ACCUMULATOR
ADMINISTRATOR'S GUIDE

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Rev. B (11/1/92)

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This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

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1 Introduction

What's In This Guide?

This guide provides instructions for installing, setting up, and operating your DANYL® Accumulator. Installation and service technicians, as well as the administrator (or key operator), should closely follow these instructions.

An overview of the contents of each chapter is provided below:

- Chapter 1 is an introduction to both Accumulators and this guide. Read this chapter to become familiar with the features and capabilities of your Accumulator, as well as with the terms that are used in later chapters.
- Chapter 2, "Description of Components," illustrates and describes the components of your Accumulator.
- Chapter 3, "Hardware Setup," describes how to connect your Accumulator to the device you want to control.
- Chapter 4, "Software Setup," describes how to initialize and set the options of your Accumulator.
- Chapter 5, "Administrative and Maintenance Procedures," describes maintenance routines you must perform once your Accumulator is in operation.
- Chapter 6, "Communications," describes the Accumulator's capacity to communicate with a personal computer
- Chapter 7, "User Instructions," explains how to use the Accumulator to access the controlled device.

- Appendix A, “Special Features of PE Models,” describes the special features and setup procedures particular to Printer (PE) Accumulators. It also reviews the types of reports that can be generated by PE models and provides instructions for how to produce them.
- Appendix B, “Display Window Messages,” lists the error messages that may appear in the Accumulator display window. For each error, the guide lists an explanation and a corrective action.
- Appendix C, “Quick Reference Guide to Management Mode Prompts,” provides a fast and easy-to-use list of the prompts that appear in the Accumulator display window.

Before using your Accumulator, read the introductory sections at the beginning of each chapter, then follow the step-by-step instructions that explain how to set up, maintain, and operate your Accumulator.

NOTE:
You must complete the hardware installation and software setup procedures in Chapters 3 and 4 — and Appendix A, if you have a PE model — before making your Accumulator available to users. Refer to the section, “An Overview of Setup Procedures,” at the end of this Chapter.

About Your Accumulator

DANYL Accumulators control access to and account for the use of photocopiers, facsimile machines* and similar equipment. By controlling user access, as well as recording equipment usage information, Accumulators provide an accurate and effective means of tracking and charging back expenses.

How Does the Accumulator Work?

An Accumulator (Figure 1-1) is connected to each piece of equipment you want to control and monitor.

T

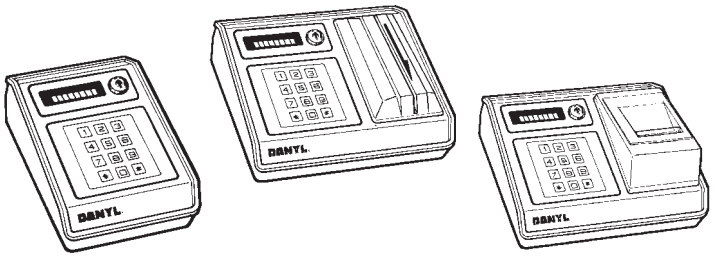


Figure 1-1: *8KE (keypad entry), 8SE (magnetic swipe card entry), and 8PE (keypad entry with printer) Accumulators*

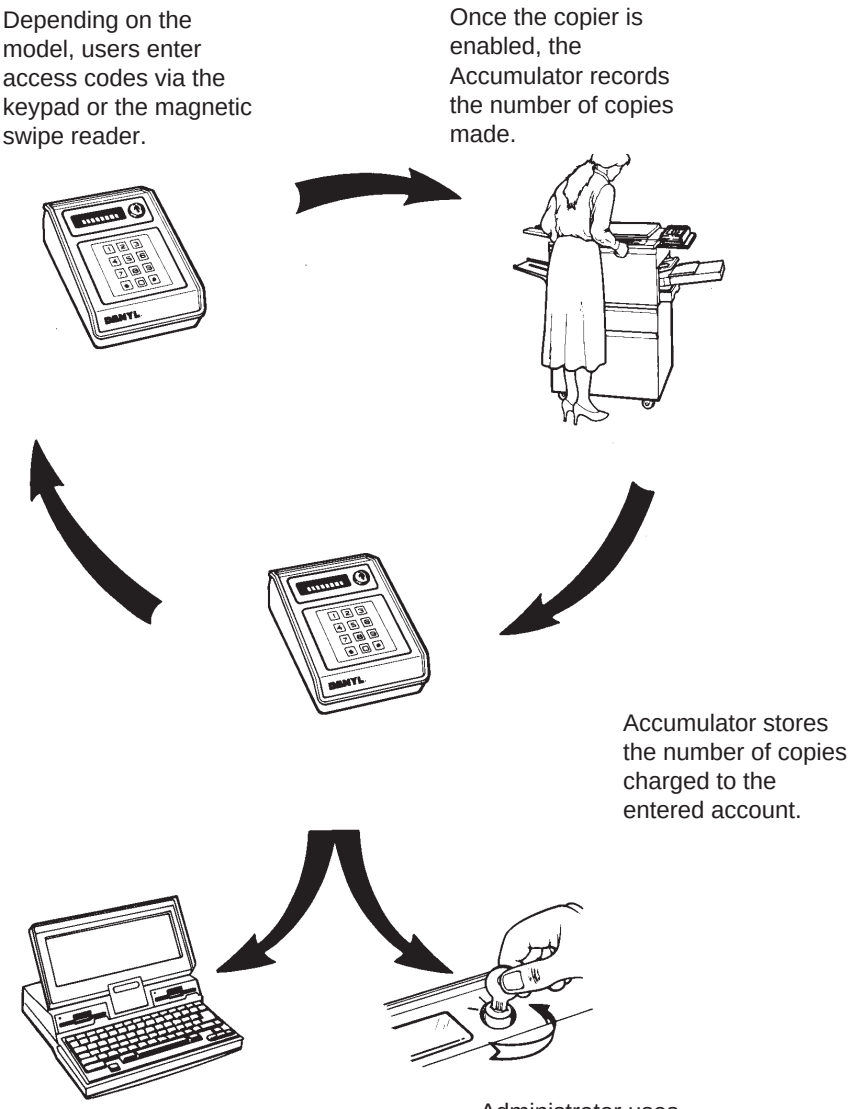
o access the controlled equipment, users must enter up to two valid *access codes*. On keypad and printer models, these codes are entered via the unit's keypad. On swipe entry models, they are entered by sliding, or *swiping*, a magnetically encoded card — called a *swipe reader card* — through the unit's magnetic *swipe reader*.

* *requires auxiliary DANYL ® FAX Page Counter*

Once the required code(s) are entered and validated, the Accumulator enables the controlled photocopier and records the number of copies made. Upon termination of the copying activity, the total associated with the entered code is stored in memory.

Data stored in the Accumulator can be retrieved by manually calling up individual account totals to the display; automatically, by using optional Collector Software; or, with printer models, by printing a report via the integral printer. After the stored information is retrieved, the account totals can be cleared, and the accumulation process begins anew. (Figure 1-2 depicts this process.)

NOTE:
Always record account totals in a Manual Log before clearing. For more information on starting a log and what it should contain, refer to the section entitled, “The Importance of Keeping a Manual Log,” later in this chapter.



