

**Springer-Miller Systems**  
**Standard Call Accounting Interface**  
**Installation Guide**

**Springer-Miller Systems, Inc.**  
**March 1999**

**SMS Document # 0100390**  
**Rev. 3-0399**



<b>1. Introduction</b>	<b>1</b>
1.1 Overview	1
1.2 Call Accounting Interface Setup Utility	2
1.2.1 Location	2
1.2.2 System Selection	2
1.2.3 Main Menus	3
1.2.4 Installation Overview	3
<b>2. SMS Call Accounting Systems Main Menu</b>	<b>4</b>
2.1 Communications Parameters	5
2.1.1 Communications Settings Fields	5
2.2 Duration of Call Screen	7
2.2.1 Duration of Call Method Fields	7
2.3 Call Record Data Definition	8
2.3.1 Call Record Definition	8
2.3.2 Call Record Data Definition Fields	8
2.4 Additional Call Record Data Definitions	14
2.4.1 Additional Call Record Data Definition Fields	14
2.5 Call Accounting Parameters	17
2.5.1 Call Accounting Parameters Fields	17
2.6 Setup Charge Description	19
2.6.1 Setup Charge Description Fields	19
2.7 Posting Control Parameters	19
2.7.1 Posting Control Parameters Fields	21
2.8 Build Pricing Indexes	23
2.9 Setup Pricing Step	23

## Standard Call Accounting Interface

---

2.10	Build Standard Indexes	24
2.10.1	Build Standard Indexes Field.	24
2.11	Setup Pricing Rates	25
2.11.1	Setup Pricing Rates Fields	25
2.12	Setup Default Charges	26
2.12.1	Setup Default Charges Fields	26
2.13	Site Configuration	27
2.13.1	Site Configuration Fields.	27
2.14	PBX Information	28
2.14.1	Phone Switch Information Fields.	28
2.15	Computer Configuration	30
2.15.1	Computer Configuration Fields	30
2.16	Diagnostic Parameters	32
2.16.1	Diagnostic Parameters Fields.	32
2.17	Error Notification	35
2.17.1	Error Notification Fields.	35
2.18	Logging Parameters	36
2.18.1	Logging Parameters Fields.	36
2.19	Exit	38
<b>3.</b>	<b>Non-SMS Call Accounting Systems Main Menu</b>	<b>39</b>
3.1	Communications Parameters	40
3.1.1	Communications Settings Fields	40
3.2	Communication Protocol	42
3.2.1	Communication Protocol Fields	42
3.3	Call Record Data Definition	43

---

---

3.3.1	Call Record Definition	43
3.3.2	Call Record Data Definition Fields	44
3.4	Additional Data Definitions	48
3.5	Call Accounting Parameters	51
3.5.1	Call Accounting Parameters Fields	51
3.6	Setup Charge Description	53
3.6.1	Setup Charge Description Fields	53
3.7	Posting Control Parameters	55
3.8	Build Standard Indexes	57
3.8.1	Build Standard Indexes Field.	57
3.9	Site Configuration	58
3.9.1	Site Configuration Fields.	58
3.10	CAS Information	59
3.10.1	CAS Information Fields.	59
3.10.2	XETA Specific Information	60
3.11	Computer Configuration	63
3.11.1	Computer Configuration Fields.	63
3.12	Diagnostic Parameters	65
3.12.1	Diagnostic Parameters Fields.	65
3.13	Error Notification	68
3.13.1	Error Notification Fields.	68
3.14	Logging Parameters	69
3.14.1	Logging Parameters Fields.	69
3.15	Exit	71
<b>4.</b>	<b>Standard Call Accounting Testing</b>	<b>72</b>



## 1. Introduction

This document describes the procedure for installing the Springer-Miller Systems Call Accounting Interface.

### 1.1 Overview

---

The Springer-Miller Systems Call Accounting Interface is designed to connect with the hardware listed under Call Accounting Systems in Exhibit B of the Springer-Miller Contract.

<b>Term</b>	<b>Definition</b>
<b>HOBIC</b>	The industry standard format for posting telephone calls.
<b>STX</b>	“Start of Text” character. (ASCII #2)
<b>ETX</b>	“End of Text” character. (ASCII #3)
<b>ACK/NAK</b>	A standard communication method using specific characters to either accept or deny postings.

## 1.2 Call Accounting Interface Setup Utility

---

This section discusses the Call Accounting Interface Setup Utility.

### 1.2.1 Location

The Setup Utility is accessed from the subdirectory containing the Call Accounting Interface.

**Examples:**        **DOS:** h:\interfac\gcai

**AIX:** >/usr/recital/interfac/gcai

Type **setcom**.

### 1.2.2 System Selection

The following screen will appear:

Version: 032499 sms!Call Accounting	
Does SMS Price Calls? . . . .	<input type="checkbox"/>
Is this setting correct? <Y/N> <input type="checkbox"/>	

Call Accounting System Selection Screen

Enter **Y** for SMS Call Accounting systems. Enter **N** for non-SMS Call Accounting systems. Enter **Y** once your setting is correct.

### 1.2.3 Main Menus

The Setup Utility contains two Main Menus, one for situations where Springer-Miller Systems' Call Accounting Interface prices calls and another where the Call Accounting System prices the call and sends it to the Springer-Miller Systems' Call Accounting Interface for posting to <sup>SMS</sup> | Host.

Once you answer the pricing questions on the first screen, the appropriate Main Menu will appear. Each Main Menu contains a number of submenus which are described in the order in which they display on the Main Menu.

Go to Section 2 on page 4 if you are installing an SMS Call Accounting system. Go to Section 3 on page 39 if you are installing a non-SMS Call Accounting System. You may back out of the Setup Utility at any time by pressing <Esc>.

### 1.2.4 Installation Overview

The call accounting interface will create all variables and set them to initial values before reading the SETCOM configuration information from the **CM-IFACE.MEM** file. When the interface reads the SETCOM configuration file, the configuration as established in SETCOM will override the settings previously established by the interface. This has been done to prevent **variable not found** errors when installing the interface.

Default values have been set when and where appropriate in the interface. The defaults are set assuming the installer is installing a Hobic interface. The setting initialized by the interface will be used when the memory variable does not exist in the **cm-iface.mem** file.

Memory variables are created in the **cm-iface.mem** file when the installer uses the setcom utility to configure the interface. Every menu option must be selected and every parameter for the option must be set to a value to insure the creation of all memory variables with correct settings.

Most of the initial values set by the interface will be incorrect because there are no appropriate default settings for these memory variables. For example, there are variables that are set based on the operating system, these variables are just created with dummy values.

It is imperative that the installer make sure ALL values are set correctly in Setcom. The installer may not necessarily get an error message indicating a problem when the interface is started. If the installer has not set the values correctly, the data may be corrupted due to incorrect settings.

## 2. SMS Call Accounting Systems Main Menu

The Main Menu enables you to access all the options used to install and configure the Call Accounting interface. The Main Menu is shown in the following example.

```
Local Step:  0

Version: 032499
sms!Call Accounting

A> Communications Parameters      J> Build Standard Indexes
B> Duration of Call Method       K> Setup Pricing Rates
C> Call Record Data Definition  L> Setup Default Charges
D> Additional Data Definitions   M> Site Configuration
E> Call Accounting Parameters    N> PBX Information
F> Setup Charge Descriptions     O> Computer Configuration
G> Posting Control Parameters    P> Diagnostic Parameters
H> Build Pricing Indexes        Q> Error Notification
I> Setup Pricing Step           R> Logging Parameters

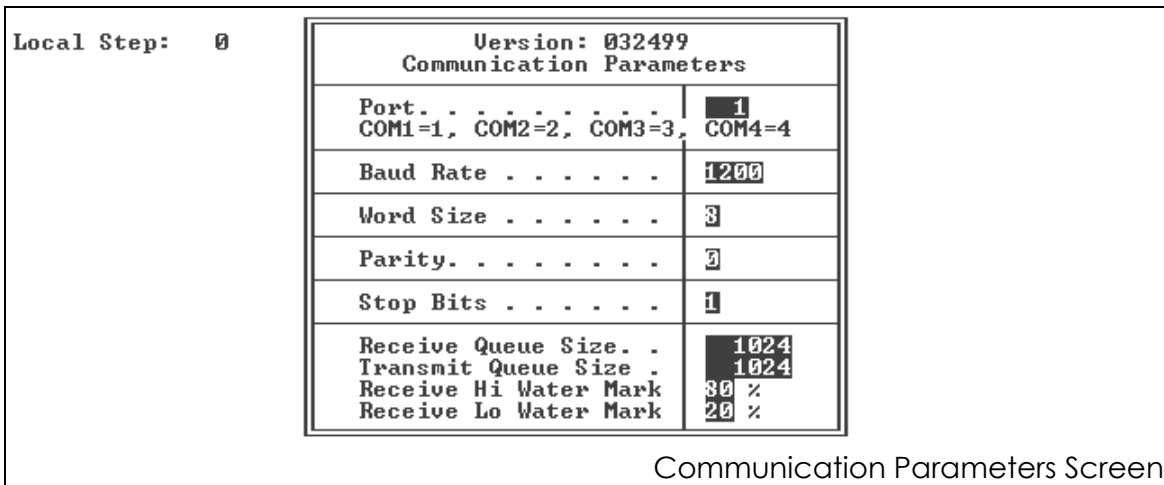
X> Exit
Interface Menu Selection? 3

SMS Call Accounting Main Menu
```

Selecting an option displays a submenu with further choices. Each Main Menu option is described in a separate section.

## 2.1 Communications Parameters

The Communications Parameters screen is used to configure the telecommunications parameters used by the interface. Press **A** at the Main Menu to display the Communications Parameters menu. A sample Communications Parameters screen is shown next.



### 2.1.1 Communications Settings Fields

The fields that display on the Communications Settings screen are described in the following table.

Field	Description
Port	Enter the appropriate communications port number: <ul style="list-style-type: none"> <li>• <b>DOS Stand-Alone PC:</b> Usually <b>1 - 4</b>.</li> <li>• <b>DOS/Cubix Card:</b> Usually <b>1</b>.</li> <li>• <b>AIX:</b> The TTY number.</li> </ul> (Default= <b>1 for DOS</b> )
Baud Rate	Enter the baud rate (typically 9600, 2400 or 1200). (Default= <b>1200</b> )
Word Size	Also "Data Bits". Enter <b>8</b> or <b>7</b> . (Default= <b>8</b> )

## Standard Call Accounting Interface

---

---

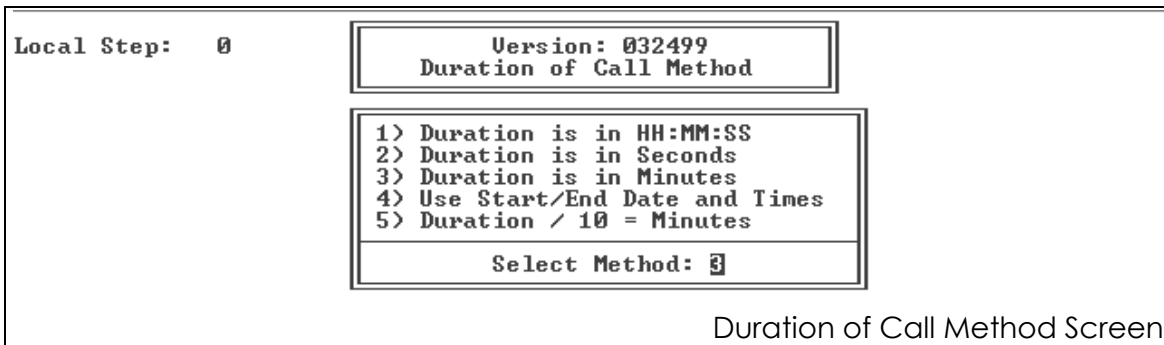
<b>Parity</b>	Enter <b>0</b> for None, <b>1</b> for Odd, or <b>2</b> for Even.  (Default= <b>0</b> )
<b>Stop Bits</b>	Stop bits. Enter <b>1</b> or <b>2</b> (usually 1). <b>NOTE:</b> The <b>Baud</b> , <b>Word Size</b> , <b>Parity</b> and <b>Stop Bits</b> settings must match those set in the call accounting system. It is imperative that you verify these settings. It is impossible to receive records from the call accounting system if they do not match.  (Default= <b>1</b> )
<b>Receive Queue Size</b>	 (Default= <b>1024</b> )
<b>Transmit Queue Size</b>	 (Default= <b>1024</b> )
<b>Receive High Water Mark</b> _%	 (Default= <b>80</b> )
<b>Receive Lo Water Mark</b> _%	 (Default= <b>20</b> )

## 2.2 Duration of Call Screen

The Duration of Call screen is where the installer selects the method used to record call length.

