

# ***TS-70PX / XI***

## *Digital Postal Scale*

### Operation Manual

Revision 1.0  
May 22, 2003



"ACCURATE AROUND THE WORLD  
SINCE 1897"

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## **CHAPTER 1: INTRODUCTION**

Thank you for purchasing the *TS-70PX / Xi* Digital Postal Computing Scale. This unit is designed specifically for the US Postal Service and is loaded with many features that guide you through day to day mailing activities. It is also very user friendly and is fully updateable to future postal rates and zone changes. The Model *TS-70PX / Xi* has a maximum weighing capacity of 70 pounds.

Prior to using the scale, please read this user's guide carefully and completely. Store the manual in a safe and convenient place so it will be available if you have questions concerning the operation of the scale.

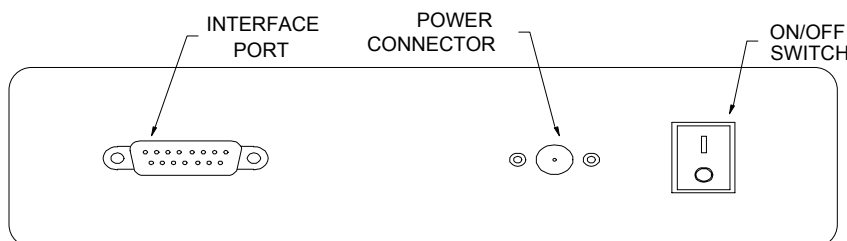
### ***VERY IMPORTANT!***

*Before you use the TS-70PX / Xi for calculating postal rates **your** zip code **must** be programmed into the scale. This is to ensure proper zip to zone conversion. Please refer to the **Zip Code Setup Menu** section 6.2 in this manual for information on programming your zip code.*

*Your **new** scale is **Factory Calibrated**. Do not attempt to calibrate the scale without contacting a Triner Scale technician. Call 1-800-238-0152 for assistance.*

## CHAPTER 2: GETTING STARTED

After unpacking the scale, a small amount of preparation is required before the scale can be used for mailing or shipping. Please refer to Figure 2-1 below as needed.



**Figure 2-1: TS-70PX / Xi Back Panel**

**Step 1.** Position the scale in its area of intended use. Observe the following guidelines for suitable location:

- Choose a firm, stable floor or table.
- Do not share an AC outlet with electrical noise producing equipment, such as refrigeration units. This includes products with electrical motors and/or relays.
- Do not place the scale in an area with changing ambient temperature and/or high humidity.
- Do not place the scale in an area prone to exposure to direct sunlight, wind, or dust.
- Do not place the scale in an area with vibrating equipment.

**Step 2.** Connect the scale to postage meter interface cable (TS-70Xi Only).

**Step 3.** Install the AC Adapter.

1. After placing the scale in its area of use, locate the AC Adapter.
2. Connect the female end of the AC Adapter to the connector on the rear of scale, and then plug the adapter into an AC outlet.

**Step 4.** Turn the scale's AC power on to begin the initialization.

**Step 5.** Initialization - ***The first time the scale is turned on you may be required to enter your origin ZIP Code.***

1. When the AC power switch is placed "ON" position, the scale prompts for your "origin ZIP Code ???".
2. Enter the first three digits of your ZIP Code. The scale displays the ZIP Code entered and prompts you to verify (Yes or No) if the ZIP Code displayed is correct.
3. If the ZIP Code is correct, press the "Yes" (Enter) key to complete the initialization or if the ZIP Code is incorrect, press the "No" (Clear) key and enter the correct ZIP Code.

### CHAPTER 3: BASICS OF OPERATION

#### 3.1 DIGITAL DISPLAY

The display is a large LCD (Liquid Crystal Display) display capable of displaying the various system messages and information. It is also backlit for easy viewing under all lighting conditions.

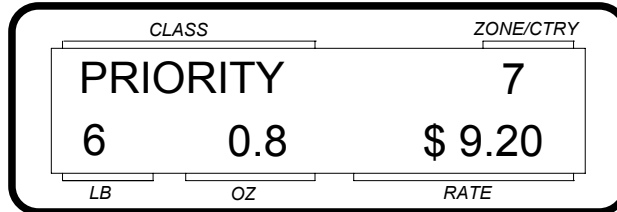


FIGURE 3-1: TS-70PX / Xi Display Detail

As shown in Figure 3-1, the scale displays the class of mail, weight, shipping charge (rate) and destination zone or country. When additional information is needed, the scale will prompt for the information.

#### 3.2 KEYBOARD

The keyboard is composed of rate keys, operator keys and function keys. Refer to Figure 3-2 for the overall layout and key locations.

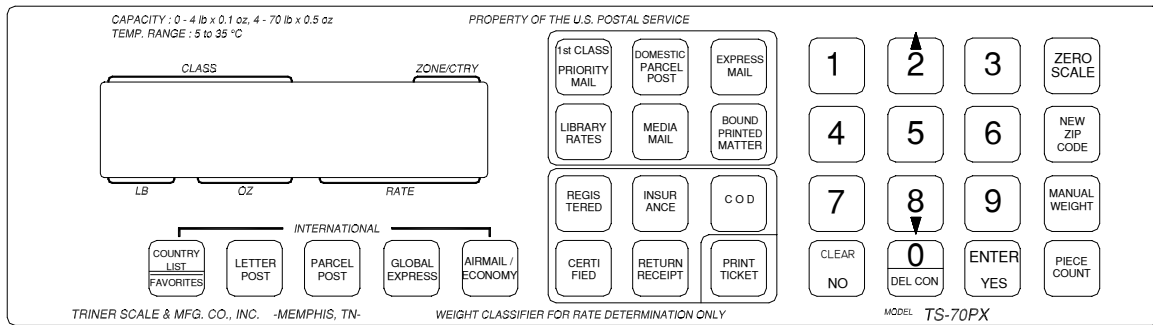


FIGURE 3-2: TS-70PX RATE KEYS AND OPERATOR KEYS LAYOUT



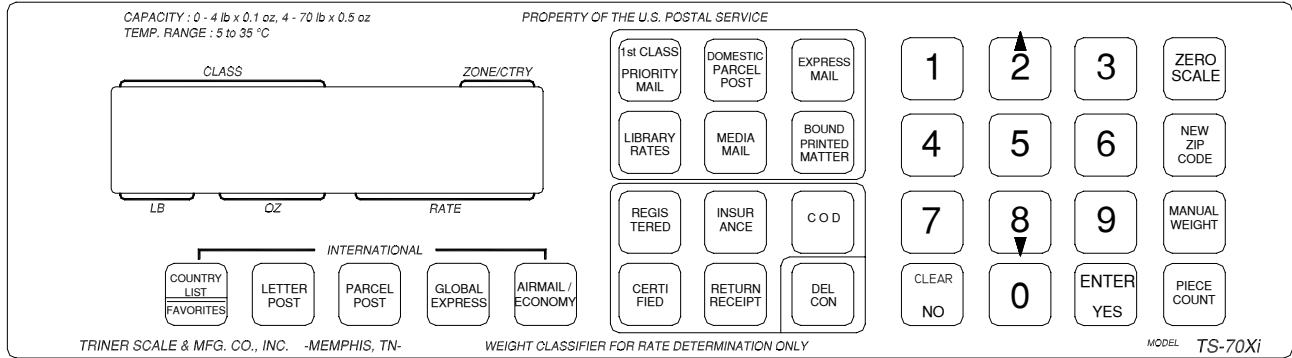


FIGURE 3-3: TS-70Xi RATE KEYS AND OPERATOR KEYS LAYOUT

### 3.2.1 USPS RATE KEYS

The following keys allow the access to the USPS rates on the scale keyboard. Pressing the key will select the chosen rate.

#### 3.2.1.1 USPS Rate Keys

**1<sup>st</sup> Class/Priority Mail** - This key is used to select the 1st Class or Priority mail rate class. The scale defaults to the 1st Class mode whenever the scale is turned on.

**Domestic Parcel Post** - Used for mailing certain items-books, circulars, catalogs, other printed matter, and merchandise-weighing not more than 70 pounds.

