8572

DigiTOL® PARTS COUNTING SCALE

Technical Manual and Parts Catalog

INTRODUCTION

This publication is provided solely as a guide for individuals who have received Toledo Technical Training in servicing the Toledo product.

Information regarding Toledo Scale technical training may be obtained by writing to:

Toledo Scale
Training Center
P.O. Box 1705
Columbus OH 43216
(614) 438-4400

FCC NOTE

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

IMPORTANT

It is most important that the correct part number is used when ordering. Part orders are machine processed, using only the part number and quantity as shown on the order. Orders are not edited to determine if the part number and description agree.

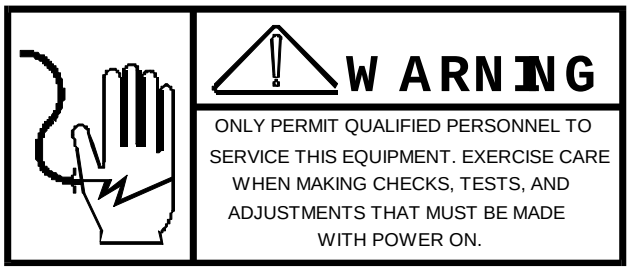
TOLEDO SCALE RESERVES THE RIGHT TO MAKE REFINEMENTS OR CHANGES WITHOUT PRIOR NOTICE

PRECAUTIONS

- **READ** this manual before operating or servicing this equipment.

- **ALWAYS REMOVE POWER** and wait at least 30 seconds **BEFORE** connecting or disconnecting any internal harnesses. Failure to observe these precautions may result in damage to, or destruction of the equipment.

- **ALWAYS** take proper precautions when handling static sensitive devices.



- **DO NOT** connect or disconnect a load cell scale base to the equipment with power connected or damage will result.

- **SAVE** this manual for future reference.

- **DO NOT** allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.

- **ALWAYS DISCONNECT** this equipment from the power source before servicing.

- **CALL** METTLER TOLEDO for parts, information, and service.

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1. GENERAL DESCRIPTION

The Toledo Scale DigiTOL® Model 8572 Parts Counting Scale is a high resolution scale designed for use in most industrial environments. The 8572 can be used with one analog or DigiTOL® remote scale base, offering flexibility and consistently accurate parts counting performance. **The 8572 MUST NOT be used in areas classified as HAZARDOUS by the National Electric Code (NEC) because of combustible or explosive atmospheres, or in areas that contain extreme dust, moisture, or corrosive materials.**

1.1. STANDARD FEATURES

- Internal Toledo® DigiTOL® load cell in 5, 10, 25, 50, and 100 lb capacities with one part in 500,000 internal resolution.
- Low power LCD (Liquid Crystal Display) with programmable cursors and two, six digit displays for weight data and counting information.
- 20 position sealed polycarbonate keyboard with embossed edges and tactile feedback.
- Bidirectional RS-232 serial port for printer or computer interfacing with single character ASCII input for remote print, tare, clear, zero, and accumulator functions.
- Low power CMOS circuitry to maximize optional battery life.
- 12 VDC 0.6 A wall transformer to power the standard 8572.
- Automatic Average Piece Weight (APW) enhancement. If selected, the 8572 automatically recalculates the APW continuously up to 4% of scale capacity.
- Selectable sample size.
- Pushbutton zeroing (±2% or ±20% of scale capacity) with automatic zero maintenance.
- Independent or dependent modes of counting operation.
- A 16 digit ID for transaction identification.
- A single register accumulator for weight or count data.
- A resetable consecutive number register that increments every time an accumulation is performed.
- All setup parameters and scale operating features including calibration are easily configured through the standard keyboard.

1.2 OPTIONAL FEATURES

- 12.5 VDC 1.5 A wall mount transformer is required to power the 8572 if any optional equipment is installed in the 8572.
- Input for one DigiTOL® or analog scale base, with 1 part in 500,000 internal resolution.
- Bar code input by means of a hand held wand or scanning gun.
- Internal and/or external batteries for applications requiring operation without AC power.

1.3. STATEMENT OF PERFORMANCE

The performance of any count-by-weighing scale is dependent on uniformity of piece weight, the number of pieces in the sample, the weight of an individual piece and the percent of rated load placed on the scale for a sample. Count accuracy is also dependant upon correct operation of the scale.

The 8572 high resolution parts counting scale significantly reduces count errors caused by the operator. In most applications, it provides better practical accuracy than either hand counting or other mechanical techniques. With the proper scale selection, count accuracy of ± one piece is attainable. However the most significant variable is non-uniformity in the weight of the parts to be counted; this variable is beyond the control of the scale.

1.4. ACCURACY CONSIDERATIONS

Counting accuracy is determined primarily by two factors: Sample size as a percentage of full scale capacity and variation in weight from piece to piece of the parts to be counted.

The first factor is the most frequent cause of counting inaccuracy because of the user's desire to hand count the minimum possible number of sample pieces. Using too small a sample size results in limited accuracy. For example, with a sample weight equal to 0.05% of full scale capacity, the internal sample weight resolution is ±1 part in 250, therefore counting accuracy will be limited to ±0.4% in this example. Use of a sample size that is a higher percentage of full scale capacity will result in improved counting accuracy.

The overall count accuracy can be severely affected if the pieces used for the sample are not truly representative of the average piece weight. The second factor is not under the control of the parts counting scale, but this factor can be minimized by using the largest practical sample size possible and resampling when counting different lots of the same material.

2. SYSTEM DESCRIPTION

The 8572 Logic PCB provides a DC voltage to the digital load cell which responds with numeric values proportional to the weight applied to the platter. This weight information is then used to determine the average piece weight and corresponding piece count. Setup parameters and calibration are accessible via the front keyboard, so no internal access is required to configure the 8572. Setup and calibration data is stored in non-volatile memory to prevent memory loss from occurring during a power outage.

2.1. INTERNAL FUNCTIONS

The basic 8572 consists of four major components. These are:

- **DigiTOL® Load Cell** - A single point loading, high resolution load cell that communicates weight data to the Logic PCB.

- **Logic PCB -** Contains the power supply and logic circuitry required to operate the scale. This PCB scans the keyboard, communicates with the DigiTOL® load cell, drives the display PCB, provides a bidirectional RS-232 serial printer port, and supplies connections for optional accessories.

- **Keyboard -** The sealed membrane, four by five matrix keyboard with domed keys for tactile feedback, is covered with an embossed polycarbonate overlay that provides ridges to separate active key areas. The functions available are tare entry, sample or APW entry, numeric ID entry, clearing of data, printing, zeroing of the scale, scale selection, recall access and setup selection.

- **Display PCB** - Contains the LCD (liquid crystal display). Six, 0.7" (18 mm) high, seven- segment digits display weight or count information. Six, 0.44" (11 mm) high, seven-segment digits display net weight, percentage of accuracy, consecutive numbering, average piece weight, or total counts. The LCD display also provides low battery and status symbols and eight programmable cursors to indicate display or operating mode.

2.2. OPTIONAL KITS

The standard 0.6 A, 12 VDC power supply (*135156 00A), MUST be replaced with the optional 1.5 A, 12.5 VDC power supply (*135693 00A) when any optional KOP is installed in the Model 8572.

2.2.1. Bar Code

Scanning of bar code data can accomplished by means of the bar code wand kit or the bar code scanning gun kit. The 8572 can read Code 39, Interleaved 2 of 5, or Codabar format bar code data. Tare, APW, and up to 16 digits of alphanumeric ID can be scanned into the 8572. The 8572, when coupled with the Model 8860 thermal printer, can print up to six lines of bar code and/or human readable data on an adhesive label in a variety of formats.

2.2.2. Remote Scale Input

The 8572 remote scale input provides 1 part in 500,000 resolution and approximately nine weight updates per second. The 8572 can accommodate one remote scale base of either the DigiTOL® or analog type.

The remote DigiTOL® scale PCB is compatible with all Toledo Scale DigiTOL® scale bases including the Model 2157 floor scale (digital j-box), also referred to as DigiTOL® POWER MODULE. The remote analog scale PCB can supply excitation voltage for up to four 350 ohm load cells and is compatible with both 2 mV/V and 3 mV/V analog load cells.

NOTE: The 8572 requires that four load cells be used with the digital j-box. The Model 2157 floor scale (digital j-box) provides up to 1 part in 280,000 resolution.

2.2.3. Battery Power Operation

2.2.3.1. Battery Powered Operating Time

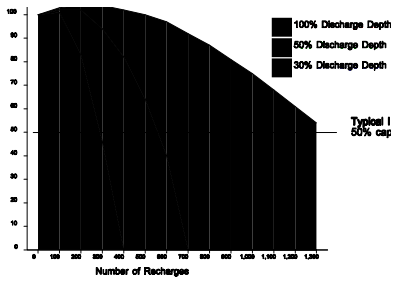
The internal battery kit allows operation of the 8572 when AC power is not available. The internal battery provides up to 8 hours of power. The battery can be removed by means of an access cover located on the back of the 8572. The normal recharge time is approximately 12 hours with the 8572 turned off. The external battery pack provides up to 32 hours of power and is easily replaced with a freshly charged external battery pack for applications requiring extended use without AC power. The normal battery recharge time is approximately 16 hours with the 8572 turned off.

Battery Option Installed	No other Options Installed	Remote DigiTOL® Scale Bar Code KOP	Remote Analog Scale Base (4-350 A Load Cells)
Internal	8 hours	3 hours (Not recommended)	2 Hours (Not Recommended)
External	32 hours	16 Hours	8 Hours

Table 2-1 Recommended Battery Powered Operating Time With Example Configurations

2.2.3.2. Battery Service Life Considerations

Battery service life is a major factor in estimating the maximum operating time of a charged battery. The internal and external battery options use a lead/acid "gel" cell type of battery that is similar to an automobile battery. **Lead/acid batteries lose charge capacity more quickly if they are completely discharged on a repetitive basis**. There is an inverse relationship between how deeply a battery is routinely discharged and how many times the battery can be recharged. A battery is considered to have exceeded its working life when the fully charged capacity is less than 50% of the original rated capacity. Refer to Table 2-1.



To maximize the working life of a battery, recharge the battery on a the basis of how many hours the scale has been in use rather than running until the 8572 powers itself down. If a particular scale configuration results in a maximum battery charge life of 24 hours before the battery is exhausted, then the battery pack should normally be used for 8 hours and then recharged. Extra battery packs and an external battery charger are available to permit continuous battery powered operation. Following this procedure will greatly increase the service life of the battery and prevent premature battery failure.

Operating and storage conditions also influence battery service life. Operating a battery at temperatures above 860 F (300 C) shortens service life considerably.

Figure 2-1 Number of Recharge Cycles Related to Battery Discharge Depth

Always recharge batteries after use. Batteries stored in a discharged state may refuse to take a charge. Batteries should be recharged every six months of storage (when stored at room temperature). Storing batteries at 500 F (100 C) or below extends shelf life before recharging is necessary.

3. SPECIFICATIONS

3.1. ELECTRICAL

3.1.1. Power Requirements

The 8572 operates at 120 VAC (+10%, -15%) 60 Hz. Export versions of the 8572 operate on 220 VAC, 50 Hz. Power to the 8572 is provided by means of an external 0.6 A / 12 VDC power supply. Power consumption for the basic 8572 without any options installed is four watts.

The 8572 meets the NIST H-44, Canadian Gazette Part 1, and OIML-SP7/SP2 line voltage variation specifications.

Line Voltage Variation Specification	AC Line Voltage			Line Frequency in Hz		
	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
NIST H-44	100	120	130	59.5	60	60.5
Canadian	108	120	132	58.8	60	61.2
OIML-SP7/SP2	102 187 204	120 220 240	132 242 264	58.8 49.0 49.0	60 50 50	61.2 51 51

Table 3-1 AC Line Power Voltage Specifications

3.1.2. Conducted and Radiated Emissions

The 8572 meets or exceeds FCC docket 80-284 for conducted and radiated emissions requirements.

The 8572 meets or exceeds the VDE 0871 class B specification for conducted and radiated emissions.

3.1.3. Radio Frequency Interference

The 8572 meets U.S.A., Canadian, VDE 0871 class B, and U.K. requirements for RFI susceptibility as listed below with a maximum of one display increment of change.

Radio Interference Frequency	U.S.A.	Canadian	VDE 0871 Class B	U.K.
	Field Strength	Transmitted Power at Specified Distance	Field Strength	Field Strength
27 MHz	3 volts/meter	4 watts at 2 meters	3 volts/meter	10 volts/meter
144 MHZ	N.A.	N.A.	3 volts/meter	N.A.
169 MHz	3 volts/meter	N.A.	3 volts/meter	10 volts/meter
464 MHZ	3 volts/meter	4 watts at 2 meters	3 volts/meter	10 volts/meter

Table 3-2 Radio Frequency Interference Continued
(N.A.) Not Applicable

3.2. ENVIRONMENTAL

The 8572 is intended for use in a general purpose atmosphere. It is intended for indoor applications where dirt, oil or water is not present. The 8572 is not designed for "hose-down" applications. Typical examples of misapplication of the scale include, but are not limited to: Immersion in liquid, hosedown, corrosive chemicals.

3.2.1. Temperature Specification

The 8572 has an operating temperature range of from 10 0 to 40 0 C, (50 0 to 104 0 F) at 10 to 95% relative humidity, non-condensing. The 8572 has a storage temperature range of -40 0 to 60 0 C, (-40 0 to 140 0 F) at 10 to 95% relative humidity, non-condensing.

3.2.1.1. Internal DigiTOL® Load Cell

The 8572 internal scale has a zero temperature coefficient of 24 PPM/0C and a span temperature coefficient of 23 PPM/0C.

3.2.1.2. Remote Analog Scale PCB

The optional analog scale PCB has a zero temperature coefficient of 0.1 uV/0C and a span temperature coefficient of 6 PPM/0C

3.2.2. Hazardous Areas

In locations classified as hazardous by the National Electrical code (NEC) because of combustible or explosive atmospheres or materials, special precautions are required.
DO NOT USE THE 8572 IN THESE LOCATIONS.

3.3. PHYSICAL SPECIFICATIONS

3.3.1. Appearance and Dimensions

The 8572 enclosure is fog white with a black platter assembly and multi-color keyboard. the unit is 5.3" (135 mm) high, 14.7" (375 mm) wide and 14.6" (370 mm) deep. The standard 8572 weighs approximately 20 lb (9.1 kg). The base and sub-platter are made from die-cast aluminum. The 8572 uses a single point loading, moment-insensitive load cell. The cover and bezel are made of heavy structural plastic. A level indicator bubble is mounted in the sub-platter which can be viewed by removing the platter.

3.3.2. Internal Scale Platter

The 5 lb capacity scale has an 8" X 8" (205 mm) plastic platform. The 10, 25, 50, and 100 lb capacity scales has a 14.5" wide (370 mm) X 10.8" deep (275 mm) painted steel platter.

3.3.3. Shipping Information

Approximate shipping weight is 22 lb (10 kg). Carton dimensions are 9" (230 mm) X 19" (485 mm) X 19" (485 mm).

3.4. DATA INTERFACE

The 8572 supplies a bidirectional RS-232 printer port standard. The baud rate is selectable from 300 to 9600 baud and parity is selectable as even, odd, or parity bit always a "0". All data is in a 10 bit frame: 1 start bit, 7 ASCII coded data bits, 1 parity bit and 1 stop bit. The 8572 printer port is powered by the external RS-232 device connected to the 8572. Both the transmit and receive RS-232 data lines of the 8572 printer port must be connected to a true RS-232 external device to permit data output. No handshake lines are provided on the printer port.

3.4.1. Data Output

When a print request occurs (caused by pressing the **PRINT** key, an autoprint operation or by receiving an ASCII "P" into the printer port), the 8572 will output data unless output is inhibited. Data output will be inhibited by an unstable weight reading (scale "in motion"), an out of range weight reading (under zero or over capacity) or if the 8572 is in the expanded weight display mode. If repeat print is disabled the 8572 will output data only once per weighment after which the load on the scale must be removed and a new load placed on the scale before data can be output.

A selectable checksum character can be added to the data output to permit detection of transmission errors. A selectable ASCII <SO> (shift out) character can be added to the data output to request large print size in the Model 8806 and 8860 printers.

3.4.2. Data Input

The 8572 printer port can be configured to permit an external device to control the 8572. Upper case, ASCII characters ("C", "P","T" and "Z") received into the printer port are equivalent pressing to the **CLEAR**, **PRINT**, **TARE** and **ZERO** keys on the 8572 keyboard. The accumulator total can be transmitted and or cleared by ASCII characters.

3.5. CONFIGURATION GUIDE

	Factory Number	Pounds Capacity	Metric Capacity	Load Cell Capacity
120 VAC, 60 Hz U.S.A. and Canadian Versions	8572-0002	5 X 0.001 lb	2.5 X 0.0005 kg	3.75 kg
	8572-0003	10 X 0.002 lb	5 X 0.001 kg	7.5 kg
	8572-0004	25 X 0.005 lb	10 X 0.002 kg	15 kg
	8572-0005	50 X 0.01 lb	25 X 0.005 kg	30 kg
	8572-0006	100 X 0.02 lb	50 X 0.01 kg	60 kg
220 VAC, 50 Hz Europe and General Export Versions	8572-1002	5 X 0.001 lb	2.5 X 0.0005 kg	3.75 kg
	8572-1003	10 X 0.002 lb	5 X 0.001 kg	7.5 kg
	8572-1004	25 X 0.005 lb	10 X 0.002 kg	15 kg
	8572-1005	50 X 0.01 lb	25 X 0.005 kg	30 kg
	8572-1006	100 X 0.02 lb	50 X 0.01 kg	60 kg

Table 3-3 Factory Number Configuration

- For Your Notes -

4. INSTALLATION INSTRUCTIONS

Examine the shipping box for damage. **IMMEDIATELY make a claim with the carrier if damage is found.**

Open the box, remove the scale, and place the scale on a flat, level, stable surface. Save the shipping box for future use.

> **⚠ CAUTION!**
>
> Do not lift the scale by the platter or sub-platter. Grasp the scale by the base to lift. Do not stress or bump the sides of the platter as this will place a side torque on the platter and may damage the load cell.

4.1. UNPACKING AND SETUP

For the 5 lb capacity scale (8572-0002, 1002), follow the procedure listed in Section 4.1.1. For all other versions, lift the platter upward to remove, find the level bubble indicator located in the center of the subplatter and proceed to Section 4.1.2.

