INN-FORM *Plus* ™

Call Accounting and Management System
User Guide

TEL electronics

WARNING

This equipment generates, uses and can radiate radio frequency energy, and if installed and used in accordance with this User Guide, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference; in which case, the user, at his own expense, may be required to take whatever measures are necessary to correct the interference.

TEL electronics, inc.
INN-FORM *Plus* User Guide
Reader Comments

TO USERS OF THIS GUIDE:

We would appreciate your assistance in keeping this user guide as up to date and as helpful as possible. Please note in the space provided below any comments, questions, corrections or suggestions you may have for future versions of this user guide. Attach additional pages as needed.

COMMENTS

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If you would like a written response to your comments, please print your name and address in the space below:

Name:_____
Company:_____
Address:_____
City:_____ State: _____ Zip:_____
Telephone:_____

Please mail this form to:

TEL electronics, inc.
313 South 740 East, Suite 1 - American Fork, UT 84003

TEL electronics, inc.
INN-FORM *Plus* User Guide
Operation Information

This page presents information which is important for the proper operation of this Call Accounting and Management System. If you wish to keep this information confidential, please remove this page and place it in a secure location.

Serial Number _____

Baud Rates:

SMDR Port_____

Printer Port_____

Remote Port_____

Management Access Number_____

CHAPTER ONE

GETTING STARTED

INTRODUCTION

Welcome to INN-FORM *Plus*. You will now be able to efficiently turn telephone data into detailed reports that can prove extremely beneficial to your property.

This user guide is divided into the following sections to help you access specific information as quickly as possible:

GETTING STARTED - Provides an introduction to the system, a basic overview, and basic day to day functionality.

REFERENCE - Provides step-by-step instructions for system reports and system programming.

QUESTIONS AND ANSWERS - Provides answers to common system questions, assists with troubleshooting a system, and covers service, maintenance and warranty information.

APPENDICES - Provides step-by-step instructions on the system installation and initialization procedures. Also includes descriptions of the three main property management interfaces, Hobic, Holidex, and Micros.

OVERVIEW

The INN-FORM *Plus* is the most sophisticated, state-of-the-art telephone call accounting and management system available today. The INN-FORM *Plus* connects to your telephone system and captures details of completed phone calls, i.e. which extension made the call, what number was dialed, what trunk was used, what time the call started and how long it lasted. Calls are also accurately priced, using the same methods as the phone company, and all data is stored so that reports can be generated. The reports available from the INN-FORM *Plus* can provide you with some of the most powerful management tools your property can use. These reports will help you significantly reduce your telephone bills, improve employee productivity and even increase sales.

The INN-FORM *Plus* is specifically designed to meet the needs of the hotels and motels by providing a large storage capability and fast processing time. It also has a large enhanced display and a full keyboard which makes it possible to enter names of departments and cost centers on site for better cost allocation.

The INN-FORM *Plus* also gives you the ability to quickly and easily customize the system to meet your unique needs. The system's default values can be changed on site by using the programming capabilities. However, if the INN-FORM *Plus* is reinitialized it will return to the original factory set defaults.

Remote polling, remote servicing and remote programming are available as options. If your company has multiple locations, each could have a INN-FORM *Plus*, permitting autonomous generation of reports. In addition, your headquarters site may call each location on a regular basis to make sure the remote systems are functioning properly and to make programming changes. Then, call data may be transferred into the headquarters site where master reports detailing and summarizing telephone activity throughout your multi-site corporation are generated.

KEYPAD

The keypad is used to initiate reports and enter data in the INN-FORM *Plus* system. Each time a key is properly pressed, an audible "beep" sound will be heard and a response will appear in the display, as an indication that the entry was received by the system.

Centered directly under the display screen you will notice five keys. These are the function keys that you will use to specify how you would like your reports to appear.

Located on the top, right corner of the system you will find three LEDs (Light Emitting Diodes).

The POWER light in dictates how the INN-FORM *Plus* is receiving power. If it is plugged into an outlet, the POWER light will be green. If it is being powered by battery backup, the POWER light will flash red.

The DATA light indicates when SMDR (telephone data) is being received by the INN-FORM *Plus*. This light should be off unless SMDR is being received, in which case the light will flash green.

The MEMORY light indicates available memory. If there is adequate memory space to store more than 500 call records, the light will be green. If the memory capacity is below 500 call records, the light will be red.

NOTE: If it becomes necessary to clean the keypad use a window cleaner or rubbing alcohol. Lightly spray a soft cloth and wipe down the keypad. **NEVER** spray solution directly on the keypad and **NEVER** use abrasive cleaners.

PRINTER

To print system reports you will need to connect a standard parallel or RS-232C serial printer to the INN-FORM *Plus*. Remember the following:

♦ Be sure you read and understand the printer manual.

♦ Make sure the printer is plugged in properly.

♦ Make sure the printer cable is connected properly.

- ♦ Load paper before you get started.

- ♦ Make sure the printer is on.

- ♦ Be sure the printer is selected or on-line.

- ♦ When using a serial printer, make sure the baud rate of the printer and the INN-FORM *Plus* are the same.

START-UP (OR RESET) REPORT

The Start-up Report will identify the system, the software release number and option settings.

When the system is first turned on, the printer will print a few lines of information. This information includes: the model name and software release number; copyright information; the date, time, and day of the week; the memory size, the serial number, and date of last tariff update; the current mode, and the programmed options. This report appears every time you reset your system or every time the system is powered-up.

NOTE: Resetting the system causes all telephone call data which has not yet been processed and stored in the system's memory to be erased.

```
*********************************************************************************
                         INN-FORM Plus HX 6.5
                    copyright, TEL electronics, inc.
                         May 31 at 10:45AM Fr
                        6020 records   SN099997
Mode: 7, Options: Print Audit Trail, Ram Setup
*********************************************************************************
```

EXAMPLE: Start-up (or Reset) Report

AUDIT TRAIL

The Audit Trail is a record of call information. Every time a valid call is completed, call data is stored in the system's memory and, if the Audit Trail parameter has been turned on, the printer will print a one-line Audit Trail Report. Each line of the Audit Trail will identify the current date, time, day of the week, cost center, department, extension number, trunk, state called, number dialed,

duration, and the charge and type of call. The Audit Trail option can be turned on or off as needed.

NOTE: Trunk information is tracked only if the SMDR includes this information.

SETTING THE MODE

The ***MODE SET*** key is used to set the diagnostic mode of the INN-FORM *Plus*.

The modes are as follows:

0 = NORMAL OPERATING MODE

7 = UTILITY MODE, which prints non-call data, such as wake-up calls, in addition to the Audit Trail (if the Audit Trail parameter has been turned on)

8 = PASS-THROUGH MODE, which prints everything received from the telephone switch as well as the Audit Trail (if the Audit Trail parameter has been turned on)

9 = CHECKING MODE, which prints the same data as mode 8, but also compares each SMDR record to see if it matches the factory programmed specifications included in the INN-FORM *Plus*. When SMDR data cannot be processed, a message is printed. When the INN-FORM *Plus* is put in mode 9 the Audit Trail is automatically turned on and will remain on thereafter until you specifically turn it off.

NOTE: Under most circumstances the mode should be left in the normal or standard operating mode (0), or utility mode (7) if you want wake-up calls to print. Management access may have to be activated in order to change the mode.

To set the system mode:

STEP 1. Press ***MODE SET.*** The system will display, "OPERATION MODE (0-9):".

STEP 2. Enter the mode desired (*0, 7, 8*, or *9*).

STEP 3. Press ***ENTER.***

EVERYDAY USE

SYSTEM STATUS CHECK

This message will automatically print every six hours to document the number of call records which were processed during that period.

```
System check on --                          May 10 at 12:00PM Th
          47 calls processed.
```

EXAMPLE: System Status Check

This helps determine if the system is operating properly. If there is a six hour period that should have recorded calls but did not, contact your dealer.

MANAGEMENT ACCESS

The *MGMT. ACCESS* key allows entry of the predefined management access number (up to four numeric digits) which permits only authorized personnel access to reports and programming functions of the system.

After a legitimate management access number is entered and work is completed, pressing the *MGMT. ACCESS* key again will cancel the management access entry and prevent unauthorized access until the management access number is entered again. Your management access number is a safeguard for your system's information. This number is selected at the time the system is ordered. It is pre-programmed into the system as it is built and customized to your specifications. For programming Multiple Levels of Management Access see Function 29.

NOTE: If your system does not use a management access number, press *MGMT. ACCESS* and you will be given access without entering an access number.

STEP 1.   Press *MGMT. ACCESS.*

STEP 2. The system will display, "MANAGEMENT ACCESS #".
Enter your management access number.

STEP 3. Press **ENTER.** (Management access has been activated.)

STEP 4. To exit management access mode press the **MGMT.
ACCESS** key.

> **NOTE:** If an incorrect number is entered, the display will read
> "INVALID" momentarily, then the system displays the current date and
> time. To start over, press **MGMT. ACCESS** again and enter the
> correct number.

ERROR KEYS (CANCEL AND DELETE)

These keys are used to cancel an entire entry, a report in progress
(except Audit Reports), or to delete the last character entered in case
of an entry error.

Press **CANCEL** to cancel an entry or report in progress. When
entering keystrokes for an Audit Report, **CANCEL** must be pressed
prior to pressing **F3** (SUM) or **F4** (DET). Once the Audit Report is
under way it cannot be canceled.

Press **DELETE** to delete one character at a time (erase and
backspace). **DELETE** can be used anytime during entry of digits or
characters.

SETTING THE TIME

The TIME SET key allows the correct time to be set in the system
for proper costing and reporting of call data. The correct time is
important because the system must know exactly what time calls are
made to apply correct charges. It is vital for identifying day rates,
night rates, evening rates, etc. The correct time should be set when
the system is installed and when changes are necessary due to
daylight savings.

STEP 1. Press **TIME SET.** The system will display, "HOUR
(0-23):".

STEP 2. Enter the hour (**0** through **23**).

STEP 3.   Press *ENTER.* The system will display, "MINUTE (0-59):".

STEP 4.   Enter the minute (0 through 59).

STEP 5.   Press *ENTER*. (The time has now been set.)

> **NOTE:** The system must be set using military time. Enter 1 or 2 digits which represent the hour of the day. Military time is 24 hours, so if it is after 12:00 noon add 12 to the hour. Thus, 3:00 p.m. is 15. Midnight is 0; noon is 12; and one minute before midnight is 23:59.
>
> **EXAMPLE:** 4:55 p.m. would be hour 16 and minute 55.

SETTING THE DATE AND DAY

The *DATE SET* key allows the setting of the correct date and day of the week in the system.

The date and day are vital for rating calls and applying correct charges (weekday rates versus weekend rates). The date and day should be set when the system is installed.

STEP 1.   Press *DATE SET*. The system will display, "MONTH (1-12):".

STEP 2.   Enter the month (*1* through *12*).

STEP 3.   Press *ENTER*. The system will display, "DAY (1-31):".

STEP 4.   Enter the day of the month (*1* through *31*).

STEP 5.   Press *ENTER*. The system will display, "WEEKDAY (1-7,1 = SUN):".

STEP 6.   Enter the day of the week (Sunday = *1*, Saturday = *7*).

STEP 7.   Press *ENTER.* (The date and day have now been set.)

MEMORY CHECK

Pressing the **MEMORY CHECK** key will display the number of new call records which can still be stored in memory.

STEP 1.   Press **MEMORY CHECK.** The number of call records which can still be stored in memory will be shown in the display.

If you get a warning message when checking the memory, there could be a problem with your call record database. In the unlikely event that this should occur, contact your dealer for assistance.

The INN-FORM *Plus* system will beep and print a warning message as a reminder that the memory is low at 300, 100, 80, 60, 40, and 20 call records. When no storage for call records is available, each call record is printed so that data is never lost. A beep sounds and a message is printed to emphasize that the system cannot store the call.

It is recommended that an Audit Report be printed to clear the memory before it gets low. (For detailed instructions on how to use an Audit Report to clear the memory, refer to Extension Audit Report.) This function also verifies the integrity of your call record database. If a problem is found, the system will print a warning message. Should this occur, contact your dealer for assistance.

NAMING DEPARTMENTS - THE N KEY

The N key allows you to personalize your system by naming your departments on site.

To name your departments on site:

STEP 1.   Press the *N* key. The system will display, "NAME FOR DEPARTMENT #".

STEP 2.   Enter both the cost center (1 through 5) and the department (01 through 50) using three digits. The system will display, "ENTER NAME:".

    EXAMPLE: To name cost center 4, department 06, you would enter 406.

NOTE: To enter the name of a cost center, enter the digit 6 before the cost center number to be named. To name cost center 1, enter 601 at STEP 2.

STEP 3.   Enter the name (up to eleven characters) of the department that you entered in STEP 2. Complete the name entry by pressing *ENTER* or *CANCEL*. Press the *SHIFT* key to toggle between upper and lower case, or to access the special symbols on the upper part of the keys.

THE EXTENSION AUDIT REPORT

An Extension Audit provides call record information on all extensions in either summary or detail. It also erases call records to provide room for more calls to be processed. This report must be generated periodically for the system to function properly.

By using the *RESTRICT* key before running an Extension Audit it is possible to restrict the audit so that it contains only call records before a specific date. (Refer to the *RESTRICT* key for further instructions.)

NOTE: Do not activate this report until all other desired reports (i.e., Extension, Department, Exception, etc.) are printed. This report erases call records from the memory-records which cannot be restored to produce other reports you may need. If the *EXT. AUDIT* key is pressed in error, press *CANCEL* immediately! An Audit Report does not erase the information appearing on the Activity and Trunk Reports. This information can be cleared when the *ACTIVITY* or *TRUNK REPORTS* are run.

When the Extension Audit Report is initiated, all call records in the specified period are flagged for erasure. When your first Extension Audit Report (in either summary or detail) has been printed, the prompt "ANOTHER AUDIT?" is displayed. The flagged call records have not been erased at this point. You may proceed with generating another Extension Audit Report or a copy of the one just completed. After each report, the "ANOTHER AUDIT?" prompt appears. When all desired Audit Reports are complete and you respond by pressing *F2* (NO), the flagged call records are then erased from memory.

STEP 1. Press ***EXT. AUDIT.*** The system will beep twice and read, "WARNING - ERASES CALLS! " followed by the display, SUMMARY OR DETAIL?".

> **NOTE:** If the Extension Audit key has been pressed in error, do not proceed with selecting summary or detail. Press ***CANCEL*** now to take you out of the Extension Audit function without loss of call records.

STEP 2. Press the corresponding function key, ***F3*** (SUMMARY) or ***F4*** (DETAIL), which indicates how you wish the information to appear on the report. (The Extension Audit Report will print.)

After printing is completed, the system will display, "ANOTHER AUDIT?". The prompt, "ANOTHER AUDIT?" assures you that no Flagged call records have been erased yet. At this point, you may select another Extension Audit Report in summary or detail. Thus, different audits can be taken in either or both summary and detail before erasing data.

STEP 3. Press ***Fl*** (YES) if another Extension Audit Report is needed, or press ***F2*** (NO), to end the audit and erase calls from memory.

NOTE: Do not press ***F2*** (NO) until you are sure you have printed as many copies of the various Audit Reports as you need. Once an Audit Report has been generated, all call records and report data for the specified period will be permanently marked for erasure and new information will begin to accumulate. Therefore, if ***F2*** (NO) is pressed after an audit has been generated, the call record information will be erased. If you have begun an Audit Report in error, as a last resort, wait until the audit finishes, count to 15, push the reset button and take any reports needed. Then, immediately regenerate the audit and press ***F2*** (NO).

CREDIT LIMIT AND ALARM

A Credit Limit is set to limit the amount of call charges that can accrue for an extension. It protects your property by helping to eliminate excessive calls and charges. The credit limit amount can be customized for each extension. When a set limit is exceeded the system will sound a constant alarm until the function ***F1*** key is pressed to silence it. An alert message will also print to the attached printer.

```
****Extension 333 has exceeded their $2.00 limit with $4.82
```

EXAMPLE: Credit limit exceeded alert message

✎ **To set a credit limit:**

STEP 1. Press ***CREDIT LIMIT***. The system will display, "CREDIT LIMIT EXTENSION #".

STEP 2. Enter the extension number for which you would like to set a credit limit.

STEP 3. Press ***ENTER***.

STEP 4. The system will briefly display the current credit limit for the extension. The system will then display, "CREDIT LIMIT $:".

STEP 5. Enter the credit limit dollar amount up to 254.

> **NOTE:** Any number over 254 indicates that there will be no credit limit set for that extension.

STEP 6. Press ***ENTER***.

911/311 ALARM

The INN-FORM *Plus* 6.X will sound a constant alarm for all 911/311 emergency calls. The system will also print a raw SMDR string showing the extension that placed the call.

To silence the alarm press the ***F1*** key.

```
**911**911**911**911 ALERT!!!
5/31 06:25P 00:01:30  333  9   911                          RT002
```

EXAMPLE: 911/311 alarm message

NOTE: The INN-FORM *Plus* does not receive call information until AFTER the caller has hung up. Thus a 911/311 alarm will not be sounded until the caller has completed the call.

(NOTES)

CHAPTER TWO

REFERENCE

REPORTS

The INN-FORM *Plus* is capable of generating many types of reports. Each report can be classified as one of two types:

- **Regular report** - which simply prints the call record information in the selected report format.

- **Maintenance report** - which affects the stored call records by erasing them all (Audit Reports) or clearing a specified periodic accumulation (Activity and Trunk Reports).

For detailed information on maintenance reports refer to the following sections: Extension Audit, Activity Report, and Trunk Report.

ACTIVITY REPORTS

The Activity Reports summarize all telephone activity during any one of five selected periods (as defined by you) for administrative and guest extensions.

This report summarizes telephone activity into the following information: four types of calls, average time per call, cost of calls, tax applied to cost, rebilling charges, sales tax on charges (if any), and gross profit (if any).

The information on a specific Activity Report will only be cleared by pressing the *F1* (YES) key when prompted, "CLEAR

ACTIVITY REPORT?" after running an Activity Report. When a specific report is cleared, new information begins to accumulate. Each report will accumulate data until it is cleared. The length of the period for accumulation of data in a report is set by how often the report is cleared.

NOTE: If Report 1 is to be a daily report, then the report can be printed any time, but must be cleared daily. Report 5 might be a yearly report and may be printed whenever you wish to see the information that has been collected year-to-date, but must be cleared once a year.

The information appearing on individual Activity Reports is not erased by an audit.

► **To print an Activity Report:**

STEP 1.   Press ***ACTIVITY REPORT.***   The system will display, "ACTIVITY REPORT (1-5):".

STEP 2.   Enter the report number.

STEP 3.   Press ***ENTER***. (The Activity Report will print.)

   EXAMPLE: 1 = Daily, 2 = Weekly, 3 = Monthly, 4 = Quarterly, 5 = Yearly

STEP 4.   The system will display, "CLEAR ACTIVITY REPORT?".

STEP 5.   Press ***F1*** (YES) to clear the report and begin collecting new data, or ***F2*** (NO) to leave the report intact and continue collecting data.

   This is only an example! You could select other periods such as: shifts, accounting periods, etc. Each Activity Report time period can be set to cover any length of time desired depending on how often the report is cleared.

```
                              TEL ELECTRONICS INN
                              May 31 at  1:10PM Fr
                               Activity Report #1

May 31 at  4:08AM through May 31 at  1:10PM

     Type    |  Count  Avg.|    Cost    Tax  |  Charged   Tax  |   Profit
    ------------------------------------------------------------------------
    Local Calls |  27.   4.1 |    0.00    0.00 |    0.00    0.00 |    0.00
    Toll Calls  |  15.  10.4 |    7.26    0.36 |    0.00    0.00 |    0.00
    Oper. Calls |   0.   0.0 |    0.00    0.00 |    0.00    0.00 |    0.00
    Other Calls |   8.   4.8 |    1.10    0.00 |    0.00    0.00 |    0.00
    ------------------------------------------------------------------------
    Total Calls |  50.  19.3 |    8.36    0.36 |    0.00    0.00 |    0.00




                              TEL ELECTRONICS INN
                              May 31 at  1:10PM Fr
                            Guest Activity Report #1

May 31 at  4:08AM through May 31 at  1:10PM

     Type    |  Count  Avg.|    Cost    Tax  |  Charged   Tax  |   Profit
    ------------------------------------------------------------------------
    Local Calls |  52.   3.4 |    0.00    0.00 |    0.00    0.00 |    0.00
    Toll Calls  |  34.   2.7 |    8.50    0.43 |   12.75    0.00 |    3.82
    Oper. Calls |   1.   1.3 |    1.50    0.12 |    3.00    0.00 |    1.38
    Other Calls |  59.  12.1 |    0.00    0.00 |    5.90    0.00 |    5.90
    ------------------------------------------------------------------------
    Total Calls | 146.  19.5 |   10.00    0.55 |   21.65    0.00 |   11.10


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copyright, TEL electronics, inc.
```

EXAMPLE: Activity Report

```
                              May 31 at  1:10PM Fr

Cleared Call totals-report #1
```

EXAMPLE: Activity Report clear

CHECK OUT REPORT

The Check Out Report is used when a Property Management System is unavailable to check out guests (or when there is no Property Management System) and will provide all telephone call charges for a selected extension.

