



M030002-F - **Pacific Pride Switcher/Controller Sunset** Upgrade Procedure



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.

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Contact OPW Fuel Management Systems

Visit us at www.opwglobal.com, or contact us at:

Call 1-877-OPW-TECH (877-679-8324)

For calls outside US and Canada, call +1-708-485-4200

Fax 1-800-421-3297

Monday through Friday, 7 a.m. to 6 p.m., US CST

For technician registration, see

<http://www.opwglobal.com/TechSupport/TechnicianRegistration.aspx>.

For in-depth training via OPW University, see

<http://www.opwglobal.com/opw-u-training-registration.html>.

These are the minimum requirements that must be included in the manual that is provided with the equipment.

No modification permitted without reference to the notified body.

Standards

UL 1238 - STANDARD FOR CONTROL EQUIPMENT FOR USE WITH FLAMMABLE LIQUID DISPENSING DEVICES - Edition 5 – Revision Date 2013/04/11

UL 913 - STANDARD FOR INTRINSICALLY SAFE APPARATUS AND ASSOCIATED APPARATUS FOR USE IN CLASS I, II, III, DIVISION 1, HAZARDOUS (CLASSIFIED) LOCATIONS - Edition 7 - Revision Date 2011/09/23

CAN/CSA C22.2 NO. 157-92-CAN/CSA - INTRINSICALLY SAFE AND NON-INCENDIVE EQUIPMENT FOR USE IN HAZARDOUS LOCATIONS - Edition 3 –Reaffirmed 2012

CAN/CSA C22.2 NO. 142-M1987 - PROCESS CONTROL EQUIPMENT - Edition 3 – Reaffirmed 2009 IEC 60529, Edition 2 - DEGREES OF PROTECTION PROVIDED BY ENCLOSURES (IP CODE)

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Section 1 Introduction / Data Collection

This doc describes the update procedure to upgrade an existing Pacific Pride FSC3000 in support of the Pride Controller Sunset project routing all cards in the Pacific Pride card deck to NBS.

These instructions have been written with the assumption that the installing technician is certified in the installation of an OPW Fuel Management Systems FSC3000 Fuel Site Controller.

This upgrade procedure requires the installation of the FSC3000 Boot Loader software version 1.02e and the OPW Multi-Trucking Network Package software version 1.20h (or higher) (sites currently using version 1.18a can continue using that version as an option).



NOTE: The Boot Loader software must be updated first.

1.1 IP Authorization Gateway

The IP Converter currently installed at the site should already be upgraded in support of the Controller Sunset project. If after installation and configuration of the 1.20h Multi-Trucking Network Package software you are unable to establish a connection to the NBS host, please contact Abierto Tech Support at 1-888-216-6823 Ext: 109 for Technical support.

1.2 ARTWare

The latest version of ARTWare can be downloaded from the Tech Support Software page of the OPWGlobal website. Click the link below or type the url into your browser.

<http://www.opwglobal.com/opw-fms/tech-support/software>

Download the **ARTWareSetup 3.13** and **PacPrideSLR Database** files to your pc.

Connect to the FSC3000 and issue a `sh ISO 28` command. Record the "Product Pricing" information.

This information will be needed to ensure the Fueltype table is set up correctly. The number prior to the price indicates the Fueltype table line numbers that may need to be modified.

Product Pricing:

1:2.379, 4:2.603, 13:2.162, 22:2.368

Section 2 Site Backup

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.

If you do not already have the OPW FSC3000 ARTWare Configuration utility installed on your machine, it can be downloaded from the OPWGlobal website at <http://www.opwglobal.com/opw-fms/tech-support/software/other-software-downloads>.

- Open the ARTWare configuration utility, if you don't already have the current site you are working at in your ARTWare database, go to the "Site" tab and click **new**.
- Set the **site id** as needed.
- Configure the COM port settings for the site.



IMPORTANT: The COM port number must match the serial port on the PC.

- The typical parameters for a Pacific-Pride location are:
 - Baud = 2400
 - Data Bits = 7
 - Parity = Even
 - Stop Bits = 1.



IMPORTANT: To speed up the upgrade process, you can set the Baud Rate at **9600**. Make sure when you complete the upgrade to reset the Baud Rate back to **2400**.

- Click **Save**.
- Click the "Connection" menu option to establish a connection to the site.
- Log in to the FSC.
- Once you are logged into the FSC go to the now available "Online" menu and select Read->Global Settings.
- Click **OK** on the message box that comes into view.
- Once that operation completes, select **Site Settings** from the "Read" option. This lets ARTWare collect all site specific setup parameters.

Section 3 Software Upgrade

3.1 Files Necessary to Upgrade the FSC3000

To upgrade the FSC3000 you must download the **FSC3000 Multi-Trucking Network Software** ZIP file from the Tech Support Software page of the OPWGlobal website. Click the link below or type the url into your browser.

<http://www.opwglobal.com/opw-fms/tech-support/software>

You will find the files below in the ZIP file.

- “bloader_1_02e.abs” this file is inside the “fsc3k.zip” file.
- “FSC3k_1_20h.abs” also inside the “fsc3k.zip” file.
- New FSC3000 option file specific to the Site’s FSC3000 SIMM Serial number.



NOTE: The file above must be requested from OPW Customer Service before you can do the upgrade procedure. Call 1- (888) 679-3835.