4.1.1. Unpacking Instructions for Low Capacity Scale (for 8572-0002, 1002 versions only)

Remove the rubber band securing the 8" X 8" plastic platter to the sub-platter. Grasp the plastic platter by the edges and lift straight up to remove it. The platter is held by hook and loop fasteners in the corners. Remove the two #8-32 screws and rubber O rings from the top of the sub-platter. Remove the tape and shim from the top of the right side of the dead-deck. Locate the level bubble indicator located on the left front of the subplatter. Refer to Figure 4-1. Save all shipping hardware for future use.

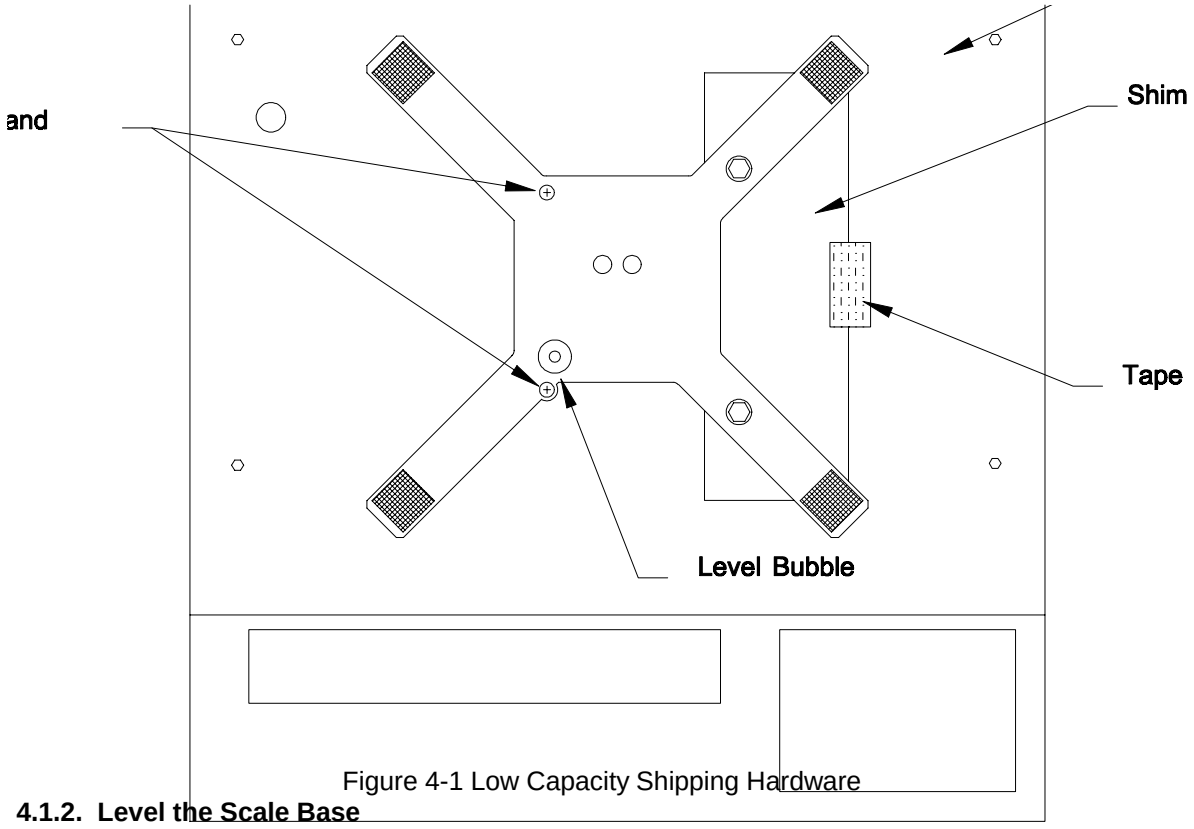


Figure 4-1 Low Capacity Shipping Hardware

4.1.2. Level the Scale Base

Level the scale by turning the adjustable feet on the bottom of the scale base until the level indicator is correct. The feet must be adjusted so the scale does not rock. Carefully tighten the lock nut at each adjustable foot. Refer to Figure 4-2.

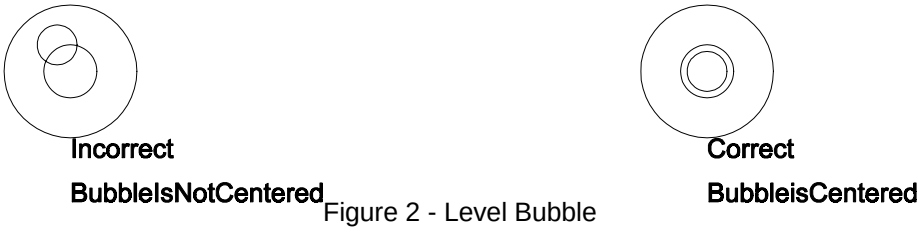


Figure 2 - Level Bubble

4.1.3. Install All Optional KOPs

Install any desired options in the 8572. Refer to the installation instructions included with the optional kit of parts. Adding any option to the 8572 requires substituting the optional 1.5 A / 12.5 VDC power supply (*135693 00A) for the standard 0.6 A / 12 VDC power supply (*135156 00A).

4.1.4. Initial Power Up Sequence

Connect AC power to the 8572 and turn on the power switch (located on the right side of the base near the front). The following sequence of events will then occur:

- All cursors, data fields, and legends light up and the decimal point then scrolls across the displays from the right-most digit to the left-most digit.

- The software part number and revision level are then displayed for a few seconds. **[135629 L02]** is an example of the L02 revision powerup display. If a **[tESt]** message is displayed instead of the software part number then the 8572 is in the factory test mode. The test mode is entered by powering up the 8572 with the setup switch turned on and is for factory setup use only. To exit the test mode: power down the 8572, slide the setup switch to the rear of the enclosure, and power up the 8572. Refer to Section 4.2. for setup switch location and description.

- During power up the Logic PCB tests all memory devices and establishes communication with the load cell and any optional PCB's that are enabled in setup. Error messages are displayed if any of the memory tests are failed or if the load cell or optional PCB does not respond.

  If an **[E3]** error is displayed then the setup memory is corrupt. Access the setup as described in Section 4.2. and verify 8572 programming and calibration.

  If any other error messages are displayed during the power up sequence refer to Section 7.1. for error code explanations and recommendations.

- The last step of the power up sequence involves capturing zero on the gross scale if auto zero capture or tare interlocks are enabled in setup. If the weight on the gross scale is within the auto zero capture range (±2% or ±20% of programmed scale capacity as selected in setup), zero will be automatically captured by the 8572 and sample and gross scale selection will be as selected in setup step **[18]**.

  If the weight reading is outside of the zero capture range, the primary display shows **[E E E]** to indicate that the weight indication is greater than the auto zero capture range. The primary display shows **[-E E E]** to indicate that the weight indication is less than the auto zero capture range.

4.2. PROGRAMMING PROCEDURE

The SETUP mode permits access to the programming and calibration parameters. To enter the SETUP mode on the 8572, remove the platter (on scales with the 11" by 14" platform) or remove the plastic cover

plug (on scales with the 8" square platter) and locate the setup switch access hole. Refer to Figure 4-3. Slide the setup switch toward the front of the scale using a pointed, non-conductive object. Do not use an object that could be easily dropped into the unit.

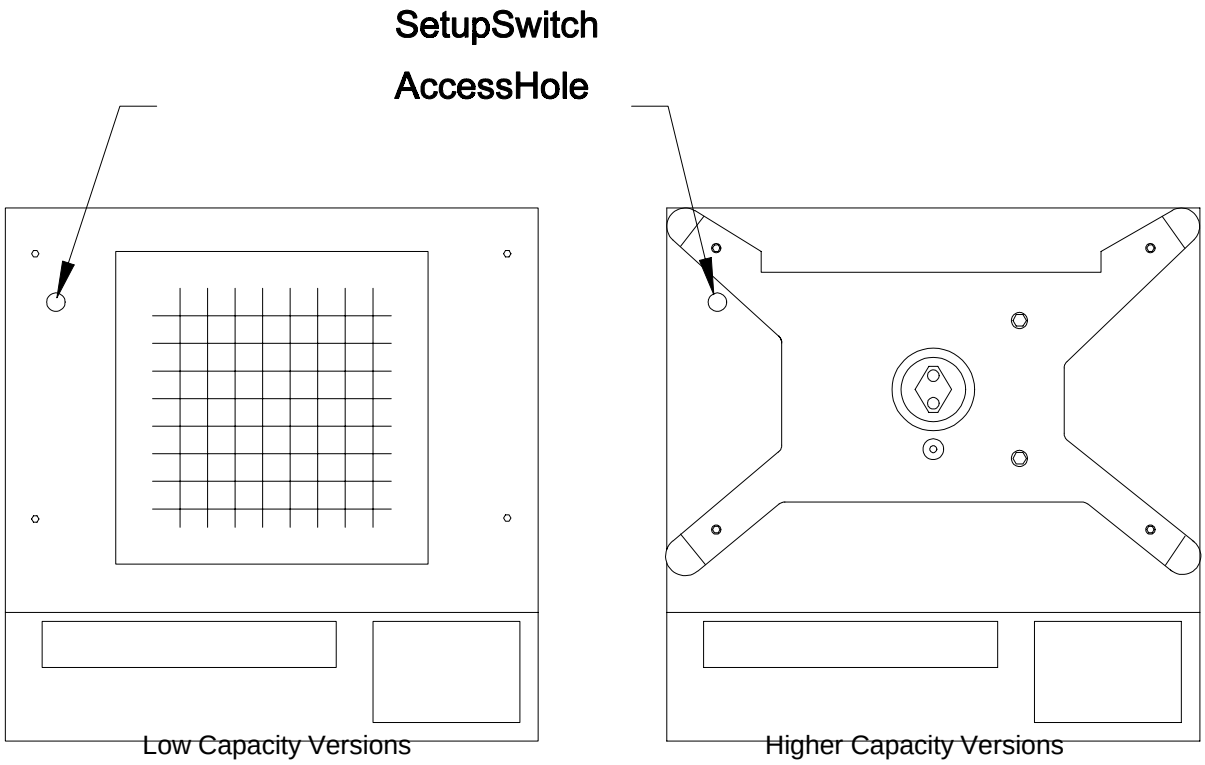


Figure 4-3 Setup Switch Access Hole

After the setup switch is actuated, the 8572 displays **[--]**. The 8572 is now in the setup mode and ready to be programmed.

The following keys are redefined to perform the function specified when in the setup mode.

ENTER - Press this key to terminate a data entry for a specific step or accept the displayed value and advance to the next setup parameter.

ZERO - Press this key to back-up to the previous step.

CLEAR - Press this key to clear the display, when the 8572 is prompting for data entry, and permit a new value to be entered.

1 - Press this key to indicate a **YES** response and advances to the next setup selection.

0 - Press this key to indicate a **NO** response and advances to the next setup selection.

4.3. SETUP QUICK REFERENCE

NOTE: The following chart pertains to the **(135629 LO2)** revision software. The software revision is the second prompt displayed after powerup. Recommended default selections are shown in ***Italics***.

[10] ACCESS CALIBRATION GROUP

[11]	Weight Units	0 = lb units, no display legend ***1 = lb units and display legend*** 2 = kg 3 = g 4 = oz 5 = toz 6 = t 7 = dwt
[12]	Linearity Compensation	***0 = Disabled*** 1 = Enabled
[13]	Remote Scale Selection	***0 = Disabled*** 1 = Single DLC 2 = DigiTOL® J-Box 3 = Analog Input
[15A]	Internal Scale Capacity	
[16A]	Internal Scale Increment Size	
[17A]	Access Internal Scale Calibration	
[14]	DigiTOL J-box Shift Adjust	
[15B]	Remote Scale Capacity	
[16B]	Remote Scale Increment Size	
[17B]	Calibrate Remote Scale	
[18]	Power up Scale Select	***0 = Sample 1, Gross 1*** 1 = Sample 1, Gross 2 2 = Sample 2, Gross 1 3 = Sample 2, Gross 2

[20] ACCESS ZERO, MOTION, FILTERING GROUP

[21]	Internal Scale AZM	0 = Disabled ***1 = Enabled***
[22]	Remote Scale AZM	0 = Disabled ***1 = Enabled***
[23]	Powerup Zero Capture	0 = Disabled ***1 = 2% Scale Capacity*** 2 = 20% Scale Capacity
[24]	Pushbutton Zero	0 = Disabled ***1 = Enabled***
[25]	Motion Detect Window	0 = Motion Detect Disabled ***1 = 0.5 Increment*** 2 = 1 Increment
[26]	Scale 1 Display Filter	0 = Disabled ***1 = Light*** 2 = Medium 3 = Heavy
[27]	Scale 2 Display Filter	0 = Disabled ***1 = Light*** 2 = Medium 3 = Heavy
[28]	Enhanced APW Repeat.	***0 = Disabled*** 1 = Enabled

[30] ACCESS TARE GROUP

[31]	Gross Scale Tare	0 = Tare Disabled 1 = Pushbutton Tare ***2 = Pushbutton/Keyboard Tare***
[32]	Sample Scale Tare	0 = Tare Disabled ***1 = Pushbutton Tare***
[33]	Tare Interlock	***0 = Disabled*** 1 = Enabled
[34]	Auto Clear Tare	***0 = Disabled*** 1 = Enabled

[40] ACCESS ACCUMULATOR GROUP

[41]	Transaction Accumulator	0 = Accumulation Disabled ***1 = Accumulate Piece Count*** 2 = Accumulate Gross Weight 3 = Accumulate Net Weight
[42]	Auto Clear Accumulator	***0 = Disable*** 1 = Autoclear After Print

[50] ACCESS COUNTING GROUP

[51]	APW or Piece/Unit Weight	0 = Pieces per Unit Weight ***1 = Average Piece Weight***
[52]	Include Sample	***0 = Disabled*** 1 = Enabled
[53]	Sample Mode and Size	***0 = Variable Sample (10)*** 1 = Fixed Sample
[54]	Sample Enhancement	0 = Disabled ***1 = Enabled***
[55]	Minimum Sample Range	***0.02%***
[56]	Auto Sample Acceptance	0 = Manual Sample Accept ***1 = Auto Sample Accept***
[57]	Order Mode Select	***0 = Independent*** 1 = ID, Tare, APW 2 = ID, Tare, Sample
[58]	Auto Clear APW	***0 = Disabled*** 1 = Enabled
[59]	Piece Count Auto Ranging	***0 = Disabled*** 1 = Enabled

Note: Recommended default selections are shown in ***Italics***.

4.3. SETUP QUICK REFERENCE CONTINUED

[60] DISPLAY CONFIGURATION GROUP

[61]	Recall Percent of Accuracy	0 = Disabled ***1 = Enabled***
[62]	Power Up Auxiliary Display	0 = Blank ***1 = APW*** 2 = CN 3 = % Acc
[63]	Count Descriptor	0 = None ***1 = "PCS"*** 2 = "*"
[64]	Cursor Assignment	
[65]	Decimal Point	***0 = Period Decimal Point*** 1 = Comma Decimal Point
[66]	ID Enable	0 = Disabled ***1 = Enabled***
[67]	ID Auto Clear	***0 = Disabled*** 1 = Enabled
[68]	Consecutive Numbering	0 = Disabled ***1 = Enabled***
[69]	Test Mode	

[70] SERIAL I/O GROUP

[71]	Printer Port Parity	0 = Space 1 = Odd ***2 = Even***
[72]	Printer Port Checksum	***0 = Disabled*** 1 = Enabled
[73]	Printer Port Baud Rate	***9600***
[74]	Print Format	0 = Single Line ***1 = Multiple Line***
[75]	Print Fields	***02145*** 0 = Gross Weight 1 = Tare Weight 2 = Net Weight 3 = Displayed Weight 4 = APW or PCS/WGT 5 = Count 6 = Sample Size 7 = ID 8 = Acc Total 9 = Blank Field/New Line
[76]	Print ID Expanded	***0 = Disabled*** 1 = Enabled
[77]	Print Net Weight Expanded	***0 = Disabled*** 1 = Enabled
[78]	Print Count Expanded	***0 = Disabled*** 1 = Enabled
[79]	Repeat Print	***0 = Disabled*** 1 = Enabled
[81]	Auto Print	***0 = Disabled*** 1 = Enabled
[82]	Option I/O Port Mode	***0 = Disabled*** 1 = Bar Code Input 2 = Not Used
[83]	Option I/O Port Parity	***0 = Space*** 1 = Odd 2 = Even
[84]	Option I/O Port Checksum	***0 = Disabled*** 1 = Enabled
[85]	Option I/O Port Baud Rate	***9600***
[86]	Option I/O Port Stop Bit	***1***

[90] INTERNATIONAL GROUP

[91]	Analog Verify	***0 = Disabled*** 1 = Enabled
[92]	Bracketed Weight Printing	***0 = Disabled*** 1 = Enabled
[93]	Hand Entered Tare Symbol	***0 = "TRH"*** 1 = "PT"
[94]	ASCII Remote Input	***0 = Disabled*** 1 = Enabled
[95]	Scale # Display Mode	***0 = Gross/Sample Selection*** 1 = Indicates Active Scale
[96]	Order Dependant Prompts	0 = Cursors ***1 = Text***
[97]	Printed Count Legend	0 = None ***1 = "PCS"*** 2 = "*" 3 = "STUECK"
[98]	Examine Individual Load Cell Weights	
[99]	Reset Default Parameters	***0 = Retain Current Setup*** 1 = US Default Setup 2 = Export Default Setup

Note: Recommended default selections are shown in ***Italics***.

4.4. CALIBRATION GROUP PROGRAMMING

FROM THIS POINT FORWARD **[X.X]** WILL SHOW THE DISPLAYED PROMPT AND THE INDENTED PARAGRAPHS WILL EXPLAIN THE SETUP STEPS FUNCTION AND SELECTIONS. TO EXIT THE SETUP MODE, SLIDE THE SETUP SWITCH TO THE REAR OF THE SCALE ANY TIME THE DISPLAY IS SHOWING **[--]**.

[10] CALIBRATION GROUP

With **[--]** on the display press the **1** key and then the **0** key. The display will then show **[11 X]**.

[11 1] CALIBRATION UNITS

Select the units to be used for the primary display and the test weight type used during span adjust and calibration. Enter selection using the numeric keys on the keyboard.

Number	Display Weight Legend	Calibration Weights
0	None	lb
1	lb	lb
2	kg	kg
3	g	g
4	oz	oz
5	toz	troy oz
6	t	metric tons
7	dwt	penny-weight

[12 0] LINEARITY COMPENSATION

The 8572 provides a calibration procedure to allow compensation of nonlinearities in the weighing performance of the scale base. This procedure is not normally required and is provided for use only when the normal calibration procedure does not result in a linear response from the scale.

0 - Linearity compensation is disabled.
1 - Two step linearity compensation is enabled.

NOTE: When using linearity compensation, test weights of one half scale capacity and full scale capacity must be used. If less than full capacity is used, linearity compensation is not performed.