Once this report has been completed, all included calls are checked out and will ordinarily not appear on further Extension or Check Out Reports (see Function 25). If an extension has been checked out in error, the checked out calls may be restored (see Undo Check Out).

Calls that are checked out by the INN-FORM *Plus* which have not been sent to a Property Management System, may be marked as not needing to be sent to a Property Management System to avoid charge duplication (see Function 25).

► **To run a Check Out Report:**

STEP 1.   Press the ***CHECK OUT*** key. The system will display, "CHECK OUT #".

STEP 2.   Enter the extension number to be checked out (up to five digits).

STEP 3.   Press ***ENTER***.

STEP 4.   The system will display, "xxxxx has nn Calls for $aaa.aa, PRINT?". (xxxxx = extension number, nn = number of calls, aaa.aa = total call charges)

STEP 5.   Press ***F1*** (DETAIL), ***F2*** (SUMMARY), or ***F3*** (NOPRINT). All calls for the selected extension will be checked out and a report will be printed if you selected ***F1*** or ***F2***.

NOTE: You can press *CANCEL* to not checkout the extension.

UNDO CHECK OUT

Calls may be restored to an extension which was checked out in error (assuming an Extension Audit Report has not been run).

► **To Undo a check out:**

STEP 1.   Press ***UNDO CHK OUT***. The system will display, "UNDO CHECKOUT FOR #".

STEP 2.   Enter the extension number to undo check out for (up to 5 digits).

STEP 3.   Press ***ENTER***.

STEP 4.   A Check Out Restore report will be printed.

```
                         TEL ELECTRONICS INN
                           Check Out Restore
                         May 10 at  1:50PM Fr

Extension    114
Totals                              3.9 Minutes      1 Calls      $     3.05
      3.05 $$/Call           0.78 $$/Minute               3.9 Minutes/Call

produced by INN-FORM Plus HX 6.5
copyright, TEL electronics, inc.
```

EXAMPLE: Undo check out report

COST CENTER REPORT

The Cost Center Report presents calling information for a selected cost center.

NOTE: The INN-FORM *Plus* system is capable of sorting call records into as many as five cost centers with 50 departments in each cost center. When the system was customized at the factory for your property, the names and numbers of each were programmed into your system. Cost center/department 1-01 is reserved for guest extensions. Extensions assigned to 1-01 will receive all programmed markups and surcharges. Other cost center/department combinations can be used for your administrative extensions - markups and surcharges will not apply. There is a provision to input the names through the call accounting system's keypad, or you may order a new Data Chip containing the new information from your dealer.

Please refer to the programming section in this User Guide (Function 21) for assigning extensions to each cost center and department.

If you are not using cost centers, the system always assumes that the cost center is 1. Any unassigned extensions are assumed to be in department 01, cost center 1.

► **To print a Cost Center report:**

STEP 1.   Press **C.C. REPORT.** The system will display, "COST CENTER (1-5):".

STEP 2.   Enter the cost center number that you wish a report for.

STEP 3.   Press **ENTER**. The system will display, "SUMMARY OR DETAIL?".

STEP 4. Press *F3* (SUM) for a summary report, or press *F4* (DET) for a detail report. (The Cost Center Report will print.)

> **NOTE:** A list of departments and cost centers in use, in Extension Audit format, can be obtained by entering 0 at STEP 2.

CURRENT CALLS REPORT

The Current Call Report generates a report of calls currently stored in the system memory that have not been checked out. The report will also include any credit limit in effect for an extension that has an amount balance.

STEP 1. Press *CURRENT CALLS*. The system will print a list of all current calls since last system audit.

```
                         TEL ELECTRONICS INN
                         Current Calls Report
                         May 31 at 3:40 PM Fr

Audit last run: May 30 at 12:00AM
--------------------------------------------------------------------------------
-
Ext.   118  CR Limit:$ NONE          769.5 Minutes      19 Calls     $   343.90
Ext.   121  CR LIMIT:$ NONE           19.8 Minutes      18 Calls     $    43.56
Ext.   122  CR LIMIT:$ NONE         1116.0 Minutes      18 Calls     $   518.58
Ext.   124  CR LIMIT:$ NONE         1220.0 Minutes      20 Calls     $   588.60
Ext.   227  CR LIMIT:$ NONE         1995.0 Minutes      19 Calls     $    18.05
Ext.   449  CR LIMIT:$ NONE           45.0 Minutes      18 Calls     $    42.84
Ext.  1000  CR LIMIT:$ NONE          822.0 Minutes      20 Calls     $   414.40
Ext.  1125  CR LIMIT:$ NONE          468.0 Minutes      20 Calls     $    25.00
Ext.  1126  CR LIMIT:$ NONE         1200.0 Minutes      20 Calls     $   523.60
Ext.  1751  CR LIMIT:$ NONE          360.0 Minutes      20 Calls     $   186.60
Ext.  1754  CR LIMIT:$ NONE         5400.0 Minutes      20 Calls     $  2211.40
Ext.  1800  CR LIMIT:$ NONE          380.0 Minutes      20 Calls     $   195.40

Totals                            13795.3 Minutes     232 Calls     $  5111.93
      22.03 $$/Call           0.37 $$/Minute            59.5 Minutes/Call
```

EXAMPLE: Current Calls Report

DEPARTMENT REPORT

The Department Report presents calling information for a selected department.

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extensions. Extensions assigned to 1-01 will receive all programmed markups and surcharges. Other cost center/department combinations can be used for your administrative extensions - markups and surcharges will not apply. There is a provision to input the names through the call accounting system's keypad, or you may order a new Data Chip containing the new information from your dealer.

Please refer to the Programming section in this User Guide (Function 21) for assigning extensions to each cost center and department.

If you are not using cost centers, the system always assumes that the cost center is 1. Any unassigned extensions are assumed to be in department 01, cost center 1.

► **To print a Department Report:**

STEP 1.   Press ***DEPT. REPORT.***   The system will display, "COST CENTER-DEPARTMENT (101-550):".

STEP 2.   To print a report for a specific department you must enter both one-digit cost center (1 through 5) and the two-digit department (01 through 50).

EXAMPLE: "307", where 3 represents cost center 3, and 07 represents department 7.

STEP 3.   Press ***ENTER***.   The system will display, "SUMMARY OR DETAIL?".

STEP 4.   Press ***F3*** (SUM) for a summary report, or press ***F4*** (DET) for a detail report. (The Department Report will print.)

NOTE: A list of departments and cost centers in use, in Extension Audit format, can be obtained by entering 0 at STEP 2.

EXCEPTION REPORTS

The Exception Report feature allows you to generate reports based on selected parameters.

This is one of the most powerful features of the INN-FORM *Plus*. With Exception Reports it is possible to view very specific parts of the stored data by defining parameters properly. Call record data

may be viewed in an almost unlimited number of ways. The following is a list of the available Exception Reports.

Exception and Graphic Reports

0 =	A menu of Exception and Graphic Reports
1 =	Duration Over/Under N Minutes
2 =	Charge Over/Under Selected NN.NN Dollars
3 =	Area Code or State Dialed
4 =	Area Code Plus Exchange Dialed (Area Code is Optional)
5 =	Phone Number Dialed
6 =	Hour of Day
7 =	N Longest Calls
8 =	N Most Expensive Calls
9 =	Trunk Used
10=	Multiple Parameters Using "And" Logic
11=	Multiple Parameters Using "Or" Logic
12=	Numbers Called Over N Times for Each Extension
13=	Numbers Called Over N Times for the Entire Organization

Each separate Exception Report is explained in detail below. The instructions for each will explain the parameters available and guide you through the easy to follow input steps.

NOTE: With large amounts of call data, Exception Reports can be time consuming. While the report is being generated, the system is still working, analyzing and storing call data in memory.

EXCEPTION REPORT 1. DURATION OVER/UNDER N MINUTES

► **To print Exception Report 1:**

STEP 1. Press *EXCEPT. REPORTS.* The system will display a menu of available reports.

STEP 2. Enter *1*.

STEP 3. Press *ENTER*. The system will display, "INVERT, TOTALS, SUMMARY OR DETAIL?".

STEP 4. Press the corresponding function key which indicates how you wish the information to appear on the report. If **F1** (INV) is selected the system will again offer options. Press the function key that corresponds to your preferred option.

STEP 5. The system will display, "MINUTES OVER:". Enter "*0*" for all calls, or the number of minutes (up to 511) and all calls with duration greater than or equal to this selected number will be identified, unless you are doing an inverted report, in which case the system will show all calls with a duration less than the selected number.

STEP 6. Press **ENTER**. (The report will print.)

EXAMPLE: To print a summary report on calls 35 minutes or longer, at STEP 4 press **F3** (SUM) and at STEP 5 enter **35.** See the following example printout.

```
                          TEL ELECTRONICS INN
                          Exception Report # 1
                          May 31 at  6:47PM Fr
Duration Over 35 Minutes
Audit last run:  5/30 at 12:00AM
-------------------------------------------------------------------------------
-
Extension  59                50.5 Minutes        1 Calls            $     23.44
Extension  75                35.8 Minutes        1 Calls            $     16.59
Extension  95                56.0 Minutes        1 Calls            $     21.41
Extension 101                73.0 Minutes        1 Calls            $     34.61
Extension 125                35.5 Minutes        1 Calls            $     15.01
Extension 174                49.1 Minutes        1 Calls            $     20.21
Extension 279                38.7 Minutes        1 Calls            $     16.23

Totals                      338.6 Minutes        7 Calls            $    147.50
```

EXAMPLE: Exception Report 1 in Summary.

EXAMPLE: To print an inverted report in detail for all calls less than one minute, at STEP 4 press **F1** (INV), at STEP 5 press **F4** (DET), and at STEP 6 Enter **1. See** the following example printout.

```
                          TEL ELECTRONICS INN
                          Exception Report # 1
                          May 31 at  6:48PM Fr
Inverse
Duration Over 1 Minutes
Audit last run:  5/30 at 12:00AM
Date    Time   Dept  Ext      Type    Trunk  State  # Called    Min Charges
-------------------------------------------------------------------------------
5/31   1:29PM  1-01    7       Local      7   UT    (801)573-2345 0.7 $ 0.30
5/31  10:59AM  1-01   12       Local     12   UT    (801)878-2345 0.8 $ 0.30
5/31  12:49PM  1-01   48       LDist     48   CA    (805)893-2345 0.7 $ 0.79
5/31   9:59AM  1-01   67       Local     67   UT    (801)930-2345 0.9 $ 0.30
5/31   7:29AM  1-01   67       Local     67   UT    (801)969-2345 0.7 $ 0.15
5/31   9:59AM  1-01   79       LDist     79   CA    (805)998-2345 0.8 $ 0.79
5/31   4:29PM  1-01   92       Local     92   UT    (801)987-2345 0.7 $ 0.76
5/31   1:29PM  1-01  174       LDist    174   AZ    (602)990-2345 0.9 $ 0.24
```

```
5/31  12:14PM  1-01 188      Local     188 UT   (801)756-2345 0.9 $ 0.24
5/31   2:29PM  1-01 190      Local     190 UT   (801)328-2345 0.6 $ 0.30

Total                        7.5 Minutes        10 Calls  $  4.23
```

EXAMPLE: Exception Report 1 Inverted and in Detail for All Calls Less Than 1 Minute.

EXCEPTION REPORT 2. CHARGE OVER/UNDER SELECTED NN.NN DOLLARS

► **To print Exception Report 2:**

STEP 1. Press *EXCEPT. REPORTS.* The system will display a menu of available reports.

STEP 2. Enter *2*.

STEP 3. Press *ENTER*. The system will display, "INVERT, TOTALS, SUMMARY OR DETAIL?".

STEP 4. Press the corresponding function key which indicates how you wish the information to appear on the report. If *F1* (INV) is selected the system will again offer options. Press the function key that corresponds to your preferred option.

STEP 5. The system will display, "CHARGE OVER:". Enter the exact amount (0 to 99.99) you wish to use, in dollars and cents including the decimal point.

> **NOTE:** Amounts up to $99.99 may be entered. For even dollars, it is not necessary to use the decimal point and cent digits. For all calls, including no charge calls, enter 0.

STEP 6. Press *ENTER*. (The report will print.)

EXAMPLE: To print a summary report of calls over $14.50, at STEP 4 press *F3* (SUM), and at STEP 5 enter $14.50.

EXAMPLE: To print an inverted totals report for all calls under $2.00, at STEP 4 press *F1* (INV), at STEP 5 press *F2* (TOT), and at STEP 6 enter *2*.

EXCEPTION REPORT 3. AREA CODE DIALED

► **To print Exception Report 3:**

STEP 1.   Press ***EXCEPT. REPORTS.***   The system will display a menu of available reports.

STEP 2.   Enter ***3***.

STEP 3.   Press ***ENTER***.   The system will display, "INVERT, TOTALS, SUMMARY OR DETAIL?".

STEP 4.   Press corresponding function key which indicates how you wish the information to appear on the report. If ***F1*** (INV) is chosen the system will again offer options. Press the function key that corresponds to your selection.

STEP 5.   The system will display, "AREA CODE:".   Enter the Area Code (3 digits) desired. If you put a dash in front of the Area Code, the report will include calls to the entire state in which that Area Code is located.

STEP 6.   Press ***ENTER***. (The report will print.)

EXAMPLE: For a summary report of calls to Area Code 415 at STEP 4 press ***F3*** (SUM) and at STEP 5 enter ***415***.

EXAMPLE: For an inverted report of calls not to the state of New York, at STEP 4 press ***F1*** (INV), and at STEP 5 enter ***-212.***

EXCEPTION REPORT 4. AREA CODE PLUS EXCHANGE DIALED (AREA CODE IS OPTIONAL)

► **To print Exception Report 4:**

STEP 1.   Press ***EXCEPT. REPORTS.***

STEP 2.   Enter ***4***.

STEP 3.   Press ***ENTER***. The system will display, "INVERT, TOTALS, SUMMARY OR DETAIL?".

STEP 4.   Press the corresponding function key which indicates how you wish the information to appear on the report. If ***F1*** (INV) is chosen the system will again offer options.

Press the function key that corresponds to your preferred option.

STEP 5.   The system will display, "AREA CODE- EXCHANGE:". Enter the Area Code-Exchange, noting that a dash must be entered between the Area Code and the Exchange.

> **NOTE:** If you do not want to specify an Area Code, but want to see all call records of a selected Exchange, enter the Exchange only and the system will print a report showing all calls to that Exchange whenever it appears, regardless of the Area Code.

STEP 6.   Press **ENTER**. (The report will print.)

EXAMPLE: For a detailed report of all calls in Area Code 801 and Exchange 561, at STEP 4 press *F4* (DET) and at STEP 5 enter *801-561*.

EXAMPLE: For a detail report of all calls to exchange 976 regardless of Area Code, at STEP 4 press *F4* (DET) and at STEP 5 enter *976.*

EXCEPTION REPORT 5. PHONE NUMBER DIALED

► **To print Exception Report 5:**

STEP 1.   Press **EXCEPT. REPORTS.** The system will display a menu of available reports.

STEP 2.   Enter *5*.

STEP 3.   Press **ENTER**. The system will display, "INVERT, TOTALS, SUMMARY OR DETAIL?".

STEP 4.   Press the corresponding function which indicates how you wish the information to appear on the report. If *F1* (INV) is selected the system will again offer options. Press the function key that corresponds to your preferred option.

STEP 5.   The system will display, "PHONE NUMBER:". Enter the Area Code-number, remembering the dash between the Area Code and the rest of the telephone number. (No dash between the Exchange and the last four digits of the

number.) You may also enter the telephone number
without the Area Code for a report showing all calls to
that specified number regardless of the Area Code.

STEP 6.   Press *ENTER*. (The report will print.)

> **NOTE:** To print a report of all calls made to the phone number
> 555-1212 regardless of the Area Code, enter 5551212 at STEP 5.

EXCEPTION REPORT 6. TIME OF DAY

► **To print Exception Report 6:**

STEP 1.   Press *EXCEPT. REPORTS.* The system will display a
menu of available reports.

STEP 2.   Enter *6*.

STEP 3.   Press *ENTER*. The system will display, "INVERT,
TOTALS, SUMMARY OR DETAIL?".

STEP 4.   Press the corresponding function key which indicates
how you wish the information to appear on the report. If
F1 (INV) is selected the system will again offer options.
Press the function key that corresponds to your preferred
option.

STEP 5.   The system will display, "HOUR (0-23):". Enter the
hour (0 through 23).

> **NOTE:** Use military time when entering the hour. Use 0 for the one
> hour period from midnight to 12:59 a.m., 1 for 1:00 a.m. to 1:59 a.m.,
> and 15 for 3:00 p.m. to 3:59 p.m.

STEP 6.   Press *ENTER*. (The report will print.)

EXAMPLE: To print a totals report for all the calls which
occurred between 10:00 a.m. and 11:00 a.m. at STEP 4 press *F2*
(TOT) and at STEP 5 enter *10.*

EXAMPLE: For an inverted summary report, showing all calls
except those between 5:00 p.m. and 6:00 p.m., at STEP 4 press *F1*
(INV), at STEP 5 press *SUMMARY* and at STEP 6 enter *17.*

EXCEPTION REPORT 7. N LONGEST CALLS

► **To print Exception Report 7:**

STEP 1.   Press *EXCEPT. REPORTS.* The system will display a menu of available reports.

STEP 2.   Enter *7.*

STEP 3.   Press *ENTER*.

STEP 4.   The system will display, "N LONGEST. N (1-40):". Enter the number of calls you wish the system to list (1 through 40).

STEP 5.   Press *ENTER*.

EXAMPLE: For a report of the 10 longest calls, at STEP 4 enter *10.*

EXCEPTION REPORT 8. N MOST EXPENSIVE CALLS

► **To print Exception Report 8:**

STEP 1.   Press *EXCEPT. REPORTS.* The system will display a menu of available reports.

STEP 2.   Enter *8*.

STEP 3.   Press *ENTER*.

STEP 4.   The system will display, "N MOST EXPENSIVE. N (1-40):". Enter the number of calls you wish the system to list (1 through 40).

STEP 5.   Press *ENTER*.

EXAMPLE: To print the 10 most expensive calls, in STEP 4 Enter *10*.

EXCEPTION REPORT 9. REPORT BY TRUNK

► **To print Exception Report 9:**

STEP 1.   Press ***EXCEPT. REPORTS.*** The system will display a
           menu of available reports.

STEP 2.   Enter **9**.

STEP 3.   Press ***ENTER***. The system will display, "INVERT,
           TOTALS, SUMMARY OR DETAIL?".

STEP 4.   Press the corresponding function key which indicates
           how you wish the information to appear on the report. If
           F1 (INV) is selected the system will again offer options.
           Press the function key that corresponds to your preferred
           option.

STEP 5.   The system will display, "TRUNK:". Enter the Trunk
           number (0 through 9999).

STEP 6.   Press ***ENTER***.

EXAMPLE: To print an inverted summary report showing activity
for all Trunks except Trunk 14, at STEP 4   Press ***F1*** (INV), at
STEP 5 press ***F3*** (SUM), and at STEP 6 enter ***14.***

EXAMPLE: To print a trunk usage by hour report showing the
activity of each trunk for each hour of the day, at STEP 4 press ***F3***
(SUM), at STEP 5 enter ***255***, then press ***ENTER***.

EXCEPTION REPORT 10. MULTIPLE PARAMETERS USING "AND" LOGIC

The "And" logic uses duration, charge and Area Code. It requires
that the information appearing on the report meets all three of the
criteria requested in order to be printed. For instance, for a report
showing all calls over 10 minutes in duration "And" over $10.00 in
charge "And" in Area Code 801, you would use Exception Report
10 and only calls that satisfied all three of the parameters would
appear on the report.

► **To print Exception Report 10:**

STEP 1.   Press ***EXCEPT. REPORTS.*** The system will display a
           menu of available reports.

STEP 2.   Enter *10.*

STEP 3.   Press *ENTER*. The system will display, "INVERT,
          TOTALS, SUMMARY OR DETAIL?".

STEP 4.   Press the corresponding function key which indicates
          how you wish the information to appear on the report. If
          F1 (INV) is selected the system will again offer options.
          Press the function key that corresponds to your preferred
          option.