**Express Mail** - This key is used to select the Express Mail Post Office to Addressee or PO to PO. Press key once for PO-to-AD. Press again for PO-to-PO rates.

**Library Mail** - Used by qualifying institutions like libraries, universities, zoos, and research institutions to mail educational and research material.

**Media Mail** - Generally used for books (at least eight pages), film (16 mm or narrower), printed music, printed test materials, sound recordings, play scripts, printed educational charts, loose-leaf pages and binders consisting of medical information, and computer-readable media.

**Bound Printed Matter** - This key is used to select the Bound Printed Single-Piece (Matter) rate.

**International (Airmail / Economy)** - The following key is used to select either the International Airmail rates or the International Economy rates.

**Global Express Mail** – This key is used for express delivery of letters documents and packages worldwide.

**International Airmail** - This key is used to select the International Air rates. If an International Economy rate is already displayed, this key toggles the display to show the International Airmail rate.

**International Economy** - This key is used to select the International Economy (surface) rates. If an International Airmail rate is already displayed, this key toggles the display to show the International Economy (surface) rate.

**Letter Post** – This key is used to select the International Airmail or Economy Letter Post rate.

**Parcel Post** - This key is used to select the International Airmail or Economy Parcel Post rate.

### **3.2.2 OPERATOR KEYS**

The remainder of the keys acts as various function keys. Some have to do with rate calculations and some have to do with actual scale operation. In each case, pressing the key will activate the chosen function or prompt for further information.

#### **3.2.2.1 SPECIAL SERVICES KEYS**

These keys are used to select the special services offered by the USPS. If the service is not available with the current class of mail, the scale will briefly display “*Service N/A*”. If the service is not valid with a previously chosen service, the scale will briefly display “*Invalid Service*”.

- **Registered** - If this service is selected, the scale prompts you to enter the Registered Amount. When Registered is selected and an amount is entered, the scale automatically includes postal insurance.

- **Certified** - If this service is selected, the appropriate fee for the transaction is applied to the displayed rate.

- **Return Receipt** - If this service is selected, the scale will ask if it is return receipt for merchandise. Select “Yes” or “No”. The appropriate fee will be applied to the displayed rate.

- **Collect On Delivery (C.O.D.)** - If this service is selected, the scale displays “*Enter Val = 0*”. Once the value is entered, the appropriate fee for the transaction is applied to the displayed rate.

- **Insurance** - If this service is selected, the scale displays “*Enter Val = 0*” and allows you to enter the insured amount. After an amount is entered the appropriate fee for the transaction is applied to the displayed rate.

- **Delivery Confirmation (Del Con)** - If this service is selected, the appropriate fee for the transaction is applied to the displayed rate.

**3.2.2.2 NEW ZIP CODE Key**

The NEW ZIP CODE key is used to change the current destination ZIP code or Zone .

**3.2.2.3 CLEAR (NO) KEY**

The CLEAR/RESET key is used to clear the current entry, clear the special service fees applied or to answer a YES/NO question. If an incorrect data entry is made, pressing this key will only clear the current data from the display.

**3.2.2.4 ZERO SCALE KEY**

The ZERO SCALE key is used to Zero the scale. When this key is selected, the scale zeros the weight.

**3.2.2.5 ENTER (YES) KEY**

The ENTER (YES) key is used to accept data when in data entry mode or answer a YES/NO question.

**3.2.3 FUNCTION KEYS**

The function keys are used to access less frequently used scale operations.

**3.2.3.1 PIECE COUNT**

The Piece Count function puts the scale into a counting mode. Refer Section 5.1 for the Piece Count operation procedure.

**3.2.3.2 MANUAL WEIGHT**

Pressing the manual weight button places the scale into the manual weight mode. In this mode the user can input the weight of an item via the numerical keypad and perform rate calculations. Press the manual weight button again to return to the normal weighing mode.

**3.2.3.3 MANUAL POSTAGE (1) KEY (TS-70Xi ONLY)**

Pressing the manual postage (1 Key) places the scale into the manual postage mode. In this mode the user can input the postage of an item via the numerical keypad and press Enter, sending the postage to the meter.

**3.2.3.4 AUTO CORRECT (2) Key (TS-70Xi ONLY)**

This mode is used when there is already postage on the package but the postage is not enough. First place the package on the scale and then select the class of service. Once the rate is displayed, press the auto correct button (2 Key), which places the scale into auto correct mode. In this mode the user will input the postage that is on the package. The scale will then subtract the postage that is on the package from the total postage and send the remaining amount that must be added to the meter.

### **3.3 GENERAL SCALE OPERATION**

#### **3.3.1 SYSTEM PROMPTS**

The *TS-70PX / Xi* scale prompts for information in three ways:

•**Numeric Entry** - This type of prompt appears as an “Enter Val” message with an equal sign indicating a zero value. Use the numeric keys to enter the requested data and press the ENTER key to complete the entry. If you make a mistake during the entry, press the CLEAR key to start over.

•**ZIP Code/ Country Code Entry** - This type of prompt appears as a message with three question marks (???). Use the numeric keys to enter the requested data. There is no need to press the ENTER key to complete the entry. If you make a mistake during the entry, press the CLEAR key or New Zip Code key to start over or New Zip Code key.

•**YES/NO Question** - This type of prompt appears as a message with a (Y/N?) suffix. Press the ENTER key for a YES response. Press the CLEAR key for a NO response.

#### **3.3.2 MAILING OR SHIPPING AN ITEM**

There are four basic steps to shipping a letter or package. Refer to Section 4 for detailed examples.

1. Place the letter or package on the scale’s platter and allow the weight indication to stabilize. For more information on weighing an item, see Section 3.3.3.
2. Press a rate key to select the mailing or shipping method. Refer to Section 3.3.4 for more information on selecting the desired class of mail.
3. If the method of shipment and/or the weight of the item requires a ZIP Code or country code, the scale prompts (displays three question marks) for a three digit code. Use the numeric keys to enter the destination ZIP Code or country code. Refer to Section 3.3.5.1 for more detailed information on entering a ZIP Code or Section 3.3.5.2 for more detailed information on entering a country code.
4. If required, select a special service (i.e. Insurance, C.O.D., etc.). Press the appropriate key to select the desired special service. Refer to Section 3.3.7 for more detailed instructions on the special services keys.

#### **3.3.3 WEIGHING A LETTER OR PACKAGE**

Before weighing an item, make sure the scale shows a zero weight indication. If it does not, remove all items from the platter and press the ZERO SCALE key.

To weigh an item, place it on the center of the weighing platter. Once the weight stabilizes, the scale’s display also stabilizes. If the item weight exceeds the scale’s weight capacity, it displays “*OVERWT*”.

#### **3.3.4 SELECTING A CLASS OF SERVICE**

To select a mailing or shipping rate, simply press the appropriate rate key. The available classes are listed in Section 3.2.1.

### **3.3.5 ENTERING A ZIP CODE OR COUNTRY CODE**

#### **3.3.5.1 ZIP CODE ENTRY**

If the method of shipment and/or the weight of the item requires a ZIP Code, the scale will prompt for a ZIP Code entry.

- When the scale prompts you for a ZIP Code, enter the three-digit destination ZIP code. When you enter third digit, the scale automatically completes the entry.
- You may also enter a destination zone with less than three digits. For example, to enter zone 8, press “8” then press the ENTER key to complete the entry.
- If the scale displays “Invalid ZIP”, re-enter a valid ZIP Code.
- If you want to change the current ZIP Code or Zone, press the NEW ZIP CODE and enter the new ZIP Code.

#### **3.3.5.2 COUNTRY CODE ENTRY**

When one of the International rate keys is selected, the scale prompts you for a three-digit numeric country code.

- Refer to the Country Code Chart in Appendix F and enter the three-digit destination country code.
- If an invalid country code is entered, the scale displays "Invalid Cty Code" and prompts you again for the country code.
- If an entered country has a service suspension imposed by the USPS or the selected class of mail is not available to that country, the scale displays an error message and prompts you again for the country code.