3.2 Upgrade Procedure

3.2.1 Boot Loader

- From the “Online” menu select **Upgrade**.
- In the “Open” dialog box that is shown, find and select the **bloader_1_02e.abs** file.
- Click **Open**. Follow the remaining prompts to allow ARTWare to start the Boot Loader Update procedure.

After the Boot Loader software upgrade is complete, the FSC will restart.

3.2.2 FSC3000 Multi-Trucking Software

- Reconnect ARTWare.
- Log back in to the FSC3000.
- From the “Online” menu select **Upgrade**.
- When the “Open” dialog box comes up, find and select the **FSC3000_1.20h.abs** file.
- Click **Open**. Follow the remaining prompts to allow ARTWare to start the Boot Loader Update procedure.

After the Multi-trucking software upgrade is complete the FSC will reset and the system will do a Cold Start reboot.

3.2.3 FSC3000 Options File

After the Cold Start is complete:

- Reconnect ARTWare.

- Log back in to the FSC3000.
- From the “Online” menu select **Options**.
- When the “Open” dialog box comes up, find and select the FSC3000 options file provided by OPW.
- Click **Open**. Follow the remaining prompts to allow ARTWare to start the Boot Loader Update procedure.



NOTE: The FSC3000 option filename is always: **<SIMMSerial#>.txt**.

After the Options File has been sent to the FSC you must do a **manual Cold Start**. See the procedure below.

Cold Start Procedure

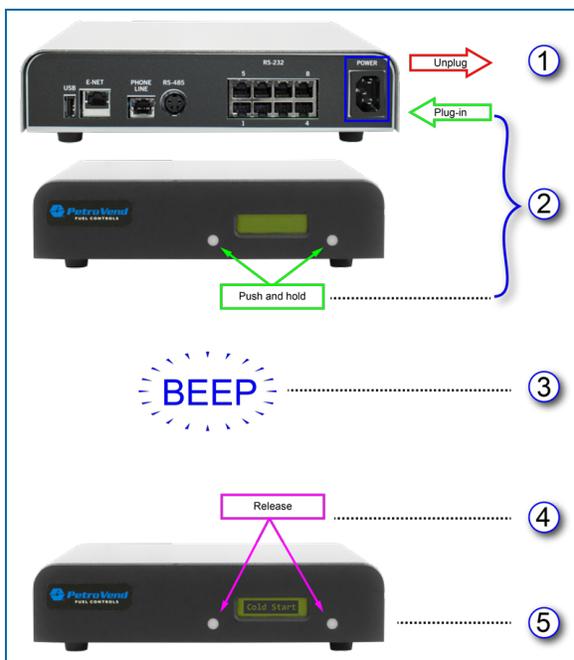


Figure 3-1 Cold Start Procedure

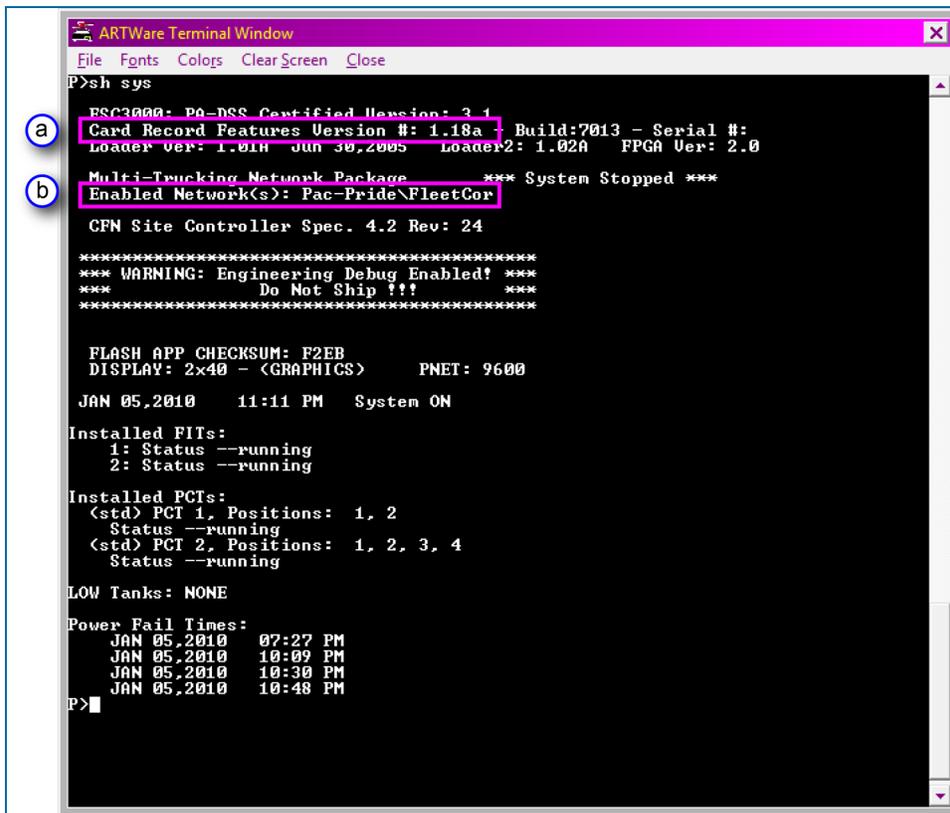
To cold start the FSC3000™:

1. Power down the unit by unplugging the power cord on the rear panel.
2. Plug the power cord back in and at the same time, push and hold the two (2) front panel buttons.
3. A “Beep” will sound.
4. Release the front panel buttons.
5. The front panel display will show that the FSC has been cold started.