STEP 5.   The system will display, "MINUTES OVER:". Enter the
          number of minutes (0 through 511).

STEP 6.   Press *ENTER*.

STEP 7.   The system will display, CHARGE OVER:". Enter the
          exact amount you wish to use (0 through 99.99) in dollars
          and cents using the decimal point where appropriate.

STEP 8.   Press *ENTER*.

STEP 9.   The system will display, "AREA CODE:". Enter the
          Area Code (0 for all Area Codes or the desired 3 digit
          Area Code). If you put a dash in front of the Area Code,
          the report will include calls to the entire state in which
          that Area Code is located.

STEP 10. Press *ENTER*. (The report will print.)

> **NOTE:** If you choose to disregard any of the three parameters, enter 0
> for that parameter.

EXAMPLE: For a summary report of all calls over 15 minutes,
"And" over 10 dollars, "And" to Area Code 212, at STEP 4 press
F3 (SUM), at STEP 5 enter *15* and at STEP 6 press *ENTER.* At
STEP 7 enter *10,* at STEP 8 press *ENTER* and at STEP 9 enter
212.

EXCEPTION REPORT 11.   MULTIPLE PARAMETERS USING "OR" LOGIC

The "Or" logic report uses duration, charge, and Area Code. It is
designed to be less limiting than the "And" logic report. The target

information that will appear on this report only has to match one of the first two selected parameters and the last parameter.

Therefore, if you ask for all calls that are 10 minutes in duration "Or" are over $10.00 and are in Area Code 801, you would receive a report of calls in Area Code 801, that are either over 10 minutes in duration or have a charge over $10.00.

► **To print Exception Report 11:**

STEP 1. Press *EXCEPT. REPORTS.* The system will display a menu of available reports.

STEP 2. Enter *11*.

STEP 3. Press *ENTER*. The system will display, "INVERT, TOTALS, SUMMARY OR DETAIL?".

STEP 4. Press the corresponding function key which indicates how you wish the information to appear on the report.   If *F1* (INV) is selected the system will again offer options. Press the function key that corresponds to your preferred option.

STEP 5. The system will display, "MINUTES OVER:". Enter the number of minutes (0 through 511).

STEP 6. Press *ENTER*.

STEP 7. The system will display, CHARGE OVER:". Enter the exact amount you wish to use (0 through 99.99) in dollars and cents using the decimal point where appropriate.

STEP 8. Press *ENTER*.

STEP 9. The system will display, "AREA CODE:". Enter the Area Code (0 for all Area Codes or the desired 3 digit Area Code). If you put a dash in front of the Area Code, the report will include calls to the entire state in which that Area Code is located.

STEP 10. Press *ENTER*. (The report will print.)

> **NOTE:** If you choose to disregard any of the three parameters, enter the maximum allowed value for duration or charge or 0 for the Area Code.

The "Or" report is based upon calls which match either the duration or the charge. Thus, in the example above, any call over 15 minutes long would be printed, regardless of charge. Calls only need to match one of the first two parameters in the "Or" report, but must match the Area Code, if the third parameter is not a 0.

EXAMPLE: For an inverted totals report showing all calls not over 10 minutes "Or" over 15 dollars to any Area Code (In other words all calls under 10 minutes and under 15 dollars) at STEP 4 press *F1* (INV), at STEP 5 press *F2* (TOT), at STEP 6 enter *10* and at STEP 7 press *ENTER*. At STEP 8 enter *15,* at STEP 9 press *ENTER,* and at STEP 10 enter *0.*

EXCEPTION REPORT 12. NUMBERS CALLED OVER N TIMES FOR EACH EXTENSION

This report considers phone numbers dialed over N times by each extension. This report considers all calls for each extension individually.

► **To print Exception Report 12:**

STEP 1.   Press *EXCEPT. REPORTS.* The system will display a menu of available reports.

STEP 2.   Enter *12.*

STEP 3.   Press *ENTER*.

STEP 4.   The system will display, "CALLED N OR MORE TIMES. N:". Enter the number of times called.

STEP 5.   Press *ENTER*. (The report will print.)

> **NOTE:** If the phone number is not shown on any line of the report, then that line is a record of an incoming call to that extension.

EXAMPLE: For a report of any number dialed by an extension 20 or more times at STEP 4 enter *20* and at STEP 5 press *ENTER*.

Exception Report 13. Numbers Called Over N Times for the Entire Organization

This report is similar to report 12 but it considers phone numbers dialed over N times by the entire organization, not by each extension. The more unique numbers there are in the system, the longer this report will take. This report is not as efficient as report 12.

NOTE: With thousands of calls in the system, this report may take hours to execute. Of course, you can press CANCEL at any time to abort the report early.

► **To print Exception Report 13:**

STEP 1. Press *EXCEPT. REPORTS.* The system will display a menu of available reports.

STEP 2. Enter *13.*

STEP 3. Press *ENTER*.

STEP 4. The system will display, "CALLED N OR MORE TIMES. N:". Enter the number of times called.

STEP 5. Press *ENTER*. (The report will print.)

> **NOTE:** The information is taken from all extensions collectively. If the phone number is not shown on any line of the report, then that line is a record of an incoming call to that extension.

EXAMPLE: For a report of all numbers dialed 20 or more times at STEP 4 enter *20*, and at STEP 5 press *ENTER*.

Extension Audit Report

This audit provides call record information on all extensions in either summary or detail.

NOTE: Because this report erases all call records in the report upon completion, all other desired reports (i.e., Extension, Department, Exception, etc.) should be run first. This report erases call records from the memory-records which cannot be restored. If the *EXT. AUDIT* key has been pressed in error, press *CANCEL* immediately. The information that appears on the Activity and Trunk Reports is not

erased by an audit. It will only be cleared when the ACTIVITY or TRUNK REPORTS are run.

When the Extension Audit Report is initiated, all call records in the specified period are flagged for erasure. When your first Extension Audit Report (in either summary or detail) has been printed, the prompt "ANOTHER AUDIT?" is displayed. The flagged call records have not been erased at this point. You may proceed with generating another Extension Audit Report or a copy of the one just completed. After each report, the "ANOTHER AUDIT?" prompt appears. When all desired Audit Reports are complete and you press *F2* (NO), the flagged call records are erased from memory.

STEP 1.   Press **EXT. AUDIT.** The system will beep twice and read, "WARNING - ERASES CALLS!", followed by the display, "SUMMARY OR DETAIL?".

> **NOTE:** If the *EXT. AUDIT* key has been pressed in error, do not proceed with selected summary or detail. Press **CANCEL** now to take you out of the Extension Audit function without loss of call records.

STEP 2.   Press the corresponding function key which indicates how you wish the information to appear on the report. (The Extension Audit Report will print.)

After printing is completed, the system will display, ANOTHER AUDIT?". The prompt "ANOTHER AUDIT?" assures you that no flagged call records have been erased yet. At this point, you may select another Extension Audit Report in summary or detail. Thus, different audits can be taken in either or both summary and detail before erasing data.

STEP 3.   Press *F1* (YES) if another Extension Audit Report is needed, then return to STEP 2, or press *F2* (NO), to end the audit and erase all calls from memory.

> **NOTE:** Do not press *F2* (NO) until you are sure you have printed as many copies of the various Audit Reports as you need. Once an Audit Report has been generated all call records and report data for the specified period will be permanently marked for erasure and new information will begin to accumulate. Therefore, if *F2* (NO) is pressed after an audit has been generated, the call record information will be erased. If you have begun an Audit Report in error, as a last resort, wait until the audit finishes, count to 15, push the reset button and take

any reports needed. Then immediately regenerate the audit, and press *F2* (NO).

EXTENSION REPORT

This Report presents calling information for a selected extension.

► **To print an Extension Report:**

STEP 1.   Press *EXT. REPORT*.

STEP 2.   Enter the extension number (up to five digits).

STEP 3.   Press *ENTER*. (All calls for the selected extension will be printed.)

> **NOTE:** If you enter a nonexistent extension number or no calls are in the memory for that extension, the system will briefly display, "NO CALLS FOUND".

GRAPHIC REPORTS

This report section will explain how to produce reports of call records in graph format.

► **To print a Graphic Report:**

STEP 1.   Press *GRAPHIC. REPORTS.* The system will display, "GRAPHIC REPORT BY:".

STEP 2.   Press F1 (A/C), F2 (HOUR), or F3 (STATE) for the report you want to print.

> **NOTE:** A/C = duration, in minutes, of calls by area code; HOUR = number of calls by hour of the day; STATE = duration, in minutes, of calls by state.

2 = Number of Calls by Hour of the Day.
3 = Total Duration of Calls by State.

STEP 3.   Press *ENTER*. (The Graphic Report will print.)

NOTE: Graphic Report 3 (STATE) excludes the following types of calls: local calls; incoming calls; Area Code (800) calls; operator assisted calls; international calls.

```
                             TEL ELECTRONICS INN
                              Graphic Report #1
                             May 31 at  3:07PM Fr

  Area Code by Duration
  Audit last run: Jan.  1 at 12:00AM
--------------------------------------------------------------------------------

     State Duration           Graph

       FL (   11)###
       TX (    2)#

  Totals                              12.6 Minutes      7 Calls      $    16.91
         2.42 $$/Call          1.34 $$/Minute              1.8 Minutes/Call

  produced by INN-FORM Plus HX 6.5
  copyright, TEL electronics, inc.
```

EXAMPLE: Graphic Report for Area Code Activity.

```
                             TEL ELECTRONICS INN
                              Graphic Report #2
                             May 31 at  3:07PM Fr

Hourly Activity
Audit last run: Jan.  1 at 12:00AM
--------------------------------------------------------------------------------
-
Hour     Calls            Graph

 0-  1:00  (   0)
 1-  2:00  (   0)
 2-  3:00  (   0)
 3-  4:00  (   2)
 4-  5:00  (   3)
 5-  6:00  (   9)
 6-  7:00  (   0)###
 7-  8:00  (  24)####################
 8-  9:00  (  20)####################
 9- 10:00  (  22)######################
10- 11:00  (  34)##################################
11- 12:00  (  28)############################
12- 13:00  (  37)#####################################
13- 14:00  (  43)###########################################
14- 15:00  (  14)#################
15- 16:00  (  21)#########################
16- 17:00  (  19)#########################
17- 18:00  (   0)###
18- 19:00  (   0)
19- 20:00  (   0)
20- 21:00  (   0)
21- 22:00  (   0)
22- 23:00  (   0)
23-  0:00  (   0)

Totals           2264.3 Minutes     240 Calls       $        855.21
```

EXAMPLE: Graphic Report for Hourly Activity

```
                        TEL ELECTRONICS INN
                         Graphic Report #3
                        May 31 at  3:07PM Fr

State by Duration
Audit last run: Jan.  1 at 12:00AM

State Duration              Graph

WA  (  61)########
ID  ( 101)###############
CA  ( 665)######################################
TX  (  51)#######
PA  (  36)######
OH  (  19)####
MN  (  53)#########
CO  ( 192)######################
WY  (  54)###########
NE  (  17)####
IL  ( 162)#################
MO  (   5)##
NY  (  36)#########
IA  (   4)##
GA  (   8)#####
OK  (  15)#######
OR  (  14)#####
AZ  ( 115)########################
WI  (   9)#######
NV  (  36)###########
VA  (  35)###########
UT  ( 128)############################
TN  (  18)#####
MI  (   8)##
KS  (   7)##

Totals                  1834.3 Minutes    169 Calls        $   772.46
```

EXAMPLE: Graphic Report for State by Duration

MULTIPLE REPORTS

This powerful feature allows the selection of a series of reports, to be defined and entered into the system as a Multiple Report. Six such Multiple Reports may be created. These reports may be run as often as desired and may be changed (redefined) at any time.

The concept behind the Multiple Report function is to streamline the time necessary to generate the reports you use most frequently. Once you become familiar with the INN-FORM *Plus* system, it will be obvious which reports and parameters provide the details most useful for your particular property.

Using the Multiple Report function allows you to "program" the system to give you the necessary reports automatically. A few minutes of setup time is all that is required. To save time when using the Multiple Report function, first list the reports and their parameters that are to be defined (such as exclusive department, start/end date, etc.). Next, refer to the reports section of this User Guide for keystroke input information for each report on the list.

Put these keystrokes in the order that they will occur. Once you have this information in front of you, inputting the keystrokes in logical sequence into the system will be easy.

There are six different Multiple Reports which can be defined. Each report represents a block of 45 keystrokes which can be used to select reports and their parameters. Each Multiple Report can then be generated, as previously defined, by pressing *MULTIPLE REPORTS* and entering the Multiple Report number (1-6).

The six different Multiple Reports that can be chained together (for a possible 270 keystrokes). To chain the Multiple Reports together use the last keystrokes in one Multiple Report to call up or activate another Multiple Report. Higher report numbers have priority, and therefore can be used as "subroutines". See the example below for more detail on how this works.

The individual reports that are programmed into a Multiple Report can be programmed to loop on a range of numbers and produce several reports instead of just one. This is done by including Function 27 and its required parameters in the definition of the Multiple Report. For more information on the Universal Number Loop refer to Function 27.

Entering a *0* clears all the defined Multiple Reports. Entering a dash in front of a Multiple Report number (*1* through *6*) will indicate you wish to define that Multiple Report. The *CANCEL* key is used to save a definition and the *DELETE* key will erase an incorrect keystroke made during the definition input.

► **To define each major report (1 through 6):**

STEP 1. Press *MULTIPLE REPORTS.* The system will display, "REPORT #".

STEP 2. Enter a dash (-) and the number of the report that you wish to define (1 through 6).

STEP 3. Press *ENTER*.

STEP 4. The system will display, ":_". Enter the keystrokes necessary to produce the reports, with the parameters you previously defined.

As you enter your series of keystrokes, a letter or symbol representing each keystroke will appear in the display. (See Figure 1. Function Key Letter Assignment Chart.) The display will scroll to the left to make room for subsequent keystrokes.

When you have used the 45 keystrokes for the report being defined, the system will not accept additional entries. If you make an error while entering keystrokes, you can use the DELETE key to correct it. If an error is made and not corrected while entering your keystrokes, the report will not be defined correctly. You may redefine any of the six reports any time you wish by following the same procedure again. To verify that input has been accurate, you may print a listing of your completed keystrokes. The printout will show the letter or symbol from Figure 1. Function Key Letter Assignment Chart.

STEP 1.   Press ***MULTIPLE REPORTS.*** The system will display, "REPORT #".

STEP 2.   Press 7 (or any number greater than 6). The system will print out a copy of all six defined Multiple Reports.

```
                                   Auto Reports
1: J2@101#H7@KDJ@E4@.48@H76@10@H8@10@
2: J2@2094@Y73@y5@9354@0290@y594@y
3:
4:
5: h7@10@h8@h12@5@
6:
```

EXAMPLE: A Sample Printout of Defined Multiple Reports

Here's a trick! The heading, "AUTO REPORTS", in this printout, is not centered on the page, but rather the "S" in "REPORTS" is at the 45th space - consider it a line marker. You may see from this if you have additional keystrokes which may be used to further define a report; or if you have gone over the allotted 45 keystrokes, and the last keystrokes you entered were not accepted.

| FUNCTION KEY | LETTER ASSIGNMENT CHART |
Function Key	Letter of Symbol Assigned
ACTIVITY REPORT	A
TRUNK REPORT	D
GRAPHIC REPORTS	G
EXCEPT. REPORTS	H
RESTRICT	J
DATE SET	K
TIME SET	L
MODE SET	M
N KEY	N
MEMORY CHECK	O
MGMT. ACCESS	P
FUNCTION	Q
C.C. REPORT	R
DEPT. REPORT	T
EXT. REPORT	U
EXT. AUDIT	W
MULTIPLE REPORTS	Y
F1	[
F2	]
F3	{
F4	}
F5		
ENTER	@
DASH	-
DECIMAL POINT	"."
NUMERIC KEYS	As Entered

Figure 1. Function Key Letter Assignment Chart

The following example will define Multiple Report 1 restricted to cost center 1 department 01 for the following:

(1) An Exception Report for all calls over 5 minutes
(2) An Exception Report for all calls over $4.50
(3) An Exception Report on the 10 longest calls
(4) An Exception Report on the 10 most expensive calls

Refer to Figure 2 for the keystrokes necessary to define the previously suggested reports and parameters.

| | | **SYSTEM WILL** | |
KEYSTROKE	**KEY PRESSED**	**DISPLAY**	**RESULTS**
(1)	*RESTRICT*	J	Restrict 2
(2)	*2*	2	specifies the
(3)	*ENTER*	@	cost center
(4)	*1*	1	and
(5)	*0*	0	department
(6)	*1*	1	
(7)	*ENTER*	@	
(8)	*EXCEPT.REPORTS*	H	This is a
(9)	*1*	1	summary
(10)	*ENTER*	@	report for
(11)	*F3*	{	all calls
(12)	*5*	5	over 5 min.
(13)	*ENTER*	@	
(14)	*EXCEPT.REPORTS*	H	This is a
(15)	*2*	2	summary
(16)	*ENTER*	@	report for all
(17)	*F3*	{	calls over
(18)	*4*	4	$4.50
(19)	*.*	.	
(20)	*5*	5	
(21)	*0*	0	
(22)	*ENTER*	@	
(23)	*EXCEPT.REPORTS*	H	This report
(24)	*7*	7	displays the
(25)	*ENTER*	@	10 longest
(26)	*1*	1	calls
(27)	*0*	0	
(28)	*ENTER*	@	
(29)	*EXCEPT.REPORTS*	H	This report
(30)	*8*	8	displays the
(31)	*ENTER*	@	10 most
(32)	*1*	1	expensive
(33)	*0*	0	calls
(34)	*ENTER*	@	
	CANCEL		Ends definition

Figure 2. Automatic Multiple Report

By predefining Multiple Report 1 under the **_MULTIPLE REPORTS_** key as suggested above, the keystrokes for the reports and the parameters are entered one time, then by using the following procedure this same set of reports can be generated as often as needed:

STEP 1.   Press **_MULTIPLE REPORTS._**

STEP 2.   Enter the number of the previously defined report (1 through 6). In this case 1.

The report would all print automatically saving you many keystrokes each time the Multiple Report function is used.

Higher report numbers have priority, and therefore can act as "subroutines" to lower report numbers. For example, a group of Exception Reports (defined in Report 5) can be run for a number of department exclusions (as defined in Report 2). While Report 2 is processing it will go to the subroutine defined in Report 5, run the subroutine and return to the exact position in Report 2 to continue (see Figure 3 on following page).

Report 2	Report 5
RESTRICT	*EXCEPT. REPORTS*
2	*7*
ENTER	*ENTER*
1	*1*
0	*0*
1	*ENTER*
ENTER	
MULTIPLE REPORTS	*EXCEPT. REPORTS*
5	*8*
ENTER	*ENTER*
	1
RESTRICT	*0*
2	*ENTER*
ENTER	
3	*EXCEPT. REPORTS*
0	*1*
2	*2*
ENTER	*ENTER*
MULTIPLE REPORTS	*5*
5	*ENTER*
ENTER	
RESTRICT	*CANCEL*
2	
ENTER	
5	NOTE: After finishing the
0	Report 5 routine the program
3	sequence returns to the step
ENTER	directly following the step
MULTIPLE REPORTS	that sent it to Report 5.
5	
ENTER	
CANCEL	

Figure 3. Subroutines - Using Report 5 within Report 2

A few important things to remember about Multiple Reports:

- Defined Multiple Reports do not clear when exiting management access.
- Function 12 (set factory defaults) clears all Multiple Report programming.

RESTRICTIONS SET ON REPORTS

This feature on the INN-FORM *Plus* system provides a convenient way of setting restrictions for report parameters. With this feature, you may set up parameters to customize your reports. These restrictions are in effect until you leave management access. Each restriction will be explained in detail below.

The possible restrictions are:

  1 = Start Date and End Date
  2 = Department
  3 = Start Time and End Time
  4 = Specific Call Types

RESTRICT 1. START DATE AND END DATE FOR REPORTS

Under normal operation, reports include all calls in memory. This restriction will allow you to limit the reports to a specific time frame. Start date begins the time period, and end date ends the time period. Both the start date and the end date are optional. The start date and end date can be changed any number of times or canceled by entering 0 for both the start date and end date. Entering a (-) before the start date or end date subtracts that number from the current date. Thus an automatic daily/weekly/etc. report may be run on the previous day, week, etc.

EXAMPLE: Use a "-1" for a daily report. Use a "-7" for a weekly report. Use a "-0" to examine a report on today's date up to the current time.

The start date and end date are canceled each time you exit management access. This feature applies to Extension Reports, Exception Reports, Graphic Reports, Department Reports, and Cost Center Reports. Only the end date applies to the Audit Reports.

