

Lucent Technologies
Bell Labs Innovations



CAS Terminal

User's Guide

585-201-701
107712580
Issue 1
February 1996

**Copyright 1996
All rights reserved
Printed in U.S.A.**

**585-201-701
Issue 1
February 1996**

Notice

Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

Your Responsibility for Your System's Security

Toll fraud is the unauthorized use of your telecommunications system by an unauthorized party, for example, persons other than your company's employees, agents, subcontractors, or persons working on your company's behalf. Note that there may be a risk of toll fraud associated with your telecommunications system, and if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

You and your System Manager are responsible for the security of your system, such as programming and configuring your equipment to prevent unauthorized use. The System Manager is also responsible for reading all installation, instruction, and system administration documents provided with this product in order to fully understand the features that can introduce risk of toll fraud and the steps that can be taken to reduce that risk. Lucent Technologies does not warrant that this product is immune from or will prevent unauthorized use of common-carrier telecommunication services or facilities accessed through or connected to it. Lucent Technologies will not be responsible for any charges that result from such unauthorized use.

Federal Communications Commission (FCC) Statement

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

Canadian Department of Communications (DOC) Interference Information

This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le Présent Appareil Numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Trademarks

IBM is a registered trademark of International Business Machine Corporation. DEFINITY, MERLIN, and PARTNER are registered trademarks of Lucent Technologies.

Ordering Information

Call: Lucent Technologies Publications Center
Voice 1-800-457-1235 International Voice 317-322-6791
Fax 1-800-457-1764 International Fax 317-322-6699

Write: Lucent Technologies Publications Center
P.O. Box 19901
Indianapolis, IN 46219

Order: Document No. 585-201-701
Comcode 107712580
Issue 1, February, 1996

For more information about Lucent Technologies documents, refer to the section entitled, "Related Documents" in "About This Book "

Support Telephone Numbers

In the continental U.S., Lucent Technologies provides a toll-free customer helpline 24 hours a day. Call the Lucent Technologies Helpline at 1-800-628-2888 or your Lucent Technologies authorized dealer if you need assistance when using your system. Outside the continental U.S., contact your local Lucent Technologies authorized representative.

Lucent Technologies Corporate Security

Whether or not immediate support is required, all toll fraud incidents involving Lucent Technologies products or services should be reported to Lucent Technologies Corporate Security at 1-800-821-8235. In addition to recording the incident, Lucent Technologies Corporate Security is available for consultation on security issues, investigation support, referral to law enforcement agencies, and educational programs.

Lucent Technologies Fraud Intervention

If you suspect you are being victimized by toll fraud and you need technical support or assistance, call BCS National Service Assistance Center at 1-800-628-2888.

Warranty

Lucent Technologies provides a limited warranty on this product. Refer to the separate warranty page, included with the CAS Terminal documentation, for more information.

Intellectual property related to this product (including trademarks) and registered to AT&T Corporation has been transferred to Lucent Technologies Incorporated.

Any references within this text to American Telephone and Telegraph Corporation or AT&T should be interpreted as references to Lucent Technologies Incorporated. The exception is cross references to books published prior to December 31, 1996, which retain their original AT&T titles.

Lucent Technologies – formed as a result of AT&T's planned restructuring – designs, builds, and delivers a wide range of public and private networks, communication systems and software, consumer and business telephone systems, and microelectronic components. The world-renowned Bell Laboratories is the research and development arm for the company.

Contents

| | |
|---|------|
| Customer Support Information | xv |
| ■ Support Telephone Number | xv |
| ■ Security of Your System Preventing Toll Fraud | xv |
| ■ AT&T Corporate Security | xvi |
| ■ AT&T Fraud Intervention | xvii |
| ■ Federal Communications Commission (FCC) Electromagnetic Interference Information | xvii |

| | |
|-----------------------------|-----|
| About This Book | xix |
| ■ Intended Audience | xix |
| ■ Terms and Conventions | xix |
| ■ Typographical Conventions | xx |
| ■ How to Use This Book | xx |

| | | |
|----------|-------------------------------|------|
| 1 | Overview | 1 1 |
| | ■ Outside Your Business | 1 1 |
| | ■ Inside Your Business | 1 2 |
| | ■ Your Call Accounting System | 1 3 |
| | ■ System Configuration | 1 5 |
| | ■ User Interface | 1 9 |
| | ■ System Operation | 1 16 |
| | ■ Functions | 1 18 |

| | | |
|----------|--|------|
| 2 | Installation | 2 1 |
| | ■ Preparation | 2 2 |
| | ■ Setting Up | 2 3 |
| | ■ Performing an Initial Software Setup | 2 5 |
| | ■ Testing | 2 26 |
| | ■ Customization | 2 27 |

Contents

- Other Programmable Features 2 37
 - Ready to Go 2 38
-

| | | |
|----------|------------------------|------------|
| 3 | Reports | 3 1 |
| | ■ Organization Reports | 3 1 |
| | ■ Selection Reports | 3 9 |
| | ■ Account Code Reports | 3 13 |
| | ■ Traffic Reports | 3 16 |
| | ■ Exception Reports | 3 25 |
| | ■ Managing Reports | 3 27 |

| | | |
|----------|---------------------------------------|------------|
| 4 | Listings | 4 1 |
| | ■ Administration Information Listings | 4 1 |
| | ■ Configuration Information Listings | 4 3 |
| | ■ System Parameter Listings | 4 6 |
| | ■ Scheduled Reports Listing | 4 11 |
| | ■ Error Logs Listing | 4 12 |
| | ■ Viewing System Messages | 4 13 |

| | | |
|----------|--|------------|
| 5 | Administration | 5 1 |
| | ■ Managing the Organization Tables | 5 1 |
| | ■ Changing Department Budgets | 5 5 |
| | ■ Changing Privacy Criteria | 5 6 |
| | ■ Changing Immediate Output Parameters | 5 8 |
| | ■ Changing Passwords | 5 12 |
| | ■ Closing an Accounting Period | 5 15 |

| | | |
|----------|--|------------|
| 6 | Configuration | 6 1 |
| | ■ Managing the Rating Functions | 6 1 |
| | ■ Entering the Dialed Digit Processing (DDP) Table | 6 29 |

Contents

| | | |
|---|----------------------------------|------|
| ■ | Managing Call Types | 6 33 |
| ■ | Managing the PBX Interface Setup | 6 38 |
| ■ | Managing System Settings | 6 48 |
| ■ | Setting Up the Accounting Period | 6 55 |

| | | |
|---|--|-----|
| 7 | Customization | 7 1 |
| ■ | Changing Organizational Level Names | 7 1 |
| ■ | Taxing Calls | 7 2 |
| ■ | Entering and Editing the User Defined Location Table | 7 3 |
| ■ | Defining System Formats | 7 5 |
| ■ | Defining the Work Week | 7 8 |
| ■ | Managing Recorded Function Definitions | 7 9 |

| | | |
|---|--|------|
| 8 | Utilities | 8 1 |
| ■ | Performing Backup and Restore Operations | 8 1 |
| ■ | Managing Call Records | 8 3 |
| ■ | Importing and Exporting Files | 8 4 |
| ■ | Performing System Updates | 8 9 |
| ■ | Performing System Maintenance | 8 11 |

| | | |
|---|-----------------------|-----|
| A | Specifications | A 1 |
|---|-----------------------|-----|

| | | |
|---|-------------------|-----|
| B | Worksheets | B 1 |
|---|-------------------|-----|

| | | |
|---|-----------------------|-----|
| C | Sample Reports | C 1 |
|---|-----------------------|-----|

| | | |
|---|--------------------|-----|
| D | Menu System | D-1 |
|---|--------------------|-----|

Contents

Glossary

GL 1

Index

IN 1

Figures

1 Overview

| | | |
|------------|---|------|
| Figure 1 1 | CAS Terminal Cabinet — Front and Right Side | 1 4 |
| Figure 1 2 | Back Panel | 1 5 |
| Figure 1 3 | System Components | 1 6 |
| Figure 1 4 | Status Screen | 1 10 |
| Figure 1 5 | Main Menu | 1 11 |
| Figure 1 6 | Sample Data Entry Screens | 1 12 |
| Figure 1 7 | Keyboard | 1 14 |
| Figure 1 8 | Operational Flowchart | 1 16 |
| Figure 1 9 | Function Cross Reference Chart | 1 18 |

2 Installation

| | | |
|-------------|--|------|
| Figure 2 1 | Processor — Back | 2 3 |
| Figure 2 2 | Processor — Front and Right Panels | 2 4 |
| Figure 2 3 | Sample Initial Setup Worksheet | 2 6 |
| Figure 2 4 | Sample Carrier Services — Basic Information Worksheet | 2 10 |
| Figure 2 5 | Sample Facilities/Trunks Worksheet | 2 11 |
| Figure 2 6 | Sample Carrier Services Fixed (Custom) Rating Worksheet | 2 29 |
| Figure 2 7 | Sample Carrier Services Meter Pulse Rating Information Worksheet | 2 29 |
| Figure 2 8 | Sample Call Types for Meter Pulse Calls Worksheet | 2 30 |
| Figure 2 9 | Sample Dialing Patterns for Rate Bands Worksheet | 2 31 |
| Figure 2 10 | Sample Part I — Carrier Services Tariff Rating Information Worksheet | 2 31 |
| Figure 2 11 | Sample Part II — Carrier Services Tariff Rating Information Worksheet | 2 32 |
| Figure 2 12 | Sample Carrier Services Duration Rating Information Worksheet | 2 33 |
| Figure 2 13 | Sample Carrier Services Flat Rating Information Worksheet | 2 34 |
| Figure 2 14 | Sample Call Type Storage Options Worksheet | 2 35 |

Figures

| | | |
|-------------|---------------------------------|------|
| Figure 2 15 | Sample Organization Worksheet | 2 36 |
| Figure 2 16 | Sample Location Table Worksheet | 2 36 |
| Figure 2-17 | Report Schedules Worksheet | 2 37 |

6 Configuration

| | | |
|------------|---|-----|
| Figure 6 1 | Call Cost Computation by the Rating Functions | 6 2 |
|------------|---|-----|

Tables

| | | |
|----------|-----------------|--------------------------------|
| 1 | Overview | |
| | Table 1 1 | Model dependent Capacities 1 4 |
| | Table 1 2 | Data Entry Commands 1 13 |
| | Table 1 3 | Special Keystrokes 1 15 |
| | Table 2 1 | Default Carrier Services 2 10 |
| | Table 1 1 | Model dependent Capacities 1 4 |
| | Table 1 2 | Data Entry Commands 1 13 |
| | Table 1 3 | Special Keystrokes 1 15 |



The exclamation point in an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product

IMPORTANT SAFETY INSTRUCTIONS

When installing telephone equipment always follow basic safety precautions to reduce the risk of fire electrical shock and injury to persons including

- Read and understand all instructions
- Follow all warnings and instructions marked on or packed with the product
- Never install this unit or telephone wiring for it during a lightning storm
- Never install a telephone jack in a wet location unless the jack is specifically designed for wet locations
- Never touch uninsulated telephone wires or terminals unless the telephone wiring has been disconnected at the network interface
- Use caution when installing or modifying telephone lines
- Use only AT&T recommended/approved CAS Terminal accessories
- Do not install this product near water for example in a wet basement location
- Use only an AT&T manufactured CAS Terminal power supply with this product
- Do not overload wall outlets as this can result in the risk of fire or electrical shock
- Do not attach the power supply cord to building surfaces Do not allow anything to rest on the power cord Do not locate this product where the cord will be abused by persons walking on it
- Vents on the bottom of the cabinet are provided for ventilation

- Never push objects of any kind into this product through vent openings in the unit as they may touch dangerous voltage points or may short out parts which could result in a risk of fire or electrical shock. Never spill liquid of any kind on this product.
- Unplug the product from the wall outlet before cleaning. Use a damp cloth for cleaning. Do not use cleaners or aerosol cleaners.
- Do not operate the system if chemical gas leakage is suspected in the area. Use telephones located in some other safe area to report the trouble.



WARNING

DO NOT open the CAS Terminal unit. There are no user serviceable parts inside the unit. Only an authorized technician should open the unit for required maintenance or upgrading purposes.

SAVE THESE INSTRUCTIONS

Customer Support Information

Support Telephone Number

In the U S A only AT&T provides a toll free customer Helpline (1 800 628 2888) 24 hours a day. If you need assistance when using your system, call the Helpline, or your AT&T authorized representative.

Outside the U S A if you need assistance when installing, programming, or using your system, contact your AT&T authorized representative.

Security of Your System Preventing Toll Fraud

As a customer of a new data system, you should be aware that there is an increasing problem of telephone toll fraud. Telephone toll fraud can occur in many forms, despite the numerous efforts of telephone companies and telephone equipment manufacturers to control it. Some individuals use electronic devices to prevent or falsify records of these calls. Others charge calls to someone else's number by illegally using lost or stolen calling cards, billing innocent parties, clipping on to someone else's line, or breaking into someone else's telephone equipment physically or electronically. In certain instances, unauthorized individuals make connections to the telephone network through the use of remote access features.

Common carriers are required by law to collect their tariffed charges. While these charges are fraudulent charges made by persons with criminal intent, applicable tariffs state that the customer of record is responsible for payment of all long distance or other network charges. AT&T cannot be responsible for such charges and will not make any allowance or give any credit for charges that result from unauthorized access.

To minimize the risk of toll fraud to your communications system

- When possible restrict the off network capability of off premises callers using calling restrictions Facility Restriction Levels and Disallowed List capabilities
- When possible block out of hours calling
- Frequently monitor system call detail reports for quicker detection of any unauthorized or abnormal calling patterns
- Limit Outcalling to persons on a need to have basis

Your communications system through proper administration can help you reduce the risk of unauthorized persons gaining access to the network. However, phone numbers and authorization codes can be compromised when overheard in a public location, lost through theft of a wallet or purse containing access information, or when treated carelessly (writing codes on a piece of paper and improperly discarding them).

Additionally, hackers may use a computer to dial an access code and then publish the information to other hackers. Substantial charges can accumulate quickly. It is your responsibility to take appropriate steps to implement the features properly, to evaluate and administer the various restriction levels, and to protect and carefully distribute access codes.

Under applicable tariffs, you will be responsible for payment of toll charges. AT&T cannot be responsible for such charges and will not make any allowance or give any credit resulting from unauthorized access.

AT&T Corporate Security

Whether or not immediate support is required, *all* toll fraud incidents involving AT&T products or services *should be reported* to AT&T Corporate Security at **1 800 821-8235**. In addition to recording the incident, AT&T Corporate Security is available for consultation on security issues, investigation support, referral to law enforcement agencies, and educational programs.

AT&T Fraud Intervention

If you *suspect you are being victimized* by toll fraud and you need technical support or assistance call National Service Assistance Center at **1 800 628-2888**

Federal Communications Commission (FCC) Electromagnetic Interference Information

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

About This Book

Intended Audience

This Book is intended to serve as a step by step guide to install set up and operate the AT&T CAS (Call Accounting System) Terminal. It is intended for use as a reference by any one needing such information including system managers support personnel sales representatives and account executives. It is also intended for technicians who are responsible for system installation maintenance and troubleshooting.

Terms and Conventions

The CAS (Call Accounting System) Terminal will henceforth be referred to as the CAS Terminal.

Throughout this document toll fraud security hazards are indicated by an exclamation point inside a triangle and the words Security Alert.



Security Alert

Security Alert indicates the presence of toll fraud security hazard. Toll fraud is the unauthorized use of your telecommunications system by an unauthorized party (e.g. persons other than your company's employees, agents, subcontractors, or persons working on your company's behalf). Be sure to read 'Your Responsibility for Your System's Security' on the inside front cover of this book and 'Security of Your System Preventing Toll Fraud' in About This Book. Additional security information is included in Chapter 1 Introduction in the Security Features and Other Security Hints sections.

Typographical Conventions

The following typographic conventions are used in this document

- Keys that you press are shown in brackets — for example
To display the status screen press <Menu>
- Two or more keys that you press simultaneously are shown together in brackets — for example
To start recording keystrokes for this function press <Ctrl 1>
- Some commands in a data entry screen are executed by typing the capitalized letter in the command name (shown in brackets) — for example
Press <C>hange type a new value and press <End>
- The word "enter" in a procedure means to type a value and press <↵> (the carriage return in your keyboard) — for example
Enter y to continue
- Data entry variables are shown in italic — for example
Enter a *month/day/year* (for example type **03/25/95**)
- Entries shown exactly as you should type them are shown in bold — for example
Type **5** The following screen appears

How to Use This Book

This book's chapters describe every function included in the menu system grouped by main menu item. An introductory chapter and installation instructions precede the function descriptions; appendices provide additional reference material. For your convenience, a glossary and an index appear at the end of the manual.

- Chapter 1 Overview contains general information about public and private telephone networks. It describes the system's design components and operation and includes a guide cross referencing the functions and where to locate information about them.
- Chapter 2 Installation provides step by step instructions to install, test and customize CAS Terminal.
- Chapter 3 Reports describes all accounting reports and how to generate them.
- Chapter 4 Listings describes the database listings and how to generate them.
- Chapter 5 Administration describes functions used to create and maintain the organization structures. It also discusses functions that perform other administrative tasks such as specifications for immediate output, identification of privacy criteria, password setup and closing the accounting period.
- Chapter 6 Configuration describes functions used to set up carriers and the rating process. It also discusses the functions that setup your switch (PBX) interface and telephone system configuration and system wide settings.
- Chapter 7 Customization describes functions used to setup features that address the unique aspects of each installation.
- Chapter 8 Utilities describes functions that perform standard operations, database management, maintenance and troubleshooting processes.
- Appendices A to D include specifications, worksheets, report samples and the menu system.

Overview

1

Contents

| | |
|------------------------------------|------|
| Outside Your Business | 1 1 |
| Inside Your Business | 1 2 |
| ■ Station Message Detail Recording | 1 2 |
| ■ Answer Supervision | 1 3 |
| Your Call Accounting System | 1 3 |
| System Configuration | 1 5 |
| ■ Compatible PBXs | 1 6 |
| ■ Processing Unit | 1 6 |
| ■ Disk Drive | 1 9 |
| ■ Printer | 1 9 |
| User Interface | 1 9 |
| ■ Menu System | 1 10 |
| ■ Keyboard | 1 14 |
| ■ The Help Feature | 1 16 |
| System Operation | 1 16 |
| Functions | 1 18 |

CAS Terminal is an important new tool designed specifically to help you control and administer telecommunications costs in your company. Before describing it in detail, the following paragraphs provide some basic background on the national telephone network and your own telephone system.

Outside Your Business

The public telephone network is a hierarchical structure based on local exchanges (*central offices (COs)* in some countries) that provide equipment to receive all local telephone traffic. Calls are routed or connected to other local users or another local exchange. The exchanges or COs are connected to each other with intermediate switching offices providing the link to larger exchanges in increasingly larger groups. A call may use several switching offices before it reaches its destination.

The network has a numbering plan to recognize calls for placement locally within the country and in different parts of the world.

- The U.S. and Canada follow the North American Dialing Plan's pattern using a three digit area code identifying the regional link to a group of COs, followed by a three digit exchange identifying the CO servicing the line called (indicated by the last four digits).
- In other countries local calls are generally identified by the number of digits (usually between three and seven). National calls contain a city code, international calls contain an additional access code plus a one to three digit country code.

In this book we refer to the telephone authorities that own the local exchange equipment and provide services for its use as *carriers*. In some countries independent private concerns such as AT&T or Mercury are carriers. In others government agencies like PTTs provide and regulate telecommunication resources. The capabilities provided by the carriers' equipment and services are referred to as facilities.

Connecting your site to the public exchange are telephone lines or *trunks*. The exchange's trunk network allows local, national, and international services. Special trunk types such as private wires or in some countries tie lines link together two private telephone systems to provide other services.

Inside Your Business

As in the national network, businesses face a similar traffic problem — how to route and connect telephones in the most efficient and cost-effective manner. To organize this traffic, businesses install a private telephone system (or *communication system*) generally a *PBX* (Private Branch Exchange). PBXs are large equipment systems that coordinate the use of all trunks. PBX features may include sophisticated in-house services like call forwarding, automatic call backs, and programmable route selection for placing outside calls.

Many communication system features relate directly to call accounting — most importantly *Station Message Detail Recording* (SMDR).

Station Message Detail Recording

SMDR-capable communication systems can output an electronic record — also called *call detail recording* (CDR) — of every call routed through the system. This record details information such as

- time of call
- call duration
- trunk used
- extension
- number dialed
- authorization code (if supplied by the communication system)

 **NOTE**

Regardless of the way your communications system reports the physical line a call uses (a trunk access code or circuit ID for example) your system reports it as a trunk

Answer Supervision

Answer supervision another communications system feature allows the communications system to detect when a call is answered. Commercial carriers begin a telephone charge when their billing equipment detects that the called party has answered.

At the private level, most communication systems without *integrated services digital network* (ISDN) services cannot determine when a call has completed its connection. To compensate, these communication systems reduce the reported length of a call by a fixed amount.

You can set up a duration adjustment or *network correction time* if necessary to better approximate actual telephone company charges.

Your Call Accounting System

Your CAS Terminal system is a compact microcomputer designed for telephone call accounting. The system gathers, interprets, and processes SMDR records prepared by a communication system and creates a database containing all processed call records from a specified time period. The system produces reports by organizing the processed records according to criteria selected by the operator.

The system is available in a Model 400. Some capacities for this model are shown in the following table.

Table 1-1 Model-dependent Capacities

| Model | 400 |
|-------------------------------|--------|
| Call Records | 40 000 |
| Extensions | 400 |
| Departments | 50 |
| Cost Centers | 100 |
| Trunk Lines | 64 |
| Facilities | 10 |
| Account Codes | 2048 |
| Private Access Codes | 10 |
| Authorization Codes | 400 |
| Call Types | 32 |
| Location Table Entries | 500 |
| Maximum Call Records in Queue | 3600 |
| Carrier Services | 32 |
| Holidays | 50 |
| Rate Bands | 50 |
| Rate Band Dialing Patterns | 500 |
| Scheduled Report Groups | 5 |
| Reports per Group | 10 |

Figure 1 1 displays the front and right side of a CAS Terminal cabinet — featuring a built in liquid crystal display (1) full keyboard with special purpose keys (2) and a 3 5 inch floppy disk drive (3) All units have easy to reach controls to adjust the display contrast (4) and to turn the power on and off (5)

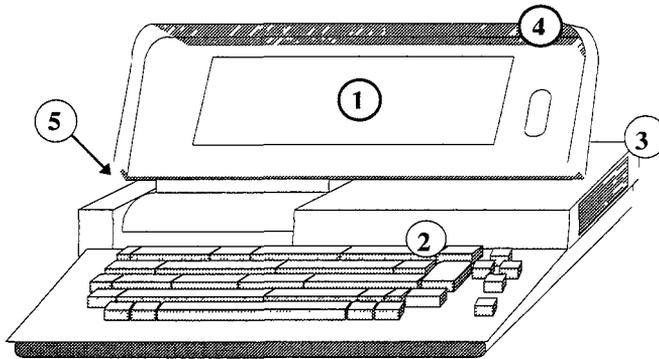


Figure 1-1 CAS Terminal Cabinet — Front and Right Side

The figure below displays the back panel of the processor's cabinet

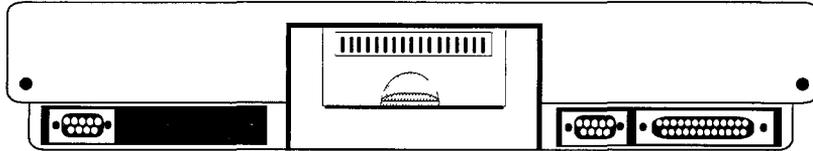


Figure 1-2 Back Panel

The unit provides two nine pin serial ports used for

- call collection (SMDR input from the communication system)
- remote access service or memory programming

The back panel also contains a centronix type parallel printer port with a 25 pin female connection. This port conforms to the IBM printer interface specification.

System Configuration

Figure 1 3 shows the call accounting processing unit and peripheral components

- 1 CAS unit
- 2 Parallel printer (IBM compatible)
- 3 Power cord and adapter
- 4 Telephone communication system or PBX
- 5 Optional remote access software for remote site s PC (with user supplied modem)

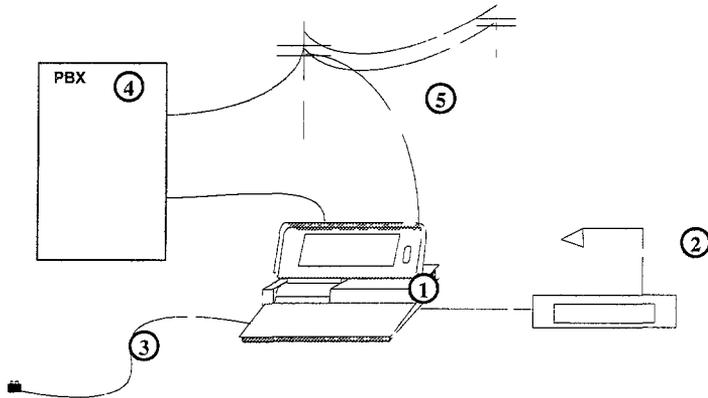


Figure 1-3 System Components

System components are described in the pages that follow

Compatible PBXs

The CAS Terminal can process information received from the communication systems listed below

- Spirit 1224/2448
- MERLIN[®] LEGEND
- System 25
- PARTNER[®] Series
- DEFINITY[®] G1/G3

Processing Unit

The processing unit houses a printed circuit board (PCB) with a special purpose microcomputer the floppy disk drive support electronics to provide storage for call records an internal clock alarm and a power supply It also houses the hardware connections to the back panel components and to the floppy disk drive Display and keyboard modules are part of the unit

Call Record Data Storage

The processing unit's memory is divided into three areas for call record storage — the *queue* area for calls waiting to be processed the *summary bucket* information area and the processed *call detail* area

- The queue area is a temporary buffer designed to hold unprocessed call records or to keep records separate while the system performs tasks such as printing reports Generally a Q appears in the top right corner of the screen when call record costing halts
- Summary buckets hold accounting period and year to date subtotals which are updated as calls are processed Subtotals are used to generate most summary and traffic reports For some reports trend information covering the current and all other completed accounting periods in the fiscal year is also retained These pre computed subtotals allow summary reports to be generated much more quickly than analyzing data accumulated over an entire accounting period
- The processed call detail area stores call records from the current accounting period Storage capacity depends on the model as shown in Table 1.1

The summary information and the processed call detail databases are created and purged according to a selected schedule The period of time covered by this schedule is referred to as an *accounting period*

At the end of an accounting period the system starts queuing new calls until old calls are deleted Reports scheduled for the end of the accounting period are generated Then the close accounting period activities take place the system clears the storage area updates the trend information and resets the summary subtotals to zero The calls in the queue are processed and normal call collection resumes The closing activities automatically occur five days after the end of an accounting period or if the queue becomes 95% full

In order to avoid losing information the system sends a warning when storage reaches 75% 85% 95% and 100% full. When this occurs an error is logged and automatically printed and a status symbol appears in the upper right corner of the screen. The warnings also appears on the *status screen*. An alarm sounds for the 95% and 100% full conditions.

If the storage area becomes completely filled costing halts and call records start gathering in the queue. After five days or when the queue becomes 95% full the call detail storage area clears costing resumes and calls store normally. The summaries remain intact until the end of the accounting period is reached.

NOTE

As a precaution against the loss of reporting ability you may wish to schedule reports according to a percentage level of calls in the database. If scheduled for output at 100% a report runs automatically when the storage area is full using the information from the call detail storage area before it is deleted. The same reports run according to their programmed frequency. For more details see *Scheduling Reports* in Chapter 3.

Power Supply and Memory Backup

External power for processing units comes from a standard 120 or 230 VAC wall adapter.

All units contain a power source for memory backup to retain stored data if the external power supply is disconnected or lost. In that event the system shuts down while preserving the memory's contents for at least 500 hours. When power is restored the system automatically resumes its full functionality.

NOTE

Following an initial power up the internal power source for memory backup begins to charge itself. After the first hour of operation the power source reaches 60% capacity. It is fully charged in approximately eight hours.

To allow full system operation without external power for a minimum of four hours the unit requires six fully charged size C two amp hour rechargeable Ni-Cad batteries. When the batteries run low on power the system shuts down and lets the backup mechanism take over to preserve the unit's memory contents. When power is restored the battery should recharge to full capacity within 48 hours.

Disk Drive

The processing unit features a 3.5 in floppy disk drive used to perform system backups and data import and export operations. The drive reads high density (1.44 Mb) diskettes only.

Printer

Your system provides full graphic, text, and language capability to the default printer types. Other parallel or serial IBM compatible printers able to operate in a compressed mode are acceptable and should also be fully supported. Printers that are not IBM or HP compatible may not be able to produce the graphic reports. Appendix A contains additional printer information.

User Interface

Setup and interaction with the system is accomplished via the keyboard and a reflective liquid crystal display with an eight line by 40 character viewing screen. System menus, messages, help, and data entry forms, as well as your keyboard entries and the system's responses, appear on this screen. Use the lever to the display's right to adjust its contrast. A screen saver makes the display appear blank when the status screen shows for longer than one minute or a period you specify.

The CAS Terminal can be maintained and operated by a single individual such as a telephone system administrator or several individuals with specific system access and corresponding duties. For example, a system administrator may perform the initial setup, determine the reporting schedule, and oversee the system; a technician may perform mid-level system and database management tasks; and operators may manually run reports.



SECURITY ALERT

Security is available through the use of menu passwords which confine accessibility to parts of the menu system

Menu System

You access the menu system by pressing the Menu key located to the left of the keyboard's space bar. Submenus, if any, are displayed by pressing the number associated with the desired menu item. Appendix D contains a complete menu system listing.

Status Screen

Figure 1-4 shows the *status screen*. This screen appears when you press the <Menu> key while viewing the Main Menu or when the system is not used for more than 15 minutes (or a period of time you select).

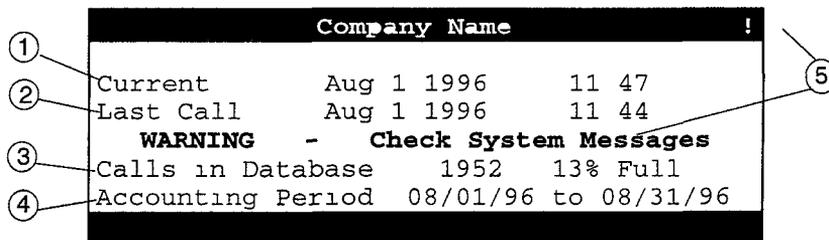


Figure 1-4 Status Screen

The status screen shows

- 1 The current date (in the format chosen for your system) and time (*hour minute*)
- 2 The date and time of the last call record processed
- 3 The number of calls in storage and the % of full capacity
- 4 The current accounting period
- 5 Any status symbols (top, right) and/or pending messages (center)

Main Menu

When viewing the status screen press <Menu> to display the Main Menu
Press <Menu> when viewing the Main Menu to display the status screen

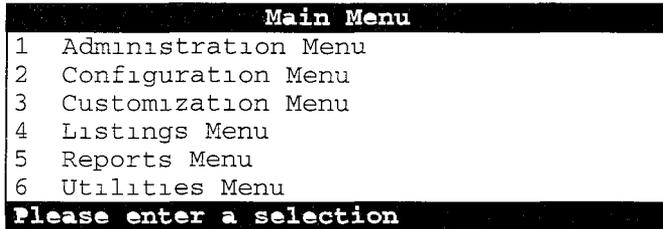


Figure 1-5 Main Menu

Data Entry Screens

Use data entry screens to enter system instructions. Valid commands for each function are displayed at the bottom of the screen.

Some functions are associated with more than one screen. Arrows in the top right hand corner indicate multiple pages.

Those fields preceded with a period (.) have selection menus associated with them. When the cursor is in that field, activate help by pressing the <Sel Help> key located on the far right of the keyboard's space bar. Selection menus contain all valid entries for a field.

Sample data entry screens are illustrated in figure 1-6 followed by a table describing the operation of the most frequently used commands.

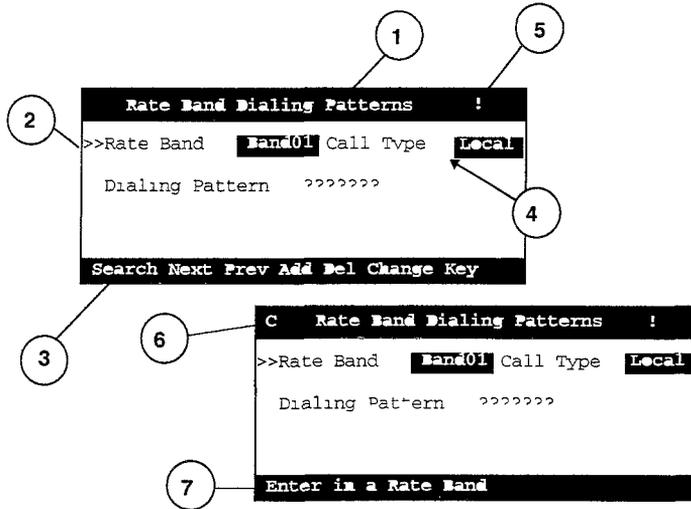


Figure 1-6 Sample Data Entry Screens

The figure shows

- 1 Screen title
- 2 Current field indicator
- 3 Command line
- 4 Period () indicating that selection help is available
- 5 Status symbol (shown on all screens and menus while the condition is present)
 - nothing for normal conditions
 - ! for an error condition The ! remains on the screen until the error is corrected or the message is viewed and/or printed
 - Q PBX output is being queued until conditions return to normal — for example the system is 100% full and you must clear calls
 - B System is operating on internal backup battery power
- 6 Command in use (Figure 1 6 shows C for the change command)
- 7 Prompt for data entry in the active field

Table 1-2 Data Entry Commands

| Command | Operation |
|----------------------|---|
| S | <S>earch generates a list of records that match specified selection criteria To enter selection criteria press <S> Type information in the key field(s) and press <END> Or position the cursor in a key field press <Sel Help> for selection help position the cursor on your choice and press <End> |
| N P | <N>ext and <P>rev display the next and previous sequential record from an entire file or from a list retrieved by <S>earch |
| A | <A>dd creates a new record Values for key fields must be provided (the prompt at the bottom of the screen will assist you with the information expected in each field) When complete press <End> |
| C | <C>hange updates the contents of the current record on the screen To change the record simply type over the fields or make new selections as required When complete press <End> |
| D | <D>elete removes the current record on the screen For most functions a confirmation prompt requires a <Y>es or <N>o response |
| K | <K>ey moves the field indicator (>>) between fields Some screens display information in a hierarchical structure <K>ey allows commands to address the different levels independently |
| M | <M>ove changes ownership of records whereby you identify and then transfer the selected record field from source to destination |
| S | <S>tart begins an operation for example print backup restore etc |
| C | <C>ancel cancels an operation for example a queued report group |
| P | <P>rint begins on demand printing |

Keyboard

The keyboard consists of a typewriter keypad along with special keys. Figure 1-7 displays the layout of the keyboard.

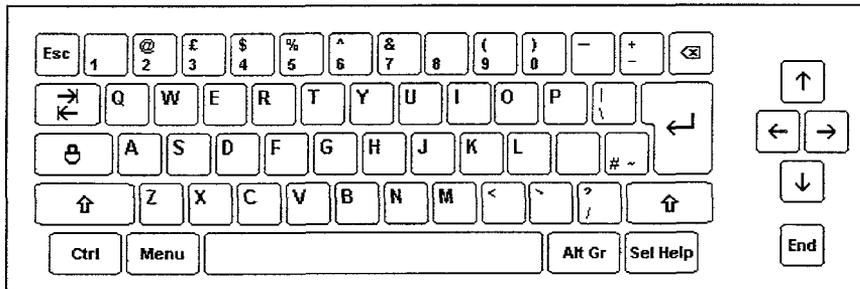


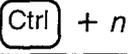
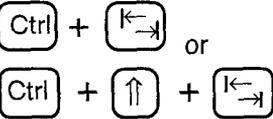
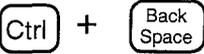
Figure 1-7 Keyboard

⇒ NOTE

If you need to type the characters [and] (in a printer escape sequence for example) press <Alt-Gr> and the ' ' key for the left bracket ([) and <Alt-Gr> and the = key for the right bracket (])

The following table shows control key sequences and other special keystrokes

Table 1-3 Special Keystrokes

| Keystroke | Function |
|---|---|
| ESC | Press <ESC> to cancel a data entry command exit a data entry screen and return to the menu system or move the user back one menu level at a time Do not use this key when a screen prompt says press any key |
| End | Press <End> to execute the Add Change and Search commands |
| Menu | When the Status Screen is displayed press <Menu> to display the Main Menu When viewing the Main Menu press<Menu> to display the Status Screen While viewing any menu level or data entry screen press <Menu> to display the Main Menu Do not use this key when a screen prompt says press any key |
| Alt Gr x | Press <Alt Gr> and hold while pressing another key with a third character option to type the alternate character |
| Sel Help | In a data entry field preceded with a period () press <Sel Help> to display all current valid entries for the field |
|  | Arrow keys move the cursor through fields in data entry screens or through selections in a selection help list If the ↑ or ↓ symbol appears on the top right corner of a screen press <↑> or <↓> to move through multiple pages of a data entry or help screen |
|  | Press and hold <↑> and a right/left arrow key to move the cursor in that direction one character at a time |
|  | Press the Tab key after accessing a data entry screen to move between horizontally aligned fields in left to right order (the way your eye moves when reading) Press and hold <↑> then press Tab to move backward in the same manner |
|  | Press <Ctrl> and hold then press 0 9 to run the macro assigned to that key combination |
|  | Press <Ctrl ↑> and Tab to output a copy of the current screen to the printer You can use this keystroke combination any time the printer is available |
|  | Press <Ctrl> and the backspace key to erase a data entry |
|  | Carriage return enters a value — typed or selected from a help list — into the current field in a data entry screen |

The Help Feature

The system provides two types of help

- Automatic Help — is available after initiating a command. The help appears in reverse type in the bottom line of a data entry screen and gives brief instructions or lists allowable entries.
- Selection Help — is available for data entry fields preceded by a period (.) Press <Sel Help> to display a list of all allowable entries for this field. Use <↑> and <↓> to move the cursor between selections. Press <↓> with the cursor on your choice to make a selection and return to the data entry screen.

System Operation

The figure below illustrates the flow of a working system

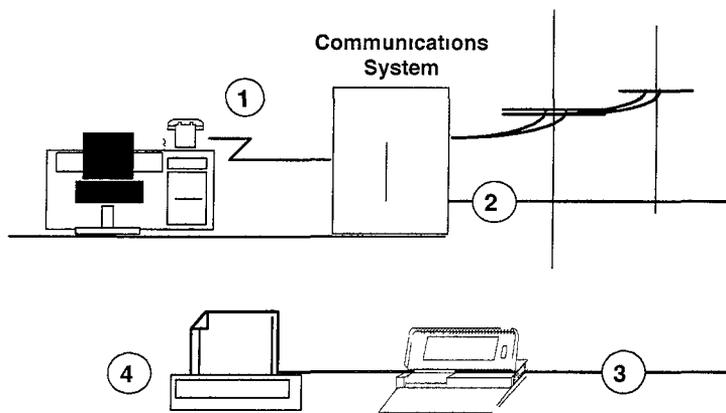


Figure 1-8 Operational Flowchart

- 1 When a phone call is placed from inside your office, it is routed through the communications system to its final destination off premises. Incoming calls are routed to an extension either through a switchboard operator or directly.

- 2 The communications system prepares an electronic station message detail recording (SMDR) record of each incoming and outgoing call it handles. Record details include
 - Time of the call
 - Call duration
 - Trunk
 - Station (telephone extension placing or receiving the call)
 - Number dialed
 - Account code (if used)
 - Meter pulses (if used)



NOTE

Regardless of the way your communication system reports the physical line a call uses (a trunk access code or circuit ID for example) your CAS Terminal reports it as a trunk.

- 3 The call processing unit receives the call record, stamps the date, screens the record according to instructions, and computes its cost.

Any programmed privacy for storing dialed numbers is now carried out as well as any special instructions regarding immediate output of, for example, costly or long calls, calls with specific dialing patterns, or calls placed by specific extensions. Finally, the call record is stored where it becomes available for reports. See Chapters 5 and 6 for programmable administration and configuration functions.

- 4 At report time — requested by an operator or initiated automatically according to a programmed schedule — the system searches the call record database (or consults the summary information), organizes it according to the type of report and any defined selection criteria, and prints it on the system printer. Programmed markups and/or privacy features for printing are carried out. See Chapter 3 for all report generating functions.

Functions

The CAS Terminal offers a great deal of reporting flexibility and customization opportunities through its functions. Figure 1-10 illustrates the interactions of the CAS Terminal functions and shows where information for each function can be located in this guide.

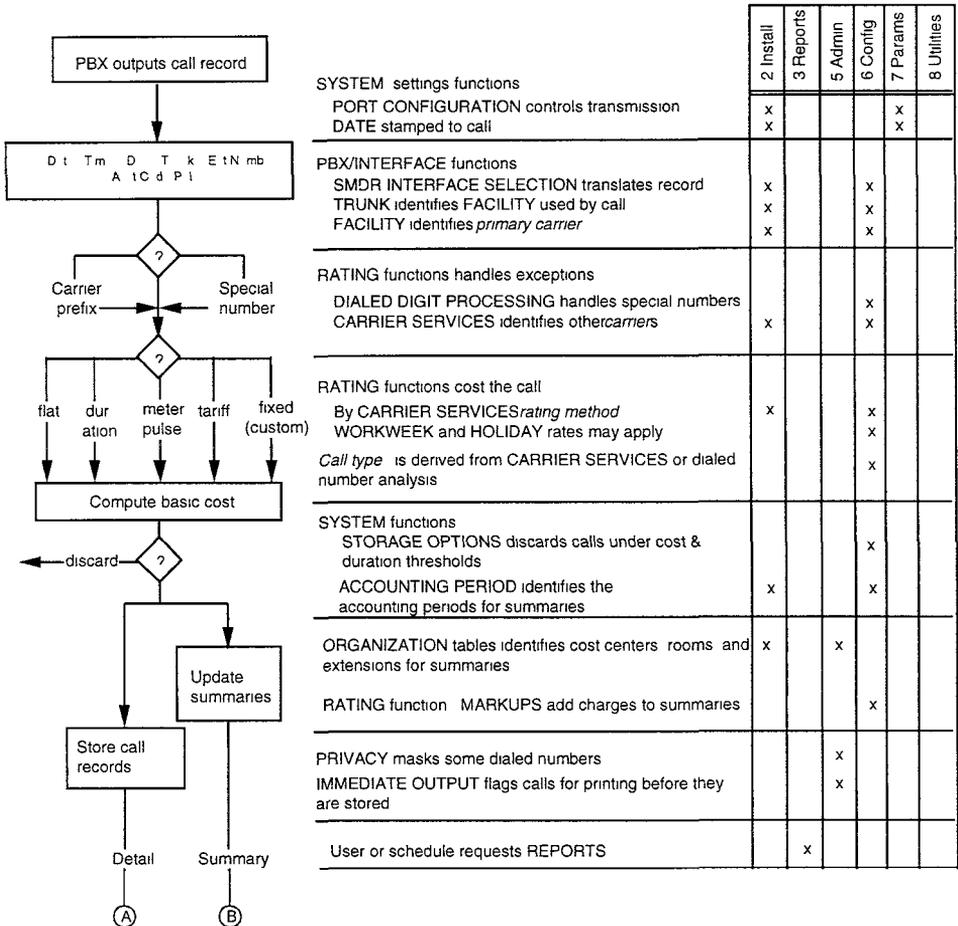


Figure 1-9 Function Cross-Reference Chart

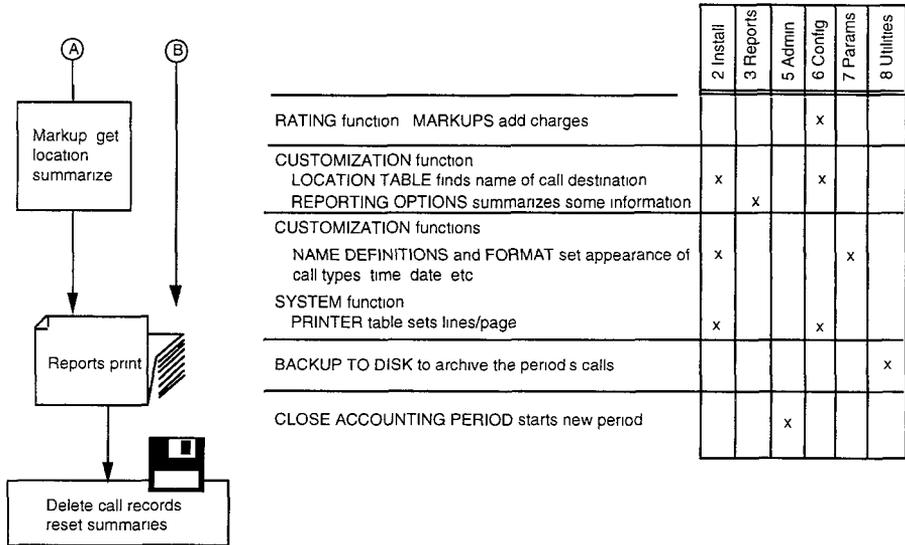


Figure 1-10 Function Cross-Reference Chart (continued)

Contents

| | |
|--|------|
| Preparation | 2 2 |
| ■ Taking Inventory | 2 2 |
| ■ Checking Site Requirements | 2 3 |
| Setting Up | 2 3 |
| ■ Connecting the Components | 2 3 |
| ■ Powering Up the Unit | 2 4 |
| Performing an Initial Software Setup | 2 5 |
| ■ Collecting Basic Configuration Information on Worksheets | 2-5 |
| ■ Using the Initial Setup Function | 2 12 |
| Testing | 2 26 |
| Customization | 2 27 |
| ■ Carrier Services — Fixed (Custom) Rating Information | 2 28 |
| ■ Carrier Services — Meter Pulse Rating Information | 2 29 |
| ■ Carrier Services — Tariff Rating Information | 2 30 |
| ■ Carrier Services — Duration Rating Information | 2 32 |
| ■ Carrier Services — Flat Rating Information | 2 34 |
| ■ Call Type Information | 2 34 |
| ■ Organization Structure Information | 2 35 |
| ■ Location Table Information | 2 36 |
| ■ Report Scheduling Information | 2 37 |
| Other Programmable Features | 2 37 |
| Ready to Go | 2 38 |

This chapter is designed to help you install your system and set up the software quickly and efficiently. Some parts of the installation process described in this chapter may be completed before shipment to you. Generally, we ship this product in one of these conditions:

| | Read and follow instructions in |
|---|---|
| 1. Initial setup performed before shipment to your site | All sections in this chapter except Performing an Initial Setup |
| 2. You perform initial setup | All sections of this chapter |

 **NOTE**

If the Initial Setup screen appears when you first turn the CAS Terminal unit on, the initial setup process has not been performed.

The installation procedure is divided into the following sections, listed below in the order you should perform them:

- **Preparation** — taking inventory of the system components, including a check that all environmental and power requirements are met
- **Setting Up** — connecting all components and supplying power to the unit
- **Performing an Initial Setup** — completing the worksheets necessary to perform an initial software setup. Next, use the Initial Setup function to enter worksheet information into the system.
- **Testing** — verifying that calls are collected and processed
- **Customization** — concluding the software configuration by entering the data gathered on customization worksheets

- Other Programmable Features — referencing instructions for CAS Terminal features
- Ready to Go — clearing call record information collected while the system was partially configured and starting your call accounting operations

It is recommended that you read Chapter 1 Overview (if you have not already done so) to help you understand the system's design and features

Preparation

Installing your system is a simple task provided your preparation is thorough. This section helps you conduct a smooth installation by taking an inventory of your equipment and site requirements before connecting components.

