



GAINCO **INC.**

Engineered Yield Management Systems

Operating Instructions & Parts List for

GAINCO INFINITI®

Smart Scale Interface

Manual# 186021

Reissued: April 11, 2012

TMC # 156

Software Version 4.1.1

For Assistance, Write:

Gainco Inc.

1635 Oakbrook Drive
Gainesville, GA 30507

U.S.A.

Phone: 800/467-2828

Phone: 770/534-0703

Fax: 770/534-1865

<http://www.gainco.com>

Information in this document is subject to change without notice.

No part of this document may be reproduced or transmitted in any form or any means, electronic or mechanical, for any purpose, without the express written permission of Gainco Inc.

Written permission to reproduce in whole or part is herewith granted to the legal owners of the Gainco Infiniti® with which these Operating Instructions have been supplied.

Operating Instructions in other languages are available on request. Additional copies of Operating Instructions are available by contacting:

Gainco, Inc.
1635 Oakbrook Drive
Gainesville, GA 30507
U.S.A.
Phone: 800/467-2828
Phone: 770/534-0703
Fax: 770/534-1865

<http://www.gainco.com>

The Information Provided In These Operating Instructions Is
Important To Your Health, Comfort And Safety.

For Safe And Proper Operation, Read This Entire Manual
Before Using This Equipment.

Copyright © 2005 By Gainco Inc.
All Rights Reserved

Table of Contents

- Section 1 *Safety and Ergonomics***
- Section 2 *Designated Use***
- Section 3 *Unpacking and Installation***
- Section 4 *Instructions for Operation***
- Section 5 *Maintenance***
- Section 6 *Cleaning***
- Section 7 *Service Parts***
- Section 8 *Contact and Document Information***

GAINCO INFINITI®

Document Change History

Section 1

Safety and Ergonomics

CONTENTS OF THIS SECTION

Safety Recommendations and Warnings (Continued)	1-2
Safety Features	1-4
Ergonomic Features	1-4
Additional Features	1-4

SAFETY RECOMMENDATIONS AND WARNINGS

WARNING



The information provided in these operating instructions is important to your health, comfort and safety. For safe and proper operation, read this entire manual before using this equipment.

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain this product. Protect yourself, others and equipment by observing all safety information. Failure to comply with instructions could result in personal injury and/or damage to the equipment. Any use in applications other than those for which the equipment was designed and built may result in equipment damage and/or serious injuries.

Retain this manual for future reference. Be thoroughly familiar with the controls and proper use of this equipment.

The manufacturer assumes no liability for any unauthorized changes in operating procedures or for unauthorized changes or modifications made to the design of the machine or any factory-installed safety equipment, whether these changes are made by the owner of this equipment, by his employees, or by service providers not previously approved by Gainco, Inc.

All maintenance procedures should be performed by qualified personnel.

SAFETY RECOMMENDATIONS AND WARNINGS (Continued)

The Gainco Infiniti® Smart Scale Interface has been designed to obtain the highest possible degree of safety, durability, and accuracy. Read and apply the following safety recommendations.

**DANGER**

Danger indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

**WARNING**

WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

**CAUTION**

CAUTION indicates a potentially, hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

**NOTICE**

NOTICE indicates a potentially hazardous situation which, if not avoided, may result in property damage. (i.e. not personal injury).

The safety definitions provided, comply with the American National Standard for Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials. (ANSI Z535.4-2007)

SAFETY RECOMMENDATIONS AND WARNINGS (Continued)

 **WARNING**

Electrical shock may occur! Always disconnect unit from power supply prior to servicing.



Electrical shock may occur! Use only 3-wire ground type connector. This must be connected to a plant ground via a suitable grounded three conductor receptacle. avoid use of this machine in standing water.

 **WARNING**



Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

NOTICE

Gainco, inc. proudly manufactures quality parts for your Gainco equipment. For optimum performance of your gainco equipment, use only parts manufactured by gainco, inc.

NOTE

Battery Disposal

The lithium batteries used in the Gainco Infiniti® are classified by the Federal Government as Non-Hazardous Waste and are safe for disposal in the normal municipal waste stream. The batteries do contain recyclable materials and are accepted for recycling by the Rechargeable Battery Recycling Corporation's (RBRC) battery recycling program.

SAFETY FEATURES

- No high voltage parts are exposed, even when the front is removed, or when disconnecting load cells.

ERGONOMIC FEATURES

- Larger, brighter display for easy, accurate viewing, while reducing eye strain.
- Universal symbols make it easy for anyone to understand the basic operation, regardless of language or literacy.
- Oversized buttons and the addition of color make it easy to make the right selection, even when wearing gloves.

ADDITIONAL FEATURES

- With no need for double boxing, the Gainco Infiniti® was built for ease of service to save time and labor.
- Operator keypad utilizes special proximity sensors mounted behind a polymeric face plate to detect touch. The keys will never wear out, puncture, or leak.
- The polymeric material is impervious to most chemicals, allowing the Gainco Infiniti® housing to stand up to the harsh chemicals used in meat, poultry, and other harsh environments.

Section 2

Designated Use

CONTENTS OF THIS SECTION

Recommended Operation	2-2
Specifications	2-2



RECOMMENDED OPERATION

The Gainco Infiniti® Smart Scale Interface is designed to provide accurate weight indication, with many additional, easy-to-use features. The following recommended list of applications is not intended to be a total and comprehensive listing, but is offered as a guide. Additional applications are possible.

- General Weighing
- Portion Control
- Manual Batching
- Inventory
- Bench Scales
- Floor Scales
- Hopper Scales
- Tank Scales

SPECIFICATIONS

Input Power

Line voltage: 90-260 VAC

Line frequency: 50/60 Hz

Power usage: 500 mA @ 115 VAC

Battery (optional)

Lithium-Ion, up to 30 hours of continuous operation

Operator Interface

Display: 6 digit, 7-segment

Annunciators: Gross, Net, Center of Zero, Motion, Lb, Kg, oz, g, Over, Under, OK

Key pad: 5 touch sensitive (capacitance) pads with universal symbols

Load Cell Compatibility

Number of channels: 4

Load cell capacity: 8 (350 Ohm type)

Load cell wires: 4 conductor (pigtail, no connector)

Excitation voltage: 5 V

Maximum excitation current: 115 mA

Signal range: 0.1-4 mV/V at full scale



SPECIFICATIONS (Continued)

I/O

Digital: Up to 8

Remote Keys: 2 user configurable

Communications

Port 1: RS-232 bi-directional with CTS

Port 2: RS-232 bi-directional

Port 3: RS-485 multi-drop

Port 4: Infrared bidirectional

Enclosure

Dimensions: 8.875" H x 8.0" W

Ingress Rating: IP69K for high pressure, high temperature washdown

Material: Corrosion and impact resistant polymeric

Mounting: Compatible with most scale frames

Environmental

Temperature: -10 to +40°C (14 to 104°F)

Humidity: 0-100% relative humidity

A/D Performance

Resolution: 100,000 displayed (\pm 8,000,000 internal)

Conversion rate: 60 Hz

Linearity error: 0.003% of full scale

Signal sensitivity: \pm 20 mV



THIS PAGE INTENTIONALLY LEFT BLANK

Section 3

Unpacking and Installation

Engineered Yield Management Systems

Unpacking and Installation

CONTENTS OF THIS SECTION

Safety First	3-2
Included Items	3-3
Installation	3-4
Mounting the Gainco Infiniti® Interface	3-4
Connecting the Load Cell	3-8
Battery Connection/Operation (Optional)	3-10
Electrical Power Connections	3-12
Connecting a Printer (Optional)	3-13

SAFETY FIRST

 **WARNING**



The socket-outlet must be installed near the equipment and must be easily accessible.

Electrical shock may occur! Use only 3-wire ground type connector. This must be connected to a plant ground via a suitable grounded three conductor receptacle.

Avoid use of this machine in standing water.

Electrical shock may occur! Always disconnect unit from power supply prior to servicing.

 **WARNING**

Unit should always be anchored to a fixed, solid object where it can withstand a minimum of 75 pounds of force applied to the bracket or to the Gainco Infiniti interface.

INCLUDED ITEMS



A typical Gainco Infiniti® package includes the items shown, and as listed below.

- Gainco Infiniti® Smart Scale Interface
- Operating Instructions and Parts List Manual
- Extra Strain Relief
- Capacity Label Set - NTEP

INSTALLATION

Mounting the Gainco Infiniti® Interface

Mounting on a DuraWeigh® Scale

The Gainco Infiniti® interface has a mounting bracket on the back designed to connect directly to a DuraWeigh® bench or floor scale. Just slide the mounting plate on the DuraWeigh® scale into the bracket on the back of the Gainco Infiniti® interface.



Using the Optional Basic Mounting Bracket

The basic mounting bracket (optional) is designed to allow mounting of the Gainco Infiniti® interface to most scales.



INSTALLATION (Continued)

Using the Universal Mounting Bracket (Optional)

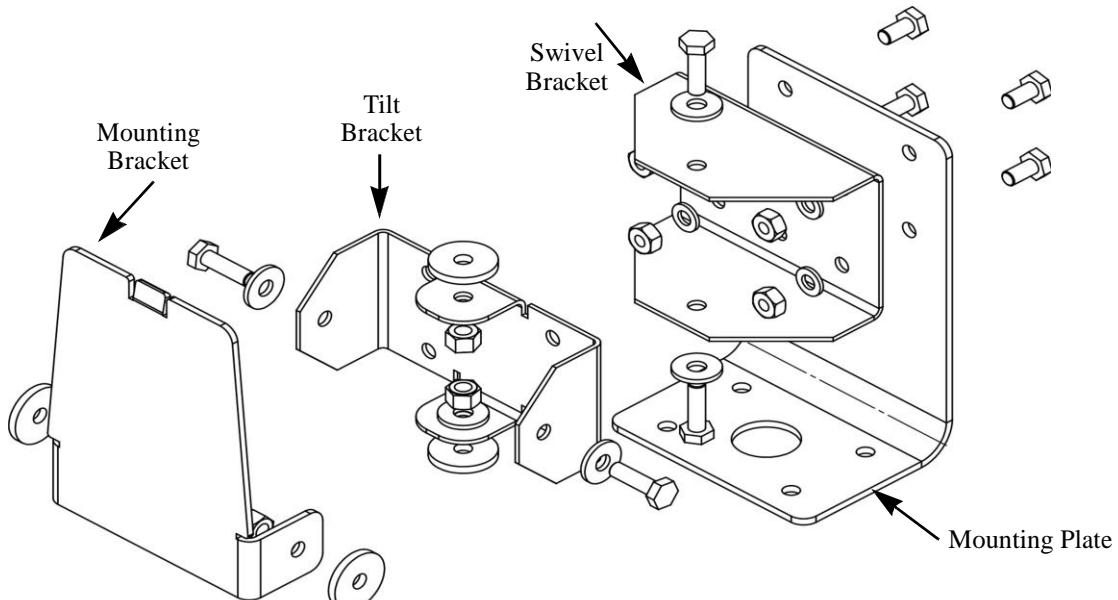
The optional universal mounting bracket allows the Gainco Infiniti® interface to be mounted in a variety of positions, and to a variety of different surfaces. The universal mounting bracket can be disassembled so you can use the parts that fit your particular situation. The universal mounting bracket has mounting holes to allow the use of screws or bolts for mounting to a flat surface, and U-bolts for mounting to a pipe. It is recommended that 1/4" bolts be used.

Recommended Mounting

It is recommended that the universal mounting bracket be attached to either 12 gauge stainless steel tubing that is 1.5 to 2 inches square or to stainless steel angle iron (3/16" thick) that is 1.5 to 2 inches square.

WARNING

Unit should always be anchored to a fixed, solid object where it can withstand a minimum of 75 pounds of force applied to the bracket or to the Gainco Infiniti interface.



INSTALLATION (Continued)

Using the Universal Mounting Bracket as a Tilt/Swivel Mount

The universal mounting bracket can be used to provide both horizontal swivel and vertical tilt adjustment. Use the entire universal mounting bracket for mounting to a horizontal surface.



You can remove the mounting plate and install the universal mounting bracket on any vertical surface. The universal mounting bracket still allows both swivel and tilt adjustment.



INSTALLATION (Continued)

Using the Universal Mounting Bracket as a Tilt Mount

Removing the swivel bracket converts the universal mounting bracket into a bracket that can mount to a vertical surface. In this mode the universal mounting bracket still provides vertical tilt adjustment.



Using the Mounting Bracket

Removing the tilt bracket allows you to use the mounting bracket alone. The mounting does not provide any swivel or tilt adjustment. The mounting bracket may be mounted as necessary to provide a fixed mounting point for the Gainco Infiniti® interface.