*NOTE: You must ask the vendor which format they use. You cannot identify the format by examining the call record.*

Press **B** at the Main Menu to display the Duration of Call screen. A sample Duration of Call screen is shown next.



### 2.2.1 Duration of Call Method Fields

The fields that display on the Duration of Call Method screen are described in the following table.

Field	Description
<b>Select Method:</b>	Enter <b>1</b> if the call record's duration is in HH:MM:SS format.  Enter <b>2</b> if the call record's duration is in Seconds.  Enter <b>3</b> if the call record's duration is in Minutes.  Enter <b>4</b> to use the Start/End Date and times to calculate the duration of the call. Start/End Date and times are defined in the Call Record Data Definition Screen.  Enter <b>5</b> if the call records's duration needs to be divided by 10 to be in minute format.  (Default=3)

### 2.3 Call Record Data Definition

---

The Call Record Data Definition screen is where the installer specifies the layout of the incoming call record. Press **C** at the Main Menu to display the Call Record Data Definition screen. A sample Call Record Data Definition screen is shown next.

Local Step:	Version: 032499 Call Record Data Definition		
	Description	Start	Length
	Message Sequence Number . . . . .	0	0
	Host Brand . . . . .	0	0
	SMDR Call Type Indicator . . . . .	0	0
	Extension or Access Number . . . . .	0	0
	Duration of Call . . . . .	0	0
	Date of Call . . . . .	0	0
	Time of Call <hh:mm> . . . . .	0	0
	AM/PM Time of Call Indicator . . . . .	0	0
	Phone Number Called . . . . .	0	0

Call Record Data Definitions

#### 2.3.1 Call Record Definition

A sample Call Accounting record might look similar to the following:

**^B001AAA03/04 2:30 101 0020555-5656 L^Cx**

The **^B** is a start of text (STX) character that represents the start of the data record. It is always in position 1 of the call record. The **^C** at the end of the sample record above is the end of text (ETX) character. The elements of a Call Accounting record are described in the table below.

#### 2.3.2 Call Record Data Definition Fields

The fields that display on the Call Record Data Definition screen are described in the following table.

Field	Description
<p><b>Message Sequence Number</b></p>	<p>The Message Sequence Number is usually three or four digits. Sometimes a single alpha character is included to handle number rollover. The alpha character will switch from A to B when the number rolls from 999 to 000. This alpha character should not be included in the data definition start and length parameters.</p> <p>This number is included in the record to prevent duplicate records. When we get two records sequentially with the same number, we know it is a duplicate. We also know that we did not get a record if the current number is greater than the last sequence + 1.</p> <p>Start: Enter the position in the call record where the Message Sequence Number begins. (Default=0)</p> <p>Length: Enter the number of positions the Message Sequence Number takes up in the call record. (Default=0)</p>
<p><b>Host Brand</b></p>	<p>The Host Brand is usually a three character string which always contains the same character value. This data is sometimes referred to as the Hotel Code or Switch Identifier in the Call Accounting System Specifications documentation.</p> <p>The Host Brand in the call record is compared to the Host Brand entered in the Posting Control Parameters option. If the value of the Host Brand in the call record differs from the brand entered in the Posting Control Parameters, the call record is rejected. If the interface is configured to use the ack/nak protocol, the interface will send a nak to the Call Accounting System. The Call Accounting system should resend the record. If the Interface is not configured with the ack/nak protocol, the Call Accounting system will not be notified.</p>

Field	Description
<p><b>Host Brand (continued)</b></p>	<p>If the <b>Log all errors</b> parameter in the Logging Parameters option is set to <b>Y</b>, an error message with a copy of the call record will be written to the log file named <b>logfile.dbf</b> in the call accounting directory.</p> <p>If the <b>Display Detail Information</b> parameter in the Diagnostics Parameters option is set to <b>Y</b>, an error message will be displayed. This functionality can be disabled by setting the Host Brand parameter in the Posting Controls option to spaces. Disabling the Host Brand functionality is not recommended unless the remote device does not send a single constant brand in all call records.</p> <p>Start: Enter the position in the call record where the Host Brand begins. <b>(Default=0)</b></p> <p>Length: Enter the number of positions the Host Brand takes up in the call record. <b>(Default=0)</b></p>
<p><b>Extension or Access Number</b></p>	<p>The Calling Extension Number is the telephone extension from which the call originated. The number is usually left justified and six characters in length.</p> <p>Start: Enter the position in the call record where the Extension or Access Number begins. <b>(Default=0)</b></p> <p>Length: Enter the number of positions the Extension or Access Number takes up in the call record. <b>(Default=0)</b></p>

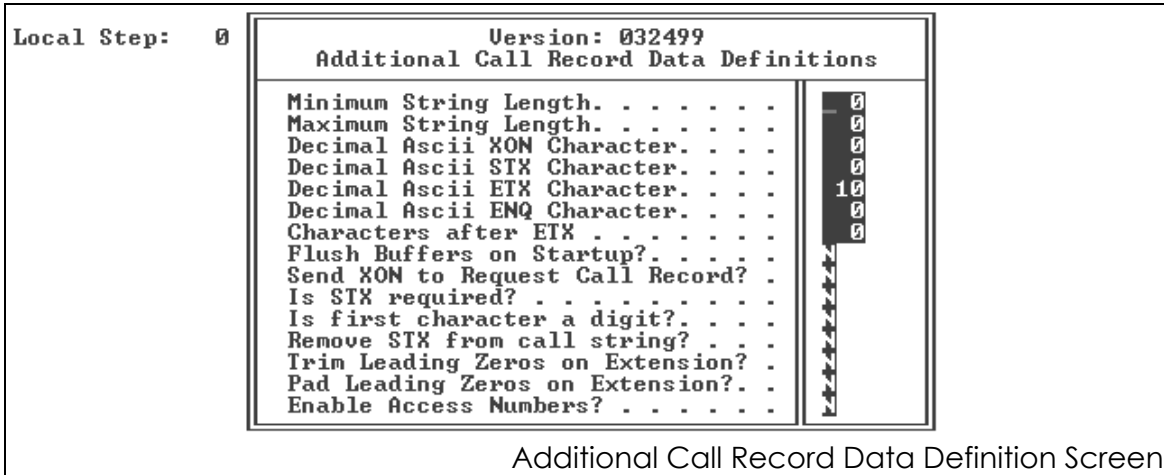
Field	Description
<b>Charge Amount</b>	<p>Note that the \$ character is not included in the start position. The specifications will usually include the dollar sign in the starting position, but our call accounting software doesn't care. Leave the \$ out of the definition so the interface software does not have to parse it out.</p> <p>Start: Enter the position in the call record where the Charge Amount begins.</p> <p><b>(Default=0)</b></p> <p>Length: Enter the number of positions the Charge Amount takes up in the call record.</p> <p><b>(Default=0)</b></p>
<b>Duration of Call</b>	<p>The length of the call in minutes. The start and length includes the decimal positions when the duration is specified as minutes and tenths of minutes (020.7).</p> <p>Start: Enter the position in the call record where the Duration of Call begins.</p> <p><b>(Default=0)</b></p> <p>Length: Enter the number of positions the Duration of Call takes up in the call record.</p> <p><b>(Default=0)</b></p>
<b>Date of Call</b>	<p>The date the call was initiated. This date is always in MM/DD format. If the year appears in the call record, do not include it in the Call Record Data Definition. The interface will append the appropriate year during processing.</p> <p>Start: Enter the position in the call record where the Date of Call begins.</p> <p><b>(Default=0)</b></p> <p>Length: Enter the number of positions the Date of Call takes up in the call record.</p> <p><b>(Default=0)</b></p>

Field	Description
<p><b>Time of Call (hh:mm)</b></p>	<p>The time the call was placed, in 24 hour time (13:30 is 1:30 p.m.). Make sure the starting position accounts for the leading space when the time is less than 12:00.</p> <p>Start: Enter the position in the call record where the Time of Call begins. <b>(Default=0)</b></p> <p>Length: Enter the number of positions the Time of Call takes up in the call record. <b>(Default=0)</b></p>
<p><b>AM/PM Time of Call Indicator</b></p>	<p>The appropriate abbreviation for the time of the call, either AM or PM.</p> <p>Start: Enter the position in the call record where the AM/PM Time of Call Indicator begins. <b>(Default=0)</b></p> <p>Length: Enter the number of positions the AM/PM Time of Call Indicator takes up in the call record. <b>(Default=0)</b></p>

Field	Description
<b>Phone Number Called</b>	<p>The phone number that was dialed from the Calling Extension Number. The field length may vary. Get the field's maximum length from the Call Accounting system vendor.</p> <p>Note the <b>L</b> in the last position of the record. This is a call type flag that is usually embedded in the telephone number at either the beginning or the end of the phone number field. Be sure to include it as part of the phone number in the field definition. The interface software will parse it out of the phone number field.</p> <p>The call type can be <b>L</b>, indicating a local call, or an <b>F</b> indicating a foreign or international call. Long distance calls do not usually contain a call type indicator but they can be identified by examining the phone number.</p> <p>Start: Enter the position in the call record where the Phone Number Called begins.</p> <p><b>(Default=0)</b></p> <p>Length: Enter the number of positions the Phone Number Called takes up in the call record.</p> <p><b>(Default=0)</b></p>

## 2.4 Additional Call Record Data Definitions

The Additional Call Record Data Definitions screen contains additional data definition required by the interface. Press **D** to display the Additional Call Record Data Definition screen. A sample screen is shown next.



### 2.4.1 Additional Call Record Data Definition Fields

The fields that display on the Additional Call Record Data Definition screen are described in the following table.

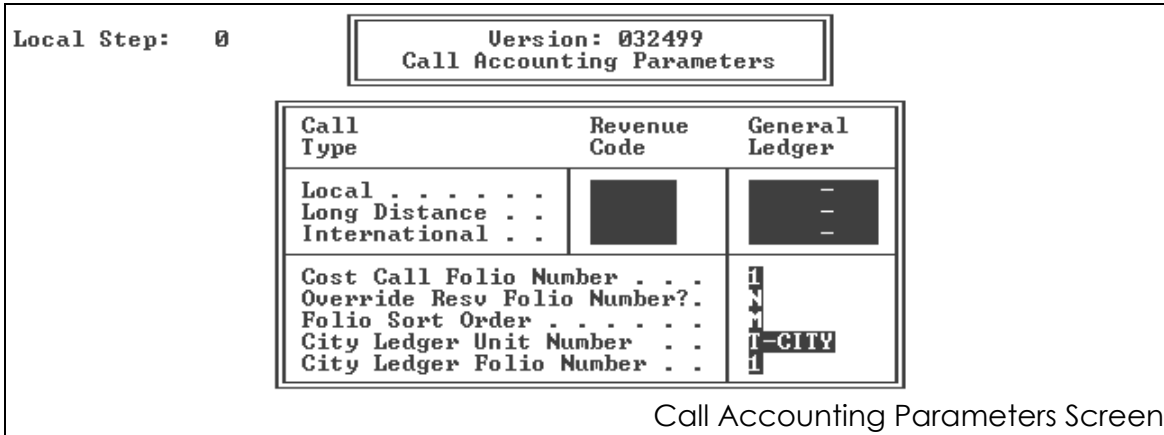
Field	Description
Minimum String Length	The minimum number of characters in a valid call record data stream.  (Default=0)

Field	Description
<b>Maximum String Length</b>	<p>This number is used by the interface to dump records that do not contain an end of text (ETX) marker. The ETX notifies the interface that the end of data record has been encountered.</p> <p>If the interface does not receive an ETX before the Maximum String Length, the record is discarded and the interface sends a negative acknowledgment (NAK) to the Call Accounting system to indicate the problem.</p> <p>A binary calculation is performed on the data record to produce a special character known as a block check (BCC) or longitudinal redundancy (LRC) check. The <b>x</b> following the ETX in the sample record represents an LRC or BCC character. This character is transmitted to the interface which performs the same calculation and compares the resulting ASCII character with the one received from the Call Accounting system. If the characters match, the incoming record is deemed to be valid and the interface sends a positive acknowledgment (ACK). If the characters do not match, the interface sends an negative acknowledgment (NAK) and disposes of the record. The call accounting system will usually transmit the record a maximum of three times: the initial transmission and two retransmissions.</p> <p><b>(Default=0)</b></p>
<b>Decimal Ascii STX Character</b>	<p>Enter the character that denotes the start of text.</p> <p><b>(Default=0)</b>(Determined by interfaced call accounting system)</p>
<b>Decimal Ascii ETX Character</b>	<p>Enter the character that denotes the end of text.</p> <p><b>(Default=10)</b>(Determined by interfaced call accounting system)</p>
<b>Decimal Ascii ENQ Character</b>	<p>Enter the character that denotes an inquiry permission request.</p> <p><b>(Default=0)</b>(Determined by interfaced call accounting system)</p>

Field	Description
Characters after ETX	Enter the number of characters the interface will accept after the end of text marker (ETX) is encountered.  (Default=0)
Is STX required?	Enter <b>Y</b> if the start of text character (STX) is required by the interface. Enter <b>N</b> if the STX isn't required.  (Default=N)
Remove STX from call string?	Enter <b>Y</b> to require the interface to strip the start of text character (STX) from the call string. Enter <b>N</b> to retain the STX.  (Default=N)
Is first character a digit?	(Default=N)
Trim Leading Zeroes on Extension?	(Default=N)
Pad Leading Zeros on Extension?	(Default=N)
Enable Access Numbers?	(Default=N)

## 2.5 Call Accounting Parameters

The Call Accounting Parameters Settings screen contains accounting parameters used by the interface. Press **E** to display the Call Accounting Parameters screen. A sample screen is shown next.



