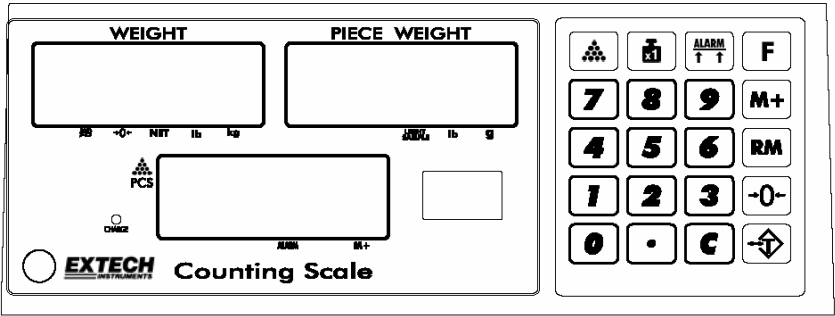


User's Guide



Precision Counting Scale
With RS232 Interface

Models 160272 and 160275



Introduction

Congratulations on your purchase of the Extech 160272 / 275 Counting Scale. This scale, with proper care, will provide years of safe reliable service.

Specifications

	160272	160275
Range	6 lbs. / 3 kg	15 lbs. / 7.5 kg
Resolution	0.0005 lbs. (0.0002 kg)	0.002 lbs. (0.0005 kg)
Accuracy	0.01%FS + 2 digits	
Pan Size	10.2 x 7.9" (259 x 201mm)	
Dimensions	10.6 x 13 x 4.5" (269 x 330 x 114mm)	
Net Weight	10 lbs. (4.6 kg)	
Power	9V (500mA) AC Adapter/Charger	

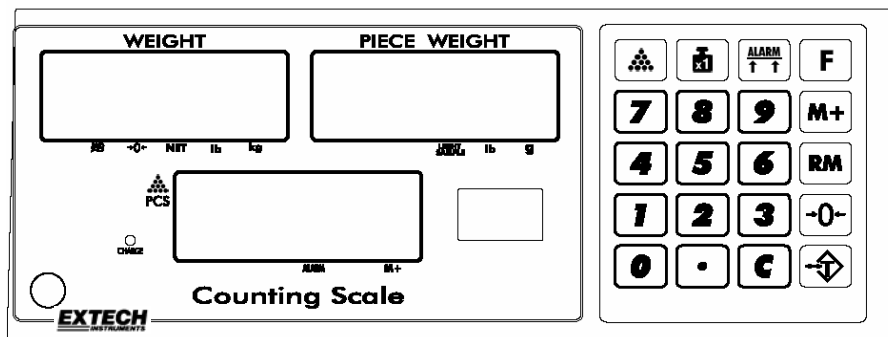
Disclaimer Notice













Calibrate the scale using reference weights of the appropriate tolerance (class). An instrument can be no more accurate than the standard to which it has been compared.

Preparation

- Select a suitable work area (this product is intended for indoor use).
- The work area should be relatively free from drafts and vibrations.
- The work surface should be level and rigid.
- Do not locate the scale near magnetic materials or equipment/instruments which use magnets in their design.
- Avoid areas that have large variations in temperature. Also, room temperatures above 104°F or below 32°F could affect instrument.

Scale Description



-   Numeric keys. Used for setting numeric data for tare weight, sample number, sample weight, or limit
-  Sets a new zero reference.
Cancels the stored data in total mode
-  Set the gross weight on the pan to the tare weight
-  Set the decimal point for the tare or sample weight
-  Cancels the numeric data or the Piece Weight data
-  Used for Parts counting mode
-  Sets the known piece weight data
-  Used to toggle between normal counting and checking operations
-  Used when accumulating sub-total data and for various printing operations
-  Used to toggle between normal counting and memory recall modes
-  Function key for lbs/kg selection


Getting Started

- a. Power the scale by connecting the AC Adaptor / Charger to the power jack on the bottom right side of the scale and to the AC source. Turn the scale on via the power switch. The power switch is located on the bottom right side of the scale. Once the internal 9V battery is charged, the scale can be used without the adaptor connected.
- b. Upon start-up, the display will count down from '999999'.
- c. Allow the scale to warm-up for 30 minutes.



Taring (Zeroing)

Each model has tare capability up to its total weight capacity. For reducing the tare weight from the scale there are two methods:

1. Push button tare

- a. Place sample container on pan and then press the  key. The NET indicator will turn on and the WEIGHT display will show zero.
- b. Now place the sample in its container.
- c. When the scale display is stable it shows the weight of the sample.


2. Keyboard tare

- a. Set the known tare weight using the numeric keypad. Do not enter the decimal point. The data is displayed in the flashing PIECE WEIGHT display.
- b. Press the  key.
- c. This sets the tare weight displayed in the WEIGHT display to zero. This also clears the previous tare.
- d. Remove weight from pan then press the  key, so that the NET indicator switches off and the WEIGHT display returns to zero.


Counting Function

There are two setting methods: PIECE COUNT and PIECE WEIGHT.

1. Piece Count Setting

- a. Count the desired number of sample pieces (10, 20, 50, 100, or 200 total pieces), placed on the pan. The total weight is shown on the WEIGHT display.
- b. Set the number of samples using the numeric keys. The number is shown on the flashing PIECE WEIGHT display.
- c. Press the  key, the PIECE WEIGHT display shows the average piece weight and the QUANTITY display shows the sample number.