### **3.3.6 COUNTRY LIST / FAVORITES**

If you are using one of the international rate keys and the scale prompts you to enter the country code, you can press the COUNTRY LIST/ FAVORITES Key to get a listing of the countries. Press the COUNTRY LIST once to access a list of all countries that the USPS serves. Scroll through the list by using the arrow keys (key number 2 to go up or number 8 to go down). Pressing once will advance the list one country at a time. Continually pressing the arrow key will scroll through rapidly. Choose the country by placing it in front of the asterisk on the display and pressing the ENTER key..

You can also enter a shorter list of countries that you ship to more frequently by using the FAVORITES key. To set up your more frequently used countries, perform the following:

1. Press the COUNTRY LIST/FAVORITES Key. A list of countries will appear on the display.
2. Scroll to a country that you mail to often. When the display shows that specific country next to the asterisk, press the Country List/Favorites key once again. This will store the country into the FAVORITES list.
3. Repeat above steps until you have chosen all of your countries.

4. To verify if the countries have been copied into your FAVORITES list, scroll through until "Favorites" is in front of the asterisk and press the ENTER key. A list showing the favorite countries you have selected will appear.
5. Choose "ALL COUNTRIES" to return to the main country list.

To delete a country from your FAVORITES list, perform the following:

1. Press the COUNTRY LIST / FAVORITES key.
2. Press ENTER to go to your favorites list.
3. Scroll to the country you wish to remove from the list.
4. Press the CLEAR key.
5. The scale will display "Clear Ctry?(Y/N)"
6. Press the YES key.

You can also clear the entire FAVORITES list by performing the following:

1. Turn the scale off.
2. Hold down the number 1 key and turn the scale back on.
3. The scale will display "Clear Faves? Y/N"
4. Press the YES key.

### **3.3.7 SELECTING SPECIAL SERVICES**

After selecting a class, press a Special Services key to select a service. If the Special Services key is pressed before a class is selected, or the special service is not available for the selected class of mail, the scale displays "*Invalid Service*".

When a value must be entered to determine the special service fee (COD, Registered, and Insurance), the scale prompts for a numeric entry. After the amount is entered, press the ENTER key to accept the input. The available special services are listed in Section 3.2.2.1.

### **3.3.8 USING THE TS-70Xi WITH A T-1000 POSTAGE METER**

Note: The model TS-70Xi scale is factory set to interface with the Francotyp-Postalia model T-1000 postage meter.

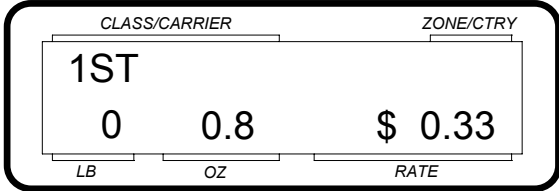
1. Make sure the scale to postage meter interface cable is connected.
2. Press the scale key on the postage meter (top right key). Make sure the scale icon lights up on the postage meter.
3. Place an item on the scale.
4. The scale will automatically transmit the displayed postage to the meter.

For assistance please call 1-800-238-0152.

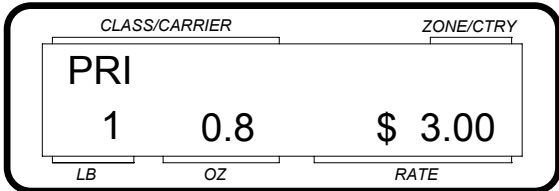
**CHAPTER 4: EXAMPLES OF OPERATION**

**4.1 SENDING A LETTER OR PARCEL BY USPS FIRST CLASS/PRIORITY MAIL**

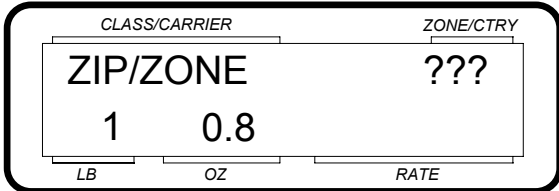
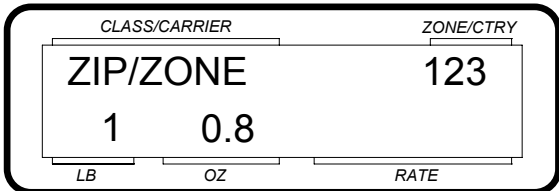
1. 1ST Class Mail (Weight Less Than or Equal To 13 ounces)


ACTION	DISPLAY EXAMPLE
1. Press the 1 <sup>st</sup> Class / Priority key. No further action is necessary.	 <p>The display shows '1ST' in the CLASS/CARRIER field and 'ZONE/CTRY' in the top right. The weight is shown as '0' in the LB field and '0.8' in the OZ field. The rate is shown as '\$ 0.33' in the RATE field.</p>

2. Priority Mail (Weight from 13 oz. to 5 Pounds)

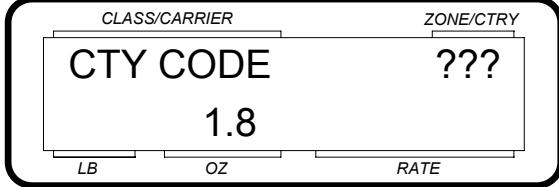
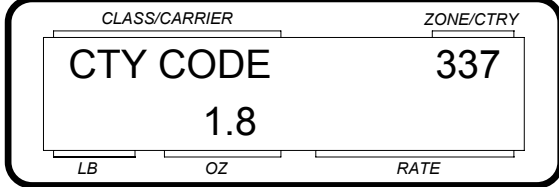
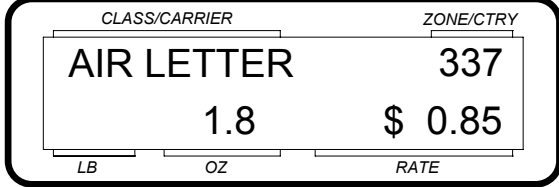
ACTION	DISPLAY EXAMPLE
1. Press the 1 <sup>st</sup> Class / Priority key. No further action is necessary.	 <p>The display shows 'PRI' in the CLASS/CARRIER field and 'ZONE/CTRY' in the top right. The weight is shown as '1' in the LB field and '0.8' in the OZ field. The rate is shown as '\$ 3.00' in the RATE field.</p>

3. Priority Mail (Over 5 Pounds)

ACTION	DISPLAY EXAMPLE
1. Press the 1 <sup>st</sup> Class / Priority key	 <p>The display shows 'ZIP/ZONE' in the CLASS/CARRIER field and 'ZONE/CTRY' in the top right. The weight is shown as '1' in the LB field and '0.8' in the OZ field. The rate field shows '???'.</p>
2. Enter the first three digits of the destination ZIP code using the numeric keys. In this example, we will use ZIP code 123.	 <p>The display shows 'ZIP/ZONE' in the CLASS/CARRIER field and 'ZONE/CTRY' in the top right. The weight is shown as '1' in the LB field and '0.8' in the OZ field. The rate field shows '123'.</p>

<p>3. The screen now shows the USPS Priority Mail rate.</p>	
---	--

**4.2 SENDING AN INTERNATIONAL AIR LETTER**

ACTION	DISPLAY EXAMPLE
<p>1. Press the Letter Key.</p>	
<p>2. Using the numeric keys, enter the country code from Appendix F. In our example, we will choose Canada, which has a country code of 337. Or use the country list to select the country as described in section 3.3.6.</p>	
<p>3. The screen now shows the USPS Air Letter rate to Canada.</p>	



## **CHAPTER 5: ADVANCED FEATURES AND OPERATION**

### **5.1 PIECE COUNTING**

This function is used to count items of identical weight. To maintain the count accuracy, the following guidelines should be followed:

- All items placed on the scale must be of the same weight.
- The minimum sample count is 10.
- The minimum weight per piece must be 0.1 ounces for a sample count of 10.
- The total weight of the items sampled must be 1 ounce or greater.