[13 0] REMOTE SCALE SELECTION

Selects type of remote scale base in use. Enter selection using the numeric keys on the keyboard.

Number	Scale 2 Selection
0	None
1	Single DigiTOL® Load Cell
2	Model 2157 Floor Scale (digital j-box)
3	Analog Load Cell

Note: If a remote scale base is not selected **[13 0]**, then steps **[14]**, **[15b]**, **[16b]**, and **[17b]** are skipped. If Model 2157 (digital j-box) is not selected **[13 2]**, then step **[14]** is skipped.

4.4.1. Internal Scale Setup and Calibration

[15A] [100] INTERNAL SCALE CAPACITY

Enter a valid capacity for the internal scale using the numeric keys on the keyboard followed by the **ENTER** key. Refer to step **[11]** and Tables 4-1 and 4-2 for valid capacity selections.

NOTE: The scale capacity entered must be large enough to use at least 35% of full load cell capacity. If a capacity selection is entered that is too small for the load cell, the 8572 will display an **[E36]** error during calibration. Refer to Table 4-1 for minimum valid scale capacities for a specific load cell capacity.

[16A] [0.02] INTERNAL SCALE INCREMENT SIZE

Press the **0** key to display the next selection. Press the **ENTER** or **1** key to accept the displayed increment size. Refer to Tables 4-1 and 4-2 for valid increment selection.

8572 Factory Number	Default Capacities		Minimum Capacities		Load Cell Capacity
	lb	kg	lb	kg	
8572-0002, 1002	5 X 0.001	2.5 X 0.0005	3	1.5	3.75 kg
8572-0003, 1003	10 X 0.002	5 X 0.001	6	3	7.5 kg
8572-0004, 1004	25 X 0.005	10 X 0.002	12	6	15 kg
8572-0005, 1005	50 X 0.01	25 X 0.005	25	12	30 kg
8572-0006, 1006	100 X 0.02	50 X 0.01	50	25	60 kg

Table 4-1 Default and Minimum Internal Scale Builds

Increment Size	Scale Capacity (Total Number of Displayed Increments)								
	3000	4000	5000	6000	10000	20000	25000	40000	50000
0.0001	N.A.	N.A.	N.A.	N.A.	1	2	N.A.	N.A.	5
0.0002	N.A.	N.A.	1	N.A.	2	4	5	N.A.	10
0.0005	1.5	2	N.A.	3	5	10	N.A.	20	25
0.001	3	4	5	6	10	20	25	N.A.	50
0.002	6	8	10	12	20	40	50	N.A.	N.A.
0.005	15	20	25	30	50	100	125	N.A.	N.A.
0.01	30	40	50	60	100	200	250	N.A.	N.A.
0.02	60	80	100	120	200	400	500	N.A.	1000
0.05	150	200	250	300	500	1000	1250	N.A.	N.A.
0.1	300	400	500	600	1000	2000	2500	N.A.	N.A.
0.2	600	800	1000	1200	2000	4000	5000	N.A.	N.A.
0.5	1500	2000	2500	3000	5000	10000	12500	N.A.	N.A.
1	3000	4000	5000	6000	10000	20000	25000	N.A.	N.A.
2	6000	8000	10000	12000	20000	40000	50000	N.A.	N.A.
5	15000	20000	25000	30000	50000	N.A.	N.A.	N.A.	N.A.
10	30000	40000	50000	60000	N.A.	N.A.	N.A.	N.A.	N.A.
20	60000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Table 4-2 Valid Scale Builds
(N.A.) Not Applicable

[17A] CALIBRATE SCALE 1

Press the **1** key to calibrate scale 1, or press the **0** key to advance to skip calibrate the next programming step.

[E SCL] EMPTY SCALE

Empty the scale platter then press the **ENTER key.** The display then counts down from **[CAL 16]** to **[CAL 01]** as a zero reading is recorded. The display then shows **[Av]** while the analog verify reading is recorded.

The span calibration sequence is next. Scale calibration will follow one of two following procedures depending on how linearity compensation is programmed.

If linearity compensation is disabled, setup step **[12 0]**, then Section 4.4.1.2. will be skipped.

If linearity compensation is enabled, setup step **[12 1]**, then Section 4.4.1.1. will be skipped.

4.4.1.1. Internal Scale Span Calibration (With Linearity Compensation Off)

[Add Ld] ADD LOAD

Place test weights as close to 50% of full scale capacity as possible on the center of the scale platter and press the **ENTER** key. This prompt will only occur if linearity compensation has been disabled, setup step **[12 0]**.

Enter the value of the test weights using the numeric keys followed by the **ENTER** key.

NOTE: The test weight value used should be as close to the programmed scale capacity as possible, but in any case no less than 50% of scale capacity. In no case may the test weight used be larger than the scale capacity programmed in setup step **[15A]**.

The display then counts down from **[CAL 16]** to **[CAL 09]**. The 8572 compares the programmed scale capacity with the number of raw counts output by the load cell. If the load cell is not sending sufficient counts for the scale capacity entered, the 8572 sends the load cell new T1 calibration parameters and attempts to increase the number of counts from the load cell.

If the load cell cannot output enough counts for the programmed scale capacity an **[E36]** error will be displayed. This error means the scale capacity entered in setup step **[15A]** is too small for the load cell and must be increased, or that the load cell is not operating properly.

If the 8572 receives enough counts from the load cell the count down will continue from **[CAL 09]** to **[CAL 01].** Increasing the number of counts out of the load cell will require an additional **[E SCL]** step to complete the calibration.

[E SCL] EMPTY SCALE (Occurs only if new calibration data is sent to load cell)

Empty the scale platter then press the **ENTER key.** The display then counts down from **[CAL 16]** to **[CAL 01]** as a zero reading is recorded. The display then shows **[Av]** while the analog verify reading is recorded. If linearity compensation is disabled the 8572 then skips to section 4.3.1.4.

4.4.1.2. Internal Scale Span Calibration (With Linearity Compensation On)

[Add FL] ADD FULL CAPACITY LOAD

Place test weights as close to 100% of full scale capacity as possible on the center of the scale platter and press the **ENTER** key. This prompt will only occur if linearity compensation has been enabled, setup step **[12 1]**.

Enter the value of the test weights using the numeric keys followed by the **ENTER** key.

NOTE: Linearity compensation calibration requires test weights as close to 100% and 50% of scale capacity as possible. Calibration with test weights other than 100% of capacity at **[Add FL]** or 50% of capacity at **[Add L0]** can result in weighing errors.

The display counts down from **[CAL 16]** to **[CAL 09]**. The 8572 compares the programmed scale capacity with the number of raw counts output by the load cell. If the load cell is not sending sufficient counts for the scale capacity entered, the 8572 sends the load cell new T1 calibration parameters and attempts to increase the number of counts from the load cell.

If the load cell cannot output enough counts for the programmed scale capacity an **[E36]** error will be displayed. This error means the scale capacity entered in setup step 15A is too small for the load cell and must be increased, or that the load cell is not operating properly.

If the 8572 receives enough counts from the load cell the count down will continue from **[CAL 09]** to **[CAL 01].** Increasing the number of counts out of the load cell will require an additional **[E SCL]** step to complete the calibration.

[Add LO] ADD HALF CAPACITY LOAD

Place test weights as close to 50% of full scale capacity as possible on the center of the scale platter and press the **ENTER** key.

Enter the value of the test weights using the numeric keys followed by the **ENTER** key.

The 8572 then counts down from **[CAL16]** to **[CAL 01]**.

[E SCL] EMPTY SCALE (Occurs only if new calibration data is sent to load cell)

Empty the scale platter then press the **ENTER** key. The display then counts down from **[CAL 16]** to **[CAL 01]** as a zero reading is recorded. **[Av]** is displayed as analog verify reading is recorded.

4.4.1.3. Internal Scale Calibration Complete

[CAL1 d] SCALE 1 CALIBRATION DONE

The display shows **[CAL1 d]** for two seconds and then will advance to one of three possible steps depending on how setup step 13 is programmed:

NOTE: If remote scale base is disabled (step **[13 0]**), the 8572 will skip all further steps in the 10's group and advance to the **[--]** display. If a Single DLC or analog remote base is selected, (step **[13 1]** or **[13 3]**) the 8572 will skip setup step **[14]** and advance to step **[15b]**.

4.4.2. Remote Scale Shift Adjust

[14] SHIFT ADJUST (Model 2157 Floor Scale (digital j-box), setup step [13 2])

This step accesses shift error compensation for the Model 2157 or the DigiTOL® Power Module. Press the **1** key to enter the shift adjust step or press the **0** key to skip this step and advance to step **[15b]**.

NOTE: The digital j-box must be connected to four load cells when used with the 8572.

[E SCL] EMPTY SCALE

Empty the scale platter then press the **ENTER** key. The display then counts down from **[SHF 16]** to **[SHF 01]** as a zero reading is recorded.

[CELL 01] CELL TO BE ADJUSTED?

The display will then show **[CELL 01]** where 01 is the first cell to be shift adjusted. Place a weight directly over cell 01 and press the **ENTER** key. The display will count down from **[SHF 16]** to **[SHF 01]**. The display will then show **[CELL 02]**.

Repeat this procedure for cells 2, 3 and 4. Place the weight directly over each load cell in turn and press the print key. Press the **ZERO** key to back up to the previous load cell if necessary.

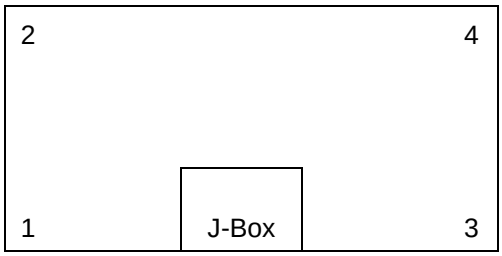


Figure 4-4 Model 2157 Load Cell Location

4.4.3. Remote Scale Setup and Calibration

[15b] [XXX] REMOTE SCALE CAPACITY

Enter a valid capacity for the remote scale using the numeric keys followed by the **ENTER** key. Refer to step **[11]**, the remote scale base data plate and technical manual, and Table 4-2 for valid capacity selection.

NOTE: The scale capacity entered must be large enough to use at least 35% of full load cell capacity. If a capacity selection is entered that is too small, the scale will display an **[E36]** error during calibration.

[16b] [0.01] REMOTE SCALE INCREMENT SIZE

Press the **0** key to display the next selection. Press the **ENTER** or **1** key to accept the displayed increment size. Refer to Table 4-2 for valid increment size selection.

[17b] CALIBRATE SCALE 2

Press the **1** key to calibrate the remote scale, or press the **0** key to advance to the next programming step.

[E SCL] EMPTY SCALE

Empty the scale platter then press the **ENTER** key. The display then counts down from **[CAL 16]** to **[CAL 01]** as a zero reading is recorded. The display then shows **[Av]** while the analog verify reading is recorded.

The span calibration sequence is next. Scale calibration will follow one of two following procedures depending on how linearity compensation is programmed.

If linearity compensation is disabled, setup step **[12 0]**, then Section 4.4.3.2. will be skipped.

If linearity compensation is enabled, setup step **[12 1]**, then Section 4.4.3.1. will be skipped.

4.4.3.1. Remote Scale Span Calibration (Linearity Compensation Off)

[Add Ld] ADD LOAD

Place test weights as close to full scale capacity as possible on the center of the scale platter and press the **ENTER** key. This prompt will only occur if linearity compensation has been disabled, setup step **[12 0]**.

Enter the value of the test weights using the numeric keys followed by the **ENTER** key.

NOTE: The test weight value used should be as close to the programmed scale capacity as possible, but in any case no less than 10% of scale capacity. In no case may the test weight used be larger than the scale capacity programmed in setup step **[15b]**.

The display then counts down from **[CAL 16]** to **[CAL 09]**. The 8572 compares the programmed scale capacity with the number of raw counts output by the load cell. If the load cell is not sending sufficient counts for the scale capacity entered, the 8572 sends the load cell new T1 calibration parameters and attempts to increase the number of counts from the load cell.

If the load cell cannot output enough counts for the programmed scale capacity an **[E36]** error will be displayed. This error means the scale capacity entered in setup step 15A is too small for the load cell and must be increased, or that the load cell is not operating properly.

If sufficient counts are received from the load cell the count down continues from **[CAL 09]** to **[CAL 01].** Increasing the number of counts out of the load cell will require an additional **[E SCL]** step to complete the calibration.

[E SCL] EMPTY SCALE (Occurs only if new calibration data is sent to load cell)

Empty the scale platter then press the **ENTER key.** The display then counts down from **[CAL 16]** to **[CAL 01]** as a zero reading is recorded. **[Av]** is displayed as analog verify reading is recorded. If linearity compensation is disabled the 8572 will skip to section 4.3.2.4. **[CAL2 d]**.

4.4.3.2. Remote Scale Span Calibration (Linearity Compensation On)

[Add FL] ADD FULL CAPACITY LOAD

Place test weights as close to 100% of full scale capacity as possible on the center of the scale platter and press the **ENTER** key. This prompt will only occur if linearity compensation has been enabled, setup step **[12 1]**.

Enter the value of the test weights using the numeric keys followed by the **ENTER** key.

NOTE: Linearity compensation calibration requires test weights as close to 100% and 50% of scale capacity as possible. Calibration with test weights other than 100% of capacity at **[Add FL]** or 50% of capacity at **[Add L0]** can result in weighing errors.

The display counts down from **[CAL 16]** to **[CAL 09]**. The 8572 compares the programmed scale capacity with the number of raw counts output by the load cell. If the load cell is not sending sufficient counts for the scale capacity entered, the 8572 sends the load cell new T1 calibration parameters and attempts to increase the number of counts from the load cell.

If the load cell cannot output enough counts for the programmed scale capacity an **[E36]** error will be displayed. This error means the scale capacity entered in setup step 15A is too small for the load cell and must be increased, or that the load cell is not operating properly.

If the 8572 receives enough counts from the load cell the count down will continue from **[CAL 09]** to **[CAL 01].** Increasing the number of counts out of the load cell will require an additional **[E SCL]** step to complete the calibration.

[Add LO] ADD HALF CAPACITY LOAD

Place test weights as close to 50% of full scale capacity as possible on the center of the scale platter and press the **ENTER** key. This prompt will only occur if linearity compensation has been enabled, setup step **[12 1]**.

Enter the value of the test weights using the numeric keys followed by the **ENTER** key.

NOTE: The test weight value used must be as close to the 50% programmed scale capacity as possible.

The 8572 then counts down from **[CAL16]** to **[CAL 01]**.

[E SCL] EMPTY SCALE (Occurs only if new calibration data is sent to load cell)

Empty the scale platter then press the **ENTER** key. The display then counts down from **[CAL 16]** to **[CAL 01]** as a zero reading is recorded. **[Av]** is displayed as analog verify reading is recorded.

4.4.3.3. Remote Scale calibration Done

[CAL2 d] REMOTE SCALE CALIBRATION DONE

The display shows **[CAL2 d]** for two seconds and then the 8572 will display **[--]**.

[18 0] POWER UP SCALE SELECT MODE

This step selects the default power up scale selection for which base is used for sampling and which base is used for counting (gross).

Enter selection using the numeric keys on the keyboard.

Number	Sample Scale	Counting (Gross) Scale
0	Internal (Scale 1)	Internal (Scale 1)
1	Internal (Scale 1)	External (Scale 2)
2	External (Scale 2)	Internal (Scale 1)
3	External (Scale 2)	External (Scale 2)

4.5. ZERO, MOTION, AND FILTERING GROUP PROGRAMMING

[20] ZERO, MOTION, AND FILTERING GROUP

With **[--]** on the display press the **2** key then the **0** key. The display will then show **[21 X]**.

[21 1] INTERNAL SCALE AUTO ZERO MAINTENANCE (AZM)

This selection controls AZM for the internal scale. Auto zero maintenance is a feature that maintains the displayed zero in the center of the zero increment. It will correct for zero drift up to a 0.1 increment per second, over a range of ± 2% of scale capacity if the tare interlock is enabled, setup step **[33 1]**, or a range of ± 20% of scale capacity if the tare interlock is disabled, setup step **[33 0]**.

0 - Internal scale AZM is disabled.
1 - Internal scale AZM is enabled, as controlled by tare interlock.

[22 1] REMOTE SCALE AUTO ZERO MAINTENANCE (AZM)

This selection controls AZM for the remote scale, otherwise this step is identical to setup step 21.

0 - Remote Scale AZM disabled.
1 - Remote Scale AZM enabled.

[23 1] POWERUP ZERO CAPTURE

This step programs the range for automatic zero capture when power is applied to the 8572. If powerup zero capture is enabled, and the scale is outside of the zero capture range, the display will show **[E E E]** (for weights above the zero capture range), or **[-E E E]** (for weights below the zero capture range), on the display until zero is manually captured.

Enter selection using the numeric keys on the keyboard.

Number	Powerup Zero Capture Range
0	Disabled
1	±2% of Scale Capacity
2	±20% of Scale Capacity

[24 1] PUSHBUTTON ZERO RANGE

A zero key is provided to rezero the scale over a range of ± 2% of scale capacity if the tare interlock is enabled, setup step **[33 1]**, or a range of ± 20% of scale capacity if the tare interlock is disabled, setup step **[33 0]**. The scale must be in the gross mode and in a no motion condition to allow zeroing.

0 - Pushbutton zero is disabled.
1 - Pushbutton zero is enabled, as controlled by tare interlock.

[25 1] MOTION DETECTION

The 8572 includes a weight in motion detector which requires three successive weight readings within the selected range of ± 0.5 increment or ± 1 increment for a "no motion" signal. The motion detector signal inhibits AZM, ZERO, TARE, PRINT and SAMPLE functions. If the tare interlock is disabled, motion will blank the lb/kg cursors.

Enter selection using the numeric keys on the keyboard.

Number	Motion Detect Window
0	Disabled
1	±0.5 Increment
2	±1 Increment

[26 1] SCALE 1 DISPLAY FILTER

The 8572 has a low pass multi-pole digital filter that is selectable for various environmental conditions. The display rate is slowed slightly as heavier filtering is selected.

Enter selection using the numeric keys on the keyboard.

Number	Display Filter
0	Disabled
1	Light
2	Medium
3	Heavy

[27 1] REMOTE SCALE DISPLAY FILTER

This step controls the filter for scale 2, otherwise this step is identical to the scale 1 filter.

Enter selection using the numeric keys on the keyboard.

Number	Display Filter
0	Disabled
1	Light
2	Medium
3	Heavy

[28 0] ENHANCED APW REPEATABILITY

Enabling this function helps to ensure maximum APW accuracy and repeatability and helps to minimize the effects of vibration. When sampling, the APW calculation will take approximately two seconds.