### 2.5.1 Call Accounting Parameters Fields

The fields that display on the Call Accounting Parameters screen are described in the following table.

Field	Description
Local Revenue Code	Enter the <sup>SMS</sup>   Host revenue code to use for local calls.
Local General Ledger	Enter the <sup>SMS</sup>   Host General Ledger code to use for local calls.
Long Distance Revenue Code	Enter the <sup>SMS</sup>   Host revenue code to use for long distance calls.
Long Distance General Ledger	Enter the <sup>SMS</sup>   Host General Ledger code to use for long distance calls.
International Revenue Code	Enter the <sup>SMS</sup>   Host revenue code to use for international calls.
International General Ledger	Enter the <sup>SMS</sup>   Host General Ledger code to use for international calls.

Field	Description
<b>Cost Call Folio Number</b>	Enter the folio number to use when overriding the folio number on the reservation.  <b>(Default=1)</b>
<b>Override Resv Folio Number</b>	If the hotel wants to use a specific folio number for call accounting transactions, set this option to <b>N</b> and enter the folio number in the above <b>Cost Call Folio Number</b> parameter. Set this option to <b>Y</b> when the calls are posted using the default folio on the Reservation.  <b>(Default=N)</b>
<b>Folio Sort Order</b>	Enter the alphabetic sort order for folios.  <b>(Default=M)</b>
<b>City Ledger Unit Number</b>	The call accounting interface software requires a UNIT for City Ledger accounts. Please enter it here.  <b>(Default=T-CITY)</b>
<b>City Ledger Folio Number</b>	Enter the folio number to use for City Ledger transactions. <i>Make sure the City Ledger Unit item contains a unique character value.</i> The Interface uses the City Ledger Unit number to determine when to use the City Ledger folio number. The City Ledger Unit Number must not be set to a valid unit number.  <b>(Default=1)</b>

## 2.6 Setup Charge Description

Press **F** to display the Setup Charge Description Screen. Use this screen to define the data to be stored in the transaction description.

Local Step: 0

Version: 032499  
Setup Charge Description

Trx Desc	^phone <^dura> ^time
C/L Trx Desc	^phone <^dura> ^time
Vacant Room	^extn ^phone <^dura> ^time

Valid Codes: ^phone, ^date, ^time, ^dura, ^extn, ^type,  
^tcode, ^glcode  
When phone is 8022537377, extn is 345 and GL-Code 0001-10  
And Charge Description is: ^phone:4 / ^glcode:1,5 ^extn  
The Description will be : 2537377 / 0001- 345

Setup Charge Description Screen

### 2.6.1 Setup Charge Description Fields

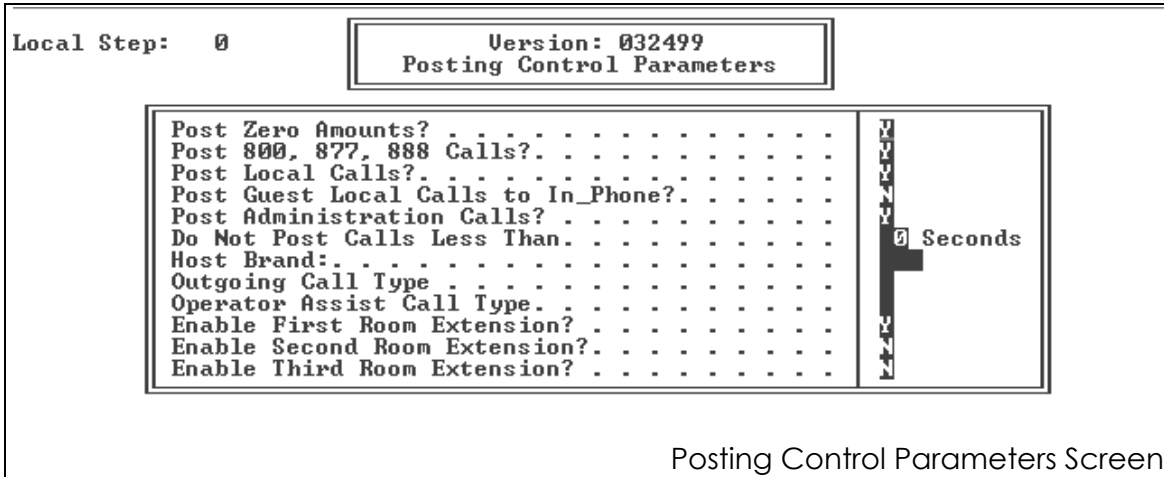
The fields that display on the Setup Charge Description screen are described in the following table.

Field	Description
<b>Trx Desc</b>	<p>This is a mask that will be used to specify what data will be placed in the transaction description field when the call record was generated on a guest room extension or an administration extension.</p> <p>(Default=<b>^phone, (^dura), ^time</b>)</p>
<b>C/L Trx Desc</b>	<p>This is the mask that will be used to specify what data will be placed in the transaction description field when the call record is for a City Ledger account.</p> <p>(Default=<b>^phone, (^dura), ^time</b>)</p>
<b>Vacant Room</b>	<p>This is a mask that will be used to specify the data that will be placed in the transaction description field when the call record was generated from a vacant guest room.</p> <p>(Default=<b>^extn, ^phone, (^dura), ^time</b>)</p>

Field	Description
<b>Valid Codes</b>	The above description fields can contain text as well as codes. For example, an extension number of <b>100</b> and a mask of <b>Extension: ^ext</b> would produce <b>Extension: 100</b> in the transaction description field.
^ <b>phone</b> :	Phone number called (see Call Record Definition)
^ <b>date</b> :	Date of the call
^ <b>time</b> :	Time of the call
^ <b>dura</b> :	Duration of the call
^ <b>extn</b> :	Calling Extension Number
^ <b>type</b> :	Call type: <b>L</b> = Local, <b>F</b> = Foreign, <b>D</b> = Long Distance
^ <b>tcode</b> :	SMS   Host revenue code
^ <b>glcode</b> :	SMS   Host General Ledger code

## 2.7 Posting Control Parameters

Press **G** to display the Posting Control Parameters Screen. This screen is where the installer sets parameters that determine whether a call record will be posted or ignored.



Posting Control Parameters Screen

### 2.7.1 Posting Control Parameters Fields

The fields that display on the Posting Control parameters screen are described in the following table.

Field	Description
Post Zero Amounts?	Enter <b>Y</b> if zero-amount calls will be posted. Enter <b>N</b> if they are not required to be posted.
Post 800, 877, 888 Calls?	Enter <b>Y</b> if the hotel wants all toll-free calls using the following area codes to be posted: 800 877 888  (Default=Y)
Post Local Calls?	Enter <b>Y</b> to post local calls to the guests' folio. Enter <b>N</b> if they are not required to be posted.
Post Guest Local Calls to In_Phone	Enter <b>Y</b> if the hotel wants all local calls made by guests to be posted to the administration phone transaction file ( <b>In-Phone.DBF</b> ). If local calls are to be posted to the guests' folio, set this option to <b>N</b> .

## Standard Call Accounting Interface

---

---

<b>Field</b>	<b>Description</b>
<b>Post Administration Calls?</b>	Enter <b>Y</b> if administration calls are to be posted to the in-phone transaction file. Enter <b>N</b> if posting isn't required.
<b>Do Not Post Calls Less Than _ Seconds</b>	Enter the least time (in seconds) for which charges are made.
<b>Host Brand</b>	Enter the unique 2 or 3 character field in the call record used to ensure record alignment. Specifications may call it a customer code, hotel code or phone switch ID.
<b>Outgoing Call Type</b>	Enter the character in the call record that identifies the call as an outgoing call.
<b>Operator Assist Call Type</b>	Enter the character in the call record that identifies an outgoing call dialed by the operator for the guest.
<b>Enable First Room Extension?</b>	
<b>Enable Second Room Extension?</b>	
<b>Enable Third Room Extension?</b>	

## 2.8 Build Pricing Indexes

---

Press **H** to build pricing indexes. This option is used to build the Pricing Table indexes for SMS Call Accounting. The Pricing Tables must be placed in the call accounting interface directory before executing this option. The standard call accounting interface directory on AIX sites is `/usr/recital/interfac/gcai`. The standard directory on DOS sites is `<drive designator>:\interfac\gcai`.

## 2.9 Setup Pricing Step

---

Press **I** to calculate the price of the phone call. This screen sets up the step for the local area code and exchange. Long distance charges are calculated based on this step and the step derived by the number dialed.

## 2.10 Build Standard Indexes

---

Press **J** to display the Build Standard Indexes Screen. This screen is where the installer initiates an Index Rebuild for all standard call accounting indexes. The standard indexes do not include pricing indexes or indexes the call accounting interface build upon startup.

Local Step: 0	<div style="border: 1px solid black; padding: 2px; margin: 0 auto; width: 80%;">                 Version: 032499                  Build Standard Indexes             </div>	
Start Index Rebuild? <Y/N> <b>J</b>		
Build Standard Indexes Screen		

### 2.10.1 Build Standard Indexes Field.

The fields that display on the Build Standard Indexes screen are described in the following table.

Field	Description
Start Index Rebuild	Select this option to build or rebuild the indexes required for the call accounting interface. The interface must be down prior to executing this option.  (Default=N)

## 2.11 Setup Pricing Rates

Press **K** to display the Setup Pricing Markup Percentages Screen. This screen is where the installer enters markup percentages for phone charges.

Local Step: 0	Version: 032499 Markups and Default Rates	
Description	Guest Rate	Admin Rate
Default Long Distance Per Minute Charge . .	0.00	0.00
Default International Per Minute Charge . .	0.00	0.00
U.S. Long Distance Markup Percentage . . .	0.0%	0.0%
International Markup Percentage . . . . .	0.0%	0.0%

Setup Pricing Rates

### 2.11.1 Setup Pricing Rates Fields

The fields that display on the Setup Pricing Rates screen are described in the following table. Setup separate base charges for guest calls and administration calls. Administration calls will not use the amounts in the Guest Amounts column.

Field	Description
Default Long Distance Per Minute Charge	Enter the default per minute charge for long distance calls.
Default International Per Minute Charge	Enter the default per minute charge for international calls.
U.S. Long Distance Markup Percentage	Enter the additional percentage charged by the property for out of state calls made within the U.S.
International Markup Percentage	Enter the additional percentage charged by the property for international calls.

## 2.12 Setup Default Charges

Press **L** to display the Setup Default Charges Screen. This screen is used to setup fixed charges for calls not priced in the pricing tables.

