Avery Weigh-Tronix

PLU Lookup

Software for the ZK840

Installation and Operation Instructions

AWT35-501790
Issue AB

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1 Introduction

This manual covers the installation and operation of the PLU Lookup program. The PLU Lookup program is designed to integrate up to 32 Avery Weigh-Tronix ZK840/PC-820 counting scales with a 32/64 Bit based computer to provide a part number based, piece weight database.

1.1 System requirements

Windows 7, Windows 8 or Windows 10

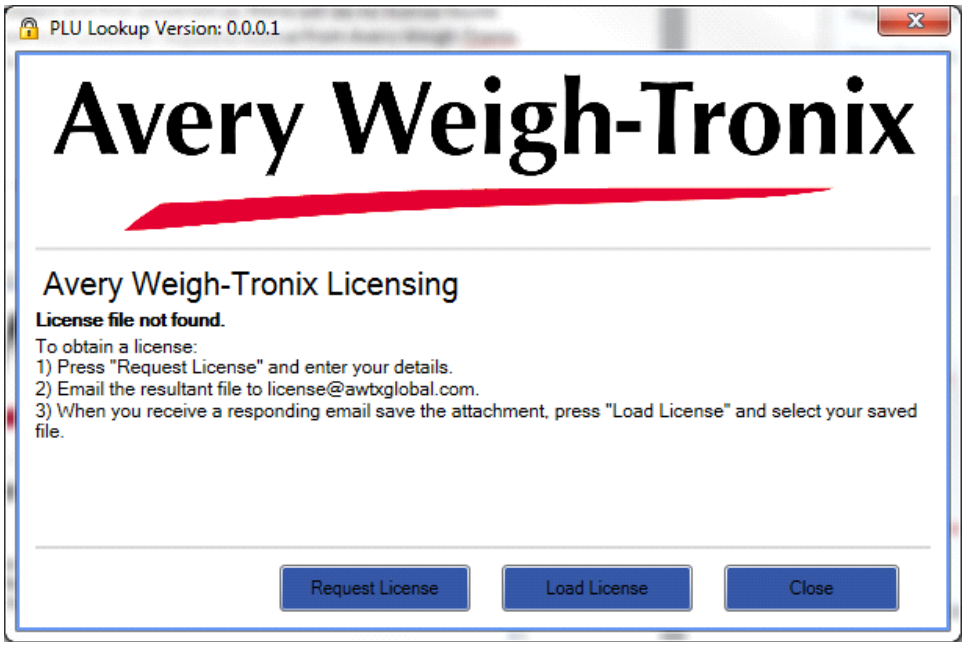
The ZK840 firmware version must be at least 2.4.1.0 or greater and the ZK840 Count App version must be 1.0.3.0 or greater.

1.2 Start Up

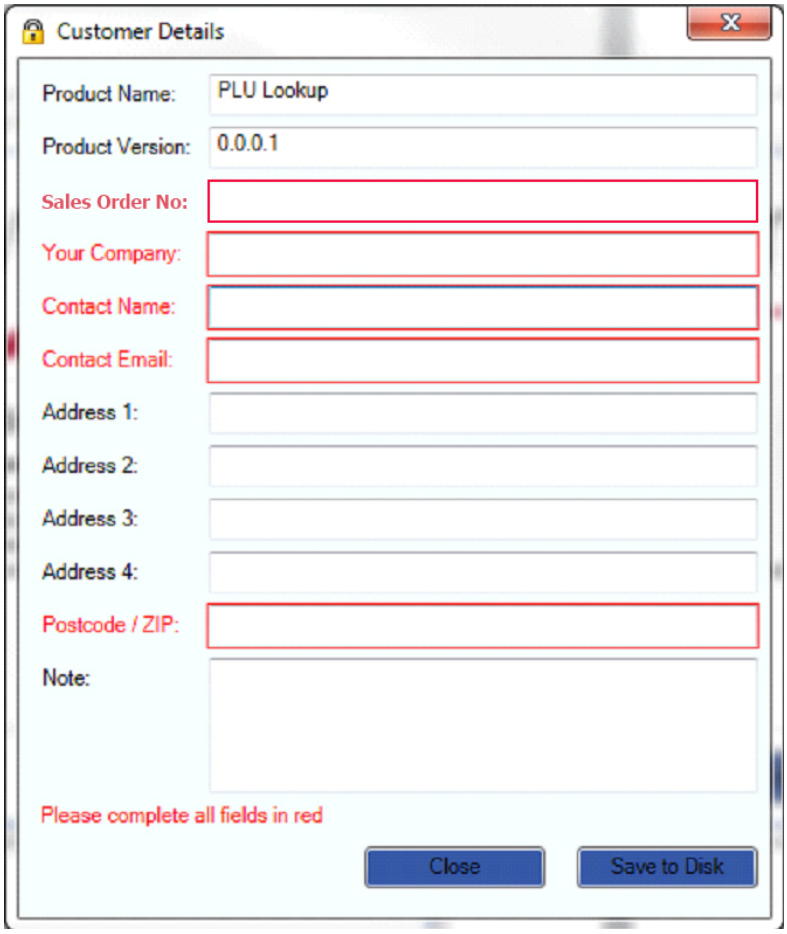
When the PLU Lookup application is installed and first powered up, there will be no license found. The user will need to follow the onscreen instructions to request a license from Avery Weigh-Tronix. This license will lock the application to the PC on which the application is installed.

1.3 Licensing

After installation, when the product is run for the first time the following license screen is shown:



Press **Request License** and fill in the required details on the form as shown below.



