GASBOY

Gasboy

CFN III Quick Reference Guide v3.4

Company Programs and Documentation

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FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Approvals

Gasboy, Greensboro, is an ISO 9001:2000 registered facility.

Underwriters Laboratories:

U.L. File#	Products listed with U.L.
MH4314	All dispensers and self-contained pumping units
MH6418	Power operated Transfer Pump Models 25, 25C, 26, 27, 28, 72, 72S, 72SP, 72X, 73 and 1820
MH7404	Hand operated Transfer Pump Models 1230 Series, 1243 Series, 1520 and 1720 Series
MH10581	Key control unit, Model GKE-B Series Card reader terminals, Models 1000, 1000P Site controller, Model 2000S CFN Series Data entry terminals, Model TPK-900 Series Fuel Point Reader System

New York City:

NYFD of A #	Product
4823	9100A, 9140A, 9152A, 9153A, 9800A, 9840A, 9850A, 9852A, 9853A, 9140
4997	9822A, 9823A
5046	9100Q, 9140Q, 9152Q, 9153Q, 9800Q, 9840Q, 9852Q, 9853Q

California Air Resources Board (CARB):

Executive Order #	Product
G-70-52-AM G-70-150-AE	Balance Vapor Recovery VaporVac

NCWM – Certificate of Compliance

Gasboy pumps and dispensers are evaluated by the National Conference of Weights and Measures (NCWM) under the National Type Evaluation Program (NTEP). NCWM has issued the following Certificates of Compliance (COC):

COC#	Product	Model #	COC #	Product	Model #	COC #	Product	Model #
95-179A2	Dispenser	9100 Retail Series, 8700 Series, 9700 Series	91-019A2	Dispenser	9100 Commercial Series			
95-136A5	Dispenser	9800 Series	91-0573A3	Dispenser	1000 Series FMS, 2000-CFN Series			

Patents

Gasboy products are manufactured or sold under one or more of the following U.S. patents:

Dispensers
5,257,720

Point of Sale/Back Office Equipment
D335,673

Trademarks

Non-registered trademarks	Registered trademarks
Atlas™	ASTRA®
Consola®	
Infinity®	
	Fuel Point®
	Gasboy®
	Keytrol®
	Slimline®

Additional U.S. and foreign trademarks pending.

Other brand or product names shown may be trademarks or registered trademarks of their respective holders.

Additional U.S. and foreign patents pending.

CONTENTS

CFN3
Command Summaries, Version 3.4

General Command Summary

[...] Square brackets mean that the contents enclosed within the pair of brackets are optional.

| Vertical bar means *or*; it separates alternatives.

{...} Curly brackets are used to group optional alternatives where only one choice can be entered.

Text in **bold** must be typed just as it is shown; *italics* indicate a generic category where you are to substitute a specific entry.

Shift-change Commands. Shift-change commands—which are included in the *optional* shift-change package—are shown in lowercase.

Disk-based Commands. Disk-based commands do not have short forms, and you should use semi-colons only where they are specifically shown.

System Commands. The short form of the command is in uppercase. The command number, which is used to enter the command from a console, is given in parentheses after the command name.

All system-command options must be preceded by a semi-colon, and there can be no blank spaces on either side of the semi-colon.

System commands and their options may also be entered using the command number followed by a:

> .5 to insert a ;I
>
> .4 to insert a ;A
>
> .3 to insert a ;C

Using Print SAles as an example:

> 126.4 is the same as typing P SA;a

ACtivate GAte (94) activates a gate from the terminal.

> Option: C

ACtivate PUmp (10) activates a pump from the terminal.

> Options: C A P1
>
> A   option puts pump in full serve mode
>
> P1   assigns account number

ADd ALlocation (77) adds to an allocation totalizer.

> Option: C

ADd DRawer (11) adds to cash in cash drawer.

> Option: C

addrawer a shift-change command to add money to the cash drawer of a POS console.

> Options: [*POS#*] [*$amount*]

ADd INventory (100) adds to inventory counters for a product.

> Option: C

ADd SIGnon (101) adds a user, assigns permission level to user, and loads user's signon code.

ADd TAnk (12) adds to tank inventory counter.

> Option: C

alter clerk a shift-change command to create a new format file for clerk reports.

alter day a shift-change command to create a new format file for end-of-day reports.

alter shift a shift-change command to create a new format file for shift reports.

BACKTRAN disk-based command to back up transactions to disk file *filename*.

> Option: ;>*filename*

BUFFERS disk-based command to display buffer usage.

CALL (102) initiates the dial-out process.

CASE command to switch by case in command files.

> Options: [-**D**] {-**P** *n1 n2* | -**E** *n1 text*}
>
> -**D**   add line for default command
>
> -**P** *n1 n2* number of case is passed from command line; *n1* is the total number of cases (except default, if used); *n2* is the case to execute
>
> -or-
>
> -**E** *n1 text* Number of case to execute is entered by user; *n1* is total number of cases (except default, if used)

cashier a shift-change command to output the shift report to standard out and a flat file.

> Options: [*journal log filename*] [*format filename*] *[%*I | *shift sequence number*] [*%S* | *shift number*] [*POS#*] [*day of week*] [*%D* | *date*] [*%T* | *time*] [*%Y* | *yymmddhhmm*] [*siteID*]

CHDir (103) changes directories.

Check CArd (13) determines if a card is valid or invalid.

>   Option: C

CHKDSK disk-based command to check the R drive integrity.

>   Options: [**-A**] [**-B** ###] [**-F**] [**-R**]

>   **-A**   read and check entire disk

>   **-B**   if the disk error message shows bad sectors, use this option with the sector numbers to mark those sectors

>   **-F**   attempt to fix disk if lost or cross-linked clusters or length errors are found

>   **-R**   read all files to check for bad sectors

CLOSE (154)   makes a retroactive safe drop to the previous shift; used only in command files, never by itself on a command line.

compare   a shift-change command to compare two character strings without case sensitivity.

>   Options: [*string1*] [*string2*]

CONSOLE   disk-based configuration program for console.

>   Options: [**-P**][**-V**] [*filename*]

>   **-P**   print current configuration

>   **-V**   display in TTY form if port is configured as a CRT in the system parameters, or vice versa

CP (105) command to copy disk files quickly.

>   Options: A I

>   *file1 file2 | file1* [*file2*] *dir*

COPy (105) copies a disk file.

>   Options: A I

>   *file1 file2*

DEactivate PUmp (14)   shuts off a pump from the terminal.

>   Options: C A

>   A   option takes a pump out of full serve mode

DELete (6) removes a disk file or files on the R drive only.

>   Option: A

>   A   option deletes any specified file, even read-only and hidden files

DIRectory (4) prints a listing of disk file names.

>   Options: I A

>   I   option gives listing in short format

>   A   option lists hidden files

DIsable COnsole (19) shuts down a console.

>   Option: C

DIsable DUmp (106) turns off file dumping.

DIsable FPR (162) shuts down a fuel point reader.

>   Option: C

DIsable GAte (88) shuts down a gate controller.

>   Option: C

DIsable HIstory (107) turns off system history recording.

DIsable PCu (20) shuts down a pump control unit.

>   Option: C

DIsable PROduct (108) disables product attributes.

>   Option: C

>   0   prompt displays ?*Price*?, not ?*Amount*?

>   1   product is not a refund

>   2   product is not a payout

>   3   product is not a withdrawal

>   4   disables dollar amount inventory for product

>   5   disables inventory tracking for product

>   7   low inventory not indicated by asterisk in PRINT PRODUCT

>   8   product is not a fuel product

>   9   journal does not use category number as department number

>   15   disable patronage (Buypass only)

DIsable PUmp (21) shuts down a pump.

>   Options: C A

>   A   option disables all pumps

DIsable RAW (109) turns off raw mode.

DIsable REader (22) shuts down a card reader terminal.

>   Option: C

DIsable SDI (163) shuts down SDI.

>   Option: C

DIsable TMS (86) shuts down a tank monitor system (gauge).

>   Option: C

DOwnload SDI (100) forces a download of an SDI. Include the SDI number(s) on the same line as the command, no C option is needed.

DUMP disk-based command to print raw tables.

Options: (see below)

[**D**]**TIP** *pump_number* [**P**] dump transaction in progress on specified pump; **D** decodes the transaction; **P** dumps previous transaction

-or-

[**D**]**TIP NF** *console_number* [**P**] dump merchandise transaction in progress on specified console; **D** decodes the transaction; **P** dumps previous transaction

-or-

[**D**]**TRAN** [**R**]*transaction_number*(*s*) dump the indicated transaction (or range of transactions) in decoded format; **D** decodes the transaction; **R** indicates a raw index number (to be used only by technicians)

-or-

CORE [*address_range* [*page_size*]] dump specified range of addresses from memory

-or-

PROCESS [process number(s)] dumps all processes (default) or specified range

-or-

table_name [*major_range* [*minor_range*]] dump from specified table record numbers included in major range (by subrecords in minor range); default is all records

ECho (144) outputs the string given as argument.

Option: A T P1

A option suppresses line feed

T option displays string on console

P1 is used with fixed decimal numbers. Place a number between the @ and M to specify the number of characters including decimal point.

ELSE command used with IF in command files.

Option: *block*

block is command or begin...end block

Enable COnsole (23) returns a console to operation.

Options: C I

I option initializes and enables all consoles

Enable DUmp (112) starts file dumping.

Option: A

A option appends file

Enable FPR (161) enables a fuel point reader.

Option: C I

I option initializes and enables fuel point reader

Enable GAte (87) returns a gate controller to operation.

Options: C I

I option initializes and enables all gate controllers

Enable HIstory (113) restarts system history recording.

Option: I

I option clears history table

Enable PCu (24) returns a pump control unit to operation.

Options: C I

I option initializes and enables all PCUs

Enable PROduct (114) enables product attributes.

Option: C

0 prompt displays ?*Amount*?, not ?*Price*?

1 product is a refund

2 product is a payout (subtracts from sales)

3 product is a withdrawal

4 enables dollar amount (not units) inventory for product

5 enables inventory tracking for product

7 low inventory indicated by asterisk in PRINT PRODUCT

8 product is a fuel product

9 journal uses category number as department number

15 enables patronage (Buypass only)

Enable PUmp (25) returns a pump to operation.

Options: C A I

I option enables all pumps

A option clears ownership and frees the pump

Enable RAW (8) enables raw output mode.

Option: A

A option sends only 1 line of response at a time

Enable REader (26) returns a reader terminal to operation.

Options: C I

I option initializes and enables all readers

Enable SDI (164) returns SDI to operation.

> Option: C I
>
> I   option enables and re-initializes the SDI.

Enable TMS (85) returns a tank monitor system to operation.

> Options: C I
>
> I   option enables and re-initializes all TMSs

EXit (27) exits command mode, enters system monitor mode; if the exit command is in a command file, the system prompt returns.

FIND disk-based command to search for *pattern* in .CMD or text files.

> Options: [;[**A**][**I**]] *pattern file1* [*file2*] ...
>
> ;**A**   prints line numbers along with lines
>
> ;**I**   returns the number of lines on which *pattern* is found (%E)

FIX_CONF disk-based command to update an old configuration file to work with a new release of FRAMOS (but not a new version number).

> Options: [-**D***conf_name*]...[*filename*]
>
> -**D***conf_name conf_name* is replaced with name of configuration program to be reset to defaults (e.g., **READER**, **PUMP**, **SYS_PAR**) or **ALL** for all configuration programs at once; you may specify more than one program by repeating modifier in front of the name of each configuration program you want to reset to its default
>
> *filename* name of configuration file; if no file name is given, assumes FRAMOS.CFG

Fix TRansactions (28) changes transaction-begin and -end pointers.

> Options: AI *rec1 rec2*
>
> **A**   recalculate CRC; allows damaged transaction records to be used; use only if necessary to allow corrupted records to be polled
>
> **I**   clear all transaction numbers from the transaction file and reset the transaction pointers; irreversible; fill transaction number field with -1s for all transactions
>
> *rec1 rec2* set pointers; *rec1* is the physical record number of the oldest transaction you want to include in the active portion of the table; *rec2* is the physical record number of the most recent transaction you wish to include in the active portion of the table

FORMAT (116) formats the RAM disk.

> ***Do not use*** unless supervised by a Gasboy Technician. Erases your site information.

FRED disk-based full-screen text editor (FRED commands are summarized later in this chapter).

> Option: [*filename*]

FUELER disk-based program to set the fueler ID for a cluster.

> Options: [<cluster> <fueler-ID>]
>
> If the arguments are not provided, the current state of all fuelers is shown. Only clusters 1-9 can have a fueler. Entry of a Fuel ID card generates a disk journal event type 197 with the first two characters of the text field containing the cluster number.

Fuelpt disk-based configuration program for fuel point readers.

> Options: [-**P**][-**V**] [*filename*]
>
> -**P**   print current configuration
>
> -**V**   display in TTY form if port is configured as a CRT in the system parameters, or vice versa

GATE disk-based gate-reader configuration program.

> Options: [-**P**][-**V**] [*filename*]
>
> -**P**   print current configuration
>
> -**V**   display in TTY form if port is configured as a CRT in system parameters, or vice versa

getlog a shift change command to append a standalone log file from the Profit Point to journal.log.

> Option: [*Profit Point #*]
>
> If # is not specified, logs from all Profit Points are appended.

Get TRansactions (117) polls transactions from connected site.

> Option: A
>
> A   option prints full Print Transaction format

GOTO used in command files; execution jumps to line labeled with *label*.

> Option: *label*

Help (29) lists Site Controller commands.

> Option: A
>
> A   option prints commands with command numbers

IF command for conditional branching in command files.

Options: **-[!]** {**Y** [*text*] | **E** *filename* |

{= | < | <= | > | >=} *arg1 arg2*}

-! negation operator; comes between dash (-) and conditional expression; reverses the truth conditions of the conditional expression it proceeds

-Y *text* the *text* is echoed, and if the user enters a 1, **Y**, or y, then the command following the **IF** statement is executed

-E *filename* if the named file exists, the command following the **IF** statement is executed

-or-

-{= | < | <= | > | >=} *arg1 arg2*} the command or block of commands following the **IF** statement is executed if =, <, <=, >, or >= holds between *arg1* and *arg2*; that is, if *arg1* {*comparison*} *arg2* is true. You can separate expressions by |, which means "or," or by &, which means "and"

KERMIT disk-based program for file transfer to external computer. Note: press CTRL-SHIFT-6 to exit from connect mode.

Options: [*baud*][**D**][**L**#]{**R** | **S** *file1* [*file2*] ...}

baud data transmission rate to use, in bits-per-second

D debug mode (used in development only)

L# Site Controller RS-232 port number to use; where # is the port number

(without R or S) connect mode; default is port number 1

-or-

R receive-file(s) mode

-or-

S *file1* [*file2*] ... send the specified file(s) to the connected computer

lddrawer a shift-change command to enter the initial amount in the cash drawer at the beginning of a shift on a console.

Options: [*POS#*] [*$amount*]

listday a shift-change command; with the 0 argument, it moves the PREVIOUS.LOG file to the reports directory; with the 1 argument, it completes the processing of the PREVIOUS.LOG file.

Options: 0 | 1 [*POS#*] [*shift# POS#*]…[*drop*] [*initial drawer total*][*current drawer total*]

listnext a shift-change command to generate a shift report.

Options: [*filename*] [*filename-extension only*] [*%I | shift sequence#*] [*shift#*] [*POS#*] [*printer# on POS*]

listone a shift-change command that runs the cashier, pritem, and prhour commands to generate the end-of-day reports.

Options: [*filename-extension only*] [*POS#*]

[*POS#*] the number of the console associated with the receipt printer where the end-of-day report is to be printed

LOad ALlocation (78) enters amounts in allocation totalizers.

Option: C

LOad Authorization (30) enters authorization code for allowed fuels or disallowed merchandise.

Options: C I

I option erases all authorization codes

LOad CArd (146) is run by a remote host to download a bit-mapped lockout file.

Option: C

LOad CRon (76) creates cron entries.

Options: C I

I option removes all entries from the cron file

Action types: @ ! ^ % ?

@ DWMMDDYYHHMM command is a timed entry

! command executes at a system restart

^ command executes at boot

% command executes when transaction file is near full

Note: an optional hyphen (-) after the action type and before the command name suppresses output to the printer.

LOad CUtoff (40) enters pump-fill limit and slow-to-cutoff point.

Option: C

LOad DAte (31) enters date and time.

LOad DRawer (32) enters initial amount of money in cash drawer.

Option: C

LOad Fuel (33) assigns product codes, price codes, and tank numbers to pumps.

Option: C

LOad Heading (34) enters receipt heading and footing messages.

Options: C I

I   option erases all heading and footing lines

LOad INventory (118) sets up inventory for a product and enables inventory tracking.

Option: C

LOad KEY loads the 18-character DES (data encryption standard) key or keys — *ttxxxxxxxxxxxxxxxx*, where tt is:

00 = master key

10 = working key

20 = working based on previous working

30 = exclusive or with previous master

xxxxxxxxxxxxxxxx is the 16 characters of the key

LOad LImitation (35) enters limitation code and fuel limit.

Options: C I

I   option erases all limitation codes and fuel limits

LOad MEssage (36) enters card reader terminal and gate broadcast messages.

Options: C I

I   option erases all messages

LOad PHone (46) enters dial-out phone numbers.

Options: C I #

I   option removes all phone numbers

is

1 = main CFN host phone number

2 = backup CFN host phone number

3 = main bank phone number

4 = backup bank phone number

5 = main auxiliary phone number

6 = backup auxiliary phone number

LOad PLU (119) loads price lookup information for merchandise products.

Option: C

LOad PRice (37) enters price code, price level, and price.

Options: C I

I   option erases all price codes, price levels, and prices

LOad PROduct (38) changes product number, name, or other product information.

Options: C A

A   option creates a new product

LOad PUmp (39) enters pump totalizer amount.

Option: C

LOad SHift (41) changes the site's shift.

LOad SIGnon (42) changes your sign-on code.

LOad TAnk (45) enters tank inventory counter quantity.

Options: C I

I   option clears all tank inventory counters

LOad TAX (142) enters tax numbers and names.

Options: C I

I   option clears all tax accumulator names

LOad TRansaction (47) enters initial transaction number.

LOad Vehicle (82) enrolls a vehicle in the MPG package.

Options: C I A

I   option removes all vehicles from the MPG package

A   option resets MPG period for all vehicles

LOCk CArd (48) invalidates a card.

Options: C A

A   option erases card file and sets positive lockout

LOG EVent (158) puts an event in the disk journal.

Options: *<et><amt><d><c#><cl#><sh#><sq#>*

et   event type (required)

amt amount in current monetary units (no decimal)

d   descriptive text (up to 20 characters). enclose spaces in quotes

c#   console number - 2 or less characters

cl# clerk number - 2 or less characters

sh# shift number - 2 or less characters

sq# shift sequence number - 4 or less characters
Use a 0 as placeholder for parameters not used.

LOG FIle (121) prints a file on the log printer.

> Option: A
>
> A   option deletes file after logging

LOG MEssage (93) prints a message on the log printer.

> Option: C

MKdir (122) creates a new directory.

NExt CLerk (159) allows the disk journal to keep separate shifts for each console.

nextday a shift-change command to end the day and begin a new day.

> Options: [*POS#*]
>
> [*POS#*]   the number of the console associated with the receipt printer where the end-of-day report is to be printed

NExt DAY (151) stops the site, closes the current day, restarts the site, opens the cash drawer for a safe drop, and loads shift 1.