STEP 1.   Press ***RESTRICT***. The system will display the four possible restrictions.

STEP 2.   Enter *1*.

STEP 3.   Press ***ENTER***. The system will display, "START DATE (0, 0101-1231):".

STEP 4.   Enter *0* or the desired start date using four digits (See examples below.)

STEP 5.   Press *ENTER*. The system will display, "END DATE (0101-1231):".

STEP 6.   Enter *0* or the desired end date using four digits.

STEP 7.   Press *ENTER*.

EXAMPLES:

- In order to print reports for calls dated September 25th to and including October 2nd, use start date 0925 and end date 1002.

- In order to print reports for calls made on or after February 22nd, use start date 0222 and end date 0602.

- In order to print reports for calls made on or after February 22nd, use start date 0222 and end date 0.

RESTRICT 2. DEPARTMENT

This restriction allows you to limit certain reports to a guest or non-guest extensions. The exclusive department parameter can be changed any number of times or canceled by entering 0 for the department. This feature applies to Exception Reports and Graphic Reports.

STEP 1.   Press *RESTRICT*. The system will display the four possible restrictions.

STEP 2.   Enter *2*.

STEP 3.   Press *ENTER*. The system will display, "EXCLUSIVE DEPARTMENT (0, 101-550):".

STEP 4.   Enter *1* (GUEST) or *-1* (NON GUEST).

STEP 5.   Press *ENTER*.

RESTRICT 3. START TIME AND END TIME FOR REPORTS

This restriction allows you to specify an exact time period (to the minute) so that reports will only include calls which occurred during the specified time. The time must be entered in military format. This program is helpful for shift studies and can also be used with Restriction 1 to isolate a very specific time period. The start time and end time can be changed any number of times or canceled by entering 0 for both the start time and end time. This feature applies to Extension Reports, Exception Reports, Graphic Reports, Department Reports, and Cost Center Reports.

STEP 1. Press *RESTRICT*. The system will display the four possible restrictions.

STEP 2. Enter *3*.

STEP 3. Press *ENTER*. The system will display, "START TIME (0000-2359):".

STEP 4. Enter the desired time in military format using four digits.

      EXAMPLE: 8:00 a.m. = 0800 and 8:00 p.m. = 2000

STEP 5. Press *ENTER*. The system will display, "END TIME (0, 0001-2359)".

STEP 6. Enter *0* or the desired time in military format using four digits.

STEP 7. Press *ENTER*.

EXAMPLES:
- In order to print reports for calls made between 8:00 a.m. to including 10:00 a.m., use start time 0800 and end time 1000.

- In order to print reports for calls made 6:00 p.m., use start time 0 and end time 1800.

- In order to print reports for calls made after 11:00 p.m., use start time 2300 and end time 0.

RESTRICT 4. SPECIFIC CALL TYPES

This restriction allows you to specify the type of call that will be included on the report. You may invert this restriction to report on all call types except the indicated call type by preceding the call type number with a dash (**-**). Refer to the call type list below for the 14 types available. The call type restriction can be changed any number of times or canceled by entering 0 for the specific call type. This feature applies to Extension Reports, Exception Reports, Graphic Reports, Department Reports, and Cost Center Reports.

STEP 1.   Press ***RESTRICT***. The system will display the four possible restrictions.

STEP 2.   Enter *4*.

STEP 3.   Press ***ENTER***. The system will display a menu of call types you may restrict.

STEP 4.   Enter a number (*1* through *14*), or enter a dash (-) and then a number for an inverted restriction, where:

1 =	Unknown Type	2 = Local Call
3 =	Direct Dialed Long Distance	4 = Operator Assisted Call
5 =	Information Call	6 = Toll Free 800
7 =	Dial-it 900	8 = Direct Dialed International
9 =	WATS Call	10 = In-house Call
11 =	Incoming Call	12 = OCC Call
13 =	Special Rate Call	14 = Measured Local Call

STEP 5.   Press ***ENTER***.

Following is an example of a report generated with all four restrictions.

```
                        TEL ELECTRONICS INN
                        Exception Report # 1
                        May 31 at  4:16PM Fr

Duration Over 1 Minutes
Exclusively for LDist Calls
Exclusively btwn  0:00 & 18:00
Exclusively from  5/28 to  5/31
Exclusively for Guest Calls

 Date     Time   Dept   Ext          Type Trunk State  # Called    Min  Charges
-------------------------------------------------------------------------------
May 31  12:07PM 1-01   223           LDist   2 FL  (305)491-3920   1.4 $  2.31
May 31   1:13PM 1-01   223           LDist   2 FL  (305)776-0576   1.3 $  2.31
May 31   1:18PM 1-01   223           LDist   2 FL  (305)776-5660   1.6 $  2.31
May 31   3:45PM 1-01   223           LDist   2 FL  (305)491-3920   1.4 $  2.31
May 31   3:52PM 1-01   223           LDist   2 FL  (305)772-4484   1.5 $  2.31

Totals                              7.2 Minutes      5 Calls     $    11.55
        2.31 $$/Call          1.60 $$/Minute           1.4 Minutes/Call
```

EXAMPLE: Exception Report 1 with all Four Restrictions

TRUNK REPORTS

The INN-FORM *Plus* is equipped to handle up to 155 Trunks. The Trunk Report option will print a report summarizing all telephone activity or traffic for each Trunk during any one of four selected periods (The periods are defined by how often the report is cleared). Pressing the ***TRUNK REPORT*** key and the report number initiates the printing of the data. The information that appears on the Trunk Report will only be cleared by pressing the ***F1*** (YES) key when prompted, "CLEAR TRUNK REPORT?" after running a Trunk Report.

Several Trunk Reports are now available to allow comparisons of activity. These comparisons could be by shift, day, week, etc. Trunks showing activity will be shown on the report. Each property must determine the time periods for such reports by clearing data from each report at some preset interval. To set the time period and clear data, please refer to Trunk Clear.

NOTE: If Report 1 is to be a daily report, then the report can be printed any time, but must be cleared daily. Report 4 might be a yearly report and may be printed whenever you wish to see the information that has been collected year-to-date but must be cleared once a year.

► **To print a Trunk Report:**

STEP 1.   Press ***TRUNK REPORT.*** The system will display, "TRUNK REPORT (1-4):".

STEP 2.   Enter the report number (***1*** through ***4***).

STEP 3.   Press ***ENTER***. (The Trunk Report will print.)

STEP 4.   The system will display, "CLEAR TRUNK REPORT?".

STEP 5.   Press ***F1*** (YES) to clear the report and begin collecting new data, or ***F2*** (NO) to leave the report intact and continue collecting data.

EXAMPLE: 1 = Daily, 2 = Weekly, 3 = Monthly, 4 = Quarterly

This is only an example! You could select other periods such as: Shifts, accounting periods, etc. Each Trunk Report time period can be set to cover any length of time desired depending on how often the report is cleared.

```
                           TEL ELECTRONICS INN
                          May 31 at  4:33PM Fr
                          Trunk Usage Report #1

May 28 at  1:14PM through May 31 at  4:33PM
Trunk     Count     Total Time          Total Cost  Time/Call  Cost/Call  Cost/Min.
-----------------------------------------------------------------------------------
  7        1.         0.7                0.09        0.70       0.09       0.129
 11        1.        15.1                5.85       15.10       5.85       0.387
 12        3.        14.6                2.75        4.87       0.92       0.188
 17        1.         4.9                0.83        4.90       0.83       0.169
 19        1.         8.8                3.43        8.80       3.43       0.390
 22        1.         3.3                1.81        3.30       1.81       0.549
 23        1.         4.2                0.54        2.10       0.27       0.129
 24        2.         5.7                2.35        5.70       2.35       0.412
 40        2.        15.3                2.82        7.65       1.41       0.184
 45        3.         6.3                1.18        2.10       0.39       0.187

Totals:   16.        78.9               21.65       4.93       1.33       0.274

produced by INN-FORM Plus HX 6.5
copyright, TEL electronics, inc.
```

EXAMPLE: Trunk Usage Report

SYSTEM PROGRAMMING

The INN-FORM *Plus* provides powerful programming capabilities to enable you to setup the system to meet your specific needs.

The following is a brief description of the INN-FORM *Plus* programming capabilities and functions:

- Functions 1 through 9 control how the call record data from the switch will be priced and handled.

- Functions 10, 20, and 32 are status reports on the current setup of the INN-FORM *Plus* system. You will probably want to have a copy of these reports before changing the programming.

- Functions 11 and 12 return the system to factory programmed defaults.

- Functions 14 through 33 control how the system receives and processes the data.

Examples of programming settings and options are provided in the following pages to explain each step in detail.

To understand the programming of rates, it is important to understand telephone company charges calculated by the INN-FORM *Plus* system.

COSTS VS. CHARGES

First, charges from the phone company are called costs in this User Guide, to distinguish these costs from the final amounts to be charged. Telephone company costs are based upon Tariffs, which in turn are generally based upon distance and duration of calls. Some exceptions exist, to include fixed rate calls (local, operator-assist, information, "800" and "900", etc.) and metered calls (WATS, etc.).

The INN-FORM *Plus* system can determine costs based upon all government-approved methods when proper information is provided and included in factory programming or is set up with the programmable parameters on site. Costs are thus determined, based

upon a large set of complicated tariff and other data which must be included in every INN-FORM *Plus* system.

The INN-FORM *Plus* calculates both the cost and charge for every call. The system analyzes the number dialed and the duration of the call in order to calculate basic cost based on the telephone company rates that are programmed into the system. The INN-FORM *Plus* system then determines if a cost percentage adjustment or cost center markup is necessary, and if so, applies the adjustment, then adds any appropriate tax. This is the total cost of the call. The system then adds markup percentage and surcharge and sales tax, if any, to arrive at the final charge. The difference between the cost and charge is the profit made from each call.

EXCEPTIONS: As usual, there are exceptions. In some areas, particularly in major metropolitan areas, local calls are called "Measured Service" calls and are charged based on distance and duration like long distance. Each INN-FORM *Plus* system includes data for such "Measured Service Areas". If WATS, or other special Trunks are used, the INN-FORM *Plus* system will calculate costs correctly. This is done when data is transmitted (after every call is completed) to a properly factory-programmed INN-FORM *Plus* system.

FUNCTION 1. FIXED RATES

This function allows you to adjust the charges for several types of fixed rate calls.

► **To adjust the charges for a fixed rate call:**

STEP 1.   Press *FUNCTION.* The system will display a menu available programs.

STEP 2.   Enter *1*

STEP 3.   Press *ENTER*. The prompt will indicate, "FIXED RATE #".

STEP 4.   Enter a number (1 through 8) where:

        1 = Local Calls
        2 = Operator Assisted Calls

3 = Local Information
4 = In-State Information
5 = U.S. Information
6 = 1 (8xx) Calls
7 = 1 (900) Calls
8 = Incoming Calls

STEP 5.   Press *ENTER*. The system will display the selected rate
number such as, "RATE 6:" for 1 (8xx) calls.

STEP 6.   Enter the rate for that selected category in cents, or in
dollars and cents using the decimal point where
appropriate (0 through 99.96).

EXAMPLE: 25 = 25 cents and 2.00 = 2 dollars

STEP 7.   Press *ENTER*.

It is possible to store and print in the Audit Trail, no charge fixed
rates calls in special ways independent of the settings of Programs 6
and 8. Entering the amounts listed below as fixed rate charges for
any of the fixed rate calls which have no charge (fixed rate calls 1
through 8), indicates a zero charge call which will be treated
differently.

Charges	Action
$99.99	Printed and stored
$99.98	Printed but not stored
$99.97	Not printed or stored

FUNCTION 2. GRACE PERIODS AND THRESHOLD BILLING

A grace period is specified as the amount of time allowed to pass
before the call is defined as a completed call.

Threshold billing is the ability to charge a per minute amount for a
non-tariffed call when it exceeds a certain length of time (the
threshold).

Whether a call actually reaches its destination or not, there will not
be a charge incurred if the call duration is less than the specified

grace period. On the other hand, if the caller allows the phone to ring for a time longer then the grace period, the call will be labeled complete by the system and a charge will be assessed, even though the caller never reached the called party.

NOTE: The use of grace periods is required because of the telephone system, not because of the INN-FORM *Plus* system. Telephone Call Accounting and Management Systems must use a grace period method because generally there is no signal available from the telephone company to signify whether a call has reached the dialed party or not.

► **To set the grace period:**

STEP 1.   Press *FUNCTION.* The system will display a menu available programs.

STEP 2.   Enter *2*

STEP 3.   Press *ENTER*. The prompt will indicate, "GRACE PERIOD #".

STEP 4.   Enter the grace period number (1 through 6) where:

> 1 = Local
> 3 = Information
> 4 = 1 (900) Calls
> 5 = International Calls
> 6 = Other Calls

STEP 5.   Press *ENTER*. The system will display the selected grace period number such as, "PERIOD 3:"

STEP 6.   Enter the seconds for that selected category (*0* through *255*).

STEP 7.   Press *ENTER*.

NOTE: Grace period values are loaded at the factory based upon the best information available, but some adjustments could be appropriate on site.

► **To set the threshold period and amount:**

Follow STEP's 1, 2, and 3 above then:

STEP 4.   Enter the threshold number (2, 7, or 8) where:

<blockquote>
2 = Operator Assisted
7 = 8xx (Toll Free) Calls
8 = Local Calls
</blockquote>

STEP 5. Press *ENTER*. The system will display the selected grace period number such as, "PERIOD 8:" .

STEP 6. Enter the minutes that should be allowed before charging a per minute rate (*0* through *255*).

STEP 7. Press *ENTER*. The system will display, "Rate:".

STEP 8. Enter the per minute amount to charge. The amount entered is in cents, a decimal can be used.

STEP 9. Press *ENTER*.

> **NOTE:** Threshold values are entered at the factory only if they are specified when ordering the system.

FUNCTION 3. COST ADJUSTMENTS

This function allows you to keep up with rate increases (or decreases) from the phone company as they occur. This percentage increase is applied to the calculated cost of each tariffed or toll call to arrive at a new adjusted cost.

► **To program a cost adjustment:**

STEP 1. Press *FUNCTION.* The system will display a menu available programs.

STEP 2. Enter *3*.

STEP 3. Press *ENTER*. The prompt will indicate, "COST ADJUSTMENT #".

STEP 4. Enter the grace period number (1 through 6) where:

<blockquote>
1 = Nearby
2 = In-State
3 = In U.S.
4 = International
</blockquote>

<div style="text-align: center;">

5 = WATS
6 = Special

</div>

STEP 5.   Press **ENTER**. The system will display the selected
percentage number such as, "ADJUST % 2:"

STEP 6.   Enter the percentage for that selected category, using
decimal numbers if desired (-100.00 through 100.00).
The percentage can be negative. (-15.5 would mean a
decrease in cost of 15.5%.)

STEP 7.   Press **ENTER**.

FUNCTION 4. MARK-UPS

A markup is the percentage to be added after the cost has been
calculated in order to determine the charge to a client or tenant, etc.

For example, of your cost is $1.00 and a markup of 50% is set, the
client would be charged $1.50 for that call (assuming that other
parameters are not considered). Thus, the markup option is used to
add an amount to the cost in order to recover overhead, labor and
other expenses and/or to provide a profit on phone activities. The
markup option is not designed to be used to reflect increases made
by the local phone company. See Cost Adjustment, Function 3 for
tariff rate changes.

► **To program a call markup:**

STEP 1.   Press **FUNCTION.** The system will display a menu
available programs.

STEP 2.   Enter **4**.

STEP 3.   Press **ENTER**. The prompt will indicate, "MARK-UP %
#".

STEP 4.   Enter a number (1 through 6) where:

1 = Nearby
2 = In-State
3 = In U.S.
4 = International

---

5 = WATS
                    6 = Special

STEP 5.   Press *ENTER*. The system will display the selected
                    markup, such as, "PERCENT 4:" for an international
                    markup adjustment.

STEP 6.   Enter the percentage selected (-999 through 999).

STEP 7.   Press *ENTER*.

FUNCTION 5. SURCHARGES

A surcharge is a flat fee added to the cost of a telephone call. For
example, if the telephone company cost of a call were $1.00 and
you select a $1.00 surcharge, a client will be charged $2.00 for that
call (assuming that other parameters are not considered).

The surcharge option is used to add an amount to the cost in order
to recover overhead, labor and other expenses and/or to provide a
profit on phone activities. The surcharge option is not designed to
be used to reflect increases made by the local phone company; such
increases should be programmed using Cost Adjustment, Function
3.

► **To program a call surcharge:**

STEP 1.   Press *FUNCTION.* The system will display a menu
                    available programs.

STEP 2.   Enter 5.

STEP 3.   Press *ENTER*. The prompt will indicate,
                    "SURCHARGE #".

STEP 4.   Enter a number (1 through 6) where:

                    1 = Nearby
                    2 = In-State
                    3 = In U.S.
                    4 = International
                    5 = WATS
                    6 = Special

STEP 5. Press *ENTER*. The system will display the selected surcharge number such as, "AMOUNT 5:" for WATS calls.

STEP 6. Enter the surcharge amount in cents, or in dollars and cents using the decimal point where appropriate (0 through 999).

STEP 7. Press *ENTER*.

FUNCTION 6. PRINT NO CHARGE CALLS (YES/NO)

This function determines whether to print or not print in the Audit Trail those calls which do not incur a charge (e.g., incoming and internal calls).

► **To determine if INN-FORM *Plus* will print no charge calls:**

STEP 1. Press *FUNCTION.* The system will display a menu of available programs.

STEP 2. Enter *6.*

STEP 3. Press *ENTER*.

STEP 4. Press *F1* (YES) to print all no charge calls or press *F2* (NO) if no charge calls are not to be printed in the Audit Trail.

FUNCTION 7. PRINT AUDIT TRAIL (YES/NO)

This function is used to print or not print an Audit Trail of calls as they occur.

► **To determine the printing status of the Audit Trail:**

STEP 1. Press *FUNCTION.* The system will display a menu of available programs.

STEP 2. Enter *7*.

STEP 3.   Press *ENTER*.

STEP 4.   Press *F1* (YES) to print the Audit Trail or press *F2* (NO)
to skip the Audit Trail.

FUNCTION 8. STORE NO CHARGE CALLS (YES/NO)

This function allows you to store or not store those calls with no
charge calls in the system's memory. Call data is saved for Activity
and Trunk Reports, but detailed call records are stored or not stored
depending on Function 8. The advantage of storing all calls is you
have the complete record of data about telephone traffic for your
property.   Every call is available for reports, even if it has no
charge. Furthermore, the no charge calls use the properties phone
system resources just as much as the charged calls.   The
disadvantage of storing all no charge calls is that reports are longer
and memory is used which could be used for charged calls.

► **To determine the status of storing no charge calls:**

STEP 1.   Press *FUNCTION*. The system will display a menu of
available programs.

STEP 2.   Enter *8*.

STEP 3.   Press *ENTER*.

STEP 4.   Press *F1* (YES) to store details for all no charge calls or
press *F2* (NO) to store only summary data.

FUNCTION 9. PAGE REPORTS

This function allows you to either print your reports on separate
pages, or to print one right after the other in order to save paper.
(The number of lines on a page can be adjusted to suit your printer
in Function 26.) If you choose to skip over the perforations, there is
a provision for that, listed below.

► **To determine the status of printing INN-FORM *Plus* reports:**

STEP 1.   Press *FUNCTION.* The system will display a menu of available programs.

STEP 2.   Enter *9*.

STEP 3.   Press *ENTER*. The system will display, "PAGE REPORTS?".

STEP 4.   Press *F1* (YES) to print on separate pages or press *F2* (NO) to print reports running back to back or press *F3* (NOSKIP) to print reports over the page perforation or press *F4* (SKIP) to have the reports skip the perforation and continue on the next page.

> **NOTE:** The default settings are programmed for no perforation skip and back to back reports.

FUNCTION 10. PROGRAMMABLE PARAMETERS REPORT

This function produces a report with information about your system and permits you to view the programmable parameters for Functions 1 through 9 as they are currently set.

► **To view the programmable parameters for Functions 1-9:**

STEP 1.   Press *FUNCTION.* The system will display a menu of available programs.

STEP 2.   Enter *10*.

