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PetroVend FUEL CONTROLS

ARTWare

M3034 - ARTWare™

Fuel Control Software

Reference Guide

OPW FUEL MANAGEMENT SYSTEMS

NOTE: Before you use this guide, make sure you have the latest revision. Check the revision level of this document against the most current revision found at http://www.opwglobal.com/opw-fms/tech-support/manuals-how-to-videos . Download the latest revision if necessary.

FUELING SOLUTIONS

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Introduction to ARTWare™ Help

This help system is designed to provide all the information necessary to configure your using the ARTWare™ configuration utility. There are many useful internal cross-references to guide you directly to related content and hyperlinks to external resources where you can get more information related to the topic you are viewing.

Some images in this guide have been provided as thumbnails for your convenience. These images contain various screen captures and illustrations to further guide you through the configuration process. Click on a thumbnail image to expand it. When you want to collapse the image, click it again.

Section 1 About ARTWare™

ARTWare™ is a Windows based configuration utility used to configure the . The primary features and benefits of ARTWare™ include:

- Supported on Windows® 7,8 and 10
- Simple user interface eliminates the need to remember programming commands
- Allows off-line or on-line configuration of the
- Maintains a global database for configuration settings common to multiple sites
- Maintains separate site databases for unique parameters such as site ID
- User can upload changes made to configuration settings when a connection is made to the
- Can be used to download complete FSC3000 settings for existing sites
- Capability to upgrade the FSC3000 application and purchased options (i.e. networks, DPC, etc.)
- Changes to global configuration settings are saved and can be uploaded to other sites

For more information on OPW Fuel Management Systems product see OPW Fuel Management Systems. For technical assistance for ARTWare™, or any other OPW Fuel Management Systems product contact OPW Fuel Management System's Technical Service Group.

Section 2 Getting Started

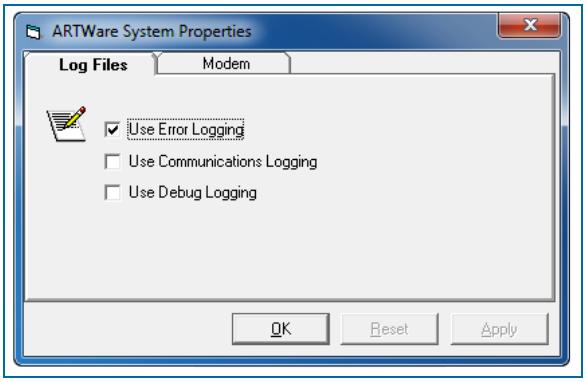
Although configuration of the FSC3000 can be completed in any order, it will help you keep track of the information if you configure in the following order:

1. Add and configure the Site ("Site Tab" on page 36).
2. Connect to the FSC3000 ("Connecting to the FSC" on page 14) and read global and site settings ("Read" on page 84)
3. Configure "Global Settings" on page 17.
    - "Product Types" on page 20 and "Product Units" on page 19
    - "Product Restrictions" on page 23 and "Quantity Restrictions" on page 24
    - "Odometer Reasonability" on page 25
    - The definition of Card Records ("Define Card Record" on page 26)
    - The definition of Transaction Records ("Define Transaction Record" on page 29)
    - "Receipt Body" on page 31
4. Configure "Product Types" on page 20
5. Configure the Pump Controllers ("Pump Controllers Tab" on page 45)
6. Configure Pumps ("Pumps Tab" on page 47)
7. Configure the Terminals ("Terminals Tab" on page 56)
8. Configure Networks (if applicable) ("Networks Tab" on page 63)

To achieve the best results we recommended that you have a good understanding of your site's installation before attempting the configuration.

Section 3 System Properties

In ARTWare, you can view the current system properties by selecting **File>System Properties**. There are two tabs in the *ARTWare System Properties* window: *Log Files* and *Modem*.



System Properties Log Files Tab

3.1 Log Files Tab

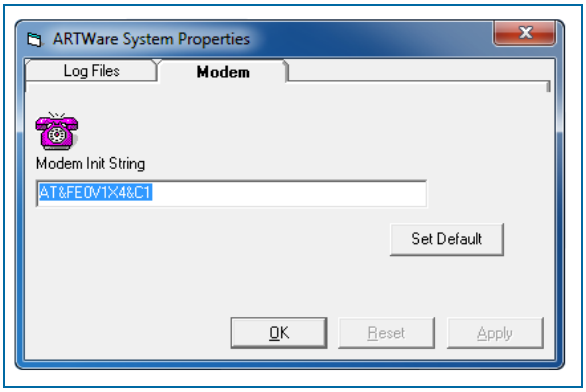
From the **Log Files** tab you can enable/disable various log files created by ARTWare. These log files are text files that are continuously updated with information, errors and communications traffic.

Use Error Logging: Selecting this option will turn on error logging. Errors are written to the file “ARTWareERROR.log” located in the same directory as the ARTWare executable. Normally you would keep this checked. Technical Service uses this file to help you solve problems.

Use Communications Logging: This file contains a complete transcript of all communications between ARTWare and your FSC3000s. Normally you would keep this checked. Technical Service will use this file to help you solve problems. This file is named “comdet.log” and is located in the same directory as the ARTWare executable.

Use Debug Logging: The debug log is an extra log file that writes messages helpful to Technical Service. Technical Service may ask you to switch on the debug log to help them. This log file is called "ARTWareDEBUG.log " and is located in the same directory as the ARTWare executable.

Since these files can get quite large over time, ARTWare will automatically archive the files if they get too large. These files are renamed to the same file name with a 3 digit number extension like "comdet.001". A maximum of 5 of these archived files will be kept.



System Properties Modem Tab

3.2 Modem Tab

The **Modem** tab lets you enter a custom modem *init* string (if you are using a modem connection). Click on the **Set Default** button to use the default init string.

Section 4 ARTWare Main Window and Navigation

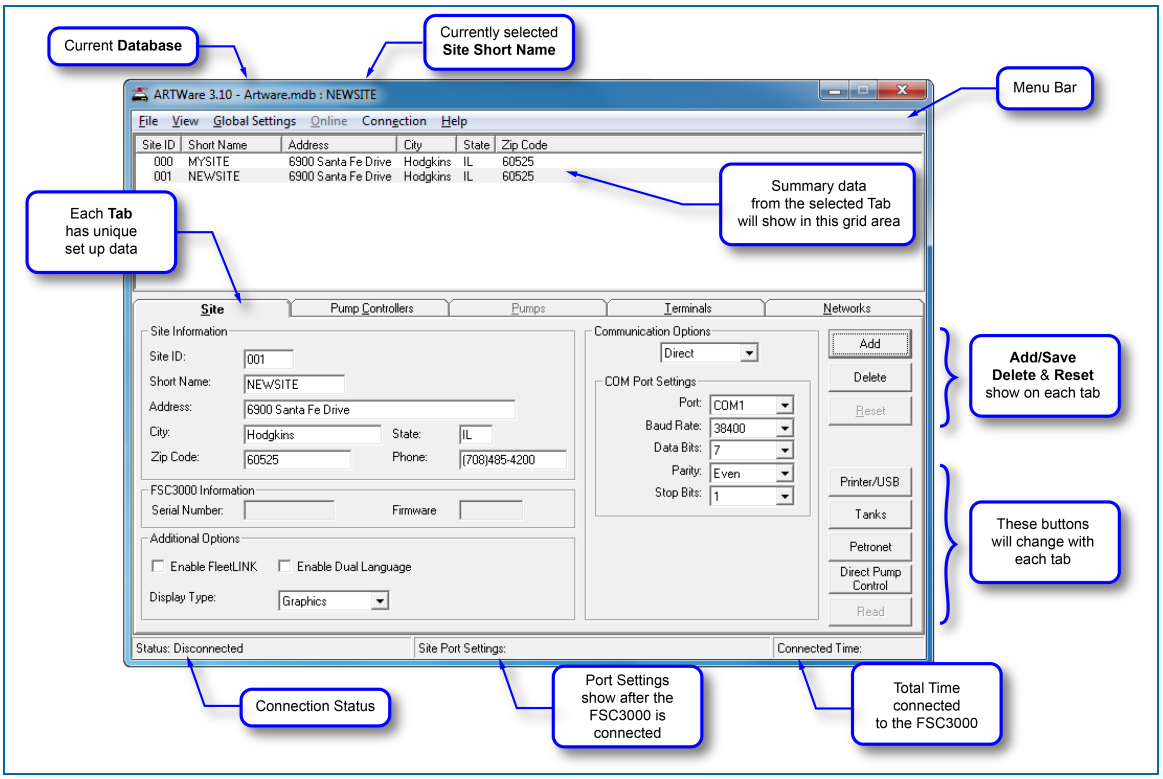


Figure 4-1 ARTWare Main Window

ARTWare is organized as a tabbed form with a spreadsheet type grid at the top. The grid shows summary information about the topic of the Tab, while the Tab shows detailed information about the item selected in the grid.

On the right side of the main window there is a column of buttons. The number of buttons and their functions will change depending on the tab you are viewing.

The top three (3) buttons that show on all tabs are:

- Add/Save
- Delete
- Reset

The **Add/Save** button will change it's caption depending on whether the data on the form has been changed. If the data on the form has not been changed (either by reading from the FSC3000 or by editing) the caption will be "**Add**," and you can enter another item (Site, Terminal etc.) If all possible items allowed are already added the button will be disabled.

If you change any existing data on a form the button will change to "**Save**." When you click **Save**, data of the selected item will first be saved to the FSC3000 (if connected) and then to the local database. There is no way to save separately to the database or the FSC3000 and not the other when connected.

The **Delete** button lets you remove an item. It is disabled if there are no items at all, or if the data on the form has been changed. Deleting an item WILL NOT delete or uninstall the item on the FSC3000, even if connected. It only deletes ARTware's record of the item.

The **Reset** button lets the user "back out" of any UNSAVED changes made on the form. It is disabled unless the data on the form has changed.

The **Read** button at the bottom of the screen is only enabled when connected to the FSC3000. Clicking this button will read the configuration data from the FSC3000 for the displayed item on the current Tab. Note that this does not read data for all items, or for items on other Tabs. For instance, if you are on the Terminal Tab and the currently selected Terminal is "Terminal ID" #1, clicking Read will read the configuration data for Terminal #1 ONLY.

ARTWare will not let you either switch Tabs or items on a grid without saving or resetting changes.

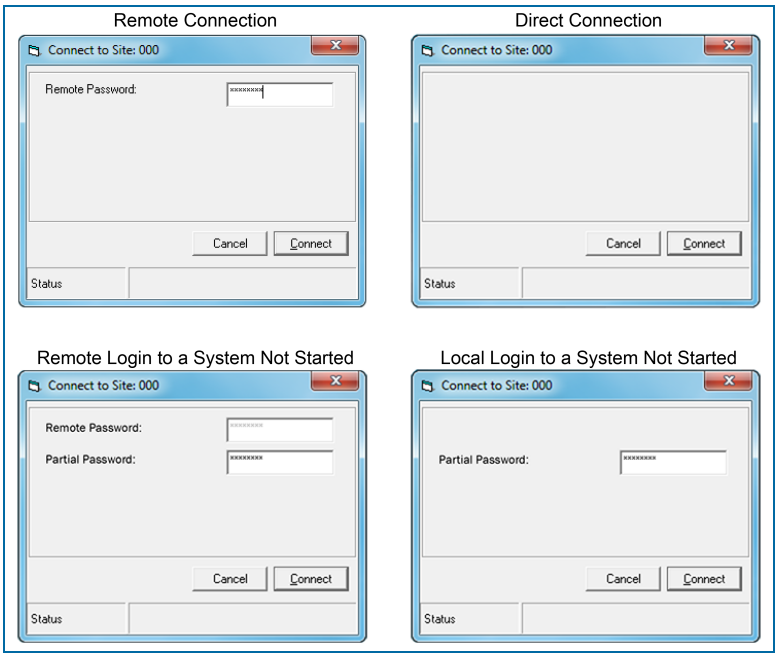
ARTWare restricts input on many of the fields to the type of data required. For instance, the "Decline Timeout" on the Terminal Tab restricts you to inputting only numbers, with a range of 0 to 32.

Section 5 Connecting to the FSC

To connect to your FSC3000 you need to set up your connection parameters to the FSC3000. See Com Port Preferences if you need help with this.

Starting with version 3.0, ARTWare has changed the way you connect to an FSC3000. In order to comply with the PCI and PABP guidelines ARTWare no longer stores passwords. You must enter the password(s) to connect to the FSC3000 each time you connect. ARTWare will also query the "SYSTEM START" status of the FSC3000 it is connected to. If the FSC3000 is "started" (i.e. it is processing cards), ARTWare will prompt for a username and password, else it prompts for the "partial access" password. If you are connecting remotely (via modem or network) you will be prompted for the "remote" password before the connection is made.

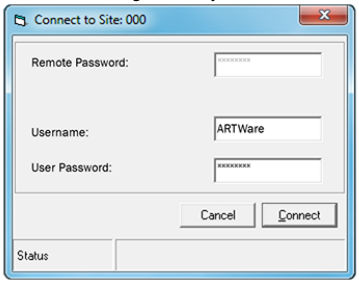
Select **Connection->Connect** to start the connection process. If ARTWare is connected remotely you will get a prompt to enter the remote password. Enter the password and click **Connect** (you can also push ENTER, as the Connect button is the default). The **Connect** button will not be enabled unless you enter a password. Click Cancel (or push ESC) to close the dialog box and close the connection (if opened).



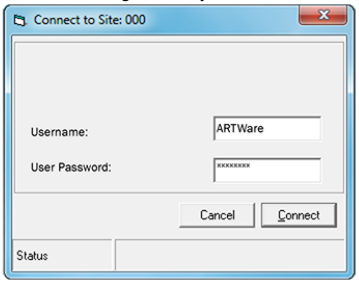
While connection is in process, ARTWare will display messages in the **Status** bar.

Once connected, ARTWare will query the FSC3000 for the system start status. One of two screens will come into view depending on whether you are logging in remotely or locally.

Remote Login to a System Started



Local Login to a System Started



Push ENTER or click Login to send the entered credentials to the FSC3000. If the FSC3000 accepts the credentials you will be logged in. If you entered a bad username or password you will get an error pop-up and you will have another chance to enter the correct credentials. Click Cancel or push ESC to close the dialog box and disconnect from the FSC3000.

Once connected, the Online menu becomes available.

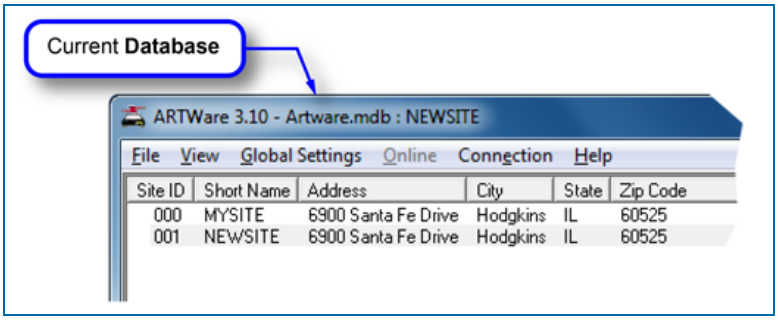
Section 6 Working with Databases

ARTWare stores all of its data in database files with the *.mdb extension. You can open any database created by ARTWare and you can save any database to another name.

To open another ARTWare database, select **File-Open Database** and select the file. ARTWare will close the current database and open the one you choose. To save a database under a different name select **File-Save As** and save the file under a different name.

NOTE: You cannot open a database unless you have saved or abandoned your changes to the current database.

ARTWare will display the name of the currently open database in the title bar.