> Options: I A
>
> I   option does not restart the site; useful for sites that are not open 24 hours a day
>
> A   option ignores the system parameter that set the time interval required between changing shifts with this command

nextshft a shift-change command to change shift, either system-wide or on a particular console.

> Options: [*n*] [*-?*] [*-s*] [*-c[n]*] [*-a[n]*] [*-pn*] [*-dn*] [*-on*]
>
> Loads next shift and prints report for console or clerk/fueler id number
>
> **n**   Changes shift for console n and prints shift report
>
> **-?**   Displays this message
>
> **-s**   Changes shift for all console at Site and prints unique shift reports
>
> **-c[n]**   Changes shift and prints report for Clerk id number n
>
> **-a[n]**   Changes shift and prints report for Attendant number n
>
> **-pn**   Prints report to console n.
>
> **-dn**   specifies n number of digits in attendant number.
>
> **-on**   specifies n number of offset digits into card data for attendant number.

NExt SHift (152) closes the current site shift, loads the next shift number, and opens the cash drawer for a safe drop.

> Option: A
>
> A   option ignores the system parameter that sets the time interval required between changing shifts with this command

PAUse (149) prompts for user input.

> Options: I A P1
>
> I   option saves line of input for next command that needs terminal input
>
> A   option suppresses line feed
>
> P1   option is used with fixed decimal numbers

PERM disk-based command to change permission levels of system-resident commands.

> Options: [**-P**][**-V**] [*filename*]
>
> **-P**   print current configuration
>
> **-V**   display in TTY form if port is configured as a CRT in the system parameters, or vice versa

PJ a disk-based command to print journal information.

> Options: [**-C***n*[*-m*]] [**-R***n*[*-m*]] [**-A***n*[*-m*]] [**-U***n*[*-m*]] [**-S***n*[*-m*]] [**-D***n*[*-m*]] [**-H***n*[*-m*]] [**-B***n*[*-m*]] [**-N***x*[*-y*]] [**-T***x*[*ss*]] [**-O***y*[*:z*]] [**-X**] [**-W**] [**-V**] [**-E**] [**-I**] [**-F**] [**-G**] [**-L**] [**-M**] [**-P**] [**-?**] [*filename*]
>
> **-C***n*[*-m*]   list journal entries for console *n* (to *m*)
>
> **-R***n*[*-m*]   list journal entries for island card reader *n* (to *m*)
>
> **-A***n*[*-m*]   list journal entries for pump *n* (to *m*)
>
> **-U***n*[*-m*]   list journal entries for user/clerk *n* (to *m*)
>
> **-S***n*[*-m*]   list journal entries for shift *n* (to *m*)
>
> **-D***n*[*-m*]   list journal entries for date *n* (to *m*)
>
> **-H***n*[*-m*]   list journal entries for hour *n* (to *m*)
>
> **-B***n*[*-m*]   list journal entries for department *n* (to *m*)
>
> **-N***x*[*-y*]   list journal entries for transaction number *x* (to *y*)
>
> **-T***x*[*ss*]   list tender type *x* (sub-tender type *ss*)
>
> **-O***y*[*:z*]   length of the first and second fields of club cards
>
> **-X**   compressed listing
>
> **-W**   raw data listing
>
> **-V**   list events only
>
> **-E**   include events

-I   do not include merchandise-item entries

-F   do not include fuel-item entries

-G   List general events only

-L   Print total without transaction records

-M   do not include tender records

-P   list journal entries for previous day's journal; if no filename specified, PREVIOUS.LOG is default

-?   print help

[*filename*] if no filename is specified, JOURNAL.LOG is default

PORT (155) allows the site to manipulate a serial port to communicate with devices connected to that port.

Options: Open, Send, Wait, Receive, Flush, Close

Open option initializes the port:
PORT OPEN [<port #>] [BAUD (300|1200|2400|4800|9600)] [DATA7] [STOPS2] [PARITY (EVEN|ODD)] [NOFLOW] [LF]
   <port #>   SC port number, defaults to 2
   BAUD   baud rate, defaults to 2400
   DATA7   7 data bits, defaults to 8
   STOPS2   2 stop bits, defaults to 1
   PARITY   parity, defaults to none
   NOFLOW   turns off flow-control (normally XON/XOFF)
   LF adds CR LF to lines (default is CR)

Send option transmits characters from string or file, or causes a break:
PORT (SEND[LINE] <*string*>|

   SENDPACKET<*string*>|

   SENDSLOW<*string*>|
SENDBREAK|SENDFILE <*fname*>)
SEND <*string*> <*string*> is sent to port
SENDLINE <*string*> <*string*> is sent followed by a CR (and LF if LF option was used in OPEN)
SENDBREAK causes a break on the line
SENDFILE <*fname*> sends file as lines followed by CR (and LF if LF option was used in OPEN)
SENDPACKET <*string*> sends <STX><*string*><ETX><LRC> where LRC is the XOR of <*string*> and ETX
SENDSLOW <*string*> string is sent one char. at a time paced about 1/4 second apart.
 Note: This command may be used to cause a modem to dial, etc., by sending the appropriate modem command. Often

a break may be used to cause the modem to hang up the phone.

Wait option pauses until a string matching the specified string (or any of a list of strings) is received or until timeout is reached:
PORT WAIT <*option-list*> FOR <*string*> [<*string*>...]
The <*option-list*> is replaced by one or more of:
   TIME <seconds> is time to wait, defaults to 30 seconds
CASE *string* is case sensitive
SPACE length of white space in target is significant
MAX <integer> give up after that many characters are received
QUIET <integer> give up if host silent that many seconds
VAR <variable> target matched is returned in <variable>
   ECHO display characters as received

The keyword *FOR* signals the end of the option list and the beginning of the string list. Each string may contain control codes (for example, ~0D or ^M) or wildcard characters (@s).

If any string contains internal spaces, it must be enclosed in quotes (''this string'').

The return code is the number of the string that was matched (for example, 1 if the first (or only) string was matched).

Receive option captures incoming characters in variable and/or file:
PORT RECEIVE [<until-list>] (VAR <variable> | FILE[APPEND] <*fname*>)
The <*until-list*> is replaced by one or more of:
MAX <integer> get the given number of characters (defaults to 39 if VAR, 80 if FILE)
END <*string*> until any character in the *string* is encountered (this option may appear multiple times), defaults to LF and FF
TIME <seconds> timeout in seconds, defaults to 30
QUIET <seconds> give up if line quiet for given number of seconds
PACKET terminated on receipt of packet, returns 0 (may combine with END)
VAR <variable> is the user variable to hold the data
FILE <*filename*> name of a file to hold the data, if file exists, it is overwritten

FILEAPPEND *<fname>* if file exists, received data is added at the end. Note: the terminator character is not included in the string. If a terminator character is found, the return code of *n* means the nth character in the END string was found.

Flush option discards pending input:
PORT FLUSH

Close option relinquishes control of port:
PORT CLOSE

The following error codes are used by all variants of the PORT command:

0   Success

100 Syntax error

101 Bad port

102 Bad baud

103 No channel open

104 Timeout

105 Quiet timeout

106 Max. chars termination

107 Terminated with ^C

108 Can't create file

109 LRC didn't check in packet

110 Port busy

Non-printing Characters: In any data string in one of the commands, non-printing characters may be represented in hex or control-letter form. For example, CR may be represented by ~0D or ^M.

prattend a shift-change command to print attendant sales.

Options: [-*?*] [-*an*] [-*sn*] [-*gn*] [-*on*] [-tn(mm)] [-*p*] [-*e*] [-f flatfile] [-*yYYMMDDHHMM*] [-*nx(-m)*] [-*x*] [*infile*]

 -? displays this message.

 -a displays totals for attendant 'n'. if none, or -a All, gives a totaled report of all.

-sn gives report for shift n.

-gn use 'n' digits for attendant number.

-on offset of 'n' digits into card data.

 -tn(mm)   designates tender type n and subtype mm to report for .

 -p processes the previous journal file.

 -e gives separate report for each attendant found.

 -f outputs raw data into 'flatfile'.

 -y begin time for shift (YYMMDDHHMM). Show transactions after this time.

-nx(**-m**) transaction number x or range. Will wrap after 9999

 -x Display taxes separate.

infile - Journal file to process. Defaults to c:journal.log.

prboth *infile* a shift-change command to print the journal file specified by *infile*.

Options:

 -H Sum sales and print by hour

 -I sum stock items and print by item

 -U sum UPC items and display by item

 -F *flatfile* output raw data into a flat file named *flatfile* from the specified journal.log file

 -P processes the previous journal file

 -R displays refunds

 --R displays refunds as negative

Print ALlocation (79) prints allocation totalizers.

Print Authorization (49) prints authorization codes and fuels allowed.

Print CArd (95) prints lockout file in bitmapped format.

Print COnsole (150) puts a line of text on console display.

Print CRon (15) prints entries in cron file.

Print DAte (50) prints date, time, and current transaction number.

Print DIagnostics (51) prints system errors.

Option: A

A   option prints all error codes

Arguments:

    0 when diagnostics were last reset

    1 Site Information

    2 PCUs

    3 readers

    4 consoles

    5 fuel point readers

    6 gate controllers

    7 tank gauges

    8 pumps

    12 SDI

Print DRawer (52) prints shift and daily cash drawer totals.

Print Heading (53) prints receipt heading and footing.

Print HIstory (123) prints event history.

> Option: A

> A   option displays new events as they occur.

Print LImitation (54) prints limitation codes and fuel limits.

Print LOckout (55) prints invalid or valid card numbers.

Print MEssage (56) prints broadcast messages.

Print MOnitor (89) prints stored log.

> Option: A

> A   option prints with physical record numbers.

Print PHone (16) prints the dial-out phone numbers.

Print PRice (57) prints price codes, levels, and prices.

Print PROduct (58) prints product information.

> Options: I A

> I   option allows ranges of categories

> A   option prints attributes enabled with ENABLE PRODUCT

Print PUmp (59) prints pump numbers, tank numbers, products, price codes, prices, pump totals, and pulse rates.

> Option: A

> A   option prints buffered totals

Print QUantity (145) prints quantity sold information.

> Options: IA

> I   option allows ranges of categories

> A   option allows choice of periods:

> > 1 = previous shift 1

> > 2 = previous shift 2

> > 3 = previous shift 3

> > C = current shift

> > Y = yesterday's total

> > D = today's total

> > T = cumulative total

> > P = cumulative totals at last day change

Print RECeipt (124) prints text on receipt printer.

> Option: C A [# | **C#** | **P1**=# | **P1**=**C#**] [*message*]

> A   option allows a file to be printed on a receipt printer without waiting for the printer to complete printing on the receipt. You must redirect a file to the command or it is an error.

> #   is a receipt printer's number; C# is the number of the console to which the receipt printer is attached.

> P1   option is usually used when redirecting a file that does not have a stored printer number

Print SAles (126) prints sales information.

> Options: I A

> I   option allows ranges of categories

> A   option allows choice of periods:

> > 0 = print tax accumulators (with I option: P SA;I 0)

> > 1 = previous shift 1

> > 2 = previous shift 2

> > 3 = previous shift 3

> > C = current shift

> > Y = yesterday's total

> > D = today's total

> > T = cumulative total

> > P = cumulative totals at last day-change

Print SIGnon (125) prints user numbers and permission levels.

Print SUmmary (18) prints summary of sales totals report.

> Options: I A

> I   option allows ranges of categories

> A   option allows choice of periods:

> > 1 = previous shift 1

> > 2 = previous shift 2

> > 3 = previous shift 3

> > C = current shift

> > Y = yesterday's total

> > D = today's total

> > T = cumulative total

> > P = cumulative totals at last day change

Print TAnk (60) prints tank numbers and inventory totals.

print tax use Print SAles;I 0

prntrpt a shift-change command to print reports.

Options [*Report type*] [*Report number*] [*Day of week extension*] [*Date and time*][*Printer POS*] [*Report flag*]

prtender creates a report similar to the site PRINT TRANSACTION command. The report is a file in the reports directory named ptend###.rpt where ### is the tender type and/or subtype of the report.

Options [-?] [-tn(mm)] [-en] [-a(n)] [-dn(-m)] [-hn(-m)] [-p] [infile]

-? Displays this message.

-tn(mm)   Designates tender type n and subtype mm for report creation

-en Displays extra account digit from offset n into discretionary data

-a(n)   Displays Aux Tran sequential numbers for all tenders

-dn(-m)   Date n to m

-hn(-m)   Hour n to m

-p Processes previous journal file

infile   Journal file to process. Defaults to /journal.log

Print TIp (129) prints transactions in progress.

Option: A

A option continuously updates (for use with CRTs only)

Print TOtals (61) prints sales totals.

Options: I A

I option allows you to specify categories

A option allows choice of periods:

1 = previous shift 1

2 = previous shift 2

3 = previous shift 3

C = current shift

Y = yesterday's total

D = today's total

T = cumulative total

P = cumulative totals at last day-change

Print TRansaction (62) prints completed transactions.

Options: A P1 P2

A option prints with physical record numbers

P1 and P2 options sort transactions

Print Vehicle (83) prints MPG information for vehicles in the MPG package.

prvoid displays all voids found in the journal.

Options [-**?**] [-cn] [-sn] [-f flatfile] [infile]

-? Displays this message

-c Displays voids for console n

-s Displays voids for shift n

-p Processes the previous journal file

-f Outputs raw data into flatfile

PUMP disk-based configuration program for pumps.

Options: [-**P**][-**V**] [*filename*]

-**P** prints current configuration

-**V** displays in TTY form if port is configured as a CRT in the system parameters, or vice versa

PUrge SIte (130) resets transaction-begin pointer.

RCP disk-based command to copy *dir1* and all subdirectories thereof to *dir2* directory and new subdirectories.

Option: dir1 dir2

RDEL disk-based command to delete a directory and all of its contents.

READER disk-based configuration program for island card reader.

Options: [-**P**][-**V**] [*filename*]

-**P** print current configuration

-**V** display in TTY form even though port is configured as a CRT in the system parameters, or vice versa

REBOOT (131) with no options, reloads configuration and reboots.

Options: I A P1

I option does a warm boot in version 1.0

A option reboots from disk (cold boot)

P1 option reconstructs all tables

RECord (7) writes data to a disk file.

Option: I

I option overwrites existing file

REMove ALlocation (80) removes a totalizer from the allocation package.

Options: C A

A option initializes the allocation file and frees all accounts from allocation

REMove Authorization (63) removes a fuel or merchandise code.

Option: C

REMove CRon (132) removes a cron entry.

Options: C I A

I   option deletes any pending executable

A   option attempts to kill the executable or cron command currently running

REMove Heading (133) removes a receipt heading line.

Option: C

REMove LImitation (64) removes a limitation code.

Option: C

REMove MEssage (134) removes a broadcast message.

Option: C

REMove PRice (17) removes a price level.

Option: C

REMove PROduct (135) removes a product.

Options: C A

A option removes all products

REMove SIGnon (136) removes a user sign on.

REMove Vehicle (84) removes a vehicle from the MPG system.

Option: C

REName (138) renames a disk file.

Option: A

A   option moves file(s) across directories

report a shift-change command to regenerate shift and end-of-day reports using an existing journal file.

Options: [*# of printer's POS*] {**yday** | **pday** [*extension*] | **shft** [*shift#*] [*POS#*] | **pshft** [*extension*] [*shift#*] [*POS#*] | **clrk** [*clerk#*] | **pclrk** [*extension*] [*clerk#*] | **atnd** [*attendant#*] | **patnd** [*ext*] [*attendant#*]}

yday   regenerate yesterday's end-of-day report

pday   regenerate an end-of-day report using the *extension* of the journal log file

shft   regenerate a shift report for the current day

pshft   regenerate a shift report for a previous day using the file extension of the journal log file

clrk   regenerate a clerk report for the current day

pclrk   regenerate a clerk report for a previous day using the file extension of the

journal log file

atnd   regenerate an attendant report for the current day

patnd   regenerate an attendant report for a previous day using the file extension of the journal log file

reprint a shift-change command to reprint whatever was last printed at a receipt printer.

Options: [*# of printer's POS*] {**day** | **last** | **pday** [*day*] | **shft** [*day*] [*shift#*] [*POS#*] | **clrk** [*day*] [*clerk#*] | **atnd** [*day*] [*attendant#*] }

day   print the last end-of-day report

last   print the last report or receipt printed on specified receipt printer

pday   reprint a previous end-of-day report

shft   reprint a shift report

clrk   reprint a clerk report

atnd   reprint an attendant report

REset DIagnostics (65) clears diagnostic error counter.

Option: I

I   option resets after a reconfiguration

REset PUmp (66) resets pump totalizers.

REset TOtals (67) resets the daily sales totals.

Option: A I

A   option resets daily and cumulative sales totals to zero, and loads shift 1

I   option resets cumulative only

REset TRansaction (68) resets first (oldest) transaction to save and to print pointer.

Options: AI

A   option resets all transaction table pointers, including next transaction to send to CFN host and next transaction to log; if a number is provided with the A option, the CFN host poll pointer is set to that transaction number;

I   option deletes transactions in progress (resulting in unassigned transactions and loss of card data needed for billing any pumping transactions that were in progress)

RESTORE Command file that extracts the files compressed with the BACKUP command and returns the files to the SC3 directory.

RESTORE disk-based command to restore contents of selected data tables from disk file SYSBACK.DTA (by filename if specified).

Options: [**old**] {*table1* [*table2*] ... | {**everything** | **reconstructed**} [**except** *table* [*table*] ...]} [**from** *filename*] [**corrupt**]

[**old**] restores from backup files created under FRAMOS version 0.2, which used a different format for the cron table; it converts the cron entries to FRAMOS version 1.0 format while restoring them

table1 [*table2*] ... restores specified tables (if backed up)

-or-

everything [**except** *table1* [*table2*] ...] restores all tables (if backed up); optional: except specified tables *table1*, *table2*, etc.

-or-

reconstructed [**except** *table1* [*table2*] ...] restores all reconstructed tables (if backed up); optional: except specified tables *table1*, *table2*, etc.

[**from** *filename*] this option restores from data in file *filename*

[**corrupt**] restores records with bad checksums

RMdir (140) removes an empty directory.

RUN (69) restarts site.

Options: I A

I   option starts site initially, or after a crash

A   option restarts a site after a console disable pumps

safedrop a shift-change command to reconcile a cash-drawer amount when money is taken out to adjust the till.

Options: [*POS#*] [*$amount*]

SCReen (167) allows command files to perform screen functions independent of the type of terminal connected.

SEND COMmand (156) sends a command from the Site Controller to one or more Profit Points

SEND COMMAND *device command*

For *device*, substitute one of the following:

C*   all Profit Points

C1   Profit Point #1 (*or* C2 for Profit Point #2, etc.)

C1C2 Profit Points 1 *and* 2; etc.

For *command*, substitute any of the commands you can enter at a DOS prompt

Option: A

A   option does not wait for operator response at the Profit Point before clearing the display, if any, from the executed command.

SEND FIle (157) sends a file from the Site Controller to one or more Profit Points, or from a Profit Point to the Site Controller. Requires at least 50 free buffers.

In the following, *S* stands for source, and *D* stands for destination:

SEND FILE[;*A*] [*mode*] *S-device S-filename D-device*[*D-device* . . .] [*D-filename*]

A   option causes the command to run in the background.

