Doron

Model 7000XL

Excel XL Series

OPERATOR MANUAL

ISO9000 CERTIFIED

NATIONAL CONFERENCE ON WEIGHTS AND MEASURES — NTEP

INTRODUCTION

Introducing the Doran Scales Excel Series, Model 7000XL Digital Scale Indicator. This scale uses state of the art technology to provide you with a low cost solution to the most demanding weighing applications. With ease of use and setup in mind, the scale is simple to set up and ready to use. The Model 7000XL offers many features. A few of these features are listed below:

- ✍ NTEP certification for Class III installations to 10,000d.
- ✍ Display Resolution from 250 to 50,000 divisions.
- ✍ A six digit, 0.56" red LED display for easy reading.
- ✍ lb, kg, oz, g, lb-oz display units supported.
- ✍ Fully configurable duplex printer port with RS232 support.
- ✍ EEPROM nonvolatile data storage of all calibration and setup information.
- ✍ Microprocessor monitoring system to prevent scale failure under severe fault conditions.
- ✍ Support for up to four 350 ohm load cells.
- ✍ 115/230 VAC 50/60 Hz (jumper selectable) operation.
- ✍ Field selectable digital filtering.
- ✍ Software configurable remote push-button support (Optional).
- ✍ Non NTEP parameters are user configurable.
- ✍ Password protected, Front Panel Calibration Access Feature
- ✍ Six digit, 0.56" red LED remote display (Optional).
- ✍ 4-20mA analog output (Optional).
- ✍ Wired Ethernet Communication port (Optional).
- ✍ USB Communication port (Optional).
- ✍ Wireless Ethernet Communication port (Optional).
- ✍ RS485 Communication port (Optional)
- ✍ Four Internal Mechanical or Solid State Relay outputs for non-battery models (Optional)
- ✍ Eight External Relay outputs for non-battery models (Optional)
- ✍ Fiber Optic Communication (Optional)
- ✍ Multi-tone Audible Alarm (Optional)
- ✍ Peak and Hold, Product Grading software

Unpacking Your Scale

Before unpacking your Doran scale, please read the instructions in this section. Your new scale is a durable industrial product, but it is also a sensitive weighing instrument. Normal care should be taken when handling and using this product. Improper handling or abuse can damage the scale and result in costly repairs that may not be covered by the warranty. If you notice any shipping damage, notify the shipper immediately. Please observe the following precautions to insure years of trouble free service from your new scale.

- ✍ DO NOT drop the scale indicator or scale platform.
- ✍ DO NOT immerse the scale indicator or platform.
- ✍ DO NOT drop objects on the platform.
- ✍ DO NOT pick up the scale platform by the "spider."

Carefully remove the scale from the shipping carton. Be sure to retain all shipping materials in case the scale must be shipped elsewhere.

Setup and Installation

INSTALLATION:

Locate the desired position for the scale platform and indicator. The platform location should be flat, level and free of any obstructions which might interfere with the operation of the scale platform.

When installing your scale, make sure that an AC power outlet is close to the scale and easily accessible.

Place the scale on a flat level surface free from any obstructions which might interfere with the operation of the scale platform.

ELECTRICAL CONNECTIONS:

Prior to connecting your scale to power, check the serial number tag on the indicator for the correct operating voltage. Verify that the power you connect the scale to matches the rated voltage.

