



M00-051.00 - FSC3000™

Fuel Site Controller

Command-Line Configuration Guide



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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NOTE: This configuration guide was created for the purpose of training and assisting technicians on how to configure FSC3000™ systems. All configuration values must be set up to meet the customer's site conditions and/or needs. The technician should read the guide in its entirety.
The information in this manual is applicable to Software Version 1.12 and above. It is possible that older software versions might not support all features.

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Introduction

This ARTWare™ (FSC) Command-Line guide is specifically written in support of the standard offering software referred to as "FSC3000 Multi-trucking Network Package, Standard Card Record Version." There are other software versions of the FSC3000™ family available for purchase and their command-line user interface generally operates based on the information provided within this manual (Except for Network related information). Contact your local Sales Representative or the OPW Tech Support group for information and commands specific to those versions of software.

For extended information related to the installation and support of the FSC3000™ in regards to PCI DSS compliance please reference the "M030001 PA1 PA-DSS Implementation Guide.pdf."



NOTE: The M030001 PA1 PA-DSS is provided as a printed version with every FSC shipped with the FSC3000™ Multi-trucking software. Contact your local distributor if this manual was not provided to you as the fuel site owner. You can also download the PA-DSS Implementation Guide from the OPW web site www.opwglobal.com.

Section 1 Getting Connected

1.1 Communication Parameters

Baud Rate 2400, 9600, 19200, 38400 Data Bits 7 Parity Even Stop 1

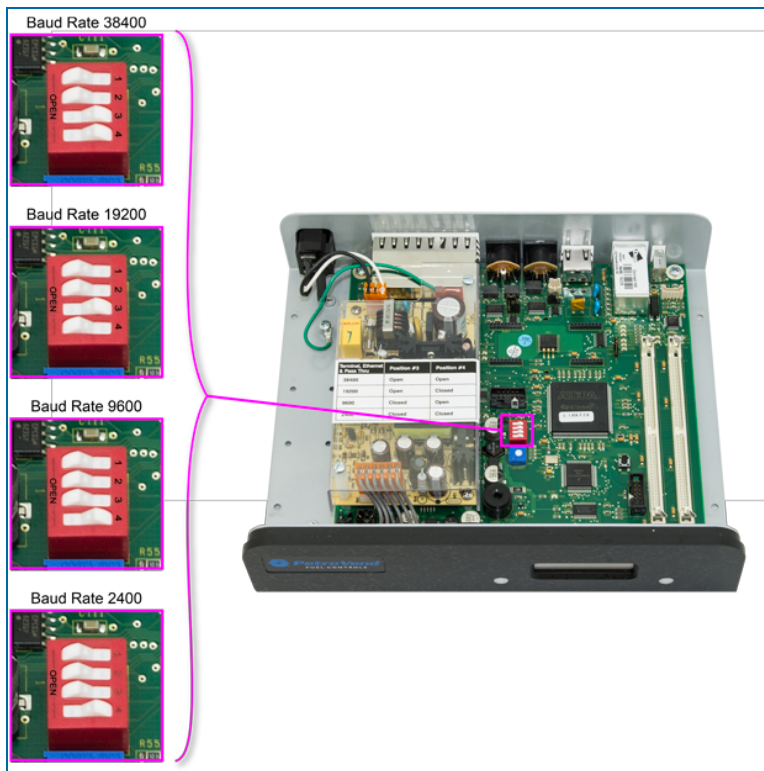


Figure 1-1 SW1 - Baud Rate Settings



NOTE: Baud Rate will affect Terminal, Ethernet, Modem and pass-through port connections.

1.2 Connection Methods

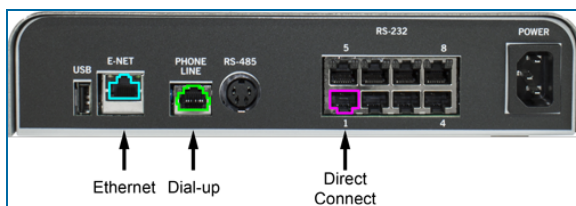


Figure 1-2 FSC3000™ Connections

1.3 Additional Connection Methods

The FSC3000™ allows for other, additional connection methods besides the standard internal modem normally available, including the Bluetooth®, Cell Modem, and WiFimodem. To utilize these additional connection methods, verify that the proper socket device type is shown on the FSC3000™ under the SHOW FLAGS data (see above).

Bluetooth® (Socket device #2) and Cell (Socket device #4) connection methods are not currently available.



NOTE: Bluetooth® and Cell Modem are not allowed for use when a PCI compliant network is enabled. These devices are automatically disabled by the FSC.

1.3.1 WiFi Modem

WiFi (Socket device #3)

To set up the WiFi Modem connection method, first connect to the FSC3000™ using either a direct-connect serial cable or the Ethernet port.

The “Set WiFi” command is used to enter the settings needed for communication with the network access point (typically a wireless router). From the command line, type: `Set WiFi`.

If the modem is not found, it will be reported as “not found” and no settings can be entered. In this case, the modem is either not installed, or inoperable. Likewise, if a different modem is enabled, this will be reported. Otherwise, the following dialogue is used to enter settings. Based on your answers, some parts of the dialogue will be omitted.

```
P>set wifi
WiFi Modem Enabled
Enter Access Point Name (SSID): MyWirelessRouter(Router-Specific response)
Select WiFi Security:
1. WPA2 (Recommended)
2. WPA
3. WEP128 (Not PCI Compliant)
4. WEP64 (Not PCI Compliant)
5. None (Disables Security)
Enter Security Mode: 1 (Router-Specific response)
Enter Security Key: MyPassword(Router-Specific response)
Dynamic IP Address (DHCP On) (Y/N)? N (Router-Specific response)
Change Static IP Address: 0.0.0.0 (Y/N)? Y
New: 192.168.1.105 (Router-Specific response)
Change Gateway Address: 192.168.1.1 (Y/N)? Y
New: 192.168.1.1 (Router-Specific response)
Change Subnet Mask: "255.255.255.0" (Y/N)? N (Router-Specific response)
```

Periodically force modem reset if no call received (Y/N)? Y (normally "N")

Reset modem if more than __ hours pass since last call (1-72)? 25

Reset Modem Now? y

The access point name and security settings are the same name that you would use connecting a laptop to your wireless network.

If your network automatically assigns IP addresses, answer yes for DHCP On. If answered "yes", you will not be asked for the various IP addresses. If "no", you'll need to set the device's IP address, the gateway address and the subnet mask.

The option is given to periodically reset, or reboot, the WiFi modem. In most cases this should be left off. However, if a site has intermittent connection issues, the modem can be set to automatically reset if it nothing connects to it for the set amount of hours. For instance, if the WiFi is only used to remotely gather totals every night at 2:00 AM, then a setting for 25 hours will cause a reboot if no connection was seen by 3:00 AM the following day.

Lastly, you'll be asked if you wish to reset the modem now. Normally answer "y". If you need to change a setting, answer "n" then use "SET WIFI" to correct the setting. If no restart is performed, the settings won't take effect until the next restart.



NOTE: This only resets the modem, not the entire FSC3000™; however, if you are connected via WiFi, this will drop your connection.

Once the modem resets (using a PC connected on the same network) login to the FSC3000™ using a terminal emulation program with the IP address of the socket modem.

SHOW WiFi – If "Set WIFI" hasn't been used to give the modem any settings, "SHOW WIFI" will report:

Wi-Fi not set yet, use SET WIFI

The "Show WiFi" command will first tell what socketdevice the flags are set for, if any. If it reports "No Modem Enabled" or "Cell Modem Enabled", for example, then the wrong flag is set. If a modem is plugged in and set up, the command-line will resemble the following:

```
P>show wifi
WiFi Modem Enabled
Access Point Name (APNSERV): MyWirelessRouter (Router-specific response)
WiFi Security: WPA2 (Recommended)
Security Key: MyPassword (Router-specific response)
Static IP Address: 192.168.1.200
Gateway Address: 192.168.1.1
Subnet Mask: "255.255.255.0"
Port Number: 10001
Periodic WiFi resets: Off
WiFi status: Configured
Show Modem Responses (Y/N)? N
```

SHOW SYSTEM

As part of the "Show System" command, if the option flag for the **WiFi** modem has been set, just after version information, it should show "WiFi Modem:" followed by:

Not Found: Either there is no physical modem plugged into the socket, or it is not communicating

Not Configured: The modem is present, but user has not used "Set **WiFi**" to give the modem connection information

Configuring: The modem has been given setup information, but has not yet seen the access point

Configured: The modem has at some time connected to the access point. It may or may not be connected to the access point at this instant, but the given settings are proven to be valid:

```
P>show sys
FSC3000: R/W Chipkey
Card Record Version #: 6.01a - Built: 7/01/11 - Serial #:
Loader Ver: 1.01A June 20,2005 Loader2: 1.02A FPGA Ver: 3.0
Wifi Modem: Configured
```



IMPORTANT: The FSC3000's network port setting is set to 2101 during manufacturing. It might have been changed during the FSC3000's network setup. Make sure the port settings match.

Section 2 Passwords

The FSC3000™ (FSC) is designed to meet PA-DSS requirements for support of system access, password control and configuration. This section provides an overview of these controls.

Password support has been designed to provide the control necessary to manage the system and let the merchant/site owner meet their needs under PCI DSS compliance. A predefined “**Admin**” user and “**Partial**” access user are available under a new installation (cold started system). A “**Remote**” access password is always a requirement when entry through the internal modem or TCP/IP port is made.



IMPORTANT: Phoenix for Windows users: there is a character limit of 10 total characters for the Partial Access mode.
and users: there is a character limit of 15 total characters for the Partial Access mode and Remote Access passwords.

Under initial configuration of a cold started FSC, the system has been designed to allow site configuration by a **Partial** user using the default login (issue “hello” with password of “hello”). To be PCI compliant a card swipe is not allowed at a fuel island terminal until the default passwords have been changed and the system has been started.



NOTE: Pump control testing can be done by issuing the “SET PUMP ON” command.

To start the system it is recommended that the installer have the site owner issue the “SET ADMIN” to modify the default passwords for **Remote**, **Partial** and **Admin**. If necessary the site owner can then create one of five (5) additional users for the installer to complete operational tests or provide an employee access to the system. See below for more information on creating users.



IMPORTANT: It is required that after the Admin password is changed the site owner should record it and store it in a safe and secure location. **If the Admin password is lost it cannot be retrieved from the system and a cold start will be required.**

Below are some basic guidelines for password management. Please refer to your **M030001_PA1 PA-DSS Implementation Guide** for additional information:

1. Change Partial, Remote and user passwords every 90 days (Admin password will be forced to change every 90-days).
2. When changing passwords, the new password should not be the same as any of the previous four (4).
3. Passwords for Admin, Partial, Remote and users should always be unique.



IMPORTANT: If the User or Admin passwords are entered incorrectly six (6) consecutive times, the User or Admin will be suspended for 30 minutes before another login attempt is allowed. If the Admin is not locked out, the Admin can reset the User password with the “SET ADMIN” command.

Although the system access and password control discussed above is always in place, additional controls are imposed when the follow networks are enabled. As the site owner, you are required to maintain PCI DSS compliance when these networks are in use at your fuel site(s).

Bankcard processing hosts:

Buypass (Firstdata)
NBS Bank
Paymentech (Chase)

MasterCard Fleet processing hosts:

Comdata (Terminal Fuel)
ComdataPOS (Retail Host)
T-Chek or TCH (EFSLLC)
CFN

For further information on installing your system, refer to M030001 (U.S.) or M030007 (U.S and Canada EMV) "Payment Application Data Security Standards (PA-DSS) Implementation Guide for Maintaining PCI Compliance on the FSC3000™ Fuel Site Controller."



IMPORTANT: Reading the PA DSS guide is required for System Installers and Controlling Merchants for PCI DSS compliance.

2.1 Security Levels

2.1.1 Remote Access (Modem or Ethernet)

The **Remote Access** password is required when accessing the FSC3000™ system using the internal dial-in modem or Ethernet network port. The default, case-sensitive password is "hello". This password will automatically be requested when first connected to the FSC3000™. Once the Remote Access password is entered, the system prompt "r>" or "l>" will be displayed (where r> = modem and l> = Ethernet).

2.1.2 Partial Access (or "Main Password")

The **Partial Access** password is accessible from the system prompt "r>" or "l>". When "hello" is entered, the system prompt "ENTER MAIN PASSWORD:" will be displayed. The default, case-sensitive **Partial Access** password is "hello". This password functions in two (2) ways. Once the **Partial Access** password is entered, the **Partial Access** prompt will be displayed.

Direct connected - "P>"
Modem connected - "R>"
Ethernet connected - "L>"

1. Prior to "SYSTEM START" command:

This password will allow full access to every command for initial configuration. Because the system is not yet started, cards will not be processed.

2. After "SYSTEM START" command:

The Partial Access password will be limited to these select commands:

Show - System, Version, Flags, PCT x, FIT x, VIT x, Transaction CF
Install Pump x (clear pump sentry)
Set Fueltype (change product prices
PCF Automated management commands - Card backup/restore/update
Passthru

2.1.3 User Access

The system supports up to five (5) defined users that have access to all commands except "SET ADMIN, SET NETWORK, or SET FLEET." Individual users can be set up to see bank card ISO numbers (first six (6) digits) in the transactions when performing "SHOW TRANSACTION" commands. Users can also be limited to the number of days of system access. To access the system using a User password, type "LOGIN" <user name>. A prompt for the User's password will be displayed. Once the User password is entered, the user prompt "(User Name)>" will be displayed.

2.1.4 Admin Access

The **Admin** is the predefined user who has access to every command. It is recommended that the Admin account only be used if the "SET ADMIN, SET NETWORK, or SET FLEET" commands are needed. **The Admin account is limited in access to the system through only a Direct or Dial-in connection. A User account is needed to access the FSC3000™ system if a TCP/IP connection is in use.** The **Admin** password should be stored in a safe location. Once the **Admin** password is entered, the prompt "Admin>" will be displayed.

2.2 Set Admin (Admin Login Required)

The **Set Admin** command allows for the management of the supported five (5) additional users of the system, and clears the system log. This command will not be available when connected using Ethernet. Once the FSC3000™ system is started, only the Admin will be able to access this command.

Type: Set Admin <ENTER>

Administrator Menu

1. Create User (free:x)
2. Delete User
3. Show User(s)
4. Change Password(s)
5. Clear Event Log

Select Administrator option or press [ENTER] to exit:

2.2.1 Create User

The **Create User** option allows up to five (5) other users of the system. Each user can be set up to either see or not see bankcard ISOs and can be configured to define a time limit (in days) to system access.

```
Enter a new (case sensitive) USER name: Tech (maximum 10 characters)
Passwords MUST be a minimum length of eight (8) characters (max 15), contain at
least one numeric digit, one lower-case character and one upper-case
character.Special characters are optional.
Enter Password for Tech: *****
Re-enter to confirm password: *****
When viewing transactions can this user see a bankcard's ISO (Y/N)? Y
Is this a time limited User (Y/N)? y
Enter number of days allowed (15 max): 15
USER "Tech" has been successfully created!
```

2.2.2 Delete User

The **Delete User** option allows for the deletion of users from the system.

2.2.3 Show User(s)

The **Show Users** option displays all users defined in the system. If the user was defined as a limited-time user, the user's remaining time will also be displayed.

Select "Administrator" option or press [ENTER] to exit: 3

```
User1: Tech - (limited time access: 1 day)
```

2.2.4 Change Passwords

The **Change Passwords** command changes the passwords for **Remote Login**, **Partial Access**, **Administrator** and all defined **Users**.

2.2.5 Clear Event Log

The **Clear Event Log** option clears the system log. Refer to Show Log (Saving Log) and the "M030001 PA1-PA-DSS Implementation Guide" before clearing the system log.

2.3 System Start

The **System Start** command is a one-time command that activates the FSC3000™ system, allowing transactions to be processed. Before this command can be performed, the "SET ADMIN" command (option 4) must be used to change the factory default passwords.

Type: System Start <ENTER>

```
ENTER "MAIN" PASSWORD:
ENTER "MODEM" PASSWORD:
ENABLE 'SHOW' PASSWORD (Y/N)?
```

2.4 Password Recovery

Due to the requirements of PA-DSS compliance, password recovery is no longer available. It is up to the system owner to secure the passwords. If the Administrator password is lost, the FSC3000™ system will require a cold start and must be reprogrammed to regain Admin access.

2.5 Cold Start Procedure

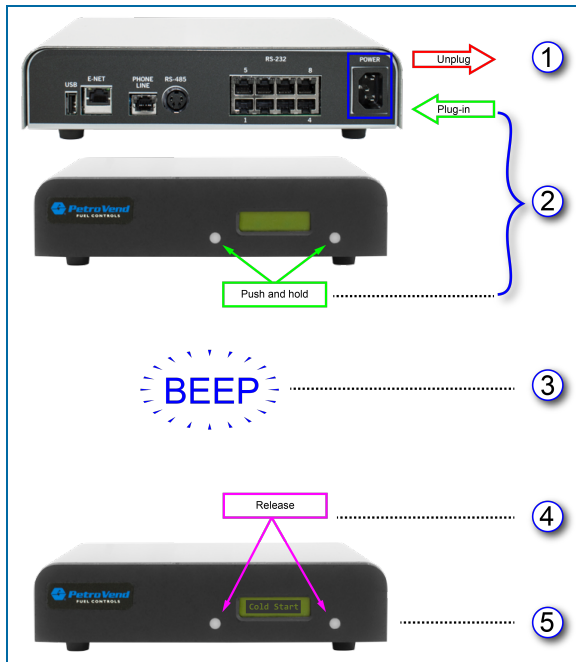


Figure 2-1 FSC3000™ Cold Start Procedure

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.



IMPORTANT: A cold start will reset the FSC3000 to factory default settings. All card records and transaction data will be erased.

On the initial FSC3000™ setup it is recommended that the distributor wait to issue the "Set Admin" & "System Start" commands until the system has been fully configured and tested. Pump control testing can be done by issuing the "SET PUMP ON" command. FIT functionality can be tested by swiping a card to receive the "System Stopped..." message.



NOTE: The "System Start" command must be issued before network testing can be performed.

Section 3 Show Flags

The FSC3000™ software has options that can be purchased. All software options should be verified to be correct when the FSC3000™ is received. To do this, issue the following command:

Show Flags <ENTER>

```

FSC3000      PA-DSS  Certified Version: 2.0
App Ver:     1.14c   Serial #: 123456
DPC Options: 10.04A  Gilbarco/Wayne
              11.01C  Tokheim
FPGA Ver:    2.0
Loader Ver:  1.02A   Jun 30, 2005
Loader2 Ver: 1.02B

MAX CARDS:           65000      (Maximum number of cards FSC3000 purchased)
SERIAL #:            12345      (Number needed when adding options to system)
MAX TRANS:           2000      (Maximum number of transactions FSC3000
                                purchased)
W&M 3 MIN PUMP TIMER: disabled  (Weights & Measures â€" max three-minute
                                total fueling times)
W&M PPU FLAG:        disabled  (Weights & Measures â€" only allows 1, 10,
                                100, 1000 pulse rates)
Not Used, Do Not Set: disabled  (Disabled)
Not Used, Do Not Set: disabled  (Disabled)
DPC FLAG:            ← ENABLED  (Allows direct control of electronic
                                dispensers)
AUTOGAS FLAG:        disabled  (Allows use of Autogas cards)
DUAL HOST AVAILABLE: disabled  (Allows 2 network connection devices â€"
                                modem, etc.)
PAC-PRIDE CARD RECORD: disabled (Pacific Pride Fueling Network)
RECORD BYPASS TRANS (SF024): disabled (Record transactions when pump in Bypass â€"
                                PCMs only)
COMDATA FLAG:        disabled  (Network)
T-CHEK FLAG:         disabled  (Network)
EFS FLAG:            disabled  (Network)
TCH FLAG:            disabled  (Network)
FLEET1 FLAG:         disabled  (Network)
CFNÂ FLAG:           disabled  (Network)
NBS/BANK FLAG (SF015): disabled  (PCI Network)
NBS/FMGC FLAG (SF016): disabled  (Network)
QUARLES FLAG:        disabled  (Network)
PAYMENTECH FLAG (SF025): ← ENABLED (PCI Network)
GENERIC NETWORK FLAG: disabled  (Network)
KARDALL IPH FLAG:    disabled  (Network)
INTEVACON NETWORK FLAG: disabled  (Network)
QUICK FUEL NETWORK FLAG: disabled  (Network)
FEDERATED NETWORK FLAG: disabled  (Network)
COMPANY CARD NETWORK FLAG: disabled  (Network)
ATIO-NET NETWORK FLAG: disabled  (Network)
IRVING FLAG:         disabled  (Network)

```

SHELL FLAG:	disabled	(Network)
USB KEY FLAG:	disabled	(Allows card updates to be performed via USB key)
SOCKET DEVICE:	1	(Define device in socket - Blank/1 = modem, 2 = Bluetooth, 3 = WiFi, 4 = Cell modem)
PRICE SIGN SUPPORTED:	← ENABLED	(Allows price sign functionality)
LOYALTY CARD FLAG		(Allows misc. collection of data under Paymentech and NBS/CHASE Bank)
BULK PLANT FLAG		(Support for net/gross pulser values, FCL only)
TIERED DISCOUNTS:		(Tiered pricing against Gasboy track 2 data)
TIERED ACCOUNTS:		(Provides tiered pricing prompt for network cards and tiered pricing for PCF based cards)

EXECUTING OUT OF FLASH FLASH ADDRESS BLOCKS:

0:100000-17FFFF (7E4B) Main App	8:500000-57FFFF (7E4B)
1:180000-1FFFFF (8512 [035D])	9:580000-5FFFFF (8512)
2:200000-27FFFF (5E23) Prod Ship	10:600000-67FFFF (57E8) PCI Cert
3:280000-2FFFFF (BLNK)	11:680000-6FFFFF (BLNK)
4:300000-37FFFF (1B30)	12:700000-77FFFF (4D02) Log Buffer
5:380000-3FFFFF (5A64)	13:780000-7FFFFF (BLNK) Sys Params
6:400000-47FFFF (1B30)	14:800000-87FFFF (3140) Boot Ldr
7:480000-4FFFFF (A168) USB Boot	15:880000-8FFFFF (FA90) FactoryUse
	16:900000-97FFFF (5ECA) RAM

Section 4 Time Management

4.1 Set Time

To **Set Time** type: Set Time <ENTER>

Enter time (XX:XX AM/PM): (May enter in 24 hour or AM/PM format)

4.2 Set Date

To **Set Date** type: Set Date <ENTER>

Enter Date (MMM DD, YYYY): (Month is entered as APR for April, JUN for June, etc.)

4.3 Set Time Change



NOTE: Time changes are not automatic in the FSC3000™. Time changes must be set up using the steps below.

To **Set Time Change** type: Set Time Change <ENTER>

Enter date when time is moved BACK 1 hour: Inactive

Enter date when time is moved FORWARD 1 hour: Inactive

BACK 1 hour: INACTIVE

FORWARD 1 hour: INACTIVE

4.4 Set System Time

To **Set System Time** type: Set System Time <ENTER>

Set system ON time (Y/N)? N

Set system OFF time (Y/N)? N

Set 'RECEIPTS ONLY' time (Y/N)? N

Set time adjust (Y/N)? N (Enter N for this)



NOTE: This feature allows an offset in seconds (a plus or minus value) applied at midnight to account for system clock drift.

4.5 Set Light

To **Set Light Time** type: Set Light <ENTER>

Enter light ON time: Inactive

Enter light OFF time: Inactive

Light ON time: Inactive

Light OFF time: Inactive



NOTE: This setting applies to the Lighted keypad and card reader on supported terminals

Section 5 Fuel Types & Tank Setup

5.1 Fuel Types

5.1.1 Set Fueling Units

One of three (3) units of measure can be associated with the fuel types. These are simply labels; no conversion is done.

To set **Fueling Unit type**: Set Fueling Unit <ENTER>

Enter fueling UNIT 1: GALLONS
Enter fueling UNIT 2: LITERS
Enter fueling UNIT 3: QUARTS



NOTE: When defining fueltype codes refer to the specific networks in "Host Specific Setup Options " on page 85.

5.1.2 Set Fueltype

Up to 32 products in the system can be defined. Each product's name, unit of measure label, Price Sign Grade (if enabled), price per unit and network product code can be set. If the Price Sign feature is enabled, there is an additional field used to assign the Price Sign Grade.

To set fuel type, type: Set Fueltype <ENTER>.

#	Name	Units	Price	PTECH	COM	UNI	FMGC	QsFN	FLT1	CFN
1	UNLEADED	GALLONS	1.000	001	0	051	002	12	40	04
2	PREMIUM	GALLONS	1.000	002	0	053	004	09	41	05
3	SUPER	GALLONS	1.000	003	0	055	003	10	42	06
4	SPEC BULK	GALLONS	1.000	004	0	017	N/A	N/A	N/A	N/A
5	#1 DIESEL	GALLONS	1.000	005	1	010	030	03	31	13
6	#2 DIESEL	GALLONS	1.000	006	2	001	005	06	12	01
7	REEFER	GALLONS	1.000	007	0	081	036	N/A	14	N/A
8	WINTER DSL	GALLONS	1.000	008	0	056	003	N/A	30	N/A
9	KEROSENE	GALLONS	1.000	009	0	048	N/A	N/A	32	N/A
10	UNLEAD BLK	GALLONS	1.000	010	0	052	N/A	N/A	N/A	N/A
11	LUBE OIL1	GALLONS	1.000	011	3	071	045	11	N/A	08
12	LUBE OIL2	GALLONS	1.000	012	3	072	822	N/A	N/A	09
13	TRANS OIL	GALLONS	1.000	013	3	075	808	N/A	N/A	N/A
14	COOLANT	GALLONS	1.000	014	0	076	605	14	N/A	N/A
15	PROPANE	GALLONS	1.000	015	0	080	039	N/A	39	17

16	E-85	GALLONS	1.000	016	0	090	000	N/A	45	29
17	ULS BIO 2%	GALLONS	1.000	017	0	202	N/A	N/A	55	N/A
18	ULS BIO 5%	GALLONS	1.000	018	0	205	N/A	N/A	56	N/A
19	ULS BIO 10%	GALLONS	1.000	019	0	210	N/A	N/A	57	N/A
20	ULS BIO 11%	GALLONS	1.000	020	0	211	N/A	N/A	58	N/A
21	ULS BIO 15%	GALLONS	1.000	021	0	215	N/A	N/A	59	N/A
22	ULS BIO 20%	GALLONS	1.000	022	0	220	N/A	N/A	60	N/A
23	BIO OFF RD	GALLONS	1.000	023	0	230	N/A	N/A	66	38
24	B2 BIO 2%	GALLONS	1.000	024	0	260	N/A	N/A	68	66
25	B2 BIO 5%	GALLONS	1.000	025	0	261	N/A	N/A	36	67
26	B2 BIO 10%	GALLONS	1.000	026	0	262	N/A	N/A	37	68
27	B2 BIO 11%	GALLONS	1.000	027	0	263	N/A	N/A	38	N/A
28	B2 BIO 20%	GALLONS	1.000	028	0	264	N/A	N/A	60	69
29	AVIATION	GALLONS	1.000	029	0	084	N/A	N/A	51	20
30	CNG	GALLONS	1.000	030	0	016	N/A	N/A	47	16
31	EXTRA	GALLONS	1.000	031	0	000	N/A	N/A	N/A	N/A
32	EXTRA	GALLONS	1.000	032	0	000	N/A	N/A	N/A	N/A

*<name> = Product DENIED when locally authorized.

