



# **Call Accounting Terminal Plus**

CAT Plus for Business  
Installation and Use

585-247-203  
Issue 3  
November 1994

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## Introduction

# 1

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The AT&T CAT Plus for Business provides an easy-to-use interface for a sophisticated, in-house call-costing and -reporting system. The CAT Plus collects call data directly from the Station Message Detail Recording (SMDR) output of your Communications System and automatically stores, processes, and organizes the data into meaningful reports. Properly used, these reports provide the basis for effective cost management.

The AT&T CAT Plus can be used with the following Communications Systems:

- MERLIN LEGEND® Communications System
- MERLIN® II Communications System
- MERLIN® PLUS Communications System
- MERLIN® 1030/3070 Communications System
- System 25 Communications System
- SPIRIT® 1224/2448 Communications System
- PARTNER® II, Communications System
- PARTNER® Plus, Release 3, Communications System

## **Applications**

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**Control Misuse and Abuse:** Usage reports for each extension show if long distance facilities are being used economically. Personal calls are reduced because employees know that calling patterns are monitored.

**Client Billback:** Telephone costs identified by extension and account code allow easy billback to clients for calls made on their behalf.

**Market Analysis:** Account codes keyed to advertisements or customers' zip codes can pinpoint the media and geographic areas where your marketing is most effective.

**Employee Productivity:** The code and length of calls handled by each employee can be related to the code and amount of sales. This is an excellent way to evaluate employee performance.

**Cost Allocation:** Summary reports by extension and account code provide easy tracking of company-wide telephone usage to accurately allocate telephone costs by department, division, or product.

**Network Optimization:** Records of call patterns help optimize network facilities for better cost effectiveness and lower long distance costs.

**System Diagnostics:** The Summary by Facility report helps identify out-of-order lines and any failure of your Communications System's Automatic Route Selection (ARS) to place long distance calls over the most economical route available.

**Resale of Telephone Services:** In dedicated resale and sharing operations, call reporting by extension can help to make the Communications System one of your most profitable investments.

## General Description

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The AT&T CAT Plus for Business is a small, self-contained unit that operates with a Communications System to provide cost accounting information. It requires connections to power, to the Station Message Detail Recording (SMDR) output of the Communications System, and to the CAT Printer. It collects, stores, organizes, and prints data about telephone calls in convenient reports that can be used for many administrative and billing purposes. The unit is shown in Figure 1-1.

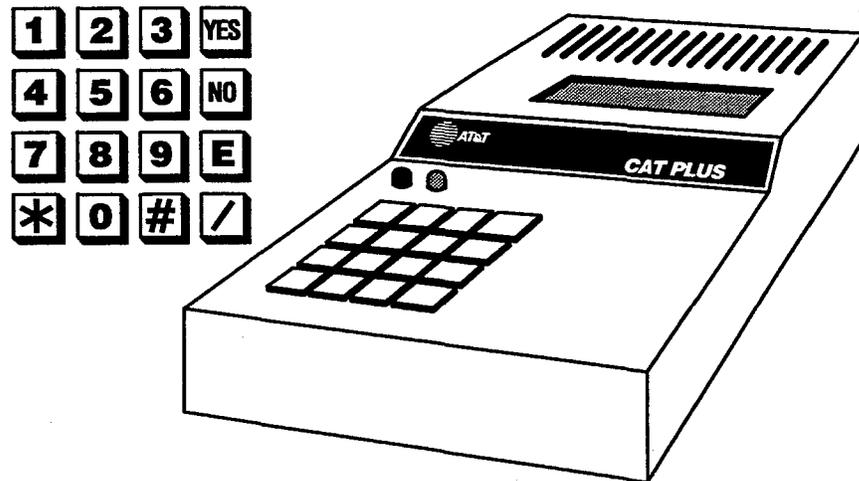


Figure 1-1. AT&T CAT Plus

### **Lamps**

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Two Light Emitting Diodes (LEDs) above the keypad indicate whether power is connected and whether the CAT unit is receiving SMDR data from your Communications System.

### **Keypad**

---

The sixteen-key keypad enables you to select from the system menus and to enter setup options and parameters. Six "special" keys facilitate setting up and changing system options. Chapter 3 on Installing the CAT Plus describes the use of each key.

### **LCD Display**

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The top of the CAT Plus has a Liquid Crystal Display (LCD) with two lines of 24 characters each. The messages, menus, and input data displayed here make it easy to operate the CAT Plus.

### **Alarms**

---

The CAT Plus has four alarms to signal when the unit is not receiving SMDR data, when the printer is out-of-paper or not responding properly, when the storage capacity of the CAT Plus is 85% full, and when toll fraud is detected.

## Capacities

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The CAT Plus has the following capacities:

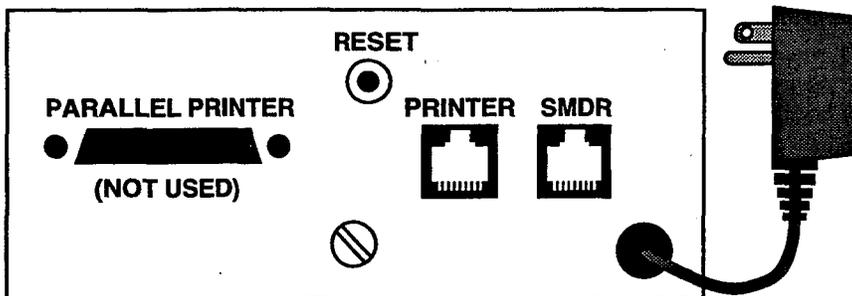
- **Storage:** 6,500 automatically collected call detail records
- **Lines or Trunks:** 49 lines or trunks, plus 4 special facilities that can be independently priced
- **Extensions:** 200 four-digit extensions
- **Account Codes:** 200 nine-digit account codes
- **Maximum Dialed Digits:** 10 plus "1" or "0," or "=" for equal access
- **Maximum Call Duration:** 999 minutes
- **Battery Backup:** 24-hour battery-backed for call record storage
- **Reports:** 28 summary and detail reports
- **Standard Costing:** AT&T tariff
- **Custom Rate Options:** Local rate table and AT&T International

## Rear Panel

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The rear panel contains connections for the printer and the Communications System, and a reset switch.

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**Figure 1-2. CAT Plus Rear Panel**

The reset switch is used only during initial installation, or when you cannot obtain a response through the keyboard.

Both the serial printer and the SMDR connect through 8-position modular jacks.

## **Report Printing**

Using the CAT Plus keypad, you can enter the setup mode and choose to print reports

- on demand
- automatically, when the system reaches 90% capacity
- automatically, once each day
- automatically, once each week

You can also print individual call records immediately after each call is completed.

## **Standard and Management Reports**

CAT Plus produces four standard reports and ten management reports. Using the CAT Plus Main Menu, you can print a standard report for all extensions or account codes or for an individual extension or account code:

- **Detail by Extension**—lists the detail of each call in a separate report for each extension.
- **Summary by Extension**—lists the call total, total duration, and total cost for each extension.
- **Detail by Account**—lists the detail of each call in a separate report for each account code.
- **Summary by Account**—lists call total, total duration, and total cost for each account code.

Using the Management Reports menu, you can select any of ten management reports:

- **Time of Day (Summary by Hour)**—either a 24-hour summary matrix or a summary or detailed report for a single hour
- **Cost Greater Than Amount**—a summary or detailed report of calls costing more than a specified amount
- **Calls Longer Than Specified Duration**—a summary or detailed report of calls lasting longer than a specified duration
- **One Facility (Summary by Facility)**—a summary report for all facilities, or a summary or detailed report for one facility or trunk
- **All 7-Digit Calls**—a summary or detailed report for all calls having seven or fewer dialed digits
- **All Incoming Calls**—a summary or detailed report of all incoming calls
- **1+ or 0+ 7-Digit Calls**—a summary or detailed report of long distance calls within your area code
- **Exchange Search**—a summary or detailed report of all calls to a specified exchange within your area code
- **Area Code Search**—a summary or detailed report of all calls made to a specified area code
- **Forward Disconnect**—a summary or detailed report of all incoming and outgoing calls on which the “far end” party hangs up significantly before your office does

## Customization Options

Using the setup menu, you can select from among 27 options and parameters so that the CAT Plus settings and values precisely match your company's needs. Here are some of the many options available:

- **Percentage Markup:** Markups can be added to both local and long distance calls, or to long distance calls only.
- **Print On-the-Fly:** Individual call records can be printed as each call is completed; such calls are also saved for periodic and other reports.
- **New Page Option:** For reports that will be distributed, each extension or account code can begin on a new page. For reports that will not be distributed, printing continuously can save paper.
- **Minimum Duration of Calls:** To detect extreme abuse, or just to avoid billing for very short calls, call printing can be eliminated for calls less than a user-specified minimum duration.
- **Print 7-Digit Calls:** 7-digit calls, whether local or long distance, can be printed or ignored.
- **Print Incoming Calls:** Printing of call records can be limited to outgoing calls only or can include incoming calls.
- **Night Discounts:** Evening and night discounts can be applied to local and long distance calls. Discounts can also be applied across-the-board when necessary.
- **Call Costing:** The Read Only Memory (ROM) contains AT&T long distance tariffs for the calling area of your Communications System. You can set a mark-up for calls to make a profit on reselling calls to clients or guests.

- **Special Call Pricing:** Prices for special calls can be assigned as follows:
  - Operator Assisted Calls: by the call
  - 411 Calls (local directory assistance): by the call
  - 555 Calls (long distance directory assistance): by the call
  - 800 Calls: by the call
  - 900 and 700 Calls: by the minute
  - Flat Surcharge: by the call for local and/or long distance
- **Suppress 7-Digit or Incoming Calls:** You can choose not to store certain calls and thus conserve storage capacity for those calls you want to track.

---

## Pre-Installation Preparations

# 2

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Installing the AT&T CAT Plus for Business is very easy. No special tools are needed except a small (1/8-inch), flat-blade screwdriver.

However, it is important to complete each of the following preparations before you start the installation:

- Select the place where you will install the CAT Plus.
- Unpack and inventory the CAT unit and printer.
- Verify the switch settings on your CAT Plus.
- Make sure that your Communications System's SMDR output has been activated.
- Make sure that you have a *non-switched* 110 volt AC outlet with sufficient power available to plug in the CAT Plus and the CAT Printer.
- Prepare the CAT Printer for installation.

## Selecting a Site

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If possible, the CAT Plus should be located very near the Communications System. The limits are as follows:

**Table 2-1. CAT Plus Location Requirements**

---

<b>Installation Procedure</b>	<b>Communications System</b>	<b>Maximum Distance and Other Requirements</b>
<b>1</b>	MERLIN 1030/3070 MERLIN II MERLIN LEGEND System 25 SPIRIT 1224/2448	Up to 50 feet from the SMDR port of the Communication System, directly connected to it.
<b>2</b>	PARTNER II PARTNER Plus	Between 51 and 1000 feet from the Communications System using PDS (Premises Distribution System) wiring.
<b>3</b>	MERLIN PLUS	Up to 14 feet from Data Collector, which may be up to 1000 feet from the Communications System.

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## **Unpacking and Inventorying Equipment**

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Unpack the CAT unit, the CAT Printer, and any associated packages. You should have the following items:

- The AT&T CAT Plus for Business unit with attached power transformer
- The AT&T CAT Printer
- A 355A 8-position modular to DB-25P adapter
- Two 14-foot D8W-87 8-position modular cords
- Any special equipment unique to your installation

## **Verifying Switch Settings and EPROM**

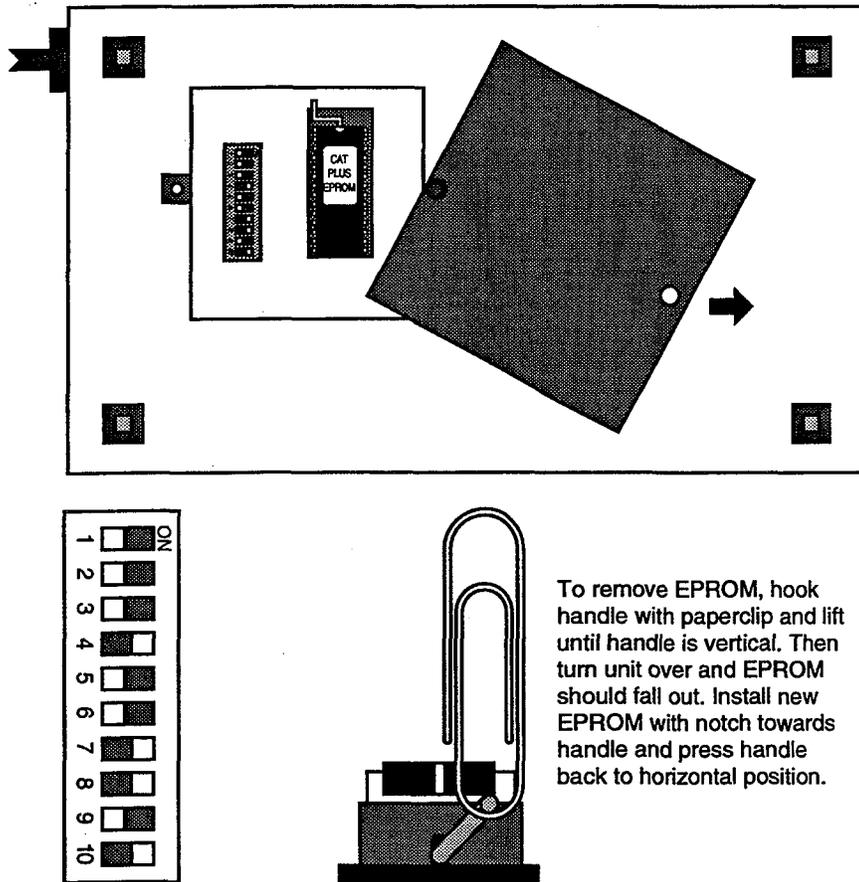
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Before installing the CAT Plus, verify that the internal switches have been properly set and that the EPROM containing the rate tables has been installed. Refer to Figure 2-1 while following these steps:

1. Turn the CAT Plus unit over so that the access cover is visible.
2. Remove the screw holding the access cover and swivel the access cover out of the way.
3. Verify that the remaining switches are set as shown in Figure 2-1. If necessary, change the switches to match Figure 2-1.
4. Verify that the EPROM is installed in the socket with the notched end of the EPROM toward the handle. If necessary, reseal the EPROM using the instructions in Figure 2-1.
5. Swivel the access cover back into place and secure it with the screw removed previously.

## Verifying Switch Settings and EPROM

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**Figure 2-1. Location and Settings for Switches and Location of EPROM**

## 2-4 Pre-Installation Preparations

## **Preparing the CAT Printer**

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### **CAUTION:**

*Do not plug the printer in until preparations have been completed. Attempting to operate the printer with the retainer installed can damage the printer.*

## **Unpacking**

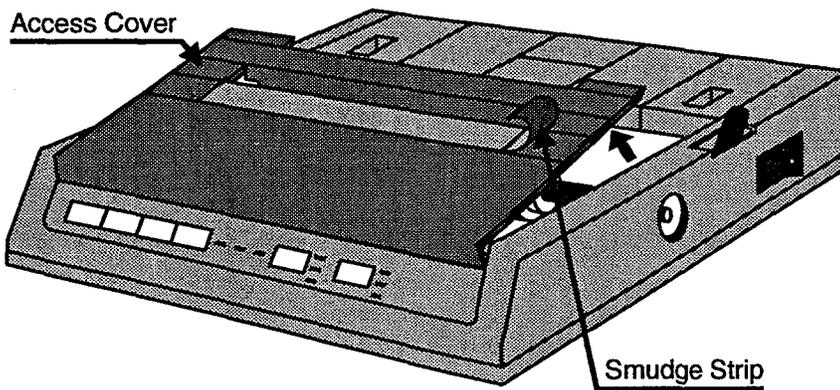
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1. Your AT&T CAT Printer is packed in a protective container along with some supplies and accessories. Lift the printer together with the styrofoam packing materials from the box and place it on a convenient table, desk, or printer stand. Remove the styrofoam side pieces and check the box for these contents:
  - Ribbon Cartridge
  - Platen Knob
  - Power Cord
  - Paper Separator
  - Access Cover (on the printer)

## Preparing the CAT Printer

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2. Lift off the access cover and remove the clear smudge strip from the cover.
- 

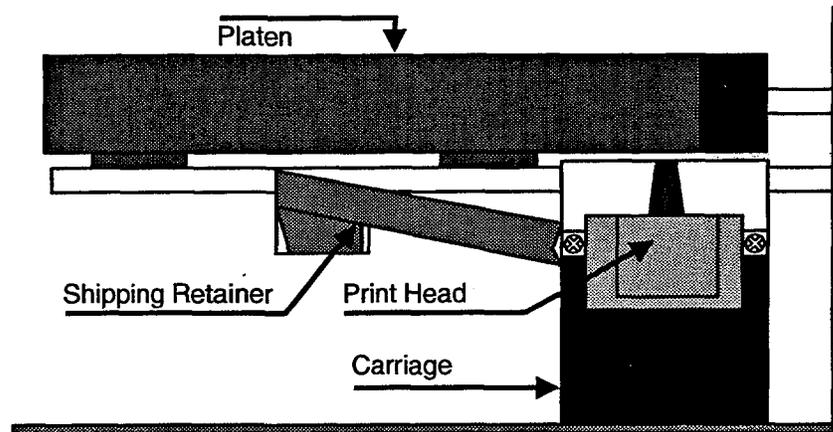


**Figure 2-2. Removing Access Cover and Smudge Strips**

## Preparing the CAT Printer

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3. Remove the plastic retainer that secures the print head during shipment. Save it in case you ever need to ship the printer.
- 

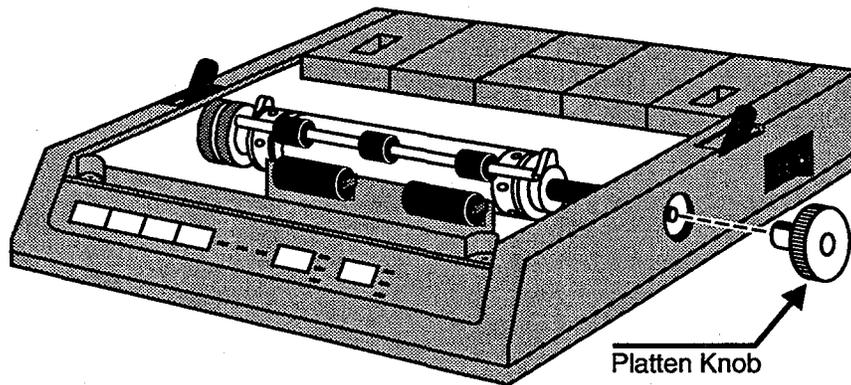


**Figure 2-3. Location of Shipping Retainer**

## Preparing the CAT Printer

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4. Insert the platen knob in the hole on the right side of the printer, lining up the notch in the knob with the pin on the shaft.
- 

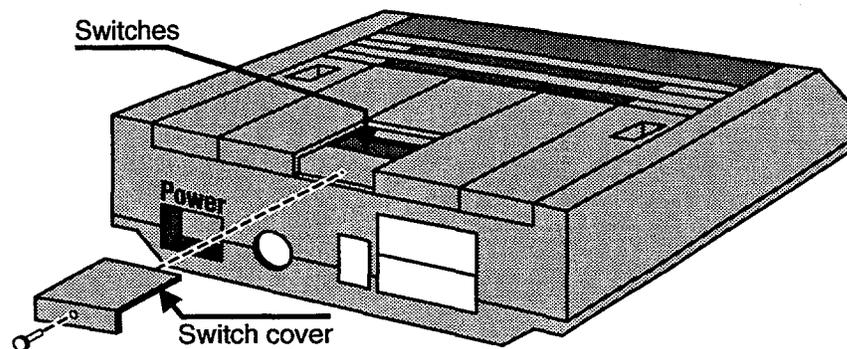


**Figure 2-4. Inserting Platen Knob**

### **Verifying the Internal Switches**

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1. Turn the printer around and remove the screw holding the switch cover in place. Remove the switch cover.
- 



**Figure 2-5. Removing the Switch Cover**

2. Verify that the switches are set as shown in Figure 2-6. If necessary, change the switches to correspond to the settings shown in Figure 2-6. Refer to Appendix C for switch meanings.
3. Replace the switch cover and tighten the screw.

