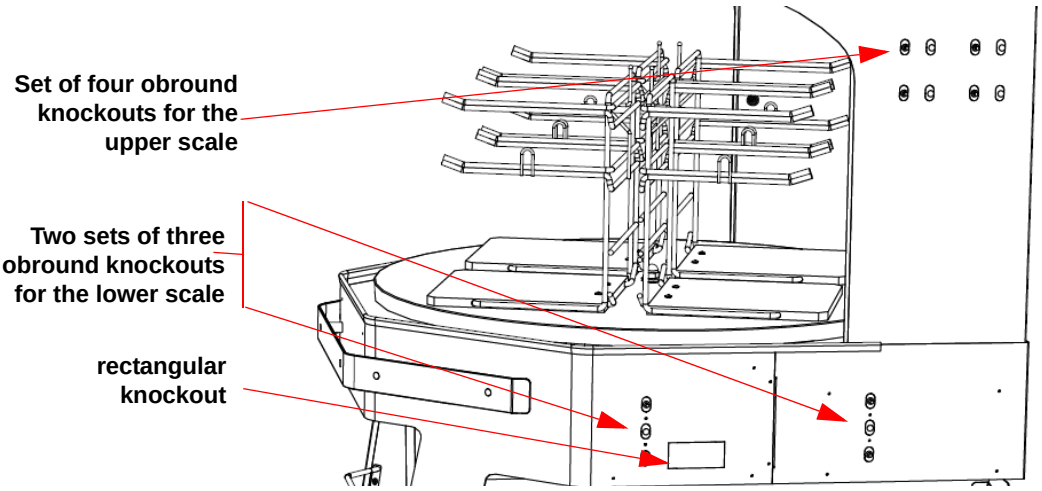
   b. One (1) two gang junction box with four conventional receptacles. All other external devices (such as Catalina printer, lane light, EAS, and so on) should be routed to and connected to this box.

isolated ground junction box

unregulated power junction box

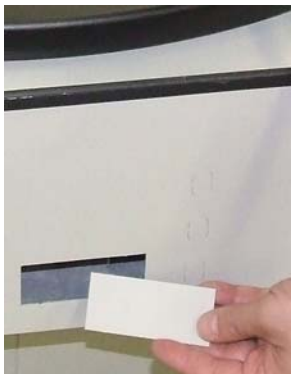
Remove the unit connection knockouts

1. Locate the six laser knockout mounting holes and the rectangular serial cable opening on the Mini Carousel unit, on the side that will face the Customer Station. For a two-scale Mini Carousel installation, also locate the four additional knockout mounting holes:



NOTE: *The knockouts pointed to above are used in a standard installation. The other remaining knockouts are for the ANSI A117.1 (308.3.2) installation (see Chapter 4).*

2. Using a rubber hammer and punch tool, punch out the rectangular knockout which is the exit for the serial cable from the scale transmitter.



3. Then punch out the six obround knockouts beside the rectangular knockout (three on each side). They line up with the attachment plate studs and screws that are located on the side of the Customer Station.

4. The following photograph shows the lower knockouts removed:

5. For a two scale Mini Carousel installation, punch out the lower set of four obround knockouts on the side of the Mini Carousel unit.

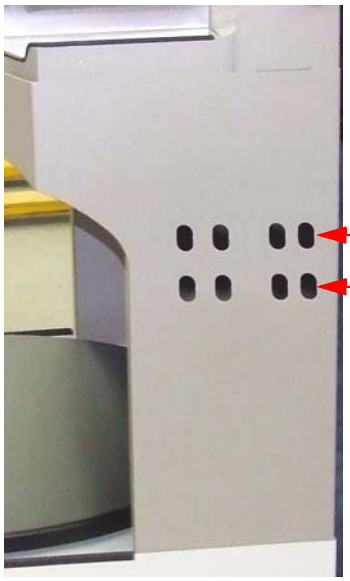
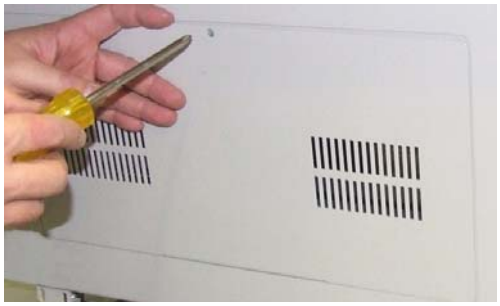


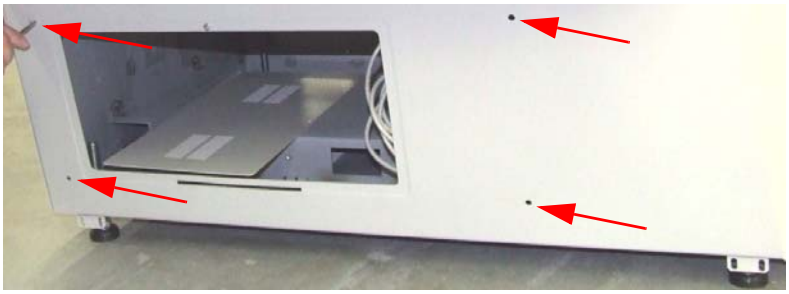
Photo orientation: side/top, robot side of the Mini Carousel

Remove the optional trim plate knockouts

1. Only perform these steps if the optional trim plates will be installed.
2. Remove the side panel on the base of the Mini Carousel ***that corresponds to the side that the robot will be attached to***.



3. Punch out the four small round knockouts on the lower side of the Mini Carousel base, as shown below.

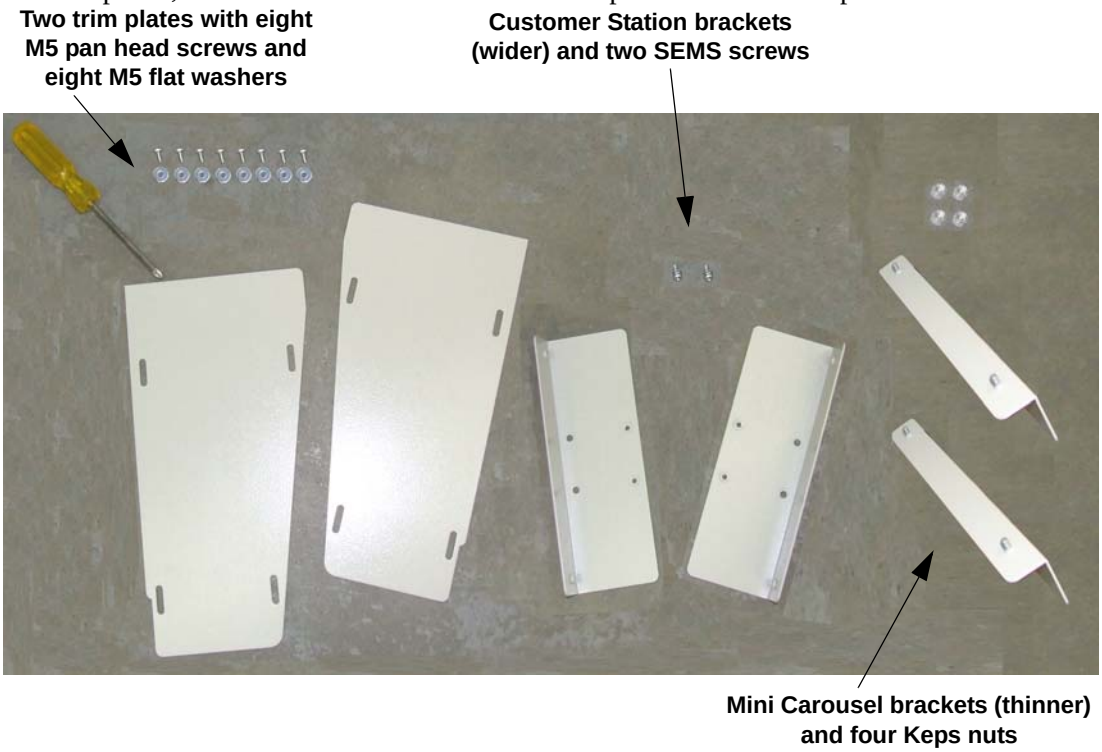


4. Punch out the rectangular knockout which is the exit for the serial cable from the scale transmitter. Then punch out the six obround knockouts (they line up with the attachment plate studs and the screws that are located on the side of the robot).

Optional trim plates

1. The trim plates fill the gap between the Customer Station and the Mini Carousel units at floor level. They are held in place by four brackets that you must install (two on the Customer Station and two on the Mini Carousel unit).

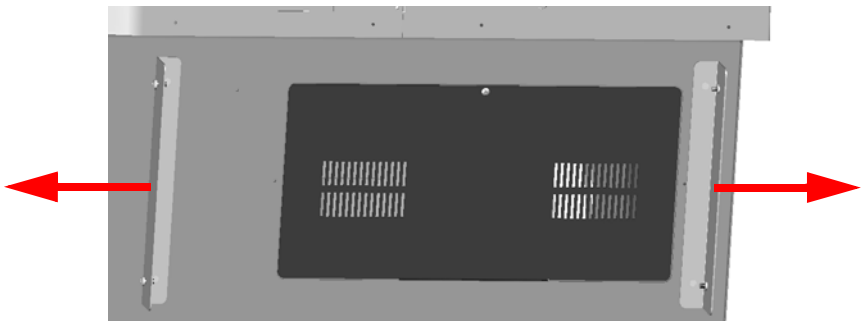
2. Locate a Mini Carousel trim plate kit (11002911S-2), which contains 2 thinner brackets that attach to the Mini Carousel unit, two wider brackets that attach to the Customer Station (robot), two trim plates, x8 M5 pan head screws and x8 M5 flat washers for the trim plates, x2 M5 SEMS screws and x4 M5 Keps nuts for the trim plate brackets.



Attach the brackets to the Mini Carousel

3. Attach the two thinner brackets to the small holes near the bottom of the Mini Carousel that you punched out earlier.

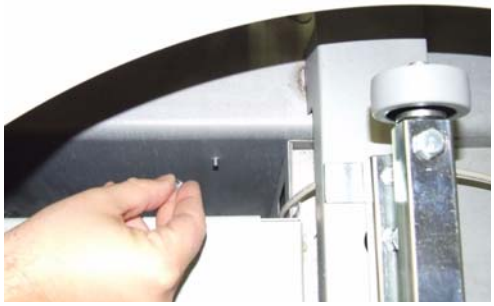
   Positioning information: the two PEM studs on each bracket are inserted into the holes, and the protruding sides of the brackets are closest to the exterior, in the front and in the rear:



4. Back bracket: position one of the thinner brackets over the two holes towards the back of the Mini Carousel that will receive the bracket PEM studs. Reach around through the side panel opening to attach the Keps nuts. Tighten the nuts with a wrench.

5. Front bracket: position the other thinner bracket over the other two holes that will receive the bracket PEM studs.

6. Reach through the top to attach the Keps nuts. Tighten the nuts with a wrench (note: RL Scales version depicted below).



Attach the brackets to the Genesis robot

1. Locate the attachment plate that has been installed near the bottom of the Customer Station. The Mini Carousel unit attaches to the Customer Station by means of this plate.

   Position information: as was the case with the Mini Carousel unit, the brackets are aligned on the robot with the protruding sides of the brackets closest to the exterior, in the front and in the rear.

Only the lower holes will be used, as indicated by the two circles in the following illustration.

2. At the front, you should see a small round M5-threaded hole, just underneath the part of the attachment plate that has two rectangular openings. If the threaded hole has been covered by a plastic plug, remove it.

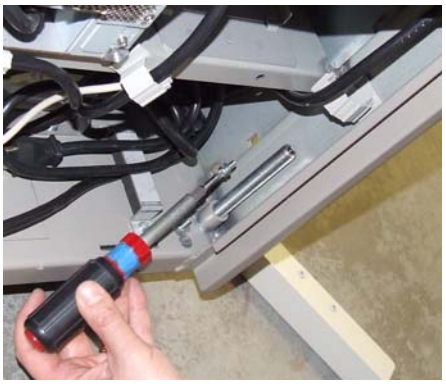
3. Secure one of the wider brackets to the side of the Customer Station using one M5 pan head screw, attached from the outside, to the lower hole next to the protruding side of the bracket (see the arrow in the photo on the right, below). Tighten the screw until the bracket is firmly attached.

4. Remove the back panel of the Customer Station, as explained in “Removing the Back Panel (Regular Self-Checkout and Payment Stations)” on page 36.

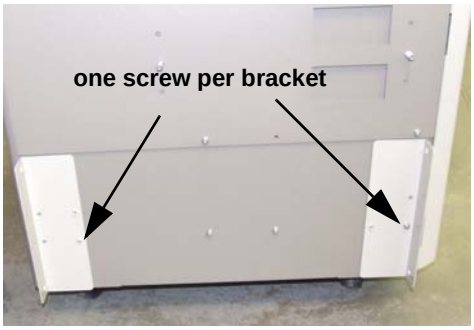
5. At the rear of the Customer Station, on the side that will receive the Mini Carousel, you should see a small obround hole just underneath the back end of the attachment plate. You will be attaching the M5 screw from the inside of the Customer Station.

   a. Insert the screw into the obround hole, from inside the robot.

b. Align the bracket so that the tip of the screw makes contact with the lower hole on the bracket.



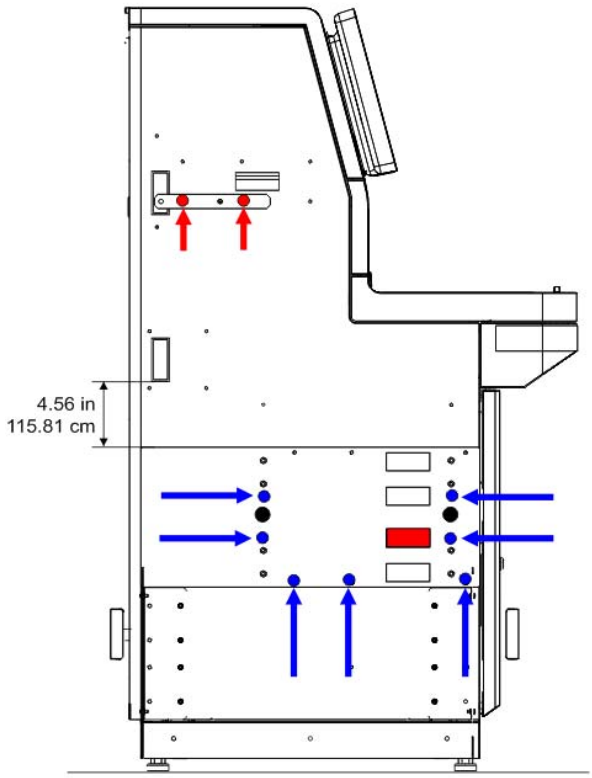
c. Tighten the screw until the bracket is firmly attached.



Connect the units

1. Push the Mini Carousel scale over to the Genesis Customer Station. Mate the units together and verify that the two protruding PEM studs align with the obround slots in the wall of the Mini Carousel.
2. For a two-scale Mini Carousel installation, you will also align the PEM studs on the upper attachment plate (with two shims attached) with the openings in the wall of the Mini Carousel unit.

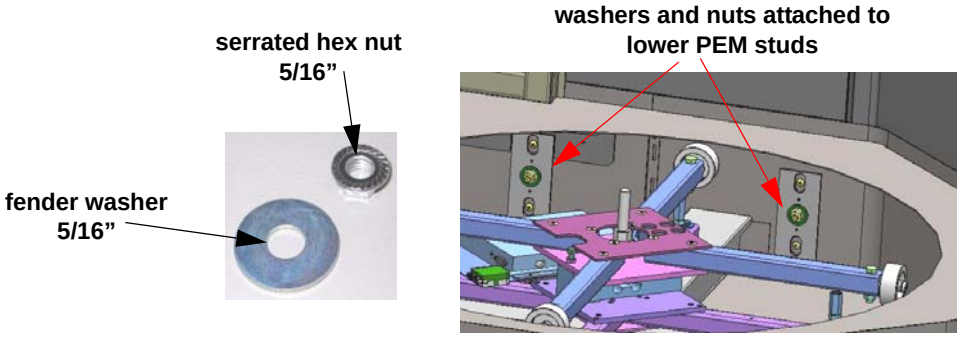
The following illustration shows the attachment plates and screws for the standard robot: the blue circles/blue arrows indicate the flat head screw locations. The two red circles (upper attachment plate) indicate the pan head screw locations, and the red box identifies the robot knockout location. The dimension is provided as a guideline.



Standard Robot

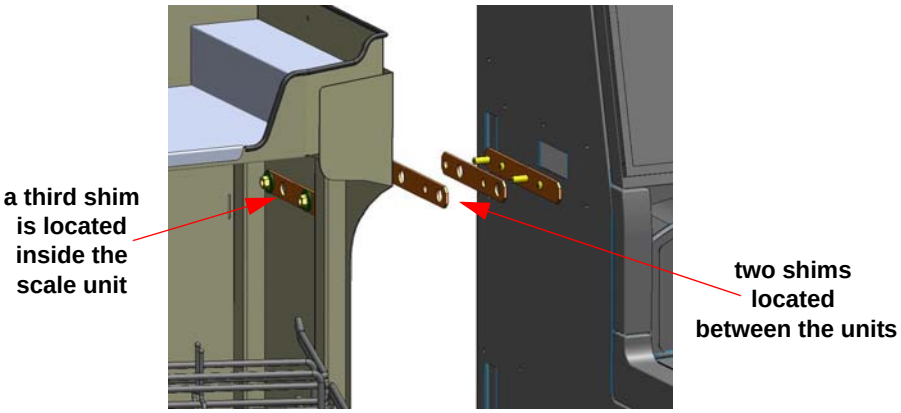
3. Some additional leveling of the units may be required, although the rounded openings allow for a certain amount of movement for adjustment.

4. Secure the Mini Carousel to the lower attachment plate on the robot using the two serrated hex nuts and fender washers that you removed from the PEM studs on the robot's attachment plates. Note that the serrations provide additional 'bite' to help secure the unit (note: RL Scales version depicted below).

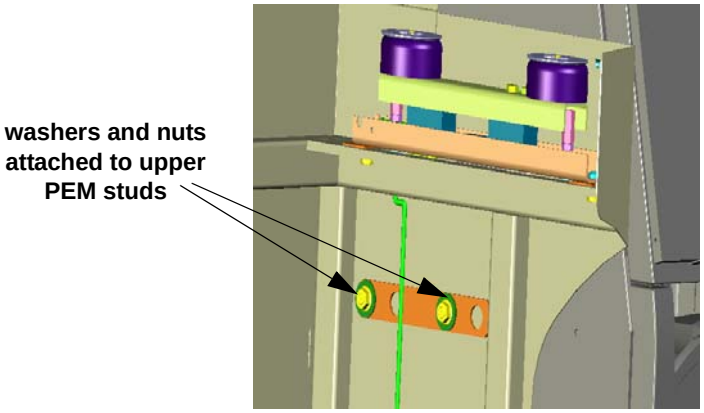


5. For a two-scale Mini Carousel installation, place the third shim that you removed earlier inside the wall of the Mini Carousel, over the PEM studs that protrude in from the upper attachment plate.

6. The shim alignment sequence is illustrated below:

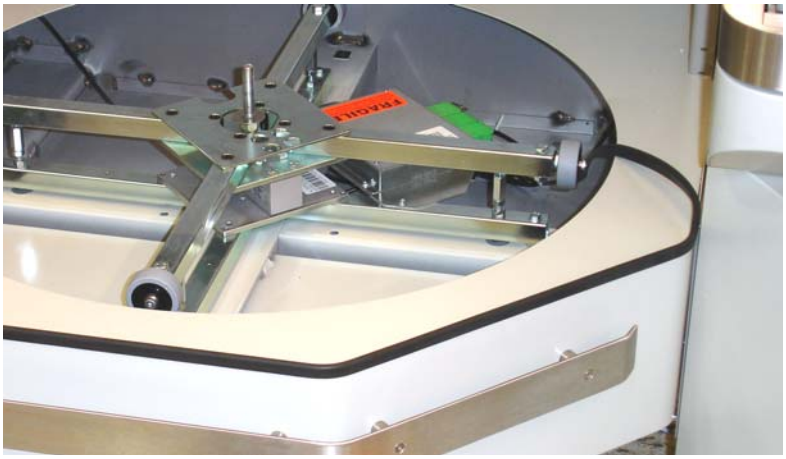


7. Attach a fender washer and serrated hex nut to each of the two PEM studs (hand tight) on the upper attachment plate.

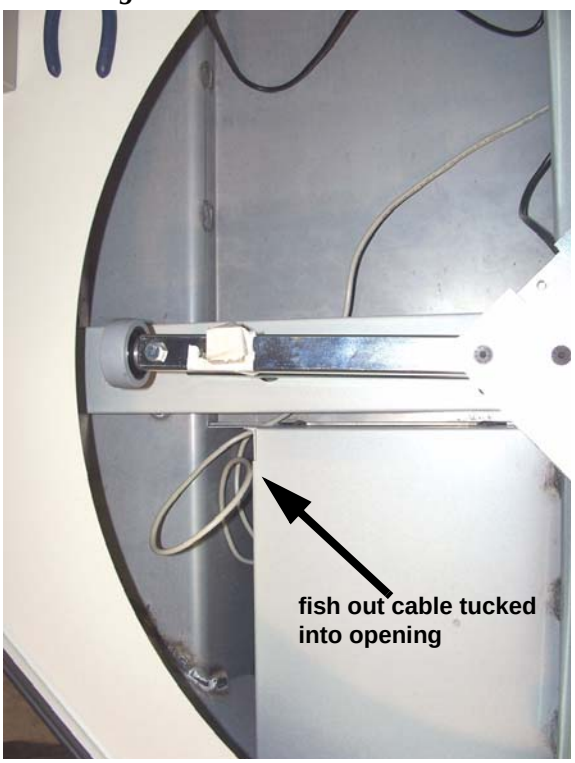


8. Pull back the trim strip on the robot side of the Mini Carousel casing. Once connected to the robot, if possible, the trim strip should be wedged back into place.

   If this is not possible, the trim strip should be cut where it meets the robot casing (note: RL Scales version depicted below).



9. Locate the serial cable in the scale well. It has been temporarily tucked into an opening on the drip tray for testing (note: RL Scales version depicted below).
This is not the final cable routing to the Customer Station.



10. Carefully extract the power and data serial cable from the opening under the primary scale.
11. Route the scale cable ***through the aligned rectangular knockout openings*** in the Mini Carousel and robot frames.
12. Attach the cable loosely to the computer cable service loop.
13. Replace the computer, sliding the computer bracket back into the casing. Take care not to pinch or otherwise interfere with the service loop when manipulating the computer.
14. For a bag scale that will receive an optional second computer, install the computer, connect the supplied KVM unit, and connect the bag scale fan cable to the Y-cable that is attached to the robot fan.

Final level check

1. Perform a final check for level of the entire unit. There are a total of 60.7 inches (154.2 cm) for the combined U-Scan robot and Mini Carousel:
   a. Place a level on the crossbars, or on level areas of the weight bar arms. You can increase the effective length of a level that is too short by placing it on a solid metal bar or other firm flat object.
   b. Clean the floor as well as the bottoms of all the feet to ensure good contact.

c. If necessary, adjust the feet until the entire unit is level and seated solidly on the floor.

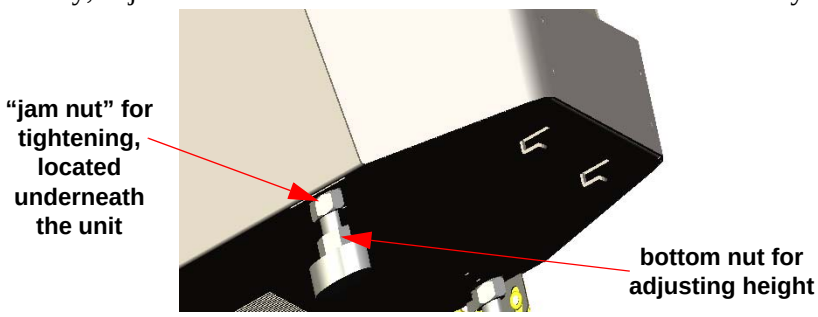


Figure 3.45 Jam nut

d. Tighten the feet hand-tight using the jam nuts, which are located under the floor of the Mini Carousel casing.

e. Push against the U-Scan at various points. If the unit moves, continue adjusting the feet until the entire unit is fixed firmly in place.

Skirt kits

1. If the optional skirt kits are required, ***install them now***.
2. Follow the instructions on page 102 (Customer Station) and page 106 (Mini Carousel unit), then continue with the next subsection.

NOTE: *The photographs which follow do not show the installed skirt kits.*

Trim Plates

Attach the front trim plate to the brackets

1. You will notice that the trim plate brackets are aligned to receive the trim plates.

2. Position a trim plate so that it aligns with the attachment holes on the brackets.

3. Loosely secure the trim plate to the front brackets using four M5 pan head screws and four M5 washers per trim plate.

   Each trim plate has four obround slots that allow them to be adjusted up and down, in case the U-Scan Station needs to be re-levelled, or raised or lowered (only if no skirts are installed).

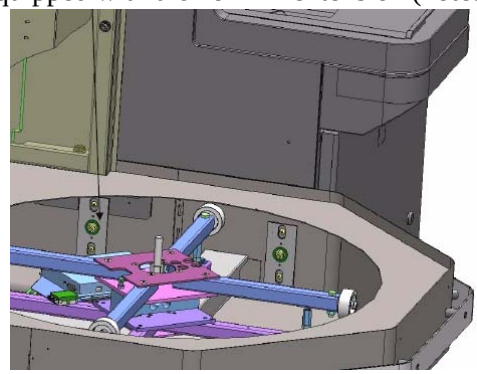
4. Leave the screws slightly loose until both the front and rear trim plates have been installed.

Attach the rear trim plate to the brackets

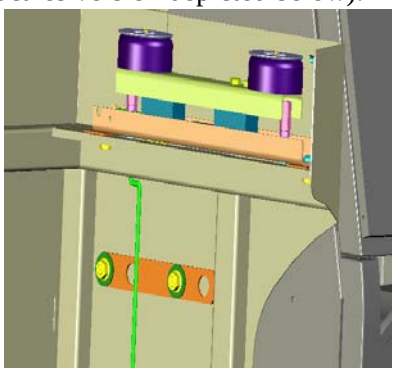
1. Position the other trim plate so that it aligns with the attachment holes on the brackets.
2. Loosely secure the trim plate to the rear brackets using four M5 pan head screws and four M5 washers per trim plate.

Each trim plate has four obround slots that allow them to be adjusted up and down, in case the U-Scan Station needs to be re-levelled, or raised or lowered (only if no skirts are installed).

3. Now that the trim plates have been loosely attached, tighten all four serrated hex nuts using a ratchet equipped with a 6” or 12” extension (note: RL Scales version depicted below).



Lower attachment (hex nuts)



Upper attachment (shim and hex nuts)

4. Now make sure that both trim plates are flush to the floor. Secure them tightly with the eight M5 pan head screws.

5. Replace the rear panel of the Customer Station (main robot unit). Align the rear panel and push in and down. Remember to tighten the captive screw you loosened when removing the back panel

Replace the Scale Platters

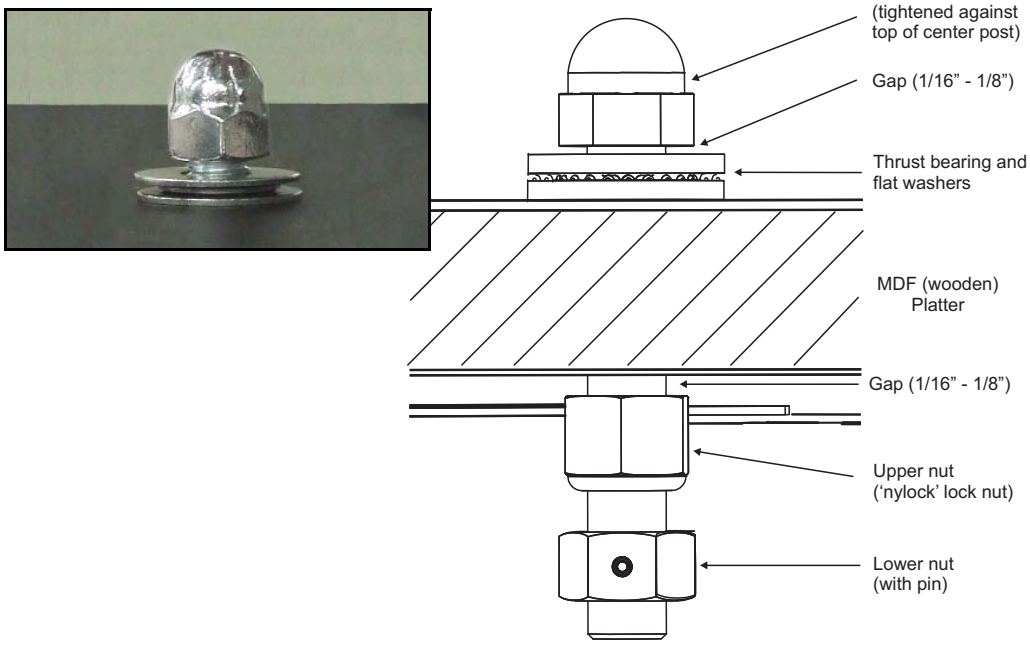
Secondary Scale (two scale Mini Carousel unit only)

1. Install the secondary scale platter.

Primary (Rotating) Scale

1. Install the primary scale platter.

2. Replace the two flat washers and thrust bearing that you removed from the center bolt as explained on page 73.



3. Ensure that there is a 1/16” to 1/8” gap between the acorn nut and the top of the topmost washer.

4. Secure the acorn nut tool-tight.

   The U-Scan Mini Carousel is fully attached to the Genesis Customer Station. Please refer to the Caution on page 96 should the assembled Customer Station ever need to be relocated.

