

USER MANUAL



EASITRAX™

DATA COLLECTION APPLICATION

SAFETY INSTRUCTIONS AND COMPLIANCE

Before using the Easitrax data collection application for the first time, please carefully read this manual, and in particular the safety instructions, at least once. This is to ensure that the contents of this manual have been understood and the reader knows how to operate the Easitrax data collect.

INTENDED USE

The Easitrax data collection application is intended for use with the Easitrax Web software. It is designed to collect and store data for reporting and performance management of hardware. Use the Easitrax data collect exclusively for this purpose. Under no circumstances can the manufacturer be held liable for any damage or loss resulting from improper use of the equipment.

The Easitrax data collection application has been designed in accordance with state-of-the-art standards and the recognized safety directives. However, please observe the following safety instructions.

PROTECTING PERSONS AND EQUIPMENT

NOTICE

Possible data loss.

Backup your database first, before updating an existing database.

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1 ABOUT THIS USER MANUAL



This section is a guide to help readers easily navigate the document and find further product documentation.

This manual was created for use of the Easitrax data collection application.

1.1 TEXT CONVENTIONS

The following symbols are used throughout this manual to call attention to safety messages and important information related to the Easitrax data collection application.

NOTICE

Notice is used to address practices not related to physical injury, such as property damage.



Short guide that summarizes a section and provides links to subsections.

1.2 ADDITIONAL HELPFUL DOCUMENTS

Easitrax data collection application documentation can be downloaded as pdf files from [CPI Downloads page](https://cranepi.com/end/support#/downloads)
cranepi.com/end/support#/downloads

2 INSTALLATION



This section outlines:

- installation of the Easitrax data collection application

All files required for the installation of the Easitrax data collection application are contained on this installation CD. Administrator privileges are required to properly install the Easitrax data collection application.

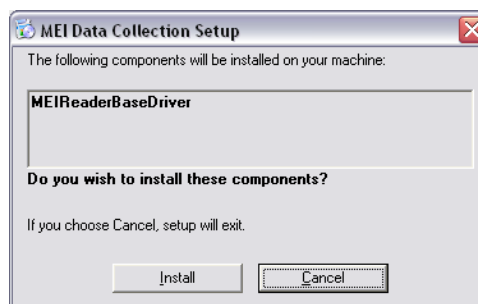
2.1 EASITRAX DATA COLLECTION APPLICATION INSTALLATION

Follow the steps below to install the Easitrax data collection application.

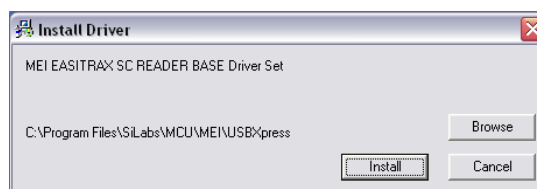
1. Run the Windows and Microsoft Update to ensure the computer has the most recent software and security patches.
2. Insert the Easitrax data collection application installation CD.
3. The CD will automatically start and open the installation menu. Select the first option in the menu. This will automatically install the Easitrax data collection application and reader base USB driver.
4. If the CD does not automatically start, you can browse to the CD using Windows Explorer and run the **AutoRun.exe** file.



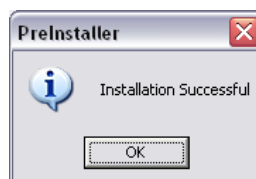
5. Click the **Install** button to begin the reader base USB driver installation.



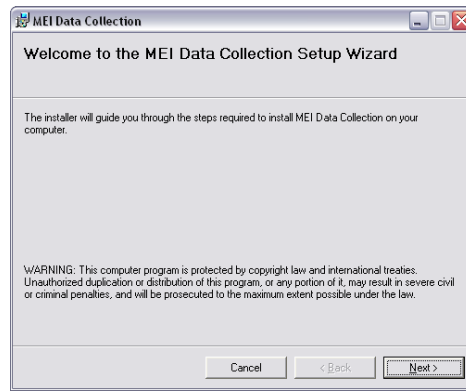
6. Click the **Install** button to continue the reader base USB driver installation.



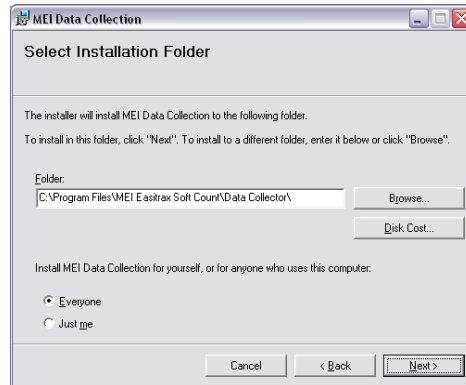
7. Click **OK** to complete the reader base USB driver installation.



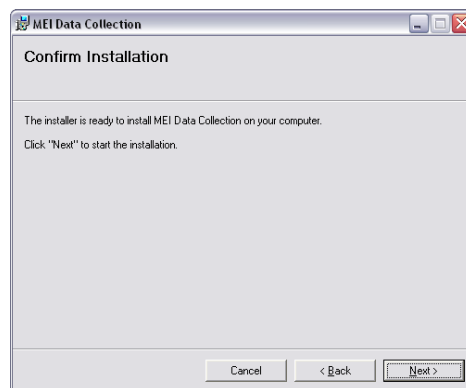
8. Click the **Next** button to begin the installation process.



