

INN-FORM PC 1.0

User's Guide

Build 0908

November, 2000

Introduction

The complete INN-FORM PC ("IFPC") system is a multi-module hospitality call accounting system that runs on any Microsoft Windows 95 / 98 / NT / 2000 system. IFPC is not intended for any other operating system, including Windows 3.1 and earlier.

IFPC consists of several modules, each with various programs (both EXEs and DLLs), as follows:

IFPC CP.EXE
IFPC PM.EXE
SHAREIT.DLL
BORLNDMM.DLL
SYSTEMINIT.EXE
CAR.ROM
REGISTER.EXE
JTSYSTEM.INI

These modules and programs will be discussed in more detail later in this document.

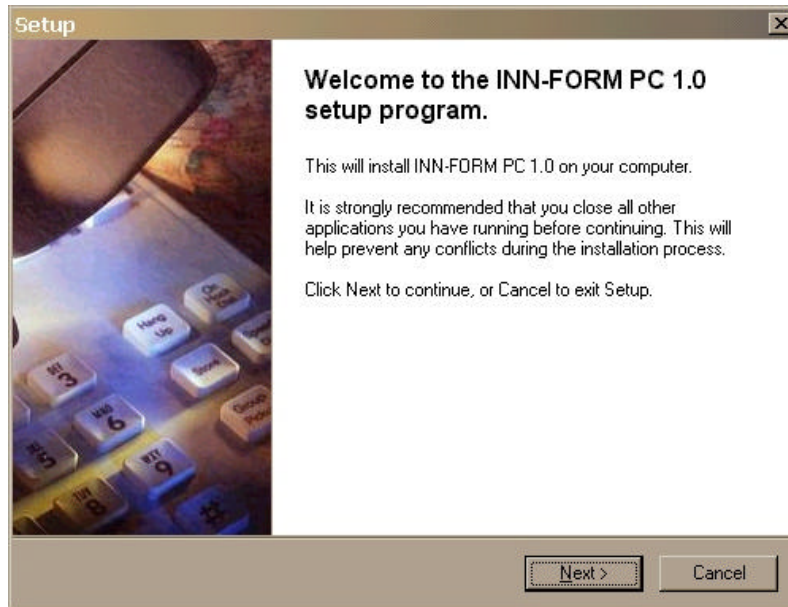
Since IFPC is a modular application, it is designed so that all current modules are installed. Any modules required to create a complete call accounting system for an end user are activated by the registration code that is given to the end user by TEL. Please note that not all modules are required by all end users. Their needs will dictate which modules are used and which ones are left dormant.

Note that other modules will be created in the future and will be documented as they are released.

Installation

Installation is very straightforward. The end user places the Install diskette (it is anticipated that later releases will be on CD-ROM) into the diskette drive and executes the file called Setup.exe. This can be accomplished by using the Windows Explorer or by using the Start/Run command with a parameter of A:\Setup.

A typical Windows set up program will begin. The user simply answers any on screen prompts and IFPC will be installed. The initial set up screen is shown below.



The install disks are comprised of four files. Disk one contains Setup.exe and Setup.1, and disk two contains Setup.2 and CAR.ROM.

Location of Files

After the installation the various files, their respective locations and purposes are as follows:

File Name	Location	Purpose
IFPC CP.EXE	Application Directory	Handles all call processing, costing, charging, and associated tasks
IFPC PM.EXE	Application Directory	Receives costed call information from the CP module and sends it out to the Property Management system
IFPC FD.EXE	Application Directory	(not yet released)
SHAREIT.DLL	Windows Directory	Provides means for communication between the various modules
BORLNDMM.DLL	Windows Directory	Memory Manager
SYSTEMINIT.EXE	Windows Directory	IFPC initialization program; makes registry entries and creates CALLREC.DAT files from the ROM File
CAR.ROM	Application Directory	Factory created customization data file
REGISTER.EXE	Application Directory	Registration program to allow the various modules to run on a specific PC until a specified date
JTSYSYEM.INI	Windows Directory	INI file showing path to the Application Directory after install

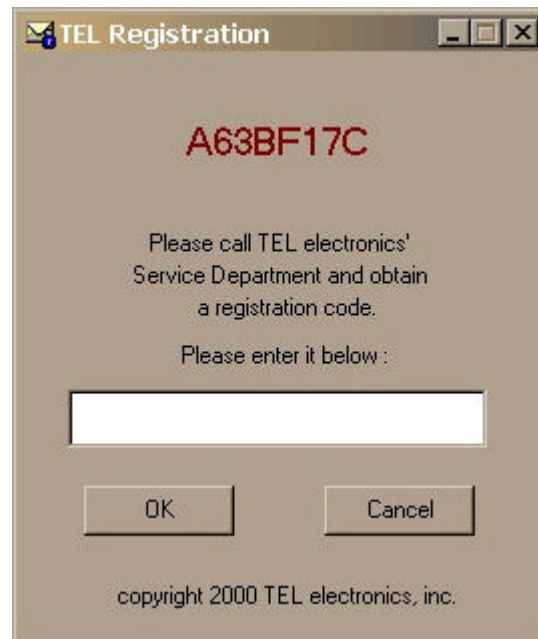
Additional files will / may be created by IFPC. Currently, the default location for these additional files is in the application directory.

Registration



Before you can use any of the IFPC programs you must register the software. To do this, simply go to the application directory (the directory where you installed the IFPC files) and double click on the program called REGISTER.EXE (the icon is a lock over an envelope).