5. For a Shekel scale unit, calibrate as explained in Chapter 5.

Removal

To remove the Mini Carousel Scale unit, follow the preceding instructions in reverse.

Preparing the Carousel Bag Scale Module

Recommended tools: Phillips screwdriver, rubber hammer, punch, tool or implement to clean thread holes, nut driver, ¾" wrench, ¼" Allen key, ratchet, 6" ratchet extension, 4' level.

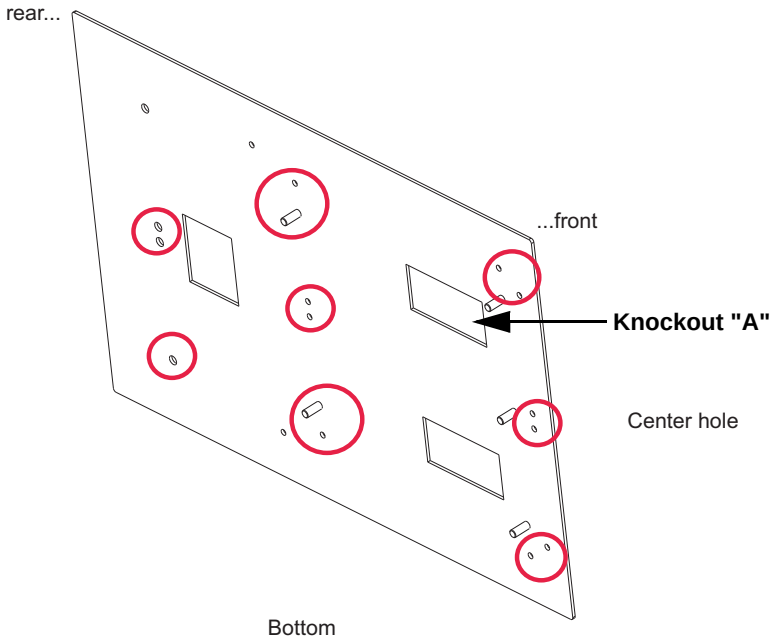
Prepare the Robot unit if necessary

If the attachment plate has already been attached to the robot at the Assembly facility, *skip this section* and continue at "Remove the packing materials" on page 96.

Connecting the attachment plate to the Genesis robot is usually done at the Assembly facility. If this has not been done, follow the instructions in this subsection. The attachment plate is designed to be used on both right-and left-hand units. Redundant holes have been machined in order to accommodate both configurations.

1. Locate the six pan-head M5 x 10mm SEMS screws (F6-SW2N5-10121), five 5/16" fender (oversized) washers (11002853) and five serrated hex nuts (11002206) that were provided with the Carousel unit.
2. Locate the attachment plate, shown below.
3. Remove any excess paint from the six threaded holes in the Genesis robot casing that you will be using, and the two threaded holes in the transition box that you will be using. This is to prevent the threads from stripping.

   To determine which holes to use on the robot casing, hold the attachment plate (11001890) against the side of the robot casing that will receive the Carousel scale. You will be able to identify the holes on the plate that align with the holes in the robot casing, as well as the knockout locations.



4. Affix a pan-head M5 screw to the front center hole of the attachment plate and loosely tighten the screw using the Phillips screwdriver. This allows you to pivot the plate to better align the remaining holes:

Photo orientation: front, at side of Station that will receive the Carousel bag scale

5. Attach the five pan-head M5 screws to affix the remaining front and center holes (the two holes at the rear are attached from inside the Genesis robot casing through to the Carousel unit's transition box). Once each screw is in place, finish tightening them all.

6. Affix the final two pan-head M5 screws to the Carousel unit's transition box. These screws will be removed and reused on site during installation.

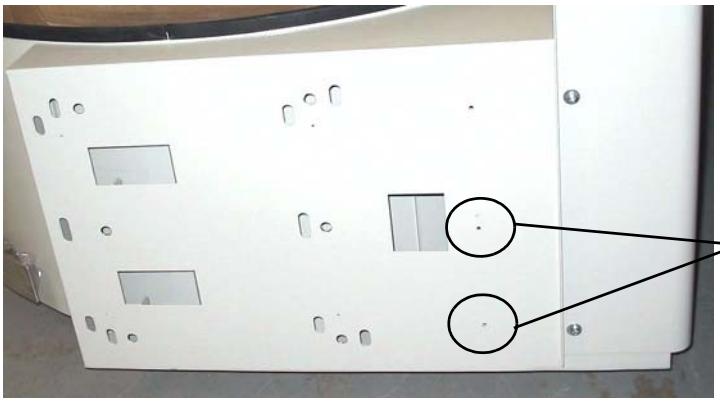


Photo orientation: side of the Carousel scale that will connect to the robot

7. Attach a fender washer and serrated hex nut to each of the five PEM studs (hand tight).

8. Drill out the two holes (top and bottom) at the rear of the robot casing that will be used to attach the Primary Guard.

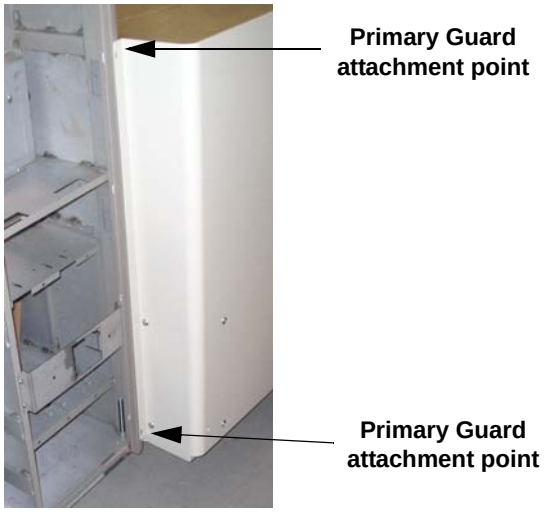


Photo orientation: rear

9. Release the drum scale platter by removing the acorn nut and washer located in the center. Set them aside.

10. Lift off the bag rack support and set it aside. Lift off the platter and set it aside. Remove the thrush bearing and flat washer from the center bolt and set them aside.

11. Using a rubber hammer, reach into the Carousel and knock out the four access knockouts on the wall of the Carousel. This will provide bolting access to the PEM studs that will join the two units together.

Remove the packing materials

1. Release the drum scale platter by removing the acorn nut and washer located in the center. Set them aside.
2. Lift off the bag rack support and set it aside. Lift off the platter and set it aside. Remove the thrush bearing and flat washer from the center bolt and set them aside.
3. Locate the Carousel bag scale mechanism. Remove the protective padding that prevents the four stopper bolts on the bottom bars of the scale unit from hitting the top bars of the scale.
4. Lubricate the wheels with a thin film of Alvania EP grease (14 oz. tube, part number 5100006035) on each wheel, and on the bolts and washers.
5. Locate the attachment plate that has already been installed on the appropriate side of the Customer Station (robot). Remove any protective material from the five PEM studs.

Caution: *The Customer Station and the Carousel bag scale are shipped separately. If an assembled Station must be relocated more than a few feet, the Carousel unit must be removed from the robot.*

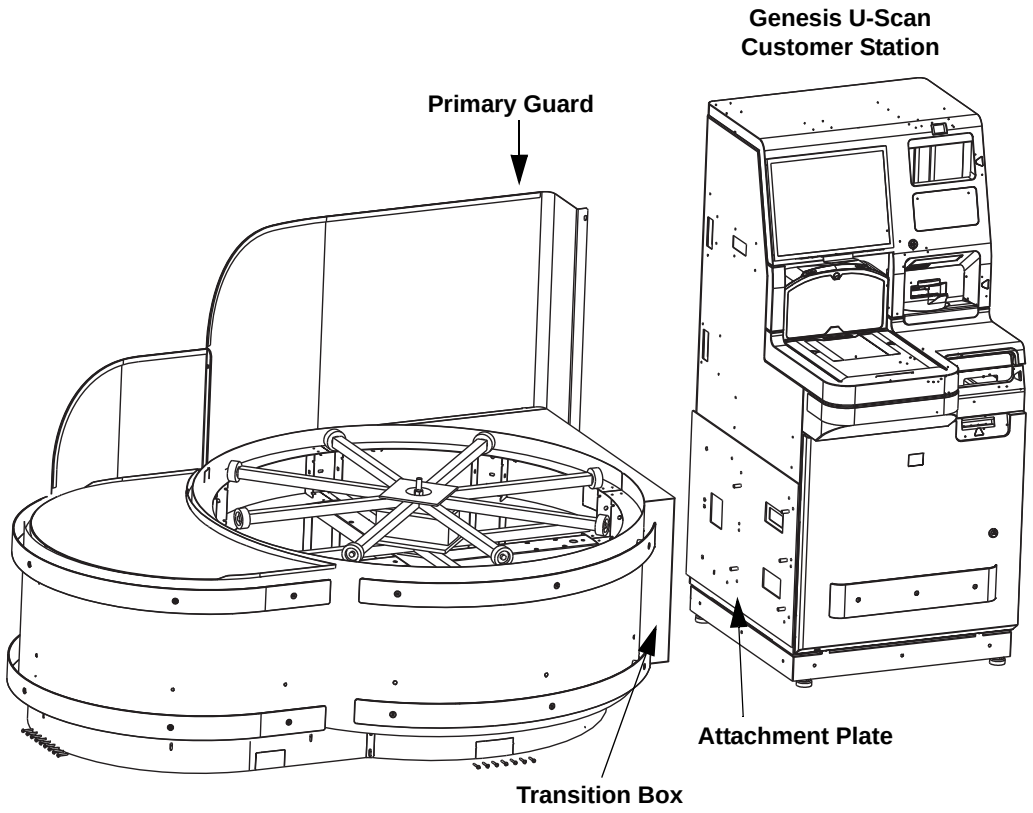


Figure 3.46 Genesis Customer Station and Carousel (platter/bag racks removed)

NOTE: *Note: if the attachment plate has not be installed on the robot unit, attach it as explained at the beginning of this section.*

Identify the pre-installed hardware

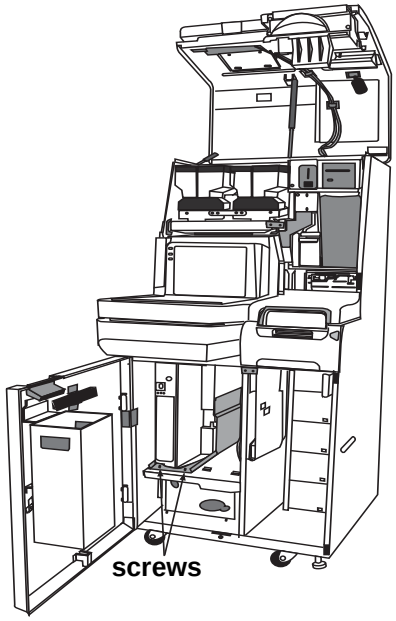
The hardware required for the Genesis Carousel installation has been pre-installed for re-use on site:

1. Locate, remove and set aside the serrated nuts and fender washers that were attached to the five PEM studs on the attachment plate on the robot unit.
2. Locate, remove and set aside the two M5 pan head screws that were pre-installed on the transition box of the Carousel unit.
3. Locate, remove and set aside the two self-tapping screws that were pre-installed on the back of the robot, that will be used to fasten the Primary Guard to the robot.

Installing the Carousel Bag Scale Module

Join the units

1. Use a Phillips screwdriver to remove the two screws that secure the computer bracket to the shelf.



2. Pull out the computer, setting it in front of the Station so that you can access the connectors on the rear of the computer. The cables will have been gathered and tied into a service loop and should be long enough to allow this. Take care not to interfere with the cable bundle when moving the computer.
3. Using a rubber hammer, knock out the top front knockout on the robot (labelled “A” in the orientation shown on page 93). Be careful not to damage any of the internal components.
4. Roll the Carousel scale over to the Genesis robot. Mate the units together and verify that the five protruding PEM studs align with the obround slots in the transition box. Some leveling of the units may be required (see step 1. on page 99), although the rounded openings allow for a certain amount of movement for adjustment.

5. Place a fender washer on each stud, then secure the serrated hex nuts to the studs (hand-tight). Note that the serrations provide additional 'bite' to help secure the unit.

Figure 3.47 Fender (oversized) washer and serrated hex nut

6. Tighten all five nuts using a ratchet equipped with a 6" or 12" extension.

7. If the back panel of the Genesis robot has been installed, remove it. To remove the back panel, open the top door and loosen the top (captive) screw at the back of the unit until the door comes loose. Do not completely remove the captive screw. Grasp the back panel handle from behind the Customer Station and lift the panel up and away.

8. From inside the Genesis robot casing, re-attach the final two M5 screws that you removed from the Carousel unit's transition box in step 2. in this subsection, on the previous page. Below is the view at the rear of the robot, looking down as the bottom screw is tightened.

Figure 3.48 Tightening the rear M5 screws from inside the robot

9. Attach the Primary Guard to the rear of the robot using two self-tapping screws.

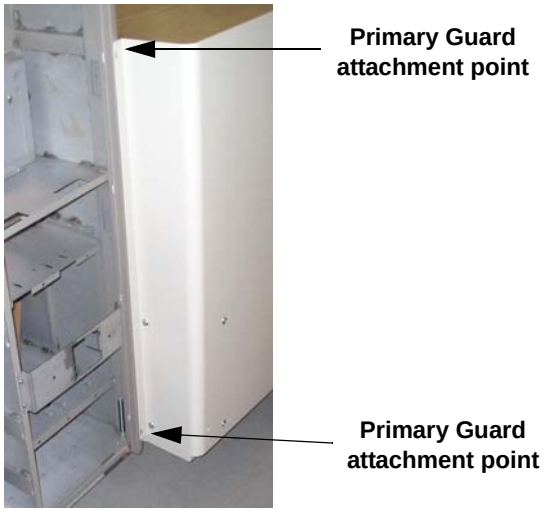


Figure 3.49 Primary Guard attachments

10. Feed the scale cable into the rectangular opening in the robot casing reserved for that purpose. If the knockout on the robot unit wall has not been removed, knock it out now.

Figure 3.50 Front view of the attached units

Final level check

1. Now the entire unit must be leveled. There are a total of eight feet for the combined U-Scan robot and Carousel (plus an additional two feet for the optional Secondary bag scale):

a. Clean the floor as well as the bottoms of all the feet to ensure good contact.

b. Using the ¼" Allen key or flexible drill bit, turn the foot screws clockwise to lower the feet until they just touch the floor.

Figure 3.51 Leveling the feet

c. Place a 4’ level on the crossbars, or on level areas of the weight bar arms. If a 4’ level is not available, you can increase a shorter level’s effective length by placing it on a solid metal bar or other firm flat object.

d. Adjust the feet until the entire unit is level and seated solidly on the floor.

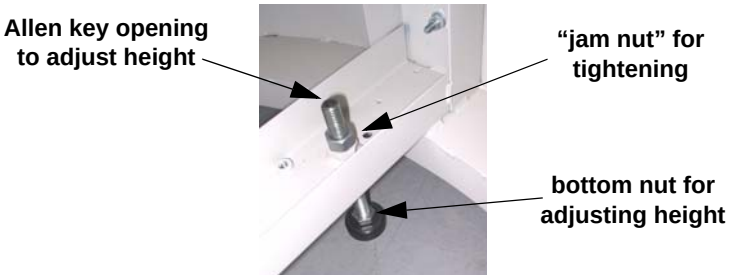


Figure 3.52 Jam nut

e. Raise the wheels up so that they spin freely. Note that we recommend leaving the wheels

attached to the U-Scan, in case it should ever need to be relocated.

f. Tighten the feet hand-tight using the jam nuts.

g. Push against the U-Scan at various points. If the unit moves, continue adjusting the feet until the entire unit is fixed firmly in place.

h. Close the doors on the robot casing. If there are any alignment problems, lay the level across the casing frame. Adjust the feet (of the robot casing only) if necessary until all of the doors close easily.

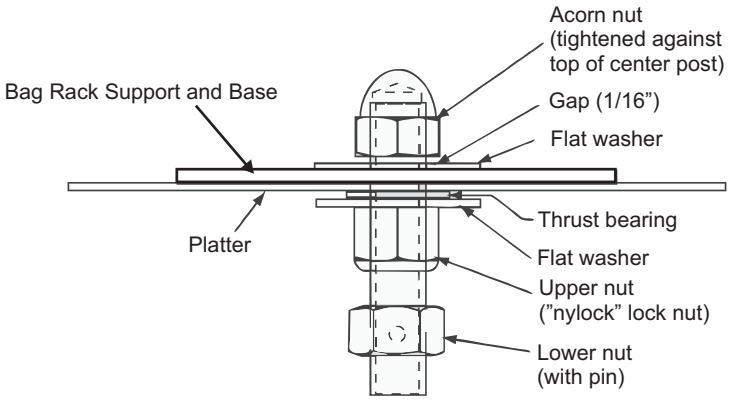
Figure 3.53 Adjustable feet

i. Tighten all of the feet firmly to their final positions using a wrench on the jam nuts (identified in Figure 3.52 on the previous page).

j. Replace the back door of the robot. Reaching in from the front of the robot, connect and then tighten the captive screw that secures the door in place.

Replace the Platter and Bag Racks

2. Replace the flat washer, then the thrust bearing you removed from the center bolt in step 2. on page 96.

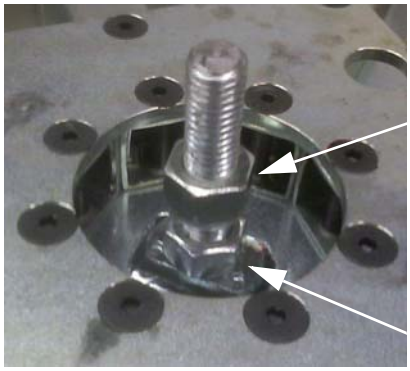


3. Reinstall the platter, bag rack unit, and flat washer.

4. Secure the assembly with the acorn nut and tighten.

5. Ensure that there is a 1/16" gap between the acorn nut and the top side of the bag rack base (you should be able to fit a quarter snugly in the gap).

6. If the gap does not have the proper clearance, remove the platter and adjust the upper “nylock” lock nut and return to step 3., repeating until you obtain a 1/16” gap.



The U-Scan Carousel is fully attached to the Genesis Customer Station. Please refer to the Caution on page 96 should the assembled Customer Station ever need to be relocated.

Electrical connection

1. Connect the bag scale communication cable to [TP3K: powered Serial Port 6 (COM22); TP3600 Series: powered Serial Port 3 (COM22)] on the computer.
2. For a Carousel unit that has the optional secondary scale, also connect the cable from the Edgeport1 to USB Port A on the computer.
3. Attach the cable(s) loosely to the computer cable service loop.
4. Replace the computer, sliding the computer bracket back into the casing. Take care not to pinch or otherwise interfere with the service loop when manipulating the computer.

Skirt kits

1. If the optional skirt kits are required, ***install them now***.
2. Follow the instructions on page 102 (Customer Station) and page 104 (Carousel unit).

Removal

To remove the Carousel Scale unit, follow the preceding instructions in reverse.

Installing the GBU 2.0 Belted Unit Module

Complete installation and maintenance instructions for the Genesis Belted Unit (GBU) are found in the following documents:

- D900000393: *Genesis Belted Unit Installation Manual*
- D900000394: *Genesis Belted Unit Maintenance Manual*.

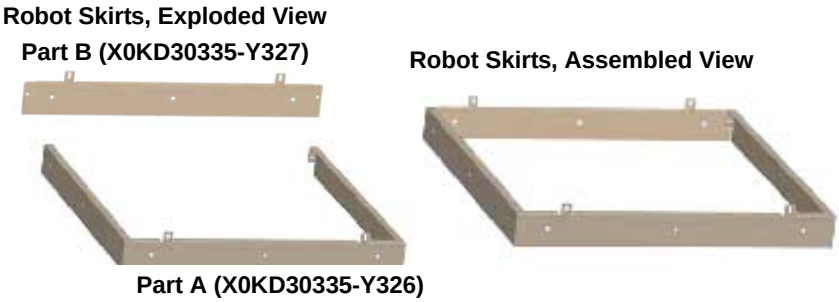
Installing the Optional Skirt Kits

The optional Skirt Kits are designed to hide the legs and wheels of the units, as well as to prevent objects from becoming lodged underneath the Stations.

Robot Skirt Kit

The Robot skirts must be installed before the standard Carousel skirts, since parts of the Carousel skirt are secured to the Robot skirts.

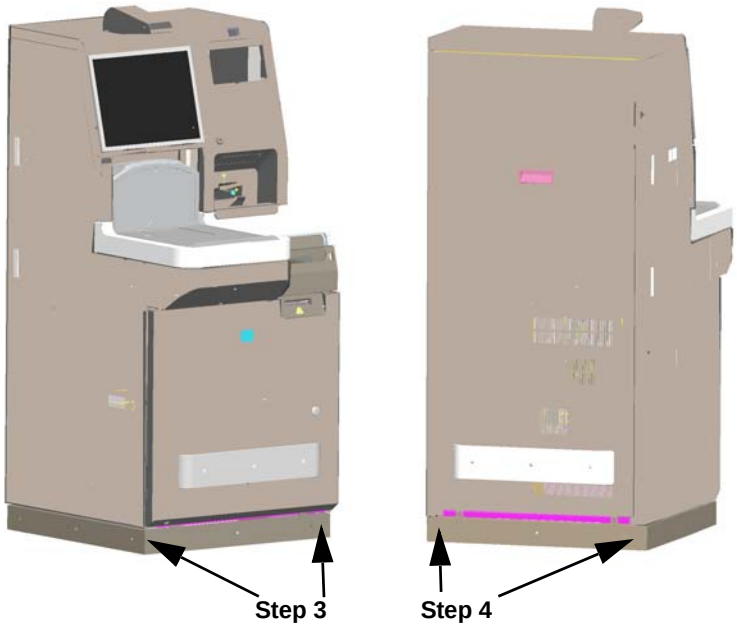
1. Locate a Customer Station skirt kit (11001215S-1), which consists of two sheet metal parts (A and B), and six M4 screws.



2. Ensure that the Customer Station is level (as explained on page 109), and that the casing has been raised high enough off the floor to accommodate the skirts. If the Station height must be adjusted, follow the steps on page 109 to adjust the feet (and remove the wheels, if desired).

3. From the front, slide Skirt A around the Robot to encompass the entire unit. Secure it in place with two screws, but do not completely tighten until the other skirt has been attached.

4. Attach Skirt B to the rear of the Genesis robot casing. Secure Skirt B to Skirt A with four screws (two on each side) and tighten to secure.

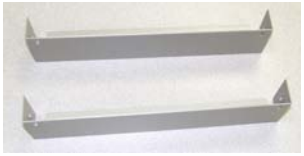


Universal Bag Scale Skirt Kits

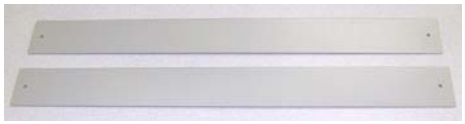
Each Universal bag scale module is identical in size, and the skirt kits for each bag scale configuration contain the correct number of short skirts (11003114) and long skirts (11003115) to accommodate the short and long edges of each module.

Configuration	Skirt Kit	Contains
U-Scan1+ U-Scan2	11003266Z-XXA	2 long skirts; 2 short skirts; mounting hardware
U-Scan4	11003266Z2-XXA	2 long skirts; 4 short skirts; mounting hardware
U-Scan6	11003266Z3-XXA	3 long skirts; 4 short skirts; mounting hardware

1. Locate the skirt kit for the configuration you are installing. Each skirt kit contains short and long skirt parts.



short skirts (11003114)



long skirts (11003115)

2. If necessary, remove the doors from the Universal bag scale modules.
3. Attach the short skirts to the exposed short sides of each bag scale module. The short skirts attach to the scale frame, as shown below:

4. Secure each short skirt with two M4 screws.

5. Attach the long skirts to the exposed long sides of each bag scale module. The long skirts attach to the short skirts, as shown below:

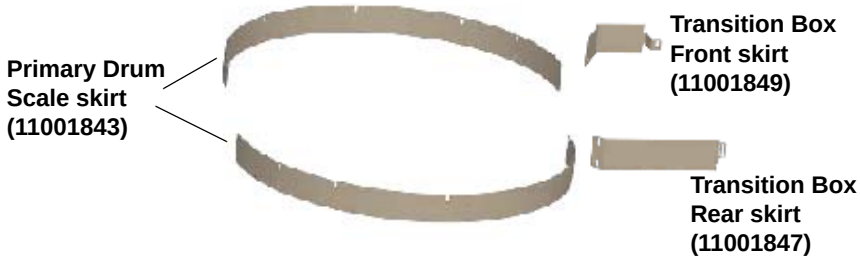
6. Secure each long skirt with two M4 screws.

NOTE: *If the U-Scan needs to be placed over existing floor cabling, each skirt is equipped with laser knockouts that can be easily be removed for use as "mouse holes" to permit the cabling to pass unobstructed beneath the scale.*

U-Scan Carousel Primary Scale Skirt Kit

1. Locate a Carousel Primary Scale skirt kit (11001842), which consists of two ***identical*** sheet metal parts and 14 M4 screws.
2. Locate a front and rear Filler Box Skirt Kit (11001846 and 11001848, respectively), which each consist of one sheet metal part and three M4 screws.

Carousel Primary Scale Skirt, Exploded View

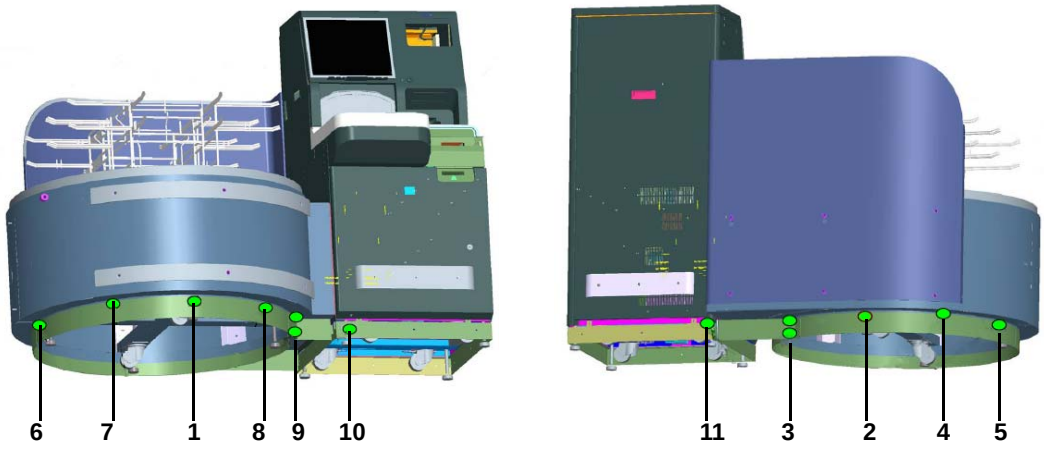


Carousel Primary Scale and Robot, Assembled View

3. Pre-install the Robot skirt kit before attaching the Carousel unit. If the Carousel scale has already been attached to the Robot, level the entire Station (see the next step), attach the Robot skirt kit first, then attach the Carousel skirts.
4. Ensure that the Carousel unit is level (as explained on page 109), and that it has been raised high enough off the floor to accommodate the skirts. If the Station or Carousel height must be adjusted, follow the steps on page 109 or page 99 to adjust the feet.