Current Selected Database

Global Settings

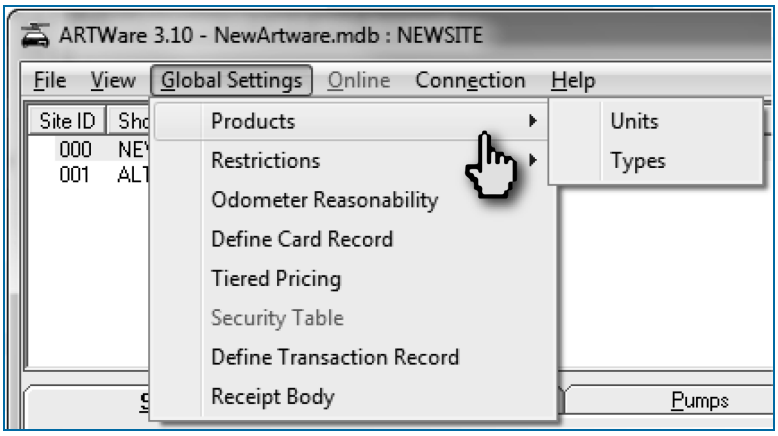
Most of the settings for your site are "site-specific" and apply only to that particular site, like the Short Name, pump controllers, pumps, etc. However, global settings are settings that apply to all sites in the database. Topics in this section include:

- "Product Types" on page 20 and "Product Units" on page 19
- "Product Restrictions" on page 23 and Restriction Codes
- "Odometer Reasonability" on page 25
- "Define Card Record" on page 26
- "Tiered Pricing" on page 28
- "Receipt Body" on page 31
- "Define Transaction Record" on page 29

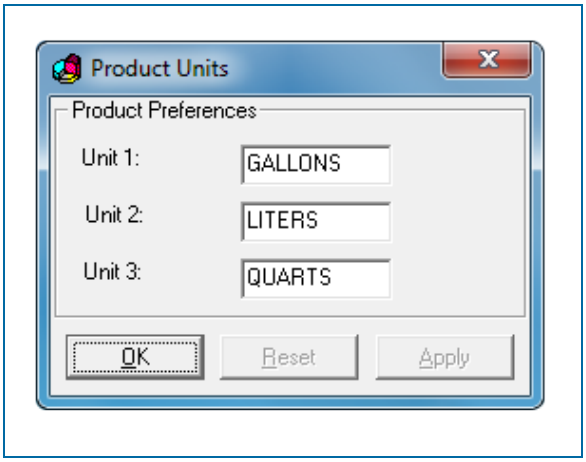
Section 7 Set Up Products

From the Global Settings Menu you can select and define the product parameters that follow:

- Product **Preferences** for **Units** of measure
- Product **Type** definition
  - Product Setup
  - Network Setup



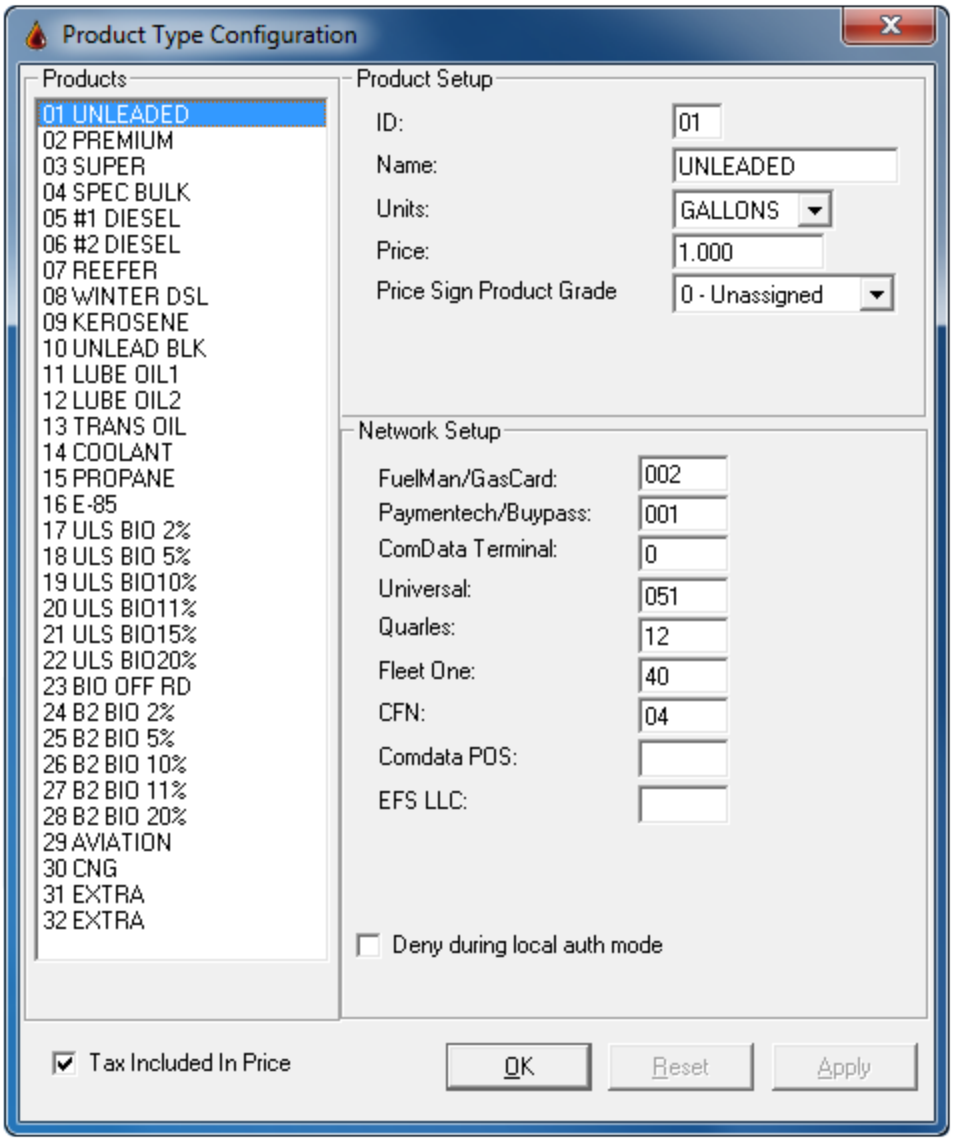
7.1 Product Units



You can associate one of three labels to your product types. The default labels are:

- Gallons
- Liters
- Quarts.

7.2 Product Types



You can define up to 32 products in ARTWare. You can set each Product's **Name**, **Units** and **Price** per unit. Each product has a code number assigned by the various networks. The code is assigned to a pump hose during Pump Controller and Pump configuration.

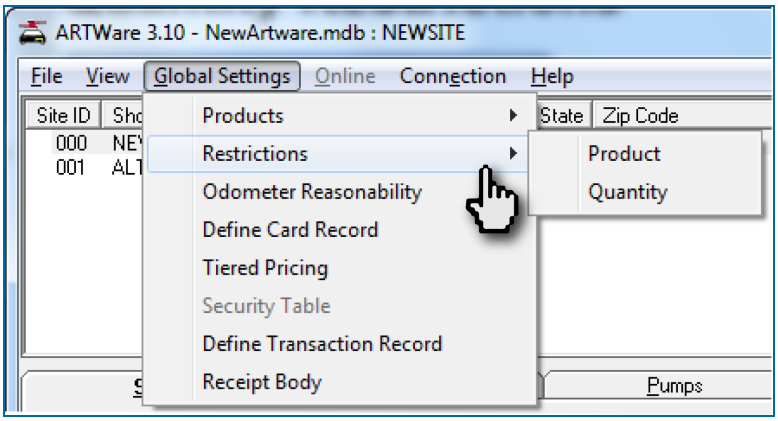
Price Sign Product Grade support is limited to FeatureMedia™ displays. It is designed to update each price sign face (up to 8 maximum) configured to a specific grade. Using this setting you can map the price sign grades to the FSC3000 products. When a price change occurs either using ARTWare or command line interface, price updates should occur within 15 seconds.

NOTE: If price sign communications fail, an error message will be displayed on the FSC3000's LCD display.

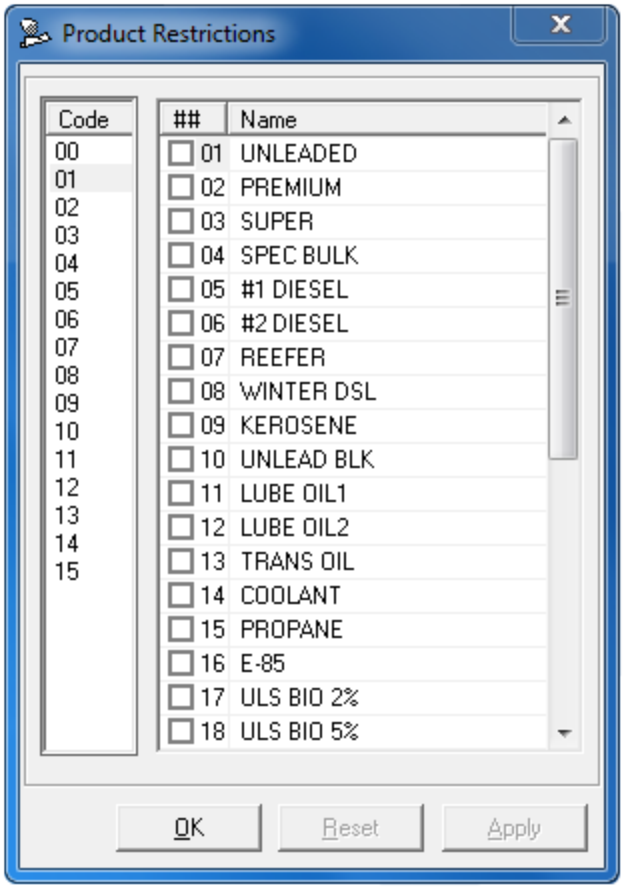
To get a complete list of network product codes contact your network sales representative or OPW Fuel Management System's Technical Service Group.

Section 8 Set Up Restrictions

From the Global Settings Menu you can select and define the **Restrictions** for **Products** and **Quantities**.



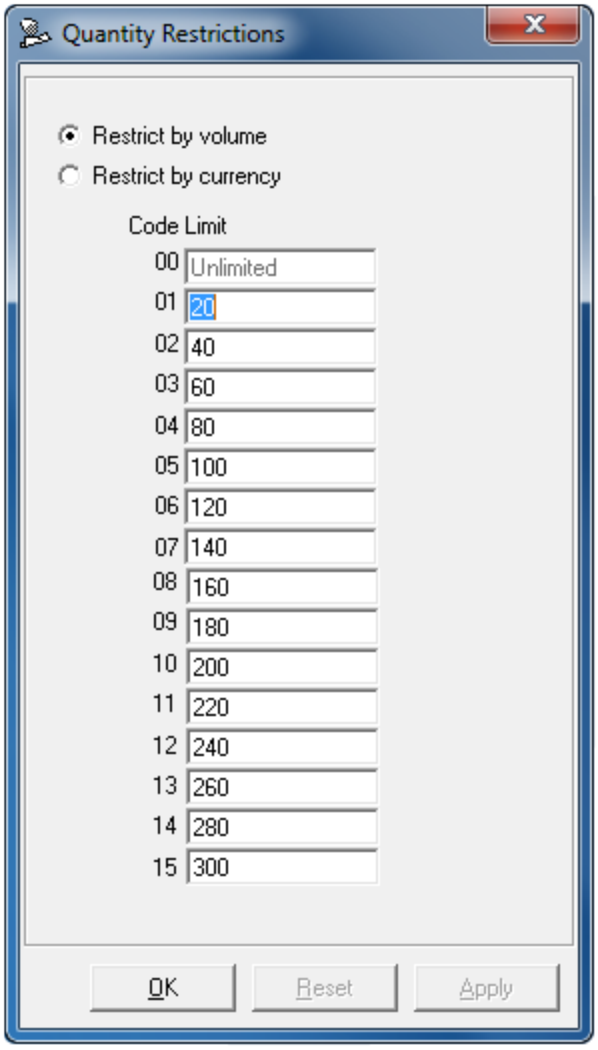
8.1 Product Restrictions



Product Restrictions let you control which products can be dispensed for cards and accounts defined within the proprietary card file. The table in this form lets you define codes for up to **15** sets of product restrictions.

IMPORTANT: The product code 00 is the code for "all products." ARTWare does not let you change it.

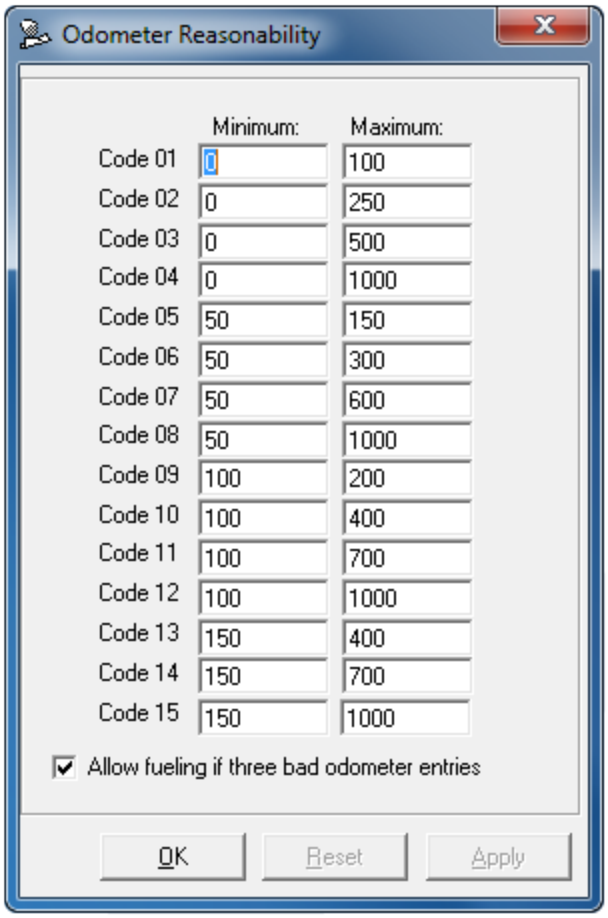
8.2 Quantity Restrictions



Quantity Restrictions are used to specify volume or currency limits assigned to a card or an account defined in the proprietary card file. Select the appropriate radio button for either "Restrict as quantity," or "Restrict as currency."

NOTE: Restrictions are limited per transaction.

Section 9 Odometer Reasonability

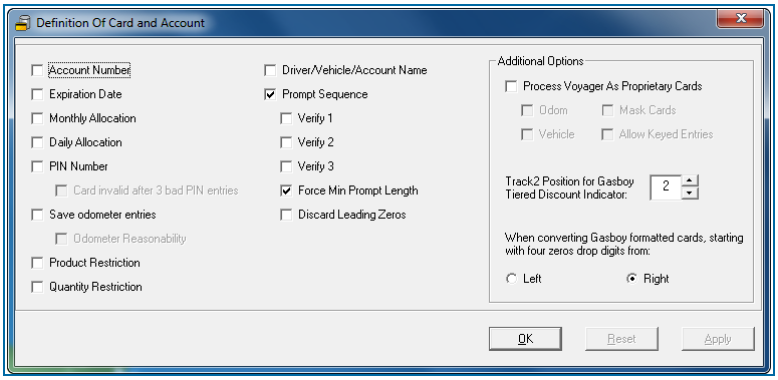


These codes define the acceptable range between a card's previous and current odometer entry. If the defined range is not met, fueling could be allowed or denied based on the setting of the "Allow fueling if three bad odometer entries" checkbox.

IMPORTANT: Odometer Reasonability should only be used for **single-site** applications.

Customer entered odometer readings are stored in the card/account file, and then compared to the next mileage entered by that user. The second entry is "reasonable" if the difference between the entries is within your specified range.

Section 10 Define Card Record



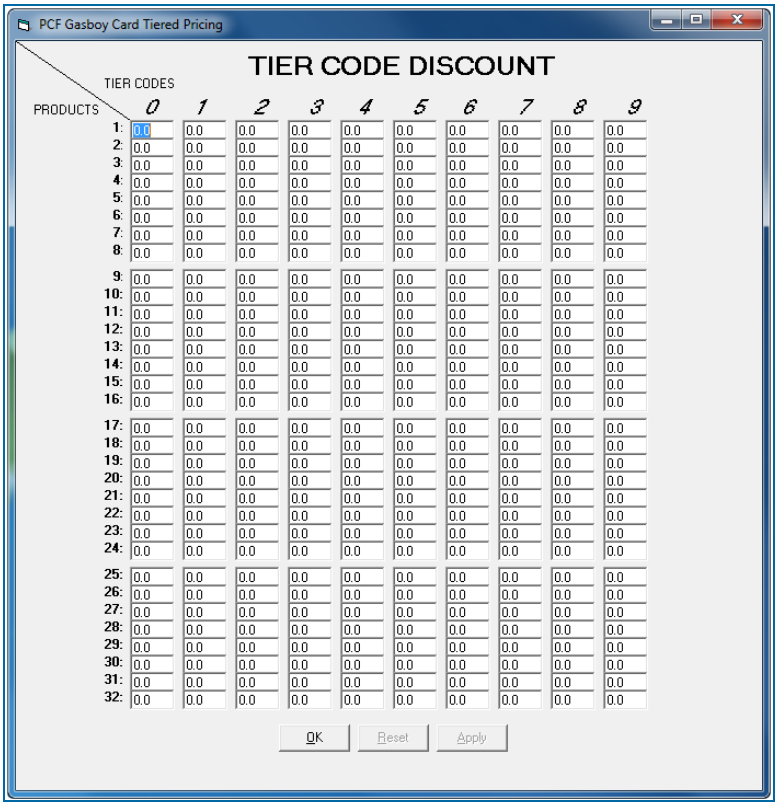
Defining the **Card Record** lets you enable or disable each of the features that follow for the proprietary card file:

NOTE: Sending card/account definition to the site controller will clear the cards and accounts.

- **Account Number**: A department or company identification number of up to four digits; cards can be grouped together for allocation restriction or reporting by assigning them to the same account.
- **Expiration Date**: Card or account validity restriction termination day.
- **Monthly Allocation**: *NOT recommended for multi-site setups*. Defines a monthly monetary limit for a specific card or account.
- **Daily Allocation**: Defines a daily monetary limit for a specific card or account.
- **PIN Number**: Personal Identification Number (card records only, not applicable to accounts).
  - **Card invalid after 3 bad PIN entries**: Affects cards only, not applicable to accounts.
- **Save Odometer Entries**: Save entries from user (card records only, not applicable to accounts). This option must be activated for MPG or km/L calculations to be performed (via the optional Report package).
  - **Odometer Reasonability**: Lets you assign "Odometer Reasonability" on page 25 codes to cards.
- **Product restriction**: Lets you assign "Product Restrictions" on page 23 codes to cards and accounts.
- **Quantity restriction**: Lets you assign "Quantity Restrictions" on page 24 codes to cards and accounts.
- **Driver/Vehicle/Account Name**: Lets you assign up to a 9 character name to cards or accounts.
- **Prompt Sequence**: As with network cards, you can capture and verify prompt information for cards stored in the card record file.
  - **Verify 1**: Can be applied using the same concept as a PIN

- **Verify 2**: Can be applied using the same concept as a PIN
- **Verify 3**: Can be applied using the same concept as a PIN
- **Force Min Prompt Length**: Lets you set a minimum prompt length
- **Discard Leading Zeros**: Removes leading zeros from numeric entries. This does not apply to odometer and misc. prompt entries.

Section 11 Tiered Pricing



The “Tiered Discounts” flag feature of the FSC3000 was designed to support the tiered price code embedded in the Track2 on your existing Gasboy cards. However, because of the many different Gasboy Track2 formats available, the FSC has no knowledge of where to find the embedded tiered pricing code. Therefore, you must configure the FSC to identify the position within the card’s Track2 data that represents the Tiered Discount indicator.

