

# **SDI Interface**

# **Wayne CAT**

**Version 1.0**

**for Site Controller II version 2.2  
and CFN3 version 3.0 and above**

**part number: C35849**

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# **Gasboy CFN Series**

## **SDI Interface Wayne CAT**

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**03/20/03**

**C35849**

**Gasboy International LLC  
Lansdale, Pennsylvania**

Gasboy International LLC  
P. O. Box 309  
Lansdale, PA 19446

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# Site Controller Related Publications

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## *Site Controller - versions 2.2 and 3.0 and above*

<i>Part No.</i>	<i>Title</i>
C09212	SC II Manager's Manual, version 2.2
C01918	SC II Installation Manual, version 2.2
C09213	SC II Configuration Manual, version 2.2
C09159	SC II Pocket Reference, version 2.2
C35920	CFN3 Manager's Manual for Windows NT, version 3.0
C09326	CFN3 Configuration Manual for Windows NT, version 3.0
C35921	CFN3 Pocket Reference
C09204	Check Point Reference Manual
C35745	Profit Point Clerk's Manual
C35746	Profit Point Reference Manual
C35923	Point of Sale and Shift Change, version 003

## *Credit and Debit Card Networks*

C35931	Amoco/DataCard	C35907	Gascard
C35901	Buypass	C35909	Generic Dial
C35914	ADS-Chicago (formerly SPS/Phillips)	C35908	PaymenTech (formerly Gensar)
C35902	ADS-CITGO	C35910	NaBANCO
C35906	ADS-FINA	C35911	NDC
C35919	ADS-ZION	C35913	Sinclair
C35904	EDS-CCIS	C35915	T-Chek
C35903	Comdata	C35916	UFDA
C35905	FDR	C35917	VDOT
C35930	Gasboy Dial	C35918	VisaNet

## *Pump Interface*

C09146	Pump Interface Manual
C01745	Gilbarco Interface Unit
C35849	SDI/Wayne CAT Interface
C35924	SDI/Unitec Interface
C35933	Insight Interface

## *Card Encoding and Miscellaneous*

C09136	CFN Series Clubcard Format
C01687	CFN Series Card Encoding Manual

## *Remote Communications*

C09141	PC/SiteControl User's Manual
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## *Technical Publications*

C01759	CFN Diagnostic Manual
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# Table of Contents

Overview .....	1
Installation .....	2
Setup .....	2
TABLE.BIN .....	2
Application files .....	2
Checking the revision level of the Vista Card terminal .....	4
Site Controller Software Configuration .....	4
Reader Addresses .....	4
Keypad .....	5
Graphic Sequences .....	6
SDI Box Switches .....	6
SDI LED Display .....	7
SDI Unit Status .....	7
SDI Run Time Code .....	7
Equipment provided .....	7

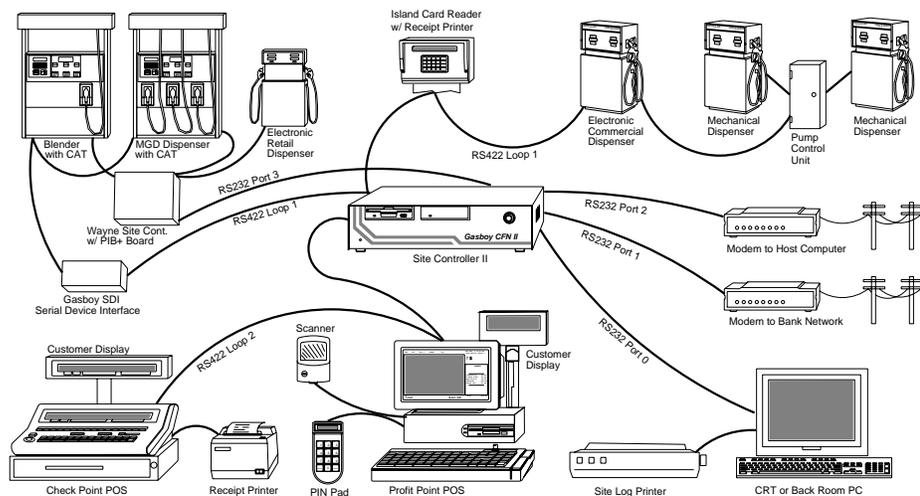


# 1.0 SDI/Wayne CAT Interface

## Overview

The interface from the Gasboy Site Controller II/III to the Wayne CAT (Wayne's Pump Card Reader) uses a device called the Gasboy SDI (Serial Device Interface). This device translates Wayne CAT messages to Gasboy Reader messages.

The Gasboy SDI box has two RJ handset style connectors on one end to connect to the Gasboy RS-485 loop. On the other end there is a DB-25S connector which connects to the Wayne CATs. The SDI is powered by an external power supply which connects to the SDI box by way of a circular DIN connector. The power supply plugs into an 110VAC outlet, which should be on the same phase and referenced to the same ground as the Gasboy Site Controller. The box also contains switches for setting the system configuration.



Use this manual if running SCII software version 2.2 and above or CFN3 software version 3.0 and above.