Once completed filling in all the required fields, press **Save to disk** and save the LicenseInformation.xml file to the file system. Make sure you know where the file is stored as you will need to send that file to Avery Weigh-Tronix. Email this file to license@awtxglobal.com

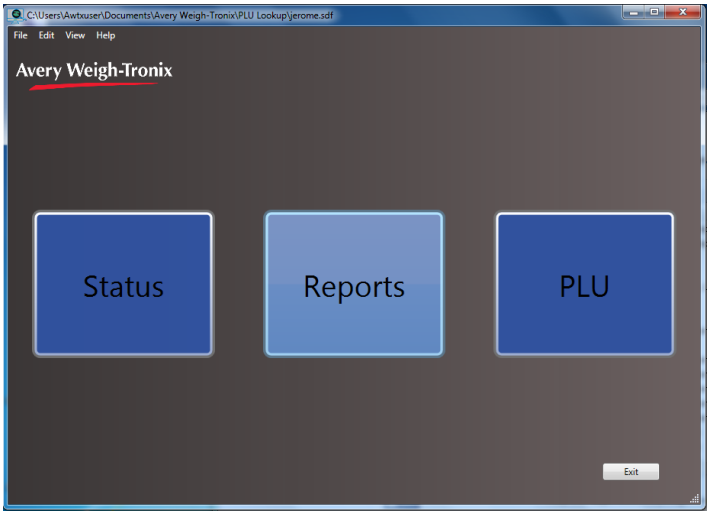
When you receive a license file back from Avery Weigh-Tronix press **Load License** and select the file from the local file system. If the email was sent to a different PC you must manually transfer the file between PC's. If the license file is correct, the PLU Lookup program will start automatically and you should not be prompted for a license file again.

Press **Close** to close the program.

2 Operation

2.1 Main screen

This is the Main screen of the PLU Lookup program. There are 3 options. Detailed descriptions of each follow.



2.2 Menu commands

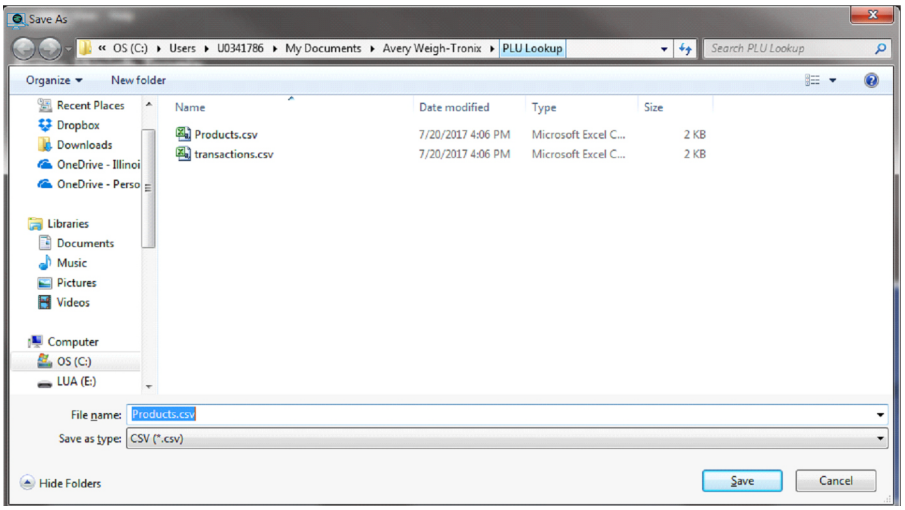
2.2.1 File

Export Products	Allows the user to export the PLU data to a csv file.
Import Products	Allows the user to import PLU data from PWLU, MI Lookup and PLU Lite.
Archive Transactions	Allows the user to archive transactions to a csv file and delete them.
Tools	Allows the user to configure scales.
Exit	Terminates the application.

Each is explained below.

Export Products

When selected the PLU's in the database are exported to the CSV filename of your choice. The default filename is Products.csv in the My Documents\Avery Weigh-Tronix\PLU Lookup folder but this can be changed to suit.



The CSV file format is shown below:

"Count","DataNumber","Description1","Description2","Description3","PartNumber","PieceWeight","PieceWeightUnits","TareWeight","TareWeightUnits"

"0","1","Can hold 32 alpha-numeric digit","","","QWERTY -abc123","0.0020000000","lb","0.0000000000","lb"

"0","1","fully flexible widgit","","","up to 20-digits","0.0050000000","lb","0.0000000000","lb"

"0","1","Glass seal 1" dia number 8 kit","","","AXT85-009777","0.0023400000","lb","0.0000000000","lb"

"0","1","Washer M8 Stainless","","","W1000298-ABX","0.0008810000","lb","0.0000000000","lb"

"0","1","Screw socket M16 x 20mm long","","","U50110","0.0020000000","lb","0.0000000000","lb"

"0","1","Washer M6 Stainless","","","W8909870-ACX","0.0005810000","lb","0.1000980000","lb"

"0","1","Screw socket M4 x 50mm long","","","U50092","0.0100000000","lb","0.0000000000","lb"

"0","1","Screw socket M5 x 10mm long","","","U50100","0.0001000000","lb","0.0000000000","lb"

"0","1","Washer M10","","","W8908760- ZDG","0.0010080000","lb","0.0019870000","lb"

"0","1","Screw socket M10 x 100mm long","","","U60001","0.4000000000","lb","0.0000000000","lb"

"0","1","Bracket kit A","","","ST-09876543/3098TX","0.0129800000","lb","0.0000000000","lb"