   Note: Partially attach the Carousel skirts to ensure proper mounting hole alignment before you proceed. ***You will need to drill pilot holes in the Robot skirt for the connections identified as #10 and #11 below.***

5. Attach the skirts and secure the screws in the order shown below. If you are installing the Secondary Scale Skirt Kit, skip to the next page and attach the skirts in the order given there. Tighten only after all screws have been attached.



U-Scan Carousel Secondary Scale Skirt Kit

1. Locate a Carousel Secondary Scale skirt kit (11001844), which consists of a skirt and nine M4 screws.

Carousel Primary and Secondary Scale Skirts, Exploded View

Secondary Skirt (11001845)

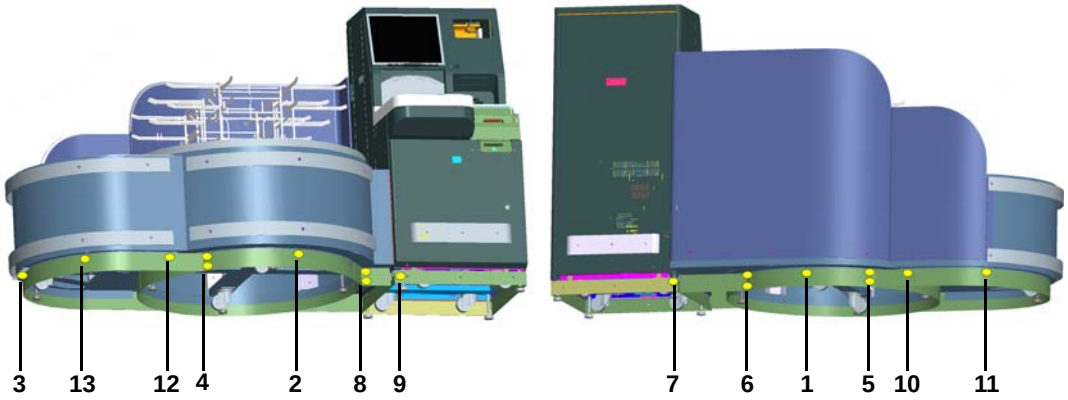
Carousel Primary and Secondary Scale Skirts and Robot, Assembled View

2. Pre-install the Robot skirt kit before attaching the Carousel unit. If the Carousel scale has already been attached to the Robot, level the entire Station (see the next step), attach the Robot skirt kit first, then attach the Carousel Primary and Secondary Scale skirts.

3. Ensure that the Carousel unit is level (as explained on page 99), and that it has been raised high enough off the floor to accommodate the skirts. If the Station or Carousel height must be adjusted, follow the steps on page 109 or page 99 to adjust the feet.

   Note: Partially attach the Carousel skirts to ensure proper mounting hole alignment before you proceed. ***You will need to drill pilot holes in the Robot skirt for the connections identified as #7 and #9 below.***

4. Attach the skirts and secure the screws in the order shown below. Tighten only after all screws have been attached.

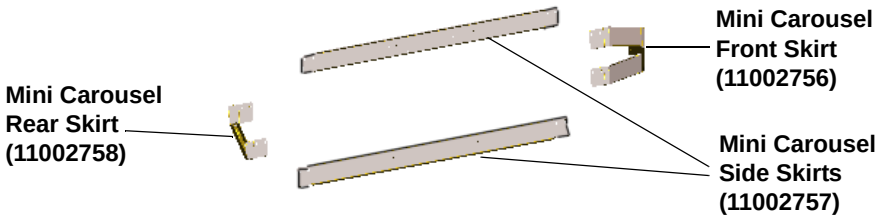


U-Scan Mini Carousel Scale Skirt Kit

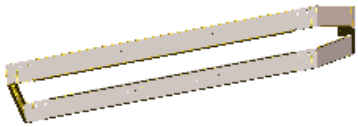
Caution: *If the optional skirts are required, level the entire U-Scan Station (both units) beforehand, since you will not be able to adjust the Mini Carousel's legs once the skirts have been installed (the adjustment nuts are located under the unit, hidden by the skirts).*

1. Locate a Mini Carousel Scale skirt kit (11002709), which consists of four sheet metal parts and eight M4 pan head screws.

Mini Carousel Scale Skirt, Exploded View



Mini Carousel Scale, Assembled view



NOTE: *Pre-install the Customer Station skirt kit before attaching the Mini Carousel unit to the Genesis robot.*

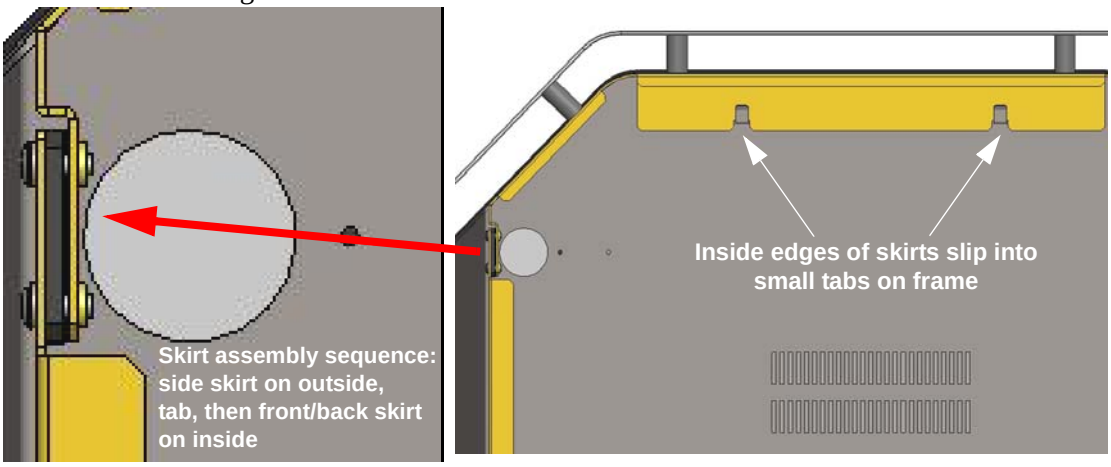
2. If the Mini Carousel scale has already been attached to the Genesis robot, level the entire Station (see the next step), attach the robot skirt kit first, then attach the Mini Carousel skirts.

3. Ensure that the Mini Carousel unit is level. If the robot or Mini Carousel height must be adjusted, follow the steps on page 89 (Mini Carousel) or page 99 (Customer Station) to adjust the feet.

4. Partially attach the Mini Carousel skirts to ensure proper mounting hole alignment before you proceed:

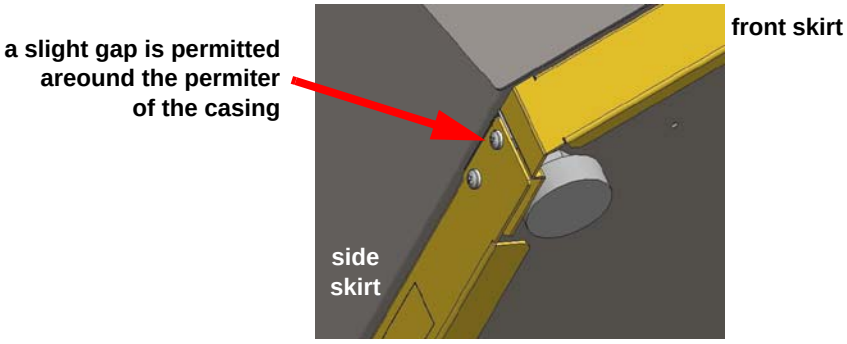
a. The tabs located on the bottom of the Mini Carousel frame are anchors for the skirts. The side skirts attach to the outside of these tabs, and the front and back skirts attach to the inside of the tabs.

b. The following illustration shows how the skirts are attached and secured to the frame:



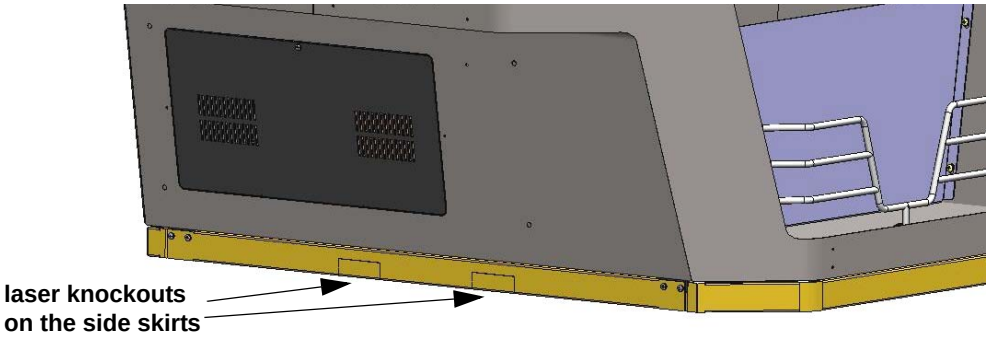
Drawing orientation: view of undercarriage from underneath

c. The following illustration shows an exterior view of how the skirt ends should be attached:



5. Secure the skirts in the order shown below, using two screws at each join. Refer to the illustrations at the top of this page. Tighten only after all screws have been attached.

NOTE: *If the Mini Carousel unit needs to be placed over existing floor cabling, and the skirt kit has been installed, the side skirts are equipped with laser knockouts that can be easily be removed for use as "mouse holes" to permit the cabling to pass unobstructed beneath the scale.*



Removing the shipping wheels and leveling the Customer Station

NOTE: *Use a flexible drill bit (1/4" - 6.35 mm hex Allen wrench bit socket) to lower the leveling feet.*

1. Unlock and open the bottom door.
2. Locate the four levellers (feet) inside the robot casing: two at the front, and two at the back.

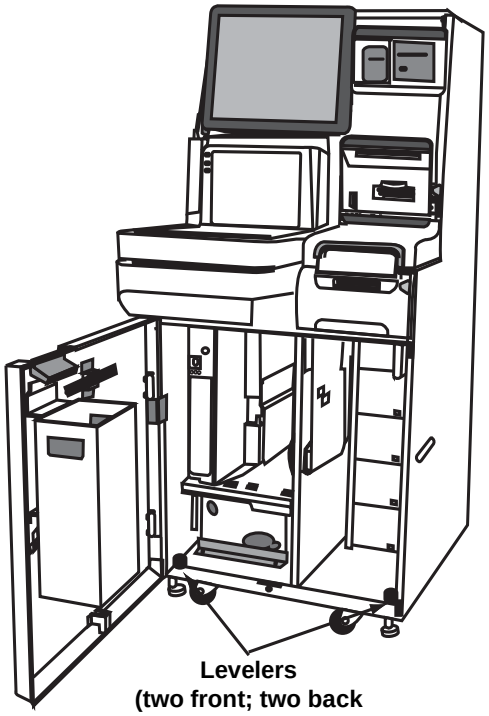
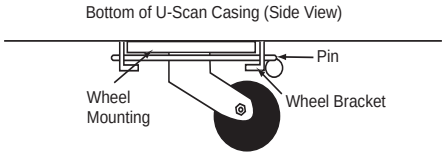


Figure 3.54 Leveling Feet

3. Use a drill with a flexible bit to lower one of the feet as far as necessary.
4. Lower the other feet to lift the U-Scan casing so that the wheels are off the floor.
5. Remove the pin that secures the first wheel to the wheel bracket.

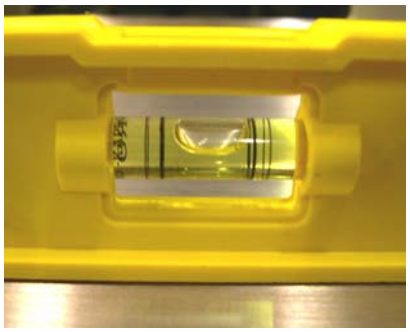


6. Slide the wheel toward you and out of the casing.
7. Repeat step 5 and step 6 for the remaining wheels.
8. Locate the power and communication cables under the casing.
9. Use the levelers to lower the U-Scan as low as possible without damaging the communication and power cables, leaving enough space for skirt installation, if required.

10. Use a small level to verify that the casing is level:

    a. Place the level on the shelf surface that supports the lower coin exit chute, oriented from front to back as shown below:

    b. Verify that the Station is level in this orientation. The bubble must be located within the center range as shown below.



Centered bubble indicates level surface

    c. Place the level on the same surface (just behind the metal shelf), oriented from left to right as shown below:

    d. Verify that the Station is level in this orientation. The bubble must be located within the center range as shown in step step 10b.

    e. Secure and lock the Station levelers.

11. For cash Recycler Stations, it is critical that the Coin Sorter unit also be leveled, once the preceding Station leveling instructions have been followed:

    a. Open the upper door.

    NOTE: *Be sure to push in the release handle when you open and close the upper door of the Genesis Station. The release handle is located beside the Scanner Scale, just above the Change Out compartment. Failure to push in this handle can break the locking mechanism.*

    b. Verify that the Coin Sorter Manifold is level from Left to Right. This must be done with as little variance as possible.

12. Leveling instructions for the different bag scale units are given in the “Final level check” subsections on page 67 (Universal bag scales), page 99 (Carousel), and page 88 (Mini Carousel).

13. Using a 1/4” Allen key, adjust the levelling feet (using the small level in the positions described above as a reference) until the casing is level and the Station does not rock or move. ***These levelling steps are important: see the Note on page 16.***

14. Add two drops of Loctite to the threads of each levelling foot.

15. Close and lock the bottom door.

16. If storage space is available in the bag scale module, place the wheels there for safekeeping.

Replacing the shipping wheels

If you ever need to replace the shipping wheels, remove the skirts, if installed, and follow the steps below:

1. Unlock and open the bottom door.
2. Locate the four levellers (feet) inside the casing: two at the front, and two at the back.

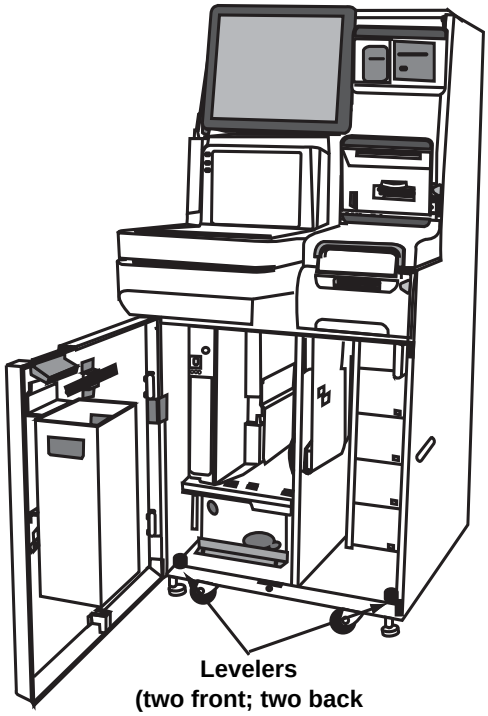


Figure 3.55 Leveling Feet

3. Use a drill with a flexible bit to raise the U-Scan casing so that you can install the wheels.
4. Retrieve the wheels from their storage location.
5. Slide the flat top of the wheel mounting into the wheel bracket on the U-Scan casing.
6. Slide the pin through the hole on the side of the wheel bracket as shown below.

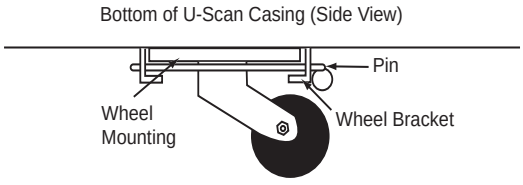


Figure 3.56 Wheel Mounting

7. Ensure that the pin is secure.
8. Raise the feet on the U-Scan casing so that the U-Scan is fully supported by the wheels.

9. Close and lock the bottom door.

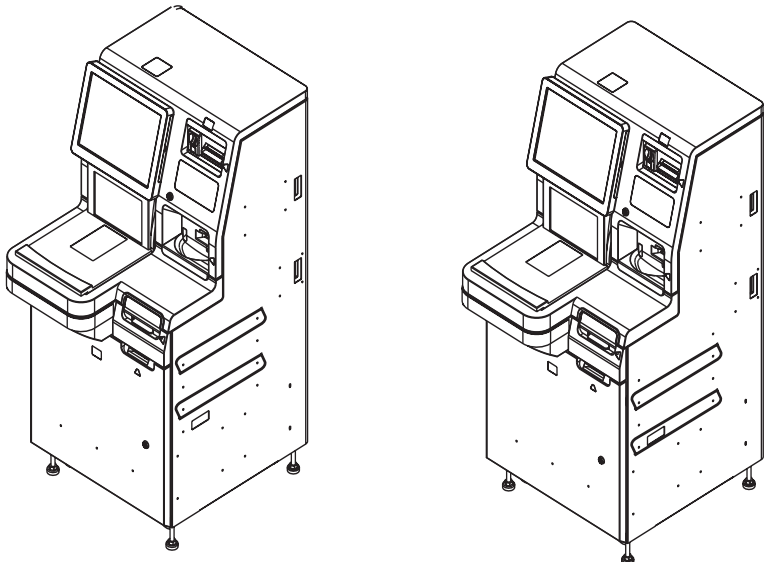
WARNING: *If a customer wishes to move or un-install their U-Scan stations, they should first **separate the bag scale units from the robot units** before attempting to carefully move the stations. This does not apply to short distance in-store relocation of the standard Carousel or GBU bag scale units, which are equipped with wheels.*

Installing the Side Assist Shelf

The Side Assist Shelf can be installed at different heights, depending on the store's preference.

1. Determine which plugs need to be removed on the side of the casing to install the shelf at the desired height.

High position **Low position**

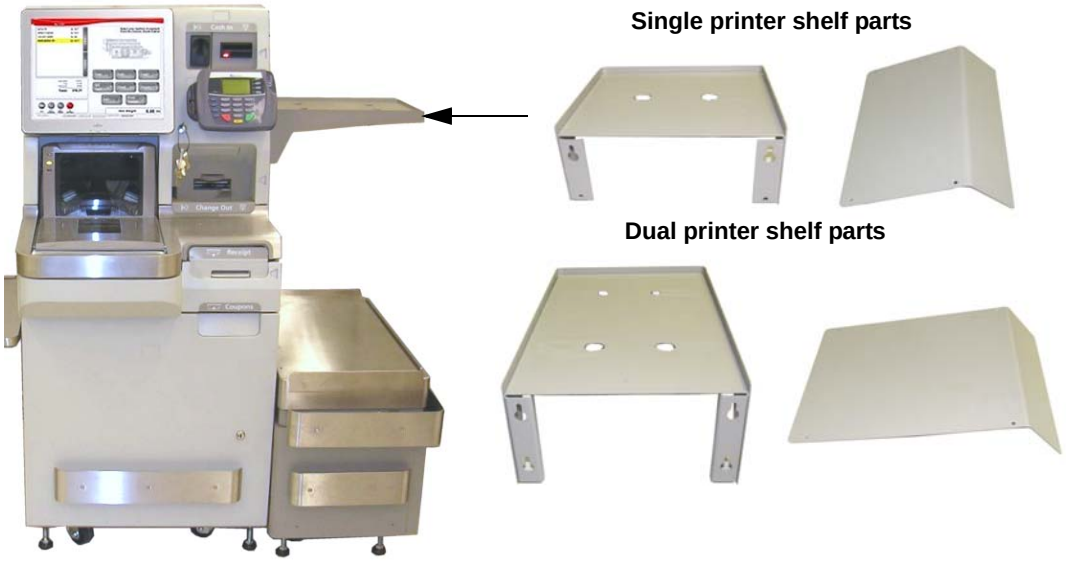


2. Remove the plastic plugs from the appropriate holes on the side of the casing.
3. Position the Side Assist Shelf (11002816) on the side of the casing.
4. Use the four M5 x 12mm SEMS screws (11000663) provided to secure the shelf to the casing.

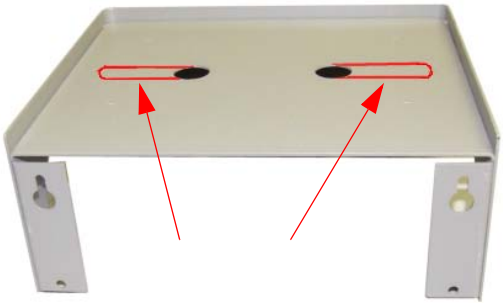
Four M5 screws secure the Side Assist shelf to the Station

Installing the external printer shelf and EFT bracket (if necessary)

Install the external printer shelf if necessary. (Note that the Customer Station shown below depicts an EFT device mounted directly on the station rather than on a bracket on the printer shelf.)



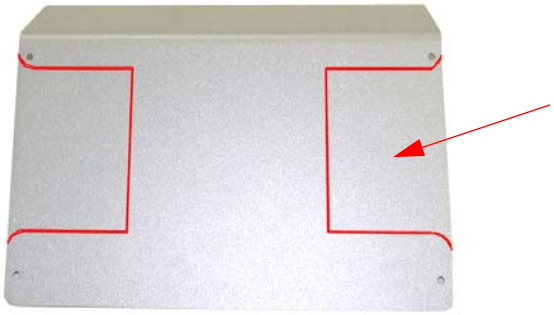
1. Locate the printer shelf kit (single: 11001230Z2-[L/R]XA or dual: 11001230Z3-[L/R]XA). The printer kit contains a shelf bracket, cover, and mounting hardware. The EFT kit contains an additional EFT bracket that is attached to the printer shelf bracket.
2. Knockouts are located next to the cable holes on the single printer shelf. These can be removed if large connectors need to be passed through the shelf.



3. For the single shelf, attach the top two M5 x 12 screws (11000663) shown below to the appropriate side of the robot. For the dual shelf, attach all four screws. Do not completely tighten the screws.

4. Remove the knockout on the side of the Customer Station that the printer cables will pass through.

5. If an EFT bracket is required, attach it to the printer bracket and remove one knockout on the cover to make room for the EFT bracket.



6. Position the keyholes on the bracket over the screws you just installed, then slide the printer shelf down.

7. Tighten the screws to secure the bracket to the station. For the single shelf, and add two more M5 x 12 screws for a total of four screws to hold the printer bracket in place.

8. Place the printer on the shelf and pass the cables through the side of the Customer Station casing. If applicable, attach the EFT device to the EFT bracket that's attached to the printer bracket and pass its cables into the Customer Station.

9. After all cables have been run into the station, secure the bottom plate to the underside of the printer shelf using four M3 x 12 flat head screws (11001342).

Removing the Scanner Scale spacers

If applicable, remove the shipping spacers installed under the Scanner Scale platter.

Installing the external pole display

If the Customer Station requires an externally-mounted pole display, install the bracket and display unit according to the following instructions.

- For Datalogic units, see 'Datalogic (PSC/Magellan 8500XT/XTS) pole display' below.
- For Metrologic units, see 'Metrologic (Honeywell) pole display' on page 119.

For either unit, the display will have to be removed from the as-shipped mounting brackets and installed with a customized U-Scan bracket.

Datalogic (PSC/Magellan 8500XT/XTS) pole display

1. Locate the Magellan external pole display bracket kit (11003770), which contains a U-Scan bracket and four M4 Keps nuts. Also locate the pole display unit, bracket, and cable that was supplied with the Scanner Scale.

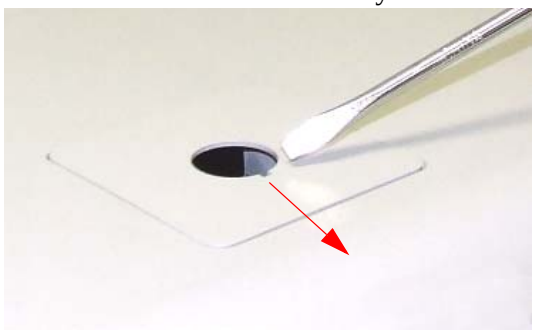
2. Pull the top part of the pole display off its original bracket. Extract the cable completely, out through the top of the original bracket.

3. Raise the upper door.

NOTE: *Be sure to push in the release handle when you open and close the upper door of the Genesis Station. The release handle is located beside the Scanner Scale, just above the Change Out compartment. Failure to push in this handle can break the locking mechanism.*

4. From the inside, punch out the knockout on the top of the upper door.

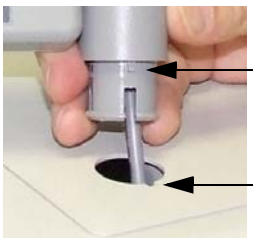
5. Locate the new U-Scan bracket and insert it into the opening at the top of the upper door. The notch in the bracket opening must face forward as indicated by the arrow below.



6. From inside the upper door, secure the bracket with the four nuts. Tighten the nuts.

7. Feed the cable into the bracket opening through the top of the upper door.

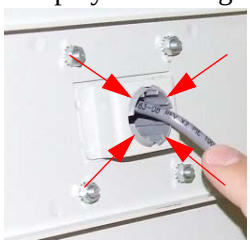
8. Position the display unit over the bracket opening. Align the tab on the plastic stem with the notch in the U-Scan bracket.



Caution: *You must be sure to hold the pole display unit straight, perpendicular to the top of the upper door, while you are striking it with the rubber hammer.*

9. Using a rubber hammer, hold the pole display unit straight and strike the pole display stem sharply to secure it in the bracket opening.

10. Strike the stem again until the unit is completely seated in the opening. From the inside, you'll see that the plastic tabs on the pole display stem are gripping the bracket.



11. The installed display should look like this:

12. Route the cable through the same clamps on the upper door that the monitor cable is routed through. Route the cable to the Scanner Scale "Pole Display" port. Loop any excess length of cable and secure it using a tie wrap.

Metrologic (Honeywell) pole display

1. Locate the Metrologic external pole display bracket kit (11002458), which contains a U-Scan bracket and four M4 Keps nuts. Also locate the pole display unit, bracket, and cable that was supplied with the Scanner Scale.

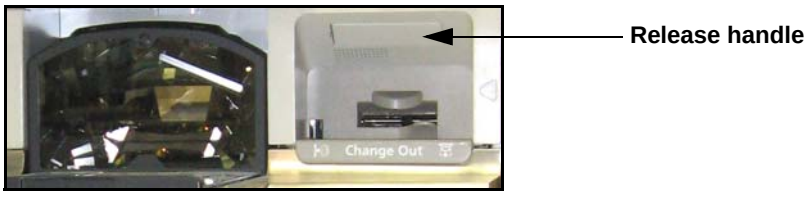
2. Separate the parts of the pole display assembly. Unplug the cable from the display unit.

3. Orient the U-Scan bracket so that the flanges on the side face the display unit. Feed the cable through the hole in the U-Scan bracket and plug it into the display unit.

4. Snap the display unit into the flanges on the U-Scan bracket.

5. Raise the upper door.

NOTE: *Be sure to push in the release handle when you open and close the upper door of the Genesis Station. The release handle is located beside the Scanner Scale, just above the Change Out compartment. Failure to push in this handle can break the locking mechanism.*



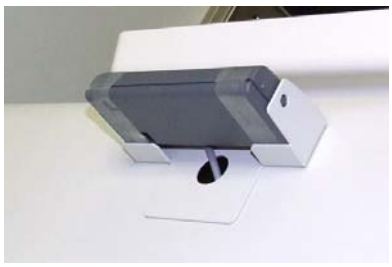
6. From the inside, punch out the knockout on the top of the upper door.

7. Feed the cable into the bracket opening through the top of the upper door. Set the display unit so that the bracket studs fit into the holes in the upper door. Holding the display unit in place, raise the upper door.

8. From inside the upper door, secure the bracket with the four nuts. Tighten the nuts.

9. The installed display should look like this:

installed (front)



installed (rear view)

10. Route the cable through the same clamps on the upper door that the monitor cable is routed through. Route the cable to the Scanner Scale “Pole Display” port. Loop any excess length of cable and secure it using a tie wrap.