Make sure the system is operational.

After the manual Cold Start is complete:

- Reconnect ARTWare.
- Log back in to the FSC3000 with the Cold Start default login (Hello, Hello).
- From the “Online” menu, select **Open Terminal**. This will open the ARTWare terminal window and give you a command-line interface to the FSC3000.
- Push **Enter**. The privileged prompt **P>** will come into view.



```

ARTWare Terminal Window
File  Fonts  Colors  Clear Screen  Close
P>sh sys
FSC3000: PO-DSS Certified Version: 3.4
Card Record Features Version #: 1.18a  Build:7013 - Serial #:
Loader Ver: 1.01H JUN 30,2005  Loader2: 1.02A  FPGA Ver: 2.0
Multi-Trucking Network Package          *** System Stopped ***
Enabled Network(s): Pac-Pride\FleetCor
CFN Site Controller Spec. 4.2 Rev: 24

*****
*** WARNING: Engineering Debug Enabled! ***
***           Do Not Ship !!!           ***
*****

FLASH APP CHECKSUM: F2EB          PNET: 9600
DISPLAY: 2x40 - <GRAPHICS>
JAN 05,2010  11:11 PM  System ON

Installed FITs:
 1: Status --running
 2: Status --running

Installed PCTs:
<std> PCT 1. Positions: 1, 2
      Status --running
<std> PCT 2. Positions: 1, 2, 3, 4
      Status --running

LOW Tanks: NONE

Power Fail Times:
JAN 05,2010  07:27 PM
JAN 05,2010  10:09 PM
JAN 05,2010  10:30 PM
JAN 05,2010  10:48 PM
P>

```

- At the **P>** prompt enter the Show System command (**sh sys**) and make sure:
 - “Card Record Features Version #.” is 1.20h (or higher).
 - “Pac-Pride/Fleetcor network is enabled.”



IMPORTANT: If the above information is not correct, stop and contact OPW Technical Support, 1-877-OPW-TECH (877-679-8324).

Once the above has been confirmed, the FSC must be manually configured to support the Pacific-Pride Controller/Switcher for ISO table downloads and correct polling support. To do this:

- Type **Set Network** at the **P>** prompt in the opened terminal window.
- Push **Enter**.

```

ARTWare Terminal Window
File  Fonts  Colors  Clear Screen  Close
P>set netw

NETWORK CHOICES

 1 - Pac-Pride\FleetCor
 8 - Set Time Zone
 9 - Set Fleet Table
10 - Perform Communication Test
11 - Set Forced Trans Capture Time
12 - Force Transaction Capture.....723 Seconds on Primary Host
13 - Print Price and Total on Network Receipts: No
    Display Price on Terminal Display: No
14 - Configure Host Port(s) and devices

Enter option number or press [RETURN] to exit: 1
NETWORK option settings          NETWORK : Pac-Pride\FleetCor

 1 - Site ID.....
    Originator ID..... 1
 2 - Site Name.....
 3 - Site City.....
 4 - Site State.....
 5 - Redial Attempts..... 1
 6 - Connect Time.....(Seconds).... 30
 7 - Local Authorization..... Disabled
 8 - Network System..... ON
    ON..... 12:00 AM
    OFF..... 12:00 AM
 9 - Authorization Message..... ^0^FHAUE A SAFE TRIP
10 - Re-Prompt Time... (Minutes).... 10
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Call Statistics:
    Answered: 0  Failed: 0  Busy: 0  Connect Time (secs): 0
13 - Additional Cards Processed:
    Pride Advantage..... Yes
    CFM/Fuelman Dual Network.... No
    Chevron Diesel Advantage.... No
    Comdata ComChek..... No
    EFS/EFS (Memphis)..... No
    EFS/TChek..... No
    EFS/TCH..... No
    Fleet One..... No
    ISO based:
    Fuelman & Gascard..... No
    MasterCard Fleet..... No
    WEX..... No
    Uoyager..... No
14 - Connect after prompts complet.. Yes
15 - Host Status..... Host DISABLED
16 - Pac-Pride Controller Support... Disabled

Enter option number or press [RETURN] to exit: 16
Activate Pride Controller Support (Y/N)? y
Enter option number or press [RETURN] to exit:

```

- When the “Network Choices” menu options come into view, type **1**.
- Push **Enter**.
- After the “Pac-Pride/FleetCor” network options come into view, type **14**.
- Push **Enter**.
- Type **Y** (this is to avoid a decline response to "Unable to process: 17").
- Push **Enter**.
- Select option **16**.
- Push **Enter**.
- Type **Y** and push **Enter** to “Activate Pride Controller Support.”

- Push **Enter** two (2) times to go back to the **P>** prompt.



IMPORTANT: For software version 1.20h installation: Type **Show Network** at the **P>** prompt and verify that "No" is set for #13 under NETWORK CHOICES.