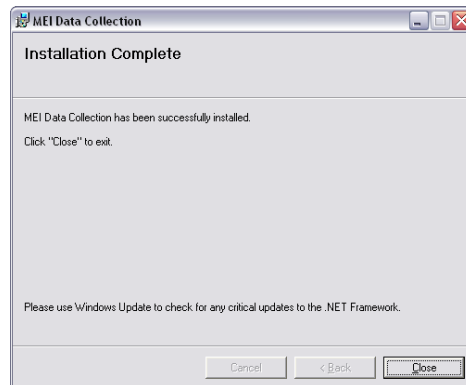
9. Select the installation location and **Everyone** to allow universal access to the program. Click the **Next** button to proceed with the installation process.



10. Click the **Next** button to continue with the installation process.



11. Click the **Close** button to complete the installation process.



2.2 INSTALLED FILES

The files listed below are created by the Easitrax data collection application. All files will not appear immediately following the installation but will be visible after the application is executed for the first time.

Files located in **C:\MEI**:

easitraxSettings.xml – Contains the saved application options.

easitraxLog.xml – Contains an activity log.

3 CONFIGURATION



This section outlines:

- configuration of the Easitrax data collection application

All configurations in the Easitrax data collection application are performed through the various tabs in the System Configuration menu.

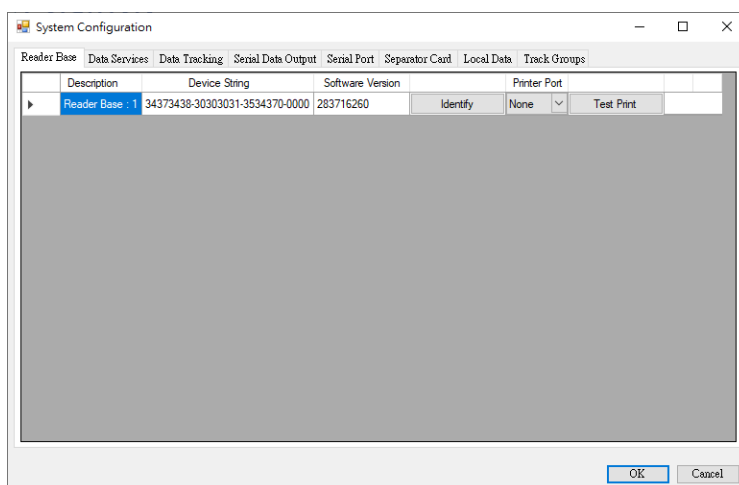
3.1 APPLICATION ACCESS

Installation of the Easitrax data collection application will automatically place an icon on the desktop titled **Data Collection**. It will also add the application to the Windows start menu under **Start->Programs->MEI EASITRAX Soft Count->Data Collection**. Either of these methods can be used to start the application.

Before starting the Easitrax data collection application, ensure that all reader bases are connected to either the PC's USB ports or a powered USB hub.

3.2 READER BASES

- The **Reader Bases** tab is used to identify all of the reader bases connected to the PC running the Easitrax data collection application. Each reader base will display a unique device string (the serial number of the reader base) and the software version installed.
- The **Identify** button can be used to determine which reader base is connected to each USB port. When the **Identify** button is pressed all of the LEDs on the front of the reader base will illuminate and a buzzer will sound.
- The **Printer Port** option is used to select a serial port to transmit data obtained from the cashbox. The **Test Print** button can be used to transmit data obtained from the cashbox. The **Test Print** button can be used to send a test string of data to the selected Printer Port.
- The Up and Down arrows can be used to rearrange the reader bases in the configuration screen. This is useful if the reader bases are attached to a surface and cannot be physically moved.



3.3 DATA SERVICES – SQL DATABASE CONNECTION

Connection to the SQL database is accomplished using a connection string containing two data fields: the computer location and the database instance name. The two data fields are separated by a “\” to provide the following connection string:

Computer Location\Database Instance Name.

Computer location – This is the location of the computer or server hosting the SQL database. It can be either a name such as “WCR_computer1” or an IP address such as “100.128.28.5”.