Taking Inventory

The package(s) shipped should include

- processing unit
- adapter with power cord
- this manual

You should provide the following materials that comply with Appendix A Specifications

- PBX cable
- printer and cable
- modem, all cables, and software (if you ordered the remote access option)
- for battery backup option — six rechargeable size C Ni Cad batteries

Save your packing materials. Even though the processing unit is a reliable product, it occasionally may be necessary to return it for maintenance. When returning the unit, send it in its original packing.

Checking Site Requirements

This installation assumes that the site complies with the environmental and electrical requirements listed below

- Environment — well ventilated within a 4° C (40° F) to 38° C (100° F) temperature range free from dust and static interference
- Electrical — separately fused 50/60 Hz 120/230 VAC power outlet with a standard grounded plug For best results the outlet should have a UGL approved surge protection
- Distance to Power Outlet and Communications System — The distance to the PBX should not exceed 15 m (50 ft)

Setting Up

This task involves connecting all components and supplying power to the unit

Connecting the Components

Make certain you connect the components in the order given Numbers refer to the steps following the figure

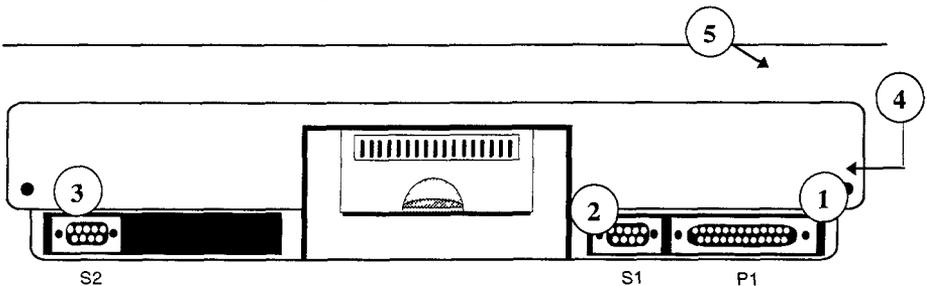


Figure 2-1 Processor — Back

- 1 Connect the printer cable from the P1 parallel port on the processor to the proper port on the printer Connect the printer to a power outlet load the paper set the top of form and make sure the printer is on-line and with the proper character set selected

- 2 Connect the PBX cable from the S1 serial port to the SMDR port on the communications system. Make certain that SMDR output at the communications system has been enabled. Consult your communications system's documentation for information and instructions.
- 3 If included on your system, use the S2 serial port to setup the remote access capability.
- 4 In standard powered systems, connect the AC power adapter cord to the 12 VAC jack and to the power outlet designated for this purpose.
- 5 If you are using the internal battery backup, remove the sliding panel from the top of the processor and install six rechargeable size C Ni Cad batteries (not included with your system). Allow 48 hours for batteries to become fully charged.

Powering Up the Unit

Make certain you follow the steps in the order given. Step numbers refer to the numbers in the figure that follows.

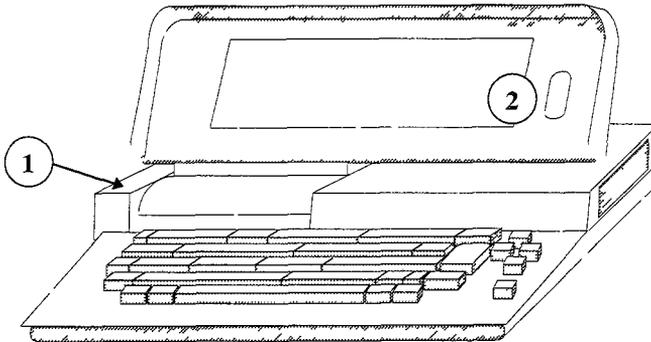


Figure 2-2 Processor — Front and Right Panels

- 1 Set the processor's power switch to the on (I) position. While the unit initializes, messages and prompts are shown on the screen. If necessary, use the contrast lever on the right-hand side of the unit to adjust the contrast until you get a clear display.

- 2 When the status screen appears the system is ready for use

Performing an Initial Software Setup

Follow the procedures in this section to collect information on worksheets and enter the data with the Initial Setup function

Collecting Basic Configuration Information on Worksheets

You configure your system in two phases the initial setup followed by customization The information required to perform these tasks is entered on worksheets Appendix B contains all worksheets and instructions for all but those used during the initial setup The sections that follow contain instructions for worksheets with information entered during the initial setup Make copies as needed and retain the originals

Three worksheets are provided for entering a basic configuration

- Initial Setup Worksheet (required for all systems)
- Carrier Services Basic Information Worksheet (required for use of meter pulse tariff duration or flat rating methods)



NOTE

If your system is costing calls with custom rate tables or default basic rating only you are not required to complete this worksheet

- Facilities/Trunks Worksheet (required for all systems)



NOTE

Regardless of the way your communications system reports the physical line used for a call (a trunk access code or circuit ID for example) CAS Terminal reports it as a trunk

Completing the Initial Setup Worksheet

Use the 'Initial Setup Worksheet' to gather information for the Initial Setup function It includes information to identify some display and report formats establish the duration of the accounting period and configure some ports

- 1 In the **Time** section circle the format for time when it appears in your reports
 - Chose one of the following
 - 12 = 12 hour clock format
 - 24 = 24 hour clock format (also called military time)
 - Write the character you want between the hour and minute in the space provided The choices are ' ' " " ' — ' / ' " or leave blank The default is

- 2 In the **Date** section
 - Circle the format for dates when they appear in your reports Chose one of the following
 - MDY (month/day/year — for example 01/31/95)
 - DMY (day/month/year — for example 31/01/95)
 - YMD (year/month/day — for example 95/01/31)
 - The default is MDY
 - Write the character you want to appear in reports between the month day and year in the space provided The choices are ' ' — ' / ' or leave blank The default is /

- 3 Select the format that best represents the decimal precision you want in the reported cost of a call The selection also represents the maximum cost of a call For more details see **Defining System Formats** in Chapter 7

- 4 In the **Other Currency Information** section enter the information used to display or report currency
 - Name — The name of your currency Use up to 8 characters
 - Symbol — The symbol that represents your currency Use up to 3 characters
 - Symbol Position — Circle either **Before** or **After** to indicate the location of the currency symbol when currency values are reported
 - Group of Three Separator — The character used to separate numbers over 999
 - Decimal Separator — The character used to separate decimal amounts from whole numbers

- 5 Use the **Organization Level Names** section when you want to rename the organization levels to reflect your business structure. Your choices appear in reports and data entry screens.
 - Write the **Company Name**
 - Write a name using up to 15 characters for
 - Level 1 (default = Department)
 - Level 2 (default = Cost Center)
 - Level 3 (default = Extension)

- 6 Review the referenced material and enter the tax information in the **Taxes** section as described below.
 - Read the definition of inclusive and additional taxes in Chapter 7 **Taxing Calls**, then choose a method
 - Enter names that appear in displays and reports for three types of taxes
 - If you are using the inclusive tax style, enter rates
 - See Chapter 6 **Entering Call Type Markups** after the initial setup process is complete to identify additional taxes

- 7 Enter information in the **Budget/Accounting Period** section as described below.
 - The month and day of the first day of your company's fiscal year (this date also serves as the first day of the initial accounting period)
 - Circle monthly, bi-monthly, or quarterly to represent the period of time an accounting period covers. (The CAS Terminal uses the frequency of the accounting period to breakdown annual department budgets for reporting purposes.)

- 8 For the **Printer** section, read the referenced material and enter the information described below.
 - See the list of printers in Appendix A. If your printer is not listed, select Custom from the help list during initial setup
 - See Chapter 7 **Choosing and Configuring a System Printer** for instructions to enter codes for compressed and graphic mode
 - Enter the number of lines to skip between immediate output report entries (up to 255)
 - Enter the number of lines to be included on each printed page (10, 255, or 0 (no page breaks))

- Circle the printer port interface required by your printer parallel or serial If you chose serial circle the port's parameters
- 9 Generally the individual in charge of your business communications system conveys to a sales representative the type of interface your CAS Terminal requires Before shipment the PBX interface is installed and selected for you Consult your communications system manager to determine the name to enter in the PBX Interface section of your worksheet You will need to make sure this interface is selected during initial setup
- 10 In the SMDR Port Configuration section circle a parameter in each group for the items described below
- Baud Rate — 150 300 600 1200 2400 4800 or 9600 bits per second
 - Data Bits — The number of bits of a single transmitted character either 8 or 7
 - Parity — A method used by some devices to check that data was transmitted correctly either Odd Even None or do not circle any
 - Stop Bits — The number of bits that trail after the transmission of a single character either 1 or 2
 - Flow Control — A standard of cable transmission flow either "XON/XOFF" "None" or "Hardware"

Completing the Carrier Services Basic Information Worksheet

Use the Carrier Services Basic Information Worksheet to identify carrier service rating that is not provided by fixed (custom) rates The information is required when using the rating functions to enter information used to compute the cost of a call stored in a call record and to make cost adjustments before it is reported

Several default carriers shown in the table that follows are included so that the CAS Terminal can rate calls if no other carrier is in place

Table 2-1 Default Carrier Services

| Carrier Name | Dialing Prefix | Rating Method | Digits in Auth Code | Direction | Call Type |
|--------------|----------------|---------------|---------------------|-----------|-----------|
| Default In | none | flat | 0 | In | INCOM |
| Default Out | none | fixed | 0 | Out | |

The first fixed custom rates installed on your system provides rating for the Default Out carrier

The duration and flat carrier service rating methods require the identification of an associated call type. A call type classifies each call allowing CAS Terminal to perform tasks such as rejecting calls on the basis of minimum cost or duration or adding markups or surcharges. CAS Terminal contains the following default call types for your use: LOCAL, NATNL (national), INTNL (international), INCOM (incoming), PRIVT (private) and OTHER. See *Managing Call Types* in Chapter 6 for more details.

Figure 2-4 provides a sample completed worksheet. Refer to instructions following the worksheet for descriptions of valid entries.

| Carrier Service Name (up to 15 characters) | Dialing Prefix (up to 11 digits) ¹ | Rating Method | Auth Code | Direction | Call Type |
|---|--|---------------|-----------|-----------------------|-----------|
| AT&T | | Fixed | 9 | <input type="radio"/> | |
| MCI | | Fixed | 0 | <input type="radio"/> | |

Figure 2-4 Sample Carrier Services — Basic Information Worksheet

To add a carrier service, enter information in each column of the worksheet as described below:

1. Enter the name of a carrier service in the *Carrier Service Name* column.
2. Enter the carrier service's local access number in the *Dialing Prefix* column.
3. Enter the appropriate rating method in the *Rating Method* column. The choices are: fixed (custom rate tables), M (meter pulse), T (tariff), D (duration) or F (flat). See Chapter 6, *Rating Methods Overview* for a description of how these methods work.

- 4 In the Auth Code column enter the number of digits in a code assigned by some telephone carriers to identify valid users of a service Enter 1 99 if used otherwise 0
- 5 In the Direction column enter I (incoming) or O (outgoing) to indicate the calls this carrier service rates
- 6 For the Call Type column these default call types are available for D or F rating methods LOCAL NATNL INTNL INCOM PRIVT or OTHER or enter a new call type (maximum 5 characters)

Completing the Facilities/Trunks Worksheet

Use the Facilities/Trunks Worksheet to identify your system's facilities and the carrier services and trunks associated with them

The number of facilities you may include in your telephone system as well as the number of trunks you can enter per facility depends on your system model Make additional copies of this worksheet as necessary Complete a separate worksheet for each facility

Figure 2-5 provides a sample Refer to instructions following the worksheet for descriptions of valid entries

| Facilities/Trunks Worksheet | | Page | of |
|---|----------------------------------|----------------------|----|
| Facility Name (up to 15 characters) T1 | Target Grade of Service (GOS) | 0 | 1% |
| Carrier Service In Default In | Carrier Service Out Private 1 | Number of Lines 3 | |
| Trunks | | | |
| 101 | 102 | 103 | |

Figure 2-5 Sample Facilities/Trunks Worksheet

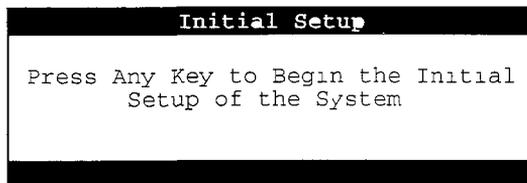
- 1 Enter a descriptive facility name for example CO or Tie 1

- 2 Enter a target grade of service (GOS) to compare to the actual GOS computed by the system. GOS refers to the probability that an attempted call will not be completed because all your trunks are busy. This information is helpful in determining the number of trunks required for each facility. For example, a target of 5% and an actual GOS of 10% indicates the need to add more trunks. An actual GOS of less than the target indicates that a facility's trunks are not fully utilized. Valid entries are 0.0 to 20.0% in increments of 0.1%.
- 3 Enter a valid carrier service name from the Carrier Services — Basic Information Worksheet, or leave blank and select from one of the defaults when you use the initial setup function. Data entry in the Facilities screen requires both incoming and outgoing carrier services.
- 4 The number of trunks (or whatever your PBX calls the physical line a call uses) associated with this facility.
- 5 Enter actual trunk line numbers. If your PBX reports Circuit ID Number, Trunk Group Number, Access Code, or something else, enter those numbers.

Using the Initial Setup Function

When you first supply power to the CAS Terminal, or following a cold start, the Initial Setup function begins. It allows you to enter a basic configuration that brings the system to an operational level capable of testing call collection and processing. Included are a series of screens (most containing default information). If a screen does not require a change, press <End> to advance to the next one. When complete, the Status screen appears and call collection and processing begins.

- 1 When a screen like the one below appears, locate the Initial Setup Worksheet. In the steps that follow, verify that the information on the screen is the same as the entries on the Initial Setup Worksheet. Make changes as needed using the instructions provided.



- 2 Press any key on the keyboard. The following screen appears.

| Time Format | |
|---------------|-------|
| Hours | 24 |
| Separator | : |
| Example | 20 42 |
| Change | |

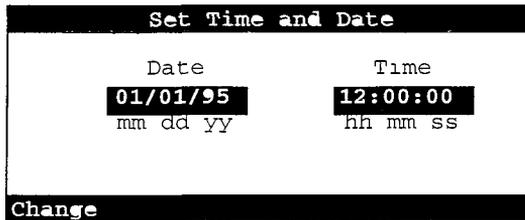
For Steps 3 through 6 use the information shown in the **Formats** section of the **Initial Setup Worksheet**

- 3 To change the time format press <C>hange
 - To display the formats available
 - With the cursor in the Hours field press<Sel Help>
 - Using the ↑ and ↓ keys highlight the format indicated in the **Formats** section of the worksheet
 - Press <↵> to place your selection in Hours field
 - Press <↵> to move to the next field
 - To select a separator
 - With the cursor in the Separator field press<Sel Help>
 - Using the ↑ and ↓ keys highlight the format indicated in the **Formats** section of the worksheet
 - Press <↵> to place your selection in Separator field
 - Press <End> Check the screen and correct any mistakes by repeating this step then press <End> again The following screen appears

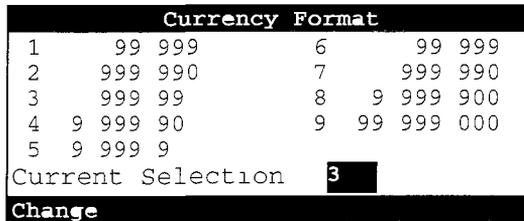
| Date Format | |
|---------------|-------------|
| Format | MDY |
| Separator | / |
| Example 1 | Jan 16 1995 |
| Example 2 | 01/16/95 |
| | mm/dd/yy |
| Change | |

- 4 To change the date format press <C>hange
 - To display the formats available
 - With the cursor in the Format field press<Sel Help>
 - Using the ↑ and ↓ keys highlight the format indicated in the **Formats** section of the worksheet

- Press <↓> to place your selection in Format field
- Press <↓> to move to the next field
- To select a separator
 - With the cursor in the Separator field press<Sel Help>
 - Using the ↑ and ↓ keys highlight the separator indicated in the Formats section of the worksheet
 - Press <↓> to place your selection in Separator field
- Press <End> Check the screen and correct any mistakes by repeating this step then press <End> again The following screen appears



- 5 To enter a date and time
 - Press <C>hange and type today s date using the format you chose in Step 4 Press <↓> to position the Time field
 - Type the current time using the format you chose in Step 3 then press <End>
 - Press <End> again The following screen appears



- 6 To change the currency format shown
 - Press <C>hange
 - Enter the number (1 to 9) corresponding to the format indicated in the Currency section of the Initial Setup Worksheet Press <End>
 - Check that the format you chose is shown and press <End> The following screen appears

| Currency Name and Dividers | |
|----------------------------|------------------------|
| Currency Name | (your currency name) |
| Currency Symbol | (your currency symbol) |
| Symbol Position | Before |
| 1000 Separator | , |
| Decimal Separator | . |
| Change | |

For Step 7 use the information from the Other Currency Information section of the Initial Setup Worksheet

7 To change currency name and separators

- Press <C>hange
- Enter the currency name indicated in the Name field of the worksheet Press <↓>
- Enter the currency symbol indicated in the Symbol field of the worksheet Press <↓>
- Enter the symbol position indicated in the Symbol Position field of the worksheet Press<Sel Help> to display the available symbol positions
 - Using the ↑ and ↓ keys highlight the position indicated in the Currency section of the worksheet
 - Press <↓> to place your selection in Symbol Position field
 - Press <↓>
- Enter the 1000 separator from the Group of 3 field of the worksheet Press <Sel Help> to display the available 1000 separators
 - Using the ↑ and ↓ keys highlight the separator indicated in the Currency section of the worksheet
 - Press <↓> to place your selection in 1000 Separator field
 - Press <↓>
- Enter the decimal separator from the Decimal Separator' field on the worksheet Press <Sel Help> to display the available decimal separators
 - Using the ↑ and ↓ keys highlight the separator indicated in the Currency section of the worksheet
 - Press <↓> to place your selection in Decimal Separator field
 - Press <↓>

- Press <End> Check the screen and correct any mistakes by repeating this step then press <End> again The following screen appears

| Organization Level Names | |
|--------------------------|--------------|
| Company Name | Company Name |
| Level-1 | Department |
| Level 2 | Cost Center |
| Level-3 | Extension |
| Change | |

For Step 8 use the information from the Organization Level Names section of the Initial Setup Worksheet

8 To change the organization level names shown

- Press <C>hange
 - Type the company name from Company Name field of your worksheet Press <↓>
 - Type the name from the Level 1 field of your worksheet Press <↓>
 - Type the name from the Level 2 field of your worksheet Press <↓>
 - Type the name of from the Level 3 field of your worksheet Press <↓>
- Press <End> Check the screen and correct any mistakes by repeating this step then press <End> again The following screen appears

| Taxes | | | |
|----------------------|-----------------|--------|----|
| Tax-1 | Tax-1 | Active | No |
| Tax-2 | Tax-2 | Active | No |
| Tax-3 | Tax-3 | Active | No |
| Style | Inclusive Price | | |
| Change Rating | | | |

For Step 9 use the information from the 'Taxes' section of the Initial Setup Worksheet

9 To change the information shown

- Press <C>hange
 - Type the name from the 'Tax 1' field of your worksheet. Press <↓> and <Sel Help> to display the selections for Tax Active? Highlight a selection and press <↓> to place it in the Tax Active? field. Press <↓>
 - Type the name from the 'Tax 2' field of your worksheet. Press <↓> and <Sel Help> to display the selections for Tax Active? Highlight a selection and press <↓> to place it in the Tax Active? field. Press <↓>
 - Type the name from the 'Tax 3' field of your worksheet. Press <↓> and <Sel Help> to display the selections for Tax Active? Highlight a selection and press <↓> to place it in the Tax Active? field. Press <↓>
- To enter Inclusive or Additional as circled in the 'Taxes' section of the 'Initial Setup Worksheet' in the Style field
 - Press <Sel Help> to display the selections for Style
 - Highlight Inclusive or Additional and press <↓> to place it in the Style field
- Press <End>. If you selected the inclusive tax style, press <R>ating. The following screen appears:

| Taxes | | |
|---------------------|------|---|
| Inclusive Tax Rates | | |
| Tax-1 | 0.00 | / |
| Tax-2 | 0.00 | % |
| Tax-3 | 0.00 | / |
| Change | | |

- To enter tax rates, press <C>hange
 - Type the rate from the 'Tax 1' field of your worksheet. Press <↓>
 - Type the rate from the 'Tax 2' field of your worksheet. Press <↓>
 - Type the rate from the 'Tax 3' field of your worksheet. Press <↓>

⇒ NOTE

Enter additional tax rates after completing the initial setup. See Chapter 6, 'Entering and Editing Call Type Markups.'

- Press <End>. Check the screen and correct any mistakes by repeating this step, then press <End> again to display the previous screen. Press <End> once more and the following screen appears:

```

Accounting Period Setup

First Day of Fiscal Year  01/01
                          mm/dd

Length of Accounting Period  Monthly

Change
    
```

For Step 10 use the information from the Budget/Accounting Period section of the Initial Setup Worksheet

10 To enter information press <C>hange

- Enter the date listed in the 'First Day of Company's Fiscal Year' field of your worksheet and press <↓>
- Press <Sel Help> and highlight the time period that corresponds to the information in the 'Length of Accounting Period' field of your worksheet and press <↓>
- Press <End> Check the screen and correct any mistakes by repeating this step then press <End> again The following screen appears

```

Printer Configuration ↓

Printer Name  IBM Graphic
Lines per Page  66

Blank Lines Between
Immediate Output Records  1

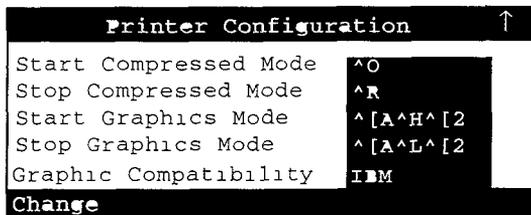
Change
    
```

For Step 11 use the information in the 'Printer' section of the Initial Setup Worksheet

11 To enter information press <C>hange

- Press <Sel Help> to display the list of default printers Highlight the printer listed in the 'Printer Name' field of your worksheet and press <↓> to place it in the Printer Name field Or select Custom to represent the name of the printer indicated on your worksheet and press <↓>
- Enter the value from the 'Lines Per Page' field of your worksheet and press <↓>
- Enter the value from the 'Blank Lines Between Immediate Output Records' field of your worksheet and press <↓>

- Press <End> Check the screen and correct any mistakes by repeating this step When complete press <↓> The following screen appears



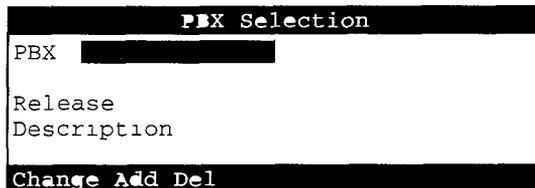
12 To make changes to the printer configuration information press <C>hange and type the code from the

- Compressed Mode Start field of your worksheet then press <↓>
- Compressed Mode Stop field of your worksheet then press <↓>
- 'Graphics Mode Start' field of your worksheet then press <↓>
- Graphics Mode Stop field of your worksheet then press <↓>

⇒ NOTE

If your codes require input of the characters [and] (square brackets) press <Alt Gr> and the key for the left bracket ([), <Alt Gr> and the = key for the right bracket (])

- When all entries are complete press <End> Check the screen and correct any mistakes by repeating this step When complete press <↓> The following screen appears



For Step 13 use the information from the PBX Interface section of the Initial Setup Worksheet

13 Compare the entry in the PBX Interface field of the Initial Setup Worksheet to the entry for PBX on the PBX Selection screen

- If they are the same press <End> and continue with Step 14
- If they are not the same press <C>hange

— Press <Sel Help>

- Highlight the PBX interface on the Sel Help list that is listed in the PBX Interface section of your Initial Setup Worksheet
- Press <End> to place your selection in the PBX field on the screen
- Press End> again and press <Y>es to confirm your selection or <N>o to cancel it
- When the PBX Selection screen appears with the interface listed on your worksheet in the PBX field on your screen press <End>

14 The following screen appears

| Carrier Services | |
|--|------------|
| Carrier Service Name | Default In |
| Dialing Prefix | |
| Rating Method | Flat |
| Digits in Auth Code | 0 |
| Direction | Incoming |
| Call Type | INCOM |
| Search Next Prev Add Del Change Rating | |

For Step 14 use the information from the Carrier Services — Basic Information Worksheet

Depending on the custom rate tables your company obtained the CAS Terminal contains one or more carrier services (all systems contain Default In and Default Out carrier services)

⇒ NOTE

If you did not complete a Carrier Services — Basic Information Worksheet you may press <End> now and continue with Step 16

- Use <S>earch <N>ext or <P>rev to review the existing carrier services
- To add carrier services press <A>dd
- Enter the information from the Carrier Service Name column and press <↓>
- Enter the information from the Dialing Prefix column then press <↓>
- With the cursor in the Rating Method field press<Sel Help> and use the ↑ and ↓ keys to highlight the rating method indicated for this carrier in the Rating Method column of your worksheet Press <↓> to place your selection in the Rating Method field Press <↓>

- Enter the digits in Auth Code column of the worksheet for this carrier Press <↓>
- With the cursor in the Direction field press<Sel Help> and use the ↑ and ↓ keys to highlight the direction indicated in the Direction column in the worksheet for this carrier Press <↓> to place your selection in the Direction field Press <↓>
- With the cursor in the Call Type field
 - press<Sel Help> and use the ↑ and ↓ keys to highlight the call type indicated in the Call Type column of the worksheet for this carrier Press <↓> to place your selection in the Call Type field
 - Or type the name of a new call type and press <↓>
- When complete press <End> Repeat this step to enter additional carrier services
- After entering all the carrier services listed on your worksheet use <N>ext or <P>revious to view your entries To correct any mistakes press <C>hange press <↓> to move to the field requiring correction and enter or select new information
- When complete press <End> The following screen appears

```

Facilities
Facility Name  Default
Target GOS    0.0
Carrier Service In  Default In
Carrier Service Out Default Out
Number of Lines 1
Search Next Prev Add Del Change
  
```



NOTE

All CAS Terminals contain the facility Default configured as shown above See Chapter 6 Building and Editing the Telephone System Configuration for complete information about the defaults

For Step 15 use the information from the Facilities/Trunks Worksheet

15 To add a facility press <A>dd

- Enter a name from the Facility Name field of the worksheet and press <↓>
- Enter a value from the Target Grade of Service (GOS) field and press <↓>

- With the cursor in the Carrier Service In field press<Sel Help> and use the ↑ and ↓ keys to highlight the carrier indicated in the Carrier Service In field on the worksheet for this facility Press <↓> to place your selection in the Carrier Service In field Press <↓>
- With the cursor in the Carrier Service Out field press<Sel Help> and use the ↑ and ↓ keys to highlight the carrier indicated in the Carrier Service In field on the worksheet for this facility Press <↓> to place your selection in the Carrier Service Out field Press <↓>
- Enter the value from the Number of Lines field on the worksheet for this facility
- When complete press <End> To enter additional facilities repeat this step

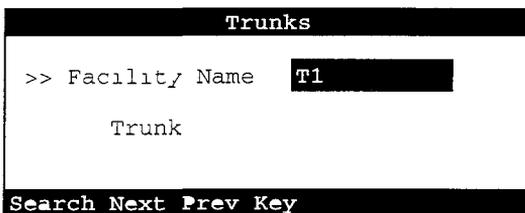
⇒ NOTE

If your communications system reports trunk lines you cannot edit the Number of Lines field It shows the number of entries made for each facility using the Trunks function

If your communications system does not report trunk lines count the number of trunks listed on each worksheet and enter the value in Number of Lines

- After entering all the facilities listed on your worksheets use <N>ext or <P>revious to view your entries To correct any mistakes press <C>hange press <↓> to move to the field requiring change and enter or select new information and press <End>

16 When complete press <End> The following screen appears



⇒ NOTE

Your CAS Terminal has the default trunk ???????? See Chapter 6 Building and Editing the Telephone System Configuration for complete information about the default facility and trunk

For Step 17 use the information in the Trunks section of the Facilities/Trunks Worksheet

- 17 Use <S>earch <N>ext or <P>rev to scroll through a list of facilities you entered in step 15 Press <K>ey to move the field indicator to Trunk The screen appears as below

```

Trunks
  >> Facility Name  T1
      Trunk        101
Search Next Prev Add Del Change Key
    
```

⇒ NOTE

Regardless of your communication system's term for the physical line used for a call (trunk access code or circuit ID for example) CAS reports it as a trunk

- To add a trunk
 - Press <A>dd and enter the first trunk number in the Trunks section of your worksheet for this facility
 - Press <End> Use this process to add all trunks on this facility's worksheet
- When complete press <K>ey to move the field indicator to the Facility Name field Use <S>earch <N>ext or <P>rev to display another facility Add the trunks as described above
- When all trunks for all facilities have been entered
 - press <K>ey and view the facilities with <S>earch <N>ext or <P>rev
 - Press <K>ey to move the field indicator to Trunk View the trunks associated with the displayed facility with <S>earch <N>ext or <P>rev
 - To correct any mistakes press <C>hange and enter new information then press <End>
- When complete press <End> again The following screen appears

```

Port Configuration
Port Number  S1
Port Function SMDR
Baud Rate   1200 Parity   NONE
Data Bits   8 Stop Bits  1
Flow Control XON/XOFF
Next Prev Change
    
```

For Step 18 use the information from the SMDR Port Configuration section of the Initial Setup Worksheet

18 Use <N>ext or <P>rev to display the default information for the port associated with SMDR Port Function. If changes are not necessary press <End>

- If changes are needed press <C>hange

- Press <Sel Help> to display the list of baud rate choices. Highlight the baud rate circled in the SMDR Port Configuration section of your worksheet and press <↓> to place your selection in the Baud Rate field. Press <↓>

- Press <Sel Help> to display the list of parity choices. Highlight the type of parity circled in the SMDR Port Configuration section of your worksheet and press <↓> to place your selection in the Parity field. Press <↓>

- Press <Sel Help> to display the list of data bit choices. Highlight the data bits value circled in the SMDR Port Configuration section of your worksheet and press <↓> to place your selection in the Data Bits field. Press <↓>

- Press <Sel Help> to display the list of stop bit choices. Highlight the stop bit value circled in the SMDR Port Configuration section of your worksheet and press <↓> to place your selection in the Stop Bit field. Press <↓>

- Press <Sel Help> to display the list of Flow Control choices. Highlight the type of flow control circled in the SMDR Port Configuration section of your worksheet and press <↓> to place your selection in the Flow Control field.

- When complete press <End>. To correct any mistakes press <C>hange, press <↓> to advance to the field requiring change and enter or select new information, and press <End>

For Step 19 use the information from the Printer section of the Initial Setup Worksheet

19 Use <N>ext or <P>rev to display the default information for the port associated with Printer Port Function. If changes are not necessary press <End>

- If changes are needed press <C>hange

- Press <Sel Help> to display the list of baud rate choices. Highlight the baud rate circled in the 'Printer' section of your worksheet and press <↓> to place your selection in the Baud Rate field. Press <↓>
 - Press <Sel Help> to display the list of parity choices. Highlight the type of parity circled in the 'Printer' section of your worksheet and press <↓> to place your selection in the Parity field. Press <↓>
 - Press <Sel Help> to display the list of data bit choices. Highlight the data bits value circled in the 'Printer' section of your worksheet and press <↓> to place your selection in the Data Bits field. Press <↓>
 - Press <Sel Help> to display the list of stop bit choices. Highlight the stop bit value in the 'Printer' section of your worksheet and press <↓> to place your selection in the Stop Bit field. Press <↓>
 - Press <Sel Help> to display the list of Flow Control choices. Highlight the type of flow control circled in the 'Printer' section of your worksheet and press <↓> to place your selection in the Flow Control field
- When complete, press <End>. To correct any mistakes, press <C>change, press <↓> to advance to the field requiring change and enter or select new information, and press <End>.

NOTE

Each Port Function is associated with only one port at a time — the system prompts you if a duplication occurs. IDLE is provided for ports not in use.

- 20 When complete, press <End> again. If you changed the printer port function, a system warm start (reboot) is necessary. Follow the instructions that appear on your screen to complete your re-configuration.

The initial setup process is complete. You can test call collection and processing by following the procedure in the next section.

NOTE

If you want to check the data you entered before testing, follow the procedures in Chapter 4: Printing Call Rating Information, Listing System Parameters Information, Printing the PBX Interface Tables, and Printing Custom Information. The status screen (press <Menu> from the Main Menu) shows the system date and time.

Testing

Testing involves verifying that the communications system transmits call records in a readable format and that the processing unit receives and handles them properly

- 1 From the Main Menu type **6** for Utilities The following menu appears

```

Utilities Menu
1 Backup and Restore Menu
2 Call Record Management Menu
3 File Import/Export Menu
4 System Update Menu
5 System Maintenance Menu

Please enter a selection

```

- 2 Type **5** The following menu appears

```

System Maintenance Menu
1 Process Control
2 Floppy/ Disk Format
3 System Control Menu
4 Call Record Analysis
5 Diagnostics Menu

Please enter a selection

```

- 3 Type **4** The following screen appears

```

Call Record Analysis
ANALYSIS MODE      CALLS RECEIVED
-----
RAI                   PROCESSED   ###
HEX                   PEJECTED   ###
PROCESSED            TOTAL      ###

Change Start      . . .

```

- 4 To change the defaults press **<C>**hange
 - With the cursor in the field you want to change press **<Sel Help>** and use the **↑** and **↓** keys to highlight Yes Press **<↓>** to place your selection in the field Press **<↓>** Repeat this process to choose one or more of the output formats described below
 - RAW (call records in the format received from the communications system)
 - HEX (call records converted to hexadecimal)
 - PROCESSED (call records processed by the PBX interface)
 - When complete press **<End>**

- 5 Press <S>art to begin analyzing the calls received Place a few test calls You should see the value in the PROCESSED field grow

⇒ NOTE

If calls are rejected your PBX selection is incorrect (unless the calls do not meet storage option thresholds) if calls are not received at all your serial port transmission values may be incorrect (other causes are a defective PBX cable SMDR output at the communications system is disabled or a defective serial port on the CAS Terminal unit itself) Take corrective action before repeating this test If the value in the PROCESSED field still does not grow call your AT&T support representative

- 6 Stop the test by pressing any key Then press <End> to return to the menu system

Customization

Once the unit is installed it is recommended that you customize your system before starting your call accounting operations Appendix B contains the customization worksheets for you to copy and complete

⇒ NOTE

If your system is costing calls using custom rate tables only Step 1 in the following procedure may not be necessary

Complete these worksheets in the following order

- 1 Carrier services require one or more of the worksheets specified below (one worksheet per carrier) If you have carrier services that cost calls using
 - fixed (custom) rates complete the Carrier Services Custom Rating Information Worksheet
 - meter pulses complete the Carrier Services Meter Pulse Rating Information Worksheet and the Call Types for Meter Pulse Calls Worksheet (This type of rating generally not used in the U S)
 - tariff rates complete the Dialing Patterns for Rate Bands Worksheet and the Carrier Services Tariff Rating Information Worksheet

- duration rates complete the 'Carrier Services Duration Rating Information Worksheet
 - flat rates complete the Carrier Service Flat Rating Information Worksheet
- 2 If you want to add new call types to the call type table or change a call type's storage options complete the 'Call Type Storage Options Worksheet'
 - 3 To allocate call details to organizational entities complete the 'Organization Worksheet'
 - 4 If you want to define locations associated with specific dialing patterns complete the Location Table Worksheet'

⇒ NOTE

If you have custom fixed rates installed they supply a default table with locations and associated area codes

- 5 To create report groups or identify single reports for printing at a later time or on a regular basis complete Report Schedules Worksheet'

Worksheet samples and references for entering their information appear in the following pages

Carrier Services — Fixed (Custom) Rating Information

Your custom rate tables supply most of the data required for the fixed (custom) rating method. Therefore, items such as call types and carrier service names are already in your system and available along with the other defaults. Call types are automatically assigned to calls using a facility with custom rating and require no user input.

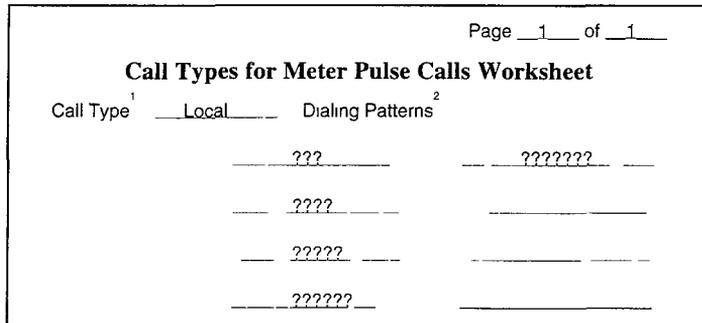
⇒ NOTE

Fixed rating method information may also be entered before the system is delivered. If that is the case or if you do not wish to add a markup to your custom rates at this time, no further input for this type of rating is required.

A sample worksheet is shown in Figure 2.6. For more details and a procedure for entering this information, see 'Managing the Rating Functions' in Chapter 6.

Use the **Call Types for Meter Pulse Calls Worksheet** to list dialed numbers that identify call types for meter pulse rated calls

Figure 2 8 shows a sample **Call Types for Meter Pulse Calls Worksheet** For more details and a procedure for entering this information see **Entering Meter Pulse Call Type Information** in Chapter 6



Page 1 of 1

Call Types for Meter Pulse Calls Worksheet

Call Type¹ Local Dialing Patterns²

| | |
|---------------|-------------------|
| <u>???</u> | <u>???????</u> |
| <u>????</u> | <u> </u> |
| <u>?????</u> | <u> </u> |
| <u>??????</u> | <u> </u> |

Figure 2-8 Sample Call Types for Meter Pulse Calls Worksheet

Carrier Services — Tariff Rating Information

With tariff rating calls are rated by linking costing schemes and call types to geographic areas called *rate bands* (similar to the rating method used by commercial carriers) For more details about tariff rating see Chapter 6 **Rating Methods Overview**

Complete the tariff rating worksheets in the order of the list below

- Use the **Dialing Patterns for Rate Bands Worksheet** to define rate bands by associating them with a call type and dialing patterns
- Use **Part 1 — Carrier Services Tariff Rating Information Worksheet** to associate rate bands with carriers
- Use **Part II — Carrier Services Tariff Rating Information Worksheet** to identify rate band values for rating calls placed or received during time periods you specify for each type of day Complete this worksheet for each set of type of day rating values you assign a rate band

Figure 2 9 shows a sample Dialing Patterns for Rate Bands Worksheet See Entering and Editing Rate Band Information in Chapter 6 for the procedure to enter this data

Page 1 of 1

Dialing Patterns for Rate Bands Worksheet

Rate Band Band01 Call Type ¹ Local

(use up to 7 character)

Dialing Patterns ² 1 ??????? 2 _____

(use up to 14 characters) 3 _____ 4 _____

5 _____ 6 _____

7 _____ 8 _____

Figure 2-9 Sample Dialing Patterns for Rate Bands Worksheet

Figure 2 10 and Figure 2 11 show samples of the other worksheets used to setup tariff rating See Entering Tariff Rating Information in Chapter 6 for the procedure to enter your data

Page 1 of 1

Part I — Carrier Services Tariff Rating Information Worksheet

Carrier Service ¹ AT&T

Rate Bands ² 1 Band01 2 Band02

(use up to 7 characters) 3 Band03 4 Band04

5 Band05 6 Band06

7 _____ 8 _____

Figure 2-10 Sample Part I— Carrier Services Tariff Rating Information Worksheet

Carrier Services Duration Rating Information Worksheet

Carrier Service Name Duration 1

(from the Carrier Services Basic Information Worksheet)

Type of Day Weekday

(choose Weekday Weekend 1 Weekend 2 or Holiday)

| Start Time ¹ | Duration (mm ss) | Cost | Interval (mm ss) |
|-------------------------|------------------|------|------------------|
| 00 00 | | | |
| First | 1 00 | 0 50 | 00 30 |
| Next | 2 00 | 0 10 | 1 00 |
| Remaining | | 0 05 | 1 00 |

| Start Time ¹ | Duration (mm ss) | Cost | Interval (mm ss) |
|-------------------------|------------------|------|------------------|
| 8 00 | | | |
| First | 1 00 | 0 50 | 00 30 |
| Next | 2 00 | 0 10 | 1 00 |
| Remaining | | 0 05 | 1 00 |

Figure 2-12 Sample Carrier Services Duration Rating Information Worksheet

Carrier Services — Flat Rating Information

Figure 2 13 shows a sample worksheet for carriers that use flat rates For more details about this type of rating see Chapter 6 Rating Methods Overview See Entering Flat Rating Information in Chapter 6 for the procedure to enter this data

| | |
|---|---|
| Page 1 of 1 | |
| Carrier Services Flat Rating Information Worksheet | |
| Carrier Service Name Vote 1 _____ (The name from the Carrier Services Basic Information Worksheet of a carrier that charges flat rates) Cost Per Call \$ 1 00 _____ Call Type ¹ SPEC _____ | Carrier Service Name _____ (The name from the Carrier Services Basic Information Worksheet of a carrier that charges flat rates) Cost Per Call \$ _____ Call Type ¹ _____ |

Figure 2-13 Sample Carrier Services Flat Rating Information Worksheet

Call Type Information

A sample 'Call Type Storage Options Worksheet' is shown in Figure 2 14 For more details about changing storage criteria for default call types or to add new call types and their storage information see Entering and Editing Call Type Information in Chapter 6

| | | | |
|--|--|-----------------------------|--|
| Page <u>1</u> of <u>1</u> | | | |
| Call Type Storage Options Worksheet | | | |
| Call Type ¹ | <u>Local</u> | Reporting Name ² | <u>Local</u> |
| Minimum Storage Cost | <u>\$0.00</u> | Duration | <u>00 00 30</u> |
| | (maximum = \$655 00 default = 0 00) | | (format = <i>hh mm ss</i> maximum = 18 00 00 default = 00 00 00) |
| Network Correction Time ³ | <u>00 30</u> | | |
| | | | (format = <i>mm ss</i> — default = 00 00) |

Figure 2-14 Sample Call Type Storage Options Worksheet

Organization Structure Information

The organization hierarchy consists of four levels. The structure is used to allocate costs, budgets, and charges to organization entities.

⇒ NOTE

This book uses the following default names to identify the four organization levels: company (your company's name) level 1 — department level 2 — cost center and level 3 — extension.

For more details about the organization tables, see *Managing the Organization Tables* in Chapter 5. To enter the data, proceed as follows:

- See *Adding, Changing, and Deleting Entries in the Organization Structure* in Chapter 5 to enter departments, cost centers, extensions, and related information.
- See *Changing Department Budgets* in Chapter 5 to enter budgets.
- See *Entering and Editing Cost Center Markups* in Chapter 6 to enter cost center markups and other adjustments.

A sample worksheet is shown in Figure 2 15.

Page 1 of 1

Organization Worksheet

Company Name (enter your company name from the Initial Setup Worksheet)
XYZ Corporation

Organization Structure Department Budgets & Extension Charges
 Enter a department and its budget for the year if any Add a cost center and list all its extensions and their users names Optionally enter cost center information (markup etc) and/or an extension's authorization code and/or fixed charges Use your system's format for all currency values You may list up to your model's capacity of extensions under a cost center Make copies of this worksheet if necessary

Department Accounting Budget _____
 (use up to 15 characters) (use up to 9 digits of precision — up to 9 999 999 00 or equivalent in your currency format)

Cost Center 11101 Markup 1 / 6
 (use up to 15 characters) (in range of 100 00 to 999 99 in your currency format)

Minimum Cost \$0 25 Surcharge per Call _____
 (maximum 655 00 or equivalent (maximum 655 00 or equivalent in your currency format)

| Extension (use up to 6 digits) | Name (use up to 20 characters) | Authorization Code (use up to 10 characters) | Fixed Charge ² |
|-----------------------------------|-----------------------------------|---|---------------------------|
| 1001 | Brown James | 12345 | |
| 1002 | Deman U B | 12346 | |

Figure 2-15 Sample Organization Worksheet

Location Table Information

The location table is used to identify and report call destinations in detail reports For more detail and a procedure to enter this information see 'Entering and Editing the User Defined Location Table' in Chapter 7

Page 1 of 1

Location Table Worksheet

Enter the dialing pattern (including city/country codes etc) that identifies calls to a location then enter the location name

| Dialing Pattern (use up to 14 characters) | Location Name (use up to 10 characters) |
|--|--|
| 17165551234 | ATT Sales |
| 1716461% | Roch NY |

Figure 2-16 Sample Location Table Worksheet

Report Scheduling Information

Report schedules are used to identify reports or report groups for automatic printing on a regular basis

A sample Report Schedules Worksheet is shown below. For more detail and a procedure to enter this information see Scheduling Reports in Chapter 3

| | |
|--|---|
| Page <u>1</u> of <u>1</u> | |
| Report Schedules Worksheet | |
| Report Group Name (use up to 20 characters) | Organization Rpt Grp |
| % Full Trigger | (Report group prints if storage reaches this capacity) 100 % |
| Frequency | <input type="checkbox"/> Once <input type="checkbox"/> Monthly <input type="checkbox"/> End of Accounting <input checked="" type="checkbox"/> Period |
| | <input type="checkbox"/> On demand only <input type="checkbox"/> Every days (up to 999) |
| Next Run Date (use your system's date format) 06/01/95 | Next Run Time (use the format hh mm) 12 00 |
| Include Reports | Organization Detail |
| | Organization Summary |
| | |

Figure 2-17 Report Schedules Worksheet

Other Programmable Features

Information not covered in worksheets that should be considered for customization appears below

- See the procedures in Chapter 5 if you want to program the following features
 - access to your system by setting passwords
 - privacy and/or immediate output features
- See the procedures in Chapter 6 if you need to program the following features

- ISDN codes for a carrier service
- Reclassification of the days of the week or identification of holidays
- Call cost adjustments using markups and/or taxes on the basis of call type and/or account code
- Dialed number exceptions for special processing (dialed digit processing)

⇒ NOTE

If your communications system includes access codes in the dialed digits use dialed digit processing to remove them from the dialed digit sequence. Otherwise, your calls will not be rated properly. This does not affect other functions that require access code information.

- A group of access codes that receive the call type 'PRIVT' and may be identified for dialed digit masking
- Customized call type reporting names
- See the procedures in Chapter 7 if you want to setup the following
 - Tax information for your call costing process
 - A sequence of keystrokes to occur when you press <Ctrl> and a number key simultaneously

Ready to Go

After all programming is done, this procedure clears all call record details from memory and resets the summary information that accumulated while performing the system setup.

