Capsa Healthcare

Cart Interface Installation and Control Board Operations Manual for M38, and M38e XP and RX Carts
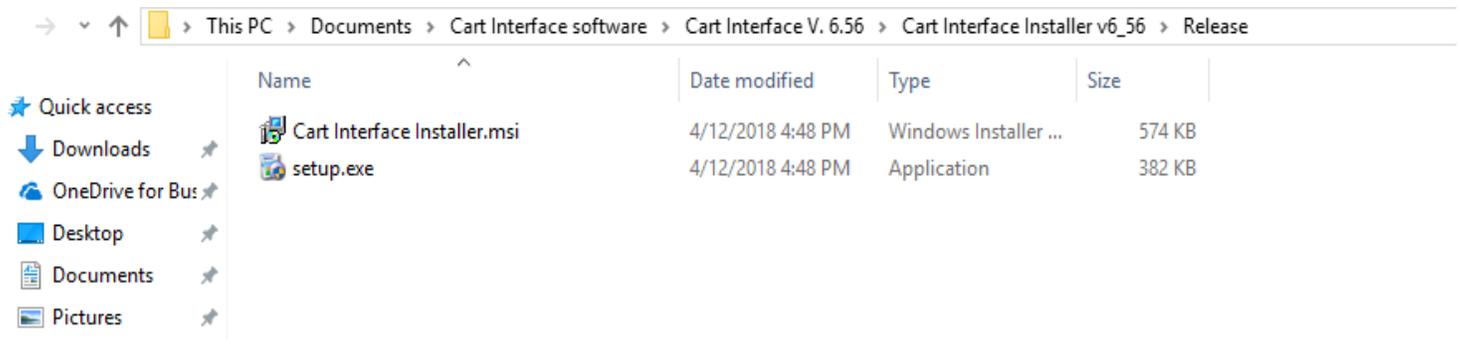

Revised 05/20/2019

INSTALLING CART INTERFACE V. 6.56 SOFTWARE

Unzip the Cart Interface file, and launch the installer to begin setup of Cart Interface to your computer:

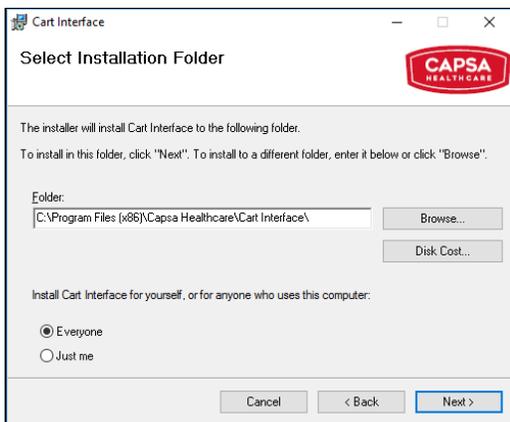You will then see the following screen. Select Next to continue.

Select default folder, as shown. Then, you can select how the program is accessed.
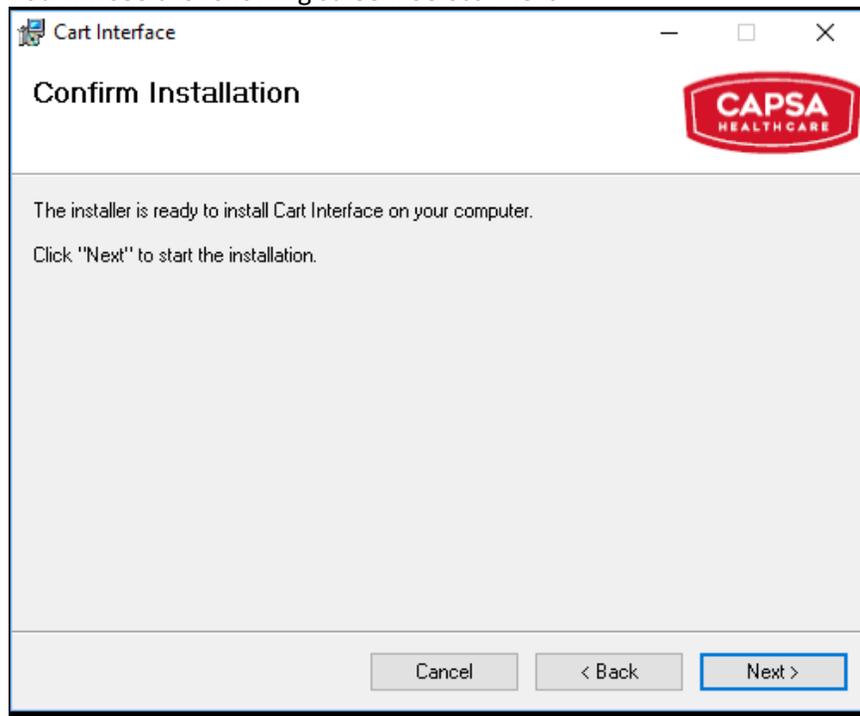If "Everyone" is selected, anyone logged in to the computer can use Cart Interface to make changes.
If "Just Me", access will only be for that user- this option can be used if Cart Interface use needs to be restricted.
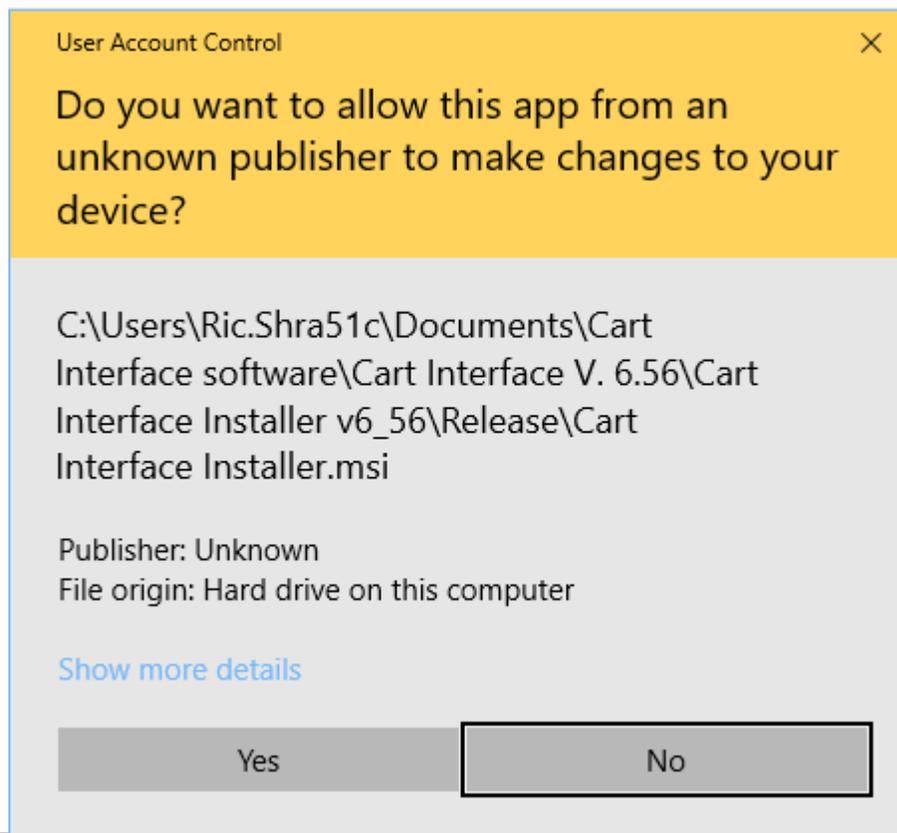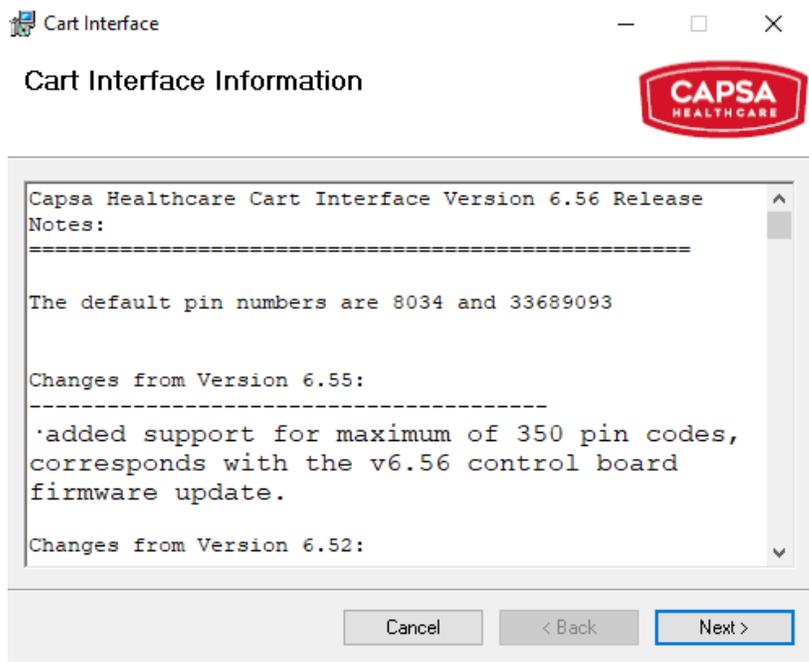Select "Next" to continue.