1. Remove all items from the scale.
2. Press the ZERO key.
3. Press the PIECE COUNT key. The scale prompts you to place a 10-piece sample count on the scale.
4. Place the 10-piece sample count on the scale. The scale prompts you to press the ENTER key.
5. Press the ENTER key.
6. Remove the sample count from the scale.
7. Place the items to be counted on the scale. As items are added to or removed from the scale the display reflects count.
8. Press the CLEAR key to return to normal scale operation.

**NOTE:** If the total weight of 10 samples is less than 1 ounce, it will not register as a full sample. If this occurs, press the ENTER key and the scale will prompt for a 20-piece sample count.

## **CHAPTER 6: SETUP OPERATIONS**

### **6.1 SETUP OPERATION OVERVIEW**

The system setup consists of three setup areas: Setup Menu, Calibration Menu and Analog to Digital Conversion Diagnostic Menu.

### **6.2 ZIP CODE SETUP MENU**

The Setup Menu is used to configure the Origination ZIP.

1. Press and hold the ZERO SCALE key while turning on the scale. When the message “ZIP Code OK?” appears on the screen, you are in Setup Menu Mode and you may release the ZERO SCALE key.

#### **6.2.1 ORIGINATION ZIP CODE**

This function is used to program your origination ZIP code.

1. Enter the Setup Menu Mode as described above. The scale prompts ” ZIP Code OK?” and displays the current ZIP code.
2. Press the ENTER (Yes) key to accept the displayed ZIP code or press the CLEAR (No) key to change the ZIP code.

**Note:** If “Yes” is selected, the scale proceeds to a screen showing the current zip. Then it will go the normal weighing mode. If “No” is selected, the message “Input ZIP = ???” appears in the display.

3. Using the numeric keys, enter the first three digits of your ZIP code. Once all three digits are entered, the scale prompts ” ZIP Code OK?” and displays the current ZIP code. Repeat Step 2.

**Note: For the TS-70Xi Only,** If “Yes” is selected, then you must press the ENTER key 3 more times before the scale proceeds to normal weighing mode.

### **6.3 CALIBRATION MENU**

Your *TS-70PX / Xi* scale ships from the factory fully calibrated. There is no need to calibrate the scale unless you feel that it has become inaccurate. It is a good idea to check the calibration of your scale from time to time with a precision test weight. Triner recommends that you perform a new calibration on your digital scale at least once a year.

The *TS-70PX / Xi* scale may be calibrated using precision test weights of 4 lb and 50 lb.

1. Enter the Calibration Mode by pressing and holding the (6) key while turning on the scale. When the message “Calibration? Y/N” appears on the screen, you are in Calibration Mode and you may release the (6) key.
2. Press the ENTER (Yes) key enter the calibration mode. The scale displays the message “C 0 PR ZERO”.
3. Remove all items from the scale’s platter and then press the ZERO SCALE key to zero the scale. The scale displays the message “C 0 PR ENTER”.
4. Press the ENTER key to save the zero point value. The scale displays the message “C 4 “.
5. Place the 4 lb test weight(s) onto the scale’s platter. When the weight stabilizes, the scale displays the message “C 4 PR ENTER”.
6. Press the ENTER (Yes) key to save the 4 lb calibration value. The *TS-70PX / Xi* scale displays the message “C 50 “.
7. Place 50 lbs of test weight onto the scale’s platter. When the weight stabilizes, the scale displays the message “ PR ENTER”.
8. Press the ENTER (Yes) key to save the 50 lb calibration value. The scale then displays the message “Calibration End”.
9. Turn OFF the scale then turn back ON to resume normal operation.

**6.4 ANALOG TO DIGITAL CONVERSION (ADC) DIAGNOSTIC MENU**

This menu is for Triner technical personnel only.

1. Enter the ADC Mode by pressing and holding the (4) key while turning on the scale.

**6.5 POSTAGE METER SETUP (TS-70Xi only)**

**6.5.1 SETTING CODE ENTRY**

This menu is for Triner technical personnel only.

Note: The model TS-70Xi scale is factory set to interface with the Francotyp-Postallia model T-1000 postage meter.

Only perform the following if the scale Displays “Set Code Err” and “Non-Interface” when the scale is turned on. If problem still exists please call 1-800-238-0153 for a new setting code.

1. Hold down the number 3 key. While holding the number 3 key turn the scale back on.
2. The scale will display the following: 

INTERFACE OK? FP T-1000
----------------------------
3. Press the YES key.
4. The scale will display the following: 

S/N OK?
---------
5. Press the CLEAR / NO key.
6. The Scale will display the following: 

ENTER S/N:
------------

7. Enter the last 8 digits of the scale serial number then press the ENTER key.
8. The scale will display the following: 

S/N OK? (The serial number you entered)
--
9. Press the YES key.
10. The scale will display the following: 

SET CODE OK?
--------------
11. Press the NO Key.
12. The scale will display the following: 

ENTER SET CODE
----------------
13. Key in the setting code.
14. The scale will display the following: 

SET CODE OK? (The setting code you entered)
--
15. Press the YES key.
16. The scale will return to the regular weighing mode.

### 6.5.2 METER MODE

This function is used to program the meter-operating mode. There are 3 modes to choose from.

- **“0”= Auto Set:** The scale automatically transmits the postage amount to the meter when the weight stabilizes. This is the recommended setting.
- **“1”= Set Only:** The user is required to press the Set Meter (ENTER) key to transmit the postage to the meter for each transaction.
- **“2”= Set / Clear:** The user is required to press the Set Meter (ENTER) key to transmit the postage to the meter for each transaction. The user is also required to press the Set Meter again to “clear” the last postage amount before the next transaction.

To change the Meter Mode perform the following:

1. Enter the Meter Mode by pressing and holding the (2) key while turning on the scale. When the message “Meter Mode” appears on the screen you may release the (2) key.
2. Press the “No” key.
3. The scale will display “Meter Mode (0-2)”
4. Select the desired Meter Mode.
5. Press the “Yes” key to confirm your selection.

**6.6 SPECIAL FUNCTION KEYS (TS-70Xi only)**

1. Press and hold the ZERO SCALE key while turning on the scale. When the message “ZIP Code OK?” appears on the screen, you are in Setup Menu Mode and you may release the ZERO SCALE key.

**6.6.1 MANUAL POSTAGE**

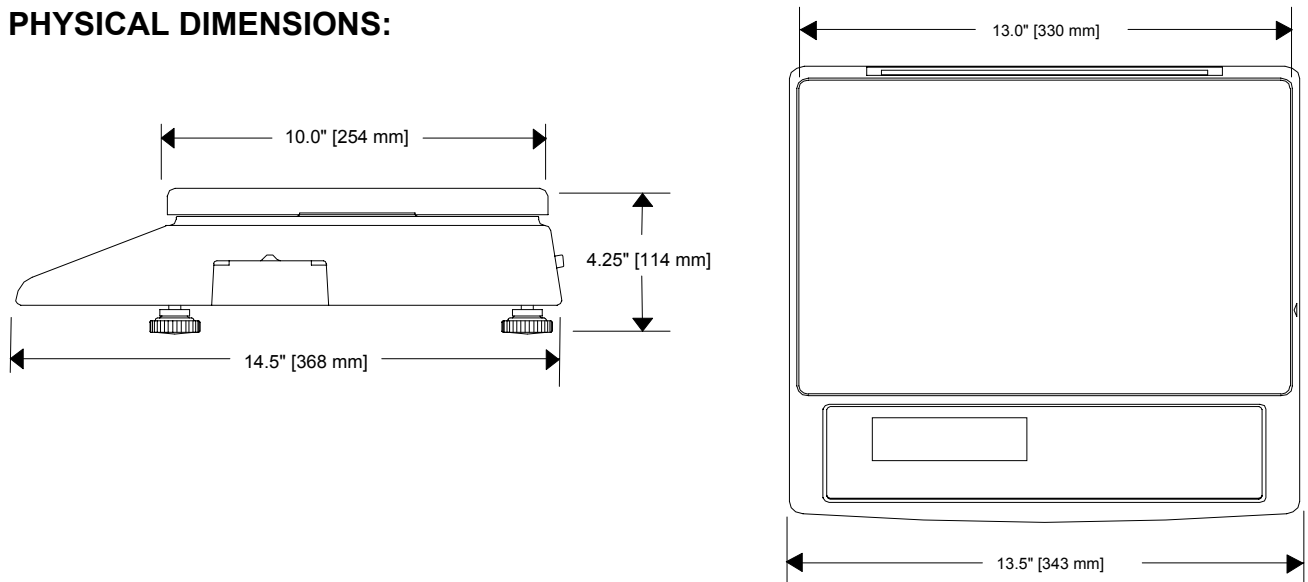
1. Press the ENTER key 2 times to proceed to the first special function, Manual Postage. The scale displays “Man Postage OK?”
2. Press the ENTER (Yes) key to accept the displayed setting (On or Off) or press the CLEAR (No) key to change the setting.
3. If No is selected, use the 0 and 1 keys to toggle on or off. Press the 0 key for OFF or the 1 key for ON and the scale displays “Man Postage OK?” Repeat Step 2.