INSTALLATION (Continued)

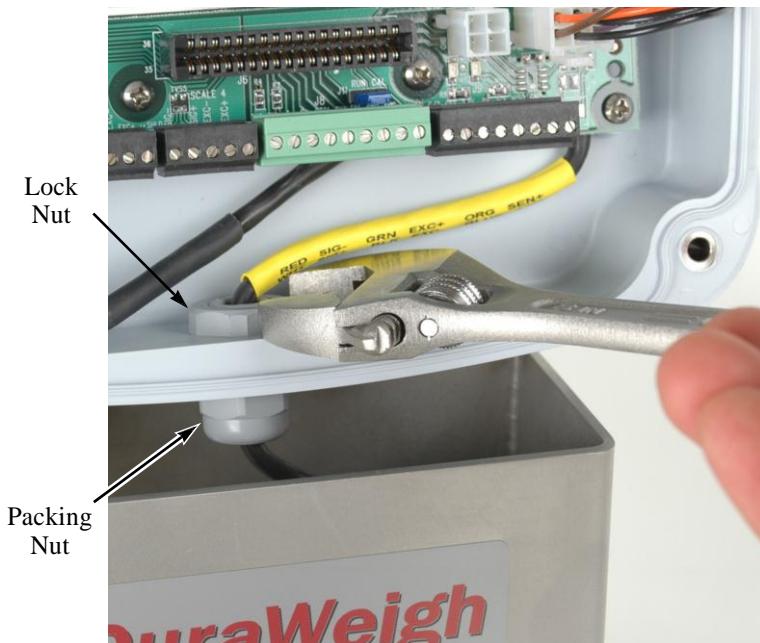
Connecting the Load Cell

Step 1: Install Cable

- Loosen the packing nut on the load cell strain relief connector.
- Insert the load cell cable through the strain relief connector. Insert enough cable to allow easy connection to the load cell connector on the terminal strip.
- Tighten the packing nut on the strain relief connector.

NOTE: *To ensure a proper seal around the load cell cable, cable should not slip in the strain relief connector when the cable is pulled.*

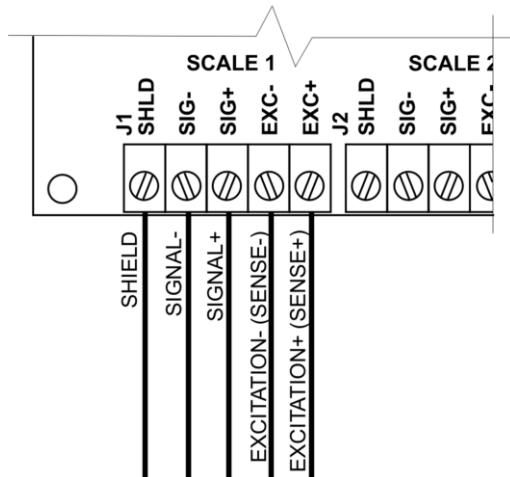
- Ensure the lock nut on the strain relief connector is tight.



INSTALLATION (Continued)

Step 2: Connect Load Cell Wires

- Check the load cell documentation to verify the wire designations. Identify the following wires. Sense signal wires are only present on six wire load cells.
 - Signal +
 - Signal -
 - Excitation + (Sense +)
 - Excitation - (Sense -)
 - Shield
- Connect the load cell wiring to the load cell connector on the terminal strip according to the wiring diagram to the right. Note that if the load cell has six wires, the Excitation and Sense wires are connected to the same terminals. For easier access, the load cell plug may be removed from the terminal strip.



INSTALLATION (Continued)

Battery Connection/Operation (Optional)

WARNING



BATTERY

Misusing the battery may cause the battery to get hot, rupture, or ignite and cause serious injury. Be sure to follow the safety rules listed below:

Do not place the battery in fire, or heat the battery.

Do not install the battery backward so that the polarity is reversed.

Do not expose the battery to water, or allow the battery to get wet.

Do not disassemble or modify the battery.

Immediately discontinue use of the battery if, while using, charging, or storing, the battery emits an unusual smell, feels hot, changes color or shape, or appears abnormal in any way.

Risk of explosion if battery is replaced by an incorrect type.

Dispose of used batteries according to the instructions.

INSTALLATION (Continued)

Battery Connection/Operation (Optional)

- If the Gainco Infiniti® is equipped with the optional battery pack, connect the battery power connector to the power supply.
- Allow the battery to charge for approximately four hours prior to operating the Gainco Infiniti® from battery power.



INSTALLATION (Continued)

Electrical Power Connections

 **WARNING**



Electrical shock may occur! Use only 3-wire ground type connector. This must be connected to a plant ground via a suitable grounded three conductor receptacle.

Avoid use of this machine in standing water.

The socket-outlet must be installed near the equipment and must be easily accessible.

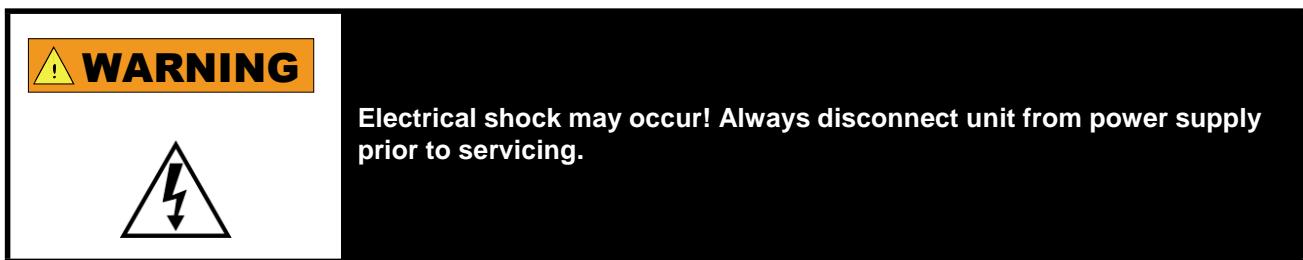
The Gainco Infiniti® interface power supply can operate on 90-260 VAC, 50/60 Hz. Connect the Gainco Infiniti® power cord to an appropriate power supply. All wiring must conform to applicable local and national codes.

INSTALLATION (Continued)

Connecting a Printer (Optional)

The Gainco Infiniti® can be connected to an optional printer. **Contact Gainco Blue Ribbon Service for assistance with connecting and installing a printer for your Gainco Infiniti® interface.**

Perform the following procedure to install a printer.



Step 1: Install a New Strain Relief Connector

- Contact Gainco Blue Ribbon Service to install a new Strain Relief Connector.

Step 2: Install the Printer Cable

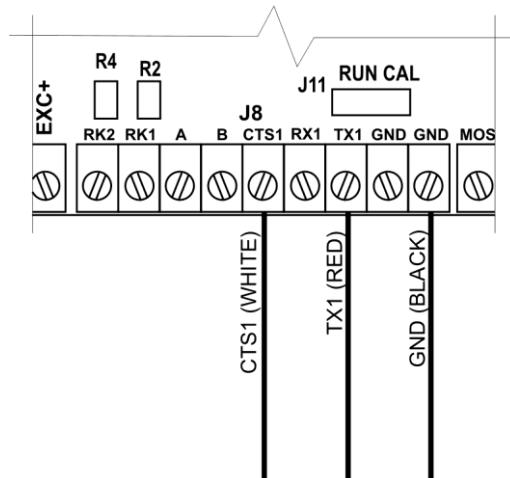
- Check the printer documentation to verify the wire designations. Identify the following wires. The colors noted are for the standard Gainco printer cable. If you are not using a standard Gainco printer, check your printer documentation to identify the wires.
 - TX1 - Red
 - CTS1 - White
 - GND - Black
- Insert the printer cable through the strain relief connector. Insert enough cable to allow easy connection to the printer connector on the terminal strip.

INSTALLATION (Continued)

- Tighten the packing nut on the strain relief connector.
- Ensure the lock nut on the strain relief connector is tight.

NOTE: *To ensure a proper seal on the printer cable, the cable should not slip in the strain relief connector when the cable is pulled.*

- Connect the printer wiring to the printer connector on the terminal strip according to the wiring diagram to the right. The printer connector is the 9-pin connector on the right side of the terminal strip. For easier access, the printer plug may be removed from the terminal strip.



Step 3: Finish Installation

- Install the control module on the rear panel assembly. Secure the control module using the four screws on the back of the rear panel assembly.

NOTE: *Make sure that the rear panel and the control module are fully closed and the screws are tightened to ensure a complete seal.*

- Connect power to the Gainco Infiniti® interface.
- Test the print function by pressing the Print key.

When shipped from the factory, the Gainco Infiniti's® print function will send the current weight, units, and gross/net mode to the printer when the Print key is pressed.

For custom print program development contact Gainco Blue Ribbon Service.





Section 4

Instructions for Operation

CONTENTS OF THIS SECTION

Description of Controls	4-2
Net and Gross Modes	4-4
Zeroing	4-6
Changing the Measurement Units	4-6
Printing	4-6

DESCRIPTION OF CONTROLS

The front panel of the Gainco Infiniti® interface contains five keys below the display. An indicator light above each key lights as the key is pressed. These keys are described below.



1. Gross/Net key - This key toggles the indicator between gross and net operating modes.
2. Tare key - This key sets the tare weight of a container.
3. Zero (-0-) key - This key sets the indicator to zero.
4. Print key - This key sends the current weight, units, and net/gross mode to an optional attached printer.
5. Units key - This key switches the indicated display units. Pressing this key cycles the display through indicating weight in pounds, kilograms, ounces, and grams, as shown by the indicator lights to the right of the display.

During calibration and setup operations, the key functions change. The arrow symbols above the key indicator lights show the new functions. For more information, refer to the Calibration and Setup Mode paragraphs in Section 5, Maintenance.

DESCRIPTION OF CONTROLS (Continued)



The Gainco Infiniti® front panel also contains several indicator lights to the left and right of the display. These indicators are described below.

1. Gross - This indicator lights when the Gainco Infiniti® is set to operate in gross mode. In this mode, the Gainco Infiniti® will display the total weight currently on the scale.
2. Net - This indicator lights when the Gainco Infiniti® is set to operate in net mode. In this mode, the Gainco Infiniti® will display the weight on the scale minus the tare weight. The tare weight is set using the Tare key.
3. >0< - This indicator lights when the Gainco Infiniti® is reading a zero weight.
4. Motion - This indicator lights when the scale is in motion. When the scale is in motion the reading is not accurate, and the print key will not function. Wait until the Motion indicator goes out before using the indicated weight or pressing the Print key.
5. Check weighing indicators - These indicators are used when check weighing is enabled. Check weighing allows the current weight of items on the scale to be compared against a standard, predetermined weight. The center OK indicator will light if the current weight matches the check weight. The left (-) and right (+) indicators light if the current weight is less than or greater than the target weight. The check weigh indicators will only be active if check weighing is enabled. Refer to Section 5, Maintenance, for information on enabling check weighing.
6. Unit indicators - These indicators show the currently selected measurement units. To change the selected display units, press the Units key.

NET AND GROSS MODES

The Gainco Infiniti® interface supports two different operating modes, net and gross. The current operating mode is indicated by the Gross and Net indicators to the left of the display. Switching between modes is done by pressing the Gross/Net key on the front panel.



Net Mode

When operating in net mode, the interface will display the total weight of all items placed on the scale, minus the tare weight. To use net mode:

Step 1: Zero the Interface

- Remove all objects from the scale.
- Press the Zero (-0-) key.



Step 2: Set the Tare Weight

- Place the empty container on the scale and wait for the Motion indicator to turn off.
- Press the Tare key. The Gainco Infiniti® interface will use the indicated weight as the tare weight and automatically switch to Net mode and indicate 0 weight. The Gainco Infiniti® will remember the tare value even when power is removed from the Gainco Infiniti®.
- If a different container is to be used, place the new container on the scale and press the Tare key again to reset the weight of the new container.



NET AND GROSS MODES (Continued)

Net Mode (Continued)

Step 3: Weigh Items

- While the interface is operating in net mode, the tare weight is automatically deducted from the total weight of items on the scale.
- To see the total gross weight of all items on the scale, press the Gross/Net key. The scale will toggle between gross and net modes, as shown by the Gross and Net indicators to the left of the display. The interface will remember the tare weight. You do not need to reset the tare weight when switching back to net mode, as long as you are using the same container.



Gross Mode

When operating in Gross mode, the interface will display the total weight of all items placed on the scale. When the Gainco Infiniti® is operating in gross mode, the Gross indicator to the left of the display is on. To switch between gross and net modes, press the Gross/Net key. The Gainco Infiniti® interface will automatically switch to Gross mode whenever the Zero key is pressed.



ZEROING

The Gainco Infiniti® interface may be zeroed at any time by pressing the Zero (-0-) key. The Gainco Infiniti® interface will automatically switch to Gross mode whenever the Zero key is pressed. The Gainco Infiniti® will remember the zero value even when power is removed from the Gainco Infiniti®.



CHANGING THE MEASUREMENT UNITS

The Gainco Infiniti® interface can display the measured weight in pounds (Lb), kilograms (Kg), ounces (oz), or grams (g). The current measurement units are shown by the four indicators to the right of the display. To switch the measurement units, press the Units key until the indicator next to the desired unit selection is lit.



PRINTING

The Gainco Infiniti® interface can be used to print the current weight to an optional attached printer, or to an attached PC if recording the weights on a computer is desired. To print, press the Print key.

The Gainco Infiniti® interface will send the current weight, measurement units, and the current gross/net mode to the attached device when the Print key is pressed. Custom print programs can be developed by contacting Gainco Blue Ribbon Service.



Section 5

Maintenance

CONTENTS OF THIS SECTION

Calibration	5-2
Calibration and Setup Mode Seal Jumper	5-5
Setup Mode	5-6
Navigating the Setup Menus	5-6
Entering Setup Mode	5-7
Exiting Setup Mode	5-8
Multiple Tare Mode	5-10
Setup	5-10
Usage	5-12
Setup Parameters	5-13
Main Menu	5-13
Configuration Menu	5-14
Information Menu	5-22
Application Menu	5-23
Configuring Gainco Infiniti® for Different Scales	5-27
Parts Replacement	5-28
Removing and Installing the Control Module	5-28
Replacing the Power Cord	5-29
Power Supply Replacement	5-32
Load Cell Replacement	5-35
Terminal Strip Replacement	5-38
Battery Pack Replacement	5-41
Battery Disposal	5-42
Control Module Disassembly	5-43
Fault Detection and Correction	5-49

CALIBRATION

The Gainco Infiniti® Smart Scale Interface should be calibrated after any service is performed. The Gainco Infiniti® must be calibrated after the replacement of any of the following parts:

- Load Cell
- Terminal Strip
- Control Module

During calibration, the front panel keys perform different functions than during normal operation. The calibration mode functions are shown by the small symbols above the keys. The up (\wedge) and down (\vee) keys change the value of the current digit. The left ($<$) and right ($>$) keys change between digits. The Enter key accepts the current value and moves to the next step of the calibration procedure.