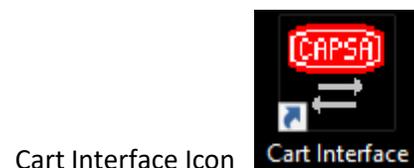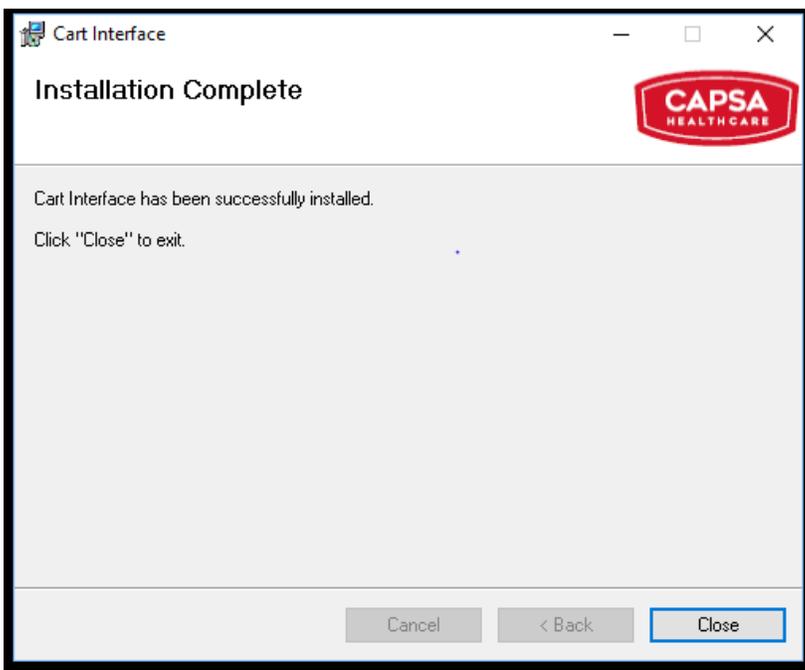You will see the following screen. Select "Next"

The Install will require Admin Privileges, as shown. Select "Yes" and continue.

You will see a progress bar, followed by an informational screen- Select "Next" to complete the install.
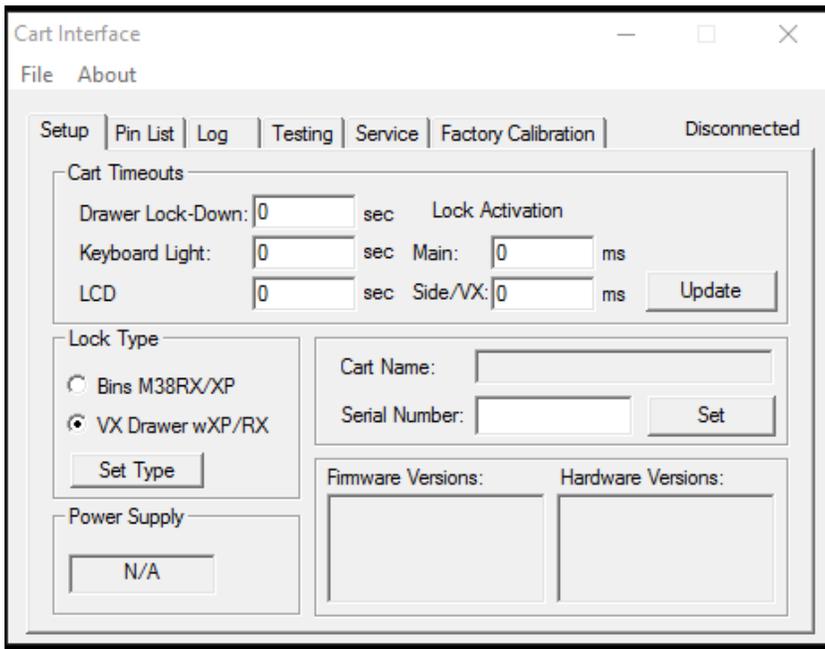

When completed, select Close- you'll then see a Cart Interface icon on the desktop.

Cart Interface Icon

Click on the icon to launch Cart Interface. A similar screen will be displayed:



Initial Launch of Cart Interface Application:
1. Inside the techbox of the cart, you'll see two USB cables. Usually one is gray and one is black but one of them should have a "**USB**" sticker label about 6" down from the connector end. This cable is used to communicate with the main controller card. Connect this cable to an available USB port on your computer.
2. You should hear the Windows tone and you'll see some Windows pop-ups, indicating the USB drivers are being installed.
3. Once the drivers are installed, you should see a pop-up saying "A PIN code has been active for xxx days", as shown below. This message indicates the age of the oldest PIN code on the cart and can be beneficial for facilities requiring periodic PIN changes. Proceed to step 4.
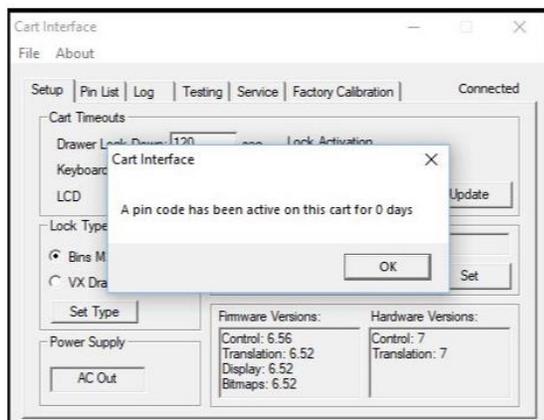
If you DO NOT get this message, you will have to MANUALLY install the USB drivers- GO TO STEP 6

4. Click OK to clear the message.
5. Cart Interface is now active. Also, verify it shows you are connected. You should see a similar screen:
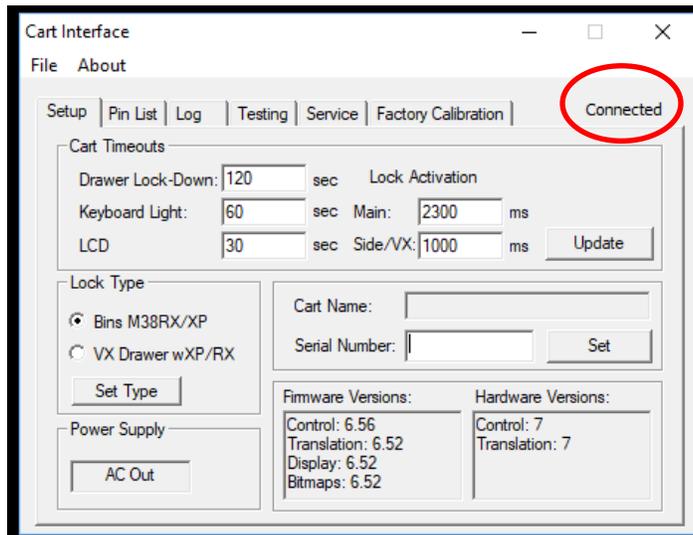
6. **Manual install of USB driver for Cart Interface**:

Make sure USB cable is not plugged in
    a. Unzip USB Drivers Win 7, and run set up:

    b. Once set up completes, re-start PC.
    c. Connect USB cable. Also, make sure cart is powered on.
    d. Open Device Manager. You should see an entry in the Ports (Com and LPT) section showing USB Serial Port, and the COM port associated with it, as shown
    e. Launch cart interface. You should now show "Connected".
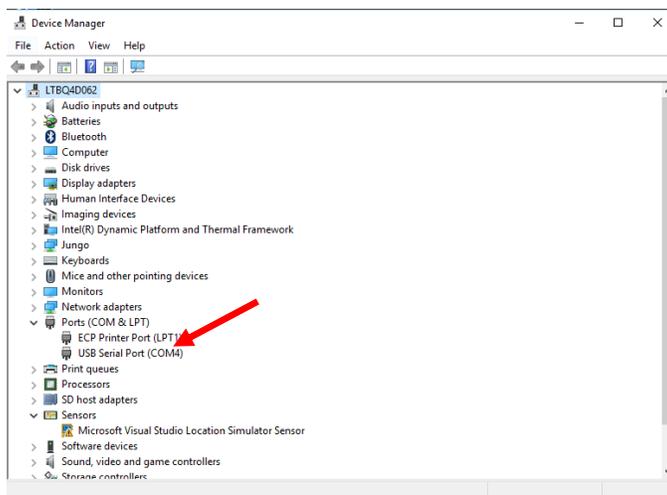
If Windows still doesn't detect USB, you will need to manually update the driver by "pointing" device manger to where the USB driver was installed.

