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FUEL MANAGEMENT SYSTEMS
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M030002 Pacific Pride Multi-Trucking Network Package Upgrade, Configuration and Startup

Procedure Guide

OPW Fuel Management Systems

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Table of Contents

Upgrade Components

Check your SmartLock replacement kit and make sure all components are present and undamaged.

For Existing FSC3000™ Sites

PP-SLR-UP	Pacific Pride SmartLock Replacement Upgrade – Phase 1-Compliant FSC3000™ Upgrade Kit
20-0381-03-PP	Pre-Programmed SIMM Card
20-6163	OPW Utility Applications CD
MCD0001	Manual CD Package
M030001-PA1	PA-DSS Implementation Guide
20-6011	Pacific Pride IP Converter Kit

Refer to Section 3.1, Upgrading an Existing FSC3000™ Fuel Site Controller for instructions on hardware connections for this upgrade kit.

For System2™ Sites or New Installations

FSC3000-PP-SLR	Pacific Pride SmartLock Replacement System – Phase 1-Compliant FSC3000™
20-8057	FSC3000™ Fuel Site Controller
20-6163	OPW Utility Applications CD
20-1520-01	Cable - RJ45 to DB9F (DCE)
75-0108	4G Mini-Flash Drive
MCD0001	Manual CD Package
M030001-PA1	PA-DSS Implementation Guide
20-6011	Pacific Pride IP Converter Kit
20-1517-01	Cable –RJ45 to DB25 M (DTE)
20-1517-05	Printer Cables

Refer to Section 3.2, Upgrading from System2™ Controller for instructions on hardware connections for this replacement kit.

⚠️ **NOTICE**

IMPORTANT: The 20-1517-01 and 20-1517-05 cables look identical. To prevent possible communication issues in the system DO NOT MIX UP THESE CABLES!

Section 1   Introduction

This document describes the upgrade and configuration procedures for the Pacific Pride FSC3000™ Multi-Trucking Network Package. This system provides a solution for Pacific Pride marketers wishing to eliminate the SmartLock PC while maintaining the ability to process all of the various card types used for fueling commercial vehicles.

The Pacific Pride Multi-Trucking Network Package is based on the reliable FSC3000™ Fuel Site Controller. Cards are authorized through an Internet Gateway that creates a secure connection to the card issuer.

The following networks are enabled in support of Pacific Pride processor requirements.

- NBS for Pacific Pride and credit cards
- NBS/FMGC for routing Fuelman and Gascard™ cards
- T-Chek™
- TCH®
- FleetOne
- Comdata® POS
- EFS

Existing SmartLock sites with either System2™ or FSC3000™ Fuel Site Controllers can be easily upgraded, No changes to the C/OPT™ Fuel Island Terminal or Pump Controllers are necessary.

The Pacific Pride Multi-Network Package includes enhanced diagnostics to provide the marketer with all the information necessary to efficiently maintain the fuel site. These diagnostics must be configured through the command line before the ARTWare configuration is sent. See Section 5.1, Memory Setup for more information.

1.1 Pacific Pride - Important Information Before You Begin

To ensure a smooth installation of the new FSC, the following issues must be addressed:

1. Pacific Pride must be notified when the installer/distributor is ready to schedule a site for installation of the new equipment so Pride can provide the installer/franchisee with a date and time slot to call in for support.

2. Pacific Pride is responsible for sending the ISO-table master record to the franchisee controller through the Pride switch. Pacific Pride MUST be notified when the installation is being started to make sure that the correct profile for the site is configured so a valid ISO-table download can be performed on the FSC.

Section 2   IP Authorization Gateway Startup

This section specifies the requirements to make sure that a successful network connection is available for processing cards.

IMPORTANT: Never push the **reset** button on the Ethernet IP Gateway. This will erase the program and it will have to be reloaded. There is a fee associated with reloading the program. For assistance, call Abierto Tech Support at 1-859-389-8700, Ext. 1, Option 1.

NOTICE

NOTE: For other questions, contact the OPW Help Desk at **1-877-679-8324** and select **Option 1** for Fuel Management Systems. Tell the Help Desk technician that you are installing an OPW Ethernet IP Gateway and provide a description of the problem you are experiencing.

2.1 Requirements for the OPW Ethernet IP Authorization Gateway

NOTE: If the network is DHCP-enabled and no outbound ports are blocked, skip to Section 2.2, Verify Network Communications. Otherwise, proceed with the information as follows below.

IMPORTANT: If your site is protected under an IT controlled firewall, the following ports must be open for outbound traffic (53, 80, 123, 443, 10001, 10002, 6082, 8130, 8820).

Please note the following materials are required for complete and proper installation:

- An Internet connection for card authorization.

- An analog phone line for dial-up fallback authorizations.

- All appropriate test cards: Credit (i.e., MasterCard, Visa, etc.) and/or fleet cards (i.e., Pacific Pride, Comdata®, TCH®, T-Chek™, Fuelman, FleetOne and EFS) for running test transactions at the site.

2.2 Verify Network Communications

1. Test the network connectivity.

    a. Plug a CAT5 cable into the Ethernet port on your laptop and plug the other end into an open port on the router at the client site. Verify that you are NOT connecting via wireless.

    b. Open the Internet browser and type www.google.com.

NOTE: If you are able to access the Internet, proceed to the next step. If you cannot access the Internet, proceed to Section 6.3, Troubleshooting.

2. Move the CAT5 cable from the Ethernet port on your laptop to the Ethernet port of the Ethernet IP Authorization Gateway.

3. Connect the included power cable to the Ethernet IP Authorization Gateway. Twist a quarter-turn (1/4) to the right in order to lock the power cable in place.

    Plug the power cable into an available electrical outlet and wait for the status light of the Ethernet IP Authorization Gateway to turn **green** and begin blinking slowly (approximately once per second).

NOTE: if the green does not blink, contact the Abierto Tech Support at 1-888-216-6823 Ext. 109.

4. Contact the Franchisee to confirm an email was received from EchoStat indicating the box has been successfully activated. This will confirm that the Ethernet IP Authorization Gateway has been successfully connected and registered itself to EchoStat, If you have any questions contact the EchoSta helpdesk at 1859-389-8700 ext: 1, option 1.

NOTE: Although the email has been received it is possible that card authorization still may fail if the ports defined above are not open. Please contact your IT department for assistance.

Section 3   Phase I Hardware Upgrade Requirements

NOTE: if you are upgrading from a System2™ Fuel Site Controller please skip to Section 3.2

3.1 Upgrading an Existing FSC3000™ Fuel Site Controller

IMPORTANT NOTE: Poll any existing transactions using the Pride controller. All stored information will be lost.

1. Perform a "Show System" command (SH SYS) to see the system's hardware configuration. Print or copy for reference.

2. Depending on the system configuration, issue a "Show FIT (n)" command for each installed C/OPT™. Print or copy for reference.

3. Depending on the system configuration, issue a "Show PCT (n)" command for each installed PCT. Print or copy for reference.

3.1.1 Pre-installation Requirements using Pride Controller

This section describes the steps provided by Pacific Pride that should be followed by the Pride franchisee before the existing equipment is removed.

Pacific Pride should be notified when the pre-installation work with the Pacific Pride controller is completed. This includes collecting the transactions from the current OPW system before it is taken offline.

Prior to current POS equipment being disabled, Controller Master files must be maintained.

The franchisee closes the site and makes sure the Pride controller pulls/edits/posts transactions and prints a Commlog report.

NOTE: Controller menu options are in italics and underlined.

1. **Pull site**: *Option #2* on the Communicate with Petro Vend Systems Menu.

2. **Edit Transactions**: *Option #8* on the Daily Processing Menu.

    • Visually review, edit and correct errors.

3. **Post Transactions**: *Option #9* on the Daily Processing Menu.

4. **Print Commlog Report**: *Option #6* on the Daily Processing Menu.

3.1.2 Upgrade the Memory on the FSC3000 Main Board

ATTENTION:

OBSERVE PRECAUTIONS FOR HANDLING **ELECTROSTATIC-DISCHARGE-SENSITIVE (ESDS) DEVICES**

NOTICE

Following the guidelines below can minimize the potential for damage from Electrostatic Discharge (ESD).

- A new component to be installed should be kept in its anti-static packaging as long as possible prior to installation

- Handle ESDS components by the edges. Avoid touching any of the circuitry.

1. Make sure the power cord is unplugged and the power is off.

2. Disconnect the communication cable from port 5 on the FSC3000™.

3. Depending on your site configuration there will be various other cables connected to the FSC3000™. Leave them in place but note where they are connected.

4. Remove the four (4) screws holding the cover on the FSC3000™.

5. The currently installed 72-pin SIMM card must be removed from SIMM slot 1 and replaced by the SIMM card provided with the upgrade kit. The existing SIMM card will be moved to the empty SIMM slot 2 (see Figure 3.1 for SIMM-slot locations). This will supply expanded system memory. To remove the existing SIMM card from its slot:

   o Find the two tabs on both sides of the SIMM slot.

   o Push both tabs to the side to eject the card.

   o Carefully lift the card away from the SIMM slot.

NOTE: To avoid confusing the old card with the new card, the old card should be set aside and the new SIMM card (provided with the upgrade kit) should be immediately installed into SIMM slot 1.
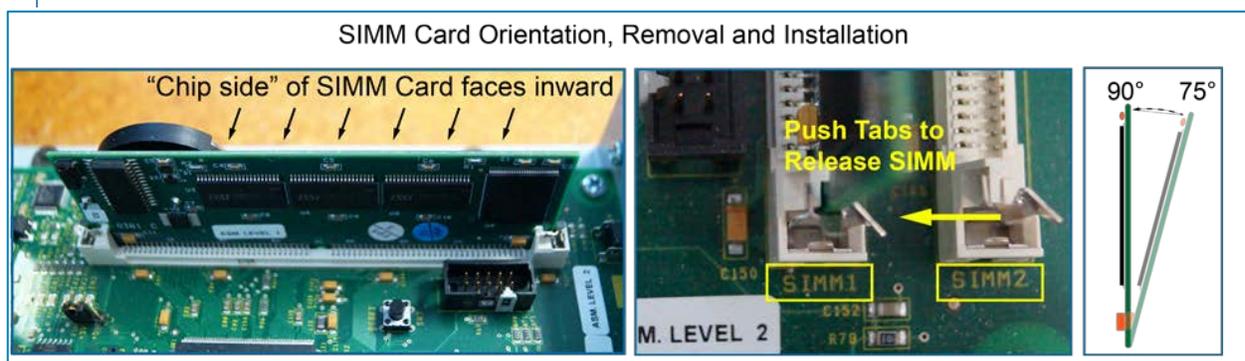
Figure 3-1 SIMM Orientation, Removal and Installation

6. To install the new SIMM card provided with the upgrade kit into Slot 1:

   o The SIMM must be placed snugly and evenly into the slot at approximately a 75° angle (the chip side of the SIMM must face the inside of the unit). Make sure all 72 pins on the bottom edge of the SIMM card are inserted properly into the holes in the slot

   o Rotate the SIMM card to a 90° angle (vertical position) in the slot

   o The tabs on either side of the slot should snap closed and lock the pins in place when the SIMM card is fully rotated to the vertical position

7. Re-install the old SIMM card into Slot 2 using the procedure in the previous step.

8. Replace the cover by re-installing the four (4) screws.

9. **Connect the IP Gateway (P/N 20-6011):** Connect the 20-1517-01 cable as shown below between the POS Serial Port 1 of the IP Gateway and the RS-232 port 5 on the FSC3000™. The 20-1517-01 cable is supplied with the IP Gateway.

10. Connect the 20-1517-01 cable (supplied with the upgrade kit) as shown below between Port 1 (or the port currently in use) of the Modem Switchbox and RS-232 Port 1 on the FSC3000™.