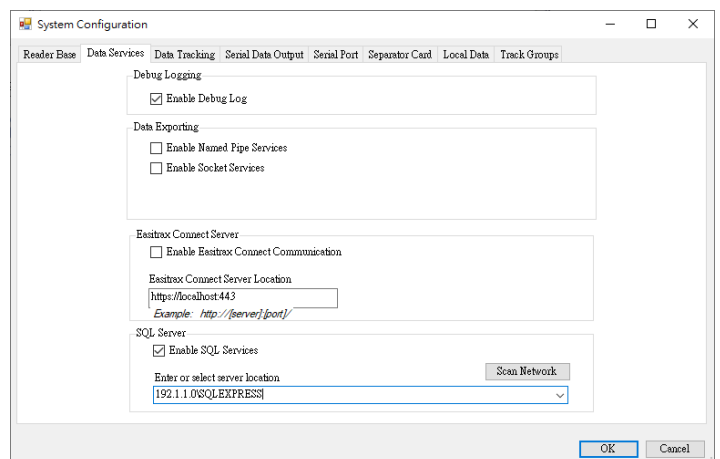
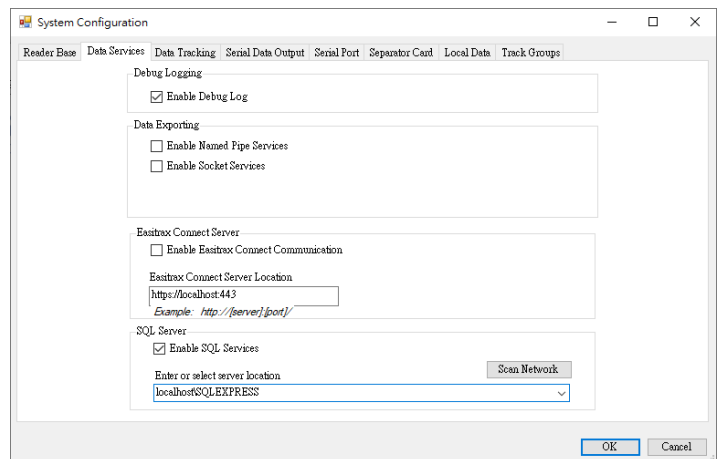
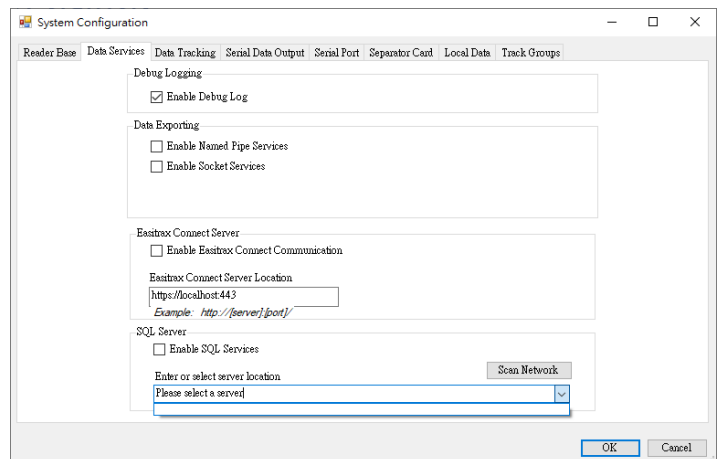
Instance name – This name points to the correct SQL location on the specified computer or server. This name can be anything but some of the most likely examples are “SQLEXPRESS” and “MSSQLSERVER”.

Examples of valid connection strings are as follows: **100.128.28.5\SQLEXPRESS** or **WCR_computer1\MSSQLSERVER**.

The **Data Services** tab provides the ability to define a connection to an SQL database instance. To enable this connection, select the checkbox next to **Enable SQL Services**.

1. Click the **Scan Network** button to search the network for all SQL database instances. Select the desired database instance from the resulting list and press **OK**.
2. If the connection is successful, a connection to the database has been established and the Easitrax data collection application is ready to accept data from cashboxes.
3. If the Scan Network option does not work and the database instance is located on the local computer, you can manually type **localhost** followed by the database instance name in the select database window.

4. If the Scan Network option does not work and the database is not located on the local computer, you can manually type the IP address followed by the database instance name in the select database window.

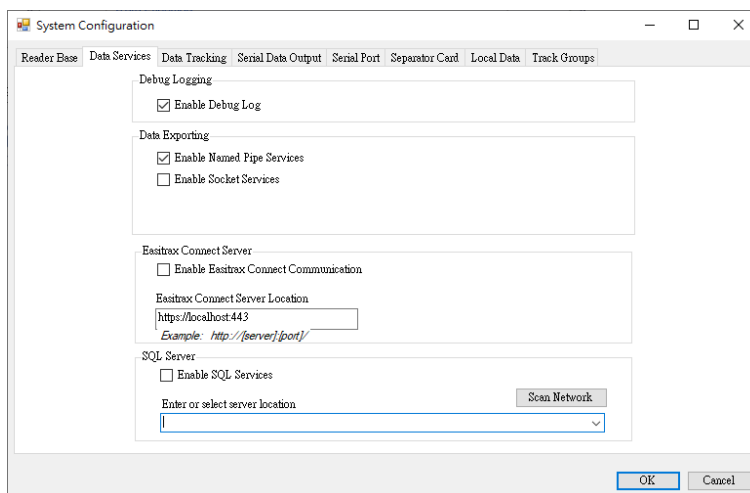


3.4 DATA SERVICES – NAMED PIPE INTERFACE

Named pipes are available to transmit data read from a cashbox to a networked device. When the Named Pipes feature is enabled, a file is created on the local machine that an external application can connect to with read/write permissions. The Easitrax data collection application shares information about the current cashbox with the external application through this file. When a cashbox is processed by the reader base, a data structure containing all the information from the RFID tag is sent across the network to the named pipe client.

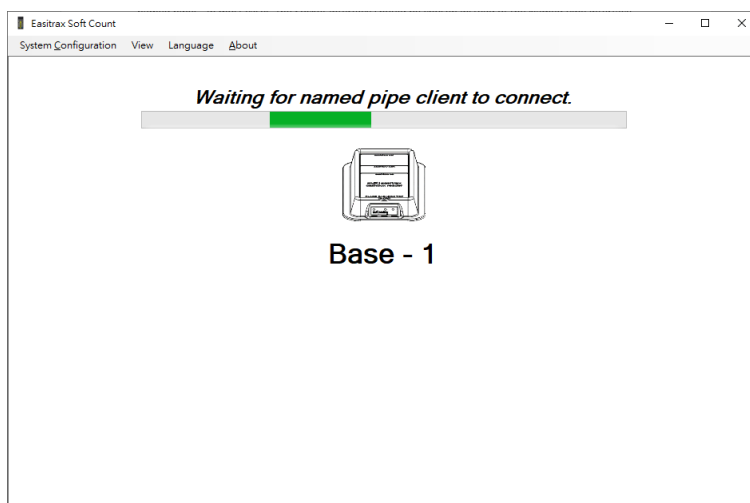
Named pipes require specific network and Windows settings to operate correctly. The client and server computers must be on a trusted network connection and be aware of each other. Most domains are set up with this kind of architecture however there may be hidden settings that prevent connections with named pipes. In most cases, the Socket interface should be chosen instead of the Named Pipe interface.