CONTROL BOARD OPERATION VIA CART INTERFACE SOFTWARE

OVERVIEW

The cart includes a control board that operates several of the carts' operations and also records data generated from the keyless entry system. An interface to this control board allows an external PC with a USB port to configure, control, and obtain status from/to the cart. Cart Interface is the software used with the control board to control the cart's interface functions.

This interface is to be used:

- In combination with a System Integrator's on-board PC, to allow the integrator's PC and Hospital Administration System to communicate with and control the Cart;

- By Hospital personnel in the field, using a stand-alone PC to configure the Cart's parameters including Access Codes and overall operation, and to read out status information including the battery state and a list of recent Access Codes used to open the Cart drawers;

- By maintenance personnel, to diagnose problems and perform system checkout and calibrations.

OVERVIEW OF CART FUNCTIONS OPERATED BY THE CONTROL BOARD

Keyless Entry System PIN Code Management: Up to **350** codes can be programmed into the board of each cart. The PIN codes control the locking mechanism on 2/4/5/6/8 drawer configurations as well as the mechanism on the VX drawers, locking side bin (optional), vertical expansion pack (optional). PIN codes can be exported for off-line management.

Keyless Entry System Auditing: The control board keeps a rolling log of transactions on the keyless entry system by PIN number. This data can be exported for off-line review.

Asset ID/Tagging: The software contains two fields, "Cart Name" and "Serial" for asset management. Alphanumeric data entered in the "Cart Name" field will always appear on top LCD panel. The "Serial" field can only be viewed using the control board software.

Battery Indication: The control board communicates with the power system to provide a graphical representation of the battery status, represented by battery image divided in to 6 bars.

LCD Panel on Keypad: Control board sends messages to the LCD panel relating to the keyless entry system, the drawer lock status, the battery life, and the cart ID. When any button on the keypad is pressed, the display will light up for a period of time specified in the cart set-up screen of the software.

Height Adjustment: Operation of the motorized height adjustment, is triggered by the board when the up or down arrow is pressed on the KEYPAD. Minimum and maximum battery voltage levels are pre-set to control the motorized height adjustment on the cart.

Keyboard Light: A keyboard light that resides just below the front of the work surface is turned on and off when the light bulb icon is pressed on the keypad. The light will automatically turn off at a user specified time entered on SET-UP tab of the CONTROL BOARD SOFTWARE.

PROGRAMMING CART FEATURES:

The cart has been programmed with default settings to allow the cart to be used prior to any custom set-up. **Prior to setting any features, it is advised the individual functional areas such as Nursing, Pharmacy, and Information Systems are consulted to determine the most appropriate settings.**

NOTE: **All carts are set with 8034 as a default PIN code.** It is strongly advised that this code is removed from the cart once new PIN codes are set to maximize security.

FACTORY DEFAULT SETTINGS:

|	
Automatic Drawer Lock-Down Time	120 seconds
Keyboard Light Shut-off	60 seconds
Medication Drawer PIN Code	8034
LCD Backlight Time	30 seconds
Cart ID	Blank
Serial Number	Set
Open Drawer Sensors	Not Used on M38 or M38e
Max Current – Lift	10 amps
Min Battery Voltage – Lift	10.4 volts

USING THE SOFTWARE:

SET-UP TAB

The set-up tab allows you to view and set time based cart functions. Current settings are displayed, including the serial number of the cart if it has been entered. It will also display the firmware version installed on the control board. The options are listed below:

| Field	Description	Parameters
Drawer LockDown time	Controls the time that the keyless entry system will automatically lock after being opened.	1 – 255 seconds
Keyboard Light Timeout	Controls the time that the keyboard light stays on after being turned on	1 – 255 seconds
LCD Backlight Timeout	Controls the time that the LCD Screen stays lit after any key on the keypad is pressed. To conserve battery life, it is suggested that this setting is less than 10 seconds	1 – 99 seconds

SET-UP TAB, continued:

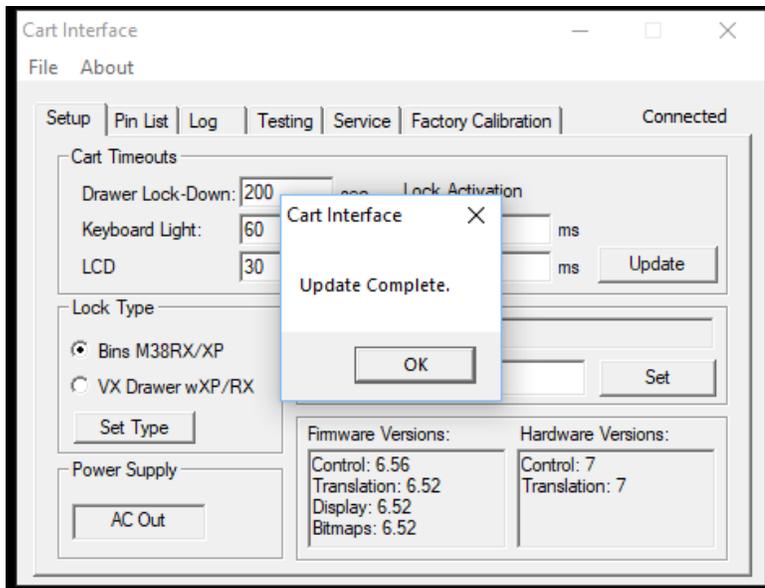- The cart will be shipped with the default settings, as shown below:
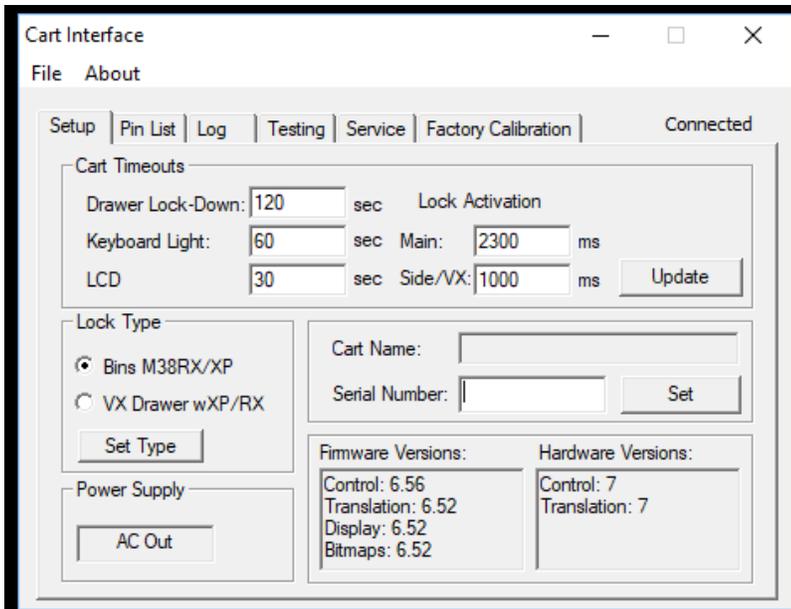
- To make any changes, simply click in the field you wish to change. Type in the new value, then select Update. In the example below, the setting for Drawer Lock Down is being changed to 200.
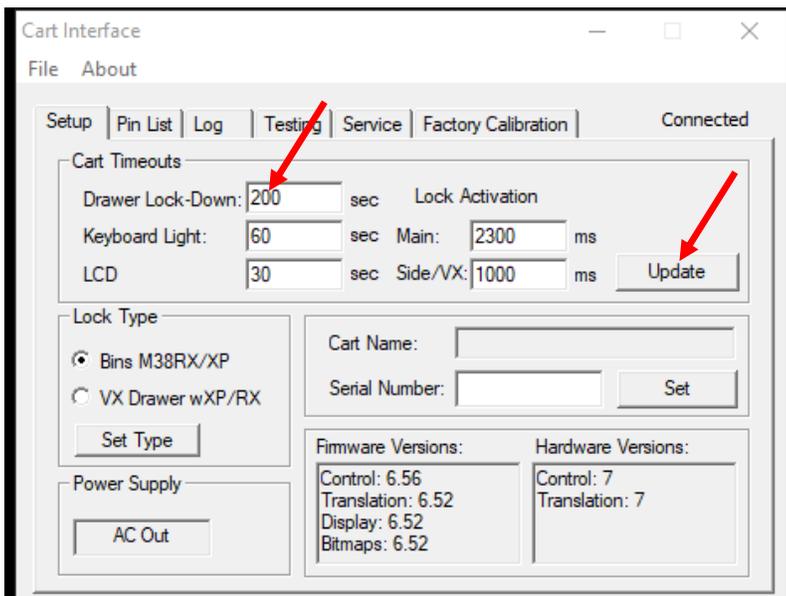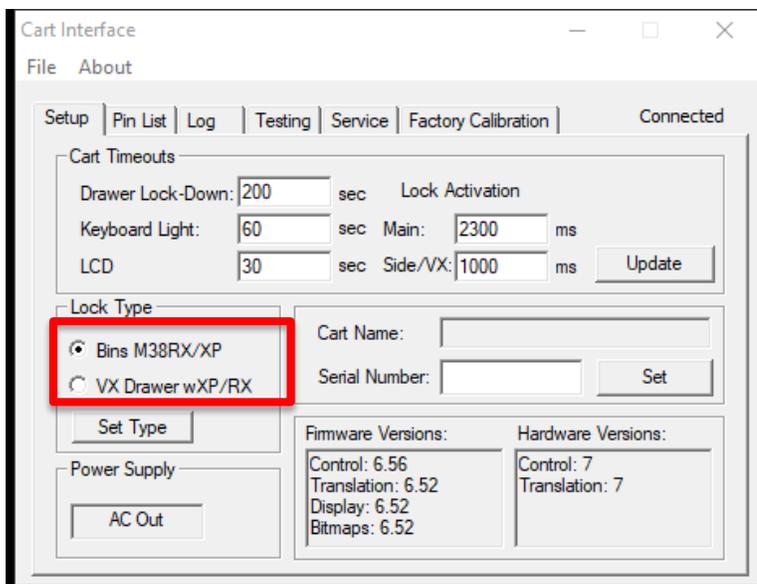
SET-UP TAB, continued:

- You will see a message indicating the cart has been updated. Click OK to continue.