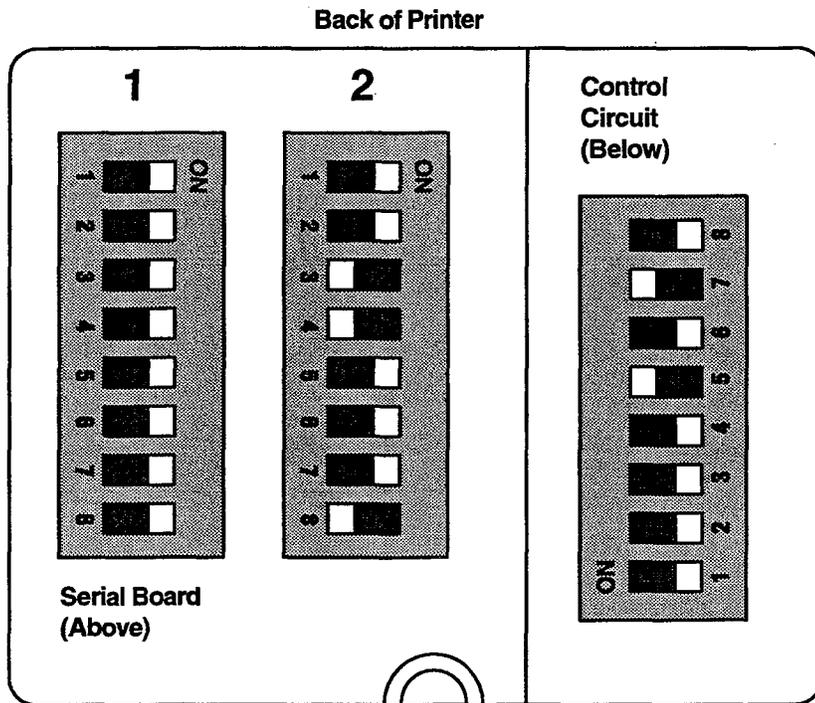
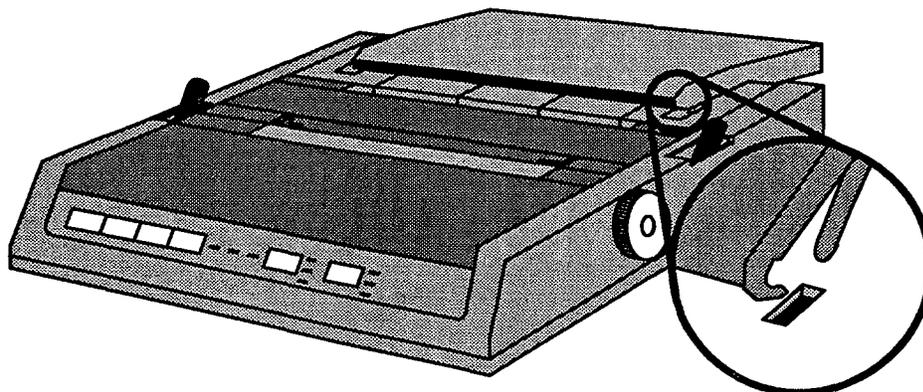


Figure 2-6. CAT Printer Switch Settings

### **Installing the Paper Separator**

---

1. Holding the paper separator at an angle to the top of the printer, insert the tabs into the slots on the top of the printer as shown in the detail blow-up in Figure 2-7.
  2. Slide the paper separator towards the back of the printer so that the tabs fit securely in the slots.
- 



---

**Figure 2-7. Installing the Paper Separator**

3. Press the back of the paper separator down so that it lies flat on top of the printer.

### **Installing the Ribbon Cartridge**

---

1. Center the print head so that it is away from the bail rollers. Make sure that the bail is closed. (The lever on the left side of the printer should be pushed towards the back.)



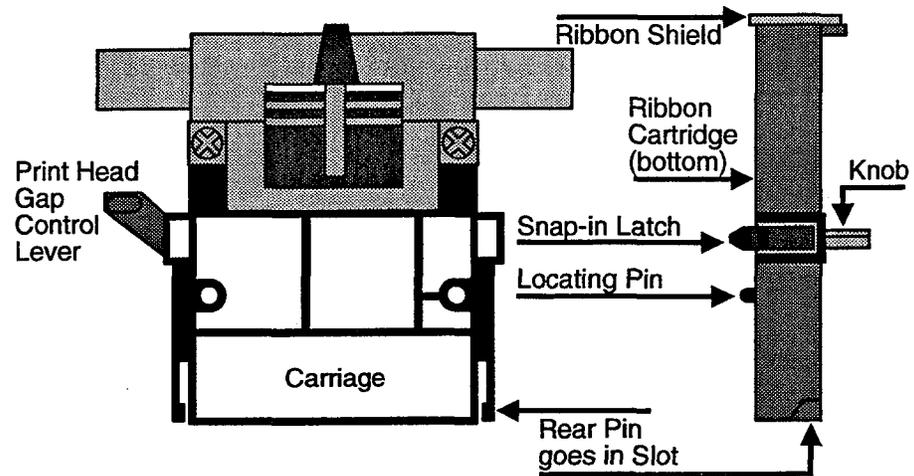
**CAUTION:**

*If the ribbon cartridge is inserted when the print head is at either end of the platen, or is directly opposite a bail roller, the ribbon shield may be damaged.*

2. With the knob side up, tilt the back of the ribbon cartridge onto the carriage so that the pins on the sides at the back of the carriage slip into the slots on the sides at the back of the ribbon cartridge.

**NOTE:**

If the ribbon will not load easily, turn the blue knob slightly until the x-shaped notch on the bottom of the ribbon cartridge aligns with the x-shaped insert on the ribbon plate.

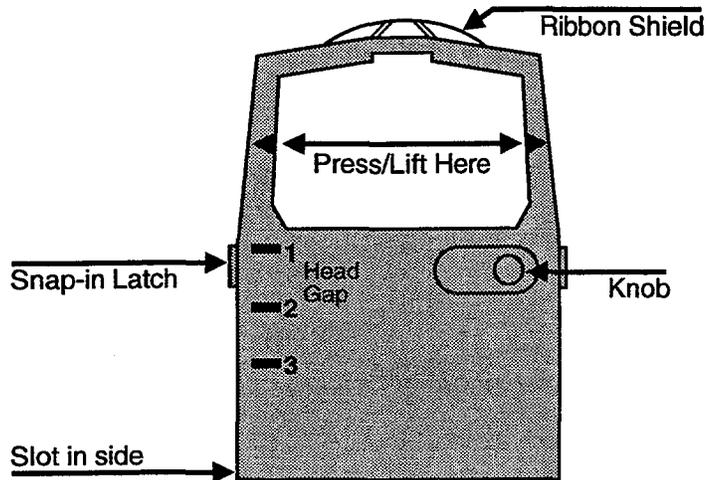


**Figure 2-8. Inserting the Ribbon Cartridge**

3. To seat the ribbon cartridge, press down on the cartridge at the two arrow heads at the sides of the print head opening.

**NOTE:**

Do not remove the clear plastic ribbon shield from the ribbon cartridge.



---

**Figure 2-9. Ribbon Cartridge, Top View**

4. To remove the cartridge, slide the print head away from the rollers, grasp the cartridge on both sides at the arrow heads, and lift off.

### **Setting the Print Head Gap Lever**

---

Before you load paper, be sure to set the blue print head gap level (located to the left side of the print head and shown in Figure 2-9) to the correct position as shown in Table 2-2.

**Table 2-2. Print Head Gap Lever Setting**

---

<b>Paper Type</b>	<b>Print Head Gap Lever Setting</b>
1-part or 2-part	1
3-part or 4-part	2
Extra thick	3

---

### **Loading Paper for Bottom Feed**

---

You can use bottom feed only if you have a slotted printer stand that is designed for bottom feed. To load paper for bottom feed, follow these steps:

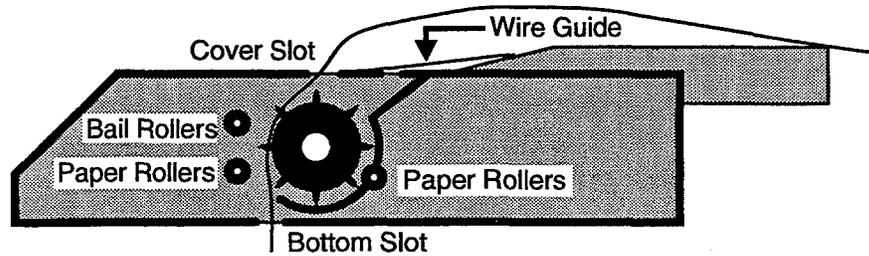
**NOTE:**

Use only fan-fold, pin-feed paper with the CAT Printer.

1. Set the printer on a slotted printer stand with the opening in the base of the printer aligned with the slot on the printer stand.
2. Place the paper under the printer stand.
3. Lift off the access cover.
4. Move both the paper lever (on the right side of the printer) and the bail lever (on the left side of the printer) forward.
5. Slide the first sheet of paper through the opening in the base of the printer.
6. Using the platen knob, engage the sprocket holes with the pins. If the pins need adjusting, pull the tabs forward and slide the pins left or right to accommodate the width of the paper. Lock the tabs when the pins are the proper distance apart.

**NOTE:**

Do not stretch the paper. If the sprocket holes stretch or tear during printing, readjust the pins.



**Figure 2-10. Loading Paper for Bottom Feed**

7. Close the bail by moving the bail lever (on the left side of the printer) towards the back.



**CAUTION:**

*The paper lever (on the right side of the printer) must be left forward or the sprocket holes will tear.*

8. Using the platen knob, advance the paper to the first line where printing is to begin.
9. Replace the access cover making sure that the paper exits through the opening. Then lower the wire guide on the paper separator to prevent exiting paper from reentering the printer.

### **Loading Paper for Rear Feed**

---

You can use rear feed with or without a printer stand. To load paper for rear feed, follow these steps:

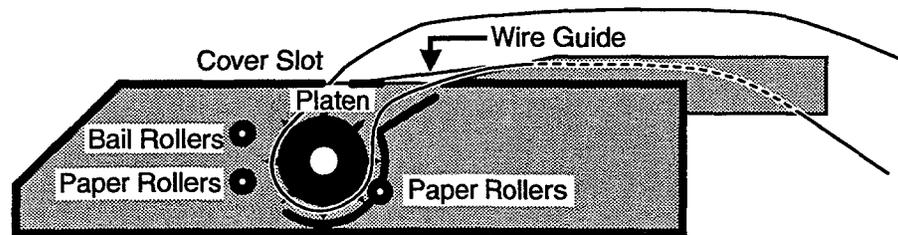
**NOTE:**

Use only fan-fold, pin-feed paper with the CAT Printer.

1. Place the paper behind the printer.
2. With the paper separator laying flat on the printer, slide the guides to their widest position.
3. Lift off the access cover.
4. Move the bail lever (on the left side of the printer) and the paper lever (on the right side of the printer) forward.
5. Insert the paper in the slot in the paper separator.
6. Push the paper forward until it reaches the platen.
7. Using the platen knob, engage the sprocket holes with the pins. If the pins need adjusting, pull the tabs forward and slide the pins left or right to accommodate the width of the paper. Lock the tabs when the pins are the proper distance apart.

**NOTE:**

Do not stretch the paper. If the sprocket holes stretch or tear during printing, readjust the pins.



**Figure 2-11. Loading Paper for Rear Feed**

8. Continue advancing the paper until it reaches the front of the platen, behind the bail.
9. Close the bail by moving the bail lever (on the left side of the printer) towards the back.



**CAUTION:**

*The paper lever (on the right side of the printer) must be left forward or the sprocket holes will tear.*

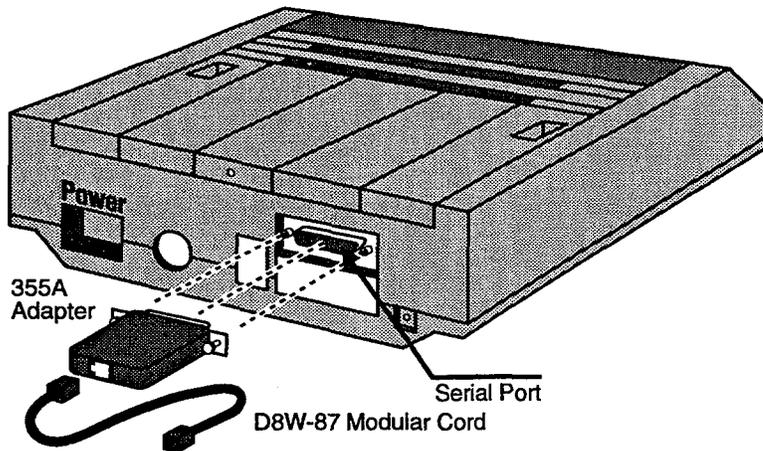
10. Using the platen knob, advance the paper to the first line where printing is to begin.
11. Replace the access cover making sure that the paper exits through the opening. Then lower the wire guide on the paper separator to prevent exiting paper from reentering the printer.

### Connecting the Printer Cable

---

To connect the printer cable, follow these steps:

1. Slide the 355A adapter into the serial connector on the rear of the printer.
- 



**Figure 2-12. Connecting the Printer Cable**

2. Using a small screwdriver, tighten down the screws on each side of the 355A adapter.
3. Connect one end of a D8W-87 8-position modular cord to the modular jack at the back of the 355A adapter.
4. At the appropriate time, connect the other end of the D8W-87 modular cord to the printer modular jack on the back of the CAT PLUS.
5. At the appropriate time, connect the power cord to the back of the printer and plug the printer in.



**CAUTION:**

*Be sure the printer is turned off (switch on the right side of the printer) before connecting the power cord.*

---

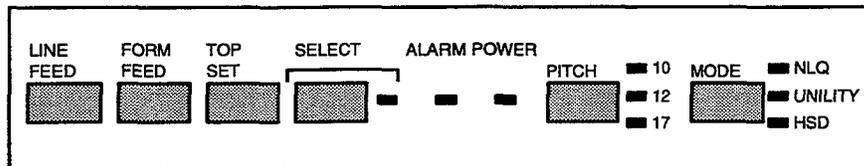
## Testing the Printer

To check the printer's operation, hold down the **LINE FEED** button while turning on the printer. The printer should respond by printing its entire character set several times at different sizes and quality levels.

---

## Operating the Printer

The printer control panel is shown in Figure 2-13.



---

**Figure 2-13. Printer Control Panel**

- The **SELECT** button controls communications with the computer. Pressing this button turns the **SELECT** lamp on and off. When the lamp is on, the printer is on-line and is ready to receive data. When the lamp is out, the printer is off-line and cannot receive data from the computer.

**NOTE:**

If the printer is off-line for more than a few minutes, the CAT sounds an alarm. Be sure to put the printer back on-line after making adjustments.

- The **LINE FEED** button moves the paper up one line. The **LINE FEED** button works only when the printer is off-line.
- The **FORM FEED** button advances the paper to the top margin of the next page. The **FORM FEED** button works only when the printer is off-line.
- The **TOF SET** button sets the top margin at the current location of the paper. To set the top of form, use the platen knob to position the paper correctly and then press the **TOF SET** button. The **TOF SET** button works only when the printer is off-line.
- The red **ALARM** lamp indicates that the printer has run out of paper or that there is an internal problem with the printer.
- The **POWER** lamp is on when the printer is plugged in and turned on.
- The **PITCH** button controls the character size. Pressing it cycles between 10, 12, and 17 characters per inch. The corresponding lamps indicate which size is selected.
- The **MODE** button controls the print quality and speed. Pressing it cycles between Near Letter Quality (NLQ, slow), Utility (good quality, medium speed), and High Speed Draft (HSD, fast but low quality). The corresponding lamps indicate which quality/speed combination is selected.

