

# MARINA SmartVend

## INSTALLATION & OPERATION MANUAL



**ROLEC**  
*Marina Services*

Installation and Operation Manual - SVCSM-01-V01-R1  
July 2022

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this manual.

## Amendments

Amendment Number	Details	Date
Ver 1 Rev 0	New Document Format.	November 2021
Ver 1 Rev 1	Correction to change kW to kWh when referring to electricity usage.	July 2022

<b>Product:</b>	<b>SmartVend Marina Pedestal and Smart Card System</b>				
<b>Applicable Models:</b>	SVCS0010	SVCS0110	SVCS0120	SVCS0130	SVCS0140
<b>Document Type:</b>	Installation and Operation Manual				
<b>Document Code:</b>	SVCSM-01-V01-R1				
<b>Language:</b>	UK English (Original)				
<b>Date Published:</b>	July 2022				
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## Safety

This manual is specifically applicable to the SmartVend Marina Smart Card System and is provided as a guide to its installation and use.



**IMPORTANT:** End Users **must** read and **understand** the content of this manual before installation/use.

If the advice in this manual is not understood, contact Rolec for further advice and/or training BEFORE attempting installation/operation of the equipment.

- Rolec Services Ltd cannot accept any responsibility for any problems arising from improper installation or improper use.

- The information provided in this manual is ONLY intended for use with the model(s) listed on page 1 of this manual (and, to a limited degree, with the SmartMaster Solo system).
- The content of this manual may be updated by the manufacturer as required.
- Do NOT use the equipment for anything other than its intended purpose.
- Do NOT modify the equipment unless specifically instructed to do so by the manufacturer.
- Do NOT attempt to repair the equipment unless specifically instructed to do so by the manufacturer.

## Safety Advice within this Manual

Rolec manuals use a system of warnings, cautions and notes.

- **WARNINGS** concern the safety of installers/end user and will be given before the detail/instructions in the manual.
- **CAUTIONS** concern the potential for damage to the equipment and will be given before the detail/instructions in the manual.
- **NOTES** are given to provide additional information and/or highlight information of importance. They will be given either before or after the detail/instructions as appropriate and may use different wording (such as IMPORTANT) where emphasis is required.

Warnings, Cautions and Notes may be repeated several times as appropriate and may be preceded by a hazard symbol.

## Product Overview

The SmartVend Marina Pedestal and Smart Card System is an update to the previous SmartMaster Solo system and most of the content of this manual will apply to the majority of existing SmartMaster Solo systems.

The system offers an easy to install and simple to use, card-controlled service pedestal solution ideal for any marina, boatyard, or waterfront location that does use data cabling or a networked management system.

Pedestals fitted with SmartVend only require to be connected to a mains electrical supply and, if required, a water supply.

**NOTE:** Where this document mentions RFID Cards, this includes similar devices such as compatible RFID Fobs and Tags which may have a different physical format.

The SmartVend Marina Pedestal and Smart Card System features:

- Windows™ PC based card management software.
- Contactless, re-usable RFID smartcards.
- Card reader with user display at every berth showing service outlet and card credit values.
- Billing of electricity and water consumption via credit applied to the pedestal via the .
- Ability to transfer credit from RFID card to the pedestal and to refund unused credit from the pedestal to the RFID card.
- Ability to export records to .CSV format files to be viewed in the majority of spreadsheet applications (such as Microsoft Excel).

Model Number	Standard Specification
SVCS0010	SmartVend RFID Reader/Writer
SVCS0110	SmartVend – 1 x 16 Amp Socket and 1 x ½" water tap
SVCS0120	SmartVend – 2 x 16 Amp Socket and 2 x ½" water tap
SVCS0130	SmartVend – 3 x 16 Amp Socket and 3 x ½" water tap
SVCS0140	SmartVend – 4 x 16 Amp Socket and 4 x ½" water tap

## Unpacking

The content of the package depends on the model ordered and any options or accessories.

Package content will typically include:

- 1 x RFID Card Reader.
  - 1 x USB A – C cable.
  - 1 x User manual.
  - Blank RFID Card(s)/Fob(s)/Tag(s) – optional.
  - Software may be supplied on USB stick, via email or via file transfer.
1. Make sure that the contents of the package do not appear to have been damaged in transit.

**NOTES:**

- Incorrect or damaged units must NOT be used. Contact your supplier to discuss replacement.
- Items damaged in transit must first be reported to the courier and then to the supplier.
- Where possible, photographic evidence of package and/or product damage should be provided.

**IMPORTANT:** Make sure all packaging is disposed of responsibly and in accordance with the current regulations in your region.

## Software Installation



**IMPORTANT:** Installers and End Users **must** read and **understand** the content of this manual before installation/use.

Installation must **only** be performed by someone who is competent to do so.

- If the advice in this manual is not understood, contact Rolec for further advice and/or training BEFORE attempting installation/operation of the equipment.
- Rolec Services Ltd cannot accept any responsibility for improper installation.

**NOTE:** Damage to the equipment, connected systems or to property caused by improper installation/use are the responsibility of the installer/user.

## Install the Software

**NOTE:** The software screens and process shown in this guide may differ slightly depending on the version of Microsoft Windows being used on the host PC. Follow the prompts shown on-screen during the installation.

**NOTE:** To maintain compatibility with the previous SmartMaster system, SmartVend setup refers to SmartMaster file locations on the host PC.

1. Software may be supplied in a compressed (zip) file. Most modern PCs can extract the files without needing any other software. If your PC cannot do this, 'unzipping' software is freely available online.
2. Unzip (decompress/extract) the software to your PC desktop.
3. Make sure you have a copy of:
  - SmartVend software.
  - Marina ID Key File.
4. Double click on the SmartVend software **Setup.exe** to start the installation process.
  - Protected Windows systems may display a warning(s). Accept the warning(s) to continue.
  - If SmartVend (or SmartMaster Solo) is already installed, a message will be displayed offering a choice to either **Repair** or **Remove** the software.
    - If you are upgrading the software, the previous version must first be removed using the PC's **Add or remove programs** option, available through Windows Settings.
    - If a customer database already exists, it will not be deleted when the old software is removed. However, if you want to back-up the data before continuing the installation, the database file is stored as an .xml file at:  
**C:\Users\your UserName\AppData\Roaming\SmartMasterSolo.**

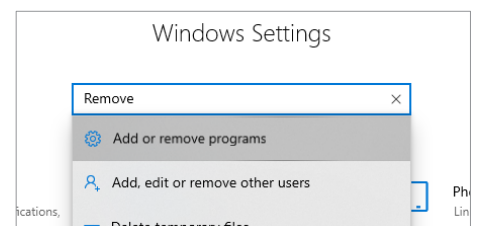


Figure 1 Windows Setup

The on-screen installation instructions will guide you through the installation of the SmartVend software.