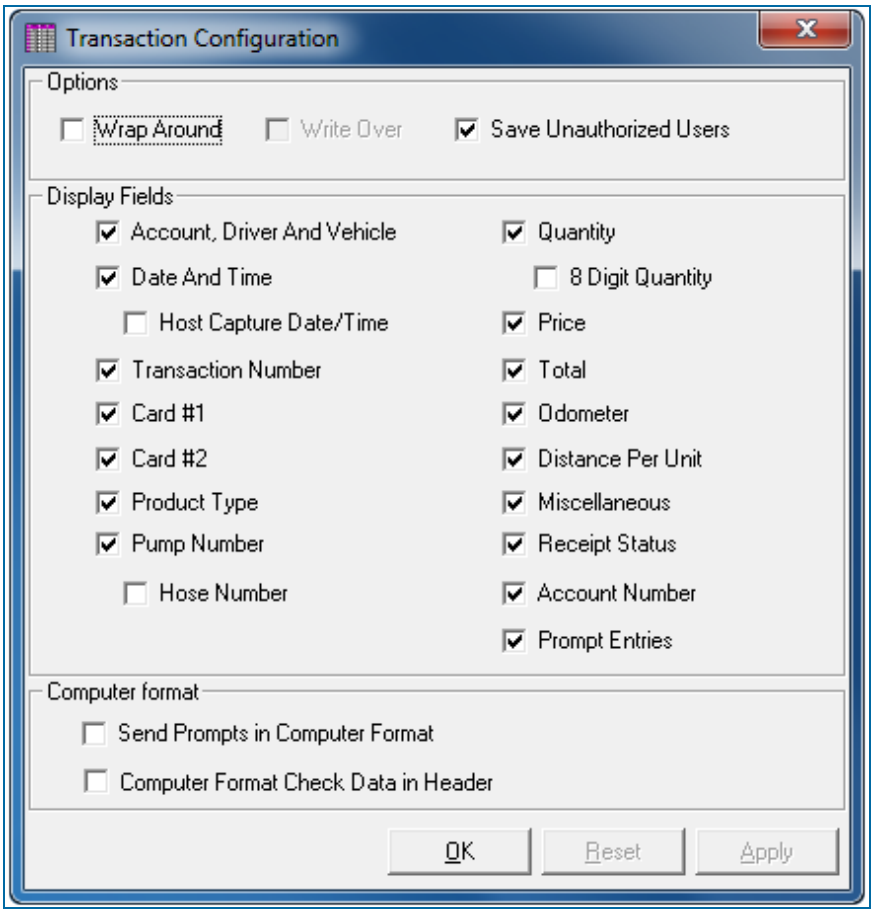
TheFSC3000 lets you (when the proper flags are enabled) set 10 levels of discounted pricing for each product available in the system.

Enter the applicable discount(s) (shown in tenths of a penny) for each product at the applicable levels.

When complete, push the Apply button to save the configuration.

NOTE: The **Reset** and **Apply** buttons come on when a character is entered into one of the fields. Push the Reset button to go back to the original values that was in the table before characters were entered.

Section 12 Define Transaction Record



12.1 Options

The first three options in the *Transaction Configuration* window include:

- Wrap Around
- Write Over
- Unauthorize Users

If **Wrap Around** is enabled and the transaction buffer is full, the FSC3000 overwrites the older transactions when new transactions are received.

IMPORTANT: Caution should be taken when enabling this feature. Transaction data will be lost if not polled before wrap around occurs.

The **Write Over** option will cause failed or non-captured network transactions to be over-written when **Wrap Around** is enabled.

NOTE: If this condition is disabled and a failed or non-captured transaction is encountered the transaction buffer will be flagged as full and the system will display SYSTEM BUSY BUFFER FULL on the terminals.

The **Save Unauthorized Users** option lets you enable or disable whether the system stores an unauthorized attempt to use the system as a transaction. Disabling this option causes the system to ignore any unauthorized user events. Only cases where a pump was activated by the FSC3000 are recorded. For this reason, if you do not use this option you might see a gap in the transaction numbers.

12.2 Display Fields

Though all transactions data is recorded, this section defines what fields are displayed when transactions are printed, shown on the terminal screen or sent to external programs like Phoenix.

Check any of the fields that you wish to be displayed.

If polling transactions using Phoenix the minimum required fields are:

- Date and Time
- Transaction Number
- Card #1
- Product Type
- Pump
- Hose (needed only for reconciliation and multi-hose)
- Quantity
- Price

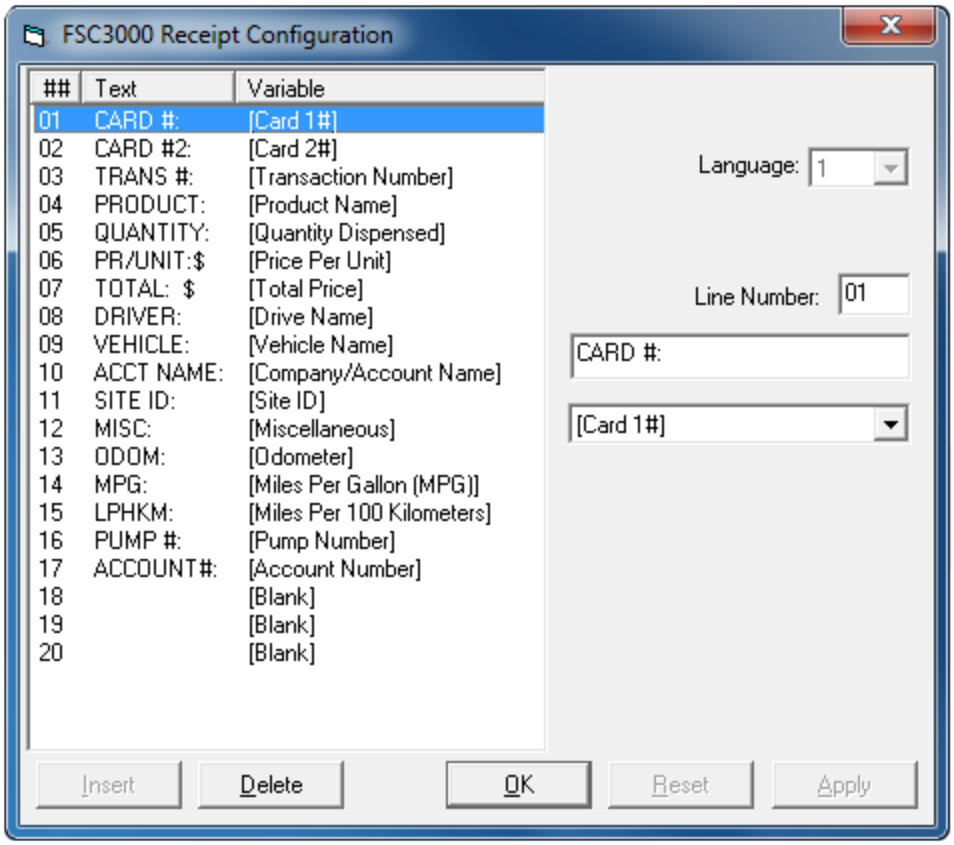
12.3 Computer Format

Send Prompts in Computer Format: Enable this feature if you are using additional prompting in the proprietary card file or if a network prompt capture is desired.

Computer Format Check Data in Header: When you transfer data to an external system in the computer format an optional data check can be prefixed to the transaction header to provide greater data integrity. The data check includes:

1. The number of records and
2. The sum of the quantities for records.

Section 13 Receipt Body



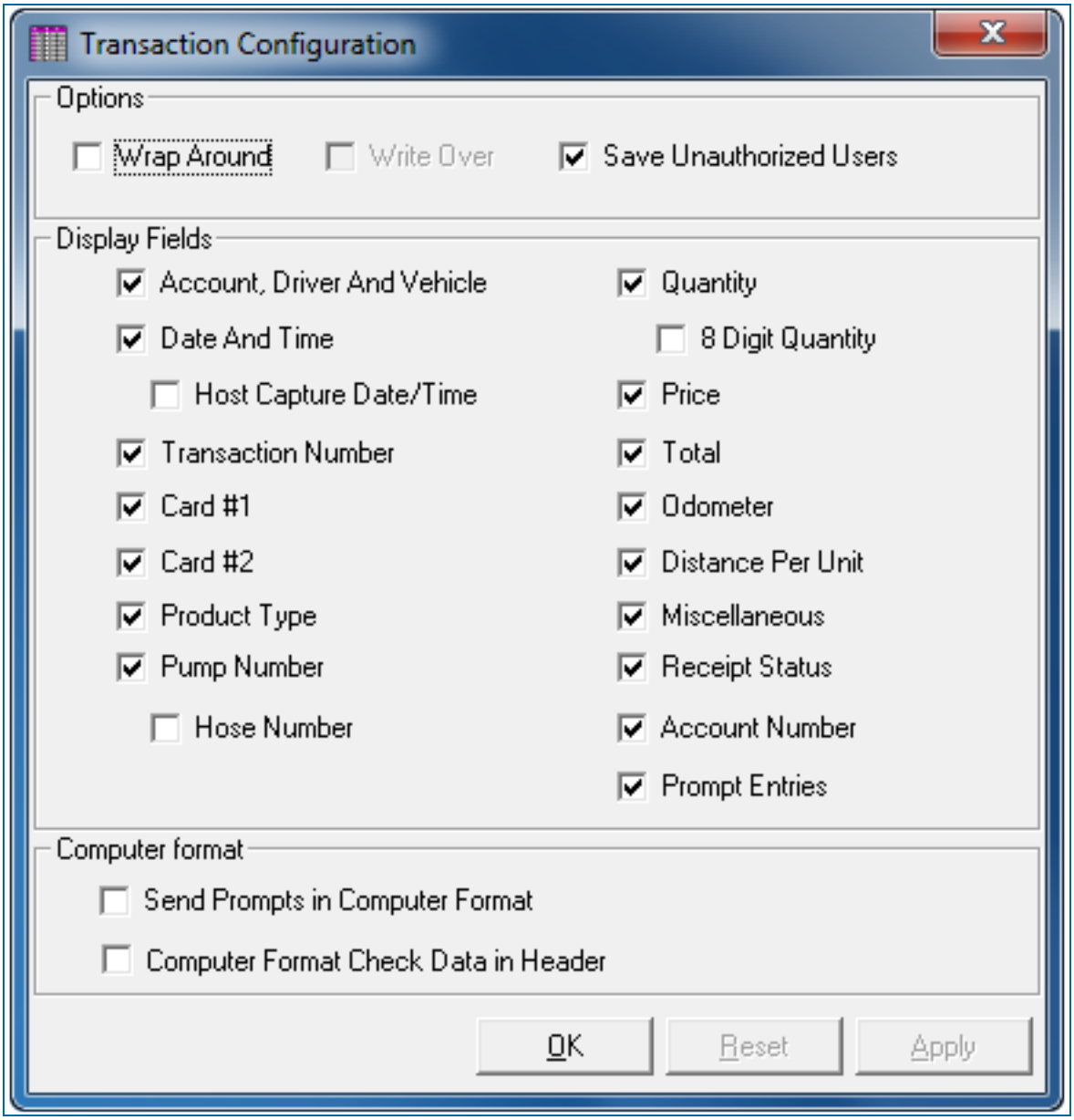
A receipt contains a "Receipt Header and Trailer" on page 61 which can be different for each site and a Body which is common for all sites. The receipt body can be up to 20 lines long. If the dual language feature is enabled, receipts can be issued in either language and the Language drop down will be enabled (see Dual Language in "Site Tab" on page 36). For each line of the receipt body some text (up to 10 characters) can be printed along with some optional data. The optional data is one of 37 different transaction variables such as card number, product name, price, etc.

Change any of the variables by selecting from the drop down, Change the text by entering it into the provided field.

Lines can be inserted or deleted using the Insert and Delete buttons.

NOTE: Receipt body is specific to proprietary transactions only.

Section 14 Transaction Configuration



14.1 Options

The first three options in the Transaction Configuration window include:

- Wrap Around
- Write Over
- Unauthorize Users

If **Wrap Around** is enabled and the transaction buffer is full, the FSC3000 overwrites the older transactions when new transactions are received. Caution should be taken when enabling this feature. Transaction data will be lost if not polled before wrap around occurs.

The Write Over option will cause failed or non-captured network transactions to be over-written when Wrap Around is enabled.

NOTE: If this condition is disabled and a failed or non-captured transaction is encountered the transaction buffer will be flagged as full and the system will display ***SYSTEM BUSY BUFFER FULL*** on the terminals.

The **Save Unauthorized Users** option allows you to enable or disable whether the system stores an unauthorized attempt to use the system as a transaction. Disabling this option causes the system to ignore any unauthorized user events. Only cases where a pump was activated by the FSC3000 are recorded. For this reason if you do not use this option you might see a gap in the transaction numbers.

14.2 Display Fields

Though all transactions data is recorded, this section defines what fields are displayed when transactions are printed or shown on the terminal screen or sent to external programs like Phoenix.

Check any of the fields that you wish to be displayed.

If polling transactions using Phoenix the minimum required fields are:

- Date and Time
- Transaction Number
- Card #1
- Product Type
- Pump
- Hose (needed only for reconciliation, with multi-grade dispensers and multi-hose)
- Quantity
- Price

14.3 Computer Format

Send Prompts in Computer Format: Enable this feature if you are using additional prompting in the proprietary card file or network prompt capture is desired.

Computer Format Check Data in Header: When transferring data to an external system in the computer format an optional data check can be prefixed to the transaction header to provide greater data integrity. The data check includes: (1) the number of records and (2) the sum of the quantities for records.

Site Information

This section provides details for site specific setup information contained in each of the Tabs. This information is arranged in four (4) sub-sections:

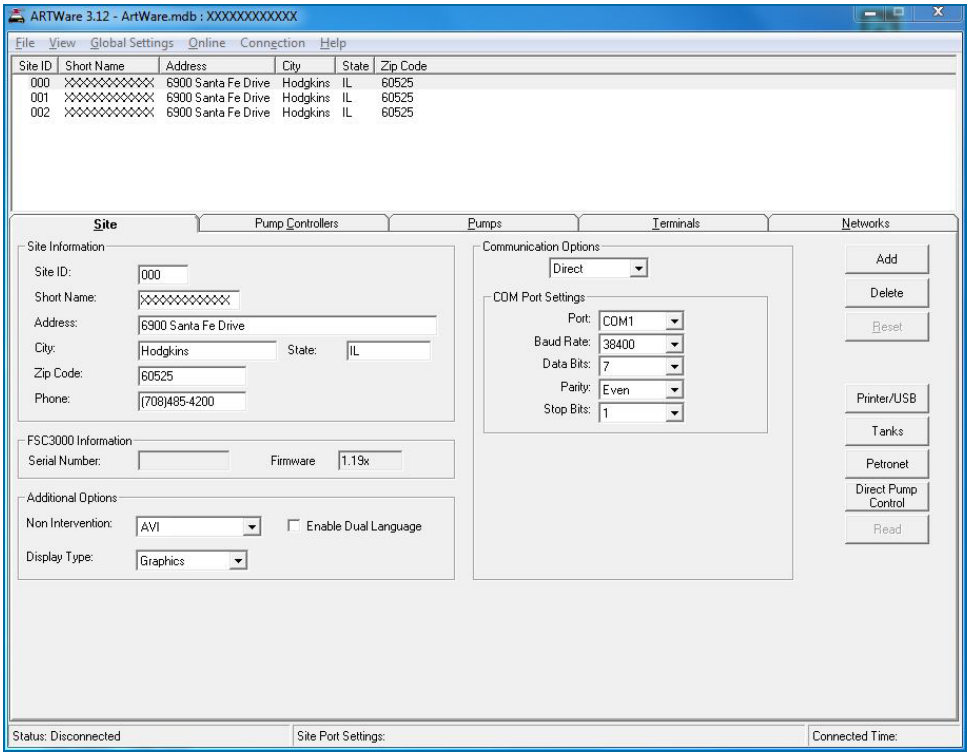
- "Site Setup" on page 35
- "Pump Setup" on page 44
- "Terminal Setup" on page 55
- "Network Setup" on page 62

Section 15 Site Setup

This sub-section describes the Site tab details:

- "Site Tab" on the next page panels
  - Site Information Panel
  - "Communication Options" on page 38 Panel
- Tab Buttons
  - "Journal Printer / USB Configuration" on page 39 options
  - "Site Tanks" on page 41
  - "Petro-Net™" on page 42
  - "Direct Pump Control" on page 43 (DPC)

15.1 Site Tab



The Site Tab is used to add, delete and edit data about sites. You can enter up to 998 sites.

The following fields are on the Site Tab

- **Site ID**: The Site ID is a unique 3 digit number used to identify a particular site in your database. When you Add a new site ARTWare will select the next available number for you, or you can enter your own before you Save the site data. Once you save the site data you cannot change the Site ID. You can enter any 3 digit number from 000 to 998 (999 is reserved).
- **Short Name**: The Short Name must be twelve characters in length. It can contain any character, even spaces, but a space cannot be the first character.
- **Enable Dual Language**: The FSC3000 can be “bi-lingual” to a certain degree - to display or print two different languages. A Language Type is programmed into all cards. When the card is read, the FIT display language changes to the programmed language. Some receipts can also be programmed to print out in the specified language.
- **Display Type**: Select the display type here (either graphics or 2x16) Note: Changing the Display Type does not change how Messages and Prompts are formatted.
- **Communication Options**: See "Communication Options" on page 38.
- **Non-Intervention Options**:
  - **AVI**: See "AVI (Non Intervention-Auto Vehicle Identification)" on page 52
  - **FleetLINK**: See "FleetLINK™" on page 50

Optional fields. If networks are enabled these values are stored to the network settings.

- Address
- City
- State
- Zip Code
- Phone

The fields **FSC3000 Serial No**. and **Firmware Version** cannot be edited. These fields will be populated when you first read the FSC3000

See ARTWare Navigation for more help with how to use ARTWare.