**6.6.2 AUTO CORRECT**

1. The scale displays “Auto Correct OK?” Press the ENTER (Yes) key to accept the displayed setting (On or Off) or press the CLEAR (No) key to change the setting.
2. If No is selected, use the 0 and 1 keys to toggle on or off. Press the 0 key for OFF or press the 1 key for ON. Repeat Step 1.

**APPENDIX A: SPECIFICATIONS**

**PHYSICAL DIMENSIONS:**



**General**

- NTEP Approval: Certificate of Conformance number 00-063
- Weighing Platform: 10" x 13"
- Overall Dimensions: 14 1/2" L x 13 1/2" W x 4 1/4" H
- Platform Material: Heavy duty scratch resistant textured ABS (stainless steel optional). Platform is positively attached to "sub platform" via hex screws.
- Platform Color: Wilson Art D315-60
- Scale Housing: Heavy duty scratch resistant textured ABS
- Scale Housing Color: Wilson Art D315-60
- Sub Platform: Rigid heavy duty formed yellow zinc plated corrosion resistant steel.
- Bottom Plate: Rigid heavy duty formed yellow zinc plated corrosion resistant steel.
- Leveling: 4 adjustable rubber shock absorbing legs with locking nuts. Level bubble indicator.
- Overload Stops: 4 corner stops and 1 load cell stop.
- Capacity: 70 Lbs
- Graduations: 0-4 lb x 0.1 oz, 4-70 lb x 0.5 oz
- Temperature Range: 0° C to 40°C (32°F to 104°F)
- Serial Port: Full duplex RS-232, male DSUB9
- Net Weight: 21 Lbs
- Shipping Weight: 29 Lbs

**Power**

- Source: 12 Volt AC adapter, 800 Ma, wall type

- Input To Scale: The scale has two power input locations. One at the rear of the unit and one located on the bottom. The hidden bottom input is used in lobby applications so that patrons cannot unplug the scale.

### **Keypad**

- Type: 33-key tactile keypad

### **Scale Markings**

- Keypad overlay includes all elements to conform to NTEP (including capacity, graduations, temperature range, etc)
- “Property of The US Postal Service” text conspicuously printed centered top of overlay.
- Lb, Oz, Class, Rate, and Zone / Country designation text aligned around display screen for easy user reference.
- All keys for classes, services, international, numeric keypad, special scale functions are color coded and grouped for ease of operation.
- Model TS-70PX / XI text clearly visible on front of scale for quick identification.
- Serial Tag: Conforms to NTEP. Identifies model, serial number, manufacturer, capacity, graduations, and accuracy class. Printed barcode on tag for inventory purposes. Tag is destructive type that cannot be removed in one piece.

### **Rate Upgrades**

- Method: User replaceable rate chip/card
- Location: Inconspicuous panel located on the right side of the scale unit.
- Technology: Universal Rate, user programmable per zip code
  - Note: Some manufacturers still use very outdated technology where each chip must be programmed at the factory specifically for each zip code for proper zip to zone conversion.
- Security: For lobby applications an additional stainless steel cover plate is utilized to eliminate patron chip removal. The plate is attached with screws in a fashion so that it can not be removed without unlocking the unit from the counter.

### **Digital Display**

- Type: Large easy to read backlit LCD, 2 lines X 16 characters per line
- Character Size: 5/16”

**APPENDIX B: STANDARD RATES, SPECIAL SERVICES AND FUNCTIONS**

**B.1 STANDARD RATES, SPECIAL SERVICES AND FUNCTIONS**

**B.1.1 UNITED STATES POSTAL SERVICE (USPS)**

1 <sup>st</sup> Class	Express Mail ( PO to PO/ PO to AD)
Priority Mail	Library Rates
Domestic Parcel Post	Media Mail
Bound Printed Matter	
Intl Parcel Post Air	Intl Letter Post Air
Intl Parcel Post Economy	Intl Letter Post Economy
Global Express	

(other rates available upon request)

**B.1.2 SPECIAL SERVICES**

Registered	COD
Insurance	Certified
Return Receipt	Delivery Confirmation

**B.1.3 FUNCTIONS**

- Clear / No
- Enter / Yes
- New Zip Code
- Piece Count
- Manual Weight
- Zero Scale
- Print Ticket



**APPENDIX C: RATE AND SPECIAL SERVICE ABBREVIATIONS**

**C.1 RATE ABBREVIATIONS**

<b>Rate</b>	<b>Display Abbreviation.</b>
USPS First 1st Class	1ST
USPS 1st Priority	PRI
USPS Express	EXP
Domestic Parcel Post	PAR POST
USPS Media Mail	MEDIA
USPS Library	LIB
USPS Bound Printed Matter	BPM
USPS International Air Letter	AIR LETTER
USPS International Air Parcel	AIR PARCEL
USP International Economy Letter	ECO LETTER
USP International Economy Parcel	ECO PARCEL
USPS Global Express	GLOBAL EXP

**C.2 SPECIAL SERVICES ABBREVIATIONS**

<b>Special Services</b>	<b>Long Display</b>	<b>Short Display</b>
Cash On Demand (COD)	COD	CO
Certified Insurance	CERT INS	CT IN
Registered w/ postal insurance	REG (I)	RG
Registered w/o postal insurance	REG	RG
Return Receipt Delivery	RT RCPT DEL	RR DC
Confirmation	CON	

**APPENDIX D: RATE CHANGE INFORMATION**

**D.1 RATE UPDATES**

Triner updates USPS rate and structure changes. The rates and operating system reside on one removable rate card.

**When Postal Rates Change**

**To install your new Rate Chip:**

1. Turn the scale off and unplug the adapter from the wall outlet. If the scale is connected to a remote device, unplug that connection also.
2. The rate chip compartment is located on the right side of the scale. Most scales have a stainless steel cover plate that protects the chip from theft. Remove this plate by removing the two screws that hold it in place.
3. Use a small flat head screw driver and **gently** pop open the plastic rate chip cover plate.
4. Remove the rate card by grasping the edges and pulling towards you.
5. Insert the new rate card (The rate card can only be installed in one direction. If it does not fit properly, turn it over and re-insert). Make sure the card is fully inserted into the slot.
6. Replace the Rate Chip Compartment cover(s).
7. Re-connect the adapter .
8. Your scale is now ready for use with its new, updated rates.

**APPENDIX E: ERROR MESSAGES**

**E.1 ERROR MESSAGES**

If the scale encounters an error condition, it will display a message alerting the operator. A description of each display follows:

**E.1.1 OPERATOR ERRORS**

<b>Message</b>	<b>Explanation</b>
<i>ovwt</i>	Indicates that the weight for the class of service selected has been exceeded
<i>underwt</i>	Indicates that the weight for the class of service selected is too light
<i>OVERWT</i>	Indicates that the weighing capacity of the scale has been exceeded
<i>-----</i>	Indicates that the weight reading is less than zero
<i>Invalid Zip Code Invalid Zone #</i>	Indicates that an invalid ZIP code or zone was entered
<i>Invalid Cty Code</i>	Indicates that an invalid country code was entered
<i>Service N/A</i>	Indicates that the special service is not valid for the class of mail selected
<i>Invalid Service</i>	Indicates that the special service is not valid with the current special service(s) selected.