NOTE: This cable will be temporarily disconnected from the FSC3000™ when using ARTWare to configure the FSC3000™.

11. Connect the RJ45 Ethernet cable from the IP Gateway Ethernet Port to the router that is providing your Internet connection.

12. Connect the dial-up fallback modem phone line to the IP Gateway Line jack (optional). This line should currently be connected to a modem attached to the existing Comdata Smartlock box.

NOTE: The IP Converter and the dial-in modem connected to the Switch Box can share the same phone line.

13. Plug in the power cord. The FSC3000™ front-panel screen should display, **"Cold Start version 1.15a"** or higher.
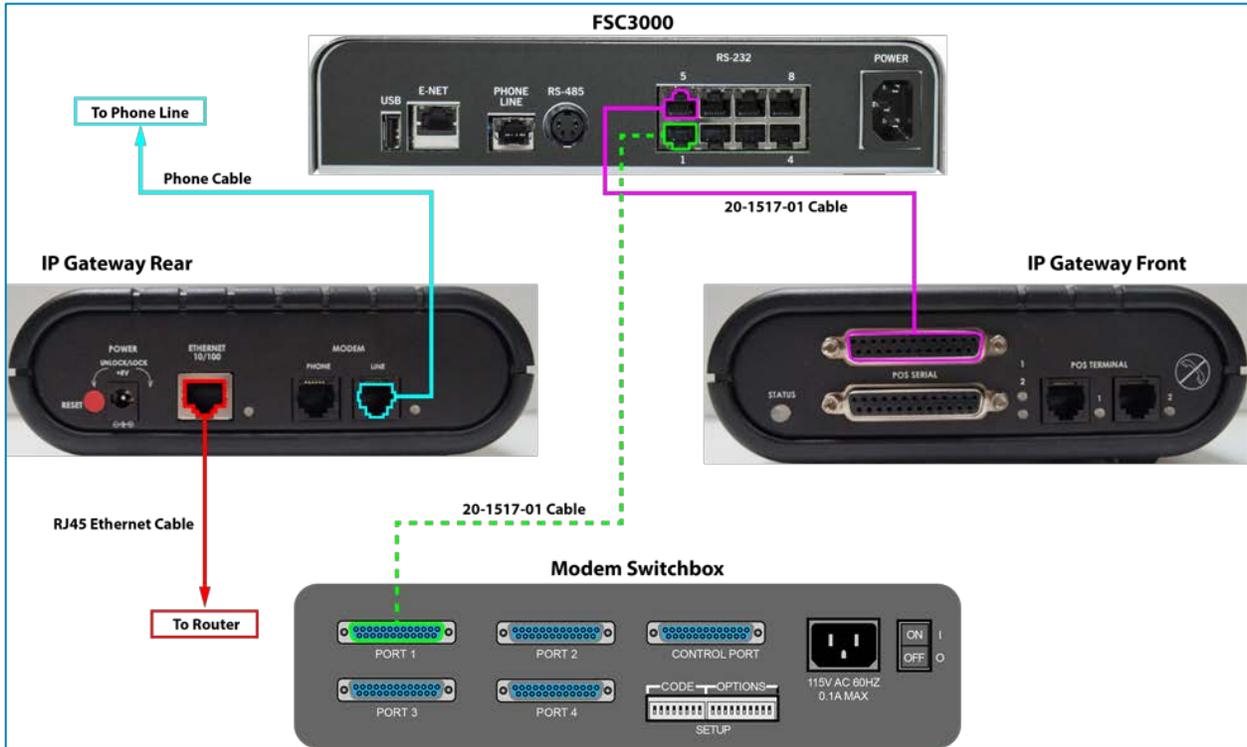
Figure 3-2 FSC3000™-IP Gateway-Modem Switchbox Connections

3.2 Upgrading from System2™ Fuel Site Controller

> **IMPORTANT NOTE**: Pull any existing transactions using the Pride controller. All stored information will be lost.

1. Perform a "Show System" command (SH SYS) to see the system hardware configuration. Print or copy for reference.

2. Depending on the system configuration, issue a "Show FIT (n)" command for each installed C/OPT™. Print or copy for reference.

3. Depending on the system configuration, issue a "Show PCT (n)" command for each installed PCT. Print or copy for reference.

3.2.1 Pre-installation Requirements Using Pride Controller

This section describes the steps provided by Pacific Pride that should be followed by the Pride franchisee before the existing equipment is removed.

Pacific Pride should be notified when the pre-installation work with the Pacific Pride controller is completed. This includes collecting the transactions from the current OPW system before it is taken offline.

> **Prior to current POS equipment being disabled, Controller Master files must be maintained.**

The franchisee closes the site and makes sure the Pride controller pulls/edits/posts transactions and prints a Commlog report.

> **NOTE**: Controller menu options are in italics and underlined.

1. **Pull site**: _Option #2_ on the Communicate with Petro Vend Systems Menu.

2. **Edit Transactions**: _Option #8_ on the Daily Processing Menu.

   o   Visually review, edit and correct errors.

3. **Post Transactions**: _Option #9_ on the Daily Processing Menu.

4. **Print Commlog Report**: _Option #6_ on the Daily Processing Menu.

3.2.2 Upgrade Connections

1. Unplug the System2™ FSC and disconnect it from Petro-Net™ and any peripherals (e.g. printer).

2. Plug the Petro-Net™ connection into the new FSC3000™.

3. **Connect the IP Gateway (P/N 20-6011)**: Connect the 20-1517-01 cable as shown below between the POS Serial Port 1 of the IP Gateway and the RS-232 port 5 on the FSC3000™. The 20-1517-01 cable is supplied with the IP Gateway.

4. Connect the 20-1517-01 cable (supplied with the upgrade kit) as shown below between Port 1 (or the port currently in use) of the Modem Switchbox and RS-232 Port 1 on the FSC3000™.

> **NOTE**: This cable will be temporarily disconnected from the FSC3000™ when using ARTWare to configure the FSC3000™.

5. If a journal printer is currently in use, replace the existing printer cable with the 20-1517-05 cable (supplied in the upgrade kit) and connect it to port 3 on the FSC3000.

6. Connect the dial-up fallback modem phone line to the IP Gateway Line jack (optional). This line should currently be connected to a modem attached to the existing Comdata Smartlock box.

NOTE: The IP Converter fallback modem and the dial-in modem connected to the Switch Box can share the same phone line.

IMPORTANT: If the existing System2™ FSC is currently configured for 1200 or 9600 baud, Pacific-Pride requests that all sites be reconfigured to operate at 2400 baud to help reduce phone line noise. Follow the steps below to reconfigure site devices. If no changes are necessary, proceed to step 7.

Reconfigure Switch Box Baud Rates

If your switch box (WTI, Porter or MultiTech) is set at 1200 or 9600 baud it must be reconfigured

WTI

For a WTI switch box change the first three dip switches (SW1, SW2 and SW3) to set 2400 baud.

2400 baud = SW1:DOWN, SW2:DOWN and SW3:UP.

Porter

To reset the baud rate on a Porter switch box:

- Disconnect the serial cable from the modem and connect to a COM port on the PC and Port 0 on the Porter box.

- Open a terminal window with port parameters set to 9600, N, 8, 1 w/full duplex.

- Send ESC @S to the Porter; the MODE, DATA and BUSY LEDs will light and a configuration menu will appear.

- Enter "1" to change port protocol settings.

- Enter "7" to save the change and then enter "8" to exit the configuration menu. The LEDs should turn off.

For the complete manual see the OPW Utility Disc shipped with the FSC3000 under the "FSC3000\ARTWare\Reference Docs" folder titled "manual-porter-2009-09-29.pdf."

MultiTech MT5634ZBA

If Pacific Pride provided the dial-in modem and it is a "MultiTech MT5634ZBA" follow these steps to reconfigure its COM port baud rate:

- Use the cable between the modem and the switch box to connect the switch box side to a COM port on your PC.

- Open a Terminal window connection to the COM port at the baud previously used by the System2™ (Hint: ARTWare's Terminal window can be used to make the connection.).

- Issue the AT&F command to the modem, it should reply with an "OK".

- Issue the follow string: ATB1Q1V0S0=1&D0&E12&Q0&K0$SB2400

- Issue AT&W to save the settings.

NOTE: If the connectors are not available to make a connection to the modem, contact OPW Help Desk at 1-877-679-8324 and select Option 1 for Fuel Management Systems and then select Option 2 for Fuel Control, for assistance in using the FSC3000 pass-thru port with cables available at the site.

NOTE: Information on changing the Pacific Pride controller baud rate settings is defined in section 6.4.
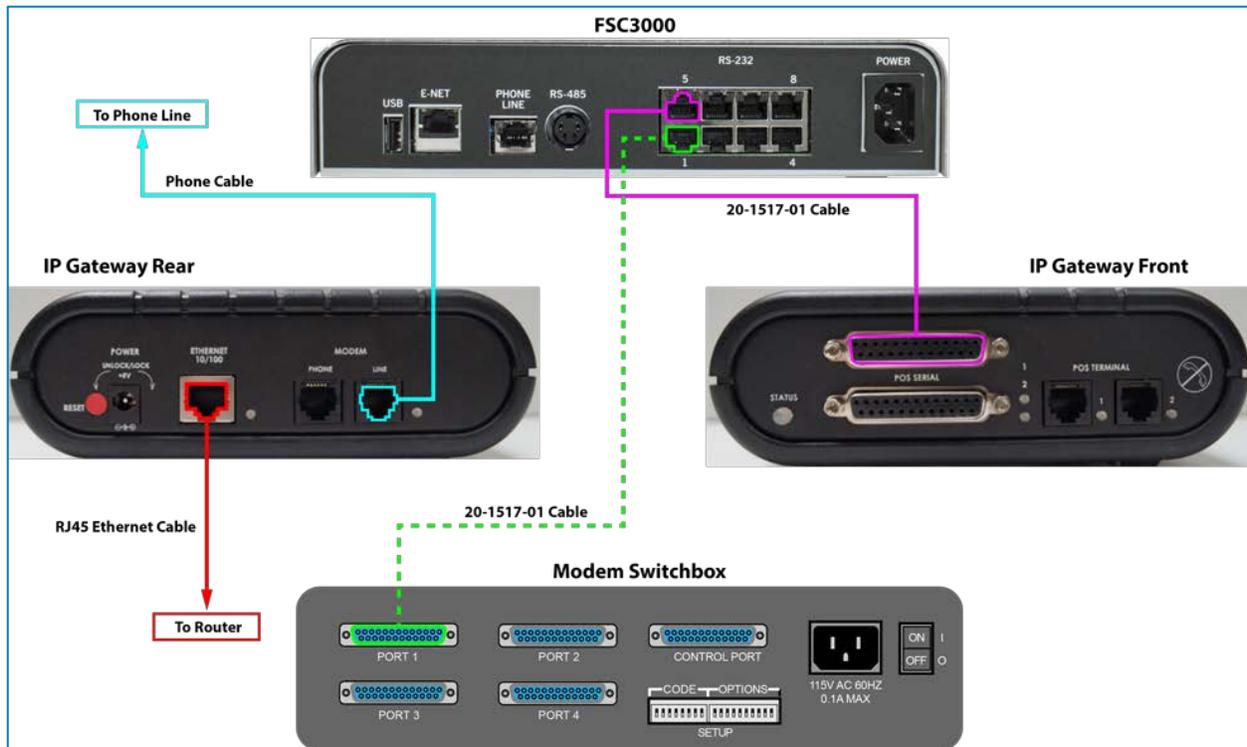
Figure 3-3 FSC3000™-IP Gateway-Modem Connections

7. Remove both yellow battery pull-tabs that extend out of the FSC3000™ box to enable FSC Battery backup.

8. Plug in the power cord. The FSC3000™ front panel screen should display, **"Cold Start version 1.15a"** or higher.

Section 4   ARTWare Installation

The FSC3000™ uses ARTWare, a PC-based configuration utility to simplify the setup of the system. The ARTWare software version must be 3.7 or greater. If you have an older version of ARTWare you must install the latest version.