"0","1","Bracket kit 109","","","ST-09879870/09897TX","0.8940000000","lb","0.0000000000","lb"

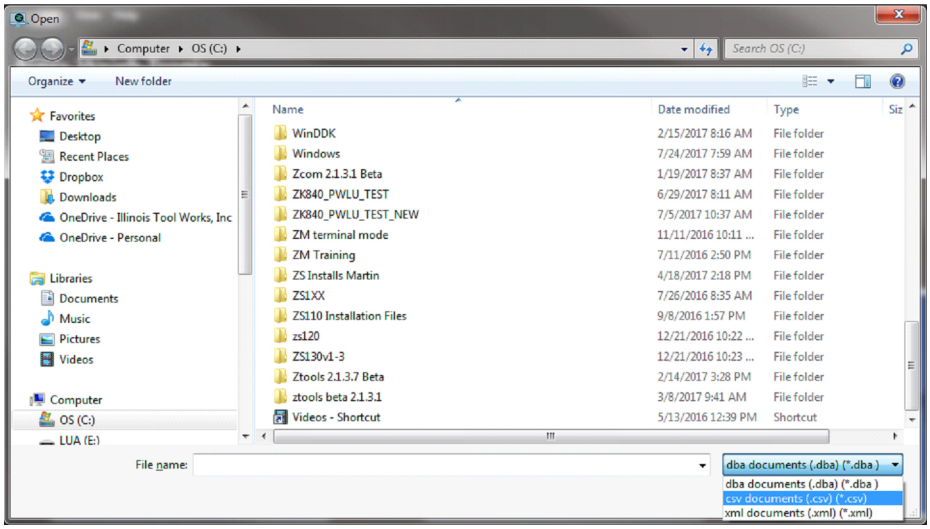
"3","1","test","","","111","0.5000000000","lb","0.0000000000","lb"

Import Products

When selected the user is prompted to select a product file produced by another Avery weigh-Tronix application. Select the appropriate file extension from the list as shown below then navigate the file structure to select the exact file you wish to import. The following file types are supported.

PWLU	dba files.
MI Lookup	CSV and xml files
PLU Lookup	CSV files

The imported PLU's will then be visible in the PLU section if the import was successful.



Archive Transactions

When selected you will be prompted if you want to delete the transactions. If you answer ***Yes***, after the *.CSV file is created, ALL the transactions will be deleted.

If you answer ***No***, the CSV file is exported. The default filename is Transactions.csv in the My Documents\Avery Weigh-Tronix\PLU Lookup folder but this can be changed to suit.

The CSV file format is as shown below

"Part Number","Description","Piece Weight","PW changed","Count","Scale","Date/Time"

"1","","0.0000000000","N","0","p1 ZK840","7/20/2017 2:50:17 PM"

"1","","0.0000000000","N","0","p1 ZK840","7/20/2017 3:13:49 PM"

"1","","0.0000000000","N","0","p1 ZK840","7/20/2017 3:35:19 PM"

"1","","0.0000000000","N","0","p1 ZK840","7/20/2017 3:36:13 PM"

"1","","0.0000000000","N","0","p1 ZK840","7/20/2017 3:38:00 PM"

"1","","0.0000000000","N","0","p1 ZK840","7/20/2017 4:36:52 PM"

"1","1","0.0001000000","N","4551","p1 serial","7/20/2017 4:37:06 PM"

"1","1","0.0001000000","N","4552","p1 serial","7/20/2017 4:37:39 PM"

"1","","0.0000000000","N","0","p1 ZK840","7/21/2017 7:57:48 AM"

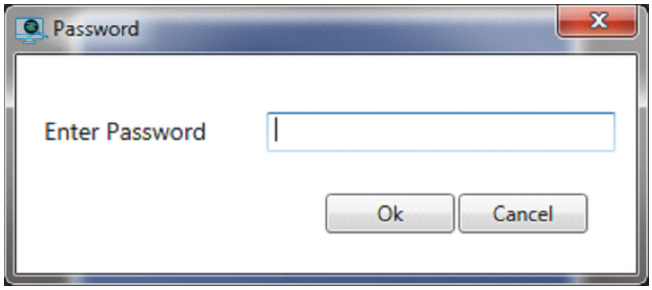
"1","1","0.0001000000","N","4573","p1 serial","7/21/2017 7:58:01 AM"

"1","","0.0000000000","Y","3","p1 serial","7/26/2017 11:37:41 AM"

"1","1","0.0001000000","N","3440","p1 serial","7/26/2017 11:50:47 AM"

Tools

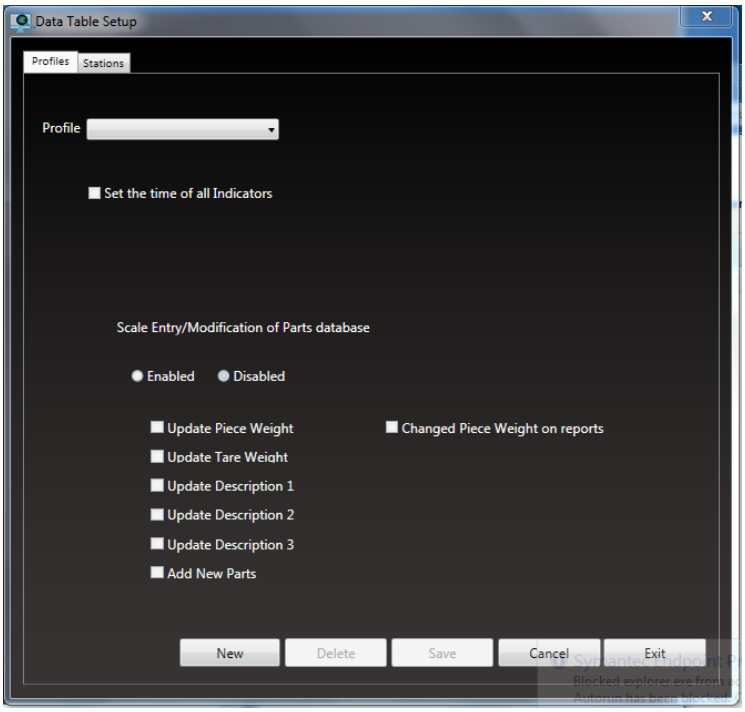
When prompted, enter the password **AWTX** in this window. This will give you access to the Data Table Setup screen shown under *Profiles*.