**Appendix F: Country Code Chart**

300 Afghanistan	352 Cyprus
301 Albania	353 Czech Republic
302 Algeria	354 Denmark
303 Andorra	355 Djibouti
304 Angola	356 Dominica
305 Anguilla	357 Dominican Republic
306 Antigua & Barbuda	358 Ecuador
307 Argentina	359 Egypt
308 Armenia	360 El Salvador
309 Aruba	361 Equatorial Guinea
310 Ascension	362 Eritrea
311 Australia	363 Estonia
312 Austria	364 Ethiopia
313 Azerbaijan	365 Falkland Islands
314 Azores	366 Faroe Island
315 Bahamas	367 Fiji
316 Bahrain	368 Finland
317 Bangladesh	369 France, Monaco
318 Barbados	370 French Guiana
319 Belarus	371 French Polynesia
320 Belgium	372 Gabon
321 Belize	373 Gambia
322 Benin	374 Rep. of Georgia
323 Bermuda	375 Germany
324 Bhutan	376 Ghana
325 Bolivia	377 Gibraltar
326 Bosnia-Herzegovina	378 Great Britain/North Ireland
327 Botswana	379 Greece
328 Brazil	380 Greenland
329 British Virgin Islands	381 Grenada
330 Brunei Darussalam	382 Guadeloupe
331 Bulgaria	383 Guatemala
332 Burkina Faso	384 Guinea
333 Burma	385 Guinea-Bissau
334 Burundi	386 Guyana
335 Cambodia	387 Haiti
336 Cameroon	388 Honduras
337 Canada	389 Hong Kong
338 Cape Verde	390 Hungary
339 Cayman Islands	391 Iceland
340 Central African Republic	392 India
341 Chad	393 Indonesia
342 Chile	394 Iran
343 China	395 Iraq
344 Colombia	396 Ireland (Eire)
345 Comoros	397 Israel
346 Congo, Republic of	398 Italy
347 Corsica	399 Jamaica
348 Costa Rica	400 Japan
349 Cote d'Ivoire (Ivory Coast)	401 Jordan
350 Croatia	402 Kazakhstan
351 Cuba	403 Kenya
404 Kiribati	458 Reunion
405 Korea, North	459 Romania
406 Korea, South	460 Russia

407 Kuwait	461 Rwanda
408 Kyrgyzstan	462 St. Christopher & Nevis
409 Laos	463 St. Helena
410 Latvia	464 St. Lucia
411 Lebanon	465 St. Pierre & Miquelon
412 Lesotho	466 St. Vincent & Grenadines
413 Liberia	467 San Marino
414 Libya	468 Sao Tome & Principe
415 Liechtenstein	469 Saudi Arabia
416 Lithuania	470 Senegal
417 Luxembourg	471 Serbia-Montenegro
418 Macao	472 Seychelles
419 Macedonia	473 Sierra Leone
420 Madagascar	474 Singapore
421 Madeira Island	475 Slovak Republic
422 Malawi	476 Slovenia
423 Malaysia	477 Solomon Islands
424 Maldives	478 Somalia
425 Mali	479 South Africa
426 Malta	480 Spain
427 Martinique	481 Sri Lanka
428 Mauritania	482 Sudan
429 Mauritius	483 Suriname
430 Mexico	484 Swaziland
431 Moldova	485 Sweden
432 Mongolia	486 Switzerland
433 Montserrat	487 Syrian Arab Republic
434 Morocco	488 Taiwan
435 Mozambique	489 Tajikistan
436 Namibia	490 Tanzania
437 Nauru	491 Thailand
438 Nepal	492 Togo
439 Netherlands	493 Tonga
440 Netherlands Antilles	494 Trinidad & Tobago
441 New Caledonia	495 Tristan Da Cunha
442 New Zealand	496 Tunisia
443 Nicaragua	497 Turkey
444 Niger	498 Turkmenistan
445 Nigeria	499 Turks & Caicos Islands
446 Norway	500 Tuvalu
447 Oman	501 Uganda
448 Pakistan	502 Ukraine
449 Panama	503 United Arab Emirate
450 Papua New Guinea	504 Uruguay
451 Paraguay	505 Uzbekistan
452 Peru	506 Vanuatu
453 Philippines	507 Vatican City
454 Pitcairn Island	508 Venezuela
455 Poland	509 Vietnam
456 Portugal	510 Wallis & Futuna Islands
457 Qatar	
511 Western Samoa	
512 Yemen	
513 Congo, Dem. Republic of	
514 Zambia	
515 Zimbabwe	

**APPENDIX G: COUNTRY NAME ABBREVIATIONS**

<u>Country Name</u>	<u>Abbr.</u>	<u>Country Name</u>	<u>Abbr.</u>
Afghanistan	AFGHANIS	Cuba	CUBA
Albania	ALBANIA	Cyprus	CYPRUS
Algeria	ALGERIA	Czech Republic	CZECH RE
Andorra	ANDORRA	Denmark	DENMARK
Angola	ANGOLA	Djibouti	DJIBOUTI
Anguilla	ANGUILLA	Dominican Republic	DOM REP
Antigua & Barbuda	ANTIGUA	Dominica	DOMINICA
Argentina	ARGENTIN	Ecuador	ECUADOR
Armenia	ARMENIA	Egypt	EGYPT
Aruba	ARUBA	El Salvador	EL SALVA
Ascension	ASCENSIO	Equatorial Guinea	EQUATORI
Australia	AUSTRALI	Eritrea	ERITREA
Austria	AUSTRIA	Estonia	ESTONIA
Azerbaijan	AZERBAIJ	Ethiopia	ETHIOPIA
Azores	AZORES	Falkland Islands	FALKLAND
British Virgin Isles	VIRGIN I	Faroe Islands	FAROE IS
Bahamas	BAHAMAS	Fiji Islands	FIJI
Bahrain	BAHRAIN	Finland	FINLAND
Bangladesh	BANGLADE	France, Monaco	FRANCE
Barbados	BARBADOS	French Guiana	FRENCH G
Belarus	BELARUS	French Polynesia	FRENCH P
Belgium	BELGIUM	Gabon	GABON
Belize	BELIZE	Gambia	GAMBIA
Benin	BENIN	Republic of Georgia	GEORGIA
Bermuda	BERMUDA	Germany	GERMANY
Bhutan	BHUTAN	Ghana	GHANA
Bolivia	BOLIVIA	Gibraltar	GIBRALTA
Bosnia-Herzegovina	BOSNIA-H	Great Britain/North Ireland	GREAT BR
Botswana	BOTSWANA	Greece	GREECE
Brazil	BRAZIL	Greenland	GREENLAN
Brunei Darussalam	BRUNEI D	Grenada	GRENADA
Bulgaria	BULGARIA	Guadeloupe	GUADELOU
Burkina Faso	BURKINA	Guatemala	GUATEMAL
Burma	BURMA	Guinea-Bissau	GUINEA-
Burundi	BURUNDI	Guinea	GUINEA
Central African Republic	CENT AFR	Guyana	GUYANA
Cambodia	CAMBODIA	Haiti	HAITI
Cameroon	CAMEROON	Honduras	HONDURAS
Canada	CANADA	Hong Kong	HONG KON
Cape Verde	CAPE VER	Hungary	HUNGARY
Cayman Islands	CAYMAN I	Iceland	ICELAND
Chad	CHAD	India	INDIA
Chile	CHILE	Indonesia	INDONESI
China	CHINA	Iran	IRAN
Colombia	COLOMBIA	Iraq	IRAQ
Comoros	COMOROS	Ireland (Erie)	IRELAND
Congo, Dem. Republic of	CONGO DE	Israel	ISRAEL
Congo, Republic of	CONGO RE	Italy	ITALY
Corsica	CORSICA	Ivory Coast	COTE D'L