STEP 3.   Press *ENTER*. (The system will print the Programmable Parameters Report.)

```
                     INN-FORM Plus HX 6.5
                 copyright, TEL electronics, inc.
                     May 31 at  5:11PM Fr
                    6020 records   SN099997
          Mode: 7, Options: Print Audit Trail, Ram Setup


                  1      2      3      4      5      6      7      8
               Local  Oper.  Loc Inf St Inf U.S. Inf 1-(8xx) 1-(900)  Incom
1: Fixed Rates:  0.00   0.00   1.00   1.95   1.95   0.00   25.00   0.00
               Local  Oper.  Info.  1-(900) Intern.  Other  1-(8xx) Thresh
2: Grace Period:  60     30     20     20     75     60     30     30
   Rate:          0.00                              0.05   0.10
               Nearby In-State In-U.S. Intern.  WATS  Special
```

```
3: Cost% Adjust:  0.00    0.00    0.00    0.00    0.00    0.00
4: Mark-up%:         0      40      40      40       0      75
5: Surcharge:     0.00    1.50    1.55    2.55    0.00    5.00
6: Print No Charge Calls: No
7: Print Audit Trail: Yes
8: Store No Charge Calls: No
9: Page Reports: No
   3   0   0   0   6   0     7   6010
```

EXAMPLE: Function 10 Status Report ** Check this REPORT

FUNCTION 11. SET DEFAULT PROGRAMMABLE PARAMETERS FOR FUNCTION 1 THROUGH FUNCTION 10

This function permits you to restore Functions 1 through 10 to factory programmed defaults.

NOTE: Using this option will erase programming you have done with Functions 1 through 10.

► **To restore defaults for Functions 1 - 10:**

STEP 1.	Press *FUNCTION.* The system will display a menu of available programs.

STEP 2.	Enter *11*.

STEP 3.	Press *ENTER*.

STEP 4.	Press *F1* (YES) to restore the system to factory programmed defaults or press *F2* (NO) to abort this option.

The system will print a message similar to the following:

```
4  0  0  0  6
DEFAULTS SET
```

EXAMPLE: Message for Function 11

FUNCTION 12. SET DEFAULT PROGRAMMABLE PARAMETERS OR EVERYTHING THAT IS NOT SET BY FUNCTION 11.

This function permits you to restore all the remaining programmed information (information not returned to factory defaults by Function 11) to the factory programmed defaults.

NOTE: Using this option will erase programming you have done, as well as the definition of the Multiple Reports. It also sets the diagnostic mode to 0.

► **To restore defaults to Functions 11 - 33:**

STEP 1. Press *FUNCTION.* The system will display a menu of available programs.

STEP 2. Enter *12.*

STEP 3. Press *ENTER*.

STEP 4. Press *F1* (YES) to restore the system to factory programmed defaults or press *F2* (NO) to abort this option.

The system will print the following message:

```
2nd DEFAULTS SET
```

EXAMPLE: Default Message for Function 12

STEP 5. Press the reset button (a small, red recessed button located on the back of the INN-FORM *Plus*) to load certain defaults from the Data Chip.

FUNCTION 14. SET TOP OF PAGE

This function allows you to determine the position of the top of the page.

► **To program the top of page:**

STEP 1. Position the paper in the printer so the top of the page is at the tear off bar, or position the paper to your specifications.

STEP 2. Press *FUNCTION.* The system will display a menu of available programs.

STEP 3.   Enter *14*.

STEP 4.   Press *ENTER*. The system will momentarily display, "TOP OF FORM SET".

FUNCTION 20. PRINT STATUS OF FUNCTION 21 THROUGH FUNCTION 29

This function prints a report listing the current status of Function 21 through Function 29.

► **To print the current status of Functions 21 - 29:**

STEP 1.   Press *FUNCTION.* The system will display a menu of available programs.

STEP 2.   Enter *20*.

STEP 3.   Press *ENTER*. (The Status Report will print.)

```
                           A.C.    0 ->    0

  0=801   1=307   2=435   3=208   4=970   5=702   6=775   7=520   8=406   9=505
 10=719  11=541  12=303  13=720  14=308  15=760  16=530  17=916  18=559  19=209


   Lines/Page: 11,  Lines to Tear Off:  5,  Baud Factor:   85,  AM/PM: Yes
 Print Mask:     0,  Clear Mask:      0,  Master Mask:     0,  User Mask: 20303
 Hosp. Mask:  8511,  Remote Overflow: 65000,  Error Number:
```

EXAMPLE: Function 20 Status Report

FUNCTION 21. PLACE EXTENSION IN A DEPARTMENT AND COST CENTER

This function allows you to assign up to 100 extensions to any department and cost center.

The INN-FORM *Plus* has the ability to store and process reports on business and guest calls. In order to provide separate control, all non-guest extensions should be placed in departments separate from the guest departments. The default cost center and department for guest calls is 1-01. All non-guest extensions should be cross

---

referenced to another cost center and department. This way, by appropriately configuring the INN-FORM *Plus* at the factory, it is possible to have full markups and surcharges affect the guest calls, with only partial (or no) markups and surcharges for other cost centers. All extensions not cross referenced to a cost center and department are assumed to be guest extensions (1-01).

Departments and cost centers are programmed by the factory with names of up to 11 characters. It is possible to add new departments and cost centers to the already existing ones simply by assigning extensions to them. There is also a provision for entering new names on site (see Naming Departments), or through your dealer you can order a new chip containing your specific requirements.

► **To add/change an extension to/in a department/cost center:**

STEP 1. Press *FUNCTION.* The system will display a menu of available programs.

STEP 2. Enter *21.*

STEP 3. Press *ENTER*. The system will display, "FROM:".

STEP 4. Enter the extension number you want to add or change (up to five digits).

STEP 5. Press *ENTER*. The system will display, "TO:".

STEP 6. Enter both the cost center number (*1* through *5*) and the departments number (*01* through *50*) using three digits.

> **NOTE:** Departments must be entered as two digits when used in conjunction with a cost center. If using departments only it is not necessary to enter a cost center number.

STEP 7. Press *ENTER*

► **To delete an unwanted extension assignment:**

STEP 1. When the system displays, "FROM:" enter the extension number whose assignment you want to delete.

STEP 2. Press *ENTER*. The system will display, "DELETED!".

Temporary department assignments via Function 21 to departments 6-01 through 6-05 make possible Exception and Graphic Reports on a specific extension or a group of extensions.

One potentially useful report using this temporary department assignment would be a report on all department heads.

► **To program temporary department assignments:**

STEP 1. Set the exclusive department parameter first by using the RESTRICT key and restriction number 2.

STEP 2. Select a department from 6-01 through 6-05. Doing this prevents the extension from being deleted from its permanent department when it is placed in the 6-XX department. The extension will be in two departments.

STEP 3. Use Function 21 to assign specific extensions already in other departments to this temporary department (6-01 through 6-05).

With this arrangement, calls to the extension will still be in the original departments. In addition, Exception and Graphic Reports may be restricted to the temporary departments. Extensions can be left in the temporary department and will respond to restrictions to the original or the temporary department.

The system will remain in the data entry mode until you press *CANCEL* or *ENTER* to quit.

FUNCTION 22. NEW INTERIM AREA CODE

If an old Area Code is divided to create a new Area Code, this option allows you to maintain pricing integrity.

A default rate is automatically used for unknown Area Codes. This function only needs to be used for a relatively close Area Code.

► **To add a new area code:**

STEP 1. Press *FUNCTION.* The system will display a menu of available programs.

STEP 2.   Enter *22*.

STEP 3.   Press *ENTER*. The system will display, "NEW AREA CODE:".

STEP 4.   Enter the new three-digit Area Code.

STEP 5.   Press *ENTER*. The system will display, "SAME AS AREA CODE:".

STEP 6.   Enter the old Area Code that has been divided to form the new Area Code.

STEP 7.   Press *ENTER*

FUNCTION 23. ADD EXCHANGE ON SITE

This function allows you to assign up to 25 new Exchanges on site. This is only necessary for newly formed Exchanges which are relatively close. If the charges for calls to those new Exchanges are significantly different than phone bills indicate, then you may wish to use this option until new tariff data becomes available.

► **To assign a new exchange:**

STEP 1.   Press *FUNCTION*. The system will display a menu of available programs.

STEP 2.   Enter *23*.

STEP 3.   Press *ENTER*. The system will display, :FROM:"

STEP 4.   Enter the new Exchange you want to assign.

> **NOTE:** If the Exchange that needs to be added is in a different Area Code, specify by using a number (1 through 19) before the Exchange. Function 20 shows the Area Codes that correspond to each digit   (1 through 19).

STEP 5.   Press *ENTER*. The system will display, "TO:".

STEP 6.   Enter the old Exchange to which the new Exchange should be equivalent.

STEP 7.   Press *ENTER*.

► **To delete any unwanted Area Code/Exchange entries:**

STEP 1.   When the system displays, "FROM:" enter the Exchange whose entry you want to delete.

STEP 2.   Press *ENTER*. The system will display, "DELETED!".

The system will remain in the data entry mode until you press *CANCEL* or *ENTER* to quit.

FUNCTION 24. PROGRAM TRUNK/ACCESS CODE ON SITE

This function allows you to assign or reassign up to 25 Trunks and/or access codes on-site. This may be useful if your telephone system capabilities are increased or changed, and you have different types of Trunks (WATS, FX, etc.).   Your system may be programmed to use the Trunk number as an access code to determine what type of call is dialed, or it may use an access code directly if it is available. Some analysis will be needed to determine if your system uses access codes or Trunks for this purpose.

► **To program a trunk/access code:**

STEP 1.   Press *FUNCTION*. The system will display a menu of available programs.

STEP 2.   Enter *24.*

STEP 3.   Press *ENTER*. The system will display, "FROM:"

STEP 4.   Enter the Trunk/access code you want to assign or reassign.

STEP 5.   Press *ENTER*. The system will display, "TO:".

STEP 6.   Enter the existing Trunk/access code that the new Trunk/access code will act like.

STEP 7.   Press *ENTER*.

► **To delete any unwanted trunk/access code entries:**

STEP 1.   When the system displays, "FROM:" enter the Trunk/access code you want to delete.

STEP 2.   Press ***ENTER***. The system will display "DELETED!".

The system will remain in the data entry mode until you press ***CANCEL*** or ***ENTER*** to quit.

FUNCTION 25. HOSPITALITY OPERATION MASK, REMOTE SYSTEM OVERFLOW, ERROR CALL NUMBER

Function 25 allows you to program an operation mask and a remote system overflow limit. If the remote system overflow is set, the system will also prompt for a phone number to dial to report an error.

NOTE: When prompted for the error call number, do not press ***ENTER*** if the number is to remain the same. Pressing ***ENTER*** will erase the previously entered number; you must reenter the number to keep it the same. A printout of Function 20 includes the previously programmed number.

A hospitality operation mask controls the added features of the INN-FORM *Plus*. Choose the options desired from the table below and add the corresponding numbers together to arrive at the mask number (* = set by default).

*1	Print guest calls on the Audit Trail.
*2	Print non guest calls on the Audit Trail.
*4	Store guest calls in memory.
*8	Store non guest calls in memory.
*16	Send guest calls to a Property Management System.
*32	Send non guest calls to a Property Management System.
64	Send 0 charge calls to a Property Management System.
128	Print warning when exceeding remote system overflow point.
*256	Include calls sent to a Property Management System in Extension and Check Out Reports.
512	Include checked out calls in Extension and Check Out Reports.
1024	Do not attempt to send checked out calls to a Property Management System.
2048	Only include checked out calls on the Audit Report.
4096	Send account codes (if present) to a Property Management System.
*8192	Print a warning and Audit Trail when calls cannot be sent to a Property Management System.
16384	Do not retry sending calls to a Property Management System after initial failure.

Figure 4. Assignment List for Hospitality Operation Mask.

► **To set the hospitality operation mask:**

STEP 1. Acquire a printout of Function 20 and note the programmed error call number. (This step is not necessary if not outdialing to report an error.)

STEP 2. Press *FUNCTION.* The system will display a menu of available programs.

STEP 3. Enter *25.*

STEP 4. Press *ENTER*. The system will display, "HOSPITALITY OPERATION MASK:".

STEP 5. Evaluate (from Figure 1) and enter the hospitality mask number.

STEP 6. Press *ENTER.*

EXAMPLE: If you would like your INN-FORM Plus to:

Print non guest calls on the Audit Trail	2
Store guest calls in memory	4
Include checked out calls in Extension and Check Out Reports	512
Hospitality Mask Number	**518**

NOTE: To return to the function prompt at this point, press ***CANCEL.*** To return to Management Access press ***ENTER.***

Under certain error conditions the INN-FORM *Plus* can outdial to an off site computer and report an error. The call is dialed via modem which must be attached to the remote serial port located on the rear panel of the INN-FORM *Plus.*

The conditions which can cause an error call are when the number of calls in memory waiting to be sent to a Property Management System exceed the remote system overflow, or when the INN-FORM *Plus'* memory is 90% full.

After the mask number has been entered in Function 25, the system will display, "REMOTE SYSTEM OVER FLOW (0-65000):". This is a setting that signifies the number of calls in the system's memory waiting to be sent to a Property Management System. When the set number is reached, the system will report an error. Setting the system to 65,000 disables this feature; a reasonable amount might be from 50 to 500 calls.

STEP 7.   Enter the remote system overflow *(0 - 65000).*

STEP 8.   Press ***ENTER.***

> **NOTE:** To initiate error calling when memory is at 90% of capacity, enter a question mark (?) as the last command in Multiple Report 4 (Multiple Reports) and set up Multiple Report 4 to execute automatically using the Print Mask.

STEP 9.   Enter the number to be dialed (1-24 digits).

> **NOTE:** If you do not enter anything in step 9, no error call will be attempted, but a warning may still be printed.

STEP 10. Press ***ENTER.***

Use a comma (,) to indicate where you would need a pause in dialing. For example, with some phone systems when accessing an outside line, there is a short pause before a dial tone is heard. If this were the case, a comma (,) would be pressed before the phone number. If using pulse rather than tone, press *P* before entering the number.

EXAMPLE: If calling from a rotary phone system, and a 9 is needed to access an outside line, and the number to be notified is 1 (801) 555-3939, enter:

P9,18015553939

Function 25 also provides backup in the unlikely event that calls are lost by a PMS.

All restrictions apply to this procedure, so virtually any portion of the stored calls in memory can be resent to a Property Management System (refer to Restrictions Set on Reports).

► **To resend the calls to a Property Management System:**

STEP l.   Make any restrictions needed to the calls in memory.

STEP 2.   Press *FUNCTION*. The system will display a menu of available programs.

STEP 3.   Enter *25*.

STEP 4.   Press *ENTER.* The system will display, "HOSPITALITY OPERATION MASK:".

STEP 5.   Enter *-1*. All calls specified by the restrictions will be resent to a Property Management System.

After resending the calls, the system will not prompt for the remote system overflow as is normally the case in Function 25. The system will return to Management Access and immediately begin resending calls.

The calls that need to be resent are kept track of automatically and are continually sent in the background, while the INN-FORM *Plus* continues to function and process new calls.

FUNCTION 26. LINES/PAGE, LINE TO TEAR OFF, BAUD RATE, AM/PM VS. MILITARY TIME

NOTE: Before you use Function 26, it is suggested that you access Function 20, and print a copy of the current status of lines per page, baud rate and AM/PM vs

military time. Review the status to determine if changes need to be made, and keep a copy for reference.

This function will allow you to adjust the lines per page, lines to tear off, baud rate and allow you to select whether your reports will be printed in AM/PM or military time format.

Entering *0* for lines per page and resetting the INN-FORM *Plus* will restore all four options, as well as all of Function 33, to the original factory defaults.

► **To adjust the lines per page:**

STEP 1.   Press *FUNCTION*. The system will display a menu of available programs.

STEP 2.   Enter *26*.

STEP 3.   Press *ENTER*. The prompt will indicate, "NUMBER OF LINES/PAGE:".

STEP 4.   Enter the required number of lines per page.

> **NOTE:** The default for lines/page is 11 and is the most commonly used value. If your requirements are different, consult your printer for the proper setting and set the lines per page accordingly.

STEP 5.   Press *ENTER*. The prompt will indicate "BAUD FACTOR" followed by a list of baud rates and the corresponding baud rate codes you will use.

> A baud rate was programmed into your INN-FORM *Plus* at the factory according to your order; however if a change in baud rate is required, it can be made with this function .

> **NOTE:** The newly changed baud rate will not be in effect until the next reset of the unit.

```
┌─────────────────────────────────────────────────┐
│  This is the                      This is the    │
│  Baud Rate of                     Baud Rate Code │
│   the SMDR                        You use in     │
│     input                         Function 26    │
│                                                  │
│     300    . . . . . . . . . . . . . . . . .  221│
│     600    . . . . . . . . . . . . . . . . .  102│
│    1200    . . . . . . . . . . . . . . . . .   85│
│    2400    . . . . . . . . . . . . . . . . .   68│
│    4800    . . . . . . . . . . . . . . . . .   51│
│    9600    . . . . . . . . . . . . . . . . .   34│
│                                                  │
└─────────────────────────────────────────────────┘
```

Figure 5. Baud Rate Code Numbers

STEP 6.   Refer to Figure 4 on baud rates and enter the code
          number that represents the correct baud rate.

          EXAMPLE: Assume that the INN-FORM *Plus* system
          you received is set with a baud rate of 300. You discover
          that in order to work properly, your system requires a
          baud rate of 1200. At the prompt, "BAUD FACTOR",
          you would enter the code number 85.

STEP 7.   Press **ENTER**. The system displays, "AM/PM?". You
          may choose AM/PM time of military time.

STEP 8.   Press **F1** (YES) for AM/PM or press **F2** (NO) for
          military time.

STEP 9.   Press the reset button (a small, red recessed button
          located on the back of the INN-FORM *Plus*).

In order to properly page reports, the system must know how many
lines to advance so the complete page may be torn off after printing.
The default is five lines to the tear off point.

► **To program the page tear of point:**

STEP 1.   Press **FUNCTION**.

STEP 2.   Enter **26.**

STEP 3. Press ***ENTER***. The system will ask for, "NUMBER OF LINES/PAGE:". Your answer will set the distance from the last printed line on the page to tear off point.

STEP 4. Enter a dash (-) and the required number. The system will then set that number of lines to tear off point.

STEP 5. Press ***ENTER***. The system will prompt, "BAUD FACTOR:".

STEP 6. Press ***ENTER*** to exit Function 26.

STEP 7. Press the reset button (a small, red recessed button located on the back of the INN-FORM *Plus*).

FUNCTION 27. THE UNIVERSAL NUMBER LOOP

This function makes it possible for your INN-FORM *Plus* to produce Multiple Reports on a range of numbers instead of just one. As an example, reports can be automatically generated for Extensions 200 through 225 (or for Departments 20 through 40, etc.) using Function 27. When Function 27 is used with Multiple Reports, it can eliminate several keystrokes by looping on this range of numbers.

► **To produce Multiple Reports on a range of numbers:**

STEP 1. Press ***FUNCTION***. The system will display a menu of available programs.

STEP 2. Enter *27.*

STEP 3. Press ***ENTER***. The system will display, "LOOP FROM:"

STEP 4. Enter the number for the loop to begin on.

STEP 5. Press ***ENTER***. The system will display, "UNTIL:".

STEP 6. Enter the value you want the loop to end on.

STEP 7. Press ***ENTER***.

NOTE: The Multiple Report that uses the Function 27 range of numbers will repeat for each number from the "LOOP FROM:" value to, but not including, the "UNTIL:" value, then that particular Multiple Report terminates and is canceled.

To use the range of numbers set with Function 27 in a Multiple Report Press *F5* at the point in the report where the system would prompt for a number. Then have the Multiple Report end by calling itself. See the example below.

EXAMPLE: The next example shows the keystrokes necessary to set up Multiple Reports 1 and 2 to use Function 27.

Multiple Report 1 (Programmed with the keystrokes indicated)

> *FUNCTION*
> *27*
> *ENTER*
> *200*
> *ENTER*
> *226*
> *ENTER*
> *ENTER*
> *MULTI REPORTS*
> *2*
> *ENTER*

By pressing the keys indicated in this example, Function 27 is set for numbers ranging from 200 to 225. Then as the last step in Multiple Report 1 the system is told to go to Multiple Report 2.

> *EXT. REPORT*
> *F5*
> *ENTER*
> *MULTI REPORTS*
> *2*
> *ENTER*

By pressing the keys indicated in this example, the Extension Report will be generated. When the *F5* key is programmed into the Multiple Report where the prompt would have asked for an extension number the system automatically uses the range of numbers specified in Function 27 (see above example). Multiple Report 2 ends by calling itself and continues to loop and repeat until it has produced Extension Reports for each number in the range of numbers (not including the "UNTIL:" value).

When Multiple Reports 1 and 2 are set up as indicated above you may activate them by simply following these steps:

STEP 1.   Press *MULTIPLE REPORTS.*

STEP 2.   Enter *1*.

STEP 3.   Press *ENTER*. (For the example explained above, the system will produce Extension Reports on extensions 200 through 225.)