NOTE

The Gainco Infiniti® interface is shipped from the factory set to calibrate using a pound weight. The calibration weight units may be changed to ounces, kilograms, or grams. Refer to Setup Parameters for information on setting the calibration units.

Use the following procedure to calibrate the Gainco Infiniti®.

Step 1: Enter Calibration mode

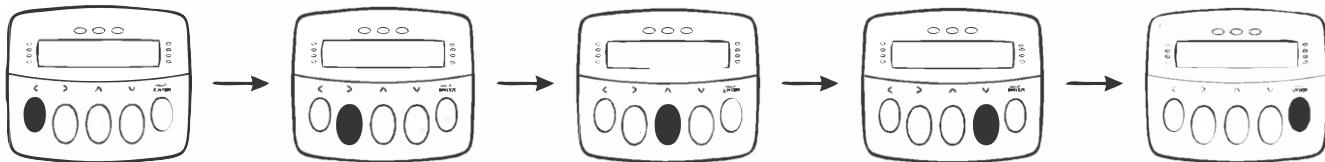
- Remove all items from the scale.
- Press the Gross/Net and Units keys at the same time.
- The interface will briefly display SETUP, and then ENTER CoDE.



CALIBRATION (Continued)

Step 2: Enter Access Code

- To begin calibration, you must enter a special key sequence. This prevents users from accidentally entering calibration mode. To enter the access code, press the keys in the following order: left, right, up, down, enter.



- The interface will briefly display FAST CAL!, and then FiRST ZERo?.

Step 3: Establish a Zero

- Ensure all items are removed from the scale.
- Press the Enter key.
- The interface will establish the zero reference, then display ENTER LOAD.



Step 4: Enter Calibration Load Value

- Press the Enter key to begin entering the calibration load value. The first digit of the display will change to a zero.



- Use the Up (\wedge) and Down (\vee) keys to enter the first digit of the calibration load weight.



CALIBRATION (Continued)

- After entering the first digit, use the Right (>) key to add more digits as needed. Use the Up (^) and Down (^) keys to set values of the additional digits.
- To add a decimal point, press the Right (>) key twice.
- When you have keyed in the calibration load weight, press the Enter key. The display will change to ADD LoAD.



Step 5: Calibrate the Load

- Place the calibration load on the scale and press the Enter key. The interface will display the value of the calibration load.
- When the reading is stable, the interface will alternate between displaying the calibration load value and CAL GoD?. Press Enter to accept the displayed value.



Step 6: Save Changes and Exit Calibration Mode

- After accepting the calibration load value, the display will change to ENTER =SAVE. Press the Enter key to save the calibration data.
- While saving the calibration data, the display will change to SAUING, then ENTER =END. Press the Enter key to exit calibration mode.
- The display will change to GooDBY, then return to the normal weigh mode.



CALIBRATION (Continued)

Calibration and Setup Mode Seal Jumper

The calibration and setup mode seal jumper provides a way to lock out access to the Calibration and Setup modes of the Gainco Infiniti® interface. If the calibration and setup mode seal jumper is installed, all access to the calibration and Setup modes is denied. Attempting to access either function will produce an error code, CoDE15 SEALED ERRoR, on the Gainco Infiniti® display.

The calibration and setup mode seal jumper has two positions.

- CAL - When the calibration setup mode and seal jumper is in the CAL position the Gainco Infiniti® interface is sealed against any access to the calibration or Setup modes.
- RUN - When the calibration setup mode and seal jumper is in the RUN position, normal access to the calibration and Setup modes is available.



SETUP MODE

The Gainco Infiniti® interface behavior can be customized to meet the needs of many different applications. Some of the items that can be configured include:

- Configuring the Gainco Infiniti® for different scales
- Check weight mode and setpoints
- Calibration units
- Display brightness
- Auto-off time

Navigating the Setup Menus

Navigating the Gainco Infiniti® Setup mode menu structure is done using the Left (<), Right (>), Up (^), Down (v), and Enter keys. When navigating the menus, the keys perform the following functions:

- Up (^) and Down (v) keys - The Up and Down keys scroll through the menu choices available at the current menu level. When editing parameters, the Up and Down keys perform one of two functions:
 - When editing a parameter that requires keying in a numerical value, the Up and Down keys change the value of the currently selected digit.
 - When editing a value that requires the user to select from a list of choices, the Up and Down keys cycle through the list of available choices.



- Right (>) key - The Right key enters the currently selected menu, or begins editing the currently selected item. When editing a parameter that requires keying in a numerical value, the Right key selects the next digit to the right. The selected digit will blink to indicate it is the digit currently selected.

If you attempt to edit a parameter that cannot be edited, the display will flash CANT SET.



SETUP MODE (Continued)

- Left (<) key - The Left key backs out of the current menu to the previous level menu. If a parameter is currently being edited, the Left key cancels the edit action, restoring the parameter to the original value.



- Enter key - When editing a parameter, the Enter key accepts the currently displayed value.



Entering Setup Mode

Access to the Setup mode can be prevented by installing the calibration and setup mode seal jumper. If the calibration and setup mode seal jumper is installed, all access to calibration and Setup modes are denied. Attempting to access either mode will produce an error code, CoDE15 SEALED ERRoR, on the Gainco Infiniti® display. See the "Calibration and Setup Mode Seal Jumper" section for information on the calibration and setup mode seal jumper.

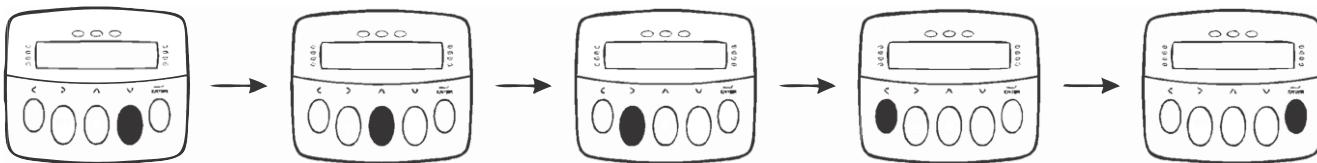
Setup mode is accessed as follows:

- Press the Gross/Net and Units keys at the same time.
- The interface will briefly display SETUP, and then ENTER CoDE.



SETUP MODE (Continued)

- To enter Setup mode, you must enter an access code. This prevents users from accidentally entering Setup mode. To enter the access code, press the keys in the following order: Down, Up, Right, Left, Enter.



NOTE: *Setup mode can be entered in a view-only mode by pressing the Enter key twice at the ENTR CoDE prompt instead of entering the access code. The interface will briefly display CANT CHANGE to indicate that view-only mode is enabled.*

- If the code is entered properly, the display will flash F1 CONFIG.
- While in Setup mode, the display will alternate between displaying the current function code and the parameter name. Refer to Setup Parameters for a listing of the available parameters.

Exiting Setup Mode

While in Setup mode, the Gainco Infiniti® interface temporarily stores all configuration changes. In order to save these changes, you must properly exit the Setup mode. If you do not exit Setup mode properly, all changes will be lost.

When exiting Setup mode, the Gainco Infiniti® interface will always prompt to perform a calibration. If you have made any changes which could affect calibration you should perform a calibration at this time. Perform the following procedure to exit Setup mode.

- Press the Left key until the interface displays ENTER =CAL.



SETUP MODE (Continued)

- To perform a calibration, press the Enter key. Refer to Calibration for instructions on calibrating the Gainco Infiniti® interface.



- To skip calibration, and return to normal operating mode, press the Left key. The interface will display ENTER =SAVE if changes to the setup have been made.
- Press the Enter key to save all changes made while in Setup mode. The interface will then display ENTER =END. Press the Enter key again to return to the normal operating mode.



At any time while in Setup mode, you can abort all changes by cycling power to the Gainco Infiniti® interface. All changes made while in Setup mode will be lost. All parameters will be reset to the values they had prior to entering Setup mode. All parameters may be returned to their factory defaults by selecting F3 DEFAULT from the Setup mode Main menu.

MULTIPLE TARE MODE

The multiple tares feature for the Gainco Infiniti® Plus indicator will allow the specification of a specific tare value from a selection of user-defined tares when this feature is activated.

Setup

In order to activate multiple tare mode, as well as defining the preset tare values, perform the following steps:

Step 1: Enter Setup Mode

- Setup mode is entered by pressing the Gross/Net and Units keys at the same time.



Step 2: Enter Access Code

- A code must be entered to access the setup menu. The keystrokes to be entered are Down, Up, Right, Left and Enter



MULTIPLE TARE MODE (Continued)

Step 3: Select Multi Tare Menu

Step 4: Select Applications Menu

At this point, three menus will be displayed.

- **Multiples Tares On/Off**
 - Activating/Deactivating multiple tares mode is achieved by choosing the Multiple Tares On/Off menu and using the Up (\wedge) key to select On or Off.
- **Tares**
 - By selecting the Tares menu option, a menu with **Tare 1, Tare 2, Tare 3, Tare 4 and Tare 5** will be displayed. Any of the 5 tares can be selected to edit its label and value. The default values are **Tare Label <#>, and 0** for each preset.

Step 1: Enter the Tare Label

- A carat (\wedge) indicates which letter in the label is currently being edited. Use the Right ($>$) and Left ($<$) keys to move the carat to the desired character to edit.
- When editing a character, use the Up (\wedge) and Down (\vee) keys to change the character. Allowable characters are upper and lower case alphabetic, numeric and space characters.
- Each label may have up to seven characters.

Step 2: Enter the Tare Value

- The tare value may be entered manually by keystroke or by placing the tare on the scale. At anytime, tare entry can be switched from scale to keystroke by removing all objects from the scale or from keystroke to scale by merely placing a tare on the scale.
- A carat (\wedge) indicates which number in the value is currently being edited. Use the Right($>$) and Left ($<$) keys to move the carat to the desired character to edit.
- When editing a number, use the Up (\wedge) and Down (\vee) keys to change the value of the number between 0 and 9.

MULTIPLE TARE MODE (Continued)

- **Zero Threshold**

- Zero Threshold allows for setting a weight, over which it is assumed that the scale is being used to enter the tare value rather than the keypad. When the value is lower than Zero Threshold, it is assumed that the keypad is being used to enter the tare value. This value can be set in the same way as previously described by entering the tare value. The value entered is recorded in the current unit of measure to which the scale is set, therefore, once a zero threshold has been entered, its value will be converted to reflect any change in the scale's unit of measurement.

Usage

Once the predefined tare values and labels have been set up, they may be accessed for use by selecting the Tare button as shown below. All five tare values with their associated labels will be displayed over the five interface buttons. The values and units of measurement displayed will reflect the current unit of measurement under which the scale is operating. Selecting any one of the five buttons will then set the associated tare value as the scale's tare value and return to normal scale mode.



After a tare has been selected, its label is shown in the lower left corner of the display when the scale is in either Net or Tare mode (mode is changed by pressing the Gross/Net key as shown below).



SETUP PARAMETERS

Main Menu

The following selections are available from the Main menu. Press the Up and Down keys to scroll through the menu items. Press the Right key to select the item, or the Left key to exit Setup mode.

Function Code	Parameter Name	Parameter Description
F1	CONFIG	Access the Configuration menu to configure system options, such as the scale range, motion filtering, communication ports, display units, and battery settings.
F2	iNFO	Access the Information menu to view system information, such as audit trails, equipment serial numbers, and firmware versions.
F3	DFAULT	Reset all Gainco Infiniti® setup parameters to the factory default settings. Options: YES, no
F4	APP	Access the Application menu to enable and configure operating mode parameters, such as check weighing and single/double stage filling.

SETUP PARAMETERS (Continued)

Configuration Menu

The following selections are available from the Configuration menu. Press the Up and Down keys to scroll through the menu items. Press the Right key to select an item, or the Left key to return to the Main menu.

Function Code	Parameter Name	Parameter Description
F1.1	SCALE1	Open the Scale menu to configure parameters for scale 1.
F1.2	SCALE2	Open the Scale menu to configure parameters for scale 2.
F1.3	SCALE3	Open the Scale menu to configure parameters for scale 3.
F1.4	SCALE4	Open the Scale menu to configure parameters for scale 4.
F1.5	PoRT 1	Open the Port menu to configure parameters for communications port 1.
F1.6	PoRT 2	Open the Port menu to configure parameters for communications port 2.
F1.7	PoRT 3	Open the Port menu to configure parameters for communications port 3.
F1.8	PoRT 4	Open the Port menu to configure parameters for communications port 4.
F1.9	iNPuT1	Configure the function of Remote Key 1 (RK1) input. Options: Zero (default), GRoSS, TARE, PRiNT, UNiTS, NoNE
F1.10	iNPuT2	Configure the function of Remote Key 2 (RK2) input. Options: Units (default), GRoSS, TARE, PRiNT, None, zero
F1.11	bATT	Open the Battery menu to set auto-off time and display brightness when operating on battery power.