Local Step: 0	Version: 032499 Surcharges and Base Amounts																			
<table border="1"> <thead> <tr> <th>Description</th> <th>Guest Amount</th> <th>Admin Amount</th> </tr> </thead> <tbody> <tr> <td>Default Base Charge for Local Call</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td>Long Distance Surcharge . . . . .</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td>Long Distance Minimum Charge . . . . .</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td>International Surcharge . . . . .</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td>International Minimum Charge . . . . .</td> <td>0.00</td> <td>0.00</td> </tr> </tbody> </table>			Description	Guest Amount	Admin Amount	Default Base Charge for Local Call	0.00	0.00	Long Distance Surcharge . . . . .	0.00	0.00	Long Distance Minimum Charge . . . . .	0.00	0.00	International Surcharge . . . . .	0.00	0.00	International Minimum Charge . . . . .	0.00	0.00
Description	Guest Amount	Admin Amount																		
Default Base Charge for Local Call	0.00	0.00																		
Long Distance Surcharge . . . . .	0.00	0.00																		
Long Distance Minimum Charge . . . . .	0.00	0.00																		
International Surcharge . . . . .	0.00	0.00																		
International Minimum Charge . . . . .	0.00	0.00																		
Setup Default Charges																				

### 2.12.1 Setup Default Charges Fields

The fields that display on the Setup Default Charges screen are described in the following table. Setup separate percentages for guest calls and administration calls. Administration calls will not use the Guest Percentages.

Field	Description
Default Base Charge for Local Call	Enter the default base charge for local calls.
Long Distance Surcharge	Enter the hotel flat fee added to all out of state calls within the U. S.
Long Distance Minimum Charge	Enter the lowest call amount that is charged for calls made within the U.S.
International Surcharge	Enter the hotel flat fee added to international calls.
International Minimum Charge	Enter the lowest amount that is charged for international calls.

## 2.13 Site Configuration

Press **M** to display the Site Configuration Screen. This screen is where the installer sets up location specific information.

Local Step: 0      Version: 032499  
Site Configuration

Local Area Code . . . . .  
Multi-Property? . . . . . N  
Property Codes? . . . . .

Site Configuration Screen

### 2.13.1 Site Configuration Fields.

The fields that display on the Site Configuration screen are described in the following table.

Field	Description
Local Area Code	Enter the local area code.
Multi-Property?	Enter <b>Y</b> if the interface is multi-property. Enter <b>N</b> if not.  (Default= <b>N</b> )
Property Codes?	Enter the alphabetic multi-property code (or codes) of the property that apply to this call accounting system.

## 2.14 PBX Information

Press **N** to display the PBX Information Screen.

Local Step: 0	Version: 032499 PBX Information	
PBX Brand . . . .	[REDACTED]	
Description	Brand	
Northern Telecom	NORTEL	
NEAX2400	NEAX2400	
AT&T Definity	DEFINITY	
Mitel	MITEL	
Remove Phone # Prefix .	[REDACTED]	xxxxxxx
Remove Additional Prefix	[REDACTED]	xxxxxxx

Phone Switch Information Screen

### 2.14.1 Phone Switch Information Fields.

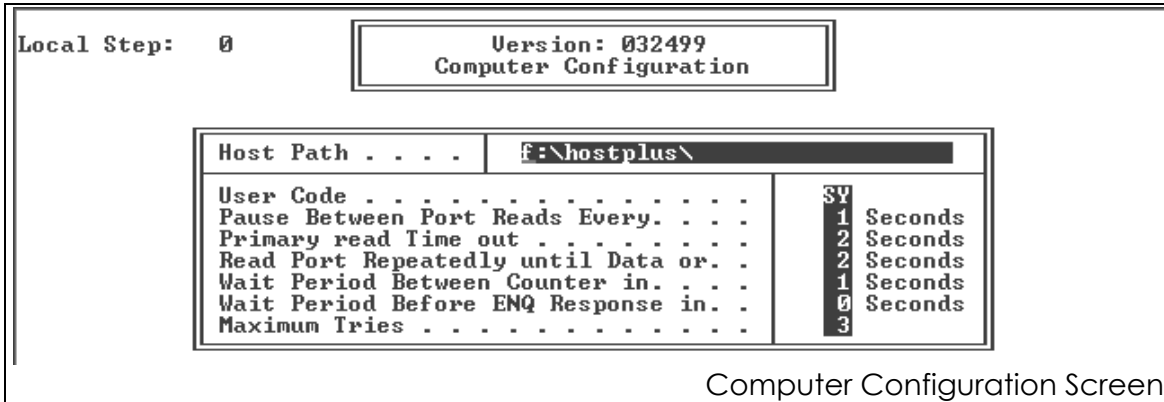
The fields that display on the Phone Switch Information screen are described in the following table.

Field	Description
<b>PBX Brand</b>  <b>Northern Telecom:</b> <b>NEAX2400:</b> <b>AT&amp;T Definity:</b> <b>MITEL:</b>	The brands listed have special processing requirements. When installing one of these brands, please enter the brand code displayed in the right column. If the brand is not listed, leave this field blank.
<b>Remove Phone # Prefix:</b>	Enter the telephone number prefix to be removed from the telephone number.  The Top Notch phone switch "NEAX2400" prefixes all long distance calls with a Sprint Prefix. This prefix had to be truncated to prevent long distance calls from being treated as calling card calls.  This parameter was provided to address a specific problem for Top Notch. This option is not a requirement of the NEAX2400 pbx system.

<b>Remove Additional Prefix</b>	Enter any additional prefix to be removed from the telephone number.
---------------------------------	--

## 2.15 Computer Configuration

Press **O** to display the Computer Configuration Screen. This screen is where the installer sets up the timing parameters, user name and path to the <sup>SMS</sup> | Host database.



### 2.15.1 Computer Configuration Fields

The fields that display on the Computer Configuration screen are described in the following table.

Field	Description
Host Path	Enter the complete drive/directory path to the directory where <sup>SMS</sup>   Host is installed.  (Default=f:\hostplus\)
User Code	This is the user name that will be written to the transaction file when a call record is posted.  (Default=SY)
Pause Between Port Reads Every _ Seconds	Enter the number of seconds the interface sleeps between calling the port read routing.  (Default=1)
Primary read Time out _ Seconds	  (Default=2)

---

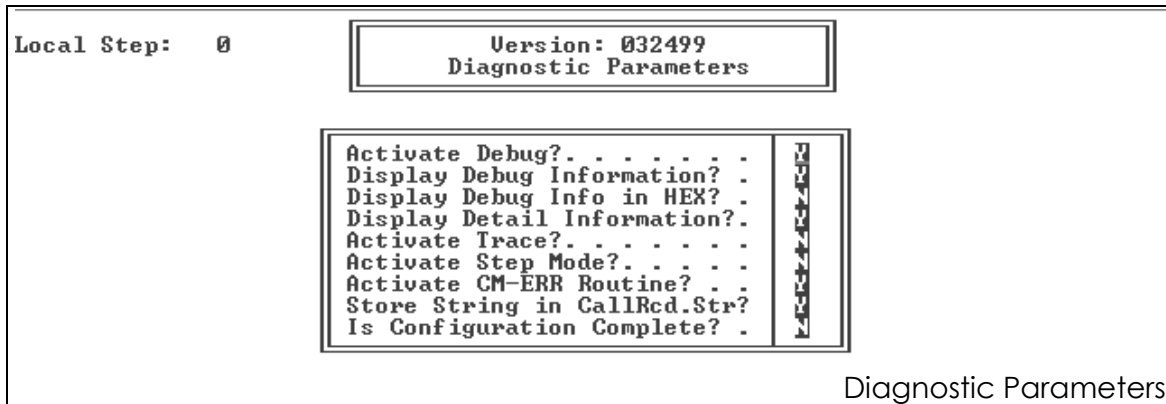
---

Field	Description
<b>Read Port Repeatedly until Data or _ Seconds</b>	Enter the number of seconds the interface spends trying to read a port if no data is found.  (Default=2)
<b>Wait Period Between Counter in _ Seconds</b>	Enter the number of seconds the interface sleeps between actual port reads.  (Default=1)
<b>Wait Period Before ENQ Response in _ Seconds</b>	Enter the number of seconds the interface waits requesting control of the line.  (Default=0)
<b>Maximum Tries</b>	Enter the number of times to resend a packet of information before it gets discarded.  (Default=3)

## 2.16 Diagnostic Parameters

---

Press **P** to display the Diagnostic Parameters Screen. This screen is where the programmer/installer puts the interface into diagnostic mode.



### 2.16.1 Diagnostic Parameters Fields.

The fields that display on the Diagnostic Parameters screen are described in the following table.

Field	Description
Activate Debug?	Enter <b>Y</b> to run the interface in debug mode. When the interface is in debug mode, all data transfers to and from the port are stored in the <b>debug.dbf</b> file. This option is intended for use by an Interface Developer. Please do not activate this option without first consulting an Interface Developer.  (Default=Y)
Display Debug Information?	Enter <b>Y</b> to display the data to the screen as it is transferred to and from the port. Data is displayed in ASCII decimal format unless the option <b>Display Debug Information in HEX</b> is activated. Printable characters are displayed below the ASCII Decimal or HEX values.  (Default=Y)

Field	Description
<b>Display Debug Info in HEX?</b>	<p>Enter <b>Y</b> to display the ASCII values of the data in HEX instead of Decimal.</p> <p>(Default=N)</p>
<b>Display Detail Information?</b>	<p>Enter <b>Y</b> to display all information in regards to the current call record. Enter <b>N</b> to limit the display to the guest account affected and the transaction performed. This option is intended to reduce resource usage while using remote diagnostic functions</p> <p>(Default=Y)</p>
<b>Activate Trace?</b>	<p>Enter <b>Y</b> to store trace information in the <b>debug.dbf</b> file. This option is intended for use by an Interface Developer. Please do not activate this option without first consulting an Interface Developer.</p> <p>(Default=N)</p> <p>This option should not be activated when it is not in use.</p>
<b>Activate Step Mode?</b>	<p>Enter <b>Y</b> to place the interface in Step Mode. When the interface is in step mode, the interface will stop at predefined locations in the code and display message. Press a key to proceed to next defined step.</p> <p>This option is intended for use by an Interface Developer. Please do not activate this option without first consulting an Interface Developer.</p> <p>(Default=N)</p>
<b>Activate CM-ERR Routine?</b>	<p>Enter <b>Y</b> to activate the error routine. This option should only be deactivated when using diagnostics. When this option is deactivated, no one will be notified when the interface goes down due to a fatal error.</p> <p>(Default=Y)</p>

Field	Description
<b>Store String in CallRcd.Str?</b>	This option is intended to allow the installer to capture a call record in a text file for setup purposes. The text file will contain column position indicators with the call string. The installer can use the data in the <b>CallRcd.Str</b> file to validate the call record data definition.  (Default=Y)
<b>Is Configuration Complete?</b>	Enter <b>Y</b> to indicate that configuration is complete.  Enter <b>N</b> if more configuration must be completed.  (Default=N)

## 2.17 Error Notification

Press **Q** to display the Error Notification Screen. This screen is where users and or terminals are setup to receive error notification when an interface goes down.

Local Step: 0	Version: 032499 Error Notification
Notify 1st. .	<input type="text"/>
Notify 2nd. .	<input type="text"/>
Notify 3rd. .	<input type="text"/>

Error Notification Screen

### 2.17.1 Error Notification Fields.

The fields that display on the Error Notification screen are described in the following table.

Field	Description
Notify 1 <sup>st</sup>	In DOS, enter up to three network names to receive broadcasted error messages when the interface encounters a problem.
Notify 2 <sup>nd</sup>	
Notify 3 <sup>rd</sup>	In AIX, enter up to three terminal device file names. Do not enter network names or device file names for computers or terminals that are running interfaces.

## 2.18 Logging Parameters

Press **R** to display the Logging Parameters Screen. This screen is where users choose which information will appear on the Log.

The log file is purged upon startup of the call accounting interface. Typically, the log file is purged daily when the night auditor finished the night audit and restarts the interface. If the client wishes to retain the information in the log file, the file named **logfile.dbf** should be copied to another location before the interface is started.

Local Step: 0

Version: 032499  
Logging Parameters

Log all Call Records?: . . . . .	Y
Log all Errors?: . . . . .	N
Log all Unposted Transactions?: . . . . .	N
Log all Posted Transactions?: . . . . .	N
Turn on Price Routine Diagnostics?: . . . . .	N
Turn on Timing Diagnostics?: . . . . .	N
Turn on Normal Diagnostics?: . . . . .	N
Log Informational Messages?: . . . . .	N
Maximum Records to Retain: . . . . .	1000

Logging Parameters

### 2.18.1 Logging Parameters Fields.

The fields that display on the Logging Parameters screen are described in the following table.