- 1 From the main menu type **6**. The following screen appears:

```
Utilities Menu
1 Backup and Restore Menu
2 Call Record Management Menu
3 File Import/Export Menu
4 System Update Menu
5 System Maintenance Menu

Please enter a selection
```

- 2 Type 2 The following screen appears

```
Call Record Management Menu
1 Call Record Deletion
2 Rebuild Summary Buckets
Please enter a selection
```

- 3 Type 1 The following screen appears

```
Call Record Deletion
*** WARNING ***
All Call Records Will Be Deleted
To Begin Press the <S>tart Command
Start Cancel
```

- 4 Press <S>tart The following screen appears

```
Call Record Deletion
Do You Want to Reset the
Internal Summaries (Y/N)? _____
Press <ESC> to Abort
```

- 5 Type Y When the process is complete press <END> twice to return to the Status Screen A report prints confirming the deletion is underway When the report indicates the deletion is complete your database is empty

Your system is completely installed and recording calls for a new accounting period

⇒ NOTE

At this time follow the procedures in Chapter 8 Performing Backup and Restore Operations and backup your CAS Terminal so that you have a copy of your databases and fixed (custom) rates In case of a hardware failure or other cause of lost data restore the backup to allow CAS Terminal to continue operation Without a backup you cannot recover a complete CAS Terminal setup

Please note that unless your installation occurred on the first day of your accounting period the first accounting period may have incomplete call accounting information

Reports

3

Contents

| | |
|--|------|
| Organization Reports | 3 1 |
| ■ Defining and Printing Organization Reports | 3 2 |
| Selection Reports | 3 9 |
| ■ Defining and Printing Selection Reports | 3 10 |
| Account Code Reports | 3 13 |
| ■ Defining and Printing Account Code Reports | 3 14 |
| Traffic Reports | 3 16 |
| ■ Standard Traffic Reports | 3 17 |
| ■ Defining and Printing a Standard Traffic Report | 3 17 |
| ■ Analysis Reports | 3 19 |
| ■ Defining and Printing Analysis Reports | 3 20 |
| ■ Facility Reports | 3 22 |
| ■ Defining and Printing Facility Reports | 3 23 |
| Exception Reports | 3 25 |
| ■ Defining and Printing Exception Reports | 3 25 |
| Managing Reports | 3 27 |
| ■ Choosing Reporting Options | 3 27 |
| ■ Scheduling Reports | 3 28 |
| ■ Running Scheduled Reports | 3 31 |
| ■ Canceling Queued Reports | 3 31 |
| ■ Printing Reports from a Previous Accounting Period | 3 32 |

This chapter describes all report related functions and provides instructions on how to define and print CAS Terminal s reports

Organization Reports

Most organization reports allocate telephone expenditures to the organization level associated with the extension listed in a call record. Two organization reports compare expenditure totals of up to twelve accounting periods and the current accounting period telephone expenditures with a fixed budget.

The cost of calls in these reports include call type and cost center markups. All organization reports include active taxes; in detail reports additional style taxes appear as a separate entry. Organization detail and summary reports show fixed charges as separate entries for each extension; the cost center and department summary reports include them in their totals.

NOTE

Throughout this manual we use the defaults: department, cost center, and extension for organization level names. You can change these names using the procedure in "Defining System Names" in Chapter 6.

- The **Organization Detail Report** provides information by extension for any selected organization level or all levels. For each extension in the selected level, the report contains a detailed listing of calls that match your criteria. Detail reporting options described in "Choosing Reporting Options" later in this chapter may apply.

- The summary reports (**Organization Summary Report**, **Cost Center Summary Report** and **Department Summary Report**) provide the total number of calls and the total and average values for their duration and cost listed by extension cost center or department
- The **Department Trends Report** provides summary information for the current and up to eleven previous accounting periods. You can select up to six or all departments and the option to print this information in a bar graph
- The **Budget Report** compares a department's actual and budgeted expenditures and their variance for the current accounting period and the year to date. You have the option to print the last page of the report showing a bar graph comparing the budgets

Sample reports appear in Appendix C

Defining and Printing Organization Reports

Follow these steps to define and print organization reports

- 1 From the Main Menu select Reports Menu then Organization Reports Menu. The following menu appears

```
Organization Reports Menu
1 Organization Detail Report
2 Organization Summary Report
3 Cost Center Summary Report
4 Department Summary Report
5 Department Trends Report
6 Budget Report
Please enter a selection
```

- 2 To define the Organization Detail Report type 1. The following screen appears

```
Organization Detail Report ↓
Date Range 04/30/95 to 04/30/95
Time Range 0:00 to 0:00
Minimum Cost $0.00
Minimum Duration 0:00:00
Change Start
```

- To define the call records included in this report press <C>hange
 - Enter a date range of call records to use when creating the report
Use the date format you chose during the initial setup process
Press <↓>

⇒ NOTE

The CAS Terminal provides a default date range based on the date and frequency of your accounting period and increments the range when a new accounting period begins. The default range covers the last day of the last accounting period until today.

- Enter a time range of call records to use when creating the report (the default covers 24 hours) Use the time format you chose for during the initial setup process Press <↓>

⇒ NOTE

To report on a time range that includes 12 00 midnight define two reports using date and time ranges similar to the examples shown below. The examples cover 5 00pm 1/1/95 to 8 00am 1/2/95.

| Report No | Date Range | Time Range |
|-----------|----------------------|----------------|
| 1 | 01/01/95 to 01/01/95 | 17 00 to 23 59 |
| 2 | 01/02/95 to 01/02/95 | 0 00 to 8 00 |

- Enter the minimum cost of calls to use when creating the report
Use the currency format you chose during the initial setup process
Press <↓>
- Enter the minimum duration of calls to use when creating the report
Use the time format you chose during the initial setup process
- When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the menu system
 - <↓> or <↓> to continue defining the report
- When you press <↓> or <↓> the following screen appears

```

Organization Detail Report ↓↑
Department
Cost Center
Extension
Page Break For Each Extension No
Change Start
    
```

- Enter a Department and press <↓>
- Enter a Cost Center name and press <↓>
- Enter up to eight Extensions
- Leave a field blank to indicate all
- Use question marks (?) and percent symbols (%) as wildcards for the department or cost center name or in one extension field
 - ? = one character Examples ???SALES matches LOC SALES and INT SALES and ?00 matches 100 200 300 etc
 - % = any number of characters Examples S% matches SALES and STORE and 1% matches 1001 10002 100003 etc
- To report each extension's information on a new page enter <Y>es
- When entries on this screen are complete press
 - <↑> to go to the previous page
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the menu system
 - <↓> or <↵> to continue defining the report

When you press <↑> or <↵> the following screen appears

```

Organization Detail Report ↑
Authorization Code
Trunk
Call Type
Dialed Number
Private Calls
Summaries Only
Include
No
Change Start
    
```

- Enter an Authorization Code or use wildcards (? = any single character % = any number of characters) to define a group Press <↓>
 - Enter a Trunk or use wildcards (? = any single character % = any number of characters) to define a group Press <↓>
 - Enter a Call Type or use the steps below to select a Call Type then press <↓>
 - With the cursor in the Call Type field press<Sel Help>
 - Using the ↑ and ↓ keys highlight your choice
 - Press <↓> to place your selection in the Call Type field
 - Enter a Dialed Number sequence or use wildcards (? = any single character % = any number of characters) to define a group Press <↓>
 - Choose to exclude calls with the PRIVT call type from this report or to report on only those calls
 - Press<Sel Help> and press the <↑> or <↓> key to highlight your choice
 - Press <↓> to place your selection in the field
 - Press <↓> to advance to the next field
 - If you do not wish to have information from the date range in summarized format
 - press<Sel Help> and press the <↑> or <↓> key to highlight No
 - Press <↓> to place your selection in the field
 - When entries on this screen are complete press
 - <↑> to go to the previous page
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the menu system
- 3 To define the Organization Summary Report from the Organization Reports Menu type 2 The following screen appears

```

Organization Summary Report ↓
Department
Cost Center
Extension
Change Start
    
```

- To limit the call records included in this report press <C>hange
 - Enter a Department or use wildcards (? = any single character % = any number of characters) to define a group Press <↓>
 - Enter a Cost Center name or use wildcards (? = any single character % = any number of characters) to define a group Press <↓>
 - Enter up to 8 Extensions or use wildcards in one field (? = any single character % = any number of characters) to define a group
 - Leave a field blank to indicate all
- When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the Organization Reports Menu
 - <↓> or <↓> to continue defining the report
- When you press <↓> or <↓> the following screen appears

```

Organization Summary Report ↑
Private Calls Include
Page Break For Each Cost Center No
Change Start
    
```

- Choose to include or exclude calls with the PRIVT call type in this report or to report on only those calls
 - press<Sel Help> and press the <↑> or <↓> key to highlight your choice
 - Press <↓> to place your selection in the field
 - Press <↓> to advance to the next field

- To report each cost center s information on a new page
 - press<Sel Help> and press the <↑> or <↓> key to highlight Yes
 - Press <↓> to place your selection in the field
 - When entries on this screen are complete press
 - <↑> to go to the previous page
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>art to print a report immediately then <End> to return to the menu system
- 4 To define the Cost Center Summary Report from the Organization Reports Menu type **3** The following screen appears

```

Cost Center Summary Report
Page Break For Each Department  No
Include the Graphic Report      Yes
Change Start
  
```

- To change the settings press <C>hange
 - To report each department s information on a new page press <Sel Help>
 - Press the <↑> or <↓> key to highlight Yes
 - Press <↓> to place your selection in the field
 - Press <↓> to advance to the next field
 - To exclude a graphic version of the report press <Sel Help>
 - Press the <↑> or <↓> key to highlight No
 - Press <↓> to place your selection in the field
- When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>art to print a report immediately then <End> to return to the Organization Reports Menu

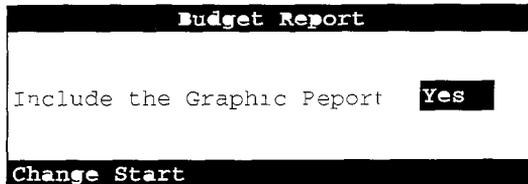
- 5 To define the Department Summary Report from the Organization Reports Menu type 4 The following screen appears

- To exclude a graphic version of the report press <C>hange
 - Press <Sel Help>
 - Use the <↑> or <↓> key to highlight No
 - Press <↵> to place your selection in the field
- When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the Organization Reports Menu

- 6 To define the Department Trends Reports from the Organization Report Menu type 5 The following screen appears

- To enter or change information press <C>hange
 - Enter up to six Departments or use wildcards (? = any single character % = any number of characters) in one field to define a group Press <↵>
 - Leave the Department fields blank to indicate all
- To exclude a graphic version of the report
 - Press <Sel Help>
 - Press the <↑> or <↓> key to highlight No
 - Press <↵> to place your selection in the field

- When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>art to print a report immediately then <End> to return to the Organization Reports Menu
- 7 To define the Budget Report from the Organization Reports Menu type **6**
The following screen appears



```
Budget Report
-----
Include the Graphic Report  Yes
-----
Change Start
```

- Repeat the process described in Step 5 of this procedure to define or print the Budget Report

Selection Reports

A selection report in detail or summary format is a tool used primarily to pinpoint details or summarize trends in problem areas discovered by other reports

⇒ NOTE

The Selection Summary Report is generated from the call record database — not the summary database

You may specify any combination of the following selection criteria

- a range of times and dates
- a minimum cost and/or duration
- a department cost center and/or up to 8 extensions or groups of organization entities specified by wildcards
- an account code or group of account codes
- a trunk number or group of trunk numbers
- a call type
- a dialed number pattern or group of dialed number patterns

- all calls with the call type PRIVT, no calls with PRIVT call type or only calls with PRIVT call type

The cost of calls in these reports include call type and cost center markups
Active taxes are included in both selection reports in detail reports additional
style taxes appear as a separate entry

Sample reports appear in Appendix C

Defining and Printing Selection Reports

Follow these steps to define and print Selection Reports

- 1 From the Main Menu select Reports Menu then Selection Reports Menu The following menu appears

```
Selection Reports Menu
1 Selection Detail Report
2 Selection Summary Report

Please enter a selection
```

- 2 To define the Selection Detail Report from the Selection Reports Menu type 1 The following screen appears

```
Selection Detail Report ↓
Date Range 04/30/95 to 04/30/95
Time Range 00:00 to 23:59
Minimum Cost $0.00
Minimum Duration 0:00:00
Change Start
```

- To make field entries press <C>hange
 - Enter a date range in the CAS Terminal date format you chose (default = current accounting period) Press <↓>
 - Enter a time range in the format *hh mm* (for example 10 00 to 14 59) Press <↓>

⇒ NOTE

To report on a time range that includes 12 00 midnight define two reports using date and time ranges similar to the examples shown below The examples cover 5 00pm 1/1/95 to 8 00am 1/2/95

| Report No | Date Range | Time Range |
|-----------|----------------------|----------------|
| 1 | 01/01/95 to 01/01/95 | 17 00 to 23 59 |
| 2 | 01/02/95 to 01/02/95 | 0 00 to 8 00 |

- Enter a minimum cost in your currency format Press <↓>
- Enter a minimum duration in the format *hhh mm ss* (for example 0 05 00) The maximum duration allowed by the CAS Terminal is 18 hours Press <↓>
- Leave a field blank to report on the entire database for the current accounting period

- 3 When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>art to print a report immediately then <End> to return to the Organization Reports Menu
 - <↓> or <↵> to continue defining the report

4 When you press <↓> or <↵> the following screen appears

```

Selection Detail Report  ↓↑
Department  ██████████
Cost Center  ██████████
Extension
██████ █████ █████ █████
Change Start
    
```

- Enter a Department or use wildcards (? = any single character % = any number of characters) to define a group Press <↓>
- Enter a Cost Center or use wildcards (? = any single character % = any number of characters) to define a group Press <↓>
- Enter up to eight extensions or use wildcards in one field (? = any single character % = any number of characters) to define a group Press <↓>

- Leave fields blank to mean all
- 5 When entries on this screen are complete press
- <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the Organization Reports Menu
 - <J> or <↓> to continue defining the report
- 6 When you press <J> or <↓> the following screen appears

```

Selection Detail Report ↑
Account Code
Trunk
Call Type
Dialed Number
Private Calls Include
Change Start
    
```

- Enter an Account Code or use wildcards (? = any single character % = any number of characters) to define a group Or enter a dash < > in the account code field to report on call records that do not have account codes Press <J>
- Enter a Trunk or use wildcards (? = any single character % = any number of characters) to define a group Press <J>
- Enter a Dialed Number sequence or use wildcards (? = any single character % = any number of characters) to define a group Press <J>
- To confine the reported call records to one call type enter its name Or choose a call type by pressing <Sel Help>
 - Press the <↑> or <↓> key to highlight a call type
 - Press <J> to place your selection in the field
 - Press <J> to advance to the next field
- Choose to include or exclude calls with the PRIVT call type in this report or to report on only those calls by pressing <Sel Help>
 - Press the <↑> or <↓> key to highlight your choice
 - Press <J> to place your selection in the field

- 7 When entries on this screen are complete press
 - <↑> to go to the previous page
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>start to print a report immediately then <End> to return to the Selection Reports Menu

Follow the steps below to define or print a Selection Summary Report

- 1 From the Main Menu select Reports Menu then Selection Reports Menu The following menu appears

```
Selection Reports Menu
1 Selection Detail Report
2 Selection Summary Report

Please enter a selection
```

- 2 To define the Selection Summary Report from the Selection Reports Menu type 2 The following screen appears

```
Selection Summary Report ↓
Date Range 04/30/95 to 04/30/95
Time Range 00:00 to 23:59
Minimum Cost $0.00
Minimum Duration 0:00:00
Change Start
```

- 3 Repeat Steps 3 through 7 in the Selection Detail Report procedure to define or print a Selection Summary Report

Account Code Reports

Two reports are available to allocate telephone charges to account codes. Typically, account codes are set up by administering a communications system. In call records, account codes appear in a separate account code field.

- The **Account Code Detail Report** lists records of calls charged to active accounts. The records are sorted in processing order by account code for the current accounting period to date or within the dates you specify. You may elect to print each account on a different page so that the report is suitable as a bill for client accounts. Reporting options described in *Choosing Reporting Options* (later in this chapter) may apply.
- The **Account Code Summary Report** condenses information on calls from the current accounting period. For each account selected to print, it provides the total number of calls and the total and average values for their duration and cost.

The cost of calls in these reports include call type, cost center, and account code markups. Active taxes are included in all account code reports; in the detail report, additional style taxes appear as a separate entry. Sample reports appear in Appendix C.

Defining and Printing Account Code Reports

Follow these steps to define and print the Account Code Detail Report.

- 1 From the Main Menu, select Reports Menu, then Account Code Reports Menu. The following screen appears:

```
Account Code Reports Menu
1 Account Code Detail Report
2 Account Code Summary Report

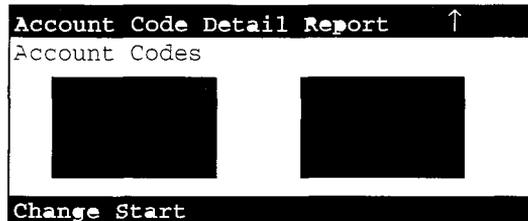
Please enter a selection
```

- 2 To define the Account Code Detail Report, type 1 from the Account Code Reports Menu. The following screen appears:

```
Account Code Detail Report ↓
Date Range 04/30/95 to 04/30/95
Page Break For Each Account Code No
Change Start
```

- Press <C>hange
 - Enter a date range (default = the current accounting period) Press <↓>
 - Enter <Y>es to print each account code s information on a separate page
- When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the Selection Reports Menu
 - <↓> to continue defining the report

3 When you press <↓ > the following screen appears



- 4 Enter up to six account codes (blank fields mean all) You may use wildcards in one field (? = any character % = any number of characters) Or enter a dash < > in one account code field to search for all call records that do not have an account code
- 5 When entries on this screen are complete press
- <↑> to return to the previous menu
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the Account Code Reports Menu

Follow these steps to define and print the Account Code Summary Report

- 1 From the Main Menu select Reports Menu then Account Code Reports Menu The following screen appears

```
Account Code Reports Menu
1 Account Code Detail Report
2 Account Code Summary Report

Please enter a selection
```

- To define the Account Code Summary Report type **2** from the Account Code Reports Menu The following screen appears

```
Account Code Summary Report ↑
Account Codes
[ ] [ ]
Change Start
```

- Press <C>hange and enter up to six account codes (blank fields mean all)
 - You may use wildcards in one field (? = any character % = any number of characters)
 - Or enter a dash < > in one account code field to search for all call records that do not have an account code
- When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the Account Code Reports Menu

Traffic Reports

The AT&T CAS Terminal has the following categories of traffic reports

- Standard Traffic Reports
- Analysis Reports
- Facility Reports

Standard Traffic Reports

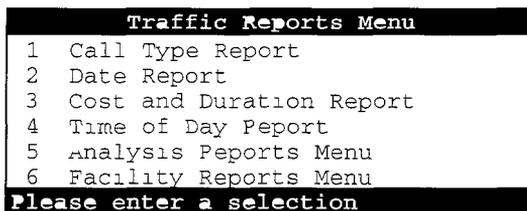
The Standard Traffic Reports summarize general call activity information for the current accounting period. These reports include all active taxes. Sample reports appear in Appendix C.

- The **Call Type Report** summarizes the activity of each call type.
- The **Date Report** summarizes daily calling activity. If the accounting period is longer than one month, information from the most recent 30 days is reported.
- The **Cost and Duration Report** summarizes calls in cost and duration ranges.
- The **Time of Day Report** summarizes calls by one hour intervals to show peak activity times.

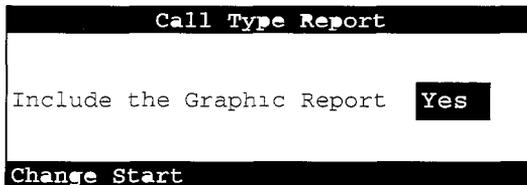
Defining and Printing a Standard Traffic Report

Follow the steps below to define and print a General Traffic Report.

- 1 From the Main Menu, select Reports Menu, then Traffic Reports Menu. The following menu appears:

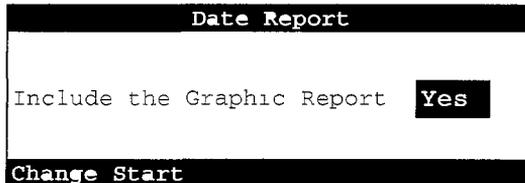


- 2 To define or print the Call Type Report, type 1. The following screen appears:



- To exclude the graphic report, press <C>hange
 — press <Sel Help> and press the <↑> or <↓> key to highlight No.

- Press <J> to place your selection in the field
 - When entries on the screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the Traffic Reports Menu
- 3 To define or print the Date Report from the Traffic Reports Menu type **2**
The following screen appears

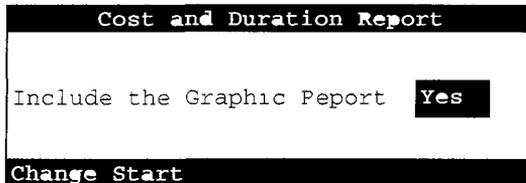


```

Date Report
-----
Include the Graphic Report  Yes
-----
Change Start

```

- Repeat the process described in Step 2 to define or print the Date Report
- 4 To define or print the Cost and Duration Report from the Traffic Reports Menu type **3** The following screen appears

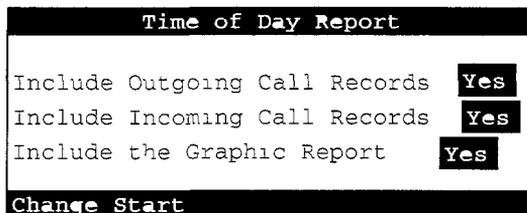


```

Cost and Duration Report
-----
Include the Graphic Report  Yes
-----
Change Start

```

- Repeat the process described in Step 2 to define or print the Date Report
- 5 To define or print the Time of Day Report from the Traffic Reports Menu type **4** The following screen appears



```

Time of Day Report
-----
Include Outgoing Call Records  Yes
Include Incoming Call Records  Yes
Include the Graphic Report     Yes
-----
Change Start

```

- To change the data press <C>hange
 - To exclude call records of outgoing calls press <Sel Help>

- Press the <↑> or <↓> key to highlight No
- Press <↓> to place your selection in the field
- Press <↓> to advance to the next field
- To exclude call records of incoming calls press <Sel Help>
 - Press the <↑> or <↓> key to highlight No
 - Press <↓> to place your selection in the field
 - Press <↓> to advance to the next field
- To exclude the graphic report press <Sel Help>
 - Press the <↑> or <↓> key to highlight No
 - Press <↓> to place your selection in the field
- When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>art to print a report immediately then <End> to return to the Traffic Reports Menu

Analysis Reports

The Analysis Reports present summarized information to help you analyze special call activity and characteristics. These reports are based on information from the current accounting period and include all active taxes. Sample reports appear in Appendix C.

NOTE

The availability of the complete set of Analysis Reports depends on your PBX selection.

- The **Call Distribution Report** summarizes outgoing call activity for each area code in the fixed rate and/or user defined location tables
- The **CLI Call Distribution Report** summarizes incoming call activity for each dialing pattern in the fixed rate and/or user defined location tables
- The **Ring Time Analysis Report** summarizes incoming calls in answered and unanswered categories according to the length of ring time

- The **Incoming Traffic Analysis Report** summarizes the hourly activity of incoming calls
- The **Rejected Call Summary Report** summarizes information on calls rejected due to call type storage options (available with all communication systems)

Defining and Printing Analysis Reports

Follow these steps to define or print an Analysis Report

- 1 From the Main Menu select Reports Menu Select Traffic Reports Menu then Analysis Reports Menu The following menu appears

```
Analysis Reports Menu
1 Call Distribution Report
2 CLI Call Distribution Report
3 Ring Time Analysis Report
4 Incoming Traffic Analysis Report
5 Rejected Call Summary Report
Please enter a selection
```

- 2 To define or print the Call Distribution Report type 1 The following screen appears

```
Call Distribution Report
Include Fixed Rate Location Table Yes
Include User Defined Location Table Yes
Change Start
```

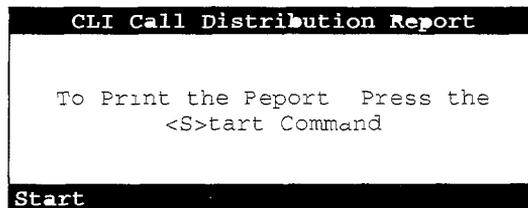
- To exclude summaries of outgoing calls for each area code in the fixed (custom) rates location table press <C>hange
 - Press <Sel Help> then the <↑> or <↓> key to highlight No
 - Press <↓> to place your selection in the field
 - Press <↓> to advance to the next field

⇒ NOTE

If your system does not have fixed (custom) rates installed you cannot access the Include Fixed Rate Location Table field in the Call Distribution Report screen

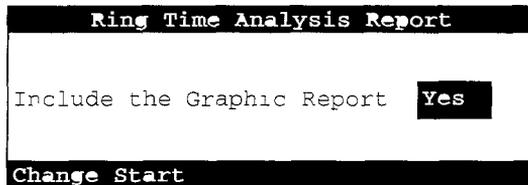
- To exclude summaries of outgoing calls for each area code in the user defined location table
 - Press <Sel Help> then the <↑> or <↓> key to highlight No
 - Press <↓> to place your selection in the field
- When entries on the screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>tart to print a report immediately then <End> to return to the Analysis Reports Menu

3 To print the CLI Call Distribution Report type **2** The following screen appears



- Press <ESC> to return to the Analysis Reports Menu without printing
- To print the report now press <S>tart then <End> to return to the Analysis Reports Menu

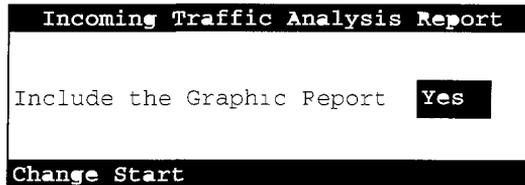
4 To define or print the Ring Time Analysis Report type **3** The following screen appears



- To exclude the graphic report press <C>hange
 - Press<Sel Help> and press the<↑> or <↓> key to highlight 'No
 - Press <↓> to place your selection in the field
- When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition

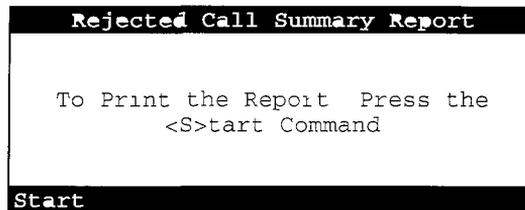
— <S>art to print a report immediately then <End> to return to the Traffic Reports Menu

- 5 To define the Incoming Traffic Analysis Report type 4 The following screen appears



- Repeat the process described in Step 4 of this procedure to define or print the Date Report

- 6 To define or print the Rejected Call Summary Report type 5 The following screen appears



- Repeat the process described in Step 3 of this procedure to print the Rejected Call Summary Report

Facility Reports

The Facility Reports provide summary information on facility activity during the current accounting period

- The **Facility Summary Report** shows actual line usage by summarizing trunk activity for selected facilities
- The **Facility Trends Report** shows facility activity for the current and up to 11 previous accounting periods
- The **Facility Grade of Service Report** shows facility performance during a peak hour. Performance is measured by comparing the number of completed calls to a target value representing a desired level of completed calls. This report is an aid in determining the number of trunks a facility requires. An actual GOS greater than the target indicates the need to add

trunks If the GOS is less than the target the system s efficiency should be examined

⇒ NOTE

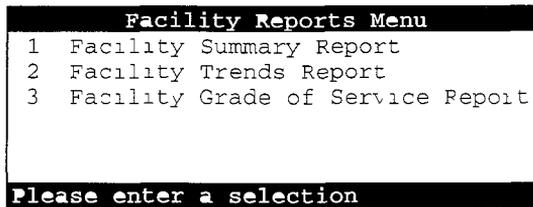
The default report group (scheduled to run at the end of each accounting period) includes this report (For details see Scheduling Reports later in this chapter) The Facility Grade of Service Report is included because the information it contains is most valuable when it is generated each accounting period

These reports include all active taxes Sample reports appear in Appendix C

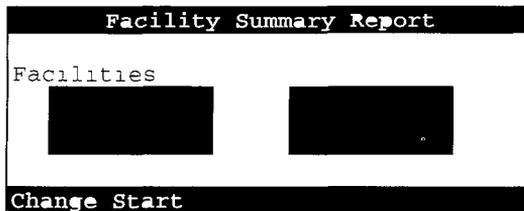
Defining and Printing Facility Reports

Follow these steps to define or print a facility report

- 1 From the Main Menu select Reports Menu Select Traffic Reports Menu then Facility Reports Menu The following menu appears



- 2 To define or print the Facility Summary Report type 1 The following screen appears



- To enter facility names press <C>hange and do one of the following
 - Type the name of a facility and press <↓> Enter up to six names
 - Press <Sel Help> then the <↑> or <↓> to highlight your choice and press <↓> Press <↓> to move to the next field
 - Leave the fields blank to report on all facilities

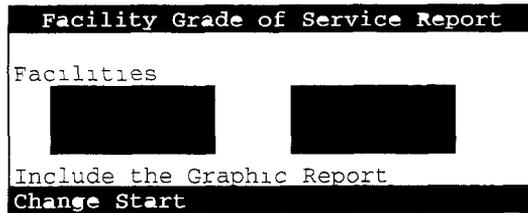
- Use wildcards in one facility field to define a group (? = any character % = any number of characters)
- When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>art to print a report immediately then <End> to return to the Facility Reports Menu

3 To define or print the Facility Trends Report type 2 The following screen appears

```

Facility Trends Report
-----
Facilities
  [ ] [ ]
Include the Graphic Report
Change Start
  
```

- To enter facility names press <C>hange and do one of the following
 - Type the name of a facility and press <↓> Enter up to six names
 - Press <Sel Help> and press the <↑> or <↓> key to highlight your choice and press <↓> Press <↓> to move to the next field
 - Leave the fields blank to report on all facilities
 - Use wildcards in one facility field to define a group (? = any character % = any number of characters)
 - To exclude the graphic report
 - press<Sel Help> and press the <↑> or <↓> key to highlight No
 - Press <↓> to place your selection in the field
 - When entries on this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
 - <S>art to print a report immediately then <End> to return to the Facility Reports Menu
- 4 To define or print the Facility Grade of Service Report type 3 The following screen appears



- Repeat the process described in Step 3 of this procedure to define or print the Facility Grade of Service Report

Exception Reports

The exception reports provide information on calls with noteworthy attributes. Except for the Telecom Managers Report, all report information is based on the entire current accounting period.

The cost of calls in these reports include call type and cost center markups and all active taxes.

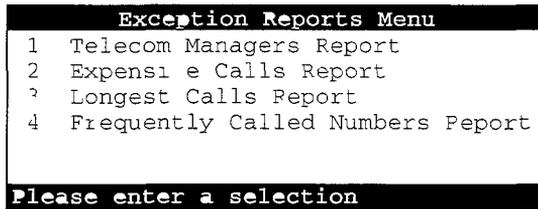
The following Exception Reports are available:

- **The Telecom Managers Report** summarizes system information useful to verify proper operation and call collection. The report covers the period of time since the report was last run within the current accounting period.
- **The Expensive Calls Report** lists the most expensive calls for the selected extension(s).
- **The Longest Calls Report** lists the calls with the longest duration for the selected extension(s).
- **The Frequently Called Numbers Report** lists the calls dialed most often for the selected extension(s). Numbers marked for reporting privacy are not masked in this report.

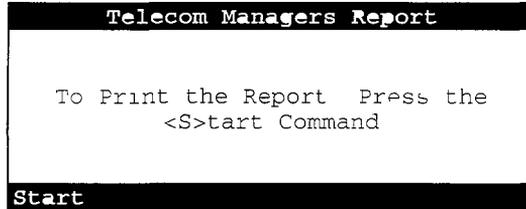
Defining and Printing Exception Reports

Follow these steps to print an exception report:

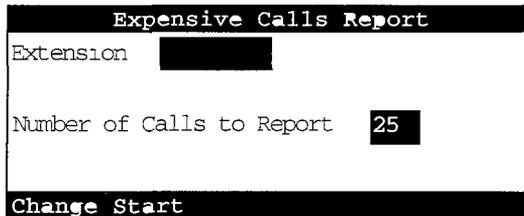
- 1 From the Main Menu, select Reports Menu, then Exception Reports Menu. The following menu appears:



- 2 To print the Telecom Managers Report type **1** The following screen appears



- Press <ESC> to return to the Exception Reports Menu without printing
 - To print the report now press <S>art then <End> to return to the Exception Reports Menu
- 3 To define or print the Expensive Calls Report type **2** The following screen appears



- Press <C>hange and enter an extension or define a group of extensions using wildcards (? = any character % = any number of characters)
 - Press <.]> and enter the number of calls to include in the report (up to 25) then press <End>
 - To print the report now press <S>art then <End> to return to the Exception Reports Menu
- 4 To define or print the Longest Calls Report type **3** The following screen appears

```
Longest Calls Report
Extension [REDACTED]
Number of Calls to Report 25
Change Start
```

- Repeat the process described in Step 3 of this procedure to define or print the Longest Calls Report
- 5 To define or print the Frequently Called Numbers Report type 4 The following screen appears

```
Frequently Called Numbers Report
Extension [REDACTED]
Number of Dialed Numbers to Report 25
Change Start
```

- Press <C>hange and enter an extension or define a group of extensions using wildcards (? = any character % = any number of characters)
- Press <↓> and enter the number of dialed digit sequences to include in the report (up to 25) then press <End>
- To print the report now press <S>tart then <End> to return to the Exception Reports Menu

Managing Reports

These procedures are used to manage the information contained in reports and set up a schedule for their output

Choosing Reporting Options

Several format options are available for detail reports If indicated reports can include

- summarized data about the items listed below

- local calls
 - incoming calls
 - other (non local) zero costed calls
 - taxes
 - an asterisk next to records with costs determined by default rating (because they contain trunks or dialing patterns not contained in the CAS Terminal databases)
 - meter pulse counts
- 1 From the Main Menu select Reports Menu Select Report Management Menu then Reporting Options The following screen appears

| Reporting Options | |
|---------------------------------|----|
| Summarize Local Calls | NO |
| Summarize Incoming Calls | NO |
| Summarize Other Zero Cost Calls | NO |
| Summarize Taxes | NO |
| Mark Default Rated Calls | NO |
| Show Meter Pulse Count | NO |
| Change | |

- 2 To change the field entries press <C>hange
- Press<Sel Help> and press the <↑> or <↓> key to highlight Yes
 - Press <↓> to place your selection in the field
 - Press <↓> to advance to the next field
- 3 When entries on this screen are complete press
- <ESC> to cancel the changes
 - <End> to save the changes
 - <End> again to return to the Report Management Menu

Scheduling Reports

The report scheduling feature is valuable for creating groups of reports and/or system tables that require output on a scheduled periodic basis

⇒ NOTE

A default report group (scheduled to run at the end of an accounting period or if the call record storage area becomes 100% full) is provided. The default report group includes an Organization Summary Report and a Facility Grade of Service Report.

You can define up to five report groups (including the default group) with up to 10 different reports and/or tables. To print scheduled reports, see the following section: Running Scheduled Reports.

- 1 From the Main Menu, select Reports Menu. Select Report Management Menu, then Schedule Reports. The following screen appears:

```

Schedule Reports
Report Group Name  Default
Percent Full      100
Frequency         End of Period
Next Run Date     01 01 95
Next Run Time     12 00AM
Next Prev Add Del Change Reports
    
```

- 2 Use the commands to perform the activities described:
 - To view the report groups (alphabetized by Report Group Name) press <N>ext or <P>rev.
 - To add a new definition, press <A>dd and proceed to Step 3.
 - To delete the definition on display, press <D>el and then <Y>es to confirm it. Press <End> to return to the Report Management Menu.
 - To change the definition on display, press <C>hange and proceed to Step 3.
 - To view or change the group of reports that belong to this definition, press <R>eports and proceed to Step 4.
- 3 If you pressed <A>dd or <C>hange in Step 2:
 - Select entries for fields preceded by a by:
 - Pressing <Sel Help> and the <↑> or <↓> key to highlight a selection.
 - Then press <↓> to place your selection in the field.
 - Move from field to field by pressing <↓>.
 - Or type field entries. The fields are described below:
 - Report Group Name: A name for this group of reports.

- **Percent Full** A value from 1 to 100 representing the database capacity level at which this report group automatically prints Enter 0 to disable this feature

⇒ NOTE

Report groups with 100 in the Percent Full field print before the database automatically deletes (Not applicable when the Frequency is once or on demand)

- **Frequency** How often to run this group of reports starting on the Next Run Date <O>nce on <D>emand <M>onthly <1> to <255> days or <E>nd of Accounting Period
- **Next Run Date** A date in your system s format After automatic runs the system keeps this date current according to the schedule frequency
- **Next Run Time** The time of day to start printing this group of reports Enter *hh mm* in your system s time format

- When entries in this screen are complete press
 - <ESC> to cancel the definition
 - <End> to complete the definition
- Press <End> again to return to the Report Management Menu

4 If you pressed <R>eports in Step 2 the following screen appears

```

Schedule Reports
Report Group Name      Default
Number of Reports      2
Report
Organization Summary Report
Next Prev Add Del Criteria
  
```

- If the report group already exists the screen displays each report name individually
 - To scroll through report names press <N>ext or <P>rev
 - To add a new name to a report group press <A>dd then
 - Press <Sel Help> and press <↑> or <↓> to highlight a report name
 - Press <↓> to place your selection in the field
 - Press <End> to complete the addition or press <ESC> to return to the Report Schedule screen without adding a report

- To delete the report on your screen from a report group press <D>el then <Y>es to confirm it
 - To view or change the selection criteria for the report on your screen press <C>riteria and enter information as necessary When complete press <End>
- 5 Press <End> to return to the Report Management Menu

Running Scheduled Reports

Follow these steps to print a report or report group you defined via schedule reports

- 1 From the Main Menu select Reports Menu Select Report Management Menu then Run Scheduled Reports The following screen appears

| Run Scheduled Reports | |
|-----------------------|----------------|
| Report Group Name | Traffic Set #1 |
| Percent Full | - |
| Frequency | Monthly |
| Next Run Date | 12 01 95 |
| Next Run Time | 12 00 |
| Next Prev Start | |

- 2 Press <N>ext or <P>rev to view the report groups alphabetized by Report Group Name When the report group you wish to print appears press <S>tart
- 3 The procedure is complete Press <End> to return to the status screen

Canceling Queued Reports

Use this function to cancel a report (or report group) that is currently printing or to cancel printing any report or report group waiting in the queue Canceling a scheduled report or report group does not affect its next run See the previous section Scheduling Reports for instruction to remove a report group from the schedule

Follow these steps to cancel printing a report or report group

- 1 From the Main Menu select Reports Menu Select Report Management Menu then Cancel Reports The following screen appears

| Cancel Reports | |
|----------------------|----------------|
| Report Group Name | Traffic Set #1 |
| Percent Full | - |
| Frequency | Monthly |
| Next Run Date | 05 30 95 |
| Next Run Time | 12 00 |
| Next Prev Cancel All | |

A report or report group currently printing displays first

- 2 Press <N>ext or <P>rev until the report/report group you wish to cancel appears Reports and report groups appear in chronological order according to run dates
 - Press <C>ancel to cancel printing the report group shown on the screen
 - Press <A>ll to cancel all reports and report groups waiting to print
 - Press <Y>es to confirm

⇒ NOTE

The CAS Terminal updates a scheduled report's next run date (when appropriate) — for example on the sample above the Next Run Date updates to 06 30 95

- 3 Press <End> to return to the status screen

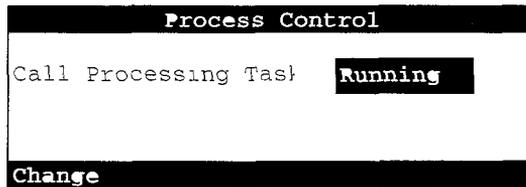
Printing Reports from a Previous Accounting Period

Follow the steps below to create reports containing information from a past accounting period

⇒ NOTE

Allow yourself enough time within the current accounting period to run your reports from the past accounting period and restore your current database The amount of time required depends on the size of your databases and the information you choose to report

- 1 From the Main Menu select Utilities Menu Select System Maintenance Menu then Process Control The following screen appears



- 2 The call processing task is RUNNING To change the processing status press <C>hange then
 - press <Sel Help> and press <↑> or <↓> to highlight STOPPED
 - Press <↓> to place your selection in the field
 - Press <End>
- 3 Press <End> two times to return to the Utilities menu

⇒ NOTE

A Q appears in the upper right hand corner of your screen to indicate calls are being queued

- 4 Type 1 to access the Backup and Restore Menu
- 5 Backup the current accounting period's information using the procedure described in Performing Backup and Restore Operations in Chapter 8
- 6 Using the backup that contains information from a past accounting period perform a restore following the procedure described in Performing Backup and Restore Operations in Chapter 8

▲ CAUTION

When you restore a backup from a previous accounting period the system date (current) and the date of the restored database do not agree The date discrepancy causes the following to occur

- an audible alarm begins
- a message displays telling you to close the accounting period
- the default report group and any others scheduled for the end of the accounting period begin to run

DO NOT CLOSE THE ACCOUNTING PERIOD Clear the messages and cancel the queued reports then proceed with the remainder of this procedure

- 7 Run the reports as necessary These reports contain information from your past accounting period

- 8 Perform a restore operation using the backup of the current accounting period
- 9 When complete repeat Step 1
- 10 The call processing task is STOPPED To change the status of the process press <C>hange then
 - press <Sel Help> and press <↑> or <↓> to highlight RUNNING
 - Press <↵> to place your selection in the field
 - Press <End>
- 11 Press <End> again to return to the System Maintenance Menu



NOTE

The Q should be gone from the upper right hand corner of your screen

Contents

| | |
|--|------|
| Administration Information Listings | 4 1 |
| ■ Printing Administration Information Listings | 4 2 |
| Configuration Information Listings | 4 3 |
| ■ Printing Configuration Information Listings | 4 4 |
| System Parameter Listings | 4 6 |
| ■ Printing System Parameter Listings | 4 7 |
| ■ Viewing or Printing the System Information Listing | 4 8 |
| ■ Viewing or Printing the System Usage Listing | 4 10 |
| Scheduled Reports Listing | 4 11 |
| ■ Printing the Scheduled Reports Listing | 4 11 |
| Error Logs Listing | 4 12 |
| ■ Printing the Error Logs | 4 13 |
| Viewing System Messages | 4 13 |

This chapter describes the database listings. Also included are sections describing how to generate a database listing and how to view system messages.

Administration Information Listings

The items below describe listings of databases created and/or maintained by the administration functions:

- The **Organization Information Listing** provides a listing of the entire organization hierarchy including information associated with extensions.
- The **Organization Directory** lists each department and all associated cost centers, extensions, and personnel.
- The **Directory by Extension** lists each extension with its associated personnel, department, and cost centers.
- The **Directory by Personnel** lists each of the company's personnel and their associated extension, department, and cost center.
- The **Privacy Criteria Listing** shows the current settings for masking stored and reported dialed digits.
- The **Immediate Output Parameters Listing** shows all current settings for information printed as soon as the system processes it.

Printing Administration Information Listings

Follow these steps to print an administration information listing

- 1 From the Main Menu type 4 The following menu appears

```
          Listings Menu
1 Administration Listings Menu
2 Configuration Listings Menu
3 System Parameter Listings Menu
4 Scheduled Reports Listing
5 Error Logs Listing
6 System Messages
Please enter a selection
```

- 2 Type 1 The following menu appears

```
Administration Listings Menu
1 Organization Information
2 Directory Menu
3 Privacy Criteria Listing
4 Immedite Output Listing
Please enter a selection
```

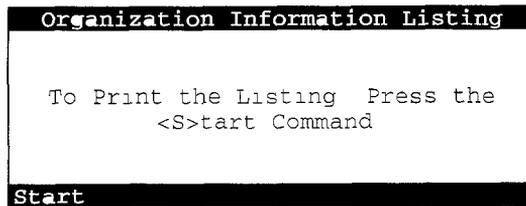
- 3 To access an Administration Listing screen

- Type 1 3 or 4 and go to Step 6
- Type 2 and go to Step 4

- 4 The following menu appears

```
          Directory Menu
1 Organization Directory
2 Directory by Extension
3 Directory by Personnel
Please enter a selection
```

- 5 Type the number corresponding to the directory you want to print
- 6 A screen similar to the following one appears (the information shown in the heading depends on the listing you selected)



- Press <S>art to print the listing You automatically return to the previous menu
- Press <ESC> to return to the previous menu without printing

⇒ NOTE

To cancel Administration Listings after you press Start see Chapter 3 Canceling Queued Reports

Repeat Steps 3 through 6 for each Administration Listing or Directory you want to print

Configuration Information Listings

The items below describe listings of databases created and/or maintained by the configuration functions

Call rating listings include

- The Fixed Rating Information Listing contains information related to your custom rate tables if any
- The **Carrier Services Information Listing** contains information related to all carrier services currently in use on your system
- The **Work Week Definition Listing** shows the days of the week and the current type of day assignments
- The **Holiday Table Listing** shows the dates currently identified as holidays
- The **Call Type Markups Listing** shows each call type currently identified in your system along with their associated markup reporting name surcharge minimum cost and additional taxes
- The **Cost Center Markups Listing** shows each current cost center's markup surcharge and minimum cost

- The **Account Code Markups Listing** shows the current account code markup surcharge and minimum cost
- The **Dialed Digit Processing Listing** shows all current search for entries and their corresponding cost as information
- The **Meter Pulse Call Types Listing** shows all current dialing patterns and corresponding call types for calls rated using meter pulses

CAUTION

Printing some of the rating listings the Fixed Rating Information Listing in particular is a lengthy process. Consider running these listings after normal hours and make sure to check your paper supply before you start to print.

Other configuration listings include

- The **PBX Interface Listing** prints a table listing current PBX information including the telephone system configuration
- The **Private Access Code Listing** prints a table listing the access codes your system currently recognizes
- The **Custom Information Listing** prints a table listing the current organization level names tax information call type reporting names detail reporting options user defined location table user interface settings printer configuration and system format settings

Printing Configuration Information Listings

- 1 From the Main Menu type 4. The following menu appears

```

Listings Menu
1 Administration Listings Menu
2 Configuration Listings Menu
3 System Parameter Listings Menu
4 Scheduled Reports Listing
5 Error Logs Listing
6 System Messages
Please enter a selection
```

2 Type 2 The following menu appears

```
Configuration Listings Menu
1 Call Rating Listings Menu
2 PBx Interface Listing
3 Private Access Code Listing
4 Custom Information Listing
Please enter a selection
```

3 To print Configuration Listings do one of the following

- Type 2 3 or 4 and go to Step 4
- Type 1 The Call Rating Listings Menu appears

```
Call Rating Listings Menu
1 Fixed Rating Information Listing
2 Rate Edit Listings Menu
3 Markup Listings Menu
4 Dialed Digit Processing Listing
5 Meter Pulse Call Types Listing
Please enter a selection
```

— To print Call Rating Listings

- Type 1 4 or 5 and go to Step 4
- Type 2 The Rate Edit Listing Menu appears

```
Rate Edit Listings Menu
1 Carrier Service Information Listing
2 Hour Week Definition Listing
3 Holiday Table Listing
Please enter a selection
```

- Type the number corresponding to the listing you want to print
Go to Step 4

- Type 3 The Markup Listing Menu appears

```
Markup Listings Menu
1 Call Type Markups Listing
2 Cost Center Markups Listing
3 Account Code Markups Listing
Please enter a selection
```

— Type the number corresponding to the listing you want to print Go to Step 4

- 4 A screen similar to the following one appears (the information shown in the heading depends on the listing you selected)

```
Fixed Rating Information Listing

To Print the Listing Press the
<S>art Command

Start
```

- Press <S>art to print the listing You automatically return to the previous menu
- Press <ESC> to return to the previous menu without printing

⇒ **NOTE**

To cancel Configuration Listings after you press Start see Chapter 3 Canceling Queued Reports

Repeat Steps 3 and 4 for each Configuration Listing you want to print

System Parameter Listings

The following system parameter listings are available

- The **System Tables Listing** shows the current settings for call type storage options the accounting period and the ports
- The **Recorded Functions Listing** shows the programmed function keys and their corresponding keystroke sequence
- The **Customer Order Information Listing** contains information describing the content of your application disk (generally used by the manufacturer or customer service personnel)

System parameter listings include two other listings that have unique screens System Information and System Usage Sections later in this chapter describe how to view and print these listings

Printing System Parameter Listings

- 1 From the Main Menu type **4** The following menu appears

```

Listings Menu
1 Administration Listings Menu
2 Configuration Listings Menu
3 System Parameter Listings Menu
4 Scheduled Reports Listing
5 Error Logs Listing
6 System Messages
Please enter a selection

```

- 2 Type **3** The following menu appears

```

System Parameter Listings Menu
1 System Tables Listings
2 System Information
3 System Usage
4 Recorded Functions Listing
5 Customer Order Information Listing
Please enter a selection

```

- 3 Type **1 4** or **5** Use the instructions on the following page for System Information and System Usage menu choices
- 4 A screen similar to the following one appears (the information shown in the heading depends on the listing you selected)

```

System Tables Listing

To Print the Listing Press the
<S>art Command

Start

```

- Press <S>art to print the listing You automatically return to the previous menu
- Press <ESC> to return to the previous menu without printing

⇒ NOTE

To cancel System Parameter Listings after you press Start see Chapter 3 Canceling Queued Reports

Repeat Steps 3 and 4 for each System Parameter Listing you want to print

Viewing or Printing the System Information Listing

The **System Information** listing contains information about your CAS Terminal's model and release number, ports, and the fixed (custom) carrier services installed.