0 - Enhanced APW Repeatability Disabled
1 - Enhanced APW Repeatability Enabled

4.6. TARE GROUP PROGRAMMING

[30] TARE GROUP

With **[--]** on the display press the **3** key then the **0** key. The display will then show **[31 X]**.

[31 2] GROSS SCALE TARE ENABLE

The 8572 allows pushbutton tare, manual keyboard tare, or both with the gross scale. The scale must be in a "no motion" condition before a tare can be taken, subject to tare interlock restrictions.

Enter selection using the numeric keys on the keyboard.

Number	Tare Mode
0	Tare Disabled
1	Pushbutton Tare Only
2	Pushbutton & Keyboard Tare

[32 1] SAMPLE SCALE TARE ENABLE

The 8572 allows pushbutton tare only with the sample scale. The scale must be in a "no motion" condition before a tare can be taken, subject to tare interlock restrictions.

0 - Sample Scale Pushbutton Tare Disabled
1 - Sample Scale Pushbutton Tare Enabled

[33 0] TARE INTERLOCK

Tare interlocks include the following functions: Tare weights can be cleared only at gross zero. Tare can only be entered in the gross mode. Keyboard tare can only be entered in the gross mode. Previous tare values must be cleared before a new tare value can be entered. Multiple tares are not possible. The lb/kg cursors will not blank with motion. Tare interlock also limits the range over which pushbutton zero and AZM will operate to ± 2% of scale capacity. Pushbutton zero and AZM will operate over a range of ± 20% of scale capacity if tare interlock is disabled.

0 - Tare Interlock Disabled
1 - Tare Interlock Enabled

[34 0] AUTO CLEAR TARE

The 8572 can automatically clear tare when the scale returns to zero after settling to a no motion condition at least ten increments above net zero. The scale must return to within one positive increment of zero or any negative gross weight to be considered to have to returned to zero. The scale must be in the count mode for auto clear tare to occur.

0 - Auto Clear Tare Disabled
1 - Auto Clear Tare Enabled

4.7. ACCUMULATOR GROUP PROGRAMMING

[40] ACCUMULATOR GROUP

With **[--]** on the display press the **4** key then the **0** key. The display will then show **[41 X]**.

[41 1] TRANSACTION ACCUMULATOR

A single register accumulator is provided to accumulate piece count, gross weight or net weight as selected below. Accumulation is performed by pressing the **PRINT** key while in the count mode, by use of the host port command, or indirectly by the auto print function. When an accumulation is performed the auxiliary display will blank, the TOTAL cursor will flash and then return to the previous recalled display. The accumulation register can store up to seven digits of total piece count or nine digits of total weight.

The accumulated total can be displayed by pressing the **RECALL** key. The TOTAL cursor will turn when the auxiliary display is showing accumulated total to indicate this is the accumulator total.

Enter selection using the numeric keys on the keyboard.

Number	Accumulator Mode
0	Disabled
1	Count
2	Gross Weight
3	Net Weight

[42 0] AUTO CLEAR ACCUMULATOR AFTER TOTAL PRINT

The 8572 accumulator can be programmed to automatically clear after the **PRINT** key is pressed with the total count in the auxiliary display. If this function is disabled the accumulator must be manually cleared by pressing the **0** key followed by the **ENTER** key, while the accumulated total is displayed by means of the recall function.

0 - Disable Auto Clear Accumulator After Total Print
1 - Enable Auto Clear Accumulator After Total Print

4.8. SAMPLE GROUP PROGRAMMING

[50] SAMPLE GROUP

With **[--]** on the display press the **5** key then the **0** key. The display will then show **[51 X]**.

[51 1] APW OR PIECES PER UNIT WEIGHT

0 - If the piece weight is to be entered as pieces per unit of weight.
1 - If the piece weight is to be entered as a decimal average piece weight.

[52 0] INCLUDE SAMPLE

Include sample is provided to automatically add the sample size to the total count and sample weight to the gross and net weight of a transaction. If include sample is enabled the sample pieces must not be added to the gross scale or the total count and weight will be off by the amount of the sample.

0 - Include Sample is Disabled
1 - Include Sample is Enabled

[53 0] [53 10] FIXED SAMPLE, SAMPLE SIZE SELECTION

The 8572 operates with fixed or variable sample sizes. Press the **0** key to select variable sample size or press the **1** key to select fixed sample size mode. After the sampling mode is selected the 8572 will display the fixed or the default variable sample size. Press the **0** key for the next default sample size or press the **1** key to accept the default sample size. Options for sample size are 5, 10, 20, 50 or 100.

0 - Variable Sample Size
1 - Fixed Sample Size

[54 1] SAMPLE ENHANCEMENT

Sample enhancement is provided to allow the 8572 to recalculate the APW on the basis of a larger sample size each time more pieces are added to the scale.

> **NOTE**: This function is disabled when the 8572 is in the dual scale counting mode or if a minimum sample percentage of 0.00% is selected in setup step **[55]**.

0 - Sample Enhancement is disabled
1 - Sample Enhancement is Enabled

[55 0.02] MINIMUM SAMPLE RANGE

Selects the percentage of scale capacity that must be reached before an average piece weight can be calculated and a count sequence initiated. The available percentages are 0.00%, 0.02%, 0.05% and 0.10%. Sample enhancement is disabled at 0.00%. If the sample pieces placed on the scale weigh less than the selected minimum sample range, the 8572 will prompt the operator to place additional sample pieces on the sample scale, (**[Add XXX]** where XXX = additional sample pieces required).

0 - Select New Minimum Sample Percentage
1 - Accept Displayed Minimum Sample Percentage

[56 1] AUTO SAMPLE ACCEPTANCE

This function selects how additional sample pieces are accepted to reach the minimum sample requirement. Manual sample accept requires the operator to press the **Enter** after placing additional parts on the sample scale. Auto sample accept only requires the operator to place the requested number of sample pieces on the sample scale and the APW is then automatically calculated.

0 - Manual Sample Accept
1 - Auto Sample Accept

[57 0] ORDER MODE SELECT

The order dependant mode prompts the operator through the counting sequence. The **ENTER** key may be used to terminate an ID, TARE, or APW/SAMPLE entry. The order independent mode requires that each function be terminated with the respective function key.

Number	Order Mode Select
0	Independent
1	ID, TARE, APW
2	ID, TARE, SAMPLE

[58 0] APW AUTO CLEAR

The 8572 can automatically clear the average piece weight when the scale returns to within one positive increment above zero or less, after settling to a no motion condition ten increments above net or gross zero.

0 - APW Auto Clear Disable
1 - APW Auto Clear Enable

[59 0] PIECE COUNT AUTO-RANGING

Auto-ranging rounds off the displayed piece count in increments of 1, 2, 5, 10 or higher as necessary when the APW for a given part is smaller than the internal resolution of the scale.

0 - Auto-Ranging Disabled
1 - Auto-Ranging Enabled

4.9. DISPLAY GROUP PROGRAMMING

[60] DISPLAY GROUP

With **[--]** on the display press the **6** key then the **0** key. The display will then show **[61 X]**.

[61 1] RECALL PERCENT OF ACCURACY

0 - To disable the recall of Percentage of Accuracy.
1 - To enable the recall of Percentage of Accuracy after a count has been made.

[62 1] POWER UP AUXILIARY DISPLAY

Enter selection using the numeric keys on the keyboard.

Number	Powerup Auxiliary Display
0	Accumulated Total
1	Average Piece Weight
2	Consecutive Number
3	Percentage of Accuracy

[63 1] DISPLAYED COUNT DESCRIPTION

The 8572 can be programmed to display a "*", "PCS" or no legend when in the count mode.

Enter selection using the numeric keys on the keyboard.

Number	Count Legend
0	None
1	PCS
2	*

[64 0] [64 --] DISPLAY CURSOR ASSIGNMENT

Display cursor assignment is provided to permit the display cursors to be redefined for specialized application that use custom silk screened display bezels. All other application should use the standard default cursor assignments.

0 - To Skip Display Cursor Assignment
1 - To Access Display Cursor Assignment

When the display shows **[64 --]**, enter the desired cursor function selection using the numeric keys on the keyboard. The display then shows **[64XX Y]**, where **XX** is the cursor function and **Y** is the current cursor display location, refer to Figure 4-5 for cursor location. After each cursor assignment the display returns to **[64 --]**. Repeat this operation until all the cursors are assigned.

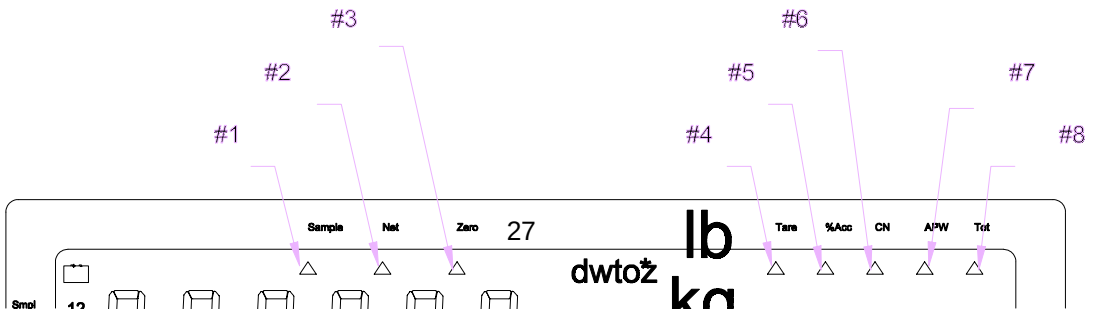


Figure 4-5 Programmable Cursor Locations

NOTE: Cursor assignment is limited by the following restrictions.

- A maximum of 8 cursors can be assigned and cursor numbers can not be duplicates. Entering a 0 for a cursor location will cancel that cursor assignment.
- If the TARE cursor (09) is assigned then the DIGITAL TARE cursor (10) and the PUSHBUTTON TARE cursor (11) will be locked out and can not be assigned.
- If the DIGITAL TARE cursor (10) or the PUSHBUTTON TARE (11) is assigned then the TARE cursor (9) will be locked out and can not be assigned.
- Cursor function selection 00 terminates the cursor assignment sequence.
- Cursor function selection 13 resets all cursor assignments back to the default assignments and terminates the cursor assignment sequence.
- Cursor function 14 cancels all cursor assignments.

Cursor/Function Number	Default Location	Cursor Description / Function
00	N.U.	Exit Cursor Assignment
01	7	Average Piece Weight
02	1	Sample
03	5	Percentage of Accuracy
04	0	ID
05	6	Consecutive Numbering
06	0	Gross Weight
07	2	Net Weight
08	3	Zero
09	4	Tare
10	N.U.	Digital Tare
11	8	Pushbutton Tare
12	N.U.	Accumulator Total
13	N.U.	Reset to Default Cursor Assignments
14	N.U.	Cancel all Cursor Assignments

(N.U.) Not Used

[65 0] DECIMAL POINT (Period or Comma)

0 - Period Decimal Point

1 - Comma Decimal Point

[66 1] ID ENABLE

The 8572 can accept up to 16 digits of alpha-numeric ID from the optional bar code input or host port. Up to 16 digits of numeric ID can be entered from the 8572 keyboard. This ID can be printed.

0 - ID Disabled
1 - ID Enabled

[67 0] ID AUTO CLEAR

The 8572 can automatically clear ID when the scale returns to within one positive increment above zero or less, after settling to a no motion condition ten increments above net or gross zero.

0 - ID Auto Clear Disable
1 - ID Auto Clear Enable

[68 1] CONSECUTIVE NUMBERING

0 - Consecutive Numbering Disabled
1 - Consecutive Numbering Enabled, indicates the number of accumulations performed.

[69 0] TEST MODE (Expanded Weight Display/Keyboard Test)

When the test mode is enabled the primary display shows the internal increments (displayed increments times 10) and the auxiliary display shows the raw counts from the load cell or analog interface card. The **SCALE SELECT** key toggles the display between scale 1 and scale 2. The **ZERO** key zeros the internal increments display. The **.** (period) key toggles between the current and default T1 calibration values in the single DLC scale bases.

The keyboard test is accessed by pressing the **RECALL** key. The primary display shows **[PrS 00]**. At this time press each of the keys on the keyboard in turn starting with the **.** (period) key, lower left. As each key is pressed the display updates to indicate the coordinates of the next key to be pressed. Refer to Figure 4-6. After the keyboard test is finished the 8572 returns to the expanded weight display.

30	31	32	33	34
20	21	22	23	24
10	11	12	13	14
00	01	02	03	04

Figure 4-6 Keyboard Test Response Codes

4.10. SERIAL I/O GROUP PROGRAMMING

[70] SERIAL I/O GROUP

With **[--]** on the display press the **7** key then the **0** key. The display will then show **[71 X]**.

[71 2] PRINTER PORT PARITY

Enter selection using the numeric keys on the keyboard.

Number	Data Bits	Parity Bit
0	8	None
1	7	Odd
2	7	Even

[72 0] PRINTER PORT CHECKSUM

Checksum is defined as the 2's complement of the 7 low order bits of the binary sum of all characters on a line, preceding the checksum.

0 - Checksum is Disabled
1 - Checksum is Enabled

[73] [9600] PRINTER PORT BAUD RATE

Select baud rate from 300, 1200, 2400, 4800, to 9600 baud.

0 - To advance to the next Baud Rate Selection
1 - To accept the displayed Baud Rate selection

[74 1] MULTI LINE PRINT FORMAT

0 - Print all data on one line
1 - Each field of data is printed on a separate line

[75] [02145] [2145] PRINT FIELDS

Up to seven different fields of data can be selected for output, but the 8572 can only display 6 entries for this setup step. Entries 1 - 6 are displayed first then entries 2 - 7 are displayed. Entries 1 - 6 are displayed for data entry. Data fields can be repeated if desired. The blank field selection is either a blank line or 7 spaces depending on single line/multi line print selection.

Number	Data Field
0	Gross Weight
1	Tare Weight
2	Net Weight
3	Displayed Weight
4	APW or PCS/Weight
5	Piece Count
6	Sample Size
7	ID
8	Accumulator Total
9	Blank Field

[76 0] PRINT ID EXPANDED

ASCII Shift out <SO> and shift in <SI> characters are inserted in the printer output to enable expanded (double width) print. Expanded printing is usable with the 8806 and 8860 printers only.

0 - Print ID Normal
1 - Print ID Expanded

[77 0] PRINT NET WEIGHT EXPANDED

0 - Print Net Weight Normal
1 - Print Net Weight Expanded

[78 0] PRINT COUNT EXPANDED

0 - Print Count Normal
1 - Print Count Expanded

[79 0] REPEAT PRINT

If repeat print is disabled the scale must settle to zero between transactions before the print request will be acted upon. If the repeat print function is enabled, successive pressings of the **PRINT** key without changing the weight on the scale will result in an exact duplicate of the previous print.

0 - Repeat Print Disable
1 - Repeat Print Enable

[81 0] AUTO PRINT

0 - Auto Print is Disabled
1 - The 8572 will automatically transmit the selected print fields when a piece count of more than 50 is displayed with no motion.

[82 0] OPTION I/O PORT MODE

Selects operational mode for the option I/O port. When selected for use as a bar code port the 8572 can scan ID, tare and APW weight.

Enter selection using the numeric keys on the keyboard.

Number	Option I/O Port Mode
0	Disabled
1	Bar Code Input
2	Reserved for future use

NOTE: ID can be entered into the 8572 only in the order dependant mode, setup step [57 1] or [57 2].

NOTE: The 2 of 5 interleaved bar code format does not support a decimal point and can only be used for ID entry with the 8572.

NOTE: Setup Steps 83 through 84 are skipped if the option I/O port is disabled or programmed for bar code input, **[82 0]** or **[82 1]**.

[83 0] OPTION I/O PORT PARITY

Enter selection using the numeric keys on the keyboard.

Number	Data Bits	Parity Bit
0	8	None
1	7	Odd
2	7	Even

[84 0] OPTION I/O PORT CHECKSUM

Checksum is defined as the 2's complement of the 7 low order bits of the binary sum of all characters on a line, preceding the checksum.

0 - Checksum is Disabled
1 - Checksum is Enabled

[85] [9600] OPTION I/O PORT BAUD RATE

The 8572 option port can communicate at 300, 1200, 2400, 4800, or 9600 baud.

0 - To advance to the next Baud Rate Selection
1 - To accept the displayed Baud Rate selection

[86 1] OPTION I/O PORT STOP BITS

1 - One Stop Bit
2 - Two Stop Bits

4.10. INTERNATIONAL GROUP PROGRAMMING

[90] INTERNATIONAL GROUP

With **[--]** on the display press the **9** key then the **0** key. The display will then show **[91 X]**.

[91 0] ANALOG VERIFY

Analog verify feature will perform a check on the load cell or analog interface card every four hours when enabled. If the analog verify test is failed for either the internal or remote scale, the 8572 will disable that scale base. If the 8572 has a remote scale base installed, the 8572 can operate with the scale base that did not fail the analog verify test. Press the **CLEAR** key to reset the error code and operate the 8572 in the single scale mode. If the 8572 does not have a remote base installed, then the 8572 must be powered down and then powered up to clear the error.

0 - Analog Verify is Disabled
1 - Analog Verify is Enabled

[92 0] BRACKETED WEIGHT PRINTING

This selection will enclose in brackets < >, all weight data that is actually measured as opposed to manually entered data such as tare or APW weights entered by means of the keyboard, bar code scanning, or the host port.

0 - Bracketed Weight Printing is Disabled
1 - Bracketed Weight Printing is Enabled

[93 0] HAND ENTERED TARE WEIGHT SYMBOL

The 8572 will either print "TRH" or "PT" after a tare weight that was manually entered by means of the keyboard, bar code scanning or the host port.

0 - Print "TRH" after Manually Entered Tare Weight
1 - Print "PT" after manually Entered Tare Weight

[94 0] ASCII REMOTE INPUT

When this function is enabled the 8572 will respond to single ASCII characters input into the printer port.

0 - ASCII Remote Input is Disabled
1 - ASCII Remote Input is Enabled

[95 0] SCALE NUMBER DISPLAY MODE

Select scale number displays operating mode. Mode 0 will indicate gross/sample scale assignment as well as which is the active scale. Mode 1 indicates active scale only.

0 - Indicate gross/sample scale assignment and flash the active scale's number.
1 - Use the scale number displays to indicate the active scale only.

[96 1] TEXT PROMPTS, ORDER DEPENDANT MODE

When the 8572 is programmed for order dependant mode, setup step **[57 1]** or **[57 2]**, then the operator is prompted through the count sequence. The prompts can be abbreviated text messages: id? for ID, tr? for tare, APu? for APW, or SPL? for sample, or the 8572 can prompt the operator by means of the cursors.