Field	Description
Log all Unposted Transactions?	Enter <b>Y</b> to log all unposted transactions.  Enter <b>N</b> to not log all unposted transactions.  (Default= <b>N</b> )
Log all Posted Transactions?	Enter <b>Y</b> to log all posted transactions.  Enter <b>N</b> to not log all posted transactions.  (Default= <b>N</b> )

Field	Description
Turn on Price Routine Diagnostics?	<p>Enter <b>Y</b> to turn on price routine diagnostics.</p> <p>Enter <b>N</b> to leave price routine diagnostics turned off.</p> <p>(Default=<b>N</b>)</p>
Turn on Timing Diagnostics?	<p>Enter <b>Y</b> to turn on timing diagnostics.</p> <p>Enter <b>N</b> to leave timing diagnostics turned off.</p> <p>(Default=<b>N</b>)</p>
Turn on Normal Diagnostics?	<p>Enter <b>Y</b> to turn on normal diagnostics.</p> <p>Enter <b>N</b> to leave normal diagnostics turned off.</p> <p>(Default=<b>N</b>)</p>
Log Informational Messages?	<p>Enter <b>Y</b> to log all informational messages.</p> <p>Enter <b>N</b> to not log informational messages.</p> <p>(Default=<b>Y</b>)</p>
Maximum Record to Retain?	<p>Enter the number of log record to keep in the file. The log file contain the number of record entered here. Each record is overwritten sequentially. When the last record in the file is written to, logging routine will overwrite records starting with the first record.</p> <p>(Default=<b>1000</b>)</p>

## 2.19 Exit

---

1. At the **Phone Interface Settings** Main Menu, press the **<ENTER>** key or type **X** and press **<Enter>**.
2. At the prompt, **Does SMS Price the Calls? . .**, press the **<Esc>** key.
3. If you are running setcom in the AIX environment and the instructions above don't work, copy the **config.db** file from the host directory into the call accounting directory.

### 3. Non-SMS Call Accounting Systems Main Menu

The Main Menu enables you to access all the options used to install and configure the Call Accounting interface. The Main Menu is shown in the following example.

```

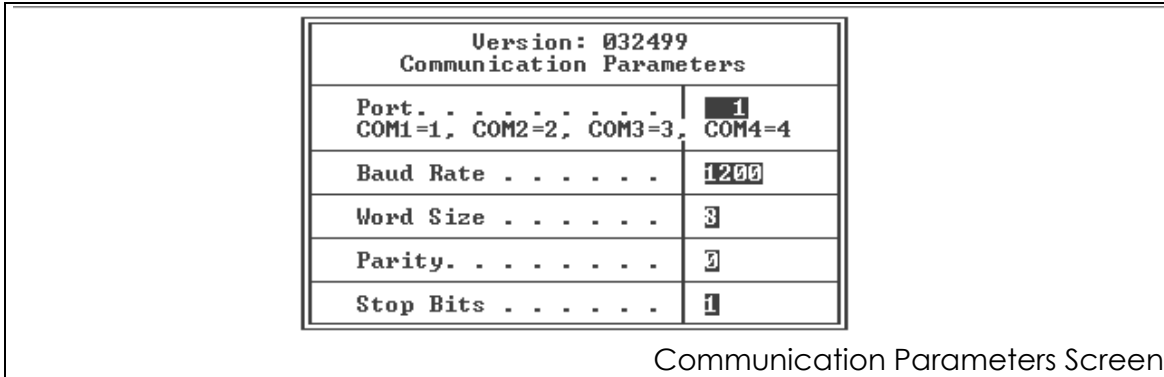
                                     Version: 032499
                                     Hobic Call Accounting Settings
A> Communications Parameters      H> Build Standard Indexes
B> Communication Protocol        I> Site Configuration
C> Call Record Data Definition   J> CAS Information
D> Additional Data Definitions   K> Computer Configuration
E> Call Accounting Parameters    L> Diagnostic Parameters
F> Setup Charge Descriptions     M> Error Notification
G> Posting Control Parameters    N> Logging Parameters

                                     X> Exit
                                     Interface Menu Selection? 3

                                     Non-SMS Call Accounting Main Menu
```

### 3.1 Communications Parameters

The Communications Parameters screen is used to configure the telecommunications parameters used by the interface. Press **A** at the Main Menu to display the Communications Parameters menu. A sample Communications Parameters screen is shown next.



#### 3.1.1 Communications Settings Fields

The fields that display on the Communications Settings screen are described in the following table.

Field	Description
<b>Port</b>	Enter the appropriate communications port number: <ul style="list-style-type: none"> <li>• <b>DOS Stand-Alone PC:</b> Usually <b>1 - 4</b>.</li> <li>• <b>DOS/Cubix Card:</b> Usually <b>1</b>.</li> <li>• <b>AIX:</b> The TTY number.</li> </ul> (Default= <b>1 for DOS</b> )
<b>Baud Rate</b>	Enter the baud rate (typically 9600, 2400 or 1200). (Default= <b>1200</b> )
<b>Word Size</b>	Also "Data Bits". Enter <b>8</b> or <b>7</b> . (Default= <b>8</b> )

---

---

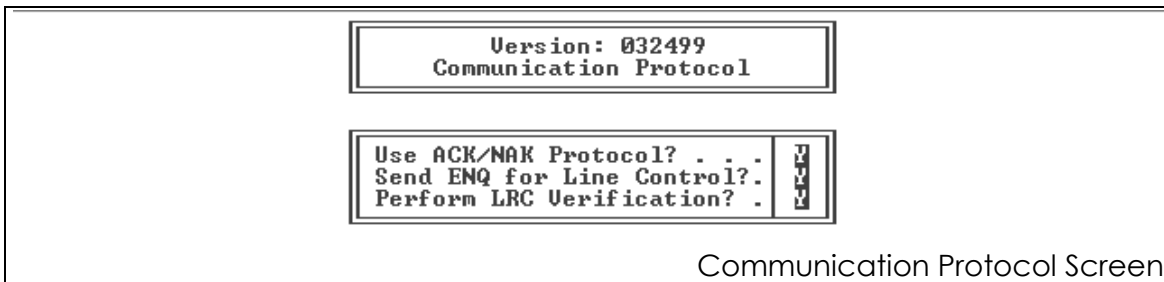
Field	Description
<b>Parity</b>	Enter <b>0</b> for None, <b>1</b> for Odd, or <b>2</b> for Even.  (Default=0)
<b>Stop Bits</b>	Stop bits. Enter <b>1</b> or <b>2</b> .  It is imperative that you verify these settings. It is impossible to receive records from the call accounting system if they do not match.  (Default=1)

**NOTE:** The **Baud**, **Wordlen**, **Parity** and **Stop Bits** settings must match those set in the call accounting system.

### 3.2 Communication Protocol

---

The Communication Protocol screen is where the installer defines the communication protocol used by the phone switch or call accounting system. Press **B** at the Main Menu to display the Communication Protocol screen. A sample Communication Protocol screen is shown next.



#### 3.2.1 Communication Protocol Fields

The fields that display on the Communication Protocol screen are described in the following table.

Field	Description
Use ACK/NAK Protocol?	Enter <b>Y</b> to use this standard communication method using specific characters to either accept or deny postings.  (Default=Y)
Send ENQ for Line Control?	Enter <b>Y</b> if communications require an inquiry permission request for the line. (Determined by the call accounting system.)  (Default=Y)
Perform LRC Verification?	Enter <b>Y</b> if an LRC checksum is required by the call accounting system.  (Default=Y)

### 3.3 Call Record Data Definition

The Call Record Data Definition screen contains call record data definition required by the interface. Press **C** to display the Call Record Data Definition screen. A sample screen is shown next.

Version: 032499 Call Record Data Definition		
Description	Start	Length
Message Sequence Number . . . .	2	3
Host Brand . . . . .	7	3
Extension or Access Number . .	17	5
Charge Amount . . . . .	35	6
Duration of Call . . . . .	29	4
Date of Call . . . . .	11	5
Time of Call . . . . .	23	5
Phone Number Called . . . . .	42	16

Call Record Data Definition

#### 3.3.1 Call Record Definition

A sample Call Accounting record might look similar to the following:

**^B001AAA03/04 2:30\$ 1.23101 0020555-5656 L^Cx**

The **^B** is a start of text (STX) character that represents the start of the data record. It is always in position 1 of the call record. The **^C** at the end of the sample record above is the end of text (ETX) character.

The elements of a Call Accounting record are described in the table below.

### 3.3.2 Call Record Data Definition Fields

The fields that display on the Call Record Data Definition screen are described in the following table.

Field	Description
<p><b>Message Sequence Number</b></p>	<p>The Message Sequence Number is usually three or four digits. Sometimes a single alpha character is included to handle number rollover. The alpha character will switch from A to B when the number rolls from 999 to 000. This alpha character should not be included in the data definition start and length parameters.</p> <p>This number is included in the record to prevent duplicate records. When we get two records sequentially with the same number, we know it is a duplicate. We also know that we did not get a record if the current number is greater than the last sequence + 1.</p> <p>Start: Enter the position in the call record where the Message Sequence Number begins.</p> <p><b>(Default=2)</b></p> <p>Length: Enter the number of positions the Message Sequence Number takes up in the call record.</p> <p><b>(Default=3)</b></p>
<p><b>Host Brand</b></p>	<p>The Host Brand is usually a three character string which always contains the same character value. This data is sometimes referred to as the Hotel Code or Switch Identifier in the Call Accounting System Specifications documentation.</p> <p>The Host Brand in the call record is compared to the Host Brand entered in the Posting Control Parameters option. If the value of the Host Brand in the call record differs from the brand entered in the Posting Control Parameters, the call record is rejected. If the interface is configured to use the ack/nak protocol, the interface will send a nak to the Call Accounting System. The Call Accounting system should resend the record. If the Interface is not configured with the ack/nak protocol, the Call Accounting system will not be notified.</p>

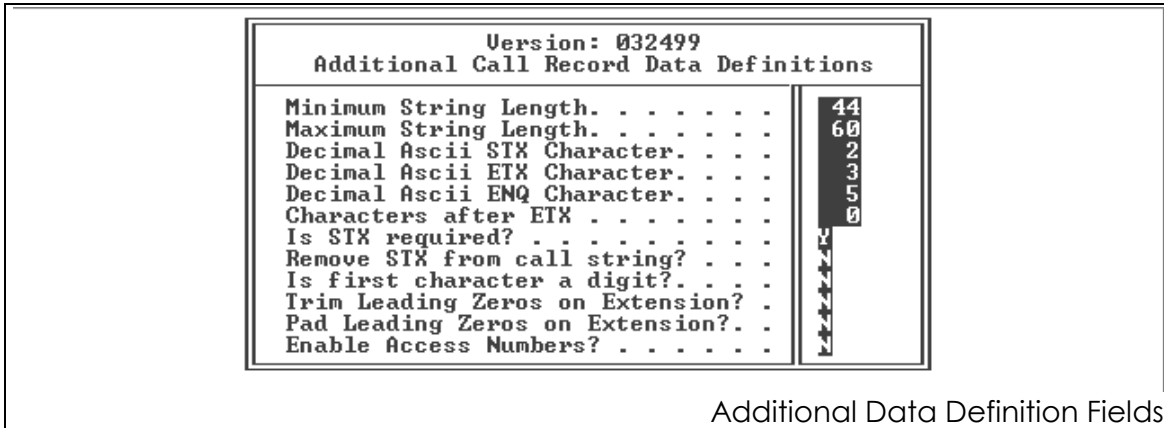
Field	Description
<b>Host Brand (continued)</b>	<p>If the <b>Log all errors</b> parameter in the Logging Parameters option is set to <b>Y</b>, an error message with a copy of the call record will be written to the log file named <b>logfile.dbf</b> in the call accounting directory.</p> <p>If the <b>Display Detail Information</b> parameter in the Diagnostics Parameters option is set to <b>Y</b>, an error message will be displayed. This functionality can be disabled by setting the Host Brand parameter in the Posting Controls option to spaces. Disabling the Host Brand functionality is not recommended unless the remote device does not send a single constant brand in all call records.</p> <p>Start: Enter the position in the call record where the Host Brand begins. <b>(Default=7)</b></p> <p>Length: Enter the number of positions the Host Brand takes up in the call record. <b>(Default=3)</b></p>
<b>Extension or Access Number</b>	<p>The Calling Extension Number is the telephone extension from which the call originated. The number is usually left justified and six characters in length.</p> <p>Start: Enter the position in the call record where the Extension or Access Number begins. <b>(Default=17)</b></p> <p>Length: Enter the number of positions the Extension or Access Number takes up in the call record. <b>(Default=5)</b></p>