Additional Site Setup from the column of buttons on the right side of the screen:

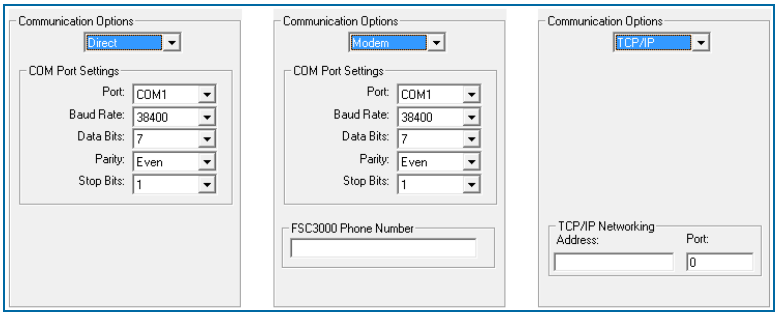
Printer/USB ("Journal Printer / USB Configuration" on page 39)

Tanks ("Site Tanks" on page 41)

Petro-Net ("Petro-Net™" on page 42)

"Direct Pump Control" on page 43

15.2 Communication Options



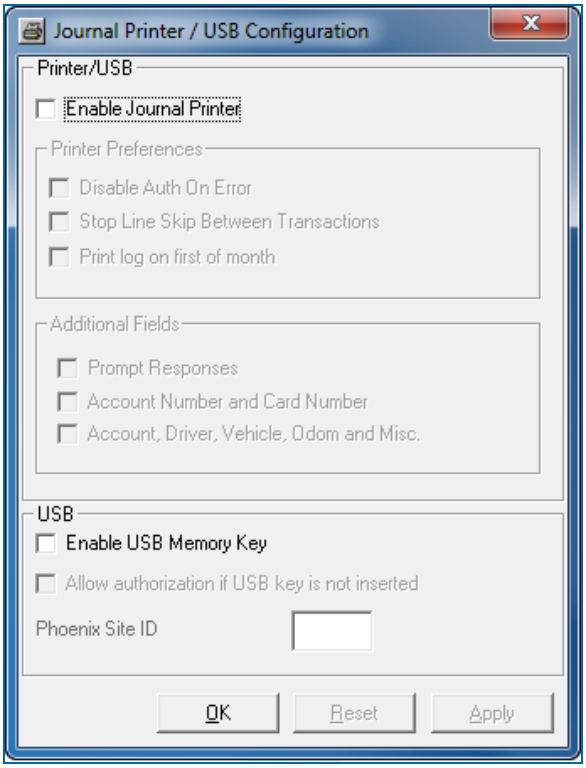
You can select one of three methods to connect to an FSC3000:

- Direct (COM port)
- Modem (Dial-up)
- TCP/IP (Ethernet™)

Select the method that ARTWare will use to connect to the FSC from the drop-down box and the form will change to allow you to enter the rest of the needed data. For the Direct method you will need the baud rate, data bits, parity and stop bits. The default values for the FSC3000 are 38400,7, even, 1. For the modem you will need to know which com port your modem is attached to in addition to the phone number of the FSC3000. For the network connection you will need to know the IP address and port number.

The modem initialization string can be found under "System Properties" on page 10.

15.3 Journal Printer / USB Configuration



To access the *Journal Printer / USB Configuration* screen push the **Printer/USB** button on the right side of the *Site* tab

An external printer can be connected to the printer port on the back of the FSC3000 to make a hard copy of all transaction data, providing added protection against data loss. The journal printer records transaction, pump and product numbers, date and time, first card number, the product quantity and dollar total.

When enabled, a USB key (also called a "Thumbdrive") can be used as an additional option to record transactions in computer format. The file created is specifically designed for import into OPW Fuel Management Systems Phoenix™ software.

More instructions on using the USB key can be found in the FSC3000 Manual, part number M030000.01.

15.3.1 Printer Preferences

Disable Auth On Error specifies if the system should authorize fueling when the printer is not operating. If you have this checked the printer may disable fueling if an error, such as a paper outage, occurs.

Stop Line Skip Between Transactions controls whether an extra line is printed between transactions

Print System Log on First of Month

15.3.1.1 Additional Fields

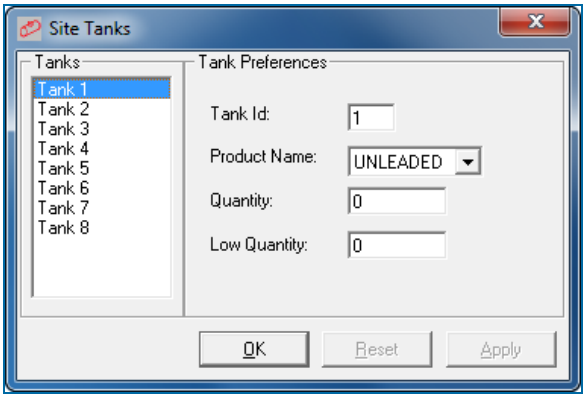
These options control what additional data is printed on the journal printer.

15.3.2 USB

Check the box **Enable USB Memory Key** to enable the writing of transactions to the USB key. The Phoenix Site ID must be entered in the field provided for transactions to be recorded. If the key is not inserted authorizations will not be allowed unless the **Allow authorization if USB key is not inserted** is checked.

IMPORTANT: Since the ARTWare and Phoenix databases are not connected, the Phoenix Site ID you enter on this form may or may not be the same as the ARTWare Site ID for the same site. Be sure to enter the proper ID, as this will affect how the transactions are imported into Phoenix.

15.4 Site Tanks

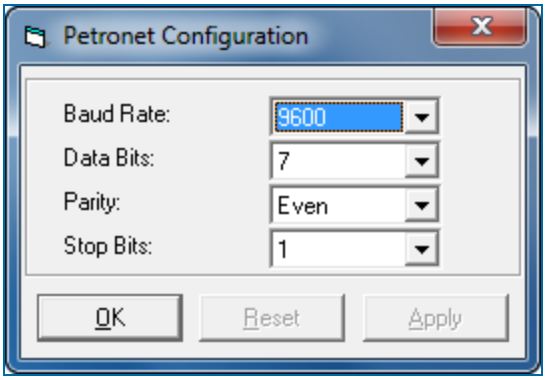


To access the *Site Tanks* screen push the **Tanks** button on the right side of the *Site* tab

From the *Site Tanks* screen you can see and set the information that follows for each tank:

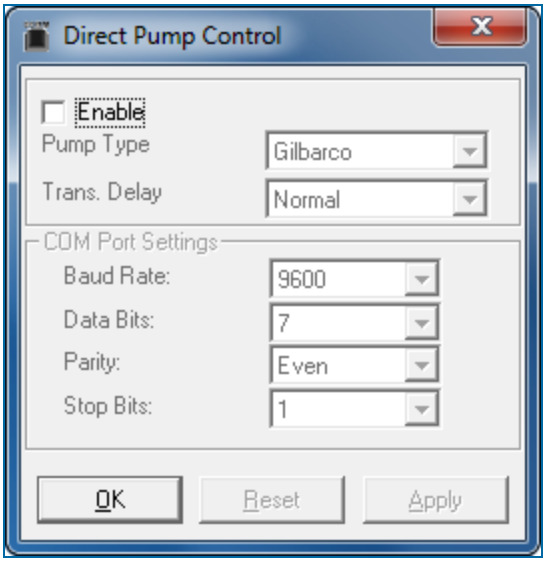
- Product assigned to the tank
- Current quantity
- Low-level tank alarm quantity

15.5 Petro-Net™



Change any of the parameters and click **OK** or **Apply** to save the changes. The defaults are shown.

15.6 Direct Pump Control



The FSC3000 can communicate directly with Wayne, Gilbarco and Gasboy dispensers. An interface adapter (provided by your distributor) is used to provide isolation and to convert the RS-232 output from the FSC3000 to the communication method used by the pumps.

NOTE: You must have the DPC option enabled on your FSC3000 for any of these configurations to take effect.

The FSC3000 does not support DPC at the same time as the Universal Pump Controller (UPC). If you have a UPC pump controller configured you will not be able to configure DPC (the **Direct Pump Control** button will be disabled) and vice-versa. If you already have any DPC pump controllers configured you will also not be able to configure UPC. DPC must be configured before you add any DPC pump controllers.

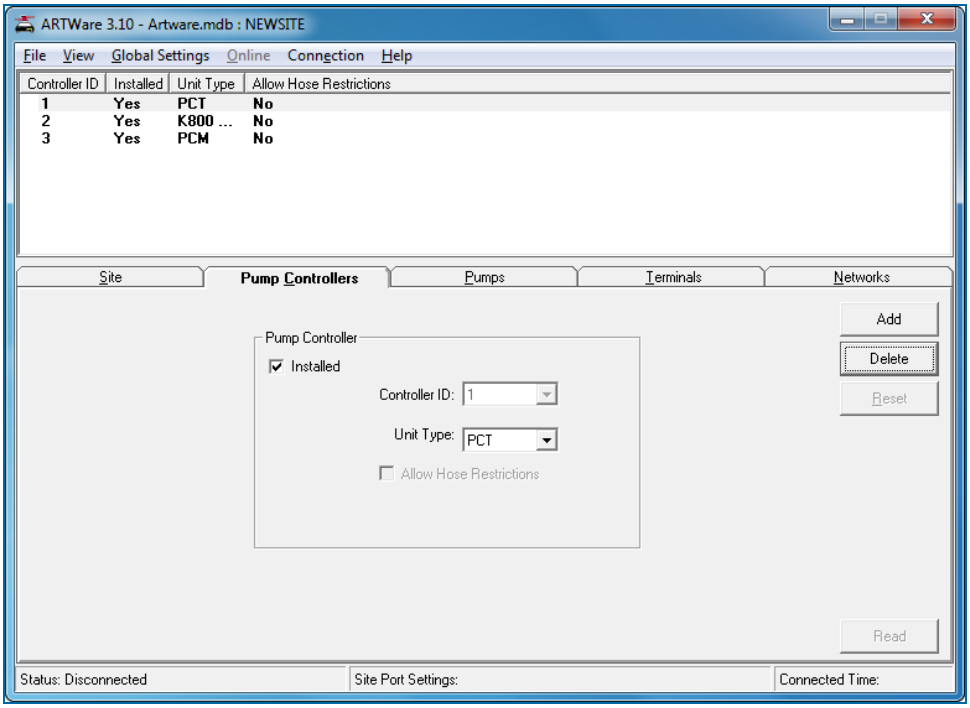
Section 16 Pump Setup

This sub-section describes the setup details for tabs related to Pumps:

- "Pump Controllers Tab" on the next page
- "Pumps Tab" on page 47
- "Pumps Tab - Hoses" on page 49 (Hoses detail)

This section will also show detailed setup information related to "FleetLINK™" on page 50 and "AVI (Non Intervention-Auto Vehicle Identification)" on page 52.

16.1 Pump Controllers Tab



Each FSC3000 has one (1) or more (up to 8) Pump Controller(s) that control pump operations. These controllers, in the FITs or in a remote cabinet, must be uniquely numbered. If the FSC3000 is equipped with UPC (Universal Pump Controller) software, it can authorize fueling transactions through a pump control console (such as that used in a self service station). Pumps controlled by UPC software do not require a pump controller board, but they do require the logical pump controller to be configured within the FSC. If you have "Direct Pump Control" on page 43 (DPC) enabled on the FSC3000 the FSC3000 can directly control pumps, but you still must configure it like a pump controller.

ARTWare does not support both the UPC and DPC at the same time. If you have a UPC Pump Controller configured you cannot configure DPC until you remove the UPC Pump Controller, and vice-versa.

For more information on DPC see "Direct Pump Control" on page 43.

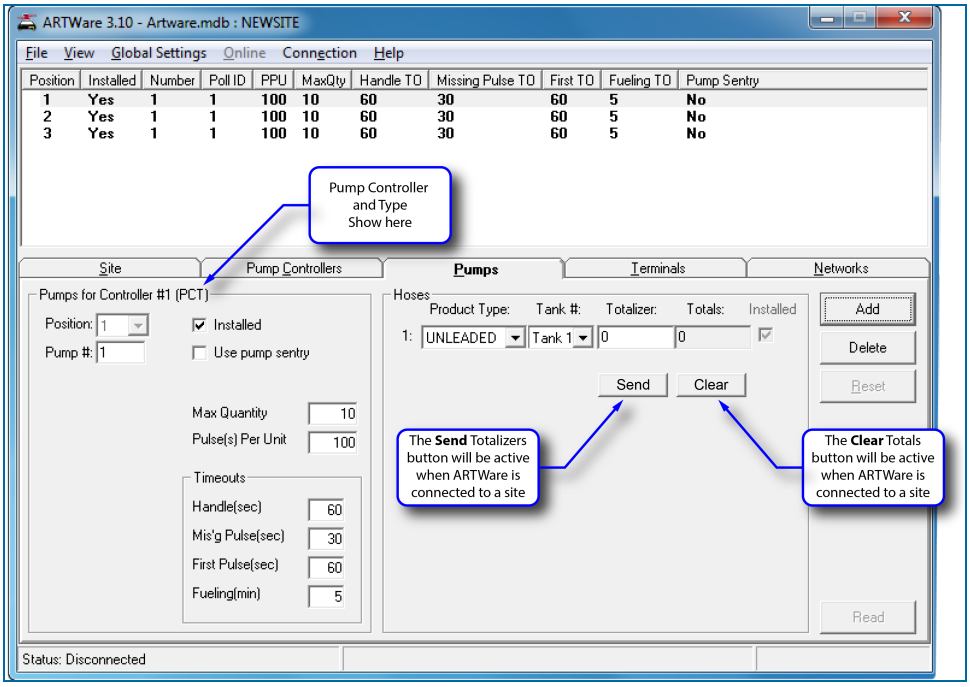
The table below describes the types of Pump Controllers supported by the FSC3000 and their properties.

Pump Controller Type	Pump Positions (5-8 available)	Pumps	Hoses	Allows Hose Restrictions?	Supports ?
K800 PCT	NO	4	1	NO	YES
PCM	NO	4	1	NO	YES
PCT	YES	8	1	NO	YES
DPC	YES	8	8	YES	NO
UPC	YES	8	8	YES	NO

If you add a pump controller but do not check the **Installed** box, ARTWare will configure the pump controller but it will not be active and will not be used by the FSC3000. If the pump controller is Installed it will be shown in bold type in the upper grid.

See "ARTWare Main Window and Navigation " on page 12 for more help with how to use ARTWare.

16.2 Pumps Tab



The *Pumps* Tab will be different depending on the Pump Controller (see "Pump Controllers Tab" on page 45) that you are configuring and whether you have "AVI (Non Intervention-Auto Vehicle Identification)" on page 52 or "FleetLINK™" on page 50 installed.

Position: This is the relay position of the pump on the Pump Controller.

Pump #: This is the pump number displayed on the Terminals for this Controller position (example: `USE PUMP #12'). This number is only a label and does not have to match the Controller position number.

Max Quantity: This is the maximum fuel amount to be dispensed for any transaction using this pump. This setting does not effect proprietary card file "Quantity Restrictions" on page 24 settings.

If using networks, the Online and Offline limits (see "Fueling Limits" on page 73) configured on the "Fleet Account Information Frame" on page 73 can have an effect on the final fueling quantity.

Pulse(s) Per Unit: Specifies the number of pulses per unit of product dispensed. A unit is typically gallons, liters or quarts.

Use pump sentry: This option stops the pump if three zero quantity transactions occur in a row. This could mean possible pump or pulser trouble.

16.2.1 Timeouts

These values are used to monitor and control pump activity.

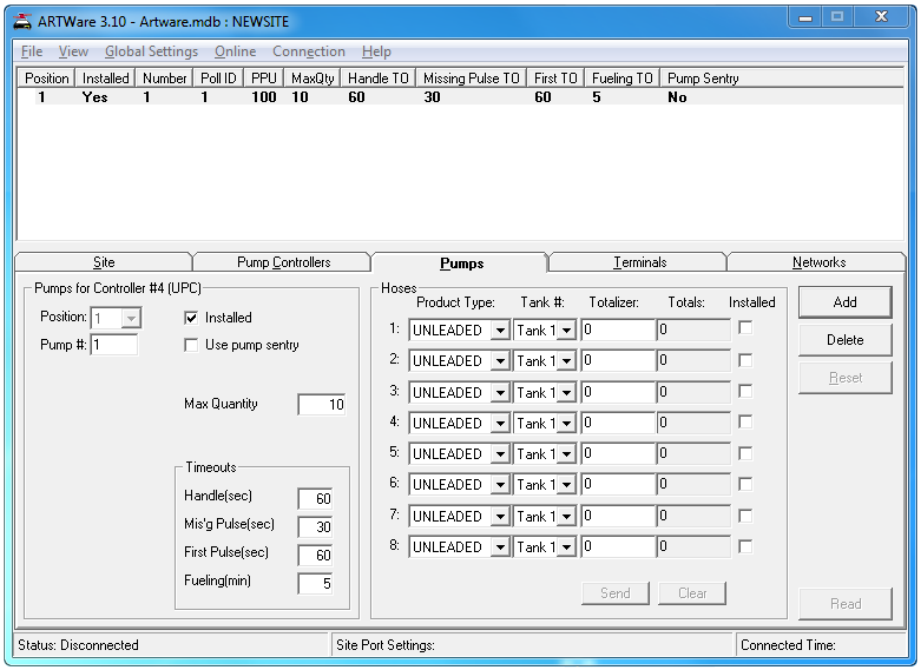
Handle (sec); Number of seconds after authorization that the pump handle must be operated.

Mis'g Pulse (sec): Maximum number of seconds allowed between pulses

First Pulse (sec): Maximum number of seconds after the pump handle has been activated before the first pulse has been detected

Fueling (min): Maximum number of minutes allowed to dispense product

16.3 Pumps Tab - Hoses



The number of hoses displayed will be either one or eight, depending on the type (see the table "Pump Controller Type" on page 45) of attached Pump Controller. The Product Type drop down selects the product dispensed by this Hose. Changing the text assigned to this Product Type on the "Product Types" on page 20 form will NOT change this assignment, but will change the text displayed. Change the Tank assigned to this Hose using the drop down.