The following window will appear:



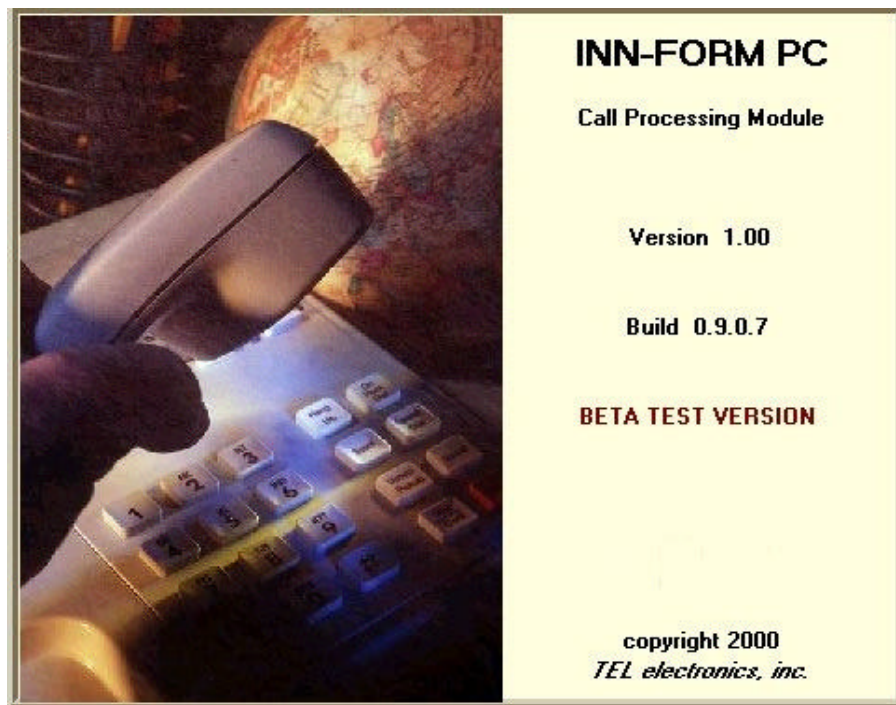
When REGISTER starts it will display a window that has a red number at the top. This number is the ID of your PC that TEL needs it in order to give you the registration code. Now, call TEL's Customer Service and tell them that you want to register your IFPC. The tech will then ask for your PC ID number – be sure to read it to him exactly as it appears on the screen. Have the tech read it back to you in order to ensure that he or she heard you correctly. The tech will then give you a lengthy number, which is your registration code. Enter this code in the space provided and click OK. If the number was typed in correctly it will show a message box thanking you for registering your IFPC. The program will then terminate. If the number was incorrect, it will show a message telling you that the number was invalid and return you to the registration screen.

Even though all the current IFPC modules are installed on your machine, they will not run if you did not purchase that particular module. The registration code determines which modules are activated. The exciting part of this technology is that if you later decide to purchase additional modules, you only need to call TEL, pay for the module and then receive a new registration code. This new code will now activate the module just purchased. No waiting for shipping!

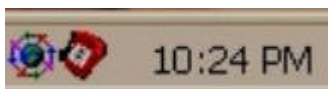
Starting IFPC CP



Go to the application directory and double click on the IFPC CP icon (the red phone). This will begin IFPC CP. You will see the splash screen and then the main screen.



The splash screen will identify the module, the version number, the build number, and any other important information concerning this particular release. In the System Tray you will see a smaller version of the CP icon (the red phone) as shown below.



Double clicking this System Tray icon will redisplay the main screen. Right clicking this icon will pop up a menu that allows the user to customize and control CP. The user will typically want to keep the program minimized to the System Tray so that they can work with other programs. However, CP is working whether it is maximized or minimized.

CP Main Screen

There is no menu, nor do you see the typical icons in the upper right corner of the window. All that is there, is the X typically used to close the current window. Note that clicking the X will not cause CP to terminate as with other Windows programs, but it will minimize itself to the System Tray bar (usually found in the lower right of the desktop next to the time).

The main screen is organized into several different sections. The top most section, titled Data From The Phone System, shows the current (last) "raw" SMDR received. The next section is the Processed Call

section. This section shows the results of CP's parsing and computations concerning the SMDR. It also contains two "LEDs" that show if any other IFPC modules are running (note that this doesn't mean installed, but actually running at the moment). The LEDs turn green when the specified module is running. Note that CP will not attempt to send processed call records to the other modules if none of the other modules are running..

The next section is the Alarms and Warnings section. This is a scrollable box that maintains any information that the user may need to review. While all alarms have their own window and alerting sound, they are also shown in the Alarms and Warnings section. This section may also contain information about the operation of the system that may not warrant an alarm.

The very bottom of the Main Screen holds the Status bar. This bar is divided into two parts. The left most part contains a count of all call records processed since CP was started and / or the user reset the count. This number also appears if the user places the Windows pointer (cursor) over CP's System Tray icon and waits a second or two. This can be useful if the user wishes to verify that CP is still processing calls, without having to restore the Main Screen. The right most part of the Status Bar contains all the current serial port settings for the port which is receiving the SMDR information from the phone system.

INN-FORM PC CP 1.0

Data From the Phone System

Processed Call

Number		Trunk		PM Module
Date		Cost		<input type="checkbox"/>
Duration		Charge		FD Module
Station		Call Type		<input type="checkbox"/>

Alarms and Warnings

copyright 2000 TEL electronics, inc.