0 - Use abbreviated text messages to prompt the operator, order dependant mode.
1 - Use the cursors to prompt the operator in the order dependant mode.

[97 1] PRINTED PIECE COUNT SYMBOL

Select the legend to print after the piece count: "PCS", "*", or "STUECK" (German).

Enter selection using the numeric keys on the keyboard.

Number	Piece Count Printed Legend
0	No Symbol Printed
1	PCS
2	*
3	STUECK

[98 0] EXAMINE INDIVIDUAL LOAD CELL WEIGHTS (2157 Floor Scale, digital j-box only)

This selection is provided as an aide to trouble shooting. Press the **0** key to skip to the **[--]** prompt. Press the **1** key to view load cell weights. The 8572 will then display: **[CELL]** Enter the cell number to be viewed, one through four. The display will then show: **[XXXXXX CELL Y]** XXXXXX is the cell output in raw counts and Y is cell number. Press the **ENTER** key to advance to the next load cell. If the 8572 is currently displaying load cell number four then the display will advance to load cell number one. Press the **CLEAR** key to exit to the **[--]** prompt.

[99 0] RESET SETUP PARAMETERS TO DEFAULT VALUES

This step will reset **ALL SETUP STEPS** except the scale calibration group. All other setup steps will be reprogrammed to the default values.

0 - Skip to the **[--]** prompt without resetting parameters.
1 - Reset parameters to U.S.A. default values.
2 - Reset parameters to General Export default values.

If 1 or 2 is selected the display will then show:

[SurE] Flashing

0 - To abort resetting parameters to default values.
1 - To reset all setup steps to default values.

If 1 is pressed **[Ld EEr]** is displayed while setup memory is being loaded with selected default values.

Switch	U.S.A.	Export	Switch	U.S.A.	Export
11	1	2	61	1	0
12	0	0	62	1	1
13	0	0	63	1	1
18	0	0	65	0	0
			66	1	1
21	1	1	67	0	0
22	1	1	68	1	1
23	1	1	69	0	0
24	1	1			
25	1	1	71	2	2
26	1	1	72	0	0
27	1	1	73	9600	2400
28	0	1	74	1	1
			75	02145	02145
31	2	2	76	0	0
32	1	1	77	0	0
33	0	0	78	0	0
34	0	0	79	0	1
41	1	1	81	0	0
42	0	1	82	0	0
			83	0	0
51	1	1	84	0	0
52	0	0	85	9600	9600
53	10	10	86	1	1
54	1	1			
55	0.02	0.02	91	0	0
56	1	1	92	0	0
57	0	0	93	0	1
58	0	0	94	0	0
59	0	0	95	0	0
			96	1	0
			97	1	3
			98	0	0

5. OPERATING INSTRUCTIONS

5.1. DISPLAY FORMAT AND LEGENDS

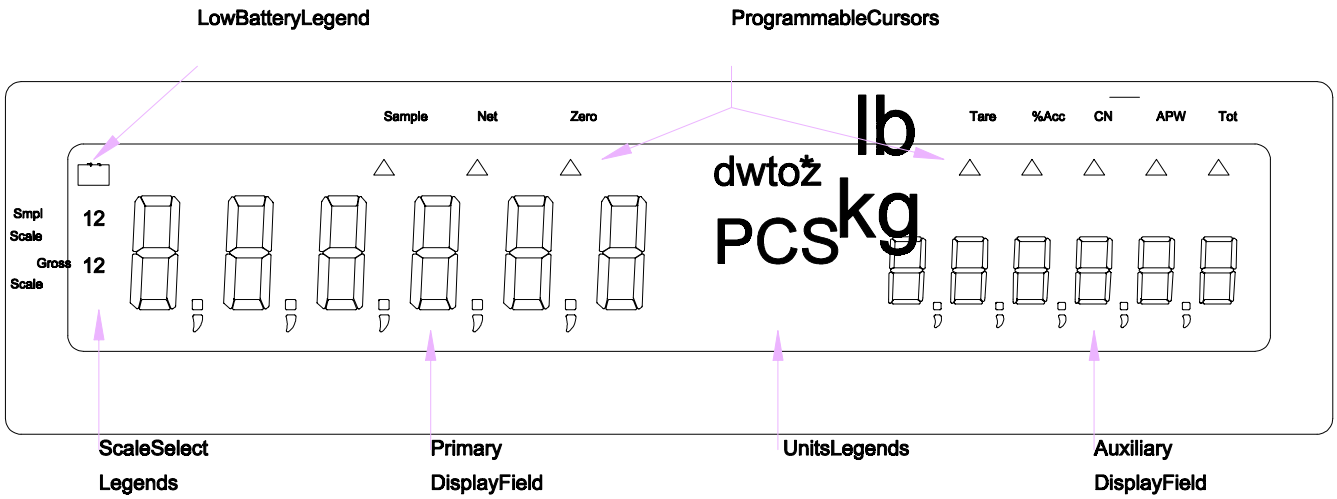


Figure 5-1 LCD Display

The 8572 uses a liquid crystal display that is divided into two six digit display fields. Programmable cursors indicate what data is being displayed or what data is to be entered. An explanation of the function of each cursor follows:

Smpl Scale - The sample scale selection is indicated by a (1) for the internal scale or a (2) for the remote scale base. A flashing scale number indicates the scale that is currently displayed in the primary display field.

Gross Scale - The gross scale selection is indicated by a (1) for the internal scale or a (2) for the remote scale base. A flashing scale number indicates the scale that is currently displayed in the primary display field.

Sample - Indicates that the sample function is in use in the order dependent mode.

Net - Indicates that the primary or auxiliary field is displaying net weight.

Zero - Indicates that the active scale is at gross zero.

Tare - Indicates that a tare is to be entered in the order dependent mode.

%Acc - Indicates that the auxiliary field is displaying the percentage of counting accuracy.

CN - Indicates that the auxiliary field is displaying consecutive numbering.

APW - Indicates that the auxiliary field is displaying the APW (average piece weight).

Tot - Indicates that the auxiliary field is displaying the accumulator total.

5.2. KEYBOARD OPERATION

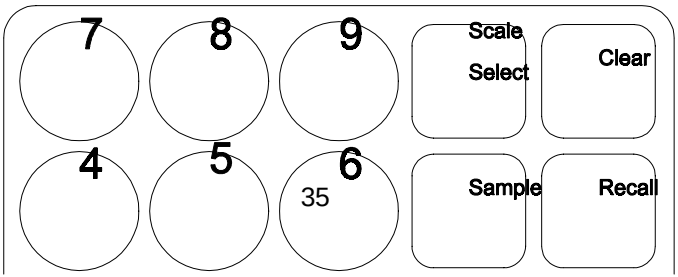


Figure 6 - Keyboard Layout

Decimal Point (.) - For entry of ID, APW, sample size, and tare weights.
& Numeric Digits

Yes/1 - Used in setup procedure. Enables the displayed selection in setup.

No/0 - Used in setup procedure. Disables the displayed selection shown in setup.

Clear - To clear incorrectly entered data, press the **Clear** key once. Press the **CLEAR** key twice to exit the data entry mode. Press the **Clear** key twice to exit the count mode and clear tare, APW, and ID.

Print - Press the **PRINT** key with no motion on the scale to transmit data out the printer port. If motion is present, the print request is stored and acted upon when motion ceases. A print operation adds the current value to the accumulator and increments the consecutive number (if enabled).

Scale Select - Press the **Scale Select** key to change to the next available gross and sample scale combination. The 8572 can count and sample on either the internal (scale 1) or optional external (scale 2) base. Dual scale applications normally use the lower capacity scale base for sampling and the higher capacity scale base for counting.

Zero - Press the **ZERO** key to capture a new zero reference. Zero capture is disabled if the weight reading on the scale base or if the gross weight reading is more than ±20% of scale capacity from the gross zero weight reference recorded during calibration (limited to ±2% of scale capacity if tare interlocks enabled).

The order operating mode (setup step **[57]**) determines how the **APW**, **Enter**, **Recall**, **Sample**, and **Tare** keys are used. Refer to Section 5.2.1. for order independent mode definitions for these keys. Refer to Section 5.2.2. for order dependent mode definitions for these keys.

Recall - Recalls the next data field to be displayed in the auxiliary field. Each time the **Recall** key is pressed, the auxiliary display recalls the next data field. Data fields are recalled as described in Table 5-1.

Data Recalled	Order Independent Mode	Order Dependent Mode

Gross Weight	No tare entered.	Count mode, no tare entered.
Net Weight	Tare entered.	Count mode, tare entered.
Tare Weight	Tare entered.	Count mode, tare entered.
APW	No restriction.	Count mode.
Percentage of Accuracy	% accuracy recall enabled.	Count mode, % accuracy recall enabled.
Consecutive Numbering	CN enabled.	Count mode, CN enabled.
Accumulator Total	Accumulation enabled.	Count mode, Accumulation enabled.

Table 5-1 Recall Key operation

Note: Order dependant mode must be in the count mode to use the recall function. **[//////]** is displayed before the recalled accumulator total if the accumulator has overflowed.

5.2.1. Order Independent Mode Key Definitions

APW - Press the **APW** key to terminate entry of an average piece weight.

Enter - Not used.

Sample- Press the **Sample** key to terminate entry of a sample size value. Pressing the **Sample** key by itself will cause a sample operation to occur using the fixed or default sample size.

5.2.2. Order Dependent Mode Key Definitions

APW - Press the **APW** key to switch to the average piece weight entry mode, when the 8572 is prompting for sample. The **APW** key can also be used to terminate entry of an average piece weight value, same as **Enter** key.

Enter - Press the **ENTER** key to terminate values entered and to advance to the next step.

When the 8572 is prompting for ID, the **Enter** key can be pressed to skip ID entry.

When the 8572 is prompting for tare weight, press the **Enter** key to take an autotare (autotare takes the weight currently on the scale as a tare weight, if the scale is at gross zero then tare is not taken).

When the 8572 is prompting for sample, press the **Enter** key to use default or fixed sample size.

Sample- Press the **Sample** key when the 8572 is prompting for an average piece weight, to switch to the sampling mode. The **Sample** key can also be used to terminate entry of a sample quantity or to sample using the default or fixed sample size, same as **Enter** key.

Tare - Press the **Tare** key to terminate a tare weight entry, same as **Enter** key.

5.3. PUSHBUTTON ZERO

The 8572 provides a pushbutton zero function to recapture gross zero, if necessary. Zero can only be captured for the scale base currently displayed in the primary display field and only when the 8572 is in the gross weight mode. Zero capture is disabled if the weight reading on the scale base is unstable or if the gross weight reading is more than ±20% of scale capacity from the gross zero weight reference recorded during calibration (limited to ±2% of scale capacity if tare interlocks enabled).

5.3.1. Zeroing the Gross Scale

To zero the gross scale, remove all parts from the gross scale platter and press the **Zero** key. If zero is not captured, verify that the 8572 is in the gross weight mode, that the scale platter is unobstructed and that the displayed weight on the scale is within ±20% of scale capacity of gross zero (±2% of scale capacity if tare interlocks enabled). If zero still can't be captured, refer to Section 7.2. for troubleshooting advice.

5.3.2. Zeroing the Sample Scale

The sample scale is zeroed in one of two ways depending on operating mode selection.

Order Dependent Mode

Press the **Enter** key until the auxiliary display shows **[SPL?]** or **[APv?]** or the sample or APW cursors indicate that the sample scale is currently displayed.

Remove all parts from the sample scale platter and press the **Zero** key. If zero is not captured, verify that the 8572 is in the gross weight mode, that the scale platter is unobstructed and that the displayed weight on the scale is within ±20% of scale capacity of gross zero (±2% of scale capacity if tare interlocks enabled). If zero still can't be captured, refer to Section 7.2. for troubleshooting advice.

Order Independent Mode

Press the **Enter** key until the sample scale is displayed in the primary display field.

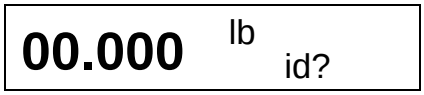
Remove all parts from the sample scale platter and press the **Zero** key. If zero is not captured, verify that the 8572 is in the gross weight mode, that the scale platter is unobstructed and that the displayed weight on the scale is within ±20% of scale capacity of gross zero (±2% of scale capacity if tare interlocks enabled). If zero still can't be captured, refer to Section 7.2. for troubleshooting advice.

Press the **Enter** key until the gross scale is displayed in the primary display field.

5.4. COUNTING OPERATION

The 8572 provides two modes of counting operation: Order dependent mode with either sampling or APW entry, and order independent mode.

ID, tare or APW values can be scanned in using the optional bar code input, instead of manually entering the data the 8572 is prompting for.



If ID is enabled, the operator is always prompted to enter an ID first. The 8572 accepts up to 16 digits of numeric ID from the keyboard or up to 16 alphanumeric characters from the optional bar code input.

5.4.1. Order Dependent Counting Modes

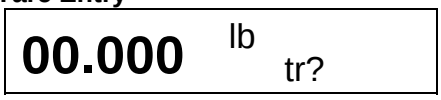
In the order dependent mode the 8572 prompts the operator step by step through the counting procedure, beginning with ID entry, then a tare entry, and finally a sampling procedure or APW entry. The order dependent mode is easier for an operator to learn than the order independent mode and the step by step prompting by the 8572 helps ensure that required steps are not skipped.

The **order dependent sampling mode** is typically used when counting parts with an inconsistent average piece weight that requires a new sample procedure be performed each time the parts are counted or when the average piece weight is not known.

The **order dependent APW entry mode** is typically used in applications where the parts to be counted have consistent, known average piece weights. Another application that uses the APW entry mode involves the counting of very light parts that require an extremely large sample size to accurately calculate the APW. In this case the APW is calculated with a large sample size, this APW is recorded and used whenever this particular part is counted. Recorded APW values should be recalculated periodically with new parts to prevent counting errors that could occur if the parts average piece weight had changed since the last APW calculation.

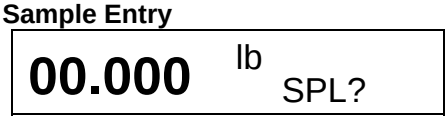
5.4.1.1. Single Scale, Count Up Mode (Empty Container)

Tare Entry



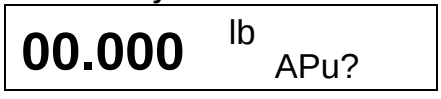
Place the empty container on the gross scale and press the **Enter** or **Tare** key. Enter the tare weight of container followed by the **Enter** or **Tare** key if manual tare entry mode is desired.

Sample Entry



Place sample pieces in the container, enter the sample quantity, then press the **Enter** or **Sample** key. If fixed sample size operation has been selected then place the fixed number of sample pieces in the container and press the **Enter** or **Sample** key.

Or APW entry



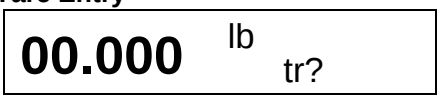
If the average piece weight (APW) of the part to be counted is known, the APW can be entered instead of sampling. Enter the APW using the numeric keys then press the **Enter** or **APW** key.

Count Display

The 8572 is now in the count mode. Place the rest of the parts to be counted in the container. The number of pieces in the container is now displayed in the primary display field. The data selected for recall is displayed in the auxiliary display field. Press the **PRINT** key to accumulate data and print a label.

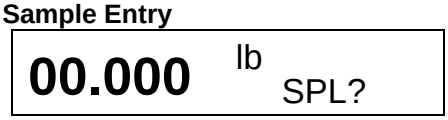
5.4.1.2. Dual Scale, Count Up Mode (Empty Container)

Tare Entry



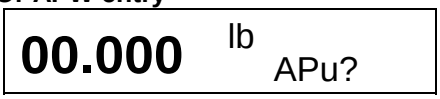
Place the empty container on the gross scale and press the **Enter** or **Tare** key. Enter the tare weight of container followed by the **Enter** or **Tare** key if manual tare entry mode is desired.

Sample Entry



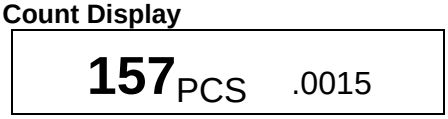
Place sample pieces on the sample scale, enter the sample quantity, then press the **Enter** or **Sample** key. If fixed sample size operation has been selected then place the fixed number of sample pieces on the sample scale and press the **Enter** or **Sample** key.

Or APW entry



If the average piece weight (APW) of the part to be counted is known, the APW can be entered instead of sampling. Enter the APW using the numeric keys followed by the **Enter** or **APW** key.

Count Display

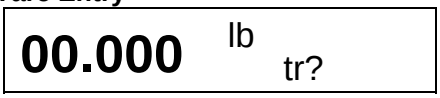


The 8572 is now in the count mode. Place the rest of the parts to be counted on the gross scale. The number of pieces in the container are now displayed in the primary display field. The data selected for recall is displayed in the auxiliary display field.

If "Include Sample" is enabled, the count displayed includes the sample pieces on the sample scale. Do not place the sample pieces in the container until after you press the **PRINT** key to accumulate data and print a label. If include sample is disabled then return the sample pieces to the full container and press the **PRINT** key to accumulate data and print a label.

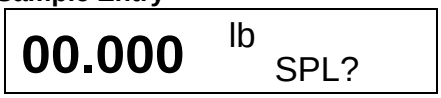
5.4.1.3. Single Scale, Count Up Mode (Full Container)

Tare Entry



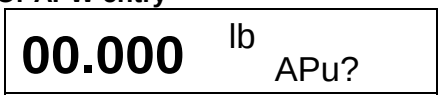
Place the full container on the gross scale and enter the known tare weight of the container using the numeric keys followed by the **Enter** or **Tare** key.

Sample Entry



Remove sample pieces from the container, enter the sample quantity, then press the **Enter** or **Sample** key. If fixed sample size operation is selected then remove the fixed number of sample pieces from the container and press the **Enter** or **Sample** key.

Or APW entry



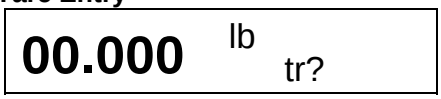
If the average piece weight (APW) of the part to be counted is known, the APW can be entered instead of sampling if the display is prompting for APW entry. Press the **APW** key to switch from sample mode to APW entry mode. Enter the APW using the numeric keys followed by the **Enter** or **APW** key.

Count Display

The number of pieces in the container are now displayed in the primary display field. The data selected for recall is displayed in the auxiliary display field. Press the **PRINT** key to accumulate data and print a label.