SETUP PARAMETERS (Continued)

Configuration Menu (Continued)

Function Code	Parameter Name	Parameter Description
F1.12	DSPLAY	Open the Display menu to set display brightness when operating on AC line power.
F1.13	T-DATE	Open the Time and Date menu to set the current time and date.
F1.14	LEGAL	Open the Legal menu to set legal compliance options.
F1.15	tare	Function Not Available
F1.16	comm	Open Com Option menu to designate the type of serial Protocol Serial = (Sig, CvV, SnnA, None), Print = (p, vv, SnnA, None), SMA = (Opt 1 , Opt 2, Opt 3, Opt 4).
f1.17	Ad ref	Open the Analog to Digital setup menu. Options = 5v,1v (Default)

SETUP PARAMETERS (Continued)

Scale Menu

The Scale menu is available from the SCALE1, SCALE2, SCALE3, and SCALE4 parameters on the Configuration menu. Each Scale menu sets the parameters for the scale connected to the corresponding connector on the terminal strip. The following selections are available from the Scale menu. The default value for each parameter is shown in bold or by the designation (default). Press the Up and Down keys to select a menu item. Press the Right key to select an item, or the Left key to return to the Configuration menu.

Function Code	Parameter Name	Parameter Description
f1.x.1	ENABLE	Enable or disable the scale. Options: YES (default), No
F1.x.2	FS	Set the full scale capacity of the scale. Valid range: 0.1 to 999999 (100)
F1.x.3	GRADS	Set the graduations for the scale display. Options: 0.00001, 0.00002, 0.00005, 0.0001, 0.0002, 0.0005, 0.001, 0.002, 0.005, 0.01 , 0.02, 0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50, 100, 200, 500
F1.x.4	STABL	Set motion filtering divisions. Options: 0 (off), 1 through 20 (8)
F1.x.5	FILTER	Opens the Filter Setup Menu.
F1.x.6	ZRANG	Set the zero range. Options: 0.01%, 0.02%, 0.04%, 0.1%, 0.2%, 0.4%, 1%, 2%, 4%, 10%, 20%, 40%, 100%
F1.x.7	ZTRAc	Set the zero track. Options: oFF, 0.5 (Default), 1 through 20

SETUP PARAMETERS (Continued)

Scale Menu (Continued)

Function Code	Parameter Name	Parameter Description
F1.x.8	UNiT1	Change the units used when the display units is set to Lb. Options: LB (default), 1000G, ouNcE, G
F1.x.9	UNiT2	Change the units used when the display units is set to Kg. Options: NoNE, LB, 1000G (default), ouNcE, G
F1.x.10	UNiT3	Change the units used when the display units is set to oz. Options: NoNE, LB, 1000G, ouNcE (default), G
F1.x.11	UNiT4	Change the units used when the display units is set to g. Options: NoNE, LB, 1000G, ouNcE, G (default)
F1.x.12	C UNiT	Set the calibrations units. Options: NoNE, LB (default), 1000G, ouNcE, G

NOTE: The “x” in the Function Code is a placeholder. When accessing the Scale menus, use the following values in place of “x”:

- Scale 1: 1
- Scale 2: 2
- Scale 3: 3
- Scale 4: 4

For example, the function code for SCALE1 is F1.1.1.

SETUP PARAMETERS (Continued)

Filter Menu

The Filter menu is available from the filter parameter on the Configuration menu. The following selections are available from the Filter menu. The default value for each parameter is shown in bold. Press the Up and Down keys to select a menu item. Press the Right key to select an item, or the Left key to return to the Configuration menu.

Function Code	Parameter Name	Parameter Description
f1.x. 5.1. 1	Sample	Changes the sample size for Filtering (1-30) 10 is default.
f1.x. 5.2	Gain	Do Not Change
f1.x. 5.3	Speed	Do Not Change
f1.x. 5.4	Debug	Set/Clear debug Mode

SETUP PARAMETERS (Continued)

Port Menu

The Port menu is available from the PoRT 1, PoRT 2, PoRT 3, and PoRT 4 parameters on the Configuration menu. Each Port menu sets the parameters for the respective communications port. The following selections are available from the Port menu. The default value for each parameter is shown in bold or by the designation (default). Press the Up and Down keys to select a menu item. Press the Right key to select an item, or the Left key to return to the Configuration menu.

Function Code	Parameter Name	Parameter Description
F1.x.1	BAuD	Sets the baud rate for the port. Options: 1200, 2400, 9600 , 19200, 57600
F1.x.2	BiTS	Sets the number of data bits for the port. Options: 7, 8
F1.x.3	PARiTY	Sets the type of parity used for the port. Options: EVEN, oDD, NoNE (default)
F1.x.4	SToP	Sets the number of stop bits used for the port. Options: 1 , 2
F1.x.5	HANDSH	Sets the handshaking mode for the port. Options: HARD, SOFT (default), NoNE
F1.x.6	Func	Port Function Options: RS232, Print, (default)NoNe

NOTE: The “x” in the Function Code is a placeholder. When accessing the Port menus, use the following values in place of “x”:

- Port 1: 5
- Port 2: 6
- Port 3: 7
- Port 4: 8

For example, the function code for PoRT 1 is F1.5.1.

SETUP PARAMETERS (Continued)

Battery Menu

The Battery menu is available from the BATT parameter on the Configuration menu. The following selections are available from the Battery menu. The default value for each parameter is shown in bold. Press the Up and Down keys to select a menu item. Press the Right key to select an item, or the Left key to return to the Configuration menu.

Function Code	Parameter Name	Parameter Description
F1.11.1	SLEEP	Sets the number of minutes the Gainco Infiniti® interface can be idle before shutting off. This setting only applies when the Gainco Infiniti® interface is operating on battery power. Options: OFF, 5, 10, 15, 20, 25, 30 , 35, 40, 45, 50, 55, 60
F1.11.2	BRiTE	Sets the display intensity (brightness) when the Gainco Infiniti® interface is operating on battery power. Options: 10%, 20%, 30%, 40%, 50% , 60%, 70%, 80%, 90%, 100%

Display Menu

The Display menu is available from the DiSPLA parameter on the Configuration menu. The following selections are available from the Display menu. The default value for each parameter is shown in bold. Press the Up and Down keys to select a menu item. Press the Right key to select an item, or the Left key to return to the Configuration menu.

Function Code	Parameter Name	Parameter Description
F1.12.1	BRiTE	Sets the display intensity (brightness) when the Gainco Infiniti® interface is operating on AC power. Options: 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%
f1.12.2	refresh	Sets the delay time (in milliseconds) between screen refreshes. (defaults): LED = 650, LCD =350 Range: 0-19999

SETUP PARAMETERS (Continued)

Time and Date Menu

The Time and Date menu is available from the T-DATE parameter on the Configuration menu. The following selections are available from the Time and Date menu. Press the Up and Down keys to select a menu item. Press the Right key to select an item, or the Left key to return to the Configuration menu.

Function Code	Parameter Name	Parameter Description
F1.13.1	DATE	Set the current date in mm.dd.yy format.
F1.13.2	time	Set the current time in hh.mm.ss format.

Legal Menu

The Legal menu is available from the LEGAL parameter on the Configuration menu. The following selections are available from the Legal menu. The default value for each parameter is shown in bold or by the designation (default). Press the Up and Down keys to select a menu item. Press the Right key to select an item, or the Left key to return to the Configuration menu.

Function Code	Parameter Name	Parameter Description
F1.14.1	LEGAL	Sets the Gainco Infiniti® to enforce various settings to comply with various trade regulations. Options: NoNE (default), NTEP, EURO (OIML)

SETUP PARAMETERS (Continued)

Information Menu

The following selections are available from the Information menu. Press the Up and Down keys to scroll through the menu items. Press the Right key to select an item, or the Left key to return to the Main menu. All selections on the Info menu are read-only.

Function Code	Parameter Name	Parameter Description
f2.1	CAuDT	View the calibration audit trail counter.
f2.2	SAuDT	View the setup audit trail counter.
f2.3	EAuDT	View the OIML Euro audit trail counter.
f2.4	CbSN	View the circuit board serial number.
f2.5	isn	View the indicator serial number
f2.6	ADVoLT	View the analog to digital convertor voltage.
f2.7	BATT	View the current battery voltage.
f2.8	APP	View the firmware application name.
f2.9	BUiLD	View the firmware build number.
f2.10	b DATE	View the firmware build date.

The calibration and setup audit counters provide an audit trail. These counters increment automatically every time a change is made to the calibration or setup parameters, as applicable. These counters cannot be reset, and roll over at 99,999. Using these counters, the Gainco Infiniti® complies with the category 1 sealing method as described in NIST Handbook 44, 2004 Edition, Section 2.20, S.1.11 Provisions for Sealing.

SETUP PARAMETERS (Continued)

Application Menu

The following selections are available from the Application menu. Press the Up and Down keys to scroll through the menu items. Press the Right key to select an item, or the Left key to return to the Main menu.

Function Code	Parameter Name	Parameter Description
f4.1	APP 1	View the Check Weighing menu.

Check Weighing Menu

The following selections are available from the Check Weighing menu. Press the Up and Down keys to scroll through the menu items. Press the Right key to select an item, or the Left key to return to the Application menu.

Function Code	Parameter Name	Parameter Description
f4.1.1	OVER	Set the over weight set point for check weighing. The default value of 0 disables the check weighing feature.
f4.1.2	UNDER	Set the under weight set point for check weighing. The default value of 0 disables the check weighing feature.
f4.1.3	delay	Delay is the time in seconds between transmissions across a serial cable of scale readings. 1(default)
f4.1.4	mode	Sets the checkweigh mode ON or OFF. When Off, the “+”, “-” and “OK” lights DO NOT ACTIVATE.

F1 – COnFIG	F1.1 – SCALE 1	F1.1.1 – EnAbLE F1.1.2 – F5 F1.1.3 – GrAdS F1.1.4 -- StAbL F1.1.5 – FILtEr F1.1.6 – 2rAnG F1.1.7 – 2trAC F1.1.8 – UnlI F1.1.9 – Unl2 F1.1.10 – Unl3 F1.1.11 – Unl4 F1.1.12 – C Unl
	F1.2 – SCALE2	F1.2.1 – EnAbLE F1.2.2 – F5 F1.2.3 – GrAdS F1.2.4 - StAbL F1.2.5 – FILtEr F1.2.6 – 2rAnG F1.2.7 – 2trAC F1.2.8 – UnlI F1.2.9 – Unl2 F1.2.10 – Unl3 F1.2.11 – Unl4 F1.2.12 – C Unl
	F1.3 – SCALE3	F1.3.1 – EnAbLE F1.3.2 – F5 F1.3.3 – GrAdS F1.3.4 -- StAbL F1.3.5 – FILtEr F1.3.6 – 2rAnG F1.3.7 – 2trAC F1.3.8 – UnlI F1.3.9 – Unl2 F1.3.10 – Unl3 F1.3.11 – Unl4 F1.3.12 – C Unl

F1 – COnFIG	F1.4.1 – FnAbl E	
	F1.4.2 – F5	
	F1.4.3 – GrAdS	
	F1.4.4 -- StAbL	
	F1.4.5 – FILtEr	
	F1.4.6 – 2rAnG	
	F1.4.7 – 2trAC	
	F1.4.8 – Unltl	
	F1.4.9 – Unlt2	
	F1.4.10 – Unlt3	
	F1.4.11 – Unlt4	
	F1.4.12 – C Unlt	
	F1.5 – Port 1	F1.5.1 – bAud
		F1.5.2 – bitS
		F1.5.3 – PAritY
		F1.5.4 – StoP
		F1.5.5 – HandSH
		F1.5.6 -- Func
	F1.6 – Port 2	F1.6.1 – bAud
		F1.6.2 – bitS
		F1.6.3 – PAritY
		F1.6.4 – StoP
		F1.6.5 – HandSH
		F1.6.6 -- Func
	F1.7 – Port 3	F1.7.1 – bAud
		F1.7.2 – bitS
		F1.7.3 – PAritY
		F1.7.4 – StoP
		F1.7.5 – HandSH
		F1.7.6 -- Func
	F1.8 – Port 4	F1.8.1 – bAud
		F1.8.2 – bitS
		F1.8.3 – PAritY
		F1.8.4 – StoP
		F1.8.5 – HandSH
		F1.8.6 -- Func
	F1.9 – inPUt 1	Zero, Print, Units, none, Gross, Tare
	F1.10 – inPUt 2	Zero, Print, Units, none, Gross, Tare



Maintenance

	F1.11 – bAtt	F1.11.1 – SLEEP F1.11.2 – britE
	F1.12 – dDISPLAY	F1.12.1 – britE
	F1.13 – t-dAtE	F1.13.1 – dAtE F1.13.2 – timE
	F1.14 – LEGAL	F1.14.1 – LEGAL
	F1.15 – Tare	F1.15.1 – Funct = Auto , Entry, none F1.15.2 – Round = True , False F1.15.3 – Tare = False , True F1.15.4 – Save = True , False
	F1.16 – Conn (COM)	F1.16.1 – Serial F1.16.2 – Print F1.16.3 – SnnA (SMA)
F1 – COnFIG	F1.17 – Ad REF	5u, 1u (u=V for Volts)
	F2 – inFo	F2.1 – C Audit F2.2 – S Audit F2.3 – E Audit F2.4 – CbSn F2.6 – AdVoLt F2.7 – bAtt F2.8 – APP F2.9 – bUiLd F2.10 – b dAtE
	F3 – dFAULT	
	F4 – APP	F4.1 – C APP I F4.1.1 – OVer F4.1.2 – Under F4.1.3 – Mode

Maintenance

CONFIGURING GAINCO INFINITI® FOR DIFFERENT SCALES

If mounting the Gainco Infiniti® Interface on your own scale, you may need to configure the Gainco Infiniti® to match your scale. Use the values in the following table as a guideline to setting the options in the Configuration menu.