1. To enable the Named Pipe interface, go to the **Data Services** tab and select the checkbox next to **Enable Named Pipe Services**.



2. The Easitrax data collection application will go out of service waiting for the named pipe client to connect.

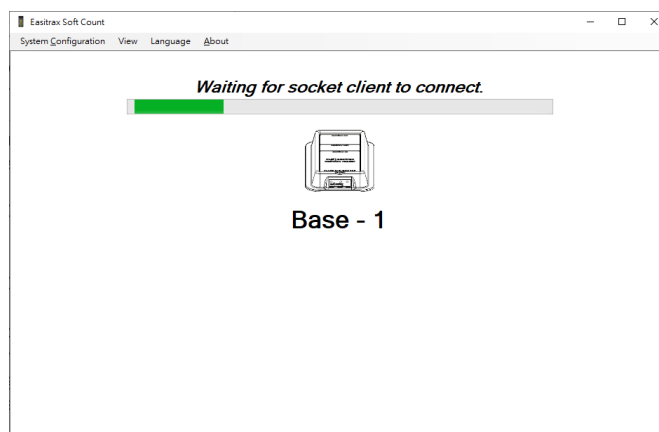
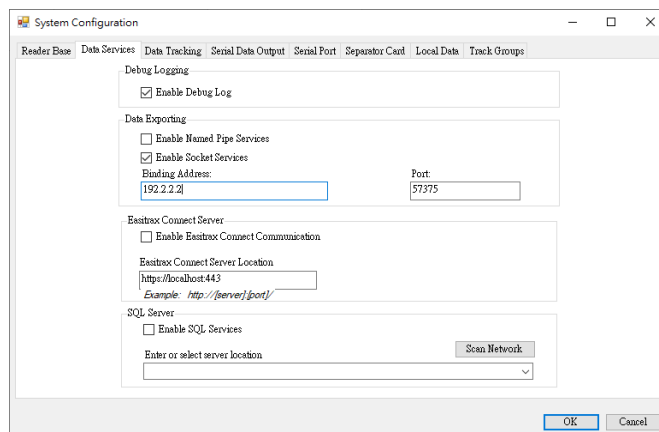
3. The Easitrax data collection application will also enter this error condition any time the named pipe client disconnects. This will prevent any cashboxes from being processed, while the client is disconnected to ensure no data is lost.



3.5 DATA SERVICES – SOCKET INTERFACE

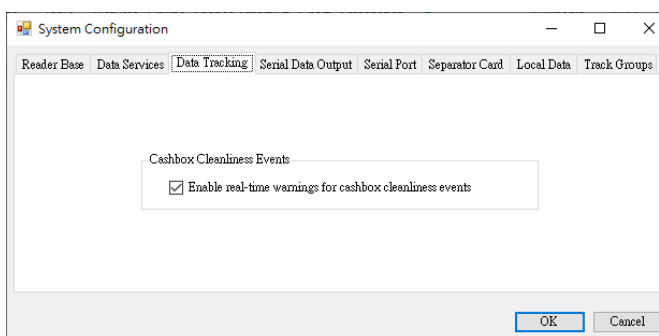
Socket communications are the preferred method for providing real time data to external networked applications. Sockets use a direct link with the other computer on the network using TCP/IP. The only requirements for a socket connection are that the two computers need to be on a network and there needs to be an open port that will not be blocked by any firewall device or software. When a cashbox is processed by the reader base, a data structure containing all the information is sent across the network to the connected machine.

1. To enable Socket communications, go to the **Data Services** tab and select the checkbox next to **Enable Socket Services**. Fill in the required fields.
2. The **Binding Address** is the IP address of the LOCAL machine (not the machine that will connect to the Easitrax data collection application).
3. The **Port** is the port number that will identify the messages that are intended for the Easitrax data collection application. This is an integer between 1024 and 65535. The default port (57375) should be acceptable in most cases.
4. The Easitrax data collection application goes out of service waiting for the socket client to connect. The Easitrax data collection application also enters this error condition any time the socket client disconnects. This prevents any cashboxes from being processed while the client is disconnected to ensure data is not lost.



3.6 DATA TRACKING

Cashbox Cleanliness Alert can be shown when a dirty cashbox is processed by the reader base by checking the **Enable real-time warning for cashbox cleanliness events**.



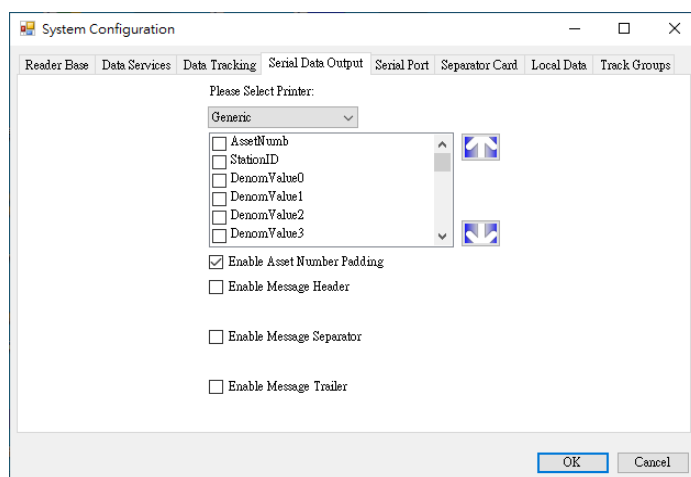
3.7 SERIAL DATA OUTPUT

Serial port communications are intended to provide a generic means of transmitting information read from a cashbox to external equipment such as counter/sorter machines or printers. Each time a cashbox is processed by the reader base, the data read from the RFID tag is transmitted to the serial port in the format specified in the Data Output tab. Unlike the named pipe or socket interface, the serial port interface allows the user to customize the data that is transmitted. Also, individual serial ports can be setup for each reader base.