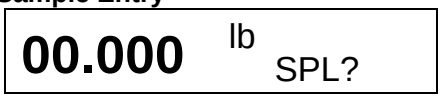
5.4.1.4. Dual Scale Count Up Mode (Full Container)

Tare Entry



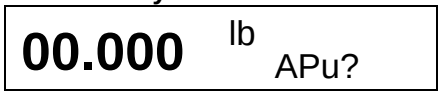
Place the full container on the gross scale and enter the known tare weight of the container using the numeric keys followed by the **Enter** or **Tare** key.

Sample Entry



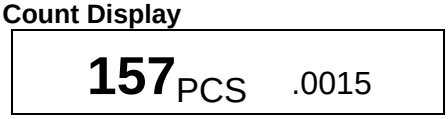
Place sample pieces on the sample scale, enter the sample quantity, then press the **Enter** or **Sample** key. If fixed sample size operation is selected then place the fixed number of sample pieces on the sample scale and press the **Enter** or **Sample** key.

Or APW entry



If the average piece weight (APW) of the part to be counted is known, the APW can be entered instead of sampling if the display is prompting for APW entry. Press the **APW** key to switch from sample mode to APW entry mode. Enter the APW using the numeric keys followed by the **Enter** or **APW** key.

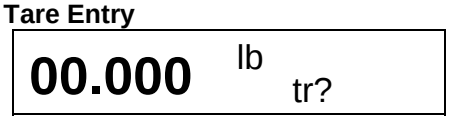
Count Display



The number of pieces in the container are now displayed in the primary display field. The data selected for recall is displayed in the auxiliary display field. If include sample is enabled the count displayed includes the sample quantity, press the **PRINT** key to accumulate data and print a label. If include sample is disabled then return the sample pieces to the full container and press the **PRINT** key to accumulate data and print a label.

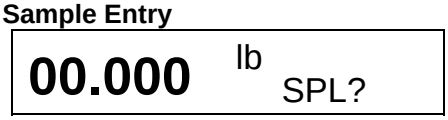
5.4.1.5. Single Scale Count Down Mode (Out of a Full Container)

Tare Entry



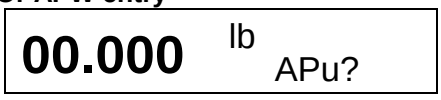
Place the full container on the scale and press the **Enter** or **Tare** key.

Sample Entry



Remove sample pieces from the container, enter the sample quantity, then press the **Enter** or **Sample** key. If fixed sample size operation is selected then remove the fixed number of sample pieces from the container and press the **Enter** or **Sample** key.

Or APW entry



If the average piece weight (APW) of the part to be counted is known, the APW can be entered instead of sampling if the display is prompting for APW entry. Press the **APW** key to switch from sample mode to APW entry mode. Enter the APW using the numeric keys followed by the **Enter** or **APW** key.

Count Display

The 8572 is now ready to count. Remove parts desired from the container. The pieces removed from the container are displayed in the primary display field. The data selected for recall is displayed in the auxiliary display field. Press the **PRINT** key to accumulate data and print a label.

5.4.2. Order Independent Counting Mode

If the user does not prefer the 8572's self prompting, step by step, dependant mode of operation, the independent mode can be enabled during setup. The independent mode of operation allows the user to

input data or accumulate transaction data in sequences independent from others. The independent mode of operation is ideal for applications where counting or weighing operations are not completed in the same manner from one transaction to the next. Transaction data can be randomly input in any order, permitting flexibility of operation.

In the independent mode of operation, all data input is terminated by pressing the function key associated with that function: **APW**, **Sample**, or **Tare**.

If the bar code option is installed in the 8572, ID, tare or APW can be entered at any time by scanning in the appropriate data.

Note: The order dependent mode MUST be used if keyboard entered ID is required. The only way to enter ID into the 8572 in the order independent mode is by using the optional bar code input.

5.4.2.1. Single or Dual Scale, Count Up Mode (Empty Container)

Place an empty container on the gross scale and press the **Tare** key. If manual tare entry mode is desired in place of auto tare, enter the tare weight of container on the gross scale by using the numeric keys followed by the **Tare** key.

Place sample pieces on the sample scale and press the **Sample** key. If fixed sample size is selected add sample pieces equal to the default sample size and press the **Sample** key.

If the average piece weight (APW) of the part to be counted is known, the APW can be entered instead of sampling. Enter the APW using the numeric keys followed by the **APW** key. The 8572 is now in the count mode. Place the parts to be counted on the gross scale. Press the **PRINT** key to accumulate data and print a label.

5.4.2.2. Single Scale, Count Up Mode (Full Container)

Place the full container on the gross scale and enter the known tare weight of the container using the numeric keys followed by the **Tare** key.

Remove sample pieces from the container and press the **Sample** key. If fixed sample size is selected remove sample pieces equal to the default sample size from the container and press the **Sample** key.

If the average piece weight (APW) of the part to be counted is known, the APW can be entered instead of sampling. Enter the APW using the numeric keys followed by the **Enter** key.

The 8572 will now display the count of pieces in the container. If "Include Sample" is enabled, the count displayed includes the sample quantity. Press the **PRINT** key to accumulate data and print a label. If "Include Sample" is disabled then replace the sample pieces to the container and press the **PRINT** key to accumulate data and print a label.

5.4.2.3. Dual Scale Count Up Mode (Full Container)

Place full container on the gross scale and enter the known tare weight of the container using the numeric keys followed by the **Tare** key.

Add sample pieces to the sample scale. If fixed sample size is selected add sample pieces equal to the default sample size press the **Sample** key.

If the average piece weight (APW) of the part to be counted is known, the APW can be entered instead of sampling. Enter the APW using the numeric keys followed by the **Enter** key.

The 8572 will now display the count of pieces in the container. If "Include Sample" is enabled, the count displayed includes the sample quantity. Press the **PRINT** key to accumulate data and print a label. If "Include Sample" is disabled then return the sample pieces to the container and press the **PRINT** key to accumulate data and print a label.

5.4.2.4. Single Scale Count Down Mode (Out of a Full Container)

Place full container on the scale, press the **Tare** key.

Remove the sample pieces from the full container. Enter sample size using the numeric keys followed by the **Sample** key. If fixed sample size desired remove sample pieces equal to fixed sample size programmed in setup and press the **Sample** key.

If the average piece weight (APW) of the part to be counted is known, the APW can be entered instead of sampling. Enter the APW using the numeric keys followed by the **Enter** key.

The 8572 is now ready to count. Remove the parts to be counted from the container. Press the **PRINT** key to accumulate data and print a label.

5.5. SAMPLE ENHANCEMENT AND COUNTING WEIGHT RANGE PARAMETERS

The 8572 provides sample enhancement for single scale mode operation, to permit accurate counting of light weight or inconsistent parts without having to hand count a large sample size. When sample enhancement is used the APW is recalculated as more parts are placed on the scale. Sample enhancement requires at least one extra step in the normal count procedure.

To use sample enhancement, proceed through the normal count procedure until the 8572 is in the count mode, displaying the sample pieces. At this time, place additional pieces, roughly equivalent to but not more than the sample quantity already on the scale. The 8572 will then automatically recalculate the APW on the basis of the larger sample size. There is no need to count the extra sample pieces added during sample enhancement, just be sure to roughly double the number of pieces on the scale each time sample enhancement is used. Sample enhancement can be repeated as many times as needed (up to 4% of scale capacity), until the sample size required to accurately count a specific part is reached.

Four distinct zones of counting exist in relation to the weight on the platter. These zones are as follows:

Zone 1: Below Minimum APW Computation Range

The weight placed on the sample scale is below the minimum APW computation (0.02% of full scale capacity). If sampling is attempted the primary display will show **[LO SPL]** and no sampling will occur.

Zone 2: 0.02% of Scale Capacity to Minimum Sample Range

The weight placed on the sample scale is between 0.02% of full scale capacity and the minimum sample range selected in setup. If sampling is attempted the primary display will show **[+ n]** where "n" is the maximum number of pieces that can be added to the sample scale on the basis of the APW calculated by the original sample. If more than this number of pieces is added to the sample scale then **[/ / / / / /]** will be displayed on the primary display until the correct number of pieces is placed on the sample scale.

A manual sample acceptance mode is also available which requires the exact number of sample pieces be added and the **[Sample]** (order independent mode) key be pressed. This results in the most accurate APW calculation.

Zone 3: Minimum Sample Range to 4% of Sample Scale Capacity, May Enhance Counting Zone

From the minimum sample range to 4% of sample scale capacity, the 8572 is operating in the count mode. Printing and accumulation can be performed as desired. The APW will be enhanced throughout this range unless too many pieces are added to the sample scale or weight is added to the gross scale. If the operator adds more pieces than can be reliably counted on the basis of the earlier sample, the primary display will show **[/ / / / / /]** for two seconds then return to showing count data.

If the operator wishes to continue APW enhancement, pieces must be removed from the scale until a change in sample weight no longer results in the **[/ / / / / /]** display. APW enhancement will then occur.

If the operator ignores the **[/ / / / / /]** display and adds more pieces, prints or accumulates, no further APW enhancement is possible for the current transaction. Once the counting weight exceeds 4% of full scale capacity, APW enhancement is discontinued.

Note: Zone 3 does not exist if average piece weight enhancement is disabled.

Zone 4: Normal Counting Zone, 4% of Scale Capacity to Full Scale Capacity

Once the weight applied to the scale exceeds 4% of full scale capacity, APW enhancement is disabled and the displayed APW will no longer change.

- For Your Notes -

6. INPUT AND OUTPUT CONNECTORS AND INTERFACING

6.1. PRINTER INTERFACE SPECIFICATIONS

The 8572 is capable of transmitting and receiving RS-232 voltage level ASCII characters. The device connected to the printer port must be a true RS-232 device. This is required because the voltage from the device's receive line is used to power the 8572's transmit line.

The 8572 transmits data suitable for use with Toledo Scale printer Models 8806, 8842, and 8860. When the print function is actuated by means of the **Print** key, auto print function or receipt of a remote ASCII control command, the 8572 will output a message according to setup programming. Scale motion holds a printout until the scale sees "no motion". Printing is disabled when the scale is under gross zero, over capacity, or in expanded weight mode.

6.1.1. Data Format

The data output is in a 10 bit ASCII format: 1 start bit, 7 data bits, 1 parity bit (selectable to even, odd, or always a 0), and 1 stop bit. The baud rate can be set from 300, 1200, 2400, 4800, to 9600 baud.

Checksum is provided to ensure data integrity. Checksum is defined as the 2's complement of the 7 low order bits of the binary sum of all characters on a line, preceding the checksum.

The 8572 is capable of transmitting data in either a single line or multi line format. The data fields to be printed are selected in setup. From one to seven fields of data will be printed in the order determined in setup. Fields may be repeated as many times as desired. Refer to Table 6-1 for single line format and to Table 6-2 for multi line scale format.

Data	STX	DF1	UF1	DF2	UF2	DF3	UF3	DF4	UF4	DF5	UF5	DF6	UF6	DF7	UF7	CR	CHK	LF
Note	A	B	C	B	C	B	C	B	C	B	C	B	C	B	C	D	E	F

Table 6-1 Single Line Data Format

Data	STX	DF1	UF1	CR	CHK	LF
		DF2	UF2	CR	CHK	LF
		DF3	UF3	CR	CHK	LF
		DF4	UF4	CR	CHK	LF
		DF5	UF5	CR	CHK	LF
		DF6	UF6	CR	CHK	LF
		DF7	UF7	CR	CHK	LF
Notes	A	B	C	D	E, G	F

Table 6-2 Multiple Line Data Format

DATA FORMAT NOTE(S):

A: <STX> ASCII start of text character, hex value 02. This character can be disabled.

B: <DFX> Numeric component of data field X. Refer to weight field format notes.

C: <UFX> Units component of data field X. Refer to Table 4 for field options.

D: <CR> ASCII carriage return, hex value 0D.

E: <CHK> Checksum character, 2's complement of the 7 low order bits of the binary sum of all character on a line, preceding the checksum. This character can be disabled.

F: <LF> ASCII Line Feed, hex value 0A.

G: <CHK> The checksum calculation for multiple line data format includes the line feed <LF> character from the previous line of data.

Note: All data fields are padded with leading spaces to make fields right justified. Leading zeros of numeric data fields are suppressed. If the 8572 is programmed to display a comma in place of a decimal point then significant leading zeroes are not suppressed.

Note: If double width printing is enabled, an ASCII <SO> character, hex 0E, will precede the net weight or gross weight numeric field, (if printing displayed weight and the 8572 is in the gross mode). An ASCII <SI> character will follow the corresponding Units field.

Note: If bracketed printing is enabled in setup then any truly measured weight will be preceded by a < character and followed by a > character.

Weight Field Format Notes:

The sign character is a space < > for positive net weights and a minus <-> for negative net weights.

The weight data field is a seven character ASCII string consisting of six numeric digits plus a decimal point. If the decimal point is not used the weight data has a leading space added to pad the total length of the weight data to 7 characters.

Net weight:<Sign character><Weight data>, total 8 bytes.
Gross or tare weight, (Single Line Format):<Weight data>, total 7 bytes.
Gross or tare weight, (Multi Line Format):<Space><Weight data>, total 8 bytes.
Accumulated Total (Weight): 9 digits of accumulated weight followed by a ***** if accumulator has overflowed, total 10 bytes.

Non Weight Fields Format Notes:

APW: Seven digits of average piece weight data, with a decimal point.
Sample: Six digits of sample size data.
Count: Six digits of piece count data.
Accumulated Total (Count): Seven digits of accumulated total piece count followed by a * if accumulator has overflowed, 8 bytes.
ID: 16 digits of alphanumeric ID data. Leading zeroes are not suppressed for ID, trailing spaces are not printed.

6.1.2. Printer Interconnect

The 8572 requires the 15 ft printer interface cable (Factory Number 0900-0243) to connect to the Model 8806, 8842, and the 8860 Toledo Scale Printers. The 8572 requires the 20 ft printer interface cable (Factory Number 0900-0250) to connect to the 8860 Washdown Printer. Refer to technical manuals TM008806 I00, TM008843 I00, TM/PC008860 I00, and TMWD8860 I00 for information about printer setup and programming. Refer to Table 6-3 for connector pinout.

8572 J1		8806, 8843, 8860 Desk	8860 Washdown
Pin	Function	Pin	Pin
2 3 7	TxD (RS-232) RxD (RS-232) Ground	3 2 7	C B G

Table 6-3 Printer Interfacing Interconnect

Note: ASCII Remote Input (setup step **[94]** must be disabled when the 8572 is connected to the Model 8806 or 8860 printer.

6.1.3. ASCII Remote Input

The 8572 will respond to upper case, single ASCII characters transmitted to the 8572 printer port from a remote device. The ASCII data transmitted into the 8572 must have the same baud rate, parity and data bit formatting the 8572 data output. Remote ASCII input must be enabled, setup step **[94 1]**. The commands that the 8572 printer port can respond to are:

Character	Function and Keyboard Equivalent
C<CR>	Same as **CLEAR key,** resets the scale to the gross mode.
H<CR>	Clears the accumulator total.
P<CR>	Same as **PRINT** key, accumulator is updated if enabled.
R<CR>	Transmits the accumulator total.
T<CR>	Same as the **TARE** key.
Z<CR>	Same as the **ZERO** key.

Table 6-4 Remote ASCII Input Commands

6.2. REMOTE SCALE BASE INTERFACING

3 CAUTION!
DO NOT attach an analog load cell to a DigiTOL® scale input or a DigiTOL® load cell to an analog scale input of the 8572 as damage to the load cell or scale input PCB may result.
REMOVE POWER FROM THE SCALE AND WAIT A MINIMUM OF 30 SECONDS BEFORE CONNECTING OR DISCONNECTING ANY HARNESSES FROM PCB'S OR LOAD CELLS AS DAMAGE MAY RESULT.
The 0.6 A/12 VDC power supply (*135156 00A), MUST be replaced with the optional 1.5 A/12.5 VDC power supply (*135693 00A) when any optional KOP is installed in the Model 8572.

6.2.1. Remote DigiTOL® Scale Base Connection

The 8572 remote DigiTOL® scale base KOP permits the connection of any of the standard DigiTOL® bench and portable scale bases, Models 1996, 1997, 2096, 2097, 2196 and 2197. The 8572 remote DigiTOL® scale base KOP is also compatible with the Model 2157 floor scale (digital j-box).

Single DigiTOL® load cells provide 1 part in 500,000 resolution with nine updates per second. The digital j-box provides up to 1 part in 280,000 resolution.

Note: The remote DigiTOL® scale KOP, (Factory Number 0901-0281), must be installed in the 8572 before a DigiTOL® scale base can be connected to the 8572. Refer to Table 6-5 for wiring information.

Model 8572		DigiTOL® Scale Base Connector				
		Function	1996 2096 2196	1997 2097 2197	Model 2157 Digital J-Box	
J-2 Pin	Color		Pin	Color	Carbon Steel TB-5	Stainless Steel Connector
1	Red	RxD A	1	Red	3	A
2	Not Used	Not Used	Not Used			
3	Key	Not Used	Not Used			
4	White	RxD B	Not Used		4	D
5	Green	+20 VDC	5	Green	6	E
6	Yellow	TxD B	6	Yellow	2	F
7	Blue	Ground	7	Blue	5	G
8	Black	TxD A	8	Black	1	H
9	Not Used	Not Used	Not Used			

Table 6-5 DigiTOL® Scale Base Interconnect

4 CAUTION!

THE WHITE WIRE **MUST NOT** BE CONNECTED TO MODEL 1996, 1997, 2096, 2097, 2196 AND 2197 BASES OR DAMAGE TO THE DIGITOL® LOAD CELL AND SCALE INPUT PCB MAY RESULT!

The DigiTOL® load cell connector mounted on the 8572 I/O connector bracket has a key in pin 3. Refer to Figure 6-1 for key pin location. This key is installed to insure that an analog scale base cannot be plugged into this connector. This key pin **MUST NOT** be removed. The mating connector included with the DigiTOL® Scale KOP has pin 3 removed. If a different connector is used it will be necessary to remove pin 3 of the mating connector. To accomplish this, grab as much of the pin as possible with a pair of needle nose pliers and bend the pin back and forth until it breaks. Make sure that all adjacent pins remain straight.

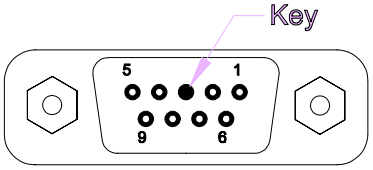


Figure 6-1 DigiTOL® Load Cell Connector

6.2.2. Remote Analog Scale Base Connection

The 8572 remote analog base KOP is capable of driving up to four, 350 ohm load cells of either 2 mV/V or 3 mV/V signal output type. The remote analog scale base KOP provides 1 part in 500,000 resolution with four updates per second.