Gainco Infiniti® Parameter	10 lb. Scale	50 lb. Scale	100-500 lb. Scale	Tank/Floor Scale
F1.1.2 FS (Full Scale)	10	50	100 - 500	1000 - 5000
F1.1.3 GRADS (Graduations)	0.002	0.02	0.05	1.0
F1.1.6 ZRANGE (Zero Range)	100%	100%	100%	100%
F1.1.7 ZTRAC (Zero Track)	1	1	1	0.5
F1.1.8 UNIT1	Lb	Lb	Lb	Lb
F1.1.9 UNIT2	1000g (kg)	1000g (kg)	1000G (kg)	1000g (kg)
F1.1.10 UNIT3	ouncE	ouncE	None	None
F1.1.11 UNIT4	(G)rams	None	None	None
F1.1.12 CUNIT (Calibration Units)	Lb	Lb	Lb	Lb

If your scale does not fit the examples shown above, or if you need assistance in configuring your Gainco Infiniti® interface, contact Gainco Blue Ribbon Service.

PARTS REPLACEMENT

Removing and Installing the Control Module

Perform the following steps to remove the front assembly.

Step 1: Remove the Control Module

- Loosen the four screws on the back of the Gainco Infiniti® securing the control module. The screws are captive screws. Do not remove the screws from the rear panel assembly unless they are damaged.
- Pull the control module from the rear panel assembly.



NOTICE

The control module is sealed at the factory. To maintain the full manufacturer's warranty, do not attempt to open the control module. Tamper-evident seals have been installed to confirm if the control module has been opened.

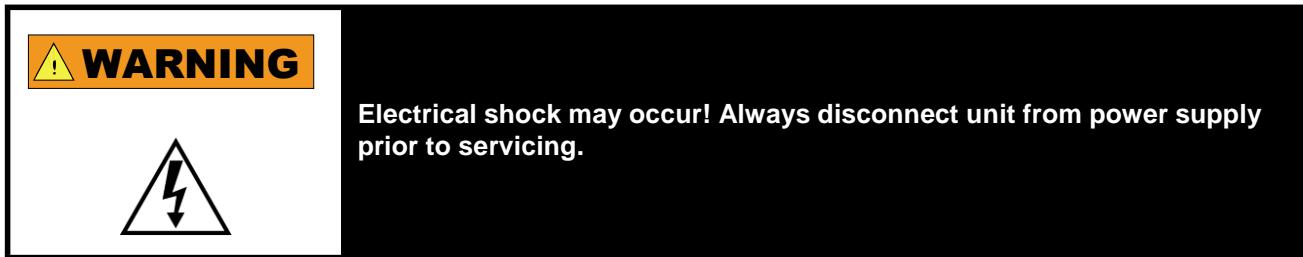
Step 2: Install the Control Module

- Inspect the seal on the back of the control module. If the seal is cracked or pinched, replace the seal.
- Place the control module onto the rear panel assembly so the connector on the control module lines up with the connector on the terminal strip. Do not force the control module into place. If it does not fit, remove the control module and realign it.
- Secure the control module using the four captive screws on the back of the Gainco Infiniti®, making sure the gap between the control module and the rear panel assembly is closed at all four corners to ensure a complete seal.

PARTS REPLACEMENT (Continued)

Replacing the Power Cord

Perform the following steps to replace the power cord.



Step 1: Disconnect Power Cord

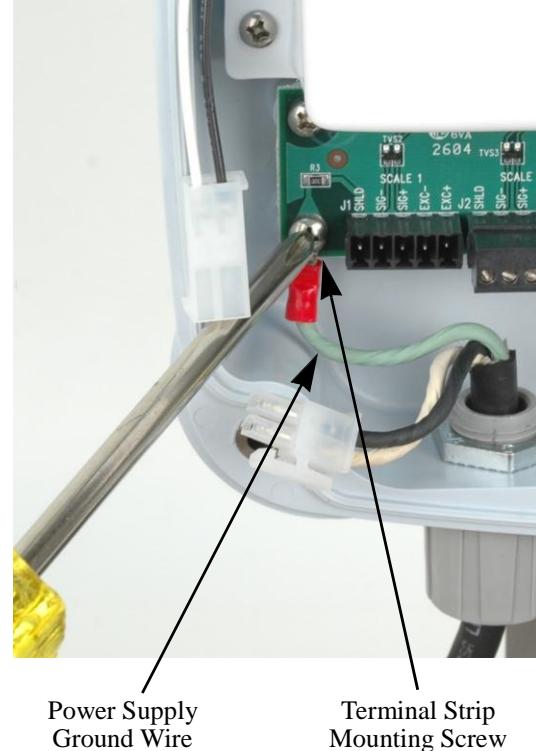
- Disconnect electrical power from the Gainco Infiniti®.
- Remove the control module.
- Unplug the input power connector from the power supply.



PARTS REPLACEMENT (Continued)

NOTE: Disconnecting the load cell connector from the terminal strip may improve access to the power supply strain relief connector and terminal strip mounting screw.

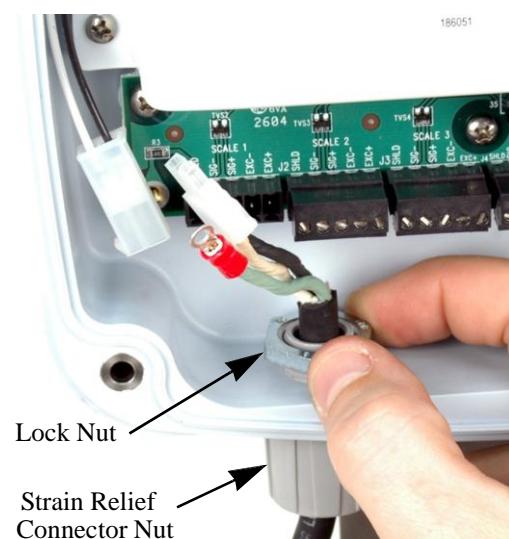
- Remove the bottom left mounting screw from the terminal strip to disconnect the power supply ground wire.



- Remove the strain relief connector lock nut and remove the power supply cable and strain relief connector from the Gainco Infiniti®. The new power supply cord will have a new strain relief connector already attached.

Step 2: Install the Power Supply Cord

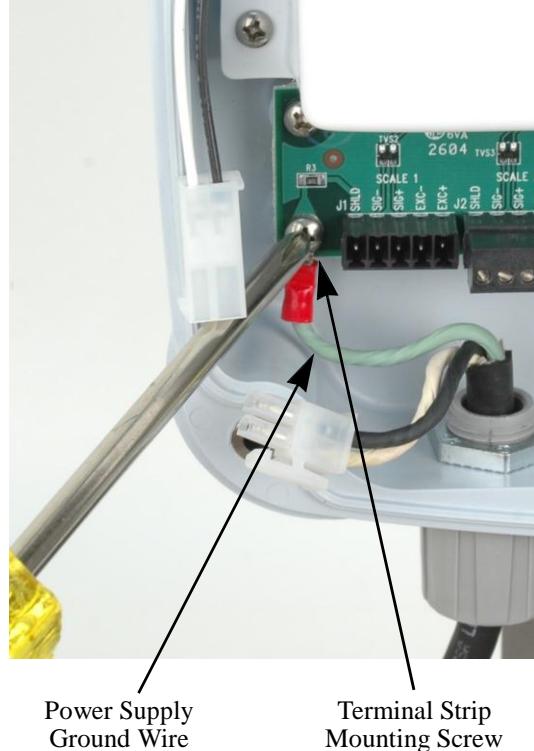
- Insert the power supply connector and ground wire on the new power supply cord through the strain relief connector mounting hole. Install the strain relief connector into the mounting hole.
- Feed enough cable through the strain relief connector to allow easy connection to the power supply connector.
- Tighten the strain relief connector nut.
- Install and tighten the lock nut on the strain relief connector.



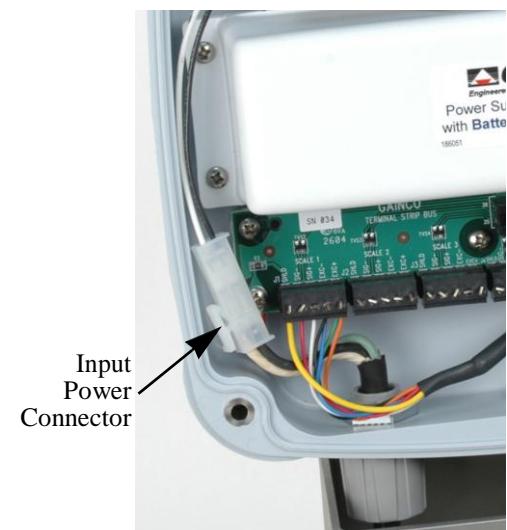
PARTS REPLACEMENT (Continued)

- Secure the power supply ground wire to the terminal strip using the lower left terminal strip mounting screw.

NOTE: If the load cell connector was removed from the terminal strip, plug the load cell connector into the terminal strip.



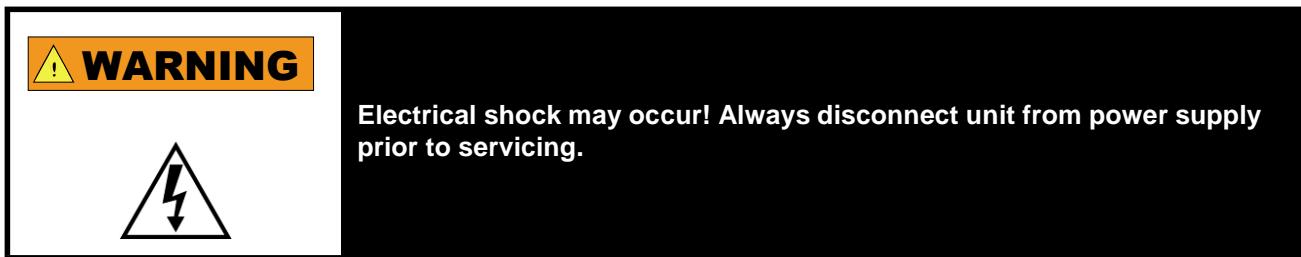
- Plug the input power connector into the power supply.
- Install the control module.
- Connect electrical power to the Gainco Infiniti®.



PARTS REPLACEMENT (Continued)

Power Supply Replacement

Perform the following steps to replace the power supply.



Step 1: Disconnect Wiring

- Disconnect electrical power from the Gainco Infiniti®.
- Remove the control module.
- Unplug the input power connector from the power supply.



- Unplug the power supply from the terminal strip.



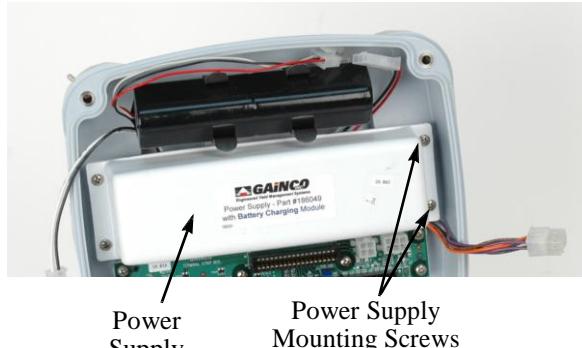
PARTS REPLACEMENT (Continued)

- If the Gainco Infiniti® is equipped with the optional battery pack, disconnect the battery power connector.



Step 2: Remove the Power Supply

- Remove the four screws securing the power supply to the rear panel assembly.
- Remove the power supply from the rear panel assembly.



Step 3: Install the Power Supply

- Place the power supply in the rear panel assembly.
- Secure the power supply using the four screws removed in Step 2.

PARTS REPLACEMENT (Continued)

Step 4: Connect Wiring

- If the Gainco Infiniti® is equipped with the optional battery pack, connect the battery pack to the power supply.

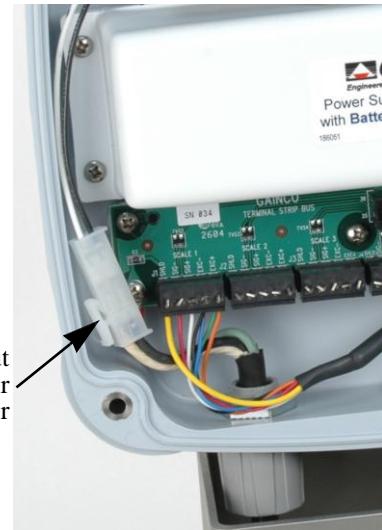


- Plug the power supply connector into the terminal strip.



PARTS REPLACEMENT (Continued)

- Plug the input power connector into the power supply.
- Install the control module.
- Connect electrical power to the Gainco Infiniti®.



Load Cell Replacement

Perform the following procedure to replace the load cell.

Step 1: Disconnect Wiring

- Disconnect electrical power from the Gainco Infiniti®.
- Remove the control module.
- Disconnect the load cell wiring from the terminal strip plug. The load cell plug may be removed from the terminal strip for easier access. Do not discard the plug.
- Loosen the strain relief connector nut and remove the load cell cable from the rear panel assembly.