To view or print this listing, follow the Steps below:

- 1 From the Main Menu, type **4**. The following menu appears:

```

Listings Menu
1 Administration Listings Menu
2 Configuration Listings Menu
3 System Parameter Listings Menu
4 Scheduled Reports Listing
5 Error Logs Listing
6 System Messages
Please enter a selection
```

- 2 Type **3**. The following menu appears:

```

System Parameter Listings Menu
1 System Tables Listings
2 System Information
3 System Usage
4 Recorded Functions Listing
5 Customer Order Information Listing
Please make a selection
```

- 3 Type **2**. The following screen appears:

```

System Information ↓
Model 400
Application Release Business
Software Release 1.0
Customer ID Number #####
Startup Date 01/01/95
Print
```

- Press <↓> A screen similar to the following one appears

```

System Information ↑↓
Accounting Period 05/01 95-05/30/95
Last Pate Update 01/01/93
Print

```

- Press <↓> A screen similar to the following one appears

```

System Information ↑↓
System Ports
Port P1 PRINTER
Port S1 SMDR 1200 N 8 1 X
Port S2 REMOTE 1200 N 8 1 X
Print

```

- Press <↓> A screen similar to the following one appears

```

System Information ↑
Carrier Services Installed
ATT516673
Print

```

4 From any screen

- Press <↑> to return to the previous screen
- Press <P>rint to print the listing You automatically return to the System Parameter Listings Menu
- Press <ESC> to return to the System Parameter Listings Menu without printing

⇒ NOTE

To cancel the System Information Listing after you press Start see Chapter 3 Canceling Queued Reports

Viewing or Printing the System Usage Listing

The **System Usage** listing shows the capacity and current usage of key databases (call records call types DDP records etc) To view or generate this listing follow the steps below

- 1 From the Main Menu type 4 The following menu appears

| Listings Menu | |
|--------------------------|--------------------------------|
| 1 | Administration Listings Menu |
| 2 | Configuration Listings Menu |
| 3 | System Parameter Listings Menu |
| 4 | Scheduled Reports Listing |
| 5 | Error Logs Listing |
| 6 | System Messages |
| Please enter a selection | |

- 2 Type 3 The following menu appears

| System Parameter Listings Menu | |
|--------------------------------|------------------------------------|
| 1 | System Tables Listings |
| 2 | System Information |
| 3 | System Usage |
| 4 | Recorded Functions Listing |
| 5 | Customer Order Information Listing |
| Please make a selection | |

- 3 Type 3 A screen similar to the following appears

| System Usage ↓ | | |
|----------------|----------|-------|
| | Capacity | Usage |
| Call Record | 40000 | 16789 |
| Extension | 400 | 100 |
| Cost Center | 100 | 20 |
| Department | 50 | 10 |
| Print | | |

- Press <↓> A screen similar to the following appears

| System Usage ↑↓ | | |
|-----------------|------|----|
| Account Code | 2048 | 30 |
| Facility | 10 | 4 |
| Trunk | 64 | 23 |
| Location Table | 500 | 50 |
| Call Type | 32 | 11 |
| DDP Record | 50 | 12 |
| Print | | |

- Press <↓> A screen similar to the following appear

| System Usage | | ↓↑ |
|-------------------|-----|----|
| Recorded Function | 10 | 0 |
| Report Group | 10 | 1 |
| Carrier Service | 32 | 2 |
| Holiday | 50 | 0 |
| Rate Band | 50 | 0 |
| Rate Band Pattern | 500 | 2 |
| Print | | |

- 2 To print the listing from any screen press <P>rint to return to the previous display press <_> to return to the previous menu press <End>
- 3 From any screen
 - Press <↑> to return to the previous menu
 - Press <P>rint to print the listing You automatically return to the System Parameter Listings Menu
 - Press <ESC> to return to the System Parameter Listings Menu without printing

Scheduled Reports Listing

The Scheduled Reports Listing shows the current report groups and their settings and the names and criteria of reports included in each report group

Printing the Scheduled Reports Listing

- 1 From the Main Menu type 4 The following menu appears

| Listings Menu | |
|---------------------------------|--------------------------------|
| 1 | Administration Listings Menu |
| 2 | Configuration Listings Menu |
| 3 | System Parameter Listings Menu |
| 4 | Scheduled Reports Listing |
| 5 | Error Logs Listing |
| 6 | System Messages |
| Please enter a selection | |

- 2 Type 4 The following screen appears

```

Scheduled Reports Listing

To Print the Listing Press the
<S>tart Command

Start

```

- Press <S>tart to print the listing You automatically return to the previous menu
- Press <ESC> to return to the previous menu without printing

⇒ NOTE

To cancel a Scheduled Reports Listing after you press Start see Chapter 3 Canceling Queued Reports

Error Logs Listing

This function is used to print a listing of all error messages currently in the log A sample printout is shown below

⇒ NOTE

The TASK in a display corresponds to LID in the printout for example STARTUP = 0 FE = 1 COST/RPT = 2 and UI = 3

```

Error Log Report
Date 0 Mar 0
Time 14 5
Page 1
Corban Name
# Date Time LID e erit Err# Message
1 0 03 09 0 INFO_HI 1009 Downtime 00 Hour 0 minutes
2 03 0 09 INFO_INT 1020 Running 1 del

```

Printing the Error Logs

- 1 From the Main Menu type 4 The following menu appears

```

Listings Menu
1 Administration Listings Menu
2 Configuration Listings Menu
3 System Parameter Listings Menu
4 Scheduled Reports Listing
5 Error Logs Listing
6 System Messages
Please enter a selection
```

- 2 Type 5 The following screen appears

```

Error Logs Listing

To Print the Listing Press the
<S>art Command

Start
```

- Press <S>art to print the listing You automatically return to the previous menu
- Press <ESC> to return to the previous menu without printing

⇒ NOTE

To cancel an Error Logs Listing after you press Start see Chapter 3 Canceling Queued Reports

Viewing System Messages

Use this function to view and/or print a group of messages containing information significant to all users These messages might trigger an alert on the status screen and in the case of severe errors an audible alarm To view and/or print the system messages follow the Steps below

- 1 From the Main Menu select Listing Menu then System Messages The following screen appears

| System Messages | | | | |
|-------------------------|-------|------|------|-------|
| Time | Err # | | | |
| 09 00 | 1009 | | | |
| Modem is not responding | | | | |
| First | Last | Next | Prev | Print |

- 2 To view the list of messages use the commands listed below
 - Press <F>irst to start at the beginning
 - Press <L>ast to start at the end
 - Press <N>ext or <P>rev to scroll through the list
 - Press <End> to exit the message log and return to the Listings Menu

 **NOTE**

To clear the ! from your screens and the Check System Messages message from Status Screen you must

- Press <N>ext until you reach the last message
 - Press <End> to return to the Listings Menu
- 3 To print the list and return to the Listings Menu press p<R>int

Contents

| | |
|---|------|
| Managing the Organization Tables | 5 1 |
| ■ Changing Organization Tables | 5 2 |
| Changing Department Budgets | 5 5 |
| Changing Privacy Criteria | 5 6 |
| Changing Immediate Output Parameters | 5 8 |
| Changing Passwords | 5 12 |
| ■ Creating Operator Passwords | 5 13 |
| ■ Creating Other Passwords | 5 14 |
| Closing an Accounting Period | 5 15 |

This chapter describes the functions used for administering the organization table and other databases

Security Alert

You should always limit access to system information that could possibly be used to gain access to WATS lines FX lines etc The following are some recommendations

- Keep telephone logs and printed reports in locations that only authorized personnel can enter
- Design distributed reports so they do not reveal password or trunk access code information

Managing the Organization Tables

The organization table is structured as a four level hierarchy patterned after your company's organization the *company name* or top level is used as a header for all your reports one or more levels (1 2 and 3 with default names *department cost center* and *extension* respectively) are used for cost allocation of out going and in coming calls

Additional charges that are applied at various times within the rating process can be attached to the organization levels Departments have associated yearly budgets used in the Budget Report Cost center markups and surcharges and extension fixed charges are added to a call's cost in some reports

⇒ NOTE

Extensions may have these other associations

- additional charges on calls with account codes (see *Entering and Editing Markup Information* in Chapter 6 for details)
- immediate output of call details (see *Changing Immediate Output Parameters* in this chapter)
- privacy for dialed numbers (see *Changing Privacy Criteria* in this chapter)

The terms *department*, *cost center*, and *extension* may be changed to the names of your choice — for example *division* or *station* — as documented in *Changing Organizational Level Names* in Chapter 7

Changing Organization Tables

Use the following procedure to make additions or changes to the organization structure

- 1 From the Main Menu, select *Administration Menu*, then *Organization*. The following screen appears:

```

Organization
>>Department   Marketing
   Cost Center  101
   Extension    1101
      Personnel Name  Smith J
      Authorization Code  000000000
      Fixed Charge   $0 00
Search Next Prev Add Del Change Key

```

- 2 With the cursor positioned on *department*:
 - To look for a specific department name, choose one of these methods:
 - Press <S>earch, enter a valid name, and press <End>
 - Enter question marks (?) and percent symbols (%) as wildcards (? = any single character, % = any number of characters) and press <J> to show the first matching record
 - Press <N>ext or <P>rev until the desired department appears
 - To add a new department, press <A>dd, enter a department name up to 15 characters long, and press <End>

- To delete the department and associated levels shown press <D>el
Press <Y>es to confirm
- To change the department name press <C>hange enter a
department name and press <End>
- To work with the cost center level press <K>ey The field indicator
(>>) moves to the cost center field as shown in the screen below

```

Organization
Department      Marketing
>>Cost Center  101
Extension       1101
Personnel Name  Smith J
Authorization Code  000000000
Fixed Charge    $0 00
Search Next Prev Add Del Change Move Key
    
```

3 With the cursor positioned on cost center

- To look for a specific cost center choose one of these methods
 - Press <S>earch enter a valid name and press <End>
 - Enter question marks (?) and percent symbols (%) as wildcards (?
= any single character % = any number of characters) and press
<↓> to show the first matching record
 - Press <N>ext or <P>rev until the desired cost center appears
- To add a new cost center press <A>dd enter its identifier (up to 15
characters) and press <End>
- To delete the displayed cost center press <D>el and <Y>es to
confirm All extensions associated with the cost center will also be
deleted
- To move the displayed cost center to another department press
<M>ove Display the department using <S>earch <N>ext or <P>rev
then press <End> Press <Y>es to confirm
- To work with the extension level press <K>ey The cursor moves to
the extension field

```

Organization
Department      Marketing
Cost Center     101
>>Extension     1101
Personnel Name  Smith J
Authorization Code  000000000
Fixed Charge    $0 00
Search Next Prev Add Del Change Move Key
    
```

4 With the cursor positioned on extension

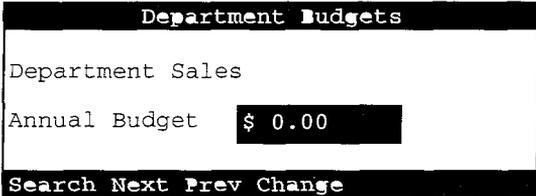
- To look for a specific extension choose one of these methods
 - Press <S>earch enter a valid name and press <End>
 - Enter question marks (?) and percent symbols (%) as wildcards (? = any single character % = any number of characters) and press <↓> to show the first matching record
 - Press <N>ext or <P>rev until the desired extension appears
 - To add new extension information
 - Press <A>dd and enter up to six digits and/or the characters # and *
 - Press <↓> to move between fields and enter the information described in the list below
 - **Personnel Name** The name of an individual associated with this extension (up to 20 characters) Use the format *last name first name* to enter names
 - **Authorization Code** A number (up to ten digits) reported by the communications system used to charge a call to this extension regardless of its origin
- ⇒ NOTE**
Calls that use authorization codes are identified in detail reports with an asterisk (*)
- **Fixed Charge** An amount charged to this extension each accounting period Use up to six digits of precision with a maximum value of 9 999 99 or equivalent in your system s currency format
- When complete press <End>
- To delete the displayed extension press <D>el Press <Y>es to confirm
- To edit the displayed extension press <C>hange edit the entry and press <End>
- To move the displayed extension to another cost center press <M>ove
 - The cursor moves to the Department field level To display the Department associated with the Cost Center where you want to move the extension
 - Press <N>ext or <P>rev to scroll through the list of departments

- Or press <S>earch and enter question marks (?) or a percent symbol (%) as wildcards to identify a department (? = any single character % = any number of characters)
 - Press <End> then press <K>ey to move the cursor to the Cost Center level
 - To display the Cost Center where you want to move the extension
 - Press <N>ext or <P>rev to scroll through the list of cost centers
 - Or press <S>earch and enter question marks (?) or a percent symbol (%) as wildcards to identify a cost center (? = any single character % = any number of characters) Press <End> to begin the search
 - When the desired cost center appears press <End> to complete the move and <Y>es to confirm it
 - To return to the other levels press <K>ey
- 5 To enter a complete organization structure repeat Steps 2 3 and 4 as necessary When complete press <End> to return to the Administration Menu

Changing Department Budgets

To enter or change the budget assigned to each department follow the steps below

- 1 From the Main Menu select Administration Menu then Department Budgets The following screen appears



The screenshot shows a terminal window titled "Department Budgets". The content is as follows:

```
Department Budgets
-----
Department Sales
Annual Budget   $ 0.00
Search Next Prev Change
```

- 2 Use the commands as described below
- To look for a specific department press <S>earch and enter a valid name followed by <End> The screen shows its budget figure if any
 - To scroll through the department names press <N>ext or <P>rev

- To change the budget for the department shown
 - Press <C>hange
 - Enter up to nine digits of precision with a maximum value of 9 999 999 99 or equivalent in your currency format
 - Press <End>
- 3 Repeat Step 2 as necessary to enter budgets for other departments
When complete press <End> to return to the Administration Menu

Changing Privacy Criteria

Your system allows you to set dialed number privacy for

- all outgoing calls
- Calling Line Identification (CLI) calls (if supported by your communications system)
- calls using private access codes
- calls using account codes
- calls made from selected extensions

This means that you can 'mask' the number called or received by replacing the rightmost digits with up to 14 question marks (for example if you mask four digits a call to 555 1000 appears as 555 ?????) Privacy may be set for storage (that is the number stored in the database is masked permanently) or for reports only

NOTE

Numbers marked for reporting privacy are not masked in the Frequently Called Numbers Report

To use the privacy feature follow the steps below

- 1 From the Main Menu select Administration Menu then Privacy Menu
The following menu appears

```
Privacy Menu
1 Privacy By Extension
2 Privacy for All Outgoing Calls
3 Privacy For Account Code Calls
4 Privacy For Private Calls
5 Privacy For CLI Calls
Please enter a selection
```

- 2 Type the number corresponding to the type of privacy you want to activate Depending on your selection a screen — similar to one in Step 3 or 4 — appears
- 3 If you type **2 3 4** or **5** go to Step 4 If you type **1** a screen similar to the follows appears

| Privacy by Extension | |
|-------------------------|-----------------|
| Extension | 1111 |
| Personnel Name | Waey, Carrie D. |
| Mask Digits for Storage | 0 |
| Mask Digits for Reports | 0 |
| Search Next Prev Change | |

- To view an extension and its corresponding personnel name and masking status use one of the methods described below
 - Press <S>earch
 - Enter the extension number
 - Press <End>
 - Press <N>ext or <P>rev until the desired extension displays
 - To change the field entries press <C>hange
 - Enter up to 14 digits to mask for storage Or enter * to mask all digits Press <↵>
 - Enter up to 14 digits to mask for reports Or enter ** to mask all digits
 - Press <End>
 - When complete press <End> again to return to the Privacy Menu
- 4 If you type **2 3 4** or **5** a screen similar to the following appears

| Privacy for All Outgoing Calls | |
|--------------------------------|---|
| Masked Digits for Storage | 0 |
| Masked Digits for Reports | 0 |
| Change | |

- To change the field entries press <C>hange
 - Enter up to 14 digits to mask for storage Or enter * to mask all digits Press <↵>

- Enter up to 14 digits to mask for reports Or enter * to mask all digits
- Press <End>
- When complete press <End> again to return to the Privacy Menu

Changing Immediate Output Parameters

You can flag some types of calls for printing as soon as their records are processed These include

- Calls placed by selected extensions
- Calls that match or exceed a specified cost or duration
- Calls with specified dialed digit patterns (these calls can also invoke an audible alert)
- Other calls with these characteristics
 - Account Code Calls Calls whose dialed digits contain account codes
 - CLI Abandoned Calls Incoming calls (containing the originator's number in their records) that are received but do not reach their final destination (available if your communications system supports CLI)
 - Default Rated Calls Call records with unrecognized dialing patterns associated with facilities that define call type by dialing pattern or any call record with a trunk that is not familiar to the system
 - Print Private Calls Calls using private access codes
 - Print Incoming Calls All incoming calls

A sample report appears in Appendix C

To designate immediate output criteria follow the steps below

- 1 From the Main Menu select Administration Menu then Immediate Output Menu The following menu appears

```

Immediate Output Menu
1 Imm Output for Extensions
2 Immediate Output by Thresholds
3 Immediate Output For Alert Numbers
4 Other Immediate Output

Please enter a selection

```

- 2 To define Immediate Output for Extensions press **1** The following screen appears

```

Imm. Output for Extensions

Extension      100
Personnel Name

Current Setting No

Search Next Prev Change

```

- To display a specific extension and information use one of the methods described below
 - Press <S>earch
 - Enter the extension number
 - Press <End> to begin the search
 - Or press <N>ext or <P>rev to scroll through a list of extensions corresponding personnel name and the current settings status
 - To indicate immediate output for the extension you're viewing press <C>hange
 - Press <Sel Help> and press the <↑> or <↓> key to highlight Yes
 - Press <↓> to place your selection in the field
 - Press <End>
 - When complete press <End> to return to the Immediate Output Menu
- 3 To define Immediate Output by Thresholds press **2** The following screen appears

```

Immediate Output by Thresholds

Minimum Cost  $655.00

Minimum Duration  18:00:00
                  hh mm ss

Change

```

- Press <C>hange

— Enter a cost in your currency format Press <↵>

— Enter a duration in *hh mm ss* (for example 00 15 00) then press <End>

⇒ NOTE

System maximums are used as the threshold defaults (shown in the sample screen above)

- When complete press <End> to return to the Immediate Output Menu

- 4 To define Immediate Output for Alert Numbers press **3** The following screen appears

```

Immediate Output for Alert Numbers

Dialed Digit Pattern  5551000

Audible Alert  No

Search Next Prev Change Add Del

```

- To view a current alert number dialing pattern use one of the methods described below

— Press <S>earch

– Type the digits of an alert number dialing pattern or use wildcards (? = any single character % = any number of characters) to define a number

– Press <End> to begin the search

— Press <N>ext and <P>rev to scroll through the list of alert numbers

- To add a new alert dialing pattern press <A>dd and use one of the methods described below

— Enter a dialed digit pattern with up to 14 digits

— Define a number with question marks (?) and percent symbols (%) as wildcards (? = any single character % = any number of characters)

- Press <↓>
- To attach an audible alert to the dialing pattern
 - Press<Sel Help> and press the <↑> or <↓> key to highlight Yes
 - Press <↓> to place your selection in the field
 - Press <End> Repeat this process to define up to 50 alert number entries
- Press <D>el to remove an entry shown on the screen and confirm with <Y>es
- To edit an entry press <C>hange and enter new data then press <End>
- When complete press <End> to return to the Immediate Output Menu

5 To define Other Immediate Output press 4 The following screen appears

| Other Immediate Output | |
|---------------------------|----|
| Print Account Code Calls | No |
| Print Private Calls | No |
| Print Incoming Calls | No |
| Print CLI Abandoned Calls | No |
| Print Default Rated Calls | No |
| Change | |

- To set immediate output for these types of calls
 - calls with account codes in their dialing patterns
 - calls with PRIVT call types
 - incoming calls
 - incoming CLI calls whose caller hangs up before the it is completed
 - calls rated by the default facility because the trunk in the call record was not in CAS Terminal s databases
- Press <C>hange
- Press<Sel Help> and press the <↑> or <↓> key to highlight Yes
 - Press <↓> to place your selection in the field

- Press <J> to move to the next field
- Press <End>
- Press <End> again to return to the Immediate Output Menu

Changing Passwords

These functions allow you to set passwords to control access to the Main Menu selections Reports Menu Listings Menu Administration Menu Configuration Menu Customization Menu and Utilities Menu



Security Alert

Passwords should be as long as allowed by the system Passwords should be hard to guess and therefore should *not* contain

- all the same numbers (for example 1111 666666)
- sequential characters (for example 123456)
- numbers that can be associated with you or your business such as your name birthday business name telephone number or social security number
- words and commonly used names

Passwords should use as wide a variety of characters as possible Passwords should be changed regularly at least on a quarterly basis Do not recycle old passwords

You may set individual passwords one for each menu as well as a global password (to access all functions) and a remote password

NOTE

The system contains the password `gcme` that serves as the default global and remote password **Change this password immediately**

If the system screen timeout causes the status screen to display you must reenter the password

You can change a password if you know the current menu or global password To do so use the steps in the following sections

Creating Operator Passwords

- 1 From the Main Menu select Administration Menu then Passwords Menu
The following menu appears

```
      Passwords Menu
1  Operator Passwords Menu
2  Remote Access Password
3  Global Password
Please enter a selection
```

- 2 To access the Operator Passwords screens type 1 The following menu appears

```
      Operator Passwords Menu
1  Administration Password
2  Configuration Password
3  Customization Password
4  Listing Password
5  Reporting Password
6  Utilities Password
Please enter a selection
```

- 3 Type the number of your selection (the information shown in the heading depends on the password you selected)

Security Alert

It is recommended that a different password be used for each function A password that accesses both the Reports Menu and the Listings Menu might be an exception

- If your selection does not have a password a screen appears similar to the following

```
      Reporting Password
Enter New Password [REDACTED]
Enter new Password
```

- Type a new password You may use up to eight characters
- Press <End> to display the Repeat New Password prompt
Retype the new password

- Press <End> to save the changes and return to the Password Menu or <ESC> to cancel your changes
- If your selection has a password the screen appears similar to the following

```
Reporting Password
Enter Old Password ██████████
Enter New Password ██████████
Enter Password for this function
```

- Type the old password You may use up to eight characters
- Press <↵> Type a new password You may use up to eight characters
- Press <End> to display the Repeat New Password prompt Re type the new password
- Press <End> to save the changes and return to the Password Menu or <ESC> to cancel your changes

Creating Other Passwords

Follow the steps below to create a Remote Access or Global Password

Security Alert

The default remote/global password should be changed immediately after your CAS Terminal is installed Always make the Remote Access Password and Global Password different

- 1 From the Main Menu select Administration Menu then Passwords Menu The following menu appears

```
Passwords Menu
1 Operator Passwords Menu
2 Remote Access Password
3 Global Password
Please enter a selection
```

2 Type **2** or **3** A screen similar to one of those below appears The information shown in the heading depends on the password you selected

- If your selection does not have a password a screen appears similar to the following

A terminal window titled "Global Password" with a black header bar. The main area contains the text "Enter New Password" followed by a black rectangular input field. At the bottom, there is a black bar with the text "Enter new Password" in white.

- If your selection has a password the screen appears similar to the following

A terminal window titled "Global Password" with a black header bar. The main area contains two lines of text: "Enter Old Password" followed by a black rectangular input field, and "Enter New Password" followed by another black rectangular input field. At the bottom, there is a black bar with the text "Enter Password for this function" in white.

3 To create a password

- If you do not have an old password go to Step 4 If you have an old password

— Type the old password Press <↵> Continue with instructions in Step 4

4 Type a new password You may use up to eight characters

- Press <End> to display the Repeat New Password prompt Re type the new password
- Press <End> to save the changes and return to the Password Menu or <ESC> to cancel your changes

Closing an Accounting Period

At the end of an accounting period new calls are queued until all data belonging to the current period is properly reported and backed up (if desired) When ready use the Close Accounting Period menu selection to perform the tasks involved in closing an accounting period

- delete the call detail database
- reset the summary information
- update the trend information

Five days after the end of the accounting period (or if the queue becomes full) the system automatically performs the closing tasks

⇒ NOTE

This function cannot be used before the current accounting period has ended. The call database can be deleted manually using the procedure in Chapter 8 "Deleting Call Records." The summary information can be reset using the procedure in Chapter 8 "Rebuilding Summary Buckets."

To close an accounting period, follow the steps below:

1. When all reports scheduled for the end of an accounting period (plus any other reports you may want) have printed, certify them. If the printouts are acceptable, proceed to Step 2; otherwise, run new reports as required.
2. Perform backups as required by your company.
3. Display the Main Menu and select Administration Menu, then Close Accounting Period. The following screen appears:

```
Close Accounting Period
This Process Will Close The Current
Accounting Period and Delete All
Call Records
Do You Want to Continue (Y/N)?
Yes No
```

- Press <Y>es to close the accounting period, or <N>o to cancel and return to the Administration menu.
 - The screen prompts: The Accounting Period Has Been Closed and the New One Has Begun. Press Any Key to Continue. You return to the Administration menu.
4. The system prints a log of the steps it takes as it ends the current period. Save the printouts showing the period's dates.

Contents

| | |
|---|------|
| Managing the Rating Functions | 6 1 |
| ■ Rating Methods Overview | 6 4 |
| ■ Setting Up the Call Rating Functions | 6 6 |
| ■ Entering and Editing Markup Information | 6 25 |
| Entering the Dialed Digit Processing (DDP) Table | 6 29 |
| Managing Call Types | 6 33 |
| ■ Entering and Editing Call Type Storage Options | 6 33 |
| ■ Changing Call Type Reporting Names | 6-35 |
| ■ Entering Meter Pulse Call Type Information | 6 36 |
| Managing the PBX Interface Setup | 6 38 |
| ■ Selecting a PBX Interface | 6 38 |
| ■ Adding PBX Interface Selections | 6 39 |
| ■ Deleting PBX Interface Selections | 6 41 |
| ■ Building and Editing the Telephone System Configuration | 6 42 |
| ■ Entering Private Access Codes | 6 47 |
| Managing System Settings | 6 48 |
| ■ Setting the System's Date and Time | 6 48 |
| ■ Configuring the Ports | 6-49 |
| ■ Choosing and Configuring a System Printer | 6 51 |
| ■ Choosing Interface Settings | 6 53 |
| ■ Setting Up SMDR Port Monitoring | 6 54 |
| Setting Up the Accounting Period | 6 55 |

This chapter describes the functions used to setup the call rating and other processes that determine the cost of calls

⇒ NOTE

Your system has the capability to rate calls with meter pulses a rating method generally used outside the U S The section of this chapter that explains meter pulse rating is marked and installations within the U S can disregard it

Managing the Rating Functions

Rating functions contain information to compute the call cost stored in a call record and to make cost adjustments before it is reported Figure 6 1 shows how these functions are used in the call costing process

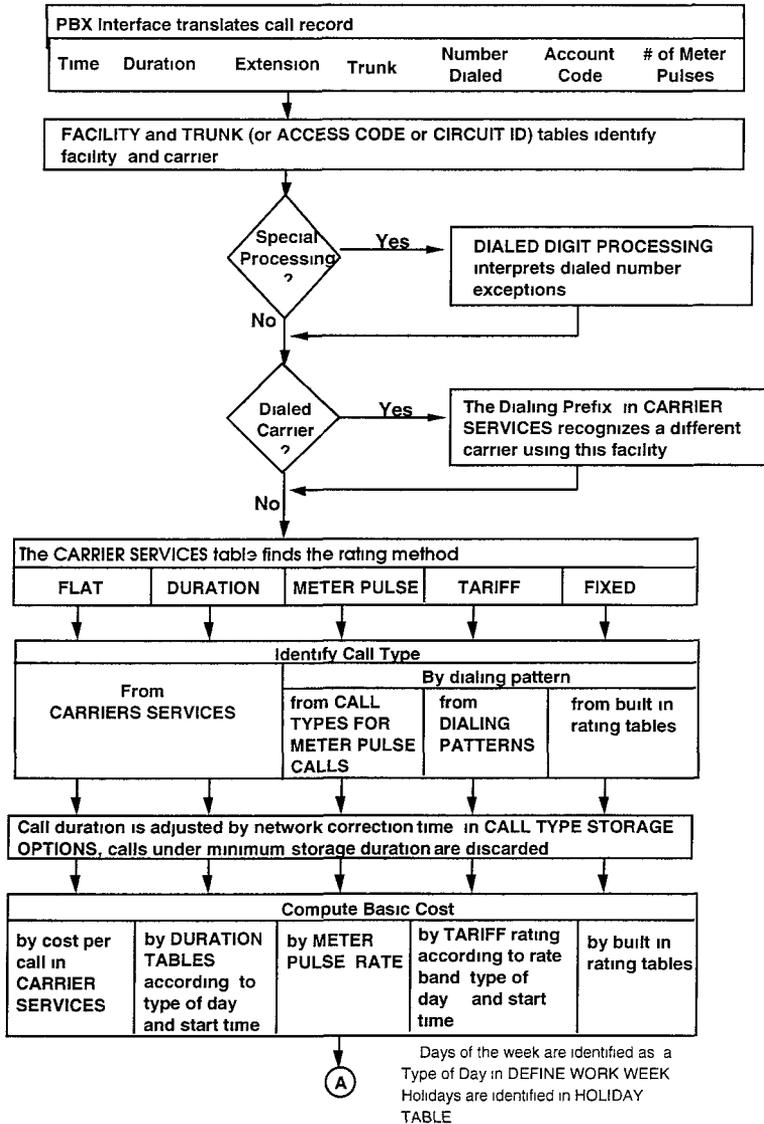


Figure 6-1 Call Cost Computation by the Rating Functions

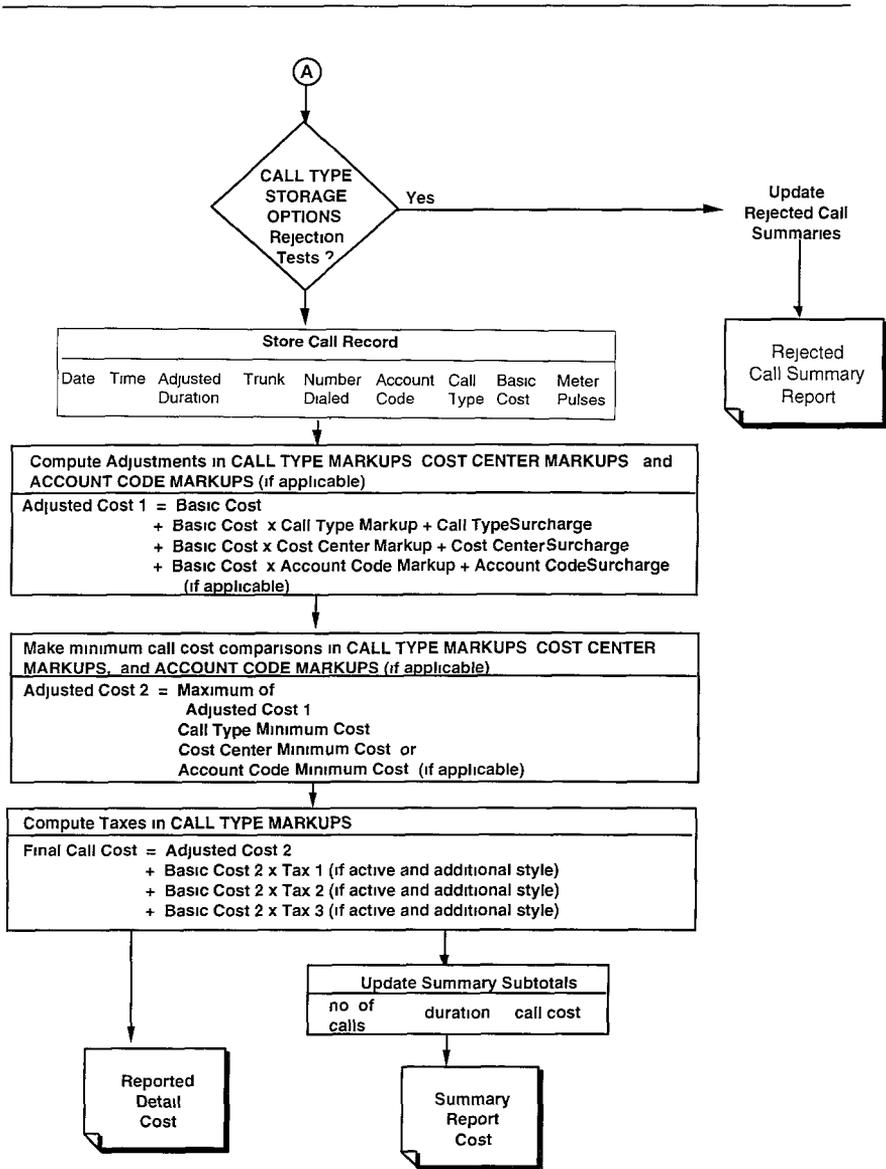


Figure 6-1 Call Cost Computation by the Rating Functions (concluded)

Rating Methods Overview

To compute a call's basic cost, the carrier services in your CAS Terminal use one of the rating methods described in the following pages:

Fixed (Custom) Rating

Separately purchased built-in rate tables, programmed for the location of each installation, provide custom rating. Custom rate tables cannot be edited. To understand how they work, see *Tariff Rating* later in this section.

Meter Pulse Rating

Meter Pulse Rating is generally used outside the U.S. Some telephone companies provide a series of electronic pulses over their phone lines. With a compatible communications system, these *meter pulses* are reported in a call record and used to determine the call's cost.

Meter pulse rating is based on a cost per pulse applied to a specified number of pulses. A sample call lasting 15 pulses and rated with the values shown below would be computed in the following manner:

| | FIRST | NEXT | REM |
|------------|---------|---------|---------|
| PULSES | 5 | 5 | |
| COST/PULSE | 0 12 DM | 0 10 DM | 0 07 DM |

$$\text{First} = 0 12 \times 5 = 0 60$$

$$\text{Next} = 0 10 \times 5 = 0 50$$

$$\text{Rem} = 0 07 \times 5 = 0 35$$

$$\text{Total Call Cost} = 1 45 \text{ DM}$$

Tariff Rating

User-entered tariff tables form the basis of this rating method. Call rating occurs in a manner similar to that used by the telephone company to bill you for their services.

Tariff rating uses the items described in the following list to cost calls:

- 1 **Rate Bands** Areas defined by concentric circles emanating from your site are referred to as rate bands. Each rate band is associated with a rating scheme.
- 2 **Type of Day** Each rate band can have a set of rating values assigned to a type of day (Types of days = Weekday, Weekend 1, Weekend 2, and Holiday).
- 3 **Start Time** A type of day breaks down into a maximum of 24 time slots defined by a start time. Each start time entered defines the end of the period before it. To apply rating values to an entire 24-hour period, do not enter any start times. (Default = 00:00—23:59)
- 4 **Rating Values** Every time slot defined by the start times has its own rating values used in the following rating formula.

As shown in the equation below, for the first Duration of a call, a Cost is charged for every Interval of the duration.

$$\frac{\text{Duration}}{\text{Interval}} \times \text{Cost} = \text{Initial Charge}$$

- Fractions of an interval round up to the next interval.
- The use the rating values in the same formula.

The cost of a sample 10-minute call, rated with the start time values shown below, computes in the following manner:

| | First | Next | Rem |
|-----------------|-------|------|------|
| Duration | 1 | 4 | |
| Cost | 0.50 | 0.10 | 0.05 |
| Interval | 5 | 1 | 1 |

$$\text{First} = 1/5 \times 5 = 1.00$$

$$\text{Next} = 4/1 \times 10 = 0.40$$

$$\text{Rem} = 5/1 \times 05 = 0.25$$

$$\text{Total} = \$ 1.65$$

Duration Rating

The duration rating method bases call costs on the day and time a call is placed. Duration rating processes compute call costs using the same formula described in the previous section, Tariff Rating.

Flat Rating

Facilities associated with a carrier service using a flat rating method apply a fixed rate to all calls placed on their trunks.

Setting Up the Call Rating Functions

Set up or change basic call rating using the functions described in the following pages.

Entering and Editing Carrier Services Information

Carrier Services identifies the telephone services used in your system and sets up a rating method for each. Refer to Figure 6-1 to help you understand how this function fits into the rating process.

To enter or change carrier services information, follow the steps below.

- 1 From the Main Menu, select Configuration Menu. Select Call Rating Menu, Rate Edit Menu, then Carrier Services. The following screen appears.

| Carrier Services | |
|----------------------|-----------|
| Carrier Service Name | ATT516673 |
| Dialing Prefix | 10288 |
| Rating Method | Fixed |
| Digits in Auth Code | 0 |
| Direction | Outgoing |

Search Next Prev Add Del Change Rating

- 2 To view current carrier services in the order they were added to your system, press <N>ext or <P>revious to scroll through the carrier services.

- 3 To view information about a specific carrier service
 - Press <S>earch and do the following
 - Press <Sel Help> to display a help menu listing your carrier services
 - Use the ↑ and ↓ keys to highlight your choice
 - Press <↵> to place your choice in the Carrier Service Name field
 - Press <End> to complete the search. The selected carrier service's information appears on the screen

⇒ NOTE

Your system contains two default carrier services configured as shown in the following table

| Carrier Name | Dialing Prefix | Rating Method | Digits in Auth Code | Direction | Call Type |
|--------------|----------------|---------------|---------------------|-----------|-----------|
| default In | none | flat | 0 | In | INCOM |
| default out | none | fixed | 0 | Out | |

- 4 To add a carrier service press <A>dd
 - When a precedes a field
 - Press <Sel Help> to see the available choices
 - Use the ↑ and ↓ keys to highlight your choice
 - Press <↵> to place your selection in the field
 - Or type entries. Press <↵> to move from field to field. The fields are described below
 - `Carrier Service Name`. A carrier service used by your company. Use up to 15 characters
 - `Dialing Prefix`. The number dialed for local access to this carrier's network. Use up to 11 digits
 - `Rating Method`. The type of rating this carrier performs. The choices are listed below

- Duration
- Flat
- Fixed (custom rate table)
- Tariff
- Meter Pulse (generally used outside the U S)

NOTE

See Rating Methods Overview earlier in this chapter for descriptions of the rating methods

- `Digits in Auth Code` The number of digits in this carrier's authorization code if any. Enter a number from the range 0 to 99
- `Direction` The direction of the calls using this carrier: either `<O>`utgoing or `<I>`ncoming
- If the Duration or Flat rating method is selected, the field described below appears
 - `Call Type` The call type associated with this carrier service
 - To select a current call type: press `<Sel Help>`, use the `↑` and `↓` keys to highlight your choice, and press `<↓>` to place your selection in the call type field
 - To enter a new call type: type the name, using up to five characters

NOTE

Call types created using this function get added to the call type table with zero values for markups and options. See Managing Call Type Storage Options later in this chapter to change the default options. See Entering and Editing Call Type Markups also in this chapter to change default markup information

- When complete, press `<End>`
- 5 To remove a displayed carrier service, press `<D>`el
- A message states that facilities using deleted carrier services re-associate with a carrier of the default facility
 - Press `<No>` to cancel the deletion
 - Press `<Y>`es to confirm the deletion

- 6 To make changes to a current carrier service
 - Press <C>hange
 - Enter or select new information as described in Step 4
 - Press <End>
- 7 To enter or change rating method information
 - Press <R>ating
 - Follow one of the procedures found in the following sections for the rating method of the carrier shown on the screen
- 8 When complete press <End> to return to the Rate Edit Menu

Entering Tariff Rating Information

For details on how the tariff rating method works see [Tariff Rating](#) in the [Rating Methods Overview](#) earlier in this chapter

- 1 From the Main Menu select Configuration Menu Select Call Rating Menu Rate Edit Menu then Carrier Services The following screen appears

```

Carrier Services
Carrier Service Name  ATT
Dialing Prefix       10288
Rating Method        Fixed
Digits in Auth Code  0
Direction            Outgoing
Search Next Prev Add Del Change Rating
    
```

- 2 Press <N>ext or <P>revious until a carrier service using the tariff rating method appears then press <R>ating The following screen appears

```

Tariff Rates
~TT
>>Rate Band         LOCALR
Type of Day         Weekda

Start Time          00 00
End Time            23 59
Search Next Prev Add Del Key
    
```

- The name of this carrier service displays at the top of the data entry area
- The cursor moves to the Rate Band field

⇒ NOTE

You cannot use this function to create rate bands. Add rate bands using the procedure in "Entering and Editing Rate Band Information" in this chapter.

- 3 To review the information related to the displayed rate band
 - Press <K>ey to position the cursor on Type of Day. Use <N>ext or <P>rev to display Weekday, Weekend 1, Weekend 2, or Holiday.
 - Press <K>ey to position the cursor on Start Time. Use <N>ext or <P>rev to view all the start and end times associated with the displayed type of day.
 - Press <R>ates to view rating information for the displayed type of day and start time.
 - Press <K>ey to reposition the cursor on Rate Band and use <N>ext and <P>rev to display another band.
 - Repeat this step to review the data for each rate band in your system.
- 4 To add new tariff rating information
 - Position the cursor on Rate Band and press <A>dd.
 - Press <Sel Help> to see the rate bands available.
 - Using the ↑ and ↓ keys, highlight your choice.
 - Press <↓> to place your selection in the Rate Band field.
 - When complete, press <End>. Default values for the first Type of Day appear in the fields.
- 5 Press <K>ey to move the cursor Type of Day. Use <N>ext or <P>rev to display the day type of interest.

| Tariff Rates | |
|---------------|----------------|
| ATT | |
| Rate Band | LOCALRB |
| >>Type of Day | Weekda_ |
| Start Time | 00 00 |
| End Time | 23 59 |
| Next Prev Key | |

- 6 Press <K>ey to move the cursor to Start Time.

```

Tariff Rates
      -TT
Rate Band   LOCALRB
Time of Day Weekday

-> Start Time 00 00
    End Time  23 59
Next Prev Add Del Change Key Rates
    
```

- Use the process below to enter all start times associated with this type of day in chronological order

- Press <A>dd
- Enter a time using an *hh mm* format
- Press <End>

⇒ NOTE

Each start time defines the end of the previous period. For example, if you enter 08 00, 13 00, 19 00, and 22 00, you defined the periods 00 00 08 00, 08 00 13 00, 13 00 19 00, 19 00 22 00, and 22 00 23 59.

7 To add rating values

- Press <N>ext or <P>rev until the screen shows the earliest Start Time
- Press <R>ates. The following screen appears

```

Tariff Rates
      -TT
Period  Duration  Cost  Interval
First   0:00  $0.0000  0:00
Next    0:00  $0.0000  0:00
Remaining $0.0000  0:00
Change
    
```

8 Press <C>hange

- enter values for the fields described below
- Use <↓> to move from field to field
- When complete, press <End>
- **Duration** The First and Next portions of the entire duration of a call record. Use the format *mm ss*.
- **Cost** An amount to charge for each interval of the First, Next, and Remaining durations. This field allows precision up to 1/10,000 of the currency.