FUNCTION 28. AUTOMATIC PRINTING AND CLEARING

This function allows printing and/or clearing of Activity and Trunk Reports to occur automatically on a daily, weekly, or monthly basis. It also allows the automatic printing of Multiple Reports 1 through 4. These reports can print daily at 12 AM; weekly on Monday at 12 AM; or monthly on the first day of the month at 12 AM. Multiple Report 4 can print whenever the memory is at approximately 10% of capacity.

► **To run setup automatic printing and clearing:**

STEP 1.   Press *FUNCTION*. The system will display a menu of available programs.

STEP 2.   Enter *28*.

STEP 3.   Press *ENTER*. The system will display, "PRINT MASK:".

> **NOTE:** A mask number represents a set of instructions telling the system how to perform. The numbers that are added together to form the print mask (see Figure 6) represent reports that will be printed.

STEP 4.   Select, from Figure 6 below, which reports you want printed, add the numbers in the left column together and enter the **TOTAL**.

EXAMPLE: In order to print:

Daily Activity Reports	1
Monthly Activity Reports	4
Weekly Trunk Reports	32
Weekly Multiple Reports	512
TOTAL	**549**

STEP 5.   Press ***ENTER***. The system will display "CLEAR MASK:".

STEP 6.   Select, from Figure 6 below, which reports you want cleared, add the numbers in the left column together and enter the **TOTAL**.

EXAMPLE: In order to clear:

Daily Activity Reports	1
Monthly Activity Reports	4
Weekly Trunk Reports	32
TOTAL	**37**

> **NOTE:** The numbers that are added together to form the clear mask (see Figure 6) represent reports that will be cleared. This number does not have to be the same number as the print mask. The clear mask does not clear the information programmed with the Multiple Reports Key.

STEP 7.   Press ***ENTER***.

NOTE: When using Multiple Reports with Program 28, be sure to activate management access at the beginning of the Multiple Report. Without management access included at the beginning of the Multiple report, certain function keys will not respond to the Multiple Report during automatic printing.

```
This column shows          This column shows the report
the number to be added     and the time frame in which
into the print mask.       the report will be generated.

ACTIVITY REPORTS
    1  ................. Daily (Activity Report 1)
    2  ................. Weekly (Activity Report 2)
    4  ................. Monthly (Activity Report 3)
TRUNK REPORTS
   16  ................. Daily (Trunk Report 1)
   32  ................. Weekly (Trunk Report 2)
   64  ................. Monthly (Trunk Report 3)
MULTIPLE REPORTS
  256  ................. Daily (Multiple Report 1)
  512  ................. Weekly (Multiple Report 2)
 1024  ................. Monthly (Multiple Report 3)
 2048  ................. When available call memory space
       ................. is down to approx. 10%.
       ................. Multiple Report 4)
```

Figure 6. Numbers to Represent Reports

FUNCTION 29. MULTIPLE LEVELS OF MANAGEMENT ACCESS

Some business require the information contained in the call accounting system to be security controlled.

This function permits management to restrict access of certain call accounting information to authorized personnel only. Selected function keys may be programmed so that they may only be accessed by Management and/or authorized users and management.

The management and/or user access numbers that must be entered into the INN-FORM *Plus* before using selected function keys will be determined by management and then defined by the master or user mask numbers used in Function 29. If you choose to customize your level of security, read this section carefully and follow the instructions as outlined. You must have management access to set up this feature.

NOTE: The user access number and the management access number are numbers entered into the INN-FORM *Plus* to gain access to the function keys. These numbers are separate from the user mask or the master mask. A mask number defines which specific function keys are restricted to the management access number and/or the user access number.

Level 1 - Unauthorized User - This level requires no access number. Anyone can operate the unit at this level.

Level 2 - User Access - This level requires a user access number (any one-to four-digit number you select) which restricts the use of selected function keys to someone with this number.

Level 3 - Management (or Master) Access - This level uses the management access number that is programmed into the Data Chip at the factory. The management access number is part of the information supplied by you with your call accounting system order. With the management access number activated, there is access to all function keys. By programming a mask number for this level, you restrict specific function keys to use only with the management access number.

Each function key has an assigned number. Use the Assignment List (refer to Figure 7) to determine your choices. Calculate the total of the assigned numbers that are to be restricted for both the

management access and user access and record them for reference
during the setup procedure for Function 29.

```
                           ASSIGNMENT LIST

                                 RESTRICTED TO       RESTRICTED TO
                                 AUTHORIZED USER     MANAGEMENT
FEATURE OR            ASSIGNED   AND MANAGEMENT      ONLY
REPORT KEY            NUMBER     (USER MASK)         (MASTER MASK)
_____
                                 X      NO.           X       NO._

Activity Report        1        ____  _____        ____   _____
Trunk Report           2        ____  _____        ____   _____
Dept. Report           4        ____  _____        ____   _____
NA                     8        ____  _____        ____   _____
Ext. Report           16        ____  _____        ____   _____
Cr Limit Shutoff      32        ____  _____        NA       NA
NA                    64        ____  _____        ____   _____
Except. Reports      128        ____  _____        ____   _____
NA                   256        ____  _____        ____   _____
Ext. Audit           512        ____  _____        ____   _____
Function            1024        ____  _____        ____   _____
Mode Set            2048        ____  _____        ____   _____
Time Set            4096        ____  _____        ____   _____
Date Set            8192        ____  _____        ____   _____
Graphic Reports    16384        ____  _____        ____   _____
```

Figure 7. Assignment List for Levels of Management Access

*These totals will be used during the setup of the management
access levels (Function 29). Steps for setting up this function are
below.

NOTE: The "N" key and the C.C. Report key have the same restrictions as the
Dept. Report key.

EXAMPLE: Total each column - "MASTERS MASK" and
"USER MASK". The mask number will be the total of the above
selected numbers which represent the function keys that will be
restricted to the user and the master (user mask) or only to the
master (master mask). Refer to the assignment list above.

Programming the master mask: If management wanted to have
exclusive access to (e.g.) the *FUNCTION* key, the assigned number
of 1024 would be entered during the setup of master mask
programming.   (Setup sequence is below.)   If more than one
function is to be restricted to management access, add the assigned
numbers and enter the total at the prompt, "MASTER MASK:".

Programming the user mask: The authorized user of the INN-FORM *Plus* system and management would have access to selected reports and functions by entering the assignment number (or sum of assignment numbers) for those functions at the prompt, "USER MASK:" (see example).

Trunk Report	2
Activity Report	<u>1</u>
TOTAL:	**3 = User mask number**

NOTE: Any function keys not restricted by masking, may be used without any access number. The management access number is programmed into the system at the factory according to your order. In order to designate the sub-level, or user access, another number, up to four digits, will be programmed during the setup procedure of Function 29, as defined below.

The default mask setting of the INN-FORM *Plus* software is set up so that an access number is not required to set the time and date. An access number is required to operate any other function key.

► **To program a user access number:**

STEP 1. Press *FUNCTION.* The system will display a menu of available programs.

STEP 2. Enter *29*.

STEP 3. Press *ENTER*. The prompt will indicate, "USER ACCESS #".

STEP 4. Enter the number you have chosen (up to four digits) to be the user access number.

STEP 5. Press *ENTER*. The system will display, "MASTER MASK:"

STEP 6. The assignment chart calculation (total) for master access (that restricts selected functions for use by management only) is entered here.

STEP 7. Press *ENTER*. The system will display, "USER MASK:".

STEP 8. Enter the number obtained from assignment chart calculation (total) for the user mask. (This restricts

selected functions for use by authorized users and
management only.)

STEP 9.   Press **ENTER**.

> **NOTE:** Any function keys that are not restricted by masking can be
> used without any access number.

Possible masking number choices: (examples only).

MASK = 0   No access number is required.
                    Just press the key to activate
                    any function.

MASK = 3   An access number is required
                    to use the ***ACTIVITY CLEAR***
                    and ***TRUNK CLEAR***
                    function keys. All other
                    function keys are available.

MASK = 3075   An access number is required
                    to use the ***ACTIVITY REPORT,***
                    TRUNK REPORT, FUNCTION
                    and ***MODE SET*** function keys. All
                    other function keys are available.

MASK = 3587   ***EXTENSION AUDIT*** is added
                    to the list above (Mask 3075)
                    of function keys requiring an
                    access number for use. All
                    function keys not masked can
                    be accessed without the access
                    number.

MASK = 20479   ***TIME SET*** and ***DATE SET***
                    are available but all other
                    functions require the access
                    number.

MASK = 32767   All function keys require an
                    access number before they can
                    be used.

FUNCTION 32. PRINT LIST OF CHANGEABLE SMDR PARAMETERS AND RULER LINE

This function prints your Function 33 settings of the SMDR parameters which you can program (see Function 33). It also produces a ruler line to help judge mode 8 or 9 printouts.

NOTE: It is suggested that you make a printout of the settings as they come from the factory and then another printout of any changes you make, so you will have a record in case of problems.

► **To print a list of changeable SMDR parameters and ruler line:**

STEP 1.   Press *FUNCTION.* The system will display a menu of available programs.

STEP 2.   Enter *32*.

STEP 3.   Press *ENTER*. The system will print the list of the current SMDR parameters and the ruler line.

```
                      SMDR Settings
      0     2    15     2    18     2    21     0     0    21
     34     4    24     4    62     0     0     0     0     0
      0     0     0     0     0     4    20     0    48    47
     58    48     1     6    21     0     0     1     0    85
      9     0    62    24     0     1    -1    -1     4    -1
     56    47    49    56    47

            1          2          3          4          5          6          7          8
  12345678901234567890123456789012345678901234567890123456789012345678901234567890
```

EXAMPLE: Function 32 Status Report

FUNCTION 33. SET SMDR RELATED PARAMETERS

This function allows you to set SMDR parameters. Changing SMDR parameters can greatly alter the performance of your call accounting system. Make sure you understand the changes needed before using Function 33. Under normal operating conditions, no changes in SMDR parameters should be required. It is recommended that you contact your dealer before changing any SMDR parameters!

NOTE: It is strongly suggested that you keep a printout of the default settings and another printout of the changes you make, if any. This can be done with Function 32. SMDR parameters for your telephone system are pre-programmed at the factory according to the information submitted with your order for your INN-FORM *Plus* system.

► **To program SMDR parameters:**

STEP 1.   Press *FUNCTION.* The system will display a menu of available programs.

STEP 2.   Enter *33*.

STEP 3.   Press *ENTER*. The system will display, "SET SMDR #".

STEP 4.   Enter the parameter number (1 through 52 - see Figure 8).

STEP 5.   Press *ENTER*. The system will prompt you for the appropriate parameter and display the current value.

STEP 6.   Enter the correct value for the chosen parameter, or enter nothing to leave the value unchanged and proceed to the next parameter.

STEP 7.   Press *ENTER*.

STEP 8.   Once you have completed all SMDR changes necessary, press the reset button (a small, red recessed button located on the back of the INN-FORM *Plus*).

The system will remain in the data entry mode until you press *CANCEL* to quit or until you press the reset button.

1. Account code is part of phone number (0 = false, 1 = true).
2. Length of hours field.
3. Position of hours field.
4. Length of minutes field.
5. Position of minutes field.
6. Length of seconds field.
7. Position of seconds field
8. Length of tenths of minutes fiels.
9. Position of tenths minutes field.
10. Length of phone number field.
11. Position of phone number field.
12. Length of extension field.
13. Position of extension field.
14. Length of Trunk field.
15. Position of Trunk field.
16. Length of account code field.
17. Position of account code field.
18. Account code is phone # indicator if #1 is true (ASCII, "-"=2 digits).
20. Account code is present indicator if # 1 is true (ASCII, "-"=2 digits).
22. Length of access code field if #24 si false.
23. Position of access field if #24 is false.
24. The access code is part of the phone number (0 = false, 1 = true).
25. Position of checking field 0 (incoming call indicator).
26. Position of checking field 1 (valid call indicator, 0=don't care).
27. Position of checking field 2 (valid call indicator, 0=don't care).
28. Position of checking field 3 (1st line of 2-line call record indicator, 0=1 line call records).
29. Character (ASCII value) for checking field 0.
30. Character (ASCII value) for checking field 1.
31. Character (ASCII value) for checking field 2 if field 0 not found.
32. Character (ASCII value) for checking field 3.
33. Use serial printer indicator (1=true, 0=use parallel printer).
34. Remote port acknowledge character (ASCII value, 121 for download).
35. Remote port non-acknowledge character (ASCII value, 106 for download).
36. Difference (+ or -) from start time to end time (0=use duration field).
38. 24 hour (instead of 12 hour) format indicator if #36 not 0 (0=12 hour).
39. Number of spaces between each Audit Trail line.
43. Position of extension field for incoming call (when #29 is found).
44. Position of Trunk for field for incoming call (when #29 is found).
45. Position of extension field used for transfers (if 0 is read, use #13).
46. "011+" calls are not operator assisted indicator (0 = operator assisted, 1 or -1 = no operator assisted.
47. SMDR and Remote port - data, parity and stop bits; set bit: 3 = even, 2 = 8 data, 1 = parity off, 0 = 1 stop bit. Low nibble is for SMDR, high is for remote.
48. Serial Printer port - baud factor: -35 = 300, -52 = 600, -1 = 1200, 17 = 2400, 0 = 4800, 34 = 9600. (Default: -1)
49. Number of rings modem waits before answering incoming call.
50. Setup of serial printer port; set bit 4 = parity off, 3 = l stop bit, 2 = odd parity, 0 = 8 data bits.
51. Number of minutes INN-FORM *Plus* waits between error call attempts when the modem is unsuccessful in reaching another modem. (l to 60)
52. Number of error call attempts. (-1 to 99. Default: -1 = try indefinitely.)

Figure 8. Changeable SMDR Parameters 1 Through 52 for Function 33

(NOTES)

CHAPTER THREE

QUESTIONS AND ANSWERS

This chapter answers common questions regarding the INN-FORM *Plus* system and is a good reference to be used when troubleshooting. This chapter also discusses the service and maintenance agreement and covers the system warranty program.

COMMON QUESTIONS

QUESTION: How do I clear the memory?

ANSWER: Doing an Extension Audit will clear out all calls stored in memory. If you do not wish to clear all call records out of the memory, use the **RESTRICT** key to select only older calls for erasure and do an Extension Audit. (Refer to Low Memory Alarm for step-by-step instructions.)

QUESTION: Why does the INN-FORM *Plus* seem to be pricing some of the calls incorrectly?

ANSWER: This could be due to a telephone company rate change or the programmable parameters in the INN-FORM *Plus* may have been changed on site.

QUESTION: What would cause black squares to appear in the display of the INN-FORM *Plus*?

ANSWER: This is an indication that there are some problems with a chip in your unit and the system is unable to read the program. It is possible that the Data Chip is not securely in the socket or a chip has been damaged.

TROUBLESHOOTING

Troubleshooting can often be handled on-site by operating personnel without incurring extra expense or waiting for an outside service technician.

During normal operation, a number of things can happen which appear to be serious, but which are simply system responses to unusual activities (power fluctuations, extreme static electricity, accidental unplugging of the system, etc.).

A thorough understanding of this User Guide will prevent most problems with your INN-FORM *Plus* system. If anything appears improper, consult this User Guide as a reference before calling your dealer for service.

SYMPTOM: INN-FORM *Plus* display is blank.

POSSIBLE CAUSE:

♦ INN-FORM *Plus* power cord is not plugged in.

♦ Static electricity has temporarily erased the display.

SUGGESTED ACTION:

♦ Make sure INN-FORM *Plus* power cord is plugged into a working, properly grounded volt A.C. outlet (110 to 120 volts).

♦ Wait for one minute and the system will reset the display as it updates the clock

SYMPTOM: INN-FORM *Plus* sounds an alarm (high pitched tone or beep).

POSSIBLE CAUSE:

♦ Printer 110 to 120 volt A.C. cord is not plugged in.

♦ Printer is not selected or on-line.

♦ Printer is out of paper or ribbon.

♦ Printer cable is not properly connected.

- ♦ System's memory is low.

- ♦ System's power turned off, then back on.

- ♦ System is waiting for a response to a prompt (ANOTHER AUDIT?")

- ♦ If applicable, PMS interface is down.

SUGGESTED ACTION:

- ♦ Make sure printer power cord is plugged into 110 to 120 volt A.C. grounded outlet.

- ♦ Select printer or put printer on-line. See printer manual.

- ♦ Load paper or ribbon according to instructions in printer manual.

- ♦ Make sure that the cable between the INN-FORM *Plus* and the printer is plugged in properly.

- ♦ Generate an Audit Report.

- ♦ Plug system into a more reliable power source or UPS.

- ♦ Answer the prompt.

- ♦ Unplug cable from the serial printer port.

SYMPTOM: Calls are not being priced.

POSSIBLE CAUSE:

- ♦ SMDR cable is not properly connected.

- ♦ Audit Trail is turned off.

- ♦ Telephone system is not sending data.

- ♦ SMDR format is programmed incorrectly.

SUGGESTED ACTION:

- ♦ Make sure that the RS-232C cable from the telephone equipment SMDR port is plugged in properly.

- ♦ Check to see if the Audit Trail is turned on. See Function 7.

♦ See programs 32 and 33 and Setting the Mode.

SYMPTOM: INN-FORM *Plus* does not price certain short duration calls.

POSSIBLE CAUSE: Grace period is set too long.

SUGGESTED ACTION: See Function 2.

SYMPTOM: INN-FORM *Plus* prices some calls incorrectly.

POSSIBLE CAUSE: Tariffs have changed.

SUGGESTED ACTION: Make adjustments in Function 3, Cost Adjustment, or contact your dealer for tariff updates.

ALARMS

PRINTER ALARM

The printer alarm is sounded by the INN-FORM *Plus* whenever the system is ready to send data to the printer but the printer is not ready to print. The system will continue to sound the alarm until the printer problem is corrected, since the system has important data which must be printed or it will be lost. The alarm is annoying, but it is meant to be. This continuing alarm demands attention to save the data.

NOTE: To temporarily shut off the alarm while in management access, press ENTER.

CAUTION: Do not press the reset button to silence the INN-FORM *Plus*! Doing so erases the information the system is attempting to print.

The printer alarm can occur if the printer is turned off, out of paper, out of ribbon, is not ready or if the cables are not properly connected. If the alarm sounds continuously, check the following:

- POWER: Make sure the printer "POWER" light is on. If not, check to see if it is plugged in or if the circuit breaker needs to be reset or the fuse needs to be replaced (depending on the type of printer). For details, refer to the printer manuals.

- PAPER: Make sure there is paper in the printer. There may be a paper sensor in the printer which will cause the printer to stop when it is out of paper. Refer to the printer manual for details. (Always have extra paper on hand.)

- RIBBON: Make sure ribbons are installed properly. Refer to the printer manual for details.

- PRINTER NOT READY: Check to make sure that the "READY" or "ON-LINE" or "SELECT" light is on. Occasionally static electricity can turn this switch off and it must be turned on again to make the printer ready.

- CABLE : Make sure the printer cable is attached properly. Refer to the printer manual for details.

POWER ALARM

Whenever power comes on or whenever the system is turned on, the INN-FORM Plus sounds a brief alarm and prints out a Startup or Reset Report. Thus, even if power goes out in the middle of the night while the system is unattended, a record of every "power on" is printer by the system. In the event that power fluctuations occur regularly, it may be appropriate to install an uniterruptable power supply (UPS) to prevent losing telephone call data. Some phone systems include UPS capabilities and, if possible, the INN-FORM Plus should be plugged into the UPS.

NOTE: The INN-FORM *Plus* will not operate without power! However, the unit does have sufficient battery backup to maintain call data and programmable parameter settings for an extended period of time. And, whenever power comes back on, the INN-FORM *Plus* will automatically start, print the Startup or Reset Report and be ready without any operator assistance.

LOW MEMORY ALARM

The memory light will turn red when there is only space for 500 more call records in memory. The INN-FORM *Plus* will sound an alarm and print a warning as a reminder when there is only space to store 300 call records, 100 call records, 80 call records, 60 call records, 40 call records, and 20 call records.

When memory is full, each additional call record is printed so that data is never lost, and an alarm sounds again to emphasize that no memory is available. It is recommended that an Audit Report be taken to clear the memory before it gets low.

► **To clear a portion of the older call record data:**

1) Use the *RESTRICT* key and Restrict #1 Start Date and End Date for Reports only selecting the End Date. Select carefully in order to erase only "older" calls. The report will only include calls placed on or before the end date.

STEP 1. Press *RESTRICT*. The system will display the four possible restrictions.

STEP 2. Enter *1*.

STEP 3. Press *ENTER*. The system will display, "START DATE (0, 0101-1231):".

STEP 4. Enter *0*.