Use the **Serial Data Output** tab is used to configure the serial data stream transmitted over the Printer Port.

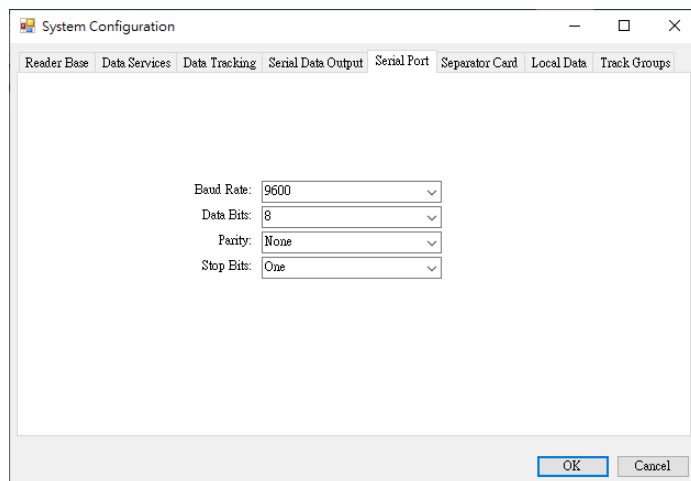
The list displays all of the data contained on the RFID tag inside the cashbox. The checkbox must be selected to transmit any of the data to the Printer Port. The information in the list can be reordered using the Up and Down arrows.

1. Select the **Enable Asset Number Padding** if unused characters in the asset number must be padded with spaces (i.e., **1234** "). If unchecked, a short asset number would be printed over the Printer Port (i.e., **1234**).
2. Select the **Enable Message Header** checkbox if the serial message to the Printer Port requires a static header byte(s) (i.e., **start**).
3. Select the **Enable Message Separator** checkbox if the serial message to the Printer Port contains a separator character between each field selected in the data list (i.e., **Start|1234|end**).
4. Select the **Enable Message Trailer** checkbox if the serial message to the Printer Port requires a static trailer byte(s) (i.e., **end** or **CR**).



3.8 SERIAL PORT

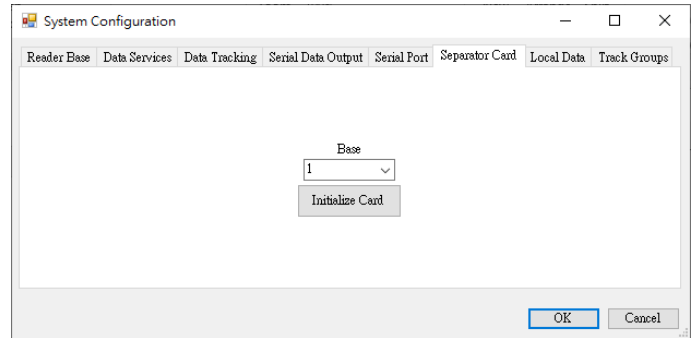
The Serial Port tab provides the configuration options for all Serial Port used by the Easitrax data collection application. Use the **Serial Port** to communicate the data output string configured in the **Serial Data Output** tab.



3.9 SEPARATOR CARD

Certain pieces of counter equipment use plastic cards with RFID tags attached to identify bunches of notes.

1. Use the **Separator Card** tab to configure an RFID tag as a separator card. Place the separator card with RFID tag on the reader base and select the appropriate reader base number. Press the **Setup Card** button.

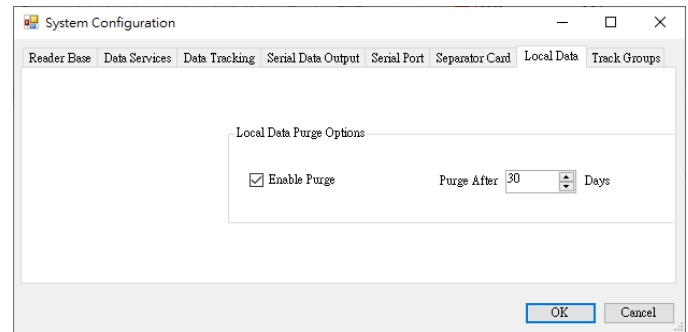


2. Press the **Initialize Card** button to reset the **Error Defective Tag** in red color.



3.10 LOCAL DATA

The local log data store in the hard disk can be purged after a certain period of time by this setting.

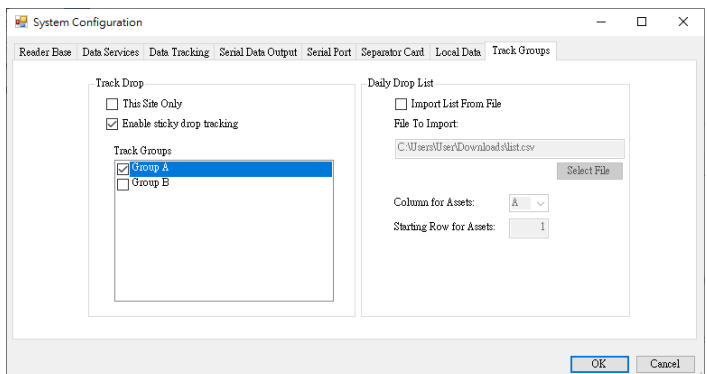


3.11 TRACK GROUPS

The Drop Status is referring the settings showing in this tab.