— **Interval** An even portion of the specified duration Use the format *mm ss*

- 9 Press <End> to return the cursor to Start Time
 - Use <N>ext or <P>rev to display another Start Time
 - Press <R>ates and enter rating values as described in Step 8
 - Repeat this step for each start time period you define
- 10 The process is now complete for all start times for one type of day There are four types of day associated with each rate band To configure costing for the others
 - Press <K>ey twice
 - Use <N>ext and <P>rev to show another Type of Day on the screen
 - Repeat Steps 5 through 9

The process is now complete for one rate band of this tariff carrier service

- 11 To add another rate band repeat Steps 4 to 10
- 12 To remove a rate band from a carrier service
 - Position the cursor on Rate Band
 - Use <N>ext or <P>rev to display the rate band of interest
 - Press <D>el

 **NOTE**
The rate band is available to attach to another carrier service

- 13 To remove a start time
 - Position the cursor on Start Time
 - Use <N>ext or <P>rev to display the start time of interest
 - Press <D>el

 **NOTE**
A new time period (start time until end time) forms starting with the previous start time and using its costing information

- 14 To change a start time
 - Press <C>hange
 - Enter the new data

- Press <End>
- 15 To access the start time costing information for any reason
 - Position the cursor on Start Time
 - Press <R>ate
 - 16 From any level of detail screen press <End> to return to the previous screen or the Rate Edit Menu

Entering Duration Rating Information

For details on how the duration rating method works see Duration Rating in the Rating Methods Overview earlier in this chapter

- 1 From the Main Menu select Configuration Menu Select Call Rating Menu Rate Edit Menu and Carrier Services The following screen appears

```
Carrier Services
Carrier Service Name  Duration 1
Dialing Prefix       10288
Rating Method        Duration
Digits in Auth Code  0
Direction            Outgoing
Call Type            OTHER
Search Next Prev Add Del Change Rating
```

- 2 Press <N>ext or <P>revious until a carrier service using the duration rating method appears then press <R>ating The following screen appears

```
Duration Rates
Duration 1
>> Type of Day      Weekday
Start Time          00 00
End Time            23 59
Next Prev Key
```

- The name of this carrier service displays at the top of the data entry area
 - The cursor appears next to Type of Day
- 3 To review the information related to a displayed type of day

- Use <N>ext or <P>rev to display Weekend Weekend 1 Weekend 2 or Holiday
 - Press <K>ey to position the cursor on Start Time Use <N>ext or <P>rev to view all the start and end times associated with the displayed type of day
 - Press <R>ates to view rating information for a displayed start/end time and type of day
 - Press <K>ey to return to Type of Day Use <N>ext or <P>rev to display another day
 - Repeat this step to review information for each type of day for this carrier service
- 4 To add new information position the cursor on Type of Day and use <N>ext or <P>rev to display the day of interest
- 5 Press <K>ey to move the cursor to Start Time

```

Duration Rates
Duration 1

Type of Day Weekday

>>      Start Time  00 00
          End Time   23 59
Next Prev Add Del Change Key Rates
    
```

- Press <A>dd and enter all start times associated with this type of day in chronological order using the procedures that follows
 - Press <A>dd
 - Enter a time using an *hh mm* format
 - Press <End>

⇒ NOTE

Each start time defines the end of the previous period For example if you enter 08 00 13 00 19 00 and 22 00 you are defining the periods 00 00—08 00 08 00—13 00 13 00—19 00 19 00—22 00 and 22 00—23 59

- 6 To add rating values
- Display the earliest start time
 - Press <R>ates
 - A screen similar to the one below appears

| Duration Rates | | | |
|----------------|----------|----------|----------|
| Duration 1 | | | |
| Period | Duration | Cost | Interval |
| First | 0:00 | \$0.0000 | 0:00 |
| Next | 0:00 | \$0.0000 | 0:00 |
| Remaining | | \$0.0000 | 0:00 |
| Change | | | |

7 Press <C>hange

- Enter values for the fields described below
- Use <↓> to move from field to field
- When complete press <End>

— **Duration** The First and Next portion of the entire duration of a call record Use the format *mm ss*

— **Cost** An amount to charge for each interval of the First Next and Remaining durations This field allows precision up to 1/10 000 of the currency

— **Interval** An even portion of the specified duration Use the format *mm ss*

8 Press <End> to return the cursor to Start Time

- Use <N>ext or <P>rev to display another Start Time
- Press <R>ates and enter rating values as described in Step 7
- Repeat this step for each start time period you define
- The process is now complete for all start times for one type of day

9 There are four types of day associated with each carrier service using duration rating To configure costing for the others

- Press <K>ey
- Use <N>ext and <P>rev to show another Type of Day on the screen
- Repeat Steps 4 through 8

10 To remove a displayed start time

- Position the cursor on Start Time
- Press <D>el

⇒ NOTE

A new time period (start time until end time) forms starting with the previous start time and using its costing information

- 11 To change a start time
 - Press <C>hange
 - Enter the new data
 - Press <End>
- 12 To access the rating information for any reason
 - Position the cursor on Start Time
 - Press <R>ates
- 13 Press <End> to return to the previous screen or the Rate Edit Menu

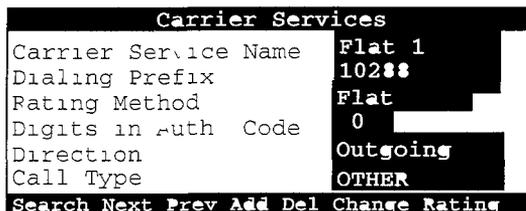
Entering Flat Rating Information

For details about how the flat rating method works see Flat Rating in the Rating Methods Overview earlier in this chapter

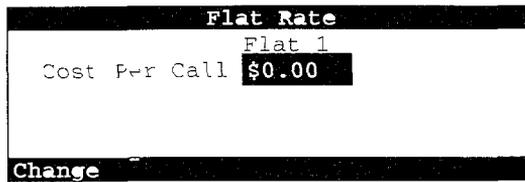
⇒ NOTE

Your system contains data to allow rating via the default carriers that includes flat rating information

- 1 From the Main Menu select Configuration Menu Select Call Rating Menu Rate Edit Menu and Carrier Services The following screen appears



- 2 Press <N>ext or <P>revious until a carrier service using the flat rating method appears then press <R>ating The following screen appears

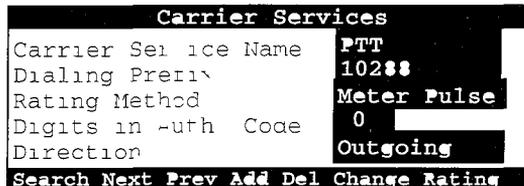


- 3 The name of this carrier service is displayed at the top of the data entry area To enter an amount in the single data entry field
 - Press <C>hange
 - Enter a value from 0 to 655 00 or equivalent in your system s currency format
 - When complete press <End>
- 4 Repeat Steps 2 and 3 to make changes
- 5 Press <End> to return to the Rate Edit Menu

Entering Meter Pulse Rating Information

Meter Pulse Rating is generally used outside the United States For details about how this rating method works see Meter Pulse Rating in the Rating Methods Overview earlier in this chapter

- 1 From the Main Menu select Configuration Menu Select Call Rating Menu Rate Edit Menu then Carrier Services The following screen appears



- 2 Press <N>ext or <P>revious until a carrier service using the meter pulse rating method appears then press <R>ating The following screen appears

| Meter Pulse Rates | | | |
|-------------------|---|--------|----------------|
| | | PTT | Cost Per Pulse |
| First | 0 | Pulses | £0.0000 |
| Next | 0 | Pulses | £0.0000 |
| Remaining | | Pulses | £0.0000 |

Change Key

3 The name of this carrier service displays at the top of the data entry area
To enter information

- Press <C>hange
- Enter values in the fields described below Press <↓> to move from field to field

— First *n* Pulses A number *n* up to three digits indicating a group of pulses at the beginning of a call

— Next *n* Pulses A number *n* up to three digits indicating a second group of pulses

— Cost Per Pulse The amount to charge for each pulse in the first second and remaining groups of meter pulses

⇒ NOTE

The maximum number of pulses allowed per call is 32 767
Details of calls that reach this number are marked in reports with an "!" in reports

- 4 Press <End> when complete
- 5 Repeat Steps 2 through 4 when making changes
- 6 Press <End> to return to the Rate Edit Menu

Entering Fixed (Custom) Rating Information

For details on how the fixed (custom) rating method works see Fixed (Custom) Rating in Rating Methods Overview earlier in this chapter

- 1 From the Main Menu select Configuration Menu Select Call Rating Menu Rate Edit Menu then Carrier Services The following screen appears

```

Carrier Services
Carrier Service Name ATT516673
Dialing Prefix 10288
Rating Method Fixed
Digits in Auth Code 0
Direction Outgoing
Search Next Prev Add Del Change Rating
    
```

- 2 Press <N>ext or <P>revious until a carrier service using the fixed rating method appears then press <R>ating The following screen appears

```

Fixed Service
ATT516673
Use the Existing Fixed
Carrier Service ATT516673
Percent Markup 0.00
Change
    
```

- 3 The name of this carrier service displays at the top of the data entry area To enter information

- Press <C>hange
- Select data for the field described below
 - Use the Existing Fixed Carrier Service The name associated with a customized rating table purchased by your company

By doing the following

- Press <Sel Help> to display a help menu listing your choices
- Use the <↑> or <↓> keys to highlight your choice
- Press <↓> The selection appears in the Use the Existing Fixed Carrier Service field
- Press <↓>
- Enter a value in the screen described below
 - Percent Markup An additional/optional charge added to calls using this carrier service computed as a percentage of the call s cost Specify the value in the range 100 00% to 999 99%

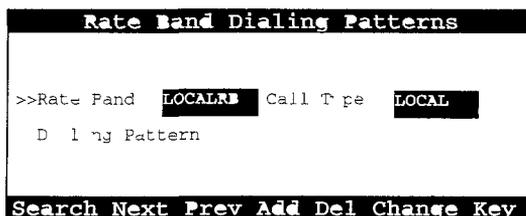
- 4 Press <End> when complete
- 5 Repeat Steps 2 through 4 when making changes
- 6 Press <End> to return to the Rate Edit Menu

Entering and Editing Rate Band Information

Use Rate Band Dialing Patterns to name rate bands (for tariff rating) and associate them with a call type and a group of dialing patterns. Refer to Figure 6-1 for an overview of call costing and the role of this function within the process.

To view and/or edit current rate band information and/or add new ones, follow the steps below:

1. From the Main Menu, select Configuration Menu, Select Call Rating Menu, Rate Edit Menu, then Rate Band Dialing Patterns. The following screen appears:



2. Use one of the methods below to view current rate bands:
 - Press <S>earch
 - Press<Sel Help> to see the rate bands available
 - Using the ↑ and ↓ keys, highlight your choice
 - Press <↵> to place your selection in the Rate Band field
 - Press <End>. The first dialing pattern associated with the rate band appears in the Dialing Pattern field
 - Press <N>ext or <P>rev to scroll through the current rate bands
3. To view the other dialing patterns associated with the rate band shown on the screen:
 - Press <K>ey
 - Press <N>ext or <P>rev until the desired rate band appears
4. To add a rate band and dialing patterns, position the cursor on Rate Band and press <A>dd:
 - Type a name in the field described below

— **Rate Band** The name for this group of dialing patterns (1-7 characters)

- Press <↵>
- To associate a call type with this rate band use one of the methods below
 - Type the name of an existing Call Type
 - To select a Call Type Press <Sel Help>
 - Use the ↑ and ↓ keys to highlight your choice
 - Press <↵> to place your selection in the field



NOTE

Use the procedure in **Entering and Editing Call Type Storage Options** later in this chapter to add new call types

- 5 Press <End> when complete
- 6 Press <K>ey and <A>dd
 - Enter a dialing pattern to associate with this rate band Use up to 14 digits and/or the wildcard characters ? or % (? = any single character % = any number of characters)
 - When complete press <End>
 - Repeat this step until all dialing patterns have been entered
- 7 Press <K>ey and repeat Steps 4 and 5 to add other rate bands
- 8 To delete a displayed rate band
 - Press <D>el
 - Press <Y>es to confirm The screen shows the next rate band



NOTE

You cannot remove a rate band currently associated with a carrier You must first disassociate a rate band from a carrier using the <D>el command as documented in **Entering Tariff Information** earlier in this chapter Then remove the rate band from the system as detailed in Step 8

- 9 To delete a dialing pattern press <K>ey to position the cursor in the Dialing Pattern field

- Use one of the methods below to select a dialing pattern
 - Press <S>earch
 - Use wildcard symbols ? and % (? = any single character % = any number of characters) to identify a dialing pattern
 - Press <End> to begin the search. If a matching dialing pattern is found, it appears on the screen.
 - Press <N>ext or <P>rev to scroll through the dialing patterns
 - Press <D>el
 - Press <Y>es to confirm
- 10 To edit displayed rate band information, press <C>hange, enter, or select new information as described in Step 4, and press <End>.
- 11 To edit a dialing pattern:
- Press <K>ey to position the cursor in the Dialing Pattern field.
 - Use <S>earch, <N>ext, or <P>rev as described in Step 9 to show the dialing pattern you wish to edit on the screen.
 - Press <C>hange and enter, or select new information as described in Step 4.
 - Press <End>.
- 12 Press <End> to return to the Rate Edit Menu.

Entering ISDN Information

ISDN Information assigns ISDN codes to carrier services. When recognized in a call record, these codes immediately identify the carrier. To associate ISDN codes to carrier services, follow the steps below.

- 1 From the Main Menu, select Configuration Menu, Select Call Rating Menu, Rate Edit Menu, then ISDN Information. The following screen appears:

```
ISDN Information
Carrier Service   ATT516673
IXC Code         ████████ NSF Code   ████████
Home Code        ██████████
Search Next Prev Change
```

- 2 To choose a Carrier Service press <S>earch and do one of the following
 - Type the name of an existing Carrier Service Press <End>
 - Press <Sel Help> to select a Carrier Service
 - Use the ↑ and ↓ keys to highlight your choice
 - Press <↓> to place your selection in the field
 - Press <End> to complete the search
 - Use wildcard symbols ? and % (? = any single character % = any number of characters) to identify a dialing pattern
 - Press <End> to begin the search If a matching dialing pattern is found it appears on the screen

- 3 To change information of the carrier on the screen press <C>hange and enter the information described below Press <↓> to move from field to field
 - **IXC Code** A number (up to four digits) identifying a specific ISDN carrier
 - **NSF Code** A three digit number identifying the type of service the ISDN carrier provides
 - **Home Code** The code that identifies the home location this carrier uses in local call rating

 **NOTE**
Generally in the United States you would enter the local area code and exchange (NPA/NXX) as the home code

- 4 When complete press <End>

- 5 Enter information for another carrier as described in Steps 2 and 3 or press <End> to return to the Rate Edit Menu

Entering and Editing the Holiday Table

Use Holiday Table to view enter and/or revise a group of dates that the fixed tariff and duration rating processes recognize as holidays Refer to Figure 6 1 for an overview of call costing and the role of this function within the process

To view the current table or define new dates for holiday rating follow the steps below

- 1 From the Main Menu select Configuration Menu Select Call Rating Menu Rate Edit Menu and Holiday Table The following screen appears

Holiday Table

Date **01/01/96**
mm dd yy

Search Next Prev Add Del Change

- 2 To review the holiday date list
 - For a specific date
 - Press <S>earch
 - Type a date in the date format you have chosen
 - Press <End> The date appears on the screen if it is part of the holiday date list
 - To scroll through the list press <N>ext or <P>rev
- 3 To add a holiday press <A>dd
 - Enter a date using the separators and format chosen for your CAS Terminal
 - When complete press <End>
- 4 Repeat Step 3 to add another date
- 5 To remove the holiday shown on your screen
 - Press <D>el
 - Confirm with <Y>es
- 6 To change the holiday shown on your screen
 - Press <C>hange
 - Enter a new date
 - Press <End>
- 7 Press <End> to return to the Rate Edit Menu

Entering and Editing Markup Information

Use markups to add charges to the cost of calls — for example to set a surcharge per call connection or to add a charge to calls billed to clients. Identify three types of markups: call type, cost center, and account code.

Entering and Editing Call Type Markups

This function identifies charges and ‘additional’ taxes for groups of calls classified as the same type. Refer to Figure 6-1 for an overview of call costing and the role of this function within this process.

⇒ NOTE

Your system has the call type defaults: Other, LOCAL, NATNL, INTNL, INCOM, and PRIVT.

To view and/or edit markups of existing call types, follow the steps below.

- 1 From the Main Menu, select Configuration Menu. Select Call Rating Menu, Markup Menu, then Call Type Markups. The following screen appears.

| Call Type Markups | | ↓ |
|-------------------------|--------|----------------------|
| Call Type | NATNL | Reporting Name NATNL |
| Markup | 0.00 | ✓ |
| Surcharge per Call | \$0.00 | |
| Minimum Cost | \$0.00 | |
| Search Next Prev Change | | |

- 2 To review the call type list and display their markup information, use one of the methods described below:
 - Press <S>earch
 - Press <Sel Help> to display the list of call types
 - Use the ↑ and ↓ keys to highlight a selection
 - Press <↓> to place the selection in the Call Type field
 - Press <End> to complete the search and show information in the other fields. If available, press <↓> to view the displayed call type's tax information. Press <↑> to return to the previous screen.

- Press <N>ext or <P>rev to scroll through the list

3 To display a specific call type

- Press <S>earch

- Use wildcard symbols ? and % (? = any single character % = any number of characters) to identify a call type
- Press <End> to begin the search. If a matching call type is found its information is displayed. If available press <↓> to view the displayed call type's tax information. Press <↑> to return to the previous screen.

 **NOTE**

You can identify taxes for each call type if you select the additional tax style. If you select inclusive, one set of taxes applies to all calls. See Taxing Calls in Chapter 7.

4 To edit call type information, display the call type of interest. Press <C>hange and enter the information described below. Press <↓> to move from field to field.

 **NOTE**

You cannot access the Call Type and Reporting Name fields. Add or delete call types using the procedure in Entering and Editing Call Type Storage Options later in this chapter. Change the default call type reporting name using the procedure in Changing Call Type Reporting Names, also in this chapter.

- **Markup** A percentage of the cost of a call added to every call of this type. Enter a value in the range 100.00% to 999.99%.
- **Surcharge per Call** A fixed fee added to every call of this type. Enter the amount in your system's currency format (maximum 655.00 or equivalent).
- **Minimum Cost** A value retained as a call's basic cost if it is greater than the computed cost. Enter the amount in your system's currency format (maximum 655.00 or equivalent).

5 If the system's current tax style is additional, continue with Step 6. Otherwise, do the following to complete the procedure:

- Press <End>
- Press <End> again to return to the Markup Menu.

6 Press <↓>. The following screen appears:

| Call Type Markups | | | |
|-------------------------|-------|----------------|-------|
| Call Type | NATNL | Reporting Name | NATNL |
| Tax-1 | | 0.00 | ✓ |
| Tax-2 | | 0.00 | ✓ |
| Tax-3 | | 0.00 | ✓ |
| Search Next Prev Change | | | |

- 7 To change the tax rates
 - Press <C>hange and enter a percentages in the range 100 00 to 999 99%
 - Press <.,> to move from field to field
 - When complete press <End>

⇒ NOTE

The tax names reflect those entered using the Taxes function (see Taxing Calls in Chapter 7)

- 8 Press <End> to return to the Markup Menu

Entering and Editing Cost Center Markups

Use Cost Center Markups to add percentage markups and fixed charges to the cost of calls based on the cost center associated with a call record's extension. Refer to Figure 6.1 for an overview of call costing and the role of this function within this process.

To view and/or edit the current cost centers' markups, follow the steps below:

- 1 From the Main Menu, select Configuration Menu. Select Call Rating Menu, Markup Menu, and Cost Center Markups. The following screen appears:

| Cost Center Markups | | |
|-------------------------|---------|---|
| Cost Center | Default | |
| Markup | 0.00 | ✓ |
| Surcharge per Call | \$0.00 | |
| Minimum Cost | \$0.00 | |
| Search Next Prev Change | | |

- 2 To review the cost centers and display their markup information, use one of the methods described below:

- Press <S> search
 - Type a cost center name or use wildcard symbols ? and % (? = any single character % = any number of characters) to identify a cost center
 - Press <End> If the cost center exists it appears on the screen along with the markup information
 - Press <N>ext or <P>rev to scroll through the list
- 3 To edit cost center information display the cost center of interest Press <C>hange and enter the information described below Press <↓> to move from field to field
- **Markup** A percentage of a call's basic rate included in the reported cost of a call All calls using extensions attached to the displayed cost center use this markup The range of valid values is 100 00% to 999 99%
 - **Surcharge per Call** A fixed fee added to the cost of calls using an extension attached to the displayed cost center (maximum \$655 00 or equivalent in your currency format)
 - **Minimum Cost** A value retained as the basic cost of calls using extensions attached to the displayed cost center if it is greater than the computed cost plus all other markups and surcharges (maximum \$655 00 or equivalent in your currency format)
- 4 Press <End> when complete
- 5 Repeat Steps 3 and 4 to change the information of another cost center
- 6 Press <End> to return to the Markup Menu

Entering and Editing Account Code Markups

You can define a percentage markup surcharge and minimum cost for calls associated with account codes To enter these values follow the steps below

- 1 From the Main Menu select Configuration Menu Select Call Rating Menu Markup Menu then Account Code Markups The following screen appears

| Account Code Markups | |
|----------------------|--------|
| Markup | 0.00 ✓ |
| Surcharge per Call | \$0.00 |
| Minimum Cost | \$0.00 |

Change

- 2 Press <C>hange and enter the values described below Press <↓> to move from field to field
 - **Markup** An additional charge based on a percentage of the computed cost of the call The range of valid values is 100 00% to 999 99%
 - **Surcharge per Call** A fixed fee added to the call s cost (maximum 655 00 or equivalent in your system s currency format)
 - **Minimum Cost** A value retained as the call s basic cost if it is greater than the computed cost Use your system s currency format (maximum 655 00 or equivalent)
- 3 When complete press <End>
- 4 To change the data repeat Steps 2 and 3
- 5 Press <End> to return to the Markup Menu

Entering the Dialed Digit Processing (DDP) Table

The Dialed Digit Processing (DDP) function is used to create a table that identifies up to 50 dialing patterns and/or facility combinations to search for in call records and when found do one of the following

- calculate the call record s cost in a special way
- discard the call record

Set up DDP to

- Identify dialing patterns of directory assisted calls on trunks associated with tariffed rating and cost them using a flat rate
- Identify toll free calls on tariffed trunks and assign a cost of \$0 00

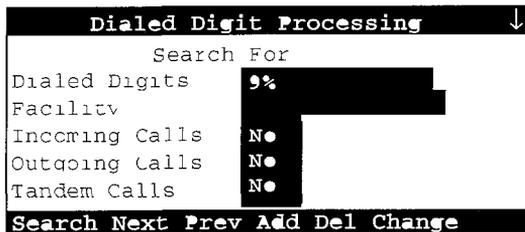
- Remove access codes if your communications system includes them in call record dialed digits — for example the access code 9 appears in a call record at the beginning of the numbers dialed. A DDP entry like the one below strips the access code and costs the call properly

| Search For | Cost As |
|------------------|-------------------------|
| Dialed Digits 9% | Dialed Digits % |
| Facility (blank) | Change Digits Yes |
| Incoming No | Carrier Service (blank) |
| Outgoing Yes | Discard Call No |
| Tandem No | |

- Identify dialing patterns of abandoned calls — those with too few digits for costing — and discard their records

To create or change the dialed digit processing table follow the steps below

- From the Main Menu select Configuration Menu then Dialed Digit Processing. The screen that identifies the search parameters appears



- To review the DDP search parameters use one of the methods described below
 - To view a specific facility press <S>earch
 - Type the name of a facility or use wildcard symbols ? and % (? = any single character % = any number of characters) to identify a facility
 - Press <End> to begin the search. If a matching entry is found its information is displayed
 - Press <N>ext or <P>rev to scroll through the list of Search For DDP entries
- Press <↓> to view the Cost As information for the dialed digit/facility displayed. Press <↑> to return to this screen
- To add a DDP entry press <A>dd

- When a precedes a field
 - Press `<Sel Help>` to display the list of entry choices
 - Use the `↑` and `↓` keys to highlight a selection
 - Press `<↓>` to place the selection in the field
 - Press `<↓>` to advance to the next field
- Or type entries Press `<↓>` to move from field to field The fields are described below
 - **Dialed Digits** A pattern of dialed numbers that when found in a call record signal special processing Use up to 14 numerals and/or the wildcard characters `?` or `%` (`?` = any single character `%` = any number of characters) to identify a pattern
 - **Facility** The name of a current facility that when identified by the trunk in a call record or in conjunction with specified dialed digits signals special processing Use up to 15 characters or use wildcards to define groups A blank field means all
 - **Incoming Calls** Are incoming calls the subject of this search? Select `<Y>es` or `<N>o`
 - **Outgoing Calls** Are outgoing calls the subject of this search? Select `<Y>es` or `<N>o`
 - **Tandem Calls** Are tandem calls the subject of this search? Select `<Y>es` or `<N>o`

⇒ NOTE

The DDP process searches for call transmissions in only one direction When Yes is selected in one of the fields (incoming outgoing or tandem) described above No automatically appears in the other two

- 5 When complete press `<↓>` The following screen appears

```

Dialed Digit Processing ↑
      Cost As
Dialed Digits      %
Change Digits     Yes
Carrier Service   No
Discard Call
Search Next Prev Add Del Change
  
```

- 6 To complete the costing portion of a DDP entry
- Type a pattern for the field described below

- **Dialed Digits** A substitute dialing pattern to use for costing this call. Use up to 14 numerals and/or the wildcard characters ? or % (? = any single character % = any number of characters)

⇒ NOTE

You must include dialed digits, a carrier service, or both in the DDP costing information.

- **Press <↓>** Use the method described below

- Press <Sel Help> to display the list of entry choices
- Use the ↑ and ↓ keys to highlight a selection
- Press <↓> to place the selection in the field
- Press <↓> to advance to the next field

To select information for the fields described below

- **Change Digits** If the dialed digits entered above should permanently replace those in the call record, select <Y>es; otherwise <N>o
- **Carrier Service** A different carrier service than that indicated by the call record, to use for costing this call

⇒ NOTE

The direction of calls for the carrier service you select must match the direction of calls indicated in the Search For screen. Searching for tandem calls requires a carrier configured for outgoing calls. Selection help for this field displays only those carriers configured with a matching direction.

- **Discard Call** To discard the call, select <Y>es; otherwise <N>o

- 7 When complete, press <End>
- 8 Press <↑> to return to the Search For screen and repeat Steps 4 through 7 to add another DDP entry
- 9 To remove a displayed DDP entry, press <D>el and confirm with <Y>es
- 10 To edit a displayed DDP entry, press <C>hange, enter, or select new information as described in Steps 4 through 7, and press <End>
- 11 When complete, press <End> to return to the menu system

Managing Call Types

Your system contains the default call types listed below:

| CALL TYPE | DESCRIPTION |
|-----------|---|
| Other | available for general use |
| LOCAL | calls within your site's local calling area |
| NATNL | calls inside your country |
| INTNL | calls outside your country |
| INCOM | calls routed to your site |
| PRIVT | calls using private access codes |

Use the functions described in this section to add or delete call types or change their properties.

Entering and Editing Call Type Storage Options

Call records must exceed call type thresholds before they are stored in the database. The CAS Terminal applies call type cost and duration minimums to each call record and discards those that do not meet the thresholds. Before a call record is discarded, its information appends to the rejected call summaries.

The system allows up to 32 call types. To add new call types and define their storage options, delete current call types, or change their information, follow the steps below:

1. From the Main Menu, select Configuration Menu. Select Call Types Menu, then Call Type Storage Options. The following screen appears:

```

Call Type Storage Options
Call Type Local Reporting Name Local
Minimum Storage Cost $0.00
Minimum Storage Duration: 00:00:00
Network Correction Time : 00:15
                               mn  ss
Search Next Prev Change Add Del
    
```

2. To view storage options of existing call types, use one of the methods described below:

- Press <S>earch.
 - Use wildcard symbols ? and % (? = any single character; % = any number of characters), to identify a call type.
 - Press <End> to begin the search. If a matching call type is found, its information is displayed.
- Press <S>earch:
 - Press <Sel Help> to display the list of entry choices
 - Use the ↑ and ↓ keys to highlight a selection.
 - Press <↓> to place the selection in the field.
 - Press <End> to complete the search and display the call type's storage option information.
- Press <N>ext or <P>rev to scroll through the list of call types.

3. To add new call types, press <A>dd and enter the information described below.

- **Call Type** The name associated with this type of call. Use up to five characters.
- **Reporting Name** The name to use when reporting this call type. Use up to five characters.

⇒ NOTE:

Use the call type reporting name to report the call type in a more descriptive manner, for example, NATNL call types might report as UK.

- **Minimum Storage Cost** An amount compared to the computed cost of calls of this type (maximum = \$655.00 or equivalent in your currency format). CAS Terminal will not store call records with costs less than this value.

- **Minimum Storage Duration** A period of time in an *hh mm ss* format (maximum = 18 00 00) compared to the duration of call s of this type CAS Terminal does not store call records with durations lower than this value
- **Network Correction Time** A period of time in a *mm ss* format subtracted from the call duration reported by the communications system The duration of a call in a report reflects the network correction

⇒ NOTE

Subtracting the correction time from a call s duration removes time spent dialing connecting etc before rating a call CAS Terminal does not store calls with corrected duration less than the minimum

- 4 When complete press <End>
- 5 To add another call type repeat Steps 3 and 4
- 6 To remove a displayed call type press <D>el and <Y>es

⇒ NOTE

Only user defined call types can be deleted In reports help menus etc the symbols '*****' substitute for deleted call types associated with active call records

- 7 To edit call type information press <C>hange enter new information and press <End>
- 8 When complete press <End> to return to the Call Types Menu

Changing Call Type Reporting Names

Use the procedure below to change the call type names that appear in reports

- 1 From the Main Menu select Configuration Menu Select Call Types Menu then Call Type Reporting Names The following screen appears

| Call Type Reporting Names | |
|---------------------------|-------|
| Call type | LOCAL |
| Reporting Name | LOCAL |
| Search Next Prev Change | |

- 2 To display a call type use one of the methods described below
 - Press <S>earch
 - Use wildcard symbols ? and % (? = any single character % = any number of characters) to identify a call type
 - Press <End> to begin the search If a matching call type is found its information is displayed
 - Press <S>earch
 - Press <Sel Help> to display the list of call types
 - Use the ↑ and ↓ keys to highlight a call type
 - Press <↓> to place the call type in the field
 - Press <End> to complete the search and display the selected call type s reporting name
 - Press <N>ext or <P>rev to scroll through the list of call types
- 3 To change the displayed call type s reporting name press <C>hange
 - Enter a new name using up to five characters
 - When complete press <End>
- 4 Press <End> to return to the Call Types Menu

Entering Meter Pulse Call Type Information

Meter Pulse call type information is part of a rating method generally used outside the United States Assigning call types to calls using meter pulse rating is based on dialed digits Use this function to identify meter pulse call types and the dialing patterns associated with them

- 1 From the Main Menu select Configuration Menu Select Call Types Menu then Call Types for Meter Pulse Calls The following screen appears

```
Call Types for Meter Pulse Calls
Dialing Pattern %
Call Type Other
Search Next Prev Add Del Change
```

- 2 Use <N>ext or <P>rev to view the current dialing patterns and their associated call types
- 3 To enter a dialing pattern press <A>dd and use one of the methods below
 - Type a dialing pattern using up to 14 numerals
 - Use wildcard symbols (? = any single character % = any number of characters) to define a group of dialing patterns
 - Press <↵>
- 4 Associate the dialing pattern with a call type using one of the methods below
 - Type the name of a current call type
 - Type the name of a new call type using up to five characters

⇒ NOTE

New call types entered in this screen are added to the call type table with all values set to the default (zero) Follow the procedures in Entering and Editing Call Type Markups and Entering and Editing Call Type Storage Options both in this chapter to change the defaults

- Press <Sel Help> to display the list of call types
 - Use the ↑ and ↓ keys to highlight a call type
 - Press <↵> to place the call type in the field
- 5 Press <End> when complete
 - 6 Repeat Steps 3 through 5 for each new dialing pattern Each call type can have up to 50 dialing patterns associated with it
 - 7 To remove a displayed dialing pattern press <D>el and <Y>es

⇒ NOTE

If the call type associated with a deleted dialing pattern is not used elsewhere in the system it deletes from the call type table. If it does have other associations they remain intact.

- 8 To edit a displayed dialing pattern or associate it with another call type
 - Press <C>hange
 - Enter and/or select the new information
 - Press <End>
- 9 Press <End> to return to the Call Types Menu

Managing the PBX Interface Setup

Use the PBX Interface Menu selections to

- Select a PBX interface that interprets communications system output and converts it to call record format
- Add a PBX interface to the processor's internal memory
- Setup your telephone system's hierarchy
- Classify a group of access codes as private

Selecting a PBX Interface

To view, change, or delete the selected PBX interface, or add a new one

- 1 From the Main Menu, select Configuration Menu. Select PBX Interface Menu, then PBX Selection. The following screen appears:

```

PBX Selection
PBX      (101) Merlin Legend
Release  3 0
Description
ISDN Base II-Direct/Polled D8
Change Add Del
```

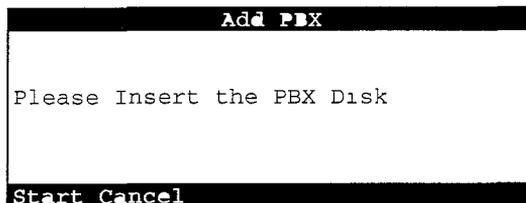
To select another interface

- 2 Press <C>hange
 - Press <Sel Help> to display the list of your CAS Terminal s default interfaces
 - Use the ↑ and ↓ keys to highlight an interface
 - Press <↵> to place the interface in the field
- 3 Press <End> A confirmation request appears on the screen
 - Press <Y>es to confirm the change The display shows the corresponding PBX revision and a brief description
 - Press <N>o to cancel the change
- 4 Press <End> to return to the PBX Interface Menu

Adding PBX Interface Selections

To add other PBX interfaces into the CAS Terminal s internal memory and make them available for selection follow the steps below

- 1 From the Main Menu select Configuration Menu Select PBX Interface Menu then PBX Selection
- 2 Press <A>dd The following screen appears



- 3 Press <C>ancel to return to the PBX Selection screen To continue insert a PBX disk and press <S>tart
- 4 When the disk is successfully verified press <End> to return to the PBX Selection screen or to continue
 - Press <C>hange
 - Press <Sel Help> to display the PBX selections available on this disk
 - Use the ↑ and ↓ keys to highlight an interface
 - Press <↵> to place the interface in the field

- 5 The other fields update with information about the selected interface similar to the sample below

```

Add PBX
PBX      ████████████████████
Release  1 0
Description
04A LSU 3B2 ^DRU D r Pcll D 3-5 dig a ct
Size    15970      Free    53546
Change
    
```

- This screen has the two informational fields (they cannot be edited) described below
 - **Size** The number of internal storage bytes the selected PBX interfaces requires
 - **Free** The number of bytes of internal storage CAS Terminal has available for PBX interfaces
- 6 Press <End> then <Yes> to accept your choice and confirm it Or press <N>o to cancel the PBX addition
 - 7 If there is not enough storage space available in the CAS Terminal s internal memory for your selection screen messages ask you to delete an interface before making this addition
 - Press <End> to return to the Add PBX screen
 - Press <End> again to return to the PBX Selection screen Delete an interface as described in the next section then start the addition process over
 - 8 After the interface is added the Free field updates to show the remaining storage space available Repeat Steps 2 and 6 to add another interface
 - 9 After a PBX interface is added to the CAS Terminal follow the steps in the previous section to select it for use
 - 10 Press <End> once to return to the PBX Selection screen and again to return to the PBX Interface Menu

Deleting PBX Interface Selections

To delete a PBX interface follow the steps below

- 1 From the Main Menu select Configuration Menu Select PBX Interface Menu then PBX Selection The following screen appears

```

PBX Selection
PBX      (101) Merlin Legend
Release  3 0
Description
ISDN Base II-Direct/Polled D8
Change Add Del
    
```

- 2 Press <D>el The following screen appears

```

Delete PBX
PBX      (150) AT&T G3
Release  1 0
Description
04A LSU sB2 CDRU-Dir Poll D 3-> dig acct
Size 15970 Free 53546
Change
    
```

- 3 Press <End> to return to the previous screen To continue
 - Press <C>hange to access the PBX field
 - Press <Sel Help> to display the PBX interface selections in your CAS Terminal's internal memory
 - Use the ↑ and ↓ keys to highlight an interface
 - Press <↓> to place the interface you select in the PBX field
- 4 Press <End> to begin the deletion A confirmation request appears on the screen
 - Press <N>o to cancel the PBX deletion and return to the PBX Selection screen
 - Press <Y>es to confirm it
 - The Free field updates to include the bytes of the deleted interface with the remaining storage space available
- 5 Press <End> twice to return to the PBX Interface Menu

Building and Editing the Telephone System Configuration

The telephone system configuration consists of a two tiered hierarchy that identifies a call's facility, carrier, and corresponding rating information, using the trunk reported in a call record.

⇒ NOTE

Regardless of your communications system's term for the physical line a call uses (trunk access code or circuit ID, for example), CAS Terminal reports it as a trunk.

Your system includes a facility named `Default`, configured as shown below to allow default rating. The default trunk associated with the `Default` facility is `???????`.

CAS Terminal uses default rating to add costs to call records

- That do not contain trunks
- That contain trunks not included in the telephone system configuration
 - When such a call is costed, the trunk is added to the `Default` facility
- When CAS Terminal's trunk database reaches its capacity
 - At this time, CAS Terminal substitutes the default trunk, costs the call using default rating, and shows `???????` as the trunk when the call record is reported.

| Facility Name | GOS | Carrier In | Carrier Out | No. of Lines |
|---------------|-----|------------|-------------|--------------|
| Default | 0 0 | Default In | Default Out | 1 |

Use the procedures in the following sections to build or change the structure of the telephone system configuration.

Entering and Editing Facilities

To view, enter, or edit facility information, follow the steps below.

- 1 From the Main Menu, select Configuration Menu. Select PBX Interface Menu, then Facilities. The following screen appears.

| Facilities | |
|---------------------------------|-------------|
| Facility Name | Default |
| Target GOS | 0.0 |
| Carrier Service In | Default In |
| Carrier Service Out | Default Out |
| Number of Lines | 1 |
| Search Next Prev Add Del Change | |



NOTE

All CAS Terminal s contain the facility Default configured as shown in the screen above. The default trunk ??????? is associated with this facility.

- 2 To view current facilities press <N>ext or <P>revious to scroll through a list of facilities
- 3 To view information about a specific facility use one of the methods described below
 - Press <S>earch
 - Use wildcard symbols ? and % (? = any single character % = any number of characters) to identify a facility
 - Press <End> to begin the search. If a matching facility is found its information is displayed
 - Press <S>earch
 - Press <Sel Help> to display the list of facilities
 - Use the ↑ and ↓ keys to highlight a selection
 - Press <↵> to place the selection in the field
 - Press <End> to complete the search and display the facility s information
- 4 To add a facility press <A>dd
 - In the Facility Name field type a name associated with a group of trunks. Use up to 15 characters
 - For the remaining fields
 - When a precedes a field
 - Press <Sel Help> to see the available choices
 - Use the ↑ and ↓ keys to highlight your choice
 - Press <↵> to place your selection in the field

— Or type entries Press <J> to move from field to field

■ The fields are described below

— Target GOS The probability that a call cannot be completed because all trunks associated with this facility are in use Enter a value from the range 0 0% to 20 0%

— Carrier Service In The name of a current carrier service that rates incoming calls

— Carrier Service Out The name of a current carrier service that rates outgoing calls

 **NOTE**

You cannot add new carrier services using the Facilities screen

— Number of Lines The number of trunk lines attached to this facility

 **NOTE**

The operation of this field depends on the information your communications system reports If the communications system does not report trunk numbers enter the facility's total number of trunks in this field so that accurate GOS reports are possible If trunk numbers are reported you cannot edit this field — it reflects the number of entries you make for this facility in the Trunks function described in the next section

5 When complete press <End> Repeat Step 4 and this step to add other facilities

6 To remove a displayed facility

■ Press <D>el

■ Press <Y>es to confirm

 **NOTE**

When a facility is deleted all associated trunks are removed from the telephone system configuration

7 To edit a displayed facility

■ Press <C>hange

■ Enter or select new information as described in Step 4

■ Press <End> when entries are complete

- 8 Press <End> to return to the PBX Interface Menu

Continue with the procedure in the next section to complete the telephone system structure

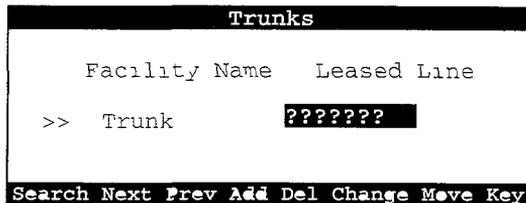
Entering and Editing Trunks

After you add a facility identify its trunks To do so proceed as follows

- 1 From the Main Menu select Configuration Menu Select PBX Interface Menu then Trunks The following screen appears

| Trunks | |
|----------------------|---------|
| >> Facility Name | Default |
| Trunk | ??????? |
| Search Next Prev Key | |

- 2 To view the current facilities press <N>ext or <P>revious to scroll through a list of facilities
- 3 To view a specific facility use one of the methods described below
 - Press <S>earch
 - Use wildcard symbols ? and % (? = any single character % = any number of characters) to identify a facility
 - Press <End> to begin the search If a matching facility is found the first trunk associated with it appears on the screen
 - Press <S>earch
 - Press <Sel Help> to display the list of facilities
 - Use the ↑ and ↓ keys to highlight a selection
 - Press <↓> to place the selection in the field
 - Press <End> to complete the search and display the first associated trunk
- 4 Press <K>ey to access the screen's trunk level



- 5 To view the trunks associated with the displayed facility use one of the methods described below
 - Use <N>ext or <P>rev to scroll through a list of trunks
 - Press <S>earch
 - Use wildcard symbols ? and % (? = any single character % = any number of characters) to identify a facility
 - Press <End> to begin the search If a matching trunk is found it appears on the screen
-  **NOTE**
 The default trunk ???????? is associated with the facility Default and cannot be deleted Call records containing trunks your CAS Terminal does not recognize or call records without a trunk are rated by the carriers associated with Default
- 6 To add a trunk press <A>dd
 - Enter the trunk line number using up to eight digits
 - Press <End>
 - Add all other trunks by repeating this step
 - 7 To remove a displayed trunk from a facility press <D>el and <Y>es to confirm
 - 8 To edit displayed trunk information
 - Press <C>hange
 - Enter new information
 - Press <End>
 - 9 To assign a displayed trunk to another facility
 - Press <M>ove The cursor is repositioned by the Facility field
 - Use <S>earch <N>ext or <P>rev to display the target facility

- Press <End>
- Press <Y>es to confirm

⇒ NOTE

When trunks are added to the facility Default because they are not included in telephone system configuration use the Move command to assign them to another facility

10 When complete press <End> to return to the PBX Interface Menu

Entering Private Access Codes

Access codes are special numbers dialed to get an outside phone line to the public telephone network In a call record an access code is added to the dialed digits or placed in a special field

⇒ NOTE

If your communications system includes access codes in the dialed digit field create a corresponding DDP entry so that the call is properly costed For example if the access code 9 appears at the beginning of a call record s dialed digits make an entry like the one below to strip it out

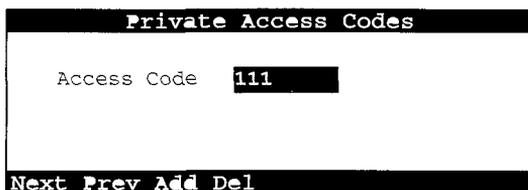
| Search For | Cost As |
|------------------|-------------------------|
| Dialed Digits 9% | Dialed Digits % |
| Facility (blank) | Change Digits Yes |
| Incoming No | Carrier Service (blank) |
| Outgoing Yes | Discard Call No |
| Tandem No | |

The following procedure identifies up to 10 access codes The system searches for these codes and when found assigns the PRIVT call type to the record

⇒ NOTE

Immediate output of private calls and private access code privacy options (described in Chapter 5 Changing Immediate Output Parameters and Changing Privacy Criteria) apply to the codes in this list

- 1 From the Main Menu select Configuration Menu Select PBX Interface Menu then Private Access Codes The following screen appears



- 2 To view the current access codes press <N>ext or <P>rev to scroll through a list
- 3 To add codes press <A>dd
 - Enter up to six digits and/or #
 - Press <End>
- 4 To remove a displayed code
 - Press <D>el
 - Confirm with <Y>es
- 5 Press <End> to return to the PBX Interface Menu

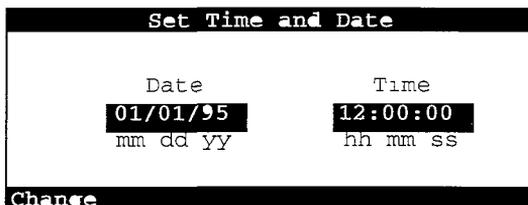
Managing System Settings

The functions described in this section set up fundamental system parameters and components

Setting the System's Date and Time

Use the following procedure to set the system's calendar and clock to the current date and time

- 1 From the Main Menu select Configuration Menu Select System Settings Menu then Set Time and Date The following screen appears



- 2 To change entries press <C>hange and enter new information in the fields described below
 - **Date** The current day entered in the date format chosen for your system
 - **Time** The current time entered as *hh mm ss* Use the 12 or 24-hour format chosen for your system
- 3 When complete press <End> Press <End> again to return to the System Settings Menu

Configuring the Ports

The table below contains the default settings for the port parameters described below

- **Baud Rate** — The number of bits transmitted per second
- **Parity** — A method used by some devices to check that data was transmitted correctly
- **Data Bits** — The number of bits of a single transmitted character
- **Stop Bits** — The number of bits that trail after the transmission of a single character
- **Flow Control** — A standard used to control loss of transmitted data when a receiving device reaches its capacity

Default Port Settings

| Port Number | Port Function | Baud Rate | Parity | Data Bits | Stop Bits | Flow Control |
|-------------|---------------|---------------------------|--------|-----------|-----------|--------------|
| S1 | SMDR | 1200 | None | 8 | 1 | XON/XOFF |
| S2 | Remote | 1200 | None | 8 | 1 | XON/XOFF |
| P1 | Printer | (this is a parallel port) | | | | |

Associate a function with each port and/or change serial port transmission parameters by following the steps below

- 1 From the Main Menu select Configuration Menu Select System Settings Menu then Port Configuration The following screen appears

```

Port Configuration
Port Number  S1
Port Function  SMDR
Baud Rate    1200  Parity  NONE
Data Bits   8     Stop Bits  1
Flow Control XON/XOFF
Next Prev Change
    
```

Press <N>ext or <P>rev to display the port numbers and their current configurations

2 To change field entries press <C>hange to place the cursor in the first field

- Press <Sel Help> to display a help menu listing your choices
- Use the <↑> or <↓> keys to make a selection
- Press <↓> to place your selection in the field
- Press <↓> to move from field to field
- The fields are described below

— Port Function Identifies the current interface of this port
Choose from

- SMDR Receives SMDR data
- REMOTE Allows remote access to the system
- PRINTER Sends data to a printer (Any port can be associated with this interface)
- IDLE Indicates the port is currently inactive

⇒ NOTE

Port functions are available to a single port To move a function between ports

- Display the port using the function you wish to move
- Replace the function with IDLE
- Display another port and select the original function

— Baud Rate 150 300 600 1200 2400 4800 or 9600 bits per second

— Data Bits 8 or 7 (Remote setting is always 8)

— Parity None Even or Odd (Remote setting is always None)

- Stop Bits 1 or 2 (Remote setting is always 1)
 - Flow Control XON/XOFF NONE or HARDWARE
- 3 When complete press <End>
 - 4 To configure another port repeat Step 2 and 3
 - 5 Press <End> again to return to the System Settings Menu

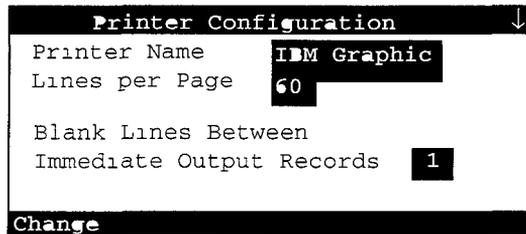
⇒ NOTE

If you change the function of the P1 port (default = PRINTER) the system requires a warm start

Choosing and Configuring a System Printer

Use the following procedure to view or select your system's printer information

- 1 From the Main Menu select Configuration Menu Select System Settings Menu then Printer Configuration The following screen appears



```
Printer Configuration
Printer Name      IBM Graphic
Lines per Page   60
Blank Lines Between
Immediate Output Records  1
Change
```

- 2 To change the information on the screen press <C>hange
 - To select the Printer Name
 - Press <Sel Help> to display a list of supported printers
 - Use the ↑ and ↓ keys to highlight a selection
 - Press <J> to place the selection in the field
 - Press <J> to go to the next field

⇒ NOTE

If your printer is not included in the list select Custom

- Enter information in the fields described below Press <J> to move from field to field
 - Lines per Page A number from 10 to 255 that indicates the length of the page your printer uses (default = 66) Enter 0 for no page breaks (Graphics print on full pages regardless of this entry)
 - Blank Lines Between Immediate Output Records A value (0 to 254) that is at least one less than the number of lines per page FF (form feed) is also acceptable If you entered 0 in the Lines per Page field enter any value up to 255

3 When complete press <J> The display shows

```

Printer Configuration ↑
Start Compressed Mode ^O
Stop Compressed Mode ^R
Start Graphics Mode ^[A^H^[2
Stop Graphics Mode ^[A^L^[2
Graphic Compatibility IBM
Change
  
```

- 4 The screen shows the default codes for the printer you selected Compare these codes to the start and stop codes for compressed printing and graphics mode documented in your printer's manual Enter new codes if necessary
- 5 Enter non printable characters following one of the processes below Press <J> to move from field to field
- Use a ^ to enter values for non printable keystrokes such as ESC or BS (backspace) The notation of characters proceeded with a ^ translates to ^x = ASCII value for x 64
 - For example using the standard ASCII character set
 - the sequence ESC A BS ESC 2
 - translates to ^(91) A ^(72) ^(91) 2
 - and you enter ^[A^H^[2
 - Or using ^xx = hexadecimal xx (xx = 01 7f)
 - for the character {
 - you enter ^7b

- To enter the characters [and] (square brackets) press <Alt Gr> and the key for the left bracket ([) <Alt Gr> and the = key for the right bracket (])

⇒ NOTE

The compression and graphic mode fields can accept up to 16 characters to accommodate sequences for non printable characters After translation the database field accepts 12 characters

- 6 To select a Graphic Compatibility for your printer
 - Press <Sel Help> to display a list of selections
 - Use the ↑ and ↓ keys to highlight a selection
 - Press <↓> to place the selection in the field

⇒ NOTE

If your printer is not compatible with either graphic compatibility choice the graphic reports cannot print

- 7 When complete press <End> Press <End> again to return to the System Settings Menu

Choosing Interface Settings

Use this procedure to change the settings of items affecting your interaction with the system

- 1 From the Main Menu select Configuration Menu Select System Settings Menu then Interface Settings The following screen appears

| Interface Settings | | |
|--------------------|-------|---------|
| Auto-Repeat | No | |
| Speaker | On | |
| Screen Time-Out | 15:00 | (mm ss) |
| Screen Saver | 00:01 | (hh mm) |
| Change | | |

- 2 Press <C>hange To select entries for the fields described below
 - Auto-Repeat To repeat a character when a key is depressed select Yes otherwise select No
 - Speaker To activate the audible portions of the application select On To deactivate the audible portions select Off

- Use the following process
- Press <Sel Help> to display a list of selections
 - Use the ↑ and ↓ keys to highlight a selection
 - Press <↵> to place the selection in the field
- 3 Type entries for the fields described below
- **Screen Time-Out** Enter the period of time before the display reverts to the status screen (<Menu>) in *mm ss* format A 00 00 entry disables this feature
 - **Screen Saver** When displaying the status screen the period of time before the LCD backlight turns off Enter a value in *hh mm* format in the range 00 01 to 08 00
- 4 When complete press <End> twice to return to the System Settings Menu

Setting Up SMDR Port Monitoring

The SMDR Port Monitoring function enables an alarm that alerts you if the system does not receive a call record during specified hours on weekdays. If triggered, an audible alarm sounds and an entry appears in the error log. The alarm is useful, for example, as an alert that a disconnected cable or communications system problem exists.