Be sure the AC power is not excessively noisy - this can occur if large inductive loads, such as solenoids or motors, are on the same power line. The Model 7000XL has a filtered power supply to reduce the effects of normal line noise, but severe fluctuations may cause operation problems. If problems occur, noise producing devices may have to be suppressed to minimize their effect.
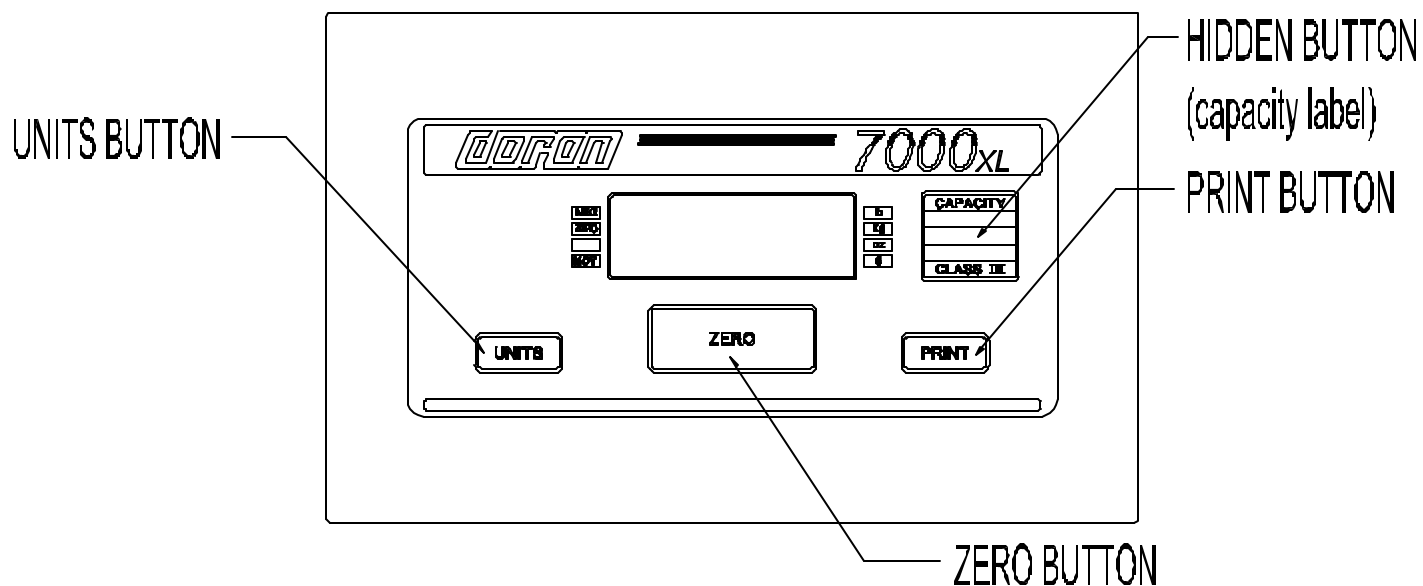
Quick Start User's Guide

Figure 1. 7000XL Front Panel Layout

Basic Weighing Operations:

1) Remove all items from the scale platter.
2) Press ZERO to zero the scale. The weight display should now read zero.
3) Place an item on scale platter and wait for the motion (MOT) indicator to turn off, indicating a stable weight.

Power Up
Plug in scale.

Indicators:

The Doran 7000XL has a main display and eleven indicator lights. These indicators provide the operator with information about the scale and the current weighing operation. The main display is used to provide the operator with the current weight. The units indicators, located on the right of the main display, show the current measurement units.

- ✍ The Motion (MOT) located on the left side of the display, informs the operator when the scale is in Motion.
- ✍ The Center of Zero (ZERO) indicators, located on the left side of the display, informs the operator when the scale is at Zero.
- ✍ The negative (NEG) indicator informs the operator whether the weight display is showing a negative weight.

ZERO:

The **ZERO** push button is used to zero the scale prior to making a reading. The zero button can function over the full range of the scale. To zero the scale, wait until the scale is stable and press the **ZERO** button. The scale will zero immediately. The 7000XL will not zero if the scale is in motion. The 7000XL is equipped with an optional Zero on Demand feature which holds zero requests until motion stops. This option may be activated during the scale setup procedure. Refer to your dealer or Instruction manual for details.

UNITS :

The **UNITS** button permits the operator to change the scale units by pressing a button. After pressing **UNITS**, the units indicator will immediately display the current weighing unit. The **UNITS** button has several configuration parameters which can disable the **UNITS** button or limit the display units available. Refer to your dealer or Instruction manual for details.

PRINT:

The **PRINT** button permits the operator to print the current weight by pressing a button. Like the ZERO button, the user must wait for motion to stop before pressing the PRINT button. The current weight will then be transmitted to the printer. When the data is transmitted, the left most display digit will momentarily display a "ʀ" to confirm data transmission. The 7000XL has a "Print on Demand" feature which stores a **PRINT** request until the scale is stable. Once stable, the scale transmits the current weight to the printer. The 7000XL also has several automatic print options which may be used to simplify printer operation. Refer to your dealer or Instruction manual for details.

Accumulator and Counter (Hidden pushbutton):

Press the Capacity Label / Hidden pushbutton to enter the accumulator / counter recall mode. The display will show "Accum" followed by the accumulated weight, then "Countr" follow by the counter value. The display will continue to repeat this message until a key is pressed. The accumulator / counter recall mode will display the accumulator value in the units currently selected in the weigh mode.