Administrator uses Collector Software to extract stored data via the communications port. On printer models, reports can be printed via the integral printer.

OR

Administrator uses Management Mode to view account totals via the display window.

Figure 1-2: *How Your Accumulator Works*

Features

To ensure maximum security, convenience, and flexibility, DANYL Accumulators have the following features:

- **Account Limit Capability** — permits the administrator to assign each account to one of ten (10) limit classes. Each class, in turn, can be assigned a limit of from 0 to 97,000 copies. Limits reduce abuse by restricting use of the copier to the preset volume established for its assigned account class. Assigning an account to a class with a “0" limit will deny that account access to the equipment.

> **NOTE:**
> If you are using an Accumulator with Limit capability with an older version of DANYL’s Collector Software, the software will not support “learning and loading” limit classes. To take full advantage of the convenience Collector Software provides, you should upgrade your software. Contact your DANYL sales representative or authorized dealer for details.

- **Machine Access Code (MAC)** — an optional three-digit code (pre-assigned by DANYL) that ensures only authorized users can access equipment at your location. More specifically, MACs can be used as an added measure to restrict access to particular equipment. For example, instead of taking the time to selectively load accounts to certain units, you can load all accounts to all Accumulators — then require use of the MAC to limit access to certain devices. (Additional information about MACs can be found in the section ,"Access Codes," later in this chapter.)
- **Management Keylock** — permits access to three operating modes:
  - — *Normal Mode* requires users to enter valid access codes — via the keypad or by swiping a card — before use of the controlled device is allowed.

—*Bypass (Local) Mode* enables the controlled device and allows copies to be made without the entry of access codes. (All copies recorded in this mode are charged to a *Local Account*.)

—*Management Mode* allows access to Accumulator setup and maintenance routines.

- **Programmable Timeout** — if selected, Timeout automatically disables the controlled device after a set period of time should a user forget to manually end the copying session. (Depending on the Timeout set, the device is disabled from 30 to 120 seconds after the last copy is detected.)
- **Hold Key** — used to override the Timeout when additional time is needed to perform tasks — such as loading paper or adding toner — that interrupt normal copying activity.
- **VIEW CARD℠** — (swipe models only) permits the administrator to view, or "read," the account code encoded on a swipe card.
- **Integral Printer** — (printer models only) permits the administrator to print optional receipts — as well as account reports — with or without costing.
- **Programmable Cost per Copy** — (printer models only) allows the administrator to set a cost, from $ .001 to $ .999, for each copy made.

Accessories

To meet the specific requirements of each customer site, the following accessories are available:

- **Mounting Bracket** — secures the Accumulator to the photocopier to eliminate the risk of equipment damage due to falls.
- **Cable Clamp** — secures the power and copier interface cables in place. (This clamp should be used if the cables or equipment are frequently moved.)
- **Interface Cable** — connects the Accumulator to the controlled device and must be ordered separately with every Accumulator. The proper cable is determined by the specific model of the device to which the Accumulator will connect.
- **Collector Software Package** — a software package designed to collect and process the data stored by Accumulators. (Contact your DANYL sales representative or authorized DANYL dealer for additional information.)
- **Collector Cable** — connects the Accumulator to the laptop PC or portable data collector on which the Collector Software Package has been loaded.
- **Swipe Reader Cards** — (*swipe models only*) magnetic striped cards for use with Swipe entry models
- **Swipe Card Encoder Kit** — (s*wipe models only*) allows on-site encoding of swipe reader cards. The kit includes an Encoder, Encoder software (for IBM® PS/2s® and compatibles), and a cable for communications between the PC and Encoder. (Contact your DANYL sales representative or authorized DANYL dealer for more information.)
- **Printer Supply Kit** — (*printer models only*) contains extra ribbons and paper for use with the integral printer

Access Codes

To access equipment controlled by an Accumulator, users may be required to enter up to two valid access codes — an account code and an optional *Machine Access Code (MAC)* — via the keypad or the magnetic swipe reader.

Machine Access Code

The MAC is an optional, three-digit code that ensures that only authorized users can access the controlled equipment. Both Accumulators and swipe reader cards (if used) are programmed with the MAC. If the MAC that is keyed in (or encoded on the swipe card) does not match the MAC programmed in Accumulator memory, equipment access is denied. (Refer to Chapter 4 for instructions on programming the Accumulator with your MAC.)

Account Code

The Account Code is a numeric code of up to eight digits that identifies the person, department, or project to which the copies are to be charged. Up to 2,000 account codes can be stored in Accumulator memory.

Accumulator Models

To provide your location with equipment that matches your particular needs, DANYL offers three basic models of Accumulators:

- **Keypad Entry (KE) Accumulators** — use the keypad for access code entry. Again, stored data can be retrieved via the display window or communications port.
- **Swipe Entry (SE) Accumulators** — use a magnetic swipe reader for access code entry. Stored data can be retrieved via the display window or communications port.
- **Printer (PE) Accumulators** — also use the keypad for access code entry. However, stored data can be retrieved using the integral, 16-column, impact printer — as well as via the display window or communications port.

Table 1-1 lists the various Accumulator models available.

Model	Digits per Account Code	Account Code Storage Capacity
8KE-AC2000	8 (numeric)	2000
8SE-AC2000	8 (numeric)	2000
8PE-AC2000	8 (numeric)	2000

Table 1-1: *Accumulator Models*

An Overview of Setup Procedures

The table below outlines (in order) the setup procedures you must complete before making your Accumulator available to users. (Note that the table indicates where to turn for instructions on completing each procedure.)

Procedure	For instructions, turn to the section,
Unpacking the Accumulator	“Unpacking and Inspecting the Accumulator,” in Chapter 3.
Installing the Accumulator	“Connecting the Power and Copier Interface Cables,” in Chapter 3
Erasing Test Data	“Initializing the Accumulator,” in Chapter 4
Setting Operating Parameters	“Programming the Options,” in Chapter 4 (and, for Printer models, “Setting the Date” and “Setting Printer Options,” in Appendix A)
Adding Account Codes to Memory	“Loading Account Codes,” in Chapter 4

Table 1-2: *Setup Procedures*

Documentation Conventions

Typefaces and Symbols

Messages and prompts that appear in the Accumulator display window are represented by the Courier typeface, for example:

MAC? or ADD?

If the prompt represents the start of a major loop, Courier Bold typeface is used, for example:

MAINT? or **SET UP?**

The keypad keys of your Accumulator are represented by rectangles surrounding the appropriate character or number, for example:

1 or *

Use of the Word, “Copier”

Accumulators can connect to a variety of devices to control and monitor usage. However, for the sake of simplicity, the remainder of this guide uses “photocopiers” as an example when referring to the controlled device — and “copying” when referring to the activity being recorded. Keep in mind that these references apply to similar equipment as well.

The Importance of Keeping a Manual Log

Keeping a manual log is an important part of monitoring Accumulator activity. Should you unintentionally delete some of the information stored by your Accumulator, the integrity of your data can be preserved through your manual log. This log should contain the following:

- a record of all individual copy counts
- a record of all account totals and codes

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2 Description of Components

This chapter illustrates and describes the components of your Accumulator. Read this chapter to become familiar with these components before beginning any of the setup procedures in Chapters 3 and 4.