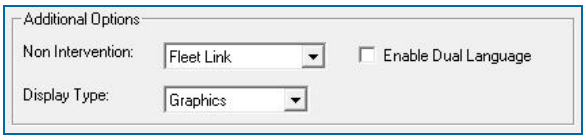
NOTE: Changing the Tank assigned to the Hose will not change the Product Type. There is no relationship in either the FSC3000 or ARTWare between Products and Tanks - they are just labels.

NOTE: The Installed checkbox must be checked for each hose available at the pump, i.e. for Wayne MPD pumps hoses 3, 5 and 7 are typically used for Premium, Mid-Grade and Unleaded. The first Hose is always defaulted to "*installed*" for pumps attached to PCTs, K800 PCTs and PCMs but not for UPCs or DPCs.

Enter the fueling point totalizer in the **Totalizer** field. If ARTWare is connected to a FSC3000 the **Send** and **Clear** buttons will be enabled. **Send** will send the Totalizer value(s) to the FSC3000 and **Clear** will clear the Totals for that fueling point and hose.

16.4 FleetLINK™

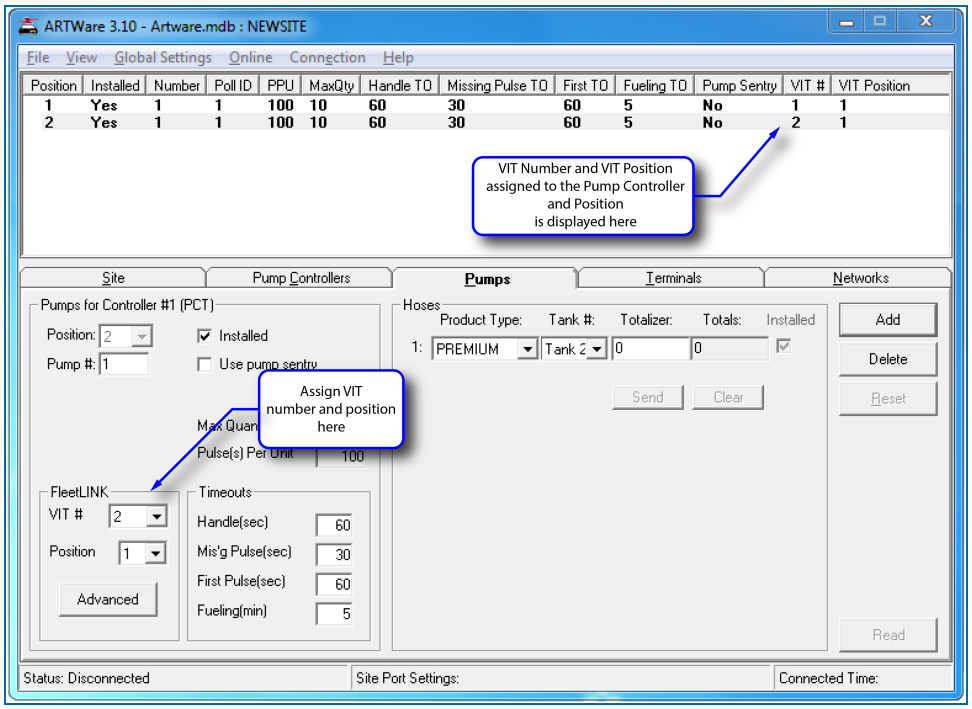
ARTWare 3.0 and above is supported to configure FleetLINK enabled FSC3000s. If you have FleetLINK installed and have the necessary Vehicle Identification Terminals (VITs) and Vehicle Identification Units (VIUs) installed you can select the FleetLINK option in the Non Intervention drop down of the *Site Tab*. Once you have enabled this feature, the FleetLINK configuration options in ARTWare become available.



IMPORTANT: Enabling FleetLINK will enable the polling of VIT devices. This feature requires you to have OPW VIU devices installed on your vehicles and additional nozzle readers on every hose. Unless you're sure you have purchased and installed the additional hardware required for this feature you should not enable FleetLINK!

For more information on the Site Tab see "Site Tab" on page 36.

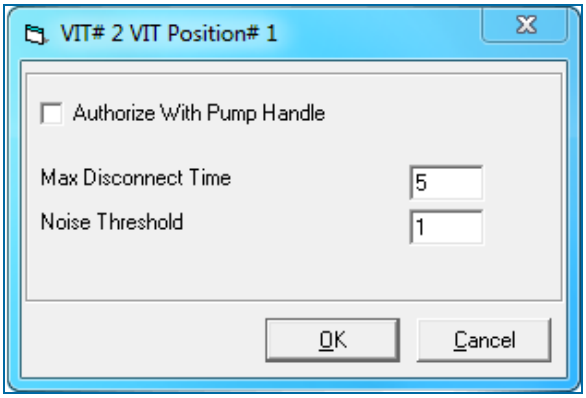
When you enable FleetLINK you change some of the available options on the "Pumps Tab" on page 47.



Assigning a VIT and position is accomplished by the dropdown boxes within the FleetLINK frame. Any VIT number and position cannot be assigned to more than one Pump Controller and position - ARTWare will enforce this. To unassign the Controller and position, simply set the VIT to "None" If you uncheck the FleetLINK box on the Site Tab you will unassign all VITs.

16.4.1 Advanced

On any Pump Controller Position that you have assigned a VIT number and position the **Advanced** button will be enabled. This will allow you to set more options.



Authorize With Pump Handle: When when this box is checked, the pump handle activation is allowed to occur prior to pump activation.

Max Disconnect Time: How long a pump will remain active after nozzle disconnection occurs.

Noise Threshold: Used to adjust connection sensitivity in noisy environments. Recommended setting is "1."

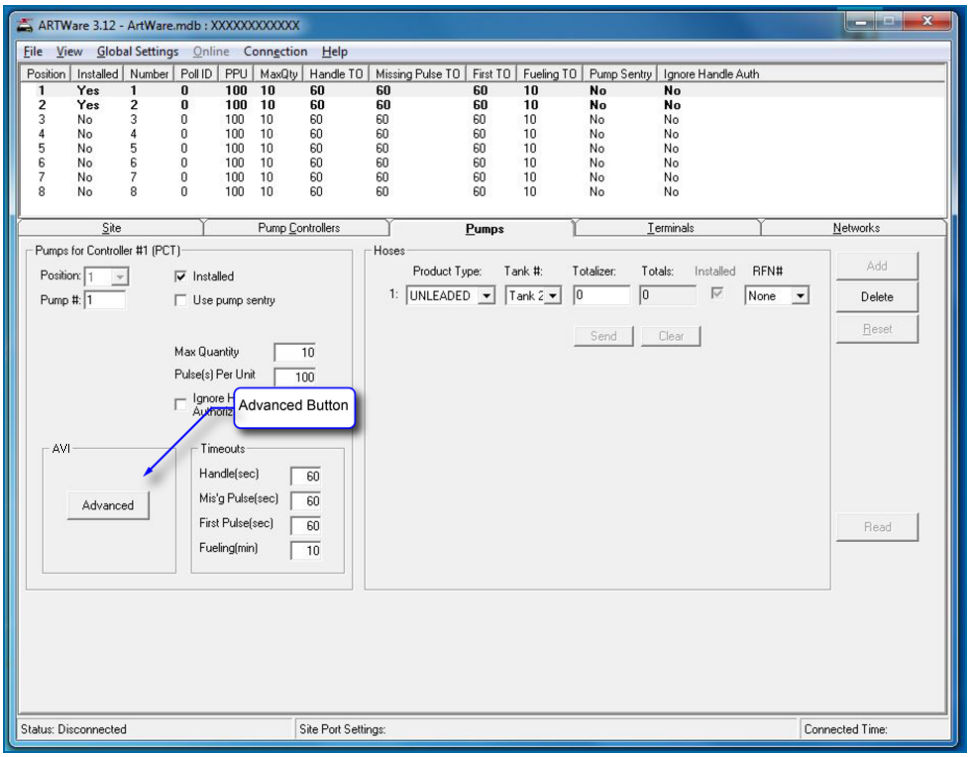
16.5 AVI (Non Intervention-Auto Vehicle Identification)

ARTWare 3.12 and above is supported to configure Auto Vehicle Identification (Non Intervention) enabled FSC3000s. If you have Auto Vehicle Identification installed and have the necessary Vehicle Identification System (VIS) and Vehicle Identification Units (VIDs) installed you can select the AVI option in the Non Intervention drop down of the *Site Tab*. Once you have enabled this feature, the Auto Vehicle Identification (Non Intervention) configuration options in ARTWare become available.

For more information on the Site Tab see "Site Tab" on page 36.

16.5.1 Advanced

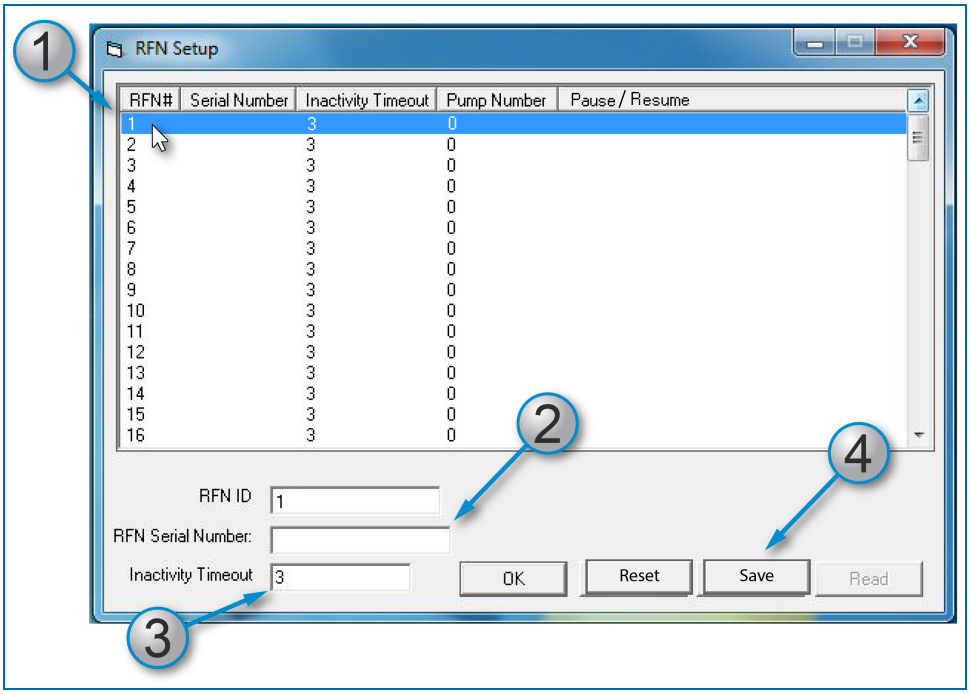
When AVI is selected in the Non Intervention drop down of the *Site Tab*, the **Advanced** button in the AVI frame of the *Pumps Tab* will show.



Push the **Advanced** button. The RFN Setup screen will come into view.

NOTE: The **Read** button on the RFN Setup screen is turned on when ARTWare is connected to a Fuel Site Controller that has been set up with Auto Vehicle Identification system RFN configuration information. Push the **Read** button to automatically populate the RFN information in the RFN Setup screen. If it is necessary to configure the system RFNs manually or when offline, use the procedure below.

16.5.1.1 RFN Setup Offline



1. Select an applicable **RFN ID** number in the numerical list in the top pane of the window. Make sure the ID number agrees with the RFN that was installed in the Auto Vehicle Identification system. See the AVI system documentation for instructions on how to configure the system RFNs.
2. Enter the **serial number** for the selected RFN (Radio Frequency Nozzle). The system will accept up to 12 alpha-numeric digits.
3. **Inactivity Timeout**: The amount of time in seconds that the system will stop the transaction if the RFN contact with the tag is lost. The system will accept numeric values from 0-999. The default is 3.
4. Push the **Save** button to save these values. The entry for the RFN ID in the top pane will change to show the saved values.

IMPORTANT: Make sure you save each configuration before you exit this screen. Examine the entries in the top panel to make sure they are correct.

NOTE: The **Reset** and **Save** buttons come on when a character is entered into one of the fields. Push the **Reset** button to go back to the original value that was in the field before characters were entered.

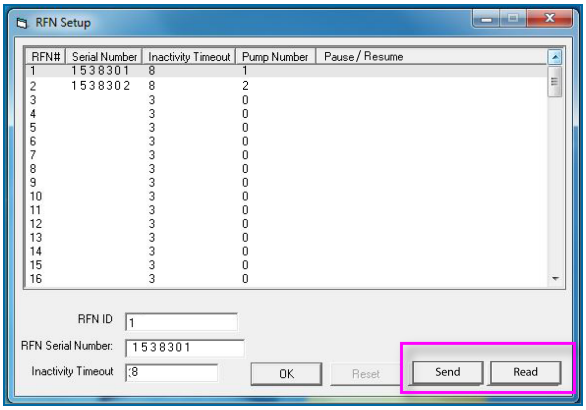
When RFN configuration is complete push the **OK** button to close this screen.

16.5.1.2 Send RFN Configuration

The RFN configuration that was set up offline in the procedure above can be sent to the FSC when ARTWare has been connected (see "Connecting to the FSC" on page 14 for information).

When ARTWare has been correctly connected to the FSC:

- Push the **Advanced** button. The RFN Setup screen will come into view.



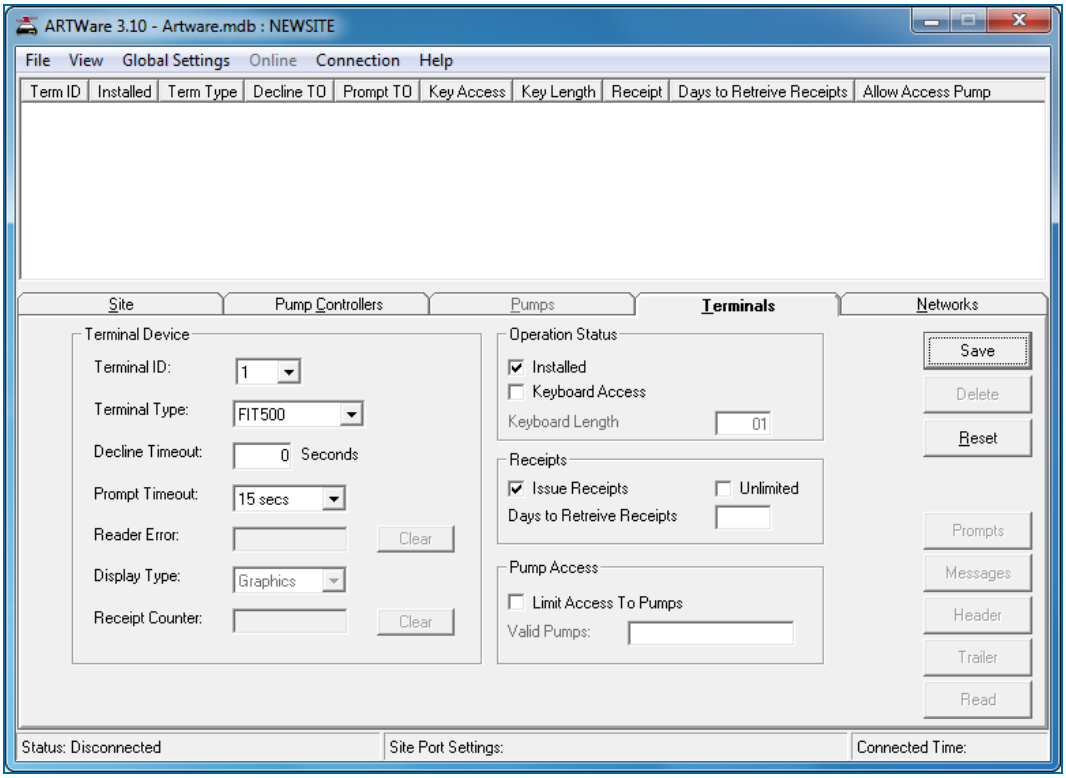
- The **Send** and **Read** buttons will be turned on (the Send button replaces the Save button from the original screen) (see the note above under "Advanced" on page 52 for information on the function of the Read button).
- Push the **Send** button to send the RFN configuration to the FSC.

Section 17 Terminal Setup

This sub-section describes the setup details for tabs related to Terminals:

- "Terminals Tab" on the next page
- "Driver Prompts" on page 58
- "System Messages" on page 60
- "Receipt Header and Trailer" on page 61

17.1 Terminals Tab



The Terminals screen is used to add, edit and delete terminals associated with a specific site.

The FSC3000 can have up to eight terminals of four different types. The table below summarizes these terminal types

Terminal Type	Positions 5-8 Available	Receipt Printer Available
System2 FIT	No	Yes
K800 (OPT)	Yes	No
C/OPT - PV200	Yes	Yes
FIT500	Yes	Yes

17.1.1 Terminal Device

When you Add a Terminal you can set the **Terminal ID**. Once added, the **Terminal ID** cannot change.

- **Decline Timeout**: This determines how long Decline Authorization message remains on the Terminal
- **Prompt Timeout**: This is the time that a prompt remains on the Terminal display

- **Reader Error**: The error counter keeps a running total of bad reads by the card reader. The system defines a bad read as one where the card reader cannot read a card correctly in three sequential attempts. Such a failure could indicate that the card reader needs cleaning or replacement. This will not show anything until you Read the FSC3000. If you are connected to an FSC3000 the **Clear** button will be enabled. Clicking on this will clear this error counter.
- **Display Type**: This is the display type set on the "Site Tab" on page 36. It is here for informational purposes only and cannot be changed on this Tab.
- **Receipt Counter**: This counts the number of receipts printed by this Terminal. This will not show anything until you Read the FSC3000. If you are connected to an FSC3000 the Clear button will be enabled. Clicking on this will clear this counter.

17.1.2 Operational Status

This section allows setting the **Installed** flag and enabling or disabling **Keyboard Access** for this Terminal. If **Keyboard Access** is enabled the number characters users can enter at the keyboard can be set in **Keyboard Length**.