The default settings are 10 characters per inch and Utility print quality (medium speed).

---

## Installing the CAT Plus

# 3

---

Before installing the CAT, be sure that you have:

- Selected the site according to the requirements in Table 2-1.
- Set up the CAT printer according to the instructions in Chapter 2.
- Administered the Call Reporting options for your Communications System, following the instructions in the system's manual.

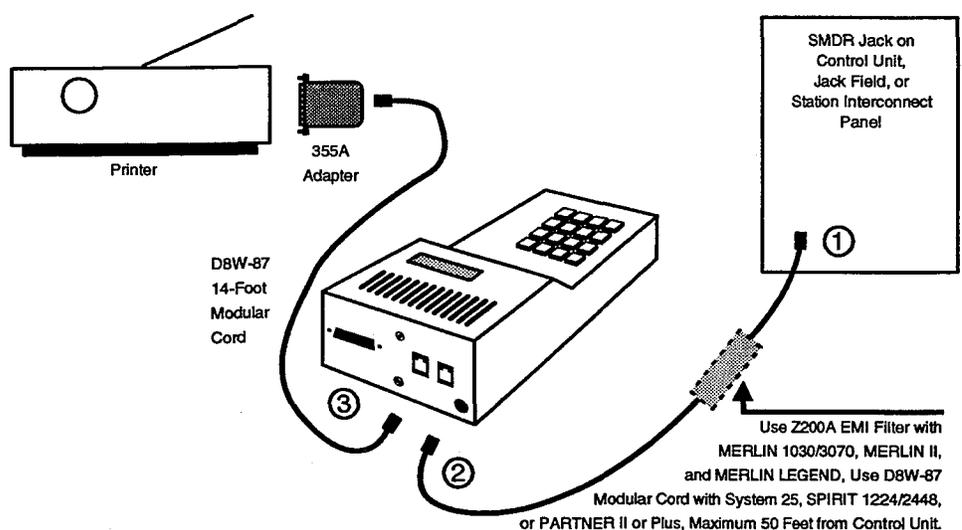
Next, refer again to Table 2-1 to determine which installation procedure is appropriate for your Communications System and the location of your CAT Plus. The three procedures that follow are numbered according to the left column of Table 2-1.

Note that the numbered callouts in each of the illustrations that follow refer to steps in the corresponding installation procedure.

## 1. Installation on the Same AC Outlet

### 1. Installation on the Same AC Outlet

Refer to Figure 3-1. To install the CAT, follow these instructions:



**Figure 3-1. Installation on the Same AC Outlet**

1. For MERLIN 1030/3070, MERLIN II, and MERLIN LEGEND, use a Z200A EMI filtered cord. For System 25, SPIRIT 1224/2448, PARTNER II, and PARTNER Plus, use a D8W-87 modular cord. Plug one end of the modular cord into the SMDR jack on the Processor Module, into the Jack Field, or into the Station Interconnect Panel.
2. Plug the other end of the modular cord into the modular jack labeled *SMDR* on the back of the CAT.

### 3-2 Installing the CAT Plus

## 2. Installation on a Different AC Outlet

---

3. Connect another D8W-87 modular cord from the printer to the modular jack labeled *Printer* on the back of the CAT.

## 2. Installation on a Different AC Outlet

---

For this installation, you need the following items, which should have been ordered at the same time as your CAT:

- Two 248B adapters
- Two 355AF adapters
- Two 400B2 adapters
- Three (additional) D8W-87 modular cords
- Two D6AP-87 modular cord
- One D8AM-87 modular cross over cable
- One M7-U87 EIA cross over cable
- One Z3A2 Asynchronous Data Unit (ADU)
- One Z3A4 ADU
- Two 2012D power transformers
- For MERLIN 1030/3070, MERLIN II, and MERLIN LEGEND only, one Z200A EMI filtered modular cord

This installation proceeds in two stages:

- In Stage 1, you connect the switch to the wall jack near it.
- In Stage 2, you connect the CAT to the other wall jack.

Figure 3-2 illustrates Stage 1 of this installation, and Figure 3-3 illustrates Stage 2. In both figures, the numbered call-outs refer to steps in the corresponding stage.

## 2. Installation on a Different AC Outlet

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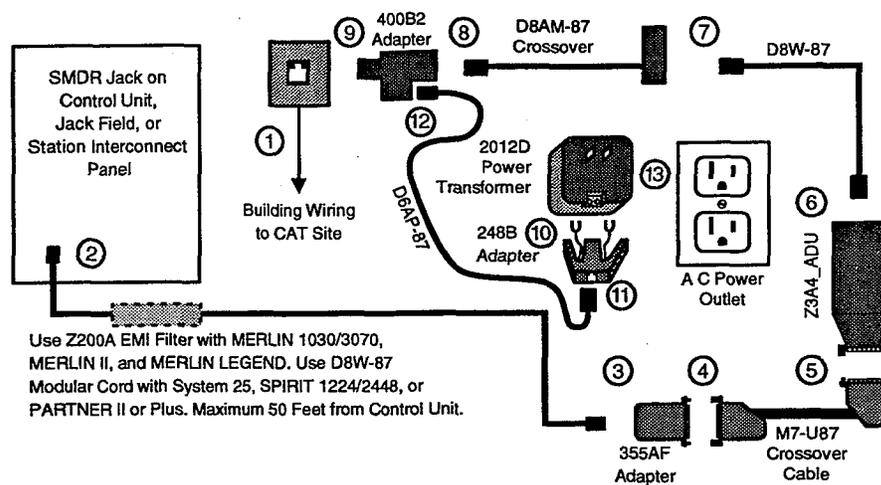
### **Stage 1 — Connecting the Switch to the Wall Jack** **(Figure 3-2)**

---

1. Make sure that the building wiring was installed from the Communication System to the location of the CAT. Identify the wall jack, the position in the jack field, or the position in the Station Interconnect Panel (SIP) that represents these wires.
2. Plug one end of the modular cord into the SMDR jack in the Jack Field, on the Processor Module, or on the Station Interconnect Panel.  
  
For MERLIN 1030/3070, MERLIN II, and MERLIN LEGEND, use a Z200A EMI filtered cord. For System 25, SPIRIT 1224/2448, PARTNER II, and PARTNER Plus, use a D8W-87 modular cord.
3. Plug the other end of the modular cord into the modular jack on one of the 355AF adapters.
4. Connect the 355AF to one end of the M7-U87 EIA cross-over cable. Tighten the screws.
5. Plug the other end of the M7-U87 EIA cross-over cable into the matching socket on the Z3A4 ADU. Tighten the screws.
6. Plug one end of a D8W-87 modular cord into the modular jack on the ADU labeled *Wall Jack*.
7. Plug the other end of the D8W-87 modular cord into the modular jack of the D8AM-87 cross-over cable.
8. Plug the other end of the D8AM-87 cross-over cable into the top modular jack of one of the 400B2 adapters.
9. Plug the 400B2 adapter into the wall jack, jack field, or SIP with the building wiring leading to your CAT location.
10. Attach the spade lugs of one of the 248B adapters to the two screw terminals of the 2012D power transformer.
11. Plug one end of a D6AP-87 modular cord into the modular jack on the 248B adapter.

## 2. Installation on a Different AC Outlet

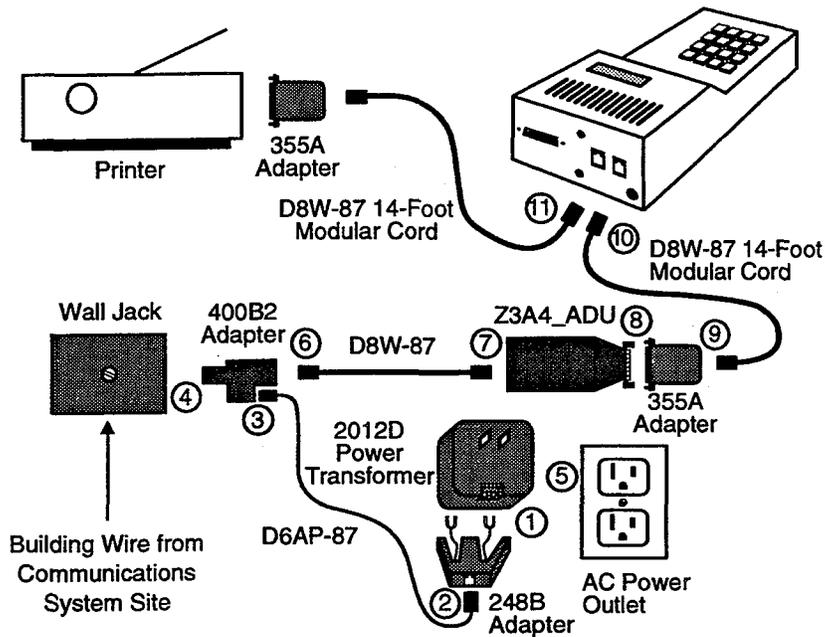
12. Plug the other end of the D6AP-87 modular cord into the lower modular jack of the 400B2 adapter in the SIP.
13. Plug the 2012D power transformer into a standard AC power outlet.
14. Take your remaining cables and adapters to the CAT location.



**Figure 3-2. Connecting the Switch to the Wall Jack**

## 2. Installation on a Different AC Outlet

### Stage 2—Connecting the CAT to the Wall Jack (Figure 3-3)



**Figure 3-3. Connecting the CAT to the Wall Jack**

1. At the CAT location, attach the second 248B adapter's spade lugs to the two screw terminals on the remaining 2012D power transformer.
2. Plug one end of the second D6AP-87 modular cord into the modular jack on the 248B adapter.

### 3-6 Installing the CAT Plus

## 2. Installation on a Different AC Outlet

---

3. Plug the other end of the D6AP-87 modular cord into the lower modular jack on the second 400B2 adapter.
4. Plug the 400B2 adapter into the modular wall jack.
5. Plug the 2012D power transformer into a standard AC power outlet.
6. Plug one end of the third D8W-87 modular cord into the top modular jack on the 400B2 adapter.
7. Plug the other end of the D8W-87 modular cord into the modular jack on the Z3A2 ADU labeled *Wall Jack*.
8. Connect the second 355AF adapter to the matching connector on the Z3A2 ADU. Tighten the screws.
9. Plug one of the D8W-87 modular cords that came with the CAT into the modular jack on the 355AF adapter.
10. Plug the other end of the D8W-87 modular cord into the modular jack labeled *SMDR* on the back of the CAT.
11. Connect the D8W-87 modular cord from the printer to the modular jack labeled *Printer* on the back of the CAT.

## 2. Installation on a Different AC Outlet

---

### **3. Installation with MERLIN Plus**

---

To install the CAT with MERLIN Plus, refer to Figure 3-4 and follow these instructions:

1. Plug one end of a D8W-87 modular cord into the modular jack labeled *Printer* on the back of the Data Collector.
2. Plug the other end of the D8W-87 cord into the modular jack labeled *SMDR* on the back of the CAT.
3. Connect another D8W-87 modular cord from the printer to the modular jack labeled *Printer on the back of the CAT*.

Make sure the Data Collector connects to the MERLIN Plus.

## System Features

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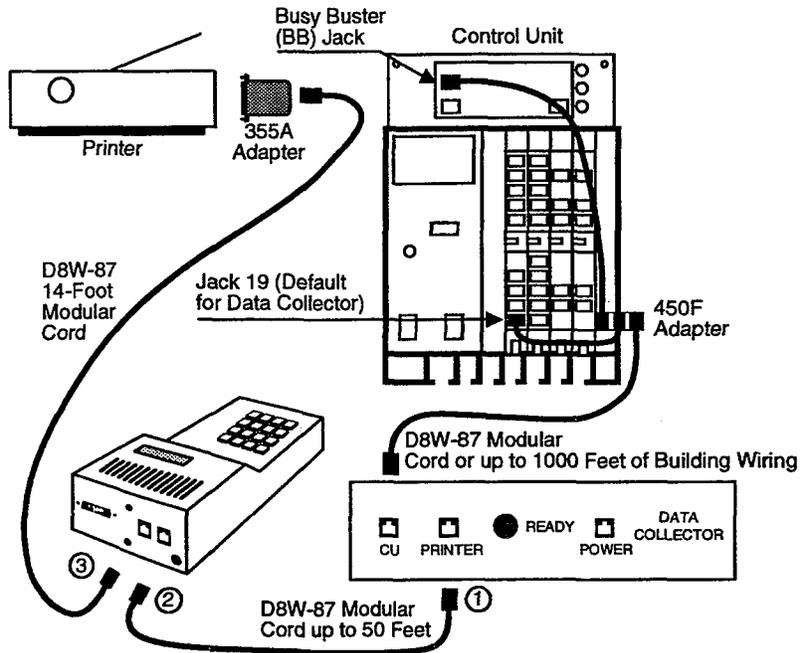


Figure 3-4. Installation With MERLIN PLUS

## System Features

---

Now is the time — before you begin to initialize the CAT Plus — to familiarize yourself with the system's features, especially the keypad, lamps, and alarms.

### **Keypad**

---

The 16-key keypad allows you to make selections from the system menus and to enter data for the system setup options and parameters. There are six "special" keys that are shown in Figure 1-1 and described as follows:

- |     |   |
|-----|---|
| YES | Used in response to Yes/No questions.   |
| NO  | Used in response to Yes/No questions.   |
| E   | Not used in the Business system.  |
| /   | Used as a field delimiter to indicate the end of an extension, account, trunk, or special number. |
| #   | Used to "escape" from any report, option, or Y/N question back to the main menu.                  |
| *   | Not used in the Business system.  |

### **LCD Display**

---

The top of the CAT Plus has a 2-line by 24-character Liquid Crystal Display (LCD). Messages, menus, and input data are presented on this display to help you operate the CAT Plus. Messages on the display are shown as follows in this document:

Line 1 of LCD display xx
Line 2 of LCD display xx

### **Lamps**

---

Two Light Emitting Diodes (LEDs) are located above the keypad:

- The green LED indicates that power is connected.
- The yellow LED indicates that data is being received from the Communications System SMDR output.

## Alarms

---

The CAT Plus has four alarms that indicate situations requiring attention. A distinctive beep signals each of the alarms:

- **No SMDR Data:** A continuous beeping sound indicates that no SMDR data has been received for an hour. The alarm is only received if enabled by a setup option, and is only received during the hours from 9:00 am to 4:00 pm, Monday through Friday. It is reset when a call is received.
- **Printer Stalled:** A solid beep indicates that the printer is not responding properly because of an out-of-paper condition or another printer problem.
- **85% Full:** A single beep for each call indicates that the storage capacity of the CAT Plus is 85% used. (5525 calls have been stored in the system.) This is an indication that the management and system reports should be run. When 90% of the storage capacity is used, four standard reports and two management reports run automatically. (See Chapter 6, *Standard Reports*, for more information.)
- **Toll Fraud:** When toll fraud is detected, a solid beep occurs and a message is printed.

## **System Initialization**

After the CAT has been installed, follow these steps to initialize the system:

1. Plug the printer line cord into a standard AC power outlet.
2. Turn on the printer. The switch is on the right side.
3. Plug the power module for the CAT into a standard AC power outlet.
4. Check the green LED on the CAT to verify that power is on. If the green LED is not on:
  - Verify that the AC outlet has power.
  - Verify that the EPROM is properly installed with the notch toward the lever.

If the green LED is still not on, unplug the CAT power module and call for technical assistance.

5. Press the *RESET* switch on the back of the CAT.

The system responds:

INITIALIZE SYSTEM Y/N?

## System Initialization

---

If it does not produce this response:

- Verify that power to the CAT is on.
- Verify that the printer has been installed properly, is plugged and turned on, and is on-line.
- Wait about two minutes and then if the display shows *PRINTER STALLED*:
  - Check the printer cables.
  - Verify that the ribbon is installed properly.
  - Verify that the paper is loaded and is not jammed.

If there is still a problem, call for technical assistance.

6. Press the **YES** function key.

The printer should print a line of I's, followed by a line of asterisks, followed by the Diagnostics shown in Form 3-1.



Then the Main Menu shown in Form 3-2 prints.

**Form 3-2. CAT Main Menu**

```
AT&T "CAT PLUS" MENU
      CALLS /DATE /TIME 0000 FRI 11/11/94 13:00

1-ALL EXT. + ACCT.
2-ALL EXT.
3-ALL ACCT.
4-ONE EXT.
5-ONE ACCT.
6-MANAGEMENT REPORTS
7-SETUP
8-DIAGNOSTICS
9-WATCH DOG
```

**NOTE:**

After a power failure, the battery backup feature in CAT Plus protects your data for a minimum of 24 hours. Since the time stamping of incoming and outgoing calls occurs independently of the CAT Plus, your calls continue to be marked with the correct dates and times even after a power failure.

If the label on the underside of your CAT Plus has a date code later than 01/93, your CAT's clock is also backed up during a power outage. On earlier CAT Plus models, the clock is not backed up, and it reverts to a date of SUN 01/01/90 and a time of 00:00 during an outage. This date and time also occur if you press RESET on the back of the system and answer [YES] to the prompt INITIALIZE SYSTEM Y/N? In both cases, you must reset the system clock.

To reset the CAT Plus clock so that your reports will be marked with the correct times, select the SETUP option from the Main Menu and enter the correct date and time. The procedure for resetting the CAT Plus clock follows.