**Note:** Because of loads on the resistors, one SDI box can only handle up to 6 CATs. If you have 12 CATs, you will need 2 SDI boxes. Also, there can be only one SDI with CATs per DB25 connection.

## Installation

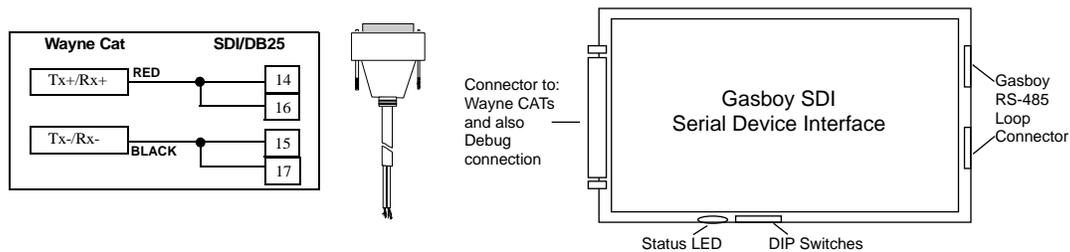
Set the CAT address to match reader address, regardless of what the `FIRST_ADDRESS` parameter is set to. CAT number 1 responds as reader number 1, number 2 as 2, etc.

If a Master Security Module is used, connect it to the Wayne 485 loop along with all the CATs. Connect this to the SDI box DB25 connector using the supplied cable. You must use the Master Security Module if you need data encryption for debit cards.

Connect the Gasboy RS485 loop into one of the phone-type jacks in the SDI box. Other Gasboy devices, including additional SDI boxes can be connected to the same Gasboy loop. The Gasboy loop is the only connection that can have more than one SDI.

**There can be only 1 SDI per DB25 loop.** A single SDI unit can handle up to 6 CATs and one security module (if DES encryption is used). A second SDI box is needed to handle each additional 6 CATs. If more than one SDI is used, a security module is also required for each additional SDI.

The CAT display is 2x16, you will also need the Merit/CAT driver in the operating system.



## Setup

In order to support the Wayne CAT interface, a version of the SDI driver which is a subset of the actual driver in the Site Controller has been included. Use the commands `ENABLE SDI`, `DISABLE SDI`, `DOWNLOAD SDI`, and `SEND SDI`.

### TABLE.BIN

Set the number of SDIs to be polled by setting the number of SDIs in `TABLE.BIN`. For one SDI you must leave at least 236 bytes of free space as reported by `TABLE.BIN`. For each additional SDI you must leave 118 bytes more.

### Application files

For each Wayne interface you need an application binary file and a parameter file. These are stored in the root directory of the Site Controller. For a Site Controller II, the location would be `C:XBIN`. For a CFN3 the location would be `C:/SC3/XBIN`.

#### *Application Binary file*

The application binary for SDI #1 will have an extension of 'B01'. For example, `CAT.B01` would be a correct application binary name for SDI #1. There should only be one file that has B01 in the directory. A second SDI (SDI#2) will have a binary file called `CAT.B02`. The files are identical with two different names. If you need to create the `CAT.B02` for the second SDI, copy the `CAT.B01` file and name it `CAT.B02`. Examples follow on how to copy and name your files.

For Site II:

1. C\* **cd xbin**
2. C:\xbin\ **copy CAT.B01 CAT.B02**

For CFN3 on OS/2:

1. From the Menu bar at the top of the screen select Command Prompt
2. Select OS/2 window
3. At the prompt enter:

```
[C:\] cd SC3\Xbin
```

```
[C:\SC3\XBIN] dircheck to make sure you see the CAT.B01 file
```

```
[C:\SC3\XBIN] copy CAT.B01 CAT.B02
```

For CFN3 on NT:

1. From the Start button in the lower left, select Programs->Windows NT Explorer.
2. Double click on the SC3 folder.
3. Double click on the XBIN folder.
4. Click once on the file CAT.B01 to highlight it.
5. From menu bar, select File->Copy, This will create a file at the bottom of the directory called "Copy of CAT.B01."
6. With this file highlighted, from the menu bar, select File->Rename. Enter CAT.B02. Now you should have two CAT.B0# files.

### ***Parameter files***

Parameter files begin with 'A' instead of 'B', so CAT.A01 would be the parameter file name for SDI unit #1. The site will attempt to keep the SDI loaded with the correct application and parameters. Remember to put file CAT.A01 in the C:/XBIN directory.

You must use the parameter file to assign the addresses. The following is the default parameter file for CAT.A01:

```
ID=CAT 1-6
```

```
FIRST_ADDRESS=1
```

```
LAST_ADDRESS=6
```

(no spaces adjacent to equal sign, use different numbers if appropriate)

The second SDI (SDI#2) parameter file (CAT.A02) would contain the following:

```
ID=CAT 7-12
```

```
FIRST_ADDRESS=7
```

```
LAST_ADDRESS=12
```

The SDI controls all CATs in the specified range, inclusive. The maximum range is 6 CATs per SDI (i.e. 1-6, 7-12). No other data should be in the file.