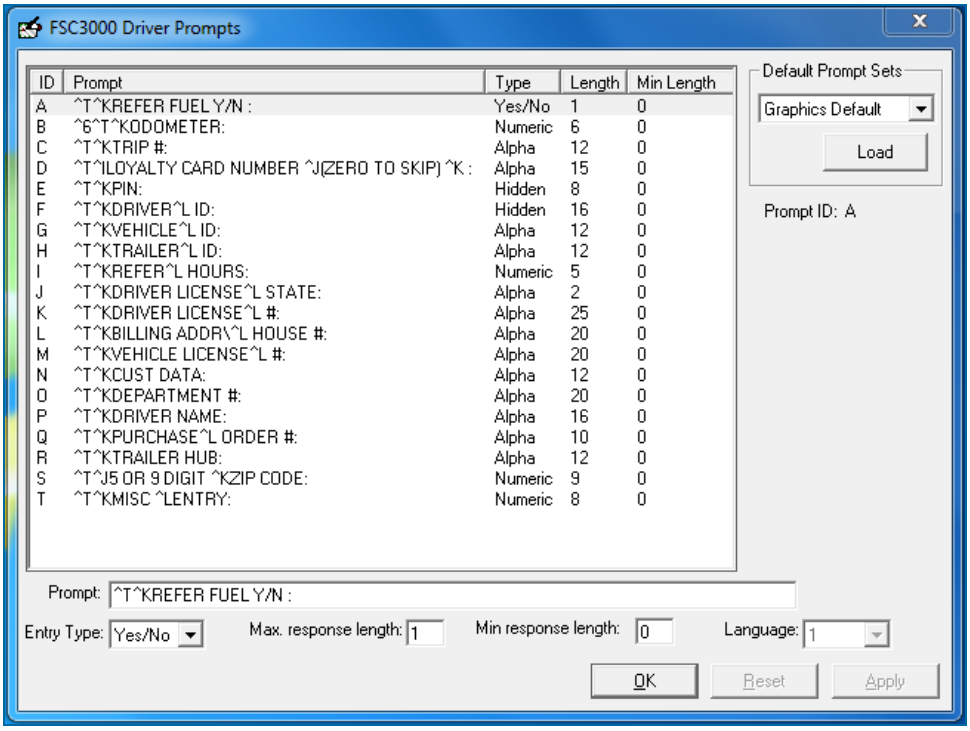
17.1.3 Receipts

For those Terminals that have receipt printers, receipt printing is enabled here with **Issue Receipts**. If receipt printing is enabled the number of days to keep receipts is set in **Days to Retrieve Receipts**, or **Unlimited** can be selected to keep receipts for an unlimited number of days.

17.1.4 Pump Access

Each Terminal can be limited to servicing certain pumps. Check **Limit Access to Pumps** and enter a comma-separated list of pump numbers to enable this feature.

17.2 Driver Prompts



Driver prompts are a set of additional prompts that can be assigned to network cards through the Fleet table and/or to proprietary cards when prompt sequence is enabled. These are the prompts that customers see after swiping their card.

Similar to messages, ARTWare does not know what prompts are on your FSC3000 when you create a site. For this reason, when you first add a site, as set of default prompts will be created, which may or may not match your hardware or needs. ARTWare will create a set of 2X16 non-graphics prompts.

You can load a complete default set of prompts by selecting one of the sets from the drop-down box **Default Prompt Sets**, and clicking the Load button. This will overwrite all the prompts.

Each prompt has a **Prompt ID** (a letter from A-T) to identify it. The prompt field is a 40-character text message customers see on the Terminal. The **Entry Type** field describes the type of characters the customer inputs in a prompt request. It is a drop-down menu that contains the following options: Numeric, Hidden, Yes/No, and Alpha.

The **Max. Response Length** field contains a value for the maximum characters in the response.

If **Enable Dual Languages** is checked in the "Site Tab" on page 36 the Language drop down is turned on you can switch between first and second language prompts.

If Force Min Prompt Length has been selected (see "Define Card Record" on page 26) the **Min response length** is available.

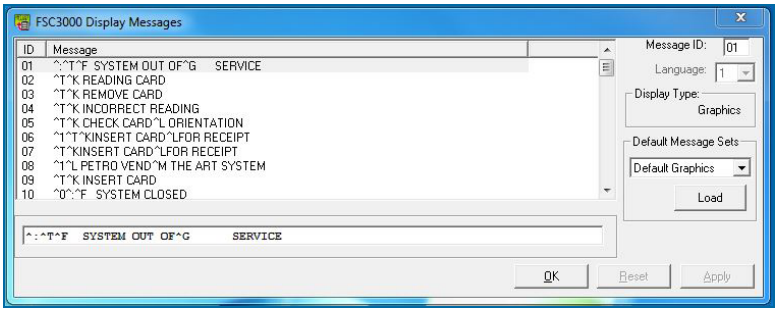
If your site is set up for **Default Graphics** (see the **Display Type** dropdown in "Site Tab" on page 36) where you can enter "Graphic Codes" on page 91.

For specified networks use the "Prompt Table" on page 93 to configure your prompts. The Network Prompt table reflects the different terms/prompt strings used by a network to capture data. When altering the prompt table, be sure to consider all enabled networks on your system. You cannot alter a prompt string to have the same meaning as another (using different wording) just to have different prompts for each network.

The meaning of the prompt in the default table never changes, and is always mapped to a specific field when the authorization packets are built and sent for approval.

If you require a prompt to be captured by the host that is not one of the standard prompts shown, you must make arrangements with a host as to which prompt will be redefined.

17.3 System Messages



The Terminal display guides customers through the fueling process with a series of prompts. The FSC3000 is pre-programmed with default prompts for certain events. There are 62 display messages. If Enable Dual Language is checked in the "Site Tab" on page 36, prompts will automatically appear in an alternate language when a card flagged for that language is inserted into the FIT.

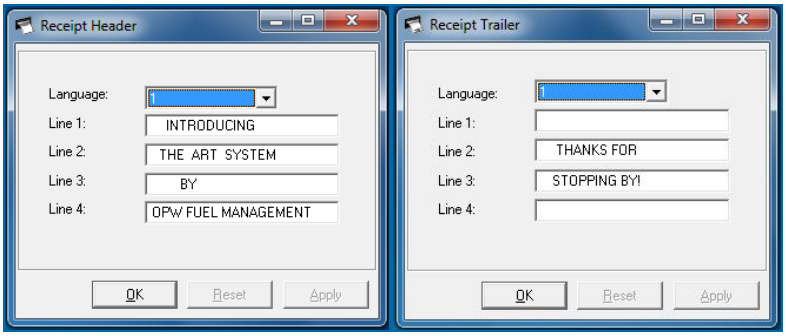
ARTWare does not know what messages are on your FSC3000 when a new site is created. For this reason, when you first add a site, a set of default messages will be created which may or may not match your hardware or needs. ARTWare will create a set of 2X16 messages. You can load a complete default set of messages by selecting one of the sets from the drop-down box **Default Message Sets** and clicking the **Load** button. This will overwrite all the messages. Connect to the FSC3000 and click **Read** on this dialog box to get the messages.

This dialog box will be different if your site is set up for 2X16 display.

If your site is set up for default graphics (see "Site Tab" on page 36) you can enter "Graphic Codes" on page 91.

You can change any of the default messages, but only the text will change. You cannot change the function of the message. For example, "Insert Card" can be changed to "Put in Card".

17.4 Receipt Header and Trailer



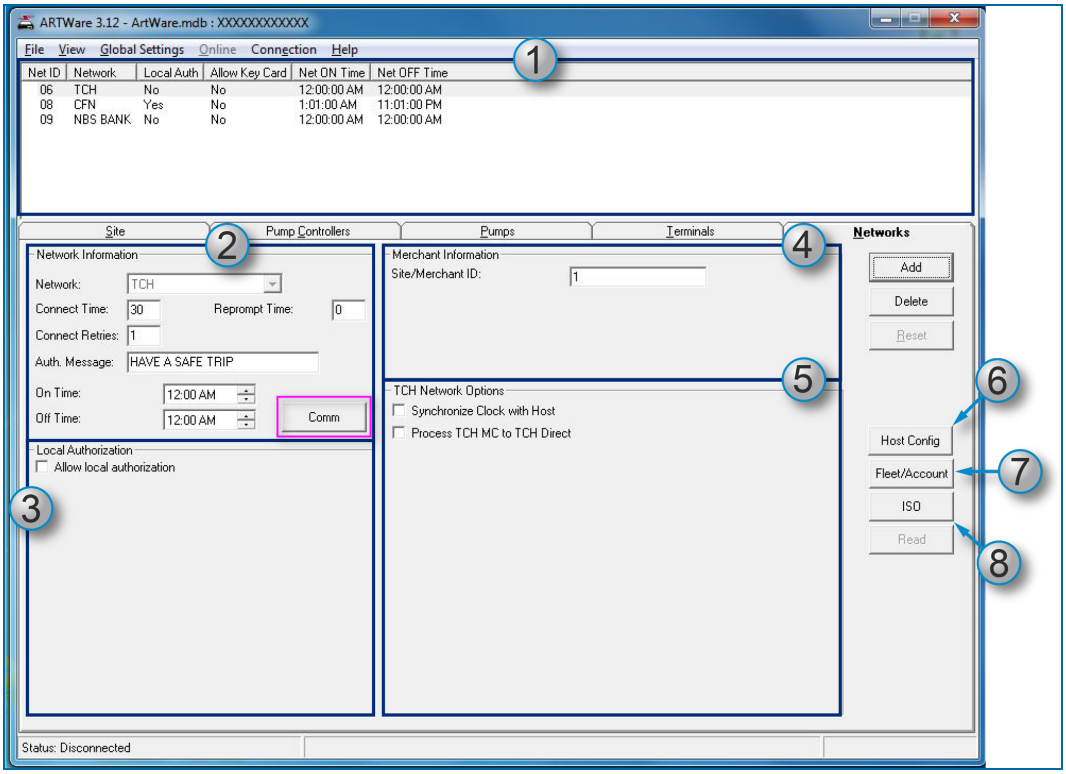
The receipt header is a message that prints at the top of each receipt, the Trailer on the bottom. These can be changed for each Site. If **Enable Dual Languages** is checked in the "Site Tab" on page 36 the **Language** drop down will be enabled to allow editing of the second language (see Enable Dual Language).

Section 18 Network Setup

This sub-section describes the setup details for tabs related to Networks:

- "Networks Tab" on the next page
- "Host Configuration Button" on page 71
- "Fleet/Account Button" on page 72
- "ISO Table Configuration" on page 76

18.1 Networks Tab



Configuring networks on the FSC3000 can be the most complicated part of configuring your site. ARTWare will make it easier for you by only asking you to supply the information needed.

If you are connected to an FSC3000 ARTWare will not permit you to save a network configuration unless the network is enabled on the FSC3000.

The Network Tab is divided into different parts:

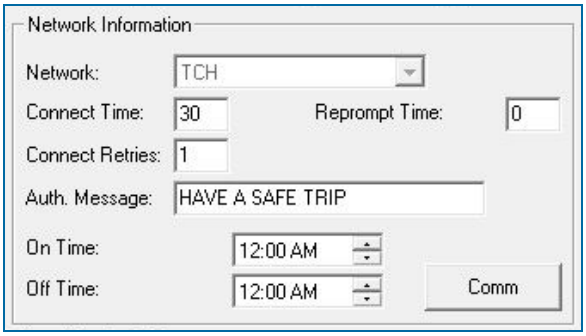
1. Top Panel: The Top Panel shows information for Networks that have been setup in the FSC.
2. "Network Information Frame" on the next page: The same information fields are applicable to all networks.
3. "Local Authorization Frame" on page 66: For applicable networks when the box is checked, Local Authorization setup information will come into view.
4. "Merchant Information Frame" on page 67: The information in this frame is different for each network.
5. "Options Frame" on page 68: The information in this frame is different for each network.
6. "Host Configuration Button" on page 71: Push this button to get access to a dialogue box to configure FSC connection to a network host.

7. "Fleet/Account Button" on page 72: Push this button to get access to a dialogue box to configure Network Fleet Accounts. The Fleet Table must be configured before Network authorization can occur.
8. "ISO Table Configuration" on page 76: Push this button to get access to a dialogue box to configure The ISO Table. This configuration dialog is used to configure and enable the bank and fleet cards that can be processed at this site.

The sections below will show information on how to configure each of the parts of the Networks Tab.

18.1.1 Network Information Frame

This frame is the same for all networks.



Network: When you Add a network you select the network from this drop down.

Connect Time: This is the maximum time (in seconds) the system tries to: (a) dial the network (using the primary or secondary phone numbers), (b) for the network to answer, and (c) for carrier detection. Default is 30 seconds. If changing connect time, remember that a long distance call takes longer to place than a local call.

Connect Retries: The number of times the FSC3000 should try to connect to the host before failing.

Authorization Message: If an authorization message is not received from the host, this message is displayed just before the USE PUMP prompt. Enter up to 20 characters for the message.

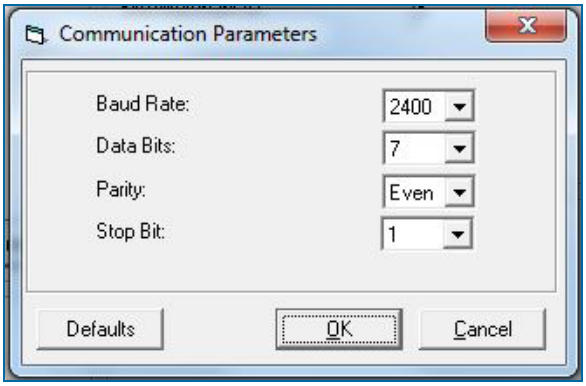
Reprompt Time: How long the FSC3000 will look back for a previous transaction with the same card number. If found, pre-programmed responses from the old transaction can be duplicated in the current transaction. Enter 0-99 minutes. 0 = no limit. The default is 10 minutes. This feature comes in handy for responses which fail authorization, or additional transactions that occur after the initial transaction.

On Time: On time for network availability. To disable set the same time as the Off Time.

Off Time: Off time for network availability. To disable set the same time as the On Time.

Comm Button

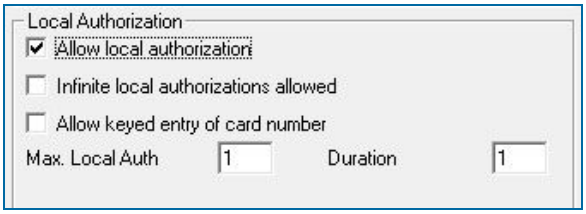
The Comm button opens a dialog box to enter communication parameters to the Host.


Communication Parameters
Baud Rate:
2400
Data Bits:
7
Parity:
Even
Stop Bit:
1
Defaults
OK
Cancel

18.1.2 Local Authorization Frame

Some networks allow local authorization if communications to the network are down (not applicable to Paymentech, Comdata POS or NBS Bank).

For most networks, if you check **Allow local authorization** you will have the options that follow:



If you check **Infinite local authorizations allowed** The FSC3000 permits an unlimited number of local authorizations to occur during an unlimited period of time.

Allow keyed entry of card number: If keyboard entry is enabled at the Terminal this feature can be used to deactivate keyboard entry when local authorization mode is active.

Max. Local Auth is the number of transactions to authorize.

Duration is the number of minutes.

> **EXAMPLE:** If the number of transactions is set to 5, and the duration set to 25, an offline FSC3000 will authorize up to five network cards within 25 minutes. If either the number or duration exceeds its limit, local authorization will not occur again until FSC3000 reconnects to the network. Once reconnected, the number and duration values are reset and local authorization is again available.

CFN

When CFN is set up and the Allow Local Authorization checkbox is selected, the frame shows checkboxes to select:

- Pride Advantage Cards
- CFN Cobranded cards
- Chevron Diesel Advantage
- Other Gascard Cards
- All Fuelman Cards

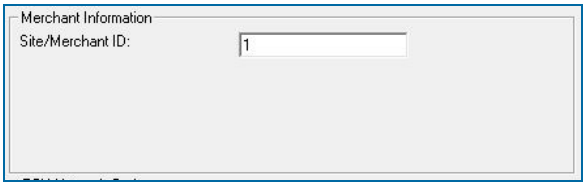
Select all that are applicable to this site.

Buypass

When Buypass is set up this frame changes to **Additional Network Options**. A checkbox comes up for "Process transactions to use the Firstdata Micronode device."

18.1.3 Merchant Information Frame

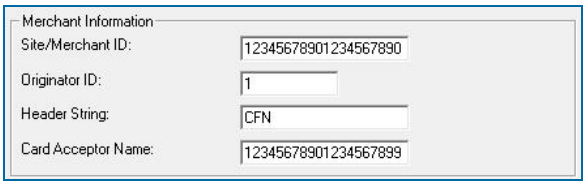
The Merchant Information frame is the same for most networks. CFN and Paymentech have different Merchant Information fields applicable to their networks only.



The Merchant ID will be given to you by your network. This value identifies your site to the network host.

If this information is not configured the Terminal will display "NOT A NETWORK CARD" after swiping the network card.

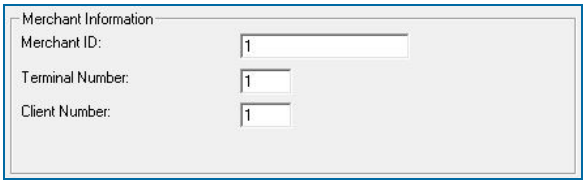
CFN Merchant Information



The Site Number, Originator ID, Header String and Card Acceptor Name will be given to you by CFN. These values identify your site to the CFN host.

If this information is not configured the Terminal will show "NOT A NETWORK CARD" after the network card is swiped.

Paymentech Merchant Information



The Merchant ID, Terminal Number and Client Number are given to you by Paymentech. These values identify your site to Paymentech's host.

If this information is not configured the Terminal will show "NOT A NETWORK CARD" after the network card is swiped.

18.1.4 Options Frame

The options in this frame will be different for each network.