Processed 0 Calls

Using Serial Port 1 at 1200 Baud No Parity 8 Data Bits 1 Stop Bit(s)

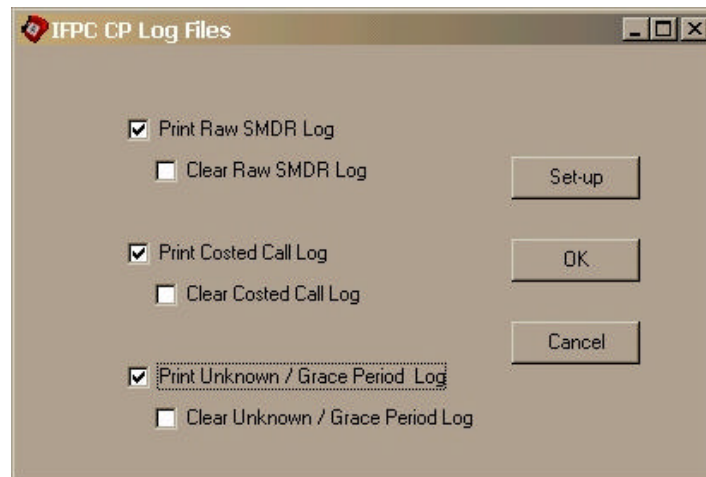
CP Popup Menu

As mentioned, when the right mouse button is clicked when the Windows pointer is over the CP System Tray icon, a menu will popup. This menu contains various options for modifying the operation of CP, including terminating the program.



Restore Window: Restores the Main Screen; an alternative to double clicking the System Tray icon.

Print Logs: Opens a window that allows the user to print and optionally clear any or all logs that the user may have the system keep. The Print Logs screen is shown below.

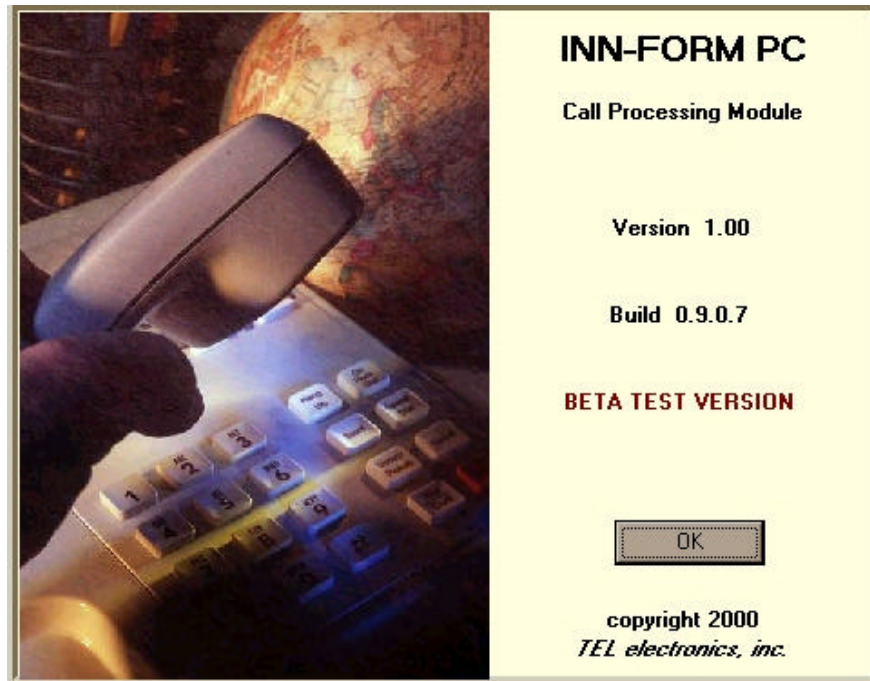


Clear Counters: This option clears the processed calls counter as well as several internal counters used by CP. The user shouldn't need to clear these counters, but it may be of benefit for those users who want a simple way of tracking traffic for a specific time period. It also may be used if the number becomes so large as to be meaningless to the user.

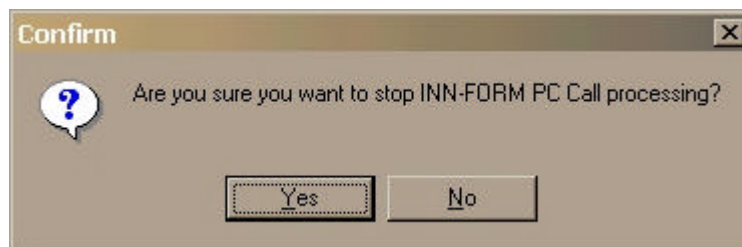
Call Record Setup: This option brings up the setup screen (see next section for more information about the setup screen).

Set Factory Defaults: Returns the settings of CP to those sent by the factory (TEL).

About: Simply shows the splash screen, which contains all the release information (as shown below), but with an OK button so that the user has control of the screen.



Quit Inn-Form PC: Terminates the operation of CP and removes it from the System Tray. A confirmation box is displayed asking for confirmation that the user really wishes to stop CP execution. Once stopped, calls are not being processed and the user will have to restart CP to begin processing calls again. If the CP icon is not in the system tray, CP is not running.



Call Record Setup

This screen is used to alter the behavior of the CP module and to a lesser degree certain functions of the other modules. In an effort to make this process compact and concise, this screen has six sub-screens called tabs. The user selects the tab which contains the parameters he / she wishes to alter and the appropriate sub-screen will be displayed.