Note: The remote Analog scale KOP, (Factory Number 0901-0283), must be installed in the 8572 before an analog scale base can be connected to the 8572. Refer to Table 6-for wiring information. The shield of the load cell cable connects to structure (chassis) ground at the scale base, and to the metal shell of the cable clamp at the 8572.

8572 J3 Pin	Function	Load Cell Termination			
		6 Wire Cable		4 Wire Cable	Jumpers
		Wire Color	Pin	Wire Color	
1	+Excitation	White	A	Green	S),
2	+Sense	Yellow	D	Jumper	S)-
3	Shield	Orange		Yellow	
4	-Sense	Red	F	Jumper	S),
5	-Excitation	Blue	C	Black	S)-
6	Key	Not Used		Not used	
7	+Signal	Green	E	White	
8	-Signal	Black	B	Red	
9	Not Used	Not Used		Not Used	

Table 6-6 Analog Scale Base Interconnection

The analog load cell connector mounted on the 8572 I/O connector bracket has a key in pin 6. Refer to Figure 6-2 for key pin location. This key is installed to insure that a DigiTOL® scale base cannot be plugged into this connector. This key pin **MUST NOT** be removed. The mating connector included with the Analog scale KOP has pin 6 removed. If necessary remove pin 6 of the mating connector. To accomplish this, grab as much of the pin as possible with a pair of needle nose pliers and bend the pin back and forth until it breaks. Make sure that all adjacent pins remain straight.

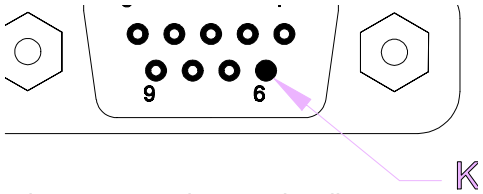


Figure 6-2 Analog Load Cell Connector

- For Your Notes -

7. PREVENTIVE MAINTENANCE

This section provides instructions and procedures for maintenance of the counting scale, as well as a troubleshooting guide to aide in problem analysis.

Clean the keyboard and covers with a soft clean cloth that has been dampened with a mild glass cleaner. **DO NOT USE ANY TYPE OF INDUSTRIAL SOLVENT. DO NOT SPRAY CLEANER DIRECTLY ONTO THE UNIT.**

CAUTION!
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.
DO NOT DAMAGE THE FOIL BELLOWS COVERING THE LOAD CELL OPENING OR SCALE PERFORMANCE MAY BE EFFECTED. DO NOT TURN SCALE BASE ON ITS SIDE OR UPSIDE DOWN WITH SUBPLATTER REMOVED.
REMOVE POWER FROM THE SCALE AND WAIT A MINIMUM OF 30 SECONDS BEFORE CONNECTING OR DISCONNECTING ANY HARNESSES FROM PCB'S OR LOAD CELLS AS DAMAGE MAY RESULT.

7.1. TROUBLESHOOTING

If the 8572 malfunctions then perform the following troubleshooting procedures, in order, until the malfunction is corrected.

1 - Record as much information as possible about the problem before attempting to correct the problem. If an error code is displayed, refer to Table 7-1, in Section 7.2 for specific suggestions for dealing with error codes.

2 - Cycle the 8572 power switch off, then back on.

3 - Verify that the scale has been properly programmed in setup.

4 - If the problem persists after verifying scale programming or if unable to enter setup mode, then check power supply voltages listed in Section 7.3.

5 - Use substitution of known good parts to correct the malfunction. Always check DC power supply voltages before replacing parts.

6 - If the Main PCB is replaced then refer to Section 4 of this manual for proper programming. Do not copy the setup of the suspected faulty PCB without verification as the problem may be due to a setup error.

7 - Once the 8572 is operational, verify the problem by reinstalling the defective component and retesting the 8572.

8 - Exchange PCBs and subassemblies are available from your authorized Toledo Scale representative.

7.2. ERROR CODES

If an error code is displayed, press the **CLEAR** key. If the error is not cleared then cycle the power switch off, then back on.

If the error code recurs, refer to Tables 7-1.1 and 7-1.2 for a description of the error code and follow the recommended corrective actions in the order listed in Table 7-1. Refer to Section 7.2 for further troubleshooting advice if necessary.

If an error occurs during calibration then press the **CLEAR** key. Verify that the correct capacity is selected and repeat the calibration procedure. If problem persists then refer to Tables 7-1.1, 7-1.2 and follow the recommended corrective actions in the order listed.

Error	Description	Recommended Corrective Action
E1	Program ROM Error	Replace Eprom and Chip Carrier
E2	Internal RAM Error	Replace Logic PCB
E3	Setup ROM Memory Error	1. Access setup, reprogram, exit setup. 2. Replace Logic PCB
E4	External RAM	Replace Logic PCB
E6 X	Scale X Analog Verify Error	1. Press **CLEAR** key to permit operation with other scale base. 2. Enter setup and recalibrate scale X.
E8 X	Scale X No Communication With DLC Error	1. Press **CLEAR** key to reset load cell. 2. Check cables and harnesses to scale X. 3. Check Power Supply Voltages. 4. Replace Load Cell or Scale PCB.
E9 X	Scale X Out of Range Under Capacity	1. Check for mechanical bind in scale X. 2. Check cables and harnesses to scale X. 3. Enter setup and recalibrate scale X. 4. Check Power Supply Voltages. 5. Replace Load Cell or Scale PCB.
E10 X	Scale X DLC Ram Error	1. Check Power Supply Voltages. 2. Replace Scale X Load Cell.
E11 X	Scale X DLC ROM Error	1. Check Power Supply Voltages. 2. Replace Scale X Load Cell.
E13 X	Scale X DLC NOVROM Error	1. Enter setup and recalibrate scale X. 2. Check Power Supply Voltages. 3. Replace Load Cell in scale X.
E14 X	Scale X Out of Range Over Capacity	1. Check for mechanical bind in scale X. 2. Check cables and harnesses to scale X. 3. Enter setup and recalibrate scale X. 4. Check Power Supply Voltages. 5. Replace Load Cell or Scale PCB.
E16 X	Math Overflow Error	Enter setup and recalibrate scales.

Table 7-1.1 Error Codes

Error	Description	Recommended Corrective Action
E21	Illegal Capacity	Press **CLEAR** key, enter proper scale capacity.
E24	Illegal Increment Size	Press **CLEAR** key, enter proper increment size.
E32	Insufficient Weight Test Weight too small	Press **CLEAR** key, verify scale capacity, recalibrate. **Test weights used in calibration MUST be at least 10% of scale capacity.**
E34	Test Weight too Large	Press **CLEAR** key, verify scale capacity, recalibrate. **Test weights MUST not exceed capacity.**
E35	Illegal Test Weight	Press **CLEAR** key, verify increment size. Test weight entered must match scale increment size.
E36	Invalid Build or Insufficient Counts	1. Press **Clear** key, verify scale capacity. Capacity selected MUST be greater than 35% of load cell capacity. 2. Check cables and harnesses to Scale X, verify that cables are wired correctly. 3. Check Power Supply Voltages. 4. Replace Load Cell or Scale PCB.
E43 A	Bar Code Port I/O Error	1. Press **CLEAR** key, Bar Code Port will be disabled. 2. Check internal harnesses. 3. Check Power Supply Voltages 4. Replace Bar Code Interface PCB
E43 B	DigiTOL® Remote Scale PCB Port Error	1. Press **CLEAR** key, remote scale port will be disabled. 2. Check internal harnesses. 3. Check Power Supply Voltages 4. Replace Bar Code Interface PCB
E E E or -E E E	Scale Out of Zero Capture Range Over or Under	1. Press **ZERO** key to capture zero. 2. Check for mechanical bind. 3. Enter setup and recalibrate scale.

Table 7-1.2 Error Codes Continued

7.3. POWER SUPPLY VOLTAGE CHECKS

7.3.1. External Power Supply

First verify that the external 12 VDC power supply output is at least 12 VDC with less than 300 mVAC ripple voltage. This voltage is unregulated and is approximately 15 to 18 VDC when measured with the power jack disconnected from the 8572. Measure this voltage between the inner and outer conductor of the power jack. The inner conductor is positive and the outer conductor is ground.

7.3.2. +12 VDC Logic Supply

This +12 VDC is used by the Logic PCB to generate all other voltages used in the 8572. This voltage can be checked at the solder pad on the banded end of diode D8. This voltage must be between the range of 9 to 15 VDC, maximum 300 mVAC ripple. A ground connection can be made at the negative solder pad of capacitor C1. Refer to Figure 7-1 for component locations. If this voltage is missing or out of range then check the external power supply or the charger PCB if present.

7.3.3. +20 VDC Supply

This voltage is used to power the internal DigiTOL® load cell. It is also used by the remote analog scale option, the remote DigiTOL® scale option, and the bar code option. There is an unregulated +22 VDC that is the raw supply to the +20 VDC regulator. The unregulated +22 VDC can be checked across the solder pads of capacitor C1 on the logic PCB. This voltage must be within the range of 20 VDC to 30 VDC. The regulated +20 VDC can be checked across the solder pads of capacitor C2. Refer to Figure 11 for component location. The regulated +20 VDC must be within the range of 19 VDC to 21 VDC. If the +12 VDC logic supply is ok and either of these voltages are missing or out of range the logic PCB must be replaced.

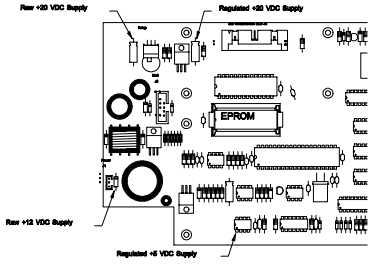
7.3.4. +5 VDC Logic Supply

This voltage is used to power all the logic circuitry on the Logic PCB. This voltage can be checked on pin 1 of integrated circuit U14. Refer to Figure 7-1 for component location. This voltage must be within the range of +4.85 VDC to +5.2 VDC, maximum ripple voltage of 0.05 VAC. If the +12 VDC logic supply checks ok and this voltage is missing or out of range the logic PCB must be replaced.

7.3.5. +12.5 VDC Analog Load Cell Excitation

The remote analog scale option has a regulated +12.5 VDC output to proved excitation voltage to the analog load cells. This excitation voltage can be checked across pins 3 and 6 of connector J2 of the Analog PCB. The excitation voltage must be within the range of +12.4 to +12.6 VDC, maximum ripple voltage of 0.01 VAC. The analog excitation voltage is derived from the +20 VDC supply.

Figure 7-1 Logic PCB Power Supply Checks



7.4. LOAD CELL REPLACEMENT

Remove power from the scale by turning off the power switch located on the right side of the base near the front. Unplug the external power supply and external battery or internal battery if present.

Remove the platter, sub-platter, dead deck (lower capacity scales), and cover assemblies.

CAUTION!

On 8572-0002, 1002 versions that use the 3.75 kg load cell, reinstall the two #8-32 shipping screws through the sub-platter into the two hex standoffs. Refer to Figure 7-2. Do not tighten these screws down. They are used to keep the sub-platter from twisting when the sub-platter mounting screws are tightened or loosened. DAMAGE TO THE LOAD CELL MAY RESULT IF THIS PROCEDURE IS NOT FOLLOWED. Remove the two #8-32 screws, after the sub-platter mounting screws are tightened or loosened.

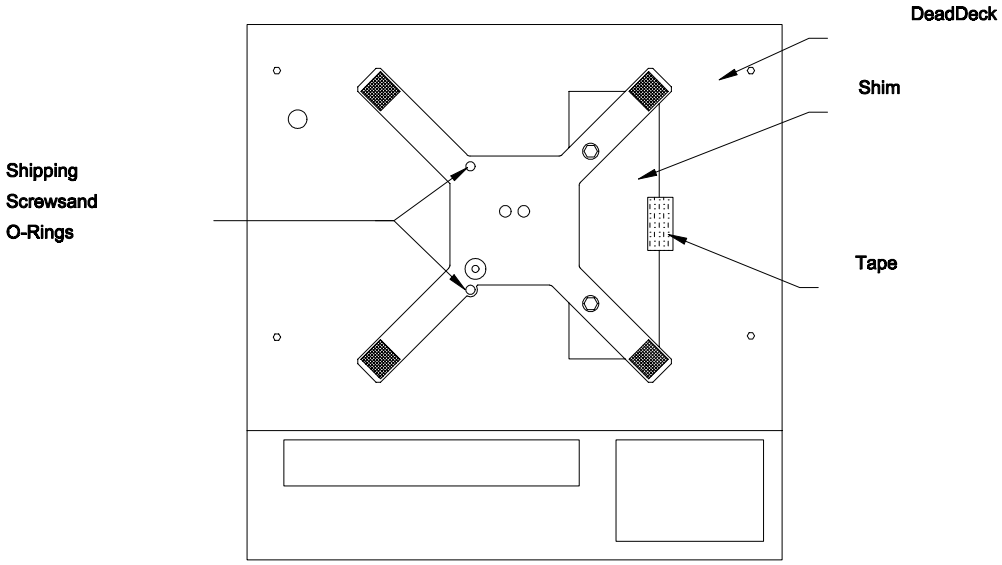


Figure 7-2 Low Capacity Shipping Hardware

Loosen the metal cover with the foil bellows that covers the load cell. Do this by removing the four screws that secure it to the base.

Disconnect the load cell harness from the load cell and set the cover assembly with the foil bellows aside.

Remove the space block on top of the load cell and turn the scale on its side.

Remove the two hex head screws from the bottom of the scale that secure the load cell. The load cell can now be removed. Be sure to retrieve the spacer under the load cell.

With the scale still on its side, reinsert the two hex head screws through the base and slide the bottom spacer over the screws.

Carefully install the new load cell by threading the screws into the bottom of the load cell. Tighten the mounting screws to finger tightness.
Stand the scale base upright and reinstall the top load cell spacer.

Reattach the load cell harness (that is attached to the metal cover with the foil bellows) to the load cell.

Secure the metal cover to its original position above the load cell. Tighten the four screws that hold the cover in place.

Reinstall the cover and dead deck (on low capacity units).

Reattach the sub-platter. Refer to the caution at beginning of load cell replacement procedure for 8572-0002, 1002 units.

Check that the corner and center overload stops are aligned with the overload stop screws.

Tighten all (4) load cell and sub-platter mounting screws to 75 - 85 inch/pounds. Use a torque wrench to ensure proper screw tension without over tightening.

Place the platter on the sub-platter.

Reconnect the internal battery or external battery if present and reconnect the external power supply. Reapply power to the 8572 by means of the power switch located on the right side of the base near the front.

Verify operation and calibration of the new load cell as described in the calibration and operation section of the technical manual.

Note: Overload stop clearance gaps must be checked after replacement of the load cell to provide proper protection to the new load cell.

7.5. OVERLOAD STOP ADJUSTMENT

The overload stops must be adjusted when the load cell and/or sub-platter has been replaced. There can be up to six overload stop positions, identified as X1 through X7. Factory numbers 8572-0002, and 1002, (5 lb capacity) versions use stops X1, X2, and X3. Overload stop X1 is located under the load cell. Refer to Figure 7-3 for overload stop locations. Factory numbers 8572-0003, -0004, 0005, 0006, 1003, 1004, 1005, and 1006 (25 lb capacity and greater) scales use stops X2 through X7, refer to Figure 7-4.

Assemble the base, load cell, and sub-platter as described in the load cell replacement procedure in section 7.3. Mounting screws should be snug but not tight.

Check that the corner and center overload stops are aligned with the overload adjustment screws. Tighten all (4) load cell and sub-platter mounting screws to 75 - 85 inch/pounds. Use a torque wrench to ensure proper screw tension without over tightening.

Note: All sub-platter and load cell mounting screws must be tightened to the proper specification before adjusting overload stops. Failure to do so may result in the overload stops being set incorrectly and failure of the load cell.

CAUTION!

Never apply weight exceeding the capacity of the scale or shock load the scale if the overload stops have not been set.

7.5.1. Low Capacity Overload Adjustment (8572-0002, and 1002)

5 lb capacity overload stops are set by observing the expanded weight display as test weights are placed in specific locations on the scale platter.

With power applied, place the scale into the test mode (setup step **[69 1]**) and loosen overload stops X1, X2, and X3.

The various test weights specified in Table 7-1 are placed in turn on the center of the platter to adjust X1, the right rear corner to adjust X2, and the right front corner to adjust X3. Refer to Figure 7-3 and Table 7-1.

Tighten the overload screw for a given overload stop until the display weight just starts to change. This indicates the overload screw is just touching the stop. Repeat this procedure for each of the three overload stops X1, X2, and X3.

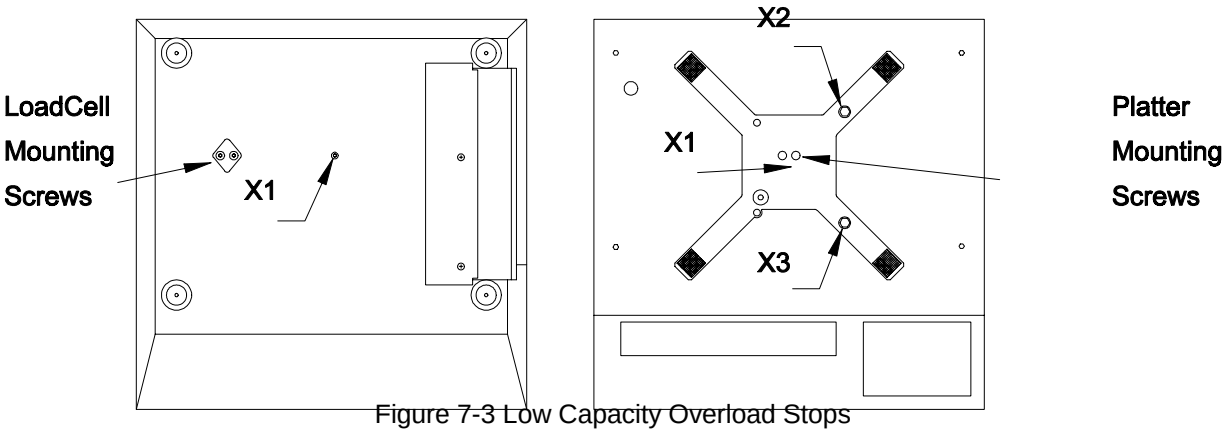


Figure 7-3 Low Capacity Overload Stops

Overload Stop Position	Factory Number (Load Cell Capacity)
	8572-0002, 1002 3.75 kg Load Cell
X1 X2 X3	6.5 lb 6 lb 6 lb

Table 7-1 Lower Capacity Overload Stop Adjustment

7.5.2. Higher Capacity Overload Adjustment (8572-0003, 0004, 0005, 0006, 1003, 1004, 1005, and 1006)

10 lb and greater capacity scales overload stops are set by measuring the gap between the overload stop and the overload screw. The gap is adjusted until it meets the specification listed in Table 7-2. All dimensions are listed in inches. Use round wire gauges, or the wire size equivalent drill bit to measure the overload stop gap. **DO NOT use flat feeler gauges to measure overload stop gap**.