TAX Included in price per unit: YES

ENTER (fuel table row # (1...32) or [RETURN] to exit):

The product table defaults to the products defined above. Fuel type names can be changed. If using networks, the network product code must be mapped correctly to the product that is being set up. To set up fuel type, enter the row that needs to be edited.

ENTER (fuel table row # (1...32) or [RETURN] to exit): 1

1	UNLEADED	GALLONS	2.000	001	0	051	002	12	40	04
---	----------	---------	-------	-----	---	-----	-----	----	----	----

*<name> = Product DENIED when locally authorized.

TAX Included in price per unit..... YES

Enter NAME: UNLEADED

Enter UNIT of measure (1=GALLONS 2=LITERS 3=QUARTS): 1

Enter PRICE: 2.000 (decimal must be entered)

Enter PAYMENTECH fuel type code: 001 (only networks that are enabled will prompt for code)

Enter UNIVERSAL fuel type code: 051 (except Universal which will prompt always)

Enter FUELMAN/GASCARD fuel type code: 002

Enter CFN fuel type code: 04

Deny this product when LOCAL AUTHORIZATION is active and supported by the network (Y/N)? Y

Map (or clear) this product to a Price Sign Product Grade (Y/N)? Y

(Only available if PRICE SIGN SUPPORTED is enabled (Optional))

Enter price sign grade (1-8) to map (zero to clear):

Enter (fuel table row # (1...32) or [RETURN] to exit):

Below is a list of networks, showing which fuel type network product code column that the specific network will use when processing network cards.

	Paymentech	Comdata	Universal	Fuelman Gascard	Quarels Fueling Network	FleetOne	CFN
	PTECH	COM	UNI	FMGC	QsFN	FLT1	CFN
Atio-Net			X				
BUYPASS	X						
Card Company			X				
CFN							X
Comdata		X					
EFS			X				
Federated Co-op			X				
FleetOne						X	
Generic			X				
Intevacon			X				
KardAll			X				
NBS - BANK			X				
NBS - FMGC				X			
Paymentech	X						
T-Chek			X				
TCH			X				
TCH - Irving Oil			X				
TCH - Shell Canada			X				
Quik Fuel			X				

5.1.3 Set Tiered Discounts

TheFSC3000™ allows you (when the proper flags are enabled) to assign 10 levels of discounted pricing for each product available in the system. These “tiered” levels can be configured by the tier code or by specific products. The Tiered Discounts section guides you through the usage of the “Set Tier” command.



NOTE: In order to use tiered pricing, you must have either the Tiered Discounts flag, or the Tiered Accounts flag (see Section 5.1.5), or both tiered flags enabled on the FSC3000™.

To set tier discounts, type: `set tier <ENTER>`.

TIERED DISCOUNTS TABLE
(displayed in tenths of a penny)

Tier Code	0	1	2	3	4	5	6	7	8	9
PROD 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1 - ENTER DISCOUNTS BY TIER CODE

2 - ENTER DISCOUNTS BY PRODUCT CODE

X - EXIT

The tiered discounts table defaults to the values above. To set discounts according to product, select option 2, then select the product for which you wish to set discounts.

SELECT OPTION: 2
ENTER PRODUCT CODE: 2

TIERED DISCOUNTS TABLE
(displayed in tenths of a penny)

Tier Code	0	1	2	3	4	5	6	7	8	9
	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
PROD 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The Tiered Discounts Table will appear, as above, displayed in tenths of a penny. To change the discounts, enter each desired discount. No entry will result in "no change". Press "Enter" after each entry to proceed to the next line.

Enter Tier 0 Discount: 3.9
Enter Tier 1 Discount: NO CHANGE
Enter Tier 2 Discount: NO CHANGE
Enter Tier 3 Discount: NO CHANGE
Enter Tier 4 Discount: 2.2
Enter Tier 5 Discount: NO CHANGE
Enter Tier 6 Discount: NO CHANGE
Enter Tier 7 Discount: NO CHANGE
Enter Tier 8 Discount: NO CHANGE
Enter Tier 9 Discount: NO CHANGE

TIERED DISCOUNTS TABLE
(displayed in tenths of a penny)

Tier Code	0	1	2	3	4	5	6	7	8	9
	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
PROD 2	3.9	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
ENTER PRODUCT CODE:										

The Tiered Discounts Table will now display the changes you've made.

To set discounts according to the tier encoded on the user's card, begin the process by again typing: P>set tier.

TIERED DISCOUNTS TABLE
(displayed in tenths of a penny)

Tier Code	0	1	2	3	4	5	6	7	8	9
PROD 1	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
PROD 2	3.9	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
PROD 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROD 32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1 - ENTER DISCOUNTS BY TIER CODE
2 - ENTER DISCOUNTS BY PRODUCT CODE
X - EXIT

The Tiered Discounts Table defaults to the above values. To enter discounts according to the tier embedded on the card, select option 1, then enter the Tier Code that corresponds to the tier you wish to set.

SELECT OPTION: 1

ENTER TIER CODE: 0

Enter Tier 0 Discount For

Product 1	(0.0):	3.5
Product 2	(3.9):	NO CHANGE
Product 3	(0.0):	NO CHANGE
Product 4	(0.0):	NO CHANGE
Product 5	(0.0):	NO CHANGE
Product 6	(0.0):	NO CHANGE
Product 7	(0.0):	NO CHANGE
Product 8	(0.0):	NO CHANGE
Product 9	(0.0):	NO CHANGE
Product 10	(0.0):	NO CHANGE
Product 11	(0.0):	NO CHANGE
Product 12	(0.0):	NO CHANGE
Product 13	(0.0):	NO CHANGE
Product 14	(0.0):	NO CHANGE
Product 15	(0.0):	NO CHANGE
Product 16	(0.0):	NO CHANGE
Product 17	(0.0):	NO CHANGE
Product 18	(0.0):	NO CHANGE
Product 19	(0.0):	NO CHANGE
Product 20	(0.0):	NO CHANGE
Product 21	(0.0):	NO CHANGE
Product 22	(0.0):	NO CHANGE
Product 23	(0.0):	NO CHANGE
Product 24	(0.0):	NO CHANGE
Product 25	(0.0):	NO CHANGE
Product 26	(0.0):	NO CHANGE
Product 27	(0.0):	NO CHANGE
Product 28	(0.0):	NO CHANGE
Product 29	(0.0):	NO CHANGE
Product 30	(0.0):	NO CHANGE
Product 31	(0.0):	NO CHANGE
Product 32	(0.0):	NO CHANGE

Entering a number for each product will set the discount at that number. Leaving the line blank and pressing "Enter" will result in "no change".

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

```
P>
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 Buffer Placement (Currently in Simm 1)
X - Exit

Enter Choice: 8
Card invalid after 3 BAD PINs (Y/N)?

Process ALL Voyager cards as PCF based (Y/N)? N

Set Track2 Position for Gasboy Tiered Discount Indicator (Y/N)? y
Enter Track2 'Price Level' Position: 24

--Track2 Position for Gasboy Tiered Discount Indicator: 24

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 Buffer Placement (Currently in Simm 1)
X - Exit
Enter Choice:
```

5.1.4 Tiered Accounts

The **Tiered Accounts** feature of the FSC3000™ is designed to provide “Tiered” pricing against cards that are always processed to a host enabled within the FSC3000™. When this feature is enabled, the FSC3000™ forces a specific prompt to always be presented before any other prompt that might normally occur for the card in use.

The prompt used for **Tiered Accounts** is always the ‘D’ prompt found using the “SET PROMPTS” command. The default message for this prompt is; “ENTER TIERED ACCOUNT # (zero to skip):” You can modify this prompt to meet your needs, but consider leaving the “(zero to skip)” message. The “(zero to skip)” message informs users who have not been assigned a tiered account on how to bypass the prompt.

See **Tiered Discounts** above for configuration of Tiered Pricing.

Configuring Tiered Accounts: To allow you to use the OPW Phoenix™ applications for managing Tiered Accounts the support has been designed to work within the boundaries of the existing Proprietary Card File

setup. To enable Tiered Accounts you must first define the Card File on the FSC to use Odometer Reasonability; do this by issuing the "SET CARDS" command.

```
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 Buffer Placement (Currently in Simm 1)
X - Exit

Enter Choice: 2

Card/Account Records: 0 Out of possible 100 # of transactions: 100

Specify Card/Account record (Y/N)? y

--Card/Account file will be DESTROYED !!! Sure (Y/N)? y

Account #'s (Y/N)? y                ← Required for Tiered Accounts
Expiration Date (Y/N)? N
Monthly Allocation (Y/N)? N
Daily Allocation (Y/N)? N
PIN # (Y/N)? N
Save Odometer Entries (Y/N)? y       ← Required for Tiered Accounts
Odometer Reasonability (Y/N)? y      ← Required for Tiered Accounts
Product Restriction (Y/N)? N
Quantity Restriction (Y/N)? N
Driver / Vehicle / Account Name (Y/N)? y
Verify 1 (Y/N)? N
Verify 2 (Y/N)? N
Verify 3 (Y/N)? N
Prompt-Seq. (Y/N)? N
Maximum Cards/Accounts: 100

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 Buffer Placement (Currently in Simm 1)
X - Exit

Enter Choice:

P>
```

Now you must create cards in the proprietary card file to be used as account numbers that will be keyed in during a network transaction. This is done by issuing the "INSERT CARD" command as follows;


```
P>insert card
Enter Card #: 1254031
Card type (S)ingle, (D)river, (V)ehicle: s
Valid (Y/N)? y
Account # (0-9999): 9999 ← Any cards created as a Tiered Account record must be assigned to
account number "9999"
Enable MISC entry (Y/N)? N
Enter current ODOM: Disabled ← Do not enter an Odometer Value for the card just press enter
```

When using Tiered Accounts, the Odometer Reasonability field references the Tiered Discounts table (0-9) with values from 1-10. A value of zero indicates NO Discount or Reasonability. Reason codes from 11-15 can still be used for Reasonability without applying a discounted price to the card.

```
Odom Reasonability/Tiered Account CODE: 3          ← Account will use Tier
Discount '3'
```

```
Driver or Vehicle Name: Tier3
--Any more cards (Y/N)? N
SORT DONE
P>
```

Now, when a network-based card is swiped, the 'D' prompt message will be displayed. If the account number of "1254031" is keyed in, the Tiered Discount price drop associated to the selected products level "3" value will be applied.

5.2 Tanks

5.2.1 Set Tank # (# = 1 to 8)

The FSC3000™ controller supports declining inventory. This command allows for the assignment of fuel types to the tanks. When fuel is pumped, it is subtracted from the assigned tank. This setup is not required.



NOTE: This feature only supports straight products – no blending.

To set Tank, type: Set Tank #<ENTER>

Fuel Type Code (1-32): Enter the fuel type number to assign the tank product

Enter Quantity: Enter the current inventory level of the tank

Tank LOW Quantity: Enter the level at which the FSC would display the tank is low

Tank ##: (Product Name) Quantity: 0.0 LOW Level: 0.0

The **Show Tank** command can be used to verify setup.

Tank #1	UNLEADED	Quantity: 0.0	LOW	Level: 0.0
Tank #2	UNLEADED	Quantity: 0.0	LOW	Level: 0.0
Tank #3	UNLEADED	Quantity: 0.0	LOW	Level: 0.0
Tank #4	UNLEADED	Quantity: 0.0	LOW	Level: 0.0
Tank #5	UNLEADED	Quantity: 0.0	LOW	Level: 0.0
Tank #6	UNLEADED	Quantity: 0.0	LOW	Level: 0.0
Tank #7	UNLEADED	Quantity: 0.0	LOW	Level: 0.0
Tank #8	UNLEADED	Quantity: 0.0	LOW	Level: 0.0

Section 6 Pump Setup

6.1 Mechanical Pumps

6.1.1 Configure PCT # (# = 1 to 8)

Originally, the FSC3000™ was designed to control mechanical pumps using a board called a PCT (Pump Control Terminal). The ability to control mechanical pumps with an integrated PCT in the (missing or bad snippet) terminal and a board called a PCM (Pump Control Module) has since been added. The configuration of the different mechanical pump interfaces, however, is still the same. The first step is to indicate the kind of mechanical pump interface that the system will interface with. The system can support up to four (4) PCTs. Even though the interfaces are not all the same, they are still configured as PCTs.

If using PCT (Mechanical), up to eight (8) positions per PCT (4 PCTs allow for 32 pumps) are supported.

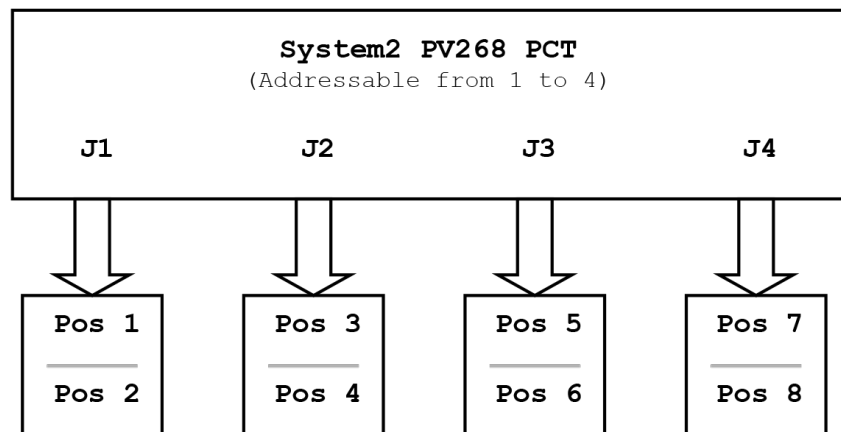
If using PCM/K800 PCT– up to four (4) positions per controller (8 PCMs allow for 32 pumps) are supported.

Type: Configure PCT # (PCT addressable from 1 to 4) (PCM from 1 to 8)

Is this a K800 PCT or PCM (Y/N)? N

Is this a UPC/DPC (Y/N)? N

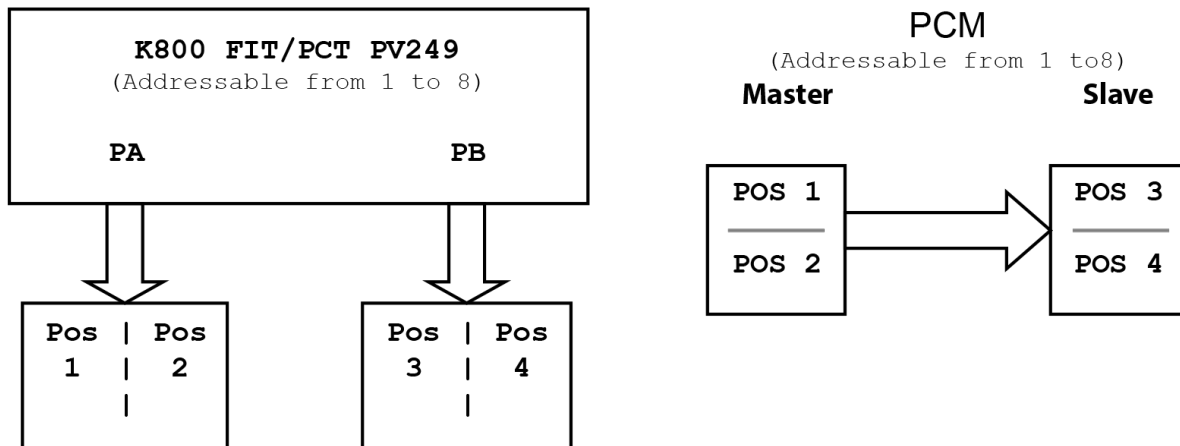
Check as "N" when
PCT/PCM 5-8



If using K800™ PCT or PCM (Mechanical), up to four (4) positions maximum are supported.

Type: Configure PCT # (K800 PCT and PCM addressable from 1 to 8)

Is this a K800 PCT or PCM (Y/N)? Y



6.1.2 Configure PCT # POS # (PCT 1 to 8 and POS 1 to 8)

The **Configure PCT # POS #** command configures each fueling point that is connected to the specific PCT. Each fueling point is to be wired to a specific position on the pump interface.

Type: Configure PCT # POS # <ENTER>

PCT 1 Position 1 (Indicates what position is being configured)
Enter Pump #: 1 (Enter the pump # that is connected to this PCT POSITION)
Enter Pulses Per GALLONS: 100 (Enter the pulse rate for the pump)
MAX Fuel to be dispensed per transaction: 10 (Largest tank to be filled for this pump)
Pump Sentry Options (Y/N)? Y (Protects against pulser\wire failure)
Pump Sentry: ENABLED
Maximum time allowed for fueling (Minutes): 5
Maximum time allowed to retrieve pump handle (Seconds): 60
Maximum time allowed to detect first fueling pulse (Secs): 60
Maximum time allowed between fueling pulses (Secs): 30
Enter Fueltype Code #: 1 (Enter the fuel type code for the product that will be dispensed)
Enter Tank #: 1 (Enter Tank number - not required for proper operation)
Clear Pump Totals (Y/N)? N
Enter Totalizer Value: 0.0 (Should set to match fueling point mechanical totalizer)

Repeat process to configure each position that is wired to a fueling point.

6.1.3 Install PCT # POS # (PCT 1 to 8 and POS 1 to 8)

The **Install PCT # POS #** command tells the system that a PCT position will be used.

Repeat process to install each configured position.

6.1.4 Install PCT # (# = 1 to 8)

The **Install PCT #** command tells the system that the PCT is there and it should communicate with it.

6.2 Electronic Pumps Controlled by UPC

The FSC3000™ controller has been enhanced to support product restriction. The FSC3000™ controller requires the UPC software to meet or exceed the following versions:

Gilbarco – 6.21A or greater

Tokheim – 1.03B or greater

Wayne – 7.05C or greater

Ruby CI / Commander – Base 40 or greater

6.2.1 Configure PCT # (# = 1 to 4)

The **Configure PCT #** allows for communication to a pump console or controller to control electronic pumps through a device called a UPC (Universal Pump Controller). The UPC can emulate up to four (4) PCTs at once. The interface uses a UPC to control the pumps. All system configurations will be referred to as a PCT.

If using a UPC as the PCT (Electronic):

```
Type: Configure PCT #
      Is this a K800 PCT or PCM (Y/N)? N
      Is this a UPC/DPC (Y/N)? Y
```

6.2.2 Configure PCT # POS

```
PCT 1 Position 1 (Indicates the position being configured)
Enter Pump #: 1 (Enter the pump # that is connected to this PCT POS)
Enter Pulses Per GALLONS: 100 (set to 1000)
MAX Fuel to be dispensed per transaction: 10 (Largest tank to be filled for this
pump)
Pump Sentry Options (Y/N)? Y (Protects against pulser/wire failure)
Pump Sentry: ENABLED
Maximum time allowed for fueling (Minutes): 5
Maximum time allowed to retrieve pump handle (Seconds): 60
Maximum time allowed to detect first fueling pulse (Secs): 60
Maximum time allowed between fueling pulses (Secs): 30
Set Up Hose 1 (Y/N)? y
      Enter Fueltype Code #: 1 (Enter the fuel type code)
Enter Tank #: 1 (Enter Tank number - not required for proper operation)
Clear Pump Totals (Y/N)? N
Enter Totalizer Value: 0.0 (Should set to match fueling point totalizer)
Set Up Hose 2 (Y/N)? N (Only required if pump has more than 1 grade!)
Set Up Hose 3 (Y/N)? N (Must match how the console reports hoses to the UPC)
Set Up Hose 4 (Y/N)? N
Set Up Hose 5 (Y/N)? N
Set Up Hose 6 (Y/N)? N
Set Up Hose 7 (Y/N)? N
Set Up Hose 8 (Y/N)? N
```

Repeat the process to configure each position that is wired to a fueling point.

6.2.3 Install PCT # POS # (PCT 1 to 4 and POS 1 to 8)

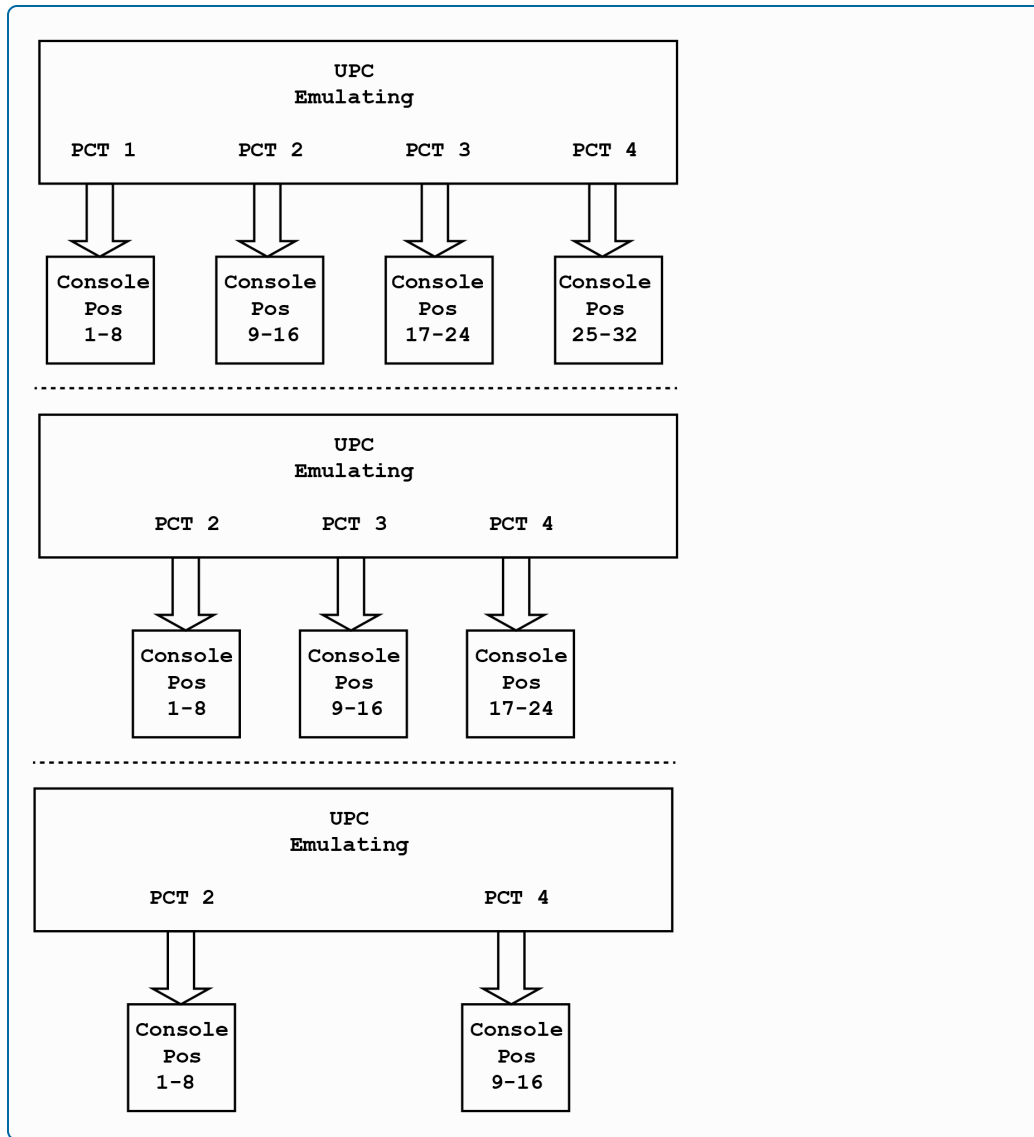
The **Install PCT # POS #** command tells the system that a PCT position will be used.

Repeat the process to install each configured position.

6.2.4 Install PCT # (# = 1 to 4)

The **Install PCT #** command tells the system that the PCT is there and to communicate with it.

EXAMPLE:



6.3 Electronic Pumps Controlled by DPC (Wayne)

6.3.1 Install Program

The first step of installation is to define the brand of electronic pumps that will be used and the communication parameters of each pump. The FSC3000™ is designed to support up to eight (8) PCT devices, but DPC is limited to the first four (4) PCTs.