3.2.4 Set Time and Date

- To **Set Time** type: **Set Time** and push **Enter**.
 - Enter the time (XX:XX AM/PM): (You can enter in 24 hour or AM/PM format)
- To **Set Date** type: **Set Date** and push **Enter**.
 - Enter the date (MMM DD, YYYY): (Month is entered as APR for April, JUN for June, etc.)
- Push **Enter** two (2) times to go back to the **P>** prompt.
- Close the terminal window.

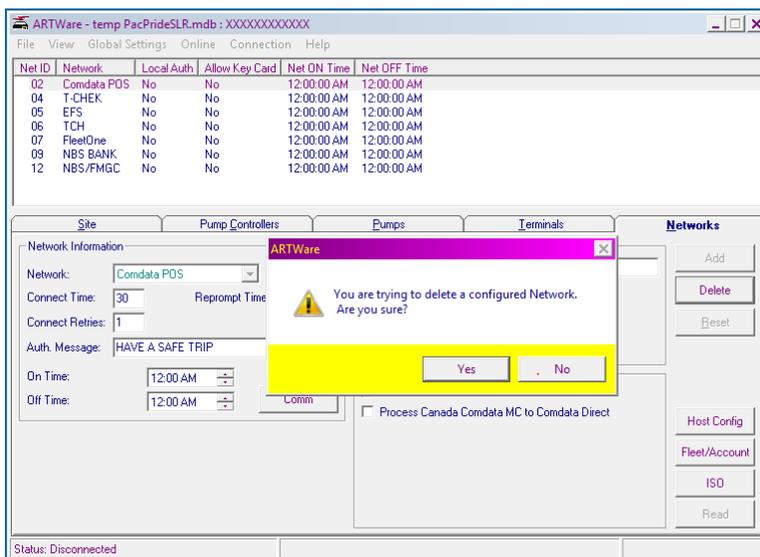
Section 4 Reconfigure Network Settings

In support of the Switcher/Controller Sunset project, the processing of private fleet cards has been changed so all traffic routes through a single network host. Follow the steps below to support this configuration change.

1. On the "Site" tab in ARTWare, select the site that was backed up in "Site Backup" on page 6.
2. Click on the **Networks** tab.
3. Select the first network in the list and click **Delete**. Repeat until all networks have been deleted.



NOTE: Answer "Yes" to the pop-up question, "You are trying to delete a configured Network. Are you sure?" asked for each network that you delete. See the screen capture below.



4. When all networks have been deleted, click **Add**.
5. Select **CFN** from the network dropdown.
 - a. In the "Site/Merchant ID" textbox, enter the the 5 digit site number *Solvone* has provided for this site.
 - b. Click **Save**.
6. Click the **Fleet/Account** button on the "Network" tab.
 - a. Click on the first row and select **CFN** from the network type dropdown.
 - b. Under "Fueling Limits" set the "Online" limit to **9999**.
 - c. Set the "Offline" limit to a value that the local merchant is willing to allow. A value of 50-100 is recommended.
 - d. Set the "Primary Phone Number" to: **18883058979**. The Secondary phone is 18883058980.

- e. Click **Save**.
7. From the "Online" menu select **Send** and **All Settings**. This will send all configuration settings to the FSC3000.
8. From the "Online" menu select **Initialize Peripherals**.
9. From the "Online" menu, select **Open Terminal** to reopen the ARTWare terminal window.
10. Push **Enter** to get the **P>** prompt.

Section 5 Memory Setup

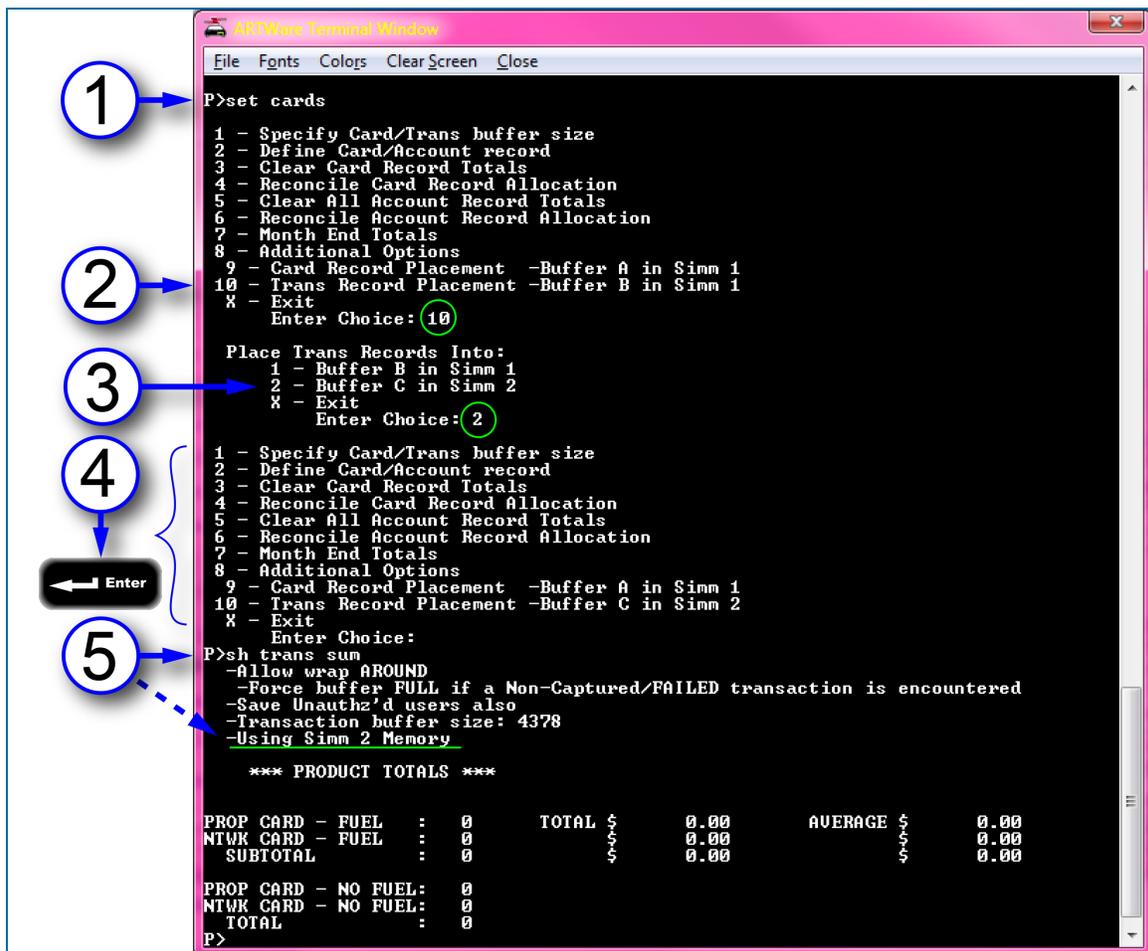
Before uploading any configuration in ARTWare, you must reallocate memory for the storage of transactions and diagnostic information.