Accumulator Components

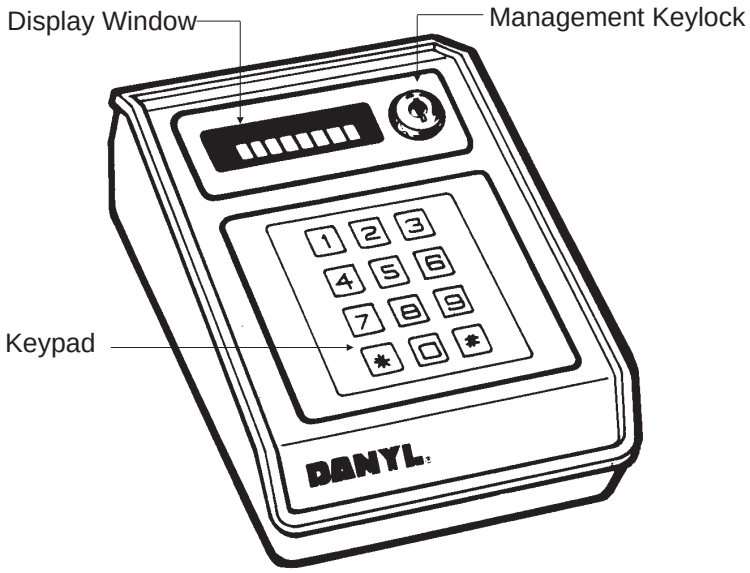

Figure 2-1: *Front View of Keypad Accumulator (8KE)*

Display Window

This 8-character window (Figures 2-1, 2-3, 2-4) displays the following types of information:

- When copying activity is in progress, the window displays the account balance, which increases or decreases (depending on how this option is set) as each copy is made.
- When in Management Mode, the window displays relevant prompts, responses, copy totals, and accounts accessed by the administrator.

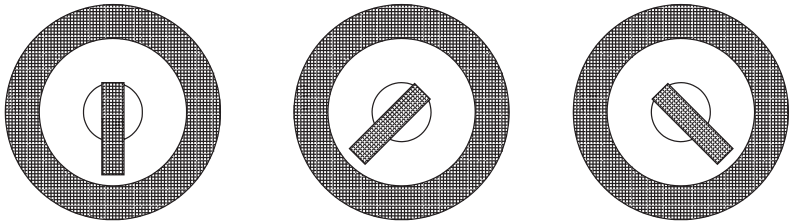

Figure 2-2: *Keylock Positions and Operating Modes*

Management Keylock

This keylock (Figures 2-1, 2-3, 2-4) can be turned to three positions to access three different operating modes:

- When turned to the center position (straight up and down), the unit is in *Normal Mode*, which requires users to enter access codes to enable the copier (Figure 2-2).
- When turned to the left (counter-clockwise), the unit is in *Management Mode*, which allows access to setup and maintenance routines (Figure 2-2).
- When turned to the right (clockwise), the unit is in *Bypass Mode*, which activates the copier and allows copies to be made without entry of access codes (Figure 2-2). (The copier remains enabled until the Accumulator is returned to Normal Mode.)

Keypad

This soft-touch, numeric keypad (Figures 2-1, 2-3, 2-4) contains the following type keys:

- *Numeric Keys* — Administrators use these keys in Management Mode to enter information (such as new account codes) to the Accumulator. Some keys also serve as special function keys that help make maintaining accounts easier.

- *Special Character Keys* — In Management Mode, administrators use these keys to respond to prompts:
  — [*] for “Yes” or “Enter”

  — [#] for “No” or “Bypass Prompt”

  In Normal Mode, users can press these keys to complete their copying activity and to activate the Hold Feature:
  — [*] for Hold

  — [#] for End Session

Magnetic Swipe Reader

The swipe reader (Figure 2-3) “reads” the information encoded on swipe cards to determine if the user is allowed access to the controlled equipment. *(Swipe models only)*

Integral Printer

The integral, 16-column impact printer (Figure 2-4) allows for easy generation of activity reports and individual receipts. *(Printer models only)*

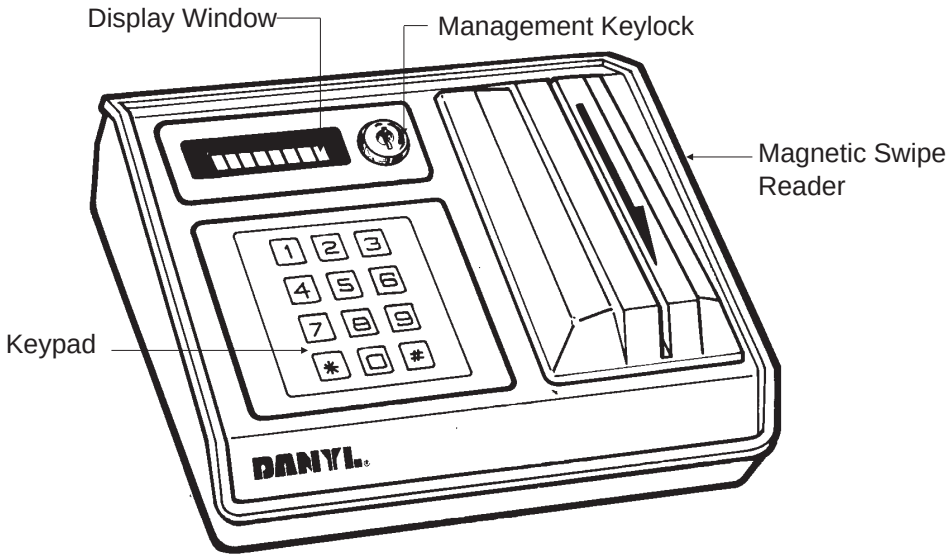

Figure 2-3: *Front View of Swipe Accumulator (8SE)*

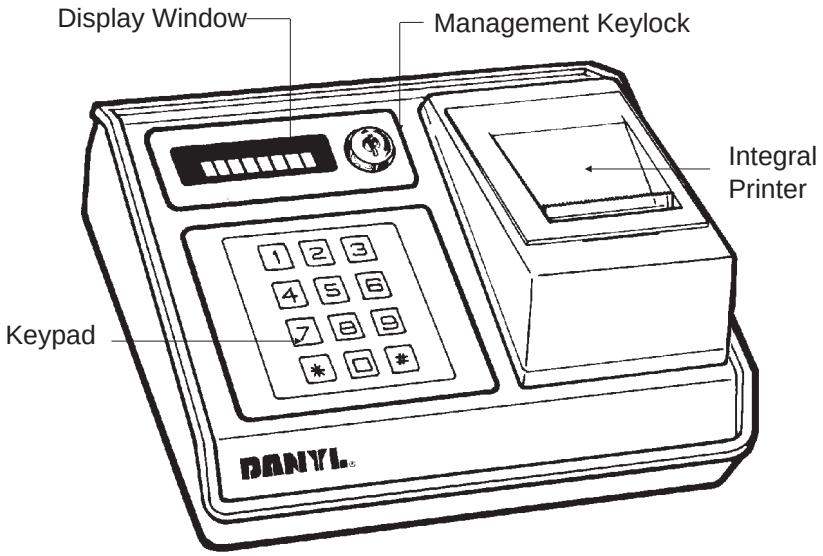

Figure 2-4: *Front View of Printer Accumulator (8PE)*

Power Supply Plug

This plug (Figure 2-5) is used to connect the Accumulator to the power source. (Refer to Chapter 3 for installation procedures.)