Type: Install program

```
Install program (or Configure program if already installed)
  SELECT DPC PROGRAM TO INSTALL
    1: GILBARCO / WAYNE
    2: GASBOY
  ENTER SELECTION: (1)
INSTALLING, PLEASE WAIT... SUCCESSFUL! (Successful should appear after
installed)
**** DIRECT PUMP SETTINGS -Ver. 10.01D ****
  Select pump types:
    1-Gilbarco, 2-Wayne: (1)2
  Set pump communication port:
    Baud: 1-1200, 2-2400, 3-4800, 4-5760, 5-9600 -> (?)5
    Character size: 1-7 bits, 2-8 bits -> (1)2
    Parity: 1-Odd, 2-Even, 3-None -> (2)1
  **** DIRECT PUMP VERSION: 10.01D ****
  Pumps: Wayne
  Baud rate: 9600, Data bits: 8, Parity: Odd, Stop bits: 1
```

6.3.2 Configure PCT # (# = 1 to 4)

The **Configure PCT #** command defines the PCT that is used for DPC.

```
Configure PCT # (# = 1 to 4)
Is this a K800 PCT or a PCM (Y/N)? N
Is this a UPC/DPC (Y/N)? Y
```

6.3.3 Configure PCT # POS # (# = PCT 1 to 4 and POS 1 to 8)

Configure PCT # POS

```
PCT 1 Position 1 (Indicates the position being configured)
Enter Pump #: 1 (Enter the pump # that is connected to this PCT POS)
Enter pump's direct address (1): (Address that the pump will associate with)
Does this pump support dollar auths (Y/N)? y (should be set to yes)
Enter Pulses Per GALLONS: 100 (set to 1000)
MAX Fuel to be dispensed per transaction: 10 (Largest tank to be filled for this
pump)
Pump Sentry Options (Y/N)? Y (optional: electronic pumps usually provide their own
pump protection)
Pump Sentry: ENABLED
Maximum time allowed for fueling (Minutes): 5
Maximum time allowed to retrieve pump handle (Seconds): 60
Maximum time allowed to detect first fueling pulse (Seconds): 60
Maximum time allowed between fueling pulses (Seconds): 30
Set Up Hose 1 (Y/N)? y
  Enter Fueltype Code #: 1 (Enter the fuel type code)
  Enter Tank #: 1 (Enter Tank number - not required for proper operation)
  Clear Pump Totals (Y/N)? N
  Enter Totalizer Value: 0.0 (Should set to match fueling point totalizer)
Set Up Hose 2 (Y/N)? N (Only required if pump has more than 1 grade!)
```

Set Up Hose 3 (Y/N)? N (Must match the pump mapping)
Set Up Hose 4 (Y/N)? N
Set Up Hose 5 (Y/N)? N
Set Up Hose 6 (Y/N)? N
Set Up Hose 7 (Y/N)? N
Set Up Hose 8 (Y/N)? N

Repeat process to configure each position for each fueling point.

6.3.4 Install PCT # POS # (# = PCT 1 to 4 and POS 1 to 8)

The **Install PCT # POS #** command tells the system that a PCT position will be used.

Install PCT # POS # (Repeat process to install each configured position)

6.3.5 Install PCT # (# = 1 to 4)

The **Install PCT #** command tells the system that the PCT is there and to communicate with it.

Install PCT # (Repeat process to install each configured PCT)

6.4 Electronic Pumps Controlled by DPC (Gilbarco)

6.4.1 Install Program

The first step is to define the brand of electronic pumps that will be used and the communication parameters of each. The FSC3000™ is designed to support up to eight (8) PCT devices, but DPC is limited to the first four (4) PCTs.

```
Type: Install program
Install program (or configure program if already been installed)
SELECT DPC PROGRAM TO INSTALL
    1: GILBARCO / WAYNE
    2: GASBOY
ENTER SELECTION: (1)
INSTALLING, PLEASE WAIT... SUCCESSFUL! (Successful should appear after installed)
**** DIRECT PUMP SETTINGS -Ver. 10.01D ****
Select pump types:
1-Gilbarco, 2-Wayne: (?)1
Select transmission delay:
1-Normal, 2-Short, 3-Shorter, 4-The shortest: (1)
Set pump communication port:
Baud: 1-1200, 2-2400, 3-4800, 4-5760, 5-9600 -> (5)4
Character size: 1-7 bits, 2-8 bits -> (2)2
Parity: 1-Odd, 2-Even, 3-None -> (3)2
**** DIRECT PUMP VERSION: 10.01D ****
Pumps: Gilbarco, Transmission Delay: Normal
Baud rate: 5760, Data bits: 8, Parity: Even, Stop bits: 1
```

6.4.2 Configure PCT # (# = 1 to 4)

The **Configure PCT #** command defines the PCT that is used for DPC.

```
Configure PCT # (# = 1 to 4)
Is this a K800 PCT or a PCM (Y/N)? N
Is this a UPC/DPC (Y/N)? Y
```

6.4.3 Configure PCT # POS # (# = PCT 1 to 4 and POS 1 to 8)

Configure PCT # POS

```
PCT 1 Position 1 (Indicates position being configured)
Enter Pump #: 1 (Enter the pump # that is connected to this PCT POS)
Enter pump's direct address (1): (Address that the pump will associated with)
Select dispenser type: 1-Standard, 2-Without SF, 3-Highline -> (1) (Use Standard
unless instructed by Tech Support)
Does this pump support dollar auths (Y/N)? y (should be set to yes)
Enter Pulses Per GALLONS: 100 (set to 1000)
MAX Fuel to be dispensed per transaction: 10 (Largest tank to be filled for this
pump)
Pump Sentry Options (Y/N)? Y (optional: electronic pumps usually provide their own
pump protection)
Pump Sentry: ENABLED
Maximum time allowed for fueling (Minutes): 5
Maximum time allowed to retrieve pump handle (Seconds): 60
Maximum time allowed to detect first fueling pulse (Seconds): 60
Maximum time allowed between fueling pulses (Seconds): 30
Set Up Hose 1 (Y/N)? Y
    Enter Fueltype Code #: 1 (Enter the fuel type code)
```

Enter Tank #: 1 (Enter Tank number - not required for proper operation)
Clear Pump Totals (Y/N)? N
Enter Totalizer Value: 0.0 (Should set to match fueling point totalizer)
Set Up Hose 2 (Y/N)? N (Only required if pump has more than 1 grade!)
Set Up Hose 3 (Y/N)? N (Must match the pump mapping)
Set Up Hose 4 (Y/N)? N
Set Up Hose 5 (Y/N)? N
Set Up Hose 6 (Y/N)? N
Set Up Hose 7 (Y/N)? N
Set Up Hose 8 (Y/N)? N

Repeat process to configure each position for each fueling point.

6.4.4 Install PCT # POS # (# = PCT 1 to 4 and POS 1 to 8)

The **Install PCT # POS #** command indicates to the system that a PCT position will be used.

Install PCT # POS # (Repeat process to install each configured position)

6.4.5 Install PCT # (# = 1 to 4)

This **Install PCT #** command indicates to the system that the PCT is there and to communicate with it.

Install PCT # (Repeat process to install each configured PCT)

6.5 Electronic Pumps Controlled by DPC (Gasboy)

6.5.1 Install Program

The first step of installation is to define the brand of electronic pumps that will be used and the communication parameters of each pump. The FSC3000™ is designed to support up to eight (8) PCT devices, but DPC is limited to the first four (4) PCTs.

```
Type: Install program
Install program (or Configure program if already installed)
SELECT DPC PROGRAM TO INSTALL
1: GILBARCO / WAYNE
2: GASBOY
ENTER SELECTION: (2)
INSTALLING, PLEASE WAIT... SUCCESSFUL! (Successful should appear after installed)
**** DIRECT PUMP SETTINGS -Ver. 10.01D ****
Select pump types:
1-Gilbarco, 2-Wayne, 3-Gasboy: (1)3
Set pump communication port:
Baud: 1-1200, 2-2400, 3-4800, 4-5760, 5-9600 -> (?)5
Character size: 1-7 bits, 2-8 bits -> (1)2
Parity: 1-Odd, 2-Even, 3-None -> (2)3
**** DIRECT PUMP VERSION: 10.01D ****
Pumps: Gasboy
Baud rate: 9600, Data bits: 8, Parity: None, Stop bits: 1
```

6.5.2 Configure PCT # (# = 1 to 4)

The **Configure PCT #** command defines the PCT that is used for DPC.

```
Configure PCT # (# = 1 to 4)
Is this a K800 PCT or a PCM (Y/N)? N
Is this a UPC/DPC (Y/N)? Y
```

6.5.3 Configure PCT # POS # (# = PCT 1 to 4 and POS 1 to 8)

Configure PCT # POS

```
PCT 1 Position 1 (Indicates the position being configured)
Enter Pump #: 1 (Enter the pump # that is connected to this PCT POS)
Enter pump's direct address (1): (Address that the pump will associate with)
Enter Pulses Per GALLONS: 100 (set to 1000)
MAX Fuel to be dispensed per transaction: 10 (Largest tank to be filled for this
pump)
Pump Sentry Options (Y/N)? Y
Pump Sentry: ENABLED
Maximum time allowed for fueling (Minutes): 5
Maximum time allowed to retrieve pump handle (Seconds): 60
Maximum time allowed to detect first fueling pulse (Seconds): 60
Maximum time allowed between fueling pulses (Seconds): 30
Set Up Hose 1 (Y/N)? y
Enter Fueltype Code #: 1 (Enter the fuel type code)
Enter Tank #: 1 (Enter Tank number - not required for proper operation)
Clear Pump Totals (Y/N)? N
Enter Totalizer Value: 0.0 (Should set to match fueling point totalizer)
Set Up Hose 2 (Y/N)? N (Only required if pump has more than 1 grade!)
Set Up Hose 3 (Y/N)? N (Must match the pump mapping)
Set Up Hose 4 (Y/N)? N
```

Set Up Hose 5 (Y/N)? N
Set Up Hose 6 (Y/N)? N
Set Up Hose 7 (Y/N)? N
Set Up Hose 8 (Y/N)? N

Repeat process to configure each position for each fueling point.

6.5.4 Install PCT # POS # (# = PCT 1 to 4 and POS 1 to 8)

The **Install PCT # POS #** command tells the system that a PCT position will be used.

Install PCT # POS # (Repeat process to install each configured position)

6.5.5 Install PCT # (# = 1 to 4)

The **Install PCT #** command tells the system that the PCT is there and to communicate with it.

Install PCT # (Repeat process to install each configured PCT)

6.5.6 DPC – Gasboy Pump Mapping

This table illustrates the configuration of Gasboy pumps in the FSC3000™, as Gasboy uses a different method for mapping pumps. Each Gasboy address represents a two-sided pump. Each side of the pump is to be assigned to a separate FSC3000™ Poll ID, as demonstrated.

Gasboy Address	Side	FSC3000 Poll ID
1	1	1
	2	2
2	1	3
	2	4
3	1	5
	2	6
4	1	7
	2	8
5	1	9
	2	10
6	1	11
	2	12
7	1	13
	2	14
8	1	15
	2	16
9	1	17
	2	18
10	1	19
	2	20
11	1	21
	2	22
12	1	23
	2	24
13	1	25
	2	26
14	1	27
	2	28
15	1	29
	2	30
16	1	31
	2	32

Section 7 Terminal Setup

7.1 OPW-FMS Fuel Island Terminals

7.1.1 Configure FIT # (1 to 12)

The FSC3000™ controller currently supports four (4) terminal types:

	Terminals				
	DTC	FIT500	C/OPT	K800 (PV100)	System2 FIT
Change FIT Type (Y/N)?	Y	Y	Y	Y	Y
Is this a DTC (Y/N)?	Y	N	N	N	N
Is this a FIT500 (Y/N)?		Y	N	N	N
Is this a C/OPT (Y/N)?			Y	N	N
Is this a K800 (Y/N)?				Y	N
*** (System2 FIT) ***					(Default)
Enter Decline Message Timeout seconds:	X	X	X	X	X
Enter Prompt Timeout Code (1...9):	X	X	X	X	X
(Enable/Disable) Receipt Printer (Y/N)?X	Y	O	O		O
--Enter limit to receive receipts in days (0..99):	2	0 - 99	0 - 99		0 - 99
--Clear Receipt Counter (Y/N)?	X	X	X		X
(Enable/Disable) Keyboard Access (Y/N)?X	O	O	O	O	O
Enter Keyboard Length (1..32):				N	O
Specify PCTs to shut off on E-Stop (Y/N)?					
Change FIT Access to Pumps (Y/N)?					
Limit FIT Access to Pumps (Y/N)?					
Enter Valid Pumps (p1, p2,...):					

Dedicated Terminal – When FIT access to pumps is limited to one specific pump, the terminal will behave in the following way:

The FIT will not prompt for pump #.

When the transaction is finished and the terminal is set up for receipts, the terminal will prompt for receipt.

The system will then display what is configured:

```
Current Type: DTC Terminal
Change FIT Type (Y/N)? N
Enter Decline Message Timeout seconds: 15
Enter Prompt Timeout Code (1...9): 1
Issue Receipts (Y/N)? y
--Enter limit to receive receipts in days (0..99): NO Limit
--Clear Receipt Counter (Y/N)? N
DISABLE Keyboard Access (Y/N)? N
Enter Keyboard Length (1...32): 32
Clear Card Reader Error Counter (Y/N)? N
Change FIT Access To Pumps (Y/N)? N

FIT Installed
FIT INFO: CAT
CRIND
CRAD 1.2.5974
Island Terminal: DTC Terminal
Decline Timeout: 15 SECONDS
Prompt Timeout: 15 SECONDS
Receipts: 2 NO Limit To Receive Receipt
Keyboard Access --ENABLED.....Length: 32
Card Reader Error Counter: 2
LIST OF VALID PUMPS: 1
```

Or, if changing the FIT type, then the system will display the following:

```
Current Type: DTC Terminal
Change FIT Type (Y/N)? y
Is this a DTC (Y/N)? Y
Is this a FIT500 (Y/N)?
Is this a C/OPT (Y/N)?
Is this a K800 FIT (Y/N)?
Enter Decline Message Timeout seconds: 15
Enter Prompt Timeout Code (1...9): 1
Issue Receipts (Y/N)? y
--Enter limit to receive receipts in days (0..99): NO Limit
--Clear Receipt Counter (Y/N)? N
DISABLE Keyboard Access (Y/N)? N
Enter Keyboard Length (1...32): 32
Specify PCTs to shut-off on E-Stop (Y/N)? N
Clear Card Reader Error Counter (Y/N)? N
Change FIT Access To Pumps (Y/N)? N
```

Prompt Timeouts (Seconds)	
1 -	15
2 -	20
3 -	25
4 -	30
5 -	35
6 -	40
7 -	45
8 -	50
9 -	55

This setting indicates to the system that the FIT is available and may communicate with it.

7.2 VIT (Vehicle Identification Terminal) – PetroLink™

When the FSC3000™ is equipped with the PetroLink™ option the VIT and its position(s) will need to be configured.

7.2.1 Install VIT x (VIT 1 to 4)

The configuration type and position(s) of each VIT must be defined to activate a specific PCT and position.

Type: Install VIT # <ENTER>

Type 8 (Y/N)? Y (PetroLink uses only type 8 VITs)

7.2.2 Configure VIT # (# = 1 to 4)

The **Configure VIT #** command can be used to configure all positions on the specific VIT. If desired, configure specific positions using the command "Configure VIT x Position x".

7.2.3 Configure VIT # POS # (VIT 1 to 4 and POS 1 to 8)

Each VIT and its position must be configured to activate a specific PCT and Position.

Type: Configure VIT # POS # <ENTER>

VIT x POSITION x
CONFIGURATION

- | - Activate PCT x Position x
- | - Authorize with Pump Handle: OFF
- | - Maximum Disconnect Time (seconds): 5
- | - Status Noise Threshold: 1

Enter new PCT: 1 (Defines which PCT will have a pump activated on)

Enter new position: 1 (Enter the position of the PCT to activate when VIU detected)

Authorize with Handle ON (Y/N)? : N (Allows pump to turn on even if sensed on immediately)

Enter Maximum Disconnect Time (seconds): 5 (Max time for VIT no longer senses VIU)

Enter Status Noise Threshold: 1

Repeat the process to configure each VIT position.

7.2.4 Install VIT # POS # (VIT 1 to 4 and POS 1 to 8)

The **Install VIT # POS #** command indicates to the system that a VIT position will be used.

Repeat the process to install each configured position.

Section 8 Display Prompts & Receipts

8.1 Dual Language

8.1.1 Set Language

The **Dual Language** feature allows the **System2™** to change its prompts and receipts to another language. When the cards are set up in the buffer, they are assigned a language code. When the card is read by the system it checks the card configuration to determine the language code. From this point on, the terminals will prompt and print receipts in the card-assigned language.



NOTE: Network cards do not support dual language and will use Language 1, except in the case of receipts.

Dispenser Terminal Control (DTC)-enabled systems use Language 2 to support DTC terminals, messages and prompts must be configured in Artware.

To set Dual Language type: SET LANGUAGE <ENTER>.

Enable DUAL language (Y/N)? Y

--DUAL language Enabled

8.2 Receipts

The **Receipts** section allows configuration of the receipts header, trailer and body.

8.2.1 Format Receipt Header

The Receipt Header can support up to four (4) lines. The system can define a Header for each language and network receipts. When configuring the network receipt header, never use more than two (2) lines.

To change the receipt header type: Format Receipt Header <ENTER>

```
Format Receipt Header      ENTER Language 1 or 2 or N:
Select the desired header  (1 - language 1, 2 - language 2, N Network)
Enter the header
```

Line 1 -->	(Company name)	Invert text (Y/N)?
Line 2 -->	(Company name)	Invert text (Y/N)?
Line 3 -->	(Company name)	Invert text (Y/N)?

8.2.2 Format Receipt Trailer

The **Receipt Trailer** can support up to four (4) lines. The system can define a Trailer for each language and network receipts. When configuring Network receipt trailer, never use more than two (2) lines.

To change the receipt trailer type: Format Receipt Trailer.

```
Format Receipt Trailer          ENTER Language 1 or 2 or N:
Select the desired trailer      (1 - language 1, 2 - language 2, N Network)
Enter the Trailer
```

```
Line 1 -->          (Company name)          Invert text (Y/N)?
Line 2 -->          (Company name)          Invert text (Y/N)?
Line 3 -->          (Company name)          Invert text (Y/N)?
```

8.2.3 Format Receipt Body

The system allows for the configuration of what is included, not included, the order and text for language 1 or 2 for proprietary receipts. Network receipt bodies are fixed and cannot be changed.

To change the receipt body type: Format Receipt Body.

```
Line # Language 1 Language 2      Code
1          CARD #:          < ><> 1 <
2          CARD #2:         < ><> 2 <
3          TRANS #:         < ><> 3 <
4          PRODUCT:         < ><> 4 <
5          GALLONS:         < ><> 5 <
6          PPU:             < ><> 6 <
7          TOTAL $          < ><> 7 <
8          DRIVER:          < ><> 8 <
9          VEHICLE:         < ><> 9 <
10         ACCT NAME:       < ><> 10 <
11         SITE ID:         < ><> 11 <
12         MISC:            < ><> 12 <
13         ODOM:            < ><> 13 <
14         MPG:             < ><> 14 <
15         LPHKM:           < ><> 15 <
16         PUMP #           < ><> 16 <
17         ACCOUNT #:       < >< 17 <
```

ENTER (Show, Delete, Insert, exit, Line #):



NOTE: Line 5 defaults to gallons to meet W&M requirements. For non-W&M sites, it is recommended to reprogram to "QUANTITY."

8.2.4 Receipt Body Code Variables

Each code represents the information that will be displayed in the receipt body when the receipt is printed. If the transaction does not contain information for the specific transaction receipt, it will be excluded from the body.

Code #	Variable	Code #	Variable
1	Card # 1	18	Additional Prompt A
2	Card # 2	19	Additional Prompt B
3	Transaction #	20	Additional Prompt C
4	Product Name	21	Additional Prompt D
5	Quantity	22	Additional Prompt E
6	Price per Unit	23	Additional Prompt F
7	Total price	24	Additional Prompt G
8	Driver/Single Name	25	Additional Prompt H
9	Vehicle Name	26	Additional Prompt I
10	Account Name	27	Additional Prompt J
11	Site ID	28	Additional Prompt K
12	Miscellaneous Prompt	29	Additional Prompt L
13	Odometer Entry	30	Additional Prompt M
14	MPG	31	Additional Prompt N
15	LPHKM	32	Additional Prompt O
16	Pump #	33	Additional Prompt P
17	Account #	34	Additional Prompt Q
		35	Additional Prompt R
		36	Additional Prompt S
		37	Additional Prompt T
		38	Gross Quantity
		39	Product Density



NOTE: Use “SHOW PROMPT” to see additional prompt setup. Void is not recommended and OPW shall not be responsible for communication issues.



NOTE: Codes 38 and 39 are only available when the “bulk plant” flag is enabled.



NOTE: The “>” character functions differently when used with a DTC. When placed at the end of the message prompt, for example, “Enter Odom>”, the message on the screen is changed to “>” and the first entry upon that first entry. This allows the user to see the entire entry when the display message and entry are too long for the display.

8.3 Prompts

8.3.1 Standard Prompts

The **Standard Display Messages** guide the customer through the fueling process with a series of prompts. These prompts can be changed as needed, but their functionality cannot. When the customer first approaches the terminals, the terminals will display as follows:

System Open - Display #8 & #9 alternating
System Closed Receipts only - Display #6 & #7 alternating
System Closed - Display #10



NOTE: DTC does not support alternating system open. It only supports displaying 8.

To format a display type: Format display # <ENTER>

```
Format Display 8
LANGUAGE 1 DISPLAY# 8:
^1^L PETRO VEND^M FUEL CONTROLS
Insert a 2 line Display Message (Y/N)? N
|Lang 1 |
^1^L PETRO VEND^M FUEL CONTROLS
```



NOTE: Use "SHOW PROMPT" to see additional prompt setup. Void is not recommended and OPW shall not be responsible for communication issues.

8.3.2 Format Display Default

The **Format Display Default** command provides the ability to reload the default display and additional prompts without cold starting the FSC3000™. All previous changes made to the prompts will be completely cleared.

To set Display Type: Format Display Default <ENTER>.

```
Display TYPE Options:
0 - NO Change
1 - 2x16
2 - 1x40
3 - 2x40 (Graphics)
ENTER OPTION: 3
DISPLAY: 2x40 - (GRAPHICS)
```



NOTE: Sometimes this command must be done twice for the additional prompts to change.

8.4 FSC3000™ Default Display Prompts



NOTE: To be sure that the correct default display prompts are being utilized, configure using ARTWare.

2x16 Display		Graphics Display
1	SYSTEM OUT OF SERVICE	^:^T^F SYSTEM OUT OF^G SERVICE
2	READING CARD	^T^K READING CARD
3	REMOVE CARD	^T^K REMOVE CARD
4	INCORRECT READING	^T^K INCORRECT READING
5	CHECK CARD ORIENTATION	^T^K CHECK CARD^L ORIENTATION
6	INSERT CARD FOR RECEIPT	^1^T^KINSERT CARD^LFOR RECEIPT
7	INSERT CARD FOR RECEIPT	^T^KINSERT CARD^LFOR RECEIPT
8	PETRO VEND FUEL CONTROLS	^1^L PETRO VEND^M FUEL CONTROLS
9	INSERT CARD	^T^L INSERT CARD
10	SYSTEM CLOSED	^:^T^F SYSTEM CLOSED
11	PLEASE WAIT	^T^J PLEASE^K WAIT
12	PRINTING RECEIPT	^:^T^F PRINTING^G RECEIPT
13	TAKE RECEIPT	^8^T^F TAKE^G RECEIPT
14	PRINTER ERROR	^0^T^F PRINTER ERROR
15	ISSUE RECEIPT?:	^5^T^K ISSUE^L RECEIPT? :
16	ENTER PUMP #:	^7^T^K ENTER^L PUMP #:
17	IN USE, RE-ENTER:	^T^K IN USE,^L RE-ENTER:
18	INVALID, RE-ENTER:	^T^K INVALID,^L RE-ENTER:
19	PUMP HANDLE? RE-ENTER:	^T^K PUMP HANDLE?^L RE-ENTER:
20	FAULTY PUMP, RE-ENTER:	^T^K FAULTY PUMP,^L RE-ENTER:
21	UNAUTH'ZED, RE-ENTER:	^T^K UNAUTH'ZED,^L RE-ENTER:

2x16 Display		Graphics Display
22	RESTRICTED, RE-ENTER:	^T^K RESTRICTED, ^L RE-ENTER:
23	USE PUMP # % PPU	^0^T^K USE PUMP # ^L \$ % PPU
24	INSERT 2nd CARD	^1^T^K INSERT ^L 2ND CARD
25	INCORRECT CARD	^0^T^F INCORRECT CARD
26	ENTER CARD #:	^5^T^J ENTER ^K CARD #:
27	ENTER PIN:	^5^T^K ENTER ^L PIN:
28	ENTER ODOM:	^6^T^K ENTER ^L ODOM:
29	ENTER MISC:	^5^T^K ENTER ^L MISC:
30	ENTER 2nd CARD #:	^5^T^J ENTER 2ND ^K CARD #:
31	RE-ENTER PIN:	^5^T^K RE-ENTER ^L PIN:
32	RE-ENTER ODOM:	^6^T^K RE-ENTER ^L ODOM:
33	SORRY! NETWORK SYSTEM OFF	^0^T^F SORRY! ^G POS SYSTEM OFF
34	PROCESSING...PLEASE WAIT	^9^T^I PROCESSING ^K PLEASE WAIT
35	NOT A NETWORK CARD	^0^T^F NOT A NETWORK CARD
36	CARD EXPIRED	^0^T^F CARD EXPIRED
37	CARD RECORD EXPIRED	^0^T^F CARD RECORD ^G EXPIRED
38	CARD INVALIDATED	^0^T^F CARD INVALIDATED
39	3 BAD ENTRIES	^0^T^F 3 BAD ENTRIES
40	ALLOCATION EXCEEDED	^0^T^F ALLOCATION ^G EXCEEDED
41	UNABLE TO PROCESS: +	^0^T^F UNABLE ^H TO PROCESS: +
42	variable pos messages	variable pos messages
43	ACCOUNT EXPIRED	^0^T^F ACCOUNT EXPIRED
44	ACCOUNT INVALIDATED	^0^T^F ACCOUNT ^G INVALIDATED
45	ACCOUNT #s DO NOT MATCH	^0^T^F ACCOUNT #s ^G DO NOT MATCH
46	ACCOUNT RECORD NOT FOUND	^0^T^F ACCOUNT RECORD ^G NOT FOUND
47	KEYBOARD ENTRY NOT ALLOWED	^0^T^F KEYBOARD ENTRY ^G NOT ALLOWED

2x16 Display		Graphics Display
48	JOURNAL ERROR-GET MANAGER	^0^T^F JOURNAL ERROR^G -GET MANAGER
49	SYSTEM BUSY-BUFFER FULL	^0^T^F SYSTEM BUSY^G -BUFFER FULL
50	ENTER DOLLAR AMT (\$5 - \$#):	^5^T^KENTER DOLLAR AMOUNT^LBETWEEN \$# AND \$# \$
51	RE-ENTER MUST BE (\$5 - \$#):	^5^T^KRE-ENTER AMOUNT^LBETWEEN \$# AND \$# \$
52	3 BAD DOLLAR AMOUNT ENTRIES	^0^T^F 3 BAD DOLLAR AMOUNT ENTRIES
53	ENTER HOSE #:	^KENTER HOSE #:
54	INVALID HOSE RE-ENTER:	^KINVALI RE-ENTER:
55	DO YOU HAVE AN ASSIGNED PIN?	^5^T^KDO YOU HAVE^L AN ASSIGNED PIN?
56	PUMP ERROR TRANS TERMINATED	^0^T^F PUMP ERROR^H TRANSACTION^I TERMINATED
57	USE PUMP IN FLEET TRANS	^0^T^J USE PUMP^K IN FLEET^M TRANSACTION
58	ENTER PUMP FOR FLEET TRANS	^7^T^J ENTER PUMP FOR^K FLEET TRANSACTION
59	DO YOU HAVE A VEHICLE CRD/KEY?	^5^T^J DO YOU HAVE A^K VEHICLE CARD/KEY?
60	SYSTEM STOPPED MUST BE STARTED	^0^E SYSTEM STOPPED^G MUST BE STARTED
61		^0^T^G FAULTY PUMP ^H USE ANOTHER
62		^0^T^G UNAUTHORIZED ^H USE ANOTHER PUMP
63		^0^T^G RESTRICTED ^H USE ANOTHER PUMP



NOTE: Percentage on Prompt 23 displays maximum gallons allowed.