Mode stands for transfer mode. It is a single-digit number or the letter *e* (9 is the default). Only one mode is allowed at a time. Modes are:

1   overwrite only (send the file only if the file already exists)

3   resume prior send, abort if file does not exist

4   do not overwrite, do not make directory

5   overwrite ok, do not make directory

8   do not overwrite, ok to make directory

9   overwrite ok, ok to make directory

e   execute transferred file on destination device.

For *S-device*, substitute one of the following:

S   Site Controller

C1   Profit Point #1

C2   Profit Point #2; etc.

In place of *S-filename*, insert the name (including the path) of the file to be sent.

For *D-device*, substitute one of the following:

S   Site Controller

C*   all Profit Points

C1   Profit Point #1

C2   Profit Point #2; etc.

In place of *D-filename*, insert a new name (and, optionally, the path) if you want the transferred file to have a name different from the source file's name (and path).

SET_PERM disk-based command to change file attributes and permissions of disk-based commands.

> Options: [**-R**] [**-H**] [**-N**] [**-U***user_no*] [**-P***perm_level*] *file1* [*file2*]
>
> **-R** *file1* [*file2*] sets read-only status on *file1* [*file2*]
>
> **-H** *file1* [*file2*] sets hidden status on *file1* [*file2*]
>
> **-N** *file1* [*file2*] allows any user to execute the disk-based command(s) *file1*, *file2*, etc.
>
> **-U***user_no file1* [*file2*] ... only user number *user_no* may execute the disk-based command(s) *file1*, *file2*, etc.
>
> **-P***perm_level file1* [*file2*] ... only users having a permission level greater than or equal to *perm_level* may execute the disk-based command(s) *file1*, *file2*, etc.
>
> Copy all necessary hard-drive files to RAM disk, run SET_PERM, copy back to hard disk.

settle varies for each card network; see the specific *Credit and Debit Card Networks* manual.

setup a shift-change command to configure report package parameters.

setup clerk a shift-change command to customize clerk reports; makes a copy of the existing format file, which can be used to undo the changes, and then runs the ALTER CLERK command to create a new format file for clerk reports.

> Options: [**-D**]
>
> [**-D**] copies the CLERK.FMT file, wipes out the existing report configuration, and runs ALTER CLERK -D to generate a default report configuration for demo purposes

setup day a shift-change command to customize the end-of-day reports; makes a copy of the existing format file, which can be used to undo the changes, and then runs the ALTER DAY command to create a new format file for end-of-day reports.

> Options: [**-D**]
>
> [**-D**] copies the DAY.FMT file, wipes out the existing report configuration, and runs ALTER DAY -D to generate a default report configuration for demonstration purposes

setup shift a shift-change command to customize the shift reports; makes a copy of the existing format file, which can be used to undo the changes, and then runs the ALTER SHIFT command to create a new format file for shift reports.

> Options: [**-D**]
>
> [**-D**] copies the SHIFT.FMT file, wipes out the existing report configuration, and runs ALTER SHIFT -D to generate a default report configuration for demonstration purposes

SET_VAR *or* **SET** command to create variables on RAM disk to store text or integers.

> Options: [; **I**] |
>
> {
>
> variable {= | @} [*string*] |
>
> *variable* {+ | - | * | / | % | ^} *number_value* |
>
> variable $ filename [*line* [*column* [*length*]]] |
>
> variable ~ *string* [*column* [*length*]] |
>
> variable ? *filename* |
>
> variable # *string* |
>
> *variable* := *num* [{+ | - | * | / | % | ^} *num*] ...
>
> set variable < *format data*
>
> }
>
>
> (no arguments) lists contents of all variables
>
> -or-
>
> ; **I**   deletes all variables
>
> -or-
>
> *variable* = *string* sets *variable* equal to value (literal text, % parameter number, or % variable name)
>
> -or-
>
> *variable* @ *string* echoes *string* text as prompt on terminal, set *variable* equal to line typed by user
>
> -or-
>
> *variable* {+ | - | * | / | % | ^} *number_value* sets *variable* to the result of performing the given mathematical operation on the current value of *variable* and *number_value*; % = mod, ^ = exclusive or
>
> -or-
>
> *variable* $ *filename* [*line* [*column* [*length*]]] sets *variable* to the substring at location line column in *filename*, for *length* characters
>
> -or-

variable ~ string [*column* [*length*]] sets *variable* to *string*; if *string* is followed by a blank space and a number, *column*, that number is the offset into the *string*, from the left, before the remainder of *string* will be set to *variable*; (any blank spaces in the *string* itself must be enclosed in quotation marks.); the second number, *length*, if present, specifies how many characters after the offset will be included in *variable*

-or-

variable ? filename sets *variable* to exact length in bytes of disk file named by *filename*

-or-

variable # string sets variable to length in characters of *string*

-or-

variable ≔ number_value [{+ | - | * | / | % | ^} *number_value*] . . . sets variable to result of numeric expression

-or-

set variable < format data allows a number to be formatted into a user variable using the same format options available for the P1 option in ECHO. Useful for converting the internal format of numbers in command files to a form that can be used a input for commands that require decimal points in a correct place.

Four of the operators (=, @, $, and ~) can be followed by one of these three modifiers:

B stands for *Boolean*. If a 1, y, or Y is entered, a y is stored. If any other character is entered, an *n* is stored.

M stands for configured *monetary* units. In the United States, the default configuration is for two decimal places (xx.xx) for cents as hundredths of a dollar

Q stands for configured *quantity* units. The default configuration is for three decimal places (xx.xxx) for thousandths of a unit.

SHow (166) displays communication between the site and devices.

SHow <device> [<device>...]

<device> may be a single word if it is one of:

ALL - shows communication of all devices

RBroad - shows reader broadcast messages

CBroad - shows console broadcast messages

ROUTer - shows router activity

STATUS disk-based command to print selected site status information.

Options: [**B**][**C**][**D**][**H**][**N**][**S**][**T**][**U**][**V**][**!**]

With no arguments, defaults to **VTS**

B backup; backs up user data in a file of your choosing (enter the command as STATUS;>>*filename* **B**).

C CPU; calculates percentage of CPU being used at site

D prints daily settlement control information

H host; reports last transaction number sent to CFN host

N no-sale; reports all non-zero no-sale counters

O oldest; returns oldest transaction number as its error code %E

R reports; prints reports on users (sign-ons), including no-sales, item voids, and length user was signed on. Default report is for previous shift. A character following the *R* indicates the period requested:

C = current shift

D = current day

Y = yesterday

T - cumulative totals

1 = previous shift

2 = one before previous shift

3 = two before previous shift

P = cumulative totals at last day-change

S switches; reports current DIP switch settings

T transaction table; reports how many more transactions will fit in the transaction table

U unpaid; reports all non-zero unpaid counters

V version; reports operating system version number and release level

! repeat; causes specified report to repeat every 1 second; for use with CRT

STOP (70) shuts down a site.

Options: A I

A option halts pumping transactions. Pay off fuel sales to display prompt.

I option does not wait for site to stop

SUbtract ALlocation (81) subtracts from an allocation totalizer.

Option: C

SUbtract DRawer (71) subtracts from cash in drawer.

    Option: C

SUbtract INventory (141) subtracts from inventory for a product.

    Option: C

SUbtract TAnk (72) subtracts from tank inventory counter.

    Option: C

SYSBACK disk-based command to back up all system tables in RAM, except transactions, to the SYSBACK.DTA file.

SYS_PAR disk-based configuration program for system parameters; main configuration program for Site Controller.

    Options: [**-P**][**-V**] [*filename*]

    -P   print current configuration

    -V   display in TTY form if port is configured as a CRT in the system parameters, or vice versa.

SYStem (160) changes from the CFN3 prompt to the NT operating system prompt. Type EXIT to return to the CFN3 prompt. Designed for use from a remote site only.

TABLE disk-based configuration program for data table sizes.

    Options: [**-P**][**-V**] [*filename*]

    -P   print current configuration

    -V   display in TTY form if port is configured as a CRT in the system parameters, or vice versa

TAX disk-based tax table entry program.

    Options: [**;**[**C**][**I**]] [**-P** | **-R** | **-?**]

    ;C   chain entries: keep looping back to the initial prompt

    ;I   reconstruct the tax rate table

    -P   print tax table summary

    -R   print tax table in raw form used by RESTORE

    -?   run in tutorial mode

TEst PCu (73) tests a pump control unit's memory.

TRANBACK disk-based command to back up transaction data to the TRANBACK.DTA file.

TREE disk-based command to print directory structure of the R drive only.

TRFMT disk-based configuration program for local transaction format.

    Options: [**-P**][**-V**] [filename]

    -P   print current configuration

    -V   display in TTY form if port is configured as a CRT in the system parameters, or vice versa

TYpe (5) prints the contents of a file.

    Option: A

    A   option prints past the MS-DOS end-of-file marker

Unlock CArd (74) validates a card.

    Options: C A

    A   option clears card file and sets negative lockout

variable a shift-change command to list the state of the shift sequence and shift number for the system and for each console.

WHERE disk-based command to print current directory.

FRED Command Summary

Modes

Command	Mode	Function
^E	i e c	enter edit mode
^C	i e c	enter command mode
^N	i e c	enter insert mode

Insert or Edit Mode

Command	Argu.	Mode	Function
^O		i e	open line above
ENTER key		i e	open line below
↑ or ^K		i e	cursor up one line
↓ or ^J		i e	cursor down one line
← or ^H		i e	cursor left one character
← or ^L		i e	cursor right one character
SPACEBAR		e	cursor right one character
b		e	move cursor to beginning of line
e		e	move cursor to end of line
c		e	enter command mode
i		e	enter insert mode
DEL key		i e	delete one character left of cursor
^D		i e	delete one character at cursor
^X		i e	delete current line
k	*char*	e	kill line from cursor up to character *char*
^U		i e	undo changes to current line
^S		i e	split line at cursor
^R		i e	join current line to line above
^Y		i e	save current line
^P		i e	put saved line below current line
u		e	scan backward (up) through file
d		e	scan forward (down) through file
g	*n*	e c	go to line number *n*
x	*char*	e	exchange character at cursor with character *char*
s	*char*	e	search for character *char*

Command Mode

Command	Argu.	Mode	Function
g	*n*	Ec	go to line number *n*
change	*begin #* *end#*	c	make changes to designated lines
find		c	search for a pattern, enter insert mode
search	*begin#* *end#*	c	print all lines in *search range* that match a pattern
clear		c	erase entire file
del	*begin#* *end#*	c	deletes designated lines
append	*filename*	c	insert file at cursor
load	*filename*	c	replace buffer with file
name	*filename*	c	set name of current file
save		c	save file
resave		c	resave existing file
q		c	quit editor, exit to operating system
tabs	*n*	c	set tab stops every *n* columns

System Variables

The following variables can be used in command files. Note that these are case-sensitive—they must be uppercase or lowercase, as shown below:

Name	Definition
%0	Number of arguments on command line (note that this character is a zero).
%1-%9	Command line arguments one through nine.
%A	Number of input lines from command terminalwaiting to be read. (To test if user pressed ENTER).
%B#	Current drawer balance for drawer #. No decimal is displayed.
%C	Where command is being executed from: 1 = local command port (command terminal) 2 = remote command port 3 = cron 4 = console #1 5 = console #2 6 = console #3 7 = console #4 8 = Profit Point #1 9 = Profit Point #2 10 = Profit Point #3 11 = Profit Point #4
%D	Date (MM/DD/YY).
%E	Last error code from last command. A 0 means the command was completed successfully; greater than 0 usually means the command failed. Note that FIND and STATUS O and CLOSE use the error code in a special way.
%Fd	Where d is the drive letter. Gives space remaining, in bytes.
%I	Current site ID.

%J	0=journal.log is up to date. 1=journal.log is not up to date.
%K	Position of console keyswitch: 0 = off 1 = on 4 = supervisor 8 = manager
%L	Without number returns locale ID string (country name) 0=returns locale code 1=returns quantity power 2=returns money power 3=returns fuel price power 4=returns date format 5=returns money character 6=returns decimal character 7=returns separation character

%M#	Miscellaneous options where # stands for:
	0 = non-resettable totals
	1 = returns the initial drawer balance in SYS_PAR
	2 = transaction number of first transaction in file
	3 = transaction number of last transaction in file
	4 = status of bank modem (0=down, 1=available, 3=connected)
	5 = status of CFN modem (0=down, 1=available, 2=dialing, 3=connected but not logged in, 4=logged in)
	6 = if the parameter is enabled for unique shift numbers for each console, returns a 1; if disabled, returns a zero
	7C# = if the parameter is enabled for unique shift numbers for each console, returns the shift number of console #; if disabled, returns the system's shift number. (The # can be replaced by a %a-%z user variable to allow variable selection of the console number.
	8C# = if the parameter is enabled for unique shift numbers for each console, returns the shift sequence number of console #; if disabled, returns the system's shift sequence number. (The # can be replaced by a %a-%z user variable to allow variable selection of the console number.
	9 = returns one if configured for a CRT; otherwise, returns zero.

%P	Permission level of user currently signed on.
%Q	Site shift sequence number; each site shift change increments this number.
%R	Site run level: 0 = running 1 = blocking new transactions 2 = stopped 3 = emergency stopped 4 = memory full 5 = crashed
%S	Current site shift number (1, 2, or 3).
%T	Time (HH:MM AM/PM).

%U	User number of user currently signed on.
%V	Site version number.
%W	Day of week-Sun, Mon, Tue, Wed, Thu, Fri, Sat
%Y	Date-time (YYMMDDHHMM)
%a-%z	User string variables set by SET_VAR; up to 118 characters long.

.EXE

Executable programs used to carry out or perform an operation. These have an .EXE ending.

BATCH Executes processes on the Site Controller through the PC.

SC3 local Site Controller command terminal window on the PC.

SC3SHELL Site Controller command shell program on the PC.

CFN3 Backup

These are run from an NT command window, not the SC3 window.

BACKUP NT command file which takes all files excluding .BINs, .EXEs, and HTML files placing them onto floppy diskette(s).

RESTORE NT command file which extracts the compressed files created with BACKUP and returns them to SC3 directory. Not the same as the site's own RESTORE described earlier.

CFN3 CPU Board

Assembly part number: C05838.

Switches

PC IRQ Switch, SC-COMM CPU - S1

On the SC-COMM CPU board on the card edge side, middle DIP switch is the IRQ enable DIP switch. The IRQ enable switch chooses one of the four possible interrupt priorities. Only one may be selected and no other device on the PC can use that interrupt. SC3.EXE currently assumes level 10. Other choices are 15, 12, and 11.

1	Closed IRQ - 15	Default - open
2	Closed IRQ - 12	Default - open
3	Closed IRQ - 11	Default - open
4	Closed IRQ - 10	Default - closed

PC Address Switch, SC-COMM CPU - S2

On the CPU board, card edge side, Switches 1-4, the PC address DIP sets where in the PC address space the Dual RAM will occur. The SC-Comm board currently assumes D0000.

	Switch			
Address	**1**	**2**	**3**	**4**
C0000	cl	cl	cl	cl
C3000	cl	cl	cl	op
C6000	cl	cl	op	cl
C7000	cl	cl	op	op
CC000	cl	op	cl	cl
CF000	cl	op	cl	op
D0000*	cl	op	op	cl
D3000	cl	op	op	op
D6000	op	cl	cl	cl
D9000	op	cl	cl	op
DC000	op	cl	op	cl
DF000	op	cl	op	op
E0000	op	op	cl	cl
E3000	op	op	cl	op
E6000	op	op	op	cl
E9000	op	op	op	op

   * = default

SC3 Comm Board DIP Switch, CPU - S3

Position 4 - UP (open), default signon.

Jumpers

SC-Comm CPU Board settings

Jumper	Description	Setting
K3	AC power fail sense	2-3 to enable 1-2-3 to disable*
K4	AC watch dog timer	1-2 to enable*
K5	SC-Comm CPU (testing only)	1-2 to reset
K6	RS-485 loop 1, 2 wire to 4 wire	2-3 for 4 wire* 1-2 for 2 wire
K7	RS-485 loop 2, 2 wire to 4 wire	2-3 for 4 wire 1-2 for 2 wire*
K8	Rx Clock from synchronous modem (DB-25-15)	1-2 to connect
K9	ETC output to synchronous modem (DB-25-24)	1-2 to connect
K10	Tx clock input from synchronous modem (DB-25-17)	1-2 to connect
K11	EPROM type	2-3 for 27256 or 27128
K12	EPROM type	2-3 for 27256 or 27128

   * = default setting

CFN3 Memory Board

Assembly part number: C05839.

Switches

DIP Switch SC-Memory I/O-S1

Position & Definition		Setting
1	Boot to monitor after reset	open
	Boot to OS after reset	closed
2	Debug mode	open
	Normal	closed
3	Don't talk to PC while in monitor	Open
	Monitor I/O goes to PC also	closed
4	Monitor I/O goes to SC port 1 also	open
	No monitor I/O to SC port 1	closed

Dip Switch SC-Memory I/O-S2

Position & Definition		Setting
1	Battery 1	open=disabled closed=enabled*
2	Battery 2 - External	open=disabled* closed=enabled
3	N/A	unused
4	N/A	unused

Jumpers

SC-Comm Memory I/O board settings

Jumper	Description	Setting
K1	Date/Time Clock Speed	*1-2 for 4 wait state 2-3 for 1 wait state
K2	Enable A19 to RAM	*2-3 for 128Kx8 1-2 for 512Kx8
K3	RAM size	*2-3 for 128Kx8 1-2 for 512Kx8
K4	External Battery	no connector = disabled
K5	Tokheim Reset Output Channel 2 **Do not install; not supported**	1-2 for reset

* = default

CFN3 Memory Map

00000		
-		RAM
7FFFFF		
A00000		DUAL RAM
C00000		EEPROM
D00000		SCC0
D00800		SCC1
D01700		SCC2
D10000		SCSI
D10100		LEDs
D10200		CPU Board Switches
D20000		Real Time Clock
D20100		Memory Board Switches
D20300		Battery Status
D20500		Watchdog Reset
D20700		Battery Drain Control
F00900		
-		EPROM
FFFFFF		

LED Diagnosis

No LED lit: Did not reach EPROM. Check seating of CPU Socket, check jumpers k1 & k2 are set correctly.

1 LED lit: EPROM not relocated. Check seating of CPU Socket, check jumpers k1 & k2 are set correctly.

2 LED's lit: Parallel ports not initialized or Vectors not copied to RAM EPROM. Check seating of CPU socket. Check U19, U20, U14 and U46.

3 LED's lit: Access BI-RAM failed. Check seating of CPU socket. Check U19, U20, U14 and U46.

4 LED's lit: Failed to initialize UART channel #1. Check seating of CPU socket. Check chips U32, U33, U36, U29, U16, U3 and U6.

5 LED's lit: Failed to initialize Real Time Clock. Check U4,U5, U3. Check connector P1 for unsoldered, bent or broken pins. Double check memory board k1, 1-2 jumper.

6 LED's lit: Failed one of: Talk to PC; sends version command to PC; print power-up message; print date/time; boot operating system. Check seating of CPU Socket. Check U19, U20, U14, U46, U9, U15, U23, U24, U31 and U47.

7 LED's lit: Should be OK. Check seating of CPU socket. This is not an expected type of failure. May indicate a bad DIAG.BIN has been loaded.