- The instructions/screens may differ from those shown below depending on the version of Microsoft Windows installed.

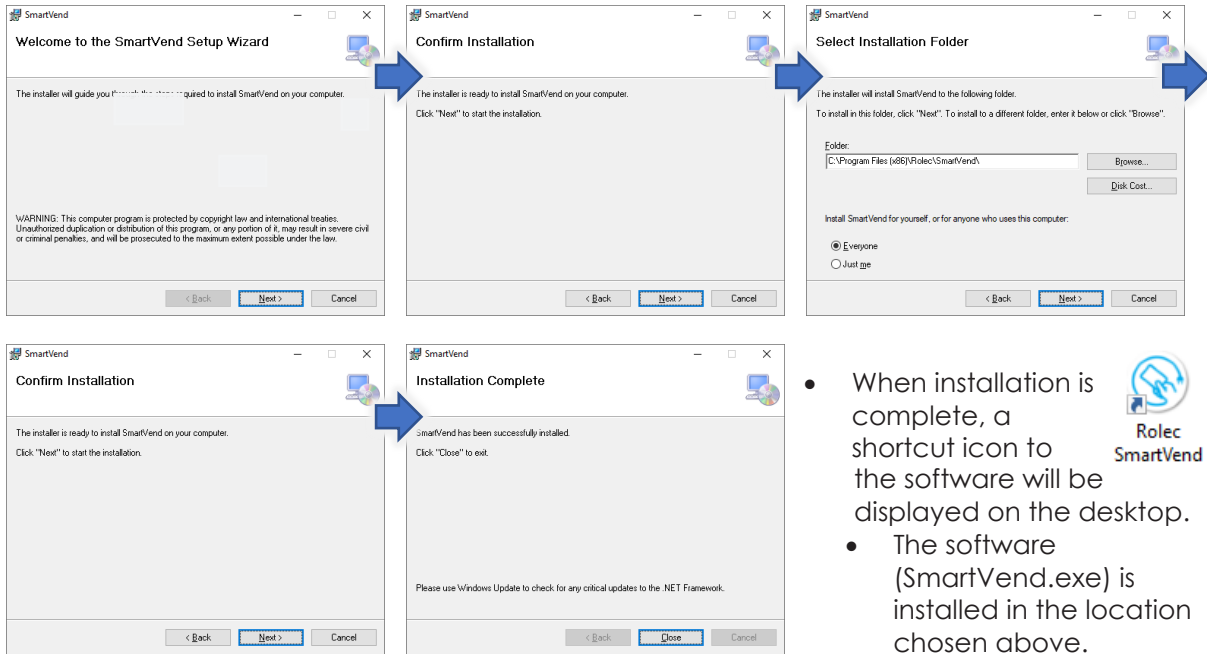


Figure 2 Software Installation Screens

By default, this is:  
**C:\Program Files (x86)\Rolec\SmartVend\**

## Connect the RFID Card Reader

1. Connect the RFID card reader to an available USB port using the supplied cable.
  - The reader will 'beep' each time it is connected.
  - The LED indicator on the reader will illuminate.
2. If this is the first time this reader has been connected to the PC or to the specific USB port, wait for the 'Found New Hardware' message to appear. The driver should be found automatically, and in a few seconds the new hardware will be configured.

## Set the Marina ID

1. Each marina has a unique ID that must be applied to the software before it can be used correctly.

You will have been provided with the ID key file (in this example, '**Marina\_76\_KeyFile.key**'), either on a memory stick or in an email.

2. Move the file to a convenient location such as the desktop, ready for step 9.
3. Start the SmartVend software using the shortcut icon shown on the desktop.



4. If this is the first time the SmartVend system has been used, the software must create a database to store information. Click on the **OK** button to create the database.
  - Alternatively, if a database already exists, you will be given the option to keep the existing database or create a new one. Choose the option appropriate to your needs.

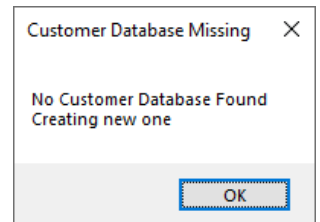


Figure 3 Database Message

5. If this is the first time the SmartVend system has been used, other warning or error messages may be displayed. Accept the warnings.
6. The SmartVend software should now be displayed on the screen.

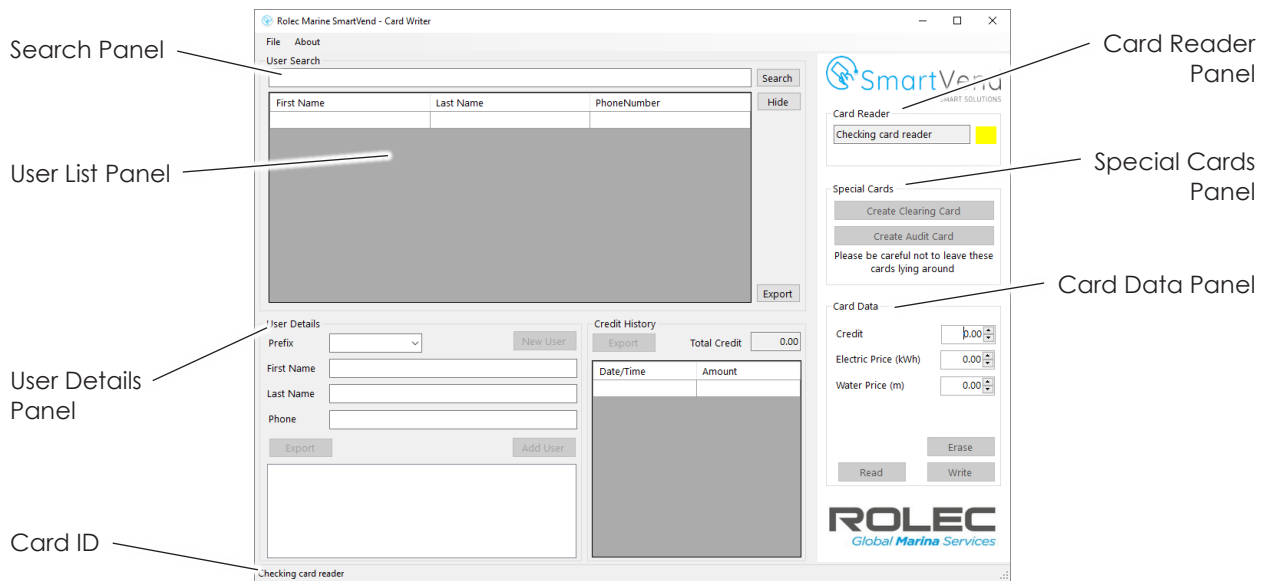


Figure 4 SmartVend Screen

7. The software will attempt to detect the card reader. If it cannot be found a yellow indicator will be shown.



Figure 5 Checking Card Reader

8. Make sure the card reader is connected. If the reader is detected the yellow indicator will change to a light blue colour and the status message will change to 'Waiting for card'.