NOTE: The ">" character functions differently when used with a DTC. When placed at the end of the message prompt, for example, "Enter Odom>", the message on the screen is changed to ">" and the first entry upon that first entry. This allows the user to see the entire entry when the display message and entry are too long for the display.

8.4.1 Graphic Codes














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



IMPORTANT: ALL Graphic Codes must be upper-case.



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

Code	System2 FIT Ver. 1.01	System2 FIT Ver. 1.02A and up C/OPT	CODE	System2 FIT	C/OPT
^A		Position on Line 1	^1		
^B		Position on Line 2			
^C		Position on Line 3	^2		
^D		Position on Line 4			
^E		Position on Line 5	^3		
^F		Position on Line 6			
^G		Position on Line 7	^4		
^H		Position on Line 8			
^I		Position on Line 9	^5		
^J		Position on Line 10			
^K		Position on Line 11	^6		
^L		Position on Line 12			
^M	Invert Display	Position on Line 13	^7		
^N	Restore Display	Position on Line 14			
^O	N/A	Position on Line 15	^8		
^P	N/A	Invert Display			
^Q	N/A	Restore Display	^9		
^T	Insert Current Time				
^V	Sm. Sans-Serif Font		^:		
	!#\$%&()*+,-./012345 6789:;<=>?@ABCDEFGHIJ KLMNOPQRSTUVWXYZ[\]^ _`~;				
^X	Lg. Sans-Serif Font Int.				
	!#\$%&()*+,-./012345 6789:;<=>?@ABCDEFGHIJ KLMNOPQRSTUVWXYZäÛ€ï ÉÊÁÓ				
^Y	Lg. Serif Font				
	!#\$%&()*+,-./012345 6789:;<=>?@ABCDEFGHIJ KLMNOPQRSTUVWXYZ[\]^ _`~;				
^Z	Large Sans-Serif Font Std.				
	!#\$%&()*+,-./012345 6789:;<=>?@ABCDEFGHIJ KLMNOPQRSTUVWXYZ[\]^ _`~;				
^0	Clear Display				

8.4.2 Update Customized Picture Files in the FIT500™

See the FSC operator's manual for display formatting commands and their usage. Apart from prompt formatting, the FIT500™ allows you to customize pictures to be displayed with a prompt. The following sections explain how to prepare customizable pictures and use them with your system.

8.4.2.1 Display Formatting Commands

To combine a picture with text on the display, add "control character ^" and "picture code" to the graphic prompt. See Section 8.4.1 for details. The picture can be associated with one or more display prompts. For example:

`^1 ENTER CARD`

The prompt will display picture #1 and the text "ENTER CARD".

8.4.2.2 Picture Codes

According to the picture code the appropriate display picture is selected and displayed on screen. Currently, the picture codes are characters from the range '1' to '=' and 'a' to 'i'. According to the codes, OPT pictures are numbered from #1 to #13 and from #49 to #57.

For picture customizable purposes these numbers will be used as the file names of your pictures. The image from the file will replace the embedded picture. See the table below where code, number and file name association is shown.

Picture Code	Picture #	File Name
'1'	1	1.bmp
'2'	2	2.bmp
'3'	3	3.bmp
'4'	4	4.bmp
'5'	5	5.bmp
'6'	6	6.bmp
'7'	7	7.bmp
'8'	8	8.bmp
'9'	9	9.bmp
':'	10	10.bmp
','	11	11.bmp
'<'	12	12.bmp
'='	13	13.bmp
'a'	49	49.bmp
'b'	50	50.bmp
'c'	51	51.bmp
'd'	52	52.bmp
'e'	53	53.bmp
'f'	54	54.bmp
'g'	55	55.bmp
'h'	56	56.bmp
'i'	57	57.bmp

8.4.2.3 Picture Files

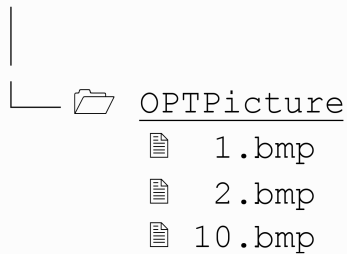
As described above, an appropriate file of the customizable version of the picture can replace each display picture. Windows Bitmap compatible RGB encoded files (.bmp) are currently supported by the FIT500™ system.

You can create a file using any graphic software and save it to the USB storage device. Files must be named according to the picture numbering scheme showed in table. Each customizable file must be placed under the **OPTPicture** directory on the device's drive to be detected by FIT500™ system.

EXAMPLE:

Three customizable files are placed on the storage device:

USB Storage Device



In this example the FIT500™ system will replace pictures #1, #2 and #10 with their customizable versions for the display prompts using codes '^1', '^2' and '^10'.

8.4.2.4 Picture Update

To introduce a new customizable picture to the system:

1. Prepare a file of a picture you want to customize.
2. Save the file to the USB Storage Device.
3. Insert the USB Storage Device into the USB slot of the (missing or bad snippet) while its software is running.
4. Wait for the picture to be automatically updated.
5. Remove the USB Storage Device from the (missing or bad snippet).



NOTE: The main (missing or bad snippet) software must be running to detect a new picture. The picture update process will run automatically with no user interaction other than inserting the USB Storage Device. The system may run in any state (working or system down) with no restriction to pictures being updated. Several pictures can be updated during one update process.

The customizable pictures will stay on the (missing or bad snippet) system up to the next update. The USB Storage Device presence is necessary during update process only. You can remove the customizable picture and go back to embedded one by updating the system with a zero-length file of the appropriate file name. The number of customizable picture files can be limited by the internal FIT500's storage capacity.

The resolution of the customizable picture depends on the FIT500's display resolution. The (missing or bad snippet) currently supports bitmap images of 640 pixels in width by 480 pixels in height (VGA size). Larger images are acceptable but will be reduced to the above size when displayed.

8.5 Additional Prompts

The FSC3000™ controller can support Additional Prompts. These additional prompts were originally designed for Network Cards, but can also be used for Proprietary Cards. The additional prompts allow you the ability, just like the other prompts, to change the message. In addition, there is also the option to restrict the number and type of input. The input can be alphanumeric, numeric, alpha numeric (hidden) or yes/no. If dual language is enabled, different messages for language 1 & 2 can be set up. Up to eight (8) additional prompts can be assigned to each card/account type, but only nine (9) can be combined presented for a single transaction with the order of precedence being **Account Prompts, Driver/Single** and then **Vehicle**.

EXAMPLE:

The cards Account is configured for 4 prompts, the Driver card with 4 and Vehicle with 4. When prompted, the 4 account prompts will be presented, the 4 driver card prompt and only the first vehicle card prompt.



NOTE: If using Network Cards, on the system do not modify the prompts used by the specific networks. In addition, some prompts may need to be changed for a specific network. Reference the following page as needed.

To format additional prompts: Set Prompt <ENTER>.



NOTE: The following option is specific to Proprietary Cards ONLY and is NOT supported for Host-Based Cards.

Enable Minimum Length Prompt entries (Y/N)?

(Card buffer - prompt Seq. must be enable to set this option)

Code	Prompt	Entry	Max	Min
A	^5^T^KREFER FUEL Y/N:	Y/N	1	0
B	^6^T^KODOMETER:	123	6	0
C	^5^T^KTRIP #:	ABC	12	0
D	^5^T^KLOYALTY CARD #:	ABC	2	0
E	^5^T^KPIN:	***	8	0
F	^5^T^KDRIVER ^LID:	***	16	0
G	^5^T^KVEHICLE ^LID:	ABC	12	0
H	^5^T^KTRAILER ^LID:	ABC	12	0
I	^5^T^KREFER ^LHOURS:	123	5	0
J	^5^T^KDRIVER LICENSE ^LSTATE:	ABC	2	0
K	^5^T^KDRIVER LICENSE ^L#:	ABC	25	0
L	^5^T^KADDR: BILLING #^LOR HOUSE #:	ABC	20	0
M	^5^T^KVEHICLE LICENSE ^L#:	ABC	20	0
N	^5^T^KTRAILER LICENSE ^LSTATE:	ABC	2	0
O	^5^T^KTRAILER LICENSE ^L#:	ABC	20	0
P	^5^T^KDRIVER NAME:	ABC	16	0
Q	^5^T^KPURCHASE ^LORDER #:	ABC	10	0
R	^5^T^KONTROL #:	ABC	12	0
S	^5^T^KJ5 OR 9 DIGIT ^KZIP CODE:	123	9	0
T	^5^T^KMISC ^KENTRY	123	8	0

ENTER (prompt table row # (A-T) or [RETURN] to exit)

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

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

¹Prompts were only sent under FDIS, free for PCF.

²Not sent to any host, free for PCF use.

Section 9 Download

When a system first communicates with pump controllers and terminals, it downloads the configuration related to each device. If information is changed after communication has been established with a configured device, the FSC3000™ will need to download the configuration again.

All configurations can be downloaded by typing: Download <ENTER>

Device-specific configurations can also be downloaded separately:

Download PCT # (Leave out # to download all PCTs)

Configure PCT #

Configure PCT # Position #

Set Fueltype - When using DPC and prices are changed, price change on pump must be performed by using download (type: download PCT)

Download FIT # (Leave out # to download all FITs)

Configure FIT #

Format Receipt Header

Format Receipt Trailer

Format Receipt Body

Format Display #

Format Keyboard #



NOTE: When using the preceding commands, the “Download” command must also be used.

Section 10 Set Journal

To set up Journal Printer or USB key type: Set Journal <ENTER>.

```
Is Journal Printer Connected (Y/N)? Y
Set Journal Printer Options (Y/N)? Y
Print:
  Account, Driver, Vehicle, Odom, And Misc (Y/N)? Y
  Account #, Card 2 (Y/N)? Y
  Prompt Responses (Y/N)? Y
  Stop Line Skip Between Transactions (Y/N)? Y
  Journal Error Option (Y/N)? Y
  Enable Auth On Journal Error (Y/N)? Y
  Print PCI System Log on First of Month (Y/N)? Y
```

Replying "Yes" to this prompt will cause the system to automatically print the current PCI log data with the midnight totals of the last day of the month. Once printed, the FSC3000™ will automatically clear the log file and start to continuously log system activity again. If set to "No", see "SHOW LOG" for maintaining compliance.

```
** USB KEY **
Enter Phoenix Site ID (000 - 998): 001
Allow Auths if USB Key is Not Inserted (Y/N)? Y
```



NOTE: USB Key support is only available on "REV C" FSC3000™ controller boards.

Section 11 Show Log (Saving Log)

If an Office Journal is not installed, or it is preferred to not auto print the PCI log, log data must be manually captured and stored to maintain PCI compliance. To manually capture PCI log data, use the following procedure:

1. Connect to the FSC3000™ using a Terminal application that provides the ability to capture text. This includes applications such as: HyperTerminal, ARTWare or Phoenix™ applications.
2. Login to the FSC3000™, enable “text capture” and select or define a new file name. Do not overwrite an existing capture file that is not more than one year old.
3. From the command prompt: issue the command “SHOW LOG”.
4. After the log data has been completely displayed, turn off the terminal’s text capture feature.
5. The log file can only be cleared when logged in as the Admin. From the “Admin>” command prompt: issue the “SET ADMIN” command and select the “Clear Event Log” option. This will clear the log flash blank and then log an entry indicating that the clear process occurred.
6. Press “Enter” to exit the “Administrator Menu” and issue “Bye” to log off as the administrator. Make sure all captured logs are saved for a minimum of one year.



NOTE: For more information about the PCI event log and retention requirements of the data see OPW document “M030001_PA1-PA-DSS-Implementation-Guide.pdf,” Section 8.5.

Section 12 FSC3000™ Memory Structure

The FSC3000™ memory is divided into three (3) sections as defined below.

12.1 Application Memory

This section of memory is used by the system for control and storage of the system configuration. The size of this memory space is determined by the firmware version of the fuel site controller. As new features are added the amount of application memory can increase and can change the amount of space available to card/account memory when using memory level 3 or 4.

12.2 Transaction Memory

Transaction Memory is reserved for the storage of fuel transaction records. The number of available stored transactions is specified when the FSC3000™ is purchased .

The FSC3000™ can be purchased with the following transaction memory levels:

Transaction Level	# of Transactions
2 (Stdandard/default)	500
3	1000
4	2000
5 (Requires 2nd SIMM Card)	4350

12.3 Card/Account Memory

The **Card/Account Memory** is used for storage of the Proprietary Card File. The number of available cards and accounts that can be stored is specified when the FSC3000™ is purchased.

The FSC3000™ can be purchased with the following card/account memory levels (table represents memory as of 1.16b):

Card Memory Level	# Cards & Accounts	Min PCF Options	Avg PCF Options	Max Pcf Options
2 (Standard/default)	2000	2000	2000	2000
3	8000	8000	8000	7580
4	64000	53925	18660	7580
5 (Requires 2nd SIMM Card)	64000+	150000	60472	24560



NOTE: As mentioned above in section 12.1, the maximum amount of card/account records available will vary as FSC application memory increases. This condition should be considered when purchasing the card memory level to meet your needs.

NOTE: The “Avg PCF Options” counts are based on the following card file options being enabled:



Account #'s
Daily Allocation
Card PIN with: Card INVALID after 3 BAD PIN Entries
Product Restriction
Quantity Restriction
Driver / Vehicle / Account Name
Additional Prompts (Prompt-Seq.)

12.4 Set Card Buffer (option 1) – Card/Transaction Size

The next step is to set the number of transactions to be stored. The system will display the maximum number of transactions that can be stored based on the transaction level that was purchased. The next step will be to set the card/account size.

To set up Card/Tran buffer type: Set Card Buffer <ENTER>.

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: 1

NOTE: Transaction and Message Buffer will be CLEARED!! (Y/N)? Y

Enter # of transactions to be stored (max 2000): (Enter the number that is displayed)

#NOTE: Transaction buffer will be CLEARED!! Are you sure (Y/N)? Y

Enter # of cards to be stored (max xxxxx):

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:

12.4.1 Set Card Buffer (option 2) – Card/Account Options

The **Card/Account Options** define how the card/account file will be set up.

Except for Card Level 2 (2000) and 3 (8000), Card Level 4 (64000) is limited to the number of cards/accounts the system can hold based on the number options defined for the card/accounts. The more options that are assigned, the larger the individual card/account size increases, therefore decreasing the number of card/accounts that can be fit into the card/account buffer (memory).



NOTE: Unless otherwise noted, to modify options, the card buffer must be redefined. You will need to clear and re-enter all card/account records. Include any of the options that follow in the initial setup if they will be used at a later date.

Available options and how they work are described in the sub-sections that follow:

12.4.2 Account

When the **Account #** option is enabled a 4-digit account number can be assigned to each card. An associated account record must also be inserted into the card file. This account number lets you group cards together for reporting purposes and fuel control restriction. When driver/vehicle cards are used with **Accounts** enabled, the use of cards assigned to an account is restricted without a corresponding drive/vehicle card from the same account. If a Driver or Vehicle card is not assigned to an Account (shown as card# being assigned to Account #: 0000), that card is treated as a Maintenance/Global card and is allowed to fuel with any card assigned to any account.



NOTE: This option must be enabled when Tiered Accounts is used.

EXAMPLE:

A driver card assigned to account "0112" can only fuel with a vehicle card assigned to account "0112" or a vehicle card with an account of zero ("0000"). This also holds true in reverse for a Vehicle card.



IMPORTANT: Whenever a driver or vehicle card assigned to a specific account is used with another card assigned to account zero, fuel totals are accumulated against the assigned account and each of the individual cards.



NOTE: Do Not create an account zero (0000) (and if a card is not assigned to an account) don't enter four zeros. Simply skip the entry when prompted for account number.

12.4.3 Expiration Date

The **Expiration Date** option allows for the definition of a date when each card/account can no longer be used in the system. This option is global and will require all cards/accounts to have the expiration date defined.

12.4.4 Monthly Allocation

The **Monthly Allocation** option is not recommended for multi-site systems. This option allows for the definition of a monthly monetary amount limit for each card/account. This option is global and will require all cards/accounts to have the amount defined. (See SET CARD – options 3, 4, 5, 6, 7 for more information related to allocation.)

12.4.5 Daily Allocation

The **Daily Allocation** option allows for the definition of a daily monetary amount for all card/account records. This option is global and will require all cards/accounts to have the amount defined.

12.4.6 PIN

The **PIN #** option allows a Personal Identification Number to be assigned to a single and/or driver card. Even with this option enabled, PIN numbers for specific cards can still be disabled.

Card Invalidation:

This option is not available if the **PIN #** option is not selected. Card Invalidation allows for a card to be deemed automatically invalid when the user enters three (3) consecutive bad PIN numbers. This option can be changed via the re-definition of the card buffer.

12.4.7 Save Odometer Entries

The **Save Odometer Entries** option is not recommended for multi-site systems. This option allocates space on the card record to store the last transaction odometer entry (Single & Vehicle Cards). This option must be activated for MPG or KM/L calculations to be performed and for the use of the Odometer Reasonability option. If the odometer reasonability option is not being used, then disabling this option is not recommended. This option must be enabled in order to use "Tiered Accounts."



NOTE: The system can still prompt for odometer entries if this option is not enabled. The odometer will only be logged into the transaction.

12.4.8 Odometer Reasonability

The **Odometer Reasonability** option is not recommended for multi-site systems. This option is available when “save odometer entries” is selected. This option allows for the selection of an Odometer restriction code for a Single or Vehicle Card that will reference the Odometer Reasonability Table. When a transaction is performed, the currently entered odometer is checked against the previous stored odometer in the card file. The difference is then compared to the odometer reasonability table with the code defined for that card. If the mileage traveled is equal to or above the lower range and equal to or below the upper range the odometer is considered reasonable and the transaction will continue. If the transaction mileage is higher than the upper limit, or lower than the lower limit, the transaction mileage entry is considered unreasonable and the system will respond in one of two ways. This option must be enabled in order to use “Tiered Accounts”.

Add information when using tiered accounts for the odometer reasonability field.

Accept the third bad entry and fueling is allowed

Reject the third bad entry and terminate transaction



NOTE: Odometer Reasonability Table Setup is required (if applicable).

12.4.9 Product Restriction

The **Product Restriction** option allows for the definition of a product restriction code to be assigned to each card/account. This code defines which product(s) can be accessed. If product restriction may be needed at a later date, enable this option and assign each card a code 00 for unrestricted.

Common Use: Single Cards (associated to vehicles) and Vehicle Cards (dual-card system) will restrict the vehicle to the fuel type it uses.



NOTE: Product Table Setup is required (if applicable).

12.4.10 Quantity Restriction

The **Quantity Restriction** option allows for the definition of a quantity restriction code for each card/account in order to limit how much fuel each transaction can pump. If Quantity Restriction may be needed at a later date, enable this option and assign each card a code 00 for unrestricted. The Quantity Restriction option can be set up to limit either by quantity or monetary, but not both.

Common Use: Single cards (associated to vehicles) and Vehicle cards (dual-card system) restrict the transaction from pumping more than the tank size of the vehicle.



NOTE: Quantity Restriction Table Setup is required (if applicable).

12.4.11 Driver/Vehicle/Account Name

The **Driver/Vehicle/Account Name** option lets you assign up to a nine (9) character entry for each account or card record added.

12.4.12 Verify Prompts 1, 2, 3

The **Verify Prompts** option allows for three (3) of the additional prompts to be verified against the value set up on the card. This is similar to another PIN number. For a Verified prompt to be presented, its letter must be included in the Prompt Sequence string.



NOTE: Like some of the fleet card hosts, the **Verify Prompts** option is provided for when the Proprietary Card File manager needs to track/allow fuel when tied to a specific reference such as; Trip # or P.O. #.

12.4.13 Prompt-Sequence

As discussed in section 8.5 the **Prompt-Sequence** option allows for eight (8) added prompts for each card type and account. These added prompts can be set up to have a predefined input such as alphanumeric, numeric, yes/no and hidden with a maximum number of inputs. This option is enabled by default if the **Verified Prompts** option is enabled.

To set up Card/Account buffer type: Set Card Buffer <ENTER>.

1. Specify Card/Tran 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
- X. Exit

Enter Choice: 2

Card/Account Records: Card/Account storage NOT yet defined

Specify Card/Account record (Y/N)? Y

-- Card/Account file will be DESTROYED!!! Sure (Y/N)? Y

Account #'S (Y/N)? Y

Expiration Date (Y/N)? Y

Monthly ALLOCATION (Y/N)? Y

DAILY Allocation (Y/N)? Y

PIN # (Y/N)? Y

-- Card INVALID after 3 BAD PIN Entries (Y/N)? Y

Save Odometer Entries (Y/N)? Y

Odometer Reasonability(Y/N)? Y

Product Restriction(Y/N)? Y

Quantity Restriction(Y/N)? Y

Driver / Vehicle / Account Name(Y/N)? Y

VERIFY 1 (Y/N)? N

VERIFY 2 (Y/N)? N

VERIFY 3 (Y/N)? N

PROMPT-SEQ. (Y/N)? Y

Maximum Cards/Accounts: 1911

1. Specify Card/Tran 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
- X. Exit

Enter Choice:

12.4.14 Set Card Buffer (option 8) – Additional Options

To set up Additional Options type: Set Card Buffer <ENTER>.

1. Specify Card/Tran 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
- X. Exit

Enter Choice: 8

Card invalid after 3 BAD PINs (Y/N)?

Discard Leading Zeros on "Prompt_Seq." entries (Y/N)? Y

(Only if Prompt-Seq. in Card/Account record is enabled)

Process ALL Voyager cards as PCF based (Y/N)? Y (**IMPORTANT** - see below)

Prompt for Odometer on ALL Voyager cards (Y/N)? Y

Prompt for Vehicle Number on ALL Voyager cards (Y/N)? Y (saved as add. prompt)

Mask card number on receipts (Y/N)? Y

Allow keyed cards (Y/N)? Y

- Card valid after 3 BAD PINs
- Leading Zeros Discarded on "Prompt_Seq." Entries.
- All Voyager cards will process as PCF authorized
- Odometer will be prompted for
- Vehicle Number will be prompted for
- Card number will be masked on Receipt
- Keyed entry of Voyager cards allowed



IMPORTANT: "Process ALL Voyager cards as PCF-based" should only be enabled for non-public sites. Enabling this option will allow every Voyager card to be accepted (offline).

Section 13 Restrictions and Reasonability

13.1 Set Product Restriction

The **Set Products Restriction** table is used to define which products are valid for a specific code. This code can then be assigned to a card and/or account. Code 0 is always set to "all products allowed".

(Option 2) – Card/Account Options

Card/Account Buffer – The "Product Restriction" option must be enabled in order to use this setup option.

To set "Pump Restriction Table" type: Set Product Restriction <ENTER>

PRODUCT RESTRICTION CODES:

CODE 0 ** ALL Products Valid **

CODE 1: Valid Products: NONE

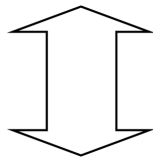
--Specify Code 1 (Y/N/X)? Y

Enter Valid Products (1-32)



CODE 2: Valid Products: NONE

--Specify Code 2 (Y/N/X)? N



CODE 14: Valid Products: NONE

--Specify Code 14 (Y/N/X)? N

CODE 15: Valid Products: NONE

--Specify Code 15 (Y/N/X)? N

13.2 Set Quantity Restriction

The **Set Quantity Restriction** table is where code limits are defined either by currency or volume that can be assigned to a card and/or account. This restriction limits each transaction to the amount assigned to the code. This table can only support all codes as currency or volume limits, but not both. Code 0 is always unrestricted.

(Option 2) – Card Management options

Card/Account buffer – The "Quantity Restriction" option must be enabled in order to use this setup option.