<u>Country Name</u>	<u>Abbr.</u>	<u>Country Name</u>	<u>Abbr.</u>
Jordan	JORDAN	Philippines	PHILIPPI
Kazakhstan	KAZAKHST	Pitcairn Islands	PITCAIRN
Kenya	KENYA	Poland	POLAND
Kiribati	KIRIBATI	Portugal	PORTUGAL
Kuwait	KUWAIT	Qatar	QATAR
Kyrgyzstan	KYRGYZST	Reunion	REUNION
Laos	LAOS	Romania	ROMANIA
Latvia	LATVIA	Russia	RUSSIA
Lebanon	LEBANON	Rwanda	RWANDA
Lesotho	LESOTHO	South Africa	SOUTH AF
Liberia	LIBERIA	South Korea	KOREA RE
Libya	LIBYA	Sierra Leone	SIERRA L
Liechtenstein	LIECHTEN	San Marino	SAN MARI
Lithuania	LITHUANI	Sao Tomes & Principe	SAO TOME
Luxembourg	LUXEMBOU	Saudi Arabia	SAUDI AR
Macao	MACAO	Senegal	SENEGAL
Macedonia	MACEDONIA	Serbia-Montenegro	SERBIA-M
Madagascar	MADAGASC	Seychelles	SEYCHELL
Madeira Island	MADEIRA	Singapore	SINGAPOR
Malawi	MALAWI	Slovakia Republic	SLOVAK R
Malaysia	MALAYSIA	Slovenia	SLOVENIA
Maldives	MALDIVES	Solomon Islands	SOLOMON
Mali	MALI	Somalia	SOMALIA
Malta	MALTA	Spain	SPAIN
Martinique	MARTINIQ	Sri Lanka	SRI LANK
Mauritania	MAURITAN	St Christopher & Nevis	ST. CHRI
Mauritius	MAURITIU	St Lucia	SAINT LU
Mexico	MEXICO	St Pierre & Miquelon	SAINT PI
Moldova	MOLDOVA	St Helena	SAINT HE
Mongolia	MONGOLIA	St Vincent & Grenadines	SAINT VI
Montserrat	MONTSERR	Sudan	SUDAN
Morocco	MOROCCO	Suriname	SURINAME
Mozambique	MOZAMBIQ	Swaziland	SWAZILAN
North Korea	KOREA DE	Sweden	SWEDEN
Namibia	NAMIBIA	Switzerland	SWITZERL
Nauru	NAURU	Syrian Arab Republic	SYRIA
Nepal	NEPAL	Taiwan	TAIWAN
Netherlands Antilles	NET ANTI	Tajikistan	TAJIKIST
Netherlands	NETHERLA	Tanzania	TANZANIA
New Caledonia	NEW CALE	Thailand	THAILAND
New Zealand	NEW ZEAL	Togo	TOGO
Nicaragua	NICARAGU	Tonga	TONGA
Niger	NIGER	Trinidad & Tobago	TRINIDAD
Nigeria	NIGERIA	Tristan Da Cunha	TRISTAN
Norway	NORWAY	Turkmenistan	TURKMENI
Oman	OMAN	Tunisia	TUNISIA
Pakistan	PAKISTAN	Turkey	TURKEY
Panama	PANAMA	Turks & Caicos	TURKS &
Papua New Guinea	PAPUA NE	Tuvalu	TUVALU
Paraguay	PARAGUAY	Uganda	UGANDA
Peru	PERU	Ukraine	UKRAINE

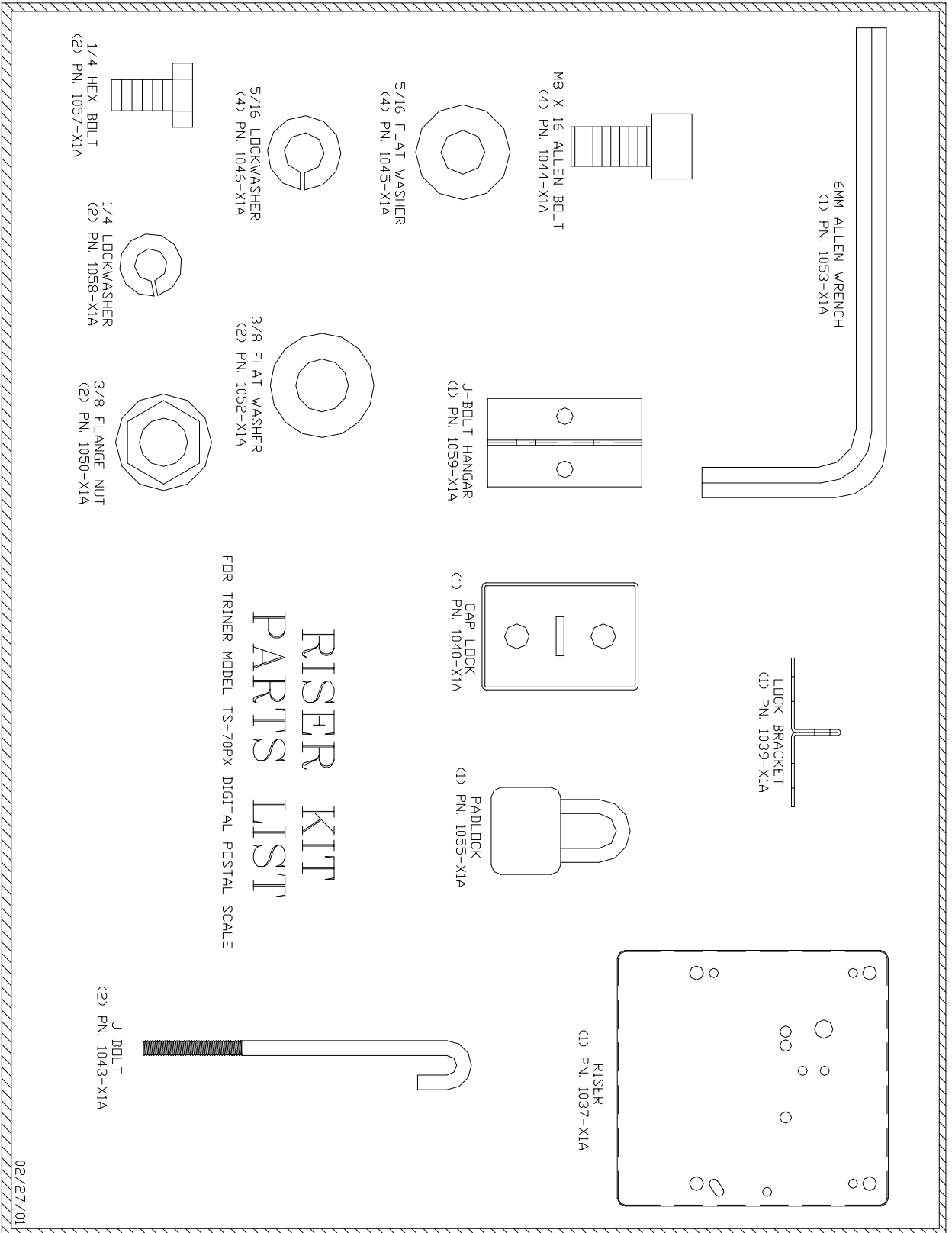
<u>Country Name</u>	<u>Abbr.</u>
United Arab Emirate	UNITED A
Uruguay	URUGUAY
Uzbekistan	UZBEKIST
Vanuatu	VANUATU
Vatican City	VATICAN
Venezuela	VENEZUEL
Vietnam	VIETNAM
Wallis & Futuna Islands	WALLIS &
Western Samoa	W. SAMOA
Yemen	YEMEN
Zambia	ZAMBIA
Zimbabwe	ZIMBABWE