Figure 6 Waiting for Card

9. On the menu at the top of the screen, select **File > Marina ID > Import Key**. A file explorer window will be displayed.
  - Select the ID file you placed on the desktop at step 2.
  - Click the **Open** button to load the ID into the SmartVend system.

10. Click on the **About** menu at the top of the screen to check that the ID has been entered correctly into the software.



Figure 7 Marina ID

11. Place an RFID Card onto the reader.

If the system is functioning correctly the Status message will change and the coloured indicator will change from blue to green. The card reader and SmartVend software are now working correctly and you can move to the next section of the manual.

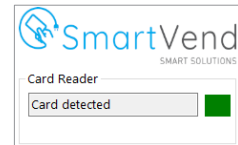


Figure 8 Card Detected

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## About the SmartVend Application

### Introduction

When talking about the application, customer accounts, RFID cards, credits and payments, it is helpful to understand how the system operates.

The SmartVend system has two main parts:

- The Service Pedestal, located at the mooring, controls access to electrical and water services through the use of an RFID card used by the customer/boat owner.
- The SmartVend Application, hosted by the marina operator controls the information about the customer, the credit purchased by the customer and the prices charged for use of the electricity and/or water services that will be delivered by the pedestal. The application stores the information in its own database and transfers data to the RFID card that can then be read by the pedestal.

### Basic SmartVend Process

1. Information about the customer is entered into the application by the marina operator and is held in the application database.
2. The information is copied to an RFID card using the card reader/writer and the card is given to the customer.
3. The service pedestal houses a similar card reader/writer that takes the information from the card and, based on the amount of credit available and the prices set for electricity and water, delivers the services to the customer.
4. As the services are used, credit is 'spent' until the service is stopped by the customer or the credit is all spent. At this point the pedestal will stop delivery.
5. When the customer has finished using the services, any credit remaining on the pedestal can be transferred back to the RFID card.
6. The marina operator can read the RFID card and reimburse the customer for any remaining credit.

## Areas of the Application

### Search Panel

The Search panel enables the marina operator to search for Users who have been entered into the system using either their first or last name.

- Search does not look at phone numbers.
- Search results are displayed in a table below the search field.
- Details about all users held within the system can be exported to a spreadsheet file.

For further information see:

- *Page 17, Search for a User.*
- *Page 31, Export Data.*

The screenshot shows a 'User Search' panel with a search input field at the top. Below it is a table with three columns: 'First Name', 'Last Name', and 'PhoneNumber'. The table contains four rows of data. A 'Search' button is located to the right of the search field, and a 'Hide' button is below it. An 'Export' button is at the bottom right of the panel.

First Name	Last Name	PhoneNumber
Barry	Brown	022345678
John	Jones	012345678
Sam	Smith	+44 12345678
Ralph	Lane	03345678

**Figure 9 Search Panel and Results Table**

### User Details Panel

The User Details panel enables the entry of new user details and the display of user details already associated with an RFID card.

- The lower section of the panel shows a history of credit written to the user's card (and hence to their account within the system).
- If details about the user change or are not correct, they can be updated from the same panel.
- Details about the user and their credit can be exported to a spreadsheet file.

For further information see:

- *Page 31, Export Data.*

The screenshot shows the 'User Details' panel. It includes a 'Prefix' dropdown menu set to 'Dr', a 'New User' button, and input fields for 'First Name' (Barry), 'Last Name' (Brown), and 'Phone' (022345678). Below these fields are 'Export' and 'Update' buttons. At the bottom, there is a log of transactions showing dates, times, and credit amounts.

Date	Time	Event	Card Credit
24/03/2021	16:19	User Written to Card	8.00
24/03/2021	16:32	User Written to Card	8.00
26/03/2021	16:44	User Written to Card	10.00
22/10/2021	09:28	User Written to Card	1.00
22/10/2021	09:29	User Written to Card	0.00
22/10/2021	09:29	User Written to Card	2.00

**Figure 10 User Details Panel**

### Credit History Panel

The Credit History Panel lists all the credits applied to the customer's account.

- It does NOT show the consumption of credits through the use of pedestal services (electricity / water).

The Total Credit field shows the sum of the credits listed in the table.

- it is NOT the balance of credit.

Details about the Credit History can be exported to a spreadsheet file.

Credit History	
Export	Total Credit 29.00
Date/Time	Amount
24/03/2021 16:19:52	8.00
24/03/2021 16:32:23	8.00
26/03/2021 16:44:15	10.00
22/10/2021 09:28:15	1.00
22/10/2021 09:29:42	2.00

Figure 11 Credit History Panel

For further information see:

- Page 31, Export Data.

### Card Reader Panel

The Card Reader panel indicates the current status of the card reader.

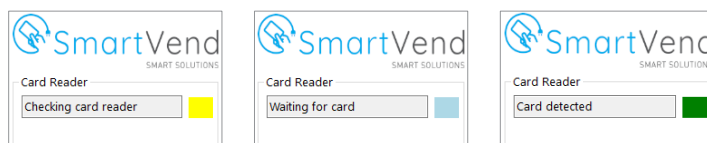


Figure 12 Card Reader Panel Indications

- **Checking card reader** – is displayed while waiting for the card reader to be connected to the PC or if the reader cannot be detected.
- **Waiting for card** – is displayed when the card reader has been detected but an RFID card has not been detected.
- **Card detected** – is displayed when a card of the correct type has been detected by the card reader.

### Special Cards Panel

The SmartVend system uses three types of card. The cards are all physically the same but they each have a defined purpose.

- **Blank Cards** – configured by the marina operator for customer use.
- **Clearing Cards** – used by marina operator to move credit from a pedestal, back onto a user's account.
- **Audit Cards** – used to check the last 3 transactions on the pedestal.

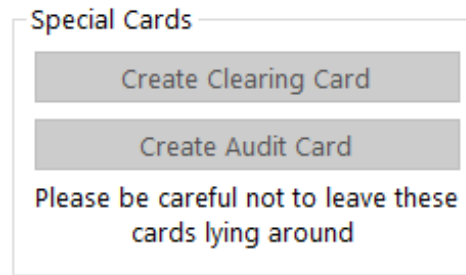


Figure 13 Special Cards Panel

Cards for customer use are created in the Card Data panel.

Clearing Cards and Audit Cards are created in the Special Cards panel.

For further information see:

- Page 21, Clearing Cards.
- Page 21, Audit Cards.

**NOTE:** Audit Cards are not a feature used in Smart Master Solo systems.

### Card Data Panel

When the SmartVend software is started, the Card Data fields will all show **0.00**.