To set Quantity Restriction Table type: Set Quantity Restriction <ENTER>

QUANTITY RESTRICTION CODES: (values represent quantities)

Code 0: NO Restrictions
Code 1: 20
Code 2: 40
Code 3: 60
Code 4: 80
Code 5: 100
Code 6: 120
Code 7: 140
Code 8: 160
Code 9: 180
Code 10: 200
Code 11: 220
Code 12: 240
Code 13: 260
Code 14: 280
Code 15: 300

Qty restriction value options (Y/N)? N

13.3 Set Odometer Reasonability

The **Set Odometer Reasonability** table is where the ranges for the odometer reasonability feature are defined. Each code is assigned a minimum and maximum mileage range. This range is then assigned to either Single or Vehicle Cards. When a transaction is performed, the currently entered odometer is checked against the previously stored odometer within the FSC3000™ card file. The difference is then compared against the odometer reasonability table with the code defined for that card. If the mileage traveled is equal to or above the lower range and equal to or below the upper range, the odometer is considered reasonable and the transaction will continue. If the transaction mileage is higher than the upper limit, or lower than the lower limit, the transaction mileage entry is considered unreasonable and the system will respond in one of the two ways:

- Accept the third bad entry and fueling is allowed (bad odometer saved)
- Reject the third bad entry and terminate transaction

(Option 2) – Card/Account options

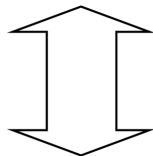
Card/Account Buffer – The "Odometer Reasonability" option must be enabled in order to use this setup option.



NOTE: Code 0 assigned to a card will ignore reasonability.

To set Odometer Reasonability Table type: Set Odometer Reasonability <ENTER>.

- 1) Enter MINIMUM mileage: 0
Enter MAXIMUM mileage: 100
- 2) Enter MINIMUM mileage: 0
Enter MAXIMUM mileage: 250
- 3) Enter MINIMUM mileage: 0
MAXIMUM mileage: 500



- 14) Enter MINIMUM mileage: 150
Enter MAXIMUM mileage: 700
- 15) Enter MINIMUM mileage: 150
Enter MAXIMUM mileage: 10000

-- Change action after BAD ODOM entries (Y/N)? y
Allow fueling if 3 BAD ODOM entries (Y/N)? N



NOTE: PetroLink™ transactions using Odometer Reasonability will always deny fueling when out of range, irrelevant of the above setting – allow fuel if BAD odometer entry.

In order to use Odometer Entries when Tiered Accounts is enabled, set all minimum values to zero (0) and maximum to nine (9) if Odometer Reasonability and Multiple Locations are not in use. If Odometer Reasonability is in use, then the Tier and Odometer Reasonability table are shared when using codes 1-20.

Section 14 Card/Account Management

14.1 Media Formats

When a proprietary media (ChipKey®, magnetic cards, optical cards) is read from a standard terminal, the terminal will match the media's network number to one of the network numbers configured in the terminal. If there are no matches, the terminal will send the card and network number to the FSC3000™ for processing. If the FSC3000™ is unable to find a match, the terminal will display "INCORRECT CARD". All non-proprietary media is sent directly to the FSC3000™ for processing. The only exception to this rule is the VIU in which the network is not checked and is sent directly to the FSC3000™ for processing. The Format is how the FSC3000™ will see the media when read.

ChipKey®:

Proprietary System2 (R/W only)	Format - NNNNCCCCCCCCCCCCCCCC
Proprietary K3000L	Format - NNNNCCCCC
Proprietary K800	Format - NNNNCCCC (ChipKey R/W)
Proprietary K800	Format - NNNNCCCCC (all other software)

Magnetic Cards:

Proprietary System2	Format - NNNNCCCCCCCCCCCCCCCC
Proprietary K800	Format - NNNNCCCC
Non-Proprietary	Format - Track 2 first 19 digits

Optical Cards:

Proprietary System2	Format - NNNNCCCCC
---------------------	--------------------

Proximity:

26 BIT - 5 digit	Format - CCCCC
26 BIT - 8 digit	Format - FFFCCCCC (FFF = Facility code)



NOTE: Other formats could be supported.

VIU (Vehicle Identification Unit):

Format - NNNNCCCCCCCCC

Keypad:

Format - Up to 19 digits
(can be limited - Con-
figure FIT # Command)

14.2 Special Card Formats (Magnetic Cards)

The FSC3000™ normally reads the first 19 digits of track 2 on magnetic cards. There are a few formats that have a custom setup as defined below. When the Magnetic Card is read and the raw data format matches one of the following formats below, the data will be reformatted to a format the card file can recognize.

Format #	Raw Card Data	Card setup in card file
1	=NNNN=DDDDVVVVAAAAA=yymmQPLT	NNNNDDDDVVVVAAAAA
2	=NNNN=CCCCRRRAAAAAVVVV=yymmQPP5M	NNNNCCCCRRRAAAAA
3	=NNNN=CCCCAAAVVVV=yymmQP	NNNNCCCCAAAVVVV
4	=NNNN=CCCCAAA=====yymm==	NNNNCCCCAAA
5	=NNNN=====VVVV=====QP	NNNNVVVV

Raw card data fields:

```

=:      Field Separator
N:      System ID
D:      Driver #
V:      Vehicle #
A:      Account #
C:      Card #
R:      Participant #
yymm:   Expiration Date
Q:      Quantity Restriction Code
P:      Product Restriction Code
L:      Price Level Code
T:      Card Type
M:      Manual Entry Code
"5":    Must be in Format 2 Position

```

14.3 Card/Account Adding/Modifying/Deleting

Insert Card

Edit card

Delete card

Insert VIU

Edit VIU

Delete VIU

Insert Account

Edit Account

Delete Account



IMPORTANT: Phoenix™ users should not use the above commands. All Card/Account management should be performed using the Phoenix™ software interface.

When using the USB card update function (the USB key flag must be enabled), the card update file on the USB key must have the same site ID as set up in the "Set Journal" command.

File - CUxxx (xxx = phoenix site ID)

14.4 Card/Account Reports

Print/Show <validity><source><category> Card <range>

Validity - Valid / Invalid

Source (If Validity is Invalid) - By Manager / By System (3 bad pins)

Category - Single / Driver / Vehicle

Range - #### / #### - ####

Print/Show Account # (leave out # for all accounts)

Print/Show Card Account #

Print/Show Card Account

Print Show Card Summary

Section 15 Network Management

15.1 Processing of Cards to a Remote Host

The Multi-trucking Network Package for the FSC3000™ processes transactions to both private fleet and standard bankcard hosts. From here on these will be referred to as networks. Private fleet networks typically process cards branded to themselves and the FSC only routes those specific cards to their specific network. Other fleet networks will accept another network's cards through agreements between them. In most scenarios of this type the FSC is able to make these adjustments through setup of the network itself. Bankcard networks (those that accept standard retail cards) such as Visa, MasterCard, Discover and American Express also accept some of the private fleet network cards. The FSC is again prepared to route those cards based on setup. For a list and processing information of the networks currently available under the Multi-trucking Network Package, contact your local sales representative. This section describes the basic setup and configuration needs of the different networks.

15.1.1 Understanding Bank Card Processing

When a bankcard (Visa, MasterCard) is swiped, the FSC will connect to the network and pre-authorize before the cardholder can fuel. Pre-authorization occurs since the final dollar amount of pay-at-the-pump transactions are not known until the end of the sale. Under Visa and MasterCard rules issuing banks place a hold on a card holder's account for transactions originating from an automated fuel system for \$1. From an authorization perspective, For the FSC an the approval of a \$1 pre-authorization request allows a transaction of \$75 or \$150 (depending on card type). These limits are defined by Visa and MasterCard and when dollar authorization is enabled the FSC controls these limits as defined.

See Fleet Table setup under Paymentech Host configuration for more information about configuring \$1 authorizations.



NOTE: Currently, the FSC3000 does not support PIN-debit transactions.

Outside of customer specific network support, the FSC currently supports three different networks for the processing of bankcards, BUYPASS (Firstdata), NBS/Bank and Chase Paymentech. By design, only one of these networks can be purchased for use on the FSC at any given time. Enabling more than one of than can create processing concerns and should not be attempted.

15.2 Set Network (Admin Login Rights Required)

The **Set Network** command displays a menu that begins with network choices (those that are enabled/purchased, up to 7 allowed per site) followed by additional configuration options (8-16) specific to network support.

To Setup Networks type: `set network`

NETWORK CHOICES

1. ComdataPOS
2. CFN
3. T-CHEK
4. EFS
5. TCH
6. NBS\Bank
8. Set Time Zone
9. Set Fleet Table (Can use "SET FLEET" to access directly)
10. Perform Communication Test
11. Set Forced Trans Capture Time (Set no greater than 18 Minutes)
12. Force Transaction Capture.....782 Seconds on Primary Host
13. Print Price and Total on Network Receipts: Yes
Display Price on Terminal Display: No
14. Configure Host Port(s) and devices
15. Create Registered Bank Card PINs ("Force Use of Bank Card PINs" is enabled)
16. Synchronize System Clock with Host? No

Enter option number or press [RETURN] to exit: 2



NOTE: Networks (1-6) will only show when enabled.

15.2.1 Set Time Zone (option 8)

The **Set Time Zone** option allows you to define the time zone where the FSC is installed.

This setting must be configured for any host processing cards under the Universal Network Protocol. These networks currently include: ATIO-Net, Company Card, EFS, Intevacon, KardAll IPN, any NBS (Bank, FMGC, Pacific-Pride, Quarles or QuickFuel), TChek and TCH.

15.2.2 Set Forced Trans Capture Time (option 11)

The **Set Forced Trans Capture Time** option defines the maximum time in minutes to hold the last uncaptured transaction. The system will normally capture the last transaction on the back end of a current transaction authorization to save on dial-outs. Setting this option to low will cause more dial-outs. Never set more than 18 minutes (default 15 minutes). Paymentech requires a transaction capture time be no longer than 20 minutes.

Enter the time interval (in minutes) to force host captures.

Enter ZERO to force a 45 second capture window:



NOTE: This option was originally provided to throttle the number of dial-up phone calls made when processing cards. With the use of TCP/IP connections now being the norm, the FSC forces this timer to no less than 90 seconds whenever a transactions is completed. Therefore this setting has become a catch all option to ensure transaction captures occur in a timely fashion and it's recommended to leave the system default of 15mins.

15.2.3 Print Price and Total on Network Receipts (option 13)

The **Print Price and Total on Network Receipts** option will remove Price and Total on network receipts. This option should always be set to "Yes" when a bankcard network is in use.



NOTE: If you are processing cards to a second network where price and total is not desired, you can set this option to "No" and then enable printing of price and total under ISO table setup for bankcards.

The second prompt; "Do you want transaction price displayed on terminal (Y/N)?" will cause the FSC to print the price per unit on the terminal when the "Use Pump x" message is shown.

15.2.4 Configure Host Port(s) and Devices (option 14)

The **Configure Host Port(s) and Devices** option allows for the definition of the type of device used for network connectivity and the enabling of the secondary host and its device for connectivity. The Dual-Host Flag must be enabled for the secondary host to be available (see SHOW FLAGS).

Enter option number or press [RETURN] to exit: 14

Modem setting for Primary Host: New OPW Host modem
Port unlocked and usable by all networks.

Change Primary Host device settings (Y/N)? y

- 1 - Change Modem type/init string
- 2 - Use TCP/IP connection device
- 3 - Lock Host Modem to Port

Enter option: 1

Configure init string for Primary Host modem;

- 'M' for 33.6k baud HOST modem.
- 'N' new 2400 baud HOST modem (purchased after 6/05).
- 'O' old 2400 baud HOST modem (prior to 6/05) OR US Robotics.
- 'C' to configure device specific string.

Enter option: O

Old OPW/US Robotics modem selected!



NOTE: When an Abierto/Systech IP converter is used to process transactions, option 'O' for Old OPW/US Robotics modem should be selected.

Modem setting for Secondary Host: Old OPW/US Robotics Host modem
Port unlocked and usable by all networks.

Change Secondary Host device settings (Y/N)? y

- 1 - Change Modem type/init string
- 2 - Use TCP/IP connection device
- 3 - Lock Host Modem to Port

Enter option: 3

Is the device specific to:

- Company Card processing (Y/N)? N
- Byypass processing (Y/N)? Y

ENABLE network processing on Secondary Host (Y/N)? y
Secondary Host ENABLED!



NOTE: When using a connection device specifically designed for use with a specific host, such as the Buypass Micronode, option 3 must be used to lock the processing of a specific hosts activity to that port.

Option 2 (Use TCP/IP connection device) should be used when the IP connection device does not emulate modem functionality. The FSC will not send modem initialization strings, nor expect modem response codes.

15.3 Host Specific Setup Options

This section calls out the setup options that are specific to each host.

- "CFN" on the next page
- "Comdata (Terminal Fuel network, dial-up only)" on page 93
- "ComdataPOS" on page 95
- "EFS (Original EFS host)" on page 97
- "T-Chek" on page 99
- "TCH" on page 101
- "FleetOne" on page 103
- "NBS\FMGC (Fuelman\Gascard [FleetCor])" on page 105
- "NBS\BankCard & Quarels Fuel Network" on page 108
- "Paymentech" on page 111
- "Buypass" on page 120

15.3.1 CFN

When **CFN** is selected the following options are specific to its setup:

```
NETWORK option settings      NETWORK : CFN

1 - Site ID..... 9998 (Provided by CFN)
   Originator ID..... 12345678901 (Do not change)
   Header String..... CFN (Do not change unless instructed by CFN)
2 - Card Acceptor Name..... (Same as Site Name on other networks)
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^FHAVE A SAFE TRIP
10 - Re-Prompt Time....(Minutes).... 10 (set to zero for DTC systems)
11 - Communication Parameters..... 1200/2400 8N1 T60Y
12 - Call Statistics:
   Answered: 0 Failed: 0 Busy: 0 Connect Time (secs): 0
13 - Additional Cards Processed:
   CFN/Fuelman Dual Network..... Yes (Enabled by default)
   T-Chek..... No
   Comdata ComChek..... No
   ISO based: (Must be enabled in ISO to process)
     MasterCard Fleet..... No
     Fuelman & Gascard..... No
     Wright Express..... No
14 - Connect after prompts complet.. No
15 - Host Status..... Host DISABLED
16 - Price/Total on Orig/Legacy Cr.. Yes
```

Enter option number or press [RETURN] to exit:

1. Site ID

```
Site ID..... 9998 (Provided by CFN)
Originator ID..... 12345678901 (Do not change)
Header String..... CFN (Do not change unless instructed by CFN)
```

2-4. Setup Options 2-4

Options 2- 4 should be set up with information from the network. The Technician should contact the Merchant and/or CFN for information.

Like all networks, the “Site ID” is provided by CFN when the site is boarded. The “Originator ID” and “Header String” are optional settings that are transmitted to host. They are available for edit but should not be changed unless specifically directed by CFN.

Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

Enable LOCAL AUTHORIZATION? (Y/N) : y

Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed

Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed

Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

Enable LOCAL AUTHORIZATION? (Y/N) : y

Enter NUMBER of Auth allowed (default = 1) : 0

LOCAL AUTHORIZATION...Infinite

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

CFN – Baud 1200 or 2400, 8 data bits, No parity, 1 stop. If using satellite, the baud rate can be configured at 9600 baud if needed.

12. Call Statistics

For Reference Only – The **Call Statistics** option provides the number of Answered, Failed, Busy connections and the connection time. This will reset with every new batch.

13. Additional Cards Processed

This option allows for the processing of additional cards on the CFN network. It is recommended that merchant/site owner check with a CFN representative to determine which cards can be enabled for acceptance.



NOTE: To process T-Chek MasterCard Fleet and ISO based cards, they must be enabled in the ISO table.

When ISO cards are enabled and a bankcard host is in use, those cards listed above will process to CFN.

14. Connect After Prompts Complete

When CFN cards are swiped, the network will start the authorization process while the prompting is taking place. When CFN is authorizing by TCP/IP, the connection is too fast and CFN will drop the connection if the customer is taking too long to enter prompts. For CFN transactions to be authorized after prompting completes, set to "yes."

15. Host Status

This option enables the CFN network for processing. This only has to be executed once.

16. Price/Total on Orig/Legacy Cards

This option enables the printing of price and total on receipts for original and legacy CFN cards.



NOTE: This supersedes the Option 13 "Print Price and Totals on Network Receipts" under the general network setup.

15.3.1.1 CFN Product Code Descriptions

CFN Product Codes	
Code	Description
1	DIESEL #2 LOW SULFUR
2	DIESEL #2 HIGH SULFUR RED DYE
3	DIESEL #2 CARB (CA ONLY)
4	UNLEADED REGULAR GASOLINE
5	UNLEADED MID-RANGE GASOLINE
6	UNLEADED PREMIUM GASOLINE
7	OIL QUART
8	OIL GALLON
9	OIL BULK
10	C-STORE 1
11	C-STORE 2
12	C-STORE 3
13	DIESEL #1 LOW SULFUR
14	DIESEL #1 HIGH SULFUR RED DYE
15	DIESEL #1 CARB (CA ONLY)
16	COMPRESSED NATURAL GAS
17	PROPANE
18	MISCELLANEOUS
19	LEADED SUBSTITUTE GASOLINE
20	AVIATION GASOLINE
21	DIESEL #2 LOW SULFUR RED DYE
22	KEROSENE - CLEAR
23	DIESEL #2 CARB RED DYE
24	REGULAR UNLEADED (CBG)
25	MID-GRADE UNLEADED (MTBE)
26	PREMIUM UNLEADED (MTBE)
27	METHANOL
28	LIQUID NATURAL GAS

CFN Product Codes	
Code	Description
29	E85 UNLD (85% ETHANOL)
30	PURE ETHANOL
31	DIESEL #1 LOW SULFUR RED DYE
32	KEROSENE - DYED
33	DIESEL #1 CARB RED DYE
34	GAS REG UNL CBOB 10% ETHANOL
35	GAS MID UNL CBOB 10% ETHANOL
36	GAS PRE UNL CBOB 10% ETHANOL
37	BIO B50 DSL #2 ULTRA LO SUL DYED
38	DIESEL #2 ULTRA LO SULFUR DYED
39	DIESEL #1 ULTRA LO SULFUR
40	DIESEL #1 ULTRA LO SULFUR DYED
41	DIESEL #2 LS PREMIUM
42	BIO B50 #2 DIESEL ULTRA LO
43	DIESEL #2 CAP PREMIUM
44	Gasoline Unl Reg Eth 10%
45	Gasoline Unl Mid Eth 10%
46	Gasoline Unl Prem Eth 10%
47	BIODIESEL B2 ULTRA LO DYED #2
48	BIODIESEL B5 ULTRA LO DYED #2
49	BIODIESEL B10 ULTRA LO DYED #2
50	BIODIESEL B20 ULTRA LO DYED #2
51	DIESEL #1 LS PREMIUM
52	BIODIESEL B99 ULTRA LO DYED #2
53	ULTRA-LO DIESEL #2
54	BIODIESEL B99 ULTRA LO SUL #2
55	CAR WASH
56	TRUCK WASH
57	DEF Gallon
58	DEF 2.5 Gallon
59	DEF Bulk

CFN Product Codes	
Code	Description
60	WEIGH SCALES
61	RACING GAS UNLD 100
62	RACING GAS LEAD 110
63	BIODIESEL B2 LO SULFUR #2
64	BIODIESEL B2 LO SULFUR DYED #2
65	RACING GAS LEAD 112
66	BIODIESEL B2 ULTRA LO SUL #2
67	BIODIESEL B5 ULTRA LO SUL #2
68	BIODIESEL B10 ULTRA LO SUL #2
69	BIODIESEL B20 ULTRA LO SUL #2
70	PARTICIPANT USE
71	PARTICIPANT USE
72	PARTICIPANT USE
73	PARTICIPANT USE
74	PARTICIPANT USE
75	PARTICIPANT USE
76	PARTICIPANT USE
77	PARTICIPANT USE
78	PARTICIPANT USE
79	PARTICIPANT USE
80	ULTRA LO PREMIUM DIESEL NO 2
81	ULTRA LO PREMIUM NO 2 DYED
82	ULTRA LO PREMIUM DIESEL NO 1
83	ULTRA LO PREMIUM NO 1 DYED
84	REG UNLD ETHANOL 7.7
85	MID UNLD ETHANOL 7.7
86	PRE UNLD ETHANOL 7.7
87	BIODIESEL B1 ULTRA LO SUL #2
88	BIODIESEL B1 ULTRA LO DYED #2
89	BIODIESEL B2 ULTRA LO SUL #2
90	BIODIESEL B3 ULTRA LO DYED #2

CFN Product Codes	
Code	Description
96	WASHROOM FACILITIES
97	LODGING

15.3.2 Comdata (Terminal Fuel network, dial-up only)

The Comdata (terminal fuel) host should only be purchased when you are a private site that dispenses fuel to its own employees (or at least to a controlled group of Comdata fleet customers, not open to the public). Card prompting is specific to Fleet table account based setup.

When is selected there is an option 12 specific to its setup:

```
NETWORK option settings      NETWORK : Comdata

1 - Site/Terminal ID.....
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..... ^Q^FHAVE A SAFE TRIP
10 - Re-Prompt Time....(Minutes).... 10 (set to zero for DTC systems)
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Process USA Market MC? ..... NO
    Process Canadian Market MC? ... NO

Enter option number or press [RETURN] to exit:
```

1-4. Setup Options 1-4

Options 1- 4 should be set up with information from the network. The Technician should contact the Merchant for information.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed
Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed
Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk
```

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 0
LOCAL AUTHORIZATION...Infinite
```

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

12. Process USA/Canadian Market

Setting the questions to "Yes" allows the different MasterCard Fleet cards defined by Comdata for the appropriate North American markets to process to this host, when the MasterCard Fleet card is enabled in the ISO table.

15.3.3 ComdataPOS

The ComdataPOS host is used when the site is open to the public (or by private sites when a TCP/IP connection is required). When using this host, card prompting is host driven.

When selected there are two options specific to its setup:

NETWORK option settings NETWORK : ComdataPOS

```

1 - Location Code.....
   Dialup Device Type..... TRT2
   Device Type Sub-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^FHAVE A SAFE TRIP
  10 - Re-Prompt Time....(Minutes).... 10 (set to zero for DTC systems)
  11 - Communication Parameters..... 2400 7E1 T60Y
12 - Process USA Market MC? ..... NO
    Process Canadian Market MC? ... NO

```

Enter option number or press [RETURN] to exit:

1. Location Code...

Like all networks the "Location Code" (Site ID) is provided by Comdata when the site is boarded. The "Dialup Device Type" and "Device Type Sub-Id" are optional settings that are transmitted to host. They are available for edit but should not be changed unless specifically directed by Comdata.

2-4. Setup Options 2-4

Options 2- 4 should be set up with information from the network. The Technician should contact the Merchant for information.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed
Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed
Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk
```

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 0
LOCAL AUTHORIZATION...Infinite
```

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

```
Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>
```

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

12. Process Market Specific

Setting these questions to "Yes" allows the different MasterCard Fleet cards defined by Comdata for the appropriate North American markets to process to this host when the MasterCard Fleet card is enabled in the ISO table.

15.3.4 EFS (Original EFS host)

The EFS network processes two card types, the original, branded as the “EFS National Bank TransAction” card and the “EFS TransActionCard Universal.” In order for the FSC to process these cards, now part of the “EFS LLC” network, the EFS network flag must be purchased.

When selected, there is an option 12 specific to its setup:

NETWORK option settings NETWORK : EFS

```

1 - Site/Terminal ID.....
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..... ^Q^FHAVE A SAFE TRIP
10 - Re-Prompt Time....(Minutes).... 10 (set to zero for DTC systems)
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Processed via IP (no ENQ/LRC).. NO

```

Enter option number or press [RETURN] to exit:

1-4. Setup Options 1-4

Options 1- 4 should be set up with information from the network. The Technician should contact the Merchant for information.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

```

Enable LOCAL AUTHORIZATION? (Y/N) : y
  Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed
  Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed
Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk

```

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 0
LOCAL AUTHORIZATION...Infinite
```

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

12. Processed via IP

When processing transaction via an Abierto IP converter this option must be set to "Yes." It tells the FSC to analyze responsiveness to whether the transactions are being processed over IP or dialup fallback (when an IP connection cannot be made). When an IP connection is made the FSC knows that modem based protocol controls are not supported so it should not process the packets as such.

15.3.5 T-Chek

The T-Chek network processes cards branded as “T-Chek Systems” cards. In order for the FSC to process these cards, now part of the “EFS LLC” network, the T-Chek network flag must be purchased.

When selected there is an option 12 specific to its setup:

```
NETWORK option settings      NETWORK : T-CHEK

1 - Site/Terminal ID.....
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^FHAVE A SAFE TRIP
10 - Re-Prompt Time....(Minutes).... 10 (set to zero for DTC systems)
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Process TCHEK MasterCard? ..... NO

Enter option number or press [RETURN] to exit:
```

1-4. Setup Options 1-4

Options 1- 4 should be set up with information from the network. The Technician should contact the Merchant for information.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed
Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed
Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk
```

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been

restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 0
LOCAL AUTHORIZATION...Infinite
```

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

12. Process MasterCard Fleet

In order for the FSC to send T-Chek MasterCard Fleet cards to the T-Chek host, this option must be set to "Yes" and the MasterCard Fleet card must be enabled in the ISO table.

15.3.6 TCH

The TCH network processes cards branded as “TCH” or “TCH Express” cards. In order for the FSC to process these cards, now part of the “EFS LLC” network, the TCH network flag must be purchased.

When selected there is an option 12 specific to its setup:

```

NETWORK option settings      NETWORK : TCH

1 - Site/Terminal ID.....
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^FHAVE A SAFE TRIP
10 - Re-Prompt Time....(Minutes).... 10 (set to zero for DTC systems)
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Process TCH MasterCard? ..... NO

```

Enter option number or press [RETURN] to exit:

1-4. Setup Options 1-4

Options 1- 4 should be set up with information from the network. The Technician should contact the Merchant for information.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

```

Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed
Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed
Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk

```

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been

restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 0
LOCAL AUTHORIZATION...Infinite
```

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

12. Process MasterCard Fleet

In order for the FSC to send TCH MasterCard Fleet cards to the TCH host, this option must be set to "Yes" and the MasterCard Fleet card must be enabled in the ISO table.

15.3.7 FleetOne

The FleetOne network processes the branded "FleetOne" cards.