Communications Port

When the Accumulator is used with the Collector Software Package, a portable data collector can be connected to this port (Figure 2-5) to extract the stored data.

Copier Interface Jack

This jack (Figure 2-5) is used to connect the Accumulator to the copier. DANYL provides a wide variety of copier interface cables. If you have not already purchased this cable, contact your DANYL sales representative or authorized DANYL dealer to determine the type cable you need. (Installation instructions are located in Chapter 3.)

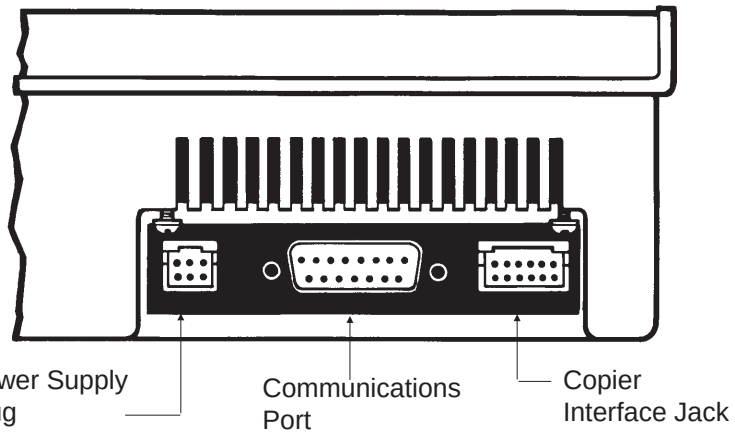

Figure 2-5: *Rear View of Accumulator*

Other Components

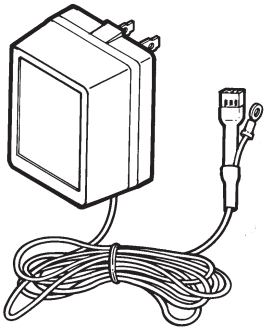

Figure 2-6: *Accumulator Power Pack and Cable*

Power Pack and Cable

The power pack (equipped with integral cable) converts 120-volt voltage to a voltage appropriate for Accumulator operation (Figure 2-6).

Management Keys

Your management key is used to place the Accumulator in its different operating modes (Normal, Bypass, Management); two such keys are included with your Accumulator to provide you with a spare. Be sure to store these keys in a secure location when not in use.

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3 Hardware Setup

Though all DANYL Accumulators are shipped pre-assembled, some hardware setup (such as connecting the copier interface cable) is required.

The sections in this chapter describe the procedures involved in installing your Accumulator:

- Unpacking and inspecting the Accumulator
- Connecting the power and copier interface cables

Software setup procedures are described in Chapter 4 (and, if you have a Printer model, in Appendix A).

Procedure	For instructions, turn to the section,
Unpacking the Accumulator	"Unpacking and Inspecting the Accumulator," in this Chapter
Installing the Accumulator	"Connecting the Power and Copier Interface Cables," in this Chapter

Table 3-1: *Hardware Setup Procedures*

Unpacking and Inspecting the Accumulator

Before you attempt to install and set up your Accumulator, inspect the shipping materials for any evidence of damage or tampering.

If you suspect the unit is not intact, do not unpack the carton until you have contacted the carrier and requested an inspection report. Then, if necessary, follow the instructions below to file a damage insurance claim:

- Complete the forms to file a damage insurance claim.
- Notify your dealer or sales representative of the damaged shipment.

When you are satisfied that your Accumulator has arrived intact, carefully remove it from the carton. Packed with the Accumulator, you should find:

- a Power Pack (with attached power cable)
- two Management Keys
- an *Accumulator Administrator's Guide*

When you are finished unpacking your Accumulator, turn to the following page to connect the power and copier interface cables.

Connecting the Power and Copier Interface Cables

Follow this procedure to attach the power and copier interface cables to the Accumulator. Procedures for connecting the copier interface cable to the copier are determined by the type copier you have and, because of this, are not included in this guide. Contact a copier technician for assistance with this portion of the installation.

Hardware Required:

- Power Pack / Cable — supplied with the Accumulator
- Copier Interface Cable — purchased separately. Contact your DANYL sales representative or dealer to determine the appropriate type cable for your copier.
- Cable Clamp — purchased separately (optional)
- Mounting Bracket — purchased separately (optional)

Tools Required:

- #1 Phillips Screwdriver

Instructions:

1. Loosen and remove the screw located above the upper, left-hand corner of the power supply plug. If you purchased a cable clamp, you must also remove the screw located above the upper, right-hand corner of the copier interface jack. (Refer to Figure 3-1.)

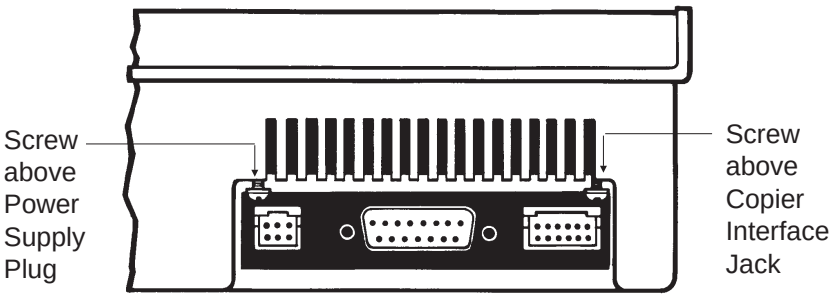

Figure 3-1: *Preparing the Accumulator for Installation*

2 Refer to the appropriate illustration(s) to attach the power and copier interface cables and connect the grounding ring:

- Refer to Figure 3-2 if you are not using a cable clamp.
- Refer to Figures 3-3 and 3-4 if you purchased a cable clamp.

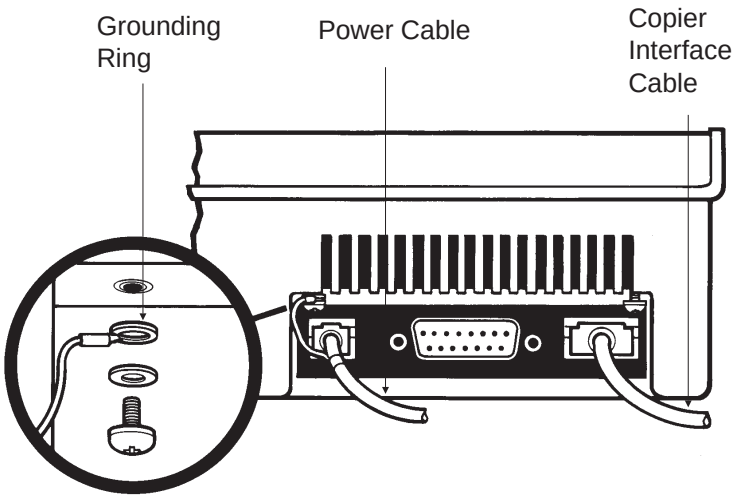

Figure 3-2: *Rear View of Accumulator with Grounding Ring and Power and Copier Interface Cables Attached*