Serial/Parallel Ports

CFN3 Ports
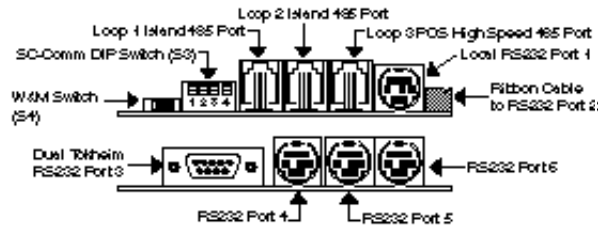
The RS232 ports on the SC can be used for any function that needs a RS232 port. The ports on the PC are more limited. Com1-4 can be used for login, log printers, and command output may be directed to them. LPT1-2 can only be used as log printers or command output.

The CFN3 has one more RS422/485 channel available than the SCII. This has been assigned to be another island loop. Broadcast messages will be sent to both of these channels. The POS loop is the only loop for Profit Point connections.

Cable Connections

Port 1, Local RS232 - use cable number C05994, CFN3 terminal cable assembly.

Port 2, Ribbon Cable to RS232 - use ribbon cable C05554 (not currently used).

Port 3, RS232 - use cable number C05996, CFN3 to Tokheim cable assembly.

Port 4, RS232 use cable number C05995, CFN3 modem cable assembly.

Port 5, RS232 use cable number C06006, CFN3 Wayne cable assembly.

Port 6 is extra and can be used as either a modem or Wayne.

Note: *Ports 1, 4, 5 and 6 are interchangeable.*

Loops 1, 2, and 3 - use cable number C05670, cable assembly 4 position 1:1 HS/Line - 8ft. modular cable.

The following is a list of ports and their assignments:

Name	Chnl	Location	Function
CON	0	PC CRT/Keyboard	Local port login
SC1	1	COMM CPU top DIN	RS232
SC2	2	COMM CPU 26 pin ribbon	RS232 all cont. lines
SC3	3	COMM MEM DB-9*	Tokheim pumps
SC4	4	COMM MEM left DIN*	RS232
SC5	5	COMM MEM middle DIN*	RS232
SC6	6	COMM MEM right DIN*	RS232
COM1	7	P C	RS232
COM2	8	P C	RS232
COM3	9	P C	RS232
COM4	10	P C	RS232
LPT1	11	P C	Parallel output
LPT2	12	P C	Parallel output
LOOP1	N/A	COMM CPU left handset*	Island loop
LOOP2	N/A	COMM CPU middle handset*	Island loop
LOOP3	N/A	COMM CPU right handset*	POS loop

* refer to diagram on previous page

Internal Profit Point setup

Plug the power supply into the Gasboy distribution box next to the word power. Plug the other end into an outlet.

Plug cables into their correct positions. Com2 of the computer connects into serial2 of the Gasboy distribution box.

Com3 on the computer connects to serial3 of the Gasboy distribution box.

Installation of the Ve rifone PIN pad requires PIN Pad Kit M05113A001. Install using instructions found in the Installation Procedure, C35925.

Diagnostic Error Codes

The following error codes may appear in response to PRINT DIAGNOSTICS;A.

Console

Errors in console-to-Site Controller messages:

CRC—bad cyclical redundancy check (CRC)
DIE—device went down
NOR—no response
PIN—PIN errors
RDE—card read error

Errors in Site Controller-to-console messages:

NB3—buffer busy
NB5—invalid command
NB7—receiver overrun
NBA—bad cyclical redundancy check (CRC)

Card & Gate Reader

Errors in reader-to-Site Controller messages:

CRC—bad cyclical redundancy check (CRC)
DIE—device went down
NOR—no response
PIN—PIN errors
RDE—read error

Errors in Site Controller-to-reader messages:

NB3—buffer in use
NB4—not hexadecimal
NB5—invalid command
NB6—undefined EE command number
NB7—overflow/framing error
NB8—input buffer overrun
NB9—alphanumeric display busy
NBA—bad cyclical redundancy check (CRC)

Pump Control Unit

Errors in PCU-to-Site Controller messages:

CRC—bad cyclical redundancy check (CRC)
DIE—device went down
NOR—no response

Errors in Site Controller-to-PCU messages:

NB0—invalid hose number or price level
NB1—pump in use
NB2—transaction data unavailable
NB4—not hexadecimal
NB5—invalid command
NB6—invalid pump number
NB7—overrun
NB8—buffer overflow
NB9—test
NBA—bad cyclical redundancy check (CRC)
NBD—power failure
NBE—RAM contains transaction data

Tank Monitor

CRC—bad cyclical redundancy check (CRC)
DIE—number of communication losses
NOR—no response

Raw Mode Error Codes

The following error codes may appear in conjunction with the %E error variable.

Code	Meaning	Code	Meaning
00	Completed, Ok, Passed	15	Valid card, bit mapped
01	Transaction(s) in progress	16	Valid card, limited
02	Not found or does not exist	17	Invalid card, bit mapped
03	Invalid data	18	Invalid card, limited
04	Card is valid	19	Expecting NC, NW, or NY
05	Card is not valid	20	String too long
06	Device out of service	21	Print heading before record
07	Pump is in use	22	Some valid, some not
08	Pump is not on	23	Already exists
09	Illegal command	24	Invalid price
10	Command failed	25	Can't open file
11	No more file space	26	Site not stopped
12	Manager key required	27	Can't activate
13	Site is stopped	28	Gate in use
14	Invalid option		

Profit Point

Back panel

The back panel of the modular Profit Point looks like this:
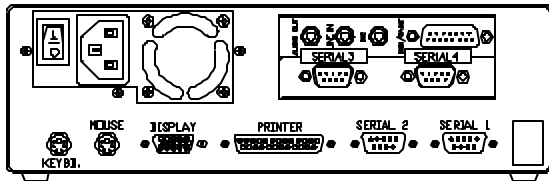
The back of the modular Profit Point Plus looks like this:
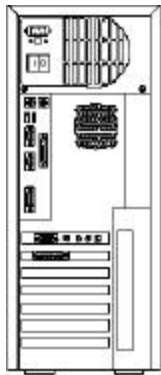
Scanner

The scanner should be set to the following parameters when the scanner is attached to the scanner port:

2400 baud (non-modular)	1200 (modular)
7 bits (non-modular)	8 bits (modular)
parity even (non-modular)	no parity (modular)
2 stop bits (non-modular)	1 stop bit (modular)

RS-232 prefixes disabled

CTS/RTS disabled

RS-232 output carriage return only

Menu Tree – Profit Point v3.4

Main menu
- **0. Exit to DOS**
- **1. Operate Point-Of-Sale Terminal**
- **2. PLU maintenance**
    - 0. Return to main menu
    - 1. Add entries
        - 0. Return to PLU maintenance menu
        - 1. UPC entries
        - 2. Stock number entries
        - 3. Department number entries
        - 4. All PLU types
    - 2. Edit entries
        - 0. Return to PLU maintenance menu
        - 1. UPC entries
        - 2. Stock number entries
        - 3. Department number entries
        - 4. All PLU types
        - 5. PLU size #s
        - 6. Change prices
        - 7. Global edit
        - 8. Global search and replace
    - 3. List entries
    - 4. Other lists and printing
        - 0. Return to PLU maintenance menu
        - 1. List entries
        - 2. Output to file for printout
        - 3. Display product totals
        - 4. Print product totals to file
    - 5. Delete entries
    - 6. PLU special operations
        - 0. Return to PLU maintenance menu
        - 1. Set default entries
        - 2. Output everything to ASCII file
        - 3. Append changes to ASCII file
        - 4. Input from ASCII file
        - 5. Merge input from ASCII file
        - 6. Clear PLU product totals
    - 7. Configure scanner port
- **3. Utility**
    - 0. return to main menu
    - 1. Test PLU file
    - 2. Show directory tree and space used
    - 3. Directory of drive A:
    - 4. Format a diskette

5. View a text file

6. Edit a text file

7. Copy PLU data file to diskette

8. Get new PLU data file from diskette

9. Installation menu

   0. return to Profit Point main menu

   1. New installation

   2. Update all program and menu files from diskette

   3. Only update .EXE files

   4. Batch files and menus

   5. Fonts and utilities

   6. POS and OS configuration files

   7. Copy PLU data files

   8. Directory of drive A:

   9. Exit to DOS

4. Configuration

  0. Return to main menu

  1. Software configuration menu

    0. Return to configuration menu

    1. Training mode off-hook rate

    2. Show change as coins and bills

    3. Minimum age to buy ask-ID items

    4. Product totals kept in PLU file

    5. Keep file of missing items

    6. Off-hook beep rate

    7. Validate checks

    8. Enter birthdate when ID required

  2. Hardware configuration menu

    0. Return to configuration menu

    1. Console address

    2. Address of printer/PIN pad

    3. Type of PIN pad used

    4. Printer type

    5. Margins for printer (L T B)

    6. Bar code scanner

    7. Key switch type

    8. Drawer type

    9. Beeper type

  3. Keyboard configuration menu

    0. Return to configuration menu

    1. Configure keys

    2. Move keys

    3. List keyboard

    4. Define new user keys

  4. Set up config.pos file

    0. Return to configuration menu

    1. Network cards configuration

2. Discount configuration

3. Permission levels

4. User menu configuration

5. Idle message and time

  5. Printer configuration submenu

    0. Return to configuration menu

    1. Forms (invoice) printer

5. Self-test

  0. Return to main menu

  1. Keyboard test

  2. Read a card

  3. Disk drive(s)

  4. Show CMOS configuration

  5. Customer display test

  6. Open and close cash drawer

  7. Test Manager's key switch

  8. Memory test submenu

    0. Return to self-test menu

    1. Video RAM test

    2. Test free portions of base RAM

    3. Quick test of entire base RAM

    4. Show map of base memory

    5. DOS shell

6. Back up files to diskettes

  0. return to main menu

  1. Everything

  2. Data and configuration files

  3. Program directories

  4. System directories

  5. Copy log files and missing UPC file

  6. Delete log files and missing UPC file

7. Restore files from diskettes

  0. Return to main menu

  1. Everything

  2. All missing or modified files

  3. Data and configuration files

  4. Changed data and configuration files

  5. Program directories

  6. System directories

Menu Tree – Profit Point v3.5

Main menu

  0. Exit to DOS

  1. Operate Point-Of-Sale Terminal

  2. PLU maintenance

    0. Return to main menu

1. Add entries
   - 0. Return to PLU maintenance menu
   - 1. UPC entries
   - 2. Add stock number entries
   - 3. Add department number entries
   - 4. Add all PLU types
2. Edit entries
   - 0. Return to PLU maintenance menu
   - 1. UPC entries
   - 2. Stock number entries
   - 3. Department number entries
   - 4. All PLU types
   - 5. PLU size #s
   - 6. Change prices
   - 7. Global edit
   - 8. Global search and replace
3. List entries
4. Other lists and printing
   - 0. Return to PLU maintenance menu
   - 1. List entries
   - 2. Output to file for printout
   - 3. Display product totals
   - 4. Print product totals to file
5. Delete entries
6. PLU special operations
   - 0. Return to PLU maintenance menu
   - 1. Set default entries
   - 2. Output everything to ASCII file
   - 3. Append changes to ASCII file
   - 4. Input from ASCII file
   - 5. Merge input from ASCII file
   - 6. Clear PLU product totals
   - 7. Header information
   - 8. File statistics
   - 9. Purge file and resize
7. Configure scanner port for PC use
8. Set PLU options

3. Utility
- 0. Return to main menu
- 1. Test PLU file
- 2. Show directory tree and space used
- 3. Directory of drive A:
- 4. Format a diskette
- 5. View a text file
- 6. Edit a text file
- 7. Copy PLU data file TO diskette
- 8. Get new PLU data file FROM diskette
- 9. Installation menu

- 0. Return to Profit Point main menu
- 1. New installation
- 2. Update all program and menu files
     from diskette
- 3. Only update .EXE files
- 4. Batch files and menus
- 5. Fonts and utilities
- 6. POS and OS configuration files
- 7. Copy PLU data files
- 8. Program modular keyboard
- 9. Exit to OS

4. Configuration
- 0. Return to main menu
- 1. Software configuration menu
   - 0. Return to configuration menu
   - 1. Training mode off-hook rate
   - 2. Show change as coins and bills
   - 3. Minimum age to buy ask-ID items
   - 4. Product totals kept in PLU file
   - 5. Keep file of missing items
   - 6. Off-hook beep rate
   - 7. Validate checks
   - 8. Enter birthdate when ID required
- 2. Hardware configuration menu
   - 0. Return to configuration menu
   - 1. Console address
   - 2. Address of printer/PIN pad
   - 3. Type of PIN pad used
   - 4. Customer display type
   - 5. Profit Point type
   - 6. Bar code scanner
   - 7. Key switch type
   - 8. Drawer type
   - 9. Host IP address
- 3. Keyboard configuration menu
   - 0. Return to configuration menu
   - 1. Configure keys
   - 2. Move keys
   - 3. List keyboard
   - 4. Define new user keys
   - 5. Keyboard port
   - 6. Type of keyboard
   - 7. Initialize serial keyboard
- 4. Set up config.pos file
   - 0. Return to configuration menu
   - 1. Network cards configuration
   - 2. Discount configuration
   - 3. Permission levels

4. User menu configuration

5. Idle message and time

6. Currency configuration

5. Printer configuration submenu

  0. Return to configuration menu

  1. Forms (invoice) printer

  2. Printer type (receipt)

  3. Margins for receipt (LTB)

6. Edit language file

5. Self-test

0. Return to main menu

1. Keyboard test

2. Read a card

3. Disk drive(s)

4. Show CMOS configuration

5. Customer display test

6. Open and close cash drawer

7. Test Manager's key switch

8. Memory test submenu

  0. Return to self-test menu

  1. Video RAM test

  2. Test free portions of base RAM

  3. Quick test of entire base RAM

  4. Show map of base memory

  5. DOS shell

6. Back up files to diskettes

0. Return to main menu

1. Everything

2. Data and configuration files

3. Program directories

4. System directories

5. Copy log files and missing UPC file

6. Delete log files and missing UPC file

7. Restore files from diskettes

0. Return to main menu

1. Everything

2. All missing or modified files

3. Data and configuration files

4. Changed data and configuration files

5. Program directories

6. System directories

2 Record safe drop

3 Load drawer total

4 Record unpaid completion (drive away)

5 Make payout sale

6 Reverse selected sale

7 Make return sale

9 Pay multiple sales

11 Load authorization number for selected sale

12 Apply offroad discount to selected sale

13 Reverse sale is unpaid

30 Enter site command mode

31 User defined function (con01)

32 User defined function (con02)

33 User defined function (con03)

34 User defined function (con04)

35 User defined function (con05)

36 Execute remote command

37 Download site configuration

50 Enter training mode

51 Enter stand-alone mode

52 Show communications

53 Communications monitor OFF [ON]

54 End the day and print report

55 End the shift and print report

56 User defined menu

57 User defined menu

58 Manager menu

59 File transfer menu

60 Execute local command

61 Execute PP01

62 Execute PP02

63 Execute PP03

64 Execute PP04

65 Execute PP05

66 Enter fuel amount for selected sale

67 Assign patron number for cash sale

68 Special network card types

69 Discounts

70 Clerk menu

71 User defined menu

72 Count cash in drawer

Special functions

0 Exit to main menu

1 Cashier sign on/off

Check Point

Special Functions

This section contains a list of special functions that are in the default configuration for the Check Point.

00	Sign Off: operator sign off at Check Point
01	Sign On: operator sign on at Check Point
02	Safe Drop
03	Load Drawer
04	Unpaid Completion
05	Payout
06	Reversal
07	Return
08	Load Shift
09	reserved for multiple sales; not yet implemented
10	Transfer Merchandise
11	Set Authorization Number
12	Off-road fuel sales
13-23	These functions are undefined and can be configured to serve the needs of the user.
24-29	not available
30	Enters Site Controller command mode.
31	Executes CON01.CMD; default is NEXTDAY.CMD, end the day and print report
32	Executes CON02.CMD; default is NEXTSHFT.CMD, end the shift and print report
33	Executes CON03.CMD; default is COUNT.CMD, record cash in drawer and final safe drop
34	Executes CON04.CMD; default is REPORT.CMD yday, regenerate last end-of-day report
35	Executes CON05.CMD; default is console status report
36	Executes CON06.CMD; default is REPRINT.CMD last, reprint last report
37	Executes CON07.CMD; default is SAFEDROP.CMD, record safe drop
38	Executes CON08.CMD; default is ADDRAWER.CMD, add change to drawer
39	Executes CON09.CMD; default is LDDRAWER.CMD, load starting drawer balance
40	Executes CON10.CMD; default is REPRINT.CMD day, reprint last end-of-day report

41	Executes CON11.CMD; default is REPORT.CMD shft, regenerate shift report for current day
42	Executes CON12.CMD; default is REPORT.CMD pday, regenerate a previous end-of-day report
43	Executes CON13.CMD; default is REPORT.CMD pshft, regenerate shift report for a previous day
44	Executes CON14.CMD; default is REPRINT.CMD pday, reprint any end-of-day report
45	Executes CON15.CMD; default is REPRINT.CMD shft, reprint shift report
46	Executes CON16.CMD; (no default function)
47	FINA
48	Shamrock
49	Wright Express (Wex)
50	CITGO
51	Texaco or Phillips
52	Cenex
53	Coastal

Product Attributes

15	Enable patronage (Buypass only)
9	Use category number as department number in journal
8	Fuel product
7	Low inventory is indicated by an asterisk in PRINT PRODUCT
5	Inventory tracking is enabled with ADD INVENTORY, LOAD INVENTORY, or ENABLE PRODUCT
4	Inventory is in dollars
3	Product is a special cash-withdrawal product
2	Product is a special payout product. Subtracts from sales.
1	Product is a special refund product
0	Check Point prompts *Amount*? rather than *Price*?

Check Point Key Map

The following diagrams show the Check Point key numbers, which are used to configure the Check Point.

This keyboard layout shows the numbers of the Check Point keys on a 71-key keyboard:
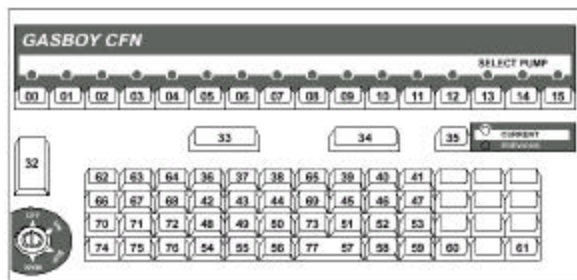
This keyboard layout shows the numbers of the Check Point keys on a 36- and 56-key keyboard.
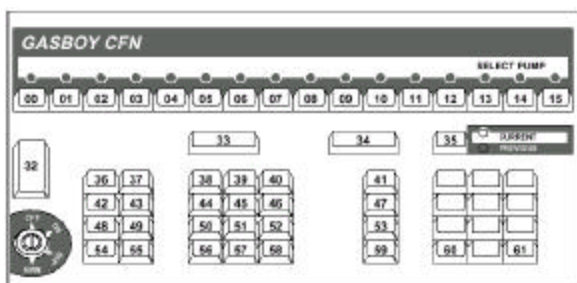
Check Point Key Actions

The following table shows the default numbers used in assigning actions to Check Point keys (submenu 2 in the Console configuration program):

00 pump	40 sign off
01 merch	41 sign on
02 disable pumps	42 safe drop
03 start	43 lo dr
04 stop	44 drive off
05 preset	45 payout
06 prepay	46 reverse
07 cash	47 return
08 credit	48 lo sh
09 debit	49 fn 9
10 checking	50 move merc
11 savings	51 auth numbr
12 cash acct	52 offroad
13 club level 1	53-63 fn 13 fn 23
14 club level 2	64 command
15 club level 3	65 con01
16 club level 4	66 con02
17 club level 5	67 con03
18 print	68 con04
19 enter	69 con05
20 insert key	70 con06
21 signon	71 con07
22 on/off	72 con08
23 scan	73 con09
24 repeat	74 con10
25 total	75 con11
26 no sale	76 con12
27 review	77 con13
28 void	78 con14
29 discount	79 con15
30 #px gn pr	80 con16
31 qpx prd	81 FINA
32 qpx prds	82 Shamrock
33 qpx mprds	83 Wex
34 ppx gn pr	84 Citgo
35 ppx prd	85 Tex/Phil
36 ppx prds	86 Cenex
37 ppx mprds	87 Coastal
38 self test	88-94 not used
39 spec func	

Switch Settings

CPU Board, Firmware 5.0 -5.2

CPU board assembly number: C04832.