Profiles

Use the ***Profiles*** screen to setup profiles and stations. A profile should be viewed as a group of scales/stations with common configurations. These are explained below.

Some scales may be required to update the PLU lookup database and some may not. Creating 2 profiles one with database update capabilities and one without enables you to associate a scale with one profile/configuration or the other as required.



Creating a new profile

Press **New** to create a new profile. Give the profile a unique name then enable the scale configuration options as required for all scales in that profile. Details of all the options are given below.

Set the Time of all indicators

This feature allows you to synchronize the clock on all the connected PC-820\ZK840s to your computer's internal clock time. If you enable this function, when PC Lookup connects to the indicator time is synchronized automatically.

Scale Entry/Modification of parts database

This feature enables the PLU data to be modified at the PC-820\ZK840 counting scale. This selection must be enabled before any of the selections below can be enabled. Enable this item by clicking on Enabled. By default, this feature is disabled.

Update Piece Weight

This feature allows you to update the current piece weight in the database from the PC-820\ZK840. When a new sample is taken the display will ask if you want to update the piece weight in the database. You are given a YES and NO choice. Enable this item by clicking on the check box in front of this line.

A tick will appear in the box to show that this feature is enabled. By default, this feature is disabled.

Update Tare Weight

This feature allows you to update the current tare weight in the database from the PC-820\ZK840. When a new tare weight is entered the display will ask if you want to update the tare weight in the database. You are given a YES and NO choice. Enable this item by clicking on the check box in front of this line. A tick will appear in the box to show that this feature is enabled.

By default, this feature is disabled.

Update Description1-3

This feature allows you to update Description 1 in the database from the PC-820 only. Description 2 and 3 can only be updated from the computer when using the standard PC-820 application. Enable this item by clicking on the check box in front of this line. A tick will appear in the box to show that this feature is enabled.

By default, this feature is disabled.

Add New Parts

This feature enables you to create new part numbers in the database from the PC-820\ZK840. Enable this item by clicking on the check box in front of this line. A tick will appear in the box to show that this feature is enabled. By default, this feature is disabled.

When complete press Save to store the information.

Changed Piece Weight on Reports

This feature enables the program to "flag" any Piece Weight that was changed at the scale on the Online Reporting or Transaction database reports. Enable this item by clicking on the check box in front of this line. A tick will appear in the box to show that this feature is enabled. By default, this feature is disabled.

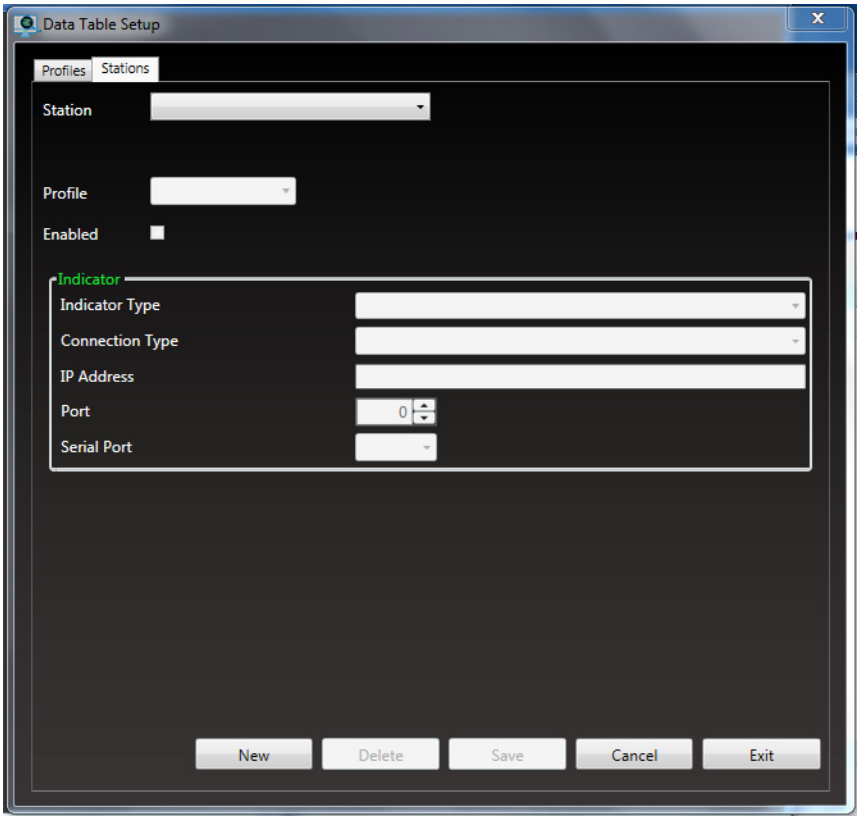
Editing an existing profile

Select the required Profile from the Profile list. Edit the configuration as required. Press Save when complete.