Call Record Set-up

4 - Call Record Fields 5 - Costing 6 - Cross-references 7 - Serial Audit Trail

1 - Serial Port 2 - Call Record Packets 3 - Alarms

Select Serial Port

☒ 1 ☐ 3 ☐ 5 ☐ 7 ☐ 9 ☐ 11 ☐ 13 ☐ 15
☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ 10 ☐ 12 ☐ 14 ☐ 16

Baud Rate

☐ 300 ☒ 1200 ☐ 2400 ☐ 4800 ☐ 9600 ☐ 19200

Parity

☒ None ☐ Odd ☐ Even ☐ Mark ☐ Space

Data Bits

☒ 8 ☐ 7 ☐ 6 ☐ 5

Stop Bits

☒ 1 ☐ 2

Flow Control

☒ DTR/DSR ☐ RTS/CTS ☐ Software Control

Xon Character

19

Xoff Character

17

OK Cancel

Tab 1: Serial Port. This tab contains all the information needed to setup the serial port for receiving information from the phone system. The user clicks on the appropriate radio button in each group (called radio buttons because when one is selected the others in the group are deselected – like a car radio). Groups which may be set, include the serial port number, the Baud Rate, Data bit size, Stop bits, Parity, and Flow Control. If Software flow control is selected the user may also alter the ASCII code for the XON and XOFF bytes (these bytes are set to the industry standard defaults for XON and XOFF and should only be changed in unique situations).

Call Record Set-up

4 - Call Record Fields 5 - Costing 6 - Cross-references 7 - Serial Audit Trail

1 - Serial Port 2 - Call Record Packets 3 - Alarms

Call Record Starts

☐ Begins with 0 0 0 0
☒ Starts with any character

Call Record Ends

☐ Ends at character number 0
☒ Ends with 13 0 0 0
☐ Time out value 0
☐ Multi-line records

☒ Log Call Records from Phone System
Path and File
c:\Program Files\IFPC\SMDRL

☒ Log Priced Call Records
Path and File
c:\Program Files\IFPC\COSTED

☒ Log Unknown / Grace Period Calls
Path and File
c:\Program Files\IFPC\UNKNO

OK Cancel

Tab 2: Call Record Packets. This tab allows you to set up all the information needed for CP to understand when a legitimate call record from the phone system is received. It allows you to specify if SMDR and costed call records should be stored to their respective log files. The top left section allows you to determine what the SMDR record should start with. Some phone systems have elaborate start of text characters or information; if yours does you can set it up here. You may define a string of up to four characters. Enter these characters as ASCII decimal; e.g. a carriage return would be 13. The default is to see any character as the start of text.

The bottom left section allows you to determine the conditions under which CP knows when the end of the SMDR record has been reached. The first option is for those records that have a set length. The second option allows you to set a string of up to four characters to signify the end of text. Again these are entered as ASCII decimals. The third option allows you to define a timeout period that triggers the assumption that we have reached the end of the record. Notice that you can have a mix of these options, so that for example, you can have both a specific character and a timeout value if desired. The last option tells CP that the SMDR is sent in two lines and to concatenate the records to form a single record before processing.

The right section allows you to tell CP to log any of the following: the SMDR call records as received from the phone system, the costed call records, or the call records of the Unknown and Under Grace Period calls. If you wish to log this type of information, you may specify a file name (complete with path) for CP to store this information or you may let CP use the default file names for log storage. Hint: if you would rather have your own software or system (like your accounting system) handle reporting and storage of the costed call records, you can turn on costed call record log and import this information into your software. The storage of this information is in a fixed field length format (see below). You may also print and clear these log files from within CP by using the Print Logs menu option.

Fixed Field Definition in Costed Log File

Position	Length	Field Name	Format	Comments
1	5	Date of Call	MM/DD	
7	5	Time of Call	HH:MM	
13	4	Trunk	XXXX	
18	5	Extension	XXXXX	
24	4	Duration	XXXX	
29	12	Number Called	XXX-XXX-XXXX	
42	7	Cost	\$XXX.XX	(includes Cost and any Tax)
50	7	Charge	\$XXX.XX	(includes Charge and any Tax)
58	1	Type of Call Indicator	A	
60	19	Type of Call	AAAAAAAAAAAAAAAAAAAA	

Call Record Set-up

4 - Call Record Fields 5 - Costing 6 - Cross-references 7 - Serial Audit Trail

1 - Serial Port 2 - Call Record Packets 3 - Alarms

☒ 911 Calls ☐ Call Record Input Activity

☒ 311 Calls 8 Hours of no activity

☒ Disk Space ☐ PM System Output Activity

10 % of Disk Left 3 Number of errors before alarming

OK Cancel

Tab 3: Alarms. The alarm tab allows you to set which alarms CP (and some other modules) will sound if the parameters you input are exceeded. All alarms create a sound and pop up a window that explains what the alarm is about. You cannot use the computer until you press the OK button on the alarm page signifying that you have read and responded to the situation. The alarm information is also posted in the Alarm and Warnings section on the Main Screen.

The 911 and 311 alarms scan the incoming SMDR records and will sound an alarm if such emergency calls were placed. The alarm window will tell you which extension (room) placed the call and at what time. Remember that the phone system must send the information to the IFPC before CP can trigger the alarm. This usually means that the caller must hang up the phone before the phone system will send IFPC the record. So no alarm can be triggered when a user dials 911 or 311 and does not hang up the phone afterwards. TEL electronics, inc. provides other systems, such as the INN-SURE, which can analyze dialed numbers as they are dialed, thus allowing an alarm to be triggered immediately after emergency calls are dialed. Both the 911 and 311 alarms are enabled by default.

The Disk Space alarm signals if the hard disk space left on the PC running IFPC is below a certain percentage that you can set. The default is ON with a level of 10%.