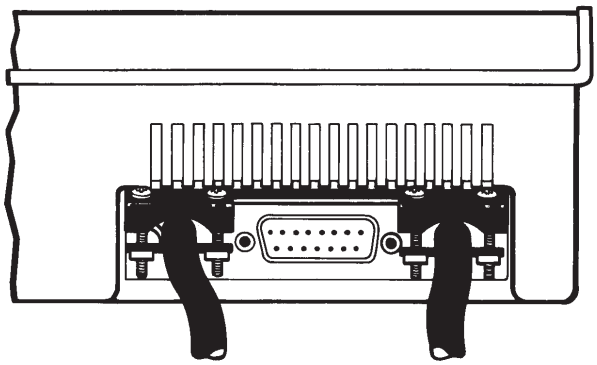

Figure 3-3: *Rear View of Accumulator with Grounding Ring, Power and Copier Interface Cables, and Cable Clamp Attached*

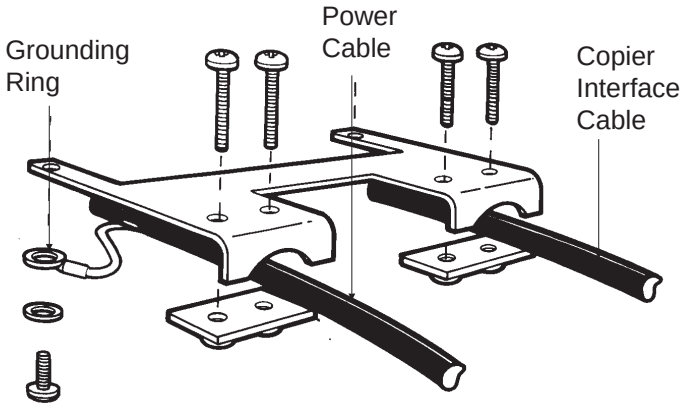

Figure 3-4: *Cable Clamp Assembly*

3 If you purchased a mounting bracket, secure the Accumulator to the copier at this point. Refer to the Installation Instruction Sheet included in the mounting bracket kit.

4 Plug the power pack into a grounded, three prong outlet. The software number is displayed, followed by the message, READY.

5 On Printer model Accumulator units, you must charge the battery before attempting to use the printer. Allowing the unit to sit with the power pack plugged into a standard wall outlet will allow the batteries to charge. If you attempt to use the printer before the batteries charge, the message “RECHARGE” will print.

4 Software Setup

The Accumulator allows you to specify some of its operating characteristics by offering you options for certain functions, then allowing you to select the option which best suits your needs and preferences. To specify which options — or *parameters* — you desire, you must program the Accumulator.

This chapter describes the setup programming procedures that must be completed before you make your Accumulator available to users. Read the introductory text in the section entitled, "Before You Begin," before proceeding with any of the configuration procedures in the following sections:

Procedure	For instructions, turn to the section,
Erasing Test Data	"Initializing the Accumulator," in this Chapter
Setting Options	"Programming the Options," in this Chapter
Adding Account Codes to Memory	"Loading Account Codes," in this Chapter
Setting the Date & Printer Options	"Setting the Date" and "Setting Printer Options," in Appendix A **(PRINTER MODELS ONLY)**

Table 4-1: *Software Setup Procedures*

Before You Begin

During initialization and programming, you will be asked to respond to a series of prompts (***major loops***) and sub-prompts (***minor loops***) that appear in the display window. You respond to these prompts by pressing the appropriate keys on the keypad:

– [*] for YES or ENTER

– [#] for NO

– numeric keys, such as [1] or [8], to key in specific data.

These prompts are organized into a series of continuous groups. When prompted to respond to a group, you must choose either to respond to — or skip — the prompts in that group. After you finish providing responses to one group, you are prompted to select the next group. Because of the continuous nature of these groups, they are commonly referred to as *loops*.

Major and Minor Loops

If you respond “YES” when prompted to enter a major loop, you are prompted to enter the first minor loop within that major loop. Respond YES to enter that minor loop, or NO to continue stepping through the loops until you reach the desired prompt. If you inadvertently skip a prompt or enter an incorrect response, just “cycle” through the loops — by repeatedly pressing [#] — until the desired prompt reappears.

Step 1: Initializing the Accumulator

You must initialize your Accumulator to clear any stray information or test data stored in memory. This ensures that test data is not combined with actual user data once the Accumulator is in use.

Before You Begin: INIT?

The Initialization major loop is used to erase this test information. The minor loops within the Initialization major loop are described below:

Clear

The Clear minor loop zeros out all copy totals stored in Accumulator memory (refer to Chapter 5).

Erase

The Erase minor loop deletes all account codes and copy totals from Accumulator memory and resets operating parameters to default values.

CAUTION:
After your Accumulator is in use, be very careful when entering this loop so that you do not inadvertently delete all copy totals or account codes. **Data erased by this procedure cannot be recovered**. If you are initializing the Accumulator for the first time, follow the procedure on this page. If you want to perform some other function through the Initialization major loop, refer to the appropriate section in Chapter 5.

Procedure

To initialize your Accumulator, access Management Mode (Figure 4-1), press [#] until the **INIT?** prompt appears, then follow the steps below:

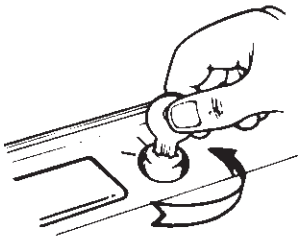

Figure 4-1: *Entering Management Mode*

System Status	User Action
1 Display reads: **INIT?**	Press [*].
2 Display reads: CLEAR?	Press [#] until the ERASE? prompt appears.
3 Display reads: ERASE?	Press [*] to clear all account codes and copy totals — and reset all options to default values. ERASE is irreversible and the information cleared cannot be recovered.
4 Display reads: SURE?	Press [*] to continue with the Erase function.
5 Display reads: PRESS 3	Press [3] to confirm that you want to continue.
6 Display reads: ERASED (for about two seconds), then reads: **MAINT?**	This signifies the end of this procedure. To continue with setup programming, turn to the next section.

Step 2: Programming the Options

After initialization, you must set certain options before making the Accumulator available to users. These options, or *parameters*, determine how the Accumulator operates.

Before You Begin: SET UP?

To set these options, you must enter the Setup major loop. Eleven minor loops allow you to set values for each of the following:

- **Machine Access Code**
  This minor loop allows you to set the optional three-digit Machine Access Code (MAC), which helps ensure that only authorized users can access the equipment at your site.
  - If "000" is assigned as the MAC, it will disable the feature and allow users to access the equipment by entering an account code only.
  - If a MAC other than “000" is assigned, the user must first enter the MAC, then the account code. *(For more information on MACs, refer to the ”Access Codes" section of Chapter 1.)*

> **NOTE:**
> With swipe model Accumulators, the MAC is preassigned by DANYL. You should have found a card packed with your Accumulator to notify you of the particular MAC assigned to your site.

- **Machine ID**
  The Machine ID is for your own identification purposes and is most often used with printer models. Numeric Accumulators can be assigned a Machine ID of up to eight digits.