The following fields are also on the Setup Tab:
- Lock Type- There are two types of Locks available:
  - **Bins M38RX/XP- Use for M38 or M38e with XP/RX Module**
 - **VX Drawer w/XP/RX- Use if VX drawer is present on either M38 or M38e, in any combination**

SET-UP TAB, continued:

- Lock Activation will need to be set differently for different Lock Types
    - **Main Setting- Timing for RX/XP modules**. **Set to 2300 for RX/XP module, Set to 10 if no RX/XP module used with VX drawer.**
    - **Side/VX Setting-   Used for Module Lock Type to control side module (optional). For VX Drawer, this also controls the VX drawer activation time- 1000 is generally the appropriate value.**

  In the example below, there is no RX/XP module, and one VX module present with no side module present.
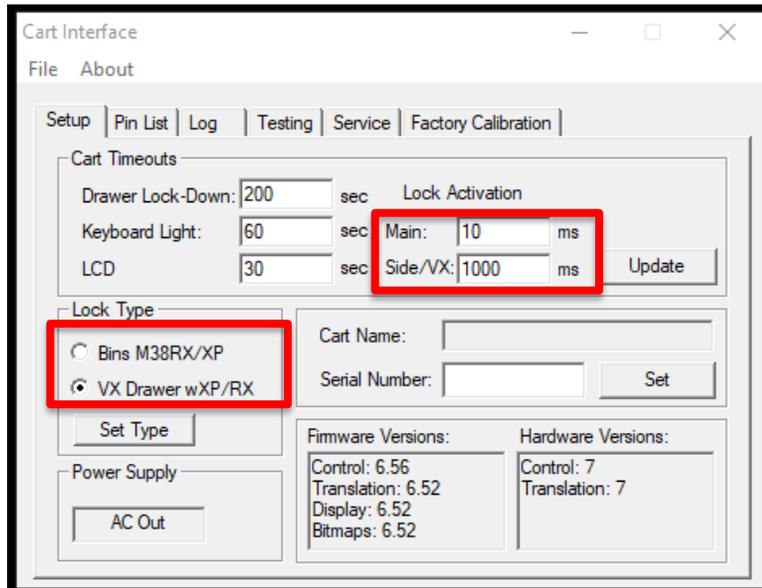
- Serial Number- This is used to record the serial number of the cart. It is set at the factory, and is useful if the serial number label is damaged. It is reccomended that this be re-entered if the control board is replaced. Enter the serial number, then select the "Set" tab.
- Power Supply- This field indicates the type of power supply in the cart- AC or DC. In the shot above, it is AC.
- Firmware Version- This lists the version of firmware present
- Hardware Version- This lists the version of hardware present- they should be version 7.
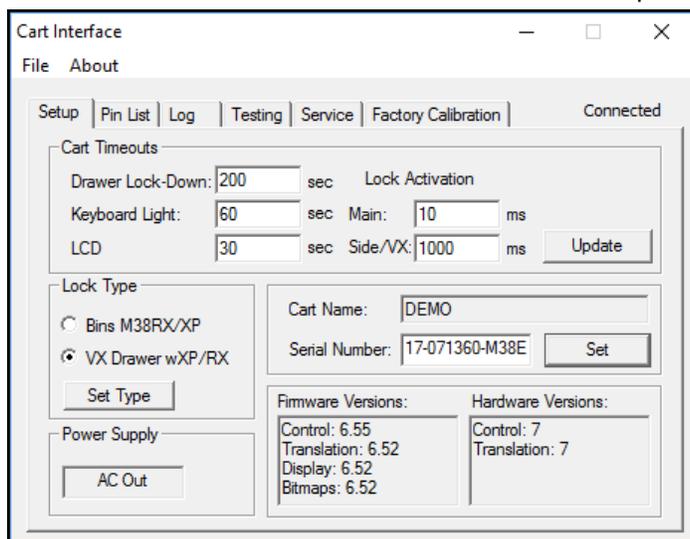
PIN LIST TAB

The Pin List tab contains all the functions required to add, remove, import, and export PIN codes for each individual cart. The age of all PIN codes in days is listed on this page.

PIN Code Specifications:

PIN Codes may be 4-6 digits and contain only numeric characters between 0-9. These digits correspond to the digits on the keypad. Up to 350 codes can be stored on each cart. **The length of the PIN is selected in the field circled below.**

Types of PIN Codes

The software does not differentiate between types of codes suggested below; however, these categories can be maintained offline by the PIN Code administrator. Nursing, Information Systems, Pharmacy, and Risk Management functions may be involved in setting the PIN Code policies.

Master Code: A code that is resident on every cart but is only distributed to staff responsible for maintaining carts such as bio-informatics.

Floor/Ward Code: A code that is resident only on carts on a specific floor or ward. All staff who should have access to the medication drawers on the floor would be aware of the codes.

Personal Code: A code that is determined by or assigned to an individual and resident on all carts that the individual needs access to.

- Default PINs from factory are displayed below.
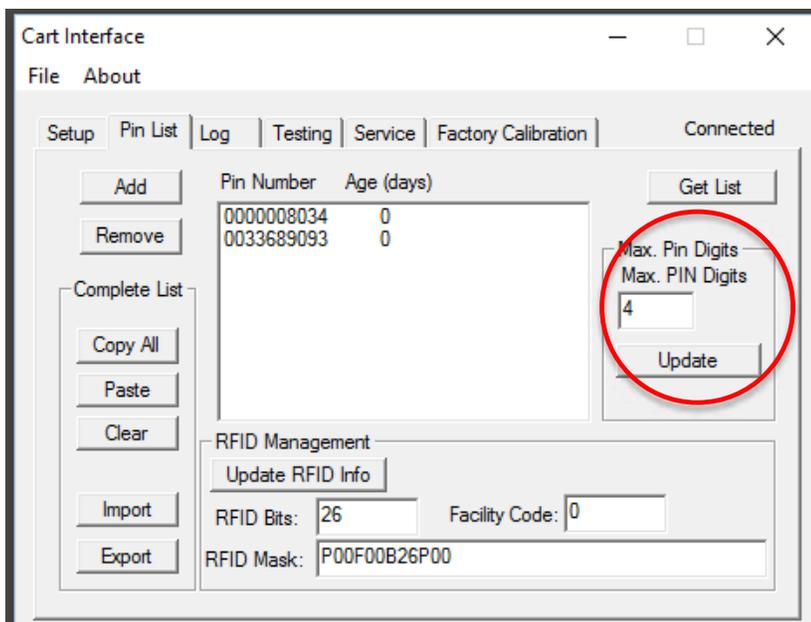
TESTING PINS