- Card Data Prices cannot be set in the software without assigning them to a user.
- If an RFID card is placed onto the reader and the card has already been assigned to a user, the Card Data panel will display the balance of **Credit** on the card and the **Prices** applied to that user.

Once the Prices have been set on screen, they will remain in place until either they are changed, or the software is closed and reopened (at which point they will be 0.00).

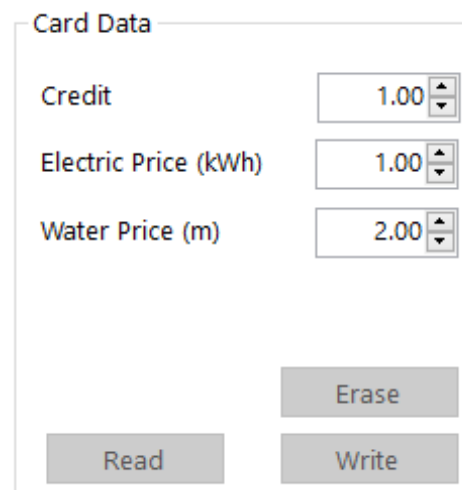


Figure 14 Card Data Panel

**NOTE:** Prices for electricity and water from the supplier may change so the price set by the marina can also be changed. When a card is read, it will show the price that was set on that particular card. Be aware, this price will remain in the Card Data panel and will be written to a blank card unless it is changed manually.

For further information see:

- Page 19, Clearing Cards.

## Card Operations

### Access the RFID Card

1. Make sure the card reader is connected to the PC.
2. Start the SmartVend software and make sure the software and card reader are connected.
  - Look on-screen for the blue indication and 'Waiting for card' message.
3. Place the card onto the card reader. The reader should automatically detect the card.
  - The on-screen indicator will change from blue to green and the 'Card detected' message will be displayed.
  - The card may be read automatically. If not, click on the **Read** button.
    - If there is any information on the card it will be displayed on-screen.
    - If there is no information on the card the message 'Blank Card' will be displayed in the Card Data panel.

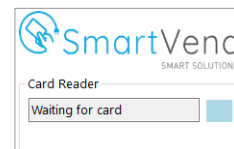


Figure 15 Waiting for Card

**NOTE:** The card reader may be able to detect an RFID card without direct contact with the reader, but the strength and quality of the signal may not be stable.

- To avoid read/write errors, always place the RFID card directly on top of the reader.
- To avoid reading the wrong card, keep other cards away from the reader and no closer than 10 cm.
- If the reader detects more than one card, a pop-up error message will be displayed if writing or reading of card is attempted.

## Add a User

A new user can only be created if there is a blank RFID card available for them to use. The **New User** button will be 'greyed out' and will not be available until a blank card is detected.

1. Place a blank card onto the reader.
  - The **New User** button should become available. If not, click on the **Read** button. If the card is NOT blank, any information held on the card will be displayed on-screen. If required, the information on the card may be erased but this must be done with caution and only when you are sure it is appropriate to do so.
  - If the card is blank, the **New User** button will become available.
2. Click on the **New User** button.
  - The fields in the User Details will become available, ready for details to be entered.
3. Add the user's details as appropriate.
4. Click on the **Add** button to save the new details to the system.

The screenshot shows a 'User Details' panel. At the top left is the title 'User Details'. Below it are four input fields: 'Prefix' (a dropdown menu with 'Mr' selected), 'First Name', 'Last Name', and 'Phone'. To the right of the 'Prefix' field is a 'New User' button. At the bottom of the panel are two buttons: 'Export' on the left and 'Add' on the right.

Figure 16 User Details Panel

## Assign a User to an RFID Card

1. Place a blank RFID card onto the card reader.
  - If a user has already been assigned to the card, their details may be displayed automatically. To make sure the card is blank, click on the **Read** button. If a user has already been assigned to the card, their details will be displayed.
  - If the card is not blank, it cannot be assigned to a user until the card has been cleared (Erased).
  - Make sure you are happy to remove the users details before erasing the card.

**NOTE:** Erasing the card does not delete information held about the user in the system. The database retains details of the user's name, phone number and credit history.

2. Select the user to be added to the card from the table below the User Search panel.

The screenshot shows a 'User Search' panel with a search input field at the top. Below it is a table with three columns: 'First Name', 'Last Name', and 'Pho'. The table contains three rows of data. The row for 'John Jones' is highlighted in blue.

First Name	Last Name	Pho
Barry	Brown	0223
John	Jones	0123
Sam	Smith	+44

Figure 17 Search Results Table



3. Set the amount of Credit to be added to the card for that user, if known. If not known, make sure the figure is **0.00**.
4. Set the price of Electricity and Water to be added to the card for that user, if known. If not known, make sure the figures are **0.00**.
5. Click on the **Write** button.
6. The user's details and the figures set for Credit and Prices will be added to the card.

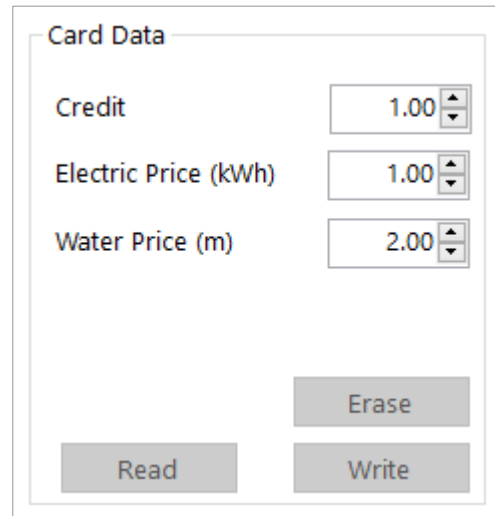


Figure 18 Card Data Panel

**NOTE:**

- If a figure for credit is set but prices are NOT set, the user will be able to use the services but will not lose any credit when using water or electricity. I.e., they will use the services for free.
- If the price of electricity and/or water is set but the user does not have any credit they will not be able to use these services.

Erase a User from the Card

1. Place the RFID card onto the Reader.
  - If the system does not automatically display the user's details, click on the **Read** button.
2. View the users details and make sure you are happy to erase the card.
3. Click on the **Erase** button.
4. Accept the warning message if you are sure the card should be erased.
  - The Card Data panel will display an 'Erased Card' message to confirm the card has been erased.