1. Locate the OPW Utility Applications CD that came with the FSC3000™ (20-6163 OPW Utility Applications CD) and install ARTWare onto the PC that will be used for configuration.

NOTE: When Installing the ARTWare right click on the "Setup.exe" and select "Run as Administrator." After the installation is complete, right click on the ARTWare Icon in your start menu and select "Properties." Click on the "Compatibility" tab in the properties dialog and set the "Run this program in compatibility mode for:" and set the drop down to "Windows XP (Service Pack 3)" (or SP2) under "Compatibility Mode". Set to "Run this program as an administrator" under "Privilege Level."
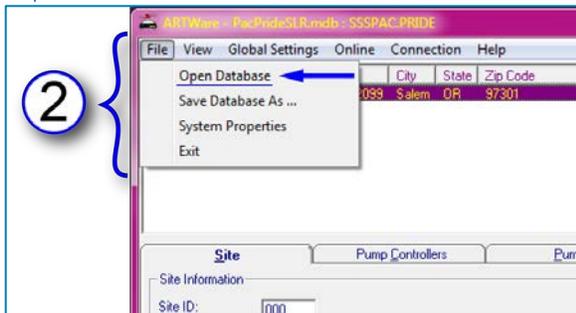
Figure 4-1 Open Database

2. Open ARTWare and under the "File" menu select "Open Database."
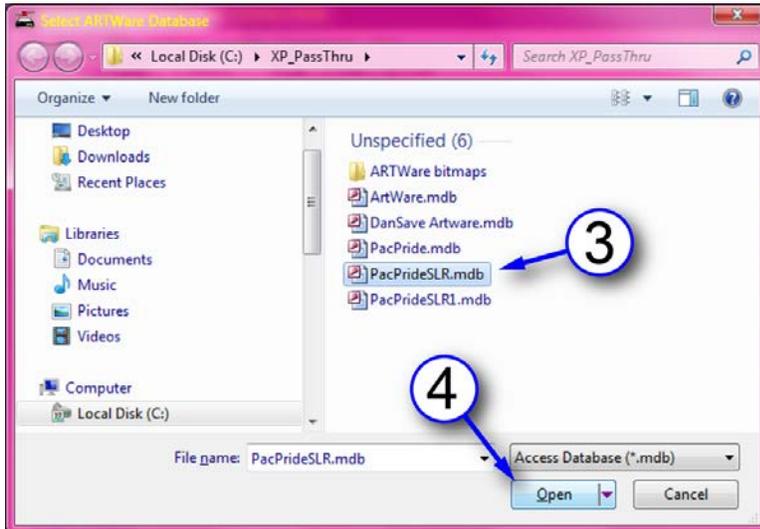
Figure 4-2 Select ARTWare Database

3. In the "Select ARTWare Database" screen, select the "PacPrideSLR.mdb" file.

4. Click "Open."
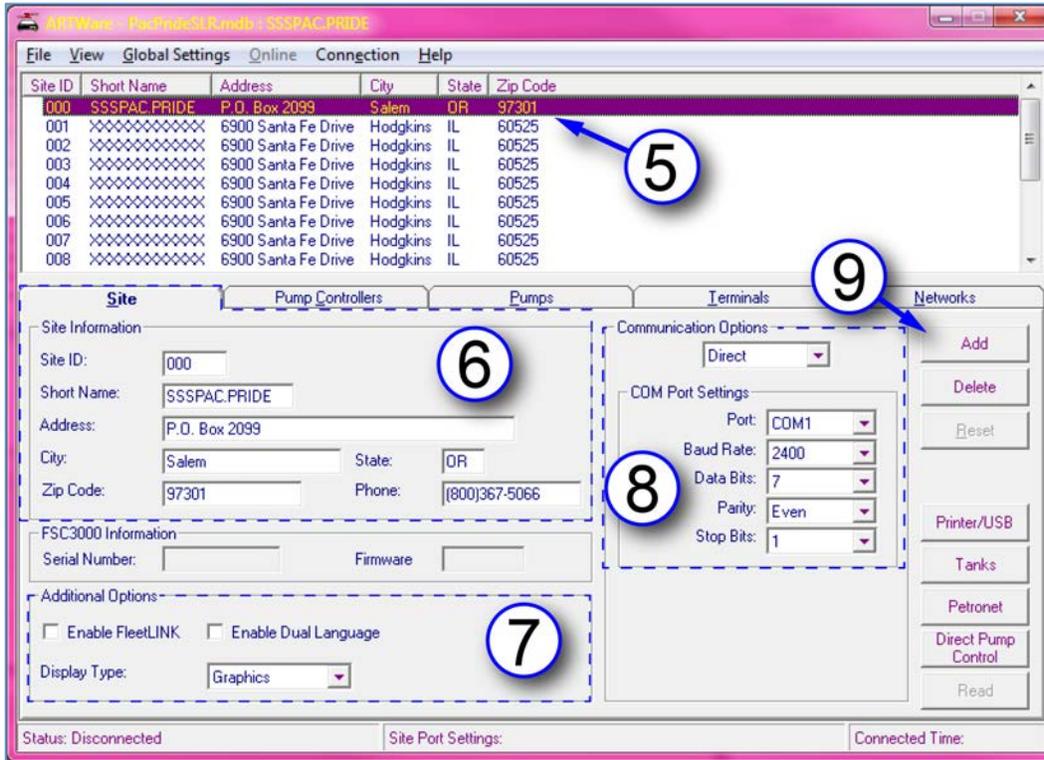
Figure 4-3 Site Information

5. A list of 15 default sites will come into view. These sites are pre-configured with the necessary Pacific Pride data for the product tables, fleet table, messages, etc. Select the first site in the list, or the next available unused site.

NOTE: If all 15 of the default sites in this database have been used and more are needed, copy the "PacPrideSLR.dat" file in the ARTWare installation folder, paste that file in the same folder and rename it to "PacPrideSLR1.mdb."

6. On the "Site" tab, enter the "Site Information. "The "Short Name" field MUST be set to match the site name configured on the marketer's Pacific Pride controller for this location.

7. From "Additional Options," select the applicable display type based on the terminals installed at the site.

8. Verify the "COM Port Settings" for this location. The COM port number must match the serial port on the PC. The data parameters are:

    - Baud - 2400
    - Data Bits - 7
    - Parity - Even
    - Stop Bits - 1

9. Click the "Add" button to save any changes.

10. Temporarily disconnect the **20-1517-01** cable from Port 1 of the FSC3000™. Locate the supplied **20-1520-01** cable and plug the RJ45 connector end into Port 1 of the FSC3000™ and connect the DB9F connector end to the serial port on the PC.

NOTE: If the PC is not equipped with a serial port, use a serial-to-USB adapter; however, not all adapters will work correctly. OPW has tested and recommends P/N: 75-2030.

11. From the "Connection" menu, select "Connect" and click "Connect" In the dialog box that comes into view.
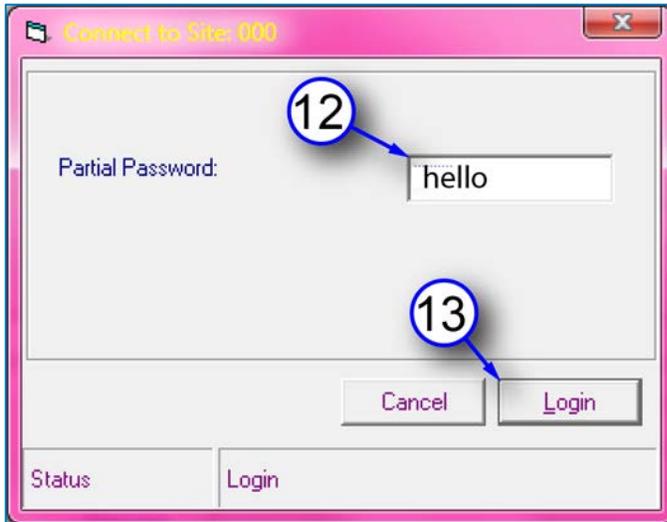
Figure 4-4 Connect to Site

12. Once connected, a "Connect to Site" prompt will come into view. Enter the "Partial Password" "hello."

13. Click "Login." ARTWare will be "Online" with the FSC3000™.

14. From the "Online" menu, select "Open Terminal." This will open the ARTWare terminal window providing a command-line interface to the FSC3000™. Push "Enter" and the privileged prompt "P>" will come into view.

Figure 4-5 ARTWare Terminal Window

15. Enter the "Show System" command and verify:

   a. "Features Version #:" is 1.15a (or higher).

   b. "Pacific Pride Network Package" is active.

   c. Comdata® POS, T-Chek™, NBS/FMGC, EFS, TCH®, FleetOne and NBS Pac-Pride networks are enabled.

NOTE: If the above settings are not correct, stop and contact OPW Technical Support, 1-877-OPW-TECH (877-679-8324), for assistance.

Section 5   Memory Setup and System Times

5.1 Memory Setup

Before uploading any configuration in ARTWare, you must reallocate memory for the storage of transactions and diagnostic information.
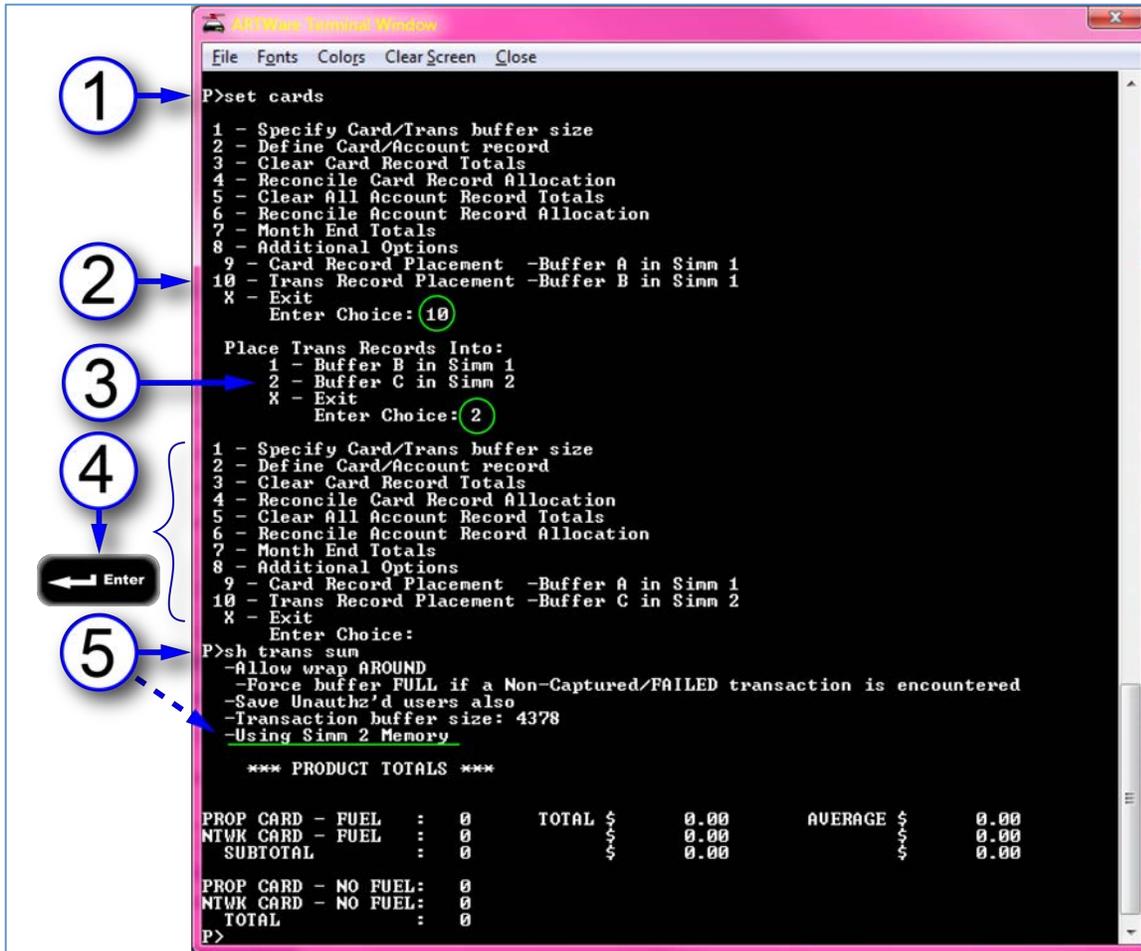
Figure 5-1 Memory Setup