⇒ NOTE

If you enter port monitoring information during the initial customization of your system, the monitor starts after the system receives a call record. Similarly, if you reset the monitor after an alarm, it starts again after receiving a call record.

To view or change the data, follow the steps below.

- 1 From the Main Menu, select Configuration Menu. Select System Settings Menu, then SMDR Port Monitor. The following screen appears:

```
SMDR Port Monitor
Business Hours 09:00am to 04:00pm
SMDR Port Timer 00:00
                hh mm
Change
```

- 2 To edit the screen press <C>hange and enter new information in the fields described below Press <J> to move from field to field
 - **Business Hours** Enter your business hours of operation in *hh mm* format using the 12 or 24 hour format your choose for your system The monitor is enabled during this range of hours
 - ⇒ **NOTE**
Business hours can carry over to the following day For example if weekdays are Monday through Friday and you enter 11 00pm to 07 00am as business hours the monitor is enabled until 7am Saturday morning
 - **SMDR Port Timer** Enter duration greater than 00 01 and less than the period of time indicated by the business hours The default (00 00) disables this feature
- 3 When complete press <End> twice to return to the System Settings Menu

Setting Up the Accounting Period

Use the Accounting Period Setup function to enter the day your fiscal year begins also marking the beginning of a year's first accounting period The default is the first day of the current year To view or change the data follow the steps below

- 1 From the Main Menu select Configuration Menu then Accounting Period Setup The following screen appears

```
Accounting Period Setup
First Day of Fiscal Year 04/01
                        mm dd
Length of Accounting Period Monthly
Change
```

- 2 To change the entries press <C>hange and enter information in the field described below
 - **First Day of Fiscal Year** The beginning date of your company's current fiscal year (used as the beginning of the first accounting period as well) Use the date format chosen for your system

⇒ NOTE

Unless the system date and first day of the fiscal year coincide some incomplete accounting periods occur during the first year

Press <↓> to move to the next field

- 3 To select an entry for the field described below
 - Length of Accounting Period Select <M>onthly imonthly or <Q>uarterly to represent the time period covered by an accounting period
 - Press <Sel Help> to display a list of selections for the field
 - Use the ↑ and ↓ keys to highlight a selection
 - Press <↓> to place the selection in the field
- 4 When complete press <End> Press <End> again to return to the Configuration Menu

Contents

| | |
|---|-----|
| Changing Organizational Level Names | 7 1 |
| Taxing Calls | 7 2 |
| Entering and Editing the User Defined Location Table | 7 3 |
| Defining System Formats | 7-5 |
| ■ Defining a Date Format | 7 5 |
| ■ Defining a Time Format | 7 5 |
| ■ Defining the Currency Format | 7 6 |
| ■ Changing Currency Names and Dividers | 7 7 |
| Defining the Work Week | 7 8 |
| Managing Recorded Function Definitions | 7 9 |

This chapter describes the functions you use to customize your system

Changing Organizational Level Names

Follow the procedure below to change the default organization level names to match those in your company

- 1 From the Main Menu select Customization Menu then Organization Level Names The following screen appears

| Organization Level Names | |
|--------------------------|--------------|
| Company Name | Company Name |
| Level-1 | Department |
| Level-2 | Cost Center |
| Level-3 | Extension |

Change

- 2 To change the default names of organization levels used in displays and reports press <C>hange and enter the following information
 - Company Name Your company s name using up to 25 characters
 - Level-1 The first level s name using up to 15 characters (default = Department)
 - Level-2 The second level s name using up to 15 characters (default = Cost Center)
 - Level-3 The third level s name using up to 15 characters (default = Extension)
- 3 When complete press <End> twice to return to the Customization Menu

Taxing Calls

Your system determines and reports tax totals based on the taxing style (defined in the following paragraphs) selected. Use the procedure that follows to name the three taxes, make them active/inactive, and enter rates for inclusive taxes.

- 1 From the Main Menu, select Customization Menu, then Taxes. The following screen appears:

| Taxes | | | |
|---------------|-----------------|--------|-----|
| Tax-1 | Tax-1 | Active | Yes |
| Tax-2 | Tax-2 | Active | Yes |
| Tax-3 | Tax-3 | Active | Yes |
| Style | Inclusive Price | | |
| Change Rating | | | |

- 2 To change the information shown on the screen, press <C>hange.
 - Enter a new tax name using up to 15 characters.
 - Exclude a tax from reports by doing the following:
 - Press <Sel Help> to display a help menu listing your choices.
 - Use the ↑ and ↓ keys to highlight No.
 - Press <J>. The selection appears in the Active field.
 - Select one of the styles of calculating taxes and displaying them in reports described below:
 - **Inclusive Price**: When this style is selected, the system assumes that all user-entered rating information includes taxes. Tax rates entered in the next step of this procedure should match those considered when entering rating information in the Carrier Services screen. When reports are generated, the system uses the percentage you enter to calculate a tax value for the total cost of all calls reported, and shows it on a separate line in the report.
 - **Additional**: When this type is selected, the system calculates taxes for the basic cost of each call, using the rates entered for each call type. Reports contain a separate line for each active tax, showing the total tax amount for all reported calls.
- By doing the following:
- Press <Sel Help> to display a help menu listing your choices.
 - Use the ↑ and ↓ keys to highlight your choice.

— Press <↓> The selection appears in the Style field

⚠ CAUTION

To assure correct tax totals in reports change your tax style only at the end of an accounting period

- 3 When complete press <End>
 - If you changed the style press <Y>es to confirm the change or <N>o to abort it
 - If you select the inclusive tax style continue with the next step
- 4 Press <R>ating The following screen appears

| Taxes | |
|---------------------|--------|
| Inclusive Tax Rates | |
| Tax-1 | 0.00 ↕ |
| Tax-2 | 0.00 ↕ |
| Tax-3 | 0.00 ↕ |
| Change | |

- 5 Press <C>hange and enter a rates in the range 100 00% to 999 99%
Press <↓> to move from field to field When complete press <End>
- 6 Press <End> to return to the Customization Menu

Entering and Editing the User Defined Location Table

Location tables that associate specific location names with dialing patterns supply the call destinations listed in detail reports This function creates a table that takes precedence over one (if any) included on the CAS Terminal

Sample location table entries appear below

| Dialing Pattern | Location |
|------------------------|-----------------|
| 01149% | Germany |
| 0114989% | Munich |
| 01149891234567 | AT&T Germany |

To define the location table follow the steps below

- 1 From the Main Menu select Customization Menu then Location Table
The following screen appears

| Location Table | |
|---------------------------------|---------|
| Dialing Pattern | 49% |
| Location Name | Germany |
| Search Next Prev Add Del Change | |

- 2 To view a listing of all dialing patterns and location names in the order they were entered use <N>ext or <P>rev
- 3 To find a specific dialing pattern
 - Press <S>earch
 - Enter a current location table dialing pattern or define a group of dialing patterns using wildcard characters (? = any single character % = any number of characters)
 - Press <End> to begin the search and display the first matching record
- 4 To enter a new dialing pattern and/or other information press <A>dd and enter the information described below
 - **Dialing Pattern** A sequence of up to 14 digits and/or the wildcard characters ? or %
 - **Location Name** The name of an area associated with the dialing pattern entered above Use up to 10 characters
- 5 When complete press <End> Repeat Step 4 and this step until all combinations are entered
- 6 To edit field information
 - Press <C>hange
 - Enter new information
 - Press <End>
- 7 To remove the entry shown on a screen
 - Press <D>el
 - Press <Y>es to confirm
- 8 Press <End> to return to the Customization Menu

Defining System Formats

During initial setup you specify the time and date format for application screens and reports and the format to use when representing currency values. To change these formats or to enter other currency information use the procedures in the following sections.

Defining a Date Format

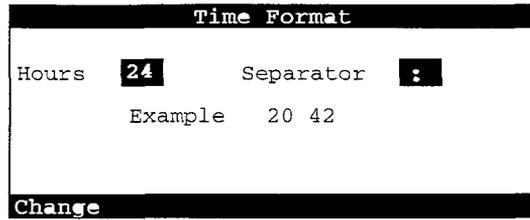
- 1 From the Main Menu select Customization Menu Select Formats Menu then Date Format. The following screen appears.

| Date Format | |
|-------------|----------------------|
| Format | MDY Separator / |
| Example1 | Jan 16 1995 |
| Example2 | 01/16/95 mm/dd/yy |
| Change | |

- 2 To change the date format press <C>hange
 - Press <Sel Help> to display a help menu of format choices
 - Use the ↑ and ↓ keys to highlight your choice
 - Press <J> to place your choice in the Format field
 - Press <J> to advance to the next field
- 3 To change the day/month/year separator use the process described in Step 2
- 4 When complete press <End>. The example displayed reflects your choices. Press <End> again to return to the Formats Menu.

Defining a Time Format

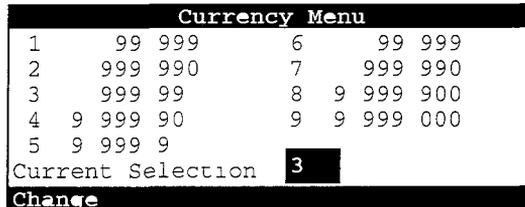
- 1 From the Main Menu select Customization Menu Select Formats Menu then Time Format. The following screen appears.



- 2 To change the time format press <C>hange
 - Press <Sel Help> to display a help menu of format choices
 - Use the ↑ and ↓ keys to highlight your choice
 - Press <↓> to place your choice in the Format field
 - Press <↓> to advance to the next field
- 3 To change the hour/minute separator use the process described in Step 2
- 4 When complete press <End> The example reflects your choices Press <End> again to return to the Formats Menu

Defining the Currency Format

- 1 From the Main Menu select Customization Menu Select Formats Menu then Currency Format The following screen appears



- 2 Press <C>hange
 - Type the number one to nine that corresponds to the currency format you want to use in reports

⇒ NOTE

The list that follows shows the maximum cost of a single call based on your selection The 9 s represent significant digits 0 s are zeros

| | Selection | Maximum cost | Precision to the |
|---|------------|--------------|----------------------|
| 1 | 99 999 | 65 535 | thousandth of a unit |
| 2 | 999 990 | 655 350 | hundredth of a unit |
| 3 | 999 99 | 655 35 | hundredth of a unit |
| 4 | 9 999 90 | 6 553 50 | tenth of a unit |
| 5 | 9 999 9 | 6 553 5 | tenth of a unit |
| 6 | 99 999 | 65 535 | units |
| 7 | 999 990 | 655 350 | tens |
| 8 | 9 999 900 | 6 553 500 | hundreds |
| 9 | 99 999 000 | 65 535 000 | thousands |

- Press <J> to place your choice in the Format field

- 3 When complete press <End> twice to return to the Formats Menu

! CAUTION

Changing your currency format changes call cost calculation and storage. If you must change the currency format after initial setup, do so at the end of an accounting period, after running reports and before clearing calls from storage.

Changing Currency Names and Dividers

- 1 From the Main Menu, select Customization Menu, Select Formats Menu, then Currency Names and Dividers. The following screen appears:

```

Currency Names and Dividers
Currency Name      DOLLARS
Currency Symbol    $
Symbol Position    Before
1000 Separator     F
Decimal Separator  .
Change
    
```

- 2 To change the currency name and dividers used on screens and in reports, press <C>hange.
 - Type entries. Press <J> to move from field to field.
 - Or, when a cursor precedes a field:
 - Press <Sel Help> to display a help menu of choices.
 - Use the ↑ and ↓ keys to highlight your choice.

- Press <J> to place your choice in the field
- Press <J> to advance to the next field
- The fields are described below
 - Currency Name The name of your currency Use up to eight characters
 - Currency Symbol The symbol that represents your currency Use up to three characters
 - Symbol Position Symbol location is efore or <A>fter currency figures
 - 1000 Separator The character used to separate numbers over 999 Choose from — / and
 - Decimal Separator The character used to separate fractions from whole numbers Choose from — / and
- 4 When complete press <End> Press <End> again to return to the Formats Menu

Defining the Work Week

Use this function to classify each day of the week as Weekday Weekend 1 or Weekend 2 These classifications are used in the tariff and duration rating processes and by the SMDR Port Monitor Refer to Figure 6 1 for an overview of call costing and the role of this function within that process

To view enter or edit the work week information follow the steps below

- 1 From the Main Menu select Customization Menu then Work Week The following menu appears

```

Work Week Definition
-----
Day of the Week   Sunday
Type of Day      Weekend-1
Next Prev Change
  
```

- 2 Use <N>ext or <P>rev to scroll through the days of the week
- 3 To change the Type of Day for the Day of the Week on the screen

- Press <C>hange
 - Press <Sel Help> to display a help menu of choices
 - Use the ↑ and ↓ keys to highlight your choice
 - Press <↓> to place your choice in the Type of Day field
 - Press <End>
- 4 Repeat Step 3 to change other days of the week Press <End> to return to the Customization Menu

Managing Recorded Function Definitions

The recorded function feature allows you to record up to 50 keystrokes — (except <Menu> or another recorded function key) and/or screen commands — and associate them to one of the keys <Ctrl 0> to <Ctrl 9>

To use the recorded keystrokes display the Status Screen or Main Menu press the <Ctrl *n*> keys and the system plays back the recorded keystrokes as if you had typed them at that moment

Use this feature to compress a group of repeated keystrokes into several keystrokes (see our example in Step 4 of the following procedure) or in some cases to globally update a database For example you could program a recorded function to add or change all cost center markups

- 1 From the Main Menu select Customization Menu then Recorded Functions The following screen appears

```
Recorded Functions
Key Sequence   Ctrl-1
Function Name  Org. Detail
Next Prev Add Del
```

Use <N>ext or <P>rev to scroll through the current programmed key sequences The system contains the following recorded function defaults

| Key Sequence | Default Defined Name | Function |
|--------------|----------------------|---|
| Ctrl 1 | Org Detail | Run the Organization Detail Report with default selection criteria |
| Ctrl 2 | Org Summary | Run the Organization Summary Report with default selection criteria |
| Ctrl 3 | Cost Center Sum | Run the Cost Center Summary Report with default selection criteria |
| Ctrl 4 | Dept Summary | Run the Department Summary Report with default selection criteria |

2 To add a recorded function definition press <A>dd

- In the Key Sequence field enter the number (1 to 9) of the Ctrl number you wish to program
- Press <↓>
- Enter a function name Use up to 15 characters
- Press <End> The following screen appears

```

Recorded Functions
You are About to Define the Function
Ctrl-# (User Defined Name)
To Begin Press the <S>tart Command
Start Cancel
    
```

- If you want to return to the Customization Menu without defining a recorded function press <C>ancel

3 To begin recording press <S>tart

- When the Main Menu appears with C n in the top right hand corner the system is ready to record up to 50 keystrokes
- During programming the system beeps and the screen changes as you enter keystrokes

⇒ **NOTE**

C n remains on the screen until you quit recording after Step 5 or you cancel by pressing <Menu>

4 Start recording your keystrokes To move backwards in the menu system during programming press <End> or <ESC>

⇒ NOTE

The simple example listed below programs Ctrl 5 to access the report scheduler

- 1 Type **5** The Reports Menu appears
 - 2 Type **6** The Reports Management Menu appears
 - 3 Type **2** The Schedule Reports screen appears
- 5 To stop recording press the <Ctrl *n*> sequence you indicated in the Key Sequence field in Step 2 For our example press <Ctrl 5>

⇒ NOTE

If you need to enter a password while programming a keystroke sequence the password is not recorded When using the recorded sequence the system pauses and waits for entry of a valid password then completes the recorded keystrokes

- 6 The procedure is complete Your screen shows the Main Menu
- 7 To delete a recorded function display the Customization Menu and select Recorded Functions
 - Press <N>ext or <P>rev until the key sequence of interest is on the screen
 - Press <D>el and <Y>es to confirm
 - The procedure is complete press <End> to return to the Customization Menu

Contents

| | |
|---|------|
| Performing Backup and Restore Operations | 8 1 |
| Managing Call Records | 8-3 |
| ■ Deleting Call Records | 8 3 |
| ■ Rebuilding Summary Buckets | 8 4 |
| Importing and Exporting Files | 8 4 |
| ■ Importing Data from a Disk | 8 6 |
| ■ Exporting Data to a Disk | 8 8 |
| Performing System Updates | 8 9 |
| ■ Updating Fixed Rates | 8 9 |
| ■ Updating the Software | 8 10 |
| Performing System Maintenance | 8-11 |
| ■ Controlling the Costing Process | 8 11 |
| ■ Formatting a Disk | 8 12 |
| ■ Restarting the System | 8 12 |
| ■ Performing a System Shutdown | 8 13 |
| ■ Call Record Analysis | 8 14 |
| ■ Performing Diagnostic Tests | 8 15 |

This chapter describes functions used for data management and maintenance of the CAS Terminal system

Performing Backup and Restore Operations

Use your disk drive to perform backup and restore operations. A backup copies the system configuration and the call record database from internal memory. A restore copies a backup into internal memory, writing over any existing configuration.

⇒ NOTE

When you restore a backup, several system configuration items are not included: port settings, printer configuration, model size information, and the system time setting. This data remains the same as before the restoration. PBX selections stored in your processor's memory and customized fixed rates are replaced by restored data.

During backup or restore operations, call costing stops and call records go to the queue until the operation completes.

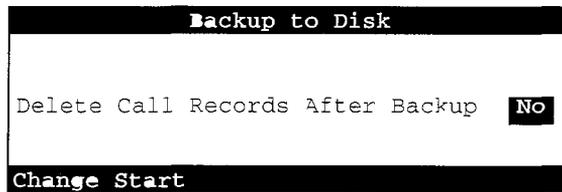
Use the procedure that follows to perform backup and restore operations to or from disks.

⇒ NOTE

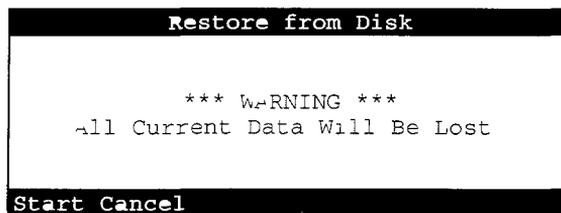
The disk drive can only use high density (1.44 Mb) disks.

- 1 From the Main Menu, select the Utilities Menu, then select Backup and Restore Menu.

- To perform a restore from a disk go to Step 3 To perform a backup to disk select Backup to Disk The following screen appears



- Use <ESC> to abort the process and return to the Utilities Menu
 - If you wish to delete the call record database following the backup
 - Press <C>hange
 - Enter <Y>es
 - Press <End>
 - Press <S>tart to begin the backup
 - Follow the screen prompt Please Insert a Blank Disk and Press Any Key When Ready
 - If your disk is not formatted or in the wrong format you have the option to format the disk or terminate the backup
 - If the backup fills more than one disk prompts ask you to insert additional disks
 - When the screen displays The Backup is Complete press <End> to return to the Backup and Restore Menu
- To perform a restore from disk select Restore from Disk The following screen appears



- Press <C>ancel if you wish to cancel the operation and return to the Backup and Restore Menu
- To begin a restore from disk Press <S>tart
 - Insert the disk containing the backup of interest then press any key The screen displays Please wait while restoring the system

- If your backup is located on more than one disk prompts ask you to insert them in the proper order
- When the screen displays The Restoration is Complete press <End> to return to the Backup and Restore Menu

Managing Call Records

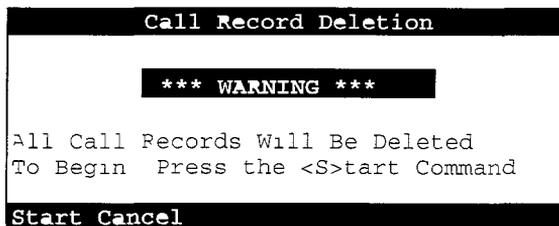
Use these functions to delete current accounting period call records or to manually reset the summary subtotals

Deleting Call Records

Deleting call records is typically part of closing an accounting period and under normal conditions we recommend using the procedure documented in Chapter 5 Closing an Accounting Period to delete the database

This function is provided however so that the database can be deleted as a isolated event without other activities occurring For instance if during an accounting period the database becomes full Call Record Deletion is used to empty the database but retain the summary information until the accounting period ends

- 1 From the Main Menu select Utilities Menu Select Call Record Management Menu then Call Record Deletion The following screen appears



- 2 Press <C>ancel to cancel the operation and return to the Call Record Management Menu To continue
 - Press <S>tart to continue and confirm with <Y>es
 - If you want to reset the current summary information and update the trend data confirm with <Y>es or press <N>o to continue

- 3 The screen displays a message 'Call Record Deletion in Progress Press any key to continue "
 - Press any key The Call Record Management Menu appears
 - At this time the system schedules the database deletion in the same way a report is scheduled
 - When its turn in the schedule is reached the deletion takes place
 - The system prints a confirmation when the deletion starts and when it completes

Rebuilding Summary Buckets

Like deleting call records resetting summary buckets is usually part of the end of accounting period activities. If called for however reset them manually by following the steps below

- 1 From the Main Menu select Utilities Menu Select Call Record Management Menu then Rebuild Summary Buckets The following screen appears

```
Rebuild Summary Buckets
*** WARNING ***
This Procedure Will Completely Clear
and Rebuild the Internal Summaries
Start Cancel
```

- 2 To abort the operation press <C>ancel The Utilities Menu appears
- 3 To continue press <S>tart When the procedure completes follow the screen prompt Press Any Key to Continue to return to the Call Record Management Menu

Importing and Exporting Files

You can import or export ASCII format database files to or from a disk Use these operations for example to build change or augment the organization database or to make database information available for other applications

NOTE

We recommend performing a backup before any import or export activity begins. This ensures that the database can return to its original condition if you desire.

Sample database file listings appear below. The lists that follow refer to the numbers below each sample.

Sample of a call record database listing (export only)

```

1 2 3 4 5 6 7 8 9 10 11 12 13 14

```

- | | | | |
|---|--|----|-------------------------------------|
| 1 | time stamp (generated by CAS Terminal) | 8 | call type |
| 2 | duration (seconds) | 9 | carrier |
| 3 | cost | 10 | direction |
| 4 | dialed digits | 11 | default rated |
| 5 | extension number | 12 | transferred call (due to auth code) |
| 6 | trunk line number | 13 | unanswered (call not complete) |
| 7 | account code | 14 | abandoned |

Sample of an extension database listing

```

121 7Brown 11 1111 11 500 0 0 0 No
1 2 3 4 5 6 7 8

```

- | | | | |
|---|--------------------|---|-------------------------|
| 1 | extension number | 5 | fixed charge |
| 2 | personnel name | 6 | mask digits for storage |
| 3 | authorization code | 7 | mask digits for reports |
| 4 | cost center | 8 | immediate output |

Sample of a cost center database listing

```

110 0 0 0 Engineering
1 2 3 4 5

```

- | | | | |
|---|------------------|---|-----------------|
| 1 | cost center name | 4 | minimum cost |
| 2 | markup % | 5 | department name |
| 3 | surcharge | | |

Sample of a department database listing

```

Engineering 0 0
1 2

```

- | | | | |
|---|-----------------|---|--------|
| 1 | department name | 2 | budget |
|---|-----------------|---|--------|

Sample of a location table listing

```

1 152-9343  Tol 0
      1      2
  
```

- 1 dialed digits
- 2 location name

The format of imported database listings must be as shown in the samples. Quotes surround fields that could contain the character used as the delimiter. Enter currency values without a decimal point — the decimal automatically inserts two places from the right (for example 200 = \$2 00).

During import or export operations, you cannot access other application functions — call processing stops, and call records go to the queue until the operation completes.

Importing Data from a Disk

To import database files, insert an appropriate disk and follow the steps below.

- 1 From the Main Menu select Utilities Menu, File Import/Export Menu, then Import from Disk. The following screen appears:

```

Import from Disk
Database File Name  extens.cdb
Disk File Name      extens.txt
Import Directive    Replace
Field Delimiter     ,
Change Start
  
```

- 2 Press <C>hange and enter data for the fields described below. If a field is preceded by a
 - Press <Sel Help> to display a help menu listing your choices
 - Use the ↑ or ↓ keys to highlight your selection
 - Press <J> to place your selection in the field

- Otherwise type entries The fields are described below
 - Database File Name The system derived name of the internal file to receive the imported data Choose from
 - extens cdb the extension database
 - ccenter cdb cost center database
 - depts cdb department database
 - dd_regn cdb location table
 - Disk File Name The name of the file to import
 - Import Directive An import operation can <R>eplace or <A>ppend an existing internal file
- ⇒ **NOTE**
- To create an organization table for new installations append your files on disk to internal database files following the hierarchy level order from highest to lowest (in other words first import departments then cost centers then extensions)
- Field Delimiter The symbol used to separate fields in the imported data
- When complete press <End>

3 To begin importing data press <S>tart A sample screen appears below

```

Import From Disk

Replacing Database File  extens cdb
Imported Records        Rejected Records
-----
                0321                0004

Cancel
  
```

Invalid records are output to the printer identified with their record number from the ASCII file then discarded A running total of these rejected records displays on this screen

- 4 Press <C>ancel to terminate the import process
- 5 When the procedure completes press any key to return to Import/Export Menu

Exporting Data to a Disk

To export ASCII formatted database files to a disk insert a formatted disk and follow the steps below. If you insert an unformatted disk a prompt appears advising that you must format the disk before an export can occur (see *Formatting a Disk* later in this chapter)

- 1 From the Main Menu select Utilities Menu. Select File Import and Export Menu then Export from Disk. The following screen appears

```

Export to Disk
-----
Database File Name  extens.cdb
Disk File Name      extens.txt
Field Delimiter     ,
Change Start
  
```

- 2 Press <C>hange and enter data for the fields described below. If a field is preceded by a

- Press <Sel Help> to display a help menu listing your choices
- Use the ↑ or ↓ keys to highlight your selection
- Press <J> to place your selection in the field
- The fields are

— Database File Name The system derived name of the exporting file. Choose from

```

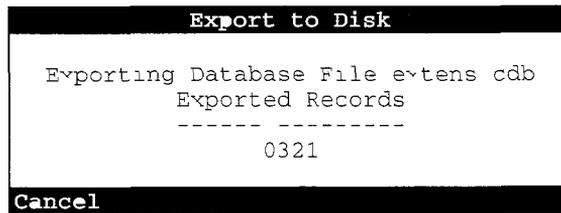
extens cdb  the extension database
ccenter cdb  cost center database
crd cdb  call record database
depts cdb  department database
dd_regm cdb  location table
  
```

— Disk File Name The name of the file on disk to receive the exported data

— Field Delimiter The symbol in the exported data used to indicate where fields begin/end

- When complete press <End>

- 3 To begin exporting data press <S>tart. A sample screen shows



- The screen shows a running total of the exported records

⇒ NOTE

If more than one disk is required to export the call record database file prompts ask you to insert the other disks

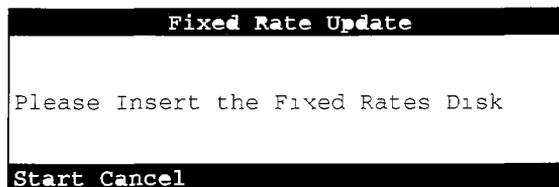
- 4 Press <C>ancel to terminate the export process
- 5 When the procedure completes follow the screen prompt to return to the Import and Export Menu

Performing System Updates

Use this procedure to update rating information or upgrade software

Updating Fixed Rates

- 1 From the Main Menu select Utilities Menu Select System Update Menu then Fixed Rate Update The following screen appears



- 2 Press <C>ancel to terminate the rate update process Or insert the rates disk in the drive and press <S>tart
 - The system verifies the disk and loads the new rates
 - When the rate update completes CAS Terminal displays the message The Fixed Rates Installation is Complete

- 3 To complete the rate installation press any key to make CAS Terminal quickly shut itself off then on again

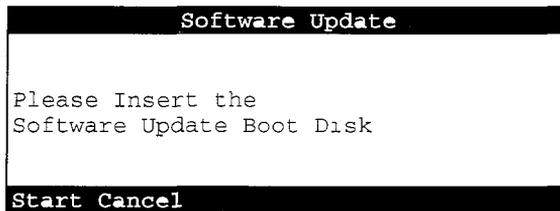
Updating the Software

Generally performing a software update leaves your databases intact or if required a database conversion occurs automatically before normal operation resumes As a precautionary measure you may wish to backup your complete system before performing a software update

⇒ NOTE

A software update uses the boot disk shipped with your updated software

- 1 From the Main Menu select Utilities Menu Select System Update Menu then Software Update The following screen appears



- 2 Press <C>ancel to terminate the update process Or insert the update boot disk in the drive and press <S>tart The system verifies the disk and displays the prompt The Unit May Now be Turned Off
- 3 Turn the unit off then on again
- 4 When prompted remove the boot disk and insert the application update disk Press <S>tart then <Y>es Or abort the update by pressing <N>o
- 5 After several minutes a prompt asks you to remove the update disk and turn the system off then on again
- 6 When the status screen appears the update is complete

Performing System Maintenance

System maintenance functions perform standard operating procedures and help diagnose system problems

Controlling the Costing Process

Use the procedure that follows to stop and restart the costing process



CAUTION

Do not use this function unless advised to do so by service personnel or under special circumstances — like restoring a backup to run reports from a previous accounting period

- 1 From the Main Menu select Utilities Menu Select System Maintenance Menu then Process Control The following screen appears

```
Process Control
Call Processing Task  Running
Change
```

- 2 The call processing task appears RUNNING or STOPPED To change the status of the process
 - Press <C>hange
 - Press<Sel Help> to display a help menu of processing modes
 - Use the ↑ and ↓ keys to highlight your selection
 - Press <↓> to place your selection in the Call Processing Task field
 - Press <End> to complete the change
- 3 The new status appears in the Call Processing Field
- 4 Press <End> to return to the System Maintenance Menu



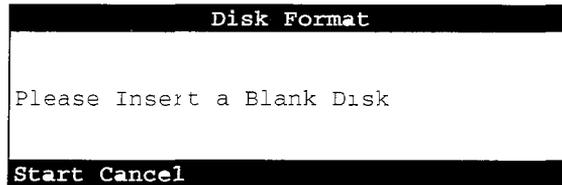
NOTE

Use this function to restart costing processes only if you used this function to stop them In other words you cannot start costing if it is halted by the system for the end of an accounting period or for some other reason

Formatting a Disk

Use this procedure to format a new disk

- 1 From the Main Menu select Utilities Menu Select System Maintenance Menu then Disk Format



- 2 Press <C>ancel to return to the menu system Or insert a disk in the drive and press <S>tart
 - The screen displays status messages as the disk format proceeds
 - In a short time the message The Format is Complete appears
 - Press any key to return to the System Maintenance Menu

Restarting the System

Use this function to reset the system with a cold start A cold start re initializes the system causing a loss of all data in internal memory

⇒ NOTE

If you wish to maintain your system s configuration and databases (including the information in the call record storage areas) perform a backup before initiating a cold start When the cold start is complete restore the backup Otherwise you have to perform complete initial setup and customization processes to re configure the system

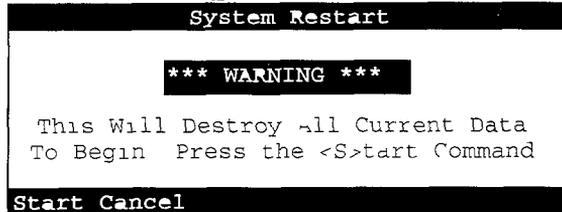
Fixed (custom) rates and PBX interfaces do not have to be reloaded

To restart the system follow the steps below

⚠ CAUTION

Under most circumstances do not perform a cold start unless advised to do so by service personnel

- 1 From the Main Menu select Utilities Menu Select System Maintenance Menu System Control Menu then System Restart The following screen appears



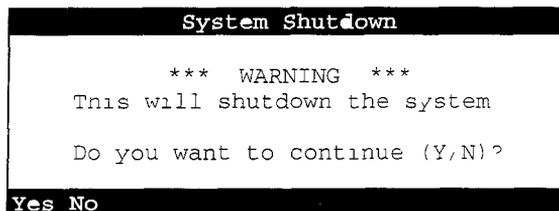
Press <C>ancel to return to the System Control Menu

- 2 To continue press <S>tart and confirm with <Y>es
 - A prompt asks you to standby
 - The initial setup process automatically begins
 - Complete the initial startup process using the procedure in Chapter 2

Performing a System Shutdown

Use this function to shut down CAS Terminal during normal operation for example when you are not using it or prior to activities such as software and rate updates Also use it before a warm start (turning the system off for a few seconds then on again)

- 1 From the Main Menu select Utilities Menu Select System Maintenance Menu System Control Menu then System Shutdown The following screen appears



- 2 Press <N>o to return to the menu system Press <Y>es to continue
- 3 Turn your system off when the display reads The Unit May Now be Turned Off

Call Record Analysis

Use call record analysis to verify accurate call record collection and processing

- From the Main Menu select Utilities Menu Select System Maintenance Menu then Call Record Analysis The following screen appears

| Call Record Analysis | | | |
|----------------------|----|----------------|-----|
| ANALYSIS MODE | | CALLS RECEIVED | |
| ----- | | ----- | |
| RAW | No | PROCESSED | ### |
| HEX | No | REJECTED | ### |
| PROCESSED | No | TCTAL | ### |
| Change Start | | | |

- To choose one or more output format press <C>hange
 - Press <Sel Help> to display a help menu
 - Use the ↑ and ↓ keys to highlight Yes
 - Press <↓> to place Yes in a field
 - The fields are described below
 - RAW — call records in the format received from the PBX
 - HEX — call records converted to hexadecimals
 - PROCESSED — call records processed by the PBX interface
 - Press <↓> to move from field to field
 - When complete press <End>
- Press <S>tart to begin analyzing the calls received If your telephones are in use you should see the values under Calls Received increase
 - The printer automatically begins to output a listing of records in the format(s) you selected
 - Stop the test by pressing any key
 - Press <End> to return to the System Maintenance Menu

⇒ NOTE

The Call Record Analysis printout shows call records in a format that may not coincide with reporting formats you chose For example in the raw mode call record dates appear in the switch's reporting format even if a different format or separator has been selected for CAS Terminal In the process mode call record dates always appear in a mm/dd/yy format

Some actions to take as a result of the analysis are listed below

- If calls are rejected check your PBX selection
- If calls are not received at all check
 - the serial port transmission values
 - the PBX cable
 - status of communication system SMDR output
 - status of serial port on CAS Terminal

Take corrective action before repeating this test

Performing Diagnostic Tests

Use the system s diagnostic tests to check the items described below

- **Ram Test** This test checks the area in RAM where the database is stored
- **Printer Test** This test sends streams of characters to the printer to check its setup

NOTE

To reset the system s lines per page count run a short report each time you perform a printer test

- **Keyboard Test** This test verifies agreement between the keyboard and the display
- **Display Test** This test shows a full screen display Blank spaces could indicate display problems
- **Software Test** This test checks your system software by comparing it to a checksum
- **Disk Test** This test checks a disk for errors by reading it sector by sector

To perform a diagnostic test follow the steps below

- 1 From the Main Menu select Utilities Menu Select System Maintenance Menu then Diagnostics Menu The following menu appears

```
          Diagnostics Menu
1  RAM Test
2  Printer Test
3  Keyboard Test
4  Display Test
5  Software Test
6  Disk Test
Please enter a selection
```

- 2 To perform a test type the number corresponding to the test you want
- 3 Follow the screen instructions when prompted
- 4 When the test completes No error found or an error message appears
- 5 Press <ESC> to terminate the test and return to the Diagnostic Menu

Specifications



This appendix provides some technical information about system components. The information describes the following topics:

- Processor
- Printer

Processor

The processing unit consists of a special purpose computer housed in a molded plastic enclosure. A hinged cover housing the unit's display panel provides protection during shipping and handling. This folding cover also makes it easy to adjust the display's viewing angle. The processor has the following specifications:

- length 14 (356mm) width 10.5 (267mm) height 2.5 (64mm)
- weight 6.5 pounds

The processing unit includes the following features:

- Display: An LCD graphics display with back lighting for easy viewing in all lighting conditions.
- Keyboard: A full typewriter keyboard with 61 full travel keys. Contoured key caps make typing easy.
- Floppy Disk Drive: 3.5 high density drive, 1.44 mb DOS disk format.
- Audible Alarm: Audio feedback to operator indicating alarms and keyboard function selection.

- **Power Source** The unit's power comes from an AC class II wall adapter providing 12 VDC to the processor
- **Rechargeable Batteries** The processor can operate from rechargeable batteries during periods of power outage (batteries not included) The unit has an easily accessible battery compartment for six rechargeable two amp hour size C Ni Cad battery cells With batteries installed the processor operates a minimum of four hours without power A software controlled charging circuit provides hi/low charging rates and monitors the charge condition of the batteries
- **Communication Ports** Connectors on the rear panel of the unit provide the interface to a telephone system switch parallel printer and external modem
 - Parallel printer port Centronix type parallel interface IBM graphics printer compatible terminated in a 25 pin female D shell connector with the following pin configuration

| Pin # | Signal | Direction | Description |
|----------|----------------|-----------|--|
| 1 | STROBE | out | STROBE pulse |
| 2 to 9 | DATA1 to DATA8 | out | The 1st to 8th bit of parallel data respectively |
| 10 | ACK | in | Low = data received printer ready |
| 11 | BUSY | in | High = printer not ready |
| 12 | PO | in | High = out of paper |
| 13 | SLCT | in | Printer on/off line |
| 14 | — | — | Not used |
| 15 | ERROR | in | Low = printer error |
| 16 | INIT | out | Normal high low = reset printer |
| 18 to 25 | GND | — | Ground |

- Serial port 1 V 24 serial port terminated in 9 pin D type male connector Port operates at 300 600 1200 2400 4800 or 9600 baud rate configured as DTE with the following pinouts

| Pin # | Signal | Direction | Description |
|-------|--------|-----------|---------------------|
| 1 | — | — | — |
| 2 | RXD | in | Receive data |
| 3 | TXD | out | Transmit data |
| 4 | DTR | out | Data terminal ready |
| 5 | GND | — | Ground |
| 6 | — | — | Not used |
| 7 | RTS | out | Request to send |
| 8 | — | — | Not used |
| 9 | — | — | Not used |

- Serial port 2 V 24 serial port terminated in 9 pin D type male connector Port operates at 300 600 1200 2400 4800 or 9600 baud rate configured as DTE with the following pinouts

| Pin # | Signal | Direction | Description |
|-------|--------|-----------|---------------------|
| 1 | DCD | in | data carrier detect |
| 2 | RXD | in | Receive data |
| 3 | TXD | out | Transmit data |
| 4 | DTR | out | Data terminal ready |
| 5 | GND | — | Ground |
| 6 | — | — | Not used |
| 7 | RTS | out | Request to send |
| 8 | — | — | Not used |
| 9 | — | — | Not used |

Printer

Your printer should have the following characteristics

- IBM graphics compatible
- 80-column
- parallel interface (standard Centronics)
- shielded cable

The following is a listing of default printers and their codes for compression and graphics modes

| Printer | Compression | | Graphics | | Graphic Compatibility |
|----------------|-------------|--------|----------------|------------|-----------------------|
| | Start | Stop | Start | Stop | |
| Epson | ^O | ^R | ^[A^H | ^[2 | IBM |
| HP LaserJet | ^[s16 66H | ^[s10H | ^[t150R^[rOA | ^[rB^[rC | HP |
| IBM Color | ^O | ^R | ^[A^H^[2 | ^[A^L^[2 | IBM |
| IBM Graphic | ^O | ^R | ^[A^H^[2 | ^[A^L^[2 | IBM |
| NEC | ^O | ^R | ^[A^H^[2 | ^[A^L^[2 | IBM |
| Okidata 184T | ^O | ^R | ^C | ^C^B | IBM |
| Okidata OL810E | ^[s16 66H | ^[s10H | ^[t150R^[rOA | ^[rB^C rC | HP |
| Panasonic | ^O | ^R | ^[A^H^[2 | ^[A^L^[2 | IBM |
| Custom | ^O | ^R | ^[A^H^[2 | ^[A^L^[2 | IBM |

This appendix includes the following worksheets

- Initial Setup Worksheet
- Carrier Services — Basic Information Worksheet
- Facilities/Trunks Worksheet
- Carrier Services Custom Rating Information Worksheet
- Carrier Services Meter Pulse Rating Information Worksheet
- Call Types for Meter Pulse Calls Worksheet
- Dialing Patterns for Rate Bands Worksheet
- Carrier Services Tariff Rating Information Worksheet — Parts I & II
- Carrier Services Duration Rating Information Worksheet
- Carrier Services Flat Rating Information Worksheet
- Call Type Storage Options Worksheet
- Organization Worksheet
- Location Table Worksheet
- Report Schedules Worksheet

Chapter 2 Installation contains sample worksheets and instructions to complete them. Make copies of those worksheets you need to use.