### Setting the Real-Time Clock

---

After the system initializes, the LCD displays the day, date, and time.

```
FRI 11/11/94 13:00 0000  
CALLS. PRESS # FOR MENU!
```

To set the real-time clock, follow these instructions:

1. The Main Menu has already printed. Press **7** for *SETUP*.

```
REAL TIME CLOCK SETUP ?  
ENTER A "YES" OR "NO"
```

2. Press **YES**.

```
FRI/11/11/94 13:00  
IS DATE/TIME CORRECT Y/N
```

3. Press **NO**.

```
ENTER DAY OF WK. SUN=1
```

## System Initialization

---

4. Press the button that corresponds to the day of the week:

- 1 Sunday
- 2 Monday
- 3 Tuesday
- 4 Wednesday
- 5 Thursday
- 6 Friday
- 7 Saturday

```
ENTER DAY OF WK. SUN=1
ENTER MM DD YY HH MM
```

5. Enter the month, day, year, hour, and minute using two digits for each. After the 10th digit is entered, the system responds with your entry:

**NOTE:**

You must enter the hour based on a 24-hour clock (military time). Use 01 for 1:00 am, 12 for noon, 13 for 1:00 pm, 00 for midnight, and so forth.

```
FRI 11/11/94 13:00
IS DATE/TIME CORRECT Y/N
```

6. If the date and time are correct, press  YES. If they are not correct, press  NO and repeat the setup. The system displays the following message:

```
FRI 11/11/94 13:00 0000
CALLS. PRESS # FOR MENU!
```

### Testing the System

---

The system is now ready to receive calls. Test the system by following these instructions:

1. Place several calls on different extensions and stay on the line for at least one minute, then hang up. When a call reaches the CAT (after you hang up), the yellow LED on the top of the CAT flashes, and the call counter on the LCD display increments.

If the number of calls on the display remains at zero:

- Verify that the SMDR option has been administered on your Communications System.
- Verify that the SMDR communication speed has been set to 1200 baud on the CAT. Switches 1, 2, and 3 should be off. Switch 4 should be on.

If this does not solve the problem, call for technical assistance.

2. Select the *ALL EXT.* (*All Extension Report*) from the menu by pressing **[2]**. The system responds:

PRINT CALL DETAIL IN RPT  
ENTER A "YES" OR "NO"

3. Press **[YES]**. The system prints the details of the test calls that you made, which should appear similar to those shown in Form 3-3.

**Form 3-3.** Test Call Detail Report

ALL EXTENSION	REPORT	DATE	FRI 11/11/94 13:42				
EXTENSION	0020						
DATE	TIME	EXT	DIALED#	ST	DUR	COST	FAC
11/11	09:34	0020	12346565	NJ	024	\$002.86	01
11/11	10:35	0020	15551212	I#	012	\$000.50	01
TOTAL		CALLS	DURATION	COST			
		000002	00000036	000003.36			

## Running Diagnostics

Occasionally, you may want to run the CAT diagnostic routines to verify that the CAT is operating properly. You can access the diagnostic function from Main Menu option 8, *DIAGNOSTICS*.

Most of the time, the LCD displays the day, date, time, and number of calls stored, and indicates that you can press **#** to print the main menu.

```
FRI 11/11/94 13:42 05200  
CALLS. PRESS # FOR MENU!
```

When you press **#**, the Main Menu shown in Form 3-4 prints.

### Form 3-4. CAT Main Menu

```
AT&T "CAT PLUS" MENU  
CALLS /DATE /TIME 0520 FRI 11/11/94 13:42  
  
1-ALL EXT. + ACCT.  
2-ALL EXT.  
3-ALL ACCT.  
4-ONE EXT.  
5-ONE ACCT.  
6-MANAGEMENT REPORTS  
7-SETUP  
8-DIAGNOSTICS  
9-WATCH DOG
```

To start the diagnostic routines, press **8** for *DIAGNOSTICS* after the Main Menu has printed.

## System Initialization

The CAT pauses for about 30 seconds while it runs memory tests. It reports any memory errors by printing the error address as a 6-digit number. If there are no memory errors, the CAT prints the diagnostic results and setup values as shown in Form 3-5. The CAT then returns to the regular display and Main Menu prompt.

### Form 3-5. CAT Diagnostics

DIAGNOSTICS	DATE	FRI 11/11/94 13:42
AT&T CAT PLUS VERSION III 09/01/94 BUSINESS		
PAR+10.813622.011305.904407.090194		
01	PERCENTAGE MARKUP	00
02	LINE SPACING	00
03	MIN. DUR. TO PRINT CALL	00
04	NIGHT DISCOUNT LOCAL	N
05	PRINT 7-DIGIT CALLS	Y
06	PRINT CALLS WITHOUT ACCT	Y
07	PRINT INCOMING CALLS	Y
08	PRINT REPORTS DAILY	N
09	SUPPRESS 7-DIGIT CALLS	N
10	SUPPRESS CALLS W/O ACCT	N
11	SUPPRESS INC CALLS	N
12	PRINT ON THE FLY	N
13	PUT CALL IN ACC RPT ONLY	N
14	NEW PAGE OPTION	N
15	ZERO COST 7-DIGIT CALLS	Y
16	SMDR DATA ALARM ON	N
17	DAY OF WK. TO PRT. RPTS.	INV
18	FREE TIME	0.0
19	COST FOR 0+ CALLS	0.00
20	COST FOR 555 CALLS	0.50
21	COST FOR 800 CALLS	0.00
22	COST FOR 900/700 CALLS	0.50
23	LOCAL SURCHARGE	0.00
24	LONG DISTANCE SURCHARGE	0.00
25	COST FOR 411 CALLS	0.00
26	ACCOUNT CODE LENGTH	1-9
27	NIGHT DISCOUNT TABLE	00 00 00 00 00 24 00

## System Initialization

---

- The first line indicates the date and time that the diagnostics were requested.
- The second line indicates the CAT type and the software release date.
- The third line indicates the *Communications System* type, EPROM creation date, and the values of the four special numbers (area code and exchange).
- The remainder of the report shows the current values of the setup options and parameters.

---

## Setting Options and Parameters

# 4

---

CAT Plus allows you to set 27 options and parameters. The first part of this chapter describes how to enter the setup mode and change any option or parameter. The remainder of the chapter describes each option and parameter in detail. It will help you choose the settings and values that are best suited to your company's needs.

## Setup Mode

---

Most of the time, the LCD displays the day, date, time, and number of calls stored, and indicates that you can press **#** to print the Main Menu.

```
THUR 09/01/94 00:00 0000
CALLS. PRESS # FOR MENU!
```

When you press **#**, the Main Menu shown in Form 4-1 prints.

### Form 4-1. CAT Main Menu

```
AT&T "CAT PLUS" MENU
  CALLS /DATE /TIME 0000 THUR 09/01/94 00:00

1-ALL EXT. + ACCT.
2-ALL EXT.
3-ALL ACCT.
4-ONE EXT.
5-ONE ACCT.
6-MANAGEMENT REPORTS
7-SETUP
8-DIAGNOSTICS
9-WATCH DOG
```

To set the options and parameters, follow these instructions:

1. Press **7** for *SETUP*.

```
REAL TIME CLOCK SETUP ?
ENTER A "YES" OR "NO"
```

### 4-2 Setting Options and Parameters

## Setup Mode

---

2. Press **NO**.

```
SETUP SYSTEM PARAMETERS?  
ENTER A "YES" OR "NO"
```

3. Press **YES**.

The current option settings and parameter values print as shown in Form 4-2. These options and parameters are explained in detail later in the chapter.

**Form 4-2.** Setup Option Settings and Parameter Values

01	PERCENTAGE MARKUP	00
02	LINE SPACING	00
03	MIN. DUR. TO PRINT CALL	00
04	NIGHT DISCOUNT LOCAL	N
05	PRINT 7-DIGIT CALLS	Y
06	PRINT CALLS WITHOUT ACCT	Y
07	PRINT INCOMING CALLS	Y
08	PRINT REPORTS DAILY	N
09	SUPPRESS 7-DIGIT CALLS	N
10	SUPPRESS CALLS W/O ACCT	N
11	SUPPRESS INC CALLS	N
12	PRINT ON THE FLY	N
13	PUT CALL IN ACC RPT ONLY	N
14	NEW PAGE OPTION	N
15	ZERO COST 7-DIGIT CALLS	Y
16	SMDR DATA ALARM ON	N
17	DAY OF WK. TO PRT. RPTS.	INV
18	FREE TIME	0.0
19	COST FOR 0+ CALLS	0.00
20	COST FOR 555 CALLS	0.50
21	COST FOR 800 CALLS	0.00
22	COST FOR 900/700 CALLS	0.50
23	LOCAL SURCHARGE	0.00
24	LONG DISTANCE SURCHARGE	0.00
25	COST FOR 411 CALLS	0.00
26	ACCOUNT CODE LENGTH	1-9
27	NIGHT DISCOUNT TABLE	00 00 00 00 00 24 00

The LCD display then requests:

## Setup Mode

---

ENTER TWO DIGIT CODE FOR  
OPTION OR # TO EXIT

- To change an option or set a parameter value, enter the 2-digit number corresponding to the option or parameter.
- Follow the instructions on the display. Typically, they are:

XX  
IS THIS THE OPTION Y/N?

XX  
IS THIS VALUE OK Y/N?

— if no:

ENTER NEW VALUE XX

XX  
IS THIS VALUE OK Y/N?

— if yes:

ENTER TWO DIGIT CODE FOR  
OPTION OR # TO EXIT

- When you are finished changing option settings and parameter values, press **#** to return to the Main Menu.

### 4-4 Setting Options and Parameters

## **Options and Parameters**

This section discusses each option and parameter.

### **01 PERCENTAGE MARKUP**

This parameter specifies the percentage to mark up the cost tables when pricing calls. To change the value enter in the new percentage. If the value is less than 10 enter a leading zero. For no markup, use 00. The default value is 00%. The value of this parameter interacts with *NIGHT DISCOUNT LOCAL*.

### **02 LINE SPACING**

This parameter controls the number of lines that are skipped between calls printed when *ON THE FLY* call printing is active. If you require spacing between printed calls, enter the 2-digit value from 01 to 99. The default value of 00 prints calls on consecutive lines with no extra space.

### **03 MIN. DUR. TO PRINT CALL**

This parameter specifies the minimum duration in minutes that a call must last if it is to print either in the reports or when *ON THE FLY* call printing is active. Enter the 2-digit value from 00 to 99. The default value of 00 causes all calls to print.

**NOTE:**

Calls shorter than the minimum are stored and can be printed later if the duration is reduced. Non-printing calls are included in summary totals.

#### **04 NIGHT DISCOUNT LOCAL**

This option controls whether local calls are discounted by hour of the day and marked up by the *PERCENTAGE MARKUP* option. The default is NO. You have to turn this option on if you want the night discount to apply to local calls.

#### **05 PRINT 7-DIGIT CALLS**

This option controls whether or not calls having 7 or fewer digits are printed in reports or when *ON THE FLY* call printing is active. The default is YES.

**Caution:** If you do not dial "1" for long distance calls within your home area code, setting this option to NO prevents printing of all 7-digit calls ; both local and long distance.

**NOTE:**

These calls are stored and can be printed later if the option is reset to YES. Non-printing calls are included in summary totals.

#### **06 PRINT CALLS WITHOUT ACCT**

This option controls whether or not calls without account codes are printed in the reports or when *ON THE FLY* call printing is active. The default is YES.

**NOTE:**

These calls are stored and can be printed later if the option is reset to YES. Non-printing calls are included in summary totals.

#### **07 PRINT INCOMING CALLS**

This option controls whether incoming calls are printed in the reports or when *ON THE FLY* call printing is active. The default is YES.

**NOTE:**

These calls are stored and can be printed later if the option is reset to YES. Non-printing calls are included in summary totals.

### 08 PRINT REPORTS DAILY

This option controls whether ALL EXTENSION, ALL ACCOUNT, SUMMARY BY HOUR, and SUMMARY BY FACILITY reports are run on a daily basis. When the reports run, the call records are automatically deleted. The default value is NO.

- If there are no calls for the day, no reports are run.
- When you activate this option, the CAT runs reports for the calls it has stored up until this time. From then on, reports run every midnight when there is call data in the CAT.
- When the CAT reaches 90% full, it automatically runs the reports and deletes the call records. This option cannot be changed.

### 09 SUPPRESS 7-DIGIT CALLS

This option controls whether 7-digit calls (local and long distance) are stored. Not storing 7-digit calls increases the storage capacity of the CAT. The default is NO (do not suppress). **Caution:** If you do not dial "1" for long distance calls within your home area code, setting this option to YES suppresses all 7-digit calls, both local and long distance.

**NOTE:**

Suppressing calls causes them not to be stored in the CAT and they cannot be retrieved at a later time.

### 10 SUPPRESS CALLS W/O ACCT

This option controls whether calls without account codes are stored. Use this option when you are interested only in those calls that can be billed back to an account code. The default is NO (do not suppress).

**NOTE:**

Suppressing calls causes them not to be stored in the CAT, and they cannot be retrieved at a later time.

### **11 SUPPRESS INC CALLS**

This option controls whether incoming calls are stored. Not storing incoming calls increases the storage capacity of the CAT. The default is NO (do not suppress).

**NOTE:**

Suppressing calls causes them not to be stored in the CAT, and they cannot be retrieved at a later time.

### **12 PRINT ON THE FLY**

This option controls whether call records are printed "on the fly," that is, as soon as the call record is received from the Communications System. The default is NO. This option interacts with *LINE SPACING*, *PRINT 7-DIGIT CALLS*, *PRINT CALLS WITHOUT ACCT*, *MIN. DUR. TO PRINT CALL*, and *PRINT INCOMING CALLS*.

### **13 PUT CALL IN ACC RPT ONLY**

This option controls whether calls with account codes appear only in the account code report (YES), or in both the account code and extension reports (NO). The default is NO (print both places).

### **14 NEW PAGE OPTION**

This option controls whether reports for each extension and account code appear on separate pages. The default is NO. If the reports will be distributed, the option should be specified as YES. When this option is selected, a dash is printed on the first line following a top-of-form command. Use this to determine whether the paper is properly aligned.

### **15 ZERO COST 7-DIGIT CALLS**

This option controls whether 7-digit calls are free. The default is YES. If you use the *LOCAL CALL SURCHARGE* parameter to apply a fixed cost per call on 7-digit calls or if you have ordered message units with your cost database (in the EPROM), you must set this option to NO.

### **16 SMDR DATA ALARM ON**

This option controls whether the CAT sounds the alarm if there are no calls received for an hour. The default is NO. When this option is set to YES, it is only in effect from Monday through Friday from 9 am to 4 pm. (These times cannot be changed.)

### **17 DAY OF WK. TO PRT. RPTS.**

This parameter specifies the day of the week that reports are to run. The reports run automatically at midnight on the selected day. The default is not to run on a weekly basis (display shows *INV*). To specify the day of the week, enter a digit from 1 for Sunday to 7 for Saturday. If this parameter is not being used, enter zero to turn weekly reporting off (the display shows *INV*).

- When you set this option, the reports may be generated when you exit the setup mode.
- Do not use this option if the *PRINT REPORTS DAILY* option is set to YES.

When the reports are run, the call records are deleted.

### 18 FREE TIME

This parameter specifies the time (in seconds) that is subtracted from each call's duration to allow for connect and ring. The value of this parameter is controlled by the type of Communications System and telephone company equipment you have and by the type of business you are in.

The minimum (default) free time is 30 seconds. Table 4-1 shows the relationship between the number you specify and the total free time.

**Table 4-1. Free Time Values**

---

<u>Free Time</u>	<u>Entry</u>
30	00 (default)
36	01
42	02
48	03
54	04
60	05
66	06
72	07
78	08
84	09
90	10

---

### 19 COST FOR 0+ CALLS

This parameter specifies a flat-rate charge for operator-assisted calls such as credit card and third-party billing. Up to \$9.99 can be charged for each call. The default value is zero (no charge).

**20 COST FOR 555 CALLS**

This parameter specifies a flat-rate charge for long distance directory assistance calls. Up to \$9.99 can be charged for each call. Most telephone companies now charge 50 cents per call, and this is the default.

**21 COST FOR 800 CALLS**

This parameter specifies a flat-rate charge for 800 (toll free) calls. Up to \$9.99 can be charged for each call. The default value is zero (no charge).

**22 COST FOR 900/700 CALLS**

This parameter specifies a per-minute charge for 900 and 700 calls. Up to \$9.99 can be charged for each minute. The default is 50 cents.

**23 LOCAL SURCHARGE**

This parameter specifies a flat-rate surcharge on local calls. Up to \$9.99 can be charged for each call. The default value is zero (no charge).

**24 LONG DISTANCE SURCHARGE**

This parameter specifies a flat-rate surcharge on long distance calls. Up to \$9.99 can be charged for each call. The default value is zero (no charge).

**25 COST FOR 411 CALLS**

This parameter specifies a flat-rate charge for local directory assistance calls. Up to \$9.99 can be charged for each call. The default is zero (no charge).

## 26 ACCOUNT CODE LENGTH

This parameter specifies the minimum and maximum length for a valid account code. The first digit is the minimum number of digits and the second digit is the maximum number of digits for the account code. The default is 1-9 (any code from 1 to 9 digits in length).

### **NOTE:**

A call with any number of digits shows up on the extension report, but only calls whose account code matches this parameter appear in the account report.

## 27 NIGHT DISCOUNT TABLE

This series of seven parameters specifies the time periods and percentages for discounting long distance calls. The default is no discount. To specify this parameter, you must enter seven values:

- Percent 1 = percent discount starting at midnight
- Time 1 = ending hour for first discount
- Percent 2 = percent discount after hour Time 1
- Time 2 = ending hour for second discount
- Percent 3 = percent discount after hour Time 2
- Time 3 = ending hour for third discount
- Percent 4 = percent discount after Time 3 until following midnight

7-digit local calls are also discounted if the *NIGHT DISCOUNT LOCAL* option is active.