Connecting the UPS battery jumper

The UPS battery jumper strap must be connected on-site when the system is installed. The strap is already secured to the rear of the UPS. Remove the yellow **Warning** label that covers the receptacle and connect the strap as shown below:

WARNING: *Do not plug in the AC power cord before the jumper strap is connected. (This does not apply to units with serial numbers higher than 5406093R-0930001 - firmware version PV58V11FB. See the Genesis Hardware Manual (UPS chapter) for more details.)*

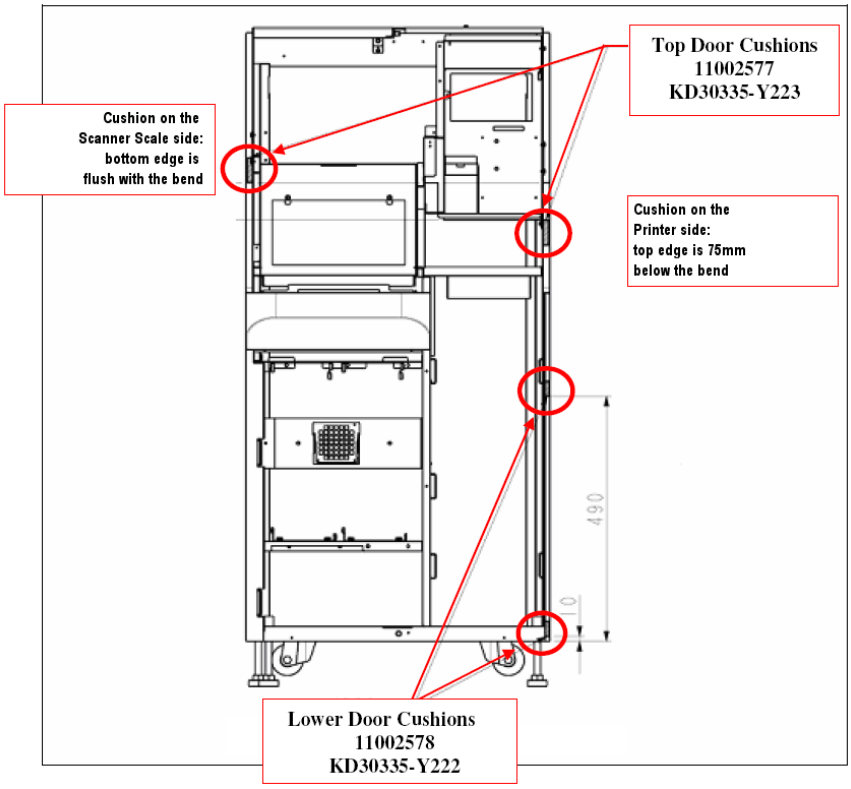
Verifying the door alignment

Loose or missing upper or lower door rubber cushions can cause an improper door alignment, which can raise both esthetic and operational concerns. If necessary, the cushions should be replaced as explained below.

The rubber cushions can be ordered as spare parts:
upper door cushion: 11002577 (KD30335-Y223)
lower door cushion: 11002578 (KD30335-Y222)

1. Clean the surface with isopropyl alcohol or acetone and allow it to air dry for two minutes.

2. Peel off the adhesive back and affix the cushions in the locations shown below. The cushions are attached to the outside, forward-facing edges of the casing:



NOTE: *A left-hand Genesis Customer Station is shown above. For a right-hand unit, the locations are mirrored.*

If the lower door cushions are positioned correctly but the door is mis-aligned, it may be necessary to adjust the hinge screws. note that you should only address alignment concerns after the station has been leveled.

The lower door is affixed to the casing with two hinges. A ¼" gap is acceptable, but should be even from the top to the bottom of the door.

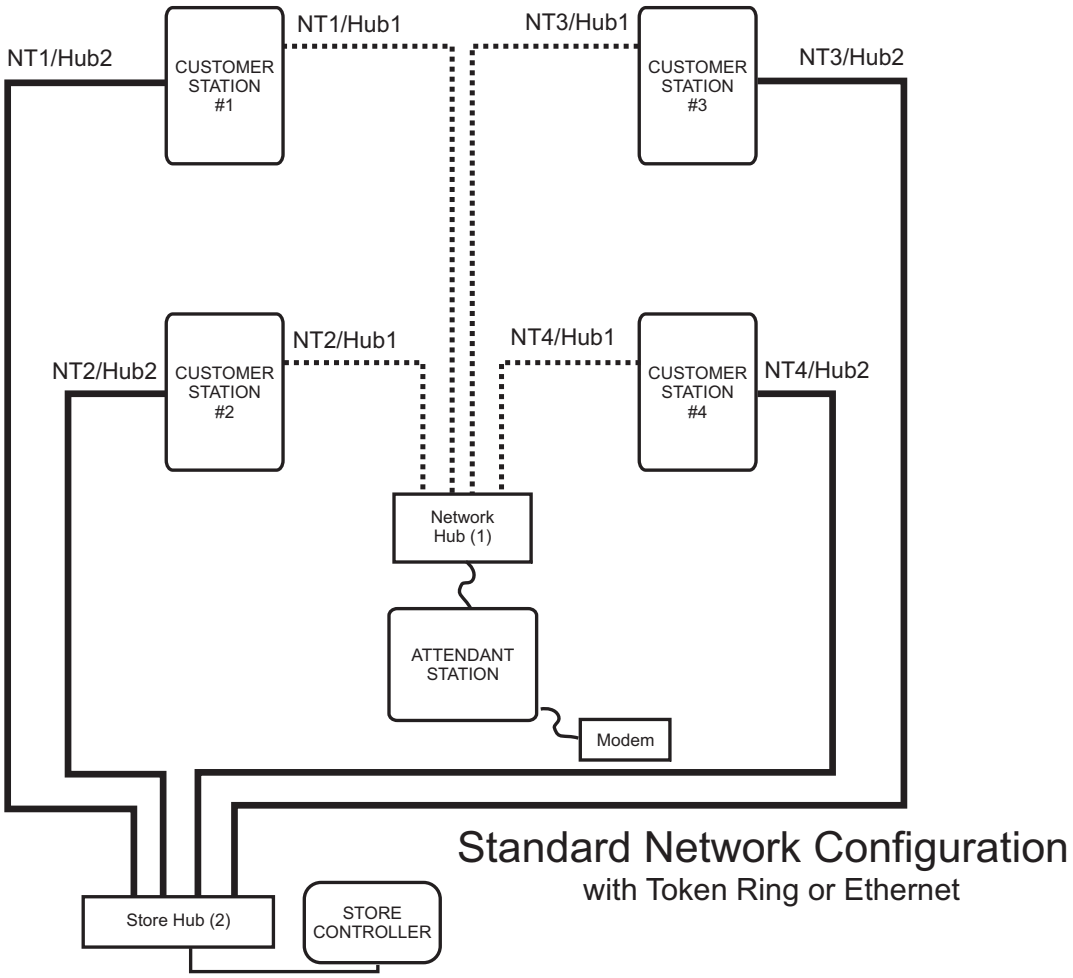
Adjust the hinge screws in order to align the lower door correctly. Note that the screw cutouts are oval, which allows you to fine tune the hinge alignment.

NOTE: *Make sure that you do not disconnect the ground strap that is attached to one of the hinge screws.*

When you have aligned the lower door, open and close it a few times to make sure that a ¼" gap is present, and that the keylock is not difficult to turn.

Connecting U-Scan to the Store Controller

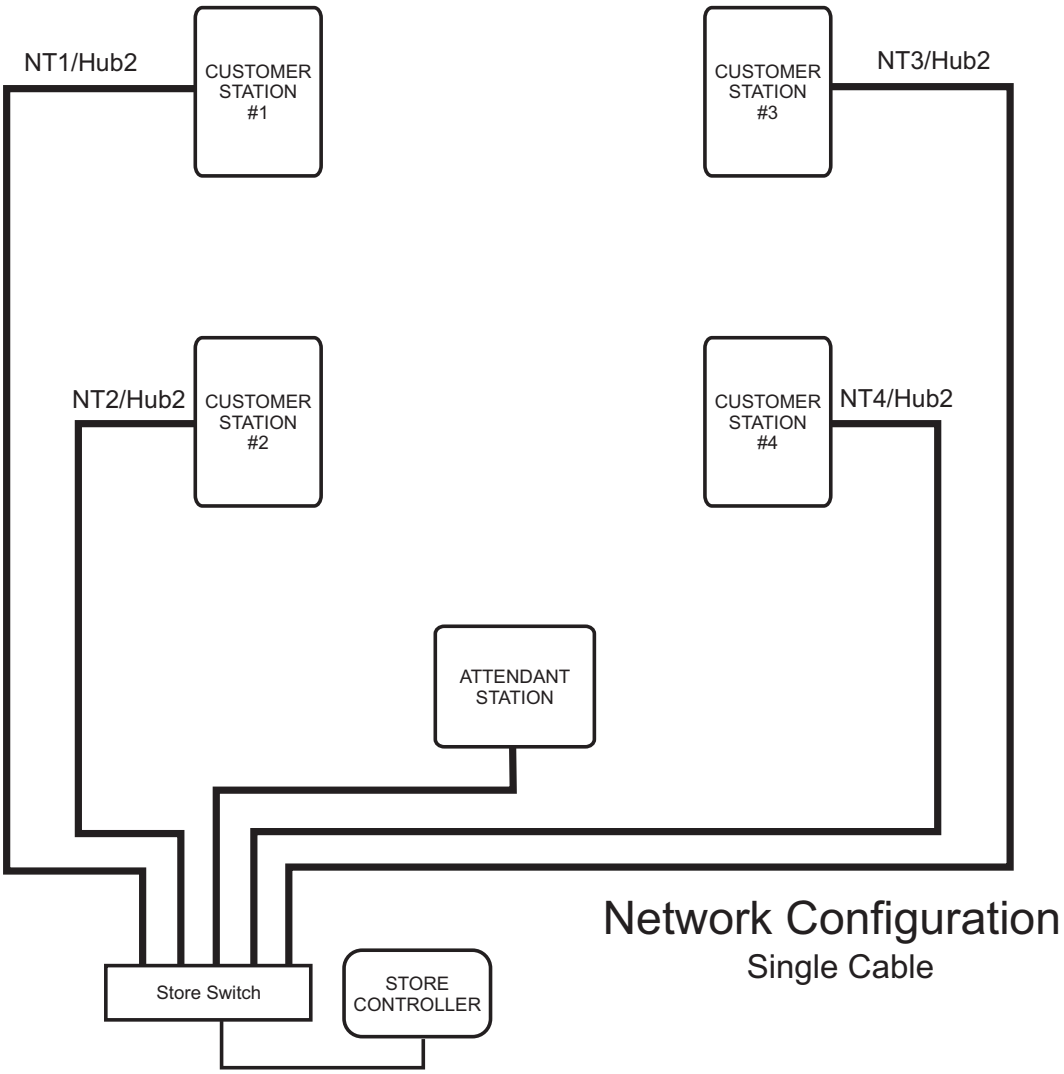
Network Topology



The diagram above illustrates communications between the U-Scan system and the Store Controller. The Customer Stations communicate with the Attendant Station and the Store Controller. The Attendant Station does **not** communicate directly with the Store Controller.

Each Customer Station accesses information directly from the Store Controller and sends the information to the Attendant Station. The Attendant Station sends information to the Customer Station, and the Customer Station then relays the information to the Store Controller.

The following diagram illustrates an alternate single-cable topology.



NOTE: *The network setup may vary from store to store.*

Regular self-checkout cables

The system cable requirements for each Customer Station are demonstrated below:

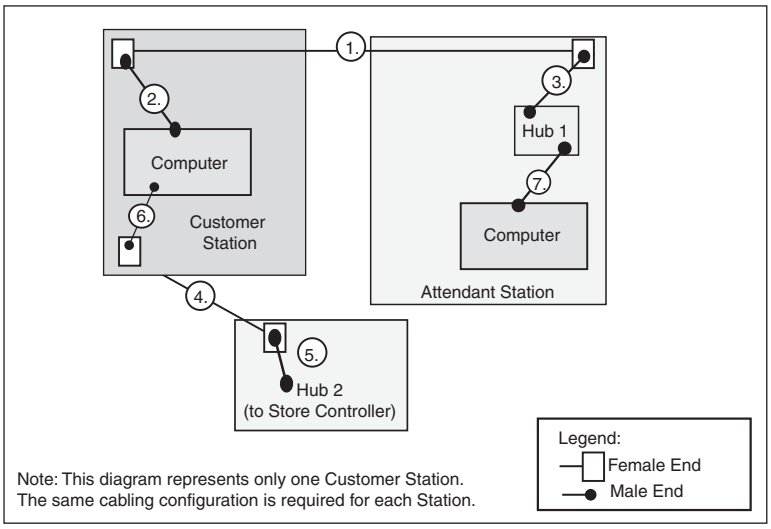


Figure 3.57 U-Scan system cable requirements - Customer Station

The cables listed in the table below are required. One cable is required for each Station. Note that the numbers listed in the first column correspond to the numbers in Figure 3.57.

#	From	To	Connector Type	Gender	Cable
1.	Customer Station	Attendant Station	RJ-45 Ethernet Jack	Female (both ends) Bix Box	100 Base-T Cat 5
2.	Customer Station Computer	Network Hub 1 (Via cable #1)	RJ-45 Ethernet Jack	Male (both ends)	100 Base-T Cat 5
3.	Network Hub 1	Customer Station (via cable #1)	RJ-45 Ethernet Jack	Male (both ends)	100 Base-T Cat 5
4.	Customer Station	Network Hub 2	RJ-45 Ethernet Jack	Female (both ends) Bix Box	100 Base-T Cat 5
5.	Customer Station	Network Hub 2 (via cable #4)	RJ-45 Ethernet Jack	Male (both ends)	100 Base-T Cat 5
6.	Network Hub 2	Customer Station (via cable #4)	RJ-45 Ethernet Jack	Male (both ends)	100 Base-T Cat 5
7.	Attendant Station Computer	Network Hub 1	RJ-45 Ethernet Jack	Male (both ends)	100 Base-T Cat 5

Payment Station cables

The system cable requirements for the Payment Station are demonstrated below:

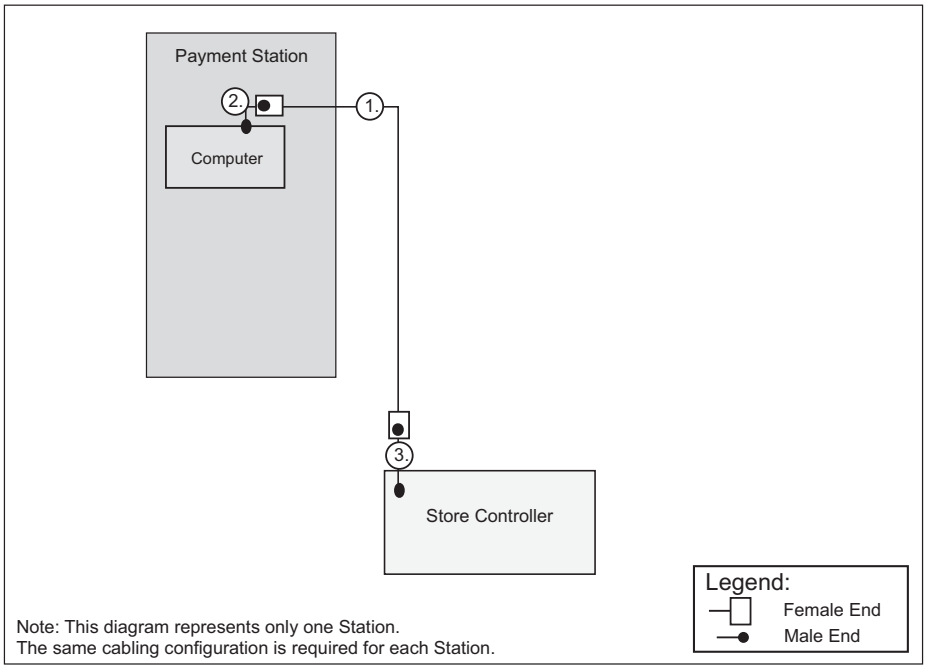


Figure 3.58 U-Scan system cable requirements - Payment Station

The cables listed in the table below are required. One cable is required for each Station. Note that the numbers listed in the first column correspond to the numbers in Figure 3.58.

#	From	To	Connector Type	Gender	Cable
1.	Payment Station Computer	Store Controller	RJ-45 Ethernet Jack	Female (both ends) Bix Box	100 Base-T Cat 5
2.	Payment Station Computer	Store Controller (via cable #1)	RJ-45 Ethernet Jack	Male (both ends)	101 Base-T Cat 5
3.	Store Controller	Payment Station (via cable #1)	RJ-45 Ethernet Jack	Male (both ends)	101 Base-T Cat 5

Connecting to the Store Controller

To connect the U-Scan system to the store's controller for an Ethernet configuration:

1. Install one patchblock-terminated network cable from each Customer Station to the Attendant Station.
2. Connect each of the female-ended network cables to Network Hub 1 using 100 Base-T patch cables.
3. Connect each Customer Station's computer to the jack marked Network Hub 1 using a 100 Base-T patch cable.
4. Connect the Customer Station with an Ethernet communications card (RJ-45 connector) to the jack marked "Network Hub 2" with a 100 Base-T patch cable.

Attendant Station

Connect the Attendant Station computer to Network Hub 1 using a 100 Base-T cable with an RJ-45 cable interface.

> **NOTE:** *Network Hub 1 consist of several hubs connected together to function as a single hub.*

Network Hub

Connect Network Hub 2 (the Store Controller Hub) to the store's main Network Hub using a 100 Base-T cable.

> **NOTE:** *Network Hub 2 may consist of several hubs connected together to function as a single hub.*

The hardware installation for the U-Scan system is complete.

4

ANSI A117.1 (308.3.2) Compliant Installation

Introduction

ANSI, the American National Standards Institute, is a private non-profit organization that oversees development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States. The organization also coordinates U.S. standards with international standards so that American products can be used around the world.

ADA, the Americans With Disabilities Act, is a US federal law that prohibits discrimination on the basis of disability in employment, State and local government, public accommodations, commercial facilities, transportation, and telecommunications. Title III of the ADA prohibits discrimination on the basis of disability by public accommodations and requires places of public accommodation and commercial facilities to be designed, constructed, and altered in compliance with the established accessibility standards.

U-Scan ANSI Compliance

ADA Title III standards are ANSI accredited. When required, Fujitsu U-Scan Customer Stations and bagging units can be adjusted during installation or re-configuration to be in compliance with ANSI A117.1 (308.3.2)/ADA requirements. See the guidelines which follow. They cover the various available configurations of U-Scan Customer Stations and bagging options.

Who is affected?

The ANSI changes only affect customers who voluntarily implement, or who are mandated by local municipality or regulatory agencies to install the U-Scan Genesis units in accordance with the new ANSI height standards. In this case, the installation crew must use the installation instructions found here, rather than the instructions in Chapter 3 of the *Genesis Site Preparation and Installation Manual*. Each store customer can decide to install none, one, or all of the Genesis units in a cluster at the new ANSI standard.

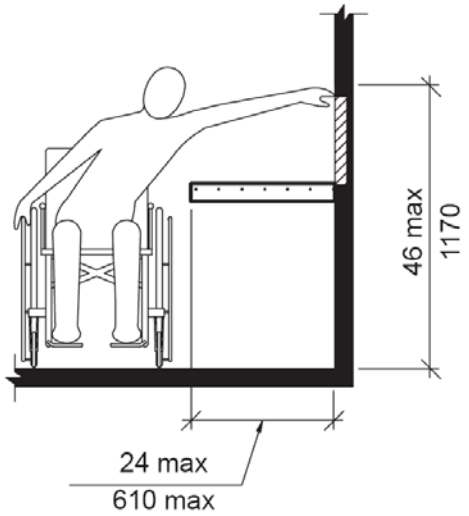


Figure 4.1 ANSI A117.1 (308.3.2) maximum obstructed side reach dimensions

Genesis Customer Station

The following illustration indicates the vertical dimensions of the Customer Station in both the standard and ANSI A117.1 (308.3.2) compliant configurations.

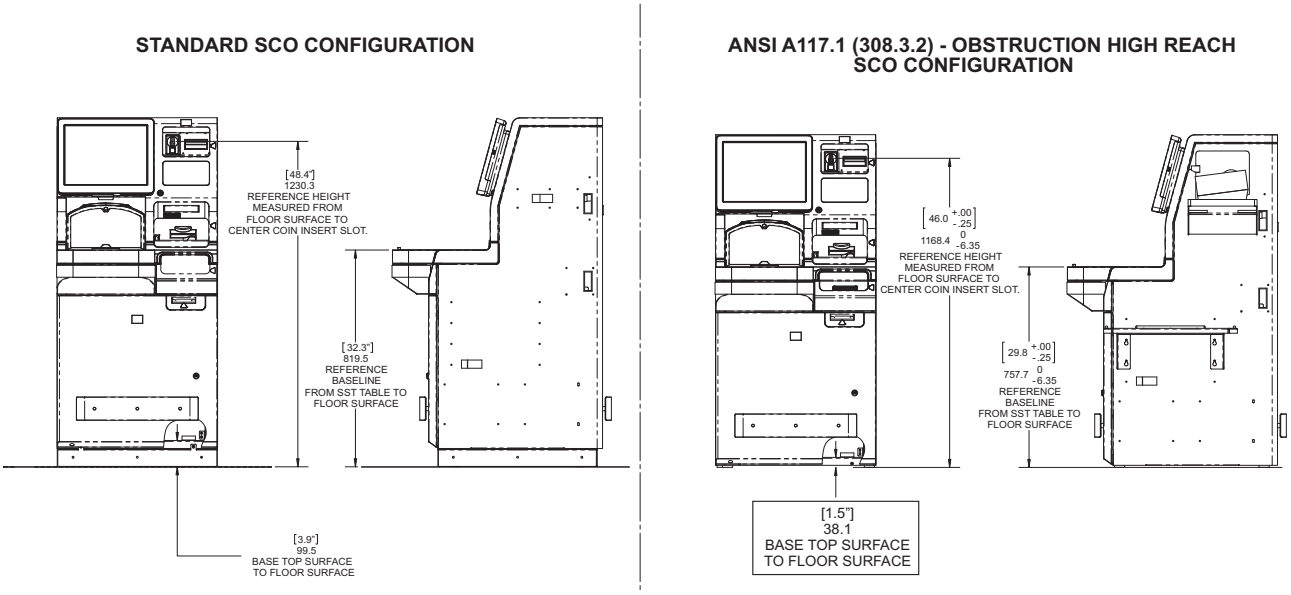


Figure 4.2 Customer Station vertical dimensions: Standard versus ANSI A117.1 (308.3.2) compliant

Customer Station Height Requirements

The following table lists both the vertical dimensions of a standard U-Scan Customer Station and the vertical dimensions that are required for the Customer Station to be compliant with ANSI A117.1 (308.3.2):

Standard Vertical Dimensions	ANSI A117.1 (308.3.2) Compliant Dimensions
Floor to top of station: 51.9 in (1319.5 mm)	Floor to top of station: 49.5 in (1257.7 mm)
Floor to center of coin insert slot: 48.4 in (1230.2 mm)	Floor to center of coin insert slot: 46.0 in (1168.4 mm)
Floor to top of Scanner Scale table: 32.3 in (819.5 mm)	Floor to top of Scanner Scale table: 29.8 in (757.7 mm)
Floor to base of casing (excluding skirts): 3.9 in (99.5 mm)	Floor to base of casing (excluding skirts): 1.5 in (37.7 mm)

WARNINGS:

- SEPARATE THE BAGGING UNIT FROM THE CUSTOMER STATION ROBOT BEFORE ADJUSTING THE STATION HEIGHT. THE CUSTOMER STATION (ROBOT) UNIT IS HEAVY AND MUST BE HANDLED WITH SAFETY IN MIND.
- TO AVOID RISK OF INJURY, IT IS IMPERATIVE THAT YOU REVIEW AND UNDERSTAND THESE INSTRUCTIONS AND ASSESS THE SAFETY REQUIREMENTS BEFORE BEGINNING THESE PROCEDURES.

Local Codes

During installation, follow the local fire department and building department fire, safety, and electrical codes applicable in your area.

Customer Station Adjustment Procedures

Required Steps

To achieve ANSI A117.1 (308.3.2) compliance with respect to the vertical dimensions, follow the appropriate steps below. You can find all of the adjustment procedures in Chapter 3 of the *Genesis Site Prep and Installation Guide*.

Re-configuring an installed station? Follow (A) and (B).

New Customer Station installation? Follow (B) only.

(A) Reconfigure the station (existing installation)

For all of the following instructions in this section, refer to Chapter 3 of the Site Prep manual for more details.

1. Separate the bagging unit from the Customer Station robot.
2. Remove the skirts from the Customer Station, if installed.
3. Remove the casters if necessary (they may already have been removed).
4. Remove the old levelers, if they are not the ones required for ANSI A117.1 (308.3.2) requirements.
5. Install the new levelers (KD30335-Y585).

WARNING: *Use care when returning the Customer Station to its normal position. There are pinch hazards where the station meets the floor.*

(B) Adjust the station (all installations)

1. Adjust the height of the Customer Station to match the specification of 1.50 inches/38.1 mm base top surface to floor surface (as shown in Figure 4.2 on page 131).

2. Continue at the section that describes the type of bagging unit installed with the station.
   - Standard Bag Scales: page 134
   - Universal Bag Scales: page 136
   - Mini Carousel: page 146

Genesis Standard Bag Scales

The illustration below indicates the vertical dimensions of the Genesis standard 1-, 2-, and 4-bag scales in the ANSI A117.1 (308.3.2) compliant configuration.

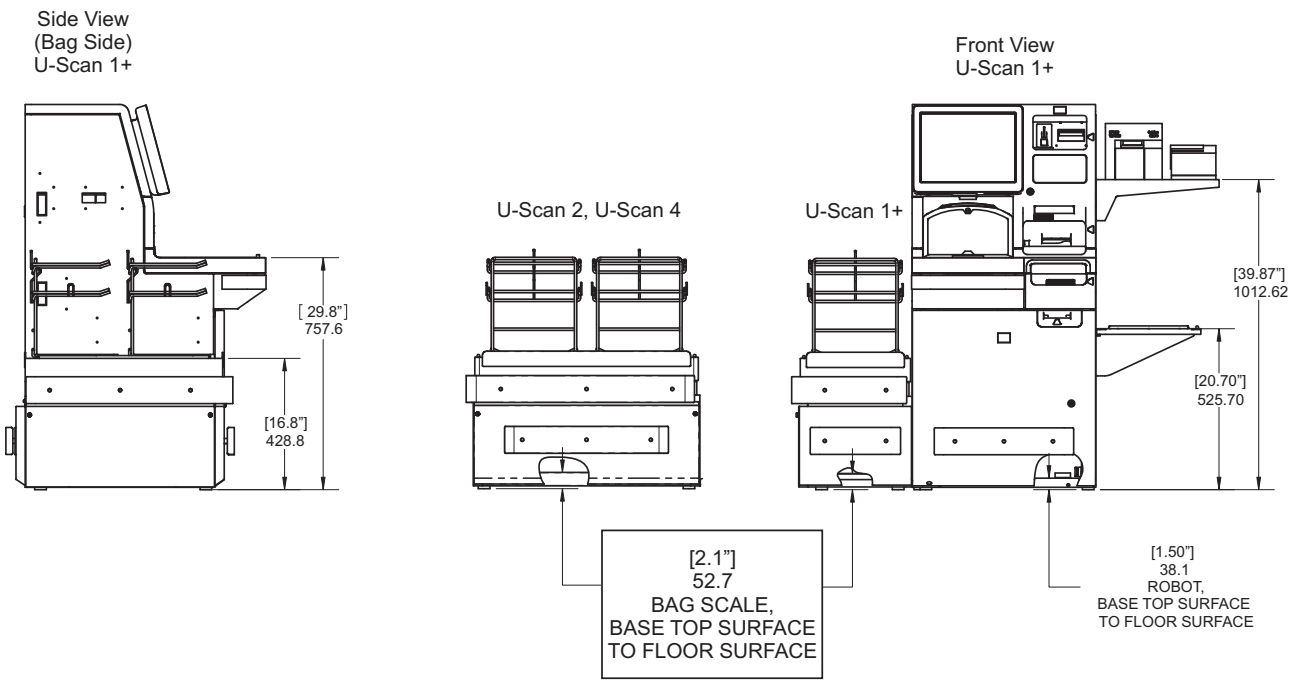


Figure 4.3 ANSI A117.1 (308.3.2) compliant standard Bag Scale vertical dimensions

IMPORTANT: This section applies to ANSI A117.1 (308.3.2) Customer Stations only. For standard stations, see Chapter 3 of the *Genesis Site Preparation and Installation* manual.