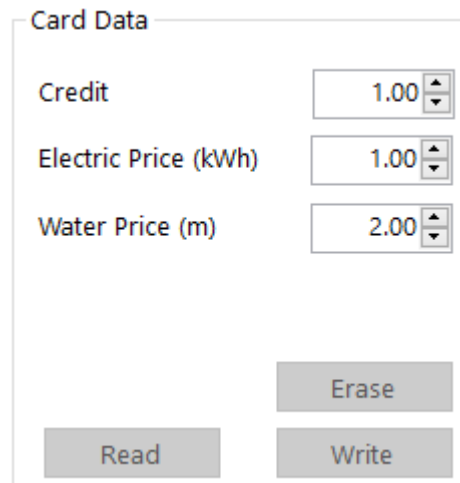


Figure 19 Card Data Panel

**NOTE:** Erasing the card does not delete information held about the user. The system database retains details of the user's name, phone number and credit history. These details can be seen when selecting a user from the Search Panel, or via the Credit History and/or User details Export functions.

### Search for a User

- **Search for all users** – Leave the User Search field empty then click the Search button. All users held in the system will be listed in a table in the window below.
- **Search for specific names** – Enter the first or last name into the User Search field then click the Search button. All users with the same name will be listed in a table in the window below.
  - Parts of a name can also be entered but this may return more search results.

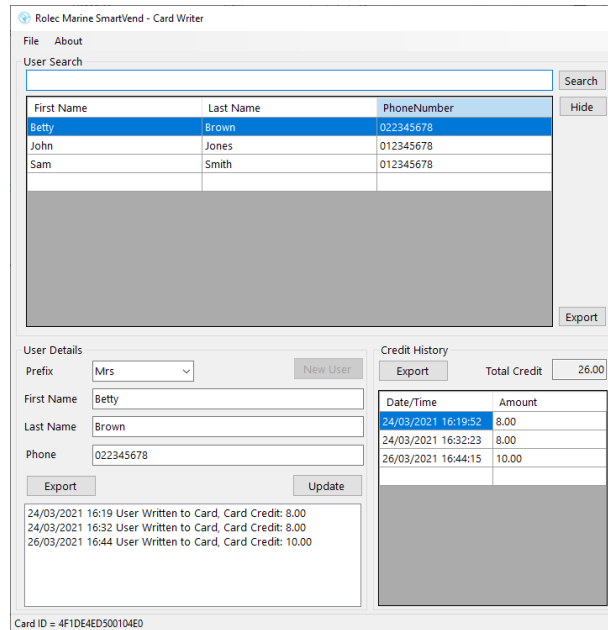


Figure 20 User Detail Search

**NOTE:** The system cannot, by default, use telephone numbers as a search term. However, if this is Important to you, add the telephone number to one of the name fields. Now, when the number (or part of the number) is entered as a search term, it will be found and listed.

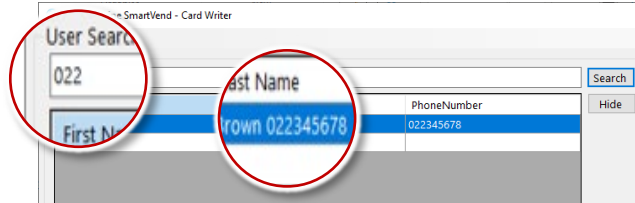


Figure 21 Telephone Search

Alternatively, other search criteria (such as an email address) could be added in the same way but whatever is used, operators **must** take care not to breach GDPR regulations relating to personal privacy and the storage/use of personally identifiable data.

### Amend User Details

User details cannot be deleted from the system using the SmartVend software. They are retained as a record of the user's activity.

However, if a user's details change, the details can be amended, and the system will be updated.

1. Highlight the User in the User Search table.
  - The user's details will be displayed in the User Details panel.

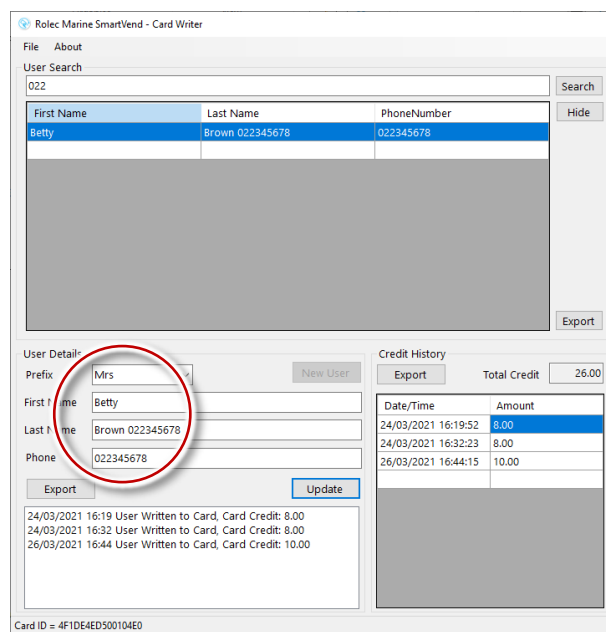


Figure 22 User Details

2. Amend the user's details as appropriate.
3. Click on the **Update** button.
  - A pop-up message will confirm the update has been done.
  - The table above will not change immediately but will update the next time the user's record is displayed.

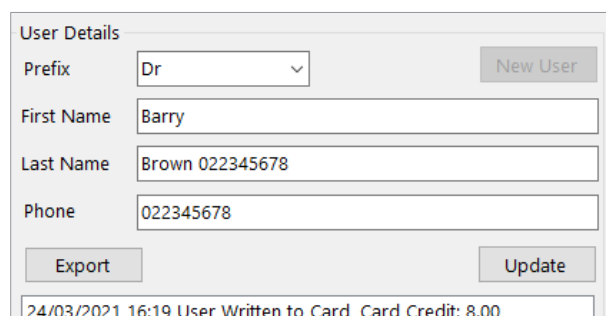


Figure 23 Updated User Details

## Set Credit and Prices

The price of electricity and water to the boat owner can be set at whatever the marina operator chooses (unless regional legislation dictates specific pricing criteria).

The price is simply set as a figure and is not linked to a currency so, for example, if Electricity is set at **1.00**, in the UK this could be **£1.00** or, in Europe, it could be **€1.00**.

The price fields can hold many characters, allowing the digits to equate to any national currency.

1. Place the RFID card onto the reader.
2. Select the user to which the price will apply. The User Detail panel will show the details for the selected user
3. Enter a figure into the credit field.
  - Numbers may be entered manually by overtyping the figures shown or...
  - The up/down buttons next to the field will increase or decrease whole numbers only. Numbers after the point must be entered manually.
4. Enter a figure into the Electric and or the Water Price field(s).
5. When the required credit and prices are in place, click on the **Write** button to transfer these figures to the card.

The screenshot shows a 'Card Data' panel with three input fields: 'Credit' set to 1.00, 'Electric Price (kWh)' set to 1.00, and 'Water Price (m)' set to 2.00. Each field has up and down arrow buttons. Below the fields are three buttons: 'Read', 'Write', and 'Erase'.

Figure 24 Card Data Panel

### NOTES:

- Credit (sums greater than 0.00) must be placed onto the card and transferred to the pedestal. The pedestal will not enable the provision of electricity or water if there is zero credit, even if the price of the services is also zero.
- If a price is set as 0.00 and the user has credit, the pedestal will dispense that service at no charge to the user.