Enable sticky drop tracking is showing the Groups created in the database.

When database is not connected, **Import List From File** can provide the list of Asset Numbers to refer.



3.12 ABOUT WINDOW

Use the **About window** to determine the version of Easitrax data collection application and the database version.



4 OPERATION



This section outlines:

- operation of the Easitrax data collection application

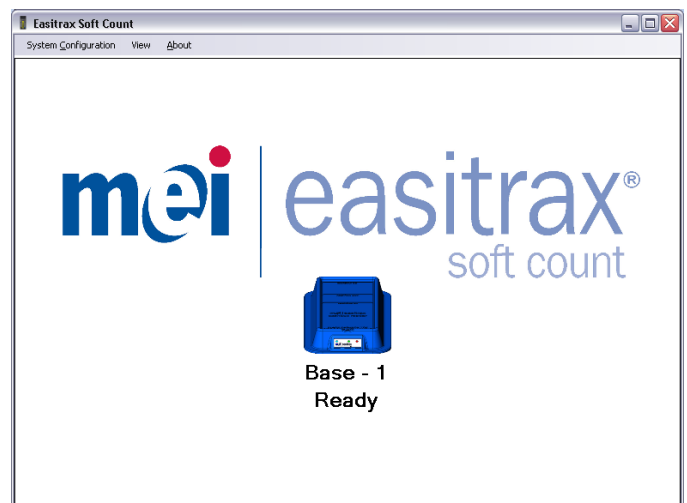
4.1 READER BASE CONNECTION

All operation of the Easitrax data collection application relies on the USB reader base. The reader base connects to the Easitrax data collection PC using a standard USB Type A to Type B cable. If more than one reader base is required, a powered USB hub must be used as specified in the Easitrax PC and Server Specification. The powered USB hub ensures excess current draw does not damage the PC.

4.2 APPLICATION AND READER BASE IDLE

When the application and reader base are properly configured and sitting idle, the blue LED on the reader base will be illuminated and the reader base picture on the screen will also be blue.

At least one properly connected reader base is required to allow program execution. Additional reader bases will be shown on the main screen using the same reader base picture up to maximum of four reader bases.



If a printer port has been configured for the reader base a printer icon will appear below the reader base picture. This icon serves as a button to manually reprint an asset number and serial output string to the specified serial port.



4.3 CASHBOX SCANNING ASSET NUMBER

1. When the system is idle it is ready to process cashboxes. Place a cashbox on the reader base as shown here.



2. The blue and green LEDs on the reader base illuminate and the reader base picture on the screen turns green when the RFID read process has been completed. If the cashbox is removed from the reader base before the LED and reader base picture turns green, the cashbox will not be cleared correctly.



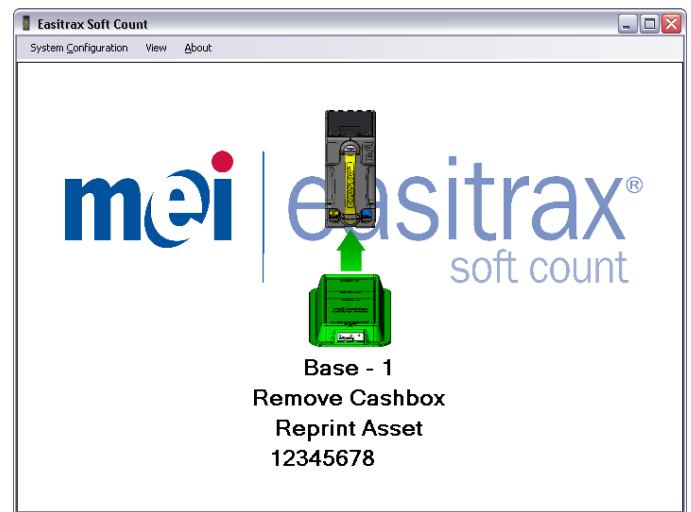
3. At this point, all data has been read from the RFID tag, stored in the SQL database, transmitted over the specified serial port and the RFID tag has been cleared.
4. The screen and LED indicators remain in this condition until the cashbox is removed from the reader base.
5. When the cashbox is removed from the reader base, it returns to the idle condition described previously.



4.4 CASHBOX SCANNING REPRINT ASSET NUMBER

There may be situations where a cashbox that has been processed by the reader base and had its RFID tag cleared must be scanned by the reader base again. This may be due to a serial port malfunction, counter machine malfunction or confusion over which cashboxes have been processed.

1. With the reader base and Easitrax data collection application idle, place the cleared cashbox back onto the reader base. The blue and green LEDs on the reader base illuminate and the reader base picture on the screen turns green to signify the RFID tag in the cashbox has been read.
2. The message **Reprint Asset** signifies that the cashbox had been cleared previously and the only action taken is to reprint the asset number on the screen and to the serial port.
3. No modifications will be made to the database.
4. When the cashbox is removed from the reader base, it returns to the idle condition described previously.



4.5 CASHBOX NOT CLEARED CORRECTLY

When scanning a cashbox, always wait until the operation has completed before removing the cashbox from the reader base.