- **Keypad Tone**
  If this feature is enabled, a tone sounds whenever a key on the Accumulator keypad is pressed.
- **Load Type**
  The Load Type determines how account codes are loaded into Accumulator memory:
  - If set to *Verify*, the Accumulator only accepts those account codes that were previously entered into the unit by the administrator.
  - If set to *Self Load*, account codes are automatically added to memory the first time a user enters a code. Setting the Load Type to Self Load avoids filling the Accumulator with unused accounts. You might want to first set the Accumulator to Self Load to dynamically build up an account base, then switch over to Verify once most codes have been loaded.
- **New Message**
  If the Load Type minor loop is set to Self Load, this feature causes the Accumulator to issue the prompt, NEW?, each time the user enters an account code not already resident in memory. *(Note: If the Load Type is set to Verify, access to the controlled device will be denied if an entered account is not currently in memory.)*
- **Hidden Account**
  When enabled, this feature provides added security by suppressing the display of the account code as it is keyed in.
- **Counting Mode**
  This option determines how the Accumulator counts the number of copies made for each account — either from the programmed limit down to zero (decrementing mode) or from zero up to the copy limit (incrementing mode).

- **Limits**
  The minor loop allows you to set the copy limit, or the maximum number of copies allowed, for each of the 10 Limit Classes at that device. If this limit is exceeded during a copy session, access to the controlled device will be denied upon the next access attempt. Though the Accumulator can store up to 99,999 copies per account, the limit must be set to a number between zero (0) and 97,000.
- **Timeout**
  The Timeout, if selected, determines the number of seconds the Accumulator allows between copies before assuming that the copying activity is complete and resetting itself to the READY prompt. Allowable values are None or 30, 60, 90, and 120 seconds.
  - If this option is set to *None*, the Accumulator **will not** automatically terminate a copy session. A session will be terminated only when the user presses [#] .
  - If this option is set to a value other than *None*, the Accumulator automatically terminates the copy session (after the specified time) if the user forgets to press [#]. The Hold Feature (described below) can be used to temporarily override the Timeout Feature.
- **Hold**
  This minor loop allows users to override the Timeout Feature when extra time is needed between copies, such as for positioning a document or adding paper. If the Hold Feature is programmed ON and the Timeout has een set to a value other than NONE, the user can press [*] at any time to prevent the Accumulator from "timing out." (An H appears in the display window to indicate that the Accumulator is "on hold.") Hold is deactivated when the user makes the next copy or presses [#] .

- **Times**
  This minor loop allows you to set a combination *Pre-* and *Post-time*:
  - The *Pre-time* specifies the number of seconds that the copier remains enabled after a copy session has been terminated by pressing the pound [#] key.
  - The *Post-time* specifies the number of seconds that the Accumulator waits for additional copy signals after the copier is disabled.

  Allowable combinations are: 0/0, 0/2, 0/4, 0/6, 0/8, 4/0, 2/2, 1/3, and 1/1. (The number *before* the slash is the Pre-time; the number *after* the slash is the Post-time.) The recommended setting is 0/4, but you may need to adjust this setting if occasional copier jams occur or if copies begin to be charged to the Bypass Account. Increase the Pre-time to eliminate copier jams caused by disabling the copier too quickly; increase the Post-time to eliminate Bypass copies caused by not waiting long enough before accepting another copy signal.

Programming Instructions

Procedures for setting the options of your Accumulator are listed below. If you are not sure how to set a particular option, refer back to the descriptions on the previous pages. Later, if you wish to change some or all of these values, just enter the Set Up major loop, follow the procedures below, and press [#] when prompted about settings you do not wish to change.

To program your Accumulator, access Management Mode (Figure 4-2), press [#] until the **SET UP?** prompt appears, then follow these steps:

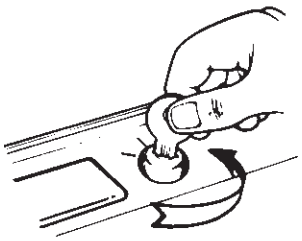

Figure 4-2: *Entering Management Mode*

	System Status	User Action
1	Display reads: **SET UP?**	Press * to enter the **SET UP?** major loop.
2	Display reads: MAC?	Press *.
3	Display reads: MAC 000 (or the current MAC)	Key in your three-digit Machine Access Code and press *.
4	Display reads: MACH ID?	Press * to assign a Machine ID to this unit.
5	Display reads: 00000000 (or the current Machine ID)	Key in the Machine ID (up to eight digits) and press *.
6	Display reads: TONE?	Press * to set the Keypad Tone.
7	Display reads: ON or OFF	Press # until the desired setting appears, then press *.
8	Display reads: LD TYPE?	Press * to set the Load Type.
9	Display reads: VERIFY or SELF LD	Press # until the desired setting appears, then press *.
10	Display reads: NEW MSG?	Press * to set the New Message option.
11	Display reads: OFF or ON	Press # until the desired setting appears, then *.
12	Display reads: HIDDEN?	Press * to set the Hidden Account Display (*not applicable to 8SEs. If you have an 8SE, press # and proceed to Step 14.*)

13 Display reads:	OFF or ON	Press # until the desired setting appears, then *.
14 Display reads:	MODE?	Press * to set the Counting Mode.
15 Display reads:	INC BAL or DEC BAL	Press # until the desired setting appears, then *.
16 Display reads:	LIMIT?	Press * to set the copy limit for each of the 10 Limit Classes.
17 Display reads: (or the current limit for Limit Class 0)	L0 97000	Press * to confirm or key in a new copy limit (from 0 to 97,000), then press *. *(Pressing # at any time when setting limits will skip you ahead to the next minor loop.)*
18 Display reads:	L1 000000	Key in the copy limit for Limit Class 1 and press *.
19 Display reads:	L2 000000	Key in the copy limit for Limit Class 2 and press *.
20 Display reads:	L3 000000	Key in the copy limit for Limit Class 3 and press *.
21 Display reads:	L4 000000	Key in the copy limit for Limit Class 4 and press *.
22 Display reads:	L5 000000	Key in the copy limit for Limit Class 5 and press *.
23 Display reads:	L6 000000	Key in the copy limit for Limit Class 6 and press *.
24 Display reads:	L7 000000	Key in the copy limit for Limit Class 7 and press *.

25 Display reads: L8 000000	Key in the copy limit for Limit Class 8 and press [*].
26 Display reads: L9 000000	Key in the copy limit for Limit Class 9 and press [*].
27 Display reads: L0 97000	This brings you back to the start of the LIMIT? minor loop. If you are finished setting Limits, press [#] to continue on to the next prompt.
28 Display reads: TIMEOUT?	Press [*] to set the Timeout value.
29 Display reads: 30 SEC 60 SEC 90 SEC 120 SEC or NONE	Press [#] until the desired value appears, then press [*].
30 Display reads: HOLD?	Press [*] to set the Hold feature.
31 Display reads: OFF or ON	Press [#] until the desired setting appears, then press [*].
32 Display reads: TIMES?	Press [*] to set the Pre- and Post-times.
33 Display reads: 0/4 SECS 0/6 SECS 0/8 SECS 4/0 SECS 2/2 SECS 1/3 SECS 1/1 SECS 0/0 SECS or 0/2 SECS	The number before the slash represents the Pre-time; the number after the slash the Post-time. The suggested setting is "0/4." Press [#] until the desired setting appears, then press [*].