Carrier Services Fixed (Custom) Rating Information Worksheet

Use the Existing Carrier Service

Enter the name of a default carrier service using a fixed (custom) rate table purchased by your company

| | |
|------------------------|------------------------|
| _____ | Percent Markup _____ % |
| (Carrier Service Name) | |
| _____ | Percent Markup _____ % |
| (Carrier Service Name) | |
| _____ | Percent Markup _____ % |
| (Carrier Service Name) | |
| _____ | Percent Markup _____ % |
| (Carrier Service Name) | |
| _____ | Percent Markup _____ % |
| (Carrier Service Name) | |
| _____ | Percent Markup _____ % |
| (Carrier Service Name) | |

Carrier Services Meter Pulse Rating Information WorksheetCarrier Service Name ¹ _____The FIRST _____ pulses at _____
(number) (cost per pulse in your currency format)The NEXT _____ pulses at _____
(number) (cost per pulse in your currency format)The REMAINING pulses at _____
(cost per pulse in your currency format)Carrier Service Name ¹ _____The FIRST _____ pulses at _____
(number) (cost per pulse in your currency format)The NEXT _____ pulses at _____
(number) (cost per pulse in your currency format)The REMAINING pulses at _____
(cost per pulse in your currency format)Carrier Service Name ¹ _____The FIRST _____ pulses at _____
(number) (cost per pulse in your currency format)The NEXT _____ pulses at _____
(number) (cost per pulse in your currency format)The REMAINING pulses at _____
(cost per pulse in your currency format)

- 1 The name of a carrier service using meter pulse (M) rating from the Carrier Services — Basic Information Worksheet

Call Types for Meter Pulse Calls Worksheet

Call Type¹ _____ Dialing Patterns²

Call Type¹ _____ Dialing Patterns²

Call Type¹ _____ Dialing Patterns²

Call Type¹ _____ Dialing Patterns²

1 The default call types are LOCAL NATNL INTNL INCOM PRIVT and OTHER Create new call types using the procedure in Chapter 6 Entering and Editing Call Type Storage Options

2 A specific sequence of dialed numbers or a combination of digits and wildcard characters The wildcard character ? is used to represent any single digit % is used to represent all following digits

Dialing Patterns for Rate Bands Worksheet

Rate Band _____ Call Type ¹ _____
 (use up to 7 characters)

Dialing Patterns ² 1 _____ 2 _____
 (use up to 14 3 _____ 4 _____
 characters) 5 _____ 6 _____
 7 _____ 8 _____

Rate Band _____ Call Type ¹ _____
 (use up to 7 characters)

Dialing Patterns ² 1 _____ 2 _____
 (use up to 14 3 _____ 4 _____
 characters) 5 _____ 6 _____
 7 _____ 8 _____

Rate Band _____ Call Type ¹ _____
 (use up to 7 characters)

Dialing Patterns ² 1 _____ 2 _____
 (use up to 14 3 _____ 4 _____
 characters) 5 _____ 6 _____
 7 _____ 8 _____

- 1 The default call types are LOCAL NATNL INTNL INCOM PRIVT and OTHER Create new call types using the procedure in Entering and Editing Call Type Storage Options in Chapter 6
- 2 A specific sequence of dialed numbers or a combination of digits and wildcard characters The wildcard character ? is used to represent any single digit % is used to represent all following digits

Part I — Carrier Services Tariff Rating Information Worksheet

Carrier Service ¹ _____

Rate Bands ² 1 _____ 2 _____

(use up to 7 3 _____ 4 _____

characters) 5 _____ 6 _____

7 _____ 8 _____

Carrier Service ¹ _____

Rate Bands ² 1 _____ 2 _____

(use up to 7 3 _____ 4 _____

characters) 5 _____ 6 _____

7 _____ 8 _____

Carrier Service ¹ _____

Rate Bands ² 1 _____ 2 _____

(use up to 7 3 _____ 4 _____

characters) 5 _____ 6 _____

7 _____ 8 _____

Carrier Service ¹ _____

Rate Bands ² 1 _____ 2 _____

(use up to 7 3 _____ 4 _____

characters) 5 _____ 6 _____

7 _____ 8 _____

1 The name of a carrier service using tariff (T) rating from the Carrier Services — Basic Information Worksheet

2 A rate band defined on the Dialing Patterns for Rate Bands Worksheet

Part II — Carrier Services Tariff Rating Information Worksheet

Rate Band ¹ _____

Type of Day ² _____

| Start Time ³ | Duration (mm ss) | Cost | Interval (mm ss) |
|-------------------------|---------------------|------|---------------------|
| | First | | |
| Next | | | |
| Remaining | | | |

| Start Time ³ | Duration (mm ss) | Cost | Interval (mm ss) |
|-------------------------|---------------------|------|---------------------|
| | First | | |
| Next | | | |
| Remaining | | | |

| Start Time ³ | Duration (mm ss) | Cost | Interval (mm ss) |
|-------------------------|---------------------|------|---------------------|
| | First | | |
| Next | | | |
| Remaining | | | |

| Start Time ³ | Duration (mm ss) | Cost | Interval (mm ss) |
|-------------------------|---------------------|------|---------------------|
| | First | | |
| Next | | | |
| Remaining | | | |

- 1 A rate band defined on the Dialing Patterns for Rate Bands Worksheet
- 2 One of the four type of day defaults Weekday Weekend 1 Weekend 2 Holiday
- 3 Enter all start times in chronological order in the time format chosen for your system
Always begin with 00 00

Carrier Services Duration Rating Information Worksheet

Carrier Service Name _____
 (from the Carrier Services Basic Information Worksheet)

Type of Day _____
 (choose Weekday Weekend 1 Weekend 2 or Holiday)

| Start Time ¹ | Duration | Cost | Interval |
|-------------------------|----------|------|----------|
| | (mm ss) | | (mm ss) |
| First | | | |
| Next | | | |
| Remaining | | | |

| Start Time ¹ | Duration | Cost | Interval |
|-------------------------|----------|------|----------|
| | (mm ss) | | (mm ss) |
| First | | | |
| Next | | | |
| Remaining | | | |

| Start Time ¹ | Duration | Cost | Interval |
|-------------------------|----------|------|----------|
| | (mm ss) | | (mm ss) |
| First | | | |
| Next | | | |
| Remaining | | | |

¹ Enter all start times in chronological order in the time format chosen for your system. Always begin with 00 00

Carrier Services Flat Rating Information Worksheet

| | |
|---|---|
| <p>Carrier Service Name</p> <p>_____</p> <p>(The name from the Carrier Services Basic Information Worksheet of a carrier that charges flat rates)</p> <p>Cost Per Call _____</p> <p>Call Type ¹ _____</p> | <p>Carrier Service Name</p> <p>_____</p> <p>(The name from the Carrier Services Basic Information Worksheet of a carrier that charges flat rates)</p> <p>Cost Per Call _____</p> <p>Call Type ¹ _____</p> |
| <p>Carrier Service Name</p> <p>_____</p> <p>(The name from the Carrier Services Basic Information Worksheet of a carrier that charges flat rates)</p> <p>Cost Per Call _____</p> <p>Call Type ¹ _____</p> | <p>Carrier Service Name</p> <p>_____</p> <p>(The name from the Carrier Services Basic Information Worksheet of a carrier that charges flat rates)</p> <p>Cost Per Call _____</p> <p>Call Type ¹ _____</p> |
| <p>¹ The default call types are LOCAL NATNL INTNL INCOM PRIVT and OTHER Create new call types using the procedure in Chapter 6 Entering and Editing Call Type Storage Options</p> | |

Call Type Storage Options Worksheet

Call Type ¹ _____ Reporting Name ² _____
 Minimum Storage Cost _____ Duration _____
 (maximum = \$655 00 (format = *hh mm ss*
 default = 0 00) maximum = 18 00 00
 default = 00 00 00)
 Network Correction Time ³ _____
 format = *mm ss* — default = 00 00)

Call Type ¹ _____ Reporting Name ² _____
 Minimum Storage Cost _____ Duration _____
 (maximum = \$655 00 (format = *hh mm ss*
 default = 0 00) maximum = 18 00 00
 default = 00 00 00)
 Network Correction Time ³ _____
 format = *mm ss* — default = 00 00)

Call Type ¹ _____ Reporting Name ² _____
 Minimum Storage Cost _____ Duration _____
 (maximum = \$655 00 (format = *hh mm ss*
 default = 0 00) maximum = 18 00 00
 default = 00 00 00)
 Network Correction Time ³ _____
 format = *mm ss* — default = 00 00)

1 The default call types are LOCAL NATNL INTNL INCOM
 PRIVT and OTHER Create new call types using the procedure in
 Chapter 6 Entering and Editing Call Type Storage Options

2 The name to use when reporting this call type

3 Enter a length of time to represent the portion of a call's duration
 consumed by network activities

Report Schedules Worksheet

Report Group Name
(use up to 20 characters) _____

% Full Trigger _____ %

(Report group prints if storage reaches this capacity)

Frequency Once On demand only
 Monthly Every days (up to 999)
 End of Accounting
 Period

Next Run Date (use your system's date format) Next Run Time (use the format *hh mm*)

Include Reports

| | |
|--|--|
| | |
| | |
| | |
| | |
| | |

Report Group Name
(use up to 20 characters) _____

% Full Trigger _____ %

(Report group prints if storage reaches this capacity)

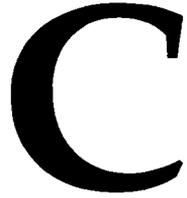
Frequency Once On demand only
 Monthly Every days (up to 999)
 End of Accounting
 Period

Next Run Date (use your system's date format) Next Run Time (use the format *hh mm*)

Include Reports

| | |
|--|--|
| | |
| | |
| | |
| | |
| | |

Sample Reports



This appendix includes samples of the following reports:

- Organization Detail Reports
- Organization Summary Reports
- Cost Center Summary Report
- Department Summary Report
- Department Trends Report
- Budget Report
- Selection Detail Reports
- Selection Summary Report
- Account Code Detail and Summary Reports
- Call Type Report
- Date Report
- Cost and Duration Report
- Time of Day Report
- Call Distribution Reports
- Ring Time Analysis Report
- Incoming Traffic Analysis Report
- Rejected Call Summary Report
- Expensive Calls Report
- Facility Summary Report
- Facility Trends Report
- Immediate Output Report
- Longest Calls Report
- Frequently Called Numbers Report
- Facility Grade of Service Report
- Telecom Managers Report

Organization Detail Reports

This sample organization report shows meter pulse count and additional taxes.

Organization Detail Report Page 1
 Date: Apr 26, 1995 Company Name
 Time: 12:00

SELECTION CRITERIA:
 DATE RANGE : 04/24/95 to 04/24/95
 TIME RANGE : 00:00 TO 23:59
 MINIMUM COST : \$ 0.00
 MINIMUM DURATION : 00:00:00
 DEPARTMENT : All
 COST CENTER : All
 EXTENSION : All
 AUTHORIZATION CODE : All
 TRUNK : All
 CALL TYPE : All
 DIALED NUMBER : All
 SUMMARIES ONLY : No
 PRIVATE CALLS : Include

PAGE BREAK FOR EACH EXTENSION: Yes

SUMMARIZE LOCAL CALLS
 SUMMARIZE INCOMING CALLS
 SUMMARIZE ZERO-COST CALLS

DEPARTMENT : Accounting
 COST CENTER : 10021
 EXTENSION : 110
 AUTHORIZATION CODE : 404110
 PERSONNEL NAME : William Smith

| DATE | TIME | DURATION HH:MM:SS | DIALED NUMBER | LOCATION | CALL TYPE | METER PULSES | COST (\$) |
|----------|-------|----------------------|--------------------|-----------------------|--------------|-----------------|----------------|
| 04/24/95 | 08:06 | 0:05:23 | 385-6388 | E ROCH NY | IS-IL | 10 | 2.10 |
| 04/24/95 | 10:16 | 0:13:49 | 1-708-325-4257 | WMONT IL | WATS3 | 15 | 3.83 |
| 04/24/95 | 10:57 | 0:08:51 | 1-305-345-3401 | FT LAUD FL | WATS2 | 3 | 0.72 |
| 04/24/95 | 14:02 | 0:17:56 | 1-201-879-2535 | CHESTER NJ | FX | 12 | 2.90 |
| 04/24/95 | 15:03 | 0:14:25 | 01144256844949 | MOSCOM LTD | IDDD | 88 | 18.51 |
| | | 5 | 1:00:24 | DETAIL SUBTOTAL | | 128 | 28.06 |
| | | 1 | 0:06:17 | LOCAL CALLS | | 17 | 0.35 |
| | | 0 | 0:00:00 | INCOMING CALLS | | 0 | 0.00 |
| | | 0 | 0:00:00 | OTHER ZERO-COST CALLS | | 0 | 0.00 |
| | | | | FIXED CHARGE | | | 0.00 |
| | | | | Tax-1 | | | 0.00 |
| | | | | Tax-2 | | | 0.00 |
| | | | | Tax-3 | | | 0.00 |
| TOTALS: | | 1:06:41 | NUMBER OF CALLS: 6 | | | 145 | 28.41 |

Sample Reports

This sample organization report shows summaries only.

ORGANIZATION DETAIL REPORT

Date: Apr 24, 1995
Time: 12:00

Page 1

Company Name

SELECTION CRITERIA:

DATE RANGE : 04/24/95 to 04/24/95
TIME RANGE : 00:00 TO 23:59
MINIMUM COST : 0.00
MINIMUM DURATION : 00:00:00
DEPARTMENT : All
COST CENTER : 101
EXTENSION : All
AUTHORIZATION CODE : All
TRUNK : All
CALL TYPE : All
DIALED NUMBER : All
SUMMARIES ONLY : Yes
PRIVATE CALLS : Include

PAGE BREAK FOR EACH EXTENSION: No

COST CENTER TOTALS

Department : 1
Cost Center : 101

| EXTENSION | TOTAL CALLS | DURATION | | COST | | |
|-----------|-------------|-----------------|-------------------|-------------|----------------|------------------|
| | | TOTAL HHH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 1101 | 2 | 000:06:17 | 0:03:08 | 2.94 | 1.47 | 0.95 |
| TOTALS: | 2 | 000:06:17 | 0:03:08 | 2.94 | 1.47 | 0.95 |

DEPARTMENT TOTALS

Department : 1

| COST CENTER | TOTAL CALLS | DURATION | | COST | | |
|-------------|-------------|-----------------|-------------------|-------------|----------------|------------------|
| | | TOTAL HHH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 101 | 2 | 000:06:17 | 0:03:08 | 2.94 | 1.47 | 0.95 |
| TOTALS: | 2 | 000:06:17 | 0:03:08 | 2.94 | 1.47 | 0.95 |

GRAND TOTALS

| DEPARTMENT | TOTAL CALLS | DURATION | | COST | | |
|------------|-------------|-----------------|-------------------|-------------|----------------|------------------|
| | | TOTAL HHH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 1 | 2 | 00:06:17 | 0:03:08 | 2.94 | 1.47 | 0.95 |
| 100 | 0 | 00:00:00 | 0:99:00 | 0.00 | 0.00 | 0.00 |
| 200 | 0 | 00:00:00 | 0:99:00 | 0.00 | 0.00 | 0.00 |
| 300 | 0 | 00:00:00 | 0:99:00 | 0.00 | 0.00 | 0.00 |
| 400 | 0 | 00:00:00 | 0:99:00 | 0.00 | 0.00 | 0.00 |
| TOTALS: | 2 | 00:06:17 | 0:03:08 | 2.94 | 1.47 | 0.95 |

End of Organization Detail Report

Organization Summary Reports

This sample organization summary report has no meter pulse counts.

ORGANIZATION SUMMARY REPORT

Date: May 1, 1995 Page 1
 Time: 12:00 Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

SELECTION CRITERIA:

DEPARTMENT : All
 COST CENTER : All
 EXTENSION : All

PAGE BREAK FOR EACH COST CENTER: Yes

DEPARTMENT : Accounting
 COST CENTER : 10021

| EXTEN | NAME | TOTAL CALLS | DURATION | | COST | |
|---------|-----------------|-------------|----------------|-------------------|--------------|-----------------|
| | | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) |
| 110 | Robert Wilson | 12 | 0:32:26 | 0:02:42 | 6.87 | 0.57 |
| 114 | William Johnson | 104 | 5:07:15 | 0:02:57 | 168.21 | 1.62 |
| 116 | Brian Smith | 32 | 1:42:49 | 0:03:13 | 17.95 | 0.56 |
| TOTALS: | | 148 | 7:22:30 | 0:03:00 | 192.98 | 1.30 |

This sample organization summary report shows the meter pulse counts.

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

SELECTION CRITERIA:

DEPARTMENT : All
 COST CENTER : All
 EXTENSION : All

PAGE BREAK FOR EACH COST CENTER: Yes

Organization Summary Report

Date: May 1, 1995 Page 1
 Time: 12:00 Company Name

DEPARTMENT : Accounting
 COST CENTER : 10022

| EXTEN | NAME | TOTAL CALLS | METER PULSES | DURATION | | COST | |
|---------|--------------|-------------|--------------|----------------|-------------------|--------------|-----------------|
| | | | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) |
| 210 | Bill Madison | 9 | 100 | 0:23:26 | 0:02:36 | 16.76 | 1.86 |
| 214 | Paul Jackson | 44 | 300 | 3:07:15 | 0:04:15 | 85.91 | 1.95 |
| 216 | Pat Wallace | 22 | 150 | 1:02:29 | 0:02:50 | 18.26 | 0.83 |
| TOTALS: | | 75 | 550 | 4:33:10 | 0:03:39 | 120.93 | 1.61 |

Cost Center Summary Report

COST CENTER SUMMARY REPORT

Date: May 1, 1995
Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

DEPARTMENT : Accounting

| COST CENTER | TOTAL CALLS | DURATION | | COST | | |
|-------------|-------------|----------------|-------------------|--------------|-----------------|-------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 10010 | 9 | 1:24:24 | 0:09:23 | 32.59 | 3.62 | 0.39 |
| 10011 | 10 | 1:24:09 | 0:08:25 | 33.67 | 3.37 | 0.40 |
| TOTALS: | 19 | 2:48:33 | 0:08:52 | 66.26 | 3.49 | 0.39 |

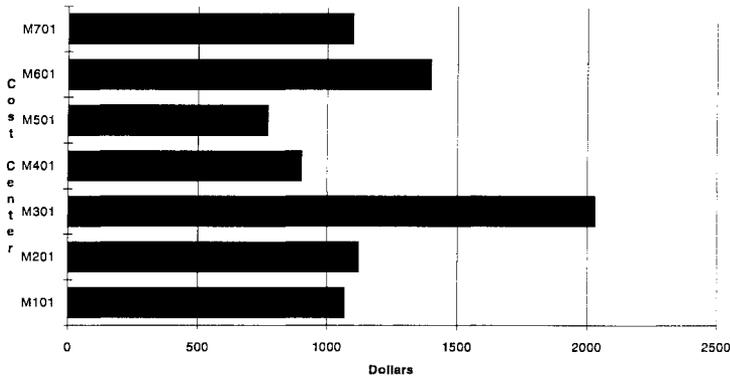
DEPARTMENT : Sales

| COST CENTER | TOTAL CALLS | DURATION | | COST | | |
|-------------|-------------|----------------|-------------------|--------------|-----------------|-------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 21220 | 3 | 0:38:16 | 0:12:45 | 2.16 | 0.72 | 0.06 |
| 21223 | 6 | 1:06:14 | 0:11:02 | 26.10 | 4.35 | 0.39 |
| 21443 | 4 | 0:50:32 | 0:12:38 | 20.45 | 5.11 | 0.40 |
| 21556 | 1 | 0:07:14 | 0:07:14 | 0.40 | 0.40 | 0.06 |
| 21767 | 1 | 0:00:53 | 0:00:53 | 11.52 | 11.52 | 13.04 |
| TOTALS: | 15 | 2:43:09 | 0:10:53 | 60.63 | 4.04 | 0.37 |

COMPANY TOTALS : Company Name

| DEPARTMENT | TOTAL CALLS | DURATION | | COST | | |
|------------|-------------|----------------|-------------------|--------------|-----------------|-------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| Accounting | 19 | 2:48:33 | 0:08:52 | 66.26 | 3.49 | 0.39 |
| Sales | 15 | 2:43:09 | 0:10:53 | 60.63 | 4.04 | 0.37 |
| TOTALS: | 34 | 5:31:42 | 0:09:45 | 126.89 | 3.73 | 0.38 |

Cost Center Cost Allocation



END OF COST CENTER SUMMARY REPORT...

Department Summary Report

DEPARTMENT SUMMARY REPORT

Date: May 1, 1995
Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

| DEPARTMENT | TOTAL CALLS | DURATION | | COST | | |
|-------------|-------------|----------------|-------------------|--------------|-----------------|-------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| Accounting | 9 | 1:24:24 | 0:09:23 | 32.59 | 3.62 | 0.39 |
| Engineering | 10 | 1:24:09 | 0:08:25 | 33.67 | 3.37 | 0.40 |
| TOTALS: | 19 | 2:48:33 | 0:08:52 | 66.26 | 3.49 | 0.39 |

DEPARTMENT SUMMARY REPORT

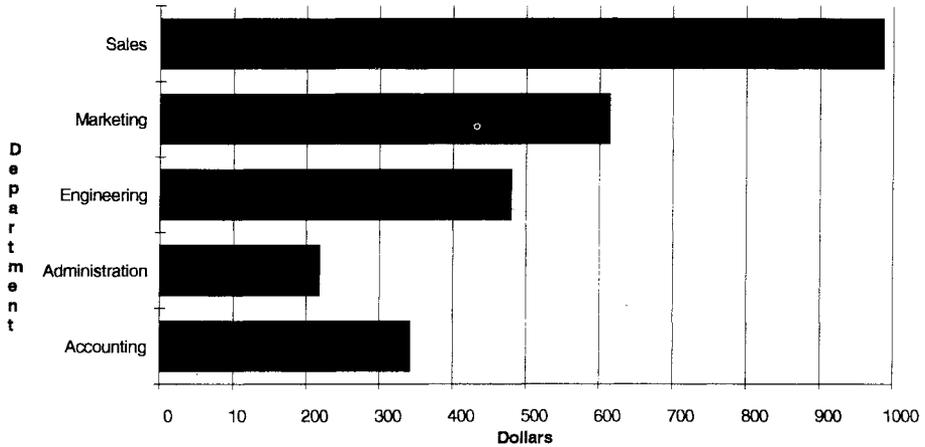
Date: May 1, 1995
Time: 12:00

Page 2

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

Department Cost Allocation



END OF DEPARTMENT SUMMARY REPORT...

Department Trends Report

DEPARTMENT TRENDS REPORT

Date: Apr 26, 1995
 Time: 12:00

Page 1

Company Name

SELECTION CRITERIA:

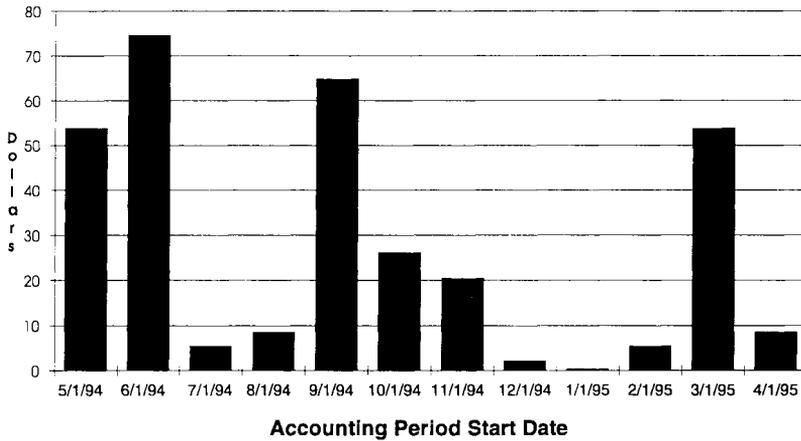
DEPARTMENTS : Engineering

DEPARTMENT : Engineering

| START OF PERIOD | TOTAL CALLS | DURATION | | COST | | |
|-----------------|-------------|----------------|-------------------|--------------|-----------------|-------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 05/01/89 | 36 | 5:49:21 | 0:09:42 | 53.77 | 1.49 | 0.15 |
| 06/01/89 | 86 | 13:45:12 | 0:09:36 | 74.68 | 0.87 | 0.09 |
| 07/01/89 | 12 | 0:45:12 | 0:03:46 | 5.40 | 0.45 | 0.12 |
| 08/01/89 | 20 | 1:11:20 | 0:03:34 | 8.52 | 0.43 | 0.12 |
| 09/01/89 | 70 | 10:13:31 | 0:08:46 | 64.86 | 0.93 | 0.11 |
| 10/01/89 | 6 | 1:06:13 | 0:11:02 | 26.10 | 4.35 | 0.39 |
| 11/01/89 | 4 | 0:50:32 | 0:12:38 | 20.45 | 5.11 | 0.40 |
| 12/01/89 | 3 | 0:38:57 | 0:10:52 | 2.16 | 0.72 | 0.20 |
| 01/01/95 | 1 | 0:07:41 | 0:07:41 | 0.40 | 0.40 | 0.05 |
| 02/01/95 | 12 | 0:45:12 | 0:03:46 | 5.40 | 0.45 | 0.12 |
| 03/01/95 | 36 | 5:49:21 | 0:09:42 | 53.77 | 1.49 | 0.15 |
| *04/01/95 | 20 | 1:11:20 | 0:03:34 | 8.52 | 0.43 | 0.12 |
| TOTALS: | 306 | 42:13:52 | 0:08:16 | 324.03 | 1.06 | 0.13 |

* This period is not complete.

Department Cost Trends



END OF DEPARTMENT TRENDS REPORT...

Budget Report

BUDGET REPORT

Date: May 1, 1995
Time: 12:00

Page 1

Company Name

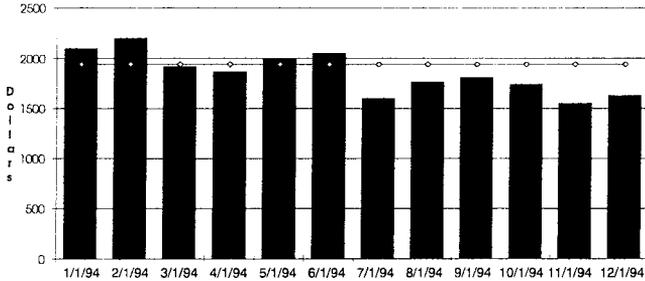
CURRENT ACCOUNTING PERIOD: Mar 31, 1995 to Apr 30, 1995

| DEPARTMENT | ACTUAL (\$) | BUDGET (\$) | VARIANCE (\$) |
|----------------|------------------|------------------|--------------------|
| Accounting | 194.00 | 157.00 | 27.00 |
| Engineering | 302.00 | 333.00 | (31.00) |
| Marketing | 396.00 | 417.00 | (21.00) |
| Sales | 641.00 | 583.00 | 58.00 |
| TOTALS: | 1,533.00 | 1,500.00 | 33.00 |

YEAR TO DATE PERIOD: Jan 01, 1995 to Apr 30, 1995

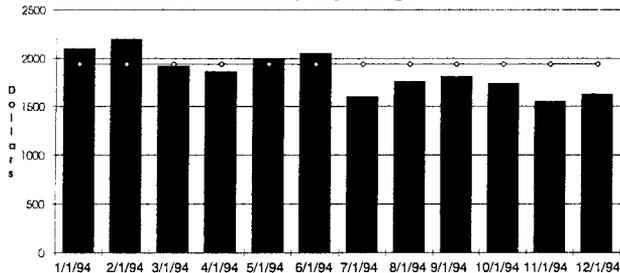
| DEPARTMENT | ACTUAL (\$) | BUDGET (\$) | VARIANCE (\$) |
|----------------|------------------|------------------|--------------------|
| Accounting | 2,116.00 | 2,000.00 | 116.00 |
| Engineering | 3,842.00 | 4,000.00 | (158.00) |
| Marketing | 4,817.00 | 5,000.00 | (183.00) |
| Sales | 7,422.00 | 7,000.00 | 422.00 |
| TOTALS: | 18,197.00 | 18,000.00 | 197.00 |

Department Budget Trends



Accounting Period Start Date

Company Budget Trends



Accounting Period Start Date

■ Actual Cost ◇ Budget

END OF BUDGET REPORT...

Selection Detail Reports

This sample report shows calls that used authorization codes and default rated calls. It also shows inclusive style taxes. A meter pulse count is not shown.

Date: Apr 26, 1995
Time: 12:00

SELECTION DETAIL REPORT

Page 1

Company Name

SELECTION CRITERIA:

DATE RANGE : 04/24/95 to 04/25/95
 TIME RANGE : 00:00 to 24:00
 MINIMUM COST : \$ 0.00
 MINIMUM DURATION : 00:00:00
 DEPARTMENT : All
 COST CENTER : All
 EXTENSION : All
 ACCOUNT CODE : All
 TRUNK : All
 CALL TYPE : All
 DIALED NUMBER : All
 PRIVATE CALLS : Include

SUMMARIZE LOCAL CALLS
 SUMMARIZE INCOMING CALLS

| DATE | TIME | DURATION | EXTENS | DIALED NUMBER | LOCATION | CALL TYPE | TRUNK | ACCOUNT CODE | COST (\$) | |
|----------|-------|----------|---------|-----------------|------------|-----------|-------|--------------|-----------|--------|
| 04/24/95 | 08:06 | 0:05:02 | 110 | 1-201-879-2535 | CHESTER NJ | FX | 12345 | 553395823 | 2.10 | |
| 04/24/95 | 10:16 | 0:13:29 | 111* | 1-415-638-8282 | OAKLAND CA | WATS5 | 543 | | 3.83 | |
| 04/24/95 | 10:57 | 0:08:05 | 110* | 01144256844949 | MOSCOM LTD | IDDD | 44321 | 36654645 | 0.72 | |
| 04/24/95 | 14:02 | 0:17:15 | 113 | 1-206-343-5687 | SEATTLE WA | WATS5 | 543 | | 2.90 | |
| 04/24/95 | 15:03 | 0:14:45 | 110* | 1-305-345-3401 | FT LAUD FL | OS-OL | 802 | 84359564565 | 18.51 | |
| 04/24/95 | 16:30 | 0:06:27 | 113 | 1-708-325-4257 | WESTMT IL | WATS5 | 543 | | 0.35 | |
| 04/25/95 | 09:14 | 0:02:21 | 111 | 1-212-232-5400 | NY NY | IS-IL | 802 | | 2.18 | |
| 04/25/95 | 11:50 | 0:11:54 | 116 | 1-617-527-4540 | NEWTON MA | OS-OL | 802 | | 1.24 | |
| 04/25/95 | 14:21 | 0:00:16 | 112 | 1-713-870-1195 | HOUSTON TX | OS-OL | 802 | 65445675485 | 1.08 | |
| 04/25/95 | 01:00 | 0:01:00 | 112 | 1-716-256-1396 | ROCH NY | SPEC | 812 | | 0.00* | |
| | | 10 | 1:19:34 | DETAIL SUBTOTAL | | | | | | 32.91 |
| | | 1 | 0:03:28 | LOCAL CALLS | | | | | | 0.76 |
| | | 0 | 0:00:00 | INCOMING CALLS | | | | | | 0.00 |
| | | | | | | | | Tax-1 | 5.0% | \$1.65 |
| | | | | | | | | Tax-2 | 0.0% | \$0.00 |
| | | | | | | | | Tax-3 | 0.0% | \$0.00 |

| TOTAL NUMBER OF CALLS | DURATION | | COST | | |
|-----------------------|----------------|-------------------|------------|---------------|-----------------|
| | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 11 | 1:24:02 | 0:04:58 | 33.67 | 3.37 | 0.53 |

END OF SELECTION DETAIL REPORT...

Sample Reports

This sample selection detail shows the meter pulse counts.

SELECTION DETAIL REPORT

Date: Apr 26, 1995
Time: 12:00

Page 1

Company Name

SELECTION CRITERIA:

DATE RANGE : 04/24/95 to 04/25/95
TIME RANGE : 00:00 to 24:00
MINIMUM COST : \$ 0.00
MINIMUM DURATION : 00:00:00
DEPARTMENT : All
COST CENTER : All
EXTENSION : All
ACCOUNT CODE : All
TRUNK : All
CALL TYPE : All
DIALED NUMBER : All
PRIVATE CALLS : Include
SUMMARIZE LOCAL CALLS
SUMMARIZE INCOMING CALLS
SUMMARIZE ZERO-COST CALLS
SUMMARIZE TAXES

| DATE | TIME | DURATION HH:MM:SS | EXTENS | DIALED NUMBER | LOCATION | TYPE | CALL TRUNK | ACCOUNT CODE | METER PULSES | COS (\$) | |
|----------|-------|----------------------|--------|-----------------|------------|-------|---------------|--------------|-----------------|---------------|----|
| 04/24/95 | 08:06 | 0:05:02 | 110 | 1-201-879-2535 | CHESTER NJ | FX | 12345 | 553395823 | 10 | 2 | |
| 04/24/95 | 10:16 | 0:13:29 | 111 | 1-415-638-8282 | OAKLAND CA | WATS5 | 543 | | 20 | 3 | |
| 04/24/95 | 10:57 | 0:08:05 | 110 | 01144256844949 | MOSCOM LTD | IDDD | 44321 | 36654645 | 5 | 0 | |
| 04/24/95 | 14:02 | 0:17:15 | 113 | 1-206-343-5687 | SEATTLE WA | WATS5 | 543 | | 15 | 2 | |
| 04/24/95 | 15:03 | 0:14:45 | 110 | 1-305-345-3401 | FT LAUD FL | OS-OL | 802 | 84359564565 | 55 | 18 | |
| 04/24/95 | 16:30 | 0:06:27 | 113 | 1-708-325-4257 | WESTMT IL | WATS5 | 543 | | 1 | 0 | |
| 04/25/95 | 09:14 | 0:02:21 | 111 | 1-212-232-5400 | NY NY | IS-IL | 802 | | 10 | 2 | |
| 04/25/95 | 11:50 | 0:11:54 | 116 | 1-617-527-4540 | NEWTON MA | OS-OL | 802 | | 5 | 1 | |
| 04/25/95 | 14:21 | 0:00:16 | 112 | 1-713-870-1195 | HOUSTON TX | OS-OL | 802 | 65445675485 | 4 | 1 | |
| | | | | DETAIL SUBTOTAL | | | | | | 125 | 32 |
| | | | | LOCAL CALLS | | | | | | 0 | 0 |
| | | | | INCOMING CALLS | | | | | | 0 | 0 |
| | | | | ZERO-COST CALLS | | | | | | 0 | 0 |
| | | | | TAX | | | | | | 0 | 0 |

| TOTAL NUMBER OF CALLS | METER PULSES | --- DURATION --- | | --- COST --- | | |
|--------------------------|-----------------|-------------------|----------------------|-----------------|--------------------|----------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 10 | 125 | 1:23:02 | 0:04:58 | 33.67 | 3.37 | 0.53 |

Selection Summary Reports

This selection summary report does not show meter pulse counts.

SELECTION SUMMARY REPORT

Date: Apr 25, 1995 Page 1
 Time: 12:00 Company Name

SELECTION CRITERIA:

DATE RANGE : 04/24/95 to 04/24/95
 TIME RANGE : 00:00 to 24:00
 MINIMUM COST : \$ 0.00
 MINIMUM DURATION : 00:00:00
 DEPARTMENT : All
 COST CENTER : All
 EXTENSION : All
 ACCOUNT CODE : All
 TRUNK : All
 CALL TYPE : All
 DIALED NUMBER : All
 PRIVATE CALLS : Include

| TOTAL NUMBER OF CALLS | ---- DURATION ---- | | ----- COST ----- | | |
|--------------------------|--------------------|----------------------|------------------|--------------------|----------------------|
| | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 10 | 1:23:02 | 0:04:58 | 33.67 | 3.37 | 0.53 |

END OF SELECTION SUMMARY REPORT...

This sample selection summary report shows meter pulse counts.

Selection Summary Report

Date: Apr 25, 1995 Page 1
 Time: 12:00 Company Name

SELECTION CRITERIA:

DATE RANGE : 04/24/95 to 04/24/95
 TIME RANGE : 00:00 to 24:00
 MINIMUM COST : \$ 0.00
 MINIMUM DURATION : 00:00:00
 DEPARTMENT : All
 COST CENTER : All
 EXTENSION : All
 ACCOUNT CODE : All
 TRUNK : All
 CALL TYPE : All
 DIALED NUMBER : All
 PRIVATE CALLS : Include

| TOTAL NUMBER OF CALLS | METER PULSES | ---- DURATION ---- | | ----- COST ----- | | |
|--------------------------|-----------------|--------------------|----------------------|------------------|--------------------|----------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 10 | 125 | 1:23:02 | 0:04:58 | 33.67 | 3.37 | 0.53 |

End of Selection Summary Report...

Account Code Detail and Summary Report

ACCOUNT CODE DETAIL REPORT

Date: Apr 26, 1995

Time: 12:00

Page 1

Company Name

SELECTION CRITERIA :

DATE RANGE : 04/25/95 to 04/25/95

ACCOUNT CODE : All

PAGE BREAKS FOR EACH ACCOUNT CODE: Yes

SUMMARIZE LOCAL CALLS

SUMMARIZE INCOMING CALLS

SUMMARIZE ZERO-COST CALLS

ACCOUNT CODE: 553395823

| DATE | TIME | DURATION HH:MM:SS | EXTENS | DIALED NUMBER | LOCATION | CALL TYPE | COST (\$) |
|----------|-------|----------------------|--------|-----------------------|------------|--------------|----------------|
| 04/25/95 | 10:16 | 0:13:44 | 111 | 1-401-224-4583 | PROV RI | LDIST | 3.83 |
| 04/25/95 | 10:57 | 0:08:50 | 110 | 1-212-283-1000 | NY NY | FX | 0.72 |
| 04/25/95 | 14:02 | 0:17:56 | 113 | 1-408-224-3121 | SAN JOS CA | WATSS | 2.90 |
| 04/25/95 | 15:03 | 0:14:13 | 110 | 011679343211 | FIJI-ISLAN | IDDD | 18.51 |
| | 4 | 0:54:43 | | DETAIL SUBTOTAL | | | 25.96 |
| | 0 | 0:00:00 | | LOCAL CALLS | | | 0.00 |
| | 0 | 0:00:00 | | INCOMING CALLS | | | 0.00 |
| | 0 | 0:00:00 | | OTHER ZERO-COST CALLS | | | 0.00 |
| | | | | Federal Tax | | | 0.00 |
| | | | | State Tax | | | 0.00 |
| | | | | Local Tax | | | 0.00 |
| | | 0:54:43 | | NUMBER OF CALLS: 4 | | | 25.96 |

ACCOUNT CODE SUMMARY REPORT

Date: May 1, 1995

Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

SELECTION CRITERIA:

ACCOUNT CODE: All

| ACCOUNT CODE | TOTAL CALLS | DURATION | | COST | | |
|--------------|----------------|----------|----------------------|-----------------|--------------------|----------------------|
| | | HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 1001 | 6 | 1:06:13 | 0:11:02 | 26.10 | 4.35 | 0.39 |
| 1002 | 4 | 0:50:32 | 0:12:38 | 20.45 | 5.11 | 0.40 |
| 1003 | 3 | 0:38:57 | 0:10:52 | 2.16 | 0.72 | 0.20 |
| 1004 | 1 | 0:07:41 | 0:07:41 | 0.40 | 0.40 | 0.05 |
| TOTALS: | 14 | 2:43:23 | 0:11:40 | 49.11 | 3.51 | 0.30 |

END OF ACCOUNT CODE SUMMARY REPORT...

Call Type Report

Date: May 1, 1995
Time: 12:00

CALL TYPE REPORT

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

| CALL TYPE | TOTAL CALLS | DURATION | | COST | | |
|-----------|-------------|----------------|-------------------|--------------|-----------------|-------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| LOCAL | 3 | 0:38:16 | 0:12:45 | 2.16 | 0.72 | 0.06 |
| IS-IL | 6 | 1:06:14 | 0:11:02 | 26.10 | 4.35 | 0.39 |
| OS-OL | 4 | 0:50:32 | 0:12:38 | 20.45 | 5.11 | 0.40 |
| IDDD | 1 | 0:07:14 | 0:07:14 | 0.40 | 0.40 | 0.06 |
| FX | 1 | 0:00:53 | 0:00:53 | 11.52 | 11.52 | 13.04 |
| TOTALS: | 15 | 2:43:09 | 0:10:53 | 60.63 | 4.04 | 0.37 |

Date: May 1, 1995
Time: 12:00

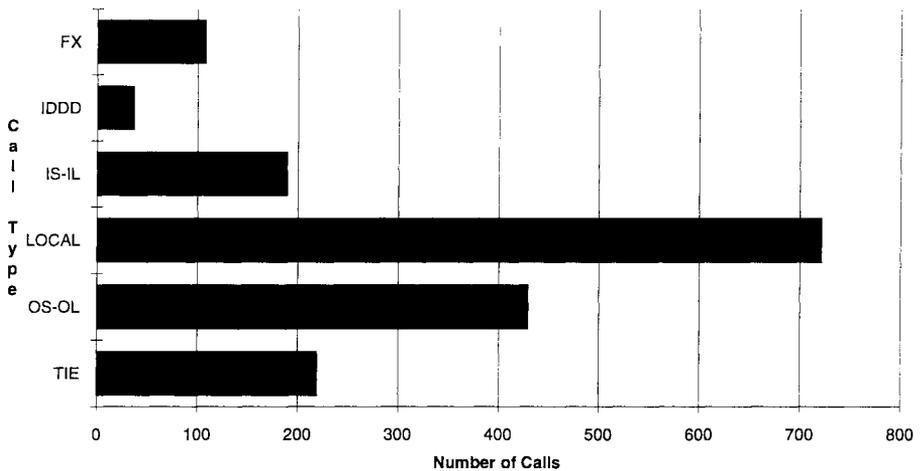
CALL TYPE REPORT

Page 2

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

Call Type Call Distribution



END OF CALL TYPE REPORT...

Cost and Duration Report

COST AND DURATION REPORT

Date: May 1, 1995
 Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

COST DISTRIBUTION

| COST RANGE (\$) | TOTAL CALLS | DURATION | | COST | | |
|----------------------|----------------|-------------------|----------------------|-----------------|--------------------|----------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 0.00 - 0.99 | 10 | 0:09:55 | 0:01:00 | 2.03 | 0.20 | 0.20 |
| 1.00 - 2.99 | 21 | 0:46:21 | 0:02:12 | 31.92 | 1.52 | 0.69 |
| 3.00 - 4.99 | 7 | 0:28:10 | 0:04:01 | 26.19 | 3.74 | 0.93 |
| 5.00 - 9.99 | 2 | 0:17:33 | 0:08:47 | 14.24 | 7.12 | 0.81 |
| 10.00 - 19.99 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 20.00 - 49.99 | 1 | 0:20:43 | 0:20:43 | 26.45 | 26.45 | 1.28 |
| OVER - 49.99 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| TOTALS: | 41 | 2:02:42 | 0:03:00 | 100.83 | 2.46 | 0.82 |

DURATION DISTRIBUTION

| DURATION RANGE MM:SS | TOTAL CALLS | DURATION | | COST | | |
|-------------------------|----------------|-------------------|----------------------|-----------------|--------------------|----------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 00:00 - 00:59 | 10 | 0:09:55 | 0:01:00 | 2.03 | 0.20 | 0.20 |
| 01:00 - 02:59 | 21 | 0:46:21 | 0:02:12 | 31.92 | 1.52 | 0.69 |
| 03:00 - 04:59 | 7 | 0:28:10 | 0:04:01 | 26.19 | 3.74 | 0.93 |
| 05:00 - 09:59 | 2 | 0:17:33 | 0:08:47 | 14.24 | 7.12 | 0.81 |
| 10:00 - 19:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 20:00 - 44:59 | 1 | 0:20:43 | 0:20:43 | 26.45 | 26.45 | 1.28 |
| 45:00 - 59:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| OVER - 59.99 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| TOTALS: | 41 | 2:02:42 | 0:03:00 | 100.83 | 2.46 | 0.82 |

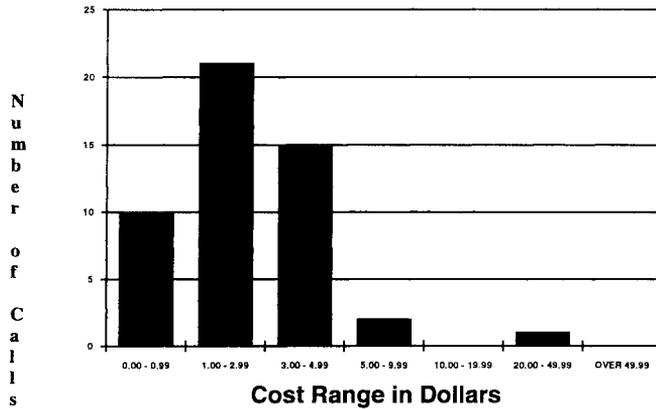
COST AND DURATION REPORT

Date: May 1, 1995
Time: 12:00

Company Name

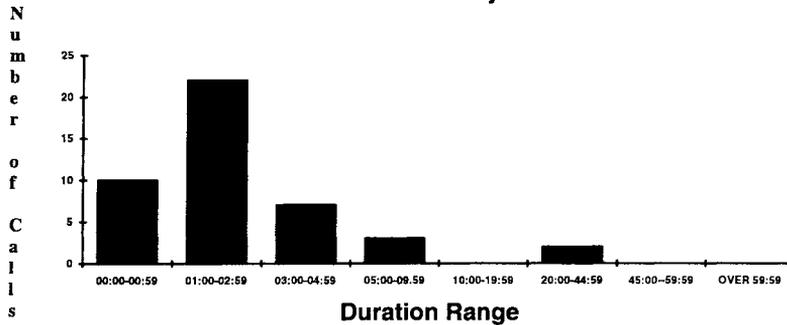
DATE RANGE: Mar 31, 1995 to Apr 30, 1995

Cost Analysis



DATE RANGE: Mar 31, 1995 to Apr 30, 1995

Duration Analysis



END OF COST AND DURATION REPORT...

Time of Day Report

TIME OF DAY REPORT

Date: May 1, 1995
 Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

SELECTION CRITERIA:

INCLUDE OUTGOING CALLS: Yes
 INCLUDE INCOMING CALLS: Yes

| TIME OF DAY | ----- DURATION ----- | | | ----- COST ----- | | |
|---------------|----------------------|----------------|-------------------|------------------|-----------------|-------------------|
| | TOTAL CALLS | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 00:00 - 00:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 01:00 - 01:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 02:00 - 02:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 03:00 - 03:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 04:00 - 04:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 05:00 - 05:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 06:00 - 06:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 07:00 - 07:59 | 3 | 0:06:10 | 0:02:03 | 0.42 | 0.14 | 0.07 |
| 08:00 - 08:59 | 6 | 0:18:32 | 0:03:05 | 1.45 | 0.24 | 0.08 |
| 09:00 - 09:59 | 11 | 0:38:34 | 0:03:30 | 6.02 | 0.55 | 0.16 |
| 10:00 - 10:59 | 10 | 0:42:08 | 0:04:13 | 13.30 | 1.33 | 0.32 |
| 11:00 - 11:59 | 21 | 1:51:44 | 0:05:19 | 27.82 | 1.32 | 0.25 |
| 12:00 - 12:59 | 12 | 0:31:22 | 0:02:37 | 3.02 | 0.25 | 0.10 |
| 13:00 - 13:59 | 32 | 2:14:39 | 0:04:12 | 41.25 | 1.29 | 0.31 |
| 14:00 - 14:59 | 17 | 0:51:34 | 0:03:02 | 17.82 | 1.05 | 0.35 |
| 15:00 - 15:59 | 11 | 0:29:13 | 0:02:39 | 5.44 | 0.49 | 0.19 |
| 16:00 - 16:59 | 15 | 0:43:08 | 0:02:53 | 11.71 | 0.78 | 0.27 |
| 17:00 - 17:59 | 7 | 0:16:41 | 0:02:23 | 2.10 | 0.30 | 0.13 |
| 18:00 - 18:59 | 1 | 0:21:53 | 0:21:53 | 0.35 | 0.00 | 0.02 |
| 19:00 - 19:59 | 2 | 0:16:16 | 0:08:08 | 2.19 | 1.10 | 0.13 |
| 20:00 - 20:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 21:00 - 21:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 22:00 - 22:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| 23:00 - 23:59 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| TOTALS: | 148 | 9:21:54 | 0:03:48 | 132.89 | 0.95 | 0.24 |

The heaviest traffic based on duration is between 13:00 and 13:59. This time period accounts for 24% of the total traffic.

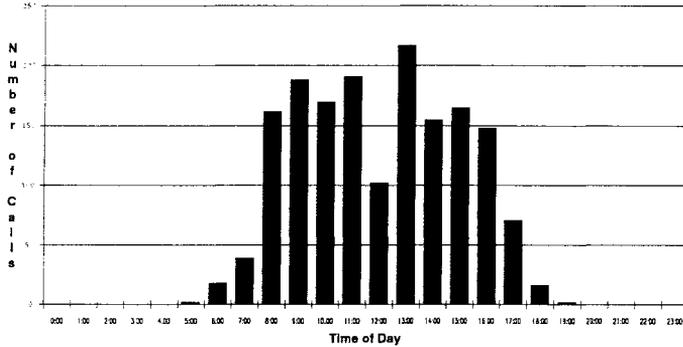
TIME OF DAY REPORT

Date: May 1, 1995
Time: 12:00

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

Time of Day Call Distribution



The heaviest traffic based on duration is between 13:00 and 13:59. This time period accounts for 24% of the total traffic.

END OF TIME OF DAY REPORT...

Call Distribution Reports

CALL DISTRIBUTION REPORT

Date: May 1, 1995
Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

SELECTION CRITERIA:

INCLUDE FIXED RATE LOCATION TABLE : Yes
INCLUDE USER DEFINED LOCATION TABLE: Yes

FIXED RATE LOCATION TABLE

| DIALING PATTERN | LOCATION | DURATION | | | COST | | |
|--------------------|--------------|----------------|--------------------|----------------------|-----------------|--------------------|----------------------|
| | | TOTAL CALLS | TOTAL HHH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 201 | NEW JERSEY | 8 | 00:34:00 | 0:00:00 | 10.19 | 0.00 | 0.29 |
| 202 | DIST COL | 2 | 00:26:00 | 0:00:00 | 5.85 | 0.00 | 0.22 |
| 203 | CONNECTICT | 3 | 00:12:00 | 0:00:00 | 2.87 | 0.00 | 0.23 |
| 204 | MANITOBA | 7 | 01:55:00 | 0:00:00 | 20.95 | 0.00 | 0.18 |
| 205 | ALABAMA | 34 | 01:57:00 | 0:00:00 | 21.91 | 0.00 | 0.18 |
| . | | | | | | | |
| 44 | UK | 1337 | 82:36:00 | 0:00:00 | 106.96 | 0.00 | 0.02 |
| 16 | FIJI ISLANDS | 56 | 03:02:00 | 0:00:00 | 192.12 | 0.00 | 1.05 |
| OTHER | | 15 | 00:22:00 | 0:00:00 | 5.16 | 0.00 | 0.23 |
| TOTALS: | | 3058 | 189:22:00 | 0:00:00 | 1,679.93 | 0.00 | 0.00 |

END OF CALL DISTRIBUTION REPORT...