PARTS REPLACEMENT (Continued)

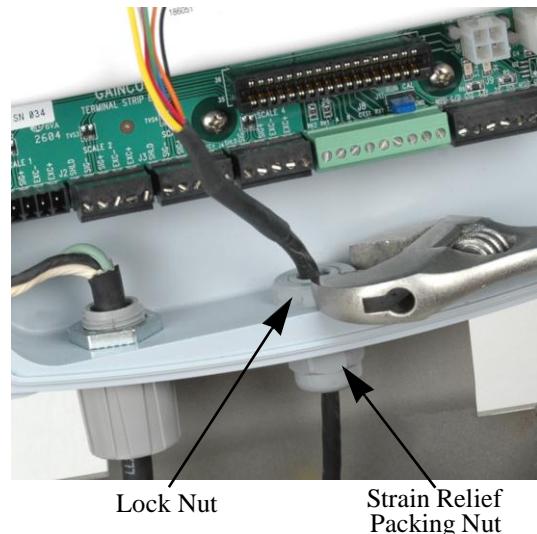
Step 2: Install Load Cell Cable

NOTE: There are two sizes of load cell strain relief connectors supplied for different sizes of load cell cables. Refer to Section 7, Service Parts, for part numbers for the different size ranges of strain relief connectors.

- Insert the new load cell cable through the strain relief connector. Insert enough cable to allow easy connection to the load cell connector on the terminal strip.
- Tighten the strain relief packing nut.

NOTE: To ensure a proper seal around the load cell cable, cable should not slip in the strain relief connector when the cable is pulled.

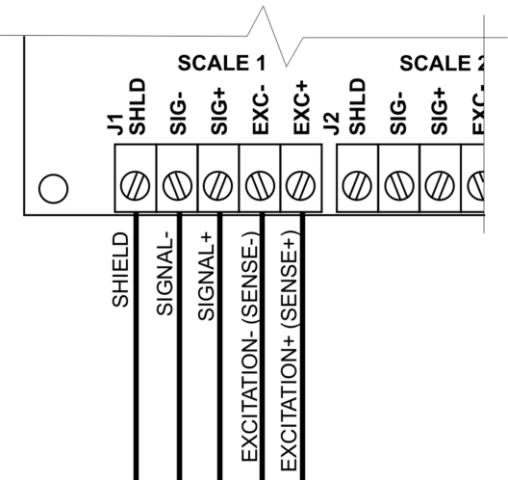
- Ensure the lock nut on the strain relief connector is tight.



PARTS REPLACEMENT (Continued)

Step 3: Connect Load Cell Wires

- Check the load cell documentation to verify the wire designations. Identify the following wires. Sense signal wires are only present on six wire load cells.
 - Signal +
 - Signal -
 - Excitation + (Sense +)
 - Excitation - (Sense -)
 - Shield
- Connect the load cell wiring to the load cell connector on the terminal strip according to the wiring diagram to the right. Note that if the load cell has six wires, the Excitation and Sense wires are connected to the same terminals. For easier access, the load cell plug may be removed from the terminal strip.
- Install the control module.
- Calibrate the Gainco Infiniti® interface.



PARTS REPLACEMENT (Continued)

Terminal Strip Replacement

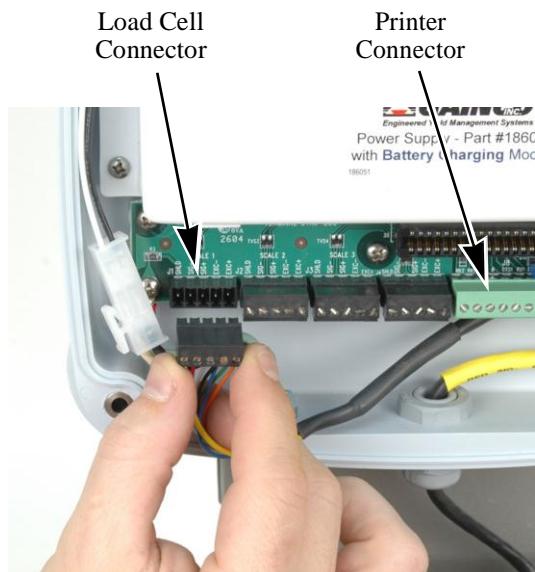
Perform the following procedure to replace the terminal strip.

Step 1: Disconnect Wiring

- Disconnect power from the Gainco Infiniti® Interface.
- Remove the control module.
- Unplug the power supply connector from the terminal strip.



- Unplug the load cell connector from the terminal strip.
- If equipped with an optional printer, unplug the printer connector from the terminal strip.
- Remove and save all unused plugs.



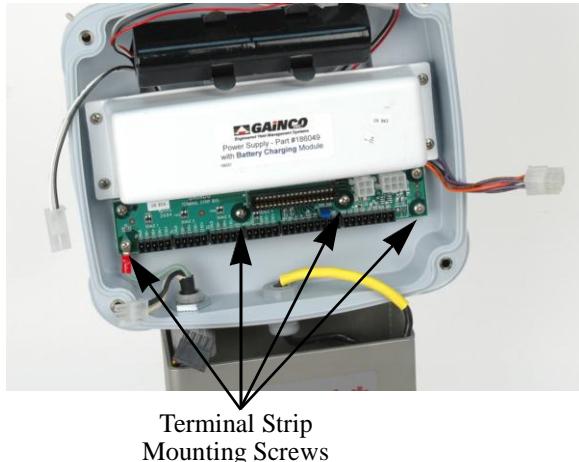
PARTS REPLACEMENT (Continued)

Step 2: Remove the Terminal Strip

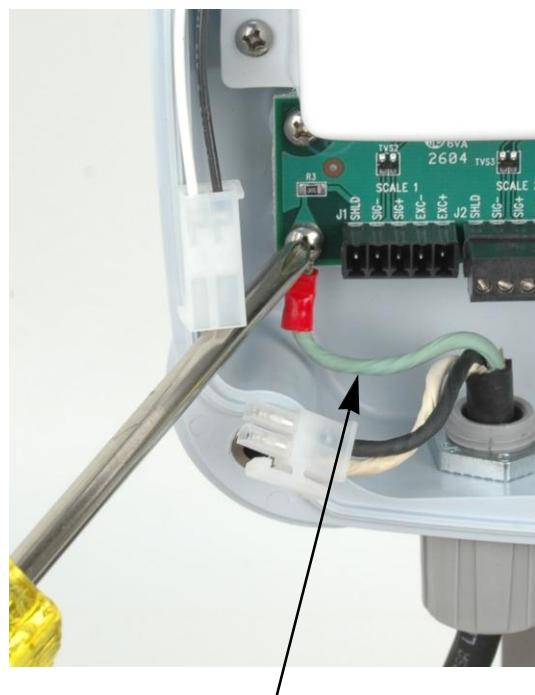
- Remove the six phillips head screws securing the terminal strip to the rear panel assembly.
- Remove the terminal strip from the rear panel assembly.

Step 3: Install the Terminal Strip

- Place the terminal strip in the rear panel assembly. Align the mounting holes in the terminal strip with the screw holes in the rear panel assembly.



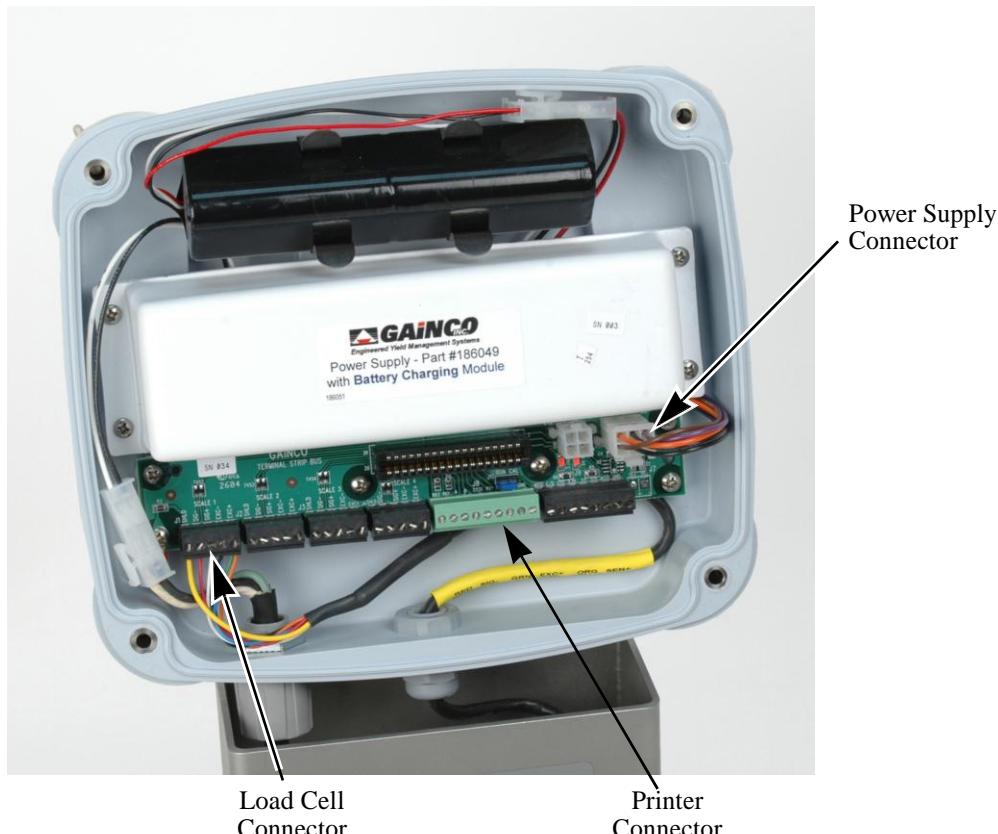
- Secure the power supply ground wire to the terminal strip using the lower left terminal strip mounting screw.
- Secure the terminal strip with the five remaining screws removed in Step 2.



PARTS REPLACEMENT (Continued)

Step 4: Connect Wiring

- If equipped with an optional printer, plug the printer connector into the terminal strip.
- Plug the load cell connector into the terminal strip.
- Plug in all remaining unused connectors.
- Plug the power supply connector into the terminal strip.
- Install the control module.
- Calibrate the Gainco Infiniti® Interface.



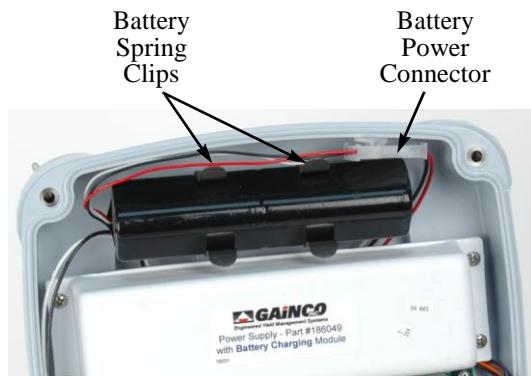
PARTS REPLACEMENT (Continued)

Battery Pack Replacement

Perform the following procedure to replace the optional battery pack.

Step 1: Disconnect Wiring

- Disconnect power from the Gainco Infiniti® Interface.
- Remove the control module.
- Pull the top side of the battery pack forward to release it from the spring clips securing the battery pack in the rear assembly.
- Remove the battery pack from the rear panel assembly.
- Disconnect the battery power connector.



WARNING



Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Step 2: Install Battery Pack

- Connect the battery power connector.
- Place the battery power connector into the rear panel assembly, behind the spring clips.
- Place the battery pack in the rear panel assembly. Place the bottom side of the battery pack into the spring clips.
- Push down on the top of the battery pack to engage the spring clips.
- Install the control module.
- Connect power to Gainco Infiniti® interface.
- Charge the battery for a minimum of 4 hours before using the Gainco Infiniti® Interface from the battery.

PARTS REPLACEMENT (Continued)

Battery Disposal

NOTE

Battery Disposal

The lithium batteries used in the Gainco Infiniti® are classified by the Federal Government as Non-Hazardous Waste and are safe for disposal in the normal municipal waste stream. The batteries do contain recyclable materials and are accepted for recycling by the Rechargeable Battery Recycling Corporation's (RBRC) battery recycling program.



PARTS REPLACEMENT (Continued)

NOTICE

The control module is sealed at the factory. To maintain the full manufacturer's warranty, do not attempt to open the control module. Tamper-evident seals have been installed to confirm if the control module has been opened.

Control Module Disassembly

If it is decided to perform service on components in the control module, please see the warranty documentation provided with the Gainco Infiniti® unit for details regarding circuit board warranties.

Perform the following procedure to disassemble the control module.

NOTICE

The Gainco Infiniti contains components that may be damaged by electrostatic discharge (ESD) if handled improperly. Before opening the Gainco Infiniti's enclosure, take the following precautions:

Use a grounding wrist strap.

Perform the service on a grounded work surface.

Step 1: Separate Front Panel and Mounting Plate

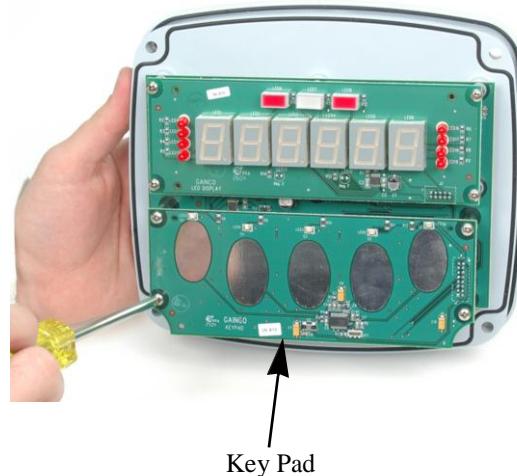
- Remove the control module from the rear assembly.
- Remove the four screws from the back of the control module. Remove the o-rings from the screws and discard the o-rings. Do not discard the screws.
- Separate the bezel assembly from the mounting plate.