Call Record Input Activity alarm is triggered if there has been no received SMDR for the number of hours indicated. The default for this alarm is OFF.

The PM System Output Activity alarm goes off if the PM module receives a set number of errors while trying to send records to the Property Management system. You set the allowable number of errors. The default is OFF.

Call Record Set-up

1- Serial Port	2 - Call Record Packets	3 - Alarms
4 - Call Record Fields	5 - Costing	6 - Cross-references
7 - Serial Audit Trail		

Field	Position	Length	Field	Position	Value
Hours	15	2	Checking Field 1	4	/
Minutes	18	2	Checking Field 2	20	:
Seconds	21	2	Checking Field 3	0	0
Phone #	34	21	Incoming Call	0	0
Extension	24	4	Incoming Ext	62	
Trunk	62	4	Incoming Trunk	24	

☐ Access Code in Phone Number

Access 0 0

OK Cancel

Tab 4: Call Record Fields. This tab allows you to change the field lengths, positions and specific characters of the call records from the phone system, enabling CP to know from where in the call record it can obtain needed information. The default is provided for you by the factory and is set to the switch (PBX) type you indicated in your order. However, you may make changes to that information here if needed. Be very careful when making any changes as they may cause CP to stop functioning properly.

Call Record Set-up

1- Serial Port	2 - Call Record Packets	3 - Alarms
4 - Call Record Fields	5 - Costing	6 - Cross-references
7 - Serial Audit Trail		

	<u>Local</u>	<u>Oper</u>	<u>Lc Info</u>	<u>St Info</u>	<u>US Info</u>	<u>8XX</u>	<u>900</u>	<u>Incom</u>
Fixed Rates:	0	0	100	195	195	0	250	0
	<u>Local</u>	<u>Oper</u>	<u>Info</u>	<u>900</u>	<u>Interntl</u>	<u>Other</u>	<u>8XX</u>	
Grace Periods:	60	30	20	20	75	60	0	
							0	Rate
	<u>Nearby</u>	<u>In-State</u>	<u>In-US</u>	<u>Interntl</u>	<u>WATS</u>	<u>Special</u>		
Cost % Adjust:	0	0	0	0	0	0		
Mark-up %:	0	40	40	40	0	75		
Surcharge:	0	150	155	255	0	500		

OK Cancel

Tab 5: Costing. Use this tab if you would like to make limited changes to the way CP costs and charges calls. Again, the factory has pre-configured this information based on your order, but CP allows you to change it if needed. For further information concerning how IFPC CP costs and charges calls, and how the above parameters affect CP's costing and / or charging please refer to the Costing and Charging section on page 16.

Tab 6: Cross-references. This tab allows the user to add or change cross-references for both Area Codes and Exchanges within the detailed Area Codes. Detailed Area Codes are those Area Codes that include detailed rate information for every exchange in that Area Code. Each IFPC system contains data for the twenty closest Area Codes to the property. Outside of these Area codes the system contains rate information based on wire centers for each Area Code. This strategy allows for a high degree of costing accuracy, while limiting the amount of rate data that must be installed and maintained by IFPC.

The left portion of the screen shows the Area Code Cross Reference box. To use this feature just input the Area Code that is current (i.e. that there are tariff rates for) in one of the Old boxes. Then put the Area Code that you would like to price the same as the old one in the New box across from the Old box you just filled in. You can add up to five Area Code cross-references.

On the right side of the screen is the Exchange Cross Reference box. You can have up to 200 exchange cross-references (with 10 per detailed area code). To add or change exchange cross-references, you must first select which detailed area code to apply the cross-references to. You do this by clicking in the Area Code selection box. A drop down menu will appear that will list all the detailed area codes this properties rate table contains. Select the appropriate area code. After you select the appropriate area code, the twenty edit boxes to the right will fill in with the current cross references. To add a cross-reference go to the first edit box that contains a zero. Enter the Old exchange in the Old box (this would be an exchange that currently has rates associated with it in the rate table). In the New box across from the Old box, enter the New exchange that you wish to have priced as if it was the old exchange. You may enter up to ten cross-references per detailed Area Code.

Tab 7: Serial Audit Trail. The Serial Audit Trail tab allows you to set up a serial port for printing various call record information to a serial printer as those records are processed (a form of audit trail). Simply select the port, baud rate, data set size, parity, and stop bits. Then select which kinds of call records you wish to print (call records from the phone system, all costed call records as processed by CP, and / or Unknown / Under Grace Period calls). Note that CP does not open the indicated port unless at least one of these is selected. Also note that this printer must be dedicated only for printing these call records and cannot be used for printing IFPC reports or as a general printer for any other Windows application.

Finished Set Up

Once you have made all the changes desired press OK and the settings are activated immediately. If you change your mind and don't want to make the changes then you can press CANCEL and the changes are disregarded.

IFPC CP Costing and Charging

In this documentation, "cost" refers to the pricing of a telephone call as billed by the telephone company and "charge" refers to the final dollar amount that a guest is billed for a telephone call. 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-assisted, information, etc.) and metered call, such as WATS calls. IFPC CP can determine costs based upon all government approved methods when proper information is provided and included in the factory configuration of each system or is programmed on site by the user.

IFPC CP 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. It then determines if any cost percentage adjustments are necessary, and if so, applies this adjustment. It then adds any appropriate taxes. This results in the total cost of the call. IFPC CP then adds a mark-up percentage and a surcharge, if any are specified for the specific call type of the call, and then adds applicable sales tax to compute the final charge.