When selected there are two options specific to its setup:

```

NETWORK option settings      NETWORK : FleetOne

1 - Merchant ID.....
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^FHAVE A SAFE TRIP
10 - Re-Prompt Time....(Minutes).... 10 (set to zero for DTC systems)
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Processed via IP (ignore LRC).. YES
  
```

Enter option number or press [RETURN] to exit:

1. Merchant ID

Although shown as "Merchant ID" this is like the "Site ID" or "Terminal ID" shown on other networks, it is provided by network when the site is boarded.

2-4. Setup Options 2-4

Options 2- 4 should be set up with information from the network. The Technician should contact the Merchant for information.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

```

Enable LOCAL AUTHORIZATION? (Y/N) : y
  Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed
  Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed
Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk
  
```

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 0
LOCAL AUTHORIZATION...Infinite
```

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

12. Process via IP

When processing transactions through an Abierto IP converter this option must be set to "Yes." It tells the FSC to analyze responsiveness to whether the transactions are being processed over IP or dialup fallback (when an IP connection cannot be made). When an IP connection is made the FSC knows that packet based LRC's are not sent so it does not run a process to validate this value.

15.3.8 NBS\FMGC (Fuelman\Gascard [FleetCor])

The Fuelman\Gascard network processes several different card types all branded as either “Fuelman” or “Gascard”.

When selected, there is an option 12 specific to its setup:

```

NETWORK option settings      NETWORK : NBS\FMGC

1 - Site/Terminal ID.....
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^FHAVE A SAFE TRIP
10 - Re-Prompt Time....(Minutes).... 10 (set to zero for DTC systems)
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Manual Entry Pre-String.....

```

Enter option number or press [RETURN] to exit:

1-4. Setup Options 1-4

Options 1- 4 should be set up with information from the network. The Technician should contact the Merchant for information.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

```

Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed
Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed
Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk

```

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been

restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 0
LOCAL AUTHORIZATION...Infinite
```

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

12. Manual Entry Pre-String

When the FSC is processing Fuelman\Gascard cards to this host and,

- it's a private/customer controller site where,
- all Gascard cards are assigned to a specific customer account
- the site chooses to enable keyboard entry

This option can be used to allow the Gascard specific cards to be keyed in strictly based on the embossed 6-digit number.

To configure this option:

Enter option number or press [RETURN] to exit: 12

```
Enter the 11 digit number that precedes the 6 digit card number
embossed on the FuelMan/GasCard card intended for keyed entry.
Enter an alpha character to clear the string:
```



NOTE: Entering an alpha character allows the merchant to clear this setting from use.

15.3.9 NBS\BankCard & Quarels Fuel Network

The NBS\BankCard and Quarles Fuel Network (NBS) networks are both bankcard processing hosts that will process any card configured and activated in the ISO table. The Quarles Fuel network is also supports a Quarles proprietary card with additional processing rules specific to Quarles.

NETWORK option settings NETWORK : NBS\BankCard or Quarles

```

1 - Site/Terminal ID.....
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^FHAVE A SAFE TRIP
10 - Re-Prompt Time...(Minutes).... 10 (set to zero for DTC systems)
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Reset ISO table to defaults ?..
13 - Force Bankcard Security Code .. No
14 - AVS Prompting for Bankcards.... Zip Code:No
   Billing Addr\House # prompt.... House #:No
15 - Dollar Auth Max Limit..... $75

```

Enter option number or press [RETURN] to exit:

1-4. Setup Options 1-4

Options 1- 4 should be set up with information from the network. The Technician should contact the Merchant for information.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

```

Enable LOCAL AUTHORIZATION? (Y/N) : y
  Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed
  Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed
Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk

```

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

```
Enable LOCAL AUTHORIZATION? (Y/N) : y
Enter NUMBER of Auth allowed (default = 1) : 0
LOCAL AUTHORIZATION...Infinite
```

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

12. Reset ISO Table Defaults

Selecting this option and answering 'Y' will set the ISO table back to cold start defaults. Once this operation is performed you must configure the ISO table and set the desired cards to process as "Active" or nothing will process to this host.

Reset ISO table to default values?

You will be required to reactivate ALL cards

processed to NBS. RESET NOW? y

-- ISO Table reset to DEFAULT settings!



NOTE: Under Quarles, their proprietary cards would still process.

13. Force Bankcard Security Code

See below for information about and how to configure this option.

14. AVS Prompting

This option enables the prompting of ZIP Code and/or House Number prompting. These networks can be setup to prompt as a theft deterrent only or collect and send the information to the host for validation.

Enter option number or press [RETURN] to exit: 14

Prompt for "Zip Code" on bankcards (Y/N)? y

Prompt for "Billing Addr\House #" on bankcards (Y/N)? n

Use AVS prompting as deterrent ONLY,
customer entries will NOT be sent to host
and fueling will always be allowed (Y/N)? y



NOTE: When using this feature and the prompts are configured to send, the NBS host will fail the transaction for authorization even if the processing bank does not support or cannot confirm the entered data. This creates a very strong reliance on every cards bank to correctly support AVS prompting.

15. Dollar Auth Max Limit

As discussed in "[Understanding Bank Card Processing](#)" on page 81, the standard rule for processing bankcard transactions at a \$1 authorization request means that max fueling cannot exceed a limit of \$75. Due to the request of some customers processing bankcards to the NBS host, they have asked that the FSC still submits a \$1 authorization request but allows a fueling amount greater than the \$75 limit to occur. This option allows the site owner to override the maximum fixed limited associated to a \$1 request.

However, changing this value is not enough to make sure that a higher limit will be allowed to occur. You must contact NBS and sign an agreement with them to accept the liability that comes with fueling more than the Visa/MasterCard defined limits. If not, the host will never authorize for a value higher than those defined by the card issuer.

Enter option number or press [RETURN] to exit: 15

This entry allows you as the Site Owner to override the VISA/MC Max Dollar fueling limit applied to a Dollar Authorization request.

NOTE: Support requests must be made with NBS before this change has affect.

Enter the Dollar Authorization applied limit: 75

15.3.10 Paymentech

NETWORK option settings

NETWORK : Paymentech

```

1 - Client #..... 1234 (Provided by Paymentech)
   Merchant #..... 123456789012 (Provided by Paymentech)
   Terminal #..... 001 (Provided by Paymentech)
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..... ^Q^FHAVE A SAFE TRIP
10 - Re-Prompt Time.... (Minutes).... 10 (set to zero for DTC systems)
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Reset ISO table to defaults ?..
13 - Force Bankcard Security Code .. Yes
   Training Screens Active ? ..... Yes
   ON... (Active: Yes)..... 12:00 AM
   OFF..... 12:00 AM
14 - AVS Prompting for Bankcards.... Zip Code:Yes
   Billing Addr\House # prompt.... House #:Yes
   AVS prompts Deterrent ONLY..... Yes

```

Enter option number or press [RETURN] to exit:

1. Client #, Merchant # and Terminal

When processing transactions to Paymentech there are three pieces of information provided by the network when boarded. Based on the protocol used, these values are expected to be a specific length where; Client # is 4-digits, Merchant # is 12-digits and Terminal # is 3-digits (typically assigned as "001").

1-4. Setup Options 1-4

Options 1- 4 should be set up with information from the network. The Technician should contact the Merchant for information.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

Enable LOCAL AUTHORIZATION? (Y/N) : y

Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed

Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed

Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

Enable LOCAL AUTHORIZATION? (Y/N) : y

Enter NUMBER of Auth allowed (default = 1) : 0

LOCAL AUTHORIZATION...Infinite

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

12. Reset ISO Table Defaults

Selecting this option and answering 'Y', will set the ISO table back to cold start defaults. Once this operation is performed you must configure the ISO table and set the desired cards to process as "Active" or nothing will process to this host.

Reset ISO table to default values?

You will be required to reactivate ALL cards

processed to Paymentech. RESET NOW? y

-- ISO Table reset to DEFAULT settings!

13. Force Bankcard Security Code

This feature allows the merchant/site owner to restrict fueling and/or meet requirements (for required fuel training) before allowing credit cards to be processed at an unattended site. Specifically, many areas throughout North America have restrictions on allowing the general public to fuel at an unattended fueling location without being trained on the proper procedures to follow to avoid an accident or what to do in case of an accident.

In order to support these requirements, the FSC supports a feature called "Bankcard Security Code" or "Training Screens." The merchant/site owner enables a process that displays a fixed set of training screens that the user must read and accept the responsibility of understanding the information presented before a receipt can be printed providing the user a 5-digit security code specific to the card swiped that must then be entered each time it's presented at the terminal. If the presentation of training screens is not desired (or allowed) the merchant can also manually train the card holder on proper operating procedures. Then, entering the card holder's Access Code (or last 8-digits) at the FSC, by selecting option 15 ("Create Registered Bank Card Security Codes") from the "SET NETWORK" command menu, will give the 5-digit security code directly tied to the card intend for use.

When registered bankcard processing is enabled and the current time falls between the programmed ON/OFF times, any ISO enabled bankcard that has "Force Registered Bank Card PIN prompt" set to "Yes" will force the FSC3000™ to prompt the user for the 5-digit Access Code assigned to their card.

If the user enters the correct Security Code, processing of the card to the network continues as normal. If not, after three (3) failed attempts the system displays the "3 Bad Pins" message and returns to "Insert Card" mode.



NOTE: To change Security Codes on all bankcards use the "SET SECURITY" command to change the values used for generating the code.

It is the merchant's responsibility to confirm the acceptability of this feature with local codes before enabling.

Enter option number or press [RETURN] to exit: 13

This feature is intended for use at UNATTENDED Fueling Locations.

Enabling this feature will cause all ISO table enabled cards with the "Force PIN" option set, to prompt for a Security Code assigned to the card number BY THIS Site Controller.

Enable Registered Bank Card PIN Prompting (Y/N)? Y

Bank Card PIN prompting ENABLED!

Present Training Screens if PIN is UNASSIGNED or 3 BAD ENTRIES (Y/N)? Y

Training Screens ENABLED!

Present BITMAP screens instead of TEXT when FIT500 is in use (Y/N)? Y



NOTE: If no is entered, text only messages will displayed!

BITMAP Training Screens ENABLED for FIT500 Terminals.



NOTE: It is the SITE OWNER's responsibility to make sure that the correct bitmaps are installed on the (missing or bad snippet)'s flash card. Bitmaps are displayed in order from 50.bmp through 57.bmp. See (missing or bad snippet) documentation for more information on using Bitmaps.

Present (P)etroleum or (C)NG text based Training Screens P/C: c

'C' = CNG based Training Screens will displayed!

'P' = Petroleum based Training Screen will displayed!

.

Enter Prompting ON time (HH:MM AM/PM): 12:00 AM

Enter Prompting OFF time (HH:MM AM/PM): 12:00 AM



NOTE: Each record in the ISO table needs to have the "Force Registered Bank Card PIN prompt?" prompt set to "yes" to allow security code prompt presented at the fuel island terminal.



IMPORTANT: Every FSC ships with same security table defined, therefore a Security Code assigned to a card would be the same at every site. To ensure your site generates a unique security code from another issue the "SET SECURITY" command and change the default values:

```
P>set security
Enter NEW table values
ROW 1: 01 23 45 67 89
      45 32 11 23 11
ROW 2: AB CD EF FE DC
Security CODE: 00
Enter CODE: 02
```

Petrol Training Screens

Opening Screen

UNATTENDED Fueling at this site requires the user to be properly trained on use and safety procedures.

Press ENTER to view the training screens now. ■

Training #1

SITE ORIENTATION

- 1-Locate & Read Signage Posted by Site Operator
- 2-Locate Emergency Shut-Off Switch
- 3-Locate Fire Extinguishers
- 4-Locate Emergency Contact Number ■

Training #2

PRACTICE SAFETY

- 1-TURN OFF: Ignition RV Heaters and Furnaces
- 2-ATTEND Hose while fueling
- 3-NO SMOKING or sources of ignition near nozzle
- 4-Use ONLY Approved Fuel Containers ■

Training #3

ENVIRONMENTAL CONCERNS

- 1-Avoid Spilling Product on the Ground
- 2-DO NOT Overfill Vehicle or Container
- 3-DO NOT Top Off!
- 4-DO NOT Block Nozzle Opening ■

Training #4

IN CASE OF SPILL

- 1-Stop Flow if Possible
- 2-Contain Spill with Materials Provided
- 3-DO NOT Enter Spill Area
- 4-Report Spill to Emergency Number ■

Training #5

IN CASE OF FIRE

- 1-Stop Flow if Possible
- 2-Activate EMERGENCY SHUT-OFF Switch
- 3-DO NOT put yourself in Danger
- 4-CALL EMERGENCY Number and/or 911 ■

Training #6

ACKNOWLEDGEMENT

I hereby acknowledge that I have read and understood the SAFETY and OPERATING INSTRUCTIONS as presented to me.

NO

PRESS TO ACCEPT -->■

YES

Training #7

FUEL ACCESS CODE

A Receipt will print with an Access Code. The code is specific to your Card and this system. Reinsert card to begin fueling

PRINT ACCESS CODE NO

RECEIPT NOW? ■ YES

Printed Receipt

THANK YOU! YOU HAVE ACKNOWLEDGED YOUR REVIEW OF THE UNATTENDED FUELING TRAINING SCREENS

WHEN FUELING AT THIS LOCATION DURING RESTRICTED HOURS, THE ACCESS CODE:

XXXXX

SHOULD BE USED, WHENEVER THE CARD:

XXXXXXXXXXXXXXXXXXXX1234

IS PRESENTED

CNG Training Screens

Opening Screen

UNATTENDED Fueling at this site requires the user to be properly trained on use and safety procedures.

Press ENTER to view the training screens now. ■

Training #1

SITE ORIENTATION

- 1-Locate & Read Fueling Procedures & Signage Posted
- 2-Locate Emergency Shut-off Switch(s)
- 3-Locate Fire Extinguishers
- 4-Locate Emergency Contact Number ■

Training #2

PRACTICE SAFETY

- 1-TURN OFF: Ignition RV Heaters & Furnaces
- 2-ATTEND Hose NO SMOKING or source of ignition near dispenser
- 3-Use ONLY an Approved Pressure Vessel/Container ■

Training #3

TO FUEL

- 1-Attach CNG Fueling Hose Nozzle to tank
- 2-Set hose nozzle Valve to FILL
- 3-Auth purchase using card reader
- 4-Turn dispenser switch to ON ■

Training #4

TO FINISH FUELING

- 1-When Dispenser BEEPS, turn switch to OFF
- 2-Turn hose nozzle valve to VENT and detach
- 3-Turn hose nozzle valve to OFF and place in dispenser holder ■

Training #5

IN CASE OF SPILL/GAS RELEASE

- 1-Activate Emergency Shut-off switch
- 2-Warn ALL customers & Evacuate Area!
- 3-DO NOT Enter Spill /GAS Release area
- 4-Report incident to Emergency Number and/or 911 ■

Training #6

IN CASE OF FIRE

- 1-Activate EMERGENCY Shut-Off Switch
- 2-Evacuate Area! DO NOT attempt to Fight Fire unless Trained
- 3-DO NOT put yourself in Danger
- 4-CALL EMERGENCY Number &/or 911 ■

Training #7

ACKNOWLEDGEMENT

I hereby acknowledge that I have read and understood the SAFETY and OPERATING INSTRUCTIONS as presented to me.

NO

PRESS TO ACCEPT --> ■

YES

Training #8

FUEL ACCESS CODE

A Receipt will print with an Access Code. The code is specific to your Card and this system. Reinsert card to begin fueling

PRINT ACCESS CODE NO

RECEIPT NOW? ■ YES

Printed Receipt

THANK YOU! YOU HAVE ACKNOWLEDGED YOUR REVIEW OF THE UNATTENDED FUELING TRAINING SCREENS

WHEN FUELING AT THIS LOCATION DURING RESTRICTED HOURS, THE ACCESS CODE:

XXXXX

SHOULD BE USED, WHENEVER THE CARD:

XXXXXXXXXXXXXXXXXXXX1234

IS PRESENTED

14. AVS Prompting

This option enables the prompting of ZIP Code and/or House Number prompting. This network can be set up to prompt as a theft deterrent only,

- Where host AVS responses will be ignored
- To deny fueling if the AVS entries are confirmed as incorrect
- To deny if the entries cannot be validated or not supported by the bank.

Enter option number or press [RETURN] to exit: 14

Prompt for "Zip Code" on bankcards (Y/N)? y

Prompt for "Billing Addr\House #" on bankcards (Y/N)? y

Use AVS prompting as deterrent ONLY. Responses will be ignored and
Fueling allowed regardless of verification results (Y/N)? N

Deny if zip code CANNOT be validated or AVS not supported (Y/N)? y

Deny if House# CANNOT be validated or AVS not supported (Y/N)? y

15.3.11 Paymentech Petroleum Product Codes



NOTE: All network product codes should be confirmed with the network for any changes that may have occurred.

002	Unleaded		021	Bio-Diesel 2% (Dyed)		
003	Premium		022	Bio-Diesel 5% (Dyed)		
004	Unleaded P		034	ULS Prem Diesel		
005	ULS Diesel		080	Misc.		
030	ULS Diesel #1				027	Off Road Diesel
034	ULS Premium Diesel		201	Scales	199	ar wash
038	ULS Diesel (Dyed)				016	E-85
038	ULS Diesel (Dyed)					
037	Dyed BioDiesel (B20)				055	Oil
044	B20 - Biodiesel		019	Racing Fuel	055	Oil
008	Motor Oil					
050	Motor Oil		199	Car wash	018	Bio-Diesel 100%
071	Unld 10% Ethanol		053	Hydraulic Fluid		
071	Unld 10% Ethanol		080	Misc.	030	Biodiesel 100% (Dyed)
071	Unld 10% Ethanol		080	Misc.	012	Bio-Diesel 11%
072	Unld-Mid 10% Ethanol		033	ULS Prem Diesel	013	Bio-Diesel 15%
072	Unld-Mid 10% Ethanol		031	Kerosene	018	Bio-Diesel 100%
072	Unld-Mid 10% Ethanol				022	Bio-Diesel 10% (Dyed)
073	Unld-Prem 10% Ethanol				024	Bio-Diesel 11% (Dyed)
073	Unld-Prem 10% Ethanol				024	Bio-Diesel 11% (Dyed)
073	Unld-Prem 10% Ethanol				024	Bio-Diesel 11% (Dyed)
038	ULS Diesel (Dyed)				051	Diesel Exhaust Fluid
036	ULS Diesel (Dyed)		015	CNG	018	Ethanol
030	ULS Diesel #1		051	LNG	018	Ethanol

034	ULS Premium Diesel						
010	Bio-Diesel 2%						
011	Bio-Diesel 5%						
012	Bio-Diesel 10%						

15.3.12 Bypass

NETWORK option settings

NETWORK : BYPASS

```
1 - Merchant ID..... 5K xx 153059 001 (5k = Required for Petro
Vend)
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^FHAVE A SAFE TRIP
10 - Re-Prompt Time....(Minutes).... 10 (set to zero for DTC systems)
11 - Communication Parameters..... 2400 8N1 T60Y
12 - Reset ISO table to defaults? .....
13 - Force Use of Bank Card PINS? ..... Yes
   Training Screens Active?..... Yes
   ON....(Active: Yes)..... 12:00 AM
   OFF..... 12:00 AM
14 - AVS Prompting for Bankcards..... Zip Code: Yes
15 - Bypass Download Ph #..... 18888433814
16 - Using Firstdata Micronode..... No
```

Valid Cards DOWNLOADED from Host: 20 59 60 71 80 81 84 0 0 0.

NOTE: Here are card codes downloaded from the Bypass supported by the FSC

- 20: Visa, Mastercard, American Express, Discover, Diners, JCB, Visa Fleet
- 59: WEX
- 60: Voyager
- 71: Fleet One
- 80: Mastercard Fleet
- 81: Fuelman Plus, Gascard Access
- 84: Sinclair Retail, Sinclair Driver Thank You

Merchant (NOTE: This information is downloaded by Bypass)

Name:
Address:
Phone:
Store Number:

Enter option number or press [RETURN] to exit:

1-4. Setup Options 1-4

Options 1- 4 should be set up with information from the network. The Technician should contact the Merchant for information.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

The Local Authorization option allows configuration of processing rules if the FSC can authorize network cards offline down the host is down. Not all networks support this feature. If you enable Local Authorization for a specific host you should first confirm with the host that this feature is allowed for the specific site.



NOTE: Depending on the host being configured different options may be presented.

Enter option number or press [RETURN] to exit: 7

Enable LOCAL AUTHORIZATION? (Y/N) : y

Enter NUMBER of Auth allowed (default = 1) : 15 ← number of auth's allowed

Enter DURATION in Mins. (default = 1) : 30 ← number of minutes allowed

Allow KEYED Cards? (Y/N): N ← allowing keyed card numbers can increase risk

To help reduce merchant risk, these settings control how many local authorizations are allowed within the number of minutes configured before local authorization is disabled. Once an active connection has been restored, these counts are cleared and local authorization is again allowed if the host goes down a second time.

If processing cards at a private site or a customer access controlled location, local authorization can be enabled to run forever while a host is down by setting the number of authorizations to zero:

Enable LOCAL AUTHORIZATION? (Y/N) : y

Enter NUMBER of Auth allowed (default = 1) : 0

LOCAL AUTHORIZATION...Infinite

If the network being configured processes bankcards or does not support local authorization the following message is displayed when option 7 is selected:

Sorry, LOCAL AUTHORIZATION is not allowed for <selected network>

8. Network System (ON/OFF times)

The Network System option defines when a specific network is allowed to process cards at the site (default 24 hours).

9. Authorization Message

The Authorization Message is the message that will be displayed at the terminal after the network card has been approved, when the host itself did not return an authorization message.

10. Re-prompt Time

The Re-Prompt Time option defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.



NOTE: Set to 0 (zero) for DTC systems.

11. Communication Parameters

Host communication parameters are set as needed on cold start. If a network is added after installation its parameters may need to be changed. If an Abierto/Systech IP Converter is in use contact OPW Tech Support for preferred settings.

Buypass - 2400 baud, 8 data bits, No parity, 1 stop.

12. Reset ISO Table Defaults

Selecting this option and answering 'Y', will set the ISO table back to cold start defaults. Once this operation is performed you must configure the ISO table and set the desired cards to process as "Active" or nothing will process to this host.

```
Reset ISO table to default values?  
You will be required to reactivate ALL cards  
processed to Buypass. RESET NOW? y
```

```
-- ISO Table reset to DEFAULT settings!
```

13. Force Bankcard Security Code

Refer to ["Paymentech" on page 1](#) for information about how to configure this option.

14. AVS Prompting

AVS Prompting provides ZIP Code and/or House number prompting on bankcards when enabled. The system can be set up to handle the prompt entry as a deterrent only or *check entry and deny* if not validated.

```
Enter option number or press [RETURN] to exit: 14  
  
AVS Zip Code prompt is ALWAYS enabled for Buypass Network  
  
Prompt for "Zip Code" on Bankcards (Y/N)? y  
  
Send to Host (Y/N)? y
```

15. Buypass Download Phone

This option is provided in case Buypass changes the number. Under normal circumstances you should not have to change this number.



NOTE: To enable the Buypass host for processing you **MUST** enter a Merchant ID and option 1 and create a Fleet Table entry for Buypass. Once both these are complete the FSC will automatically connect to Buypass and prepare for card authorization.

```
Enter option number or press [RETURN] to exit: 15  
  
Buypass Download Phone #:  
  
Perform Download Now (Y/N)? Y
```

16. Firstdata Micronode

When using a Firstdata Micronode IP Converter (in place of a modem) for the processing of Buypass network transactions you must set this option to "Yes."

15.4 FleetTable

The Multi-trucking Fleet Table (also referred to as Bank Table) is used to configure the different fleets that may be fueling at a specific site. Unlike networks where only seven (7) can be enabled for a single site, the fleet table provides up to 20 entries allowing the merchant/site owner to configure specific prompting and fueling limits for a customer's account against a single network.

This feature is designed to provide flexibility with prompting when you have different fleet customers fueling at your site, where each may need variations in the type of prompts and fueling limits they need to receive. To do this, the fleet table allows the configuration of an account/fleet number tied to the specific network's card in use. The FSC then keys on that number to manage prompting and fueling limits as configured.

For example; the customer's card has a specific ISO/BIN # as the first 6-digits followed by an account/fleet number for a specific number of digits (this is network card type specific). It is this account/fleet number that the network (card issuer) uses to determine required prompts, fueling limits and other conditions of control offered. When configuring the fleet table, based on the selected network being configured, the FSC knows where to find this account/fleet number and prompts the user to enter this as needed. This allows a site who is providing fuel to different customers holding the same fleet card but requiring different prompt and fueling limits to configure the FSC as needed to meet those needs.

This section shows the different fleet table setup options available based on the networks supported within the FSC. Issue the "SET FLEET" command to display the table and then select a row to edit from the table.

P>set fleet

#	?	Fleet/Acct	Name	Prompt Seq	Primary	Secondary	Onlin	Offln	A	B
1								0		
2								0		
3								0		
4								0		
5								0		
6								0		
7								0		
8								0		
9								0		
10								0		
11								0		
12								0		
13								0		
14								0		
15								0		
16								0		
17								0		
18								0		
19								0		
20								0		

ENTER (fleet table row # (1..20) or [RETURN] to exit) : 1

Once a row is selected, the current settings for the row are displayed followed by a list of the enabled networks on the system with a prompt to select a network. Once the network is selected, the FSC will prompt for the account/fleet number for which prompting and fuel limits will be applied. From this setting, you decide whether prompting will be constant for all cards related to a specific network or if you need to define multiple accounts for a single network to better accommodate your customer.



TIP: To keep prompts and fueling limits the same for all cards of a specific network, do not enter an account/fleet number when prompted. The FSC will back fill this field with ten zeros indicating that all cards are treated the same.



NOTE: If you want to single out 2 or 3 specific account/fleets for a network, use constant prompting for all other cards not associated to a specific account. Create a final row in the fleet table BENEATH all account/fleet specific rows for constant prompting against the rest. If you ONLY want to support the 2 or 3 accounts defined and decline all other cards from that network DO NOT add this constant record to the table.



NOTE: Some networks drive prompting based on embedded prompt codes on the card track2 data. For these networks, the FSC will not prompt for an account/fleet number or a prompt sequence string.