Comdata and Comdata POS

There are two (2) available checkboxes for:

- Process US Comdata MC to Comdata Direct
- Process Canada Comdata MC to Comdata Direct

OPW Generic and Federated Co-op

There is one (1) available checkbox for:

- Synchronize Clock with Host

Check this option to synchronize the FSC3000 clock with the host. Make sure that when using this feature that the time zone setting has been configured for this site.

T-Chek

There is one (1) available checkbox for:

- Process TChek MC to TChek Direct

EFS - FleetOne

There is one (1) available checkbox for:

- Process Records via IP Connection

Quick Fuel, Kardtech, Intevacon, Company Card, ATIO.Net

These networks have no available options.

TCH

There are two (2) available checkboxes for:

- Synchronize Clock with Host: Check this option to synchronize the FSC3000 clock with the TCH host. Make sure that when using this feature that the time zone setting has been configured for this site (see "Set Date and Time" on page 80).
- Process TCH MC to TCH Direct

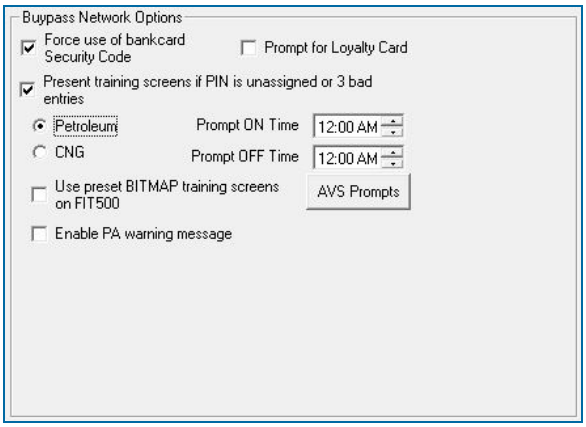
NBS/FMGC

There is 1 (one) available checkbox for:

- Manual Pre-entry String

This allows the entry of the GasCard account number specific to your location when manual keyboard entry is enabled at the terminal. See "Operational Status" on page 57.

Paymentech, Quarels and Buypass



Force use of bankcard Security Code: This feature provides the ability to prompt for a card specific PIN used to uniquely identify the user at unattended sites. With this feature the ability to present unattended site user training screens to meet fire regulation codes in certain areas of North America. OPW FMS recommends contacting your local Fire Marshal for information regarding bankcard usage at unattended sites.

If checked this will enable the additional option of **Prompt for PIN** on the ISO Configuration dialog box (see "ISO Table Configuration" on page 76).

Present training screens if PIN is unassigned or 3 bad entries: If checked, users will be provided with "Site Usage Training Screens" to make sure the user understands local fire safety requirements. Once the user has been trained and after they have acknowledged their understanding of these screens, they will be provided with a card specific PIN. Future fueling will bypass the training screens if a correct PIN is entered.

There are two (2) sets of training screens. One is for Petroleum sites and one for CNG (Compressed Natural Gas) sites. Select the applicable radio button for the type of site in use.

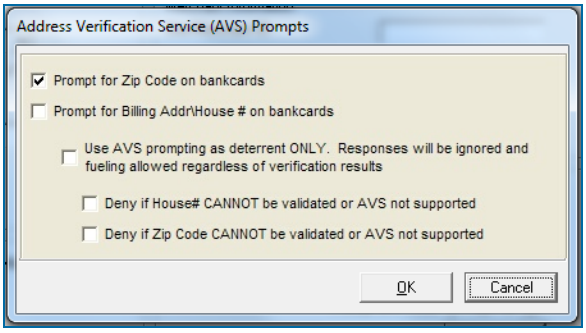
Prompt Times: These time settings are used to determine when PIN prompting is required, allowing you to disable "Site Usage Training Screens" when the site is attended.

Use preset BITMAP training screens on FIT500: When a FIT500 is installed at the site, preconfigured bitmap "Site Usage Training Screens" can be shown in place of text.

Enable PA Warning Message: For sites in Pennsylvania that use training screens, select this option.

18.1.4.1 AVS Prompts

Push the **AVS Prompts** button to get access to the Address Verification Service (AVS) Prompts setup screen.

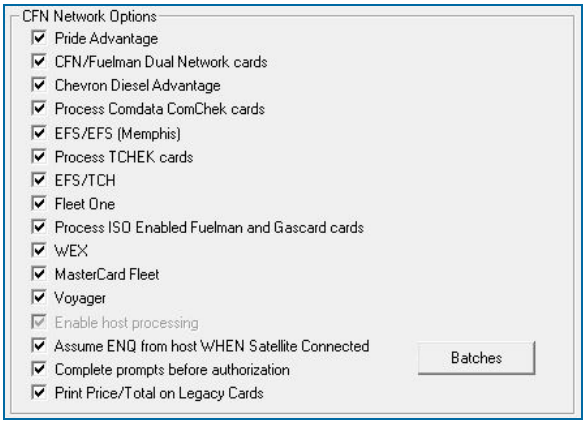


Prompt for... These options allow additional security checks to be performed on bankcards.

Use AVS prompting... If checked, the validity of the prompt entry from the host is ignored and fueling is always allowed.

Deny if... These options provide you enhanced security to ensure that fueling is denied if the host cannot validate the entry or AVS is not supported by the card's local bank.

CFN



Process... These flags enable the processing of additional cards to the CFN host. For ISO based cards be sure to activate the related cards for processing.

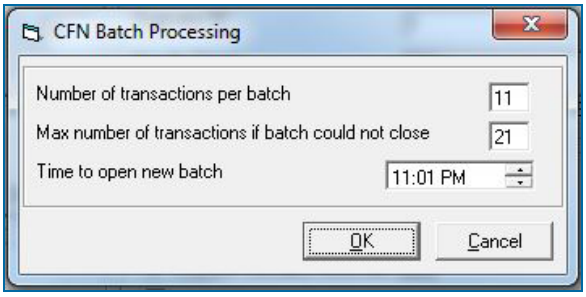
Enable host processing must be set to turn on CFN Host Processing. After you save this setting you will not be able to turn it off.

Assume ENQ from host...The code will not wait for a host provided ENQ before it sends out the request packet.

Complete prompts before authorization: This feature should be enabled when processing to CFN host using a TCP/IP connection.

Print Price/Total on Legacy Cards: This refers to first generation CFN cards used in older Systems 2 Fuel Management Systems.

CFN Batch Processing



Click the **Batches** button to configure CFN Batch Processing.

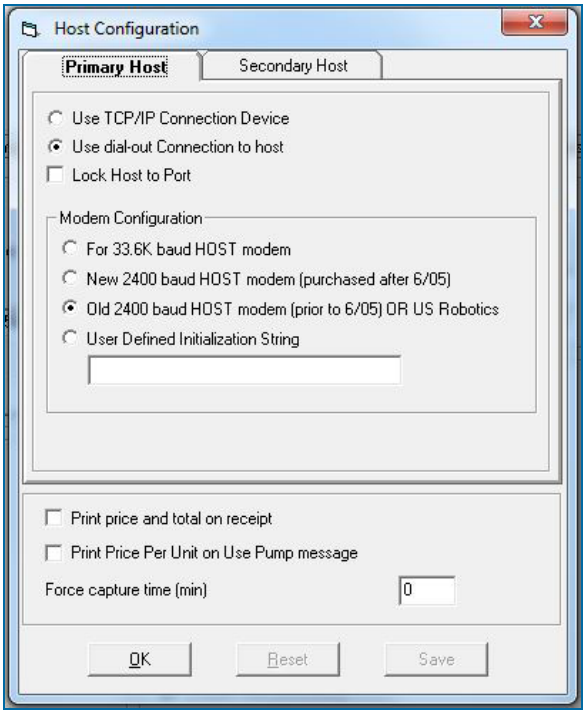
Number of transactions per batch: Once this number of transactions is reached the controller will close the current batch on the CFN host.

Max number of transactions if batch could not close: Maximum number of transactions allowed before system will stop processing of CFN network related cards when a batch cannot be closed.

Time to open new batch: The time at which a batch will be closed regardless of the current number of transactions. Typically used for end-of-day closure.

18.1.5 Host Configuration Button

Push this button to get access to the **Host Configuration** setup screen.



The Host Configuration dialog box allows you to configure how your FSC3000 connects to the network host (s). The FSC3000 can connect to two network hosts at the same time. The two tabs, **Primary Host** and **Secondary Host** are identical, except that the Secondary Host tab has an additional checkbox to enable the secondary host processing.

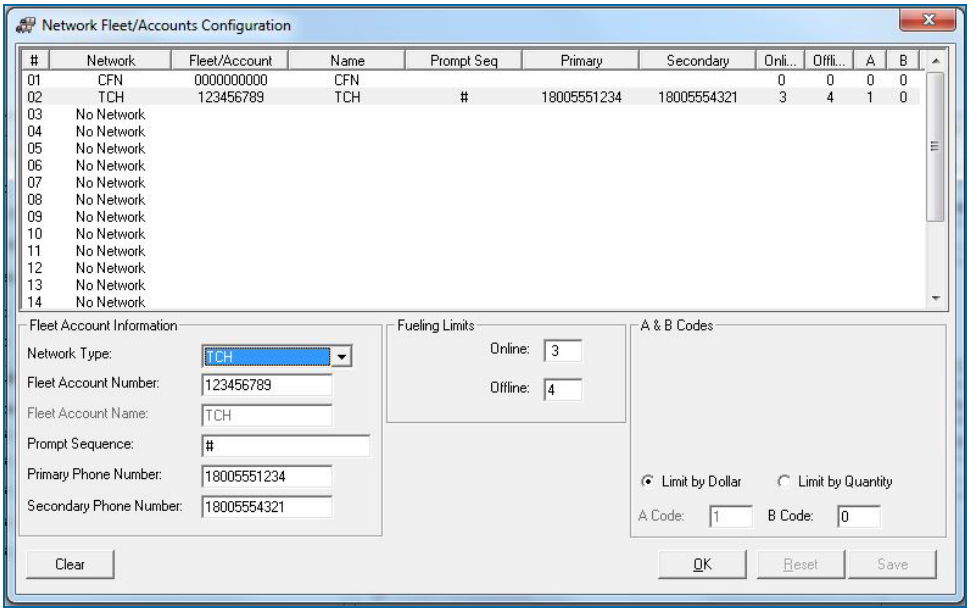
Each host can be connected to by either the device server/Satellite or through a dial-up modem. If modem you must select what kind of modem (if provided by OPW Fuel Management Systems) or you may provide your own initialization string for third party modems.

Print price and total on receipt: This option is not checked it will cause all network based receipts to remove the printing of price and total information. In order to meet PCI compliance this option does not apply to the locked cards defined in the "ISO Table Configuration" on page 76.

Force capture time (min) The minimum time allowed between authorizations before the capture of previous fueling occurs without additional authorizations. When processing bankcards this option should never exceed 20 minutes.

18.1.6 Fleet/Account Button

Push this button to get access to the **Network Fleet/Accounts Configuration** setup screen.



NOTE: Network authorization cannot occur until the fleet table is properly configured.

18.1.6.1 Fleet Account Information Frame

Network Type: The network you are defining this Fleet for. Only those networks that you have Added will show in the drop down.

Fleet Account Number: This field connects prompts, phone numbers, and quantities to specific cards for a network based on the card's fleet, account or customer number. By defining a Fleet Account Number you can limit your system to a specific customer of a specific network. This also lets you provide different prompts and limits for your accounts.

- To define information for a fleet, account or customer number, enter the number assigned by the network for that group. Usually, this is part of the embossed number on a card. Some networks do not provide specific Fleet/Acct # information on their cards. In these cases the Fleet Account Number will not be enabled.
- Leaving the Fleet Account Number as all zeros allows every card issued by the network.

Fleet Account Name: This is the account name, the associated fleet name for transactions, receipts and the journal log.

Prompt Sequence: The prompt sequence defines the order in which prompts are presented to the driver after the driver swipes or enters his or her card. The prompt sequence uses the codes set in "Driver Prompts" on page 58.

Three optional characters - *, #, and $- can be included in the prompt sequence:

- ***** The asterisk tells FSC3000 to connect to the network immediately vs. waiting for the prompting sequence to complete. The customer can thereby answer prompts while FSC3000 is connecting. Put the character near the beginning of the prompt sequence. This is useful if the connect time is lengthy for this network. If numerous prompts are configured, test the asterisk's placement in regards to the time required by a customer to complete the prompt sequence. If the character is too far forward in the list, the connection may be made too soon and the network may time out and disconnect before the information is sent. This causes a re-dial, slowing the process even more.
- **#** This specifies the Pump number. This character MUST be part of the prompt sequence, and ARTWare will enforce this. When a valid pump number is entered, the FSC3000 reserves the pump until authorization is received. When received, the message USE PUMP appears on the Terminal display. If no authorization is received, the pump selection is canceled and no fueling is allowed.
- **$** The dollar sign forces PRESET GALLON AMOUNT (1-#). The "#" is the number of gallons the driver wants. This lets the user select the pre-authorized quantity.

Primary Phone Number: The dial-out phone number for Authorization/Capture.

Secondary Phone Number: The dial-out phone number for Authorization/Capture if the Primary Phone Number fails to connect.

18.1.6.2 Fueling Limits

Depending on the network these settings are used to define the network authorization requested limits by quantity (i.e. gallons) or currency.

Online: Maximum allowed when a host connection is available.

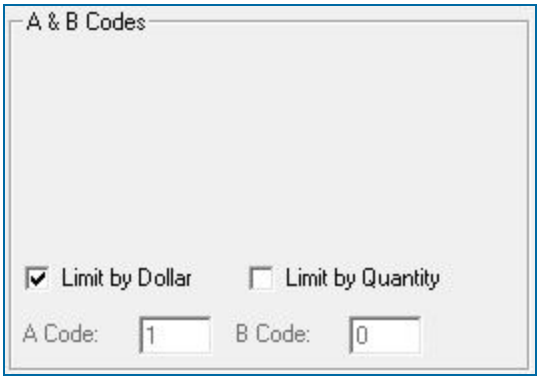
Offline: Maximum allowed when a connection cannot be made to a host and "Local Authorization Frame" on page 66 is enabled (local authorization not supported by all networks).

NOTE: Although these are the authorization limits requested of the host they may be overridden by the lower limits configured for the pump. When authorizing by currency the price per unit must also be considered in determining limits. The lowest limit always comes first.

18.1.6.3 A & B Codes

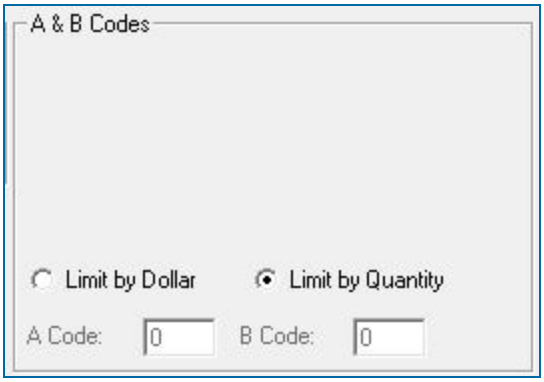
The use of the title "A & B" codes is a hold-over from command line configuration of the FSC3000. Each network has different uses for these values. ARTWare will present to you only those options for each selected network that you need to fill out.

Comdata, Comdata POS



Although you can enable both of these options, it is recommended to only select one.

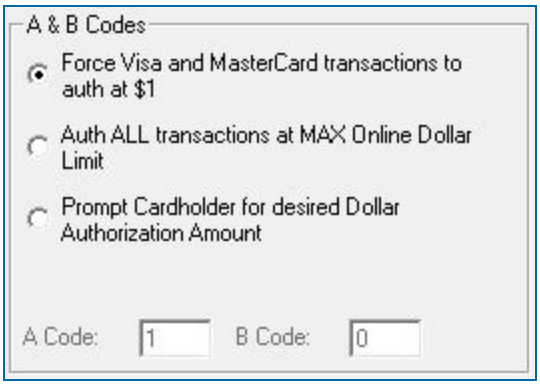
OPW Generic, T-Chek, EFS, TCH, NBS/FMGC, Federated Co-op, QuickFuel, Kardtech, Intevacon, ATIO.Net



When **Limit by Quantity** is selected the values entered for Online and Offline limits are applied (see "Fueling Limits" on the previous page).

When **Limit by Dollar** is selected a max dollar authorization value must be entered in the B Code field.

NBS Bank, Quarles, Paymentech, Buypass



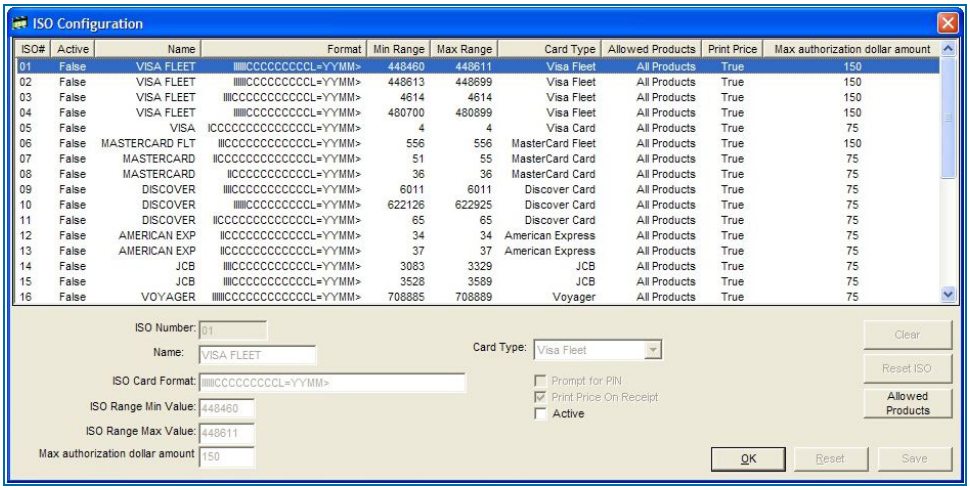
Force Visa and MasterCard... In order to obtain the best interchange rate for Petroleum based Visa and Mastercard transactions, these cards should be authorized at $1 and have a final SALE of less than or equal to $75. While Visa and Mastercard fleet cards must have a final sale less than or equal to $150.