The Tab 5: Costing screen (as seen here) shows those parameters that are alterable by the user, which IFPC CP is using to calculate costs and charges.

Call Record Set-up

1 - Serial Port	2 - Call Record Packets		3 - Alarms					
4 - Call Record Fields	5 - Costing	6 - Cross-references	7 - Serial Audit Trail					
Fixed Rates:	<u>Local</u> 0	<u>Oper</u> 0	<u>Lc Info</u> 100	<u>St Info</u> 195	<u>US Info</u> 195	<u>8XX</u> 0	<u>900</u> 250	<u>Incom</u> 0
Grace Periods:	<u>Local</u> 60	<u>Oper</u> 30	<u>Info</u> 20	<u>900</u> 20	<u>Interntl</u> 75	<u>Other</u> 60	<u>8XX</u> 0	
							0	Rate
Cost % Adjust:	<u>Nearby</u> 0	<u>In-State</u> 0	<u>In-US</u> 0	<u>Interntl</u> 0	<u>WATS</u> 0	<u>Special</u> 0		
Mark-up %:	0	40	40	40	0	75		
Surcharge:	0	150	155	255	0	500		

OK Cancel

Fixed Rates: These are fixed costs per call that you can place for certain call types. These call types are shown in maroon across the width of the screen. Thus, for Fixed Rates you can specify fixed rates for Local, Operator Assisted, Local Information, State Information, US Information, 8XX, 900, or Incoming calls.

All values are shown / entered as cents. In the screen above, it shows that the fixed rate for Local calls is zero cents while the fixed rate for a 900 call is \$2.50.

Grace Periods: A grace period is the amount of time allowed to pass before a call is defined as a completed call. Regardless of whether a call actually is answered, there will not be a charge for that call if the call duration is less than the grace period established for that call type. On the other hand, if the caller allows the phone to ring for a time longer than the grace period, IFPC will declare the call completed and a charge will be determined. Please note that TEL electronics manufactures a product, the INN-SURE, that can eliminate the need for grace periods by reporting when each call is actually completed. Grace periods can be set for all the call types shown. All values are entered as seconds. The screen above shows a grace period of 60 seconds for local calls, but 75 seconds for international calls.

The Grace Period setting for 8XX calls may implement a special costing feature called Threshold Costing. This feature allows you to define a per minute rate to be charged for 8XX calls once the grace period has been exceeded. This per minute cost is in addition to the cost established by the Flat Rate parameter for 8XX calls. This feature is activated by setting a value (as cents) in the rate box.

Cost Percentage Adjustments: The purpose of this option is to allow you to adjust call costing based on a percentage value. This is helpful for keeping up with minor tariff changes from the phone company. Although this feature is provided, in order for IFPC to remain accurate, it is strongly recommended that the user purchase rate updates on a periodic basis. All values are entered as a percentage value and may include a minus sign (negative percentage) to adjust the cost of a call down

Mark Up Percentage: These values are used by IFPC CP to calculate the charge of a call. Thus, a mark up percent is set by the user in order to recover overhead costs, labor costs, and / or to provide a profit from use of the phone. This option should not be used to adjust the cost of the call due to changes in phone company tariffs. All values are entered as a percent and may include a minus sign (negative percentage). In the screen above, In-State calls are marked up 40%. Thus, an in-state call costing \$1.00 will be charged \$1.40 (assuming that other charging parameters are not considered).

Surcharges: A surcharge is a flat fee added to a call charge after all other costs and charges have been computed. These values are entered as cents. Using the screen above, In-State calls have a \$1.50 surcharge, meaning that an in-state call costing \$1.00 will be charged \$2.50 (assuming that other charging parameters are not considered). If we were to include the Mark Up Percentage for In-State calls, this \$1.00 call would be charged \$2.90 (40% mark up plus a \$1.50 surcharge).

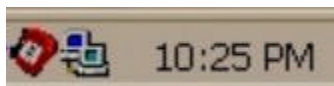
Starting IFPC PM



Go to the application directory and double click on the IFPC PM icon (two computers joined together). This will begin IFPC PM. You will see the splash screen and then the main screen.



There is no menu, nor do you see the typical icons in the upper right corner of the window. Note that clicking the X in the upper right hand corner will not cause PM to terminate as with other Windows programs, but it will minimize itself to the System Tray (usually found in the lower right of the desktop next to the time), as shown below.



In the System Tray you will see a smaller version of the PM icon (two computers joined together). Double clicking this icon in the System Tray will redisplay the main screen. Right clicking this icon will pop up a menu that allows the user to customize and control PM. The user will typically want to keep the program minimized to the System Tray so that they can work with other programs. However, PM is working whether it is maximized or minimized.

PM Main Screen

The main screen is organized into several different sections. The top most section is the Processed Call section. It shows the information passed to it by the CP module. The next section, entitled Data To The Property Management System, shows the current (last) call record sent to the PMS. This call is shown as it is formatted based on the type of PMS you have.

INN-FORM PC PMS Interface

Processed Call

Number	4122016666	Trunk	8
Date	10/10	Cost	\$8.84
Duration	33	Charge	\$13.93
Station	323		

Data To the Property Management System

000A TEL 10/10 323 08:10 0033 \$013.93 412-201-6666

Alarms and Warnings

Zero Cost Call: Not Sent
Zero Cost Call: Not Sent
Zero Cost Call: Not Sent

0%

copyright 2000 TEL electronics, inc. Tries 0

Processed 7 Calls Using Serial Port 2 at 1200 Baud No Parity 8 Data Bits 1 Stop Bit(s)

The next section is the Alarms and Warnings section. This is a scrollable box that maintains a log of alarm, warning or operational information that the user may wish to review on a periodic basis. While all alarms have their own window and alerting sound, they are also posted in the Alarms and Warnings section for later review. This section may also contain information about the operation of the system, which may not warrant an alarm.