1. Issue the "set cards" command.

2. Select Option 10.

3. When prompted to "Place Trans Records into:" select option 2 for "Buffer C in SIMM 2" and push "Enter."

4. When the "Set Cards" menu redisplays push "Enter."

5. Issue the "Show Transaction Summary" command (sh trans sum). Make sure that it displays "Using SIMM 2 Memory."

Now you must configure the FSC to record the required serial port communications for troubleshooting and referencing daily processes and operations.
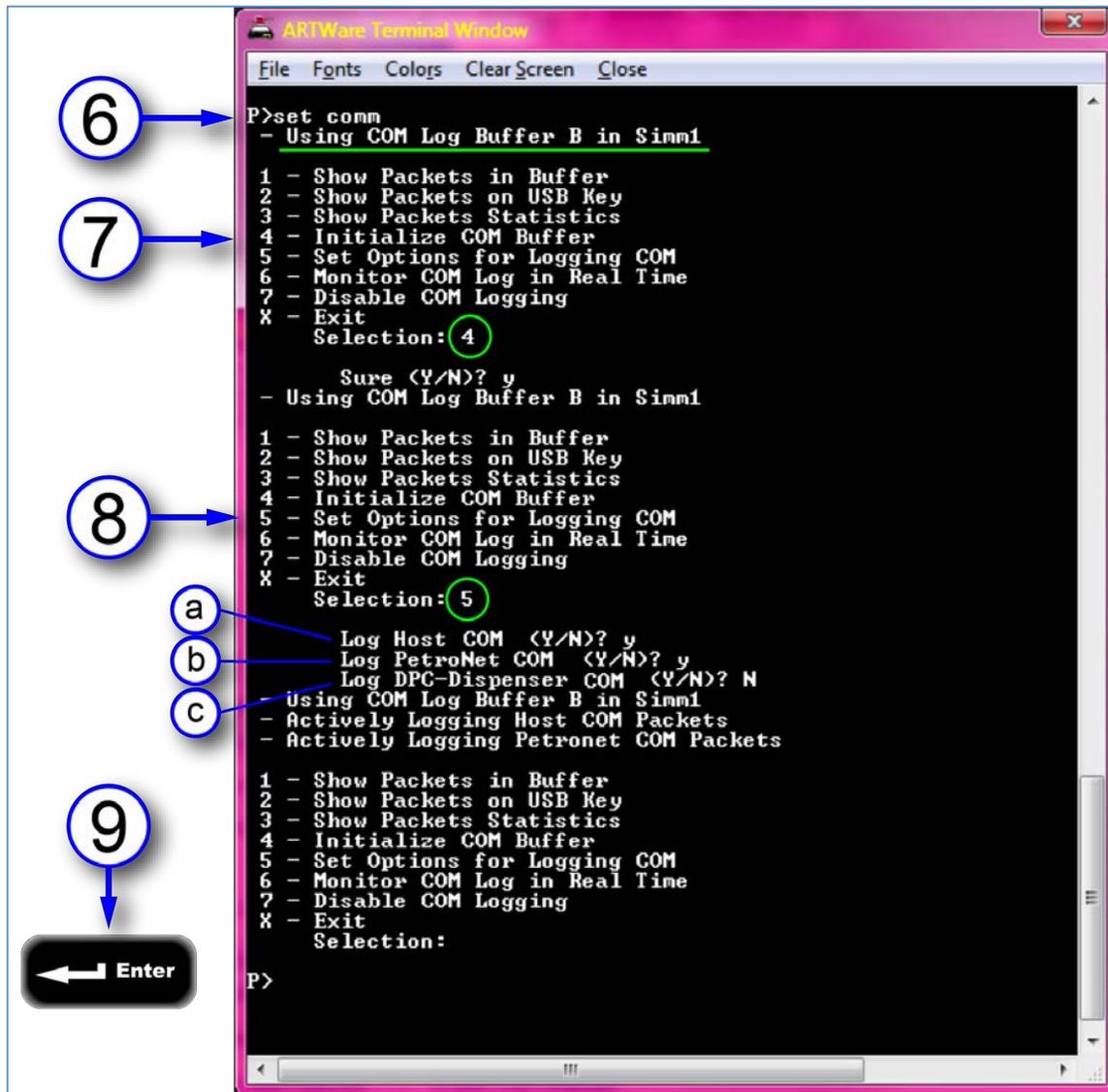
Figure 5-2 Configure Serial Port Communications

6. Issue the "SET COMM" command. Above the menu displayed you should see the message: "- Using COM Log Buffer B in SIMM1." If this message references SIMM2, repeat the memory setup above.

7. Select option '4' to initialize the COM buffer.

8. Select option '5' to Set Options for Logging COM

   a. Answer Yes ('y') to the "Log Host COM" prompt

   b. Answer Yes ('y') to the "Log PetroNet COM" prompt

   c. Answer No ('n') to the "DPC-Dispenser COM" prompt to preserve log memory.

9. Press ENTER to return to the "P>" prompt and close the terminal window.

5.2 Set System Times
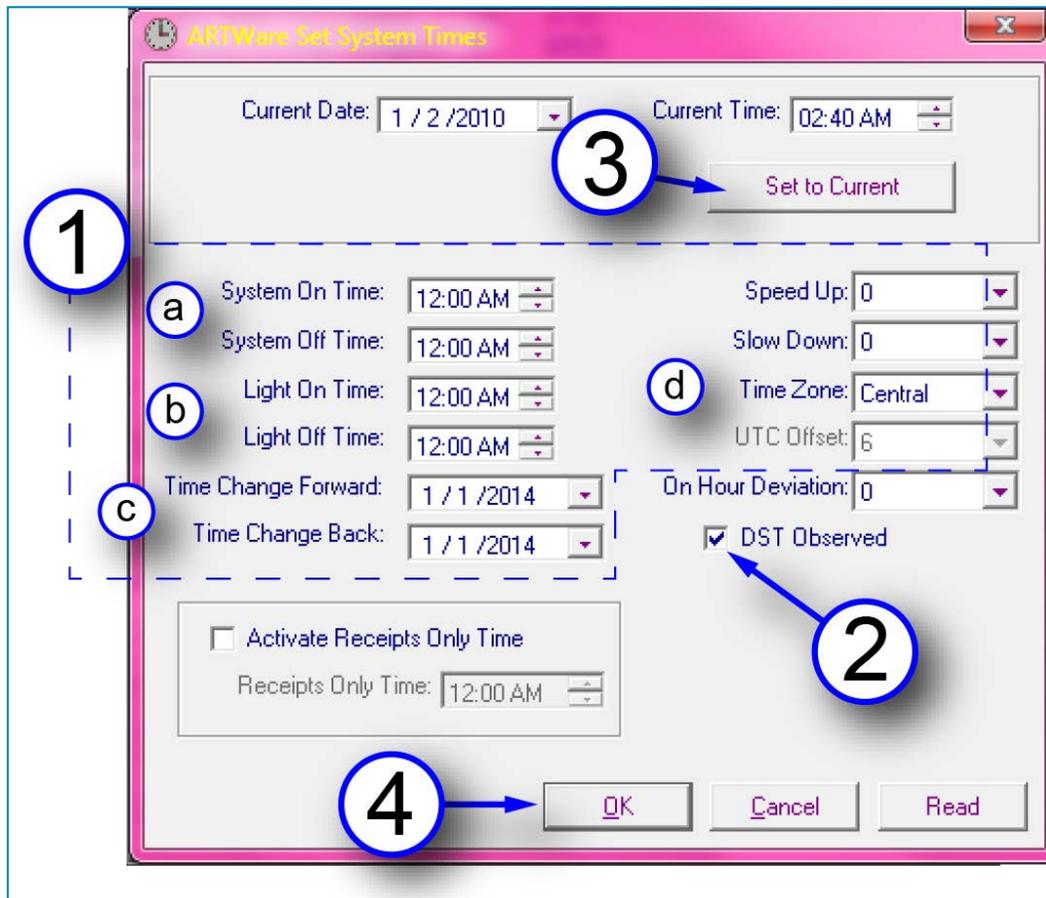
Figure 5-3 Set System Times

1. From The "Online" menu, select "Set Date and Time." Set:

    a. The "System On/Off Times."

    b. The FIT "Light On/Off Times."

    c. The daylight savings "Change Forward and Change Back" dates.

    d. The "Time Zone" field to the location in which you are installing the controller.

2. Check the "DST Observed" checkbox, if appropriate.

3. Click the "Set to Current" button to refresh the current date and time.

4. Click "OK" to save the settings and update the FSC.

Section 6   Configuration

In using the Pacific Pride database (PacPrideSLR.mdb) all global settings, messages and network-fleet table settings are set as needed by default. Do not make changes (other than what's documented in this section) unless directed by Pacific Pride or OPW helpdesk.

6.1 Global Product Settings

From the "Global Settings" menu, select "Products" and then "Types."

Figure 6-1 Product-Type Configuration

> **NOTE:** Pacific Pride supports approximately 90 different product types. The 32 most common types are pre-configured to match the FSC's cold-start defaults. These default codes cover the most commonly used products and should not be changed unless a non-defaulted product is required. If the site dispenses a product type not currently listed, contact Pacific Pride for instructions.
>
> See Appendix B for a list of "Pacific Pride Category and Product Codes," (together with product codes accepted by the enabled networks), or ask the site owner to print the "Product Pump Assignments" from their Pacific Pride office controller.
>
> Pacific Pride assigns products to product categories; in order for product restrictions to work correctly, both the category and product type must be defined correctly.
>
> By modifying one of the default FSC codes to use a different category and product code *(from Appendix B),* Pacific Pride must be notified so it can assign prices to the correct FSC product code (1 through 32) assigned to each card configured in the ISO table.

6.2 Configuring Site-Specific Parameters

NOTE: Reference the site-specific configuration information collected in Section 2 when programming the C/OPT™s and PCTs in the next steps. Configure them as they were before the upgrade.

NOTE: If using Direct Pump Control (DPC), go to the site tab and click the "Direct Pump Control" button.

1. From the "Pumps" tab, configure the pumps as required by site by setting the product type (for each hose, if needed) based on the product name that contains the correct Pac-Pride Category and Product Codes.

NOTE: Since product codes are now managed in the FSC, it is possible that the configured product codes (1-32) from the previous FSC may not be those configured by Pride for this new installation. These configured settings will be confirmed later.

2. On the "Terminals" tab, configure the terminals specific to those installed at the site.

3. On the "Terminals" tab, click the "Prompts" button and select the "Pacific Pride" option from the "Default Prompt Sets" pull-down menu. Click the "Load" button. Click "Send."