DIP switch banks 2 and 3 on the Check Point CPU board set options:

DIP Switch Bank 2

Position & Definition		Setting(*=customary)
1	----	
2-3	key click	see below
4	beeper	*closed=enabled open=disabled
5	cash drawer present	*closed=yes open=no
6	cash drawer type	*open=Gasboy
7-8	address	see below

Keyclick	2-2	2-3
none	open	open
short	open	closed
medium	closed	open
long	closed	closed

Check Point Poll Address Select

Address	2-7	2-8
1	open	open
2	open	closed
3	closed	open
4	closed	closed

DIP Switch Bank 3

Position & Definition		Setting(*=customary)
1	____	
2	dead man timer	*open=enabled closed=disabled
3	____	
4	self test mode	*open=disabled closed=enabled
5	keyswitch type	*open=4 position closed=2 position
6	off-hook beeps	closed=soft *open=loud
7	off-hook color	*open=red closed=green
8	off-hook beeper	closed=no *open=yes

CPU Board, Firmware 5.3 & 5.4

CPU board assembly number: C05836.

There are no DIP switch banks on the Check Point CPU board with this firmware version.

Pins 2 and 3 on K1 (next to U15) are normally jumpered.

Any RS-232 (serial) printer connected directly to the Check Point CPU board goes to P11; a parallel printer goes to P12.

Check Point Test Mode

To begin a self test:

*   turn keyswitch to MANAGER and press 00/NO SALE, or
*   disconnect the RS-422/485 connector, wait for the Out of Service display, and press 00/NO SALE.

0	self-test
1	memory test
2	beeper check
3	console card reader test
4	display test
5	keyboard test
6	test opening of cash drawer
7	check setting of switches (firmware 5.2) or configuration (firmware 5.3)
8	serial port/loopback test
CLEAR PRINT	printer test (ver. 5.4 and higher)
9	ends self test
00	manager key test (firmware 5.3 or later)

Configuration

In the self test with firmware 5.3, pressing 7 accesses configuration mode. (If the Check Point has never been configured or if its configuration has been erased, it will go into configuration mode at power up.)

The default selection is the first selection shown in each of the following option groups:

Option Menus	Selections
console address	1 2 3 4
keyswitch type	4 position 2 position
cash drawer	yes no
drawer switch type	dr clo=sw closed dr clo=sw open
beeper	enabled disabled
alert beep type	short long no no
alert beep repetition*	15 sec 8 sec 4 sec 2 sec
key click type	short medium long none
LED color	normal reversed
dead man timer	on off
console printer/pad**	none present
printer address	01 01-64
DES	disabled enabled
receipt line feed, top	0 1-10
receipt line feed, end	10 00-18
receipt left margin	04 00-10
printer	Star undefined
printer port	serial parallel
decimal position	.00 none .0 .000
decimal point	period comma
ignore scan	57 36-59, 62-77, 99
ignore scan	99 36-59, 62-77, 99
ignore scan	99 36-59, 62-77, 99
ignore scan	99 36-59, 62-77, 99
ignore scan	99 36-59, 62-77, 99
* in version 5.3e	
** for Star RS-422 printer, set to *none*	

While an option in each group is displayed, pressing:

- ENTER selects the currently displayed option and causes an option in the next group to display.
- 1 selects the next option in that group.
- 2 defaults to the first option in that group.
- 0 exits configuration mode and saves your changes.
- PREV selects the currently displayed option and displays the previous group.
- 7 returns you to the initial configuration display.

RS-422/485 Loopback Connector

Pin connections: 1 to 3 (black to green) and 2 to 4 (red to yellow).

Vacuum Fluorescent Display

DIP switch bank 1 on the Check Point fluorescent display board sets options:

Switch 1	Definition	VF Display on	
		Console	Cust. Display
1	----	open	open
2	----	open	open
3	TEST**	open	open
4	MASTER	closed	open
5	SLAVE	open	closed
6	----	open	open
7	----	open	open
8	----	open	open

**in version 3.0; position 6 activates the self test in version 3.1.

Notes

1-3, TEST—If closed, the display performs a rotating barber-pole-pattern self test. The last four characters in the pattern have all dots lit.

1-4, MASTER—If closed, display transmits characters via its serial interface as it displays them. This switch should be closed on the display in the Check Point if a remote display is used also.

1-5, SLAVE—If closed, display listens on its serial interface and displays all characters received there. This switch should be closed if a display is being used as a remote display connected to the display in the Check Point.

Standalone Receipt Printer

Epson

Dip Switch Settings

Set 1

Switch	Setting	Function
1-1	OFF	Data Errors Print as "?"
1-2	OFF	4K Buffer
1-3	OFF	DTR/DSR Handshaking
1-4	OFF	8 Bits Data Word
1-5	OFF	Parity Check Disabled
1-6	OFF	Parity Odd
1-7	ON	9600 Baud
1-8	OFF	Transmission Speed

Set 2

Switch	Setting	Function
2-1	OFF	Busy, Off Line or Buffer Full
2-2	OFF	Fixed Off
2-3	OFF	Normal Print Density
2-4	OFF	Normal Print Density
2-5	OFF	Fixed Off
2-6	OFF	Fixed Off
2-7	OFF	Reset Pin 6 Disabled
2-8	OFF	Reset Pin 25 Disabled

Star

Self Test

To start any Star printer's self test and display its switch settings, turn its power on while pressing down on FEED.

Star (RS-422)

The part number is C06244; the adapter is C06243; and the cable is C06242. This printer works with both console CPU boards, C04832 and C05836.

This printer does not allow the use of a PIN pad. On CPU board C05836, set the *console printer/pad* configuration to none.

Configure as type 3 in the Reader configuration program, menu 3 (parameters).

The Star printer has four DIP switch banks:
DIP Switch Bank 1. Positions 1-4 and 6 are always closed; positions 7 and 8 are always open. Position 5 governs the height of the line feed: open=1/8 of an inch; closed (default)=1/6 of an inch.

DIP Switch Bank 2. All 8 positions on DIP switch bank 2 should always be closed, with the possible exception of position 4, which sets the paper width: closed (default)=3-inch or 3.25-inch paper; open=2.5-inch paper.

DIP Switch Bank 3. Positions 1-4 and 6-8 should always be closed; position 5 should always be open.

DIP Switch Bank 4. Switch 4, which has 4 positions, sets the address of the printer, as shown in the following chart. Note that the Star printer can never be address 4.

Address	4-1	4-2	4-3	4-4
1	op	Cl	cl	cl
2	cl	Op	cl	cl
3	op	Op	cl	cl
5	op	Cl	op	cl
6	cl	Op	op	cl
7	op	Op	op	cl
8	cl	Cl	cl	op
9	op	Cl	cl	op
10	cl	op	cl	op
11	op	op	cl	op
12	cl	cl	op	op
13	op	cl	op	op
14	cl	op	op	op

Jumper B and C on SW5 and SW6.

Star (RS-232) for CheckPoint

The part number is C06297, and the cable is C04532.

This printer works with console CPU board C05836. Inside the CheckPoint, the ribbon from the printer port must be connected to P11, the *serial* printer connector on the CPU board.

Set the *console printer/pad* configuration to none, and set the printer address even if no PIN pad is used.

With 1.0 software, configure the printer as type 2 in the Reader configuration program, menu 3 (parameters). With 2.0 software, configure it as type 4.

All switches on DIP switch banks 1-4 are normally closed, with the exception of switch 5 on DIP switch bank 3, which is open.

SW5 and SW6 have A and C jumpered.

Star (Parallel)

The part number is C06451, and the cable is C01303.

This printer works with console CPU board C05836. Inside the CheckPoint, the ribbon from the printer port must be connected to P12, the *parallel* printer connector on the CPU board.

Set the *console printer/pad* configuration to none, and set the printer address even if no PIN pad is used.

With 1.0 software, configure the printer as type 2 in the Reader configuration program, menu 3 (parameters). With 2.0 software, configure it as type 4.

Set all switches to on.

Okidata 184/186 Printer Setup

Settings for serial printer

SW1-1	on	Parity: odd
SW1-2	on	Parity: no
SW1-3	on	Data bits: 8
SW1-4	off	Protocol: XON/XOFF (CFN)
	on	Ready/Busy (Gasboy RS-232 splitter)
SW1-5	on	Test select: circuit
SW1-6	on	Mode select: print
SW1-7	on	Busy line selection: DTR - pin 20
SW1-8	on	Busy line selection: DTR - pin 20

SW2-1	off	Baud rate: 9600
SW2-2	on	Baud rate: 9600
SW2-3	on	Baud rate: 9600
SW2-4	on	DSR input signal: active (set to off for splitter)
SW2-5	on	Buffer threshold: 32 bytes
SW2-6	off	Busy signal timing: 1 sec (min.)
SW2-7	on	DTS signal: space after power on
SW2-8	off	not used

Printer Controls

String	Effect
&&C;	use condensed print (15 chars. per inch)
&&N;	use normal print (12 chars. per inch)
&&E;	use expanded print (7.5 or 6 chars per inch, depending if condensed or normal in effect)
&&U;	use expanded print (return to condensed/normal)
&&L*nn*;	set margin to *nn* (*nn* is one or two digits)
&&V;*text*	wait for insert, print *text* on inserted slip (check validation)

The C and N options may be followed by any combination of B or E. B causes the text to be struck twice, giving a bold effect. E puts the print into expanded mode.

Name on Receipt
Track 1 only

The card reader device must support track 1 to use the following characters:

@N prints customer's name if known. Line prints regardless even if no name found.

@O if found on line with @N, line will not print unless customer name is known.

POS Reports
Tender Codes

In the following table, a first digit of:

0 = club card	3 = credit card
1 = debit checking	4 = cash
2 = debit savings	5 = unpaid

Code	Tender	Code	Tender
000	Gasboy club card	331	Trendar
001	Country Energy regional club card	332	Tesoro
002	Country Energy local club card	333	Sinclair Fleet
003	CITGO Fleet	334	Gascard
004	IAES	335	Amarada-Hess
100	Debit checking	336	Voyager
200	Debit savings	337	JCB
300	Bank credit card	338	Gulf
302	Wright Express card	339	Fuelman
303	American Express card	340	IAES Fleet
304	VISA card	341	Country Mark
305	MasterCard	342	Southern States
306	Discover card	343	Amoco Multi card
307	FINA card	344	Amoco Torch
308	AMOCO card	345	Amoco Transi card
309	CITGO Plus card	346	MasterCard Fleet
310	Diamond Shamrock card	347	VISA Fleet
311	Texaco card	348	Amoco Co Brand
312	Sinclair card	349	API
313	Carte Blanche card	350	Citgo FAMS
314	Diners Club card	351	Gasboy Fleet One
315	customer charge	352	Gasboy Debit
316	employee charge	353	Gasboy Program 1
317	Phillips card	354	Gasboy Program 2
318	Comdata card	355	Gasboy Program 3
319	CCIS card	356	SPS Fleet
320	Coastal card	357	T Chek
321	Buypass Fleet card	358	Shell GO
322	Generic fleet card	365	Citgo PrePaid
323	PHH Fleet Amer card	366	Citgo Black (Plus)
324	CITCO Red card	400	cash
325	CITCO Silver card	401	food stamps
326	Quick Fuel	402	checks
327	Transcash	403	full-serve
328	NTS Fuel	500	unpaid
329	TIC	501	Instant-on denial
330	EFS		

Event Codes

Code	Event	Code	Event
000	Clerk sign-on	012	Enter stand alone mode
001	Clerk sign-off	013	Training mode
002	New shift	014	Load drawer
003	Safe drop	015	Add drawer
004	No sale	016	AC power fail
005	System reboot	017	Outstanding pre-pay
006	Configuration change	018	Next clerk
007	Device up	019	Settlement complete
008	Device down	020	Settlement failed
009	Void all items	021	Final safe drop
010	New day	022	Exit stand alone mode
011	End of day	023	Instant-on refusal

Record Identifiers

The following table summarizes the various record identifiers and their associated data:

Description	Id	Data
Cashier Report Record	CSH	*clerk,datetime*
Shift Report Record	SHF	*serial,shift,POS,datetime*
End of Day Report Record	DAY	*site,serial,datetime*
Events Logged	EVT	*type,POS,shift,amount,datetime*
Fuel Sales	FUL	*dept,count,quantity,amount*
Inside Fuel Sales	IFS	*count,quantity,amount*
Outside Fuel Sales	OFS	*count,quantity,amount*
Total Fuel Sales	TFS	*count,quantity,amount*
Merchandise Departments	DEP	*dept,count,amount*
Merchandise Items	ITM	*stock,size,count,amount*
Misc. taxable merchandise	MTX	*count,amount*
Misc. nontaxable merchandise	MNT	*count,amount*
Total Merchandise Sales	TMS	*count,amount*
Department Sale Adjustments	ADJ	*count,amount*
Drive-aways (UnPaid)	UNP	*count,amount*
Returns	RTN	*count,amount*
Total Sale Adjustments	TSA	*Amount*
Offroad Tax	ORT	*count,amount*
Net Sales Tax	TAX	*count,amount*
Total Net Sales	TNS	*amount*
Tenders	SYT	*type,count,amount*
Tenders Inside	STI	*type,count,amount*

Description	Id	Data
Tenders Outside	STO	*type,count,amount*
Other Credit	OCR	*count,amount*
Other Inside Credit	OCI	*count,amount*
Other Outside Credit	OCO	*count,amount*
Total Inside Credit	TIC	*count,amount*
Total Outside Credit	TOC	*count,amount*
Total Credit Tenders	TCR	*count,amount*
Total Noncredit	TNC	*count,amount*
Total Tenders	TST	*count,amount*
Fuel by Tenders	FST	*type,count,quantity,amount*
Fuel by Other Credit	FOC	*count,quantity,amount*
Prior shift Pre-pays	PSP	*count,amount*
Change for other POS	CFP	*count,amount*
Change by other POS	CBP	*count,amount*
Outstanding Pre-pays	OST	*count,amount*
Sign-on	SON	*count*
Sign-off	SOF	*count*
No Sales	NOS	*count*
Item Voids	ITV	*count,amount*
Sale Voids	SVD	*count,amount*
Reversals	RVS	*count,amount*
Unprocessed records	UPR	*count,amount*
Cash Withdrawals	CAW	*count,amount*
Instant-on Refusals	IOR	*count,amount*
Total Fuel Only	TFO	*count,amount*
Total Merchandise Only	TMO	*count,amount*
UPC Items Scanned	UIS	*count*
UPC Items Hand	UIH	*count*
Total Mdse/Fuel	TMX	*count,amount*
Total Patronage Sales	TPS	*count,amount*
Total All Sales	TAS	*count,amount*
Average Fuel Only	PFO	*percent,average*
Average Merchandise Only	PMO	*percent,average*
Average Mixed	PMX	*percent,average*
Average All Sales	ALL	*Average*
Average Inside Credit	PIC	*percent,average*
Average Outside Credit	POC	*percent,average*
Average Credit	PCR	*percent,average*
Average Noncredit	PNC	*percent,average*
Average Seconds	SEC	*count,average*
Card Auto (Swiped)	CDS	*count*
Card Hand Entered	CDH	*count*
Settlement Compete	SCP	*count,amount*
Settlement Failed	SFL	*count*
Starting Drawer Balance	SDB	*amount*
Drawer Tender Adjustments	DAJ	*type,amount*
Add Drawer	ADD	*count,amount*
Pay outs	PYO	*count,amount*

Description	Id	Data
Safe Drops	SFD	*count,amount*
Final Safe Drop	FSD	*count,amount*
Final Book Balance	FBB	*amount*
Ending Drawer Balance	EDB	*amount*
Drawer Over/(Short)	DOS	*amount*

This table summarizes the record identifiers that do not appear in the standard reports:

Description	Id	Data
Total to account for	TAF	*amount*
Total Lottery	TLT	*amount*
Total Coupons	TCP	*amount*
Sign On User ID	SOU	*userID,count*
Total Dept Sales	TDS	*amount*

Sample Commands

REPORT 1 PDAY LOG Regenerates the end-of-day report from the PREVIOUS.LOG file, and prints it on console 1's receipt printer.

REPORT 2 PSHFT 5 2 4 Regenerates the shift report for shift 2 at console 4 from the PREVIOUS.5 file, and prints it on console 2's receipt printer.

REPRINT 1 PDAY THU Reprints Thursday's end-of-day report on console 1's receipt printer.

REPRINT 2 SHFT TUE 3 1 Reprints Tuesday's shift report for shift 3, console 1, at console 2's receipt printer.

Link Terminal Setup

General Setup			
Emulation	VT52	Auto Page	Off
Enhancements	Off	Warning Bell	On
Virtual Terminal	Off	Margin Bell	Off
Scroll Style	Jump	Bell Sound	1
Auto Scroll	On	Block Terminator	US/CR
Auto Wrap	On	Send ACK	Off
Received CR	CR	Monitor Mode	Off

The warning bell, margin bell, and bell sound parameters can be set as you wish. All other parameters should be set as shown.

Communications Setup

Main Baud	9600	Aux Baud	9600
Main Data/parity	8/None	Aux Data/Parity	8/None
Main Stop Bits	1	Aux Stop Bits	1
Main Rcv Hndsk	XON/XOFF	Aux Rev Hndsk	NONE
Main Xmt Hndsk	NONE	Aux Xmt Hndsk	XON/XOFF
Ignore 8th bit	Off	Aux Rev Level	50%
Comm Mode	Full Duplex	Aux Port	RS232
Disconnect	2 sec	Aux Interface	RS232
		Printer	Serial

All parameters should be set as shown.

Display Setup			
Columns	132	Background	Dark
80/132 Clear	On	Attributes	Char
Lines	24	Wprt Intensity	Dim
Pages	1X Lines	Wprt Reverse	Off
Status Line	Ext	Wprt Underline	Off
Cursor Style	Blink Block	Refresh Rate	60 Hz
Cursor	On	Pound Char	US
Screen Saver	15 min	Auto Font Load	On

You can change the Columns setting from 132 to 80 if you wish. However, this may cause transactions displayed on the screen (and printed on the Okidata printer) to wrap, hindering readability. Set the Cursor Style and Screen Saver parameters as you wish. All other parameters should be set as shown.

Keyboard Setup			
Key Click	Off	Break	250 ms
Key Repeat	On	Xmt Limit	None
Key Lock	Caps	FKey Xmt Limit	None
Return Key	CR	Key Code	ASCII
Enter Key	CR	WP Keyboard Mode	Off
Back Space Key	BS/DEL	Lock Keyboard	Disable
Left Alt Key	Funct	Language	US
Delete Key	Normal		

Set Key Click and Key Repeat as you wish. All other parameters should be set as shown.