KE MODELS ONLY

34	Display reads: **COMM?**	You are now finished with the **SET UP?** major loop. To continue with setup procedures, proceed to the next section.

or

SE MODELS ONLY

	Display reads: **VIEW CD?**	You are now finished with the **SET UP?** major loop. To continue with setup procedures, proceed to the next section.

or

PE MODELS ONLY

	Display reads: **PRINTER?**	You are now finished with the **SET UP?** major loop. To continue with setup procedures, proceed to the next section.

Step 3: Loading Account Codes

The "Load Type" set in the previous section determines whether you need to load account codes into memory:

- If the unit is set for *Self Load*, you do not need to load account codes. When a user enters an account code not resident in memory, the Accumulator automatically adds that account. (Skip the procedure in this section.)
- If the unit is set for *Verify*, all account codes must be pre-loaded. Any account code entered must be resident in memory or that user will not be allowed to use the copier. *(Note: You can add an account to the Accumulator and temporarily deny access to it — for example, while an employee is on vacation — by assigning it a Limit Class with a limit of "0." For more information on Limit Classes, refer to "Step 2: Programming the Options," in this Chapter.)*

NOTE TO USERS WITH COLLECTOR SOFTWARE:
Refer to your *Collector Software Guide* for instructions on setting the Communications major loop and downloading account codes.

If you are not using Collector Software and have set your load type to "Verify," you can load your account codes using the following methods:

- **All Models** — you can enter account codes via the Accumulator keypad. (Follow the procedure on the next page.)
- **Swipe Models Only** — you can set the Load Type to *Self Load*, then swipe all the user cards through the reader. (The Accumulator automatically stores the account codes in memory.) After you finish loading the codes, simply change the Load Type back to *Verify*.

Before You Begin: MAINT?

To manually key in account codes, use the Maintenance major loop. The minor loops within this major loop are described below:

- **Examine**
  The Examine minor loop allows you to view and maintain accounts. Turn to Chapter 5 for instructions on using this loop.
- **Add**
  The Add minor loop allows you to add one or more account codes to Accumulator memory.
- **Delete**
  The Delete minor loop allows you to delete one or more account codes from Accumulator memory. (Refer to Chapter 5 for instructions on using this loop.)

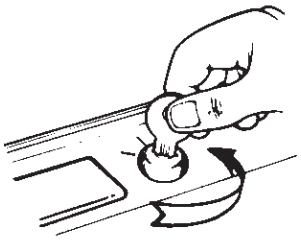

Figure 4-3: *Entering Management Mode*

To load account codes, access Management Mode (Fig. 4-3), press [#] until the **MAINT?** prompt appears, then follow these steps:

	System Status	User Action
1	Display reads: **MAINT?**	Press [*] to enter the **MAINT?** major loop.
2	Display reads: EXAMINE?	Press [#] to bypass this minor loop.
3	Display reads: ADD?	Press [*] .
4	Display reads: ACCOUNT?	Key in the first account code (up to 8 digits) you want to add, then press [*] .

NOTE:
If the account code you wish to add is less than 8 digits, you need not key in preceding zeros.

5 Display reads: LM VAL 0	Key in the desired Limit Class for this account and press [*] .
6 Display reads: ADDED (for about three seconds), then reads: ADD?	Repeat Steps 3, 4, and 5 until you have added all the necessary account codes, then press [#] at the ADD? prompt.
7 Display reads: DELETE?	Press [#] to skip this prompt.
8 Display reads: **SET UP?**	This prompt indicates the start of the **SET UP?** major loop.

You are now finished with the setup procedures. Turn the Management Key back to the center position (Normal Mode) and store the key in a secure place. (Refer back to Table 4-1 to double-check that you have completed each of the setup procedures listed there.) If desired, refer to Chapter 5 for maintenance instructions or Chapter 7 for user instructions.

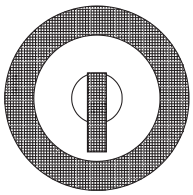

Figure 4-4: *Normal Mode*

NOTE:
If you have an 8PE model, turn to Appendix A for directions on setting the DATE?, PRINTER?, and REPORT? Major Loops.

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5Administrative and Maintenance Procedures

This chapter describes the various administrative tasks involved in maintaining your Accumulator once it is set up and in use. Step-by-step instructions for completing each task are described in the appropriate section of this chapter.

Read the introductory text in the section entitled, “Before You Begin,” before proceeding with any of the procedures in the following sections:

Procedure	For instructions, turn to the section,
Maintaining Individual Accounts	“Maintaining Accounts Individually,” in this Chapter
Maintaining All Accounts	“Maintaining Accounts Globally,” in this Chapter
Viewing Cards	“Using the VIEW CARD Feature,” in this Chapter **(SE MODELS ONLY)**

Table 5-1: Maintenance Procedures

Before You Begin

When performing maintenance tasks, you will be asked to respond to a series of prompts that appear in the display window. You respond to these prompts by pressing the appropriate keys on the Accumulator keypad:

– [*] for YES or ENTER

– [#] for NO

– numeric keys, such as [1] or [8], to key in specific data.

These prompts are organized into a series of continuous groups — or *loops*. When prompted to respond to a group, you must choose either to respond to — or skip — the prompts in that group. After you finish providing responses to one group, you are prompted to select the next group.

If you skip a prompt or enter an incorrect response, just "cycle" through the loops — by repeatedly pressing [#] — until the desired prompt reappears.

Maintaining Accounts Individually

This section describes how to maintain accounts on an individual basis (i.e. one account at a time). If you wish to perform maintenance tasks that affect all accounts, turn to the section entitled “Maintaining Accounts Globally.”

Before You Begin: MAINT?

Individual account maintenance tasks are performed through the Maintenance major loop. Three minor loops aid you in performing specific tasks:

- **Examine**
  This minor loop allows you to examine any or all accounts and the corresponding copy balance. When EXAMINE? is selected, each account code — starting with the lowest-numbered account — can be displayed (for 2 seconds), followed by its copy balance. For information on how special function keys can be used in this loop to maintain the displayed account, refer to the next section entitled, “Using the Special Function Keys.”
- **Add**
  This minor loop allows you to add one or more account codes, one at a time, to Accumulator memory.
- **Delete**
  This minor loop allows you to delete one or more account codes, one at a time, from Accumulator memory.

Using the Special Function Keys

While in the EXAMINE? portion of the Maintenance major loop, you can use some of the numbered keys on the Accumulator keypad to maintain the displayed account or to call a specific account to the display.

To use these keys, simply press the appropriate function key (refer to Figure 5-1 and Table 5-2) when the account balance is displayed. The Accumulator will then prompt you to activate the specified function. If you decide not to perform the function, simply enter a response of "NO" (by pressing [#]).