On the pedestal, credit is 'spent' for each pulse of the meter. Typically, meters are set to issue 1000 pulses for each kWh of electricity or cubic metre of water. This means that if you have, for example credit of 1.00 and the price of electricity is set to 0.50, 1 kWh of electricity will cost half of a credit (0.50).

Credit that is unused can be moved from the pedestal back onto the card and when the card is read the marina can reimburse the boat for the unused credit.

### Correct an Error in the Credit Applied to the Card

Imagine the scenario where a boat owner has requested 5 credits to be added to their card, then, after you have written the credits to the card, they decide they actually want 10 credits.

Credit is NOT 'added' to a card. For example, you cannot add 5 credits and then add 5 more credits to make 10 credits.

When credit is written to the card it is 'set' at the figure displayed in the Credit field. In the images shown opposite, it can be seen that 5.00 Credit is set in the Card Data panel and that when written to the card this is displayed in the Credit History as an Amount of 5.00.

If the boat owner now wants 10 credits the Credit figure in the Card Data panel must be changed to 10.00.

**Card Data**

Credit: 5.00

Electric Price (kWh): 1.00

Water Price (m): 1.00

**Card Write**

Figure 25 Card Data Panel

**Credit History**

Export Total Credit: 5.00

Date/Time	Amount
21/10/2021 15:52:26	5.00

Figure 26 Credit History Panel

Now, you can see that the 10.00 Credit is shown in the Card Data panel.

However, in the Amount column, it is clear that the new figure has only added 5.00 credits to the previous 5.00 credits.

**Card Data**

Credit: 10.00

Electric Price (kWh): 1.00

Water Price (m): 1.00

**Card Write**

Figure 27 Card Data Panel

**Credit History**

Export Total Credit: 10.00

Date/Time	Amount
21/10/2021 15:52:26	5.00
21/10/2021 16:25:40	5.00

Figure 28 Credit History Panel

**NOTE:** The Total Credit field displays all of the credit ever purchased by that user. The details of these purchases are held in the system, so the figure shown is not necessarily the amount of credit currently applied to the card.

## Reimburse Credit on the Card

When the boat owner has finished using the pedestal and its services they will move any credit remaining on the pedestal to the RFID card.

The marina operator will read the card and can reimburse the boat owner for the remaining credit before erasing the card, ready for the next user.

When the card is read, the remaining credit to be reimbursed is shown in the Credit field.

1. When the credit has been reimbursed, make sure to click on the Erase button to remove the credit details from the card.
2. To make sure the details have been erased, click on the **Read** button. The Credit field should now show as 0.00

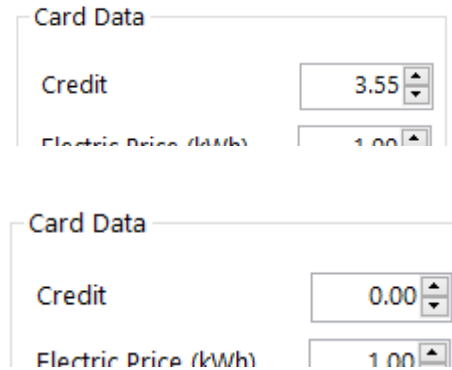


Figure 29 Credit Data Panels

## Clearing Cards

Clearing cards are used to remove credit held on the pedestal without the user card being present. To create a Clearing Card:

1. Place a blank card onto the reader and click the **Read** button.
2. Click the **Create Clearing Card** button within the Special Card panel.
3. When the card has been created, the card can be used to remove the user's data from the pedestal.

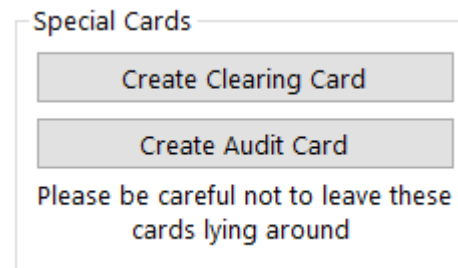


Figure 30 Special Cards Panel

4. Back at the office, place the card onto the card reader then click on the **Read** button to view the customer's data.
5. The card can be erased when you have the data you need.

**NOTE:** If the Clearing Card is not already blank, the clearing card creation process will erase the details from the card.

## Audit Cards

Audit cards allow marina staff to interrogate a pedestal to retrieve usage information if required for example, to settle queries or disputes.

The Audit Card will allow the previous THREE transactions to be viewed.

To create an Audit Card:

**NOTE:** Audit Cards are not a feature used in Smart Master Solo systems.

To create an Audit Card:

1. Place a blank card onto the reader and click the **Read** button.
2. Click the **Create Audit Card** button within the Special Card panel.
3. When the card has been created it can be used to view data on the pedestal.

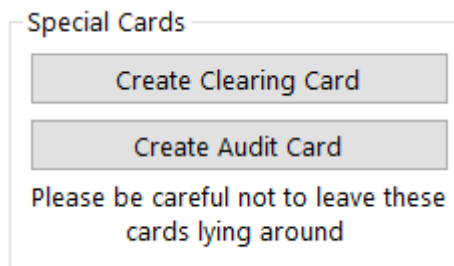


Figure 31 Special Cards Panel

## Pedestal Operations

SmartVend pedestals feature an LCD screen and RFID Card reader.

The card must be held against the Card image to allow information to be read from and/or recorded onto the card.

During periods where there is no direct interaction with the pedestal by a user, the screen will display a number of images.

One of the images will indicate the number of services provided by that pedestal and how many of those services are currently available for use.



Figure 32 Pedestal - Screen



Figure 33 RFID Reader Images



## Reading a Card

1. On the pedestal, place a valid RFID card against the RFID reader logo and hold it in place while the card is read.

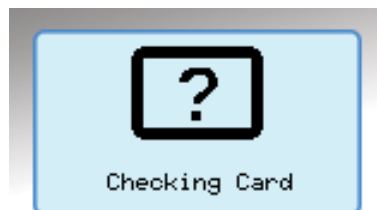


Figure 34 Checking Card Message

2. If the card is valid, a message will be displayed showing how much credit is available on the card.

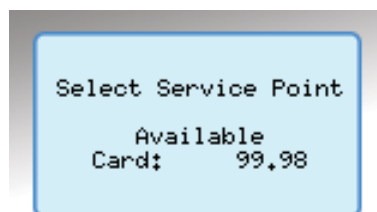


Figure 35 Valid Card Message

**NOTE:** If the card is NOT valid, one of the following messages will be displayed:

- **Read Failure** = the card could not be read correctly. Try removing the card and then place it back onto the reader. Make sure it is held on the reader long enough for the card to be read.
- **Not Recognised** = the card is the wrong type for use with the system. There is also a **Not Authorised** version of this screen where the card is the correct type but has maybe come from another marina.