NOTE: Captive Sites will not have a second SIMM and can ignore all SET COMM setup instructions.



IMPORTANT: If you have two (2) installed SIMMS and you receive an error message in step 2 below, go to "Dual SIMM Error" on page 30 for additional steps.



```

ARTWare Terminal Window
File  Fonts  Colors  Clear_Screen  Close

P>set cards
1 - Specify Card/Trans buffer size
2 - Define Card/Account record
3 - Clear Card Record Totals
4 - Reconcile Card Record Allocation
5 - Clear All Account Record Totals
6 - Reconcile Account Record Allocation
7 - Month End Totals
8 - Additional Options
9 - Card Record Placement -Buffer A in Simm 1
10 - Trans Record Placement -Buffer B in Simm 1
X - Exit
Enter Choice: 10

Place Trans Records Into:
1 - Buffer B in Simm 1
2 - Buffer C in Simm 2
X - Exit
Enter Choice: 2

1 - Specify Card/Trans buffer size
2 - Define Card/Account record
3 - Clear Card Record Totals
4 - Reconcile Card Record Allocation
5 - Clear All Account Record Totals
6 - Reconcile Account Record Allocation
7 - Month End Totals
8 - Additional Options
9 - Card Record Placement -Buffer A in Simm 1
10 - Trans Record Placement -Buffer C in Simm 2
X - Exit
Enter Choice:

P>sh trans sum
-allow wrap AROUND
-Force buffer FULL if a Non-Captured/FAILED transaction is encountered
-Save Unauthz'd users also
-Transaction buffer size: 4378
-Using Simm 2 Memory

*** PRODUCT TOTALS ***

PROP CARD - FUEL      : 0      TOTAL $      0.00      AVERAGE $      0.00
NTWK CARD - FUEL      : 0      TOTAL $      0.00      AVERAGE $      0.00
SUBTOTAL           : 0      TOTAL $      0.00      AVERAGE $      0.00

PROP CARD - NO FUEL  : 0
NTWK CARD - NO FUEL  : 0
TOTAL               : 0
P>
  
```

Figure 5-1 Memory Setup

1. Issue the **set cards** command.

2. Select option 10, "Trans Record Placement - Buffer B in Simm 1" and type **10** after "Enter Choice" and push **Enter**.
3. When prompted to "Place Trans Records into:" select option 2 for "Buffer C in SIMM 2," type **2** after "Enter Choice" and push **Enter**.
4. When the "Set Cards" menu re-displays 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 to reference daily processes and operations.