Below the Alarms and Warnings section and to the left of the copyright is a progress bar, which shows the percentage of the output buffer that is filled. Since the speed of output depends on the PMS responding to the PM system, a buffer is used. This bar will show the user how much of that buffer is taken. As long as it remains below 50% the bar is green. Between 50 and 75% the bar is yellow and over 75% the bar is red. To the right of the copyright is a counter, which reflects the number of times that the PM module has attempted to send the current record to the PMS. If it cannot send the call record successfully, it will log the information in the Alarms and Warnings section as well as notify the CP module that an error has occurred. It then logs this call into the PMSERROR.LOG in the same format the PMS was expecting it in. The number of attempts prior to logging the call is determined by the respective property management interfaces (see sections below on the Micros, Hobic and Holidex interfaces), but usually range between three and five tries.

The very bottom of the Main Screen displays the Status bar. This bar is divided into two parts. The left most part contains a count of all call records processed since PM was started and / or the user reset the count. This number also appears if the user places the Windows pointer (cursor) over PM's System Tray icon and waits a second or two. This can be useful if the user wishes to verify that PM is still processing calls, without having to restore the Main Screen. The right most part of the Status Bar contains all the current serial port settings for the port that is sending the formatted call information to the property management system.

PM Popup Menu

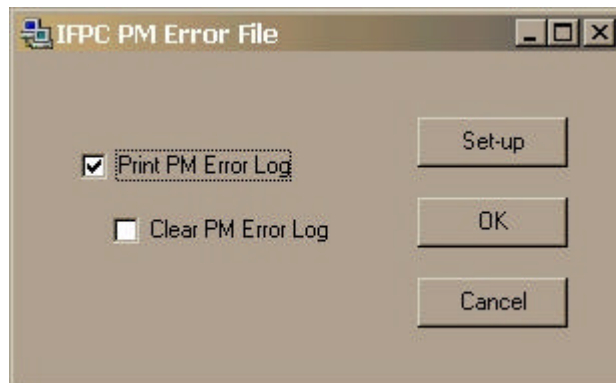
As mentioned, when the right mouse button is clicked when the Windows pointer is over the PM System Tray icon, a menu will popup. This menu contains various options for modifying the operation of PM, including terminating the program.



Restore Window: Restores the Main Screen; an alternative to double clicking the System Tray icon.

Clear Counters: Clears the processed calls counter as well as several internal counters used by PM. The user shouldn't need to clear these counters, but it may be of benefit for those users who want a simple way of tracking traffic for a specific time period. It also may be used if the number becomes so large as to be meaningless to the user.

Print Error Log: Allows you to print and optionally clear the error log. This log maintains all errors that occurred while trying to send a call record to the property management system.



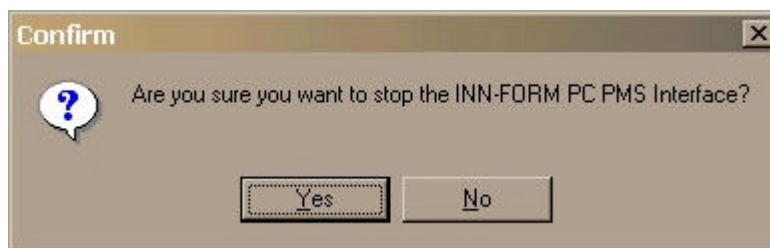
PMS Record Setup: Displays the setup screen (see next section for more information about the setup screen).

Set Factory Defaults: Returns the settings of PM to those sent by the factory (TEL).

About: Simply shows the splash screen (containing all the release information), but with an OK button so that the user can close the screen when ready. An example of this screen is shown below.



Quit IFPC PM: Terminates the operation of PM and removes it from the System Tray. A confirmation box is displayed asking for confirmation that the user really wishes to stop PM execution.



PMS Record Setup

This screen is used to alter the behavior of the PM. In an effort to make this process compact and concise, this screen has two sub-screens called tabs. The user selects the tab which contains the parameters he / she wishes to alter and the appropriate sub-screen will be displayed.

PMS OUT Set-up

1 - Serial Port | **2 - PMS Packets**

Select Serial Port

☐ 1
 ☐ 3
 ☐ 5
 ☐ 7
 ☐ 9
 ☐ 11
 ☐ 13
 ☐ 15
☒ 2
 ☐ 4
 ☐ 6
 ☐ 8
 ☐ 10
 ☐ 12
 ☐ 14
 ☐ 16

Baud Rate

☐ 300
☒ 1200
☐ 2400
☐ 4800
☐ 9600
☐ 19200

Parity

☒ None
☐ Odd
☐ Even
☐ Mark
☐ Space

Data Bits

☒ 8
☐ 7
☐ 6
☐ 5

Stop Bits

☒ 1
 ☐ 2

Flow Control

☒ DTR/DSR
☐ RTS/CTS
☐ Software Control

Xon Character

19

Xoff Character

17

OK Cancel

Tab 1: Serial Port. This tab contains all the information needed to setup the serial port for receiving information from the phone system. The user clicks on the appropriate radio button in each group (called radio buttons because when one is selected the others in the group are deselected – like a car radio). Groups which may be set include the serial port number, the Baud Rate, Data bit size, Stop bits, Parity, and Flow Control. If Software Control is selected under the Flow Control section is selected the user may also alter the ASCII code for the XON and XOFF bytes (these bytes are set to the industry standard defaults for XON and XOFF and should only be changed in unique situations).