**APPENDIX H: Riser and Lock Down Kit (LDK) Assembly**

**If your TS-70PX / Xi came with a Riser and LDK, follow these installation instructions.**

- A. Gently turn the scale unit upside down. Remove the scales leveling feet. Locate the riser (1037-X1A) and place it on the scale bottom plate aligning the four holes in the riser with the four holes in the scales bottom plate (where the feet used to be). Using allen bolts (1044-X1A), flat washer (1045-X1A), and lock washer (1046-X1A) secure the riser to the scale bottom plate. Use the allen wrench (1053-X1A) to tighten the screws. Screw the leveling feet that were removed from the scale into the four holes on the riser.
- B. With the unit still upside down, you will see two threaded holes that go though the scale base plate. Attach the J-bolt hangar (1059-X1A) using the hex bolts (1057-X1A) and lock washers (1058-X1A). Tighten securely. **See parts list for reference.**
- C. Place the scale assembly on the counter where you wish to mount it. Once you align the scale in the spot, take the **Hole-Drilling Pattern** and slide it under the scale. Align the scale assembly with the lines on the hole-drilling pattern. (Be sure to align the left rear corner of the riser). Once everything is aligned and is satisfactory, tape the edges of the pattern down to the counter to temporarily keep the pattern in place. Remove the scale assembly and set it aside.
- D. Using a ½” drill bit, drill the two holes in the counter where it shows on the hole-drilling pattern (just drill right though the pattern). Once the holes are drilled remove the pattern.
- E. Take the two J-Bolts (1043-X1A) and hang them on the J-Bolt Hangar as shown in **fig. 1**. With the J-Bolts hanging down from under the scale, set the scale assembly in place on the counter making sure the J-Bolts go through the holes that were drilled in the counter.
- F. Adjust the leveling feet to level the scale. Use the level bubble on top of the scale unit as a level indicator. Leveling feet are shown in **fig. 1**.
- G. Slide the Lock Bracket (1039-X1A) onto the J-Bolts as shown in **fig. 1**. Use hex flange nuts (1050-X1A) and flat washer (1052-X1A) to secure tight against the counter **fig. 1**.
- H. Slide the cap lock (1040-X1A) up onto the j bolts and fasten with pad lock (1055-X1A) as shown in **fig. 1**.



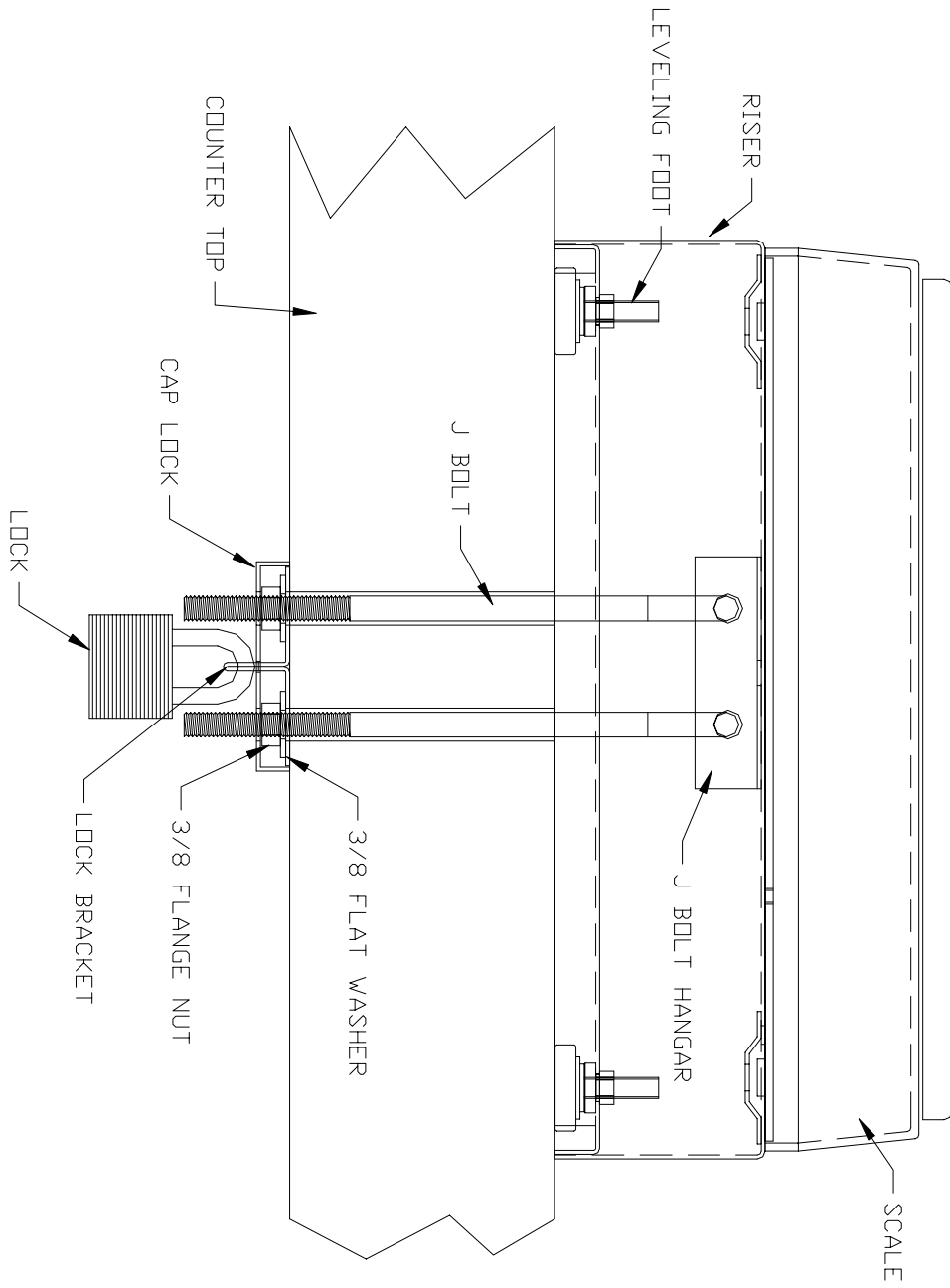


FIGURE 1 LOCK DOWN ARRANGEMENT MODEL TS-70PX

Reserved for figure 2: Hole Drilling Pattern

**TRINER SCALE & MFG. CO.  
LIMITED WARRANTY**

**What is Covered:** Triner Scale & Mfg. Co. Inc. warrants to the first end user customer of the Triner Scale product enclosed with this limited warranty statement that the product, if purchased and used in the United States, conforms to the manufacturer's specifications and will be free from defects in workmanship and materials for a period of two (2) years from the date of original purchase.

**What Triner Scale Will Do to Correct Problems:** Should your Triner Scale product prove defective during the warranty period, please call Triner Scale at (800) 238-0152 for warranty repair instructions and return authorization. Triner Scale will, at its option, repair or replace on an exchange basis the defective unit as follows:

**PARTS**

New or comparable rebuilt parts in exchange for defective parts for two (2) years after original purchase.

**LABOR**

Carry-In or mail in service for six (6) months from the date of original purchase. Labor and shipping cost after the six-month period will be charged to you.

If you are authorized by Triner Scale to ship the product to Triner Scale for repair, it is your responsibility to securely package the product in its original container or an equivalent and provide proof of the date of original purchase. You will be responsible for shipping costs to Triner Scale repair facility. When warranty service involves the exchange of the product or a part, the exchanged product may be new or previously repaired to the Triner Scale standard of quality. Exchange or replacement products or parts assume the remaining warranty period of the product covered by this limited warranty.

**What this Warranty Does Not Cover:** This warranty covers only consumer use in the United States. Triner Scale is not responsible for warranty service should the Triner Scale label or logo or the serial number be removed or the product fail to be properly maintained or fail to function properly as a result of misuse, abuse, improper installation, neglect, improper shipping, damage caused by disasters such as fire, flood, and lightning, improper electrical current, interaction with non-Triner Scale products, or service other than a Triner Scale Authorized Service. Packaging and shipping costs incurred in presenting your Triner Scale product for warranty service are your responsibility. If a claimed defect cannot be identified or reproduced in service, you will be held responsible for costs incurred.

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No terms, condition, understanding, or agreements, purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of the seller. This warranty gives you specific legal rights, and you may have other rights which vary from jurisdiction to jurisdiction.

**TRINER SCALE & MANUFACTURING COMPANY INC.**

**2842 Sanderwood Road**

Memphis, TN 38118

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