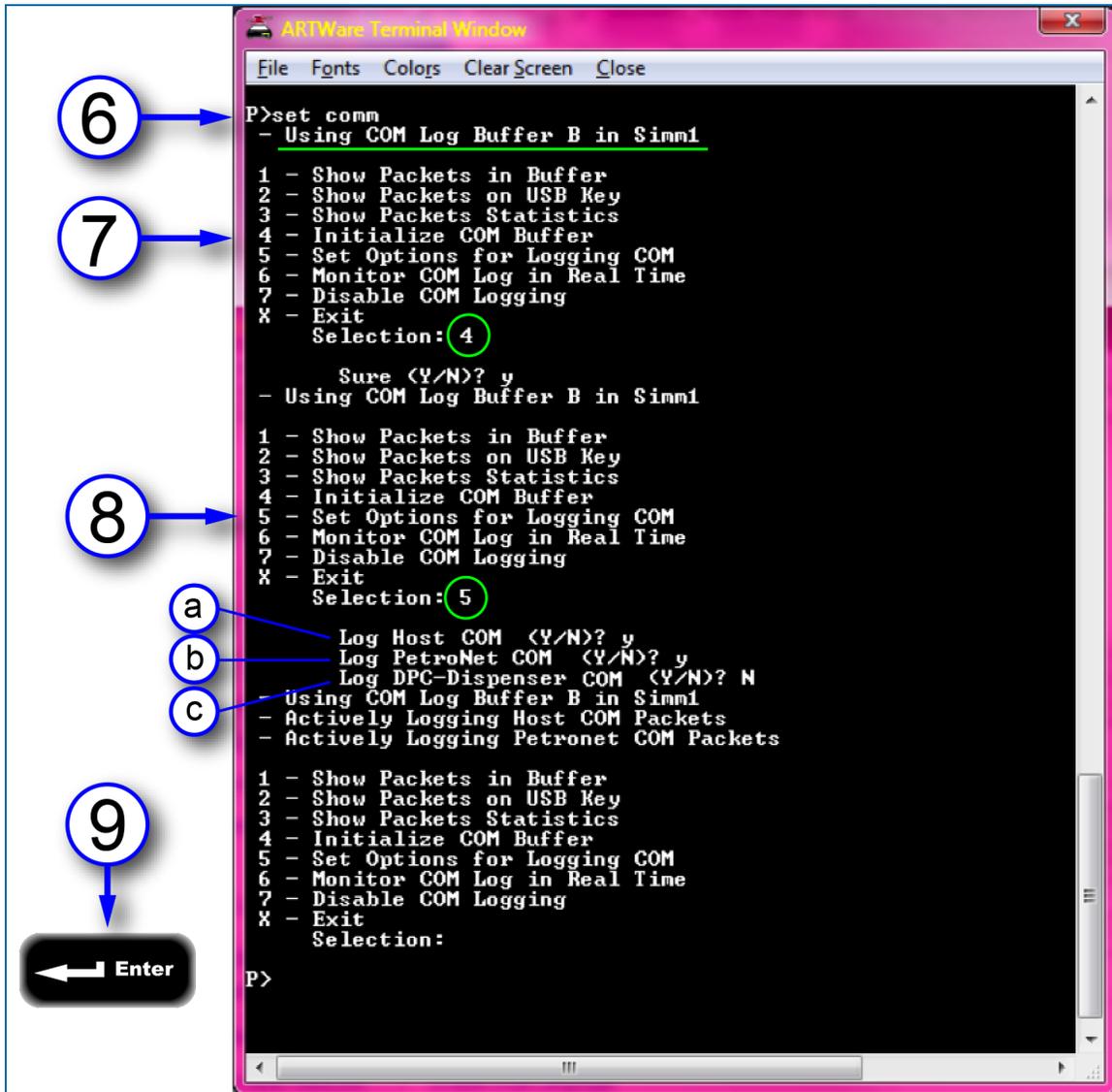


Figure 5-2 Configure Serial Port Communications

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 "Initialize COM Buffer;" type **4** after "Selection" and push **Enter**.
8. Select option 5 "Set Options for Logging COM;" type **5** after "Selection" and push **Enter**.
 - 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.

5.1 Change Password

1. Type **Set Admin** and select 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 make sure that the following data is returned by the FSC.

```
P>sh trans cf
0000/0000000000/abcdefghijklm/90 <- Push Enter for termination string
//
P>
```

Section 6 Final Setup for “Pac-Pride/FleetCor” Host

Use the terminal window, logged in as **Admin** (use the Admin password that was set up in "Change Password" on page 16).

- Type the **SET NETWORK** command.
- Enter ‘1’ from the “Network Choices” menu.
- Push **Enter**.



```

ARTWare Terminal Window
File  Fonts  Colors  ClearScreen  Close
8 - Network System..... ON
   ON..... 12:00 AM
   OFF..... 12:00 AM
9 - Authorization Message..... ^0^FHAUE A SAFE TRIP
10 - Re-Prompt Time... <Minutes>... 10
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Call Statistics:
   Answered: 0   Failed: 0   Busy: 0   Connect Time <secs>: 0
13 - Additional Cards Processed:
   Pride Advantage..... No
   CFN/Fuelman Dual Network.... Yes
   Chevron Diesel Advantage.... No
   Comdata ComChek..... No
   EFS/EFS <Memphis>..... No
   EFS/TChek..... No
   EFS/TCH..... No
   Fleet One..... No
   ISO based:
   Fuelman & Gascard..... No
   MasterCard Fleet..... No
   WEX..... No
   Uoyager..... No
14 - Connect after prompts complet.. Yes
15 - Host Status..... Host DISABLED
16 - Pac-Pride Controller Support... Active

Enter option number or press [RETURN] to exit: 13
Process Pride Advantage Cards <Y/N>? y
Process CFN/Fuelman Dual Network Cards <Y/N>? N
Process Chevron Diesel Advantage Cards <Y/N>? N
Process Comdata ComChek Cards <Y/N>? y
Process EFS <EFS Memphis> Cards <Y/N>? y
Process EFS <TChek> Cards <Y/N>? y
Process EFS <TCH> Cards <Y/N>? y
Process FleetOne Cards <Y/N>? y
Process ISO enabled Fuelman & Gascard Cards <Y/N>? y
Process ISO enabled MasterCard Fleet Cards <Y/N>? y
Process ISO enabled WEX Cards <Y/N>? y
Process ISO enabled Uoyager Cards <Y/N>? y

Reset ISO table to default values?
You will be required reconfigure and activate needed cards.
!!! CAUTION !!! Resetting the ISO table will require you to reconfigure all accep
ted cards.
RESET ISO TABLE NOW? N
--- Reset aborted, no change made.
Enter option number or press [RETURN] to exit: █

```

- When the “Network Choices” menu options come into view, type **13**.