Deleting an existing profile

Select the required Profile from the dropdown box. Press Delete to remove the selected profile.

Stations



Creating a new station

Press **New** to create a new station.

Give the station a unique name then fill in the rest of the details

Profile

Select a profile from the list of previously created profiles.

Enabled

Select this to enable scale. This can be unticked to temporarily disconnect a scale.

Indicator type

Select PC820 or ZK840

Connection Type

Select Serial or Network client

If ***Serial*** is selected the Settings will be defaulted to ***9600, NONE, 8, 1***. (Baud, Parity, Data Bits, Stop bits)

Adjust as required keeping the same settings as the scale.

The available values are:

Baud – 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200

Parity – NONE, EVEN, ODD, MARK, SPACE

Data bits - 7, 8

Stop bits – 1, 2

Select the required com port from the list.

If ***Network client*** is selected, enter the ***IP Address*** and ***Port*** as required to match the scale. Press **SAVE** when complete.

Editing an existing station

Select the required station from the Station list. Edit the data as required. Press Save when complete.

Deleting an existing station

Select the required Station from the Station list. Press Delete to remove the selected station.

2.2.2 EDIT

PLU Allows the user to maintain PLU data. Equivalent to pressing the PLU button on the main screen

2.2.3 VIEW

Status Views the Status screen. Equivalent to pressing the **Status** button on the main screen

Reports Views the Reports screen. Equivalent to pressing the **Reports** button on the main screen

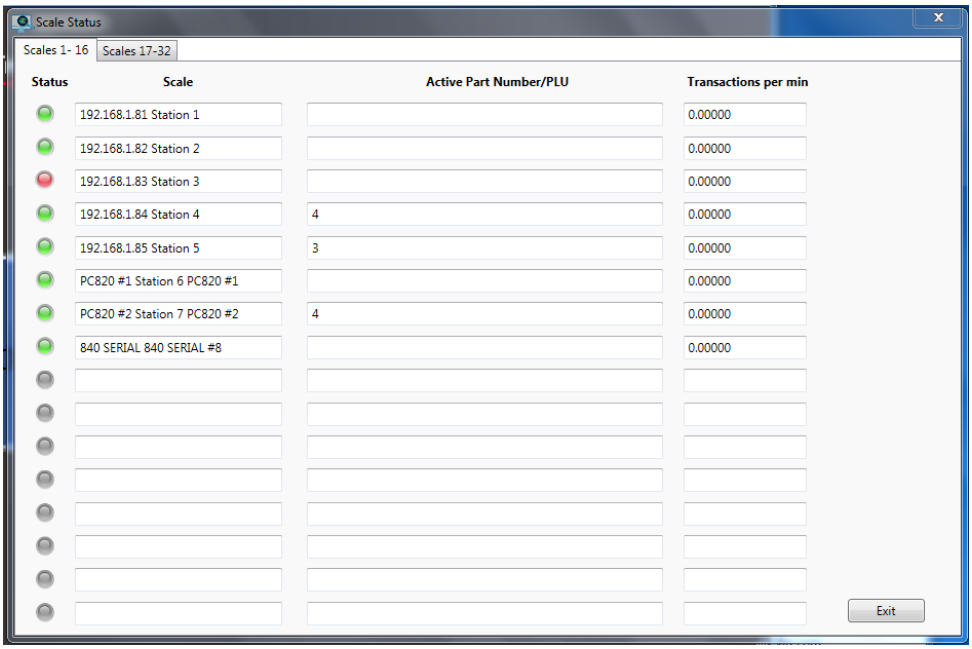
2.2.4 HELP

About Lists the version and End User License Agreement information about the application.

2.3 Main screen buttons

2.3.1 Status

This screen shows the current status of all the configured scales. There are 2 tabbed screens each containing 16 scales.



Status lights

The Status lights are used to indicate the status of the connected counting scales.

GREEN	Scale is online
RED	Unable to communicate with the scale/error in communication
GREY	Slot is not in use

Scale

This is the name of the scale/station created in the tools menu. The name consists of two parts separated by a SPACE character. The first part is the profile name the second part is the station name. This ensures the name is unique across profiles.

Active Part Number/PLU

The Active Part Number box is used to show the last active part for a particular scale. When a scale requests a part, and it is sent out, the corresponding part number is displayed in the box. If the part is a new part number and the scales parent profile is configured such that part number creation is enabled, then “New” will appear in the box in front of the part number. If part number creation is not enabled, the scale will not be able to create that part and the box will be empty.

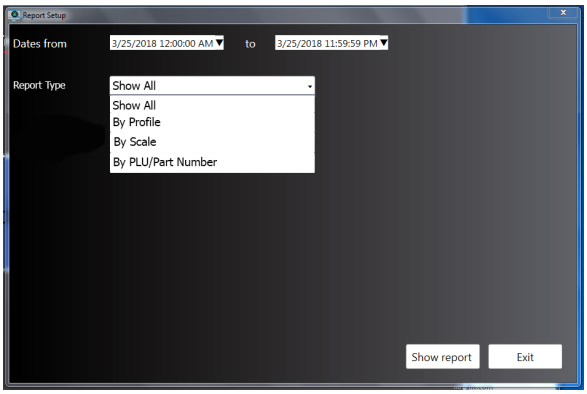
Transactions per min

This is the number of transactions per minute measured for the last 15 minutes.