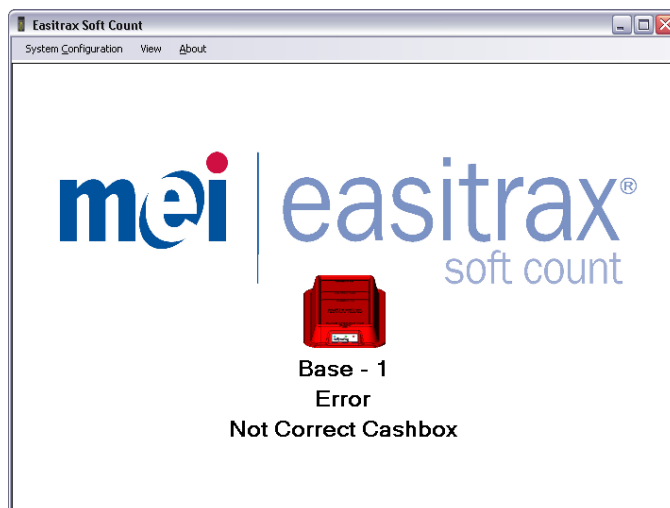
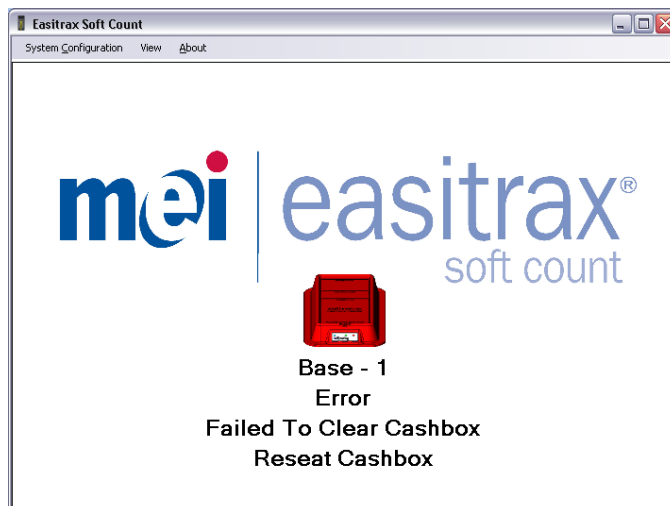
If a cashbox is placed on the reader base and removed before the operation has completed (green LED and reader base picture), the red LED on the reader base illuminates and the reader base picture on the screen turns red.

The message **Failed to Clear Cashbox, Reseat Cashbox** displays on the screen to alert the user to rescan the same cashbox.

This error condition is persistent and will remain until the correct cashbox is rescanned.

If the user scans the wrong cashbox, the error condition text will change to **Not Correct Cashbox**.

1. When the correct cashbox is rescanned, the blue and green LEDs on the reader base illuminate and the reader base picture on the screen turns green when the RFID read process has completed.
2. At this point, all data has been read from the RFID tag, stored in the SQL database, transmitted over the specified serial port and the RFID tag has been cleared.
3. The screen and LED indicators remain in this condition until the cashbox is removed from the reader base.

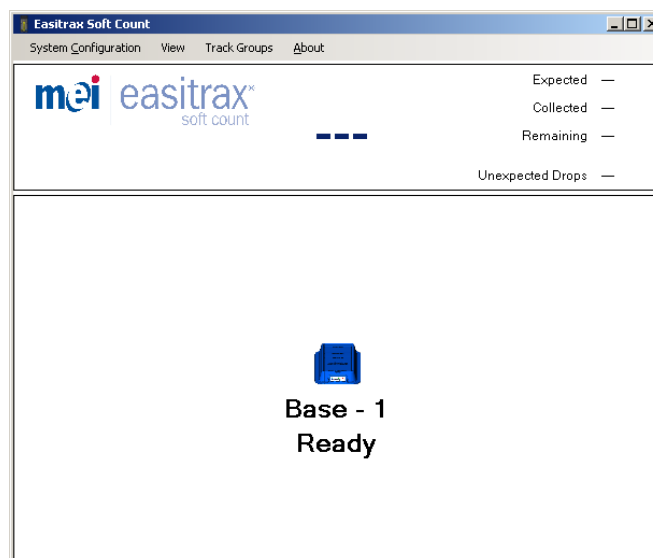
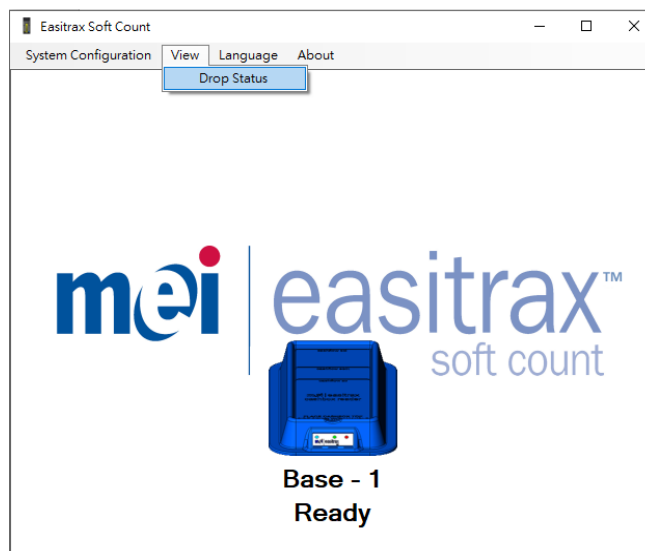


4.6 DROP STATUS TRACKER

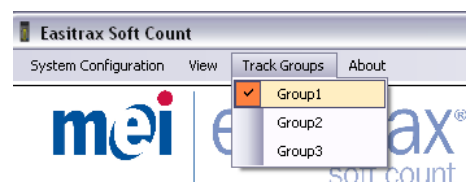
The Drop Status Tracker feature allows real time tracking of an expected group(s) of asset numbers. This feature will rely on asset number and group associations configured using the Asset Management application and stored in the SQL database instance. As cashboxes are scanned on the reader bases, the current percentage complete for the specified group(s) will be displayed.