STEP 5. Press *ENTER*. The system will display, "END DATE (0,0101-1231):".

STEP 6. Enter the desired end date using four digits.

EXAMPLE: For October 31st, use end date 1031.

(2) Next do an Extension Audit to clear the block of call records that were restricted.

STEP 1: Press *EXT. AUDIT*. The system will beep twice and read, "WARNING - ERASES CALLS!", followed by the display, "SUMMARY OR DETAIL?".

STEP 2. Press the corresponding function key which indicates how you wish the information to appear on the report. (The Extension Audit Report will print.)

STEP 3. After printing is completed, the system will display, "ANOTHER AUDIT?".

STEP 4. Press *F1* (YES) if another Extension Audit Report is needed, then return to STEP 2 or press *F2* (NO) to end the audit and release these calls from memory.

> NOTE : Do not press *F2* (NO) until you are sure you have printed as many copies of the various Audit Reports as you need. Once you press *F2* (NO), all call records and report data for the specified period will be erased and a new set of information will begin to accumulate.

911/311 ALARM

The INN-FORM *Plus* will sound an alarm when 911 or 311 is dialed from a property extension connected to the INN-FORM Plus system. In addition, when 911 or 311 is dialed the system will print raw SMDR to indicate from which extension the 911 or 311 call was placed. This will help emergency personnel quickly locate the individual in need of assistance.

NOTE: The INN-FORM *Plus* does not receive call information until AFTER the caller has hung up. Thus a 911/311 alarm will not be sounded until the caller has completed the call.

SERVICE AND MAINTENANCE

TEL electronics, inc. (TEL) provides a full set of service and maintenance support functions for its dealers and customers.

An excellent warranty program is offered with each TEL system. In addition to the warranty program, TEL has an excellent service and maintenance staff on call 24 hours daily on normal business days, including most weekends and holidays. This staff is prepared to answer questions, provide advice and even solve many minor problems over the phone.

It must be emphasized that TEL carries out all sales and service activities through its distributors and dealers.

Therefore, it is suggested that the dealer who sold and/or installed the system be contacted for sales and service matters. TEL will accept calls from end-user customers only on an emergency basis.

For fast and efficient technical assistance, it is suggested that you collect (if possible) the following information about your system before calling your dealer:

♦ The name of the property or business where the INN-FORM *Plus* is located and the serial number of the unit.

♦ A printed copy of Function 10 (The Programmable Parameters Report).

♦ A printed copy of Function 20 (The status of Functions 21 through 26).

♦ One or two pages of call record data with the system in the checking mode (mode 9).

WARRANTY

TEL electronics, inc. warrants that the INN-FORM *Plus* system will perform in substantial compliance with the documentation supplied with this system. If the system is defective, *TEL electronics, inc.* will replace it at no charge, assuming the defective system is returned to *TEL electronics, inc.* and is currently under warranty. The INN-FORM *Plus* system is warranted by *TEL electronics, inc.* for a period of two years, from defects due to materials and/or workmanship.

In no event will *TEL electronics, inc.* be liable for any damages, including loss of savings or other incidental or consequential damages arising out of the use or inability to use the INN-FORM *Plus* system (even if *TEL electronics, inc.* or an authorized dealer or distributor of *TEL electronics, inc.* has been advised of the possibility of such damages), or for any claim by any other party.

CHAPTER 4

APPENDIX

APPENDIX A. SYSTEM INSTALLATION

This section explains how to install INN-FORM *Plus* quickly and efficiently. The installation procedure is divided into numbered steps. By following these steps, you will check to see that you have the proper equipment, make the physical connections, and run system tests.

NOTE: During the installation certain functions will be used which may require management access privileges. See Chapter 1, Getting Started.

STEP 1. THE PRODUCT CHECKLIST

Check to see that your INN-FORM *Plus* packaging contains these items:

♦ INN-FORM *Plus*
♦ Power supply (separate plug-in transformer)
♦ User Guide
♦ Quick Reference Guide
♦ Extra supply order form
♦ Printer cable (optional)

This shipment does not include the cables for the SMDR connections. The dealer should provide a shielded 2 wire cable for the SMDR connection.

STEP 2. Programming Check List

To properly connect the printer and SMDR to the system you'll need to provide the following information:

♦ The SMDR baud rate (default: 1200)
♦ The printer baud rate, if serial (default: 1200)
♦ The management access number (default: serial number of the system if none)

NOTE: The above numbers can usually be found on your copy of the order form.

STEP 3. Installing and Replacing the Data Chip

NOTE: Be sure the power is off for this procedure. If the System's Data Chip was previously installed, skip to STEP 4.

The customer Data Chip fits securely into a "user-friendly" socket inside the unit case. The socket prevents the Data Chip from being put in backwards by providing keyed alignment slots. At times it becomes necessary to replace the Data Chip to provide new tariff information. To do so carefully turn the INN-FORM *Plus* unit over giving access to the bottom panel of the unit. Loosen the locking screw enabling the panel to be rotated upwards revealing the Data Chip socket. To remove the Data Chip, grasp tabs firmly and remove.

Place the new Data Chip in by aligning the keyed slots, holding the Data Chip firmly, and pressing it in securely. Once you have seated the Data Chip firmly, replace the back panel and tighten the screw securely.

STEP 4. Connecting the Printer

The INN-FORM *Plus* can be connected to either a serial or a parallel printer. The type of printer you will be using determines which port to use.

Before you connect a serial printer, make sure that the printer selector switches are set to the proper settings, as follows:

- ♦ Same baud rate as on customer Dataform
- ♦ 8 data bits
- ♦ 1 stop bit
- ♦ No parity

Perform a printer self test after setting the switches above to make certain that the printer is operating properly.
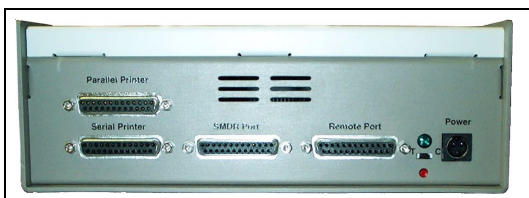
Figure 8. Back of INN-FORM *Plus* unit.

The "Serial Printer" port is used for connection to a serial printer. The connector configuration is as follows:

- ♦ Pin 1-frame ground
- ♦ Pin 3-transmit data
- ♦ Pin 7-signal ground
- ♦ Pin 20-data terminal ready (DTR)

NOTE: Pin 20 is a control line from the printer which, when high, tells the system that it is ready to print.

The "Parallel Printer" port is used for connections to a parallel printer. The connector configuration is as follows:

Pin connector	Parallel Port Function
1	Data Strobe
2	Data 0
3	Data 1
4	Data 2
5	Data 3
6	Data 4
7	Data 5
8	Data 6
9	Data 7
10	Acknowledge
11	Busy
12	Paper Error
13	Select

```
   14  . . . . . . . . . . . . . . . . . . . . . . . . . . .  Chassis Ground
19-30  . . . . . . . . . . . . . . . . . . . . . . . . .  Signal Ground
   31  . . . . . . . . . . . . . . . . . . . . . . . . .  Reset
   32  . . . . . . . . . . . . . . . . . . . . . . . . .  Fault
```

First, determine which sort of printer you will be using (either serial or parallel) and securely fasten the cable into the proper port.

Next, plug the printer's AC power cord into a grounded outlet.

Finally, load the printer paper, set the top of form, and make sure that the printer is selected or on-line. Also perform any other necessary adjustments required by the printer manufacturer (read the printer manual).

STEP 5. CONNECTING THE POWER

The INN-FORM *Plus* needs a dedicated 117 volt AC outlet (110 volt AC min. 125 volt AC max). The outlet should have a standard socket with a conduit ground. It is recommended that a separate 15 amp breaker and AC surge protection be used.

The INN-FORM *Plus* will operate in humidity up to 90% and at temperatures ranging from 10 degrees to 40 degrees centigrade.

Once you're sure that you've provided the proper environment, plug in the wall mount power supply. Next, plug the DC power jack into the power transformer socket (be sure this connector is in securely).

The system will immediately transmit a Startup or Reset Report to the printer which includes the following information:

♦ System type and software version
♦ Date, time, and day of week
♦ Memory capacity, serial number, and last tariff date
♦ Mode setting and current options

If the Startup or Reset Report does not print after the power is connected, repeat STEP 4. If trouble persists, attempt STEP 6, the Printer Test. If trouble still persists, refer to STEP 11, Troubleshooting Installation.

STEP 6. THE PRINTER TEST

Now that you have made all the physical connections, it's time to run some systems tests. The first of these is the printer test. If the Startup Report printed properly in STEP 5, you can skip to STEP 7.

Before you begin the printer test, locate the reset button that is located on the back, right side of the INN-FORM *Plus*. By depressing this red button, the system will transmit the Startup or Reset Report to the printer. This is the easiest method of generating test data to the printer.

If your system came configured for the wrong type of printer, press the reset button, enter your management access number and run Function 33. You may have to wait 20-30 seconds for system initialization to finish. Set SMDR parameter 33 to 0 for a parallel printer, or 1 for a serial printer.

STEP 7. THE KEYPAD TEST

Depress each key that is marked on the keypad. As each marked key is depressed, there will be an audible sound. This sound assures you that each key is making contact and has been completely depressed. After each marked key has been depressed and checked to be functioning, depress the cancel key several times to clear out unwanted commands entered by depressing many keys sequentially.

If all has gone well, the keypad test is over. If any function key does not work, contact your dealer.

STEP 8. THE MEMORY TEST

The memory test is designed to test and clear each bank of the system's memory. A successful memory test means that there will be no problems storing data.

Follow the initialization procedure located in APPENDIX B of this user guide. This should only be necessary at the first time installation. The procedure consists of doing a Function 248, and then a reset. The Startup or Reset Report will appear as follows:

```
********************************************************************************
                          INN-FORM Plus HX 6.5
                       copyright, TEL electronics, inc.
                            May 31 at 10:45AM Fr
                          6020 records    SN099997

Mode: 0, Options: Print Audit Trail, Ram Setup
                             < Master Clear >
Cleared all activity and trunk reports and the audit period
********************************************************************************
```

Figure 9. Startup or Reset Report

If the printed message looks similar to Figure 8, then no errors were
found and the master clear has taken place. This procedure will test
and clear memory in preparation to receive valid call data.

STEP 9. CONNECTING TO THE TELEPHONE SYSTEM

Before you actually make the connection, make absolutely certain
that your telephone system SMDR cable pinouts correspond to the
INN-FORM *Plus* SMDR connector. The INN-FORM *Plus* SMDR
port pin and connector designation are as follows:

- ♦ Pin 2 or pin 3 (NOT both) - receive data
- ♦ Pin 7 - signal ground

You will notice there are no "handshaking" lines connected to the
INN-FORM *Plus*. The system is designed to receive data from the
SMDR device on a continuous basis, so handshaking is not needed.

NOTE: It is very important that you understand the SMDR equipment you are
working on. The SMDR port on the phone system must be configured to send data
on a continuous basis (no handshaking). It may be necessary to strap certain pins
together in order to satisfy handshaking requirements of the switch..

Now you can connect the INN-FORM *Plus* to the telephone system.
Connect the male end of the telephone system's cable to the SMDR
port.

STEP 10.   THE VALID CALL TEST

The valid call test lets you know that the connection between the
INN-FORM *Plus* and the telephone system is good, that the phone

system is transmitting call records in a readable format, and that the INN-FORM *Plus* is receiving, analyzing and storing these calls.

First, place the INN-FORM *Plus* in mode 9 and perform Function 6. Press *F1* (YES) at the prompt, "PRINT NO CHARGE CALLS?" in order to print no charge calls. This will allow you to see the data transmitted from the telephone system printed out and also see whether or not the INN-FORM *Plus* will accept that data format.

Now make three test calls. Make one local call, one long distance call within your Area Code, and one long distance call outside of your Area Code. Each test call should be at least one minute long.

The data on the printer should show the SMDR as sent by the telephone system similar to the following:

```
1234  00:01:45  00:00:00   9           2345533           T004
```

EXAMPLE: SMDR from the Telephone System

The next line of printed information will be an Audit Trail which will signify that the system accepted the SMDR format. You should see lines similar to the following:

```
1234  00:01:45  00:00:00   9           2345533           T004
 4/07  9:41AM  Fr  1-01    350     201  UT  (801)363-1544  2.9  $  0.25 local call
```

EXAMPLE: Audit Trail in INN-FORM *Plus* Format

If one of the following messages appear, refer to STEP 11, Troubleshooting:

- ♦ Checking fields bad
- ♦ Insufficient input
- ♦ Under grace period

STEP 11. TROUBLESHOOTING INSTALLATION

This section describes certain error conditions and possible troubleshooting activities that can be performed on site to correct such errors. Troubleshooting suggestions are listed with the most common problems first. If, while following the procedures, the

error condition is corrected, there is no need to perform subsequent procedures.

ERROR CONDITION 1. The Call Accounting and Management System is not printing to the printer.

- ♦ Be sure the printer is properly setup: (power, paper, on-line, the self test runs properly, etc.).

- ♦ For a serial printer, set switches to: baud rate specified on dataform, 8 data bits, 1 stop bit, no parity.

- ♦ Check to see if the connector from the INN-FORM *Plus* cable is securely fastened to the printer.

- ♦ Disconnect the serial printer and the SMDR cables from the INN-FORM *Plus*. Turn the INN-FORM *Plus* over, giving access to the bottom panel of the unit. Loosen the screw, enabling the panel to be rotated upwards revealing the jumper block. Remove the jumper from the pins labeled JMP9 and place it on the pins labeled JMP10 which will connect the serial printer output to the SMDR input. Restore power to the INN-FORM *Plus*. Run Function 88. The system will send data out and expect to receive data back. The system will display, "TESTED PORTS ARE OK". This will verify that the system ports are functioning and the problem is elsewhere. If after 8 seconds you do not see this message displayed, call your dealer. After running this test remember to unplug power and move JMP10 back to JMP9.

- ♦ Ensure that cabling pinouts are correct for the telephone switch and the printer.

ERROR CONDITION 2. The INN-FORM *Plus* is not receiving data from the telephone system;

- ♦ Run Function 6, Print No Charge Calls and press *F1* (YES) to see all calls. This will allow you to see actual printed call data if the INN-FORM *Plus* is receiving the data from the telephone system in a valid format.

- ♦ Place the INN-FORM *Plus* in mode 9. This diagnostic mode will print any data that is transmitted to the INN-FORM *Plus* from the telephone system. This will

allow you to see if the necessary data is being transmitted from the telephone system.

♦ See Functions 32 and 33, if some adjustments to the SMDR programming are necessary. See Function 26, if the baud rate needs to be changed.

♦ Observe the DATA LED to be sure it flashes as data is received.

♦ Perform the above "TESTED PORTS ARE OK" test.

♦ Be sure the cabling is correct, and that the telephone system is able to send on a continuous basis. In other words, make certain that handshaking is not required by the SMDR port of the telephone system. Remember the SMDR cable should only have 2 connections:

   ▪ Pin 3-receive data
   ▪ Pin 7-signal ground

NOTE: If, at last resort, you need a high signal to tell the telephone system to send data, there is a +5 volts DC signal found on pin 20 of the INN-FORM *Plus*. Use caution when utilizing this pin.

STEP 12. FINAL PREPARATION

Now that you have run several tests, made corrections, and learned many things, it's time to reinitialize the system and get it ready for use. To do so, run Function 248 to clear all test calls out of memory and press the reset button (the red, recessed button located on the back of the INN-FORM *Plus*). Also, be sure the Audit Trail is set correctly (see Function 6), and make certain all connections are secure. Your system will now be ready for daily use.

NOTE: If you have made on site programming changes, this procedure will delete those changes. You may wish to run Function 1739 to clear call record memory, and clear Activity and Trunk Reports separately instead of running Function 248.

STEP 13. BATTERY BACKUP

At some point in time it may be necessary for the system to rely on battery backup (i.e. power outage, storm, travel). INN-FORM *Plus* can store memory without power for three days. The POWER light

(located on the top, right corner of the unit's face) will flash red indicating the system is running off of battery backup. If the system must retain memory without access to an outlet for a period longer than three days, the jumper block will require some adjustments.

The necessary adjustments can be made by turning the INN-FORM *Plus* over providing access to the bottom panel. Loosen the locking screw, enabling the panel to be rotated upwards revealing the jumper block. Remove the jumper located on the pins labeled JMP9 and replace it (on one of the pins labeled JMP9) in a horizontal position. Doing so disables the flashing red POWER light and diverts that power to the extended battery backup period. With jumper 9 removed, the battery backup can last up to 30 days.

NOTE: Jumpers 3-8 are not user configurable.

APPENDIX B. INITIALIZATION PROCEDURE

The INN-FORM *Plus* initialization procedure is used to set the system defaults. The initialization should only be necessary at the first time installation.

► **To initialize the system:**

STEP 1. Establish management access if necessary.

STEP 2. Press *FUNCTION.* The system will display a menu of available programs.

STEP 3. Enter *248.*

STEP 4. Press *ENTER.*

STEP 5. Press the reset button (located on the back of the INN-FORM *Plus*.)

The initialization Report will print out and should look similar to the figure on the following page.

```
1  0  0  0  0
DEFAULTS SET
2nd DEFAULTS SET

                   1       2       3       4       5       6       7       8
                 Local   Oper.  Loc Inf St Inf U.S. Inf 1-(8xx) 1-(900)  Incom
1: Fixed Rates:  0.00    0.00    1.00    1.95    1.95    0.00   25.00    0.00
                 Local   Oper.   Info.  1-(900) Intern.  Other  1-(8xx) Thresh
2: Grace Period:   60      30      20      20      75      60      30      30
   Rate:                  0.00                                    0.05    0.10
                Nearby In-State In-U.S. Intern.   WATS  Special
3: Cost% Adjust: 0.00    0.00    0.00    0.00    0.00    0.00
4: Mark-up%:        0      40      40      40       0      75
5: Surcharge:    0.00    1.50    1.55    2.55    0.00    5.00
6: Print No Charge Calls:  No
7: Print Audit Trail:  Yes
8: Store No Charge Calls:  No
9: Page Reports:  No
   0  0  0  0  0


********************************************************************************
                         INN-FORM Plus HX 6.5
                     copyright, TEL electronics, inc.
                        May 31 at 10:45AM Fr
                        6020 records    SN099997

Mode: 0, Options: Print Audit Trail, Ram Setup
                          < Master Clear >
Cleared all activity and trunk reports and the audit period
********************************************************************************
```

Figure 11. Printout of the Initialization

APPENDIX C. INN-FORM *PLUS* Property Management System (PMS) Interface

The powerful INN-FORM *Plus* Call Accounting and Management System has been designed with the larger hotel or hospital in mind. It combines business features with hospitality functions as well as providing a powerful external reporting capability to a third party Property Management System. A Property Management System is connected to the INN-FORM *Plus* through the serial printer port which makes it necessary to use a parallel printer when a Property Management System is used.

NOTE: The serial printer port of the INN-FORM *Plus* may be used for a Property Management System interface. It is designed to transmit data on pin 3 and receive data on pin 2. When a Property Management System interface uses the serial printer port, a parallel printer must be used.

The INN-FORM *Plus* can send calls to a Property Management System through the serial printer port. Calls not accepted by a Property Management System can be stored in memory so the INN-FORM *Plus* can keep trying until they are accepted (see Function 25).

During normal use of a Property Management System interface the following two conditions can exist:

CONDITION 1

The transmission is accepted and a one line Audit Trail may be printed (see Functions 7 and 25).

```
  May 31  1:46PM Fr 1-01   211    2 NY 1(212)555-6789   2.1 $ 2.57 out-of-state
```

EXAMPLE: One Line Audit Trail

CONDITION 2

The transmission from the INN-FORM *Plus* to a Property Management System is not accepted. In that event a warning

---

message may be printed with an Audit Trail (see Functions 7 and 25).

```
** Remote system is unavailable.  The following call must be posted manually:
May 31  1:46PM Fr 1-01   211    2 NY 1(212)555-6789   2.1 $ 2.57 out-of-state
```

EXAMPLE: Remote system unavailable.

PMS-HB, HOBIC INTERFACE

DATA FORMAT SPECIFICATION

This information will assist in the understanding of TEL's Hobic (HB) Property Management System interface transmission format and protocol.

Each record sent from the INN-FORM *Plus* conforms to the following format:

```
Field  1 2 3   4      5      6     7    8        9            10
       001A TEL 05/31    621 19:19 0015 $006.51 212-555-4532 L
```

All field are separated by one space except for fields one and two, which are adjacent. (Field nine would have four spaces if the phone number sent is lacking an area code.) For those fields where leading zeros are not used, the data will be right justified, occupying the right most position in the number of bytes designated for that field.