1										
---	--	--	--	--	--	--	--	--	--	--

(0=None, 1=CFN, 2=EFS, 3=TCH, 4=FleetOne, 5=NBS\BankCard, 6=Paymentech)

Enter NETWORK:

Below is a list of the different account/fleet number prompts that may be presented based on the network selected:

KardALL IPN:	For unique prompts enter Card ISO+4 (length of 10):
Intevacon:	Enter Intevacon Issuer ID (length of 6):
Company Card:	Enter Company Card Member ID (length of 6):
FleetOne:	Enter Fleet One Account # (length of 6): (allows fueling limits only)
TChek:	Enter T-Chek Customer # (length of 5):
TCH:	Enter TCH Customer # (length of 6):
NBS Quick Fuel:	Enter Quick Fuel Account # (length of 10):
EFS:	Enter EFS Acct# & Branch as: 6 chars of Account# plus 4 right most chars of Branch. (Ex: Acct. 123456 & branch 003012 = 1234563012):

When a specific account/fleet number is entered, you will be prompted to enter a name associated with that customer. If a constant record is created, the name field will be populated with the network's name as shown in the list.

EFS: Enter ACCOUNT/BRANCH NAME :

FleetOne & Quick Fuel: Enter ACCOUNT NAME :

All others: Enter CUSTOMER NAME :

For networks that allow a prompt sequence to be configured, here you enter the required string of characters to define the prompting sequence. See ["Additional Prompts" on page 61](#) for the list of available letters to enter (max 9) and prompts associated with them.

Along with these letters, three (3) special characters can be entered into the string sequence. These are: '\$', '*' (asterisk) and '#'.

- '\$' can be used to prompt the driver for a max dollar limit they wish to fuel
- '*' tells the FSC to begin the connection process to the host. This is used to synchronize the host connection process with the Driver's entry of prompt data to reduce the amount of time the "Processing Please Wait" message is displayed at the terminal while the host pre-authorization takes place (use of the asterisk is more important when modems are used for making host connections).
- The '#' character tells the system to prompt for the pump #. If not added, the FSC will add this to the end of the string.

Enter Prompt Sequence:

Next, enter a main number to dial when connecting to the network, and then the backup number to use when the primary number is busy or fails.



IMPORTANT: A primary number must be configured or the FSC will decline the card with a message of "Not a Network Card" being displayed at the terminal:

Enter PRIMARY #:

Enter SECONDARY #:

The next step is to configure the fueling limits available for this account/network. These limits allow you, as the site owner, to set the maximum amount of fuel any network can authorize for a single transaction. These settings, along with the absolute max quantity defined for a dispenser, give you the control necessary to regulate the amounts of fuel taken.

Depending on the network being configured, different entries will be presented based on the processing rules in place. Other than the network specific setup defined below the standard prompts are:

Enter MAX ONLINE Qty (0=Local) : See ["\(0=Local\)" on page 128](#) for information on (0=Local)
Enter MAX OFFLINE Qty:

Limit by (D)ollar or (Q)ty:

Enter Dollar Limit (no cents): \$

- Selecting 'Q' tells the FSC that this network will always request and service the authorization for quantity based fueling limits.
- Selecting 'D' causes the "Dollar Limit" prompt to be presented, telling the FSC to always request and service the authorization for dollar based fueling limits.



TIP: To ensure the "Dollar Limit" value is the now max amount allowed, set the "Max Online Qty" limit (times the lowest priced product) to a value higher than the "Dollar Limit" entered

EXAMPLE:

If Dollar limit is set to \$300 and Max Qty at 100 times lowest PPU of 2.89, the max dollar allowed for that product would be \$289. Thus, Max Qty should be no less than 105 gallons.

15.4.1 Network Specific Differences:

CFN:

Limit by (D)ollar or (Q)ty: is not presented. CFN is only quantity based.

Comdata – Terminal Fuel:

- instead of Limit by (D)ollar or (Q)ty:

LIMIT by \$ (Y/N):
LIMIT by Qty (Y/N):

ComdataPOS: - Local auth not allowed, host requires quantity and dollar

Enter MAX Quantity Limit:
Enter MAX Dollar Limit:

FleetOne: - Dollar based only

Enter MAX Online DOLLAR Limit:
Enter MAX Offline DOLLAR Limit:

Bankcard hosts: Buypass, NBS Bank, NBS Quarles and Paymentech

!!! ATTENTION - Important Notice !!!

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

USING this feature will require Visa and MasterCard customers needing to pump more than \$75 and Visa Fleet and MasterCard Fleet customers needing to pump more than \$150 to re-swipe their cards to continue fueling.

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

Press ENTER to continue...

NOTE: When using options 2 or 3 you may be charged a higher processing fee for each VISA and MasterCard transaction.

- 1) Force Visa and MasterCard transactions to auth at \$1
 - 2) Auth ALL cards using their ISO table Max Authorization amount
 - 3) Prompt cardholder for desired Dollar Authorization amount
- Select Option:

Option 1 selected

Please configure ISO table MAX Authorization \$ amount for ALL others cards.
 Visa and MasterCard cards will only authorize @ \$1.
 Displays on fleet table:

1	6	0000000000	Paymentech		<primary#>	<secondary>	cISO	0	\$1	Yes
---	---	------------	------------	--	------------	-------------	------	---	-----	-----

Option 2 selected

Please configure ISO table MAX Authorization \$ amount for each enabled card.
 Displays on fleet table:

1	6	0000000000	Paymentech		<primary#>	<secondary>	cISO	0	\$1	No
---	---	------------	------------	--	------------	-------------	------	---	-----	----

Option 3 selected

Cardholder will be prompted for desired Dollar Amount!
 Displays on fleet table:

1	6	0000000000	Paymentech		<primary#>	<secondary>	cISO	0	Prm	pt
---	---	------------	------------	--	------------	-------------	------	---	-----	----



IMPORTANT: When using options 2 or 3, higher processing fees may be charged for each Visa and MasterCard transaction.

NBS Quarles:

Enter MAX Offline Qty for Quarles Classic Card:

Buypass:

- 1) Force Visa and MasterCard transactions to auth at \$1
 Note: Sending of \$1 NOT supported by host,
 contact Buypass for configuration limits.
 See "M00-051-00 FSC3000 Command-Line Configuration Guide"
 under Buypass ISO setup for more information.
 - 2) Auth ALL cards using their ISO table Max Authorization amount
 - 3) Prompt cardholder for desired Dollar Authorization amount
- Select Option:



NOTE: Option 1) cannot be selected under the Buypass host section 5.4 for ISO table setup/support

15.4.1.1 (0=Local)

For networks that provide these two prompts, a special feature is available for customers who have a private fueling location and their employees/fleet carry a particular network card for fueling when on the road. By setting the "Max Online Qty" to zero and then setting the "Max Offline Qty" to the max amount desired at the dispenser, any card swiped for that network will be authorized for fuel after the configured prompts are entered, without authorization to the host. This feature allows controlled fueling without the overhead of network charges for dispensing your own fuel or the need to manage a proprietary card file. For further protection, the fleet record can be configured for your network account number to make sure that network cards not affiliated with you **cannot** fuel.



NOTE: If a modem or IP Converter is connected to the host port, the FSC will attempt to capture those transactions when fueling is complete.

```
Enter MAX ONLINE Qty (0=Local): 0
Enter MAX OFFLINE Qty: 250
```

15.5 ISO Table

The ISO table used on the FSC is specifically design for the processing of bankcard and private fleet cards under the networks; Buypass, NBS Bank, NBS Quarles and Paymentech. Other networks that process MasterCard Fleet cards require the MasterCard Fleet card ISO table to be "Activated" before those cards will process to their specific network.

For any card to process to a bankcard host, it must be activated in the ISO table. Along with the controlled activation of cards, the ISO table also provides the merchant/site owner the ability to set the maximum dollar auth amount, product restriction and control of bankcard security code prompting.

Use the SET ISO command to configure the FSC ISO table.

```
ISO table for Bank, Fleet and Private Label card configuration
Cards defined as active are only processed under:
--CFN, TCH (MC Fleet Only), BUYPASS
```

The above line, indicates which networks rely on at least one card to be activated for use.

The section below is specific the Buypass network. When enabled the customer **MUST** agree to the terms defined or card authorization limits cannot be modified beyond their cold start defaults.

```
!!! IMPORTANT !!! Due to Buypass host processing rules, INCREASING
the default "Authorization Amount/Max Fueling Limit" value for bankcards
may result in additional charges and penalties from your credit card issuer
or bank. You as the site operator may incur chargebacks on transactions
when proper funds are not available.
See M00-051-00 FSC3000 Command-Line Configuration Guide for more information.
```

For the following select:

- (A) to Accept.
- (D) to Decline, all bankcard fueling limits be set to default.
- (I) to Ignore, current limits will be retained without edit.

Currently: DECLINED

Do you as the Site Operator/Technician ACCEPT financial responsibility for this Liability of chargebacks when changing the max fueling limits? (A/D/I):


```

:
:
ISO #16:          DISCOVER          --Active
ISO Range: 300-305
# of digits to display/print: 4
Card Type/PPT:   10/1              ← card type = 10
Force PIN: No
Authorization Amount/Max Fueling Limit: $75 - Not used by CFN network
ALL Products Valid

--Modify this ISO (Y/N/X)? N

```

```

ISO #17:          VOYAGER          --Active
Format:          IIIIIICCCCCCCCCCL=YYMM>
ISO Range: 708885-708889
# of digits to display/print: 4
Card Type/PPT: 20/1              ← card type = 20, PPT – Print Price & Total on receipt indicator (1=Yes, 0=No)
Force PIN: No
Authorization Amount/Max Fueling Limit: $400 - Not used by CFN network
ALL Products Valid

--Modify this ISO (Y/N/X)? N

:
:
ISO #29:          Row NOT defined!
--Modify this ISO (Y/N/X)? N

ISO #30:          Row NOT defined!
--Modify this ISO (Y/N/X)? N

```

15.5.1 Card Type Indicator

This card type indicator is used within the FSC3000™ for control of processing rules. It provides the FSC knowledge of what the card is to determine what networks are able to process and if the card is a PCI controlled card type.

This card type indicator is also made available during transaction polling in the “MISC” field of the transaction CF format.



NOTE: Not every card listed can be added to the ISO table for processing. Consult OPW Tech Support to determine the proper use and configuration of ISO table card definition.

The following table is a list of the defined Multi-trucking card type codes:

Multi Card Name	Multi Card Type Code
FMCLASSIC	1
GCACCESSORIG	2
FuelMan PLUS (FMPLUS)	3
Gascard ACCESS (GCACCESS)	4
Gascard SINCLAIR (GCSINGCLAIR)	5
*** START OF PCI ***	
VISA CARD	6
MC CARD	7
AMEX CARD	8

Multi Card Name	Multi Card Type Code
DISCOVER CARD	9
DINERS CARD	10
INTERACT_DBT	11
JCB CARDÂ Â Â	17
VISAFLT CARD	18
MCFLT CARD	19
*** END OF PCI ***	
VOYAGER CARD	20
WEX CARD	21
PREPAIDCARDÂ	22
GASCARDPARTNERS	23
PACPRIDE CARDÂ	24
PHH CARD	25
PRIVLBLCARD	30
SINCLAIR_RTL	31
SINCLAIR_DTY	32
GMFASTSTOP_CARD	33
PPADVANTAGE	34
TCHEK CARD	41
EFS CARD	42
TCH CARD	43
QUARLES CARD	44
FMGC CARD	45
COMCHEK CARD	46
FDIS CARD	47
FLEET1 CARD	48

Multi Card Name	Multi Card Type Code
IRVING CARD	49
IRVING CARD2	50
SHELLFPS CARD	51
CFN CARD	52
CFN CARD2	53
QUICKFUEL CARD	54
KARDTECH CARD	55
INTEVA CON CARD	56
COMPANY CARD	57
GROWMARK SVS	58
NPC_ACH CARD	59
QUARLES VOYAGER	60
ATIO CARD	61
CENEX NETWORK	62

15.6 Set ISO - Buypass (Firstdata)

ISO table configuration is the same as described under "ISO Table" on page 1.

For FSC3000™ version 1.16a or higher, the ISO table setup has changed when the Buypass network is enabled. This new feature has been added to make sure that the site owner and installing technician are aware of the financial liability involved with changing the "Authorization Amount/Max Fueling Limit" setting in the ISO table for the processing of bankcards. OPW has found that due to the way in which the Buypass network supports the processing of one dollar (\$1) authorizations, there is the potential for chargebacks on transactions when you increase this fueling limit beyond their cold start defaults.



IMPORTANT: To protect all parties involved, the following acceptance and control has been added to the ISO setup to ensure that a conscious decision is being made to accept the liability involved before moving forward. The site owner must accept this agreement before being allowed to change the system defaults. If at any time a "Decline" of the agreement is selected, the FSC will restore bankcard card limits to their default values.



NOTE: As of ARTWare version 3.9 this same agreement is in place when the Buypass network is enabled for the site being configured. If the user does not accept that agreement within ARTWare the FSC will again revert the current fueling limits to their default values.

ISO Table Agreement:

```
P>set ISO
ISO table for Bank, Fleet and Private Label card configuration
Cards defined as active are only processed under:
--ComdataPOS (MC Fleet Only), T-CHEK (MC Fleet Only), TCH (MC Fleet Only), BUYPASS
```

!!! IMPORTANT !!! Due to Buypass host processing rules, INCREASING the default "Authorization Amount/Max Fueling Limit" value for bankcards may result in additional charges and penalties from your credit card issuer or bank. You as the site operator may incur chargebacks on transactions when proper funds are not available.

See M00-051-00 FSC3000 Command-Line Configuration Guide for more information.

For the following select:

(A) to Accept.

(D) to Decline, all bankcard fueling limits be set to default.

(I) to Ignore, current limits will be retained without edit.

Currently: DECLINED

Do you as the Site Operator/Technician ACCEPT financial responsibility for this Liability of chargebacks when changing the max fueling limits? (A/D/I):d

Default fueling limits restored for bankcard records!

← Note: Decline chosen!

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

ISO #1: VISA-FLEET --Inactive
ISO Range: 448460-448611
of digits to display/print: 4
Card Type/PPT: 18/1
Authorization Amount/Max Fueling Limit: \$150
ALL Products Valid
--Modify this ISO (Y/N/X)? y
Dollar Authorization/Fueling Limit: 150 ← Note: Value displayed without change
Alter Product Restrictions for this card? (Y/N):
:

As stated above under the fleet table setup for Buypass host, the merchant should contact Buypass to get this feature properly configured under their Buypass profile and to understand the risks involved with increasing the fueling the limits.

15.7 ComdataPOS

As of FSC3000™ version 1.15a a new Comdata network has been added, referred to as the “ComdataPOS” network. This is different from the previously supported (and still available) “Comdata” network. The difference between the two is that the “Comdata” network is designed and supported by Comdata for use at private terminal fuel locations. It only supports a standard dial-up phone connection, with driver prompts only configurable on the FSC. It is assumed that all Comdata cards (Comchek and MC Fleet) are unique to the site in use and managed directly by the site owner.

The new ComdataPOS network is available for use at a site that is open to the public allowing any Comdata presented card to be processed. This network supports TCP/IP connections with dial-up fallback support and all driver prompts are host-driven allowing Comdata to provide card specific prompting as needed by the card holder.

When ComdataPOS is selected from the “SET NETWORK” menu the following table will come into view:

Enter option number or press [RETURN] to exit: 1

NETWORK option settings NETWORK : ComdataPOS

```

1 - Location Code.....
   Dialup Device Type..... TRT2
   Device Type Sub-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^FHAVE A SAFE TRIP
10 - Re-Prompt Time....(Minutes).... 10
11 - Communication Parameters..... 2400 7E1 T60Y
12 - Process USA Market MC? ..... NO
    Process Canadian Market MC? ... NO

```

Enter option number or press [RETURN] to exit:

1. Location Code

Option 1. Under ComdataPOS three pieces of information are configurable, but only the first value should be entered. This is the “Location Code” which is a 5 character entry provided by Comdata when you sign up for processing. The other two values, “Dialup Device Type” and “Device Type Sub-Id” are configured by default and should not be changed unless specifically directed by Comdata to do so. When configuring the location code from the command line, enter the five character location code provided by Comdata and then press enter three (3) times to skip over the other two entries.



TIP: If you mistakenly delete or change the device type values and processing to Comdata fails, reenter them to the values shown above.



NOTE: To help protect the user from misconfiguration, the two device type entries are only available from the command line and are not configurable under ARTWare setup.

Setup Options 2-4

These values are mainly used for reference and don't directly affect site operation. They are passed from ARTWare under the site setup information and sent to all enabled networks that are the same.

5. Redial Attempts

The Redial Attempts option defines how many times the system will try to connect to the network. Default is 1.

6. Connect Time

The Connect Time option defines the maximum time to stay connected to the network when trying to approve a card. If this time is reached, the transaction will be terminated.

7. Local Authorization

This feature is not supported by the ComdataPOS host and is therefore disabled in the FSC. If selected, this option will display: "Sorry, LOCAL AUTHORIZATION is not allowed for ComdataPOS host"

8. Network System (ON/OFF times)

The Network System option defines when network cards can be processed (default 24 hours).

9. Authorization Message

The authorization message is displayed after the card has been approved. The network for processing and the host itself does not provide an authorization message.

10. Re-prompt Time

The Re-prompt Time setting defines how long the system will look back for transactions with the currently swiped card. If a transaction is found, the system will populate certain fields with the same information as before. This setting is useful, for example, when a driver forgets to bring his odometer and must go back to get it. By then the transaction has terminated, he would just re-swipe the card and verify displayed information.

11. Communication Parameters

The Communication Parameters option defines the network communication parameters. Bypass default setting is 2400 baud, 8 data bits, parity - none, 1 stop.

12. Process ... Market MC?

Comdata supports two different sets of MasterCard Fleet ISOs. One is designated for use in the US market and the other for use in Canada. This option allows you to enable which of the MasterCard Fleet card types you want to process. Depending on your sites location, it is suggested that you confirm with Comdata which card types are acceptable for processing before enabling an outside market MasterCard.



IMPORTANT: To maintain PCI compliance in the FSC, you **MUST** enable the MasterCard Fleet card record in the ISO table to complete the setup for the processing of Comdata MasterCard Fleet cards.



NOTE: If you **Do Not** enable this option under Comdata and also have a bankcard host enabled on the FSC, the Comdata MasterCard Fleet cards will process via the enabled bankcard host and the FSC will only prompt for those entries encoded on the track2.

15.8 Set Fleet – ComdataPOS

As of version 1.16a, fleet table support for the ComdataPOS has been changed to provide more control over max quantity and dollar fueling limits.

P>set fleet

#	?	Fleet/Acct	Name	Prompt Seq	Primary	Secondary	Onlin	Offln	A	B
1								0		
2								0		
3								0		
4								0		
5								0		

: : : :

20										
----	--	--	--	--	--	--	--	--	--	--

ENTER (fleet table row # (1..20) or [RETURN] to exit) : 2

2										
---	--	--	--	--	--	--	--	--	--	--

(0=None, 1=ComdataPOS, 2=T-CHEK, 3=EFS, 4=TCH, 5=FleetOne, 6=BUYPASS)

Enter NETWORK: 1
Enter PRIMARY #: 18004564799
Enter SECONDARY #:
Enter MAX Quantity Limit: 600
Enter MAX Dollar Limit: 900

When using the Comdata POS, host-processing limits are provided in both max quantity and dollar limits. The values entered here are site-overriding values. These values are intended to give the site owner control over the maximum amount of fuel that any driver can take when processing a Comdata Comchek or MasterCard Fleet card. This limits the driver to an amount lower than what Comdata will allow for the drivers card. If you don't have a need to limit the driver and want Comdata to determine the maximum amount of fuel that can be taken, set these limits high so the host can then lower the limits as required by the card.

To display the max quantity and dollar amounts in the fleet table, the Online (Onlin) and Offline (Offln) columns of the Fleet table are used to display these values.



NOTE: In the example below the 'A' and 'B' columns display a "Qty" string and a dollar sign ('\$') to help identify the respective columns in which the values are shown.

P>

Notice the statement; "The following setting is not used for the Comdata network..." This tells you that the configured "Dollar Authorization/Fueling Limit" is specific to the processing of OTHER MasterCard Fleet cards via an enabled Bankcard host. Depending on the fleet table configuration for that bankcard host, you should press <Enter> to avoid any implications for \$1 processing of these cards.



NOTE: This message serves as a reminder that when processing Comdata branded MasterCard Fleet cards directly to the ComdataPOS host, Comdata itself treats the processing of this card as a normal ComChek card and the \$1 authorization rules specified by MasterCard are not regulated.

Section 16 Transaction Management

16.1 Set Transaction

The **Set Transactions** option defines how the transaction buffer will handle and display transaction information.

16.1.1 Wrap Around



IMPORTANT: If using proprietary, wraparound is not recommended as transactions could be lost.

The **Wrap Around** option defines how a transaction should be handled when the transaction buffer is full. If this option is disabled the system will prevent new transactions and display "SYSTEM BUSY – BUFFER FULL" when one is initiated. The user will then retrieve and clear transactions (poll) before a new one can be started. If enabled, the system will always allow fueling when the transaction buffer is full, but will overwrite the oldest transaction. This is not recommended when processing proprietary cards.

16.1.2 Write Over NON-CAPTURED or FAILED Transactions

The **Write Over NON-CAPTURED or FAILED Transactions** option defines whether the network transactions that have not been captured or failed should be written over. This option is available when the "Wrap Around" option is enabled.

16.1.3 Redefine Transaction

TRANS = Unauthorized users also. The **Redefine Transaction** option saves transaction buffer space by storing only transactions of authorized users (declined network cards will always be saved). If set to "no" the system will not save unauthorized proprietary cards and any network cards invalid on the ISO table.



NOTE: When set to "no," some unauthorized transactions can be assigned a transaction number, but when terminated will not save, causing transaction number gaps in the transaction buffer.

16.1.4 Specified Display Fields

The **Specified Display Fields** option defines which fields will be displayed when performing show commands and/or polling of transactions.

To set Transaction options type: `Set Transaction <ENTER>`.

ACCOUNT, DRIVER, VEHICLE	? y	
DATE & TIME	? y	(required for Phoenix)
Â HOST CAPTURE Date/Time	? y	
TRANS #	? y	(required for Phoenix)
CARD #1	? y	(required for Phoenix)
CARD #2	? y	(required for Phoenix)
FUELTYPE	? y	(required for Phoenix)
PUMP	? y	(required for Phoenix)
Â Â HOSE	? y	(required for Phoenix if using reconciliation and multi-hose pumps/dispensers)
QUANTITY	? y	(required for Phoenix)
Â USE 8 Digit field length	? y	(not all polling packages support 8 digit)
PRICE	? y	(required for Phoenix)
TOTAL	? y	
ODOMETER	? y	(required for Phoenix if transaction MPG reports are desired)
DISTANCE PER UNIT	? n	
MISCELLANEOUS	? y	(required for Phoenix if miscellaneous is desired in transaction reports)
RECEIPT STATUS	? y	
ACCOUNT #	? y	
PROMPT ENTRIES	? y	(required for Phoenix if prompts are desired in transaction reports)
Â Send in Computer format	? y	(required for Phoenix)

Set wrap around options? Y

-Enable wrap around? Y (Recommended only for systems using only network cards)

-Write Over NON-CAPTURED or FAILED Transactions? Y

Re-Define Transaction? Y

-TRANS = Unauthorized users also? Y

Specify displayed fields? y

Enter 'Y' to display the field:

--Computer format check data in header? N (not required for Phoenix)



IMPORTANT: Changing these fields can affect polling packages.

Transaction Field Codes	
A	Account Driver Vehicle Name
B	Date & Time
C	Trans #
D	Card #1 " Single/Driver
E	Card #2 - Vehicle
F	Fuel type
G	Pump # (& hose)
H	Quantity
I	Price
J	Total
K	Odometer
L	Distance per Unit
M	Miscellaneous
N	Receipt Status
O	Account #
P	Prompt Entries

16.2 Transaction Reports

Print/Show Transaction # (leave out # for all transactions)
 Print/Show Transaction Summary
 Print/Show Day (Current day)
 Print/Show Day <mmm dd,yyyy>
 Print/Show Shift

16.3 Transaction Searches

Print/Show Transaction where Date = <mmm dd,yyyy>
 Print/Show Transaction where Date < <mmm dd,yyyy>
 Print/Show Transaction where Date > <mmm dd,yyyy>
 Print/Show Transaction where Time = <mmm dd,yyyy>
 Print/Show Transaction where Time < <mmm dd,yyyy>
 Print/Show Transaction where Time > <mmm dd,yyyy>
 Print/Show Transaction where Card = <#>
 Print/Show Transaction where Account = <#>

16.4 Transaction Searches (network)

Print/Show Transaction where status = <Verbal CATEGORY>

Verbal CATEGORY	Description
Authorized	Authorized by network, still not captured
Captured	Captured by network
Declined	Authorization denied by network
Failed	Authorized by network, but rejected on capture
Local	Authorized by the FSC, Still not captured

Print/Show Transaction where status = <code CATEGORY><#> (# = a:123456)

CODE CATEGORY	Description
a	Authorized by network, still not captured
A	Authorized by FSC, still not captured
B	No allocation from network
q	Authorized by network and captured by network
Q	Authorized by FSC and captured by network
!	Authorization denied by network
i	Authorized by network, but rejected on capture
I	Authorized by FSC, but rejected on capture
C	Too many re-prompt attempts
v	Failed Reversal
V	Auth Request Reversed

16.4.1 Clearing Transactions

Clear Transaction <mmm dd,yyy> Sequence <#>

Clear Transaction (all)



NOTE: Phoenix® users should have Phoenix® set up to clear transactions. Using the above commands to clear transaction commands may cause Phoenix® to lose transactions.

This applies to ANY polling package.

USB Key users.

The FSC3000™ will write transactions to the USB Key in the K2500 .TRN format.

If the K2500 .TRN already exists then the controller will append to the file.