- Push **Enter**.
- As shown in the image above, answer 'Y' and Push **Enter** for each of the card processing prompts presented, *except* for two of the card types that are not designated for processing at Pacific-Pride locations at this time.



NOTE: Pacific Pride will alert the marketer if either of these cards are added to their existing card deck.



NOTE: Option 7: "Local Authorization" should not be enabled for use without consulting the site owner. The site owner will be responsible for all disputed transactions processed in Local Authorization mode.

- When the "Network Choices" menu options come back into view, type **15**.
- Push **Enter** to enable Pac-Pride\FleetCor Host for processing.
- Push **Enter** to return to the SET NETWORK menu.
- Push **Enter** to return to the Command Line.
- Type the **SHOW FLEET** command.
 - If the entry's "NAME" field shows **CFN**, make a note of the information.
 - ◆ Type the **SET FLEET** command. Select the applicable row and **DELETE** it.
 - Select the row again and recreate with the same **Phone#**.
- Close the terminal window.



REMINDER: If you previously set the Baud Rate to 9600 to speed up the upgrade process, you must go back to the COM Port settings and set the Baud Rate back to **2400** before you disconnect from ARTWare.

- Select **Disconnect** from the "Connection" menu and then close ARTWare. The site configuration will be saved automatically.

The Pacific Pride controller in the marketer's office must now communicate with the FSC3000 and download the marketer's pricing and card-acceptance parameters.

- Disconnect the direct-connect cable and use cable P/N: 20-1517-01 to reconnect the Modem Switchbox to Port 1. Make sure the modem is powered-up and connected to a phone line.
- Contact the Franchisee's Pacific Pride Controller operator to prepare for a download.

Section 7 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 if any of the following have been set differently than the old configuration by the OPW technician during the install.:

1. Franchisee maintains Pacific Pride Controller Site Master Record.
 - a. *Option #2* on the Master File Maintenance and Listing Menu.
 - i. *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.
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.

Section 8 Verify Download



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 ISO 28 is the Pride Advantage card 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 differences are found, either reconfigure the pumps to correspond with the ISO table.



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. Ensure a USB key is installed 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 9 Startup, Testing and Troubleshooting

9.1 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.

9.2 Testing

9.2.1 Testing the OPW Ethernet IP Gateway for Network Authorization

1. Using a Pac-Pride Advantage Card, swipe it at a fuel island terminal. Enter the requested prompts.
2. The terminal should switch to "Processing Please Wait" followed by either the MISC prompt or a Pump Number prompt. After entering the prompts a Use Pump message should come into view. The card has been authorized, host connection confirmed.



NOTE: If "Unable To Process" is shown, a connectivity problem exists. Check output cable connections and confirm the Status light is flashing green (1 sec) on the Abierto IP Converter.

9.2.2 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 have 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.

9.3 Data Collection

Once testing is complete, the site owner 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.
 - 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: Once this operation is done, notify SolvOne that the installation is complete and the site is operational.

9.4 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 your 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 the **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.
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 "[Troubleshooting](#)" on the previous page 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 - CFN Product Codes



NOTE: Use the table below to validate the existing CFN codes configured in ARTWare (and/or your FSC) are aligned to the names shown in the table below. **A CFN Code can not be duplicated anywhere within this table.**

Pride Column in Fueltype Table	CFN Column in Fueltype Table	Product Description
01-001	19	LEADED SUBSTITUTE GASOLINE
02-002	4	UNLEADED REGULAR GASOLINE
03-003	1 - if site is not in CA;3 - if site is in CA	DIESEL #2 LOW SULFUR;DIESEL#2 CARB (CA Only)
04-004	6	UNLEADED PREMIUM GASOLINE
05-005	7	OIL QUART
06-006	60	WEIGH SCALES
07-007	79 - Domestic/Local Sales Only	PARTICIPANT USE
07-008	78 - Domestic/Local Sales Only	PARTICIPANT USE
07-009	20	AVIATION GASOLINE
05-010	8	OIL GALLON
11-011	13 - if site is not in CA;15 - if site is in CA	DIESEL #1 LOW SULFUR;DIESEL #1 CARB (CA Only)
04-012	61	RACING GAS UNLD 100
04-013	19	LEADED SUBSTITUTE GASOLINE
06-014	55	CAR WASH
05-015	75	HYDRAULIC OIL (GALLON)
06-016	70 - Domestic/Local Sales Only	PARTICIPANT USE
06-017	71 - Domestic/Local Sales Only	PARTICIPANT USE
12-018	5	UNLEADED MID-RANGE GASOLINE
03-019	41 - if site is not in CA;43 - if site is in CA	DIESEL #2 LS PREMIUM;DIESEL #2 CA PREMIUM
11-020	22	KEROSENE - CLEAR
05-021	79	SUPER PLUS 15-40 (QUARTS)
17-025	38 - if site is not in CA;23 - if site is in CA	DIESEL #2 ULTRA LO SULFUR DYED;DIESEL #2 CARB RED DYE
18-026	17	PROPANE
19-027	16	COMPRESSED NATURAL GAS
17-028	38 - if site is not in CA;23 - if site is in CA	DIESEL #2 ULTRA LO SULFUR DYED;DIESEL #2 CARB RED DYE
19-029	28	LIQUID NATURAL GAS
06-030	72 - Domestic/Local Sales Only	Participant Use
05-031	8	OIL GALLON
05-032	78	SOLVENTS (GALLON)