    The messages are pre-configured, but the welcome screen messages (Messages 8 and 9) can be programmed, as desired. For example:

Message 8:	Welcome to	Message 9:	Insert and Remove
	Bob's Fuel		Fuel Card

4. If receipts are available at the terminals, on the "Terminals" tab, configure the Network receipt header and trailer with the site name and address.

5. On the "Network" tab, verify the networks shown in the terminal window are enabled (See figure 4-5).

IMPORTANT: Do not change any of the default settings configured in the network database. It is pre-configured to provide the needed settings.

6. From the "Online" menu select "Send" and "All Settings." This will send all configuration settings to the FSC3000™.

7. From the "Online" menu select "Initialize Peripherals."

8. From the "Online" menu, select "Open Terminal" to reopen the ARTWare terminal window. Push "Enter" to get the "P>" prompt.

6.3 Change Password

1. Type "Set Admin" and choose option 4: "Change Password(s)."

    A prompt will come up to change the default passwords for: Remote, Partial Access and the Administrator passwords. Set the Remote, Partial Access and Administrator password as desired by the merchant. *See the "M030001_PA1-PA-DSS-Implementation-Guide" for more information on use and control of passwords.*

IMPORTANT: Be sure to write down this password and keep it in a safe place for reference.

2. When prompted to change the password for user "Hello," enter "N" (No).

IMPORTANT: If you change the password for user "Hello," you must make sure that the Pride controller is configured with this change. See Section 6.4 below.

3. Push "Enter" to return to the "P>" prompt.

4. Issue the "System Start" command to enable the system to start accepting cards.

5. To confirm that the controller is configured correctly for Pacific Pride polling, issue the "Show Transaction Configuration" command (sh trans cf) and ensure that the following data is returned by the FSC.

```
P>sh trans cf
0000/000000000/abcdefghikm/90     <- Push Enter for termination string
//
P>
```

6. Close the terminal window, select "Disconnect" from the "Connection" menu and then close ARTWare. The site configuration will be saved automatically.

7. The Pacific Pride controller in the marketer's office now needs to communicate with the FSC3000™ and download the marketer's pricing and card-acceptance parameters. Disconnect the direct-connect cable and reconnect the Modem Switchbox to Port 1 using cable P/N: 20-1517-01. Make sure the modem is powered-up and connected to a phone line.

8. Contact the Franchisees Pacific Pride's Controller operator to prepare for a download.

6.4   Download ISO Table and Pricing

The following information was provided by Pacific Pride to help the installer and franchisee understand the steps needed to perform the ISO table card/price download. **After new equipment has been installed and configured:**

1.   Franchisee maintains Pacific Pride Controller Site Master Record.

   a.   *Option #2* on the Master File Maintenance and Listing Menu

      i.   *Field #2* - PV Pull, there are four (4) fields (the second parameter in the new settings needs to be a blank).

•	• Type	• Sub	• sftd	• MPD
• Old	• 4	• B	• 1	• N
• New	• 1	(Blank)	• 1	• N

      ii.   *Field #3* - **PV Password** - This field must match the password set for user "Hello" in the FSC3000™.If you did NOT change the password for user "Hello" above do not change this setting.

   b.   *Field #6* - **Baud Rate** - IMPORTANT - if you changed the FSC baud rate in section 3.2.2 above you must change this setting to match the FSC, modem and switch box.

   c.   *Field #8* - **WTI/Porter Box** - OPTIONAL - if this box was removed from the configuration of the site (not needed unless ATG is connected) this field needs to be set to '0' to tell the Pride controller it is no longer in the mix.

   d.   *Field #15* - **Trendar Installed? Y/N** - Set this field to N.

   e.   *Option #3* on the Master File Maintenance and Listing Menu.

      i.   *Field #7* must be set to match the product identified in the OPW fuel-type set-up. Please note the Pacific Pride proprietary product code must be used. If the product you are dispensing is not found on the list, franchisee must work with the installer to choose a table entry that can be changed from the *default* to reflect the product being dispensed. Pacific Pride Fuel-Type Table

2.   Update and download FSC3000™ ISO Table.

   a.   *Option #7* on the SmartLock & Multi-Trucking Card Pricing Menu.

   b.   *Option #10* on the SmartLock & Multi-Trucking Card Pricing Menu.

NOTE: If the above settings are not correct, stop and contact OPW Technical Support, 1-877-OPW-TECH (877-679-8324), select **Option 1 and then dial 22** for assistance.

6.5 Verify Download and Product-Code Mapping

IMPORTANT: It is important to follow the steps below to make sure there are NO product-code-mapping issues. If the product mapping is not correct transactions may be processed without a price, creating settlement problems for the merchant.

1. After the download is complete, remove the Modem Switchbox cable and reconnect the direct-connect cable again. Reconnect to the FSC3000™ with ARTWare and open the Terminal Window.

2. Issue the "Set ISO" command. After the first ISO record is displayed, you will see a message that reads, "—manual modification NOT allowed for Pac-Pride Network Systems" followed by one of these two messages:

    a. "Pac-Pride ISO table download required!" – If this message is seen, the download process may have failed or not completed successfully.

    b. "A Price Change is pending, Apply now (Y/N)?" – Respond 'Y' to this message. When the "Price Change complete!" message is displayed, you will be returned to the prompt and the system will be ready for testing.

3. To further determine if a successful download occurred, issue the "Show ISO" command (sh iso). This will scroll the entire ISO-table setup.

4. Once the scroll of data completes, page up in the terminal window to review. Based on the site configuration you should see cards populated at the bottom with the card names shown as "Active" along with card-specific prices that should correspond with the current pump configuration.

5. Make note of the product numbers that are defined for the cards and close the terminal window.

6. Go to the "Pumps" tab in ARTWare for this site and confirm that the assigned products (1-32) match those noted above. IF ANY ISSUES are found, either reconfigure the pumps to correspond with the ISO table or contact Pacific Pride to help resolve the mismatch.

NOTE: If MPDs are used at the site, consider the name assigned to the product and change it as needed to reflect the product name best known for use at this site. This renaming will help customers to better understand the hose-selection prompt. It is suggested that you reference the preferred names with the site operator.

7. Contact Pacific Pride to inform them that the download was successful (Pacific Pride has requested confirmation of a successful download). If you had to correct any pump configuration consider verifying those changes with Pacific Pride if you have concern about the product codes downloaded.

8. Insert the USB key shipped in the box with the FSC3000™ into the USB port on the back of the FSC. Pacific Pride requires recording transactions to the USB key.

IMPORTANT: The FSC is configured by default to require a USB key for transaction processing. _Do not operate the FSC without the USB key inserted._

Section 7   Startup, Testing and Troubleshooting

7.1 Startup

1. Make sure that all of the hardware has been properly installed.

2. Power up the FSC3000™ and all other components of the system (FITs, Pump Control, IP Gateway, etc.).

3. Verify all terminals and pump controllers are communicating by checking the status LED display on the FSC3000™.

7.2 Testing

7.2.1 Testing the OPW Ethernet IP Gateway for Network Authorization

1. Verify that the FSC3000™ is configured properly for the processors that will be supported at the site.

NOTE: You are configuring the FSC3000™ to work in dial-out mode exactly as if you were going to use the "new" OPW modem and a phone line.

2. Run a test transaction for all processors (networks) supported at the site. After the "**Processing Please Wait**" message a "**Use Pump**" message will come into view. This indicates that you have received authorization.

NOTE: Run a transaction for each card (0.5 gallons will do), to be polled by Pac-Pride later.

7.2.2 Dial Back-up (Optional)

At this point, transactions should be processing properly over the IP connection, and you should be ready to test the Dial Back-up functionality.

1. Remove the CAT5 cable from the Ethernet IP Authorization Gateway **Ethernet** port.

2. Test the **Dial Back-up (DBU)** by running a test transaction for all processors (networks) supported at the site. These test transactions will take longer than the high-speed transactions since they are running over a phone line instead of an IP connection. After the "**Processing Please Wait**" message a "**Use Pump**" message will come into view. This indicates that you have received authorization.

NOTE: You do not need to pump fuel at this time.

3. Plug the **CAT5 Ethernet** cable back into the Ethernet IP Authorization Gateway Ethernet port.

NOTE: If all tests were successful, you are now operating on high-speed processing. If any of the above tests failed, contact the *OPW Help Desk at 877-679-8324* and select **Option 1** for Fuel Management Systems. Tell the Help Desk Technician that you are installing an Ethernet IP Authorization Gateway and provide a description of the problem you are experiencing.

7.3 Data Collection

Once testing is complete Pacific Pride needs to confirm that the transaction data can now be collected from the FSC. The following steps have been provided.

After test transactions have been run at the site: The franchisee pulls/edits/posts transactions and prints a Commlog report.

1. **Pull site**: _Option #2_ on the Communicate with Petro Vend Systems Menu.

2. **Edit Transactions**: _Option #8_ on the Daily Processing Menu.

   o   Visually review the edit. If there are product-code errors, review the mapping in _Field #7_ (set up in the Pacific Pride Controller Product Pump Assignments) to ensure the table number is correct for the Pacific Pride Proprietary (not NACS) product code. The installer should also verify the table entry is set correctly in the FSC3000™. Change the mapping or have the installer change the table if needed and retest.

3. **Post Transactions**: _Option #9_ on the Daily Processing Menu.

4. **Print Commlog report**: _Option #6_ on the Daily Processing Menu.

> **IMPORTANT NOTE**: Once this operation is done, notify Pacific Pride that the installation is complete and the site is operational.

7.4 Troubleshooting

1. Test the network connectivity.

   a. Plug a CAT5 cable into the Ethernet port on your laptop and plug the other end into an open port on the router at the client site.

   b. Open the Internet browser and type http://www.google.com, or you can:

      i.   Click the **Start** button on our PC screen (located in the lower-left corner of the screen).

      ii. Select **Run...**

      iii. Type **cmd** in the window labeled **Open.** Click **OK**.

      iv. Type the command **ping www.google.com** in the **cmd** window.

      v.   Push **Enter/Return** key.

> **NOTE**: If you can browse the Internet or "ping" a website successfully, you have Internet connectivity and your IP Converter should be able to access the Internet.

   c. Close the **cmd** window and go back to **Section 6.1** of this document to restart the installation process.

2. If you are unable to establish network connectivity, complete the following:

   a. Locate the high-speed modem and router at the site. There may be only one piece of equipment if the modem has a built-in router. Verify with your network administrator.

   b. Check the status lights on all device(s). If there is a DSL and/or Internet light, these should be green.

   c. Please record what the status light(s) on the high-speed modem and/or router are doing.

   d. Please record what the status light on the Ethernet IP Authorization Gateway is doing.

NOTE: You may need to reboot (power cycle) the high-speed modem, router and the Ethernet IP Authorization Gateway.

   e. Reboot the devices in this order:

      i. Power down the Ethernet IP Authorization Gateway.

      ii. Power down the router at the site.

      iii. Power down the high-speed modem.

   f. Wait 20 seconds and power up all of the devices in reverse order:

      i. Power up the high-speed modem. Wait until Power, DSL and all Internet lights are **green**.

      ii. Power up the router at the site. Wait until Power and Ethernet/Internet/LAN light are **green**.

      iii. Power up the Ethernet IP Authorization Gateway.

   g. Repeat Section 6.3, Troubleshooting to verify network connectivity.

NOTE: If you are still unable to successfully access the Internet, you will need to speak with the person who handles the network for the site. This may be the Network Administrator or this may be the Internet Service Provider (ISP).

Appendix A – Troubleshooting Authorization to Host

If the system fails to process the test cards correctly, follow these troubleshooting steps first to confirm additional setup conditions.