ANSI Setup			
FKey Lock	Off	Print	National
Feature Lock	Off	Send	All
Keypad	Numeric	Send Area	Screen
Cursor Keys	Normal	Print Area	Screen
Xfer Term	EOS	Send Term	None
Char Mode	Multinational	Print Term	None
Keys	Typewriter	Print Mode	Auto/Normal
VT 100 ID	VT 100	Auto Answerback	Off

Any commands run at the Site Controller will not be logged unless you:

- direct output to the logger (use >log with the command), or
- press CTRL - SHIFT - PRINT SCREEN simultaneously. Pressing these keys toggles the Main port output to the logger. (The message line at the top of the screen toggles between FDX MAIN and FDX>AUX.)

All other parameters should be set as shown above.

Island Card Reader I
CPU Board

Part number: C05375.

Switches

DIP Switch Bank 2
DIP switch 2 on the reader terminal CPU board sets options, including the reader terminal address:

Position & Definition		Setting(*=customary)
1	see below	*open
2	decimal point	*open=enable closed=disabled
3	DES PIN encryption	*closed=disabled open=enabled
4	reader type	see below
5	gate reader	*open=disabled closed=enabled
6	reader type	see below
7-10	address	see below

Reader Type	2-4	2-6
mag swipe without optical	closed	closed
mag swipe with optical	closed	open
mag insert	open	closed
optical	closed	open

Notes

Position 2-1 is not used in SC II software versions 1.0 and later. (In software versions 0.2 and before, 2-1 is the deadman timer switch: open (default)=enabled, closed=disabled.)

Position 2-5—In SC II software versions 0.2 and before, 2-5 is the CRC switch; open=CRC enabled, closed= disabled.

Address	2-7	2-8	2-9	2-10
1	cl	cl	cl	cl
2	cl	cl	cl	op
3	cl	cl	op	cl
4	cl	cl	op	op
5	cl	op	cl	cl
6	cl	op	cl	op
7	cl	op	op	cl
8	cl	op	op	op
9	op	cl	cl	cl
10	op	cl	cl	op
11	op	cl	op	cl
12	op	cl	op	op
13	op	op	cl	cl
14	op	op	cl	op
15	op	op	op	cl
16	op	op	op	op

Jumpers

Jumper	Function and/or Normal Setting
K1	Position 1=LCD display Position 1 and 2=Beckman alphanumeric display
K2, K3	K2 in position 2 and K3 in position 1=Omron reader K2 in position 1 and K3 in position 2=Magstripe reader
K4	----
K5	Position 2=2K RAM; position 1=8K RAM
K6	Jumpered when using motorized reader

Test Mode

To activate test mode, open the island card reader door, flip the S3 switch on the CPU board to *TEST*, and press START OVER on the keypad. (The unit must remain open during tests.) The keypad is now enabled for selecting one of the 9 test routines:

1   test front panel lights for *paper low* and *paper out* on receipt printer

2   test the table messages

3   test printer

4   test DES

5   test alphanumeric display

6   test keypad

7   test card reader (mag or optical)

8   display baud rate and address

9   test paper cutter

Printers

Star

There are two DIP switch banks on the Star printer. Each position must be set as follows:

DIP Switch Bank 1

Position & Definition		Required Setting
1-3	9600 baud	on
4	stop bit 1	on
5	X-on/X-off mode	off
6	8 data bits	on
7	no parity	on
8	even parity	off

DIP Switch Bank 2

Position & Definition		Required Setting
1	USA character set	on
2	USA character set	on
3	printer type	on
4	CR valid	off

Island Card Reader II
CPU Board

Part number: C05857.

Works with program software 5.0 and above.

Notes
Beckman display not supported
Motorized reader not supported
Novatronics printer not supported

Switches

DIP Switch Bank
DIP switch on the reader terminal CPU board sets options, including the reader terminal address:

Position & Definition		Setting(*=customary)
1	not used	not used
2	decimal point	*open=enable closed=disabled
3	1 or 2 line display	*closed=1 line open=2 line
4	reader type	see below
5	gate reader	*open=disabled closed=enabled
6	reader type	see below
7-10	address	see below

Reader Type	4	6
key	closed	closed
key/mag combo	open	closed
mag swipe without optical	closed	closed
mag swipe with optical	closed	open
mag insert	open	closed
optical	closed	open

Address	7	8	9	10
1	Cl	cl	cl	cl
2	Cl	cl	cl	op
3	Cl	cl	op	cl
4	Cl	cl	op	op
5	Cl	op	cl	cl
6	Cl	op	cl	op
7	Cl	op	op	cl
8	Cl	op	op	op
9	Op	cl	cl	cl
10	Op	cl	cl	op
11	Op	cl	op	cl
12	Op	cl	op	op
13	Op	op	cl	cl
14	Op	op	cl	op
15	Op	op	op	cl
16	op	op	op	op

Jumpers

Jumper	Function and/or Normal Setting	Setting(*=customary)
K1	Jumpered=debug	*always open
K2	Watchdog timer	*1-2=on (always) 2-3=off
K3	----	*open, future use
K4, K5		Position 1-2=AM MAG Position 2-3=Omron reader

Test Mode

To activate test mode, open the island card reader door, flip the S3 switch on the CPU board to *TEST*, and press START OVER on the keypad. (The unit must remain open during tests .) The keypad is now enabled for selecting one of the 9 test routines:

1 test front panel lights for *paper low* and *paper out* on receipt printer

2 test the table messages

3 test printer

4 test DES

5 test alphanumeric display

6 test keypad

7 test card reader (mag or optical)

8 display baud rate and address

9 test paper cutter

Printers

Star

There are two DIP switch banks on the Star printer. Each position must be set as follows:

DIP Switch Bank 1

Position & Definition		Required Setting
1-3	9600 baud	on
4	stop bit 1	on
5	X-on/X-off mode	off
6	8 data bits	on
7	no parity	on
8	even parity	off

DIP Switch Bank 2

Position & Definition		Required Setting
1	USA character set	on
2	USA character set	on
3	printer type	on
4	CR valid	off

DPT

The Tokheim DPT comes in two models: TCS and Premier.

Keypad

The keys on the TCS and Premier DPT keypads can be configured for different functions with the *Tokheim DPT/Gilbarco CRIND keyboard layout* on page 4 of the CFN3's SYS_PAR program. The characters that select different functions are shown below. Note that these characters are case-sensitive:

Char.	Function
0-9	Numeric digits 0 through 9
.	Decimal point
E	ENTER
C	CLEAR
Y	Yes
N	No
$	Cash inside
c	Cash outside

D	Debit inside
d	Debit outside
B	Credit (bank card) inside
b	Credit outside
X	CANCEL
x	CLEAR/CANCEL (CLEAR if data entry started; else CANCEL)
H	Help
h	Help/Decimal (Decimal if data entry started; else Help)
n	No/CANCEL (No if in yes/no state; else CANCEL)
S	Start
u	unused key

The numbers of the keypad keys on the TCS are:

1	7	13	19
2	8	14	20
3	9	15	21
4	10	16	22
5	11	17	23
6	12	18	24

The default function arrangement of the TCS keypad:

B	B	b	b
N	N	Y	Y
1	2	3	C
4	5	6	C
7	8	9	E
h	0	X	E

The numbers of the keypad keys on the Premier are:

6	5	4	3	2	1
12	11	10	9	8	7
18	17	16	15	14	13
24	23	22	21	20	19

The default function arrangement of the Premier keypad:

h	7	4	1	N	B
0	8	5	2	N	B
X	9	6	3	Y	b
E	E	C	C	Y	b

The string that would be typed into the *Tokheim DPT/Gilbarco CRIND keyboard layout* item in SYS_PAR to give the Premier keypad function arrangement shown above is:

BN147hBN2580bY369XbYCCEE

Some TCS and Premier keys are "double" keys, made up of a pair of single keys. On a double key, the same function must be selected for each member of the pair. On the TCS, 1 and 7, 13 and 19, 2 and 8, 14 and 20, 21 and 22, and 23 and 24 are pairs in a double key. On the Premier, keys 1 and 7 must be the same, and keys 13 and 19 must be the same.

Switches

DIP Switch Bank 1

Position & Definition		Setting(*=customary)
1	on = printer has tear bar off=printer has cutter bar	* on (requires DPT ver 1.0D)
2	pump side on = side A, off = side B	On
3-7	reader address	(see below)
8	on = 4-line display off = 2-line display	*on

Address	1-7	1-6	1-5	1-4	1-3
1	on	on	on	on	On
2	on	on	on	on	Off
3	on	on	on	off	On
4	on	on	on	off	off
5	on	on	off	on	on
6	on	on	off	on	off
7	on	on	off	off	on
8	on	on	off	off	off
9	on	off	on	on	on
10	on	off	on	on	off
11	on	off	on	off	on
12	on	off	on	off	off
13	on	off	off	on	on
14	on	off	off	on	off
15	on	off	off	off	on
16	on	off	off	off	off
17	off	on	on	on	on
18	off	on	on	on	off
19	off	on	on	off	on
20	off	on	on	off	off

21	off	on	off	on	on
22	off	on	off	on	off
23	off	on	off	off	on
24	off	on	off	off	off
25	off	off	on	on	on
26	off	off	on	on	off
27	off	off	on	off	on
28	off	off	on	off	off
29	off	off	off	on	on
30	off	off	off	on	off
31	off	off	off	off	on
32	off	off	off	off	off

Jumpers

2-wire operation (default): jumpers 9, 10, and 11 in position 1.

    Connector J4:

    3 - Tx+/Rx+ (CFN 422 - 1 & 3)

    4 - Tx-/Rx- (CFN 422 - 2 & 4)

4-wire operation: jumper 9 - position 1; jumpers 10 and 11 - position 2.

    Connector J11:

    3 - Rx- (CFN422-4)

    4 - Rx+ (CFN422-3)

    5 - Tx+ (CFN422-1)

    6 - Tx- (CFN 422-2)

CRIND

Version 2.0b or later of the Site Controller software is required to run a Gilbarco CRIND (Card Reader IN Dispenser). The CRIND should be on the RS-422 port.

Keypad

The keys on the CRIND keypad can be configured for different functions with the *Tokheim DPT/Gilbarco CRIND keyboard layout item* on page 4 of the CFN3's SYS_PAR program. The characters that select different functions are shown below. Note that these characters are case-sensitive:

Char.	Function
0-9	Numeric digits 0 through 9
.	Decimal point
E	ENTER
C	CLEAR
Y	Yes
N	No
$	Cash inside
c	Cash outside
D	Debit inside
d	Debit outside
B	Credit (bank card) inside
b	Credit outside
X	CANCEL
x	CLEAR/CANCEL (CLEAR if data entry started; else CANCEL)
H	Help
h	Help/Decimal (Decimal if data entry started; else Help)
n	No/CANCEL (No if in yes/no state; else CANCEL)
S	Start
u	unused key

The numbers of the keypad keys on the CRIND are:

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

Note that keys on the left half of the keyboard—that is, 1, 2, 3, 6, 7, 8, 11, 12, 13, 16, 17, and 18—cannot be programmed.

The default function arrangement of the CRIND keypad:

1	2	3	u	b
4	5	6	$	B
7	8	9	N	Y
C	0	E	H	X

The string that would be typed into the *Tokheim DPT/Gilbarco CRIND keyboard layout item* in SYS_PAR to give the CRIND keypad function arrangement shown above is:

    123ub456$B789NYC0EHX

Cabling

D-Box to Gilbarco Interface

Pump Loop

Part number: C06691.

There are two wires, which have spade lugs on one end and a DB-9S connector on the other. The wires connect the terminal block on the back of the interface box to the male 9-pin connector current loop at the distribution box.

Terminal Block	DB-9S	Wire Color
1 -	6	red
1 +	7	black

At the terminal block, connect the red wire to the black wire and the black wire to the red wire.

CRIND Loop

Part number: adaptor is C06692; cable is C06242; both together are C06326.

There are four wires, which have a modular handset plug on one end and a DB-9P connector on the other. The wires connect the spare RS-422 jack on the interface box to the DB-9S RS-422 loop at the D-box.

Modular Plug	DB-9P	Signal Name
1	2	RX+
2	6	RX-
3	3	TX-
4	7	TX+

The wire colors are not significant.

The modular pins are numbered from right to left when looking at the modular plug from the retainer-clip side, with the cable inserted into the plug on the side closest to you.

SDI/Wayne CAT

The keys of the CAT keypad can be configured for different functions with the TokheimDPT/Wayne CAT keyboard layout item on page 4 of the CFN3's SYS_PAR program.

Keypad

The characters that select different functions are shown below. Note that these characters are case-sensitive:

Character	Function of key
0-9	Numeric digits 0-9
.	Decimal point
E	ENTER
C	CLEAR
Y	Yes
N	No
$	Cash inside
c	Cash outside
D	Debit inside
d	Debit outside
B	Credit (bank card inside)
b	Credit outside
X	CANCEL
x	CLEAR/CANCEL (CLEAR if data entry started; else CANCEL)
H	Help
h	Help/Decimal (Decimal if data entry started; else Help)
n	No/CANCEL (No if in yes/no state; else CANCEL)
S	Start
u	unused key

The numbers of the keypad keys on the CAT are:

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

Note that keys on the left half of the keyboard - that is: 1, 2, 3, 6, 7, 8, 11, 12, 13, 16, 17, and 18 - cannot be programmed.

The default func. arrangement of the CAT keypad is:

1	2	3	u	b
4	5	6	$	B
7	8	9	N	Y
C	0	E	H	X

The string that would be typed into the Tokheim/ DPT/Wayne CAT keyboard layout item in SYS_PAR to give the CAT keypad function arrangement shown above is:

123ub456$B789NYC0EHX

SDI Box Switches

MODA/MODB are on switch 7, RESET on switch 8.

For Wayne CAT, SDI #1, make all switches to OFF (open).

For Wayne CAT, SDI #2, make position 5 ON (closed), all others OFF (open).

To clear application memory:

1. Close switch position 6
2. Close switch position 8
3. Open switch position 8
4. Wait a few seconds
5. Open switch position 6

Insight Interface

PC Connection

Connect com1 (default) or alternate PC Com port to the DB25 connector of the 9600 converter (Gasboy part# C05859). Use a standard PC DB9 to DB25 cable (part# C06253). The following is an overview of the connections and a wiring illustration:

Connect the power supply (part# C05440) to the 9600 converter and plug it in.

Insight Board Switches

SW1 on the Insight board is used to set the Insight address and baud rate for the site controller port.

Leave position 1 and 2 alone. These control internal settings for the Insight/pump interface, which should be set at the factory or by a Tokheim service person.

Set each Insight address to match the site's DPT address. These are set using positions 3-7.

Parameter File Defaults

FIRST_ADDRESS= and LAST_ADDRESS= refer to the Insight address range this SDI is supposed to control.

> ID=Insights1-16
>
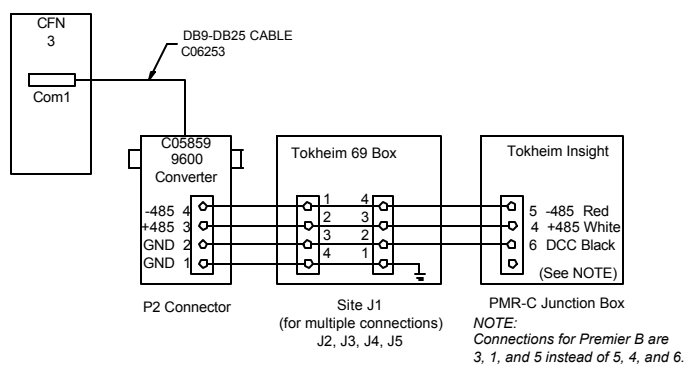> FIRST_ADDRESS=1
>
> LAST_ADDRESS=16

Non-Debit operations:

> DEBIT_MODE=N

3	4	5	6	7	Address
ON	ON	ON	ON	ON	1
OFF	ON	ON	ON	ON	2
ON	OFF	ON	ON	ON	3
OFF	OFF	ON	ON	ON	4
ON	ON	OFF	ON	ON	5
OFF	ON	OFF	ON	ON	6
ON	OFF	OFF	ON	ON	7
OFF	OFF	OFF	ON	ON	8
ON	ON	ON	OFF	ON	9
OFF	ON	ON	OFF	ON	10
ON	OFF	ON	OFF	ON	11
OFF	OFF	ON	OFF	ON	12
ON	ON	OFF	OFF	ON	13
OFF	ON	OFF	OFF	ON	14
ON	OFF	OFF	OFF	ON	15
OFF	OFF	OFF	OFF	ON	16

CFN 3 — Com1

DB9-DB25 CABLE C06253

C05859 9600 Converter
-485 4
+485 3
GND 2
GND 1

P2 Connector

Tokheim 69 Box
1 4
2 3
3 2
4 1

Site J1
(for multiple connections)
J2, J3, J4, J5

Tokheim Insight
5 -485 Red
4 +485 White
6 DCC Black
(See NOTE)

PMR-C Junction Box
NOTE:
Connections for Premier B are 3, 1, and 5 instead of 5, 4, and 6.

ON	ON	ON	ON	OFF	17
OFF	ON	ON	ON	OFF	18
ON	OFF	ON	ON	OFF	19
OFF	OFF	ON	ON	OFF	20
ON	ON	OFF	ON	OFF	21
OFF	ON	OFF	ON	OFF	22
ON	OFF	OFF	ON	OFF	23
OFF	OFF	OFF	ON	OFF	24
ON	ON	ON	OFF	OFF	25
OFF	ON	ON	OFF	OFF	26
ON	OFF	ON	OFF	OFF	27
OFF	OFF	ON	OFF	OFF	28
ON	ON	OFF	OFF	OFF	29
OFF	ON	OFF	OFF	OFF	30
ON	OFF	OFF	OFF	OFF	31
OFF	OFF	OFF	OFF	OFF	32

Set position 8 to OFF for 9600 baud.

Parameter File

For COM 1, the parameter file is located and named:

> C:SC3\XBIN\insight.A01

For COM 2, the parameter file is located and named:

> C:SC3\XBIN\insight.A02

Debit operation:

    DEBIT_MODE=Y

    PROMPT=

Everything after the "PROMPT=" is the wording of the prompt, multiple spaces and punctuation are ignored. These can be unique for each site and must be entered, matching the reader prompt. These two are examples:

    PROMPT=   enter amount $

    PROMPT=   enter driver id:

Defaults:

    INSERTED_WRONG_MESSAGE=Card inserted wrong   Please insert again

    READ_ERROR_MESSAGE=   Read error Please insert again

    REMOVE_CARD_MESSAGE= Remove Quickly

    BAD_CARD_MESSAGE=Unable to read card Use a different card

    SALE_CANCELLED_MESSAGE=Sale Cancelled

Payment Softkey Labels:

    CASH_HERE_PROMPT=Cash Here

    CASH_INSIDE_PROMPT=Cash Inside

    CREDIT_HERE_PROMPT=Credit Here

    CREDIT_INSIDE_PROMPT=Credit Inside

    DEBIT_HERE_PROMPT=Debit Here

    DEBIT_INSIDE_PROMPT=Debit Inside

Native mode with no graphics.