Pride Column in Fueltype Table	CFN Column in Fueltype Table	Product Description
06-033	73 - Domestic/Local Sales Only	PARTICIPANT USE
06-034	74 - Domestic/Local Sales Only	PARTICIPANT USE
06-035	75 - Domestic/Local Sales Only	PARTICIPANT USE
17-038	31 - if site is not in CA;33 - if site is in CA	DIESEL #1 HIGH SULFUR RED DYE;DIESEL #1 CARB RED DYE
06-039	56	TRUCK WASH
01-040	29	E85 UNLD (85% ETHANOL)
17-041	32	KEROSENE - DYED
05-042	77	CHAIN BAR OIL (GALLON)
05-043	76	PREMIUM HYDRAULIC OIL (GALLON)
03-044	69	BIODIESEL B20 ULTRA LO SUL #2
03-045	53 - if site is not in CA;3 - if site is in CA	ULTRA-LO DIESEL #2;DIESEL #2 CARB (CA ONLY)
17-047	50	BIODIESEL B20 ULTRA LO DYED #2
02-050	44	Gasoline Unl Reg Eth 10%
02-051	84	REG UNLD ETHANOL 7.7
12-053	45	Gasoline Unl Mid Eth 10%
12-054	85	MID UNLD ETHANOL 7.7
04-056	46	Gasoline Unl Prem Eth 10%
04-057	86	PRE UNLD ETHANOL 7.7
17-059	21 - if site is not in CA;23 - if site is in CA	DIESEL #2 HIGH SULFUR RED DYE;DIESEL #2 CARB RED DYE
11-060	39 - if site is not in CA;15 - if site is in CA	DIESEL #1 ULTRA LO SULFER;DIESEL #1 CARB (CA ONLY)
03-061	80 - if site is not in CA;43 - if site is in CA	ULTRA LO PREMIUM DIESEL #2;DIESEL #2 CA PREMIUM
03-064	66	BIODIESEL B2 LO SULFUR #2
03-065	67	BIODIESEL B5 ULTRA LO SUL #2
03-066	68	BIODIESEL B10 ULTRA LO SUL #2
03-067	92	B11
20-069	54	BIODIESEL B99 ULTRA LO SUL #2
17-070	47	BIODIESEL B2 ULTRA LO DYED #2
17-071	48	BIODIESEL B5 ULTRA LO DYED #2
17-072	49	BIODISEL B10 ULTRA LO DYED #2
05-076	57	DEF Gallon
05-077	59	DEF Bulk
16-080	96	WASHROOM FACILITIES
16-081	96	WASHROOM FACILITIES

Appendix B - 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



NOTE: When FleetCor / CFN Network is set up, there is only one Network displayed.

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

```
Display ALL COM Packets (Y/N)?
Display PetroNet Packets (Y/N)?
Display Host Packets (Y/N)?
```

(To display ALL data collected thus far)
(Show Petro-Net comm packets)
(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: TChk
- 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.



NOTE: Bypass is not applicable to a Pacific Pride site upgrade.

Here is a sample communication with the Bypass 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=xxxxxx23456789 [FS] [FS] 2 [FS] 1000 [FS] [FS] [FS]
[FS] 000012 [FS] [FS] 0416141442 [FS] 1 [FS] 111 [FS] 054 [FS]
005003900010030000000000000000000000VOW001 [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

Appendix C - Dual SIMM Error

If you received an error message in "Memory Setup" on page 14 step 2, see the instructions that follow.

Go to **P>set comm** ("Configure Serial Port Communications" on page 15).

Select option 7 - **Disable Comm Logging**. This will release SIMM 2.

Go back to **P>set cards** ("Memory Setup" on page 14).

Step 3, select **Buffer C in SIMM 2**.

Go back to **P>set comm** and complete steps 6-9.

Complete the steps under "Change Password" on page 16.

Go to "Cold Start Procedure" on page 8 and do the steps from **after** the cold restart.

Go to "Final Setup for "Pac-Pride/FleetCor" Host" on page 17 and complete the setup.

Revisions M030002-F

Revision #	ECO	Effective	Software Version	Key Changes
0	643	9/22/14		Initial Release
1	652	10/21/14		Remove Pac Pride support contact info
2	656	11/4/14		Added support docs in suite w/refs
3	686	2/6/15		Add/update Important notes; customers not following steps correctly
4	1689	2/6/20		January 2020 updates
5	1740	5/13/20		Set Fleet issue in ARTWare fix



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

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.



INNOVATIVE SOLUTIONS FUELING BUSINESS SUCCESS WORLDWIDE



Dover Fueling Solutions Global Locations

Corporate Headquarters
3814 Jarrett Way
Austin, Texas 78728
United States
Phone: +1 512 388 8311
www.doverfuelingsolutions.com

North America

Richardson, TX, USA
Hodgkins, IL, USA
Brighton, Ontario, CAN

Latin America

Rio de Janeiro, Brazil

Europe

Midlothian, UK
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