- In order to troubleshoot system problems, disconnect the dial-in modem and reconnect the direct-connect cable to Port 1 on the FSC.

- Open ARTWare and reconnect to the FSC, when prompted for username and password, enter the username "Admin" and the password that was configured in Section 6.3.1 step 1 above.

- Once connected, open the terminal window from the "Online" menu.

Problem: After attempted authorization process, terminal displays "Not A Network Card."

Solution: Confirm the Pacific Pride download occurred correctly. Issue the "Show ISO" command (sh iso) and confirm entries 29 and 30 display "PRIDE NETWORK" and "PAC-PRIDE" cards as shown below:

```
sh iso

 ISO table for Bank, Fleet and Private Label card configuration
 Note: Cards defined here are only processed under:
 NBS\Pac-Pride

 I - ISO # C - Card Number
 L - Luhn check digit = - must be field separator
 M - Month X - don't care digit or field separator
 Y - Year # - don't care digit
 0-9 - must be specified digit
 > - don't check length to the end OR alternate network card


 ISO #1: VISA-FLEET --Inactive
         :
 ISO #28: Row NOT defined!
 ISO #29: PRIDE NETWORK --Active
  Format: IIIIIICCCCCCCCCCCCCL=>
  ISO Range: 690046-690046
  # of digits to display/print: 19
  Card Type/PPT: 26/0
  Authorization Amount/Max Fueling Limit: $400
  ALL Products Valid
  Local Auth Limit: 0
  Product Pricing:
  4:3.264, 13:3.085        <- Product Price values are site-specific
  Site Id: PV1041001326101      <- Host Site ID values are site-specific

 ISO #30: PAC-PRIDE --Active
  Format: IIIIIICCCCCCCCCCCCCL=>
  ISO Range: 708426-708426
  # of digits to display/print: 19
  Card Type/PPT: 24/0
  Authorization Amount/Max Fueling Limit: $400
  ALL Products Valid
  Local Auth Limit: 0
  Product Pricing:
  4:3.264, 13:3.085        <- Product Price values are site-specific
  Site Id: PV1023001326901      <- Host Site ID values are site-specific
```

If these cards are not defined, reconnect the dial-in modem and ask Pacific Pride to perform another download to the site.

Problem: After attempted authorization process, terminal displays "Unable to Process XX."

Solution: First issue a "SH TRANS" command, if the recorded transaction appears something like:

```
SEQUENCE #.............. 8 : NBS\Pac-Pride
REASON FOR DENIAL....... UNABLE TO PROCESS
FLEET NAME.............. NBS - PAC PRIDE : DECLINED
AUTHORIZATION #......... !:
DRIVER IDENTITY.........
DATE....(auth date)..... APR 08,2010 : 04/08/2010
TIME....(auth time)..... 12:33 PM : 12:33
TRANSACTION #........... 8
CARD #.................. 708426xxxxxxxxx6191 : SWIPED: PAC-PRIDE
```

This may be a host-configuration problem. In order to confirm this condition, enter the "Test" command and reply "Y" (Yes) to the second prompt, "Monitor Primary Host Port (Y/N)?" Then, reswipe the test card at the terminal.

After another failed response at the terminal, review the captured data. If the following text (or, similar text) appears, contact Pacific Pride (see number above) and report: "NBS is returning an INVALID TERM ID message and you are unable to process cards." Pacific Pride may be able to correct this problem with a phone call to NBS, and other times, it may require Pacific Pride to resend another download to the system.

```
Admin > test
Monitor Petronet (Y/N)? N
Monitor Primary Host Port (Y/N)? Y
 CONTROL CODE TRANSLATION: !-SOH "-STX #-ETX $-EOT %-ENQ &-ACK ?-NAK -FS

 ** HIT 'ENTER' KEY TO EXIT **

 AT&F0E0V0\N0$F1W2&K0+MS=V22B AT AT&F0E0V0\N0$F1W2&K0+MS=V22B AT &
AT&F0E0V0\N0$F1W2&K0+MS=V22B AT 0 ATDT18883058980 10
%"PV1023001326901PVSystem211001.1IPP70842xxxxxxxxxxxxxxx=xxxx=xxxxxxxxx000T00210
.00084971DATE04082010TIME1233080011#?"INVALID TERM ID #q$
```

Problem: After attempted authorization process, the terminal displays a message indicating an invalid product was selected.

Solution: Reference the "Product Price" values downloaded for each card (shown above), confirming the FSC product codes priced in the ISO and match the FSC product codes assigned to the pumps/hoses when configuring the system.

> **NOTE:** If the Pride Category or Product codes assigned to the price field in the product table during setup are altered, this could also be a problem. Confirm with Pacific Pride what category product code should be expected to be assigned to the FSC product.

Appendix B – Default Pacific Pride Products and Categories

OPW Index	Pac-Pride Product-Code	Pac-Pride Category	EFSLLC (tch) Code Assigned	Comdata Code Assigned	Uni Code Assigned (TChek, EFS (Memphis) & NBS)	FM/GC Code Assigned	FleetOne Code Assigned
1	02 No Lead	02 No Lead	019 Unld Reg	001 Unleaded Reg	051 No Lead	002 Unleaded	40 Unld Reg
2	04 Premium No Lead	04 Premium	021 Unld Prem	003 Unleaded Prem	055 Super No Lead	003 Premium	42 Unld Prem
3	18 No Lead Mid-Grade	12 Mid-Grade	020 Unld Plus	002 Unleaded Mid-Grade	053 No Lead Mid-Grade	004 Unleaded P	41 Unld Plus
4	45 Ultra Low Dsl #2	03 Diesel	055 ULS Diesel	053 Ultra Low Dsl #2	201 ULS #2	005 ULS Diesel	53 Dsl ULS #2
5	11 #1 Diesel	11 Alt Diesel	022 Diesel #1	019 Diesel #1 LS	010 #1 Diesel	030 ULS Diesel #1	31 Dsl LS 1
6	03 #2 Diesel	03 Diesel	001 Fuel/Diesel #2	020 Diesel # 2 LS	001 #2 Diesel	034 ULS Premium Diesel	12 Dsl Prem 2
7	28 Marked Red Diesel	17 Off Diesel	064 Marked Refer	059 LS Diesel Dyed	081 Refer	038 ULS Diesel (Dyed)	14 Refer LS
8	25 Off Road Diesel	17 Off Diesel	003 Refer Diesel #2	033 Diesel LS Off-Road	091 Dyed Off-Road Diesel	038 ULS Diesel (Dyed)	46 Offroad Dsl
9	47 Off Road Bio-diesel (B20)	17 Off Diesel	061 Bio Diesel Refer	088 Bio-Diesel (B20) Off-Road	315 Bio-Diesel Off-Road	037 Dyed BioDiesel (B20)	66 Offroad Bio
10	44 Bio-diesel (B20)	03 Diesel	036 Bio Diesel	050 Bio-Diesel (B20)	264 Bio-Diesel Blend B20	044 B20 - Biodiesel	43 CNG/Bio LS 20%
11	05 Motor Oil (Quart)	05 Oils	032 Oil	101 Oil	015 Motor Oil Quart	008 Motor Oil	15 Oil/1 Qt
12	10 Motor Oil (Gal)	05 Oils	032 Oil	101 Oil	015 Motor Oil	050 Motor Oil	15 Oil
13	50 Unleaded 10% Ethanol	02 No Lead	019 Unld Reg	011 Ethanol Unleaded Reg	095 Unlead Ethanol	071 Unld 10% Ethanol	61 Unld Rg E10
14	51 Unleaded 8.2 - 7.7% Ethanol	02 No Lead	019 Unld Reg	011 Ethanol Unleaded Reg	095 Unlead Ethanol	071 Unld 10% Ethanol	61 Unld Rg E10
15	52 Unleaded 5.7% Ethanol	02 No Lead	019 Unld Reg	011 Ethanol Unleaded Reg	095 Unlead Ethanol	071 Unld 10% Ethanol	61 Unld Rg E10
16	53 Mid-Grade 10% Ethanol	12 Mid-Grade	020 Unld Plus	012 Ethanol Unld Mid-Grade	096 Unlead Mid-Grade Ethanol	072 Unld-Mid 10% Ethanol	62 Unld Pl E10
17	54 Mid-Grade 8.2 – 7.7% Ethanol	12 Mid-Grade	020 Unld Plus	012 Ethanol Unld Mid-Grade	096 Unlead Mid-Grade Ethanol	072 Unld-Mid 10% Ethanol	62 Unld Pl E10
18	55 Mid-Grade 5.7% Ethanol	12 Mid-Grade	020 Unld Plus	012 Ethanol Unld Mid-Grade	096 Unlead Mid-Grade Ethanol	072 Unld-Mid 10% Ethanol	62 Unld Pl E10
19	56 Premium 10% Ethanol	04 Premium	021 Unld Prem	014 Ethanol Unld Prem	097 Premium Ethanol	073 Unld-Prem 10% Ethanol	63 Unld Pr E10
20	57 Premium 8.2 – 7.7% Ethanol	04 Premium	021 Unld Prem	014 Ethanol Unld Prem	097 Premium Ethanol	073 Unld-Prem 10% Ethanol	63 Unld Pr E10
21	58 Premium 5.7% Ethanol	04 Premium	021 Unld Prem	014 Ethanol Unld Prem	097 Premium Ethanol	073 Unld-Prem 10% Ethanol	63 Unld Pr E10

OPW Index	Pac-Pride Product-Code	Pac-Pride Category	EFSLLC (tch) Code Assigned	Comdata Code Assigned	Uni Code Assigned (TChek, EFS (Memphis) & NBS)	FM/GC Code Assigned	FleetOne Code Assigned
22	59 Red Ultra Low Diesel #2	17 Off Diesel	056 Refer ULS	056 Diesel #2 USL Off-Road	092 ULS Dyed Off-Road Diesel	038 ULS Diesel (Dyed)	46 Offroad Dsl
23	62 Red Ultra Low Diesel #1	17 Off Diesel	033 Refer #1	085 Diesel #1 USL Off-Road	230 Bio-Diesel Blend Off-Road	036 ULS Diesel (Dyed)	46 Offroad Dsl
24	60 Ultra Low Diesel #1	11 Alt Diesel	055 ULS Diesel	076 USL Diesel #1	200 ULS #1 Diesel	030 ULS Diesel #1	52 Dsl ULS #1
25	61 Ultra Low Premium Diesel	03 Diesel	055 ULS Diesel	054 USL Diesel #1 Prem	200 ULS #1 Diesel	034 ULS Premium Diesel	53 Dsl ULS Pr2
26	64 Bio-diesel (B2)	03 Diesel	036 Bio Diesel	045 Bio-Diesel B2	260 Bio-Diesel 2%	010 Bio-Diesel 2%	36 Bio LS 5%
27	65 Bio-diesel (B5)	03 Diesel	036 Bio Diesel	046 Bio-Diesel B5	261 Bio-Diesel 5%	011 Bio-Diesel 5%	37 Bio LS 10%
28	66 Bio-diesel (B10)	03 Diesel	036 Bio Diesel	047 Bio-Diesel B10	262 Bio-Diesel 10%	012 Bio-Diesel 10%	37 Bio LS 10%
29	70 Off Road Bio-diesel (B2)	17 Off Diesel	061 Bio Diesel Reefer	044 Bio-Diesel B2 Off-Road	311 Bio-Diesel Off-Road 2%	021 Bio-Diesel 2% (Dyed)	66 Offroad Bio
30	71 Off Road Bio-diesel (B5)	17 Off Diesel	061 Bio Diesel Reefer	800 Bio-Diesel B5 Off-Road	312 Bio-Diesel Off-Road 5%	022 Bio-Diesel 5% (Dyed)	66 Offroad Bio
31	77 Diesel Exhaust Fluid - Bulk	05 Oils	081 DEF Pump	819 Diesel Exhaust Fluid	070 DEF/UREA Pump\Bulk	034 ULS Prem Diesel	138 DEF
32	80 Restroom	16 Free	002 Merchandise	950 Unknown Misc.	900 Restroom Access	080 Misc.	25 Miscellaneous
	01 No Lead W/Lead Sub	01 Unl Ls/Eth					
	06 Truck Scales	06 Misc.			650 Truck Scales	201 Scales	
	07 80-87 Av Fuel	07 Aviation	038 Aviation Gas	152 Aviation 88LL			
	08 100-130 Av Fuel	07 Aviation	038 Aviation Gas	153 Aviation 100-130			
	09 Jet A Fuel	07 Aviation		150 Aviation Jet A	086 Jet Fuel		50 Jet Fuel
	12 Racing Gas	04 Premium		036 Racing Fuel	087 Racing Fuel	019 Racing Fuel	
	13 Leaded Premium	04 Premium		018 Reg Leaded	055 Super No Lead		01 Regular Leaded
	14 Car Wash	06 Misc.		102 Vehicle Wash		199 Car wash	
	15 Hydraulic Oil (Gal)	05 Oils				053 Hydraulic Fluid	
	16 Misc. 1	06 Misc.				080 Misc.	