Standard Bag Scale Height Requirements

The following table lists the vertical dimensions that are required for the Genesis standard bag scale to be compliant with ANSI A117.1 (308.3.2):

ANSI A117.1 (308.3.2) Compliant Standard Bag Scale Dimensions
Floor to top of station: 49.5 in (1257.7 mm)
Floor to top of bag scale platform: 16.9 in (428.8 mm)
Floor to top of side assist shelf: 20.7 in (525.7 mm)
Floor to base of bag scale casing: 2.1 in (52.8 mm)

WARNINGS:

- SEPARATE THE BAGGING UNIT FROM THE CUSTOMER STATION ROBOT BEFORE ADJUSTING THE STATION HEIGHT. THE CUSTOMER STATION (ROBOT) UNIT IS HEAVY AND MUST BE HANDLED WITH SAFETY IN MIND.
- TO AVOID RISK OF INJURY, IT IS IMPERATIVE THAT YOU REVIEW AND UNDERSTAND THESE INSTRUCTIONS AND ASSESS THE SAFETY REQUIREMENTS BEFORE BEGINNING THIS PROCEDURE.

Required Steps

To achieve ANSI A117.1 (308.3.2) compliance with respect to the vertical dimensions, follow the appropriate steps below. You can find all of the adjustment procedures in Chapter 3 of the *Genesis Site Prep and Installation Guide*.

Re-configuring an installed bag scale? Follow (A) and (B).

New bag scale installation? Follow (B) only.

(A) Reconfigure the system (existing installation)

1. Follow the Customer Station adjustment procedures that start on page 132.
2. Remove the bag scale skirts, if installed, and set them aside. They will not be used.
3. Remove the casters and set them aside.

(B) Connect the units (all installations)

1. Adjust the height to match the specifications of 2.1 inches/52.7mm base top surface to floor surface (as shown in Figure 4.3 on page 134).
2. Connect the standard bag scale to the Customer Station robot. Refer to Chapter 3 of the Site Prep manual for more details.
3. Installation is now complete.

Genesis Universal Bag Scales

The illustration below indicates the vertical dimensions of the Genesis Universal 1-, 2-, and 4-bag scales in the ANSI A117.1 (308.3.2) compliant configuration.

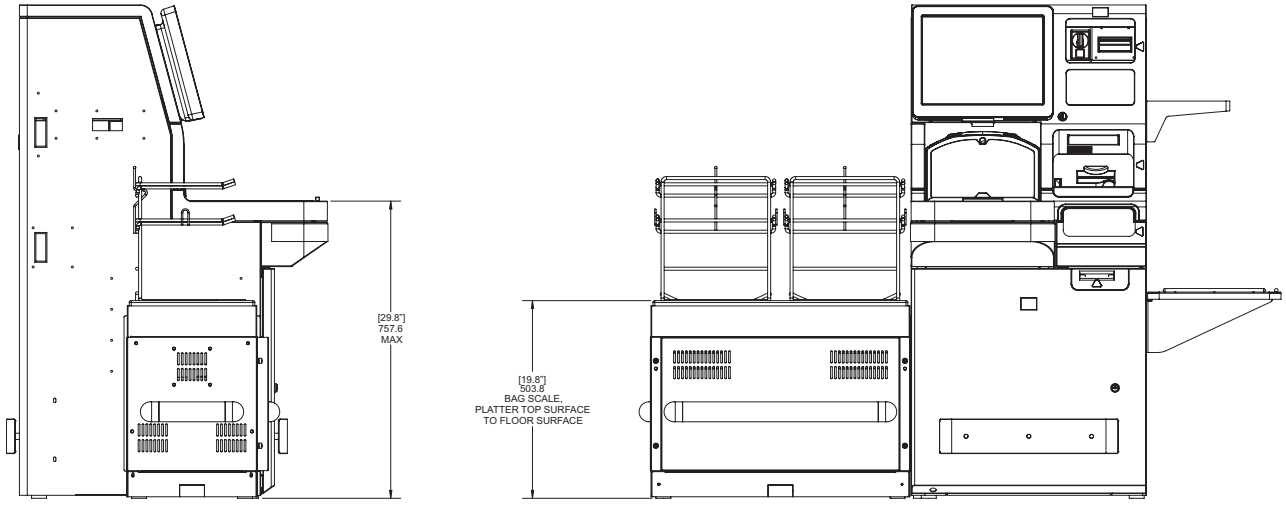


Figure 4.4 ANSI A117.1 (308.3.2) compliant Universal Bag Scale vertical dimensions

IMPORTANT: This section applies to ANSI A117.1 (308.3.2) Customer Stations only. For standard stations, see Chapter 3 of the *Genesis Site Preparation and Installation* manual.

Universal Bag Scale Height Requirements

The following table lists the vertical dimensions that are required for the Genesis Universal bag scale to be compliant with ANSI A117.1 (308.3.2):

ANSI A117.1 (308.3.2) Compliant Universal Bag Scale Dimension
Platter top surface to floor surface: 19.8 in (503.8 mm)

WARNINGS:

- SEPARATE THE BAGGING UNIT FROM THE CUSTOMER STATION ROBOT BEFORE ADJUSTING THE STATION HEIGHT. THE CUSTOMER STATION (ROBOT) UNIT IS HEAVY AND MUST BE HANDLED WITH SAFETY IN MIND.
- TO AVOID RISK OF INJURY, IT IS IMPERATIVE THAT YOU REVIEW AND UNDERSTAND THESE INSTRUCTIONS AND ASSESS THE SAFETY REQUIREMENTS BEFORE BEGINNING THIS PROCEDURE.

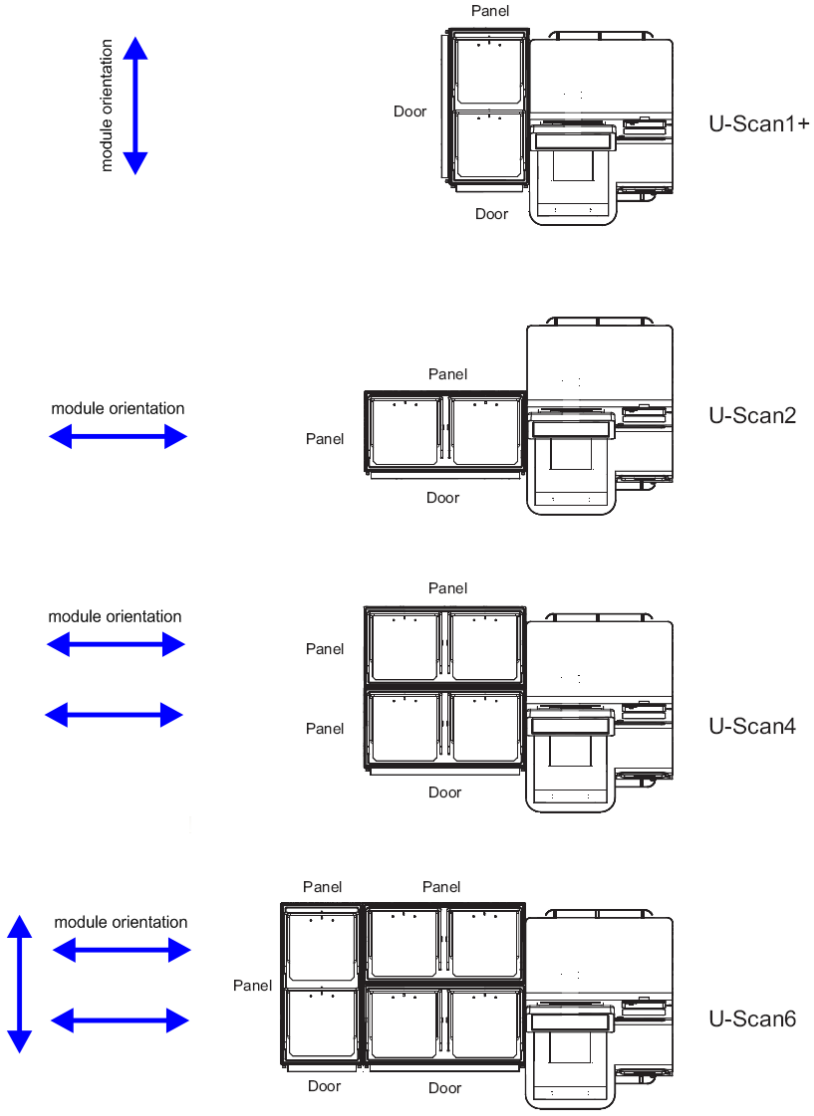
Preparing the Universal Bag Scale Module (ANSI A117.1 (308.3.2))

IMPORTANT:	This section applies to ANSI A117.1 (308.3.2) Customer Stations with Universal Bag Scale only. For standard stations, see Chapter 3 of the *Genesis Site Preparation and Installation* manual.

Recommended tools: #2 Phillips screwdriver, tool or implement to clean thread holes, ratchet (M4/M5/M6 sockets) or adjustable wrench, 4' level.

The Universal bag scale modules are assembled at the U-Scan assembly facility and shipped separately from the main unit. Follow the steps in this section to attach the Universal bag scale to the main robot unit and connect the cable(s). Instructions on attaching the other bag scale models to the main unit are given later in this chapter.

The following illustration identifies the default Universal bag scale configurations, and identifies the bag scale door and panel placement:

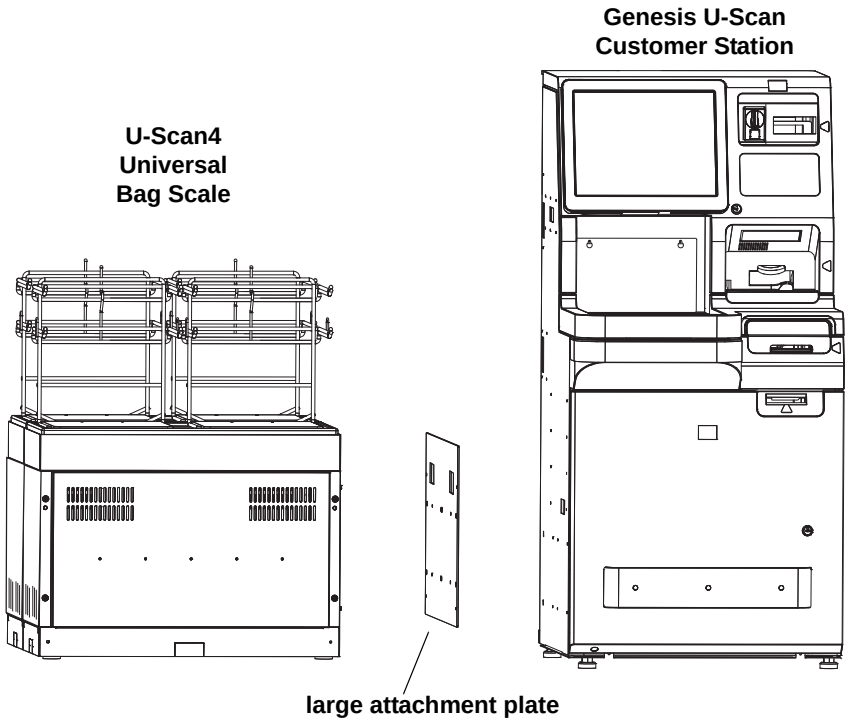


Prepare the Robot unit if necessary

- ***If the attachment plate has been attached*** to the bag scale unit for shipping, you must remove it before proceeding with the rest of the steps in this section. If the attachment plate has been packaged separately with the scale at the Assembly facility, continue to follow the steps in this section.

The attachment plate must be connected to the side of the robot unit. The attachment plate is designed to be used on both right- and left-hand robots. Redundant holes have been machined in order to accommodate both configurations.

CAUTION: *The Customer Station and the Universal bag scales are shipped separately. If an assembled Station must be relocated, the Universal bag scale unit should be removed from the robot.*



1. Locate the appropriate scale attachment plate (large plate, 11003488, for U-Scan1+, U-Scan4, and U-Scan6; small plate, 11003487, for U-Scan2).
2. Locate four flat head M5 x 10mm screws. For the large attachment plate only, also locate two M5 x 10mm pan head screws.
3. Remove any excess paint from the four threaded holes in the Genesis robot casing that you will be using. This is to prevent the threads from stripping.

   See Figure 4.5 on the next page to determine which holes to use on the robot casing. The PEM studs attached to the attachment plate face outward — at the customer site, they will pass through holes in the scale frame and be secured with nuts.

The following illustration shows the attachment plates and screws for the ANSI robot: the blue circles/blue arrows indicate the flat head screw locations. The two red circles (large attachment plate) indicate where the pan head screws are attached from behind, and the red box identifies the robot knockout location. The dimension is provided as a guideline.

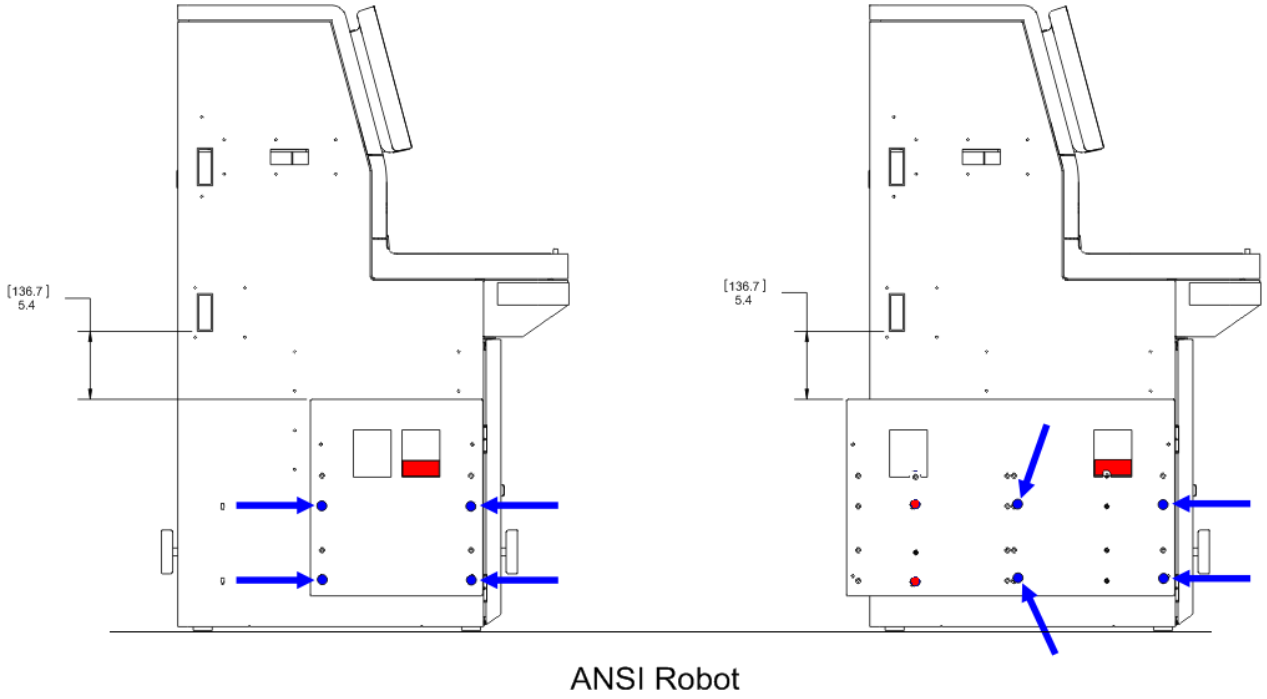
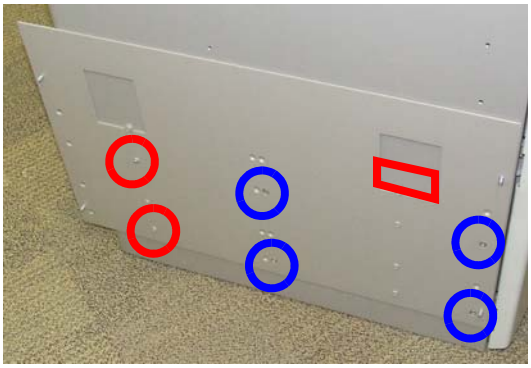


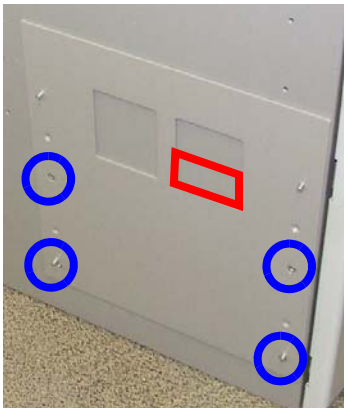
Figure 4.5 ANSI Robot attachment points

Secure the appropriate attachment plate to the Customer Station as shown in Figure 4.5 and in the photos below.

large attachment plate, installed (red triangle indicates cable knockout location)



small attachment plate, installed (red triangle indicates cable knockout location)



4. Affix a flat head M5 screw to one of the front center holes of the attachment plate and loosely tighten the screw using a Phillips screwdriver or drill. This allows you to pivot the plate to better align the remaining holes:

Photo orientation: front/bottom, Customer Station

5. Attach the three remaining flat head M5 screws to affix the remaining holes. Once each screw is in place, finish tightening them all.

6. If the back panel of the Genesis robot has been installed, remove it as explained in Chapter 3 of the *Genesis Site Preparation and Installation* manual.

   a. For the large attachment plate only: from the inside of the robot casing, insert two pan head M5 SEMS screws through the slots and screw them into the threaded holes at the back of the attachment plate.

   b. After securing the M5 screws, replace the back panel of the robot. Reaching in from the front of the robot, connect and then tighten the captive screw that secures the panel in place.

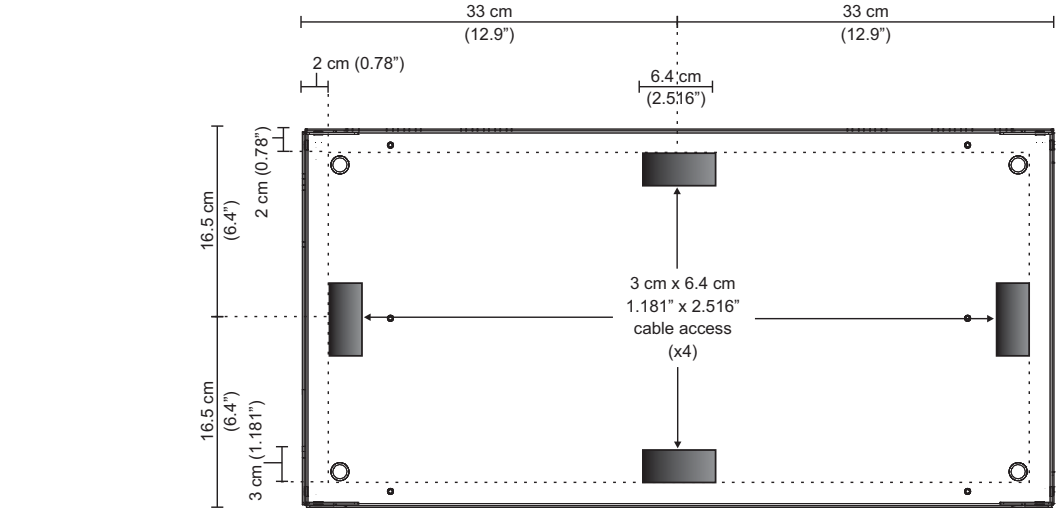
Electrical Connections

WARNING: *Under NO circumstances should electrical wiring be routed into the Customer Station (robot) unit. Provision has been made in the bag scale units for both isolated ground (Customer Station UPS only) and unregulated (Catalina printer, lane light, EAS, etc.) power.*

1. If the power lines are coming from below the station, route the cables through the bottom knockouts on the floor of the bag scale.

2. If the power lines are coming from the side or from above, first route the cables through the mouse hole knockouts in the bag scale skirts, then through the bottom knockouts on the floor of the bag scale.

3. Below are the floor knockout locations for each Universal bag scale module. The skirt mouse hole knockouts, when installed, align with the floor knockouts:



Modular Universal Bag Scale Unit (Overhead View of Bottom of Unit)

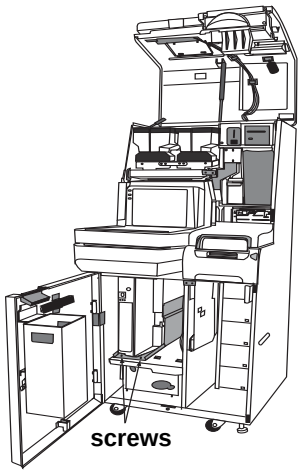
4. The recommended power installation is shown below:
   - **a.** One (1) single gang junction box with one isolated 15 amp grounded receptacle. ***Only the power cable of the Customer Station UPS*** is to be routed to and connected to this box. The extra outlet should be blocked.
   - **b.** One (1) two gang junction box with four conventional receptacles. All other external devices (such as Catalina printer, lane light, EAS, and so on) should be routed to and connected to this box.

isolated ground junction box

unregulated power junction box

Installing the Universal Bag Scales

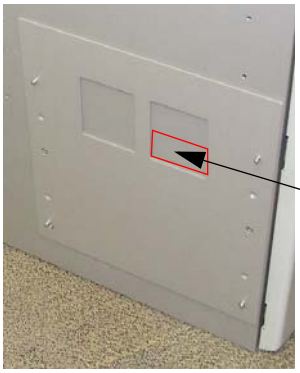
1. Use a Phillips screwdriver to remove the two screws that secure the computer bracket to the shelf.



2. Pull out the computer, setting it in front of the Station so that you can access the connectors on the rear of the computer. The cables will have been gathered and tied into a service loop and should be long enough to allow this. Take care not to interfere with the cable bundle when moving the computer.

3. Using a rubber hammer and punch, remove the frontmost knockout on the robot casing (it aligns with the frontmost rectangular hole in the attachment plate).

Large attachment plate: Remove this knockout and route the bag scale cable(s) through the opening



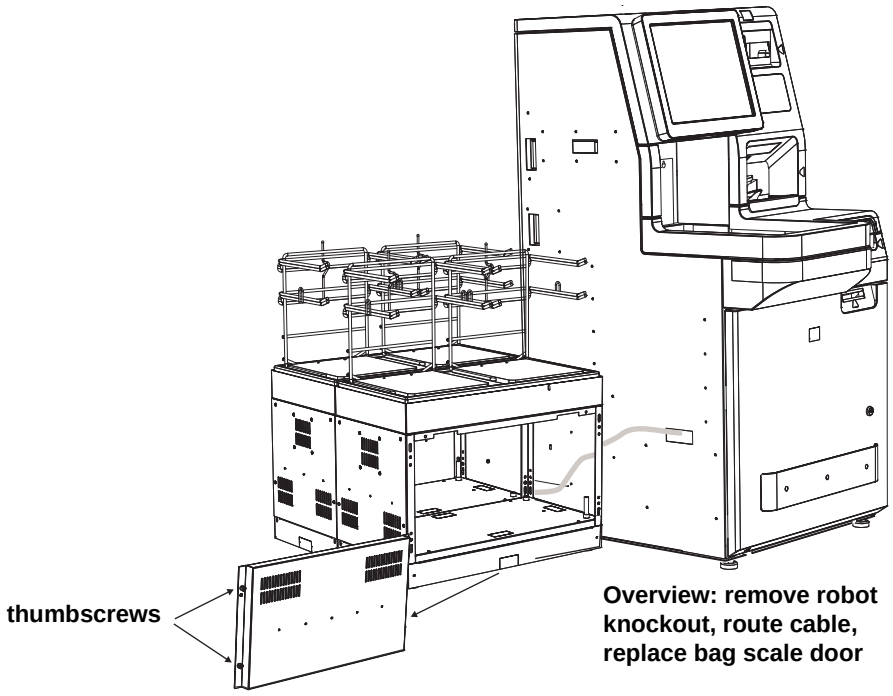
Small attachment plate: Remove this knockout and route the bag scale cable(s) through the opening

4. Position the Universal bag scale unit close to the robot unit on the appropriate side of the robot, according to your work order. The side of the bag scale that connects to the main robot unit has no panel attached.

   The bag scale will have been properly leveled with the height set to match the robot unit. (The height of the bag scale levellers is pre-set during assembly.)

5. Loosen the four thumbscrews on the front door of the bag scale, then remove it.

   (The U-Scan6 bag scale has two front doors — remove the larger door that is installed closest to the main robot unit.)



6. If the optional skirts are used, they must be installed on the bag scale before it is attached to the robot unit.

7. Align the units so that the four PEM studs in the robot's attachment plate pass through the holes in the bag scale frame. Secure them with four M6 Keps nuts.

8. Route the bag scale cable(s) from the bag scale into the front knockout on the side of the robot casing that you removed in Step 3.. Add tie wraps to secure the cable(s) to the inside of the robot casing to keep the cable from getting caught on the computer when it is pulled out and put back in.

   NOTE: *If you need to access the scale controller, you must remove the bag racks and platter from the Universal bag scale module that is in the front. For a U-Scan6 system, a second scale controller is located in the bag scale module that is farthest from the robot. To access any of the scale bars, you must also remove the bag rack(s) and platter(s).*

9. If applicable, install any required external equipment such as an EAS controller or electrical junction box.

10. Remove the plastic protective film from the bumpers.

Communication connection

1. Connect the bag scale communication cable to [TP3K: powered Serial Port 6 (COM22); TP3600 Series: powered Serial Port 3 (COM22)] on the computer.

   a. For a U-Scan6 unit that has two scale transmitters, also connect the cable from the Edgeport1 to USB Port A on the computer.

   b. For a bag scale that will receive an optional second computer, install the computer, connect the supplied KVM unit, and connect the bag scale fan cable to the Y-cable that is attached to the robot fan.

2. Attach the cable(s) loosely to the computer cable service loop.

3. Replace the computer, sliding the computer bracket back into the casing. Take care not to pinch or otherwise interfere with the service loop when manipulating the computer.

Final level check

1. Now the entire unit must be leveled:

   a. Clean the floor as well as the bottoms of all the feet to ensure good contact.

   b. Using the appropriate tool, turn the foot screws clockwise to lower the feet until they just touch the floor.

Figure 4.6 Leveling the feet

Note that bag scale units with more than two platforms are equipped with additional feet in the middle.

c. Place a 4’ level on the bagging platform. If a 4’ level is not available, you can increase a shorter level’s effective length by placing it on a solid metal bar or other firm flat object.

d. Adjust the feet until the entire unit is level and seated solidly on the floor.

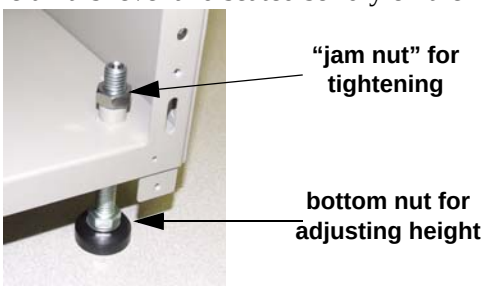


Figure 4.7 Jam nut

e. Tighten the feet hand-tight using the jam nuts.

f. Push against the U-Scan at various points. If the unit moves, continue adjusting the feet until the entire unit is fixed firmly in place.

g. Close the doors on the robot casing. If there are any alignment problems, lay the level across the casing frame. Adjust the feet (of the robot casing only) if necessary until all of the doors close easily.

h. Tighten all of the feet firmly to their final positions using a wrench on the jam nuts (identified in Figure 4.7 above).

2. Replace the bag scale door and tighten the four thumbscrews.

3. Hardware installation is now complete. For a Shekel scale unit, calibrate as explained in Chapter 5.

Removal

To remove the bag scale, follow the preceding instructions in reverse.

Genesis Mini Carousel Scales

The illustration below indicates the vertical dimensions of the Genesis Mini Carousel scale in the ANSI A117.1 (308.3.2) compliant configuration.