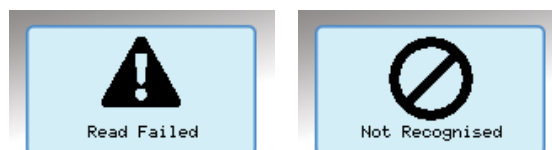


Figure 36 Invalid Card Messages

## Starting a Service Session

There are two methods to start a session for power or water to be served.

- Make sure the power cable or water hose (as appropriate) is correctly connected to the pedestal before starting the session

Method 1	Method 2
<p>1. On the pedestal, place a valid RFID card against the RFID reader logo and hold it in place while the card is read.</p> <div data-bbox="156 660 715 808"> </div> <p><b>Figure 37 Checking and Reading the Card</b></p> <p>2. On the pedestal, press the appropriate button for the required service.</p>	<p>1. On the pedestal, press the appropriate button for the required service.</p> <p>2. If the required service outlet is available for use, a message will be displayed requesting the RFID card to be presented to the RFID reader.</p> <div data-bbox="943 786 1214 934"> </div> <p><b>Figure 38 Present the Card Message</b></p>
<p>3. The system will transfer credit from the card to the pedestal.</p> <p>The card must continue to be held against the RFID reader.</p> <p>4. If the transaction is successful, the screen will show a <b>Transaction complete</b> message and show that the credit has moved from the card to the pedestal.</p> <p>5. The card can now be removed from the RFID reader.</p> <p>6. An acknowledgement image will be shown to signify the process is complete.</p>	<div data-bbox="810 1016 1193 1227"> </div> <p><b>Figure 39 Transferring Credit</b></p> <div data-bbox="810 1317 1193 1527"> </div> <p><b>Figure 40 Transfer Complete</b></p> <div data-bbox="810 1617 1193 1827"> </div> <p><b>Figure 41 Process Complete</b></p>

## Check a Session in Progress

To check on a session in progress...

Method 1	Method 2
<ol style="list-style-type: none"> <li>1. On the pedestal, press the appropriate button for the service to be checked.</li> <li>2. A message will be displayed showing whether the service is active and how much credit remains.</li> </ol> <p>The screen will 'timeout' and return to its previous display after a few seconds.</p> <div data-bbox="320 707 703 913" data-label="Image"> <p>The image shows a rectangular display screen with a light blue background and a dark border. The text on the screen is as follows: 'Service 1 - IN USE' at the top, 'Present card to continue' in the middle, and 'Credit: 99.98' at the bottom.</p> </div> <p data-bbox="392 943 636 969">Figure 42 Service in Use</p>	<ol style="list-style-type: none"> <li>1. On the pedestal, place a valid RFID card against the RFID reader logo and hold it in place while the card is read.</li> <li>2. If the card is already active on the pedestal, a message will be displayed showing which service is in use and how much credit remains.</li> </ol> <p>The screen will return to its previous display when the card is removed.</p> <div data-bbox="967 779 1350 985" data-label="Image"> <p>The image shows a rectangular display screen with a light blue background and a dark border. The text on the screen is as follows: 'Card in use on service 1' at the top, 'Available Card: 0.00' in the middle, and 'Credit: 99.98' at the bottom.</p> </div> <p data-bbox="983 1014 1331 1041">Figure 43 Card and Service in Use</p>

**NOTE:** If the button is pressed while the card is on the RFID reader, the session will be ended.

## End a Session

Credit on the pedestal is 'spent' (removed) in line with the quantity of power or water provided.

At the end of a service session, any credit that has not been used can be moved from the pedestal, back onto the user's card. This will end the session and turn off the services.

1. On the pedestal, press the appropriate button for the service that is to be ended.
2. Place the appropriate card on the RFID reader and hold it in place.
3. The system will transfer any remaining credit from the pedestal to the card.
4. If the transaction is successful, the screen will show a **Transaction complete** message and show that the credit has moved from the card to the pedestal.
5. The card can now be removed from the RFID reader. An acknowledgement image will be shown to signify the process is complete.



Figure 44 Card being Written

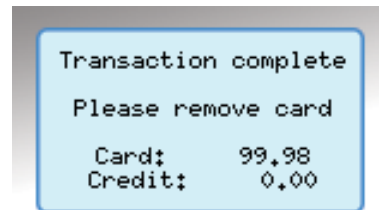


Figure 45 Remove Card from the Reader



Figure 46 Process Complete

## Remove User Credit from a Pedestal with the Clearing Card

Clearing cards are used to remove credit held on the pedestal without the user card being present.

1. Place the clearing card on the RFID reader and hold it in place.
2. Press the button on the pedestal that relates to the user/service to be cleared.
3. The system will transfer any remaining credit for that service from the pedestal to the card.
4. The card can now be removed from the RFID reader. An acknowledgement image will be shown to signify the process is complete.



Figure 47 Clearing in Progress



Figure 48 Process Complete

## Use the Audit Card

1. When the card has been created, the card can be used to display the last 3 transactions on the pedestal screen.

The information shown is unique to that pedestal.

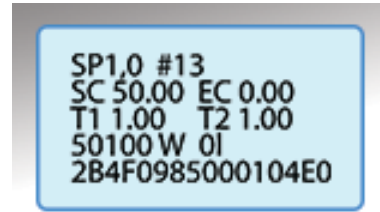


Figure 49 Pedestal Audit Screen

<b>SP1,0</b>	Indicates service point 1, session 0 (0 = latest, 2 = oldest)
<b>#13</b>	This is an internal session ID to record the number of usage sessions on this service point, this number increments.
<b>SC</b>	Starting credit (in this case £50.00)
<b>EC</b>	Ending credit (in this case £0.00)
<b>NOTE:</b> For a session still in progress, the SC and EC will be the same.	
<b>T1 and T2</b>	The tariffs used for this session (as read from the Card/TAG) <ul style="list-style-type: none"> <li>• T1 = Electricity</li> <li>• T2 = Water</li> </ul>
<b>Then usage information electricity in watts</b>	50100 w (50.1 kWh)
<b>Then water usage in litres</b>	0 l (in this case no water has been used)
<b>2B4F0985000104E0</b>	The unique card Tag ID used for the session. this can be used to verify the card used by the customer.

Pressing the appropriate service buttons the operator can cycle through and recall the information for all the service points on the pedestal.

Another example of a session:

- Starting credit £50.00.
- Ending credit £36.90.
- 13.1 kWh (13100 W) of electricity.
- 0 l (litres) No usage of water.