To modify the existing CAT.A01 file use a text editor. To add an additional parameter file either create a new file named CAT.A0n where 'n' is the address of the SDI and enter the information. Or you can copy an existing application file and then edit it. For example, CAT.A02 would be the parameter file for SDI#2.

The text editor for the Site II is FRED, see the Site Controller II, versions 2.2 and above, Manager's Manual for instructions. The text editor for OS/2 is available from on OS/2 window.

See the SC3 Manager's Manual for OS/2, chapter 16 for more information. The text editor on NT is either NotePad or WordPad. See the CFN3 Manager's manual, chapter 16 for more information.

Make sure there is only one .B0'n' and one .A0'n' for each SDI box.

If you want to force the site to reload the application, DOWNLOAD SDI n where 'n' is the SDI number. This will force a download.

SDI status will show up in the gate section of diagnostics. Use the command:

```
Print Diagnostics 1 (P Di 1)
```

to display the SDI status.

### Checking the revision level of the Vista Card terminal

For the SDI interface to work with the Wayne CAT, the revision level of the Vista Card terminal must be greater than 50. To check the revision level:

1. Switch OFF the power to the Vista Card terminal.
2. While holding down any key on the keypad, switch ON the power to the Vista Card terminal. Hold the key down until the display reads "REV", then release the key.
3. The unit will then enter the self test mode. It will wait 25 seconds for the response to self test prompts, then proceed to the next test (after the last test) revert to on-line mode.

The first display in the self test shows:

```
REV XXX XX/XX/XX  
ADDRESS = XX
```

The top row is the Vista Card terminal software revision level and the bottom row is the currently assigned terminal address for the card processing terminal communication data link. The top line must display the revision level of 50 or greater.

Press  to exit.

Follow the instructions in the manual Installation Operation, Vista Series from Wayne Dresser for completing the self test.

### Site Controller Software Configuration

Version 2.2 or later of the Site Controller software is required to run a Wayne CAT. The CAT should be on the RS-422 port.

All readers that are to be CATs must be set up in the Reader configuration to be device type Wayne CAT. The Reader Parameter "TYPE" (device type) must be changed to 8, for Wayne CAT.

### Reader Addresses

No reader can be set to the address of 30, that is reserved for the Master Security Module. The reader that would have been 30, give the address of 40. The Site Controller will read the address as 30.

## Keypad

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 Site Controller’s SYS\_PAR program. The characters that select different functions are shown below. Note that these characters are case-sensitive:

Character	Function
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 function 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

Refer to the *CFN II or CFN3 Configuration Manual* for more information.

## Graphic Sequences

The SDI is capable of several graphic sequences. The graphic CAT comes embedded supporting the following:

~B = spinning clock	~P = pumping
~C = insert card	~R = receipt printing
~G = press grade	~S = press START
~L = remove nozzle lift lever	~W = want car wash?
~N = remove nozzle	

SCII version 2.3 and above or CNF3 version 3.0B and above support graphics. Car wash is supported only on CFN3.

### Example

Graphic sequences are entered into the READER program. To display an insert card graphic, place a ~C in the Insert Card step as illustrated below. To insert spinning clock while the customer's card is being verified, insert a ~B into the Verify Card step. The words will display on the top of the screen with the graphic under the words.

#	Ty	S/D	DISPLAY	WHILE ENTERING	OPTIONS
1	1	!	INSERT CARD~C	!	!
2	3	6	ENTER YOUR PIN	!YOUR PIN	! Optional Auto-enter Masked
3	7	7	ENTER ODOMETER	!ODOMETER	! Optional
4	2	2	SELECT PUMP NUMBER	!SELECT PUMP	!
5	9	!	!Verifying Card...~B	!	!
6	10	!	!	!	!
7	16	2	! [PRODUCT]	!	!
8	19	2	!PUMP #XX IS READY	!	!
9	13	2	! We Thank You	!	!
10		!	!-----END-----!	!	!

## SDI Box Switches

The SDI box contains a switch for setting the SDI box number and for clearing the unit's memory. Switch functions are:

1	2	3	4	5	6	7	8
ADDR	ADDR	ADDR	ADDR	ADDR	DLD	MODA	RESET
4	3	2	1	0		MODB	

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:

(Do this under instruction from qualified support engineer only)

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

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## SDI LED Display

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The SDI unit has a single LED located next to the switch assembly. This LED is used to display the status of the SDI unit and the Wayne CAT units. The LED display consists of a series of blinks and delays that show the site status. SDI unit status is shown using a slow or fast blinking LED with no delay between blinks. SDI run time status is shown by a series of 1 to 4 blinks in a group followed by a delay between groups. The display codes are:

### SDI Unit Status

Slow steady blink	SDI unit is ready; but needs application loaded
Fast blink	SDI unit has problems; Call your service representative

### SDI Run Time Code

Number of Blinks	Status (with delay between group)
1	Site down; all CAT's down
2	Site up; all CAT's down
3	Site down; some CAT's up
4	Site up; some CAT's up (normal operation)

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## Equipment provided

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- This documentation
- SDI Box
- SDI power supply w/ AC power cable
- Interface cable for the Wayne CAT's w/ two wires marked plus and minus.
- Disk with Wayne CAT software