Auth ALL transactions... If this option is not selected it will cause your customers to incur a Credit Limit Hold on their cards for the "MAX Auth Amount" configured in the ISO table. Debit card users will incur a temporary loss of funds, based on this limit, from their checking accounts. If this feature is used it will require Visa and MasterCard customers must pump more than $75 and Visa Fleet and Mastercard Fleet customers must pump more than $150 to re-swipe their cards to continue fueling.

Prompt Cardholder... As a third option you can choose to prompt the customer for a desired dollar amount. The entered value would then be used to authorize their cards provided it is greater than the values shown above.

NOTE: When using the second or third options you could be charged a higher processing fee for each VISA and Mastercard transaction.

18.1.7 ISO Table Configuration



The ISO table configuration dialog is used to configure and enable the bank and fleet cards to be processed at this site. The ISO table is only used for Paymentech, Federated CO-OP, NBS Bank and CFN Networks. All entries in the ISO table are disabled by default.

NOTE: Other networks that process MasterCard Fleetcards will require the specific card to be activated.

By default the first rows (currently 15, but can change) of the table are configured for most of the major cards and you cannot Clear them or change most of the settings. To enable them for use you must check **Active**.

ISO Name: This is a 16 character card name for purposes of identification. It is recommended to not use spaces.

ISO Card Format: This sequence of characters is used to define the layout of the Track 2 card data. It tells the site controller how to identify the specific card type.

Character	Meaning
I	ISO #
C	Card Number
L	Luhn check digit
=	must be field separator
M	Month
Y	Year
X	don't care digit or field separator

Character	Meaning
#	don't care digit
0-9	must be specific digit
>	don't check length to the end or alternate network card

ISO Range... These two fields define the minimum and maximum range used to identify the specific card type.

Max authorization dollar amount: This field is used by Paymentech to define a card-specific dollar authorization value.

NOTE: See the A&B Codes for Paymentech above.

Card Type: This value associates the branding of the card to the logic applied within the FSC3000 for purposes of identification and processing rules.

If you are configuring the ISO's for Paymentech and have enabled bankcard PINs the Prompt for PIN option is available.

NOTE: See Network Options for Paymentech above.

Print price on Receipt: Disabling this field will disable printing of the price and total on the cardholder's receipt.

Activate: If not checked this card will not process.

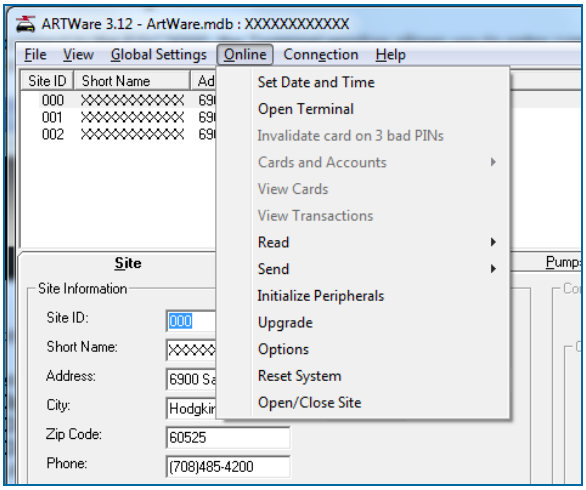
The **Clear** button will clear the selected ISO. The **Reset ISO** button is only enabled if ARTWare is connected to an FSC3000 and will reset the whole ISO table back to it's factory original state.

18.1.7.1 Allowed Products

If you wish to use product restrictions on a per ISO basis, you can do this by clicking on the **Allowed Products** button. You will open a dialog box that allows you to select/deselect products allowed for that ISO. The default is to allow all products.

Online Functions

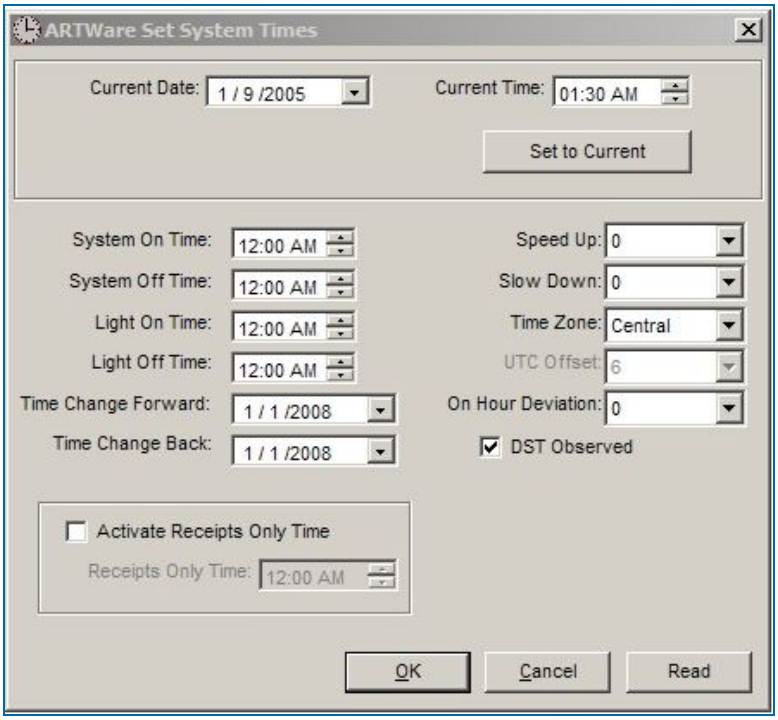
Once ARTWare is connected to a site the Online menu is turned on.



This section gives you information about the Online functions of ARTWare. Topics in this section include:

- "Set Date and Time" on page 80
- "Open Terminal" on page 82
- "Invalidate Card on 3 Bad PINs" on page 83
- "Read" on page 84
- "Send" on page 85
- "Initialize Peripherals" on page 86
- "Upgrade" on page 87
- Options
- "Reset" on page 89
- "Open/Close Site" on page 90

Section 19 Set Date and Time



This dialog box lets you set any or all of the time settings of the FSC3000. When the dialog box opens, ARTWare will do an automatic **Read** of all the values from the FSC3000. Click **OK** to send all the values to the FSC3000 and dismiss the dialog box. Click **Cancel** to exit and not send changes to the FSC3000.

Set to Current: This button reads and shows your PC's current date and time.

System On Time: Specifies the time of day the FSC3000 turns itself ON. When ON, the FSC3000 can show messages and accepts card or keypad entries.

System Off Time: The time of day the FSC3000 shuts itself OFF for the day. No new transactions can be started, but transactions that are in progress can be completed.

Light On Time: The time to turn on the "pocket" lights

Light Off Time: The time to turn off the "pocket" lights

Time Change Forward: This sets the date when the internal clock moves forward by one hour, to adjust for the change from "Standard" time to daylight savings time. The change occurs at 2:00 AM on the date specified if the **DST Observed** box is checked.

Time Change Back: This sets the date when the internal clock moves back by one hour, to adjust for the change from daylight savings time to “Standard” time. The change occurs at 2:00 AM on the date specified if the **DST Observered** box is checked.

Speed Up: This is a software adjustment to the internal clock. If your system is losing time, you can add seconds each day with this entry.

Slow Down: This is a software adjustment to the internal clock. If your system is gaining time, you can subtract seconds each day with this entry.

Activate Receipts Only Time: The time the FSC3000 stops new transactions from starting, while it lets “just completed” customers to get receipts. This setting is typically set before the System Off time by several minutes.

19.1 Network and Location Specific Settings

The fields below are specific to certain networks and must be specified in relation to the FSC3000's operating location.

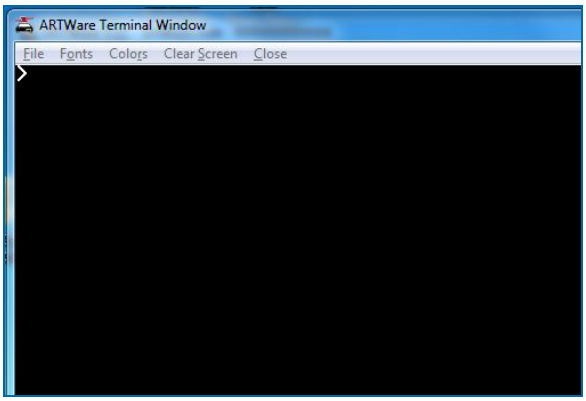
Time Zone: Specify the time zone for the FSC3000. If the site's time zone is not listed in the drop down, select "Enter Offset" from the drop down and enter the time zone offset in the **UTC Offset** field.

UTC Offset: This setting is only available if you select "Enter Offset" for Time Zone (see above). Enter a westward offset from UTC (Greenwich mean time).

On Hour Deviation: Some localities observe “fractional” time zones. Enter this offset in minutes.

DST Observered If you have set a Time Change Forward or Time Change Back you can check this to activate the time change.

Section 20 Open Terminal



To get access to the Terminal Window go to Online >Terminal Window.

The Terminal Window has the options that follow in it's menu bar:

File >Open Capture File: This lets you "capture" your communication session to a selected file.

File >Close Capture File: This will close the current capture file.

File >Close: This selection closes the Terminal Window (ARTWare will stay connected).

Fonts: This lets you select from three (3) different font sizes. The Terminal Window will resize itself to the new font size

Colors: This lets you select from a list of eight (8) different colors for fonts and background.

Clear Screen This will remove all characters from the Terminal screen.

Close This selection closes the Terminal Window (ARTWare will stay connected).

NOTE: After the Terminal Window closes ARTWare must re-negotiate proper credentials with the FSC3000. This can sometimes take a few seconds. During this time ARTWare can be unresponsive. If you have changed usernames during the time the Terminal Window was open, ARTWare will open a login dialog box and you must supply the correct username and password.

Section 21 Invalidate Card on 3 Bad PINs

This option lets you configure the FSC3000 to cancel cards set up in the proprietary card file, when the cardholder enters an incorrect PIN three times. This option is not available if you do not select the PIN option on the Global Settings > Define Card Record screen.

The steps below show how to configure the FSC to invalidate cards on three bad pins.

- Make sure you are connected to the FSC and the online functions are active.
- Click Online > Invalidate Card on Three Bad Pins.
- If the command is not successful you will receive a failure message and you should try the operation again, or determine why this function was not successful.

Section 22 Read

The Read commands let you read all the settings from your FSC3000.

NOTE: These commands take time to execute, depending on your communication method and speed. While the command is running your cursor will change to an hourglass and you will not be able to do anything else with ARTWare until the transfer is complete.

Online > Read > Site Settings

With this command you can get all site-specific settings from the FSC3000. When it is done all of the site-specific settings for the site in your database will be overwritten.

Online > Read > Global Settings

This command reads all of the Global Settings from the FSC3000.

IMPORTANT: It is dangerous to read global settings from a site controller. Since these settings apply to all of your site controllers you risk the possibility of the other site controllers becoming out of sync with the settings.

Section 23 Send

These commands allow you to send all the settings from ARTWare to your FSC3000.

NOTE: These commands take time to execute, depending on your communication method and speed. While the command is running your cursor will change to an hourglass and you will not be able to do anything else with ARTWare until the transfer is complete.

Online > Send > Site Settings

This command will send all the site settings to the FSC3000.

Online > Send > All Settings

This command will send all settings, both site-specific and global to the FSC3000.

Section 24 Initialize Peripherals

When you configure peripherals (e.g., Terminals, Pump Controllers, etc.) the FSC3000 does not download the configuration to them until one of these occurs:

- The FSC300 is restarted.
- ARTWare disconnects from the FSC300.
- Initialize Peripherals is done.

To initialize peripherals:

1. Go to Online > Initialize Peripherals. The Initialize Peripherals pop-up comes into view.
2. Click **OK**. The configuration is downloaded to the peripherals.
3. The window closes automatically.

Section 25 Upgrade

The FSC Upgrade command lets you update the application on the FSC3000. When you do this procedure you will select the update file and upload it to the controller. This file is given to you by OPW Fuel Management Systems.

IMPORTANT: After a successful upgrade ARTWare will automatically disconnect and the FSC3000 will restart. Upgrading can also wipe out all your settings. Use the Site Settings operation in "Read" on page 84 to back up your FSC3000.

To do an FSC3000 Upgrade:

1. Go to Online > Upgrade. A **File Open** dialog box will open.
2. Browse for the file, select it and click **Open**.
3. When the *Upload Application* dialog box opens, click **Start**.
4. As the application uploads you will see the progress bar move. This can take several minutes, depending on your connection speed. You can click the Stop button at any time to cancel the operation.
5. When the upload is complete, the Stop button will change to Done. Click **Done** to close the box.

Section 26 FSC3000 Options

The FSC Options command lets you select purchased features (options) in the system. Options include additional networks, memory levels, etc. When you purchase a new option, an options file will be emailed to you as an attachment in a file. The file name will be "XXXXXXX.txt" where the Xs represent the seven (7) digit serial number of the SIMM card for which the option was purchased. Save this file in a known directory. ARTWare will apply these options by sending this file to the FSC3000.

To apply these options:

1. Connect to the FSC3000.
2. Go to Online > Options. This will open a standard file selection dialog box.
3. Browse for the file that was sent to you and click **Open**.
4. Click **OK**. The option is added to your system.
5. A confirmation box will come into view.

Section 27 Reset

This command will do a reset or "warm start" on the FSC3000.

IMPORTANT: All current fueling transactions will be stopped and the FSC3000 will disconnect from ARTWare.

Section 28 Open/Close Site

When an FSC3000 is closed all activities in progress (pumping, printing a receipt, etc.) complete normally but no new activities are allowed to begin until the FSC3000 is opened again.

Go to Online > Open/Close Site to change the site's open/close state. A pop-up warning is displayed that gives the current open/close state and asks for confirmation to change it.

Appendix A - Graphic Codes

When using graphics displays, the FSC3000™can change font and/or display images.

IMPORTANT: ALL Graphic Codes must be upper-case.

NOTE: Entering ^ { will cause the message to beep when displayed.

Code	System2 FIT Ver. 1.01	System2 FIT Ver. 1.02A and up C/OPT
^A	Position on Line 1	
^B	Position on Line 2	
^C	Position on Line 3	
^D	Position on Line 4	
^E	Position on Line 5	
^F	Position on Line 6	
^G	Position on Line 7	
^H	Position on Line 8	
^I	Position on Line 9	
^J	Position on Line 10	
^K	Position on Line 11	
^L	Position on Line 12	
^M	Invert Display	Position on Line 13
^N	Restore Display	Position on Line 14
^O	N/A	Position on Line 15
^P	N/A	Invert Display
^Q	N/A	Restore Display
^T	Insert Current Time	
^V	Sm. Sans-Serif Font !#$%&()*+,-./012345 6789:<=>?@ABCDEFGHIJ KLMNOPQRSTUVWXYZ[\]^ _"';`	
^X	Lg. Sans-Serif Font Int. !#$%&íú*+,-./012345 6789:ñ=ö?üABCDEFGHIJ KLMNOPQRSTUVWXYZäßç¡ É¿áó	
^Y	Lg. Serif Font !#$%&()*+,-./012345 6789:<=>?@ABCDEFGHIJ KLMNOPQRSTUVWXYZ[\]^ _”’;`	
^Z	Large Sans-Serif Font Std. !#$%&()*+,-./012345 6789:<=>?@ABCDEFGHIJ KLMNOPQRSTUVWXYZ[\]^ _"';`	
^0	Clear Display	

CODE	System2 FIT	C/OPT
^1		
^2		
^3		
^4		
^5		
^6		
^7		
^8		
^9		
^:		

Appendix B - Prompt Table

The table that follows provides a network prompt cross reference chart (if you are processing a card against two networks that can use the same prompt but the chart reflects a different prompt string). You should reformat the specific prompt string to present the dual use need.

Code	Networks using different Text or meaning. If MEANING then prompt is used as network specific											
	Prompt Table Defaults	EFS	T-Chek	TCH	NBS\Quarles	NBS\FMGC	Pac-Pride via NBS	Wright Express via Paymentech or NBS and Buypass	FleetOne	CFN	Comdata POS	**Multi index**
A	Refer Fuel Y/N	Used only if the site uses standard diesel as refer fuel from the same pump. Instead of this prompt you can assign product code "081" to refer when dispensed from a specific pump.										*0*
B	Mileage	Supports both HUB and ODOMETER readings. An "either-or" prompt.									Odom	*1*
C	Trip #				Job Code			Job #			Trip #	*2*
D	Enter Loyalty # (zero to skip)		As of version 1.10b this prompt is used in conjunction with the Loyalty Card Flag									*3*
E	PIN					Driver ID		User ID (not hidden)		Driver ID		*4*
F	Driver Id	Employee #						Driver #			Driver ID	*5*
G	Vehicle Id	Unit #	Unit #	Unit #				Vehicle #	Unit #		Unit #	*6*
H	Trailer Id										Trailer #	*7*
I	Refer Hours										Refer Hours	*8*
J	Driver License State		CDL State								Drvr Lic St	*9*
K	Driver License #		CDL					License #			Drvr Lic #	*10*
L[2]	Vehicle License State											*11*
M	Vehicle License #	Sends in DrvLic# 'k'										*12*
N	Cust Data						Misc Entry					*13*
O	Department #							Department #				*14*
P[2]	Driver Name											*15*
Q	Purchase Order #		P.O.#	P.O.#					P.O.#/Ref #		PO #	*16*
R[2]	Control #										Trailer Hub	*17*
S[2]	Pro #											*18*
T	Misc Entry						Misc Entry	Misc Entry		Misc Entry	Misc Entry	*19*

[1]Prompts were only sent under FDIS, free for PCF.
[2]Not sent to any host, free for PCF use.

Revisions - M3034 & M3035

Revision #	ECO	Effective	Software Version	Key Changes
0	tbd	tbd	3.13 Build 6.09	Initial release

NOTE: It is possible that older software versions might not support all features

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