Field	Description
<p><b>Charge Amount</b></p>	<p>Note that the \$ character is not included in the start position. The specifications will usually include the dollar sign in the starting position, but our call accounting software doesn't care. Leave the \$ out of the definition so the interface software does not have to parse it out.</p> <p>Start: Enter the position in the call record where the Charge Amount begins.</p> <p><b>(Default=35)</b></p> <p>Length: Enter the number of positions the Charge Amount takes up in the call record.</p> <p><b>(Default=6)</b></p>
<p><b>Duration of Call</b></p>	<p>The length of the call in minutes. The start and length includes the decimal positions when the duration is specified as minutes and tenths of minutes (020.7).</p> <p>Start: Enter the position in the call record where the Duration of Call begins.</p> <p><b>(Default=29)</b></p> <p>Length: Enter the number of positions the Duration of Call takes up in the call record.</p> <p><b>(Default=4)</b></p>
<p><b>Date of Call</b></p>	<p>The date the call was initiated. This date is always in MM/DD format. If the year appears in the call record, do not include it in the Call Record Data Definition. The interface will append the appropriate year during processing.</p> <p>Start: Enter the position in the call record where the Date of Call begins.</p> <p><b>(Default=11)</b></p> <p>Length: Enter the number of positions the Date of Call takes up in the call record.</p> <p><b>(Default=5)</b></p>

Field	Description
<b>Time of Call (hh:mm)</b>	<p>The time the call was placed, in 24 hour time (13:30 is 1:30 p.m.). Make sure the starting position accounts for the leading space when the time is less than 12:00.</p> <p>Start: Enter the position in the call record where the Time of Call begins.</p> <p><b>(Default=23)</b></p> <p>Length: Enter the number of positions the Time of Call takes up in the call record.</p> <p><b>(Default=5)</b></p>
<b>Phone Number Called</b>	<p>The phone number that was dialed from the Calling Extension Number. The field length may vary. Get the field's maximum length from the Call Accounting system vendor.</p> <p>Note the <b>L</b> in the last position of the record. This is a call type flag that is usually embedded in the telephone number at either the beginning or the end of the phone number field. Be sure to include it as part of the phone number in the field definition. The interface software will parse it out of the phone number field.</p> <p>The call type can be <b>L</b>, indicating a local call, or an <b>F</b> indicating a foreign or international call. Long distance calls do not usually contain a call type indicator but they can be identified by examining the phone number.</p> <p>Start: Enter the position in the call record where the Phone Number Called begins.</p> <p><b>(Default=42)</b></p> <p>Length: Enter the number of positions the Phone Number Called takes up in the call record.</p> <p><b>(Default=16)</b></p>

### 3.4 Additional Data Definitions

The Additional Data Definitions screen contains additional data definition required by the interface. Press **D** to display the Additional Data Definitions screen. A sample screen is shown next.



#### 3.4.1 Additional Data Definition Fields

The fields that display on the Additional Data Definition screen are described in the following table.

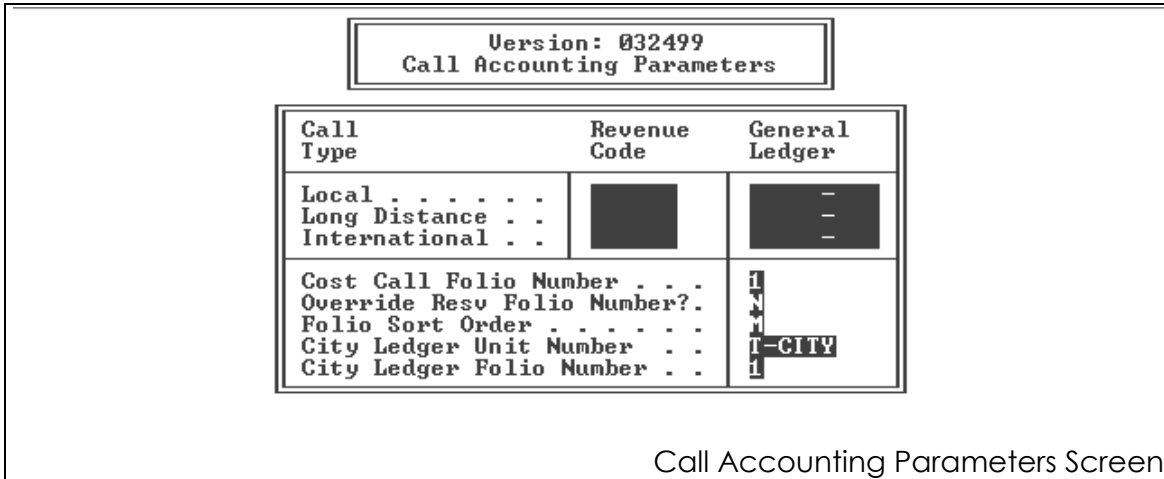
Field	Description
Minimum String Length	The minimum number of characters in a valid call record data stream.  (Default=44)

Field	Description
<b>Maximum String Length</b>	<p>This number is used by the interface to dump records that do not contain an end of text (ETX) marker. The ETX notifies the interface that the end of data record has been encountered.</p> <p>If the interface does not receive an ETX before the Maximum String Length, the record is discarded and the interface sends a negative acknowledgment (NAK) to the Call Accounting system to indicate the problem.</p> <p>A binary calculation is performed on the data record to produce a special character known as a block check (BCC) or longitudinal redundancy (LRC) check. The <b>x</b> following the ETX in the sample record represents an LRC or BCC character. This character is transmitted to the interface which performs the same calculation and compares the resulting ASCII character with the one received from the Call Accounting system. If the characters match, the incoming record is deemed to be valid and the interface sends a positive acknowledgment (ACK). If the characters do not match, the interface sends a negative acknowledgment (NAK) and disposes of the record. The call accounting system will usually transmit the record a maximum of three times: the initial transmission and two retransmissions.</p> <p><b>(Default=60)</b></p>
<b>Decimal Ascii STX Character</b>	<p>Enter the character that denotes the start of text.</p> <p><b>(Default=2)</b>(Determined by interfaced call accounting system)</p>
<b>Decimal Ascii ETX Character</b>	<p>Enter the character that denotes the end of text.</p> <p><b>(Default=3)</b>(Determined by interfaced call accounting system)</p>
<b>Decimal Ascii ENQ Character</b>	<p>Enter the character that denotes an inquiry permission request.</p> <p><b>(Default=5)</b>(Determined by interfaced call accounting system)</p>

Field	Description
Characters after ETX	Enter the number of characters the interface will accept after the end of text marker (ETX) is encountered.  (Default=0)
Is STX required?	Enter <b>Y</b> if the start of text character (STX) is required by the interface. Enter <b>N</b> if the STX isn't required.  (Default=Y)
Remove STX from call string?	Enter <b>Y</b> to require the interface to strip the start of text character (STX) from the call string. Enter <b>N</b> to retain the STX.  (Default=N)
Is first character a digit?	(Default=N)
Trim Leading Zeroes on Extension?	(Default=N)
Pad Leading Zeros on Extension?	(Default=N)
Enable Access Numbers?	(Default=N)

### 3.5 Call Accounting Parameters

The Call Accounting Parameters Settings screen contains accounting parameters used by the interface. Press **E** to display the Call Accounting Parameters screen. A sample screen is shown next.



#### 3.5.1 Call Accounting Parameters Fields

The fields that display on the Call Accounting Parameters screen are described in the following table.

Field	Description
Local Revenue Code	Enter the <sup>SMS</sup>   Host revenue code to use for local calls.
Local General Ledger	Enter the <sup>SMS</sup>   Host General Ledger code for local calls.
Long Distance Revenue Code	Enter the <sup>SMS</sup>   Host revenue code for long distance calls.
Long Distance General Ledger	Enter the <sup>SMS</sup>   Host General Ledger code for long distance calls.
International Revenue Code	Enter the <sup>SMS</sup>   Host revenue code for international calls.
International General Ledger	Enter the <sup>SMS</sup>   Host General Ledger code for international calls.

Field	Description
<b>Cost Call Folio Number</b>	Enter the folio number to use when overriding the folio number on the reservation.  (Default=1)
<b>Override Resv Folio Number?</b>	If the hotel wants to use a specific folio number for call accounting transactions, set this option to <b>N</b> and enter the folio number in the above <b>Cost Call Folio Number</b> parameter. Set this option to <b>Y</b> when the calls are posted using the default folio on the Reservation.  (Default=N)
<b>Folio Sort Order</b>	Enter the alphabetic sort order for folios.  (Default=M)
<b>City Ledger Unit Number</b>	The call accounting interface software requires a UNIT for City Ledger accounts. Please enter it here.  (Default=T-CITY)
<b>City Ledger Folio Number</b>	Enter the folio number to use for City Ledger transactions. <b>Make sure the City Ledger Unit item contains a unique character value.</b> The Interface uses the City Ledger Unit number to determine when to use the City Ledger folio number. The City Ledger Unit Number must not be set to a valid unit number.  (Default=1)

### 3.6 Setup Charge Description

Press **F** to display the Setup Charge Description Screen. Use this screen to define the data to be stored in the transaction description.

Version: 032499  
Setup Charge Description

Unformat phone number  Remove Phone # Prefix

Trx Desc	^phone (^dura) ^time
C/L Trx Desc	^phone (^dura) ^time
Vacant Room	^extn ^phone (^dura) ^time

Valid Codes: ^phone, ^date, ^time, ^dura, ^extn, ^type,  
^tcode, ^glcode  
When phone is 8022537377, extn is 345 and GL-Code 0001-10  
And Charge Description is: ^phone:4 / ^glcode:1,5 ^extn  
The Description will be : 2537377 / 0001- 345

Setup Charge Description Screen

#### 3.6.1 Setup Charge Description Fields

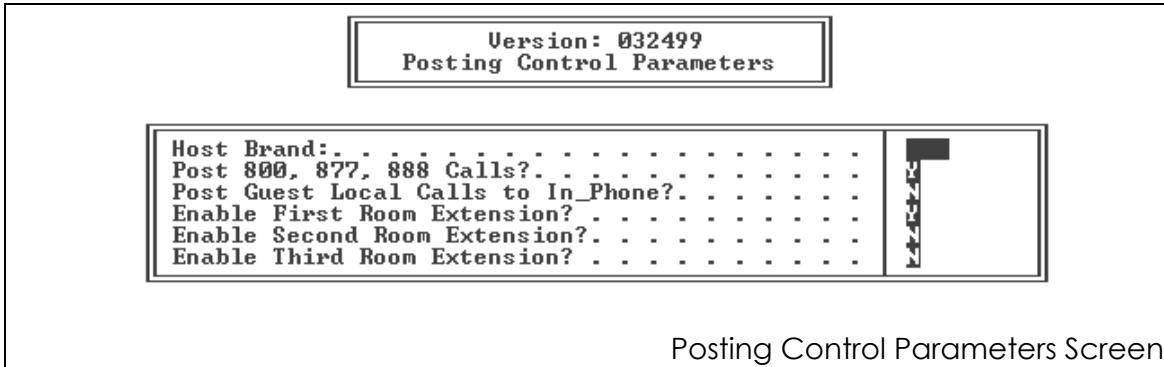
The fields that display on the Setup Charge Description screen are described in the following table.

Field	Description
<b>Trx Desc</b>	<p>This is a mask that will be used to specify what data will be placed in the transaction description field when the call record was generated on a guest room extension or an administration extension.</p> <p><b>(Default=^phone, (^dura), ^time)</b></p>
<b>C/L Trx Desc</b>	<p>This is the mask that will be used to specify what data will be placed in the transaction description field when the call record is for a City Ledger account.</p> <p><b>(Default=^phone, (^dura), ^time)</b></p>
<b>Vacant Room</b>	<p>This is a mask that will be used to specify the data that will be placed in the transaction description field when the call record was generated from a vacant guest room.</p> <p><b>(Default=^extn, ^phone, (^dura), ^time)</b></p>

Field	Description
<b>Valid Codes</b>	The above description fields can contain text as well as codes. For example, an extension number of <b>100</b> and a mask of <b>Extension: ^ext</b> would produce <b>Extension: 100</b> in the transaction description field.
^ <b>phone</b> :	Phone number called (see Call Record Definition)
^ <b>date</b> :	Date of the call
^ <b>time</b> :	Time of the call
^ <b>dura</b> :	Duration of the call
^ <b>extn</b> :	Calling Extension Number
^ <b>type</b> :	Call type: <b>L</b> = Local, <b>F</b> = Foreign, <b>D</b> = Long Distance
^ <b>tcode</b> :	<small>SMS</small>   Host revenue code
^ <b>glcode</b> :	<small>SMS</small>   Host General Ledger code

### 3.7 Posting Control Parameters

Press **G** to display the Posting Control Parameters Screen. This screen is where the installer sets parameters that determine whether a call record will be posted or ignored.