    NATIVE_MODE=Y

Merchandise:

    ITEM_AMOUNT_PROMPT=enter amount $

Up to 6 items are allowed in the following format:

    ITEM=name:price:deparment

For example:

    ITEM=Qt oil:99:22

Softkey and Animation sequences

Softkeys

~s =	start/cancel/help
~p =	payment type
~c =	cancel/help
~q =	Yes/No
~h =	enter/cancel/help
~d =	dollar preset (use with "enter amount" step in reader configuration)
~M =	merchandise

Animation sequences

~B =	spinning clock
~C =	insert card
~g =	select grade
~R =	receipt printing
~N =	remove nozzle
~n =	replace nozzle
~L =	remove nozzle and lift lever
~l =	lift lever
~W =	car wash
~$ =	cash

Pump Control Unit
EXPMUX CPU Board

Part number: C05837

LEDs

LED	Color	Function
DL1	green	reset high
DL2	green	battery okay
DL3	red	422 receive
DL4	red	422 transmit
DL5, 8, 11, 14	red	slow flow, pump 1, 2, 3, 4
DL6, 9, 12, 15	red	fast flow, pump 1, 2, 3, 4
DL7, 10, 13, 16	red	submersible, pump 1, 2, 3, 4

Switches

DIP switch banks B and C on the EXPMUX CPU board set options latched in at power-up time:

DIP Switch Bank B

Position & Definition		Setting(*=customary)
1-4	address	see below
5	pulser type	closed
6-8	relay	closed

Address	B-1	B-2	B-3	B-4
1	cl	cl	cl	cl
2	op	cl	cl	cl
3	cl	op	cl	cl
4	op	op	cl	cl
5	cl	cl	op	cl
6	op	cl	op	cl
7	cl	op	op	cl
8	op	op	op	cl
9	cl	cl	cl	op
10	op	cl	cl	op
11	cl	op	cl	op
12	op	op	cl	op
13	cl	cl	op	op
14	op	cl	op	op
15	cl	op	op	op
16	op	op	op	op

DIP Switch Bank C

Position & Definition		Setting(*=customary)
1-4	pulser enabled (pumps 1-4) (see note below)	closed=after reset is complete open=upon activation
5	----	
6	dead man timer	*always open=enabled
7	----	
8	test mode	*closed=no open=yes

Note: In connection with pulser enabled, there are two error codes, each with three characters, that can show up in the error column on a transaction printout. The reset-failed-to-start transaction code is $D2 through $DF, and the reset-failed-to-complete transaction code is $E5 through $EF ($ indicates hexadecimal). The last character in each code (2 through F or 5 through F) is the number of seconds the PCU waited for reset to start or complete. This numeric character is incremented by one each time the PCU reset-to-start/complete times out, until the maximum timeout of 15 (15 is F in hexadecimal counting) seconds is reached.

Test Mode. When test mode is activated with switch C-8, switch C-5 determines the relay limits:

C-5	Function
Open	pump slows at 500 pulses and turns off at 510 pulses
Closed	pump slows at 50 pulses and turns off at 60 pulses

In test mode, switches C-6 and C-7 select the pump to be tested:

Pump to Test	C-6	C-7
1	closed	closed
2	open	closed
3	closed	open
4	open	open

Jumpers

Jumper	Setting	Setting	Default
K1	installed=battery connected	removed=battery disconnected	installed

CMOS CPU Board

Part number: C05321

LEDs

LED	Color	Function
L1	red	422 transmit
L2	red	422 receive
L3, 4, 5, 6	red	submersible & slow flow, pump 1, 2, 3, 4
L7, 8, 9, 10	red	fast flow, pump 1, 2, 3, 4

Switches

DIP switch banks B and C on the CMOS CPU board set options latched in at power-up time.

DIP Switch Bank B

Position & Definition		Setting(*=customary)
1-4	address	see below
5	address	*always closed
6	address	*always closed
7	baud rate	*open=9600 closed-see below
8	baud rate	*closed=9600 open-see below

Address	B-1	B-2	B-3	B-4	B-5	B-6
1	cl	cl	cl	cl	cl	cl

2	op	cl	cl	cl	cl	cl
3	cl	op	cl	cl	cl	cl
4	op	op	cl	cl	cl	cl
5	cl	cl	op	cl	cl	cl
6	op	cl	op	cl	cl	cl
7	cl	op	op	cl	cl	cl
8	op	op	op	cl	cl	cl
9	cl	cl	cl	op	cl	cl
10	op	cl	cl	op	cl	cl
11	cl	op	cl	op	cl	cl
12	op	op	cl	op	cl	cl
13	cl	cl	op	op	cl	cl
14	op	cl	op	op	cl	cl
15	cl	op	op	op	cl	cl
16	op	op	op	op	cl	cl

Baud Rate	B-7	B-8
not used	closed	closed
9600	open	closed
1200	closed	open
300	open	open

DIP Switch Bank C

Position & Definition		Setting(*=customary)
1-4	pulser enabled pumps 1-4	*closed=after reset is complete open=upon activation
5	CRC required	*open=required closed =not required
6	dead man timer	*always open=enabled
7	____	
8	test mode	*closed=no open=yes

Jumpers

Jumper	Setting-IN	Setting-OUT	Default
K1	normal	battery test	installed
K2	battery	no battery	installed

I/O Board

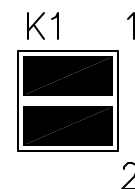The part number of the original PCU I/O board is C05668.

Jumpers

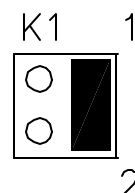| Jumper	Position	Position	Default
K1-K4	(see below)		
K-5	in=low speed main pulsers	out=high speed main pulsers	out

K1-K4 power pulsers 1-4.

For pulsers with mechanical switch closures (such as VR 1871 series):
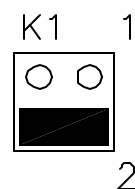
For electronic pulsers requiring +12 Volt power (such as VR 7671 series):

For pulsers with an external power supply (such as VR 7874 series):

9800 Pump Dispenser
CPU Board

Jumpers

Jumper K1 is set according to the size of the RAM IC in socket U19. At this time, only the 2K size is being used:

RAM	Jumper Pins
2K	across 2 and 3
8K	across 1 and 2

LED Indicators

LED	Function
L1	AUTH1 - side 1 AC authorization present
L2	SLOW1 - side 1 slow flow solenoid
L3	FAST1 - side 1 fast flow solenoid
L4	SUBM1 - side 1 submersible starter relay
L5	AUTH2 - side 2 AC authorization present
L6	SLOW2 - side 2 slow flow solenoid
L7	FAST2 - side 2 fast flow solenoid
L8	SUBM2 - side 2 submersible starter relay
L9	PUL1A - side 1 pulser, channel A
L10	PUL1B - side 1 pulser, channel B
L11	HAND1 - side 1 handle switch
L12	PUL2A - side 2 pulser, channel A
L13	PUL2B - side 2 pulser, channel B
L14	HAND2 - side 2 handle switch

Test Points

Test points are provided for voltage measurements.

Test Point	Function
TP1	+5VDC
TP2	DC ground

Switches

Switch settings should be changed with the power switch OFF. The new settings are read by the CPU board when the power is turned ON again.

Switch Bank 1

Position & Definition		Setting(*=customary)
1	baud rate	*open=9600 closed=1200
2	communication mode	*open=on-line closed =standalone
3-4	lead detect delay	see below
5	----	
6	authorization activates	*open=no closed=yes
7	totalizers	*open=no closed=reset
8	----	

Delay Time	1-3	1-4
0	closed	closed
4	closed	open
5	open	closed
6	open	open

Switch Bank 2

This bank serves two purposes:

- address setting when communicating on the Gasboy RS-485/RS-422 loop, or
- pulser output rate selector when pulser data is sent to a fuel management system other than a Gasboy CFN.

Pulse Rate	2-1	2-2	2-3
1	cl	cl	cl
10	op	cl	cl
100	cl	op	cl
250	op	op	cl
500	cl	cl	op
1000	op	cl	op
none	cl	op	op
none	op	op	op

Address	2-1	2-2	2-3	2-4
1	cl	cl	cl	cl
2	op	cl	cl	cl
3	cl	op	cl	cl
4	op	op	cl	cl
5	cl	cl	op	cl
6	op	cl	op	cl
7	cl	op	op	cl
8	op	op	op	cl
9	cl	cl	cl	op
10	op	cl	cl	op
11	cl	op	cl	op
12	op	op	cl	op
13	cl	cl	op	op
14	op	cl	op	op
15	cl	op	op	op
16	op	op	op	op

LCD Board

Jumpers

Display Address:

Hose	Jumper Pins
1	across 1 and 2
2	across 2 and 3

Display of Units:

Units	K2	K4	K6
whole units	1-2	1-2	1-2
tenths - .0	2-3	1-2	1-2
hundredths - .00	1-2	2-3	1-2
thousandths - .000	1-2	1-2	2-3

For decimal point position only. Display also depends on pulse rate (latest software) for stand alone mode. Unused digits are marked.

Electronic Pump Interfaces
Tokheim

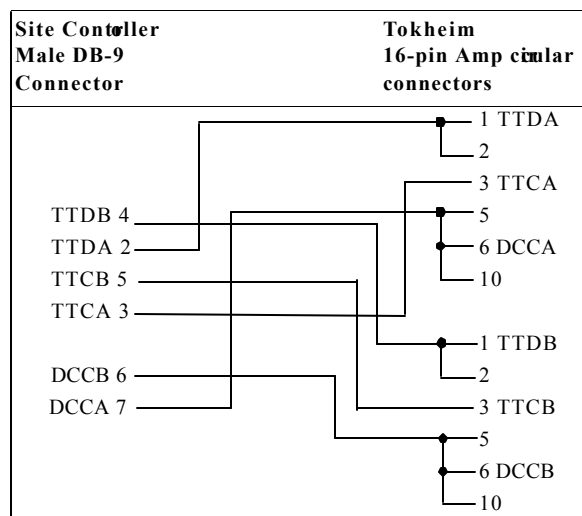### Single Channel To Tokheim 67 Box or 98 Box

For single channel use Tokheim cable, C07081.

98 Box

TALK DISP should be connected to +9V with a 1K Ohm resistor. DC COM should be connected to GND.

Dual Channel To Tokheim 67 Box or 98 Box

Dual Channel to Tokheim 67 or 98 box, use cable C05996 that has the following layout.

CFN3 Pump Configuration

In the PUMP configuration program, in submenu 1, set Maximum Units to Gallons and Maximum Amount to 999 Gallons.

In the PUMP configuration program, in submenu 3, set the following options:

Tokheim type	Options to set
162/262	2,7
262-A	2,7,8,9,13
SA MMD	1,2,7,8,9
SA MMD $/Cr	1,2,3,7,8,9
TCS	1,2,7,8,9,13
TCS $/Cr	1,2,3,7,8,9,13
TCS 1 hose blend	1,2,7,8,9,12,13,19
TCS 1 hose blend $/Cr	1,2,3,7,8,9,12,13,19
TCS 1 hose, multigrade, non-blend	1,2,7,8,9,13,19
TCS 1 hose, multigrade non blend $/Cr	1,2,3,7,8,9,13,19
Premier	1,2,7,8,9,13,16
Premier $/Cr	1,2,3,7,8,9,13,16
Premier 1 hose blend	1,2,7,8,9,13,16,19
Premier 1 hose blend $/Cr	1,2,3,7,8,9,13,16,19
Premier blender	1,2,7,8,9,13,16
Premier blender $/Cr	1,2,3,7,8,9,13,16
Premier 1 hose, 1 prod	2,7,8,9,13,16
Premier 1 hose, 1 prod $/Cr	1,2,3,7,8,9,13,16
Premier 1 hose, multigrade	1,2,7,8,9,13,16,19
Premier 1 hose, multigrade $/Cr	1,2,3,7,8,9,13,16,19

The options in the above table are:

1 Pump is a multi-product dispenser.
2 Pump always needs switch detect (off-hook) to activate.
3 Pump has a cash-credit select button. (Customer can choose cash or credit payment at the pump.)
4 Site Controller can activate the pump without knowing the price or hose (for some MPDs).
5 Site Controller cannot choose the hose number or price (for some MPDs).
6 Site Controller cannot get the dollar amount or volume during pumping.
7 Pump can't do switch detect or pulser timeouts (timeouts must be done by the driver).
8 Pump is a Tokheim stand-alone dispenser or Gasboy SPD v4.3+/PAC v4.2+.
9 Pump can only be activated from downloaded prices (the displayed prices are downloaded).
10 Pump never needs switch detect to activate (can be activated while it is still on-hook).
11 The PCU is slow to respond to requests (improves performance on pumps that are

inherently slow to respond or at sites that have a large number of pumps and are very busy).
12 The pump is a blender. (The Site Controller may not be able to keep component product tank inventories for types of blender pumps that are not specifically supported by Gasboy.) *Do not use this option for Gilbarco and Tokheim Blenders.*
13 The pump is a TCS configured to always download prices. (This allows TCS pumps to display the correct price level for a sale, provided that the pump's Tokheim firmware supports the Mode 25 feature.)
14 Pump is a Gasboy PAC.
15 Single-sided pump (used for PCU auto-configuration).
16 Tokheim Premier model.
17 Requires start button (not required for Tokheim).
18 Beeps without pressing payment on DPT or CRIND.
19 Grade-select buttons exist.
20 Beeps when offhook without START key being pressed.
21 Pump has a lift-lever for offhook.
22 Pump is the master of the pump chain. Turning on this pump activates all other "pumps" in its cluster except other master pumps in that cluster.
23 Wayne 3 product blender, hoses 1, 3, and 5. For Wayne products V580 and V590U. Previously these pumps required using 5 hoses, setting the price code for hoses 2 & 4 to 99. With this option, only define 3 hoses and the Wayne driver maps to the appropriate pump positions automatically.

Tokheim Pump Programming

Mode 19 - set dispenser function code to 0.

Mode 23 - set address (1-16), number of products, number of sides, and number of prices.

Mode 25 - set price-change mode equal to 1.

Mode 26 - on the Premier should be set as 2.

Gilbarco Interface Unit

Part number: C05688. Use a C04500 cable from the RS422/RS485 junction box to the RS422 port of the interface unit.

Use Gilbarco firmware version 70.2 or later. Product authorization does not work with Gilbarco pumps before version 2.0c of Gasboy's interface firmware and version 2.0cp2 of the Site Controller II software and only with the Advantage Series.

Interface Terminal	Short Wire Color	Terminal Block Connection	Field Wire Color	Gilbarco dist. Box	Terminal Legend
Pl-1	red	1+ (top terminal)	black	box 1	-BLK
Pl-2	black	1- (next down)	red	box 1	+RED
P2-1	red	2+ (third down)	black	box 2	- BLK
P2-2	black	2- (bottom)	red	box 2	+ RED

CPU Board

Jumper	Function and/or Normal Setting
K1	All K1 jumpers are absent.
K2	All K2 jumpers are absent.
K3	Position 1: enables the dead man timer. K3-1 jumper must be installed. K3-1 is the pair of K3 terminals closest to P9, the long double-row offboard connector at the edge of the board. Position 2: K3-2 jumper is absent. K3-2 is the pair of K3 terminals farthest from P9.
K4	----
K5	Battery to U31; must install.
K6	Battery to U32; must install.
K7	Enables the AC power fail circuit; must install.
K8	K8 jumper is absent.

DIP Switch Bank 2. This switch sets the poll address and allows memory to be cleared

Position & Definition		Setting(*=customary)
1	debug mode	*closed=normal mode open=debug mode
2	erase memory on reset	*closed=no open=yes
3-8	interface address	see below

Address	2-3	2-4	2-5	2-6	2-7	2-8
1	cl	cl	cl	cl	cl	cl
2	cl	cl	cl	cl	cl	op
3	cl	cl	cl	cl	op	cl
4	cl	cl	cl	cl	op	op
5	cl	cl	cl	op	cl	cl
.						
.						
.						
64	op	op	op	op	op	op

DIP Switch Bank 3

Position & Definition		Setting(*=customary)
1-2	local terminal baud rate	*open=9600 (also see below) open=RS-422/485 to
3	CRIND	CRIND closed=current loop
4	reports (see below)	open=onhook activate closed=no report
5	product authorization	open= no restrictions closed=restrict grades

Switch 3-4: with Site Controller versions before 2.0b, pumps are deactivated if offhook, and activated if onhook. This is the sequence reported with push-to-start and cash-credit.

Baud Rate	3-1	3-2
9600	open	open
2400	open	closed
1200	closed	open
300	closed	closed

DIP Switch Bank 4. This switch selects certain price level options and allows either twelve or sixteen pumps (six or eight double-sided units) on a loop**.**

| Position & Definition		Setting(*=customary)
1	(see below)	
2	# of pumps per loop	*open=6 dual pumps closed=8 dual pumps
3	dead man timer	*open=enabled closed=disabled
4	(see below)	
5-8	----	

Dip Switch Bank 4 for a single -display price bar:

Pricing policy	Bar shows level:	SW4-1	SW4-4
all levels have same price	1 2	op op	cl op
level 0 same as level 2	1 2	op op	cl op
level 0 same as level 1	1 2	op op	cl op
levels 0, 1, and 2 all different	1 2	cl cl	cl op

Dip Switch Bank 4 for a cash/credit select button, dual-display price bar, or a single alternating-display price bar (only three prices levels—0, 1, and 2—can be loaded, and level 0 must be the same as level 1 or level 2):

Pricing policy	SW4-1	SW4-4
level 0 same as level 1	op	cl
level 0 same as level 2	op	op

Front Panel LEDs

```
L1                              L12

  ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

      ○          ○          ○
     DC        BOK        BAD
```
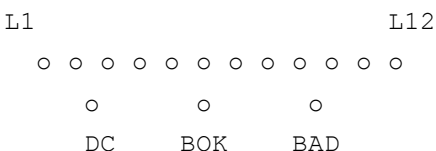
Lamp	Indication
L1	TxD on CRIND 422 port
L2	RxD on CRIND 422 port
L3	transmit data on 422 loop #1
L4	receive data on 422 loop #1
L5	dead man timer refresh
L6	current loop power enabled
L7	current loop #1 active if flashing
L8	current loop #2 active if flashing
L9	program crash code bit 1
L10	program crash code bit 2
L11	program crash code bit 3
L12	program crash code bit 4
DC	DC 5V power OK (green)
BOK	battery OK (green)
BAD	battery bad (red)

Interface Board

| Jumper	Function and/or Normal Setting
K1	Baud rate clock source; must be installed in position 1.
K2	Battery backup enable. Boards should be stored with this jumper out; it should be installed at assembly time. Lamp BAD will light if K2 is omitted.

CFN3 Pump Configuration to Gilbarco

Notes: Pump limits and card limits must be in dollars, not volume; for a cash/credit pump ($/Cr), the limit must be $999. Grade assignments must be entered as hose numbers.

In the PUMP configuration program, in submenu 3, set the following options:

Gilbarco type	Options to set
Highline (old)	6,9
Highline	9
Highline$/Cr	3,9
MPD	1,5,9
MPD $/Cr	1,3,5,9

Wayne

The cable that connects the Wayne controller with port 4, 5, or 6 of the CFN3 is part number C06006. The pins in the cable are wired like this:
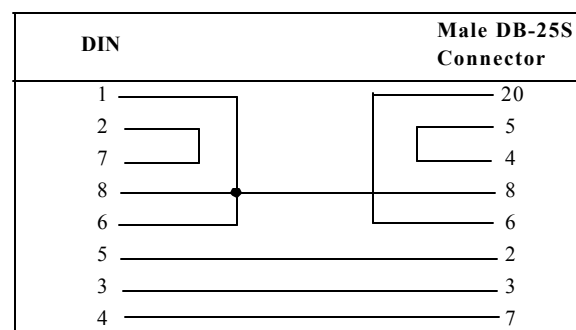
The Wayne controller must be set at 1200 baud.