FIELD DESCRIPTION

Field 1 3 bytes	Sequence number which increments to 999 followed by 000. Every 6 hours it is cleared to 001
Field 2 1 byte	Increments (A, B, ...) when Field 1 wraps around to 000. Every 6 hours it is cleared to A
Field 3 3 bytes	Three character identifier which is always "TEL."
Field 4 5 bytes	Date of call. Leading zeros are sent in both the month and day fields, which are separated by a slash.
Field 5 5 bytes	Room or extension which placed the call. Leading zeros are not used
Field 6 5 bytes	Time of call. Leading zeros are sent in both the hour and minute fields, which are separated by a colon
Field 7 4 bytes	Call duration in minutes. Leading zeros are sent.

Field 8	Call cost in dollars and cents, preceded by a dollar
7 bytes	sign. Leading zeros are sent in both the dollars and
	cents fields, which are separated by a decimal point.

Field 9	Called number. This normally consists of the area
12 bytes	code, exchange and the last four digits of the number
	dialed, separated by dashes. Where appropriate, spaces
	are sent in place of the area code and first dash

Field 10	Local/Foreign indicator. L means local, F means
1 byte	international, space means anything else (typically long
	distance).

SPECIFICATION LINK CONTROL CHARACTERS

ACK - An ACK is used to represent a positive acknowledgment by a Property Management System. ACK will be sent to the TEL System in response to a data transfer indicating successful reception of the data by a Property Management System. ACK can be defined by the property to be almost anything (see Function 33, SMDR# 34), although an ASCII "ACK" (HEX 6) is recommended.

NAK - A NAK is used to represent a negative acknowledgment by a Property Management System. NAK will be sent to the TEL System in response to a data transfer indicating unsuccessful reception of the data by a Property Management System and requests that the TEL System retransmit the data. NAK can be defined by the property to be almost anything (see Function 33, SMDR# 35), although an ASCII "NAK" (HEX 15) is recommended.

SOM, EOM -- A Start-of-Message (SOM) sequence is used to precede the text, and an End-of-Message (EOM) sequence ends the text. The defaults are set to LF for SOM (HEX 0A), and CR, LF, FF for EOM (HEX 0D 0A 0C). When ordering they may be defined as any sequence of characters.

OTHER HANDSHAKING METHODS

If the ACK and NAK are undefined (HEX 0) a hardware handshaking protocol is expected to be used so that no part of any

transmission is lost. If the hardware handshaking is not satisfied within about 30 seconds, however, the TEL system assumes there is a problem and beeps repeatedly. This is because the input and output buffers will eventually overflow if the handshaking is not satisfied.

The interface is configured as follows:

PIN FUNCTION

2	Receive data
3	Transmit data
7	Signal ground
20	DTR (low means busy)

If there is to be no handshaking established the receiver must be prepared at all times. This is accomplished by leaving ACK and NAK undefined and by not connecting pin 20.

RESPONSES

A software handshaking protocol is expected to be used when ACK and NAK have been defined. When the TEL system sends a message to the Property Management System the receiver of the message can act in three ways. Positively acknowledge, negatively acknowledge or not respond.

1. A positive response. The PMS acknowledges the message.

INN-FORM *Plus*   External PMS

SOM (text) EOM   ∅

                                    ×   ACK

2. A negative response. The PMS returns a negative acknowledgment. The TEL system waits three seconds between retransmitting the second message and then if necessary the third and final message. If an ACK is received a one-line audit trail is printed. On the third NAK or no response, a full Call Report is printed.

INN-FORM *Plus*   External PMS

SOM (text) EOM ∅

        × NAK

(wait 3 seconds)

SOM (text) EOM ∅

        × NAK

(wait 3 seconds)

SOM (text) EOM ∅

3. No response. If the PMS does not respond to the TEL message the TEL system will print a full Call Report.

   INN-FORM *Plus*   External PMS

   SOM (text) EOM ∅
   (wait 5 seconds)   (no response)

   The TEL system prints a full Call Report.

PMS-HX, HOLIDEX INTERFACE

DATA FORMAT SPECIFICATION

This information will assist in the understanding of TEL's Holidex (HX) Property Management System interface transmission format and protocol.

Each record sent from the INN-FORM *Plus* conforms to the following format:

```
Field  1 2 3   4     5    6    7   8     9          10
       001A TEL 05/31   621 19:19 0015 $006.51 212-555-4532 L
```

All field are separated by one space except for fields one and two, which are adjacent. (Field nine would have four spaces if the phone number sent is lacking an area code.) For those fields where leading zeros are not used, the data will be right justified, occupying the right most position in the number of bytes designated for that field.

FIELD DESCRIPTION

Field 1 3 bytes	Sequence number which increments to 999 followed by 000. Every 6 hours it is cleared to 001
Field 2 1 byte	Increments (A, B, ...) when Field 1 wraps around to 000. Every 6 hours it is cleared to A
Field 3 3 bytes	Three character identifier which is always "TEL."
Field 4 5 bytes	Date of call. Leading zeros are sent in both the month and day fields, which are separated by a slash.
Field 5 5 bytes	Room or extension which placed the call. Leading zeros are not used
Field 6 5 bytes	Time of call. Leading zeros are sent in both the hour and minute fields, which are separated by a colon
Field 7 4 bytes	Call duration in minutes. Leading zeros are sent.

Field 8   Call cost in dollars and cents, preceded by a dollar
7 bytes   sign. Leading zeros are sent in both the dollars and
              cents fields, which are separated by a decimal point.

Field 9   Called number. This normally consists of the area
12 bytes   code, exchange and the last four digits of the number
              dialed, separated by dashes. Where appropriate, spaces
              are sent in place of the area code and first dash

Field 10   Local/Foreign indicator. L means local, F means
1 byte   international, space means anything else (typically long
              distance).

SPECIFICATION LINK CONTROL CHARACTERS

ENQ - A HEX 05 (ENQ) is used to request the status of the PMS (ready/busy).

ACK - An ACK is used to represent a positive acknowledgment by a Property Management System. ACK will be sent to the TEL System in response to a data transfer indicating successful reception of the data by a Property Management System. ACK can be defined by the property to be almost anything (see Function 33, SMDR# 34), although an ASCII "ACK" (HEX 6) is recommended.

NAK - A NAK is used to represent a negative acknowledgment by a Property Management System. NAK will be sent to the TEL System in response to a data transfer indicating unsuccessful reception of the data by a Property Management System and requests that the TEL System retransmit the data. NAK can be defined by the property to be almost anything (see Function 33, SMDR# 35), although an ASCII "NAK" (HEX 15) is recommended.

STX - A HEX 02 (STX) -- This is the beginning frame character during the transfer of data between the TEL System and PMS. The STX also starts the accumulation of the BCC.

ETX - A HEX 03 (ETX) -- This is the last data character and is followed immediately by the BCC.

BCC - A HEX value representing the Block Check Character used to verify the successful transfer of data between systems. The BCC is calculated by processing each character through an accumulator by an exclusive-or operation. The BCC process will start with the character after the STX character, and includes and ends with the ETX character. The BCC character will follow the ETX character.

RESPONSES

When the TEL system sends a message to the Property Management System the receiver of the message can act in three ways. Positively acknowledge, negatively acknowledge or not respond.

1. Normal delivery of message to PMS.

INN-FORM *Plus*	External PMS
ENQ ∅	
	× ACK
STX (text) ETX BCC ∅	
	× ACK

2. Busy response by PMS

INN-FORM *Plus*	External PMS
ENQ ∅	
	× NAK (PMS responds but cannot accept data at this time)

The TEL system will retransmit an ENQ after 5 seconds until the PMS accepts the message, or until 4 NAK responses are received.

3. No response from PMS.

INN-FORM *Plus*	External PMS
ENQ ∅ (wait 5 seconds)	(no response)

ENQ   ∅
(wait 5 seconds)   (no response)

ENQ   ∅
(wait 5 seconds)   (no response)

The TEL System will retransmit an ENQ every five seconds until the PMS responds, or until four unsuccessful ENQ responses have been sent.

4. Negative response to data transfer.

<u>INN-FORM *Plus*</u>   <u>External PMS</u>

ENQ
       ×   ACK

STX (text) ETX BCC   ∅
       ×   NAK

ENQ   ∅
(wait 3 seconds)

STX (text) ETX BCC (Max. of 3 tries)   ∅
       ×   ACK

If the message is still not successfully transmitted after three tries, the TEL system will print the message on its attached printer, and proceed to transmit the next message.

5. No response to data transfer.

<u>INN-FORM *Plus*</u>   <u>External PMS</u>

ENQ   ∅
       ×   ACK

STX (text) ETX BCC   ∅
(wait 11 seconds)   (no response)

ENQ   ∅
       ×   ACK

STX (text) ETX BCC (Max. of 3 tries)   ∅
       ×   ACK

In the event of no response to the data message, the TEL System will reinitiate the ENQ sequence.

If the message is still not successfully transmitted after three tries, the TEL System will print the message on its attached printer and proceed to transmit the next message.

PMS-MR, MICROS INTERFACE

DATA FORMAT SPECIFICATION

This information will assist in the understanding of TEL's Micros (MR) Property Management System interface transmission format and protocol.

Each record sent from the INN-FORM *Plus* conforms to the following format:

```
Field  1   2    3     4
       ac0103100006563125341234
```

All fields are adjacent (no spaces). The message is always followed by a carriage return (HEX 0D) with no line feed.

FIELD DESCRIPTION

Field 1   Start of Message. A four character identifier
4 bytes   which is always "ac0l".

Field 2   Room or extension which placed the call.
4 bytes

Field 3   Call charge. The amount is represented in
6 bytes   pennies (i.e., no decimal point).

Field 4   Telephone number. The telephone number
10 bytes   field always contains 10 digits.

SPECIFICATION LINK CONTROL CHARACTERS

ACK - An ACK is used to represent a positive acknowledgment by a Property Management System. ACK will be sent to the INN-FORM *Plus* in response to a data transfer indicating successful reception of the data by a Property Management System. ACK can be defined by the property to be almost anything (see Function 33, SMDR# 34), although an ASCII "y" (HEX 79) is recommended.

NAK - A NAK is used to represent a negative acknowledgment by a Property Management System. NAK will be sent to the

INN-FORM *Plus* in response to a data transfer indicating unsuccessful reception of the data by a Property Management System and requests that the INN-FORM *Plus* retransmit the data. NAK can be defined by the property to be almost anything (see Function 33, SMDR# 35), although an ASCII "n" (HEX 6E) is recommended.

RESPONSES

When the INN-FORM *Plus* sends a message to a Property Management System the receiver of the message can acknowledge or not respond.

1. A positive response. A Property Management System acknowledges the message.

INN-FORM *Plus*		External PMS
text plus carriage return	∅	
	×	ACK

2. A negative response. A Property Management System returns a negative acknowledgment. The INN-FORM *Plus* waits 3 seconds before retransmitting the final message. If an ACK is received the system proceeds normally. On a NAK or no response the INN-FORM *Plus* may print a warning and optionally store the call in memory and try to send it as it has the opportunity (see Function 25).

INN-FORM *Plus*		External PMS
text plus carriage return	∅	
	×	NAK
(wait 3 seconds)		
text plus carriage return	∅	

3. No response. If a Property Management System does not respond to the message, the INN-FORM *Plus* will print a full Call Report.

INN-FORM *Plus*	External PMS
text plus carriage return ∅	
	(no response)
(wait 5 seconds)	
	(no response)

The TEL system prints a full Call Report .

Chapter Five

Glossary

A

ACCESS CODE - A number dialed to enable the use of specific Trunks. Used to identify different dialing routes.

ACTUAL COST - The amount incurred as a result of your telephone company rates. This amount is prior to the addition of any markups or other programmed charges added by the TEL-Executive.

ALARM - A warning of a malfunction. Refer to the Alarms section of this User Guide for more detail.

AREA CODE - A three-digit number identifying an assigned geographic area in the North American direct distance dialing (DDD) numbering plan. The middle digit of the Area Code is either a "0" or a "1".

ASCII - American Standard Code for Information Interchange - A seven bit alphanumeric code. This code uses numbers to represent characters.

AUDIT TRAIL - A record of call data printed when the call is received.

B

BLOCK - When referring to Multiple Reports a block is one of six different reports with selected parameters, using up to 45 keystrokes per block (or report). For more information see Multiple Reports.

BAUD RATE - Serial data transmission speed equivalent to the number of signaling elements per second.

C

CARRIER - A company authorized by the appropriate regulatory agency to provide communication services.

CALL RECORD - A unit of storage used to hold information in your data base.

CHARGE - An amount added to the cost of the call enabling a profit to be made on the use of the telephone system.

CHECKING FIELD - A location where a specific character will be found verifying the validity of the data received.

CLEAR MASK - Refer to mask. The numbers that are added together to form the clear mask represent Activity and Trunk Reports that will be cleared at specific preset times.

COST - The amount incurred as a result of your telephone company rates. This amount is prior to the addition of any markups or other programmed charges are added by the TEL-Executive.

COST ADJUSTMENT - Refer to Function 3. This allows you to keep up with rate increases (or decreases) from the phone company as they occur. This percentage increase is applied to the calculated cost of each tariffed or toll call to arrive at a new adjusted cost.

D

DDD - Direct Distance Dialing - A method of making long distance toll telephone calls without operator intervention on the public switched telephone network.

E

EXCHANGE - In a 10 digit telephone number, the three digits following the Area Code. In a seven digit number, the first three digits.

EXTENSION - A branch off the PBX, a telephone number, a telephone located at a specific number.

FIXED RATE - Fixed rate call charges can be set in seven different categories: local, operator-assisted, local information, in-state information, out-of-state information, "800" and "900" calls. This is the set charge on the category specified. To check your Fixed Rates see Function 10 Programmable Parameters Report.

F

FX - Foreign Exchange. Exchange service from an exchange other than the one from which service would normally be provided. The use is primarily to reduce the cost for traffic to or from a heavily used remote location.

G

GRACE PERIOD - The amount of time allowed to pass before the call is defined as a completed call.

I

IN-STATE - A type of call defined as having occurred within the boundaries of the state that you are in.

INTERNATIONAL - A call placed from the United States and going to another nation.

IN-USA - A call placed within the boarders of the United States of America.

INVERTED REPORT - Many of the reports that the INN-FORM *Plus* produces can be reversed. The inverted report feature increases the number of reports that you can get with the INN-FORM *Plus* by accessing information more easily.

L

LED - Light Emitting Diodes - Three small lights located on the right side of the unit's face. These lights will indicate the status of the power supply, SMDR input, and memory.

LOCAL CALL SITE - A reference to the location of the INN-FORM *Plus*.

M

MARK-UP - An increase in an already existing amount.

MASK - A mask is one number that represents a set of instructions telling the system which functions to perform and which functions to restrict or mask out.

MASTER MASK - Refer to mask. The master mask number restricts the use of specified function keys until the management access number has been entered. See Function 29 Multiple Levels of Management Access.

MEASURED SERVICE - In some areas, particularly in major metropolitan areas, local calls are called "measured service" calls and are charged based on distance and duration like long distance calls. These calls are also referred to as "nearby" calls.

MEASURED SERVICE AREA - An area where local calls are charged based on distance and duration like long distance calls.

MEMORY - A storage area for call record data and other system data.

METERED CALL - A system where the number of calls made is monitored and after a specified number of calls have been made each call is charged a set amount.

MODE - The diagnostic mode of the INN-FORM *Plus* indicates how incoming SMDR data will be shown (if at all).

MULTI REPORTS KEY - The Multi Reports key is used to define or access the Multiple Reports. Multiple Reports give you the capability to automatically execute many functions with a few keystrokes.

N

NEARBY - A specific call type based on distance from the call site. A local call in a measured service area.

NO CHARGE CALL - Any calls which do not incur a charge (e.g., incoming and internal calls).

O

OCC - Other Common Carrier - 1) Specialized common carriers, domestic and international record carriers and domestic satellite carriers that provide transmission services such as private line voice, data or video services or other services as authorized by the Federal Communication Commission. 2) All resellers.

OPERATOR ASSISTED - Calls that require the assistance of a telephone company operator. These include collect, person-to-person, and credit card calls. Even if credit card calls are handled automatically they are classified as operator assisted calls and are charged at a premium rate.

OTHER CALLS - Any call not previously listed falls into this category.

P

PABX - Public Automatic Branch Exchange - telephone switching equipment, also referred to as PBX, or EPABX for Electronic Public Automatic Branch Exchange.

PARAMETER - A value or setting that can be changed by programming the system.

PARALLEL - The data transmission technique in which multiple signal elements are transmitted concurrently.

PBX - Refer to PABX.

PRINT MASK - Refer to mask. The number or numbers that are added together to form the print mask represent reports that will be printed at specific preset times. See Function 28 Automatic Printing and Clearing.

PROGRAMMED CHARGES - Amounts programmed into the system to be included with the cost from the telephone company for a total amount the customer will pay. An example of a programmed charge is the surcharge (Function 5).

PROGRAMMABLE PARAMETERS REPORT - A report that shows the status of the variables that can be controlled by Functions 1 through 9.

R

REMOTE PORT - A component of the INN-FORM *Plus* information handling system that provides the interface between the system and other communication channels such as a modem or computer.

RESTRICT KEY - This feature of the INN-FORM *Plus* system provides a more convenient way of setting restrictions for report parameters. With this feature, you may set up parameters to customize your reports. These restrictions are in effect until you leave management access.

RS-232C - The interface between data terminal equipment (DTE, in this case the INN-FORM *Plus*) and data communication equipment (DCE, in this case the telephone switch, printer, or remote device) employing serial binary data interchange.

S

SERIAL CABLE - A group of wires over which serial data can be transmitted one bit at a time.

SERIAL NUMBER - A six digit number issued to each INN-FORM *Plus* during production. This number can be found engraved on the bottom of the unit, and is printed in the Startup or Reset report.

SERIAL TRANSMISSION - The data transmission technique in which signal elements follow each other in time on a single transmission channel.

SMDR - Station Message Detail Recording - Detailed information about each phone call sent from the telephone switch to the INN-FORM *Plus* for processing.

SOFTWARE RELEASE NUMBER - The software release number can be found in the Startup or Reset Report which will print out any time you press the reset button (a small red, recessed button located on the back of the system).

SPECIAL - Refer to Function 10 The Programmable Parameters Report. Functions 3,4, and 5 each have a call type called "Special". This refers to a call type that may be specified on the dataform

STATUS REPORT - The INN-FORM *Plus* has several status reports available. These include:

Function 10 The Programmable Parameters Report which gives the status of Functions 1 through 9.

Function 20 which gives the status of Functions 21 through 26.

Function 32 which lists the settings for the SMDR parameters of the unit.

The system check which occurs every 6 hours and establishes that the system is functioning properly.

START-UP REPORT - This report appears every time you reset your system or every time the system is powered-up. This information includes: copyright information, the serial number, the software release number, the model name, the memory size, the date, time, and day of the week, the current mode and the programmed options.

SUBROUTINES - A subroutine is a small program within a main program that is executed before the main program proceeds. In describing the Multiple Reports and how to use them, this User Guide indicates that higher report numbers have priority, and thus can act as "subroutines".

SURCHARGE - A surcharge is a flat fee added to the cost of a telephone call.

T

TARIFF - The schedule of rates and regulations pertaining to the services of a communications common carrier. Tariffs are filed with the appropriate regulatory agency. The rates by which calls are priced.

TELEPHONE CALL ACCOUNTING - The INN-FORM *Plus* is a Telephone Call Accounting and Management System. This system is a sensitive electronic device which monitors calling activity and provides you with management information, formatted to your specifications. This information in turn insures accountability and profitability in business.

TEL-SCAN - A TEL-SCAN unit will interface between the telephone switch and the INN-FORM *Plus* for the purpose of translating the telephone activity into a format that the INN-FORM *Plus* can process. This is useful when the switch does not have SMDR capabilities.

THRESHOLD BILLING - Billing method where there is no charge for a set period of time (the threshold) followed by a per minute charge thereafter.

TRUNK - A transmission path usually used as a common artery between switching centers, toll centers, test centers, PBXs and concentrators. The telephone lines that you pay for from the PBX to the outside world.

U

UPS - Uninterruptable Power Supply - Used to prevent losing telephone call data. Some phone systems include UPS capabilities and, if possible, the INN-FORM *Plus* should be plugged into the UPS.

USER MASK - Refer to mask. This mask number will be the total of the selected numbers which represent the function keys that will be restricted to the authorized user and management.

W

WATS - Wide Area Telecommunications Service - A service designated to meet the needs of customers having substantial volumes of long distance calls. Customers can subscribe to as many as six interstate service areas at rates based on total usage as opposed to a call-by-call rating.

E

F