## Options and Parameters

---

For example, to select the normal AT&T discounts, you would enter the following values:

53	53% discount night rate
08	ends at 8.00 am
00	00% discount day rate
17	ends at 5.00 pm
38	38% discount evening rate
23	ends at 11 pm
53	53% discount night rate until midnight



---

## Facility Update, Delete, and Print

# 5

---

The Facility Table defines the facilities you have and how calls placed using them are priced. Each facility is defined by a 2-digit code as follows:

**Table 5-1. Facility Definitions**

<b>Facility</b>	<b>Used For</b>	<b>Considerations</b>
01-49	Trunks (lines)	For MERLIN (except MERLIN LEGEND), SPIRIT, and PARTNER Communications Systems, the facility numbers must match the system line numbers. For System 25 and MERLIN LEGEND, the line number is assigned to the facility.
50	OCC and Equal Access	CAT Plus uses Facility 50 for Other Common Carriers (OCCs) and equal access. Under the default settings, CAT Plus reports the trunk used for each equal access call (a call via another long distance carrier) and applies the normal AT&T Direct Distance Dial rates. If, instead, you use the facility setup routine to specify special rates for these calls, CAT Plus reports them under Facility 50.
51-54	Special Numbers	A Special Number is a specific area code or area code and exchange that is priced at a special rate. You may create facilities for up to four Special Numbers.

---

## Selecting Update, Delete, or Print

---

The Facility Table also contains the pricing method for each facility. There are two methods for pricing calls:

- According to the telephone company rates, which are in the rate tables that you received with your CAT. (Rate tables are contained in the EPROM.)
- At per minute rates, which you enter while updating the Facility table. If you price calls at per minute rates, you must enter costs for both initial and secondary periods.

## Selecting Update, Delete, or Print

You can access the facility delete, update, and print functions from Main Menu option 7, *SETUP*.

Most of the time, the LCD displays the day, date, time, and number of calls stored, and indicates that you can press **#** to print the Main Menu.

```
FRI 11/11/94 13:42 0520
CALLS. PRESS # FOR MENU!
```

When you press **#**, the Main Menu shown in Form 5-1 prints.

### Form 5-1. CAT Main Menu

```
AT&T "CAT PLUS" MENU
  CALLS /DATE /TIME 0000 FRI 11/11/94 13:42

1-ALL EXT. + ACCT.
2-ALL EXT.
3-ALL ACCT.
4-ONE EXT.
5-ONE ACCT.
6-MANAGEMENT REPORTS
7-SETUP
8-DIAGNOSTICS
9-WATCH DOG
```

To enter the facility delete, update, and print routines, follow these instructions:

1. Press **7** for *SETUP*.

```
REAL TIME CLOCK SETUP ?
ENTER A "YES" OR "NO"
```

## Selecting Update, Delete, or Print

---

2. Press  NO.

SETUP SYSTEM PARAMETERS?  
ENTER A "YES" OR "NO"

3. Press  NO.

FACILITY DELETE ?  
ENTER A "YES" OR "NO"

4. To delete the Facility Table, press  YES and follow the instructions on the LCD display. To continue to the next option, press  NO.

FACILITY UPDATE ?  
ENTER A "YES" OR "NO"

5. To update the Facility Table, press  YES and follow the instructions on the LCD display. To continue to the next option, press  NO.

FACILITY PRINT ?  
ENTER A "YES" OR "NO"

6. To print the Facility Table, press  YES and follow the instructions on the LCD display. To continue to the next option (not related to Facility Table), press  NO.

## Deleting the Facility Table

When you initialize the system upon installation, the Facility Table is automatically deleted. The only other time you need to delete the Facility Table is when the setup changes are so drastic that it is easier to delete the table and start over.

To delete the Facility Table, follow these instructions:

1. When you see:

```
FACILITY DELETE ?  
ENTER A "YES" OR "NO"
```

press YES. The CAT asks for verification:

```
ARE YOU SURE      Y/N
```

2. Press YES.

The CAT deletes the Facility Table and returns to the main menu prompt.

```
FRI 11/11/94 13:42 0520  
CALLS. PRESS # FOR MENU!
```

## Printing the Facility Table

You should print the Facility Table before making changes, and again after changes have been made. Keep these printouts for your records.

To print the Facility Table, follow these instructions:

1. When you see:

FACILITY PRINT ? ENTER A "YES" OR "NO"
---

press  YES. The CAT prints a Facility Report similar to that shown in Form 5-2.

### **Form 5-2.** Facility report

FAC NUM	TRUNK ACCESS	TOL # PRI A	PRI PER	PRI COST	SEC PER	SEC COST
01	01	P 0	1	0.50	1	0.25
02	02	T 0	0	0.00	0	0.00
03	03	T 0	0	0.00	0	0.00

**NOTE:**

The facility number must match the trunk number in all cases except System 25 and MERLIN LEGEND. For MERLIN LEGEND, the facility number must be four digits with leading zeros.

After printing the report, the CAT returns to the main menu prompt.

## Updating the Facility Table

The Facility Table or *trunk file* is used to generate usage reports by trunk. It is also used to specify rates for special numbers and to set up for Other Common Carriers (OCCs) and equal access.

For SPIRIT, PARTNER, and MERLIN systems (except MERLIN LEGEND), the facility defaults to the line number. For example, if you place a call on line 2, the facility will be 02. For System 25 and MERLIN LEGEND systems, you must set up a facility table if you wish to generate trunk usage reports. In all cases, if the switch is behind a centrex, you must set up the facility table to strip off the access digits. Unless your Communications System requires a Facility Table, you should wait until you have had a chance to store several calls and become familiar with the CAT before setting up your Facility Table.

The Facility Update allows you to add or delete trunk numbers. Facility numbers must be assigned in sequence, starting with 01 and ending with 49. Facility 50 is reserved for OCC lines or equal access, and facilities 51 to 54 for special numbers or area codes. After completing an update, print the file.

## Adding Trunks

Before you start, obtain a list of the telephone numbers assigned to each trunk from the company that installed your Communications System.

To enter the facility update routines, follow these instructions:

1. When the Main Menu has printed, press  for *SETUP*.

REAL TIME CLOCK SETUP ?  
ENTER A "YES" OR "NO"

## Updating the Facility Table

---

2. Press  NO.

SETUP SYSTEM PARAMETERS?  
ENTER A "YES" OR "NO"

3. Press  NO.

FACILITY DELETE ?  
ENTER A "YES" OR "NO"

4. Press  NO.

FACILITY UPDATE ?  
ENTER A "YES" OR "NO"

5. Press  YES.

EXIT FACILITY UPDATE Y/N

6. Press  NO.

FACILITY NUMBER    XX

## Updating the Facility Table

---

7. For MERLIN (except MERLIN LEGEND), SPIRIT, and PARTNER Communications Systems, the facility number must be the same as the line number, which you enter next. For the System 25 and MERLIN LEGEND, the line numbers will be different from the facility numbers, but it is essential that you enter the Facility Table in sequence without any skipped facility numbers.

Enter the 2-digit facility number. Facility numbers for trunks start at 01 and go to 49.

01 IS THIS VALUE OK Y/N?
-----------------------------

If the facility number is correct, press  YES. If the facility number is incorrect, press  NO and you will be asked to reenter the facility number.

TRUNK/ACCESS #   XXXXXX
-------------------------

8. For MERLIN (except LEGEND), SPIRIT, or PARTNER Communications Systems, enter a 2-digit line number that is exactly the same as the facility number. Then press the  key. For the MERLIN LEGEND, enter the 4-digit line number (with leading zeros) assigned to the facility, followed by the  key. For the System 25, enter the 4-digit line number assigned to the facility followed by the  key.

01 IS THIS VALUE OK Y/N?
-----------------------------

(Only the number of digits entered show on the display.)

## Updating the Facility Table

---

If the line number is correct, press  YES. If the line number is incorrect, press  NO, and the CAT Plus will prompt you to reenter the line number.

# DIGS IN ACCESS CODE X

9. If your Communications System is installed behind a centrex and you must dial an access code of at least two digits for an outside line, enter the *number* of digits that must be dialed *less one*. (For example, if you must dial  9  9 for an outside line, that is 1 digit.) If it is not necessary to use an access code, or if the access code is only one digit, enter the digit 0.

0  
IS THIS VALUE OK Y/N?

If the number of digits shown is correct, press  YES. If the number of digits shown is incorrect, press  NO, and you will be asked to reenter the number of digits.

TOLL COSTING            Y/N

10. If you specify  YES, all calls placed over this trunk will be priced at the telephone company rates stored in the EPROM. If you specify a percentage markup or surcharge using the setup parameters, CAT Plus will add these costs to the toll rates. If you specify  NO, CAT Plus will prompt you to add period and cost parameters for both initial and secondary periods. The next section discusses these parameters. Here we'll assume that you press  YES at this time.

## Updating the Facility Table

---

Y  
IS THIS VALUE OK Y/N?

If the choice of costing method is correct, press **YES**. If the choice of costing method is incorrect, press **NO**, and you will be asked to reenter the choice of costing method.

EXIT FACILITY UPDATE Y/N

11. If you have entered all the facility information you need, press **YES**. If you still have more facilities to enter, press **NO** and repeat the process for each additional facility.

### Specifying Rates for a Facility

If you answered  NO to the *TOLL COSTING Y/N* question, calls placed over the trunk will be priced at an initial cost plus an incremental rate. You specify the rates to be used by responding to the next four questions.

1. You have pressed  NO in response to:

TOLL COSTING	Y/N
--------------	-----

The LCD now displays:

INITIAL PERIOD	X
----------------	---

2. Enter the number of minutes in the initial period — from 1 minute to 9 minutes.

X
IS THIS VALUE OK Y/N?

## Updating the Facility Table

---

If the number of minutes in the initial period is correct, press **YES**. If the number of minutes in the initial period is incorrect, press **NO** and you will be asked to reenter the number of minutes in the initial period.

INITIAL COST            XXX

3. Enter the cost for the initial period in dollars and cents with leading zeros but without a decimal point. The cost can range from 000 (none) to 999 (\$9.99).

      X.XX  
IS THIS VALUE OK Y/N?

If the cost for the initial period is correct, press **YES**. If the cost for the initial period is incorrect, press **NO** and you will be asked to reenter the cost for the initial period.

SECONDARY PERIOD    X

4. Enter the number of minutes in the secondary (incremental) period — from 1 minute to 9 minutes.

      X  
IS THIS VALUE OK Y/N?

If the number of minutes in the secondary period is correct, press **YES**. If the number of minutes in the secondary period is incorrect, press **NO** and you will be asked to reenter the number of minutes in the secondary period.

## Updating the Facility Table

---

SECONDARY COST      XXX

5. Enter the cost for the secondary (incremental) period in dollars and cents with leading zeros but without a decimal point. The cost can range from 000 (none) to 999 (\$9.99).

X.XX  
IS THIS VALUE OK Y/N?

If the cost for the secondary period is correct, press  YES. If the cost for the secondary period is incorrect, press  NO and you will be asked to reenter the cost for the secondary period.

EXIT FACILITY UPDATE Y/N

6. If you have entered all desired facility information, press  YES. If you still have more facilities to enter, press  NO to repeat the facility entry process.

### **Other Common Carriers (OCCs) and Equal Access**

---

Facility 50 is used for Other Common Carriers (OCCs) and equal access. Use this section if you want to price calls with values other than normal AT&T direct distance dialing rates.

OCC and equal access are different methods for accessing other carriers. An OCC is a second (or additional) long distance carrier and is usually accessed by dialing a local number of the form 950-XXXX. An authorization code (or password) is then required before the facility can be used.

Equal access allows any long distance carrier to be used by dialing 10XXX where XXX is the carrier's equal access code. (For example, AT&T's code is 10AAT or 10288.) In 1995, this will change to 101-XXXX.

Table 5-2 summarizes the setup procedures for both OCCs and equal access, and the pages that follow provide step-by-step instructions.

**Table 5-2. Setup for Other Common Carriers and Equal Access**

---

<b>Type</b>	<b>Setup</b>
OCC	If you have a single OCC, enter the local OCC number and the number of digits in the authorization code. If you have multiple OCCs, you must have the same number of digits in all the authorization codes. Enter zeros for the local OCC number and the number of digits in the authorization code.
Equal Access	For equal access, specify the local OCC number as zeros and specify zero digits in the authorization code.

---

### Setting Up an OCC or Equal Access

To set up for one or multiple OCCs, or for equal access, press **YES** in response to the *FACILITY UPDATE?* question, and enter 50 as the facility number. The LCD display then shows:

LOCAL OCC NUMBER XXXXXXXX

1. If you have a single OCC, enter the local OCC number. If you have multiple OCCs, or if you want equal access, enter seven zeros.

XXXXXXX  
IS THIS VALUE OK Y/N?

If the local OCC number is correct, press **YES**. If the local OCC number is incorrect, press **NO** and you will be asked to reenter the local OCC number.

# DIGITS IN AUTH. CODE X

2. Enter the number of digits in the authorization code. If you have multiple OCCs, all must have the same number of digits in their authorization codes. For equal access, enter zero for the number of digits.

X  
IS THIS VALUE OK Y/N?

## Special Numbers

---

If the number of digits in the authorization code is correct, press  YES. If the number of digits in the authorization code is incorrect, press  NO and you will be asked to reenter the number of digits in the authorization code.

TOLL COSTING	Y/N
--------------	-----

3. Now proceed as you would for a normal facility by specifying standard or special rates.

## Special Numbers

---

The CAT Plus has the ability to use special charging for four groups of special numbers using facilities 51 through 54. These facilities may be used for calls to specific area codes (3 digits), calls to specific area codes and exchanges (6 digits), exchanges (3 digits), and 7-digit numbers.

To set up special numbers, update the Facility Table and enter 51, 52, 53, or 54 as the facility number (see "Adding Trunks" earlier in this chapter). The LCD display shows:

SPECIAL NUMBER	XXXXXX
----------------	--------

1. Enter a 3-digit or 6-digit number. For a 3-digit number, enter the 3 digits and press the  key

AREA CODE?	Y/N?
------------	------

## Special Numbers

---

2. Do one of the following:

- If you entered a 3-digit number in Step 1:  
Press  YES for area code  
Press  NO for exchange
- If you entered a 6-digit number in Step 1:  
Press  YES for area code and exchange  
Press  NO for 7-digit number

The LCD display shows:

XXXXXX  
IS THIS VALUE OK Y/N?

3. If the special number is correct, press  YES. If the special number is incorrect, press  NO and you will be asked to reenter the special number.

INITIAL PERIOD      Y/N

4. Now proceed as you would for a normal facility by specifying special rates.  
(See "Specifying Rates for a Facility" earlier in this chapter.)

---

## Standard Reports

# 6

---

The CAT Plus is capable of generating 28 different summary and detail reports. Those generated through the Main Menu are termed Standard Reports; those accessed through the *MANAGEMENT REPORTS* submenu are referred to as Management Reports.

This chapter first explains the general procedures for generating reports and identifies the special codes and indicators that appear in all the detail reports. It then explains how you generate and use the Standard Reports. Chapter 7 covers the Management Reports.

## **Generating Reports**

---

You have four ways to generate the CAT reports:

- On-request
- Automatically on a daily basis (see option 8 described in Chapter 4)
- Automatically on a weekly basis (see option 17 described in Chapter 4)
- Automatically when the CAT reaches 90% of memory capacity (5850 calls)

Automatic reporting generates a fixed series of reports, including two Management Reports and four Standard Reports. The automatic reports are:

- Summary by Hour — a Management Report
- Summary by Facility — a Management Report
- All Extension Detail — a Standard Report
- Summary by Extension — a variation of the All Extension Detail
- All Account Detail — A Standard Report
- Summary by Account — a variation of the All Account Detail

There is no way of altering this list of reports. Following an automatic report, the CAT deletes all call records that were used to generate the reports. Calls received while the CAT is printing are not included in the report but are saved for the next report.

## Generating Reports

---

**NOTE:**

The 90% capacity automatic report overrides all options. It is intended for your protection so that no data is lost. The CAT beeps its alarm for each call received after 85% (5525 calls) to notify you that an automatic report and data deletion will occur soon. This setting is very handy in determining when to run on-request reports.

Standard Reports can be run at any time. You simply enter the report number through the keypad whenever the Main Menu is displayed.

## **Special Codes**

---

A number of codes are shared by all the CAT Plus detail reports, both standard and management. The pages immediately following identify them briefly. Later sections describe their uses more fully in connection with specific reports. For example, the section on the Forward Disconnect Reports amplifies the information here on the forward disconnect indicator.

### **Equal Access Indicator**

The dialed number (DIALED#) field may contain an "=" at the front of the number shown. The "=" indicates that an equal access code was dialed (for example, 10288 for AT&T) to access a long distance carrier.

### **Forward Disconnect Indicator**

An asterisk "\*" after the last digit in the dialed number (DIALED#) field indicates that the "far end" party hung up at least 5 seconds before your office did.

**Incoming Call Identifiers**

CAT Plus supports any available caller identification signal — whether an Automatic Number Identification (ANI) signal on a long distance call or Incoming Call Identification (ICLID) or other CLASS signal provided by a local telephone company. Thus, on all reports, CAT Plus V3 prints the following information for each incoming call with caller identification data:

- The caller's number prints in the DIALED# field.
- The letter **I** replaces the dollar sign (\$) as the first digit of the COST field on ICLID only.
- The state (ST) field displays the state from which the call originated.

If no ICLID or ANI data is available, CAT Plus identifies incoming calls by printing the **IN** indicator in the DIALED# field. In these cases — and whenever an IN appears in the SMDR data stream — the state shown in the ST field is the state in which the CAT Plus is installed.

**Form 6-1. Incoming Call Indicator**

DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	10:22	0002	18086334466	HI	001	I000.00	123456789	00
11/11	10:45	0021	IN	NH	066	\$000.00	1234567	02

## Special Codes

---

### Codes in the State Field

The state (ST) field normally contains the state or Canadian province abbreviation for the area code called. There are a number of other possibilities, which are shown in Table 6-1.