To determine if a PIN code has been successfully been added, enter the code into the numeric keypad on the cart. The "drawers unlocked" message will appear for all valid PIN Codes.
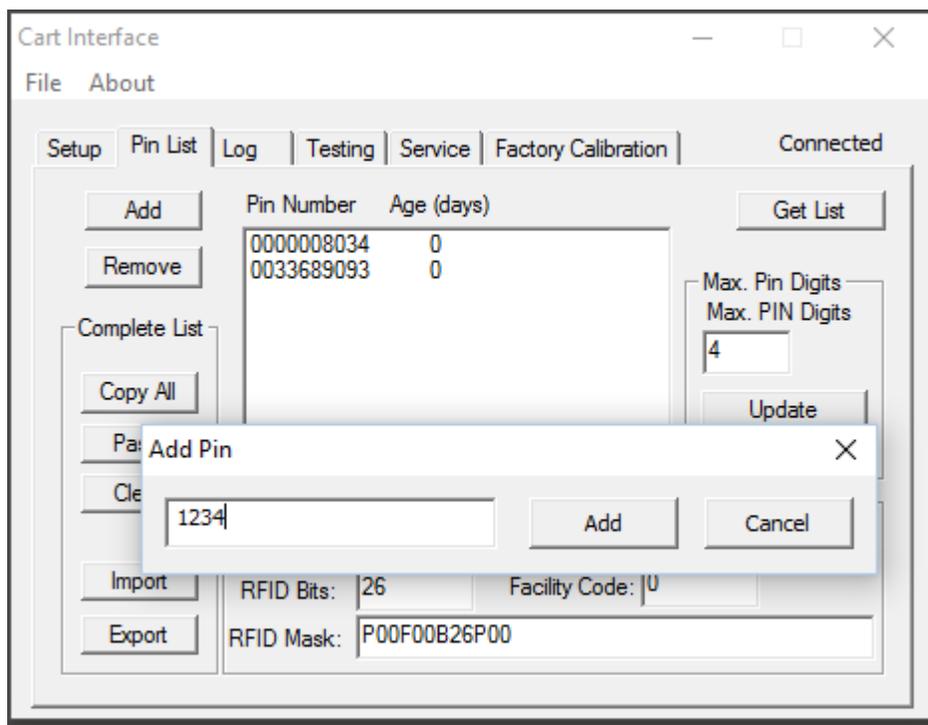
- The **Get List** field will retrieve all PINs and their age currently active on the cart.
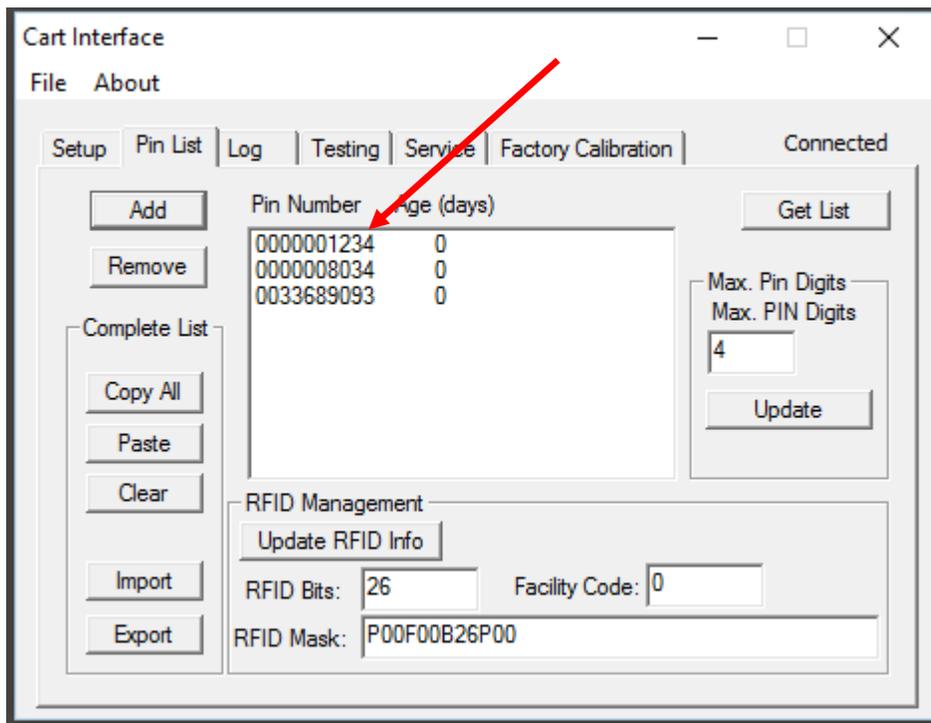- To manually ADD a PIN, select **Add**. You will see the following screen:
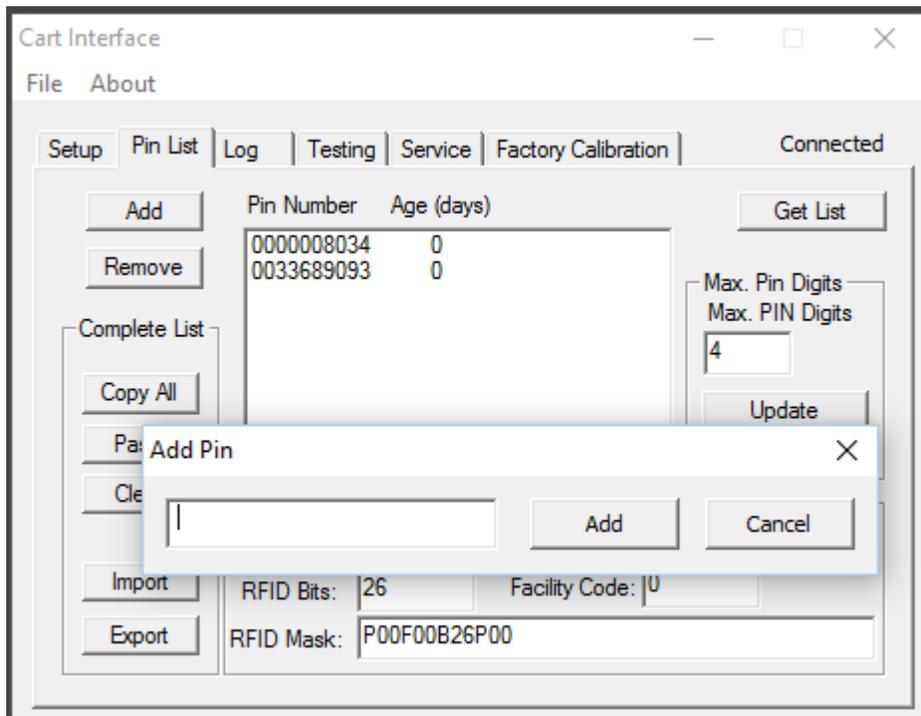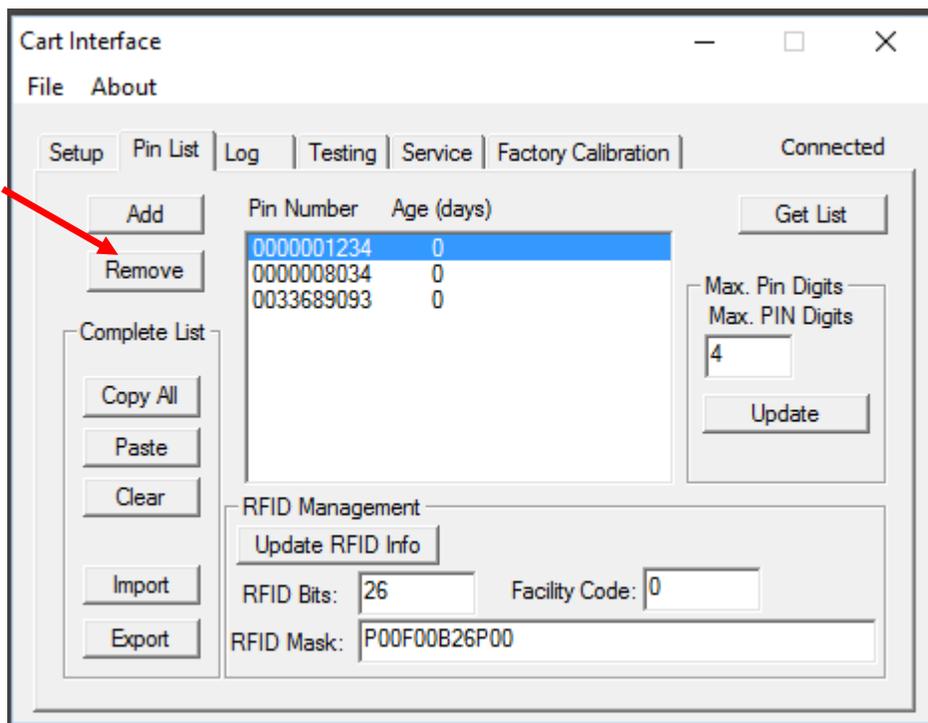

- Enter PIN- in this case, "1234", then selct Add

- The new PIN will immediately be added, as below, and, in additon, it will become active right away.

- To Remove a PIN, click on the PIN you wish to remove, then select "Remove". The PIN will immediately be removed, and will no longer be active.

COPY ALL:

- Selects all active PIN codes to allow pasting into an external program.
- Select Copy All- PIN list will be copied into Microsoft Windows clipboard. Select Paste on the desired application to insert data, usually Excel.

PASTE:

- Pastes a list of codes from the Microsoft Windows clipboard onto the cart. New PIN codes are appended to the list of existing codes on the cart. If you wish to replace the existing PIN codes with the list you plan to paste in, you must first clear all PIN codes on the cart (see below).