For Wayne pumps:

- the cash price must be lower than or equal to the credit price.
- the pump limit must be $999 for the cash/credit selection to work.
- all Wayne dispensers must be configured in sequential, consecutive order. All Wayne dispensers must be addressed as starting with number 1, regardless of the actual pump numbers that they are configured with in the Site Controller.
- in the Wayne Data Distribution Box, any switches that are not wired to a dispenser must be in the Bypass position.

For non-blenders:

- each hose must be assigned a price code in ranges 1-5, 11-15, 21-25, 31-35; all hoses on a pump must be in the same decade.

For all blenders:

- use price codes 6-9, 16-19, 26-29, 36-39 for blended hoses. Use price codes 4, 14, 24, 34 for low feedstock (non-blended hoses). Use price codes 5, 15, 25, 35 for high feedstock (non-blended hoses).
- product names for products in blended hoses should contain blend rate (for example, *blended 40%*, using a percent sign); do not use a percent sign in non-blended hoses.

For fixed blenders:

- hose 1 is always a non-blended, low-feedstock hose and must have price code 4 (or 14 or 24 or 34). Hose 3 is always a non-blended, high-feed-stock hose and must have price code 5 (or 15 or 25 or 35). Hose 2 is the blended hose and must have a price code in ranges 6-9, 16-19, 26-29, 36-39.

For variable 5-product blenders:

- hoses 1-5 must use price codes 4-9, 14-19, 24-29, 34-39, with no repeats.

For variable 3-product blenders:

- assign 5 hoses, but assign price code 99 to hoses 2 and 4 since the system uses only hoses 1, 3, and 5.

CFN3 Pump Configuration to Wayne

In the PUMP configuration program, in submenu 3, set the following options:

Wayne type	Options to set
MPD	1,2,5,7,9
MPD $/Cr	1,2,3,5,7,9
Blender	1,2,5,7,9,12,19*
Blender $/Cr	1,2,3,5,7,9,12

* Select option 19 only if there are grade buttons to press.

Tank Gauge

## Veeder-Root CPU Board

TLS 250 and TLS 250i

DIP Switch Bank 1

Position & Definition		Setting(*=customary)
1-3	interboard communications	*always closed
4	parity	*always closed=odd
5	security code	*always closed=enable

TLS 350

9600, odd, 1 stop bit, 7 data bits

Enable Security Code:	Yes
Auto Transmit Message:	Disabled
Tank Monitor Security Code (Address):	000001 (assumes only one monitor on system)
EoT Character:	Enable

Cabling the TLS-350
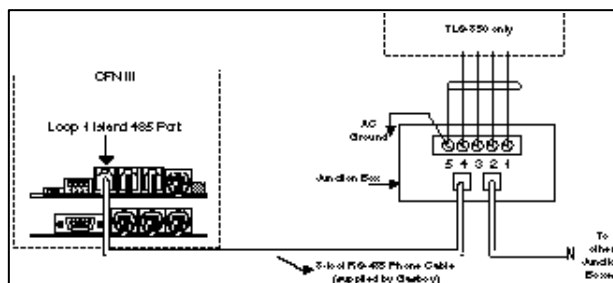
TLS 350R

1. RS-232 Security Code: 000001
2. RS-232 End of Message: Enabled

System Requirements

Console must have "Send All Messages Feature", page 5 of SYS_PAR.

Non-blended dispensers are supported.

All Profit Point Broadcast Messaging enabled.

Gasboy Junction Box P/N C05020.

Interface Module Hardware Configuration.

Baud Rate	DATA Bits	CFN Parity	SW1	SW2
9600	7	odd	1,2,4=closed 3=open	all open

Cabling the TLS-350R for with BIR

The TLS must be connected on Island Loop 1 to receive BIR data. See TLS-350 illustration.

ECPU Board Battery Switch ON (SW1)

HRM Features (Europe Only) - Enabled

  (DIP Switch 3 in the Closed position)

Other areas - disabled (disabled for CFN)

  (DIP Switch 3 in the OPEN position)

RS-232 Security Code-Disabled

  (DIP Switch 2 in the OPEN position)

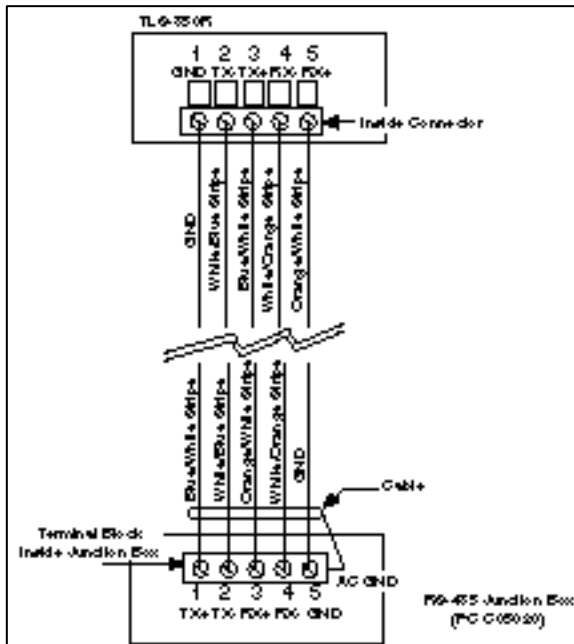Front Panel Security Code - Disabled

  (DIP Switch 1 in the CLOSED position,

  2 OPEN, 3 OPEN, 4 UNUSED)

DIP rocker switch 4 - Unused

Battery Backup Switch - OFF (down)

Wiring to the Junction Box

Note: if cable must be shortened, remove excess at the TLS end.

For further installation instructions, refer to the VeederRoot manual titled "*Gasboy CFN TLS-350/TLS-350R Systems Setup*."

EECO tank monitor

Interface with CFN II or CFN3 using either the a RS232 connection utilizing the CFN System's PORT command or a Gasboy RS232-RS485 converter. In the EECO monitor setup menus, there are two selections for connecting to a site controller. These are:
Gasboy-PC or Gasboy-Site Control.

Gasboy-PC

Use this setting when connecting to one of the site's RS232 ports and interfacing using the PORT command. This sets the communication parameters to 9600, odd, 1 stop bit, 7 data bits, and no security code.

Gasboy-Site Control

Use this setting when connecting to one of the site's RS485 loops. This sets the communication parameters to 9600, odd, 1 stop bit, 7 data bits, and security code to 000001. These parameters can also be changed individually. You need a C07476 cable to connect from the monitor to the 485/232 converter (C05897).

Gasboy Interface Software

EECO SYSTEM™ 2000

Software	Minimum Revision
028	E
029	E
030	D
041	D
042	A
074	F

EECO SYSTEM™ 1500

Software	Minimum Revision
023	M
087	B
083	E

EECO SYSTEM™ Galaxy

Software	Minimum Revision
063	H
075	L

RS-422/485 Communications
422/485 Line Monitor

PC Monitor

There are no switches on the PC-based monitor. (DIP Switch Banks 2 and 3, discussed below, apply only to Site Controller I-based monitors.) PC monitors require an RS 422/485 - RS232 converter, discussed below after DIP switch banks.

Help. Press *H* for help on the PC.

DIP Switch Banks 2 and 3

These switches apply only to Site Controller I-based monitors. Set these switches according to the speed of the terminal to be hooked to the line monitor.

Local Terminal Baud Rate

Baud Rate	3-1	3-2	2-8
300	closed	closed	----
1200	closed	open	----
2400	open	closed	closed
4800	open	closed	open
9600	open	open	----

RS-422/485 Port Baud Rate

DIP switch 3, positions 5-8, all open=9600 baud.

DIP switch 2, position 7, open=7 bits; closed=8 bits.

422/485-232 Converter

For PC monitors, Veeder-Root tank gauges, and Profit Points. Part number: C05897.

Jumpers

Position 1 is top and position 2 is bottom when the board is oriented so that GASBOY RS422/485-RS232 CONVERTER is readable.

Position 1, both jumpers on upper two rows:

Position 2, both jumpers on lower two rows:

Jumper	Setting	Setting	Default
K1K2	position 1=slave side of 422/485 loop transmits	position 2=master side of 422/485 loop transmits	position 1
K3K4	position 1=tank monitor or PC or Profit Point	position 2=other application if position 1 doesn't work	position 1
K5	always on		on
K6	on=232 device listens to slave responses, or for PC monitor	off=tank gauge off=Profit Point	off
K7	on=232 device listens to master side of 422/485 loop		on

R1 - Adjusting

R1 should be adjusted only if you are using a PC monitor and the data being displayed is scrambled.

1. Turn R1 20 full turns counterclockwise.

2. Slowly turn R1 clockwise until the data display clears up.

3. Start counting turns.

4. Continue turning R1 clockwise until the data starts to scramble again.

5. Turn R1 counterclockwise half the number of turns you counted in order to position it in the middle of the acceptable range.

RS-232 Communications
Modems and Cables

PC Package/Answer modem

Kit number: C01533

Parameter settings

Set SYS_PAR, page 8, Remote CFN Port Type:
3 = direct connect or dumb modem, full duplex.

Setup procedure:

1. Connect a terminal to the modem with a 1:1 cable male DB-25 to male DB-25 (C04549) or male DB-25 to female DB-9 (C04654).

2. Connect the modem's power cord and turn modem power switch ON.
3. Use the steps below:

Hayes/Hayes-Compatible 14.4 and above
Type: **AT&F&D2S0=1&C1B1&Q6X0&K0&W** ↵
Modem responds: **OK**
Type: **ATQ1&W** ↵
Modem does not respond

Note: If a Panasonic data terminal (or other data terminal requiring DCD) is being used to configure the modem, set the parameter in the terminal to **Ignore the DCD level of the RS-232 signal**. This is necessary because the *AT&C1&W* command causes the modem to drop DCD which may be required by the terminal being used to configure the modem unless the terminal is set up to ignore the DCD level.

Bank Network modem

Kit number: C05899

For SCII, CFN3, or Islander II with a network interface that requires the fuel management system to contact a bank network for verification of a user's card.

System:

Set remote port modem type to Hayes with handshake.

Modem:

For bank networks, call for current modem part number.

For Networks with a menu selection:

Set the modem type to the approved purchased type of modem. See the appropriate Credit and Debit Card Network manual for specific modem information.
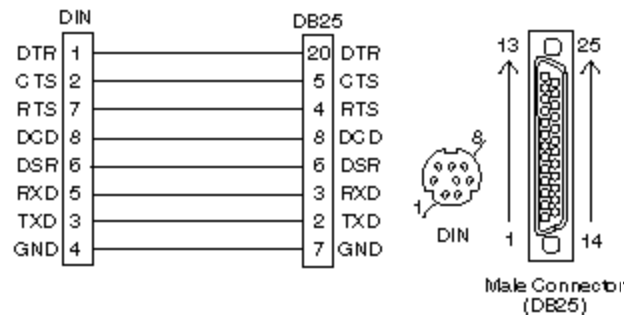
For Networks without a menu selection:

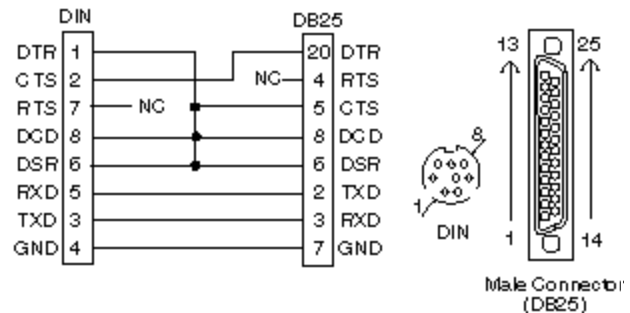Set SYS_PAR, page 8, Host Handler Data:
01 = Hayes 2400.

CFN3 to Modem

For CFN3 to modem use part number C05995.

CFN3 to Okidata

For CFN3 to Okidata use part number C05994.

RS-232 Character Framing

ASCII, 8 data bits, no parity, 1 stop bit.

Print Transaction

Host-Site Mode

Code = PT; options = A

<ENQ>aaPTb<ETB><crc><EOT>

The Site Controller response is:

<STX>aaPTbrrssss0ddddddxyffggggqqqqqqqqooooooo ppttttyymmddhhnneennnnnnvvvvvvvv

aa...aa,[00..00]tdwkii...iikeeeeepppp<ETB><crc><EOT>

Completed Transaction Codes

Code	Message*	Meaning
7	Refund	transaction is a refund**
8	Return	transaction is a return**
9	Payout	transaction is a payout**
10	Mem Lost	pump control unit's memory was lost due to battery failure
40	Pwr Fail	transaction terminated due to a power failure at the pump control unit
41		normal transaction
42	Timed Out	transaction timed out at the pump
43	Limit	pump cut off at limit
45	Reversal	transaction is a reversal
50	Unassigned	a device completed a transaction but the Site Controller does not have a record of it.
52	Gate	transaction was started at a gate controller
54	Aborted	transaction was aborted (pump was deactivated) before pumping was completed
55	Delivery	transaction is a fuel delivery, either manually entered at the card reader terminal*** or registered by a tank monitor
71	Manual	transaction was manually entered at the card reader terminal***
77	Pulse err	caused by dual pulser failure
78	Prod out	pump reports it is out of this type of product
79	Pump down	a pump is not working**
81	Withdrawal	transaction was a cash withdrawal**

* The message printed in the Error field of the transaction printout.
** Site Controller II and III.
*** Site Controller I only

Site-Host Mode

Standard log in—an example of the sign-on command and response with calculated CRC-16 check sums:

<ENQ>01CK0GASBOY<ETB>E7B6<EOT>

<STX>01CK0008511251408000600060006000100020 2V010,<ETB>D389<EOT>

Raw Mode

The table on the next page explains the PRINT TRANSACTION fields. These fields are the same for GET TRANSACTION except:

- the first GET TRANSACTION field is the 6-digit system ID.
- because of the 6-digit system ID, all subsequent GET TRANSACTION fields are offset by 6 more than the offset number shown below for each PRINT TRANSACTION field.
- if you enter the GET TRANSACTION command without the A option, the resulting display will stop with the 1-digit account field terminator.

Field	Off set	Lgth.	Description
ssss	0	4	sequence number assigned by Site Controller
0	4	1	status code; always 0 for completed transaction
dddddd	5	6	total dollar amount, in hundredths; if negative, most significant ASCII character has its sixth bit set; the equivalent meanings are: p = -0 u = -5 q = -1 w = -6 r = -2 w = -7 s = -3 x = -8 t = -4 y = -9
x	11	1	account to charge: 0 = club card 3 = bank card 1 = checking 4 = cash 2 = savings 5 = unpaid
y	12	1	transaction type: 0 = fuel 1 = fuel, preauthorized 2 = non=fuel 3 = non-fuel, preauthorized 4 = like 0, from console 5 = like 1, from console 6 = like 2, from console 7 = like 3, from console
ff	13	2	product code
gggg	15	4	price in thousandths of dollars
qqqqqqqq	19	8	quantity, in thousandths; if negative, most significant ASCII character has its sixth bit set, see description of dollar amount field above
ooooooo	27	7	odometer reading, in tenths; if no odometer was entered, the first digit is p or zero, depending on configuration
pp	34	2	pump number (register number for non-fuel sale)
tttt	36	4	transaction number assigned by Site Controller
yymmdd	40	6	date completed, from Site Controller (year, day, month)
hhmm	46	4	time completed, from Site Controller (hour, minute)
ee	50	2	error code (see table below)
nnnnnn	52	6	authorization number (if site authorized, this is SCeeee, where eeee is the card expiration date; if expiration date is two digits, format

			is SCeeFF)
vvvvvv vv	58	8	vehicle number; if no vehicle number was entered, the first digit is p or zero, depending on configuration
aa...aa	66	1-19	account number from transaction table
,	V	1	account field terminator
[00...00]	V	0-18	zeros if account field is less than 19 digits; *optional, needed only if account number is less than 19 digits*; field length = 19 - no.. of digits in account field.
t	86	1	device type (0-9,A-F valid): 1 = Site Controller 3 = card reader terminal 4 = console 6 = gate reader 7 = tank gauge 9 = remote site A = full serve
d	87	1	device drop (0-9,A-F valid)
w	88	1	number of digits after the decimal point in the quantity (for weights and measures, allows transaction printout to match resolution of the pulsers)
k	89	1	kind of transaction: 0 = ordinary 2 = return 1 = refund 3 = payout
ii...ii	90	20	issuer field (0-9,A-F valid digits)
eeee	90	4	expiration date (read from card)
pppp	114	4	physical record number; *with A option only*

PC/Site Control
Required Settings for CFN3

Network Poll Address = 1.

Site ID = site ID in PC password file.

Password for user 1 is identical in PC password file.

Baud rate correct for modem and its switches.

Command Line Options

SC [/**A***argument*] [/**B***baud*] [/**C***com#*] [/**D***phone*] [/**L**] [/**T***timeout*] [*siteid*]

/A*argument* Specify an argument to be passed to a file of Site Controller commands that is used as input to PC/SiteControl. Multiple arguments can be sent using multiple /A options. /A options must come before any other parameters.

/B*baud* 300, 1200, 2400, or 9600; default is 1200

/C*com#* 1 or 2; default is 1

/D*phone* Specify the phone number to dial to

connect to a Site Controller. Use this option only if you connect to the Site Controller through a dial-out modem and you want to override the number in the password file. P requests pulse (rotary) dialing, T requests touch dialing, and a comma requests the modem to pause 2 seconds in the dialing sequence to wait for a second dial tone.

Another phone number option is the modem timeout length. That is the time the modem will wait for an answer. The modem timeout length is the number of seconds surrounded with square brackets [], typed after the /D.

/L Output usually appears on the screen. This option will make the output also print on the PC printer.

/T*timeout* Specify how long to wait for a response from the Site Controller. The time is specified in eighteenths of a second (18 = 1 second); default and shortest timeout allowed is 3 (0.167 seconds).

siteid Specify the site ID number. Use this option only for sites you are dialing up with a modem, not for direct-connect sites. Use an asterisk (*) as the site ID to call all the sites in the password file.

Input and Output Redirection

If you use site-control mode, the input and output files will be on the PC's disk, instead of the Site Controller's disk. Similarly, printed output will be printed on the PC's printer, instead of the Site Controller's printer.

<*filename* uses the commands from the named file as input.

>*filename* puts the output of the commands in the named file, deleting whatever was in the named file.

>>*filename* adds the output of the commands to the end of the named file.

>*PRN* prints the output of the commands on the PC printer (site-control mode).

>*LOG* prints the output of the commands on the site printer (terminal mode).

Fuel Point Reader

CPU Board

Site Notes

Part number: C08886.

4-wire operation:

RS 485 PCB to RS-485 JBOX

 1 - Tx+ (CFN422-1)
 2 - Tx- (CFN422-2)
 4 - Rx- (CFN422-4)
 3 - Rx+ (CFN422-3)

Switches

DIP Switch Bank 1

DIP switch 1 on the fuel point reader terminal CPU board sets options, including the reader terminal address:

Switch	Setting
1	always on
2	always on
3	address - see below
4	address - see below

FPR address	Switch 3	Switch 4
1	OFF	OFF
2	OFF	ON
3	ON	OFF
4	ON	ON

Switch	Setting
DL1	Receive from vehicle module
DL2	Transmit to vehicle module
DL3	Receive from fuel management system
DL4	Transmit to fuel management system

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