Posting Control Parameters Screen

#### 3.7.1 Posting Control Parameters Fields

The fields that display on the Posting Control Parameters screen are described in the following table.

Field	Description
Host Brand	Enter the unique 2 or 3 character field in the call record used to ensure record alignment. It is sometimes called a customer code, hotel code or phone switch ID in the specifications.
Post 800, 877, 888 Calls?	Enter <b>Y</b> if the hotel wants all toll-free calls using the following area codes to be posted: 800 877 888  (Default=Y)
Post Guest Local Calls to In_Phone	Enter <b>Y</b> if the hotel wants all local calls made by guests to be posted to the administration phone transaction file ( <b>In-Phone.DBF</b> ). If local calls are to be posted to the guests' folio, set this option to <b>N</b> .  (Default=N)

Field	Description
Enable First Room Extension	(Default=Y)
Enable Second Room Extension	(Default=N)
Enable Third Room Extension	(Default=N)

### 3.8 Build Standard Indexes

Press **H** to display the Build Standard Indexes Screen. This screen is where the installer initiates an Index Rebuild.



#### 3.8.1 Build Standard Indexes Field.

The fields that display on the Build Standard Indexes screen are described in the following table.

Field	Description
Start Index Rebuild	Select this option to build or rebuild the indexes required for the call accounting interface. The interface must be down prior to executing this option.  (Default=N)

### 3.9 Site Configuration

---

Press *I* to display the Site Configuration Screen. This screen is where the installer sets up location specific information.

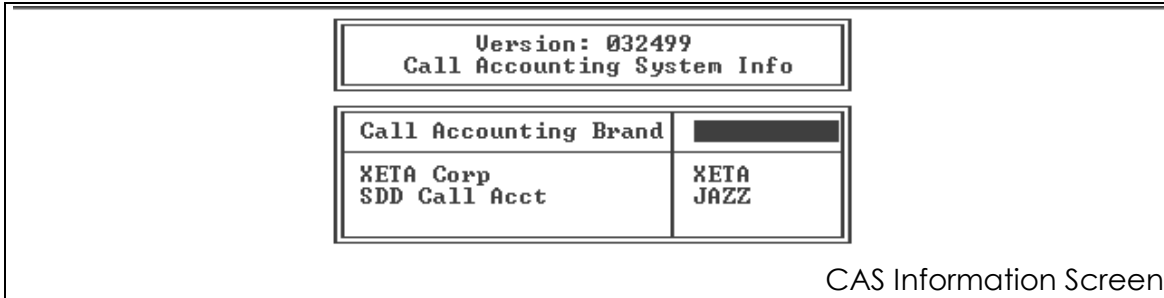
#### 3.9.1 Site Configuration Fields.

The fields that display on the Site Configuration screen are described in the following table.

Field	Description
Multi-Property?	Enter <b>Y</b> if interface is multi-property. Enter <b>N</b> if not.  (Default= <b>N</b> )
Property Codes?	Enter the alphabetic multi-property code (or codes) of the property that apply to this call accounting system.

### 3.10 CAS Information

Press **J** to display the CAS Information Screen.



#### 3.10.1 CAS Information Fields.

The fields that display on the CAS Information screen are described in the following table.

Field	Description
<b>Call Accounting Brand</b>  XETA Corp SDD Call Acct	The brands listed have special processing requirements.  When installing one of these brands, please enter the brand code displayed in the right column. If the brand is not listed, leave this field blank.

### 3.10.2 XETA Specific Information

The XETA Specific Information screen will appear if XETA has been selected. This screen is where the XETA call accounting setup is done.

Version: 032499 XETA Specific Information		
Description	Start	Length
Find Error Call Indicator . . .	0	1
Call Originator Indicator . . .	0	1
Call Type Indicator . . . . .	0	0
Call Types below are: <L>ocal, Long<D>istance and <I>nternational		
Information Call <L/D/I>. . . .	L	
HOBIC <L/D/I> . . . . .	L	
Direct Dial LD <L/D/I>. . . . .	D	
International Call .<L/D/I> . . .	I	
L.D. Service Charge.<L/D/I> . . .	D	
Post when Find Error = 1? . . .	Y	

XETA Specific Information Screen

#### 3.10.2.1 XETA Specific Information Fields.

The fields that display on the CAS Information screen are described in the following table.

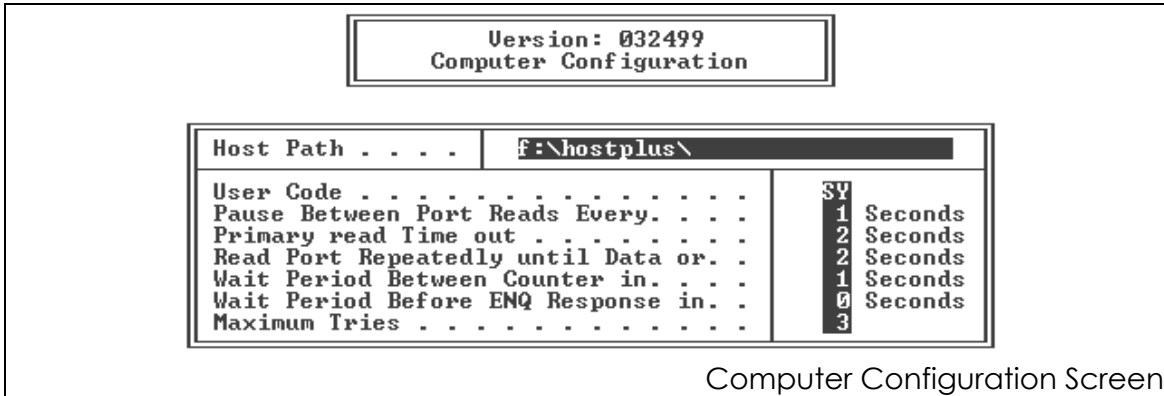
Field	Description
<b>Find Error Call Indicator</b>	<p>The Find Error Call Indicator is a field in the call record that identifies calls that could not be priced by the XETA call accounting system.</p> <p>Start: This is the starting position of the Find Error Call Indicator field in the call record.</p> <p>Length: This is the number of characters in the Find Error Call Indicator field.</p>

Field	Description														
<b>Call Originator Indicator</b>	<p>The Call Originator Indicator is a field in the XETA call record that identifies administration calls and guest calls. A zero in this field indicates a guest call while a one indicates an administration call.</p> <p>Start: This is the starting position of the Call Originator Indicator field.</p> <p>Length: This is the number of characters in the Call Originator Indicator field.</p>														
<b>Call Type Indicator</b>	<p>The Call Type Indicator is a field in the XETA call record that identifies the following types of calls:</p> <table border="1" data-bbox="613 766 1356 1333"> <thead> <tr> <th data-bbox="613 766 706 800">Value</th> <th data-bbox="808 766 943 800">Call Type</th> </tr> </thead> <tbody> <tr> <td data-bbox="613 835 634 869"><b>0</b></td> <td data-bbox="808 835 1019 869">Information call</td> </tr> <tr> <td data-bbox="613 905 634 938"><b>1</b></td> <td data-bbox="808 905 959 938">HOBIC call</td> </tr> <tr> <td data-bbox="613 974 634 1008"><b>2</b></td> <td data-bbox="808 974 1146 1008">Direct Dial Long Distance</td> </tr> <tr> <td data-bbox="613 1043 634 1077"><b>3</b></td> <td data-bbox="808 1043 943 1077">Local Call</td> </tr> <tr> <td data-bbox="613 1113 634 1146"><b>5</b></td> <td data-bbox="808 1113 1320 1220">Long Distance Service Charge calls including all Operator Assists, Collect, Third Party, etc.</td> </tr> <tr> <td data-bbox="613 1255 634 1289"><b>8</b></td> <td data-bbox="808 1255 1305 1325">Room Status Calls. Room Status Calls are NOT posted.</td> </tr> </tbody> </table> <p>Any other value is treated as an invalid call type. The error is logged and the call is posted as a local call.</p> <p>Start: This is the starting position of the Call Type Indicator in the XETA call record.</p> <p>Length: This is the number of characters in the Call Type Indicator in the call record.</p>	Value	Call Type	<b>0</b>	Information call	<b>1</b>	HOBIC call	<b>2</b>	Direct Dial Long Distance	<b>3</b>	Local Call	<b>5</b>	Long Distance Service Charge calls including all Operator Assists, Collect, Third Party, etc.	<b>8</b>	Room Status Calls. Room Status Calls are NOT posted.
Value	Call Type														
<b>0</b>	Information call														
<b>1</b>	HOBIC call														
<b>2</b>	Direct Dial Long Distance														
<b>3</b>	Local Call														
<b>5</b>	Long Distance Service Charge calls including all Operator Assists, Collect, Third Party, etc.														
<b>8</b>	Room Status Calls. Room Status Calls are NOT posted.														
<b>Information Call (L/D/I)</b>	<p>Enter <b>L</b> if the transaction is posted to the Local Revenue and G/L codes. Enter a <b>D</b> if the transaction is posted using the long distance codes. Enter an <b>I</b> if the transaction is posted using international distance codes.</p> <p><b>(Default=L)</b></p>														

Field	Description
<b>HOBIC (L/D/I)</b>	Enter <b>L</b> if the transaction is posted to the Local Revenue and G/L codes. Enter a <b>D</b> if the transaction is posted using the long distance codes. Enter an <b>I</b> if the transaction is posted using international distance codes.  (Default=L)
<b>Direct Dial LD (L/D/I)</b>	Enter <b>L</b> if the transaction is posted to the Local Revenue and G/L codes. Enter a <b>D</b> if the transaction is posted using the long distance codes. Enter an <b>I</b> if the transaction is posted using international distance codes.  (Default=D)
<b>International Call (L/D/I)</b>	Enter <b>L</b> if the transaction is posted to the Local Revenue and G/L codes. Enter a <b>D</b> if the transaction is posted using the long distance codes. Enter an <b>I</b> if the transaction is posted using international distance codes.  (Default=I)
<b>L.D. Service Charge (L/D)</b>	Enter <b>L</b> if the transaction is posted to the Local Revenue and G/L codes. Enter a <b>D</b> if the transaction is posted using the long distance codes. Enter an <b>I</b> if the transaction is posted using international distance codes.  (Default=D)
<b>Post when Find Error = 1?</b>	This field tells the interface what to do with the transactions that are flagged as <b>Cannot Price</b> when the <b>Find Error Call</b> flag is set to 1.  Enter <b>Y</b> to post these calls.  (Default=Y)

### 3.11 Computer Configuration

Press **K** to display the Computer Configuration Screen. This screen is where the installer sets up the timing parameters, user name and path to the <sup>SMS</sup> | Host database.



#### 3.11.1 Computer Configuration Fields.

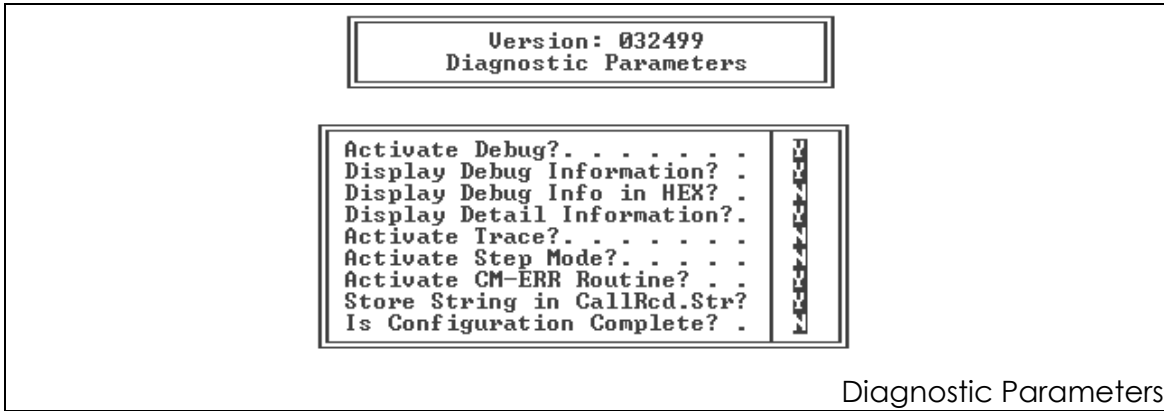
The fields that display on the Computer Configuration screen are described in the following table.