2.3.2 Reports

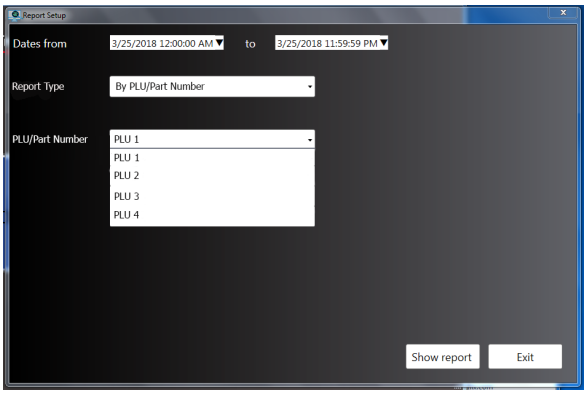
Every time The ACCUM+ or ACCUM- buttons are pressed on the indicator a transaction record is stored in the PLU Lookup database. The reports option reports on this transaction data.

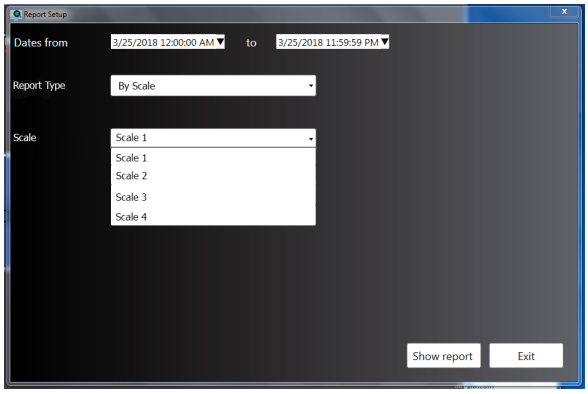
On the screen shown below, select the ***Report Type*** and the drop down list appears.



If you select ***Show All*** you will see all the transactions.

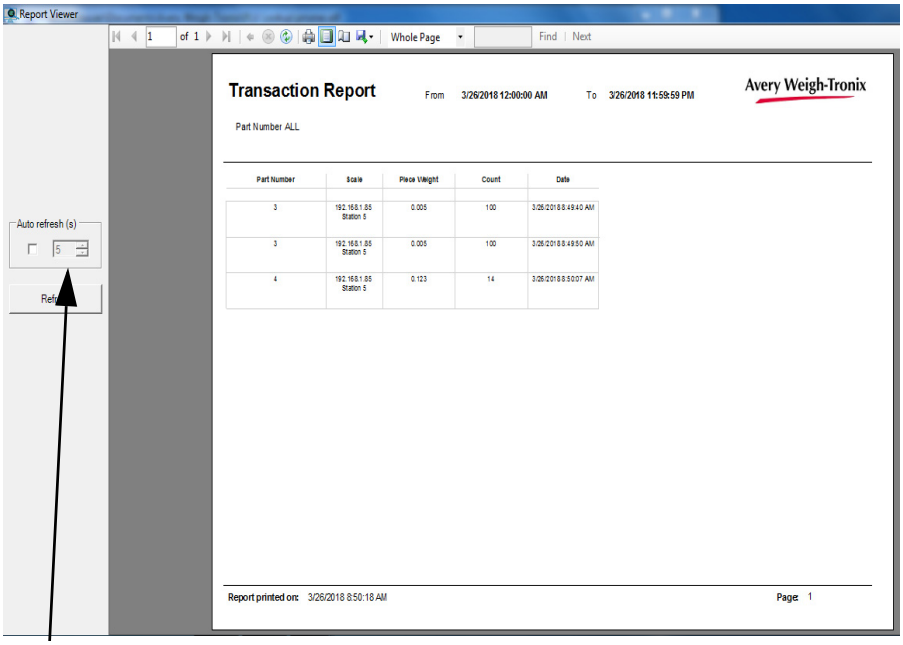
Below are examples of what you see when you choose a particular Report Type.





Select the dates you wish to report on (The default is for the current 24 hour period) and then select the relevant profile from the list. Then click **Show report**.

A transaction report list as shown below will be displayed. This can be printed by clicking on the printer icon in the menu bar at the top of the screen.

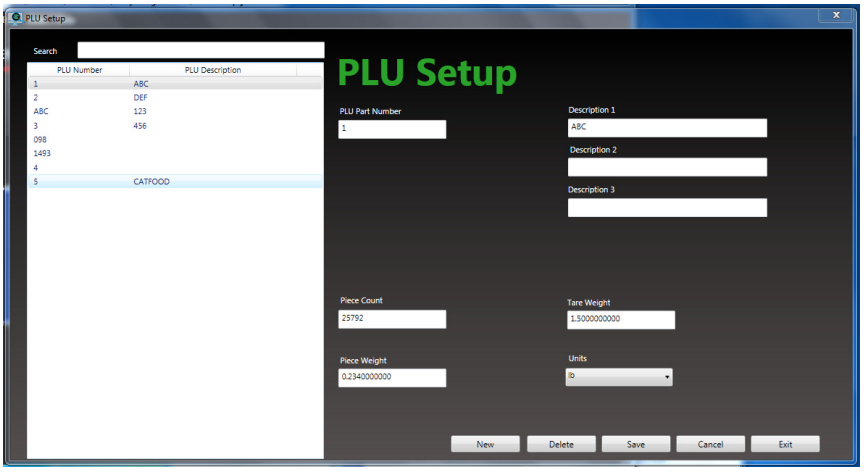


The more transactions that are available, the longer it takes to redraw the report so a longer refresh value may be needed.