OPW Index	Pac-Pride Product-Code	Pac-Pride Category	EFSLLC (tch) Code Assigned	Comdata Code Assigned	Uni Code Assigned (TChek, EFS (Memphis) & NBS)	FM/GC Code Assigned	FleetOne Code Assigned
	17 Misc. 2	06 Misc.				080 Misc.	
	19 Premium Diesel #2	03 Diesel	001 Fuel/Diesel #2	021 Diesel # 2 Prem	016 Prem Diesel #2	033 ULS Prem Diesel	12 Dsl Prem 2
	20 Kerosene	11 Alt Diesel	031 Kerosene	035 Kerosene	048 Kerosene	031 Kerosene	048 Kerosene
	21 Super Plus 15-40	05 Oils					
	22 Super Plus 30	05 Oils					
	23 XHD 10-30	05 Oils					
	24 Motor Oil 40	05 Oils					
	26 Propane - Restricted	18 Propane	024 Propane	303 Bottled Propane			39 Propane
	27 Compressed Natural Gas	19 CNG	057 CNG	022 CNG	082 CNG	015 CNG	47 CNG
	29 Liquefied Natural Gas	19 CNG	028 Natural Gas	024 Liquid Natural Gas	083 Liquid Natural Gas (LNG)	051 LNG	
	30 Misc. 3	06 Misc.					
	31 Antifreeze (Gal)	05 Oils	039 Antifreeze	106 Antifreeze	076 Coolant (antifreeze)		
	32 Solvents (Gal)	05 Oils					
	33 Misc. 4	06 Misc.					
	34 Misc. 5	06 Misc.					
	35 Misc. 6	06 Misc.					
	36 Carpet Cleaner	06 Misc.					
	37 Vacuum	06 Misc.					
	38 Off Road Diesel #1	17 Off Diesel	033 Refer #1 Diesel	032 Diesel #1 Off-Road	091 Dyed Off-Road Diesel	027 Off Road Diesel	
	39 Truck Wash	06 Misc.		102 Vehicle Wash		199 Car wash	
	40 E-85	01 Unl Ls/Eth		026 E-85	090 E-85	016 E-85	

OPW Index / Pac-Pride Product-Code	Pac-Pride Category	EFSLLC (tch) Code Assigned	Comdata Code Assigned	Uni Code Assigned (TChek, EFS (Memphis) & NBS)	FM/GC Code Assigned	FleetOne Code Assigned
41 Off Road Kerosene	17 Off Diesel		300 Kero LSD (non-taxed)			
42 Chain Bar Oil (Gal)	05 Oils				055 Oil	
43 Prem Hydr Oil (Gal)	05 Oils				055 Oil	
46 Auto Trans Fluid (Quart)	05 Oils					
48 Bio-diesel (B100)	20 Bio gt 20%		051 Bio-Diesel B100	221 ULS Bio-Diesel 100%	018 Bio-Diesel 100%	
49 Unleaded L/S 10% Ethanol	01 Unl Ls/Eth					
63 Off Road Bio-diesel (B100)	17 Off Diesel		092 Bio-Diesel B100 Off-Road		030 Biodiesel 100% (Dyed)	
67 Bio-diesel (B11)	03 Diesel	036 Bio Diesel	048 Bio-Diesel B11	263 Bio-Diesel 11%	012 Bio-Diesel 11%	
68 Bio-diesel (B15)	03 Diesel	036 Bio Diesel	049 Bio-Diesel B15		013 Bio-Diesel 15%	
69 Bio-diesel (B99)	20 Bio gt 20%	036 Bio Diesel	051 Bio-Diesel B100		018 Bio-Diesel 100%	
72 Off Road Bio-diesel (B10)	17 Off Diesel	061 Bio Diesel Reefer	093 Bio-Diesel B10 Off-Road	313 Bio-Diesel Off-Road 10%	022 Bio-Diesel 10% (Dyed)	
73 Off Road Bio-diesel (B11)	17 Off Diesel	061 Bio Diesel Reefer	094 Bio-Diesel B11 Off-Road	314 Bio-Diesel Off-Road 11%	024 Bio-Diesel 11% (Dyed)	
74 Off Road Bio-diesel (B15)	17 Off Diesel	061 Bio Diesel Reefer	095 Bio-Diesel B15 Off-Road		024 Bio-Diesel 11% (Dyed)	
75 Off Road Bio-diesel (B99)	17 Off Diesel	061 Bio Diesel Reefer		316 Bio-Diesel Off-Road 99%	024 Bio-Diesel 11% (Dyed)	
76 Diesel Exhaust Fluid	05 Oils	080 DEF Container	819 Diesel Exhaust Fluid	069 DEF/UREA Container	051 Diesel Exhaust Fluid	138 DEF
78 E-15	01 Unl Ls/Eth				018 Ethanol	
79 E-30	07 Unl Ls/Eth				018 Ethanol	
81 Gate Opener	16 Free					
89 E-20	01 Unl Ls/Eth					
90 Prem Diesel Blend <20 BioDsl	03 Diesel					

NOTES:

a: The OPW index field is used to present the defaulted 32 products on power up.

b: The Pac-Pride Product Code is used for Pride specific cards sent to NBS

c: The FleetOne Assigned codes are sent for all FleetOne authorized cards.

d: The Uni Assigned code is sent for ALL EFSLLC processed cards and any NON-Pride based cards sent to NBS.

e: FM/GC Assigned codes are sent for all FleetCor cards routed via NBS

Appendix C – Software Updates for Pacific Pride Network Sites

When updating software at an existing Pacific Pride site with FSC3000™ software version 1.15a or higher, use the following instructions to quickly update the software with minimal downtime.

1. The most recent FSC3000™ and ARTWare software versions can be installed from the OPW Utility Applications CD that came packaged with your upgrade kit. The latest software can also be downloaded from the OPW Fuel Management Systems website. The following link will take you to the "Other Software Downloads" page where the latest version of FSC3000™ Multi-Trucking Software and the latest version of ARTWare software can be found.

   http://www.opwglobal.com/TechSupport/OtherSoftwareDownloads.aspx

2. After downloading the software, install ARTWare and confirm v3.7 or higher is now installed. Once ARTWare is installed, open the application and follow these steps:

   a. If not already opened, click on the "File" menu, select "Open Database" and select the "PacPrideSLR.mdb" file. If the database previously used to configure this site is available, select it from the list; if not, select the next available unused site in the list.

   b. Make the appropriate cable connection to the FSC. This may require disconnecting the dial-in modem temporarily while updating the software.

   c. From the "Connection" menu, select "Connect" and login to the FSC as the "Admin" user.

   d. First, ensure all current fueling is complete, then open the terminal window and type "Close."

   e. Enter the "Set Network" command and choose Option 12 to force the FSC to capture any outstanding host transactions and then close the terminal window.

   IMPORTANT: Because of the numerous networks enabled for use at Pacific Pride sites, you should wait about 30 seconds and reissue the Option 12 "Force Transaction Captures" operation a second time. If the FSC indicates that additional transactions are being sent for capture, repeat this process until the message is not displayed.

   f. If connected to the CAP Port (1), disconnect from ARTWare and reconnect the Pacific Pride dial-in modem. Tell the merchant to poll the FSC using the Pride Controller to ensure all transactions are polled and recorded.

   g. Once transactions have been polled by the Pride Controller reconnect and login using ARTWare. From the "Online" menu, backup the existing system configuration. First, select "Online > Read > Global Settings." Once the reading of the global settings is complete, select "Online > Read > Site Settings."

   h. After all of the settings have been read, select "Upgrade" from the "Online" menu and update the FSC with the latest version software.

   i. Once the Software upgrade completes, reconnect and log in to the FSC based on its current state. If warm-started, use the previously configured password; if cold-started, log in using the default password "hello."

   j. If a warm start occurred after upgrading the software, open the terminal window and at the prompt, type "Open." Now, disconnect and close ARTWare. The system should now be running and ready for use.

If a cold start occurred after upgrading the software, continue from **Section 5 Memory Setup and System Times.**

Appendix D - Using the COM Log Debugger

The purpose of this COM logger is to capture and store communication to the host and on Petro-Net™ as it happens. The captured COM data will have the COM data, trans #, date, timestamp, etc. for debugging communications that can be evaluated later. The captured communications get stored in SIMM 2.

> **Note**: To preserve memory, only Petro-Net™-passed commands are stored. The entire Petro-Net™ polling process is not recorded.

Connect to the FSC using ARTWare and open the terminal window.

Get privileged.

Enter 'set com' at the prompt to get to the main menu

```
Admin>set com

 - Actively Logging Host COM Packets
 - Actively Logging PetroNet COM Packets

1 - Show Packets in Buffer
2 - Show Packets on USB Key
3 - Show Packets Statistics
4 - Initialize COM Buffer
5 - Set Options for Logging COM
6 - Monitor COM Log in Real Time
7 - Disable COM Logging on Simm2

X - Exit

    Selection:
```

Explanation of Menu Items

1 - Show Packets in Buffer

Below are the filters you can use to view captured COM packets

`Display ALL COM Packets (Y/N)?`	(To display ALL data collected thus far)
`Display PetroNet Packets (Y/N)?`	(Show Petro-Net™ comm packets)
`Display Host Packets (Y/N)?`	(Show Host COM packets)
`Networks to Display`	(Allows you to specify which host packets to view)

```
   1: ComdataPOS
   2: TCHEK
      :
   7: NBS\Pac-Pride
```

`Make Selection (Hit Enter for All):`	(Select specific host packets to view)
`Enter Date:`	(Specify date of captured COM data)
`Enter Trans:`	(Specify COM of designated trans #)
`Enter Search String:`	(Search for specified string in COM buffer)

2 - Show Packets on USB Key

Below are the filters you can use when viewing captured COM packets

```
Enter COM Log Date:                    (Specify date of captured COM data)
Display PetroNet Packets (Y/N)?        (Show Petro-Net™ COM packets)
Display Host Packets(Y/N)?             (Show Host COM packets)

Networks to Display                    (Allows you to specify which host packets to view)

1: ComdataPOS
2: TChek
3: NBS\FMGC
4: EFS
5: TCH
6: FleetOne
7: NBS\Pac-Pride
Make Selection (Hit Enter for All):    (Select specific host packets to view)

Enter Trans #:                         (Specify COM of designated trans #)
```

3 - Show Packets Statistics

```
        COM LOG STATISTICS:

APR 16, 2014 02:42 PM thru APR 21, 2014 04:29 PM

     Number of Packets:   24978
     Buffer Space In Use: 490678
     Total Buffer Space:  3137536
     COM Log Buffer:      15.6% Full
```

4 - Initialize COM Buffer

(This option will erase contents of COM buffer)

5 - Set Options for Logging COM

To save space in COM-log buffer you can select which COM data you want or don't want to capture. If both are enabled you can see the interaction between events on Host communications and events on Petro-Net™ communications.

```
Log Host COM (Y/N)?            (Answer 'Y' to store Host data packets)
Log PetroNet COM (Y/N)?        (Answer 'Y' to store PetroNet data packets)
Log DPC COM (Y/N)?             (Answer 'N' to preserve memory in the system)
```

6 - Monitor COM Log in Real Time

With this option the communication packets will be sent to the display as they happen. You can view COM log data in real-time and capture it in a Hyperterm session.

```
Display Protocol Sequence (Y/N)?    (Tell system whether or not to display ACK/NAK,
```
etc.)