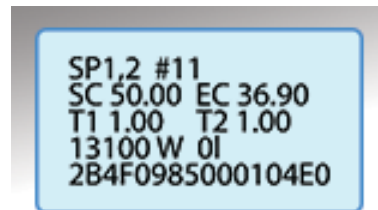


Figure 50 Pedestal Audit Screen

## Maintenance

**NOTE:** In the event of a hardware issue, always contact your installer first.

- Damage caused to the equipment by misuse, lack of maintenance, inappropriate maintenance or modification is not covered by the manufacturer warranty.

### RFID Reader

1. If required, clean the external surfaces of the RFID reader by wiping with a damp cloth or a cloth designed for cleaning IT equipment.
2. Visually inspect the of the RFID reader and its cable/plugs for damage. Obtain replacements for damaged items.

### RFID Cards

1. If required, clean the external surfaces of the RFID card by wiping with a damp cloth.

**CAUTION: Equipment Damage**

To avoid damage to the card do NOT use:

- Abrasive materials.
- Mineral or petroleum solvents / degreasers.

2. Cards that are severely bent, cracked, split or damaged in a similar way should be replaced.
  - The damaged card may appear to function but cannot be relied upon to continue to function and/or may not transfer data correctly.
  - Damaged cards should be erased, if possible, then destroyed and correctly disposed of.

## Software

### Export Data for Viewing

If required for paper records, audit purposes, etc., Data can be exported from the following areas of the application:

- **User Search** – Exports all names and phone numbers (User Accounts) of all users held within the system.
- **User Details** – Exports the details of the selected user only.
- **Credit History** – Exports the credit history of the selected user only.

The data is saved as a comma separated value (.CSV) file which can be viewed as a text document or within a spreadsheet application such as Microsoft Excel.

- The application does not allow exported data to be reimported into the system.

#### To export data:

1. Decide which data is to be exported.
2. Make sure the required panel is populated with the data to be exported.
3. Click on the Export button for the chosen panel.
4. The system will generate a CSV file and ask for a location where it should be saved.
5. To view the file, double click on the saved file icon and it will open in the application associated with that file type on your PC.
  - Alternatively, right click on the file icon and select **Open with**, then select the application to be used to view the file from those that are listed.
6. If opened in Excel, you will see a spreadsheet similar to the image below.

As can be seen, Excel does not know what format should be used and some cells do not show what might be expected.



	A	B	C	D	E	F	G	H	I	J
1	UserID	DateTime	TagID	Type	Description	CreditAdd	CardAmou	Electric Ta	Water	Tariff
2	2.1E+15	#####	4.85E+13		3 User Write	Card Cred	10	10	1	1
3	2.1E+15	#####	4.85E+13		3 User Write	Card Cred	10	10	1	1
4	2.1E+15	#####	4.85E+13		3 User Write	Card Cred	-10	0	1	1
5	2.1E+15	#####	880A92820		3 User Write	Card Cred	0	0	0	0

Figure 51 Data Export Example Displayed in Excel

7. Select the incorrect cells and change their cell format. Right click on the selected cells and select **Format Cells**.
8. In the Format Cells window, select the Number tab then select the appropriate category for the cells. In this example 'Number'.
9. The image below shows this applied to columns A and C.
10. You may also need to adjust column widths and apply any formatting that will help display the data clearly.

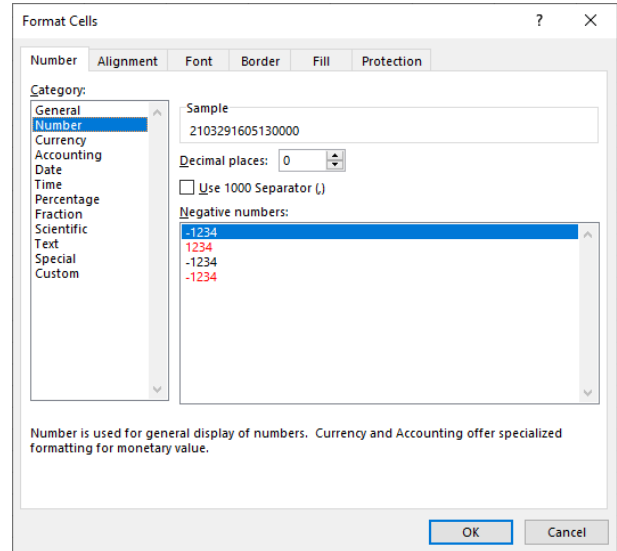


Figure 52 Format Cells in Excel

	A	B	C	D	E	F
1	<b>UserID</b>	<b>Date Time</b>	<b>TagID</b>	<b>Type</b>	<b>Descriptio</b>	<b>Credit</b>
2	2103291605130000	29/03/2021 16:12	48457382000104		3 User Write	Card C
3	2103291605130000	29/03/2021 16:14	48457382000104		3 User Write	Card C
4	2103291605130000	29/03/2021 16:32	48457382000104		3 User Write	Card C
5	2103291605130000	05/10/2021 13:14	880A9282000104		3 User Write	Card C

Figure 53 Formatted Data Export

**NOTE:** The formatting steps above are just an example. Different formatting may be required depending on how the viewing application interprets the presentation of the data.

## Create a Database Backup

Records of Users and their Credit History can be created as spreadsheets as described at **Export Data for Viewing** but this is predominantly for viewing purposes and should not be considered to be a backup.

### **CAUTION: Data May be Lost**

You may be required to overwrite any files already in the database folder. This will remove all data from the file and replace it with data from the backup. This is a manual process, and no warnings will be given by the software. Make sure you really want to do this.

- To safeguard the data in the current database, you may wish to back up the file before replacing it with a different backup.

Backups of the database can be made by copying the database file.

1. Open **Windows Explorer** and navigate to the folder:  
**C:\Users\your UserName\AppData\Roaming\SmartMasterSolo**
  - There may be one or more XML files within the folder.
2. **Copy** the XML file(s) and store it in safe location.

**NOTE:** If you will be keeping a number of backups, it is good practice to adopt a file naming policy to differentiate each backup from the others. The original file name must be applied to any files that will be reinstated to the system.

If the XML file needs to be viewed, most modern PCs will be able to display the XML database file by simply clicking on the icon. Alternatively, the file should be viewable through Windows Notepad or WordPad. Any changes made must be saved as .XML format and will be viewable in the SmartVend application if the database file is restored.

## Restore a backup file

1. Make a copy of the backup file from its safe location.
2. Place the copied file into the SmartMasterSolo folder located at:  
**C:\Users\your UserName\AppData\Roaming\SmartMasterSolo**

**NOTE:** If the file name has been changed the application will not find the file correctly and will offer to create a new database. If required, use the new database to copy the database file name. Apply the name to the database to be restored then overwrite the new file with the restored file.

## Software Updates

Updates to the desktop software and/or RFID reader may be issued to improve functionality.

1. Updates should be performed as soon as possible after receipt by following the instructions provided with the update.



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