CLEAR:

- Clears all PIN codes from the control board
- Select Clear – the screen will display the following:
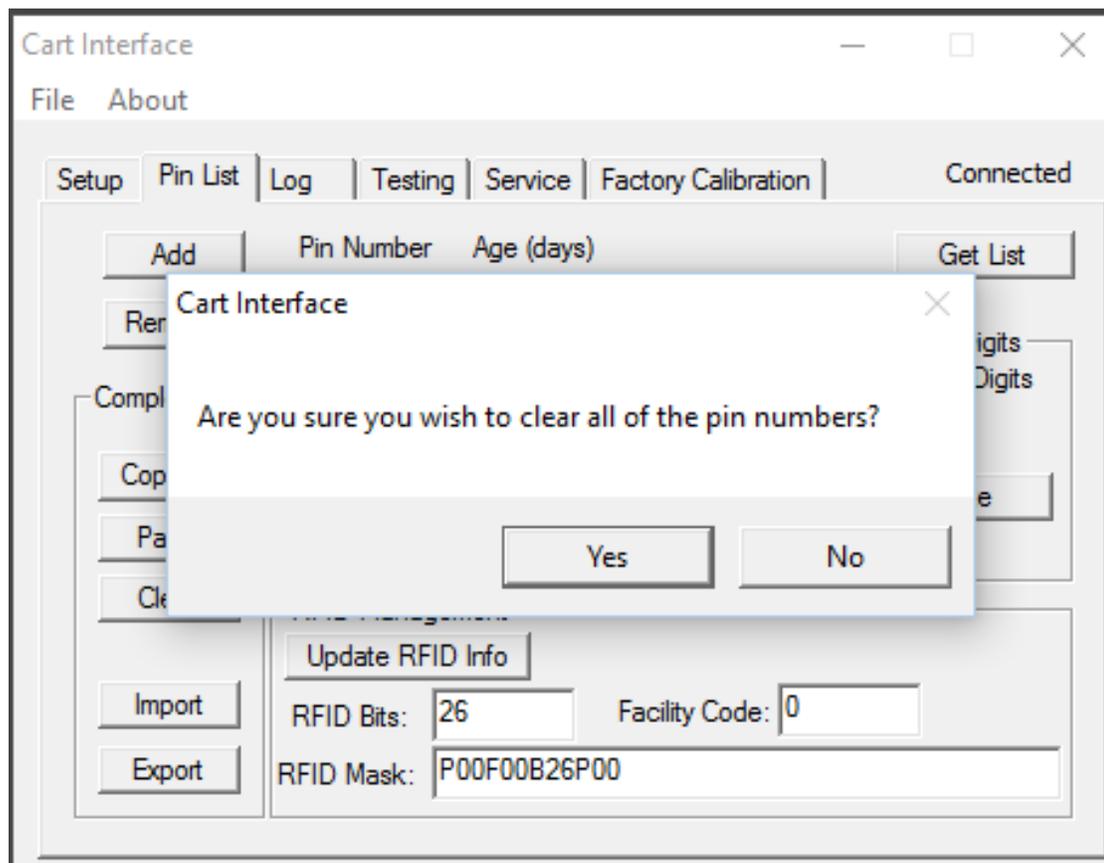

- Select "Yes", and all PIN's will be cleared.

PIN LIST TAB, continued

CREATING A LIST FROM EXCEL TO ADD PINS TO ACTIVE CART

IMPORT:
Allows a list of PIN Codes to be uploaded to the Control Board. Imported PIN codes appear in the list in numerical order. To replace the existing PIN codes on the list prior to importing, you must first clear all PIN codes on the cart (see above).

- Open new Spreadsheet in Excel. In the first column, enter 1 code per row
- Ensure all numbers are text (not values) by placing an apostrophe (') in front of the number. This will ensure that the codes beginning with zero contain all four digits when uploaded to the software.
- Save file as *.csv file.
- Use Cart Interface Import command to ADD the list to a new cart.
- Locate file, and select Open- as shown below. This will import PINs to the active cart.
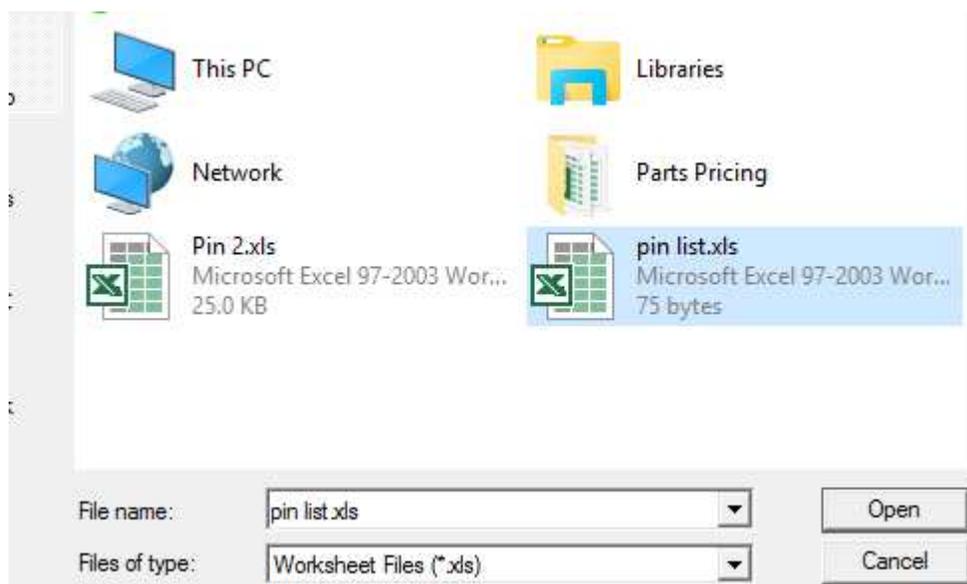
**CREATING A LIST USING EXCEL, TO ADD PINS TO ADDITIONAL CARTS**

EXPORT:

Creates a spreadsheet of all existing PIN Codes on the active cart. List includes PIN number and PIN Age.
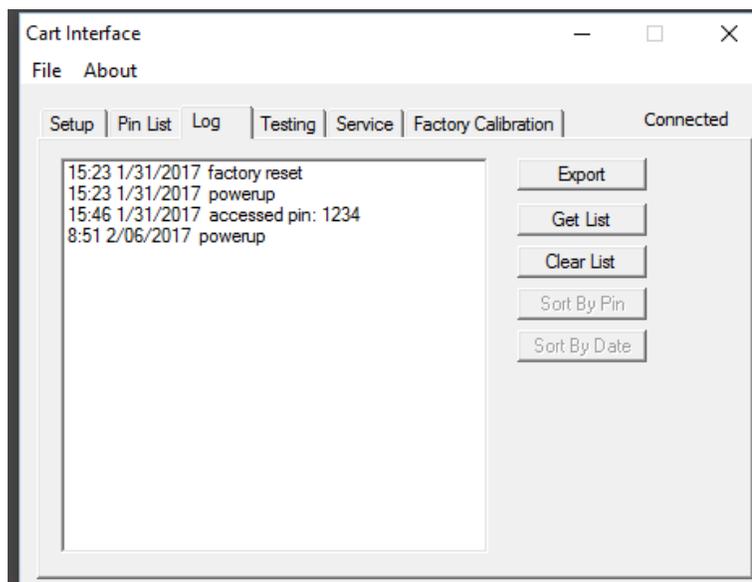
- Select Cart Interface Export command
- Create file name and location
- Save as file type .csv or .xls
- The file can now be used with the Cart Interface Import command to ADD the list to a new cart.

PIN LIST TAB, continued

NOTE: The RFID Management fields are not used or supported in Cart Interface
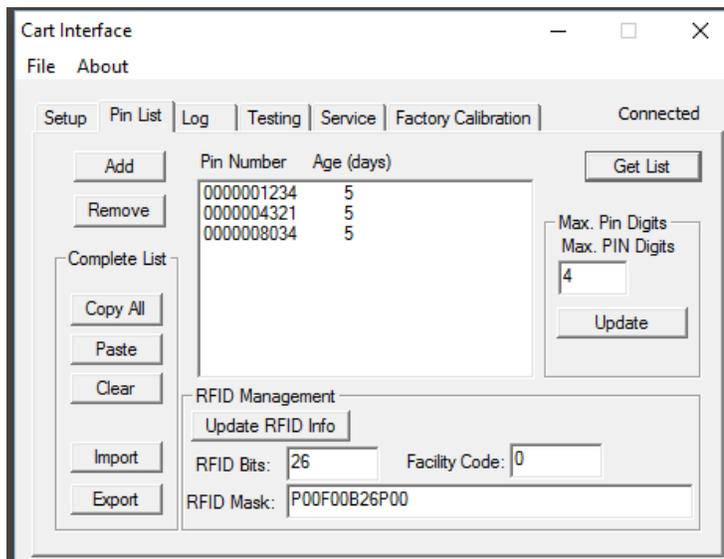

LOG TAB:

The Log tab allows you to review and export the keyless entry data stored on the control board.
The control board keeps an electronic record of the 1028 most recent keyless entry transactions. Once the list is populated with 1028 transactions, the earliest transaction will fall off every time a new transaction is entered. If you wish to keep a complete list of transactions, transactions will need to be periodically uploaded. The Log Tab has the following features:
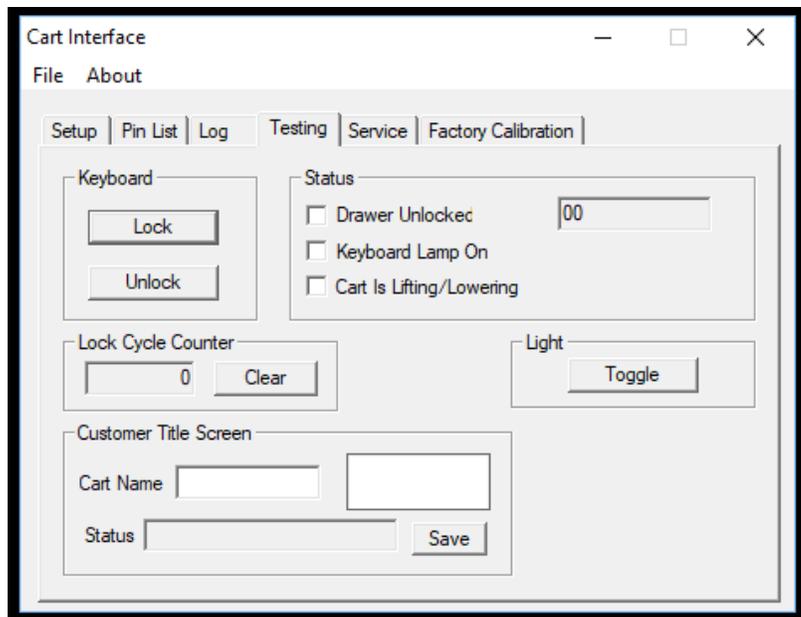
GET LIST: This command will retrieve all entries on the board, and display as shown below.
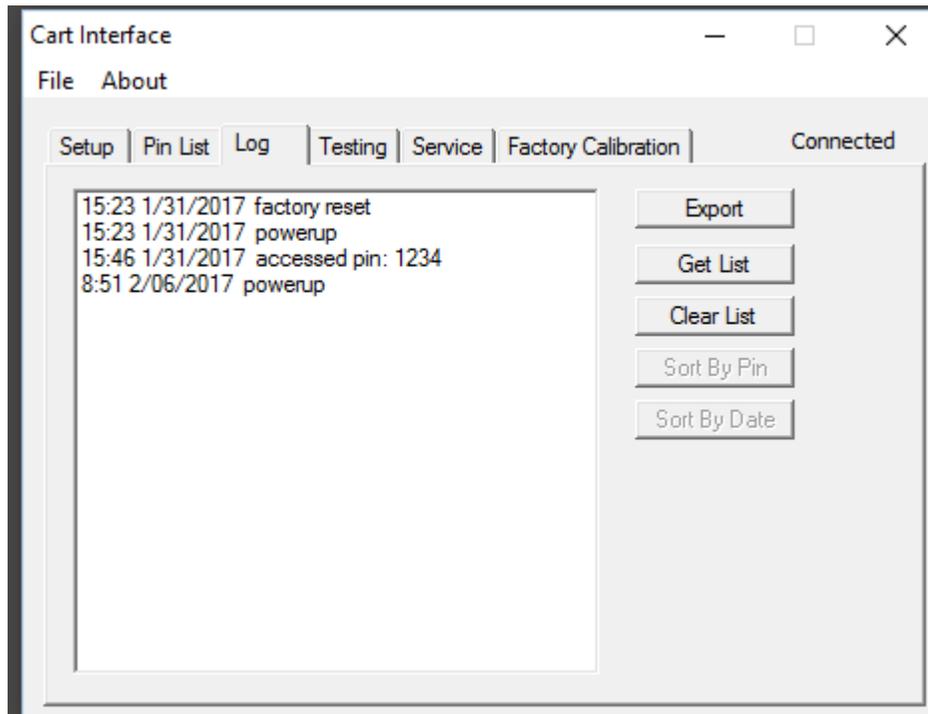
CLEAR LIST: This command will clear all entries on the board.

EXPORT: This command is used to create a file, typically csv or xls format, of all transactions currently on board.

**TESTING TAB:** This tab has several fields used for testing and troubleshooting.

TESTING TAB, continued:

KEYBOARD: This field allows you to lock or unlock the drawers on the cart without entering a PIN. It can be used for testing the cart when any repairs are being made to the drawer system.

STATUS: This field displays the current status of drawer, keyboard light, and electronic lift, if present.

LOCK CYCLE COUNTER: This field displays the number of cycles the locking drawer has been through. It can be reset, using the CLEAR command.

LIGHT: This field allows you to toggle the keyboard light for testing during repairs.
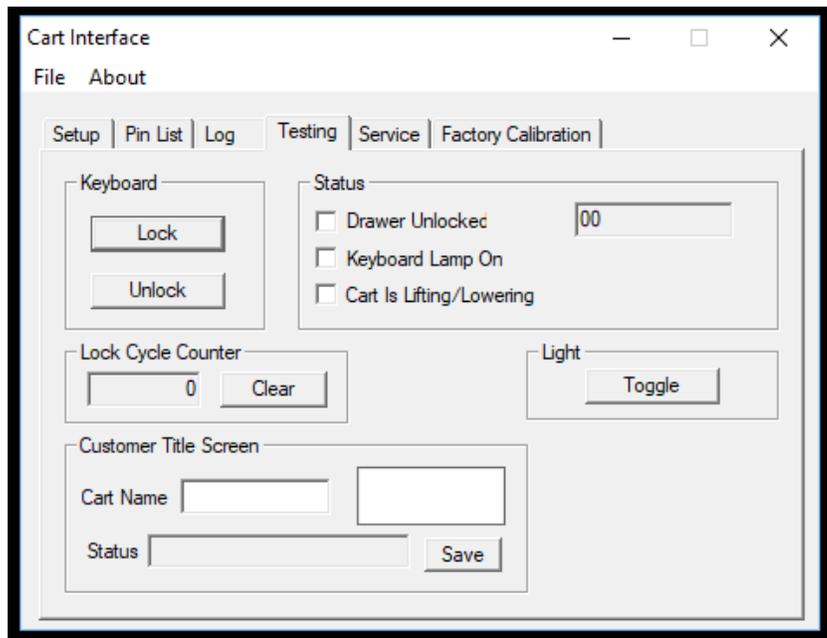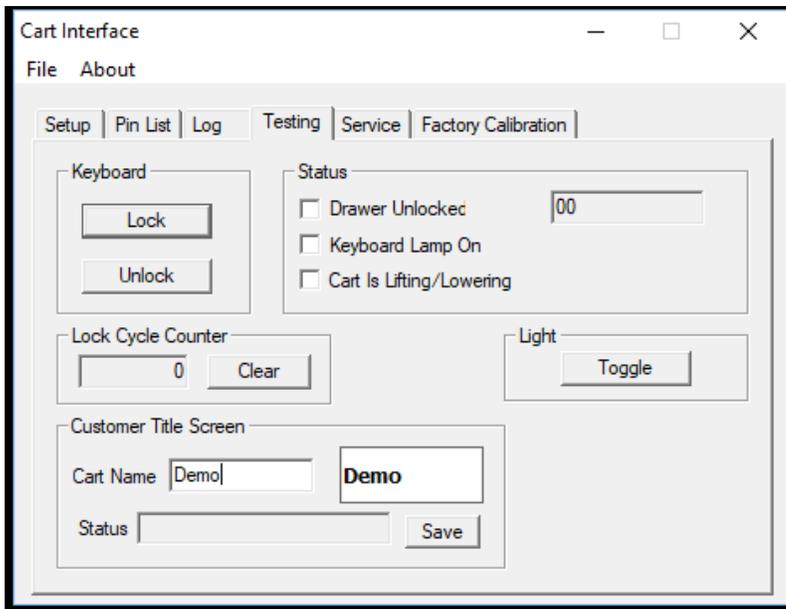