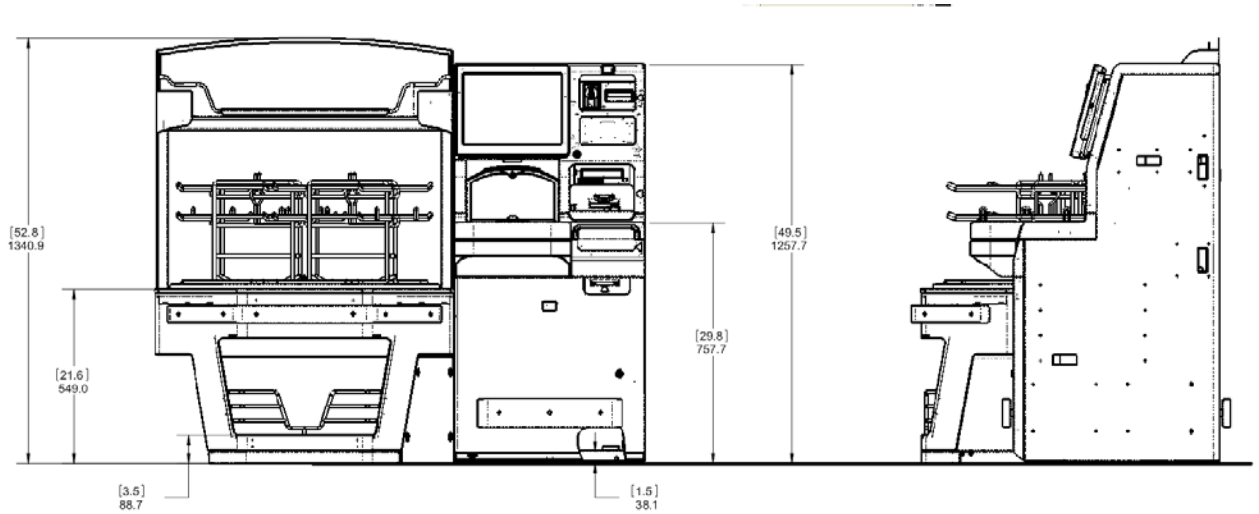


Figure 4.8 ANSI A117.1 (308.3.2) compliant Mini Carousel scale vertical dimensions

IMPORTANT: This section applies to ANSI A117.1 (308.3.2) Customer Stations with Mini Carousel scale only. For standard stations, see Chapter 3 of the *Genesis Site Preparation and Installation* manual.

Mini Carousel Scale Height Requirements

The following table lists the vertical dimensions that are required for the Genesis Mini Carousel scale to be compliant with ANSI A117.1 (308.3.2):

ANSI A117.1 (308.3.2) Compliant Mini Carousel Scale Dimensions
Floor to top of Customer Station: 49.5 in (1257.7 mm)
Floor to top of rotating platform: 21.6 in (549.0 mm)
Floor to top of Mini Carousel unit: 52.8 in (1340.9 mm)
Floor to base of bag storage compartment (excluding skirts): 3.49 in (88.7 mm)

WARNINGS:

- SEPARATE THE BAGGING UNIT FROM THE CUSTOMER STATION ROBOT BEFORE ADJUSTING THE STATION HEIGHT. THE CUSTOMER STATION (ROBOT) UNIT IS HEAVY AND MUST BE HANDLED WITH SAFETY IN MIND.
- TO AVOID RISK OF INJURY, IT IS IMPERATIVE THAT YOU REVIEW AND UNDERSTAND THESE INSTRUCTIONS AND ASSESS THE SAFETY REQUIREMENTS BEFORE BEGINNING THIS PROCEDURE.

Installing the Mini Carousel Bag Scale Module (ANSI A117.1 (308.3.2))

If you are already familiar with the installation procedure for the standard Genesis Carousel, there are a few important differences you should keep in mind when installing the Mini Carousel scale:

- There is an additional attachment plate for a two scale unit. Three shims are employed, as described on page 162. (Two are located between the robot and the scale, and a third is located inside the scale unit).
- The center bolt assembly is different for the Mini Carousel. The thrust bearing is sandwiched between two washers and installed ***above*** the platter as shown on page 167 (rather than underneath the platter, which is the case for the standard Genesis Carousel scale).
- The unit has adjustable feet rather than casters, so it cannot be rolled into position during installation. The jam nuts on the feet are located ***underneath*** the Mini Carousel unit (whereas they are located ***inside*** the standard Genesis Carousel unit).

Remove the Mini Carousel from the Shipping Pallet

1. The Mini Carousel unit arrives on site on a shipping palette. The recommended procedure for removing the unit from the pallet is for one person to tilt the unit while another person pulls the pallet away:

   a. Remove any packaging material and unscrew the four anchoring plates from the pallet.

   b. Gently slide the Mini Carousel off the pallet so that the unit's levellers touch the floor.

   c. Tilt the Mini Carousel back so that the front levelers are not touching the pallet.

   d. Hold the unit steady while another person slides the pallet out and way from the Mini Carousel.

e. Gently lower the Mini Carousel onto the floor and slide it into its approximate final position, but not up against the Genesis robot yet.

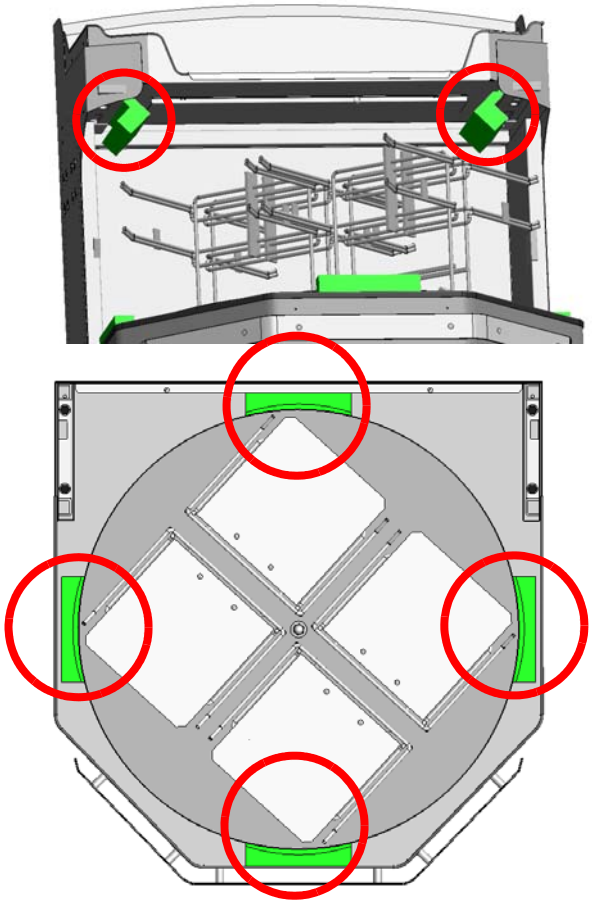
Initial preparations

1. You will need to remove the rotating platter before continuing. To do so, undo the center bolt acorn nut and note the locations of each hardware component as shown below. Carefully pull up on the platter edge (or on the bag racks) from two sides and set it aside.

2. Locate the transportation safety features:

   a. For an RL Scales unit: remove the protective padding, tape, and wooden blocks that prevent the four stopper bolts on the bottom bars of the scale unit from hitting the top bars of the scale.

b. For a Shekel Scales unit: remove the six protective foam inserts, which are installed between the upper platform and the platform supports at each end, and at the four cardinal points around the rotating platter, as indicated by the green blocks below:



3. Locate the attachment plates that have already been installed on the appropriate side of the Customer Station (robot). Remove any protective material from the four PEM studs.

CAUTION: *The Customer Station and the Mini Carousel bag scale are shipped separately. If an assembled Station must be relocated, the Mini Carousel unit must be removed from the robot.*

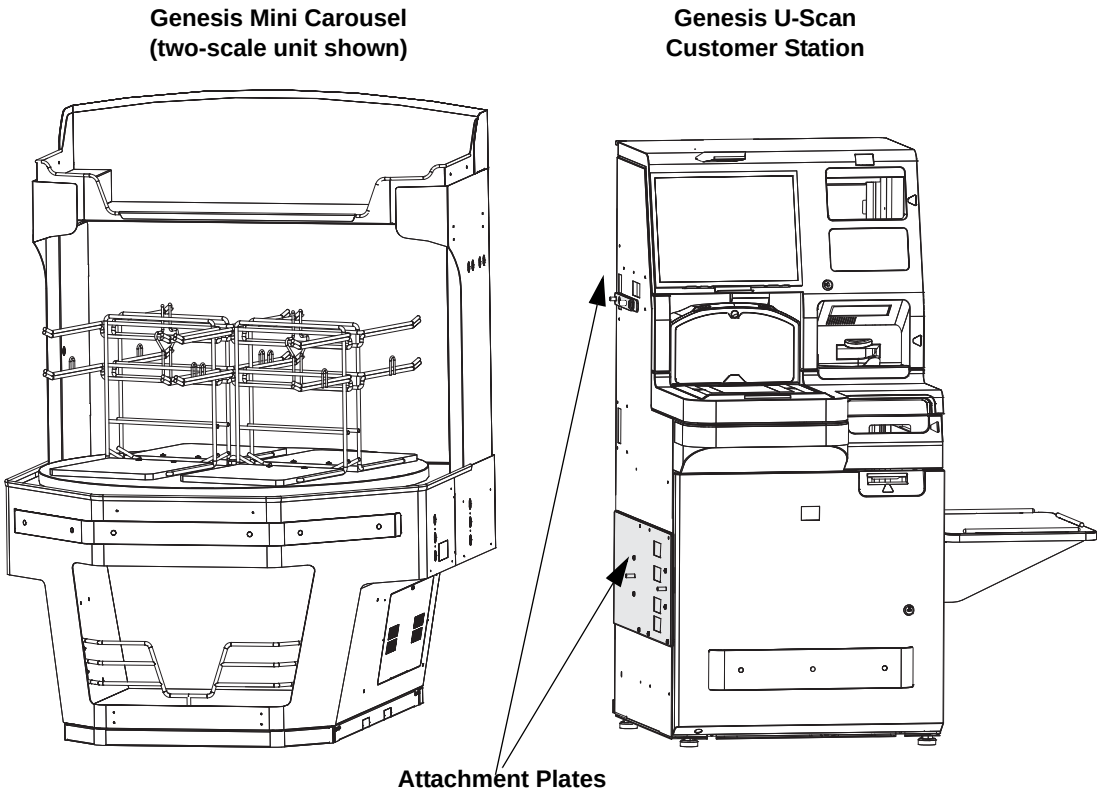


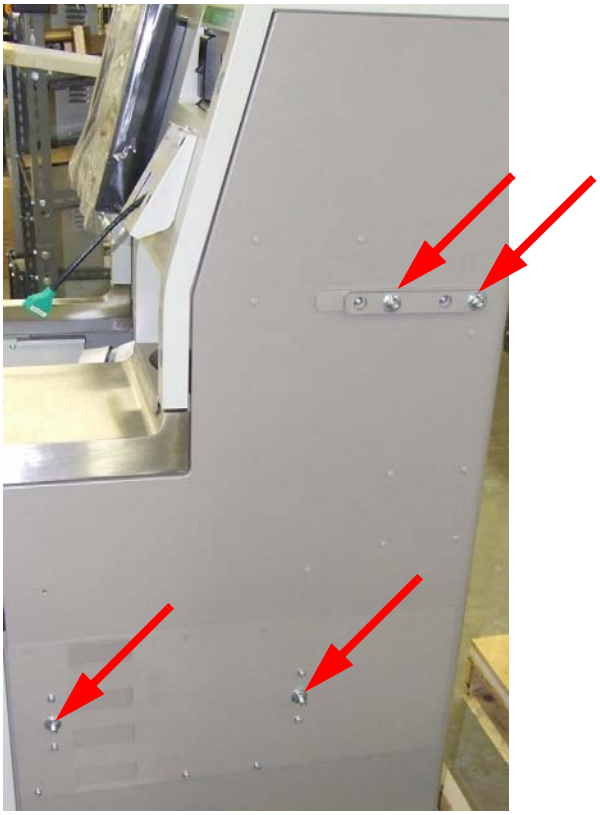
Figure 4.9 Genesis Customer Station and Mini Carousel scale

NOTE: *Note: if the attachment plates have not be installed on the robot unit, attach them as explained at the beginning of this section.*

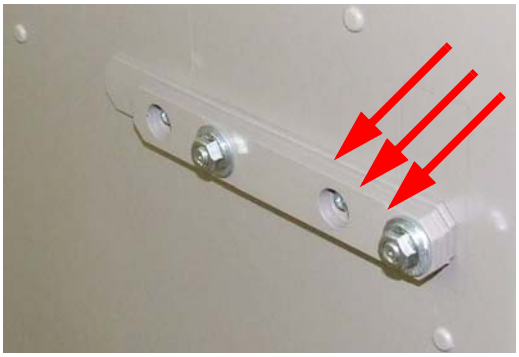
Identify the pre-installed hardware

The hardware required for the U-Scan Genesis Mini Carousel installation has been pre-installed for re-use on site.

1. Locate, remove and set aside the serrated nuts and fender washers that were attached to the PEM studs on the two attachment plates on the robot. Set them aside.



2. For a two-scale Mini Carousel installation, locate, remove and set aside the third shim that was attached to the two PEM studs on the upper attachment plate on the robot unit. Leave two of the shims on the robot, as shown below on the right.

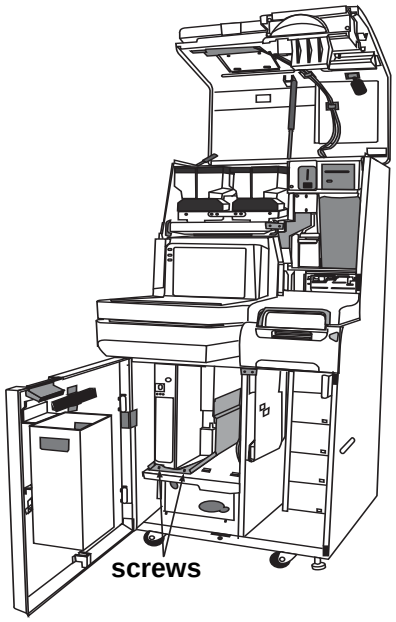


3. Level the Customer Station and the Mini Carousel as necessary.

4. For a two-scale Mini Carousel installation, remove the side panel that is closest to the Customer Station (it is held in place by one screw, in the middle).

Remove the Customer Station knockout

1. Use a Phillips screwdriver to remove the two screws that secure the computer bracket to the shelf.



2. Pull out the computer, setting it in front of the Station so that you can access the connectors on the rear of the computer. The cables will have been gathered and tied into a service loop and should be long enough to allow this. Take care not to interfere with the cable bundle when moving the computer.

3. Using a punch tool and a rubber hammer, knock out the rectangular knockout on the robot that aligns with the lower rectangular opening on the lower attachment plate. Be careful not to damage any of the internal components.

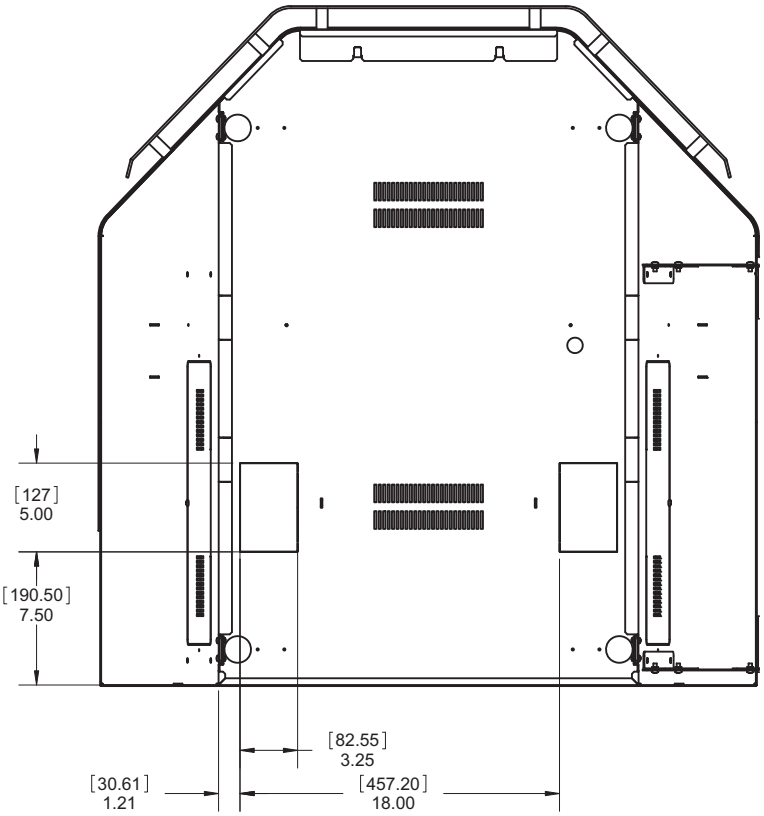
Electrical Connections

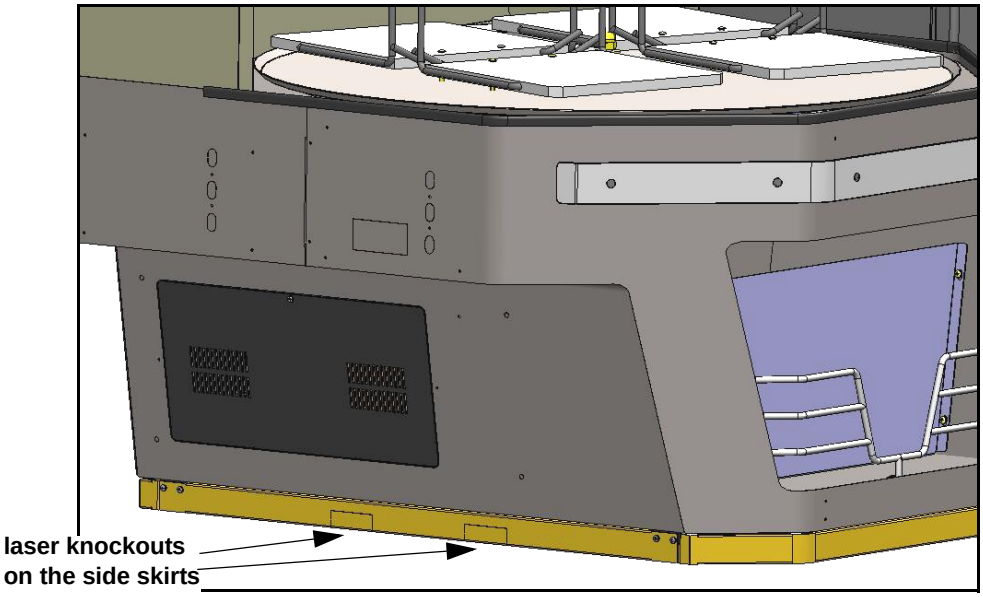
WARNING: *Under NO circumstances should electrical wiring be routed into the Customer Station (robot) unit. Provision has been made in the bag scale units for both isolated ground (Customer Station UPS only) and unregulated (Catalina printer, lane light, EAS, etc.) power.*

1. If the power lines are coming from below the station, route the cables through the bottom knockouts on the floor of the bag scale.

2. If the power lines are coming from the side or from above, first route the cables through the mouse hole knockouts in the bag scale skirts, then through the bottom knockouts on the floor of the bag scale.

3. Below are the floor knockout locations for the Mini Carousel. The skirt mouse hole knockouts, when installed, align with the floor knockouts:





4. The recommended power installation is shown below:
   a. One (1) single gang junction box with one isolated 15 amp ground receptacle. ***Only the power cable of the Customer Station UPS*** is to be routed to and connected to this box. The extra outlet should be blocked.

   b. One (1) two gang junction box with four conventional receptacles. All other external devices (such as Catalina printer, lane light, EAS, and so on) should be routed to and connected to this box.

isolated ground junction box

unregulated power junction box

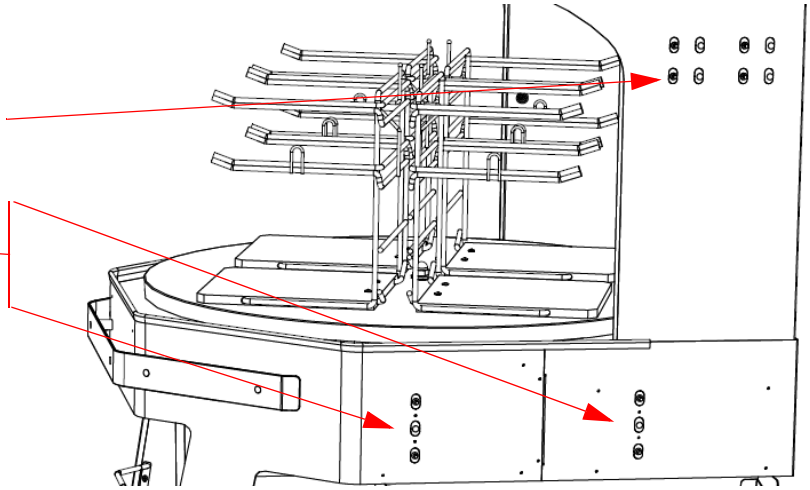
Remove the unit connection knockouts

1. Locate the six laser knockout mounting holes and the rectangular serial cable opening on the Mini Carousel unit, on the side that will face the Customer Station.

2. For a two-scale Mini Carousel installation, also locate the four additional knockout mounting holes:

Two sets of four obround knockouts for the upper scale (the lower set is used for ANSI A117.1 (308.3.2) installation)

Two sets of three obround knockouts for the lower scale



NOTE: *The knockouts pointed to above are used in an ANSI A117.1 (308.3.2) installation. The other remaining knockouts are for the standard installation.*

3. Punch out the six obround knockouts beside the rectangular knockout (three on each side). They line up with the attachment plate studs and screws that are located on the side of the Customer Station.

4. The following photograph shows the lower knockouts removed:

5. For a two scale Mini Carousel installation, punch out the four obround knockouts on the side of the Mini Carousel unit.

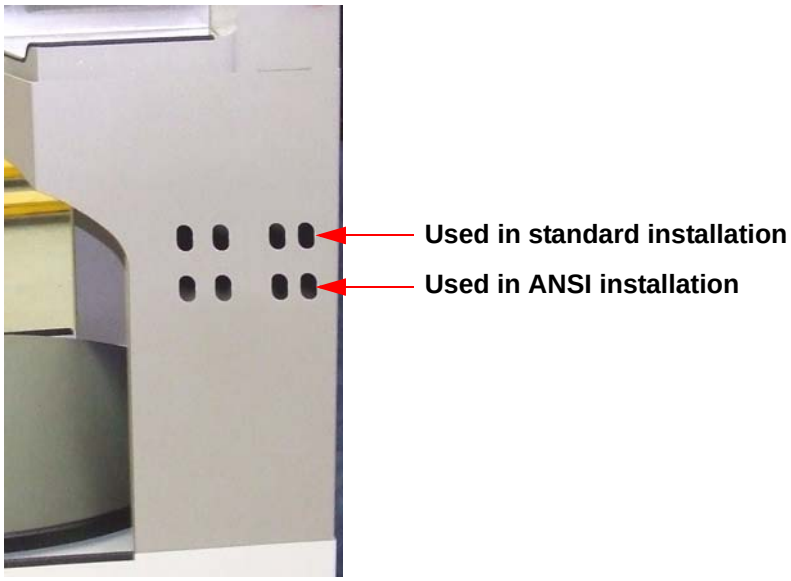
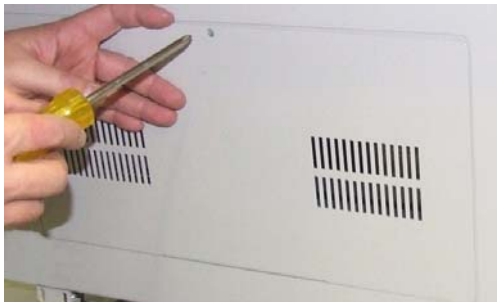


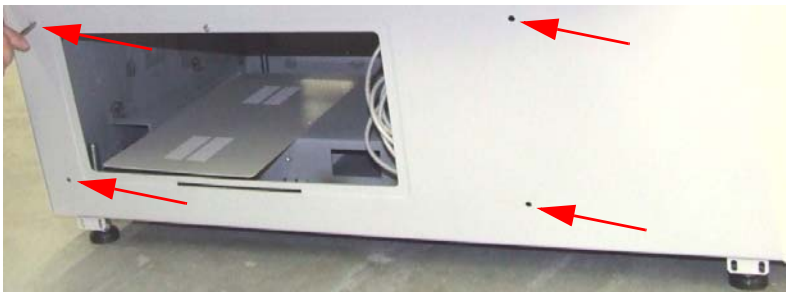
Photo orientation: side/top, robot side of the Mini Carousel

Remove the trim plate knockouts

1. The trim plates are mandatory in a ANSI A117.1 (308.3.2) installation.
2. Remove the side access panel on the base of the Mini Carousel ***that corresponds to the side that the robot will be attached to***.



3. Punch out the four small round knockouts on the lower side of the Mini Carousel base, as shown below.

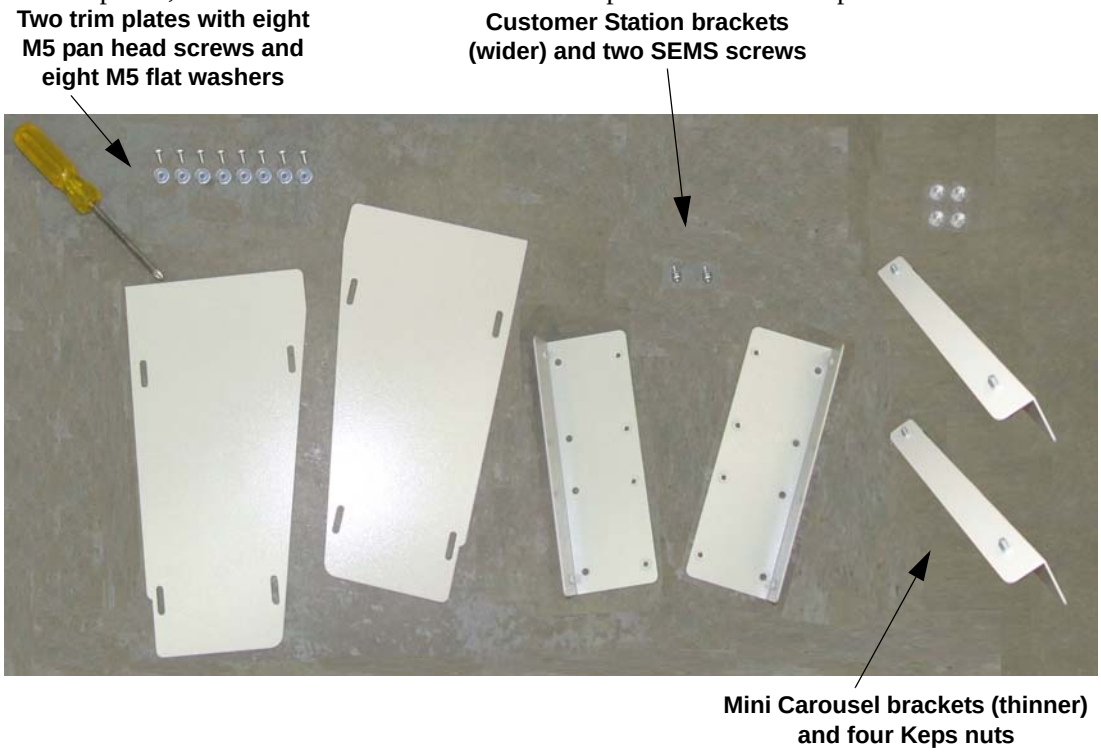


4. Punch out the rectangular knockout which is the exit for the serial cable from the scale transmitter. Then punch out the six obround knockouts (they line up with the attachment plate studs and the screws that are located on the side of the robot).

Trim plates

1. The trim plates fill the gap between the Customer Station and the Mini Carousel units at floor level. They are held in place by four brackets that you must install (two on the Customer Station and two on the Mini Carousel unit).

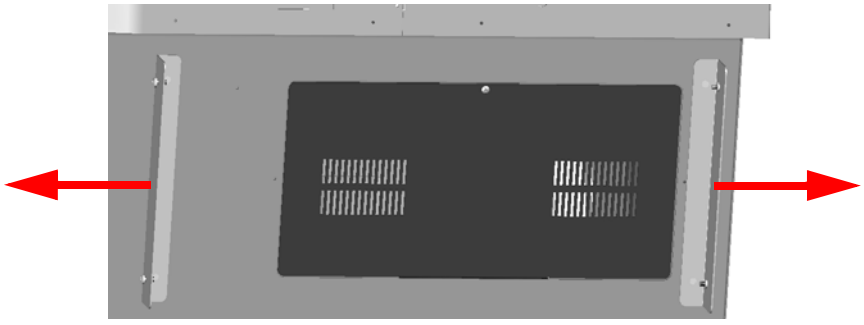
2. Locate a Mini Carousel trim plate kit (11002911S-2), which contains 2 thinner brackets that attach to the Mini Carousel unit, two wider brackets that attach to the Customer Station (robot), two trim plates, x8 M5 pan head screws and x8 M5 flat washers for the trim plates, x2 M5 SEMS screws and x4 M5 Keps nuts for the trim plate brackets.