**Table 6-1. Special Codes in the State Field**

---

<b>Code</b>	<b>Stands For</b>	<b>Means</b>
TF	Toll Free	800 call
SP	Special Purpose	900 or 700 call
IS	Islands	809 calls (Virgin Is/Puerto Rico)
OV	Overseas	011 calls
OP	Operator Assisted	0+ calls
I#	Information	555-1212 or 411 calls

---

## Running Standard Reports

Most of the time, the LCD displays the day, date, time, and number of calls stored, and indicates that you can press **#** to print the Main Menu.

```
FRI 11/11/94 13:42 0520
CALLS. PRESS # FOR MENU!
```

When you press **#**, the Main Menu shown in Form 6-2 prints.

### **Form 6-2.** CAT Main Menu

```
AT&T "CAT PLUS" MENU
  CALLS /DATE /TIME 0520 FRI 11/11/94 13:42

1-ALL EXT. + ACCT.
2-ALL EXT.
3-ALL ACCT.
4-IBE EXT.
5-ONE ACCT.
6-MANAGEMENT REPORTS
7-SETUP
8-DIAGNOSTICS
9-WATCH DOG
```

To select the Standard Reports, press **1**, **2**, **3**, **4**, or **5** depending on the report to be selected.

The remainder of this chapter discusses each of the Standard Reports in the order of their appearance on the CAT Plus Main Menu.

1 ALL EXT. + ACCT.

---

**1 ALL EXT. + ACCT.**

---

This selection generates both the All Extensions Report and the All Accounts Report. The first is a report by extension with the calls sorted in chronological order. The second is a report by account code with the calls sorted in chronological order.

Both reports provide totals at the end of each extension's and account's report and then after all the individual extension and account reports have printed.

To select these reports, follow these instructions:

1. Press **[1]** at the Main Menu.

PRINT CALL DETAIL IN RPT ENTER A "YES" OR "NO"
---

2. For all call detail, press **[YES]**. For summary totals only, press **[NO]**. The CAT prints:

1 ALL EXT. + ACCT.

**Form 6-3. All Extensions and Accounts Report**

ALL EXTENSION & ACCOUNT REPORT		DATE	FRI 11/11/94 13:42						
ALL EXTENSION		REPORT	DATE	FRI 11/11/94 13:42					
EXTENSION		0020							
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC	
11/11	09:34	0020	12346565	NJ	024	\$002.86	234	01	
11/11	10:35	0020	15551212	I#	012	\$000.50		01	
11/11	12:10	0020	04561000	OP	070	\$000.00	456	02	
11/11	13:15	0020	2346565	NJ	024	\$000.00	234	01	
TOTAL		CALLS	DURATION	COST					
		000004	00000130	000003.36					
ALL ACCOUNT		REPORT	DATE	FRI 11/11/94 13:36					
ACCOUNT		567							
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC	
11/11	10:22	0022	=6178901212	MA	005	\$001.15	567	50	
11/11	10:32	0022	17008901212	SP	005	\$002.50	567	02	
TOTAL		CALLS	DURATION	COST					
		000002	00000010	000003.65					

Following the report the LCD display shows:

DELETE ALL CALLS IN CAT  
ENTER A "YES" OR "NO"

1 ALL EXT. + ACCT.

---

3. Press  YES if you are finished with the data. Press  NO if you still need the data for additional reports. If you press  YES, the LCD display shows:

ARE YOU SURE	Y/N
ENTER A "YES" OR "NO"	

4. Press  YES to delete the call records. Press  NO to retain the data.

## 2 ALL EXT.

---

### **2 ALL EXT.**

---

This selection generates a report listing all extensions that placed calls during the reporting period. The extension reports are printed in numeric order, with the calls on each extension sorted in chronological order.

At the end of each extension's detail report, a totals line prints the number of calls, the total duration in minutes, and the total cost. After the last extension's report, a similar totals line summarizes the activity on all the extensions. The call detail can be eliminated so that only the totals print.

To select this report, follow these instructions:

1. Press  at the Main Menu.

PRINT CALL DETAIL IN RPT  
ENTER A "YES" OR "NO"

2. For all call detail, press . For summary totals only, press . The CAT prints:

2 ALL EXT.

---

**Form 6-4. All Extensions Report**

ALL EXTENSION	REPORT DATE	FRI 11/11/94 13:42						
EXTENSION	0020							
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	09:34	0020	12346565	NJ	024	\$002.86	234	01
11/11	10:35	0020	15551212	I#	012	\$000.50		01
11/11	12:10	0020	04561000	OP	070	\$000.00	456	02
11/11	19:35	0020	2346565	NJ	024	\$000.00	234	01
TOTAL	CALLS	DURATION	COST					
	000004	00000130	000003.36					

Following the report the LCD display shows:

DELETE ALL CALLS IN CAT  
ENTER A "YES" OR "NO"

3. Press  YES if you are finished with the data. Press  NO if you still need the data for additional reports. If you press  YES, the LCD display shows:

ARE YOU SURE            Y/N  
ENTER A "YES" OR "NO"

4. Press  YES to delete the call records. Press  NO to retain the data.

### 3 ALL ACCT.

---

### **3 ALL ACCT.**

---

This selection generates a report listing all account codes that have calls during the reporting period. The account code reports are printed in numeric order, with the calls in each account code sorted in chronological order.

At the end of each account's detail report, a totals line prints the number of calls, the total duration in minutes, and the total cost. After the last account's report, a similar totals line summarizes the activity for all the accounts. The call detail can be eliminated so that only the totals print.

To select this report, follow these instructions:

1. Press **3** at the Main Menu.

PRINT CALL DETAIL IN RPT  
ENTER A "YES" OR "NO"

2. For all call detail, press **YES**. For summary totals only, press **NO**. The CAT prints:

3 ALL ACCT.

---

**Form 6-5. All Account Report**

ALL ACCOUNT	REPORT DATE	FRI 11/11/94 13:42							
ACCOUNT	567								
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC	
11/11	10:22	0022	=6178901212	MA	005	\$001.15	567	50	
11/11	10:32	0032	17008901212	SP	005	\$002.50	567	02	
TOTAL	CALLS	DURATION	COST						
	000002	00000010	000003.65						

Following the report the LCD display shows:

DELETE ALL CALLS IN CAT  
ENTER A "YES" OR "NO"

3. Press  YES if you are finished with the data. Press  NO if you still need the data for additional reports. If you press  YES, the LCD display shows:

ARE YOU SURE? Y/N  
ENTER A "YES" OR "NO"

4. Press  YES to delete the call records. Press  NO to retain the data.

## 4 ONE EXT.

---

### **4 ONE EXT.**

---

This selection generates a report for one extension. The CAT Plus prompts you for the extension number and asks you whether you want the call detail to print or just the summary data.

To select this report, follow these instructions:

1. Press **[4]** at the Main Menu.

```
PRINT CALL DETAIL IN RPT
ENTER A "YES" OR "NO"
```

2. For all call detail, press **[YES]**. For summary totals only, press **[NO]**. The CAT prints:

#### **Form 6-6.** One Extension Report Heading

```
ONE EXTENSION          REPORT DATE          FRI 11/11/94 13:42
```

and the LCD display shows:

```
ENTER EXTENSION XXXX
```

3. Enter up to four digits to specify the extension to be reported. If the extension number has less than four digits, enter the digits and then press the **[ ]** key. The CAT verifies your entry and prints the selected report or prints **NOT FOUND** if there are no calls for that extension.

4 ONE EXT.

---

**Form 6-7. One Extension Report Detail**

EXTENSION		0020						
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	09:34	0020	12346565	NJ	024	\$002.86	234	01
11/11	10:35	0020	15551212	I#	012	\$000.50		01
11/11	12:10	0020	04561000	OP	070	\$000.00	456	02
11/11	13:15	0020	2346565	NJ	024	\$000.00	234	01
TOTAL		CALLS	DURATION	COST				
		000004	00000130	000003.36				

**NOTE:**

The CAT does not allow you to delete call records after a single- extension report.

5 ONE ACCT.

---

## **5 ONE ACCT.**

---

This selection generates a report for a single account. The CAT prompts you for the account code and asks you whether you want detail information or just the summary data.

To select this report, follow these instructions:

1. Press **[5]** at the Main Menu.

```
PRINT CALL DETAIL IN RPT
ENTER A "YES" OR "NO"
```

2. For all call detail, press **[YES]**. For summary totals only, press **[NO]**. The CAT prints:

### **Form 6-8. One Account Report Header**

```
ONE ACCOUNT          REPORT DATE          FRI 11/11/94 14:19
```

and the LCD display shows:

```
ENTER ACCT NO XXXXXXXXX
```

3. Enter up to nine digits to specify the account code to be reported. If the account code has less than nine digits, enter the digits and then press the **[ ]** key. The CAT verifies your entry and prints the selected report or prints **NOT FOUND** if there are no calls for that account code.

5 ONE ACCT.

---

**Form 6-9.** One Account Report Detail

ACCOUNT		234						
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	09:34	0020	12346565	NJ	024	\$002.86	234	01
11/11	13:15	0020	2346565	NJ	024	\$000.00	234	01
TOTAL		CALLS	DURATION	COST				
		000002	00000048	000002.86				

**NOTE:**

The CAT does not allow you to delete call records after a single account code report.

---

## Management Reports

# 7

---

The Management Reports enable you to examine the calling patterns or habits of your company. They analyze the calls currently stored in the system. You will find the reports most useful if you wait until you have a good sampling of calls to analyze.

### Running Management Reports

Most of the time, the LCD displays the day, date, time, and number of calls stored, and indicates that you can press **#** to print the Main Menu.

```
FRI 11/11/94 13:42 0520  
CALLS. PRESS # FOR MENU!
```

When you press **#**, the Main Menu shown in Form 7-1 prints.

## Running Management Reports

---

### Form 7-1. CAT Main Menu

```
AT&T "CAT PLUS" MENU
  CALLS /DATE /TIME   0520  FRI 11/11/94 13:42

1-ALL EXT. + ACCT.
2-ALL EXT.
3-ALL ACCT.
4-ONE EXT.
5-ONE ACCT.
6-MANAGEMENT REPORTS
7-SETUP
8-DIAGNOSTICS
9-WATCH DOG
```

To select the management reports, press **[6]**. The LCD display shows:

```
6-MANAGEMENT REPORTS
```

and the CAT prints the Management Reports submenu shown in Form 7-2.

### Form 7-2. Management Reports Submenu

```
MANAGEMENT REPORTS

1-TIME OF DAY
2-COST > XX.XX
3-DURATION > XXX
4-FACILITY
5-ALL 7-DIGIT CALLS
6-ALL INCOMING CALLS
7-1 OR 0 + 7 DIGIT CALLS
8-EXCHANGE SEARCH
9-AREA CODE SEARCH
0-FORWARD DISCONNECT
```

Press the selection number on the keypad to select each report. Press **[#]** to return to the Main Menu.

## 7-2 Management Reports

## 1 TIME OF DAY

---

### 1 TIME OF DAY

---

This selection generates either a 24-hour summary matrix or a summary or detail report for a single hour.

To select this report, follow these instructions:

1. Press  at the Management Reports submenu. The CAT prints:

#### Form 7-3. Time-of-Day Report Heading

HOURLY	USAGE	REPORT DATE	FRI 11/11/94 17:30
--------	-------	-------------	--------------------

and the display shows:

PRINT CALL DETAIL IN RPT ENTER A "YES" OR "NO"
---

2. For a report with all call detail on a single hour, press . For summary totals only in the single-hour report, press . This choice does not affect the 24-Hour Summary report.

24 HOUR SUMMARY Y/N
---------------------

3. If you want the 24-Hour Summary report, press . If you want the single hour report, press .

If you press  for the 24-Hour Summary report, the CAT prints:

1 TIME OF DAY

---

**Form 7-4. Summary by Hour Report**

SUMMARY BY HOUR			
HOUR	CALLS	DURATION	COST
00	0001	000001	0000.54
.	.	.	.
.	.	.	.
07	0006	000122	0058.99
.	.	.	.
23	0000	000000	0000.00

and the CAT returns to the Management Reports submenu.

If you press  NO, the LCD display prompts you to enter the hour:

ENTER START HOUR XX

4. Enter two digits to specify the hour to be reported. Use military time from 00 to 23 to specify the hour. The CAT prints:

**Form 7-5. Hourly Usage Report**

HOURLY USAGE FOR		15						
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	15:14	0023	411	I#	006	\$000.50		03
11/11	15:22	0023	IN		010	\$000.00	1	21
11/11	15:39	0023	06178902000	OP	007	\$000.00		03
11/11	15:44	0023	16479190	NJ	006	\$002.37		03
TOTAL		CALLS	DURATION	COST				
		000004	00000029	000002.87				

After the report has printed, the CAT returns to the Management Reports submenu.

**7-4 Management Reports**

2 COST > XX.XX

---

## 2 COST > XX.XX

This selection generates a summary or detailed report for all calls costing more than a specified amount.

To select this report, follow these instructions:

1. Press  at the Management Reports submenu.

PRINT CALL DETAIL IN RPT  
ENTER A "YES" OR "NO"

2. To include all call detail in the report, press . For summary totals only, press .

ENTER MIN. COST XX.XX

3. Enter the minimum call cost for selection. Type four digits, including any leading zeros. Omit the decimal point. The CAT prints:

2 COST > XX.XX

---

**Form 7-6. Call Cost Report**

CALL COSTING OVER		\$	01.00	REPORT	DATE	FRI 11/11/94 13:42		
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	09:34	0020	12346565	NJ	024	\$002.86	234	01
11/11	10:22	0022	=6178901212	MA	005	\$001.15	567	50
11/11	01:10	0220	19003456000	SP	002	\$001.00		23
11/11	09:31	0220	17003456000	SP	002	\$001.00		23
11/11	10:32	0022	17008901212	SP	005	\$002.50	567	02
TOTAL		CALLS	DURATION	COST				
		000005	00000038	000008.51				

After the report has printed, the CAT returns to the Management Reports submenu.

### **3 DURATION > XXX**

---

This selection generates a summary or detailed report for all calls lasting longer than a specified duration.

To select this report, follow these instructions:

1. Press **3** at the Management Reports submenu.

PRINT CALL DETAIL IN RPT  
ENTER A "YES" OR "NO"

2. To include all call detail in the report, press **YES**. For summary totals only, press **NO**.

ENTER MIN. DURATION XXX

3. Enter the minimum call duration in minutes. Type three digits, including any leading zeros. The CAT prints:

3 DURATION > XXX

---

**Form 7-7. Call Duration Report**

CALL LASTING OVER MIN.		010	REPORT	DATE	FRI 11/11/94 13:42				
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC	
11/11	09:34	0020	12346565	NJ	024	\$002.86	234	01	
11/11	21:22	0023	IN		010	1000.00	1	21	
11/11	10:35	0020	15551212	I#	012	\$000.50		01	
11/11	12:10	0020	04561000	OP	070	\$000.00	456	02	
11/11	13:15	0020	2346565	NJ	024	\$000.00	234	01	
TOTAL		CALLS	DURATION	COST					
		000005	00000140	000003.36					

Duration is shown in minutes.

After the report has printed, the CAT returns to the Management Reports submenu.

## 4 FACILITY

This selection generates either a summary report for all facilities or trunks, or a summary or detail report for a single facility or trunk.

To select this report, follow these instructions:

1. Press 4 at the Management Reports submenu. The CAT prints:

### **Form 7-8.** Facility Report Heading

FACILITY	REPORT DATE	FRI 11/11/94 13:42
----------	-------------	--------------------

and the LCD shows:

PRINT CALL DETAIL IN RPT ENTER A "YES" OR "NO"
---

2. To include all the call detail on a single facility, press YES. For only the summary totals on a single facility, press NO. This choice does not affect the All Facility Summary report.

PRINT ALL FAC. SUMMARY
------------------------

3. If you want the All Facility Summary report, press YES. If you want a report on a single facility, press NO.

If you press YES, the CAT prints:

## 4 FACILITY

---

### Form 7-9. Summary by Facility Report

SUMMARY BY FACILITY			
FACIL	CALLS	DURATION	COST
01	0003	000060	0003.36
02	0002	000075	0002.50
03	0003	000019	0000.00
11	0002	000002	0000.17
21	0001	000010	0000.00
23	0003	000012	0001.50
50	0003	000060	0003.36

and the CAT returns to the Management Reports submenu.

If you press **[NO]**, the LCD display prompts you to specify the facility:

ENTER FAC. NUMBER XX

4. Enter two digits to specify the facility to be reported. Use a leading zero if necessary. The CAT prints:

### Form 7-10. Selected Facility Report

SELECTED FACILITY 50								
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	09:34	0020	12346565	NJ	024	\$002.86	234	50
11/11	10:35	0020	15551212	I#	012	\$000.50		50
11/11	13:15	0020	2346565	NJ	024	\$000.00	234	50
TOTAL		CALLS	DURATION	COST				
		000003	00000060	000003.36				

After the report has printed, the CAT returns to the Management Reports submenu.

## 7-10 Management Reports

## 5 ALL LOCAL CALLS

---

### 5 ALL LOCAL CALLS

---

This selection generates a summary or detailed report for all calls having seven or fewer dialed digits. This includes calls to directory assistance and incoming calls if they were stored by the CAT.

To select this report, follow these instructions:

1. Press **5** at the Management Reports submenu.

PRINT CALL DETAIL IN RPT  
ENTER A "YES" OR "NO"

2. To include all call detail in the report, press **YES**. For summary totals only, press **NO**. The CAT prints:

#### Form 7-11. All Local Calls Report

ALL LOCAL CALLS			REPORT	DATE	FRI 11/11/94 13:42			
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	14:34	0023	411	I#	006	\$000.00		03
11/11	08:13	2200	6334466	NJ	001	\$000.00	123456789	11
11/11	09:35	0020	2346565	NJ	024	\$000.00	234	01
11/11	13:30	0023	6479190	NJ	006	\$000.00		03
TOTAL		CALLS	DURATION	COST				
		000004	00000037	000000.00				

After the report has printed, the CAT returns to the Management Reports submenu.

## 6 ALL INCOMING CALLS

---

### 6 ALL INCOMING CALLS

---

This selection generates a summary or detailed report for all incoming calls.