Field	Description
Host Path	Enter the complete drive/directory path to the directory where <sup>SMS</sup>   Host is installed.  (Default=f:\hostplus\)
User Code	This is the user name that will be written to the transaction file when a call record is posted.  (Default=SY)
Pause Between Port Reads Every _ Seconds	Enter the number of seconds the interface sleeps between calling the port read routing.  (Default=1)
Primary read Time out _ Seconds	  (Default=2)

Field	Description
<b>Read Port Repeatedly until Data or _ Seconds</b>	Enter the number of seconds the interface spends trying to read a port if no data is found.  (Default=2)
<b>Wait Period Between Counter in _ Seconds</b>	Enter the number of seconds the interface sleeps between actual port reads.  (Default=1)
<b>Wait Period Before ENQ Response in _ Seconds</b>	Enter the number of seconds the interface waits requesting control of the line.  (Default=0)
<b>Maximum Tries</b>	Enter the number of times to resend a packet of information before it gets discarded.  (Default=3)

### 3.12 Diagnostic Parameters

Press **L** to display the Diagnostic Parameters Screen. This screen is where the programmer/installer puts the interface into diagnostic mode.



#### 3.12.1 Diagnostic Parameters Fields.

The fields that display on the Diagnostic Parameters screen are described in the following table.

Field	Description
<b>Activate Debug?</b>	Enter <b>Y</b> to run the interface in debug mode. When the interface is in debug mode, all data transfers to and from the port are stored in the <b>debug.dbf</b> file. This option is intended for use by an Interface Developer. Please do not activate this option without first consulting an Interface Developer.  (Default=Y)
<b>Display Debug Information?</b>	Enter <b>Y</b> to display the data to the screen as it is transferred to and from the port. Data is displayed in ASCII decimal format unless the option <b>Display Debug Information in HEX</b> is activated. Printable characters are displayed below the ASCII Decimal or HEX values.  (Default=Y)

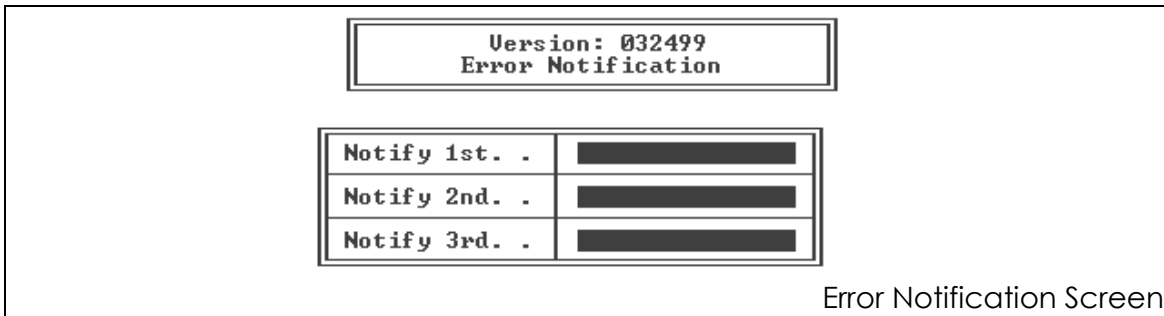
Field	Description
<p><b>Display Debug Info in HEX?</b></p>	<p>Enter <b>Y</b> to display the ASCII values of the data in HEX instead of Decimal.</p> <p>(Default=N)</p>
<p><b>Display Detail Information?</b></p>	<p>Enter <b>Y</b> to display all information in regards to the current call record. Enter <b>N</b> to limit the display to the guest account affected and the transaction performed. This option is intended to reduce resource usage while using remote diagnostic functions</p> <p>(Default=Y)</p>
<p><b>Activate Trace?</b></p>	<p>Enter <b>Y</b> to store trace information in the <b>debug.dbf</b> file. This option is intended for use by an Interface Developer. Please do not activate this option without first consulting an Interface Developer.</p> <p>(Default=N)</p> <p>This option should not be activated when it is not in use.</p>
<p><b>Activate Step Mode?</b></p>	<p>Enter <b>Y</b> to place the interface in Step Mode. When the interface is in step mode, the interface will stop at predefined locations in the code and display message. Press a key to proceed to next defined step.</p> <p>This option is intended for use by an Interface Developer. Please do not activate this option without first consulting an Interface Developer.</p> <p>(Default=N)</p>
<p><b>Activate CM-ERR Routine?</b></p>	<p>Enter <b>Y</b> to activate the error routine. This option should only be deactivated when using diagnostics. When this option is deactivated, no one will be notified when the interface goes down due to a fatal error.</p> <p>(Default=Y)</p>

Field	Description
<b>Store String in CallRcd.Str?</b>	<p>This option is intended to allow the installer to capture a call record in a text file for setup purposes. The text file will contain column position indicators with the call string. The installer can use the data in the <b>CallRcd.Str</b> file to validate the call record data definition.</p> <p>(Default=Y)</p>
<b>Is Configuration Complete?</b>	<p>Enter <b>Y</b> to indicate that configuration is complete.</p> <p>Enter <b>N</b> if more configuration must be completed.</p> <p>(Default=N)</p>

### 3.13 Error Notification

---

Press **M** to display the Error Notification Screen. This screen is where users and or terminals are setup to receive error notification when an interface goes down.



#### 3.13.1 Error Notification Fields.

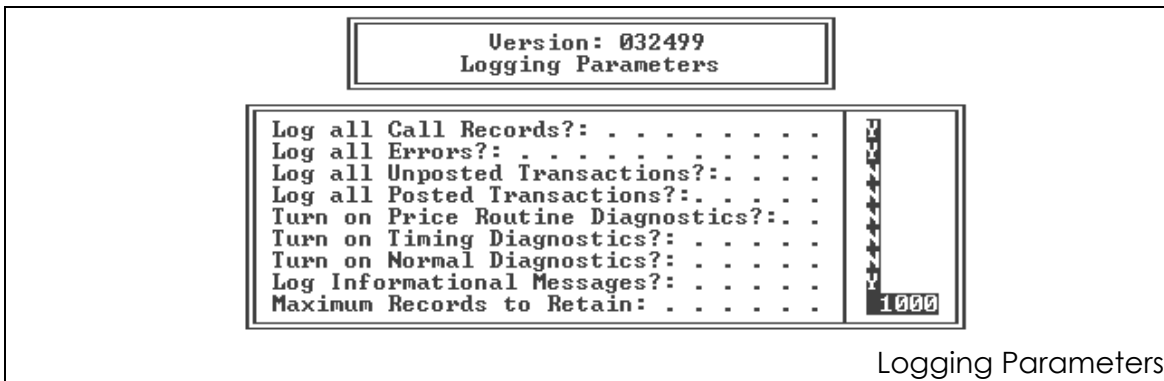
The fields that display on the Error Notification screen are described in the following table.

Field	Description
Notify 1 <sup>st</sup>	In DOS, enter up to three network names to receive broadcasted error messages when the interface encounters a problem.
Notify 2 <sup>nd</sup>	
Notify 3 <sup>rd</sup>	

### 3.14 Logging Parameters

Press **N** to display the Logging Parameters Screen. This screen is where users turn on diagnostics and choose which information will appear on the Log.

The log file is purged upon startup of the call accounting interface. Typically, the log file is purged daily when the night auditor finished the night audit and restarts the interface. If the client wishes to retain the information in the log file, the file named **logfile.dbf** should be copied to another location before the interface is started.



#### 3.14.1 Logging Parameters Fields.

The fields that display on the Logging Parameters screen are described in the following table.

Field	Description
Log all Call Records?	Enter <b>Y</b> to log all call records.  Enter <b>N</b> to not log all call records.  (Default=Y)
Log all Errors?	Enter <b>Y</b> to log all errors.  Enter <b>N</b> to not log all errors.  (Default=Y)

Field	Description
<p><b>Log all Unposted Transactions?</b></p>	<p>Enter <b>Y</b> to log all unposted transactions.</p> <p>Enter <b>N</b> to not log all unposted transactions.</p> <p>(Default=<b>N</b>)</p>
<p><b>Log all Posted Transactions?</b></p>	<p>Enter <b>Y</b> to log all posted transactions.</p> <p>Enter <b>N</b> to not log all posted transactions.</p> <p>(Default=<b>N</b>)</p>
<p><b>Turn on Price Routine Diagnostics?</b></p>	<p>Enter <b>Y</b> to turn on price routine diagnostics.</p> <p>Enter <b>N</b> to leave price routine diagnostics turned off.</p> <p>(Default=<b>N</b>)</p>
<p><b>Turn on Timing Diagnostics?</b></p>	<p>Enter <b>Y</b> to turn on timing diagnostics.</p> <p>Enter <b>N</b> to leave timing diagnostics turned off.</p> <p>(Default=<b>N</b>)</p>
<p><b>Turn on Normal Diagnostics?</b></p>	<p>Enter <b>Y</b> to turn on normal diagnostics.</p> <p>Enter <b>N</b> to leave normal diagnostics turned off.</p> <p>(Default=<b>N</b>)</p>
<p><b>Log Informational Messages?</b></p>	<p>Enter <b>Y</b> to log all informational messages.</p> <p>Enter <b>N</b> to not log informational messages.</p> <p>(Default=<b>Y</b>)</p>
<p><b>Maximum Record to Retain?</b></p>	<p>Enter the number of log record to keep in the file. The log file contain the number of record entered here. Each record is overwritten sequentially. When the last record in the file is written to, logging routine will overwrite records starting with the first record.</p> <p>(Default=<b>1000</b>)</p>

### 3.15 Exit

---

1. At the **Phone Interface Settings** Main Menu, press the **<ENTER>** key or type **X** and press **<Enter>**.
2. At the prompt, **Does SMS Price the Calls?**, press the **<Esc>** key.
3. If you are running setcom in the AIX environment and the instructions above don't work, copy the **config.db** file from the host directory into the call accounting directory.

## 4. Standard Call Accounting Testing

Complete the installation instructions first so the port and interface configurations will be set before you test interface performance.

Place all the files in the prescribed directories

Run the main program script. Type **gcai**.

The first thing you should see is the building of temporary databases and indexes. If you have any errors, call for Interface Support. Otherwise check off each of the items below after you complete them.

Keep this information, as well as all interface instructions with the property folder. Each new software will come with its own set of instructions and checklists.

### 4.1 Testing Checklist

---

- Check for good communications** - Look at the *TX* line near the bottom of the screen. The packet will always come from the vendor. The packet should be in a format like "0001 PPH 08/12 1102 10:02 0004 \$003.34 617-234-9876" on the *RX* line. SMS will respond on the *TX* line with an ACK. If we are not communicating both ways, refer to your interface troubleshooting guide. When communication is established, move on.

From this point on, remember that the *TX* line is SMS, and the *RX* line is the call accounting system.

- Post a local phone charge** - Have the phone vendor send you a local phone charge. This is the primary functionality of this interface. You will see a packet that looks like the one above, without the area code. Verify that the charge and description appear on the <sup>SMS</sup> | Host folio, if applicable.
- Post a long distance phone charge** - Have the phone vendor send you a long distance phone charge. You will see a packet that looks like the one above, including the area code. Verify that the charge and description appear on the <sup>SMS</sup> | Host folio.
- Post a credit card phone charge** - Have the phone vendor send you a credit card phone charge. You will see a packet that looks like the one above, with the added numbers before the area code. Verify that the charge and description appear on the <sup>SMS</sup> | Host folio, if applicable.

- Post an information phone charge** - Have the phone vendor send you an information phone charge. You will see a packet that looks like the one above, with a 411 or a 555-1212. Verify that the charge and description appear on the <sup>SMS</sup> | Host folio, if applicable.
  
- Post an 800/888 phone charge** - Have the phone vendor send you an 800/888 phone charge. You will see a packet that looks like the one above, with the area code as 800 or 888. Verify that the charge and description appear on the <sup>SMS</sup> | Host folio, if applicable.
  
- Post a 900 phone charge** - Have the phone vendor send you an 900 phone charge. You will see a packet that looks like the one above, with the area code as 900. Verify that the charge and description appear on the <sup>SMS</sup> | Host folio, if applicable.
  
- Post an administrative charge** - If the property is posting admin calls, have the phone vendor send you a call from an administrative phone. Verify that the charge and description are placed in the in-phone file.
  
- Check for errors** - Look for a *NAK* on the *TX* line. This means we do not like the packet or charge for some reason. You may see SMS send this error. If you don't see any, and all the postings work, check this and move on.
  
- Call Support** - Let Support know that the interface is done. Any phone calls the hotel might make about it should never catch Support unaware.
  
- Add to hotel folder** - Save this document for our records.