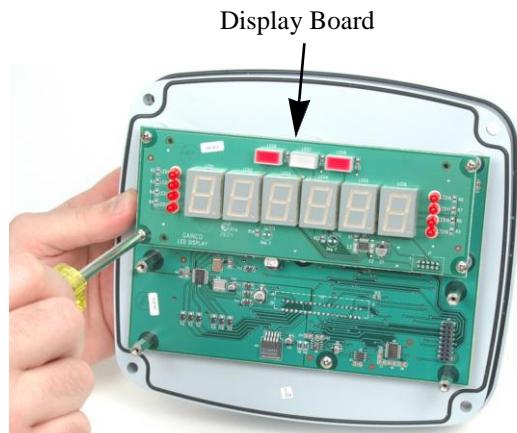
PARTS REPLACEMENT (Continued)

Step 2: Remove Circuit Boards

- Remove the four screws securing the key pad to the main circuit board. Remove the key pad.

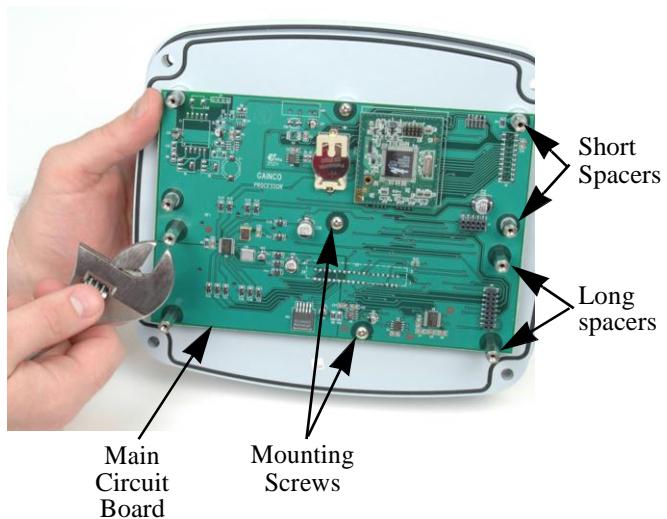


- Remove the four screws securing the display board to the main circuit board. Remove the display board.



PARTS REPLACEMENT (Continued)

- Remove the four short spacers and washers.
- Remove the four long spacers.
- Remove the three screws securing the main circuit board to the mounting plate. Remove the main circuit board.

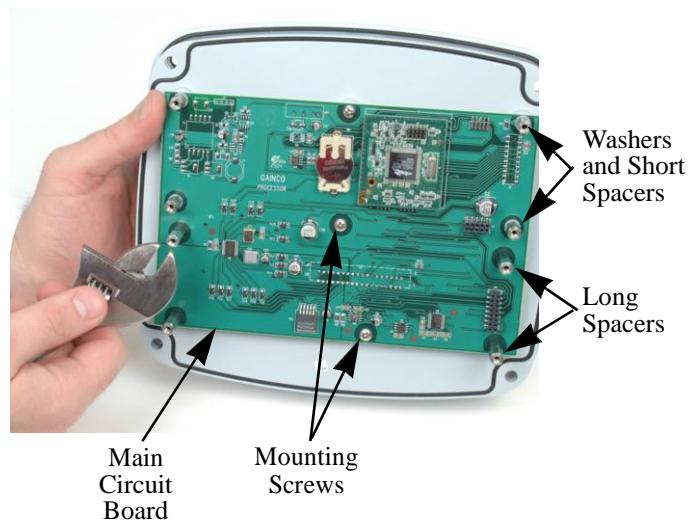


Step 3: Install Circuit Boards

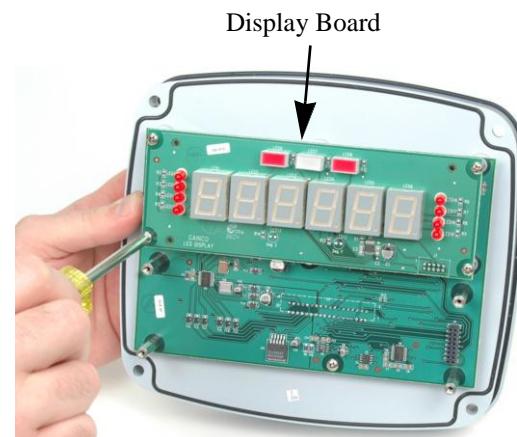
- Place the main circuit board on the mounting plate. Line up the connector on the back of the main circuit board with the connector on the mounting plate. Press firmly in the center of the main circuit board to ensure the connector is fully seated.
- Secure the main board with the three screws removed in Step 2.

PARTS REPLACEMENT (Continued)

- Install the four long spacers in the position shown in the picture to the right.
- Install the four washers and short spacers in the positions shown in the picture to the right.

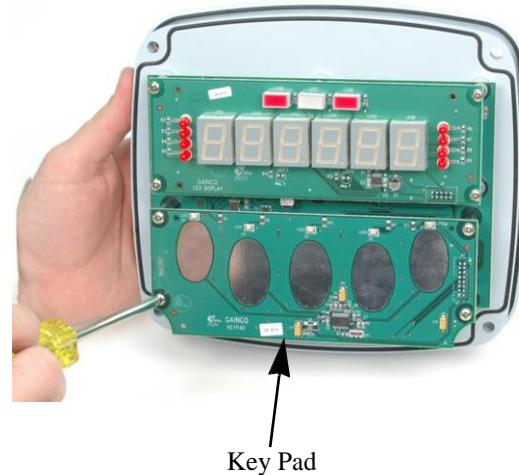


- Place the display board on the four short standoffs on the main circuit board. Line up the connector on the back of the display board with the connector on the main circuit board. Secure the display board with the screws removed in Step 2.



PARTS REPLACEMENT (Continued)

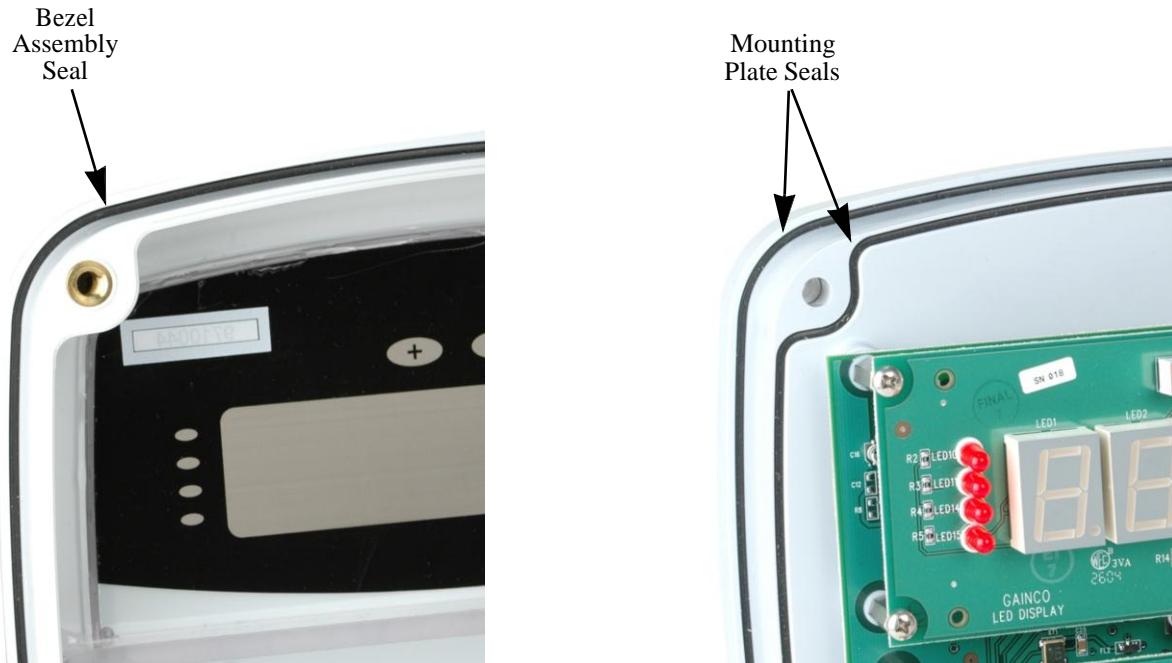
- Place the key pad on the four long standoffs on the main circuit board. Line up the connector on the back of the key pad with the connector on the main circuit board. Secure the key pad with the screws removed in Step 2.



PARTS REPLACEMENT (Continued)

Step 4: Install the Bezel Assembly and Bumper on the Mounting Plate

- Inspect the seals on the bezel assembly, bumper, and mounting plate. Make sure the seals are fully seated in the seal grooves. Replace any damaged seals.
- Place the bezel assembly face down on a clean surface. Place the bumper on top of the bezel assembly. Place the mounting plate on top of the bumper. Make sure all seals are fully engaged. Do not force the parts together. If they do not fit easily, remove the parts and realign them.
- Install new o-rings on the four mounting screws removed in Step 1. Secure the mounting plate in place with the four screws.
- Install the control module on the rear assembly.



FAULT DETECTION AND CORRECTION

The Gainco Infiniti® interface contains built-in diagnostics that monitor performance. If an error is detected, the display will flash an error code followed by the error message. The following table lists the error codes, error messages, and the cause of the error.

Error Code	Error Message	Cause
CODE01	AD ERRoR	The processor detected a problem with the analog-to-digital convertor. Possible causes include: moisture and/or corrosion shorting components, faulty soldering joint, or a defective chip. Contact Gainco Blue Ribbon Service for assistance.
CODE02	LOAD CELL	The load cell signal is more than double the expected full scale setting. The most likely cause is an incorrectly wired or defective load cell.
CODE03	OUER LOAD	The load cell signal is greater than the full scale setting plus 5%. The most likely cause is an excessive load on the scale. The Full Scale setting may also be incorrect. Make sure the Full Scale setting matches the load cell's rated capacity. Refer to the ADVOLT value in the Info menu to check the load cell voltage.
CODE04	UNDER LOAD	The load cell signal is less than negative Full Scale plus 5%. The most likely cause is an excessive load on the scale. The Full Scale setting may also be incorrect. Make sure that the Full Scale setting matches the load cell's rated capacity. Refer to the ADVOLT value in the Info menu to check the load cell voltage.
CODE05	OUT OF RANGE	An attempt was made to key in a value that exceeded the limits of the current selection.

FAULT DETECTION AND CORRECTION (Continued)

Error Code	Error Message	Cause
CODE06	ZERO RANGE	An attempt was made to zero out more than what is allowed by the ZRANGE setting. Use the Tare key to remove container weights. If the dead load weight of the scale has increased then recalibrate the scale.
CODE07	NOT STABL	The weight fluctuations exceed the limit set by the STABLE setting. Possible causes include: excessive vibration from nearby machinery, fans blowing on the scale, or a defective load cell. Other possibilities include: Filter setting is too low, or the STABLE setting itself may be too low.
CODE08	-TARE ERRoR	Negative tare error. An attempt to enter a tare value less than zero was made while the current LEGAL selection doesn't allow this.
CODE09	TARE ERRoR	The tare weight entered was greater than the full scale value.
CODE10	BAD E2	The processor was unable to write a value to the EEPROM. Possible causes are moisture and/or corrosion shorting the component, faulty solder joint, or defective chip. Contact Gainco Blue Ribbon Service for assistance.
CODE11	BAD E2	The processor was unable to read a value from the EEPROM. Possible causes are moisture and/or corrosion shorting the component, faulty solder joint, or defective chip. Contact Gainco Blue Ribbon Service for assistance.

FAULT DETECTION AND CORRECTION (Continued)

Error Code	Error Message	Cause
CODE12	BAD E2	The processor detected a problem with the integrity of the data stored in the EEPROM. Possible causes are moisture and/or corrosion shorting the component, faulty solder joint, or defective chip. Contact Gainco Blue Ribbon Service for assistance.
CODE13	FLASH UPDATE	The processor has detected new firmware. Press ENTER to acknowledge the message.
CODE14	DSPLY ERRoR	The value to be displayed is larger than the six digit limitation of the display.
CODE15	SEALED ERRoR	An attempt was made to enter the Configuration or Calibration mode while the Sealed jumper is installed.
CODE16	BATT LO	Battery is low. Battery needs to be recharged or possibly replaced. Refer to the BATT value in the Info menu to check the battery voltage.
CODE17	ENTRY ERRoR	An invalid entry was made. This is usually the result of an entry being made that is not allowed by the current function.
CODE18	BAD CoDE	The wrong setup code was entered.
CODE19	BAD DATE	An invalid date or time was entered.
CODE20	BBR CRC	The battery backed RAM CRC checksum did not match the computed checksum. Possible causes could be a bad battery or defective RAM. Contact Gainco Blue Ribbon Service for assistance.