2.3.3 PLU

PLU Lookup will provide basic Product Look Up (PLU) maintenance. The editor allows a user to add, subtract and save PLU information. Any parts created on a scale can also be viewed and modified here.

The Piece Count is adjusted automatically within the PLU database every time the **ACCUM+** or **ACCUM-** buttons are used on the indicator to adjust the count.



Adding a New PLU

To add a new PLU press the **New** button then enter all the data as required. When complete press the save button to store the information.

Editing an existing PLU

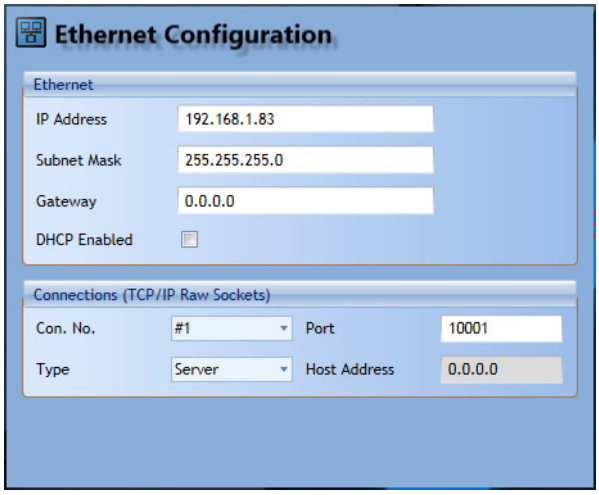
Select a PLU from the list on the left hand side and modify the data as required. When complete press the Save key to save that PLU. Use the search option to help select the item. This searches by both PLU Number and PLU description.

Deleting an existing PLU

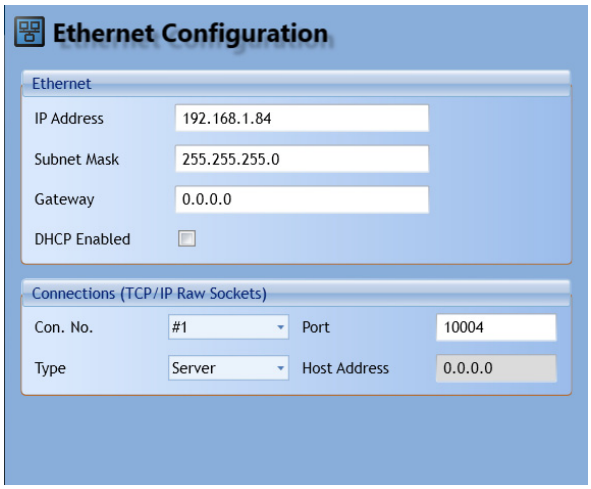
Select a PLU from the list on the left hand side and then press the Delete key to delete that PLU. Use the search option to help select the item. This searches by both PLU Number and PLU description.

2.4 ZK840 Ethernet Setup

To ready the ZK840 for use with the PLU Lookup program the following settings must be configured from Ztools or the ZK840 menus.



If using only 1 ZK840, the default settings, shown above, are OK to use.

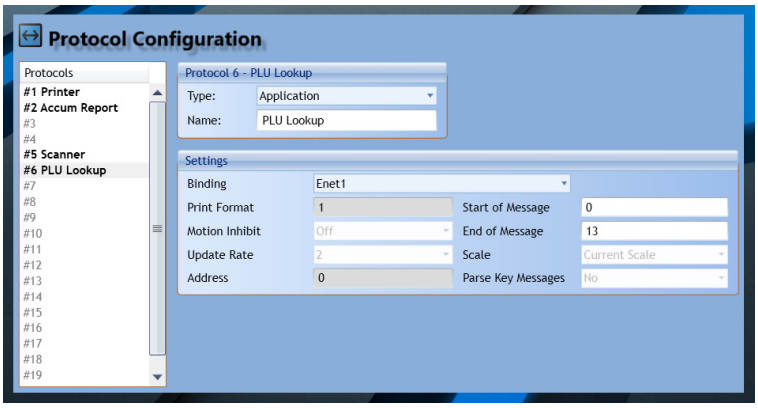


If using multiple ZK840s, the IP address and Port settings must be unique for each scale.

In the Ethernet Configuration screen, shown above, set the IP Address for your scale.

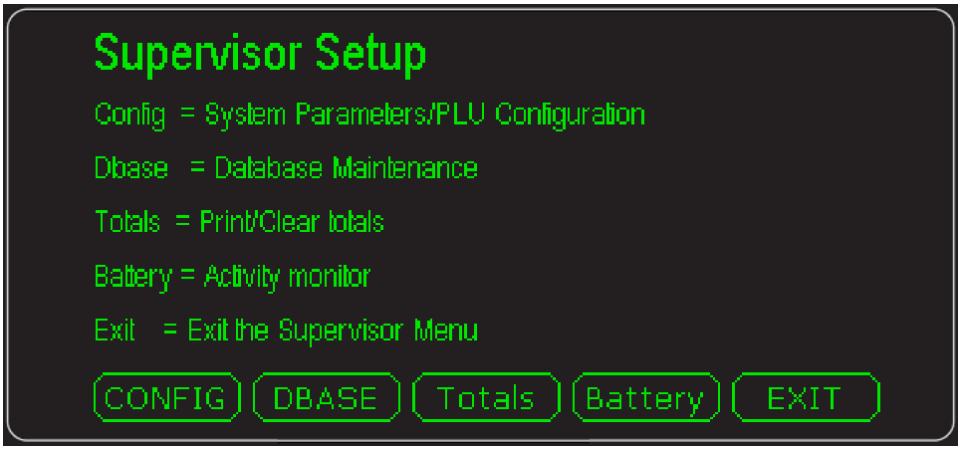
Set the *Type* to ***Server***.