16.5 Pump & Fuel Reports

```
Print/Show Fueltype # Totals (leave # out for all fuel types)
Print/Show Pump # Totals (leave # out for all pumps)
Print/Show PCT # Totals
Clear Pump # Totals
Clear PCT # Totals
Print Show Midnight Totals
```



IMPORTANT: Midnight Totals are generated from the currently stored transactions on the FSC. If transactions are cleared, the Midnight Totals will not fully reflect the true totals for the day.

16.6 Transaction Terminations/Denials

When a transaction is generated, the system records how the transaction is denied or terminated. If the transaction was started but never got to the “use pump” prompt, the transaction will be terminated with a reason for denial. If the pump was authorized, then the transaction will terminate with a reason for termination.

There are two ways to get the denial/termination code. The first method is to connect to the FSC3000™ and use the “show transaction command”. If the specific transactions are known “show trans xxxx (xxxx = transaction #)” command can be used. The FSC3000™ will display transactions as below. To the right of the transaction is the journal printout example. This is the second method if the site is equipped with a journal printer.

Show Transaction Command		Journal Printer
SEQUENCE#	3	
REASON FOR DENIAL	USER ENTRY TIME-OUT ← Denial	0022e04MAR05
1	Code	12:17A 1
DRIVER	TEST	
DATE	MAR 04, 2005	
TIME	12:17 AM	
TRANSACTION #	22	
CARD #	1	
RECEIPT	NOT ISSUED	
ACCOUNT #	0000	
REFER FUEL Y/N	NO	
SEQUENCE #	1	

Show Transaction Command		Journal Printer
SEQUENCE #	1	
REASON FOR TERMINATION	NORMAL ← Termination Code	0012I 20FEB05
01:28A 1		
DRIVER	TEST	
DATE	FEB 20, 2005	
TIME	01:28 AM	
TRANSACTION #	12	

CARD #	1
FUELTYPE	UNLEADED
PUMP #	1
QUANTITY	12.345 GALLONS
PRICE	\$1.000
TOTAL	\$12.35
ODOMETER	
DISTANCE PER UNIT	NOT AVAILABLE
MISCELLANEOUS	
RECEIPT	ISSUED
ACCOUNT #	0000

16.6.1 Denial Codes (lower-case letter) – Authorization Never Granted

Code	Description	Cause	Possible Solution
b	Bad PIN entry	Wrong PIN entered 3 times	Verify correct pin is assigned
c	Bad odometer entry	Odometer Reasonability is active and odometer entry is not acceptable	Verify card record has correct odometer and/or reasonability codes. Verify reasonability table is set up correctly.
d	Bad Miscellaneous entry	Not Supported	
e	User entry time-out	Customer did not finish entering a prompt before time limit was exceeded	Increase prompt time-out on FIT configuration
f	Card # not in positive file	Card not in card file	Verify card is in the card file Verify card number is correct
g	Card expired	Date on system exceeds card expiration date	Verify FSC date is correct Reprogram card with new expiration date
h	Card record expired	Expiration date on card in the card file is older than the FSC current date	Verify card expiration date in card file Verify FSC date is correct Disable Expiration dates from card file

Code	Description	Cause	Possible Solution
i	Card invalidated	Proprietary Card or Network Card Type invalidated	Proprietary Cards - Change card validation to valid in card file Network Cards - Change card validation on ISO table
j	Three Bad PIN entries	Customer has entered 3 bad PINs	Verify user has correct PIN Verify user's PIN is correct in card file
k	No allocation	Customer has exceeded his daily or monthly limit on his card(s) or account	Verify allocations in card file - check all card types and account If daily allocation is exceeded - user must wait until midnight to fuel again If monthly allocation is exceeded - system manager may adjust limits or clear totals
l	Unable to process	Network denied card	View transaction for a more detailed explanation why card could not be processed
n	Account Expired	Customers account expiration date has been exceeded.	Verify account expiration date is correct in card file Verify FSC date is correct
o	Account Invalidated	Account is invalidated	Change account validation to valid in card file
p	Account numbers do not match	Driver and Vehicle records are not assigned to the same account	Verify Driver and vehicle card records are in the same account or one of them is in account zero
q	Account record not found	Card record is assigned an account that is not in the card record	Verify cards have the correct account assigned Verify account is in the card file

Code	Description	Cause	Possible Solution
r	Keyed entry not allowed		
s	3 bad preset \$ entries	A dollar range outside of the allowed limits has been entered	
t	AVS Check Failed	The zip code or address entered failed host validation	
u	Invalid tiered account #	The enter value does not match an account configured in the PCF	
v	EMV Card swiped to wrong terminal	EMV cards (in Canada) can only be swiped in a C/OPT with an EMV pin pad and reader	
w	Card in use	The card swiped is currently fueling at another pump; the system believes it may be a gift card or limited authorization card	

16.6.2 Termination Codes (upper-case letter) – Authorization Granted

Code	Description	Cause	Possible Solution
C	Pump error, premature busy		
D	Pump error - Reset Quantity exceeded	1 unit of Pulse(s) being received by the pump controller without sensing the pump is on PCT - Handle or Current sense PCM - Handle or Voltage sense K800 Hybrid - Current sense	Verify pump controller is set up for the correct sensing method Verify pump wiring is correct
E	No 'Pump Handle busy'	Pump controller never sensed the pump on and the handle timer was reached.	Verify pump controller is set up for the correct sensing method Verify pump wiring is correct
F	No fueling pulses	Pump controller sensed pump on, pulses where never received and the first pulse timer was reached.	Verify pulser is working Verify pulser wiring
G	Pump currently active		
I	Normal	Transaction terminated normally	
J	Quantity limit exceeded	One of the Quantity limits for the transaction has been reached	Verify pump, card/account record quantity limits are adequate and adjust accordingly
K	Total transaction timeout exceeded	The total transaction fueling timer has been reached	Verify total transaction fueling time is adequate for the pump and adjust accordingly
L	Pulser error	Only on flow switch applications Pulses not being received within 5 seconds after the flow switch activation	Verify pulser is working Verify pulser wiring Verify flow switch is not bad
M	Emergency stop	Emergency stop switch pressed on the System2 FIT or K800 Hybrid terminal (if equipped)	Verify Emergency switches are not shorted

Code	Description	Cause	Possible Solution
N	Missing pulse detected	Pump controller sensed pump on, pulses where received, then pulses stopped being received and the Missing pulse timer was reached.	
O (01)	Communication error	The Transaction was terminated because communications was lost with the pump controller	Verify communication wiring is properly installed Verify site power conditions
Q	Disconnect VIU Timeout	VIU was not detected by VIT for too long of a period	VIT pump nozzle ring not properly mounted Increase timeout if fueling satellite tanks.
R	Pump Error - DPC COM	FSC is encountering DPC communication problems to the dispenser.	Check wiring from FSC3000 to pumps and/or distribution box
S	Pump Bypass Override	We provide a feature that allows the FSC to record fuel while a pump is in Bypass mode. This termination code almost always has fuel taken.	
U	Pump Activation Timeout	The pump controller did not respond to the command to activate the pump within the allotted time.*	Make sure the software version in the pump controller is up to date.
Z	Manager activated	Pump was authorized using the pump on command in the FSC	

* This indicates that the FSC terminated and closed an open pump state due to an internal timer on the FSC designed to be a pump watchdog (more for mechanical pumps). This protects against a rogue pump that may have never gone hot while the FSC thinks it did. Typically these are zero quantity transactions. HOWEVER; as a side effect when electronic dispensers are in use and being controlled by our UPC or DPC controllers, if a driver never hangs the hose a valid transaction with fuel can be terminated with quantity.

16.6.3 Network “Unable to Process” Result Codes

When network transactions cannot be processed, one of these conditions may be the resulting problem. The associated result code is displayed at the end of an “Unable to Process: xx” message. In most cases the driver should be able to re-swipe the card to complete the authorization process.

The short text description is displayed with failed transactions, from the “SHOW TRANSACTION” command.

Code	Short Text	Cause
Code	Short Text	Cause
0	NO ERROR	Network connection failed or was never established based on any known error conditions
1	BAUD 300 ERROR	Modem connected at baud rate not configured for use with specific network. Check communication parameters.
3	NO CARRIER	Line answered, but modem could not establish connection
4	ERROR IN FORMAT	Connection was established, but network rejected the authorization request packet due to corrupted data and/or invalid packet checksum. Possible poor line condition (line noise)
5	BAUD 1200 ERROR	Modem connected at baud rate not configured for use with specific network. Check communication parameters.
6	NO DIAL TONE	Modem never detected a Dial Tone “ Check phone line or connection.
7	BUSY	Modem returned an error, indicating the dialed number is busy.
8	NO ANSWER	Modem dialed but time-out from “No Answer” “ Check primary/secondary phone numbers are correct on fleet table.
10	BAUD 2400 ERROR	Modem connected at baud rate not configured for use with specific network. Check communication parameters.
11	TIMEOUT NO ANSR	FSC no answer time-out. Used as failsafe for result code 8, in case modem time-out does not fire.
12	MODEM NOT CNFGD	Result code could occur if no response is seen from modem after the communication parameters have been sent. Check modem is powered and/or connected to FSC.
13	NO CONNECT NTKW	Indicates that the modem has established a connection (with DCD high), but an ENQ was never received from network. ENQ wait period is 30 seconds for modem and 15 seconds for device server. Note: under device server operation, this result can be displayed without a valid connection being established.
14	NO PHONE or ID	No phone or site ID is not configured for the specific network.
15	NTWKS EXHAUSTED	Usually indicates that a connection was previously established for the current transaction, but was lost and cannot be re-established.
16	NO MODEM RES.	Modem had been previously configured, but currently non-responsive to standard AT commands. Check modem.
17	<EOT> FROM NTKW	Network sent an EOT and terminated the connection before completion. This could occur if the FSC NAKs three bad packets from network.

Code	Short Text	Cause
18	LOCAL AUTH ALL	Local authorization is enabled for all transactions specific to network.
19	NO NET Response	An ENQ was received from the network, but an ACK or NAK was never received from a transmitted packet. The FSC has attempted to send a packet 3 times, waiting about 45 seconds between each packet.
20	NTWK DC NO<EOT>	Host disconnected without sending an EOT.
21	UNKNOWN DENIAL	Host denied transaction without any reason text returned.
22	LOCAL AUTH PROD DENIED	When locally authorized and product was denied because it was flagged to deny on local authorization.

Section 17 Miscellaneous Commands

CALL (Can use to dial out from internal FSC modem)

PASSTHRU (Command allows pass-thru controller to talk to another device)

Test (Command required for setting Petro-Net baud rate)

Format LCD (Allows message to be placed on FSC controller display)

Show System

Type: Show System

FSC3000: PA-DSS Certified Version: 1.0

Card Record Features Version #: 1.09a - Built: 4/16/09 - Serial #: 123456

Loader Ver: 1.01A Jun 30,2005 FPGA Ver: 2.0

Multi-Trucking Network Package *** System Stopped ***

Enabled Network(s): CFN, Paymentech (show all enabled networks)

Chase Paymentech HCS-UTF 1.97 Rel: 8.04.00 - Last Modified: 9/22/08

CFN Site Controller Spec. 4.0 Rev: 24

FLASH APP CHECKSUM: 58CD

DISPLAY: 2x40 - (GRAPHICS) PPU: PROGRAMMABLE PNET: 9600 (Petronet baud rate)

JAN 08,2005 05:28 AM System ON (System OFF - no fueling allowed)

Installed FITs:

1: Status --running (Shows all terminals installed and their status -
Running, Down)

Installed PCTs:

(std) PCT 1, Positions: (1), 2 (Parenthesis around the position shows disabled
by sentry)

Status --running (Shows if pump control device is running)

(upc) PCT 2, Positions: 1, 2

Status --running

Price Sign COM: active (Displays only when Price Sign option enabled)

LOW Tanks: NONE

Power Fail Times:

JAN 07,2005 12:51 AM (Displays date/time of last four (4) FSC resets/power
fails)

JAN 07,2005 01:17 AM

JAN 07,2005 01:19 AM

JAN 07,2005 01:22 AM

P>

Appendix A - Using FSC3000™ with Computer-Formatted Commands

This appendix describes the following:

- How to connect a computer to the FSC3000™
- Retrieving transaction data from the FSC3000™ in computer format
- Sending configuration data to the FSC3000™ in computer format
- Backing up and restoring card, account and configuration data for the FSC3000™

To interface with the FSC3000™ via a PC, an emulation program must be run on the PC. This program is explained later in this appendix.

If the distance between the FSC3000™ and the PC is less than 50 feet, the FSC3000™ is considered directly connected to the PC.

When the distance is greater than 50 feet, modems are required.

Refer to "[Connection Methods](#)" on page 11 and *M1700 FSC3000™ Fuel Site Controller Installation, Operation and Maintenance Guide* for port connection details.



IMPORTANT: BEFORE making any connections, be sure the computer and peripheral equipment (printer, converter, modem, etc.) are OFF.

Data Field Structure

- AUTH FLAG – value of the authorization response flag received for host with the approval response (3 bytes)

Card/Transaction Data Formats

The FSC3000™ transaction data format is designed to be read by people, and includes a header with configuration data and labels for each included field. In the display format, the transmission of transaction records can be cued from the keyboard.

To pace the data stream, the transmission of each transaction record must be cued by a specific computer response.

To retrieve transaction data in the computer format, append the prefix '**SHOW**' and the suffix '**CF**' to one of the following commands.

```
TRANSACTIONS
TRANSACTION ###
TRANSACTIONS WHERE DATE = mmm dd, yyyy
TRANSACTIONS WHERE DATE < mmm dd, yyyy
TRANSACTIONS WHERE DATE > mmm dd, yyyy
TRANSACTIONS WHERE TIME = hh:mm am/pm
TRANSACTIONS WHERE TIME < hh:mm am/pm
TRANSACTIONS WHERE TIME > hh:mm am/pm
TRANSACTIONS WHERE CARD = #
TRANSACTIONS WHERE VEHICLE = #
TRANSACTIONS WHERE ACCOUNT = #
```

The following command will call up transaction 123 in computer format:

```
SHOW TRANSACTIONS 123 CF
```

Search commands can be combined with '**AND**' in the computer format. For example:

```
SH TRANS WH DAT=JAN 1, 1996 AND WH TIM>5:00 PM CF
```

When data is requested from FSC3000™ in the computer format, the FSC3000™ first transmits the transaction header and the first transaction. This header always includes:

- Codes to indicate which transaction fields will be included in the transmitted record(s)
- A 2-digit checksum and a carriage return
- A line feed ('|CR|LF|')

All transactions include the sequence number and Reason For Termination code(s). The fields are included as specified by the transaction field code listed in the header. All items are separated by a slash ('/').

See "[Termination Codes \(upper-case letter\) – Authorization Granted](#)" on page 148, and "[Denial Codes \(lower-case letter\) – Authorization Never Granted](#)" on page 145 of this Configuration Guide.

Each record is terminated with '|CR|LF|'. The external computer responds with '|CR|LF|' to initiate the transmission of the next record. The FSC3000™ will send records each time it receives '|CR|LF|' up to the last record. At the last record, the system sends '//|CR|LF|'.

If the computer session is terminated by the computer with an 'X', FSC3000™ sends '\\|CR|L|'. If access was denied to a customer, only the first four data fields are recorded (and can be transmitted) for that transaction. The graphic below is an example of transaction data retrieval in the computer format. Note that a data check was not included in the header.

The 'SHOW TRANSACTION' command has been abbreviated to SH TRANS.

'|CR|LF|' indicates a carriage return and a line feed.

Indicates a "space pad". A transaction record is sent as one string. For clarity, the example shows line breaks between fields.

External Computer Output SYSTEM2 Response

```
SH TRANS 123 CF|CR|LF|          a b c d e f g h i j k l m n o / 07 |CR|LF|
                                123 / I / TRUXCO- - - / SMITH- - - - /VAN1 - - - - /
                                02221989 / 0711 / 0123 / 20001 - - - - - - - - - /
                                60001 - - - - - - - - - / 03 / 03 / 0025000 / 00100 /
                                00000002500 / 0066555 / 105 / 1234567890 / 1 / 1234 /
                                11 / |CR|LF|
|CR|LF|                          // |CR|LF|
```

Transaction Header Format

TRANSACTION HEADER FORMATTING			
Variable	Field Format	Padding	Included
Number of transactions	4 digits left-justified	Zeroes	Optionally
Sum of quantities	9 digits left-justified	Zeroes	Optionally
Transaction field codes	0-15 characters	None	Always
Checksum	2 digits	None	Always

Transaction Field Codes:

TRANSACTION FIELD FORMATTING			
Variable	Field Format	Padding	Code Letter
Account/Driver/Vehicle	9/9/9 characters (total 27 characters)	spaces	a
Date/Time	8/4 digits - MMDDYYYY/HHMM	zeroes	b
Transaction Number	4 digits	zeroes	c
Card 1 Number	19 digits	spaces	d
Card 2 Number	19 digits	spaces	e
Fuel Type	2 digits from 01 to 32 only	zeroes	f
Pump Number (hose# optional)	2 digits, from 011 to 998 (3 rd digit optional)	zeros	g
Quantity	7 or 8 digits: #####(,),###	zeroes	h
Price	5 digits: ##.###	zeroes	i
Total	9 digits: #####.##	zeroes	j
Odometer	1 character and 6 digits		k
MPG	3 spaces (this feature dependent on use of Odometer reasonability at the site)	spaces	l
Miscellaneous	10 digits	spaces	m
Receipt Status	0 or 1: "1" = receipt issued "0" = receipt not issued	spaces	n
Account Number	4 spaces	spaces	o
Prompts	9 fields @ 23 characters, left justified. 3 fields @ 30 characters, left justified	spaces	p

Checksums

The **checksum** is a number included with data to ensure the integrity of the data.

The checksum used by the FSC3000™ is a 2-digit number calculated by adding the decimal values of the ASCII characters in a string and truncating the sum.

For example, in the string **'/ABC'**, the decimal values for each character are: **'/'** = 47, **'A'** = 65, **'B'** = 66 and **'C'** = 67. Adding these numbers produces 245. Truncating the number in this case means removing all but the last two digits – for 245, resulting in 45.

The checksum is included with transaction, card and account records sent by the FSC3000™. Checksum can also be used on each record when using the **'RESTORE'** command. As an example, the following transaction record has a checksum of 08.

```
123/I/123089/1130/000001234/08|CR|LF|
```



IMPORTANT: When calculating the checksum for a record, the slashes (**'/'**) must be included in the calculation.

EXAMPLE:

An example of a checksum in a **'RESTORE'** command is:

```
RESTORE STATION12345/beatify/75|CR|LF|
```

The checksum is 75. Note that the slash and the blank space (between **'RESTORE'** and **'STATION12345'** in the example above) must be included in the checksum calculation.

Calculating a Checksum

The following BASIC program can be used to determine the checksum for a line of data:

```

10 CHKSUM% = 0
20 TRANSACTION$ = "LINE OF DATA 0123456789"
30 NUMCHARS% = LEN (TRANSACTION$)
40 FOR INDEX% = 1 TO NUMCHARS%
50 SINGLECHAR$=MID$ (TRANSACTION$, INDEX%, 1)
60 CHKSUM% = CHKSUM% + ASC (SINGLECHAR$)
70 NEXT INDEX%
80 TEMP$ = STR$ (CHKSUM%)
90 TEMP$ = RIGHT$ (TEMP$,2)
100 PRINT TEMP$
110 END

```

ASCII Character Table

Decimal Value	ASCII Char	Decimal Value	ASCII Char	Decimal Value	ASCII Char	Decimal Value	ASCII Char
032	space	056	8	080	P	104	h
033	!	057	9	081	Q	105	i
034	"	058	:	082	R	106	j
035	#	059	;	083	S	107	k
036	\$	060	<	084	T	108	l
037	%	061	=	085	U	109	m
038	&	062	>	086	V	110	n
039	'	063	?	087	W	111	o
040	(	064	@	088	X	112	p
041	)	065	A	089	Y	113	q
042	*	066	B	090	Z	114	r
043	+	067	C	091	[	115	s
044	,	068	D	092	\	116	t
045	-	069	E	093	]	117	u
046	.	070	F	094	^	118	v
047	/	071	G	095	_	119	w
048	0	072	H	096	'	120	x
049	1	073	I	097	a	121	y
050	2	074	J	098	b	122	z
051	3	075	K	099	c	123	{
052	4	076	L	100	d	124	|

Decimal Value	ASCII Char	Decimal Value	ASCII Char	Decimal Value	ASCII Char	Decimal Value	ASCII Char
053	5	077	M	101	e	125	}
054	6	078	N	102	f	126	~
055	7	079	O	103	g		

Backing up the card validation data allows for the safeguarding of this information and to minimize system downtime when modifying or repairing aFSC3000™. Data from one FSC3000™ can be backed up and restored to another FSC3000™. FSC3000™ systems need to have the same database.

The BACKUP and RESTORE commands must be included as part of a computer program that can format, store and transmit the raw computer data produced by the FSC3000™.

The Phoenix® for Windows® software package from OPW Fuel Management Systems provides all the information needed to back up and restore card data quickly and easily using an IBM®-compatible personal computer.

Phoenix® is available from a distributor or directly from OPW Fuel Management Systems.

BACKUP/BACKUP Card Commands

These privileged commands transmit card and account data from the FSC3000™ database to an external computer.

From an external computer, the **BACKUP** commands request FSC3000™ to transmit site id, card and account field code(s), checksum, carriage return and a line feed ('|CR|LF|'), all separated by a slash ('/').

The records themselves are then sent following each '|CR|LF|' sent by the external computer. After the last record, the FSC3000™ sends '///|CR|LF|'.

- If NO card number is specified, backup starts transmission at the first card/account record
- If a card number is specified, the transmission starts at the specified record. Because the records are sorted by number, this command allows for the backup of a latter portion of the file.

Card and account records are sorted only by number; that is, account 2222 would be between card 1111 and card 3333. The **BACKUP** commands back up both record types.

There is no command to specify only card or only account.

The following is an example of the information exchanged with the '**BACKUP**' command.

In this example, 'STATION12345' is the site ID and '44' is the checksum. The '-' indicates a "space pad." Card and account records are sent as single strings. For clarity, the example above shows line breaks between fields.

```
RESTORE site id (/fields) (/checksum)
```

This privileged command loads card and account information from an external computer to the FSC3000™ database.

The SITE ID, CARD or ACCOUNT numbers (field "a") and RECORD TYPES (field "b") must be specified. Specify any additional field codes to be restored (see Restoring Fields below). Also include a checksum for the command line and/or data records.



NOTE: Specify field codes with lower-case letters. Specify the **RESTORE** command and any site ID letters with upper-case letters.

The following information is exchanged with the **RESTORE** command.

```
|CR|LF|                                     P>
RESTORE STATION12345/ a b c d e f g h i j k l m n o /
44 |CR|LF|                                |CR|LF|
10004000000000000000/00100001/1234
020219961996199619961996199619961996/00000809/001000/000100/--5903/
0014060/02/00/01/RIKARD---/54|CR|LF|      |CR|LF|
// |CR|LF|                                P>
```

The '**|CR|LF|**' indicates a carriage return and a line feed. The '-' indicates a space pad. A card or account record must be sent as one string. For clarity, the example above shows line breaks between fields.

Restoring Fields

The FSC3000™ allocates space in its database when it receives the field codes.

You can restore a different number of fields than were in the database when it was backed up. For example, if a field was accidentally omitted during configuration, you can add that field without losing any card or account data.

First, back up the current card or account data. Then, use the **SET CARD BUFFER** command to include all the old and new fields. This destroys the old data!

Finally, restore the card or account data, specifying the original fields plus the new field(s). The new fields can be filled with blanks or actual data.

Similarly, you can restore fewer fields - this increases the number of transactions or card and account records to be retained by the FSC3000™.

Backing up the FSC3000™ is like taking a snapshot of the database. When data is restored, FSC3000™ returns to exactly the same state as when backed up.

Frequent database backups reduce the need to update any specific fields (e.g. mileage) in the database when you use the **RESTORE** command.

UPDATE Site ID (/fields) (/checksum)

This privileged command modifies existing card or account records in the FSC3000™.

SITE ID and CARD # must be specified for this command; all other field changes are optional. A field must be present in the original record to be updated. Checksum data can be sent if desired.

The sequence for the **UPDATE** command is similar to that of **RESTORE**.



NOTE: The message 'SYSTEM DOWN' is shown on the FIT display while backing up or restoring configuration data. Terminal cannot be used by customers while this message is displayed.

The '**|CR|LF|**' indicates a carriage return and a line feed. The '-' indicates a space pad. A card or account record must be sent as one string.

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.

Revisions

Revision #	ECO	Effective	Software Version	Key Changes
0	na	7/22/10		Initial Release
1	133	4/8/11		na
2	394	9/6/12		Updated to OPW Brand Standards, added connection method descriptions, added DTC information, added Tiered Accounts and Tiered Discounts descriptions and commands.
3	477	7/2/13		Revised Gasboy DPC configuration, added commands for EMV Terminal. Revised termination codes.
4	na	na		Canceled. Removed from product BOMs; added to Manual CD
5	578	2/13/14		Updated manual to include Buy-pass network configuration.
6	918	3/8/16		General updates, corrections and reconfigurations per S/W and F/C Engineering. Brand update.
7	933	4/5/16		Replace partial CFN product Codes with Full Product Code Table (Section 15.3.1.1) Updated Section 12.4 to add items 9 & 10 in Set Card Buffer options.
8	1140	3/6/2017	1.17e	Add Note: P4W Partial Access p/w 10 character limit / SQL & SQL Lite 15 character limit
9	1147	3/24/2017		Update Transaction Field Codes in Appendix A (add codes o and p)
10	1220	9/5/17	1.17f	Corrected Cold Start procedure
11	1307	2/6/2018	1.19b	Change text in Training screens and body text to replace references to PIN with "Access Code".

Revision #	ECO	Effective	Software Version	Key Changes
12	1334	3/19/2018		Update Transaction Field Code "g" in Appendix A
13	1375	6/12/2018		Def Code #00165867 - Correct Default Display Prompt Item 9
14	1662	11/6/2019		Update Transaction Field Code "I" in Appendix A



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



INNOVATIVE SOLUTIONS FUELING BUSINESS SUCCESS WORLDWIDE



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