7 - Disable COM Logging on SIMM 2

This option will disable COM logging. If you choose to re-enable, logging the contents of the buffer will be cleared first.

X - Exit

Exit the comm. log menu.

Here is a sample communication with the Buypass host.

```
Host:  BUYPASS  Trans: 12   APR 16, 2014   14:42:37
TXMIT: ---->  [STX] [x00] [x16] [x84] [x08] [x00] [x9D] ATL105 [FS] 2 [FS] 100
[FS] 094 [FS] 0 [FS] H817007967001 [FS] 5020 [FS] 6011xxxxxxxxxxxx=xxxxxxx23456789
[FS] [FS] 2 [FS] 1000 [FS] [FS] [FS] [FS] 000012 [FS] [FS] 0416141442 [FS] 1 [FS]
111 [FS] 054 [FS] 0050039000100300000000000000000000000VOW001 [FS] {- [ETX]

Host:  BUYPASS  Trans: 12   APR 16, 2014   14:42:38
RCV:   <----  [STX] [x00] [x16] [x90] [xF7] c [ETX]
```

Here is a sample communication on Petro-Net™.

```
P-Net: Dev A  Trans: N/A   APR 21, 2014   16:53:58
RCV:   <----  [STX] C;189999xxxxxxxxxxxx=xxxx?= [ETX] @

P-Net: Dev A  Trans: 13   APR 21, 2014   16:53:58
TXMIT: ---->  [STX] AI~^5~^5^T^KENTER DOLLAR AMOUNT^LBETWEEN $5 AND $75  $} [ETX]
[NAK]

P-Net: Dev A  Trans: 13   APR 21, 2014   16:53:58
RCV:   <----  [ACK]

P-Net: Dev A  Trans: 13   APR 21, 2014   16:53:58
TXMIT: ---->  [STX] FI241

P-Net: Dev A  Trans: 13   APR 21, 2014   16:53:58
RCV:   <----  [ACK]
```

When viewing the captured data the following information is provided:|
  - The Host or Petro-Net™ device being communicated to
  - The transaction #
  - The date
  - The timestamp with resolution to one (1) second
  - Whether this packet was transmitted or received
  - The comm data

If a character in the packet is printable, it will display it: A thru Z   0 thru 9   !@#$%^&*(etc..

If a character in the packet is a non-printable protocol character it will be displayed this way:

```
[STX] - Start of Text
[ETX] - End of Text
[EOT] - End of Transmission
[ENQ] - Enquire
[ACK] - Acknowledge
[DLE] - Data Line Escape
[NAK] - Negative Acknowledge
[FS]  - Field Separator
[US]  - Unit Separator
```

All other non-printable characters will be displayed this way:

```
[x1A] - hex character 1A
[xC5] - hex character C5
```

Warranty

OPW Fuel Management Systems warrants that all OPW Tank Gauge and Petro Vend Fuel Control systems supplied by OPW Fuel Management Systems to the Original Purchaser will be free from defects in material and/or workmanship under normal use and service for a period of 12 months from the date of installation or 15 months from the date of shipment from OPW. Additionally, OPW Fuel Management Systems warrants that all upgrades and replacement parts (new and remanufactured) supplied by OPW Fuel Management Systems will be free from defects in material and workmanship under normal use and serviced for a period of 90 days from the date of installation, or for the remainder of the system's original warranty, whichever is greater, as set forth in the first sentence of this statement. The foregoing warranties will not extend to goods subjected to misuse, neglect, accident, or improper installation or maintenance, or which have been altered or repaired by anyone other than OPW Fuel Management Systems or its authorized representative. The buyer's acceptance of delivery of the goods constitutes acceptance of the foregoing warranties and remedies, and all conditions and limitations thereof.

If a claim is made within the warranted time period that any equipment and/or remanufactured part is defective in material or workmanship under normal use and service, such equipment and/or remanufactured part shall be returned to OPW Fuel Management Systems, freight prepaid. If such equipment or remanufactured part is found by OPW Fuel Management Systems in its sole judgment to be defective in material or workmanship under normal use and service, OPW Fuel Management Systems shall, at its sole option, repair or replace such equipment and/or remanufactured part (excluding, in all instances, fuses, ink cartridges, batteries, other consumable items, etc.) OPW Fuel Management Systems shall not be held responsible for data loss or retrieval on returned products.

The warranties, as set forth above, are made expressly in lieu of all other warranties, either expressed or implied (including, without limitation, warranties of merchantability and fitness for any particular purpose and of all other obligations or liabilities on OPW Fuel Management Systems' part.) Further, OPW Fuel Management Systems neither assumes, nor authorizes any other person to assume for it, any other liability in connection with the sale of the systems, or any new/replacement part that has been subject to any damage from any act of nature or any force majeure. Any terms proposed by the Original Purchaser either orally or in writing are expressly rejected. The terms and conditions expressed in this document may only be changed upon the express written consent of OPW Fuel Management Systems.

The term "Original Purchaser" as used in these warranties shall be deemed to mean the authorized OPW Fuel Management Systems' distributor to which the system or any new/replacement part was originally sold. These warranties may be assigned by the original purchaser to any of its customers who purchase any OPW Fuel Management Systems' systems or new/replacement parts. This document shall be governed by and construed in accordance with the law of the State of Illinois. OPW Fuel Management Systems and Original Purchaser agree that any legal action or proceeding under or with respect to this document may ONLY be brought in the courts of the State of Illinois, or the United States District Court having jurisdiction in the City of Hodgkins, Illinois. Original Purchaser expressly consents to personal jurisdiction in any of the above-mentioned forums and agrees to waive all defenses based on improper venue or inconvenient form should an action be brought therein.

The sole liability of OPW Fuel Management Systems, for any breach of warranty, shall be as set forth above. OPW Fuel Management Systems does not warrant against damage caused by accident, abuse, faulty or improper installation or operation. In no event shall manufacturer's liability on any claim for damages arising out of the manufacture, sale, delivery or use of the goods exceed the original purchase price of the goods. In no event shall OPW Fuel Management Systems be liable for any direct, indirect, incidental or consequential damage or loss of product.

TERMS

Ex-works our factory, Hodgkins, Illinois, USA
Installation not included.
All trade names are registered. Patents pending.
Subject to engineering improvement and/or other changes.
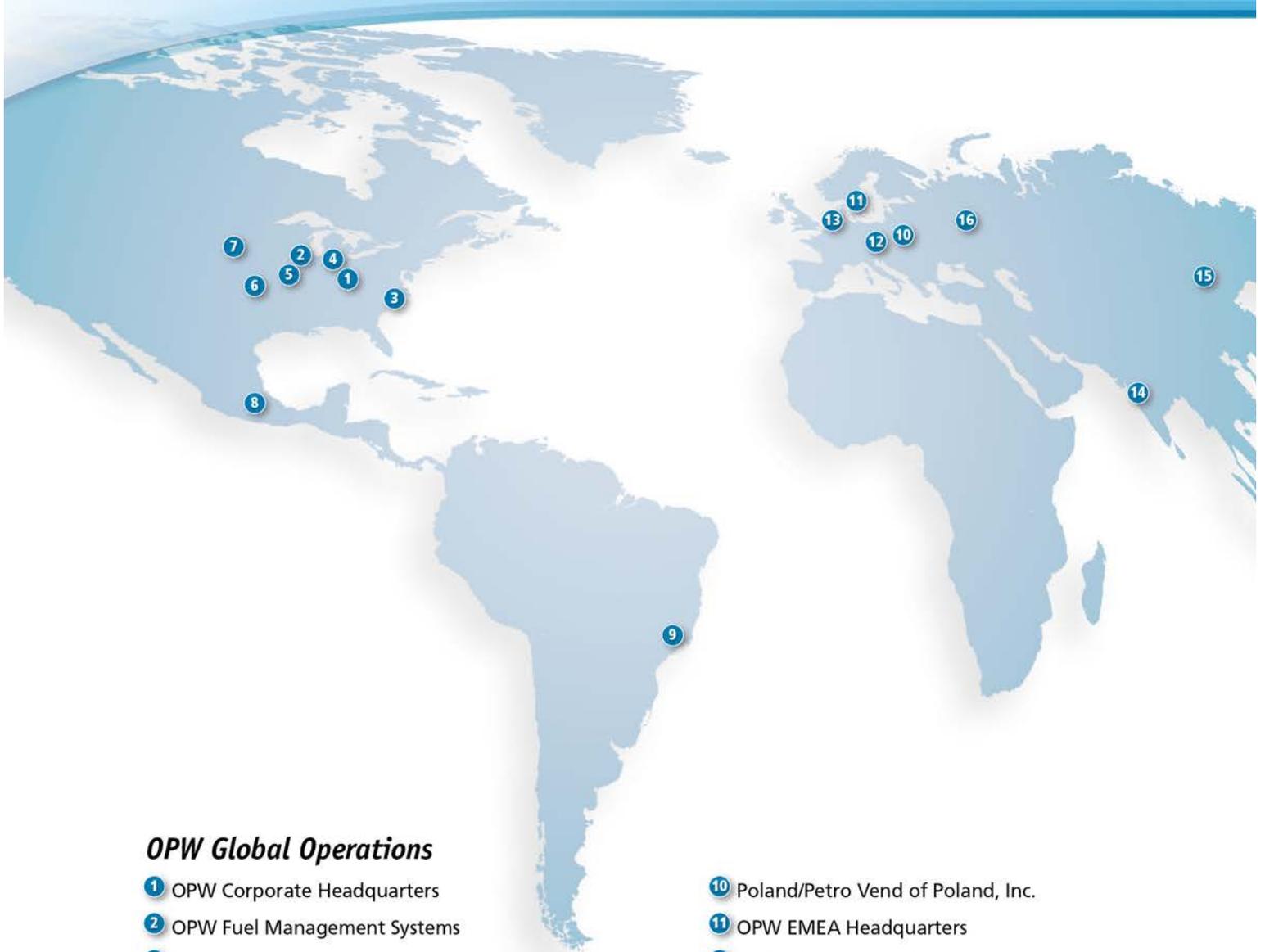
OPW Global Operations

1 OPW Corporate Headquarters
2 OPW Fuel Management Systems
3 OPW Retail Fueling
4 OPW Engineered Systems
5 Midland Manufacturing
6 Civacon
7 PDQ Manufacturing Inc.
8 OPW Mexico
9 OPW Latin America

10 Poland/Petro Vend of Poland, Inc.
11 OPW EMEA Headquarters
12 OPW EMEA Czech Republic
13 OPW FTG Europe
14 OPW India
15 OPW Asia Pacific
16 OPW Russia