CLI CALL DISTRIBUTION REPORT

Date: May 1, 1995
Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

SELECTION CRITERIA:

INCLUDE FIXED RATE LOCATION TABLE : Yes
INCLUDE USER DEFINED LOCATION TABLE: Yes

FIXED RATE LOCATION TABLE

| DIALING PATTERN | LOCATION | DURATION | | | COST | | |
|--------------------|--------------|----------------|--------------------|----------------------|-----------------|--------------------|----------------------|
| | | TOTAL CALLS | TOTAL HHH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 201 | NEW JERSEY | 8 | 00:34:00 | 0:00:00 | 10.19 | 0.00 | 0.29 |
| 202 | DIST COL | 2 | 00:26:00 | 0:00:00 | 5.85 | 0.00 | 0.22 |
| 203 | CONNECTICT | 3 | 00:12:00 | 0:00:00 | 2.87 | 0.00 | 0.23 |
| 204 | MANITOBA | 7 | 01:55:00 | 0:00:00 | 20.95 | 0.00 | 0.18 |
| 205 | ALABAMA | 34 | 01:57:00 | 0:00:00 | 21.91 | 0.00 | 0.18 |
| . | | | | | | | |
| 44 | UK | 1337 | 82:36:00 | 0:00:00 | 106.96 | 0.00 | 0.02 |
| 16 | FIJI ISLANDS | 56 | 03:02:00 | 0:00:00 | 192.12 | 0.00 | 1.05 |
| OTHER | | 15 | 00:22:00 | 0:00:00 | 5.16 | 0.00 | 0.23 |
| TOTALS: | | 3058 | 189:22:00 | 0:00:00 | 1,679.93 | 0.00 | 0.00 |

END OF CLI CALL DISTRIBUTION REPORT...

Ring Time Analysis Report

RING TIME ANALYSIS REPORT

Date: May 1, 1995
 Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

| RING TIME (SECONDS) | -- ALL CALLS -- | | --- ANSWERED --- | | -- UNANSWERED -- | |
|------------------------|-----------------|---------------------|------------------|----------------------|------------------|----------------------|
| | NUMBER | PERCENT OF TOTAL | NUMBER | PERCENT OF NUMBER | NUMBER | PERCENT OF NUMBER |
| 0 - 5 | 1,075 | 64.3 | 1,075 | 100.0 | 0 | 0.0 |
| 6 - 10 | 286 | 17.1 | 273 | 95.5 | 13 | 4.5 |
| 11 - 15 | 117 | 7.0 | 103 | 88.0 | 14 | 12.0 |
| 16 - 20 | 48 | 2.9 | 41 | 85.4 | 7 | 14.6 |
| 21 - 25 | 41 | 2.5 | 34 | 82.9 | 7 | 17.1 |
| 26 - 30 | 91 | 5.4 | 67 | 73.6 | 24 | 26.4 |
| 31 - 45 | 12 | 0.7 | 4 | 33.3 | 8 | 66.7 |
| 46 - 60 | 1 | 0.1 | 0 | 0.0 | 1 | 100.0 |
| 61 - 120 | 0 | 0.0 | 0 | - | 0 | - |
| 120 + | 0 | 0.0 | 0 | - | 0 | - |
| TOTALS: | 1,671 | 100.0 | 1,597 | 95.6 | 74 | 4.4 |

RING TIME ANALYSIS REPORT

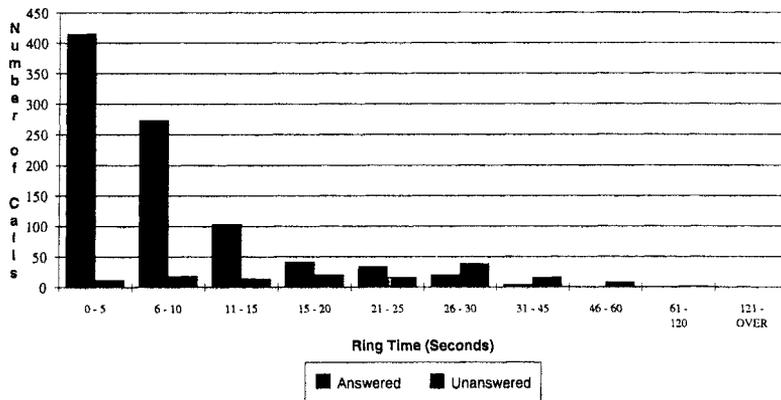
Date: May 1, 1995
 Time: 12:00

Page 2

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

Ring Time Analysis



END OF RING TIME ANALYSIS REPORT...

Incoming Traffic Analysis Report

INCOMING TRAFFIC ANALYSIS REPORT Page 1
 Date: May 1, 1995
 Time: 12:00 Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

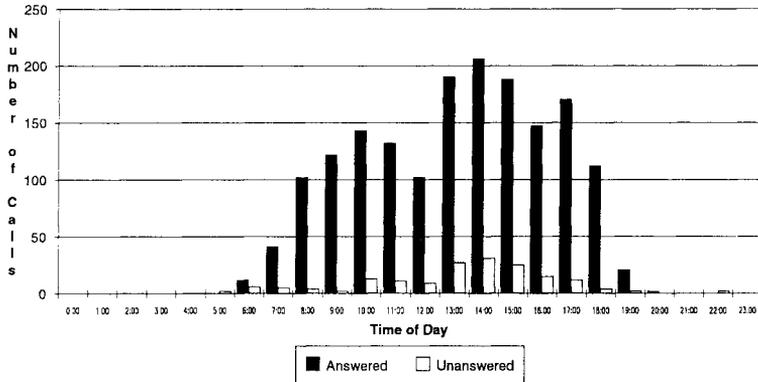
| TIME OF DAY | TOTAL CALLS | ANSWERED | | | UNANSWERED | | |
|---------------|-------------|----------|-------|---------------------|------------|------|---------------------|
| | | NUMBER | % | RING TIME (SECONDS) | NUMBER | % | RING TIME (SECONDS) |
| 00:00 - 00:59 | 0 | 0 | 0.0 | 0 | 0 | 0.0 | 0 |
| : | | | | | | | |
| 08:00 - 08:59 | 30 | 30 | 100.0 | 2 | 0 | 0.0 | 0 |
| 00:00 - 00:59 | 45 | 44 | 97.8 | 5 | 1 | 2.2 | 34 |
| 00:00 - 00:59 | 59 | 56 | 94.9 | 9 | 3 | 5.1 | 37 |
| 11:00 - 11:59 | 96 | 85 | 88.5 | 15 | 11 | 11.5 | 41 |
| : | | | | | | | |
| 23:00 - 23:59 | 0 | 0 | 0.0 | 0 | 0 | 0.0 | 0 |
| TOTALS: | 645 | 621 | 96.3 | 8 | 24 | 3.7 | 37 |

NOTE: 11.5% of the total number of incoming calls were unanswered between 11:00 - 11:59.

INCOMING TRAFFIC ANALYSIS REPORT Page 2
 Date: May 1, 1995
 Time: 12:00 Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

Incoming Traffic Analysis



END OF INCOMING TRAFFIC ANALYSIS REPORT...

Rejected Call Summary Report

REJECTED CALL SUMMARY REPORT

Date: May 1, 1995
 Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

CALLS REJECTED BY THE CALL TYPE STORAGE OPTIONS

| CALL TYPE | TOTAL CALLS | DURATION | | COST | | |
|-----------|-------------|----------------|-------------------|--------------|-----------------|-------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| LOCAL | 25 | 0:25:50 | 0:01:02 | 12.50 | 0.50 | 0.48 |
| SPCL | 10 | 0:21:45 | 0:02:11 | 38.59 | 3.86 | 1.77 |
| . | | | | | | |
| . | | | | | | |
| . | | | | | | |
| TOTALS: | 181 | 25:13:09 | 0:08:22 | 173.66 | 0.96 | 0.12 |

END OF REJECTED CALL SUMMARY REPORT...

Expensive Calls Report

EXPENSIVE CALLS REPORT

Date: May 1, 1995
 Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

SELECTION CRITERIA:
 EXTENSION : All
 CALLS TO REPORT: 15

| | COST (\$) | DURATION HH:MM:SS | DATE | TIME | DIALED NUMBER | LOCATION | EXTEN | PERSONNEL |
|---|-------------|-------------------|----------|-------|----------------|------------|-------|-----------|
| | | | | | | | | NAME |
| ! | 655.35 | 15:25:44 | 04/16/95 | 14:28 | 01144256844949 | MOSCOM UK | 4342 | Wild, Jay |
| | 18.51 | 0:34:45 | 04/03/95 | 16:21 | 1-305-345-3401 | FT LAUD FL | 1332 | Smit, Tom |

END OF EXPENSIVE CALLS REPORT...

Facility Summary Report

FACILITY SUMMARY REPORT

Date: May 1, 1995
 Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

SELECTION CRITERIA:
 FACILITIES : All

FACILITY : 10837

| TRUNK | TOTAL CALLS | DURATION | | COST | | |
|---------|-------------|----------------|-------------------|--------------|-----------------|-------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 1023 | 27 | 3:42:04 | 0:08:13 | 31.29 | 1.16 | 0.14 |
| 1024 | 36 | 5:49:21 | 0:09:42 | 53.77 | 1.49 | 0.15 |
| 1025 | 86 | 13:45:12 | 0:09:36 | 74.68 | 0.87 | 0.09 |
| TOTALS: | 149 | 23:16:37 | 0:09:22 | 159.74 | 1.07 | 0.11 |

FACILITY : 24432

| TRUNK | TOTAL CALLS | DURATION | | COST | | |
|---------|-------------|----------------|-------------------|--------------|-----------------|-------------------|
| | | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 2010 | 12 | 0:45:12 | 0:03:46 | 5.40 | 0.45 | 0.12 |
| 2011 | 20 | 1:11:20 | 0:03:34 | 8.52 | 0.43 | 0.12 |
| 2012 | 0 | 0:00:00 | 0:00:00 | 0.00 | 0.00 | 0.00 |
| TOTALS: | 32 | 1:56:32 | 0:03:39 | 13.92 | 0.44 | 0.12 |

GRAND TOTALS:

| TOTAL CALLS | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
|-------------|----------------|-------------------|--------------|-----------------|-------------------|
| 181 | 25:13:09 | 0:08:22 | 173.66 | 0.96 | 0.12 |

Trunk Line 2012 Had NO Activity.

END OF FACILITY SUMMARY REPORT...

Facility Trends Report

FACILITY TRENDS REPORT

Date: Apr 30, 1995
 Time: 12:00

Company Name

SELECTION CRITERIA:
 FACILITIES : 1010

FACILITY : 1010

| START OF PERIOD | TOTAL CALLS | NUMBER OF LINES | TOTAL DURATION HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | COST PER CALL (\$) | PER MINUTE (\$) |
|-----------------|-------------|-----------------|----------------------------|----------------------|-----------------|-------------------------|----------------------|
| 05/01/89 | 36 | 2 | 5:49:21 | 0:09:42 | 53.77 | 1.49 | 0.15 |
| 06/01/89 | 86 | 2 | 13:45:12 | 0:09:36 | 74.68 | 0.87 | 0.09 |
| 07/01/89 | 12 | 2 | 0:45:12 | 0:03:46 | 5.40 | 0.45 | 0.12 |
| 08/01/89 | 20 | 2 | 1:11:20 | 0:03:34 | 8.52 | 0.43 | 0.12 |
| 09/01/89 | 70 | 2 | 10:13:31 | 0:08:46 | 64.86 | 0.93 | 0.11 |
| 10/01/89 | 6 | 1 | 1:06:13 | 0:11:02 | 26.10 | 4.35 | 0.39 |
| 11/01/89 | 4 | 1 | 0:50:32 | 0:12:38 | 20.45 | 5.11 | 0.40 |
| 12/01/89 | 3 | 1 | 0:38:57 | 0:10:52 | 2.16 | 0.72 | 0.20 |
| 01/01/95 | 1 | 1 | 0:07:41 | 0:07:41 | 0.40 | 0.40 | 0.05 |
| 02/01/95 | 12 | 2 | 0:45:12 | 0:03:46 | 5.40 | 0.45 | 0.12 |
| 03/01/95 | 36 | 2 | 5:49:21 | 0:09:42 | 53.77 | 1.49 | 0.15 |
| *04/01/95 | 20 | 2 | 1:11:20 | 0:03:34 | 8.52 | 0.43 | 0.12 |
| TOTALS: | 306 | | 42:13:52 | 0:08:16 | 324.03 | 1.06 | 0.13 |

* This period is not complete period.

FACILITY TRENDS REPORT

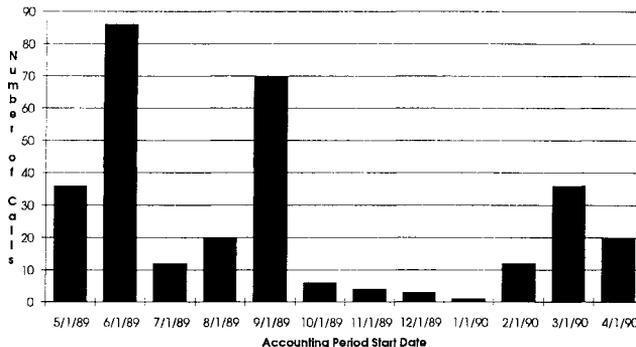
Date: Jan 01, 1995
 Time: 12:00

Company Name

SELECTION CRITERIA:
 FACILITIES : 1010

FACILITY : 1010

Facility Trends



END OF FACILITY TRENDS REPORT...

Immediate Output Report

Call Record Immediate Output Report Page 1
 Date: Mar 26, 1995
 Time: 12:00 Company Name

| CODE | DATE | TIME | DURATION | | EXTENS | DIALED NUMBER | LOCATION | CALL | | COST |
|---------|----------|-------|----------|--------|----------------|---------------|----------|------|---------------------------|-------|
| | | | HH:MM:SS | EXTENS | | | | TYPE | TRUNK ACCOUNT CODE (\$) | |
| | 04 24 95 | 08:06 | 0:05:23 | 1111 | 385-6388 | E ROCH NY | IS-IL | 1000 | 11111111 | 2.10 |
| REJECT | 04 24 95 | 10:16 | 0:13:49 | 2222 | 1-708-325-4257 | WMONT IL | WATS3 | 2000 | | 3.83 |
| PRIVATE | 04 24 95 | 10:57 | 0:08:51 | 3333 | 1-305-345 3401 | FT LAD FL | WATS2 | 3000 | | 0.72 |
| | 04 24 95 | 14:02 | 0:17:56 | 4444 | 1-201-879-2535 | CHSTER NJ | FX | 4000 | | 2.90 |
| | 04 24 95 | 15:03 | 0:14:25 | 5555 | 01144256844949 | MOSCOM | LTD1DDD | 5000 | | 18.51 |

Longest Calls Report

LONGEST CALLS REPORT Page 1
 Date: May 1, 1995
 Time: 12:00 Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

SELECTION CRITERIA:
 EXTENSION : All
 CALLS TO REPORT: 15

| DURATION | COST | PERSONNEL | | | DIALED NUMBER | LOCATION | EXTEN | NAME |
|------------|-------|-----------|-------|--|----------------|------------|-------|-------------|
| HH:MM:SS (| \$) | DATE | TIME | | | | | |
| 1:25:44 | 44.99 | 04/16/95 | 14:28 | | 01144256844949 | MOSCOM UK | 4342 | Wilson, Art |
| 0:34:45 | 18.51 | 04/03/95 | 16:21 | | 1-305-345-3401 | FT LAUD FL | 1332 | Smith, John |
| | | | | | | | | |
| | | | | | | | | |

END OF LONGEST CALLS REPORT...

Frequently Called Numbers Report

FREQUENTLY CALLED NUMBERS REPORT

Date: May 1, 1995
 Time: 12:00

Page 1

Company Name

DATE RANGE: Mar 31, 1995 to Apr 30, 1995

SELECTION CRITERIA:

EXTENSION : All
 DIALED NUMBERS TO REPORT: 15

| DIALED NUMBER | LOCATION | DURATION | | | COST | | |
|---------------|------------|-------------|----------------|-------------------|------------|---------------|-----------------|
| | | TOTAL CALLS | TOTAL HH:MM:SS | PER CALL HH:MM:SS | TOTAL (\$) | PER CALL (\$) | PER MINUTE (\$) |
| 411 | DIRECT AST | 501 | 0:12:53 | 0:00:00 | 12.55 | 0.00 | 0.00 |
| 385-6440 | MOSCOM | 126 | 0:11:36 | 0:00:00 | 39.21 | 0.00 | 0.00 |
| 212-555-1212 | DIRECT AST | 98 | 0:01:34 | 0:00:00 | 30.05 | 0.00 | 0.00 |
| 213-555-1212 | DIRECT AST | 88 | 0:00:19 | 0:00:00 | 26.23 | 0.00 | 0.00 |
| 442561926 | MOSCOM UK | 23 | 0:03:37 | 0:00:00 | 188.21 | 0.00 | 0.00 |

END OF FREQUENTLY CALLED NUMBERS REPORT...

Facility Grade of Service Report

FACILITY GRADE OF SERVICE REPORT

Date: Jan 01, 1991
 Time: 12:

Page 1

Company Name

SELECTION CRITERIA:

FACILITIES : 0817 2213 5566

| FACILITY | NUMBER OF LINES | AVERAGE BUSY HOUR | AVERAGE CALLS | DURATION | | GOS | | TRUNKS REQ'D |
|----------|-----------------|-------------------|---------------|------------------|-------------------|----------|----------|--------------|
| | | | | AVERAGE HH:MM:SS | PER CALL HH:MM:SS | ACTUAL % | TARGET % | |
| 0817 | 2 | 10:00 - 10:59 | 12 | 1:06:32 | 0:05:33 | 3.0 | 2.0 | 3 |
| 2213 | 4 | 11:00 - 11:59 | 23 | 2:14:49 | 0:05:52 | 3.5 | 5.0 | 3 |
| 5566 | 1 | 13:00 - 13:59 | | 0:43:08 | 0:06:10 | 2.2 | 2.0 | 1 |

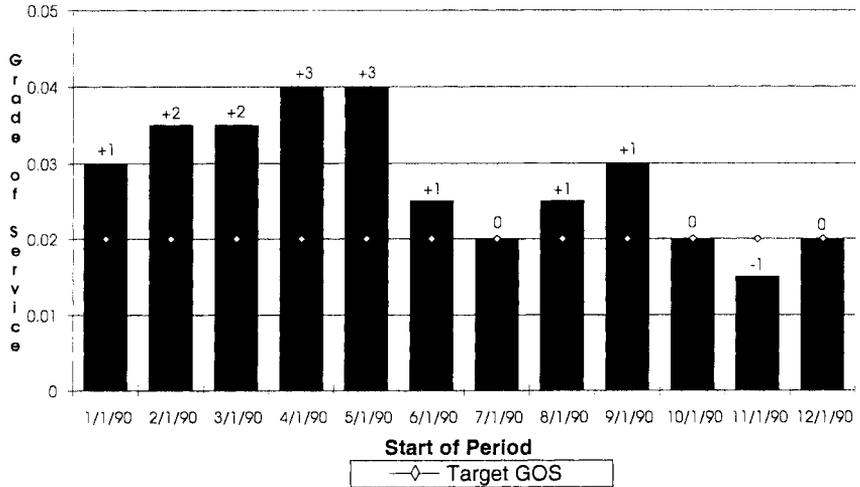
FACILITY GRADE OF SERVICE REPORT

Date: Jan 01, 1991
Time: 12:00

Company Name

FACILITY: 0817

Facility Grade of Service Trends



END OF FACILITY GRADE OF SERVICE REPORT...

Telecom Managers Report

TELECOM MANAGERS REPORT

Date: May 1, 1995
Time: 12:00

Page 1

Company Name

This Report Was Last Run: Apr 28, 1995 at 6:05

| TOTAL VALID CALLS | TOTAL DURATION HH:MM:SS | TOTAL COST (\$) |
|----------------------|----------------------------|----------------------|
| ----- 655 | ----- 23:42:08 | ----- 214.32 |

| TOTAL REJECTED CALLS | TOTAL DURATION HH:MM:SS | TOTAL COST (\$) |
|-------------------------|----------------------------|----------------------|
| ----- 103 | ----- 0:39:02 | ----- 14.24 |

| TOTAL UNANSWERED CALLS |
|---------------------------|
| ----- 37 |

MOST EXPENSIVE CALL

| COST (\$) | DURATION HH:MM:SS | DIALED NUMBER | LOCATION | EXTENS | PERSONNEL NAME |
|----------------|----------------------|-------------------------|--------------------|---------------|-------------------------|
| ----- 44.99 | ----- 1:25:44 | ----- 01144256844949 | ----- MOSCOM UK | ----- 4342 | ----- Wilson, Gerald |

LONGEST CALL

| DURATION HH:MM:SS | COST (\$) | DIALED NUMBER | LOCATION | EXTENS | PERSONNEL NAME |
|----------------------|----------------|-------------------------|--------------------|---------------|-------------------------|
| ----- 1:25:44 | ----- 44.99 | ----- 01144256844949 | ----- MOSCOM UK | ----- 4342 | ----- Wilson, Gerald |

TRUNKS THAT HAD NO ACTIVITY

| | | |
|-------------------|-------------------|-------------------|
| ----- 12345678 | ----- 09231332 | ----- 89232040 |
| ----- 2211 | ----- 54356 | ----- 432643 |

MESSAGES:

-
1. The end of the accounting period was reached Apr 30, 1995.
 2. The call record database is 10% full with 1500 calls.
 3. Power was down between 18:03 on Apr 30, 1995 and 18:44 on Apr 30, 1995.

END OF TELECOM MANAGERS REPORT...

This appendix lists the menu system accessed from the main menu

Administration Menu

- Organization
- Department Budgets
- Privacy Menu
 - Privacy By Extension
 - Privacy For All Outgoing Calls
 - Privacy For Account Code Calls
 - Privacy For Private Calls
 - Privacy For CLI Calls
- Immediate Output Menu
 - Immediate Output For Extensions
 - Immediate Output By Thresholds
 - Immediate Output For Alert Numbers
 - Other Immediate Output
- Passwords Menu
 - Operator Passwords Menu
 - Administration Password
 - Configuration Password
 - Customization Password
 - Listing Password
 - Reporting Password
 - Utilities Password
 - Remote Access Password
 - Global Password
- Close Accounting Period

Configuration Menu

- Call Rating Menu
 - Rate Edit Menu
 - Carrier Services
 - Rate Band Dialing Patterns
 - ISDN Information
 - Holiday Table
 - Markup Menu
 - Call Type Markups
 - Cost Center Markups
 - Account Code Markups
- Dialed Digit Processing
- Call Types Menu
 - Call Type Storage Options
 - Call Type Reporting Names
 - Call Types for Meter Pulse Calls
- PBX Interface Menu
 - PBX Selection
 - Facilities
 - Trunks
 - Private Access Codes
- System Settings Menu
 - Set Time and Date
 - Port Configuration
 - Printer Configuration
 - Interface Settings
 - SMDR Port Monitor
- Accounting Period Setup

Customization Menu

- Organization Level Names
- Taxes
- Location Table
- Formats Menu
 - Date Format
 - Time Format
 - Currency Format
 - Currency Name and Dividers
- Work Week
- Recorded Functions

Listings Menu

- Administration Listings Menu
 - Organization Information Listing
 - Directory Menu
 - Organization Directory
 - Directory by Extension
 - Directory by Personnel
 - Privacy Criteria Listing
 - Immediate Output Parameters Listing
- Configuration Listings Menu
 - Call Rating Listings Menu
 - Fixed Rating Information Listing
 - Rate Edit Listings Menu
 - Carrier Service Information Listing
 - Work Week Definition Listing
 - Holiday Table Listing
 - Markup Listings Menu
 - Call Type Markups Listing
 - Cost Center Markups Listing
 - Account Code Markups Listing
 - Dialed Digit Processing Listing
 - Meter Pulse Call Types Listing
- PBX Interface Listing
- Private Access Code Listing
- Custom Information Listing
- System Parameter Listings Menu
 - System Tables Listing
 - System Information
 - System Usage
 - Recorded Functions Listing
 - Customer Order Information Listing
- Scheduled Reports Listing
- Error Logs Listing
- System Messages

Reports Menu

- Organization Reports Menu
 - Organization Detail Report
 - Organization Summary Report
 - Cost Center Summary Report
 - Department Summary Report
 - Department Trends Report
 - Budget Report
- Selection Reports Menu
 - Selection Detail Report
 - Selection Summary Report
- Account Code Reports Menu
 - Account Code Detail Report
 - Account Code Summary Report
- Traffic Reports Menu
 - Call Type Report
 - Date Report
 - Cost and Duration Report
 - Time of Day Report
 - Analysis Reports Menu
 - Call Distribution Report
 - CLI Call Distribution Report
 - Ring Time Analysis Report
 - Incoming Traffic Analysis Report
 - Rejected Call Summary Report
 - Facility Reports Menu
 - Facility Summary Report
 - Facility Trends Report
 - Facility Grade of Service Report
- Exception Reports Menu
 - Telecom Managers Report
 - Expensive Calls Report
 - Longest Calls Report
 - Frequently Called Numbers Report
- Report Management Menu
 - Reporting Options
 - Schedule Reports
 - Run Scheduled Reports
 - Cancel Reports

Utilities Menu

- Backup and Restore Menu
 - Backup to Disk
 - Restore from Disk
- Call Record Management Menu
 - Call Record Deletion
 - Rebuild Summary Buckets
- File Import/Export Menu
 - Import from Disk
 - Export to Disk
- System Update Menu
 - Fixed Rate Update
 - Software Update
- System Maintenance Menu
 - Process Control
 - Floppy Disk Format
 - System Control Menu
 - System Restart
 - System Shutdown
- Call Record Analysis
- Diagnostics Menu
 - RAM Test
 - Printer Test
 - Keyboard Test
 - Display Test
 - Software Test
 - Floppy Disk Test

Glossary

A

access code

A field in a call detail record that contains the numbers dialed to get an outside line to a telephone facility. For some communications systems that do not report trunk line information, access codes can be entered as part of the telephone system configuration. (Do not confuse with private access code.)

account code

A field in a call detail record that contains a user defined identifier. Account codes are typically added to a call's dialed digits to identify, for example, the call's subject matter or client account number.

accounting period

A period defined as monthly, bi-monthly, or quarterly, starting on the same day of the month as the start of the fiscal year.

add

The <A>dd command, used to create a new record in a file or table.

additional tax style

Taxes calculated for each call based on rates entered for each call type. Reports contain a separate line for each active tax showing the total tax amount for all reported calls.

alert numbers

A group of dialed digit patterns that, when found in a call record, cause an immediate print out as soon as it is processed. If selected, an audible alarm sounds as well.

answer supervision

The capability to detect when a telephone call has been answered. Answer supervision is one of the many advantages provided by ISDN services.

authorization code

A communications system feature whereby users dial their assigned code, typically to identify the call origin and/or use limited access facilities.

B

backup

A computer function used to copy system databases onto diskettes

basic cost

The cost of a call computed by the rating method associated with the carrier service used

baud rate

A measurement of digital transmission speed representing the number of signal events per second. If the signal event represents the presence or absence of one bit, then the baud is identical to bits per second.

bits per character

The length (number of bits) of a single character transmission

buffer

A temporary storage area in the processor's internal memory

C

call line identifier (CLI)

The ability of ISDN equipment to pass to their subscribers (in digital form) the phone number of subscribers' callers

call record

The processed Station Message Detail Recording (SMDR) that is stored in a database and used to produce reports

call type

A classification determined for each call according to its associated carrier and sometimes the dialed digits that allows the application of minimums, charges, and/or taxes

carrier

A company providing telephone service

change

The <C>hange command used to edit the information of the record currently on display

communications system

The software controlled communications processor complex that interprets dialing pulses tones and/or keyboard characters and makes the proper interconnections both within the system and external to the system. The PBX itself consists of a digital computer software storage device (memory) and carriers with special hardware to perform the actual connections. A PBX provides voice and/or data communications services (including access to public and private networks) for voice and data terminals on a customer's premises.

correction time

An estimate of how long it takes to make a telephone connection. This includes all non chargeable time from dialing to answering a call.

cost center

The default name for the second organizational hierarchy level used by the system to allocate telephone expenses.

costing

The set of application functions and data files used to screen and then compute the cost of valid calls. The process of computing the cost of calls.

currency format

The way that the cost of calls will be represented and stored — includes the currency name and symbol maximum cost decimal divider separator symbol etc.

cursor

A movable pointer that designates where your input is entered on the screen or where you select an item from a displayed menu. The cursor occupies one character position.

D

database

A collection of data in your system — such as the set of all call records in an accounting period — structured and organized for easy access. Also the information in system tables that identifies its users equipment company organization etc.

date format

The way that the date will be represented and stored (including the separator symbol) throughout the system and in reports.

data bits

The actual length (number of bits) of a single character transmitted by a device.

default

The value option or feature automatically supplied by the system unless the user specifies otherwise.

default rating

This type of rating occurs when during the rating process the system encounters an extension or dialing pattern not contained in its databases. Rating derived from the default carrier is used to cost these calls.

defined reports

A single report or a group of reports identified for generation at a specified time.

delete

The <D>el command used to permanently remove the record currently displayed. If the current call record database contains a deleted item, the deletion takes place when the call records are removed from the system (either by end of accounting period activities or when a capacity is reached).

department

The default name for the first level in a company's organizational hierarchy, used by the system to allocate telephone expenses.

detail reports

The Organization, Account Code, or Selection Detail Reports, three reports that list every call record for the selection criteria requested.

dialed digits

See dialing pattern.

dialed digit processing

The process that searches for calls with an identified dialing pattern and/or facility and costs them according to a specified method.

dialing pattern

The order of numbers dialed in a telephone call.

dialing prefix

A set of numbers dialed at the beginning of a call to access a carrier's local network.

diagnostic tests

A set of tests that the user can run on demand to monitor the processing unit's health. These include tests on the unit's memory, disk, serial ports, printer, keyboard, display, and software.

disk (or diskette)

A thin, flexible platter (also called a floppy disk) coated with magnetic material and used as a storage medium.

E

end

The end key on the keyboard referred to as <END> in procedures used to terminate data entry and save changes

error log

A utility file accessible to users where system messages about significant events and errors are recorded

escape

The escape key on the keyboard referred to as <ESC> on screen displays used to abort an operation or command

extension

1 A field in a call detail record that contains the number of a voice terminal indicating the origin of an outgoing call or the destination of an incoming call 2 The default name for the lowest level in a company's organizational hierarchy

F

facility

A capability or type of service provided by a telephone company

format

The arrangement or layout of data

fixed charge

An amount (up to \$9 999 99 or equivalent in the system's currency format) charged to an extension in some organization reports

G

Grade of Service (GOS)

The probability that an attempted call will receive a busy signal Based on a traffic engineering theory the system compares the actual GOS to a facility's target GOS to determine trunk usage and requirements

H

help

Instructions that appear automatically at the bottom of a data entry screen after initiating a command Or a list of allowable entries that appears when you position the cursor in some data entry fields and press <Sel Help>

holidays

The days during which carriers apply holiday discount rates

I

immediate output

The immediate printing of processed call records that comply with user specified criteria

inclusive tax style

The style of taxing calls that uses one set of values to calculate taxes for the total cost of all reported calls

INCOM

The call type for calls routed to your site

INFO1/INFO2

The call types for calls to carrier information services

initial setup

A series of data entries performed at installation that set up call record collecting processing and costing

interface

A device or system forming a common boundary at which independent devices or systems interact

Integrated Services Digital Network (ISDN)

A network that provides end to end digital communications to support a wide range of services including voice and data to which users have access by a set of standard multipurpose user network interfaces

Some examples of ISDN services include calling number information (also known as CLI for call line identification) call waiting credit card calling network access and simultaneous data calls

INTNL (International)

The call type for calls to a foreign country dialed using the international routing code

IXC (interexchange carrier) code

A number (up to 4 digits) identifying a specific ISDN carrier

L

LDIST

The call type for domestic long distance calls

LOCAL

The call type for calls within a site's local calling area

location table

A tabulation of dialing patterns and corresponding geographic locations

M

markup

A percentage of a call's cost added in the costing process as an extra charge

memory

The working storage area in the computer where programs and data are processed

menu

A list of selectable items on a screen

meter pulse

A method used by some telephone companies to cost calls. The billing equipment sends pulses over the telephone lines at various rates per second, depending on the call destination, rating period, etc. Customers then pay a fixed price for each meter pulse occurring during a telephone call.

minimum duration

A threshold value specified by the user that tells the system when to consider a call valid for storage.

modem

A device that converts digital data signals to analog signals for transmission over voice terminal circuits. Analog signals are converted back to original digital data signals by another modem at the other end of the circuit.

N

network

1 In the context of voice and/or data communications a complex consisting of two or more interconnected switching systems 2 In the context of computer operation a system consisting of one or more computers and the connected terminals and related devices such as modems and input/output (I/O) channels

next

The <N>ext command used to access the next sequential record in a file (or portion thereof)

NSF (network service feature)

A 3 digit number identifying the type of service an ISDN carrier uses in call rating

O

organization

The user specified structure of a company — the company name the number and names of its hierarchical or corporate levels and the level associated with budget tracking — as well as the set of individual entries (the organization database)

OTHER

A call type provided for calls not fitting another call type description

P

parity

A method used by some devices to check that data was transmitted correctly Party can be odd even or not used at all

password

A unique string of characters that a user enters to access a program

PBX

Private Branch Exchange see communications system

port

The data transmission outlet on a device used for communicating with other devices

previous

The <P>rev command used to access the record previously displayed on the screen

privacy

Masking dialed numbers by substituting question marks for digits. Criteria for privacy includes call direction, calls using CLI, and/or calls using specified extension. Privacy can be permanent (digits can be stored in a masked form) or for reports only.

private calls

A call containing a code identified as a private access code. When your system encounters a call record with one of the defined private access codes, it assigns the PRIVT call type to the record.

PRIVT

A call type provided for calls using private access codes.

processor

A central processing unit (CPU) that receives data, manipulates it, and supplies results.

protocol

A set of conventions or rules that describe how data is organized, transmitted, and received.

Q

queue

A temporary storage area in the processing unit's internal memory.

R

rate band

Geographic areas defined by concentric circles emanating from a specified location. Each rate band has rating information used to compute the cost of calls placed in its area.

rating method

One of five formats used for computing a call's cost: fixed (custom), meter pulse, tariff, duration, and flat.

record

The smallest piece of information that the system can retrieve from a file. Records may contain several items of information (fields); for example, a call record contains the time of a call, its duration, origin, destination, account code dialed, and cost.

recorded function

A series of functions and/or keystrokes programmed for use with one of the <Ctrl 0> to <Ctrl 9> keys.

REGNL

The call type of in LATA long distance calls

remote access

The functions used to access the system from another processing unit at a remote location

report group

One or more reports scheduled for output according to a specified time and order

reporting period

The time interval covered in a report

restore

The function that allows you to copy back into storage the system and call record database previously backed up into diskettes

return

The <..> key corresponding to a carriage return

ring time

The period of time from receipt of a call (ringing begins) until it is answered

RS232C interface

An Electronic Industries Association (EIA) standard 25 pin interface between data terminal equipment (DTE) and data communication equipment (DCE) using serial binary interchange signals

S

selection report

A report that lists summary or detailed call record information based on the selection of a time date cost duration extension account code number etc

serial data transmission

An operation whereby data is transmitted sequentially one bit after another

SMDR

Station Message Detail Recording A communications system capability with which the details concerning the path of a call from origination to termination are recorded in the form of an SMDR record

stop bits

The number of bits that trail after the transmission of a single character

straight through cable

A cable with wires connected between identical pins on each end

summary storage area

The area of internal memory where total number of calls total cost and duration and trend information subtotals are updated each time calls are processed At the end of an accounting period the subtotals are reset to zero after trend information is compiled

summary report

Reports that list information for the selection criteria requested in a summarized form

T

tandem call

A connecting call in a telephone network coming into a communications system through one line and transferred out again through another

tariff

A carrier service rating method that computes a call's cost based on the time it occurs and the location of the called site

threshold

A critical level which when reached produces a system response

time format

The way that time is represented and stored (including the separator symbol) throughout the system and in reports

traffic reports

A collection of reports that focus on trends telephone usage productivity exceptions etc

trunk line

1 A dedicated communication channel between two communications systems 2 A field in a call detail record that contains the identifier for the specific trunk (or group of trunks) used by the call

U

utilities

A group of programs that provide a specific application within a computer

V

valid calls

Calls that have computable costs. That is, calls over the duration threshold, routed through defined trunks, and dialed using a pattern understood by the system as able to reach a destination. Invalid calls are discarded.

W

wildcards

The characters % ? and * used as follows:

- ? match a single character in that position
- % match any number of trailing characters
- * match any call record without an account code

Z

ZERO+

The call type for operator assisted calls

Index

A

account code
 cost adjustments listing 4 4
 cost adjustments setup 6 28
 reports 3 13 12
accounting period 1 7
 closing 5 15
 setup 6 55
add command 1 13
administration
 of closing an accounting period 5 15
 of department budgets 5 5
 of immediate output settings for calls
 5 8
 of masked dialed numbers (privacy)
 5 6
 of organization structures 5 1
 of passwords 5 12
analysis reports 3 19
 Call Distribution Report C 19
 CLI Call Distribution Report C 19
 Incoming Traffic Analysis Report C
 21
 Rejected Call Summary Report C 22
 Ring Time Analysis Report C 20
answer supervision 1 3
authorization code 5 4

B

backup
 complete system to disk 8 1
 during loss of power 1 8
Budget Report *see* organization reports

C

call cost
 computation flow chart 6 1
 dialed digit processing 6 29
 rating methods 6 4
 see also call cost adjustments carrier
 services setup procedures
call cost adjustments (markup/discount
 surcharge) 6 25

 by account code 6 28
 by call type 6 25
 by cost center 6 27
 database listings 4 3
Call Distribution Report C 19
call record
 analyze collection/processing 8 14
 delete database 8 3
 samples 8 5
 storage 1 7
Call Type Report *see* traffic report
call types 6 33
 adding deleting and changing
 information 6 33
 cost adjustments 6 25
 cost adjustments listing 4 3
 customize reporting name 6 35
 for calls rated by meter pulse 6 36
 for rate bands 6 20
 list reporting names 4 4
 role in call cost computation 6 1
 storage option setup 4 6
 storage options 6 33
cancel
 command 1 13
 reports in print queue 3 31
capacities by system model 1 4
 system usage listing 4 10
carrier services
 database listing 4 3
 ISDN information 6 22
 print database listings 4 2 4 4 4 7
 4 11 4 13
 rating methods 6 4
 setup 6 6
 see also worksheets
carriers 1 2
change command 1 13
CLI (Calling Line Identification)
 listing abandoned calls 5 8
 masking dialed digits 5 6
CLI Call Distribution Report *see*
 analysis reports
company name 2 35 7 1
 see also organization structure

- compression codes
 - as part of printer configuration 6 52
 - for default printers A 3
- configuration
 - of accounting period 6 55
 - of call type information 6 33
 - of DDP 6 29
 - of rating functions 6 6
 - of system settings 6 48
- Cost and Duration Report *see* traffic reports
- cost center reports *see* organization reports
 - changing default level names 7 1
 - cost adjustments 6 27
 - cost adjustments listing 4 3
- Custom Information Listing 4 4
- Customer Order Information Listing 4 6
- customization
 - of organization level names 7 1
 - of recorded functions 7 9
 - of system formats 7 5
 - of taxes 7 2
 - of the workweek 7 8
 - of user defined location table 7 3

D

- data entry
 - commands 1 13
 - help 1 16
 - screens 1 11
- database record samples 8 5
- date
 - list current format 4 4
 - print current format 4 4
 - setting for system 6 48
 - see also* status screen
- Date Report *see* traffic reports
- default rating 6 42
- delete command 1 13
- department 2 35
 - see also* organization reports
 - organization structure
 - budgets 5 5
- diagnostics system 8 15
- dialed digit processing 6 29
 - listing current table 4 4
 - role in call cost computation 6 1

- dialed numbers
 - marking for immediate output 5 8
 - masking 5 6
 - see also* dialed digit processing
- dialing prefix
 - and carrier service information 6 7
 - role in call cost computation 6 1
- directories
 - by extension 4 1
 - by organization entity 4 1
 - by personnel 4 1
- disk (floppy)
 - for backup/restore operations 8 1
 - formatting 8 12
- disk drive 1 9
- duration rating 6 6
 - listing by carrier 4 3
 - setup 6 13

E

- error logs listing 4 12
 - see also* messages from system
- exception reports 3 25
 - Expensive Calls Report C 22
 - Frequently Called Numbers Report C 26
 - Longest Calls Report C 25
 - Telecom Managers Report C 28
- Expensive Calls Report *see* exception reports
- exporting files 8 4 8 8
- extension
 - attaching fixed charges 5 4
 - changing default level names 7 1
 - marking for immediate output 5 8
 - masking numbers dialed 5 6

F

- facility 6 42
- facility reports 3 22 3 23
 - Facility Grade of Service Report C 26
 - Facility Summary Report C 23
 - Facility Trends Report C 24
- fixed (custom) rating method 6 4
 - fixed rating table listing 4 3
 - setup 6 18
- fixed charges 5 4
 - shown in organization reports 3 1

flat rating method 6 6
 setup 6 16
Frequently Called Numbers Report *see*
 exception reports

G

grade of service (GOS) 2 12
 report 3 22 C 26

H

help for application 1 16
holiday table 6 23
 database listing 4 3

I

immediate output marking calls for 5 8
 current parameters listing 4 1
 report C 25
importing files 8 4
Incoming Traffic Analysis Report *see*
 analysis reports
installation
 connecting system components 2 3
 customizing databases 2 27
 performing an initial software setup
 2 5
 preparation activities 2 2
 programming features 2 37
 testing 2 26
 see also worksheets
ISDN (Integrated Services Digital
 Network) 1 3
 assigning codes to carriers 6 22

K

key command 1 13
keyboard 1 14
 control keys 1 15

L

listing databases
 administration information 4 1
 configuration information 4 3
 error log 4 12
 report schedule 4 11

 system parameter information 4 6
location table user defined 7 3
 list current table 4 4
Longest Calls Report *see* exception
 reports

M

menu
 help 1 16
 how to use 1 10
 system D 1
messages from system 4 13
meter pulse rating 6 4
 call types 6 36
 listing by carrier 4 3
 listing call types 4 4
 setup 6 17
 see also installation customizing
 databases worksheets
minimum cost
 by account code 6 29
 by call type 6 26
 by cost center 6 27
 for immediate output 5 10
 for storage by call type 6 34
minimum duration for storage by call
 type 6 35
move command 1 13

N

network
 correction time 1 3 6 35
 private 1 2
 public 1 1
next command 1 13

O

options
 for storing call types 6 33
organization
 customizing default level names 7 1
 department budgets 5 5
 reports 3 1 C 2 C 3 C 4 C 5 C 6
 C 7 C 8
 structure 2 35

P

- passwords 5 12
- PBX (Private Branch Exchange) 1 2
 - in system configuration 1 5
 - interface installation test 2 26
 - interface listing 4 4
- ports
 - display current settings 4 8
 - setup 6 49
- power supply 1 8 A 2
- previous command 1 13
- print
 - cancel current scheduled report 3 31
 - scheduled reports 3 31
 - see also* individual report/listing
- print command 1 13
- printer 1 9
 - setup 6 51
 - specifications A 3
- printing reports from a previous
 - accounting period 3 32
- privacy by masking dialed digits 5 6
 - privacy information listing 4 1
- private access codes 6 47
 - database listing 4 4
 - setup for immediate output 5 8
 - setup for privacy 5 6
- private wire 1 2
- process (call costing) control 8 11
- processing unit 1 7
 - in system configuration 1 5

Q

- queue for call records 1 7

R

- rate bands 6 5 6 20
 - see also* tariff rating method
 - worksheets
- rating methods of carriers
 - duration 6 6
 - fixed (custom) 6 4
 - flat 6 6
 - meter pulse 6 4
 - setup 6 6
 - tariff 6 4

- see also* call cost carrier services
 - rate bands
- recorded functions 7 9
 - database listing 4 6
 - defaults 7 9
- Rejected Call Summary Report *see* analysis reports
- report groups 3 29
- reports and graphic charts
 - account code 3 13
 - analysis 3 19 3 20
 - canceling those in print queue 3 31
 - exception 3 25
 - facility 3 22 3 23
 - list reporting options 4 4
 - options 3 27
 - organization 3 1
 - printing scheduled reports 3 31
 - scheduling 3 28
 - selection 3 9
 - traffic 3 16
- restart system (cold start) 8 12
- restore system backup 8 1
- Ring Time Analysis Report *see* analysis reports

S

- scheduling reports (for printing) 3 28
 - see also* worksheets
 - running (printing) 3 31
- search command 1 13
- selection reports 3 9
 - Selection Detail Report C 9
 - Selection Summary Report C 11
- shutdown system (warm start) 8 13
- SMDR 1 17
 - see also* PBX
- start command 1 13
- status screen 1 10
- status symbols 1 12
- storage
 - and management of call records 1 7
 - as shown on status screen 1 10
 - of masked numbers 5 6
 - options by call type 6 33
 - queue 1 7
 - summary buckets 1 7

- summaries (call records) 1 7
 - and closing of accounting period 5 16
 - resetting 2 38 8 4
- system
 - configuration 1 5
 - operation 1 16
- System Information listing 4 8
- system parameters listings 4 6
- System Tables Listing 4 6
- System Usage Listing (capacities) 4 10

T

- tariff rating 6 4
 - rate listings by carrier 4 3
- taxes
 - list current names 4 4
 - listing current settings by call types 4 3
 - setting up 7 2
- Telecom Managers Report *see* exception reports
- telephone system configuration 6 42
 - facilities 6 42
 - list current setup 4 4
 - private access codes 6 47
 - trunks 6 45
- time
 - setting for system 6 48
 - see also* status screen
- Time of Day Report *see* traffic reports
- traffic reports 3 16
 - Call Type Report C 13
 - Cost and Duration Report C 15
 - Date Report 14
 - Time of Day Report C 17
- troubleshooting
 - by analyzing call
 - collection/processing 8 14
 - by using diagnostics 8 15
- trunk 1 2
 - adding to facilities 6 45

U

- updating software 8 10
- user interface 1 9
 - list current settings 4 4
 - settings 6 53

- utilities
 - for backup/restore operations 8 1
 - for system diagnostics 8 15
 - to analyze call collection/processing 8 14
 - to delete call records 8 3
 - to import/export files 8 4
 - to rebuild summary buckets 8 4
 - to restart (re initialize) the system 8 12
 - to shutdown the system 8 13
 - to stop/start the costing processing 8 11
 - to update software or rating 8 9

W

- weekdays defining 7 8
- wildcards 3 4
- work week
 - current settings listing 4 3
 - defining 7 8
 - see also* tariff rating duration rating
- worksheets
 - basic configuration information 2 5
 - for call type storage options 2 34 B 13
 - for call types for meter pulse calls 2 29 B 7
 - for carrier services basic information 2 9 B 3
 - for customizing databases 2 27
 - for dialing patterns for rate bands 2 31 B 8
 - for duration rating information 2 32 B 11
 - for facilities/trunks information 2 11 B 4
 - for fixed (custom) rating information 2 28 B 5
 - for flat rating information 2 34 B 12
 - for initial setup 2 5 B 2
 - for location table information 2 36 B 15
 - for organization information 2 35 B 14
 - for meter pulse rating information 2 29 B 6
 - for report schedule information 2 37 B 16
 - for tariff rating information 2 30 B 9 B 10