Attach the brackets to the Mini Carousel

3. Attach the two thinner brackets to the small holes near the bottom of the Mini Carousel that you punched out earlier.

   Positioning information: the two PEM studs on each bracket are inserted into the holes, and the protruding sides of the brackets are closest to the exterior, in the front and in the rear:



4. Back bracket: position one of the thinner brackets over the two holes towards the back of the Mini Carousel that will receive the bracket PEM studs. Reach around through the side panel opening to attach the Keps nuts. Tighten the nuts with a wrench.

5. Front bracket: position the other thinner bracket over the other two holes that will receive the bracket PEM studs.

6. Reach through the top to attach the Keps nuts. Tighten the nuts with a wrench.

Attach the brackets to the Genesis robot

1. Locate the attachment plate that has been installed near the bottom of the Customer Station. The Mini Carousel unit attaches to the Customer Station by means of this plate.

   Position information: as was the case with the Mini Carousel unit, the brackets are aligned on the robot with the protruding sides of the brackets closest to the exterior, in the front and in the rear.

Only the lower holes are used in an ANSI A117.1 (308.3.2) installation, as indicated by the two circles in the following illustration. (See Chapter 3 of the *Genesis Site Preparation* manual for an indication of which holes to use in a standard (non-ANSI) installation.)

2. At the front, you should see a small round M5-threaded hole, just underneath the part of the attachment plate that has two rectangular openings. If the threaded hole has been covered by a plastic plug, remove it.

3. Secure one of the wider brackets to the side of the Customer Station using one M5 pan head screw, attached from the outside, to the lower hole next to the protruding side of the bracket (see the arrow in the photo on the right, below). Tighten the screw until the bracket is firmly attached.

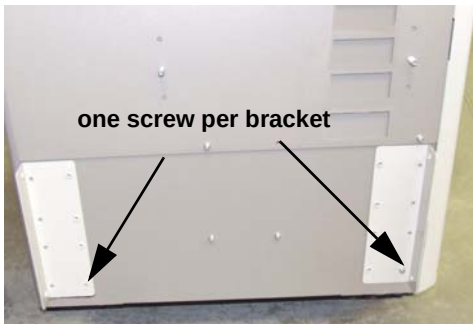
4. Remove the back panel of the Customer Station, as explained in “Removing the Back Panel (Regular Self-Checkout and Payment Stations)” in Chapter 3 of the *Genesis Site Preparation and Installation* manual.

5. At the rear of the Customer Station, on the side that will receive the Mini Carousel, you should see a small obround hole just underneath the back end of the attachment plate. You will be attaching the M5 screw from the inside of the Customer Station.

   a. Insert the screw into the obround hole, from inside the robot.

   b. Align the bracket so that the tip of the screw makes contact with the lower hole on the bracket.

c. Tighten the screw until the bracket is firmly attached.

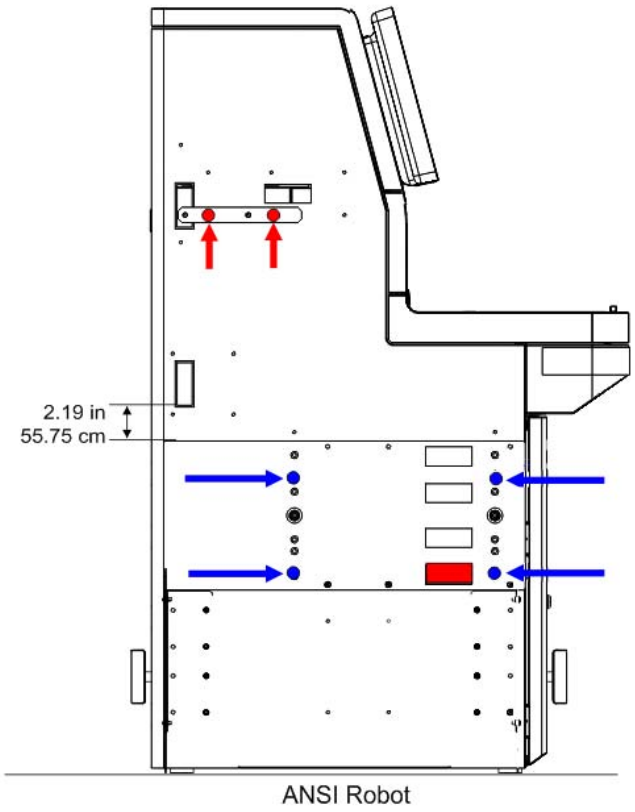


Connect the units

1. Push the Mini Carousel scale over to the Genesis Customer Station. Mate the units together and verify that the two protruding PEM studs align with the obround slots in the wall of the Mini Carousel.

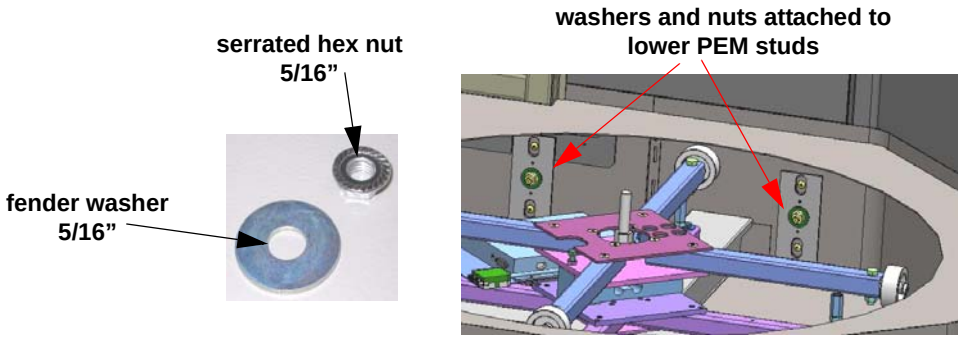
2. For a two-scale Mini Carousel installation, you will also align the PEM studs on the upper attachment plate (with two shims attached) with the openings in the wall of the Mini Carousel unit.

   The following illustration shows the attachment plates and screws for the ANSI robot: the blue circles/blue arrows indicate the flat head screw locations. The two red circles (upper attachment plate) indicate the pan head screw locations, and the red box identifies the robot knockout location. The dimension is provided as a guideline.



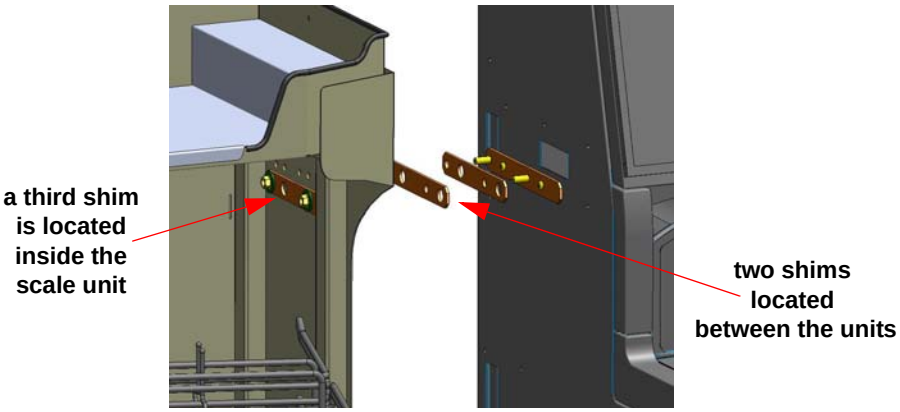
3. Some additional leveling of the units may be required, although the rounded openings allow for a certain amount of movement for adjustment.

4. Secure the Mini Carousel to the lower attachment plate on the robot using the two serrated hex nuts and fender washers that you removed from the PEM studs on the robot's attachment plates. Note that the serrations provide additional 'bite' to help secure the unit.

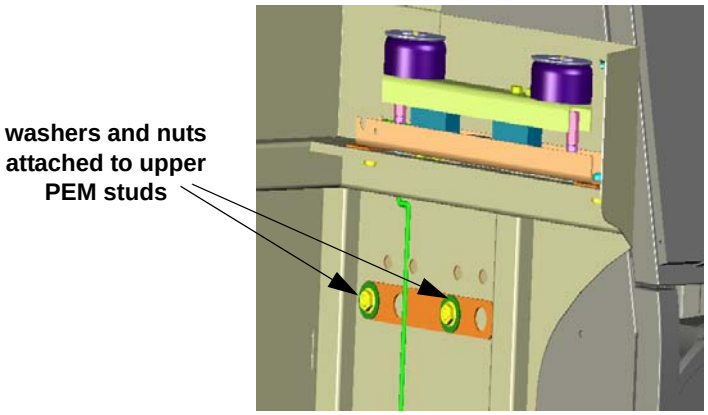


5. For a two-scale Mini Carousel installation, place the third shim that you removed earlier inside the wall of the Mini Carousel, over the PEM studs that protrude in from the upper attachment plate.

6. The shim alignment sequence is illustrated below:

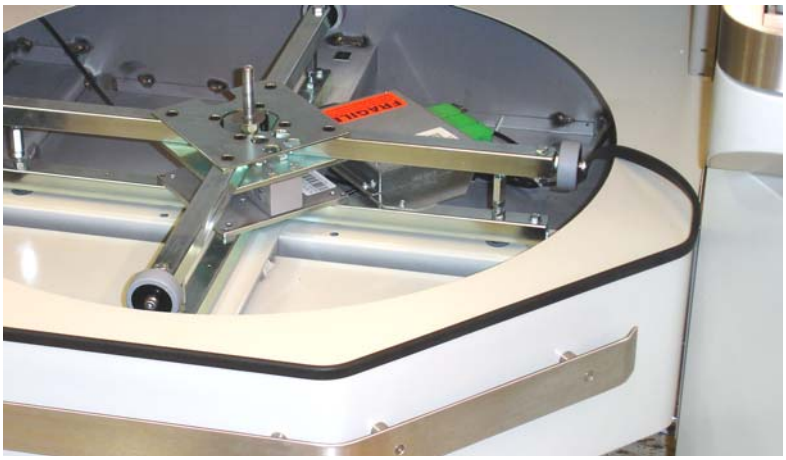


7. Attach a fender washer and serrated hex nut to each of the two PEM studs (hand tight) on the upper attachment plate.

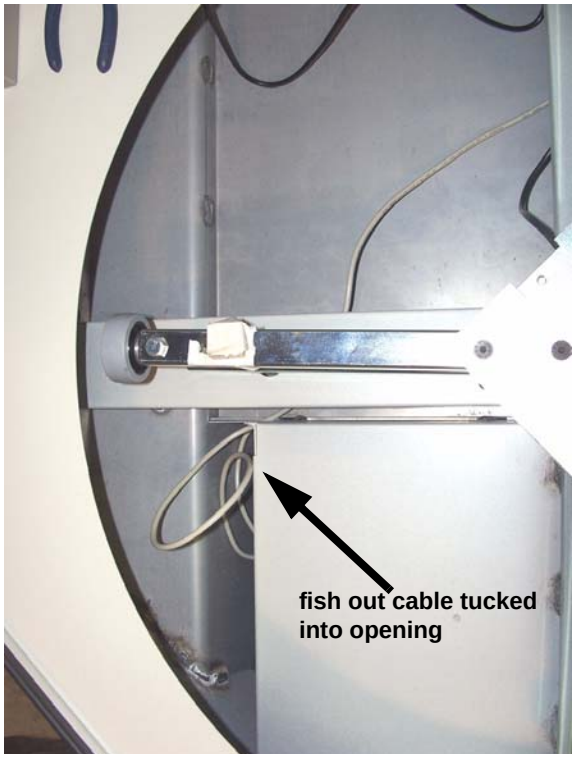


8. Pull back the trim strip on the robot side of the Mini Carousel casing. Once connected to the robot, if possible, the trim strip should be wedged back into place.

   If this is not possible, the trim strip should be cut where it meets the robot casing.



9. Locate the serial cable in the scale well. It has been temporarily tucked into an opening on the drip tray for testing.
   This is not the final cable routing to the Customer Station.



10. Carefully extract the power and data serial cable from the opening under the primary scale.

11. Route the scale cable ***out through the side access panel opening*** in the Mini Carousel that you exposed earlier (see page 157), and then on through the robot knockout to the computer. (The exposed cable will be hidden by the trim plates that you will install on page 165.)

12. Attach the cable loosely to the computer cable service loop.

13. Connect the communications cable to [TP3K: powered Serial Port 6 (COM22); TP3600 Series: powered Serial Port 3 (COM22)] of the computer.

14. Replace the computer, sliding the computer bracket back into the casing. Take care not to pinch or otherwise interfere with the service loop when manipulating the computer

15. For a bag scale that will receive an optional second computer, install the computer, connect the supplied KVM unit, and connect the bag scale fan cable to the Y-cable that is attached to the robot fan.

Final level check

1. Perform a final check for level of the entire unit:

   a. Place a level on the crossbars, or on level areas of the weight bar arms. You can increase the effective length of a level that is too short by placing it on a solid metal bar or other firm flat object.

   b. Clean the floor as well as the bottoms of all the feet to ensure good contact.

   c. If necessary, adjust the feet until the entire unit is level and seated solidly on the floor.

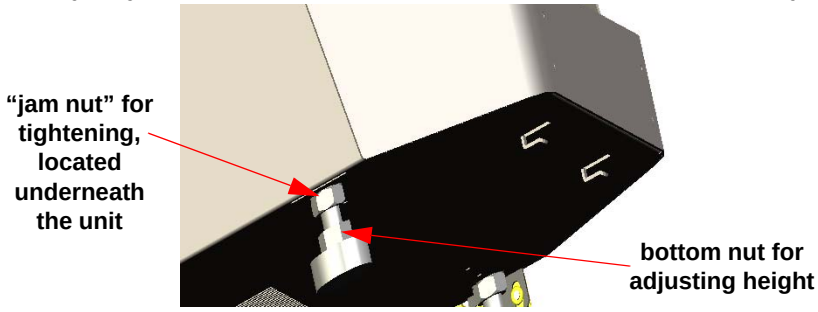


Figure 4.10 Jam nut

   d. Tighten the feet hand-tight using the jam nuts, which are located under the floor of the Mini Carousel casing.

   e. Push against the U-Scan at various points. If the unit moves, continue adjusting the feet until the entire unit is fixed firmly in place.

Skirt kits

1. If the optional skirt kits are required, ***install them now***.

   IMPORTANT: *In an ANSI A117.1 (308.3.2)-compliant installation, the Customer Station is lowered and therefore does not have any skirts installed.*

2. Follow the instructions on page 106 of Chapter 3 of the Genesis Site Preparation and Installation manual (Mini Carousel unit), then continue with the next subsection.

   NOTE: *The photographs which follow do not show the skirt kits installed on the Mini Carousel unit.*

Trim Plates

Attach the front trim plate to the brackets

1. You will notice that the trim plate brackets are aligned to receive the trim plates.

2. Position a trim plate so that it aligns with the attachment holes on the brackets.

3. Loosely secure the trim plate to the front brackets using four M5 pan head screws and four M5 washers per trim plate.

Each trim plate has four obround slots that allow them to be adjusted up and down, in case the U-Scan Station needs to be re-levelled, or raised or lowered (only if no skirts are installed).

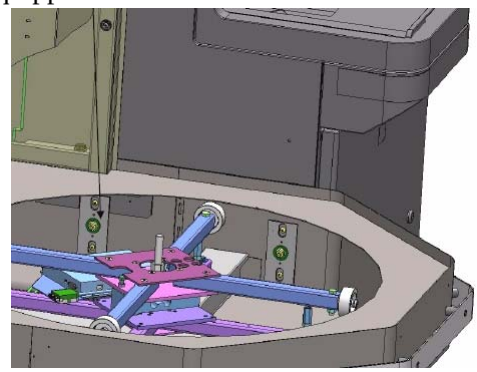
4. Leave the screws slightly loose until both the front and rear trim plates have been installed.

Attach the rear trim plate to the brackets

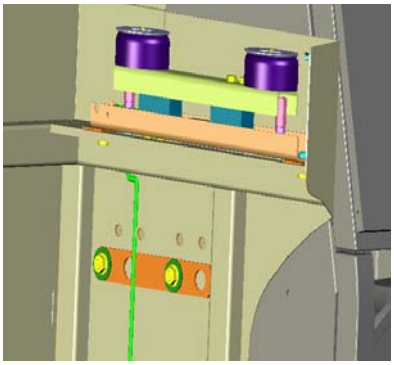
1. Position the other trim plate so that it aligns with the attachment holes on the brackets.
2. Loosely secure the trim plate to the rear brackets using four M5 pan head screws and four M5 washers per trim plate.

   Each trim plate has four obround slots that allow them to be adjusted up and down, in case the U-Scan Station needs to be re-levelled, or raised or lowered (only if no skirts are installed).

3. Now that the trim plates have been loosely attached, tighten all four serrated hex nuts using a ratchet equipped with a 6” or 12” extension.



Lower attachment (hex nuts)



Upper attachment (shim and hex nuts)

4. Now make sure that both trim plates are flush to the floor. Secure them tightly with the eight M5 pan head screws.

5. Replace the rear panel of the Customer Station (main robot unit). Align the rear panel and push in and down. Remember to tighten the captive screw you loosened when removing the back panel

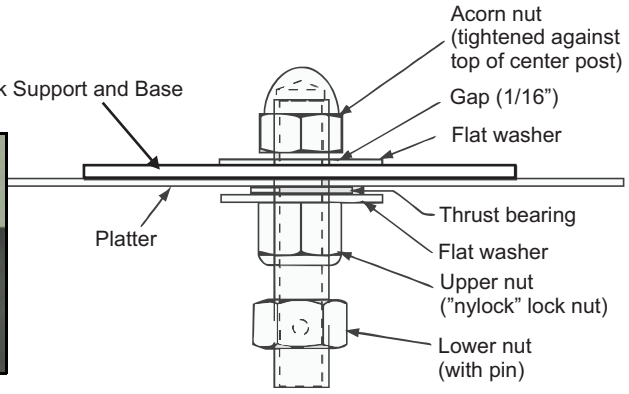
Replace the Scale Platters

Secondary Scale (two scale Mini Carousel unit only)

1. Install the secondary scale platter.

Primary (Rotating) Scale

1. Install the primary scale platter.
2. Replace the two flat washers and thrust bearing that you removed from the center bolt (see Chapter 3 of the *Genesis Site Preparation and Installation* manual).



3. Ensure that there is a 1/16" to 1/8" gap between the acorn nut and the top of the topmost washer.
4. Secure the acorn nut tool-tight.

   The U-Scan Mini Carousel is fully attached to the Genesis Customer Station. The Mini Carousel must be disconnected from the Customer Station should the assembled Customer Station ever need to be relocated.
5. Hardware installation is now complete. For a Shekel scale unit, calibrate as explained in Chapter 5.

Removal

To remove the Mini Carousel Scale unit, follow the preceding instructions in reverse.

IMPORTANT: Resume the installation steps in Chapter 3, starting on page 109.

5
Shekel Scale Calibration

The information in this chapter applies specifically to U-Scan bag scales that contain ***scales manufactured by Shekel***.

This chapter presents the following information:

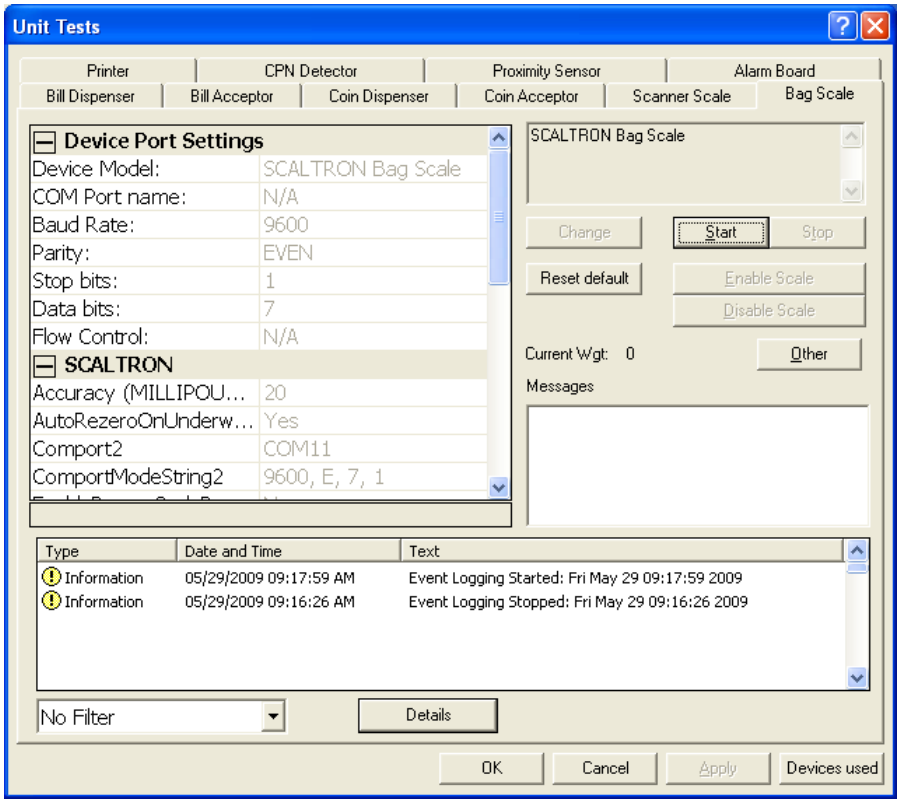
Testing in the Device Tester

The Shekel scales used in the Mini Carousel are shipped as a kit by the manufacturer. The Shekel scales used in the Universal Bag Scale are shipped individually by the manufacturer. If the customer is experiencing problems with the scales, or if this is a new installation, you will need to calibrate the scales as explained in "System Calibration (Dorban utility)" on page 175.

Check the Settings

1. Access the **Device Tester**:
   a. Locate the computer keyboard.
   b. Press **ALT+TAB** and select the **Robot Control** window.
   c. Touch **Stop Robot**.
      The **Launchpad** appears.
   d. Touch **Device Tester**.
   e. Enter the password (**1379**), then touch **Done**.
      The **Device Tester** appears.

2. In the **Unit Tests** window, click the **Bag Scale** tab. Ensure that the **Device Port Settings** are as shown below.



3. Check that the **Device Model** or **Device Type** is set to **SCALTRON Bag Scale.** (Older versions of **Device Tester** may refer to this as **Scaltron.dll**.)
4. Check that the **Single Unit Mode** setting is set to **Yes**.
5. Ensure that the correct COM port is selected.
   a. TP3K: Port 6 (COM22)
   b. TP3600: Port 3 (COM19)
6. Ensure that the remaining settings are correct:

Baud	9600
Parity	EVEN
Stop Bits	1
Data Bits	7

Change the Settings if Incorrect

*NOTE: Only change the settings if the **Device Model** or COM port are incorrect.*

1. Stop the device (from the software).
2. Press **ALT** + **[*]** (the * key is on the number pad).
   The **Change** button is enabled.
3. Click **Change**.
4. Click the arrow key to display the Location drop-down menu.
5. Select the appropriate **Device Model** for the device.
6. Click **Apply**.

Reset (Zero) the Scale

1. Remove the bag racks if possible (or at least remove the bags). If there are no bag racks, remove the platter.
2. Access the **Device Tester**.
3. Click the **Bag Scale** tab.
4. Click **Start**.
5. Click **Other**.
6. In the **Range** box, verify that the value is 150 for Mini Carousel, U-Scan1+ and U-Scan2. The value must be 300 for a U-Scan4.
7. In the **Command** list, select **Z**. See the warning below.
8. Click **ZERO** to reset the bag scale.
9. Replace the bag racks.
10. If necessary, touch the **Rotating Siren** at the Attendant Station to clear the weight violation.

*WARNING: Do not use any commands in the command list other than **Z** for zero, **R** for range, or **V** for version.*
If you accidentally used any other command:
*(1) Close the **Other** window and exit the Device Tester program.*
(2) Re-start the Device Tester program and start the Scale (on line).
*Only use the **Z** command for zeroing the scale.*

Test the Scales

*NOTE: Error messages are stored in the **Eventlog Viewer** and can be viewed when you exit the **Device Tester**.*

1. Click **Start**.
2. Click **Enable Scale**.
   The current weight is displayed in the **Messages** box.
3. If the **Enable Scale** button is disabled, the current weight is already displayed in the **Messages** box.
4. Put an object on the bag scale and read the weight.
5. Weigh the object on different areas of the bag scale to ensure that the weight is constant and accurate.
6. Click **Stop**.

Troubleshooting

The Shekel scales used in the Mini Carousel are shipped as a kit by the manufacturer. The Shekel scales used in the Universal Bag Scale are shipped individually by the manufacturer. If the customer is experiencing problems with the scales, or if this is a new installation, you will need to calibrate the scales as explained in "System Calibration (Dorban utility)" on page 175.

IMPORTANT:
NEVER PERFORM THE DORELLA CALIBRATION PROCEDURE (page 182) ON A MINI CAROUSEL BAG SCALE UNLESS THE PRE-CALIBRATED SCALE BARS ARE REPLACED OR RE-INSTALLED, OR IF THE SCALE TRANSMITTER IS CHANGED!

THE DORELLA PROCEDURE IS NOT REQUIRED FOR UNIVERSAL BAG SCALE SYSTEMS.

Troubleshooting the Shekel Scales Bag Scales

You will be able to identify most issues with the bag scales if you follow the steps outlined in this chapter.

Follow the Testing Procedure

See Testing in the Device Tester (page 169). If there are problems, follow the procedures detailed in this chapter.

Identify the scale manufacturer

Before continuing, ensure that the installed scales were manufactured by Shekel. If you are unsure of the manufacturer, stop the U-Scan software and:

1. Run the **Device Tester** program.
2. Select **Bag Scale**, then **Start**.
3. Press **Other**.
4. Verify the software version (**V**), which should be 3.30.

Check the Cables

1. Remove the carousel platter.
2. Ensure that the power/communication cables are connected to the scale transmitter.
3. Ensure that the power and communication cables are connected to the computer:
   a. TP3K: Port 6 (COM22)
   b. TP3600: Port 3 (COM19)

Check the Bag Scale Platter

1. Ensure that the carousel platter is not touching the unit casing.
2. Upper platter: check that the difference in height between the tops of the scale bar bumpers and the bottom of the platter does not exceed 1.0 mm.
3. Lower platter: check that the difference in height between the tops of the scale bar bumpers and the bottom of the platter does not exceed 1.78 mm.

Zero the Scale

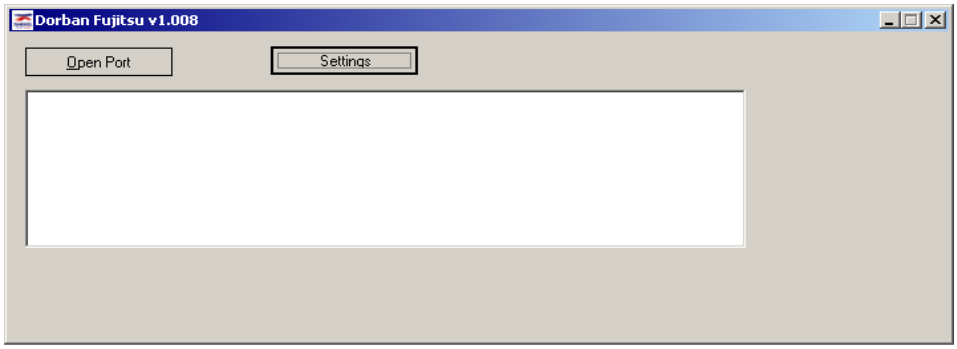
Zero the scale using **Device Tester** as explained on page 169.