Please note that real time data is only available if there is one instance of Easitrax data collection application connected to the database. If multiple instances of the Easitrax data collection application are connected to the same database, updates to the Drop Tracker may be delayed up to 30 seconds.

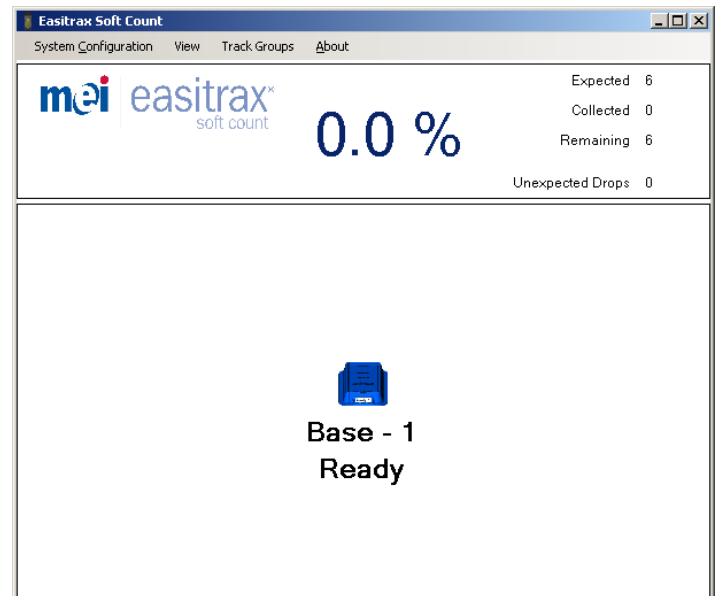
1. Open the **Drop Status** tracker feature by clicking **View->Drop Tracker**. The **Drop Status** tracker appears in the upper portion of the main screen and displays the percentage complete, number of expected asset numbers, number of collected asset numbers, number of remaining asset numbers and number of unexpected asset numbers.



2. Select the **Group(s)** of asset numbers to track with the **Drop Status** tracker by clicking **Track Groups** and selecting the desired groups. Multiple groups can be selected in this window.



- As cashboxes are scanned and asset numbers are added to the database, the percentage complete updates along with the categories on the right side of the screen.



4.7

UNINSTALLATION

To uninstall the Easitrax data collection application, run the windows uninstallation wizard that can be found in the **Add/Remove Programs** in Windows under the **Control Panel**. This removes the software from the system. It is also important to remove the logs and settings files that are left. Old data may not be compatible with future versions of the software. In the **C:\MEI** folder, delete the following files:

easitraxLog.xml

easitraxSettings.xml

4.8

PC REQUIREMENTS

Please refer to the Easitrax data collection application PC and Server Specification for a complete list of required hardware and software.

5 **DIAGNOSTICS AND TROUBLESHOOTING**



This section outlines:

- diagnosing problems and troubleshooting the Easitrax data collection application

5.1 **SYSTEM SITS AT THE SPLASH SCREEN**

Ensure there are no message boxes that are hidden behind the splash screen. In most cases, there is an error message that will be visible in the system tray of Windows.

5.2 **WHEN I SCAN A CASHBOX ON THE READER BASE NOTHING HAPPENS**

Ensure there is an RFID tag installed inside the cashbox in the correct location.

5.3 **SOCKET CLIENT CANNOT CONNECT TO EASITRAX DATA COLLECTION APPLICATION**

Ensure the binding address is the correct address. In the event the computer has two Ethernet cards, the binding address must be set to the address of the Ethernet card that the client computer will be connecting through. For instance, ensure the binding address is the wireless IP address, if the client will be connecting through the wireless card.

Ensure the port numbers are the same. The client and server must be trying to connect on the same port number. By default, this is 57375 but can be changed by the user.

Ensure the port number is not being used or blocked by a firewall. If the port is being used by another application, it may be necessary to change the default port number. If no other application is using the port number and the computers are on the same network, then ensure there is no firewall running that is blocking that port.

5.4 **ARE MULTIPLE ETHERNET CARDS NEEDED?**

There will be some situations where a PC running the Easitrax data collection application will have two active Ethernet Cards (also known as NICs– Network Interface Cards). If this is the case, the proper binding address for the Socket interface is important. If there are two NICs, then the computer has two IP address. Be sure to set the Socket binding address to the IP address that the client computer will be using to connect to Easitrax data collection application.

5.5 EASITRAX WEB SOFTWARE DIAGNOSTICS CONDITIONS

The table below shows all of the Easitrax Web software diagnostic conditions that will be encountered during normal operation of the product. Each reader base MMI and data collection screen combination is described along with corrective actions if necessary.

Reader Base LED Status	Reader Base Picture on Data Collection Screen	Description	Corrective Action(s)
Blue (solid)	Blue	The reader base is powered and communicating with a PC.	None
Blue (solid), Green (solid)	Green	Cashbox has been processed and cleared correctly and can be removed from reader base.	None
Blue (blinking), Red (solid)	White or program not started	The reader base is powered, but is not communicating with a PC.	Start the Easitrax data collection application. Close the system configuration menu. Reconnect the USB hub.
Blue (solid), Red (solid)	Red	The cashbox was removed from the reader base before the clear was completed.	Place the correct cashbox back on reader base.

6

VERSION HISTORY

Rev	Change	Sections Concerned	Date
v1.0		all	-
v2.0		all	2010-03-26
v3.0	Reformatting	all	2024-04-22
v4.0	Product name updated	all	2024-06-03

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USA

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