The accumulator and counter is incremented once every time a manual or automatic accumulation occurs. When the weight has been added to the accumulator and the counter has been incremented, the left most display digit will momentarily display a "a" to confirm operation. The maximum value that can be shown for the accumulator and counter is 6 digits or 999999. When the maximum value is reached, the accumulator or counter will rollover starting at a zero value.

Press the **UNITS** pushbutton to exit the accumulator / counter recall mode without changing their values.

Press the **ZERO** pushbutton, while in the accumulator / counter recall mode to clear the accumulator and counter values. The display will show "Clr Ac" and exit from the recall mode.

Press the **PRINT** pushbutton, while in accumulator recall mode, to transmit the accumulator and counter values through the RS232 port or optional communication port. Label buffer 4 contains the print string formatting for the accumulated weight and counter value. Refer to your dealer or Instruction manual for details.

Note: Changing the current display units will clear both the accumulator and counter values while in the weigh mode. Only Available in non Legal for Trade applications.

Troubleshooting

Scale Messages:

Message	Meaning
"ᴦEL Pb" Release push button.	The scale has detected that a key has been depressed for more than 3 seconds.
"Ld9 0" Loading zero.	The scale is attempting to zero the scale upon startup. This message will remain until scale is stable.
"CLᴦ Ac" Clear accum/counter	The Accumulator and Counter values are cleared out of nonvolatile memory.

Common Problems and Solutions

Problem:	What to Do or Check:
Weight reading will not repeat or scale does not return to zero when weight is removed.	Make sure that there is nothing caught in the platform under or around the load cell or spider interfering with its movement.
Scale weighing range is limited, and will not indicate full capacity or go into overload.	Make sure that there is nothing caught in the platform under or around the load cell or spider which would interfere with their movement. Make sure all four overload stops are properly set. Take the platter off the platform, invert it and place it back on the spider. With 1/2 of the scale's capacity in test weights concentrated over a corner of the platform, there should be approximately 1/32" of clearance between the stop and the bottom of the spider. Check all four corners then recalibrate the scale. If the problem persists, it is possible that the scale is being shock-loaded causing the load cell to be shifted.
Scale will not come to zero when the ZERO button is pressed.	Make sure that the scale is stable ("MOT" annunciator is off) when ZERO is pressed. If excessive motion is a problem, then it may be necessary to activate the latching zero feature (20d) or lengthen the filter time (Au C32). There may be a problem with the touch-panel or main board.
Weight readings don't seem to be correct.	Make sure that there is nothing caught in the platform under or around the load cell or spider which would interfere with their movement. Check the scale's accuracy with a test weight. Recalibrate if necessary.
Scale drifts off of zero.	Check for air currents and/or vibration around the scale. If that is the cause it may be necessary to set the AZT aperture to a wider setting to compensate.

Scale reading is bouncing or "flighty".	Check for air currents and/or vibration around the scale. If that is the cause it may be necessary to set the Digital Averaging to a higher setting to stabilize the reading.

If you are still experiencing a problem with your scale, or if the problem you are having is not covered in the above list, please contact your Doran Scales authorized dealer.

Error Messages

Error Message	What to Do or Check:
"udr-Ld" Scale underload	The scale is in underload. The load on the scale is less then the minimum scale capacity by more than -20%. Recalibrate scale or add additional dead load.
"our-Ld" Scale overload	The scale is in overload. The load on the scale platform exceeds the scale capacity by more than 103%. Remove excess weight from scale platform.
"9r5-oL" Gross overload	The scale is in gross overload. The load exceeds the scale ratings and might result in damage to the scale. Remove excess weight immediately. Ignore this message for the first five seconds after power up.
"9r5-uL" Gross underload	The scale is in gross underload. The load exceeds the minimum scale ratings and might result in damage to the scale. Loadcell connections might be wired in reverse.
"5U 0 E" Startup zero error	The scale was not stable, or a weight in excess of full load was present on the platter when the scale started. Remove the weight and wait. The scale will zero once it becomes stable.
"Err EP" EEPROM error	The setup parameters loaded in nonvolatile memory have become corrupted. The scale requires reinitialization by a qualified scale technician.
"Er Ad" A/D failure	The scale has detected a failure in A/D circuit. Have the scale serviced by a qualified scale repair technician.
"no 5AU" Values not saved.	The scale has not successfully stored or verified parameter value in nonvolatile memory.
"Err 1" Program ROM error	The program memory in the scale has become corrupted. Have scale serviced by a qualified scale repair technician.