To select this report, follow these instructions:

1. Press **[6]** at the Management Reports submenu.

PRINT CALL DETAIL IN RPT  
ENTER A "YES" OR "NO"

2. To include all call detail in the report, press **[YES]**. For summary totals only, press **[NO]**. The CAT prints:

#### Form 7-12. All Incoming Calls Report

ALL INCOMING CALLS		REPORT	DATE	FRI 11/11/94 15:43				
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/09	10:22	0002	18086334466	HI	001	I000.00	123456789	00
11/09	11:23	0002	IN	NH	066	\$000.00	1234567	00
11/10	00:21	0002	IN	NH	021	\$000.00	1234567	02
11/10	15:23	0000	14137651000*	MA	006	I000.00	1234567	00
11/11	15:37	0000	13125088928*	IL	001	I000.00	1234	02
TOTAL		CALLS	DURATION	COST				
		000005	00000095	000000.00				

After the report has printed, the CAT returns to the Management Reports submenu.

**NOTE:**

CAT Plus supports all caller identification signals, including Automatic Number Identification (ANI) signals on long distance calls and Incoming Call Identification (ICLID) and other CLASS signals provided by local telephone companies. For example, if your MERLIN LEGEND Communications System captures ANI data and you are using a Signaling System 7 service with ANI — Megacom® 800, for example — the telephone numbers of those calling you will automatically be included in the Incoming Call Detail Report as well as in all your CAT Plus detail reports — the Extension Detail Report, the Account Code Detail Report, and so on.

As was noted in the preceding chapter, CAT Plus identifies incoming calls by printing the letter I in place of the dollar sign (\$) (ICLID only) as the first digit of the COST field and the state (ST) field displays the state from which the call originated.

In the absence of ICLID or ANI data, CAT Plus identifies incoming calls by printing the IN indicator in the DIALED# field, along with all the information recorded for any outgoing call — the time, duration, extension, and trunk, everything except the caller's number. Even without the caller's telephone number, this detailed information on incoming calls helps you make full use of your current telephone resources and plan for change.

## 7 1+ OR 0+ 7-DIGIT CALLS

---

### 7 1+ OR 0+ 7-DIGIT CALLS

---

This selection generates a summary or detailed report for all calls that are not local but that are still within your area code.

To select this report, follow these instructions:

1. Press **[7]** at the Management Reports submenu.

PRINT CALL DETAIL IN RPT  
ENTER A "YES" OR "NO"

2. To include all call detail in the report, press **[YES]**. For summary totals only, press **[NO]**. The CAT prints:

#### Form 7-13. 1+ or 0+ 7-Digit Calls Report

1 OR 0 + 7 DIGIT CALLS REPORT DATE FRI 11/11/94 13:43								
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	09:34	0020	12346565	NJ	024	\$002.86	234	01
11/11	10:35	0020	15551212	I#	012	\$000.50		01
11/11	12:10	0020	04561000	OP	070	\$000.00	456	02
TOTAL		CALLS	DURATION	COST				
		000003	00000106	000003.36				

After the report has printed, the CAT returns to the Management Reports submenu.

## 8 EXCHANGE SEARCH

This selection generates a summary or detailed report for all calls that were made to a specified exchange within your area code. It can also be used for local directory assistance calls (411). It can not be used for in exchange in an area code other than the home area code.

To select this report, follow these instructions:

1. Press **[8]** at the Management Reports submenu.

```
PRINT CALL DETAIL IN RPT
ENTER A "YES" OR "NO"
```

2. To include all call detail in the report, press **[YES]**. For summary totals only, press **[NO]**. The CAT prints:

### **Form 7-14.** Exchange Search Report Heading

```
EXCHANGE SEARCH          REPORT DATE          FRI 11/11/94 14:42
```

and LCD display shows:

```
ENTER EXCHANGE  XXX
```

3. Enter three digits to specify the exchange to be reported. The CAT prints:

## 8 EXCHANGE SEARCH

---

### Form 7-15. Exchange Search Report Detail

SELECTED EXCHANGE 647								
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	14:34	0023	6479190	NJ	006	\$000.00		03
TOTAL		CALLS	DURATION			COST		
		000001	00000006			000000.00		

After the report has printed, the CAT returns to the Management Reports submenu.

## 9 AREA CODE SEARCH

---

### 9 AREA CODE SEARCH

---

This selection generates a summary or detailed report for all calls that were made to a specified area code. There is no way to specify an exchange within that area code.

To select this report, follow these instructions:

1. Press **[9]** at the Management Reports submenu.

PRINT CALL DETAIL IN RPT  
ENTER A "YES" OR "NO"

2. To include all call detail in the report, press **[YES]**. For summary totals only, press **[NO]**. The CAT prints:

#### Form 7-16. Area Code Report Heading

AREA CODE SEARCH	REPORT DATE	FRI 11/11/94 13:42
------------------	-------------	--------------------

and LCD display shows:

ENTER AREA CODE XXX

3. Enter three digits to specify the area code to be reported. The CAT prints:

## 9 AREA CODE SEARCH

---

### Form 7-17. Area Code Report Detail

SELECTED AREA CODE 617								
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC
11/11	08:13	2200	16176334466	MA	001	\$000.17	123456789	11
TOTAL		CALLS	DURATION			COST		
		000001	00000001			000000.17		

After the report has printed, the CAT returns to the Management Reports submenu.

0 FORWARD DISCONNECT

**0 FORWARD DISCONNECT**

This selection generates a detail report that lists chronologically all incoming and outgoing calls on which the "far end" party hung up at least 5 seconds before your office did.

To select this report, follow these instructions:

1. Press  at the Management Reports submenu.

PRINT CALL DETAIL IN RPT  
ENTER A "YES" OR "NO"

2. To include all call detail in the report, press . For summary totals only, press . The detail report appears as follows:

**Form 7-18.** Forward Disconnect Report

FORWARD DISCONNECT RPT. REPORT DATE								WED 10/19/94 03:29	
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC	
10/17	14:22	0002	12014314466*	NJ	011	\$002.42	123400	00	
10/17	14:45	0002	12024315154*	DC	011	\$002.53	12345678	00	
10/17	15:23	0000	14137651000*	MA	006	1000.00	1234567	00	
10/18	15:37	0000	13125088928*	IL	001	1000.00	1234	02	
TOTAL		CALLS	DURATION	COST					
		000004	00000029	000004.95					

After the report has printed, the CAT Plus returns to the Management Reports submenu.

## 0 FORWARD DISCONNECT

---

**NOTE:**

Forward disconnect indicators identify two additional categories of call when you connect the CAT Basic V3 to a PARTNER II R3:

- Incoming calls answered by your Automatic System Answer (ASA) or Direct Extension Dial (DXD) feature but not by a person. These show **0000** in the Extension (EXT) field instead of an extension number.
- Incoming calls answered by PARTNER MAIL™ or AT&T Attendant but not by a person. These calls are reported as completing to the PARTNER MAIL or AT&T Attendant extension the call reached. With PARTNER MAIL, this occurs regardless of whether the caller leaves a message.

Both categories of call display an asterisk in the DIALED# field and are included in the Forward Disconnect Reports. These listings give you the advantage of seeing exactly what you're missing. Now, when a caller listens to one of PARTNER II R3's automated messages but disconnects before anyone picks up, you'll know about it — what time of day they called, how long they held. And, if you have the ICLID feature, you'll also have their phone number — and can call them back.

### **Introduction**

---

The CAT Watch Dog software helps CAT Plus users to detect and identify telephone misuse and fraud. Watch Dog analyzes call information (such as the telephone number, duration, and cost) received from the Station Message Detail Recording (SMDR) port of the AT&T telephone system once a call has been completed. If a call matches a user-defined fraudulent call description, the software sets off an alarm or prints a warning message.

**NOTE:**

No standard set of rules defines a fraudulent call. What is fraudulent to one company may be valid to another. Fraud detection software can help you understand your company's calling patterns, which can help you recognize toll fraud.

Watch Dog automatically prints two reports of the call information collected each day. You can also print these reports as needed. When necessary, you can change the parameters used to generate the reports.

## **Installation**

---

The Watch Dog software is installed on the CAT Plus EPROM. For more information on installing the EPROM, see "Verifying Switch Settings and EPROM" in Chapter 2, "Pre-Installation Preparations," of the *CAT Plus for Business Installation and Use*.

### **NOTES:**

1. In order for the Watch Dog module to operate properly, the clock/date in the communication system must be set to within a couple of minutes of that in the CAT Plus. (See "Setting the Real Time Clock" in Chapter 3, "Installing the CAT Plus.") See your communication system's documentation to set the clock/date of your communication system.
2. You must delete the call profile matrix when installing the system for the first time. See "DELETE CALL PROFILE" later in this document for the steps to delete the matrix.

## **Accessing Watch Dog**

---

The CAT Plus Main Menu has a new item, "9-WATCH DOG," as shown in Form 8-1.

## Watch Dog Menu Options

---

### Form 8-1. CAT Plus Main Menu

```
AT&T "CAT Plus" MENU
      CALLS /DATE /TIME   0000 SAT 10/22/94 00:00

1-ALL EXT. + ACCT.
2-ALL EXT.
3-ALL ACCT.
4-ONE EXT.
5-ONE ACCT.
6-MANAGEMENT REPORTS
7-SETUP
8-DIAGNOSTICS
9-WATCH DOG
```

If you select option 9 and the software is not installed, the system displays the following message:

```
THE WATCH DOG OPTION
HAS NOT BEEN PURCHASED.
TO ORDER PLEASE CONTACT
YOUR AT&T SALES REPRESENTATIVE.
```

If the software is installed, the system displays the menu shown in Form 8-2.

## Watch Dog Menu Options

---

The Watch Dog Main Menu is shown in Form 8-2 below.

### Form 8-2. Watch Dog Main Menu

```
FRAUD MENU

1-USAGE PROFILE RPT.
2-CALL PROFILE RPT.
3-CALL SEARCH
4-UPDATE CALL PROFILE
5-DELETE CALL PROFILE
```

## Watch Dog Menu Options

---

A brief description of each of the menu items is provided in Table 8-1. Detailed information about each of the menu items is contained in the sections that follow.

**Table 8-1. Watch Dog Main Menu Options**

---

<b>Menu Option</b>	<b>Description</b>
USAGE PROFILE REPORT	Print the Usage Profile Report
CALL PROFILE REPORT	Print the Call Profile Report
CALL SEARCH	Search for and print calls matching specified parameters
UPDATE CALL PROFILE	Update a Call Profile
DELETE CALL PROFILE	Delete the Call Profile Matrix

---

Watch Dog checks for fraudulent calls by comparing collected call data with a set of user-defined toll fraud characteristics, or *call profile*. Two or more call profiles are referred to as a *call profile matrix*. Watch Dog allows you to define up to 16 call profiles. To generate reports, you must create at least one call profile. See "UPDATE CALL PROFILE" later in this document for the steps to create a profile.

### **USAGE PROFILE REPORT**

---

The Usage Profile Report lists the daily total calls for the last 31 days. Calls are grouped by working hours and non-working hours. The system prints the reports automatically at midnight each day. You can also print the report on demand by selecting the menu option "1-USAGE PROFILE RPT" from the Watch Dog Main Menu. By examining each report, you can become familiar with your daily telephone usage and can recognize when major changes occur. A sample report is shown in Form 8-3 and described below.

Watch Dog Menu Options

**NOTE:**

To change the work day hours, see "UPDATING CALL PROFILE" later in this document.

**Form 8-3.** Usage Profile Report

<b>USAGE PROFILE MATRIX REPORT DATE SAT 10/22/94 00:01</b>							
<b>WORK DAY HOURS</b>				<b>08-17</b>			
<b>DATE</b>	<b>CALLS</b>	<b>DURATION</b>	<b>COST</b>	<b>:</b>	<b>CALLS</b>	<b>DUR.</b>	<b>COST</b>
10/01	0389	001021	\$0413.25	:	0021	0065	\$0015.34
10/02	0029	000121	\$0033.35	:	0001	0001	\$0000.42
10/03	0000	000000	\$0000.00	:	0005	0055	\$0019.75
10/04	0356	000956	\$0378.13	:	0031	0073	\$0045.22
10/05	0487	001127	\$0617.78	:	0039	0067	\$0075.54
10/06	0567	001561	\$0715.66	:	0041	0105	\$0065.36
10/07	0501	001224	\$0643.71	:	0028	0085	\$0045.89
10/08	0419	000921	\$0473.25	:	0009	0058	\$0019.55
10/09	0009	000021	\$0013.88	:	0000	0000	\$0000.00
10/10	0000	000000	\$0000.00	:	0000	0000	\$0000.00
10/11	0359	000921	\$0393.75	:	0023	0045	\$0010.84
10/12	0512	001545	\$0845.26	:	0018	0047	\$0067.38
10/13	0568	001625	\$0813.67	:	0051	0201	\$0235.56
10/14	0423	001134	\$0532.67	:	0020	0043	\$0017.56
10/15	1333	001021	\$0413.25	:	0021	0065	\$0015.34
10/16	0039	000211	\$0117.56	:	0001	0015	\$0002.33
10/17	0031	000184	\$0093.23	:	0000	0000	\$0000.00
10/18	0345	000923	\$0433.16	:	0019	0053	\$0017.78
10/19	0429	001156	\$0643.22	:	0032	0093	\$0042.31
10/20	0537	001198	\$0678.78	:	0034	0078	\$0035.76
10/21	0498	001091	\$0593.55	:	0028	0060	\$0026.54
10/22	0333	000924	\$0425.67	:	0018	0035	\$0009.79
10/23	0000	000000	\$0000.00	:	0000	0000	\$0000.00
09/24	0412	001224	\$0617.66	:	0038	0126	\$0078.01
09/25	0008	000028	\$0008.54	:	0000	0000	\$0000.00
09/26	0000	000000	\$0000.00	:	0000	0000	\$0000.00
09/27	0601	001501	\$0754.25	:	0027	0085	\$0035.45
09/28	0496	001233	\$0613.71	:	0031	0121	\$0065.36
09/29	0567	001466	\$0657.65	:	0021	0096	\$0054.21
09/30	0553	001223	\$0597.48	:	0028	0123	\$0071.63

The report is described below. Table 8-2 explains the column headings.

REPORT DATE is the day and time the report is printed.

The left hand side lists calls that occurred during work hours as indicated in:  
"WORK DAY HOURS 08-17".

The right hand side shows calls from midnight to the start of the work day and from the end of the work day to midnight. If the work day hours are changed at any time, previous daily summaries will not reflect those new hours.

The report displays totals for the last 31 days. The report starts with day 1 of the current month and continues to the day the report is printed. The remaining days show totals for the previous month. If the report is printed on the last day of a month that does not have 31 days, totals for all remaining days are filled with zeros.

**Table 8-2. Usage Profile Report: Description**

---

<b>Heading</b>	<b>Description</b>
<b>DATE</b>	The date the calls were made or received
<b>CALLS</b>	Number of calls collected by the CAT Plus system according to parameters set up by the user
<b>DURATION</b>	Total time in minutes of all calls collected
<b>COST</b>	Total cost of outgoing calls

---

This report, along with the Facility Report described in Chapter 7, "Management Reports," will help to identify trunk-related fraud.

## **CALL PROFILE REPORT**

---

The Call Profile Report shows the parameters of each call profile and the completed calls that match any of those profiles. This report is printed automatically each day at midnight. A sample report is shown in Form 8-4. The report has two sections as described below:

- The summary section is printed at the top of the report. The left hand side of the summary shows the parameters specified for each call profile. The right hand portion shows the number of calls that match each call profile and the cost of those calls. Table 8-3 explains the column headings in the summary section.
- The detail section of the report is printed below the summary and contains a separate section for each call profile that has matching calls. Detailed call information is provided for every call that matches the criteria of the call profile. A description of the column headings in the detail section is included in Table 8-4.

### **NOTE:**

The information in this report is valid as long as the date and time of the CAT Plus matches that of your communication system. If you notice they are not synchronized, see "Setting the Real Time Clock" in Chapter 3, "Installing the CAT Plus."

Watch Dog Menu Options

Form 8-4. Call Profile Report

CALL PROFILE REPORT		REPORT	DATE	SAT 10/22/94 00:01					
NO	DAY	FROM	TO	DIALED NO.	DUR	COST	LVL	:CALLS	COST
00	1	00	23	908*****	000	00.00	1	:0000	0000.00
01	7	00	23	908*****	000	00.00	1	:0000	0000.00
02	*	08	17	011*****	005	15.00	2	:0002	0043.41
03	*	00	08	011*****	000	00.00	1	:0000	0000.00
04	*	17	24	011*****	000	00.00	1	:0000	0000.00
05	*	00	23	900*****	000	00.00	2	:0002	0010.00
06	*	00	08	908*****	000	00.00	1	:0000	0000.00
07	*	17	24	908*****	000	00.00	1	:0000	0000.00
08	*	00	23	2123331000	000	00.00	3	:0000	0000.00
09	*	00	23	*****	060	00.00	2	:0001	0017.39
10	*	00	23	*****	000	50.00	2	:0000	0000.00
CALL PROFILE MATRIX				02					
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC	
10/22	08:23	0014	0114431237	OV	006	\$019.00		02	
10/22	16:45	0014	0114431237	OV	007	\$024.41		01	
CALL PROFILE MATRIX				05					
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC	
10/22	09:46	0017	19003331212	SP	002	\$004.00		01	
10/22	09:55	0017	19002341022	SP	003	\$006.00		01	
CALL PROFILE MATRIX				09					
DATE	TIME	EXT	DIALED#	ST	DUR	COST	ACCOUNT	FAC	
10/22	12:10	0021	4541000	NH	067	\$017.39		03	

**Table 8-3. Call Profile Report: Summary Section**

---

<b>Heading</b>	<b>Description</b>
<b>NO</b>	Call Profile Number. A maximum of 16 profiles were defined earlier with UPDATE CALL PROFILE. Profiles that were not defined will not print on the report.
<b>DAY</b>	The day of the week that must be matched in order for the call to meet the profile. Day 1 is Sunday. An "***" indicates any day of the week.
<b>FROM TO</b>	This specifies the time period of interest for matching calls. Each entry is an hour of the day on a 24-hour clock. For example, if 08 17 is entered, then any calls from 08:00 to 16:59 will be matched.
<b>DIALED NO.</b>	A complete or partial telephone number used to match calls. An asterisk (*) indicates any digit can be matched in that position. A "1", "0" or "=" in the first character position will not be included in the match, although they will print in the report. A call with fewer than 10 digits will have a "/" in the remaining positions, such as 253****//.
<b>DURATION</b>	Any call having a duration equal to or greater than this specified value will be matched, as long as the other criteria are met.
<b>COST</b>	Any call meeting all the other criteria and having a cost equal to or greater than this specified value will be considered a matched call.