System Calibration (Dorban utility)

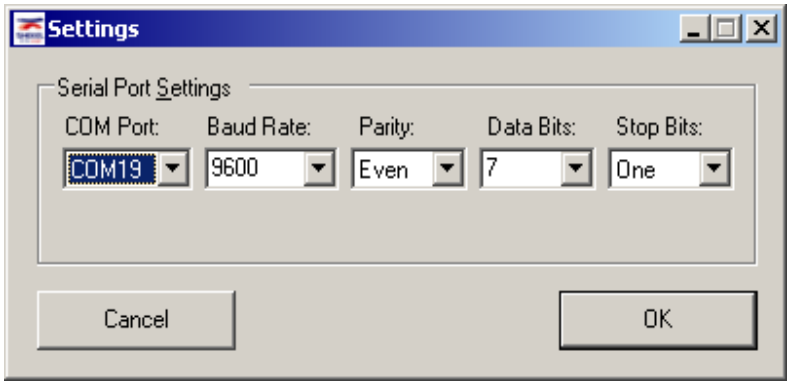
The Dorban utility connects to the bag scale transmitter and is used to calibrate the Shekel scales.

Start the Dorban utility

1. To calibrate the scales, press Alt+Tab on the computer keyboard and select the **Robot Control** window.
2. Touch **Stop Robot**. The Launchpad appears.
3. Touch **Stop TS** (if applicable) and then touch **Exit**.
4. From this point on, you require administrative rights. If necessary, log on as a user that gives you access to the Windows desktop.
5. Locate and run the executable file named *11004240 Dorban Fujitsu vX.XXX.exe*. The latest version of this file is available on Tech Web: http://deliveryuskm.fc.fujitsu.com/ITSG-CS/NTS/TW/UScan/Forms/Shekel.aspx.
6. Touch or click the **Settings** button to identify the port used by the scale transmitter.

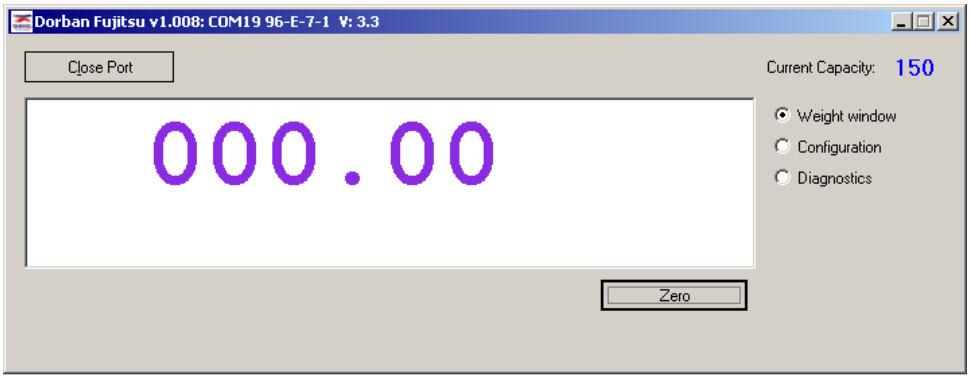


   a. Make the following selections: **COM22 (TP3K) or COM19 (TP3600)**, Baud Rate: **9600**, Parity: **Even**, Data Bits: **7**, Stop Bits: **One**. Click **OK** to continue. Touch or click **Cancel** to return to the starting screen.



7. You are returned to the main window. Click the **Open Port** button to open the selected port for communications.

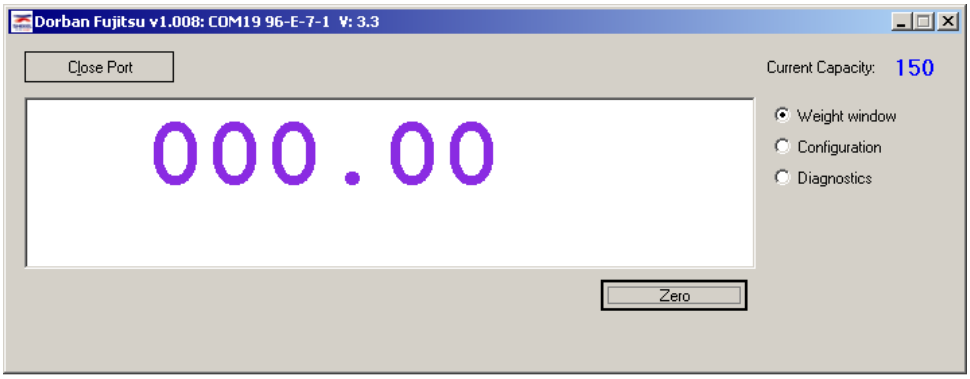
8. The **Weight Display** window opens:



Weight

The **Weight Display** window, which opens automatically after you open the port, displays the current weight on the scale, as well as the weight capacity of the scale. Note that a summary of the current configuration is displayed in the title bar of the window.

1. You can toggle among displaying the **Weight** information, **Configuration** information, or **Diagnostics**, as explained later on. **Weight Window** is selected by default.

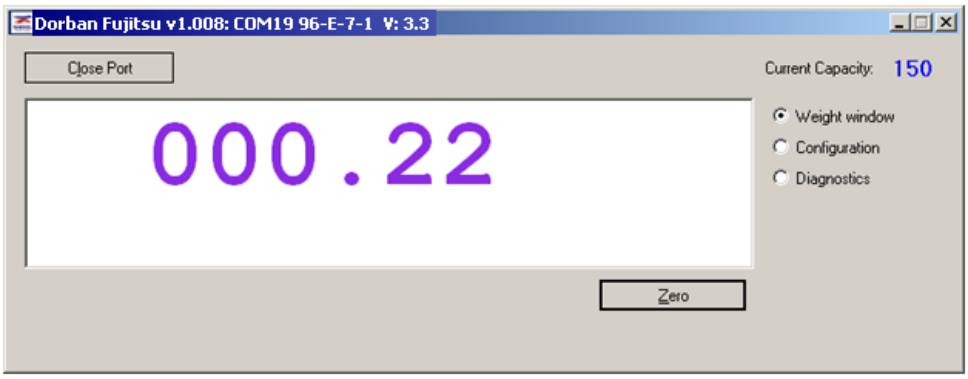


2. The current weight on the scale is displayed as an interactive reading in the message window.
3. Click the **Zero** button in the **Weight Display** window to zero the scales.

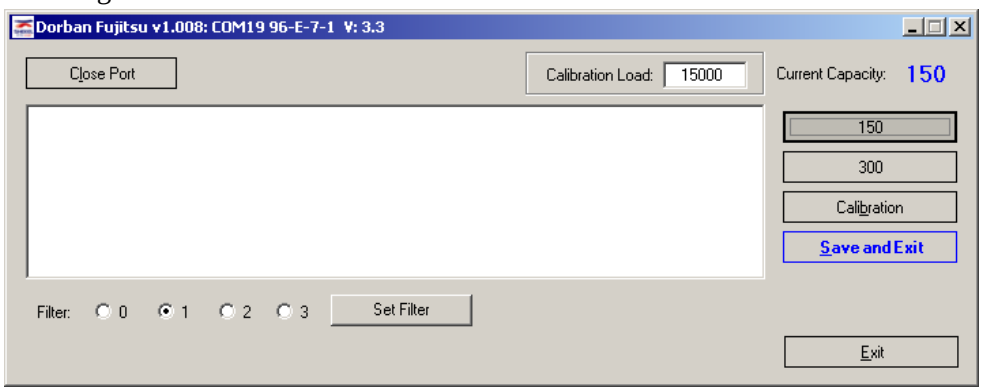
Configuration

— Start of procedure for changing the current configuration:

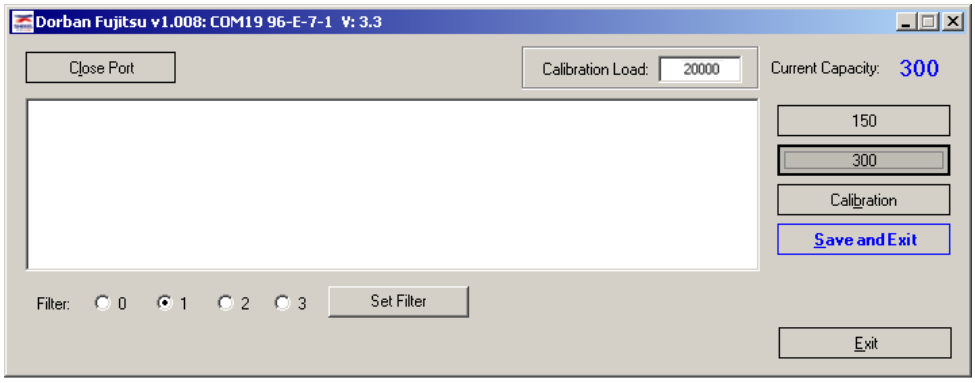
1. Click the **Configuration** radio button in the **Weight Display** window to change the current scale configuration.



a. Click the **150** button to set the scale capacity to 150 lb.
The weight increment is set to .01.



b. For a U-Scan4 system, click the **300** button to set the scale capacity to 300 lb.
The weight increment is set to .02.



c. In the **Calibration Load** window, enter 15000 (150 lb) as the calibration load. In the case of a dual scale unit, this represents the combined weight of all loads to be placed on the entire scale. For 150 lb on the Mini Carousel, place 50 to 60 lb on the upper platter and 100 to 110 lb on the lower platter.

Tip: If precise weights are not available, try to locate suitable store inventory items (choose solids like cat litter rather than liquids). Validate the weight of the items on the Scanner Scale or at another calibrated scale.

d. Ensure that the selected filter is the default, which is "1". To change the filter setting, click **Set Filter** and choose "1". (The filters represent the 'settling' time from fastest (0) with least stable weight readings, to slowest (3) with most stable weight readings.)

e. Click **Calibration** to start the calibration process, described on the next page.

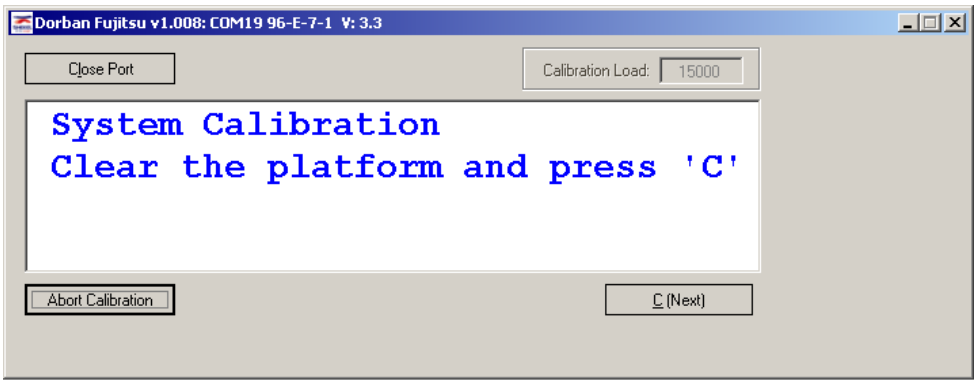
*NOTE: The settings you make will only be written to the scale's firmware if you click the **Save and Exit** button.*
*Touch or click **Exit** to return to the **Weight Display** screen without making any changes to the scales.*

— End of procedure for changing the current configuration:

Calibrate the Scales

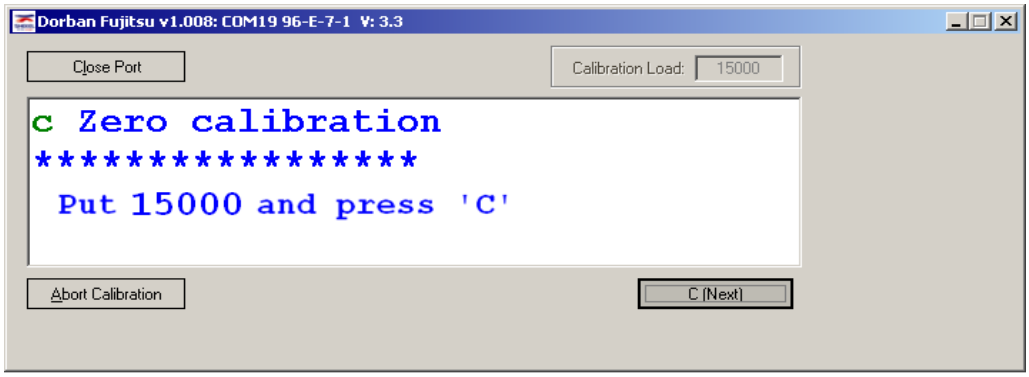
— Start of procedure for calibrating the scales:

The **Calibration** window, which opens when you touch or click the **Calibration** button in the **Configuration** window, starts the scale calibration process. Follow the instructions provided to proceed.



1. Remove any items from the bag scale, then press the "C" key on your keyboard, or click **Next**.
2. Wait for the scales to calibrate with zero weight (the message box displays "Zero calibration").

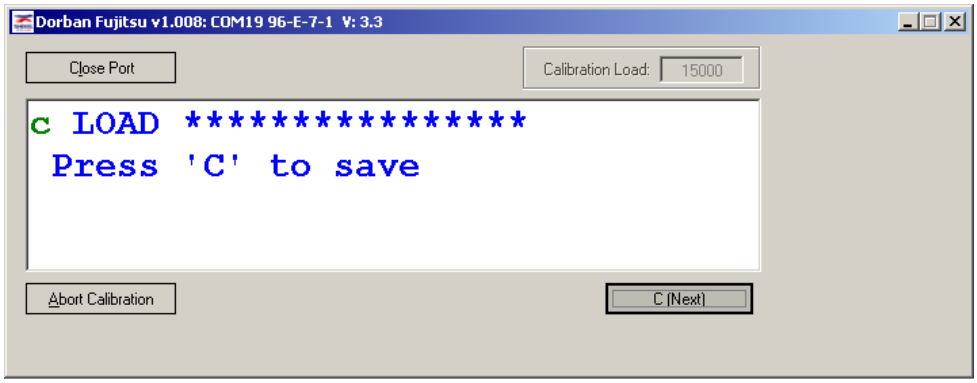
3. After the scales have finished calibrating, the message box prompts you to place the specified calibration load on the bag scale and then press “C”.



a. Before you continue, ensure that you have placed only the calibration load on the scales, and then press “C”.

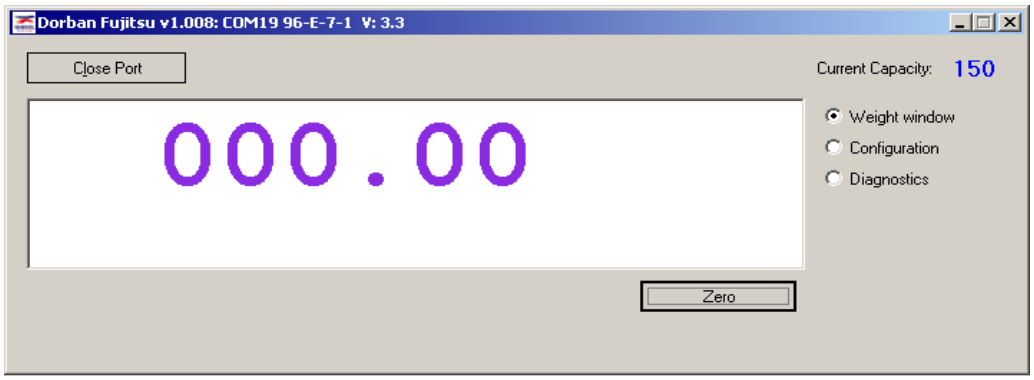
Tip: If precise weights are not available, try to locate suitable store inventory items (choose solids like cat litter rather than liquids). Validate the weight of the items on the Scanner Scale or at another calibrated scale.

b. Wait for the calibration process to end (the message window indicates “LOAD **********”):



4. (You can click the **Abort Calibration** button if you wish to end the calibration process.)

5. Press “C” to save the calibration and return to the **Display Weight** continuous weight display window. If the system locks up, or you see a message to reboot, click **Close Port** then **Open Port**.



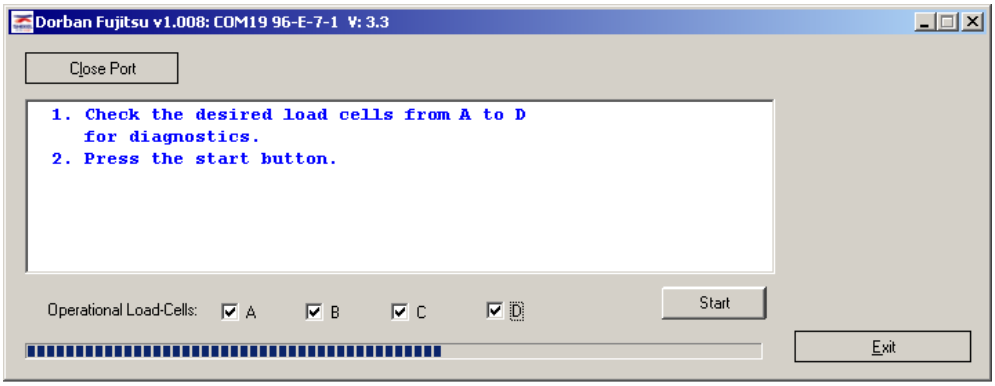
6. For the Mini Carousel, follow the test procedures described in document D900000459: “Field Test Procedure - Shekel Mini-Carousel.pdf”.
7. For the Universal Bag Scale, follow the test procedures described in the test procedures document (TBD).

— End of procedure for changing the current configuration.

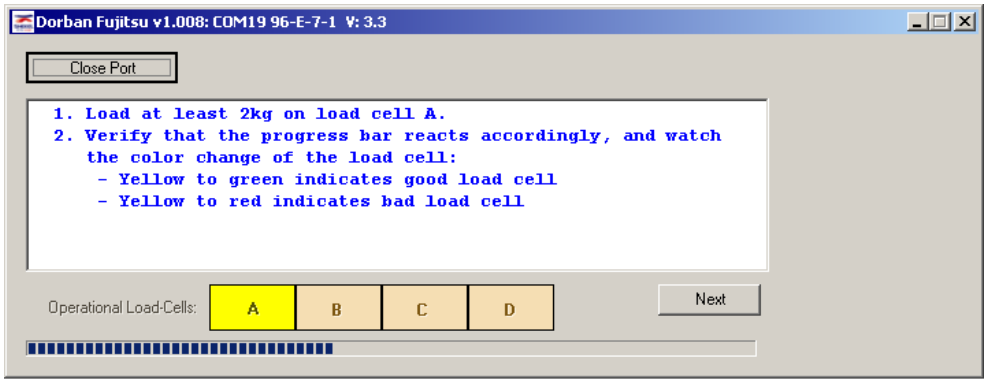
Diagnostics

— Start of procedure for running diagnostic tests, if necessary:

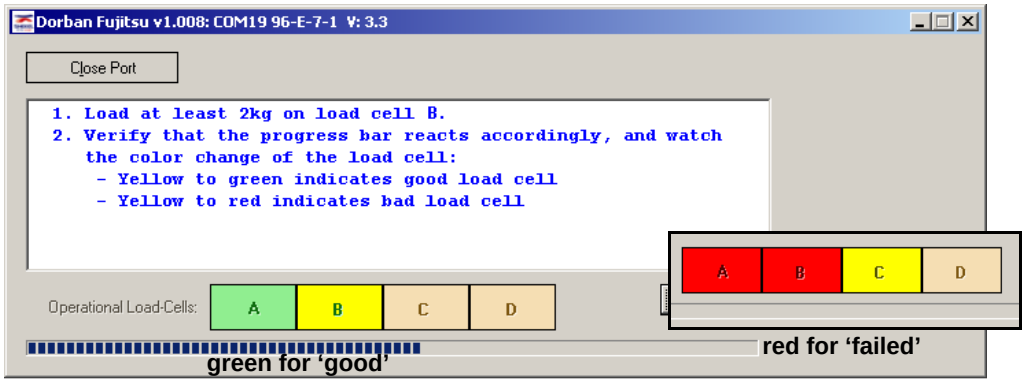
1. Click the **Diagnostics** radio button in the **Weight Display** window to start the diagnostic test.
2. Click the checkboxes to select all of the individual scale bar(s) that you wish to diagnose, then click **Start**. The scale bars will be tested in series.



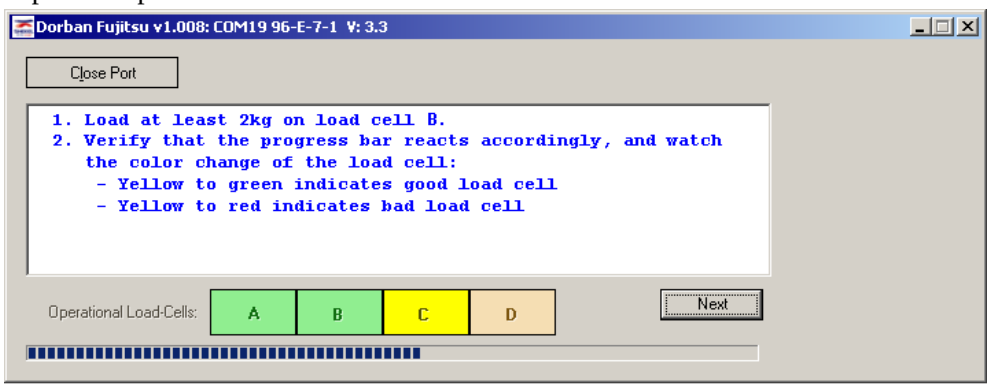
3. A yellow box is displayed for the first scale bar you selected. You are prompted to load a weight of at least 2 kg on that scale bar, then click **Next**. The yellow box will change to green if the test is good, or else it will change to red if the test fails.



4. A yellow box is then displayed for the next scale bar you selected. You are prompted to load a weight of at least 2 kg on that scale bar, then click **Next** again.



5. Repeat this process until all of the scale bars have been verified.



6. A message box indicates when you are done. Click the **Done** message button to return to the **Weight Display** window.

7. If the program does not exit automatically, click the **Close Port** button to exit.

— End of procedure for running diagnostic tests.

Zero the Scale

Zero the scale using **Device Tester** as explained on page 169.

‘Dorella’ Component Calibration

The procedure described below is performed at the Shekel manufacturing plant ***on Mini Carousel scales only***, prior to shipment to Fujitsu.

It is not normally necessary to perform this procedure in the field or at the Fujitsu assembly facility, however if a weigh bar is replaced or re-installed, or if the scale transmitter is changed ***in a Mini Carousel system only***, it will be necessary to take the steps below:

IMPORTANT:
NEVER PERFORM THE DORELLA CALIBRATION PROCEDURE (DESCRIBED BELOW) ON A MINI CAROUSEL BAG SCALE UNLESS THE PRE-CALIBRATED SCALE BARS ARE REPLACED OR RE-INSTALLED, OR IF THE SCALE TRANSMITTER IS CHANGED!

THE DORELLA PROCEDURE IS NOT REQUIRED FOR UNIVERSAL BAG SCALE SYSTEMS.

CAUTION: Do not perform the Dorella calibration procedure unless you have read and understood the instructions that follow.

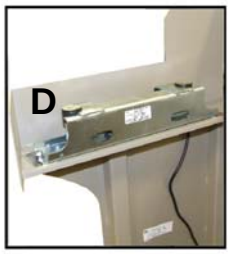
The Dorella calibration procedure consists of:

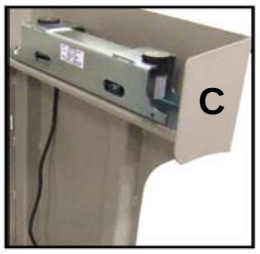
1. **Individual scale bar calibration:**
   Performed on each scale bar separately, followed by the regular **System calibration (**performed on all the installed scale bars simultaneously).

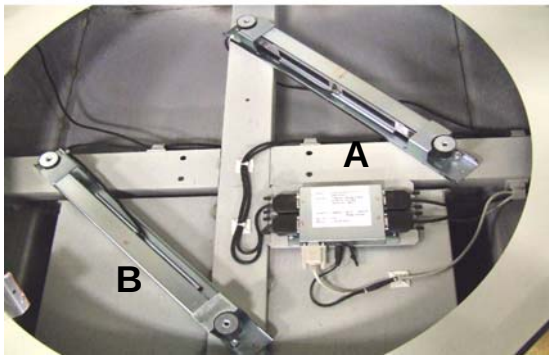
   NOTE: The Dorella calibration procedure must be performed whenever a scale bar is replaced, re-installed, or if the scale transmitter is changed.

Scale bar calibration (Mini Carousel)

1. Install the weigh bars in the Mini Carousel (upper and lower), without the scale frame or platter. If the scale frame has already been installed, remove it.
2. Identify the scale bars cables by **A**, **B**, **C**, and **D**:
   - **A** for the rear scale bar of the Mini Carousel lower scale
   - **B** for the front scale bar of the Mini Carousel lower scale
   - **C** for the right scale bar of the Mini Carousel upper scale
   - **D** for the left scale bar of the Mini Carousel upper scale

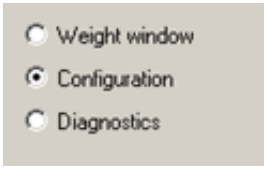


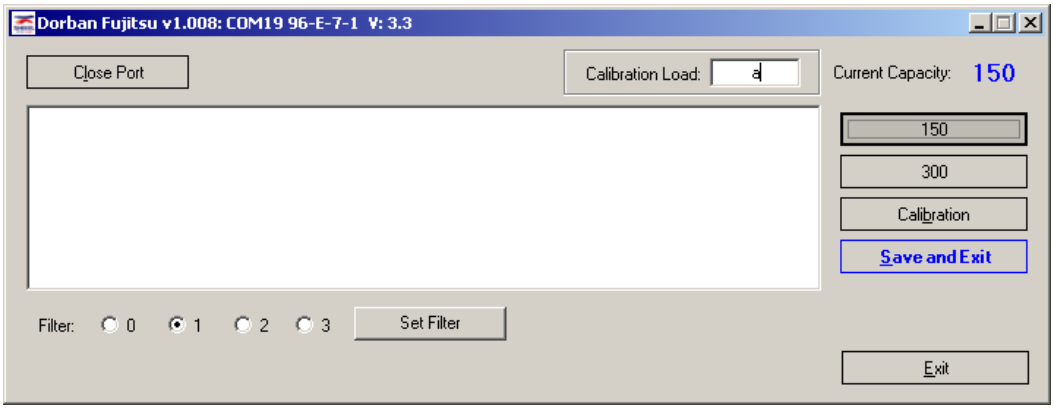




3. Run the Dorban application on the computer as explained starting on page 175.
4. Verify successful communications.

5. Check the **Configuration** radio button and verify that the configuration window opens:





6. Verify that all of the scale bars are clear of a load or any physical disturbance.

   NOTE: Calibration is performed individually on each scale bar (A, B, C, and then D). Take the following steps for each scale bar that you calibrate.

7. In the **Calibration Load** box, start by calibrating scale bar a, then calibrate scale bar b, c, and then d as explained below.

8. Click the **Calibration** button to start calibrating the scale bar selected in the previous step.

   a. The message **Release all the buttons and click next** will be displayed.

   b. Click the **Next** button

   c. The message **Press the red button and click next** will be displayed.

   d. Load a total weight of 10 lb on the appropriate scale bar (a matched set of two identical 5 lb weights on each rubber mount).

calibrate "b" **calibrate "a"** **calibrate "d"** **calibrate "c"**

e. Wait 5 to 10 seconds to verify stability.

NOTE: If one of the later scale bar calibrations fails, you do not have to repeat all of the earlier calibrations.

f. Click the **Next** button and follow the on-screen instructions until the save is displayed.

g. Save the calibration information.

h. Repeat steps 8 through 8-g for the remaining scale bar(s).

System calibration (Mini Carousel)

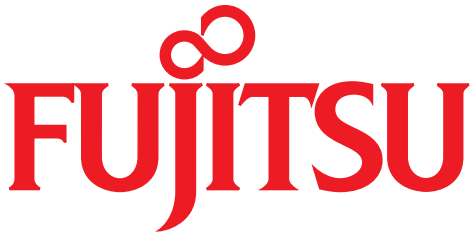
After performing the calibration for scale bars a, b, c, and d:

1. Install the frame on the Mini Carousel lower frame and secure it in place.
2. Install the round platter and tighten the center nut.
3. Install the upper platform.
4. Set the **Calibration Load** to 15000 (150 lb).
5. Perform the regular system calibration with a total load of 150 lb (50 to 60 lb on the Mini Carousel upper platter, and 100 to 110 lb on the lower platter). Position the weights as shown below:

6. Follow the test procedures described in document D900000459: “Field Test Procedure - Shekel Mini-Carousel.pdf”.

Zero the Scale

Zero the scale using **Device Tester** as explained on page 169.



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