PMS OUT Set-up

1 - Serial Port **2 - PMS Packets**

PMS Interface Formats

☐ Micros Format (MR)

☐ Hobic Format (HB)

☒ Holidex Format (HX)

Packet Start:

Packet End:

PMS ACK: PMS NAK:

☒ Do Not Send Zero Cost Calls

Example of Output:

045A TEL 05/31 757 12:33 0053 \$012.69 213-555-7564

OK Cancel

Tab 2: PMS Packets. The PM module allows for the same property management system interfaces that the hardware TEL products have: Micros, Hobic and Holidex. IFPC PM adds some additional flexibility in that it allows the end user to customize these three basic formats. To do this, the user simply types in the ASCII values of up to the first four characters of the packet start or end. In addition, the user can specify the ASCII values of the ACK and NAK sent by the property management system. There is also a check box that will prevent PM from sending any zero cost calls to the property management system.

Explanation of Micros Format

Costed call records are sent to a property management system using the Micros interface format. The following is an example of this format:

ac0102720048668017569606

All fields are adjacent to each other and the packet always starts with “ac01” and followed by a carriage return (ASCII 13), without a line feed.

Field Definition

Position	Field Name	Format	Comments
1	Start of Packet	ac01	
5	Extension / Room	XXXX	
9	Charge in cents	XXXXXX	
15	Number Called	XXXXXXXXXX	

The PM module will transmit the record packet and then waits for an ACK. If a NAK is received or if nothing is received, the module will wait 3 seconds and then will retransmit the packet. The module will try to send the packet 3 times. If it never receives the expected ACK it will log the packet in a file called PMSERROR.LOG located in the application directory. If the PM System Output Activity alarm is enabled and if the event is over the number of errors set by the user, an alarm will be raised. The event is also logged in the Alarms and Warning section on the PM main window.

The default ACK and NAK are 'y' and 'n' respectively (or ASCII 121 and ASCII 110).

Explanation of Hobic Format

Costed call records are sent to a property management system using the Hobic interface format. The following is an example of this format:

```
045A TEL 05/31 757 12:33 0053 $012.69 213-555-7564
```

All fields are separated by a space except the first two which are adjacent to each other. The packet always starts with a line feed (ASCII 10) and followed by a carriage return (ASCII 13) line feed (ASCII 10) and a form feed (ASCII 12).

Field Definition

Position	Field Name	Format	Comments
1	Sequence number	XXX	increments with each packet; resets to 001 every 6 hours
4	Sequence letter	A	increments each time sequence number wraps; resets to A every 6 hours
6	Identifier	TEL	
10	Date of call	MM/DD	
16	Extension / Room	XXXXXX	Left justified
22	Time of call	HH:MM	
28	Duration	XXXX	
33	Cost	\$XXX.XX	
41	Number Called	XXX-XXX-XXXX	
54	Call Type Indicator	A	L = local call; F = international call; and a space is everything else

The PM module will transmit the record packet and then waits for an ACK. If a NAK is received or if nothing is received, the module will wait 5 seconds and then will retransmit the packet. The module will try to send the packet 3 times. If it never receives the expected ACK it will log the packet in a file called PMSERROR.LOG located in the application directory. If the PM System Output Activity alarm is enabled

and if the event is over the number of errors set by the user, an alarm will be raised. The event is also logged in the Alarms and Warning section on the PM main window.

The default ACK and NAK are set to true ACK (ASCII 6) and true NAK (ASCII 21).

Explanation of Holidex Format

Costed call records are sent to a property management system using the Holidex interface format. The following is an example of this format:

045A TEL 05/31 757 12:33 0053 \$012.69 213-555-7564

All fields are separated by a space except the first two which are adjacent to each other. The packet always starts with Start of Text (ASCII 2) and followed by an End of Text (ASCII 3), line feed (ASCII 10) and a form feed (ASCII 12).

Field Definition

Position	Field Name	Format	Comments
1	Sequence number	XXX	increments with each packet; resets to 001 every 24 hours
4	Sequence letter	A	increments each time sequence number wraps; resets to A every 24 hours
6	Identifier	TEL	
10	Date of call	MM/DD	
16	Extension / Room	XXXXXX	Right justified
22	Time of call	HH:MM	
28	Duration	XXXX	
33	Cost	\$XXX.XX	
41	Number Called	XXX-XXX-XXXX	
54	Call Type Indicator	A	L = local call; F = international call; and a space is everything else

The PM module will transmit the record packet and then waits for an ACK. If a NAK is received or if nothing is received, the module will wait 5 seconds and then will retransmit the packet. The module will try to send the packet 3 times. If it never receives the expected ACK it will log the packet in a file called PMSERROR.LOG located in the application directory. If the PM System Output Activity alarm is enabled and if the event is over the number of errors set by the user, an alarm will be raised. The event is also logged in the Alarms and Warning section on the PM main window.

The default ACK and NAK are set to true ACK (ASCII 6) and true NAK (ASCII 21).

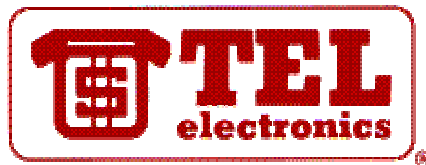
Finished Set Up

Once you have made all the changes desired, press OK and the settings are activated immediately. If you change your mind and don't want to make the changes then you can press CANCEL and the changes are disregarded

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