CUSTOMER TITLE SCREEN: This field is used to give a name to the cart, which will be displayed on the Front Panel.
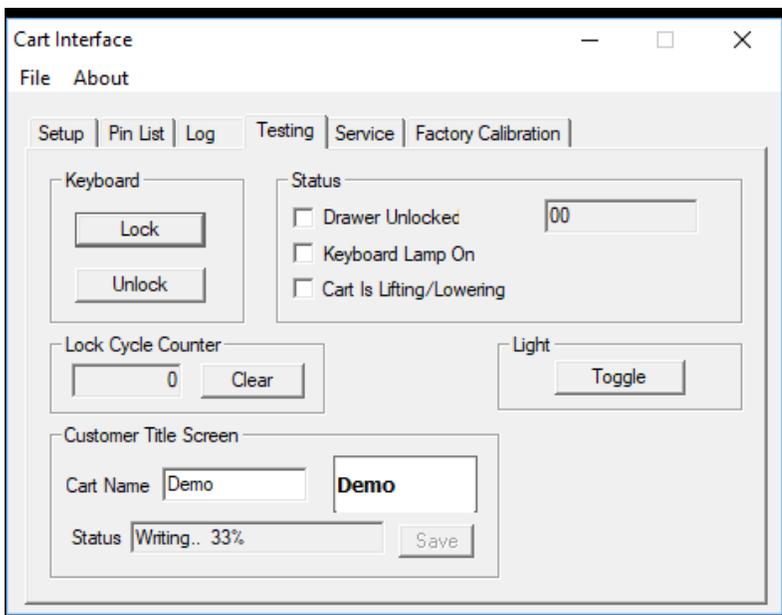The default name is displayed, as shown below:
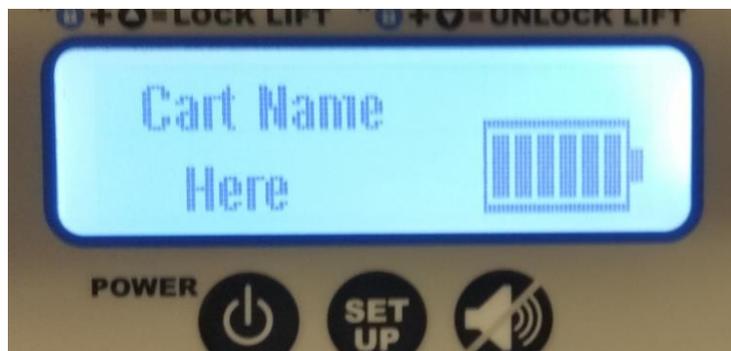
CUSTOMER TITLE SCREEN, continued: To rename the cart, enter the new value in this field, and select save. In the example below, the cart is being renamed to "Demo".
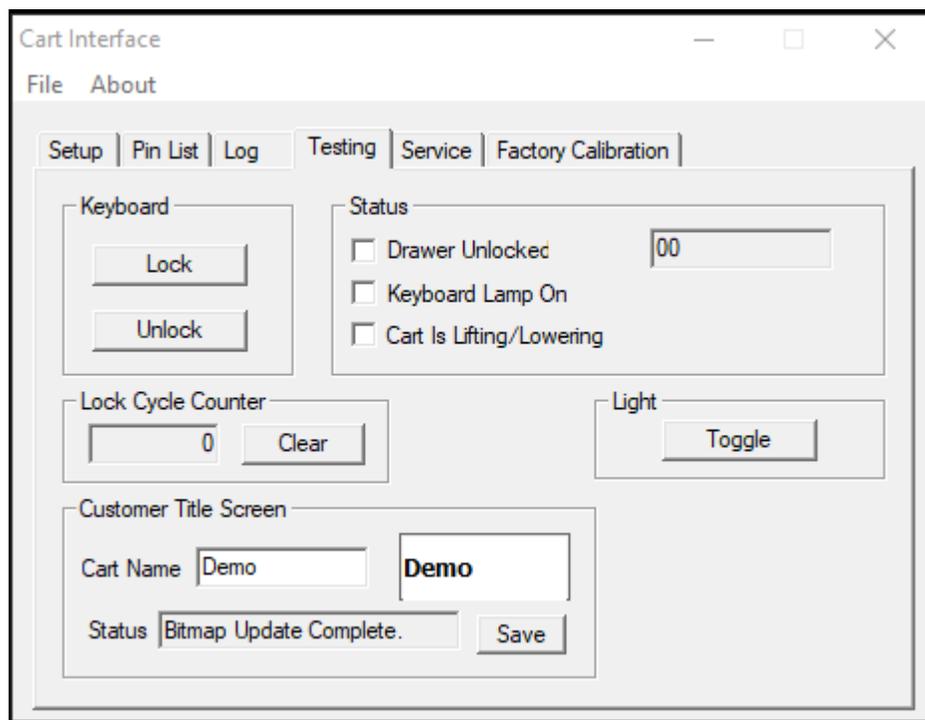

- Once Save is selected, you should see an update showing the name is being written to the cart, as shown below:
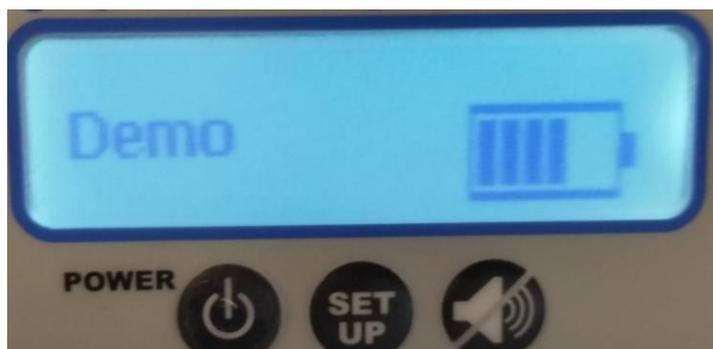
TESTING TAB, continued:

- Once the writing of the new name is complete, you will see the following message:


- The new name will be displayed, as shown below:


NOTES:
- **If the computer you are connected with is using Windows 7 or higher, you will need to temporarily disable "Clear Text Type" on it, as Cart Interface does not support that font type.**
- **There is a 14 character limit on what can be written to the display.**

There are 2 additional tabs- Service and Factory Calibration. These commands are to be used only under the direction of Capsa Support.

SERVICE:
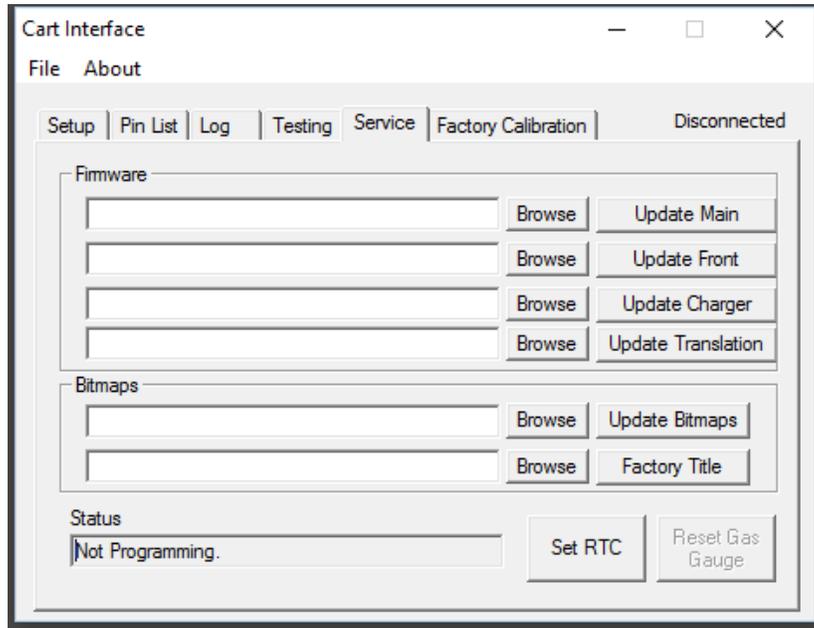
FACTORY CALIBRATION:
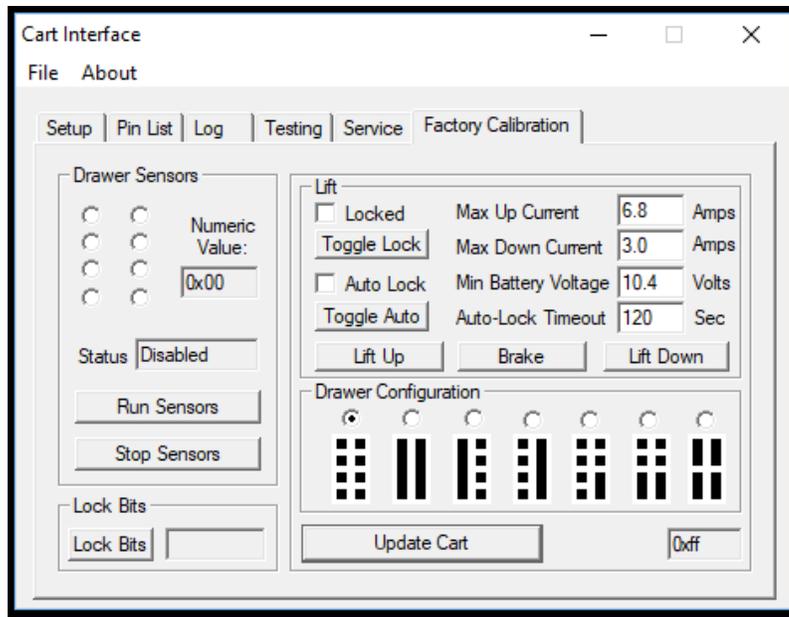
If you need assistance, please contact Capsa HealthCare Customer Service at 800-437-6633.