- Tighten the overload screw until the gap is smaller than the wire gauge.
- Hold the wire gauge against the gap with a slight pressure.
- Slowly loosen the overload screw until the wire gauge snaps through the gap.
- Repeat this procedure for each of the six overloads X2, X3, X3, X4, X5, X6, and X7. Refer to Figure 7-4 for overload stop location.

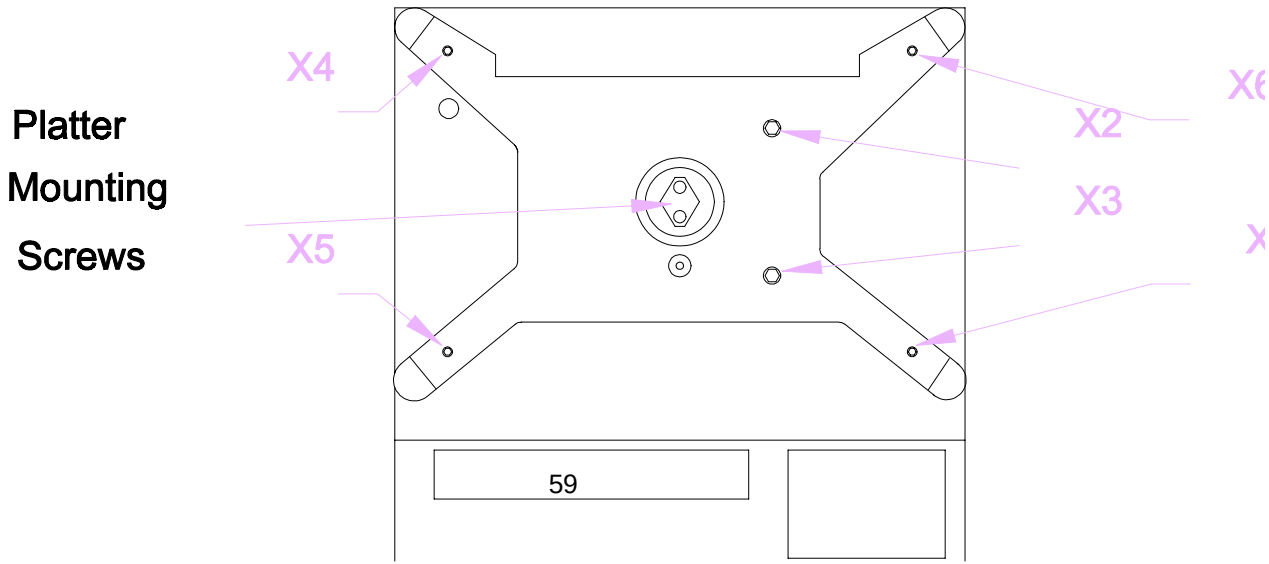


Figure 7-4 Higher Capacity Overload Stops

Over Load Stop	Factory Number and Load Cell Capacity				TOL. "
	8572-0003, 1003 7.5 kg Load Cell	8572-0004, 1004 15 kg Load Cell	8572-0005, 1005 30 kg Load Cell	8572-0006, 1006 60 kg Load Cell	
X2	0.014"/#79	0.015"/#79	0.016"/#78	0.024"/#73	±.001"
X3	0.016"/#78	0.017"/#77	0.020"/#76	0.026"/#71	
X4	0.047"/#56	0.064"/#52	0.084"/#45	0.153"/#24	±.005"
X5	0.047"/#56	0.059"/#53	0.057"/#54	0.094"/#42	
X6	0.047"/#56	0.064"/#52	0.084"/#45	0.153"/#24	
X7	0.047"/#56	0.059"/#53	0.057"/#54	0.094"/#42	

Table 7-2 Higher Capacity, Overload Stop Gap Specification

7.6. KEYBOARD REPLACEMENT

Remove power from the scale by turning off the power switch located on the right side of the base near the front. Unplug the external power supply and battery if present.

⚠ CAUTION!

Remove power from the scale and wait a minimum of 30 seconds before connecting or disconnecting any harnesses from PCB's or load cells as damage may result.

On 8572-0002, 1002 versions that use the 3.75 kg load cell, reinstall the two #8-32 shipping screws through the sub-platter into the two hex standoffs. Refer to Figure 7-2. Do not tighten these screws down. They are used to keep the sub-platter from twisting when the sub-platter mounting screws are tightened or loosened. DAMAGE TO THE LOAD CELL MAY RESULT IF THIS PROCEDURE IS NOT FOLLOWED. After the sub-platter mounting screws are tightened or loosened, the two #8-32 screws are removed.

Remove the platter, sub-platter, dead deck (lower capacity scales), and cover assemblies.

Unplug the keyboard ribbon connector from the Logic PCB and gently slide the ribbon harness through the flat cable clamp, refer to Figure 7-5. Do not remove the flat cable clamp from the cover assembly.

Figure 7-5 Keyboard Mounting

Remove the four retaining screws that hold the keyboard backing plate. Remove the backing plate and keyboard assembly. Refer Figure 15.

Install the new keyboard assembly, backing plate and four retaining screws.

Verify the revision level of the Logic PCB. The revision level is the leading prefix of the PCB part number, (for example: "B134771 00A" is a "B" revision part number). "A" and lower revision Logic PCBs require a double twist in the keyboard ribbon harness to permit pin 1 of the keyboard ribbon harness to plug into pin 1 of the J7 connector on the Logic PCB. "B" and higher revision Logic PCBs reverse the location of pin 1 of the J7 connector and no longer require the double twist of the keyboard harness.

After folding the keyboard ribbon harness correctly, slide the ribbon harness back through the clamp.

Insert the keyboard ribbon harness plug P7 into the Logic PCB connector J7. Verify that pin 1 of the keyboard harness is inserted into pin 1 of connector J7 on the logic PCB. "A" and lower revision Logic PCBs have pin 1 located towards the rear of the enclosure. "B" and higher revision Logic PCBs have pin 1 of connector J7 located towards the front of the enclosure. The keyboard ribbon harness pin 1 is marked by means of a diamond on the side of the ribbon harness plug. Refer to Figure 7-6.

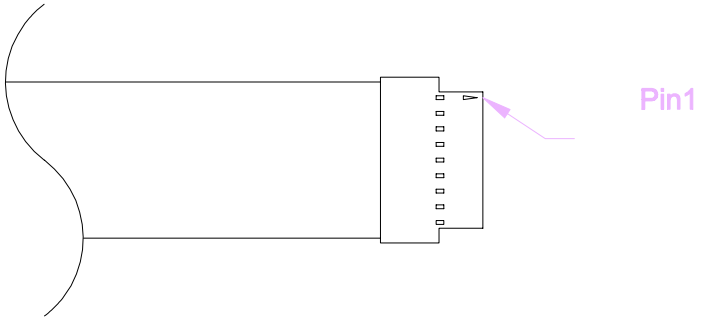


Figure 7-6 Keyboard Connector Pin 1

7.7. LOGIC PCB REPLACEMENT

9CAUTION!
Remove power from the scale and wait a minimum of 30 seconds before connecting or disconnecting any harnesses from PCBs or load cells as damage may result.
On 8572-0002, 1002 that use the 3.75 kg load cell, reinstall the two #8-32 shipping screws through the sub-platter into the two hex standoffs. Refer to Figure 7-2. Do not tighten these screws down. They are used to

keep the sub-platter from twisting when the sub-platter mounting screws are tightened or loosened. DAMAGE TO THE LOAD CELL MAY RESULT IF THIS PROCEDURE IS NOT FOLLOWED. After the sub-platter mounting screws are tightened or loosened, the two #8-32 screws are removed.

- Remove power from the scale by turning off the power switch located on the right side of the base near the front. Unplug the external power supply and external battery or internal battery if present.
- Remove the platter, sub-platter, dead deck (lower capacity scales), and cover assemblies. Remove all optional PCBs, harnesses and retaining screws, then remove the Logic PCB from the cover assembly.
- Remove the Eprom and Chip Carrier (*135629 00A) from its socket on the logic PCB.
- Insert the logic PCB into an antistatic bag (112736 00B) immediately.
- Insert the Eprom/Chip Carrier (*135629 00A) into the empty socket on the replacement Logic PCB. **Replacement Logic PCBs are not shipped with the Eprom/Chip Carrier.**
- Install the new Logic PCB, reinstall all retaining screws, harnesses and optional PCBs. Verify that pin 1 of the keyboard harness is inserted into pin 1 of connector J7 on the logic PCB. "A" and lower revision Logic PCBs have pin 1 located towards the rear of the enclosure. "B" and higher revision Logic PCBs have pin 1 of connector J7 located towards the front of the enclosure. Refer to Keyboard replacement procedure in Section 7.5.

7.8. RECOMMENDED SPARE PARTS

*136139 00A	Logic PCB
*135629 00A	Eprom/Chip Carrier
*134773 00A	Display PCB
*136149 00A	Keyboard Assembly
*135156 00A	0.6 A, 12 VDC External Power Supply
*(Refer to Table 7-3)	DigiTOL® Load Cell

Factory Number	Load Cell Capacity	Part Number
8572-0002, 1002	3.75 kg	*134789 00A
8572-0003, 1003	7.5 kg	*134790 00A
8572-0004, 1004	15 kg	*134791 00A
8572-0005, 1005	30 kg	*134792 00A
8572-0006, 1006	60 kg	*134793 00A

Table 7-3 Load Cell Part Numbers
(*) Part numbers listed may have letter prefix.

7.9. OPTIONAL KITS

7.9.1. External 120 VAC/1.5A Power Supply (Required if any other KOPs are installed)

0919-0028 Sales Part Number
*135693 00A Service Part Number

7.9.2. Internal Battery KOP

0919-0031 Sales Part Number

*135696 00A Service Part Number

7.9.3. External Battery KOP

0919-0032 Sales Part Number
*135698 00A Service Part Number

7.9.4. Remote Analog Scale KOP

0901-0283 Sale Part Number
*135690 00A Service Part Number

7.9.5. Remote DigiTOL® Scale KOP

0901-0281 Sales Part Number
*135686 00A Service Part Number

7.9.6. Bar Code Wand KOP

0901-0279 Sales Part Number
*135522 00A Service Part Number

7.9.7. Bar Code Scanner Gun KOP

0901-0280 Sales part Number
*135492 00A Service Part Number

(*) Part numbers listed may have letter prefix.

Note: Bar Code KOPs 0901-0279 and 0901-0280 require the 0901-0281 Remote DigiTOL® Scale KOP to operate. Analog scale bases can be used with the 0901-0283 Remote Analog Scale KOP even though the remote DigiTOL® Scale KOP is installed to support bar code operation.

- For Your Notes -

8. PARTS CATALOG

8.1. EXTERIOR VIEW LOW CAPACITY VERSIONS (Factory Numbers 8572-0002, 1002)

REF	PART NUMBER	DESCRIPTION	QTY	REF	PART NUMBER	DESCRIPTION	QTY
1	115193 00A	Plastic Platter Assembly	1	12	134788 00A	Display Lens (U.S.A.)	1
2	126983 00A	Hook Fastener	4		138911 00A	Display Lens (Export)	1
3	R03575 00A	Set Screw, 3/8-24 X 1/2"	2	14	R03816 00A	Setup Hole Plug	1
4	126984 00A	Sub-Platter Assembly	1	15	102689 00A	Level Bubble	1
5	126987 00B	Dead Deck	1	16	135156 00A	120 VAC/0.6 mA Transformer (U.S.A.)	1
6	R03719 00A	Nylon Screw, #8-32 X 3/4"	5	N.S.	135693 00A	120 VAC/1.5 A, Transformer (U.S.A.)	1
7	R03708 00A	Nylon Washer, #8	5	N.S.	137962 00A	220 VAC/0.6 mA Transformer (Export)	1
8	119133 00A	Rocker Switch	1	17	122692 00A	Set Screw Caution Label	1
9	136149 00A	Keyboard Assembly (U.S.A.)	1	18	R03508 00A	Screw, 1/4-28 X 1-1/2"	2
N.S.	122312 00B	Switch Membrane (Export)	1	19	115190 00A	Hook & Loop Fasteners (NS)	4
N.S.	136138 00A	Keyboard Overlay (Export)	1	21	131919 00A	Load Cell Caution Label	1
N.S.	125662 00A	Keyboard Gasket (Export)	1	22	129350 00B	White Plastic Cover	1
10	116033 00A	Static Caution	1	23	R03831 00A	Shipping O-Ring (NS)	2
11	125134 00B	Decorative White Bezel	1	24	R01145 130	Shipping Screw, #8-32 X 3/4" (NS)	2

Part number listed may have a letter prefix. (NS) Not shown.

8.2. EXTERIOR VIEW HIGHER CAPACITY VERSIONS (Factory Numbers 8572-0003, 0004, 0005, 0006, 1003, 1004, 1005, and 1006)

REF	PART NUMBER	DESCRIPTION	QTY	REF	PART NUMBER	DESCRIPTION	QTY
1	126986 00A	Black Steel Platter	1	N.S.	136138 00A	Keyboard Overlay (Export)	1
2	122347 00A	Platter Pad	1	N.S.1	125662 00A	Keyboard Gasket	1
3	R03508 00A	Cap Screw, 1/4-28 X 1-1/2"	2	0	119133 00A	(Export)Power Switch	1
4	R03575 00A	Set Screw, 3/8-24 X 1/2"	2	11	134788 00A	Display Lens (U.S.A.)	1
5	126972 00A	Sub-Platter Assembly (X003, X004)	1	N.S.	138911 00A	Display Lens (Export)	1
	126972 00B	Sub-Platter Assembly (X005, X006)	1	12	125134 00A	Decorative White Bezel	1
6	R03646 00A	Set Screw, 1/4-28 X 1/2"	2	13	129350 00A	White Plastic Cover	1
7	120509 00A	Conductive Pad	4	14	116033 00A	Static Caution Label	1
8	135156 00A	120 VAC/0.6 mA Transformer (U.S.A.)	1	15	R03030 00A	Screw, 8-32 X 3/8"	4
N.S.	135693 00A	120 VAC/1.5 A, Transformer (U.S.A.)	1	16	R03573 00A	Black Sealing Screw	1
N.S.	137962 00A	220 VAC/0.6 mA Transformer (Export)	1	18	102689 00A	Level Bubble	1
9	136149 00A	Keyboard Assembly (U.S.A.)	1	19	122692 00A	SetScrew Caution Label	1
N.S.	122312 00B	Switch Membrane (Export)	1				

(X00X) Factory Number 8572-X00X

Part numbers listed may have a letter prefix. (N.S.) = not shown.

8.3. BOTTOM VIEW

REF	PART NUMBER	DESCRIPTION	QTY
1	122410 00A	Leveling Leg	4
2	001874 00B	Nut, 5/16-18	4
3	R03020 00A	Black Plastic Hole Plug, 7/8"	2
4	R03046 00A	Overload Screw, 1/4-28 X 1" (X002)	1
5	126985 00A	Base Assembly (X002, X003)	1
	124224 00A	Base Assembly (X004, X005, X006)	1
6	135705 00A	Printer Harness	1
7	135706 00A	Power Harness	1
8	R03090 00A	Screw, #6-32 X 3/8"	4
9	126334 00A	Standoff, #6-32 X 3/4"	2
10	134784 00A	Power/Printer Mounting Bracket	1
11	130850 00A	Cover Plate	1
12	R03507 00A	Cap Screw 1/4-28 X 1" (0002 thru 0005)	2
	R02401 00A	Cap Screw 1/4-28 X 3/4" (0006) only	2
13	122339 00A	Bottom Load Cell Spacer (0002 thru 0005)	1

(X00X) Factory Number 8572-X00X.
(*) Part number listed may have a letter prefix. (NS) Not shown.

8.4. PCBs AND TOP COVER

REF	PART NUMBER	DESCRIPTION	QTY
1	R03997 00A	SEMS Screw, #6-32 X 3/8"	4
2	123134 00A	Keyboard Bracket	1
3	136149 00A	Keyboard Assemble	1
N.S.	122312 00B	Switch Membrane (Export)	1
N.S.N	136138 00A	Keyboard Overlay (Export)	1
.S.	125662 00A	Keyboard Gasket (Export)	1
4	129350 00B	White Cover (X002, X003)	1
	129350 00A	White Cover (X004, X005, X006)	1
5	R02459 00A	Blind Plastic Rivet	4
6	129340 00A	Battery Access Cover Plate	1
7	R03225 00A	Plastite Screw, #6-32 X 1/4"	4
8	135629 00A	Eprom and Chip Carrier	1
9	136139 00A	Logic PCB	1
10	135783 00A	Back Plane Shield (N.S.)	1
11	R03495 00A	Plastite Screw, #6-32 X 5/8"	2
12	135704 00A	Display Harness	1
13	134773 00A	Display PCB	1

(*) Part number listed may have a letter prefix.
(N.S.) Not shown.

8.5. INTERIOR OF BASE

REF	PART NUMBER	DESCRIPTION	QTY	REF	PART NUMBER	DESCRIPTION	QTY
1	123132 00A	L/C Cover Assem. Consists Of:	1	7	R02180 050	#8-32 X 3/8" Screw	4
1	122324 00A	Cavity Cover	1	8	119133 00A	Power Switch	1
2	123626 00A	Bellows, RFI Shield	1	9	126985 00A	Scale Base (X002, X003)	1
N.S.	154360001	Copper Tape	10"		124244 00A	Scale Base (X004, X005, X006)	1
3	125789 00A	4-40 Standoff	2	10	124718 00A	1/2" Cable Clamp	1
4	122718 00A	Internal Load Cell Harness	1	11	135706 00A	Power Harness	1
5	R01862 050	4-40 X 3/16" Screw	2	12	135705 00A	Printer Harness	1
6	134789 00A	3.75 kg, digital load cell (X002)	1	13	127395 00A	Spacer Block (X002 - X005)	1
	134790 00A	7 kg, digital load cell (X003)	1		125657 00A	Space Block (X006)	1
	134791 00A	15 kg, digital load cell (X004)	1	14	122693 00A	Load Cell Harness	1
	132792 00A	30 kg, digital load cell (X005)	1	15	130093 00A	#8-32 X .56" Standoff (X002, X003)	2
	134793 00A	60 kg, digital load cell (X006)	1		R02180 050	#8-32 X 3/8" Screw (X0004 - X006)	2

(X00X) Factory Number 8572-X00X

Part numbers listed may have a letter prefix. (N.S.) = not shown.

9. INTERCONNECT DRAWING

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