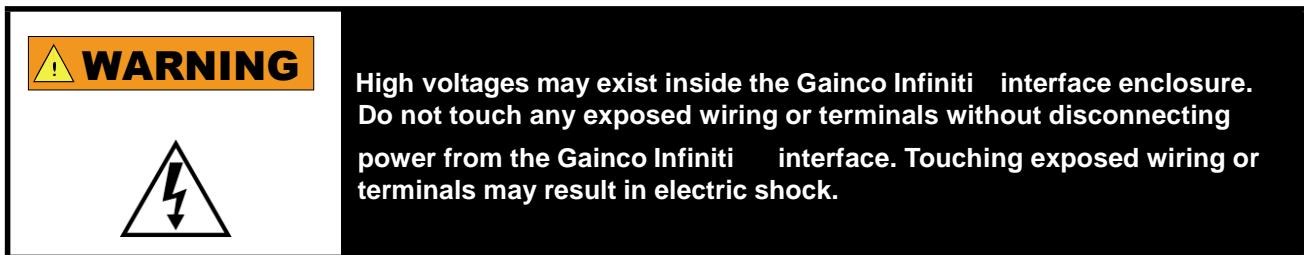
FAULT DETECTION AND CORRECTION (Continued)

Error Code	Error Message	Cause
CODE21	CANT SET	An attempt was made to change a parameter that cannot be changed, or an attempt was made to edit a parameter while in view-only mode.
CODE22	RES 100000	The FULL SCALE value divided by the GRADS value is greater than 100,000. Changes made in setup mode cannot be saved until this condition is corrected. Verify that the FULL SCALE value matches the load cell's rated capacity, and that FULL SCALE divided by GRADS is not greater than 100,000. If the resolution still exceeds 100,000, either increase the GRADS parameter, or switch to a lower capacity load cell.

FAULT DETECTION AND CORRECTION (Continued)

Power Supply LED Indicators

The terminal strip contains two LEDs located above the printer connector. These LEDs indicate the status of the power supply. During normal operation, both of these LEDs should be illuminated. If you suspect that the power supply is bad, check the status of these two indicators prior to replacing the power supply.



To check the status of the power supply LEDs, apply power to the Gainco Infiniti® interface. Remove the control module from the rear panel assembly. The two power supply LEDs are located above the printer connector, as shown in the picture to the right. If both LEDs are not lit, the power supply should be replaced. Disconnect power from the Gainco Infiniti® interface prior to replacing the power supply.



THIS PAGE INTENTIONALLY LEFT BLANK

Section 6

Cleaning

CONTENTS OF THIS SECTION

Periodic Cleaning During Use	6-2
Cleaning After Daily Use	6-2
Cleaning Solutions	6-2
Approved Cleaning Solutions	6-2
Prohibited Cleaning Solutions	6-2



PERIODIC CLEANING DURING USE

If the Gainco Infiniti® interface requires cleaning during the course of normal use, it may be wiped down with any typical, non-abrasive in-plant cleaning solutions.

CLEANING AFTER DAILY USE

The Gainco Infiniti® interface uses a durable, double-sealed polymeric housing that can withstand chemical and high pressure washdown. The Gainco Infiniti® interface does not need to be bagged or removed from the plant floor prior to chemical or high pressure washdown.

CLEANING SOLUTIONS

Approved Cleaning Solutions

The Gainco Infiniti® interface can be cleaned using in-plant cleaning solutions normally used in the meat and poultry processing industries.

Prohibited Cleaning Solutions

The following types of cleaning solutions should not be used on the Gainco Infiniti® interface.

- Abrasive cleansers
- Hydrocarbon-based solvents

Section 7

Service Parts

CONTENTS OF THIS SECTION

Safety Recommendations and Warnings	7-1
Rear Panel Assembly	7-2
Control Module	7-4

SAFETY RECOMMENDATIONS AND WARNINGS



WARNING

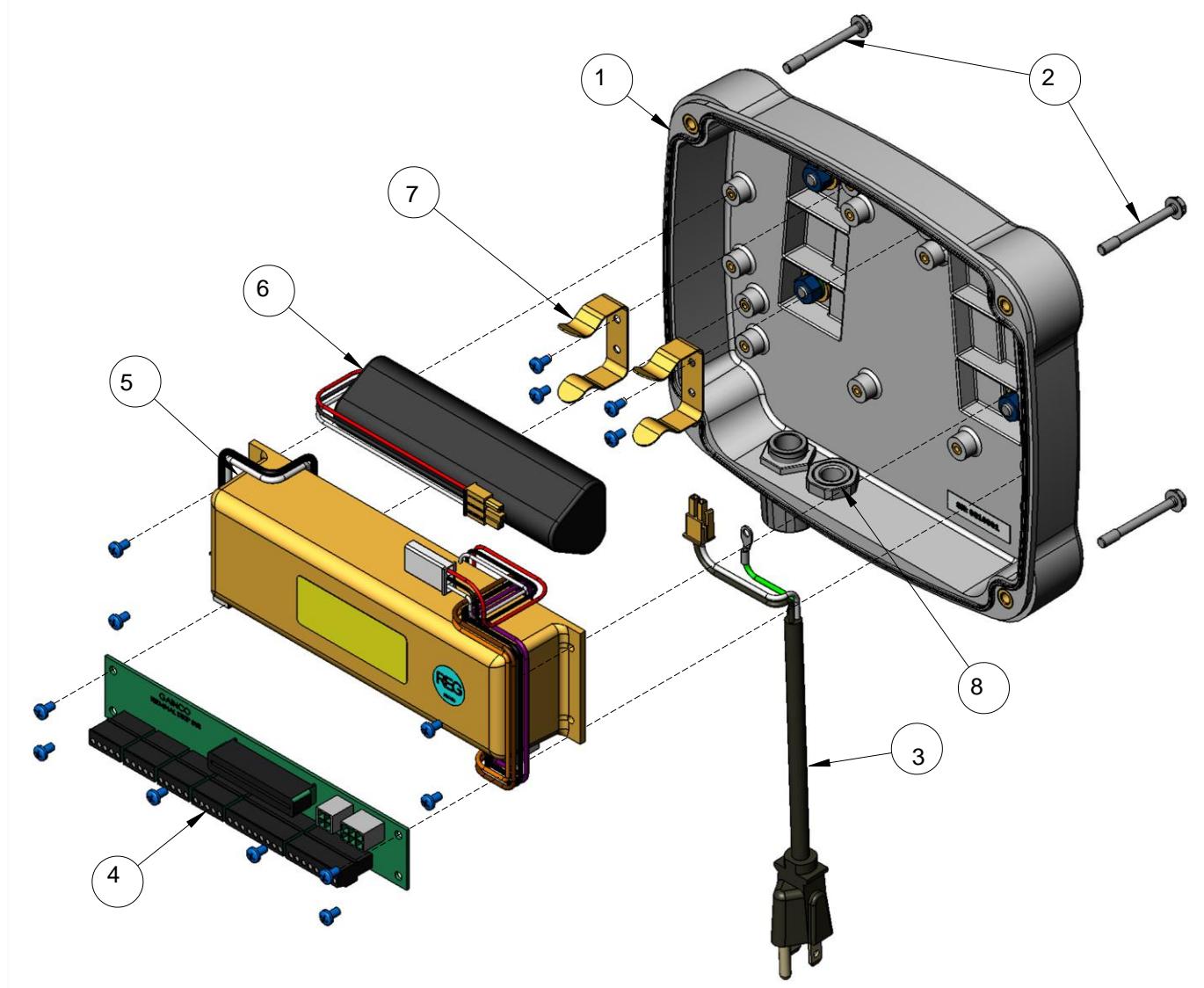
All maintenance procedures should be performed by qualified personnel.



NOTICE

Gainco, Inc. proudly manufactures quality parts for your Gainco equipment. For optimum performance of your Gainco equipment, use only parts manufactured by Gainco, Inc.

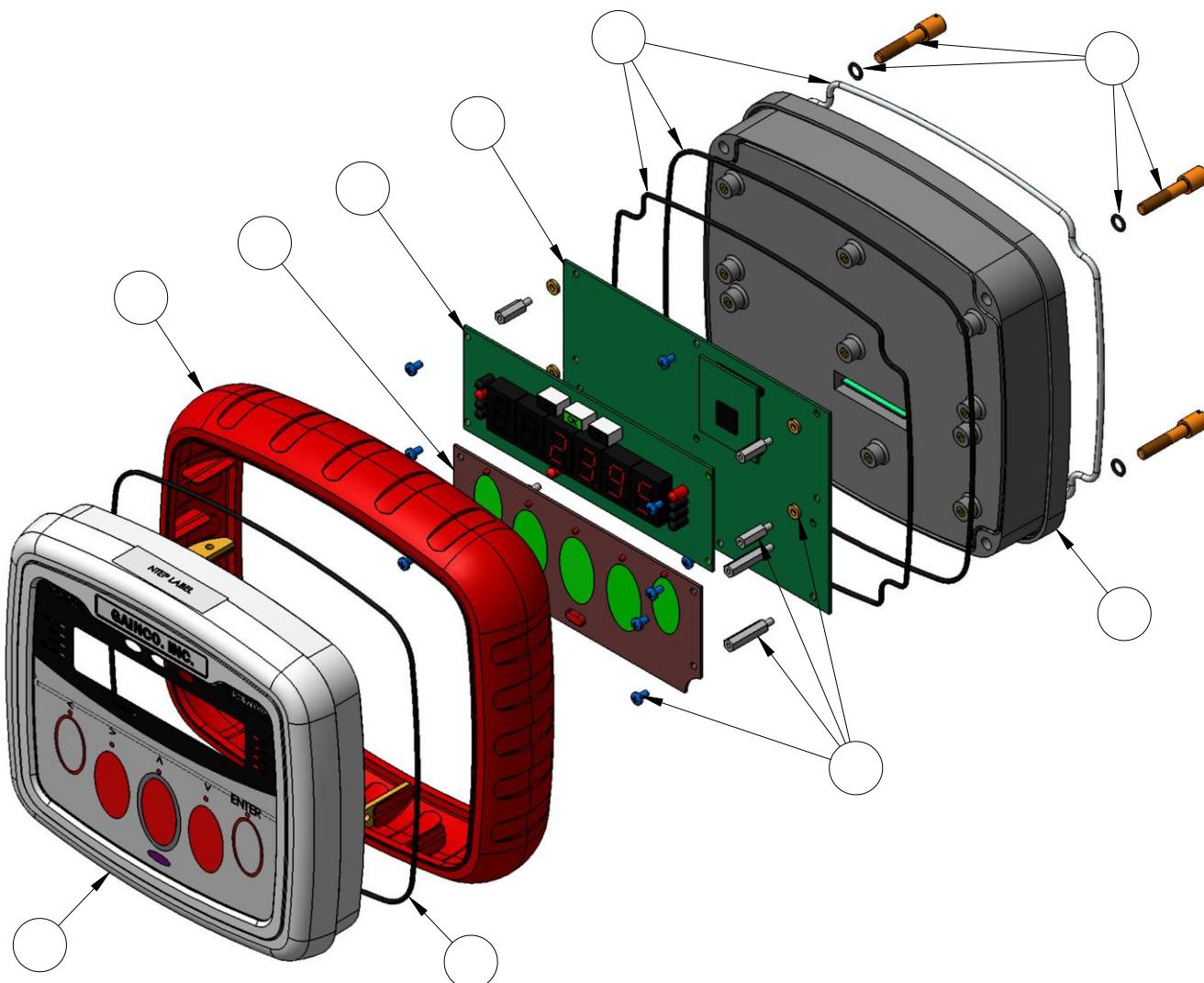
REAR PANEL ASSEMBLY



REAR PANEL ASSEMBLY (Continued)

ITEM	DESCRIPTION	Part Number	QTY
--	Rear Panel Assembly with Battery	186047	1
--	Rear Panel Assembly without Battery	186032	1
1	Rear Assembly	186033	1
2	Screw	186201	4
3	Power Cord Assembly (includes strain relief and power supply connector)	186115	1
4	Terminal Board	186045	1
5	Power Supply (with battery charger)	186049	1
5	Power Supply (without battery charger)	186041	1
6	Battery Pack	186053	1
7	Battery Clip Hardware	186113	2
8	Load Cell Strain Relief Connector (cable size 0.08 - 0.24 in. [2 - 6 mm])	186155	1
8	Load Cell Strain Relief Connector (cable size 0.19 - 0.31 in. [5 - 8 mm])	186062	1
--	Basic Mounting Bracket (optional/not shown)	186074	1

CONTROL MODULE



CONTROL MODULE (Continued)

ITEM	DESCRIPTION	PART NUMBER	QTY
--	Front Control Module Assembly (LED)	186001	1
--	Front Control Module Assembly (LCD)	186025	1
1	Front Fastener Kit	186112	1
2	Mounting Plate (with seal)	186109	1
3	Seal Kit	186130	1
4	Front Bezel Assembly (LED display) Front Bezel Assembly (LCD display)	186012 186029	1 1
5	Bumper Assembly (Red) Bumper Assembly (Blue)	186010 186009	1 1
6	Key Pad	186024	1
7	Display Board (LED) Display Board (LCD)	186009 186028	1 1
8	Main Board (LED) Main Board (LCD)	186191 186027	1 1

THIS PAGE INTENTIONALLY LEFT BLANK

*Contact and Document Information**Engineered Yield Management Systems*

Section 8

Contact and Document Information

CONTENTS OF THIS SECTION

Contact Address and Phone	8-1
Document Identification	8-1
Software and Duplication	8-1



CONTACT ADDRESS AND PHONE

For additional information, technical support and spare parts, contact Gainco Inc. Blue Ribbon Service or your distributor.

Gainco Inc.
1635 Oakbrook Drive
Gainesville, GA 30507
U.S.A.
Phone: 800/467-2828
Phone: 770/534-0703
Fax: 770/534-1865
<http://www.gainco.com>
Email: service@gainco.com

DOCUMENT IDENTIFICATION

Copies of this Operation Instruction may be ordered by quoting the Document ID as listed below:

Document ID: Manual #186021 TMC 156
Document Description: Operating Instructions and Spare Parts List
For the Gainco Infiniti Smart Scale Interface
Reissued: April 11, 2012

SOFTWARE AND DUPLICATION

For more information, contact your local Representative or:

Gainco, Inc.
1635 Oakbrook Drive
Gainesville, GA 30507
USA