In the ***Protocol Configuration*** window, shown below, you must set *#6 PLU Lookup* ***Binding*** setting to **Enet1**.



Be sure you go into the 1793 Supervisor menu of the ZK840 indicator and set the Application Mode to PLU Lookup. Follow these steps to select PLU Lookup:

Press and hold the **SETUP** key until the password entry screen appears. Key in the Supervisor password, 1793, and press the **Enter** key. The screen below appears.



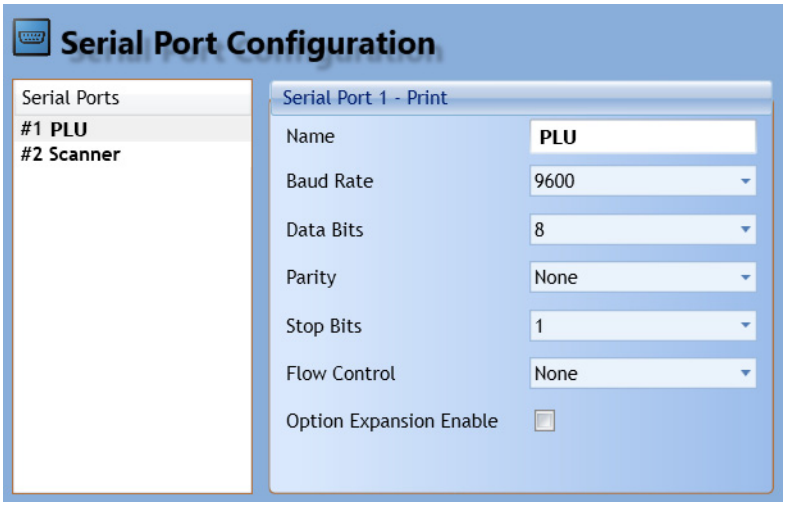
Press the **CONFIG** button.

Press the **APP** button. The ***App Configuration*** list appears. In this list highlight ***Application Mode*** and press **Enter**.

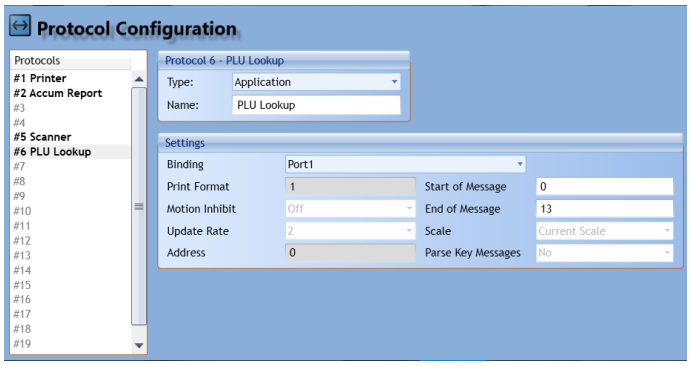
A new list appears. Select ***PLU Lookup*** and press **Enter**.

Exit the Supervisor menu.

2.5 ZK840 Serial Setup



In the example shown above, Serial Port 1 is being used and the default serial port settings are shown. These settings match the PLU serial settings so nothing needs to be changed.



In the ***Protocol Configuration*** window, shown above, you must set *#6 PLU Lookup* ***Binding*** setting to **Port1**.

Be sure you go into the 1793 Supervisor menu of the ZK840 indicator and set the Application Mode to PLU Lookup. Follow these steps to select PLU Lookup:

Press and hold the **SETUP** key until the password entry screen appears. Key in the Supervisor password, 1793, and press the **Enter** key. The screen below appears.

Press the **CONFIG** button.

Press the **APP** button. The ***App Configuration*** list appears. In this list highlight ***Application Mode*** and press **Enter**.

A list appears. Select ***PLU Lookup*** and press **Enter**.

Exit the Supervisor menu.

2.6 PC820 Setup

To configure the PC-820 counting scale for use with the PLU Lookup program, set Port Mode to PWLU under Serial, Port 1 in the Configuration Menu found in the Service Manual (PN29724-0012).

Be sure the computer and all scales have the same baud rate, parity, data bits, etc.

Your PC-820 is now configured to work with the PWLU program.

Below is a table to help you determine the worst case timeout (if all scales try to communicate at the same time) with RF scales active. It is recommended that you set the PWLU communications timeout according to this table:

NumberofScales	Non-RF PC-820 PWLU comm. Timeout
1-4	6 seconds
5-16	9 seconds
17-32	18 seconds

If communications timeouts are still occurring, try increasing the timeout setting, check the hardware or make sure the PLU Lookup program is running and the correct scales are enabled.

If you have the RF communications package installed and you enable radio communications the radio ID is the scale number. Each number must be unique and each additional one adds to the timeout required for RF units.

2.6.1 RS-232 Cable Pinouts

The maximum cable length is determined by conductor size, baud rate, and RS-232 specifications. For average usage, maximum cable length is approximately 50 feet.

PC-820 to Computer

PC-820 (9-pin)	Computer (25 pin)	Computer (9-pin)
1 NA	7 GND	2 RXD
2 RXD	4 RTS	3 TXD
3 TXD	3 RXD	4 DTR
4 NA	20 DTR	5 S Ground
5 GND	5 CTS	6 DSR
6 NA	6 DSR	7 RTS
7 RTS	2 TXD	8 CTS
8 CTS		9 NA
9 NA		

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