---

*Continued on next page*

**Table 8-3, Continued**

---

<b>Heading</b>	<b>Description</b>
<b>LEVEL</b>	<p>These are the alarm levels assigned to calls meeting the match.</p> <ul style="list-style-type: none"><li>■ <b>Level 1</b> These calls set off the CAT Plus alarm. The alarm is turned off by selecting "9 - WATCH DOG" from the Main Menu and then entering "6" in the Watch Dog Main Menu. Upon return to the Main Menu the alarm will be turned off.</li></ul> <p>As these calls occur, they also generate a printed message as shown in Form 5 and are printed in the "CALL PROFILE REPORT" at midnight. The call information is included in both the summary section and the detail section of the report.</p> <ul style="list-style-type: none"><li>■ <b>Level 2</b> When these calls occur, they generate a printed message as shown in Form 5 and are printed in the "CALL PROFILE REPORT" at midnight. They will be included in both the summary section and the detail section of the report.</li><li>■ <b>Level 3</b> These calls are printed in the summary section of the "CALL PROFILE REPORT" at midnight.</li></ul>
<b>CALLS</b>	Indicates how many calls met the criteria over the last 24 hours.
<b>COST</b>	Indicates the total cost of those calls that met the criteria over the last 24 hours.

---

**Table 8-4. Call Profile Report: Detail Section**

---

<b>Heading</b>	<b>Description</b>
<b>DATE</b>	Date the call was made
<b>TIME</b>	Time the call was made
<b>EXT</b>	Extension number from which the call was made
<b>DIALED#</b>	The complete number as dialed
<b>ST</b>	State. See "Codes in the State Field" in Chapter 6
<b>DUR</b>	Duration. Length of time, in minutes, for the call
<b>COST</b>	Cost of the call
<b>ACCOUNT</b>	Account code. Billing number for the call
<b>FAC</b>	Facility or Trunk number used for the call

---

## **CALL SEARCH**

---

This option searches for any calls that match the criteria defined for Call Profile 00. This option differs in two ways from the others:

- The report runs only upon request.
- The search encompasses the entire call memory of 6500 calls as opposed to the current day's calls. With this extensive search, you can look for any previous occurrences of a problem call.

See "UPDATE CALL PROFILE" later in this document for steps to create or update Call Profile 00 or to verify that Call Profile 00 has already been defined with the values you want. The following criteria are used for the search:

- **FROM TO Times**
- **DIALED NUMBER**
- **DURATION**
- **COST**

The system automatically uses any day of the week and alarm level 1. As soon as you select this option, the system starts the search.

When a call is matched, the information on that call is printed using the format of the detail portion of the Call Profile Report. Since the entire call file is searched, the calls are not sorted by Date/Time in the report. (If you are initializing a new system, you may get search information that contains garbled characters. Once call memory has surpassed 6500 calls, this will not occur.)

## UPDATE CALL PROFILE

---

Use this procedure to create or update a call profile. A call profile is a collection of values that defines a fraudulent call. Call information is compared to these profiles, and any calls that match these parameters are printed in the Call Profile Report. The system permits you to define up to 16 different call profiles, numbered 00 to 15. Profile 00 is used for the Call Search option. When you select this option, the system prints out the CALL PROFILE MATRIX as it is currently stored.

To update a call profile, perform the following steps:

1. Press **4** at the Watch Dog Main Menu.

ENTER WORK DAY HR. XX-XX

2. Enter work day hours. Valid entries are 00 to 24. The first entry must be earlier than the second.

ENTER MATRIX NUMBER

3. Enter the call profile number to be updated. Valid entries are 2-digit numbers between 00 and 15, inclusive. To exit the update program, enter a 99 at this step.

ENTER DAY OF WEEK

4. Enter the day of the week to be matched. Valid entries are 1 to 7 with 1 corresponding to Sunday and 7 to Saturday. Entering a "\*" indicates that any day of the week is a match. The only other valid entry is "0", which indicates that the entry should be deleted. For Call Profile 00, if anything other than a "0" or "\*" is entered, an "\*" is assumed.

## Watch Dog Menu Options

---

ENTER TIME PERIOD XX-XX

5. Enter the time period to be matched. Valid entries are 00 to 24 . For example, if values 08 17 are specified, then any call from 08:00 to 16:59 will be considered a match. The first entry must be earlier then the second.

ENTER DIAL # XXXXXXXXXXXX

6. Enter the telephone number to be matched. Valid entries for each position are 0 to 9, or "\*" to indicate any digit will be matched. Leading digits of "1", "0" or "=" are not part of the match routine.

Calls with fewer than ten digits are entered with trailing "/" 's.  
For example, to match any local number in the 253 exchange, enter 253\*\*\*\*//.  
To match 411 calls, enter 411////////.

ENTER MIN. DURATION XXX

7. Enter the minimum duration of the call in minutes. A value from 000 to 999 can be entered. If the call duration is equal to or greater than that value, the call will be considered a match for the duration criteria.

ENTER MIN. COST XX.XX

8. Enter the minimum cost of the call. Any amount from \$00.00 to \$99.99 can be entered. Any call having a cost equal to or greater then that amount will be considered a match for the cost criteria.

ENTER ALARM LEVEL

9. Enter the alarm level. Valid entries are 1, 2, or 3. These are the alarm levels assigned to calls meeting the match:
- **Level 1** These calls set off the CAT Plus alarm. The alarm is turned off by selecting "9 - WATCH DOG" from the Main Menu and then entering "6" in the Watch Dog Main Menu. Upon return to the Main Menu the alarm will be turned off.  
  
As these calls occur, they also generate a printed message as shown in Form 5 and are printed in the "CALL PROFILE REPORT" at midnight. The call information is included in both the summary section and the detail section of the report.
  - **Level 2** When these calls occur, they generate a printed message as shown in Form 5 and are printed in the "CALL PROFILE REPORT" at midnight. They will be included in both the summary section and the detail section of the report.
  - **Level 3** These calls are printed in the summary section of the "CALL PROFILE REPORT" at midnight.

For Call Profile 00, the system automatically uses an alarm level of "1".

10. Repeat from Step 3 if additional profiles are to be updated. If you have completed this procedure, enter 99 to exit and return to the Watch Dog Main Menu.

### DELETE CALL PROFILE



**CAUTION:**

*This option deletes all call profiles. You will not be prompted to verify your selection. Use this option carefully.*

## Alarm Reporting

---

This option deletes the entire call profile matrix, which includes both the compare parameters as well as the summary totals. The primary use for this option is for installation or if you want to define a completely new set of profiles.

**NOTE:**

This option must be performed upon installation of the Watch Dog software.

## Alarm Reporting

---

If a level 1 or 2 fraud call is detected, the system prints the call information on the printer in the format shown in Form 8-5 (see Table 8-4 for an explanation of these columns).

The CAT Plus alarm is turned on for level 1 calls. To turn off the alarm, select option 9, "9-WATCH DOG" from the CAT Plus Main Menu and then enter a "6" when the Watch Dog Main Menu appears. Upon return to the CAT Plus Main Menu, the alarm will be turned off.

**Form 8-5.** Fraud Detection Report

```
*****  
FRAUD CALL DETECTED  REPORT DATE    SAT 10/22/94 08:31  
10/22 08:23 0014 0114431237 OV 006 $019.00      02  
*****
```



---

## Option and Parameter Default Values

# A

---

**Table A-1. Default Values for CAT Plus for Business**

<b>#</b>	<b>Parameter Name</b>	<b>Default Value</b>
01	Percentage Markup	00
02	Line Spacing	00
03	Minimum Duration to Print Calls	00
04	Night Discount Local	N
05	Print 7-Digit Calls	Y
06	Print Calls Without Account Numbers	Y
07	Print Incoming Calls	Y
08	Print Reports Daily	N
09	Suppress 7-Digit Calls	N

---

*Continued on next page*

Option and Parameter Default Values

**Table A-1, Continued**

#	Parameter Name	Default Value
10	Suppress Calls Without Account Numbers	N
11	Suppress Incoming Calls	N
12	Print on the Fly	N
13	Put Calls in Account Report Only	N
14	New Page Option	N
15	Zero Cost 7-Digit Calls	Y
16	SMDR Data Alarm ON	N
17	Day of Week to Print Reports	INV
18	Free Time	0.0
19	Cost for 0+ Calls	0.00
20	Cost for 555 Calls	0.50
21	Cost for 800 Calls	0.00
22	Cost for 900 and 700 Calls (per min)	0.50
23	Local Surcharge	0.00
24	Long Distance Surcharge	0.00
25	Cost for 411 Calls	0.00
26	Account Code Length	1-9
27	Night Discount Table	00 00 00 00 00 24 00

---

## CAT Plus Switch Settings

# B

---

**Table B-1. CAT Plus Switch Settings**

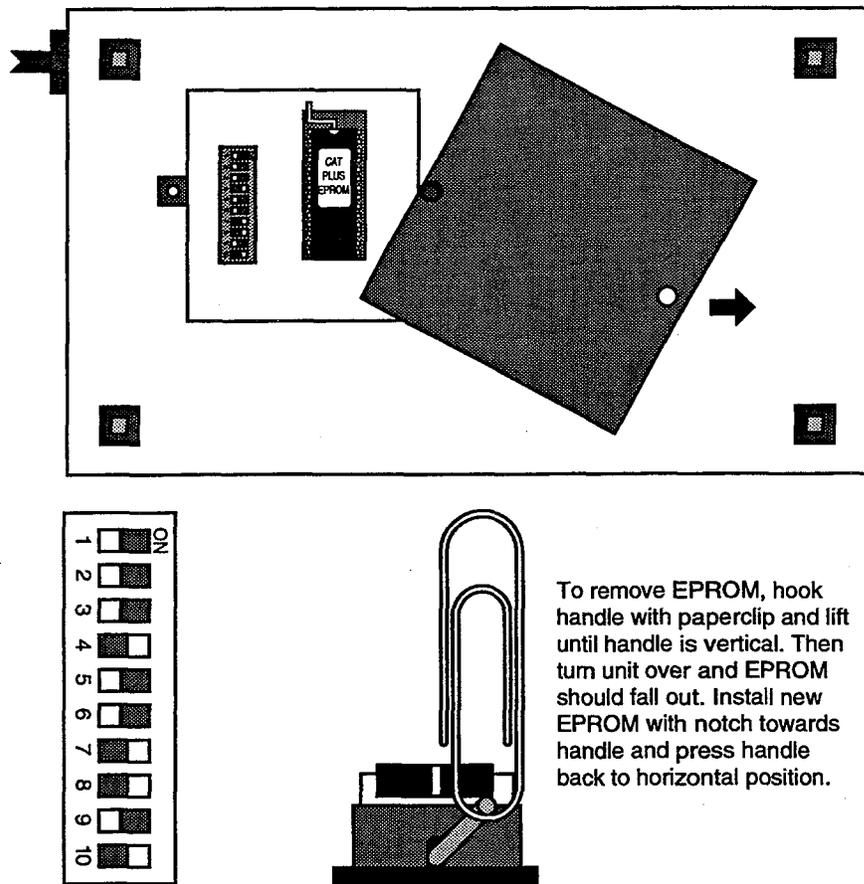
---

<u>Number</u>	<u>Switch</u>	<u>Setting</u>
1	110 baud PABX	Off
2	300 baud PABX	Off
3	600 baud PABX	Off
4	1200 baud PABX	On
5	300 baud Printer	Off
6	600 baud Printer	Off
7	1200 baud Printer	On
8	Serial Printer	On
9	Parallel Printer	Off
10	Battery	On

---

## CAT PLUS Switch Settings

---



**Figure B-1. Location and Settings for Switches and Location of EPROM**

---

## CAT Printer DIP Switch Settings

# C

---

**Table C-1. Settings for Switch Bank 1**

---

<b>Number</b>	<b>Switch</b>	<b>Setting</b>
1-1	On: Odd Parity Off: Even Parity	On
1-2	On: Without Parity Off: With Parity	On
1-3	On: 8 data bits Off: 7 data bits	On
1-4	On: Ready/Busy Protocol Off: XON/XOFF Protocol	On
1-5	On: Circuit Test Select Off: Monitor Test Select	On
1-6	On: Print Off: Test	On
1-7	On On : DTR- Pin-20	On On
1-8	On Off: RTS- Pin-4 Off On : SSD- Pin-11 Off Off: SSD+ Pin 11	

---

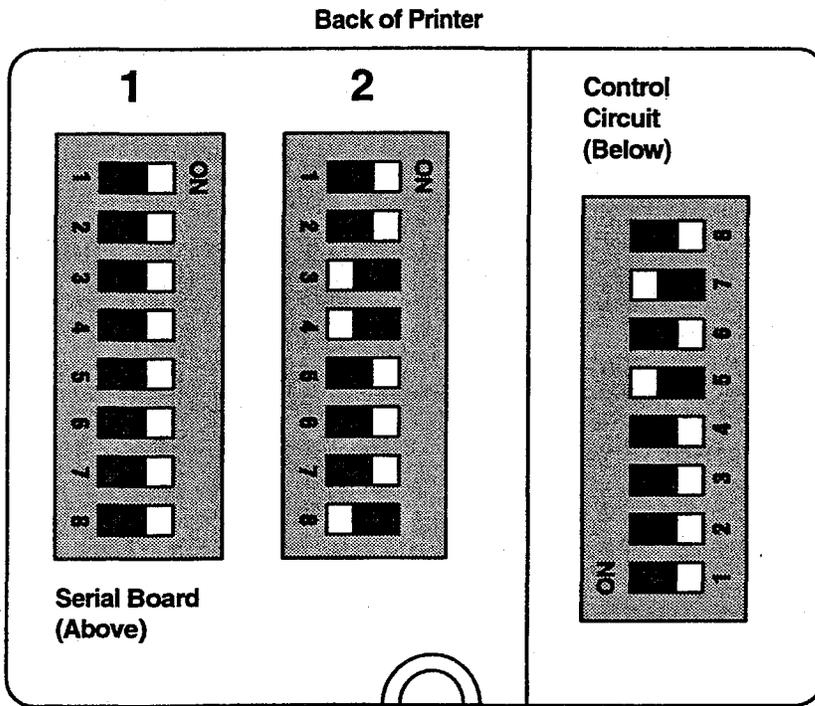


Figure C-1. Printer Switch Settings

CAT Printer DIP Switch Settings

---

**Table C-2. Settings for Switch Bank 2**

<b>Number</b>	<b>Switch</b>	<b>Setting</b>
2-1	On On On: 19200 baud	
2-2	Off On On: 9600 baud	
2-3	On Off On: 4800 baud	
	Off Off On: 2400 baud	
	On On Off: 1200 baud	On On Off
	Off On Off: 600 baud	
	On Off Off: 300 baud	
	Off Off Off: 110 baud	
2-4	On: DSR Input Active	
	Off: DSR Input Inactive	Off
2-5	On: 32 byte buffer	On
	Off: 256 byte buffer	
2-6	On: 200 ms minimum busy	On
	Off: 1 second minimum busy	
2-7	On: Space DTR on Power On	On
	Off: Space DRT on Select	
2-8	Not Used	Off

## CAT Printer DIP Switch Settings

---

**Table C-2. Settings for Control Switch Bank (Lower Level)**

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<u>Number</u>	<u>Switch</u>	<u>Setting</u>
C-1	On On On : Spanish	
C-2	Off On On : French Canadian	
C-3	On Off On : Unslashed 0	
	Off Off On : French	
	On On Off: German	
	Off On Off: British	
	On Off Off: Unslashed 0	
	Off Off Off: Slashed 0	<u>Off Off Off</u>
C-4	Off Off: 5.5-inch Form	
C-5	On Off: 8.5-inch Form	
	Off On : 11-inch Form	Off On
	On On : 14-inch Form	
C-6	On: Auto Line Feed	
	Off: No Auto Line Feed	<u>Off</u>
C-7	On: 8 data bits	On
	Off: 7 data bits	
C-8	On: Disable Front Panel	
	Off: Enable Front Panel	<u>Off</u>

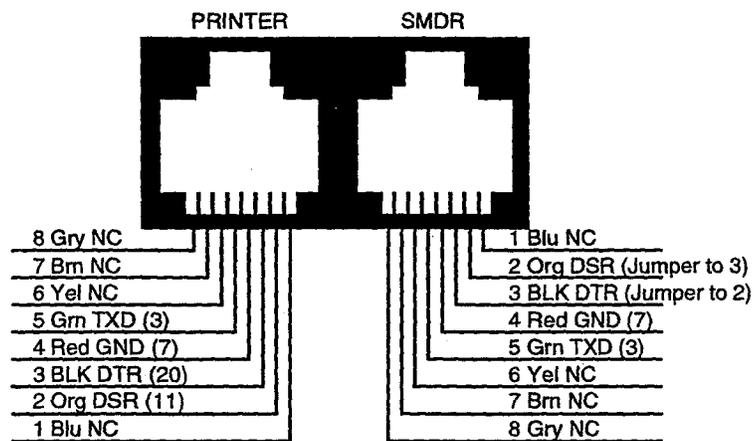
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## Pinouts

# D

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Figure D-1. CAT Plus Pinouts



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