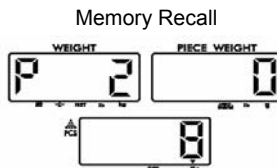
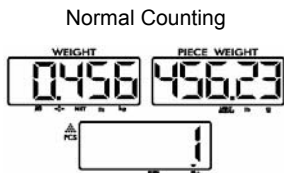
2. Piece Weight Setting (Use this method if the piece weight is known)

- a. Set the piece weight using the numeric keys and the decimal point key. The number is shown on the flashing PIECE WEIGHT display.
- b. Press the  key, to complete the PIECE WEIGHT setting.

The Piece weight alarm 'LIGHT SAMPLE' indicator will flash when the average piece weight or set piece weight is not sufficient for accurate counting. The scale may still be used in this case but counting errors may occur.

Accumulation Function

1. Press the **M+** key to accumulate the sub-total piece count (M+ appears on display).
2. Return the scale to zero before accumulating a new piece count.
3. Press the **RM** key to toggle between normal counting and memory recall mode.



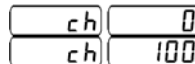
Note: The **0** key can be used to delete the grand total.

Alarm Functions

1. Alarm Setting

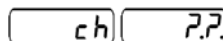
This function is designed for packing applications. For example, if the user wishes to pack 100 pieces in each carton, the upper limit can be set to 100 pieces.

- a. Press the **ALARM** key
- b. Press the **1** **0** **0** keys and then the **h** key
- c. Press the **ALARM** key, to return to normal counting mode.
- d. The Alarm indicator will turn ON.
- e. Now if the total quantity reaches 100 or more the scale will emit a series of beeps.



2. Alarm Release

- a. Press the **ALARM** key
- b. Press the **C** **h** keys and the **ALARM** key
- c. The indicator will turn off.



Programming

Press and hold any key while turning the scale on. The display will show

CAL

Press **3** to access the program sequence.

Press **⏏** to sequence through the available parameters.

Press **↔** to change settings and advance to the next step (see below):

Auto Power Off	P0	0	Off
	P0	1	After 5 minutes
	P0	2	After 10 minutes
	P0	3	After 20 minutes
	P0	4	After 30 minutes
Backlight	P1	0	Off
	P1	1	On
	P1	2	Auto lighting while loading
RS232 Output	P2	0	Off
	P2	1	Enabled

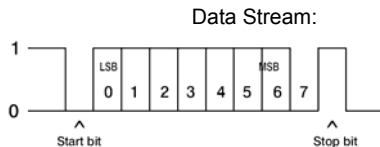
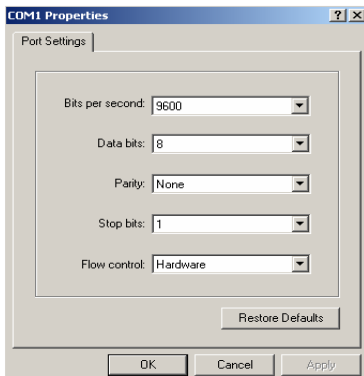
Error Messages

Display	Cause	Solution
┌───┐	Overload Weighing range exceeded	Unload scale
└───┘	Underload Weighing pan not in place Weighing range is below zero	Ensure pan is in place set scale to zero
- 0 L -	Zeroing not possible Zeroing outside the zero setting range	Perform zero in admissible range

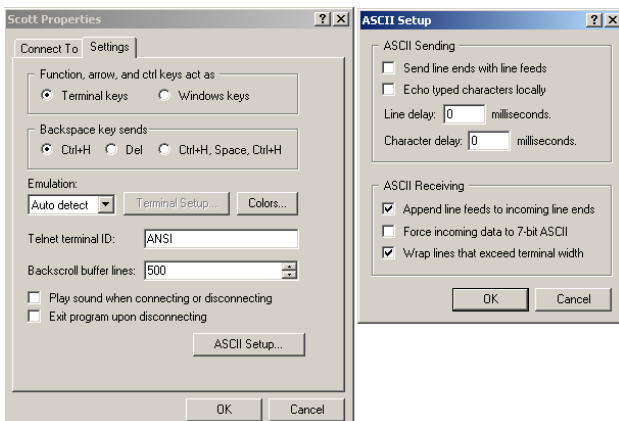
RS232 Specifications & Connections

The scale comes with a uni-directional RS232 port allowing the scale to transmit data to a PC via a communication program such as Hyper Terminal. The physical connection is made via the COM port through a 9 pin data cable.

Hyper Terminal Settings:



Once Hyper Terminal link has been completed, select PROPERTIES from the Hyper Terminal menu and change settings as shown.



To transmit from the scale to the PC press the **M+** key.
Data transmitted will appear in the following format.

```
ID : XXXXXXXXXX
WT : XXXXX LB
APW1000 : XXXXX LB
QTY : XXXXXX PCS
```

Calibration and Repair Services

Extech offers complete repair and calibration services for all of the products we sell. For periodic calibration, NIST certification or repair of any Extech product, call customer service for details on services available. Extech recommends that calibration be performed on an annual basis to insure calibration integrity.

Warranty

EXTECH INSTRUMENTS CORPORATION warrants this instrument to be free of defects in parts and workmanship for one year from date of shipment (a six month limited warranty applies on sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website at www.extech.com (click on 'Contact Extech' and go to 'Service Department' to request an RA number). A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.



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