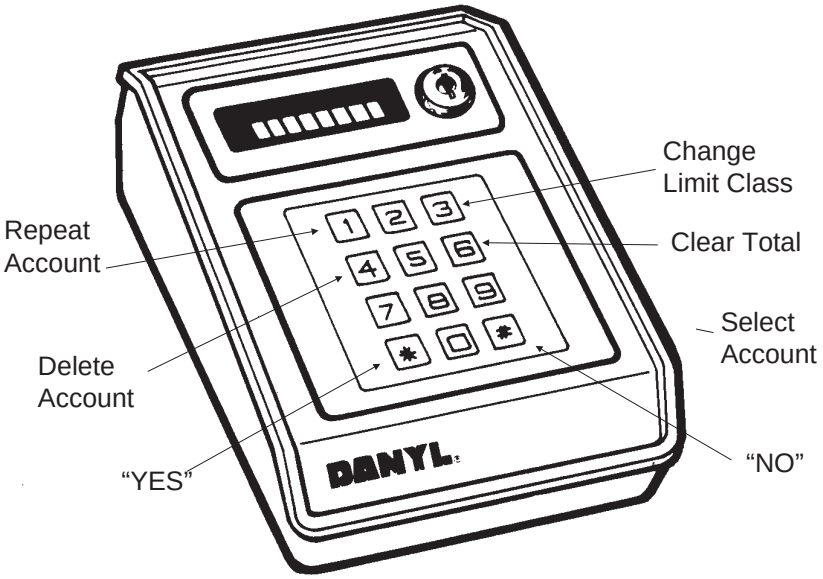

Figure 5-1: *Using the Special Function Keys with the EXAMINE Minor Loop*

Key	Function	Description	User Action
1	Repeat Account	Re-displays the current account code (for about two seconds).	Press 1 to re-view the account code.
3	Change Limit Class	Allows you to change the limit class assigned to that account.	Press 3 to change the limit class. Key in number from 0 to 9 and press * . Redisplays account with new limit class.
4	Delete Account	Prompts you to delete the current account code.	Press 4 , then press * to the DELETE? prompt, * to the SURE? prompt, and 3 to the PRESS 3 prompt.
6	Clear Total	Prompts you to clear the copy balance of the displayed account.	Press 6 , then press * to the CLEAR? prompt, * to the SURE? prompt, and 3 to the PRESS 3 prompt.
9	Select Account	Prompts you to specify an account to examine.	Press 9 . When prompted with ACCOUNT?, key in the account code and press * .
*	YES	Allows you to enter a positive response	Press * to enter a loop or to confirm an entry
#	NO	Allows you to enter a negative response	Press # to skip a loop or toggle between displayed options

Table 5-2: Special Function Keys Used with EXAMINE

How to Examine One or More Accounts

The Examine minor loop not only allows you to examine each account and its copy balance, but also to maintain these accounts by using the Special Function Keys as described in the previous section.

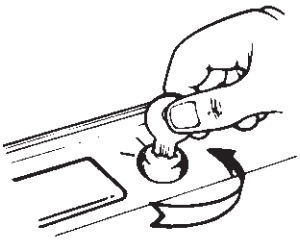

Figure 5-2: *Entering Management Mode*

To examine and maintain accounts, access Management Mode (Figure 5-2), press # until the **MAINT?** prompt appears, then follow these steps:

	System Status	User Action
1	Display reads: **MAINT?**	Press * to enter the **MAINT?** major loop.
2	Display reads: EXAMINE?	Press * to enter the EXAMINE? minor loop.
3	Unit displays the lowest-numbered account code (for about two seconds), then displays the copy balance.	When you are finished viewing this account, press * to view the next consecutive account. To continue examining accounts in order, press * after each copy balance is displayed.
4	After the highest numbered account code is examined, the display reads: *LOCAL* (for about 2 seconds) then displays the total number of copies made in Local Mode.	When you are finished viewing this total, press * .

5 The display reads: ADD? This prompt signifies the start of the next minor loop.

If you wish to perform other management functions, go on to the appropriate section in this chapter. If you are finished for this session, turn the Management Key to Normal Mode (Figure 5-3), remove the key, and store it in a secure place.

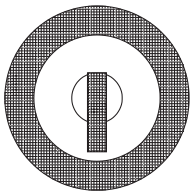

Figure 5-3: *Normal Mode*

How to Add One or More Account Codes

Although you probably added some account codes when you first set up the Accumulator, you can add more accounts at any time.

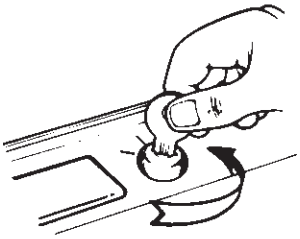

Figure 5-4: *Entering Management Mode*

To add an account, access Management Mode (Figure 5-4), press [#] until the **MAINT?** prompt appears, then follow these steps:

	System Status	User Action
1	Display reads: **MAINT?**	Press [*] to enter the Maintenance major loop, then press [#] to bypass the EXAMINE? minor loop.
2	Display reads: ADD?	Press [*] to enter the ADD? minor loop.
3	Display reads: ACCOUNT?	Key in the Account Code you want to add (up to 8 digits) and press [*] .
4	Display reads: LM VAL 0	Press [*] to confirm or key in a new limit class (from 0 to 9), then press [*] .
5	Display reads: ADDED (for about 2 seconds) then reads: ADD?	To add more account codes, press [*] and repeat Step 3. If you are finished adding accounts, press [#] .

If you are finished for this session, turn the Management Key to Normal Mode (Figure 5-3), remove the key, and store it in a safe place.

How to Delete One or More Account Codes

Follow this procedure to delete one or more accounts. (You may want to examine the account and record its balance in your Manual Log before deleting.) Remember, an alternate method of deleting accounts is to use the function key, [4] , while in the EXAMINE? minor loop. (Refer to the section, "Using the Special Function Keys.") To delete all accounts, turn to the section "Maintaining Accounts Globally."

> **NOTE:**
> Before deleting any account codes or balances, be sure to record them in your Manual Log.

To delete an account code, access Management Mode (Figure 5-5), press [#] until the **MAINT?** prompt appears, then follow these steps:

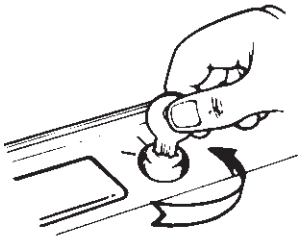

Figure 5-5: *Entering Management Mode*

System Status	User Action
1 Display reads: **MAINT?**	Press [*] to enter the **MAINT?** major loop, then press [#] until the DELETE? prompt appears.
2 Display reads: DELETE?	Press [*] .
3 Display reads: ACCOUNT?	Key in the Account Code to be deleted, then press [*] .
4 Display reads: SURE?	Press [*] to continue. (Pressing [#] to this prompt returns you to the DELETE? prompt.)

5 Display reads: PRESS 3	Press 3 to confirm the deletion. (Pressing any key other than 3 returns you to the DELETE? prompt.)
6 Display reads: ERASED (for about two seconds), then: DELETE?	To delete more accounts, press * and repeat Step 3. When you are finished deleting accounts, press # at the DELETE? prompt.

If you are finished for this session, turn the Management Key to Normal Mode (Figure 5-6), remove the key, and store it in a safe place.

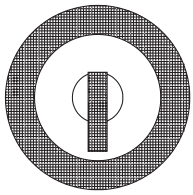

Figure 5-6: *Normal Mode*

Maintaining Accounts Globally

This section describes how to maintain accounts on a global basis (i.e. activate maintenance functions that affect all accounts). If you wish to perform maintenance tasks that affect only individual accounts, turn to the section entitled, “Maintaining Accounts Individually.”

Before You Begin: INIT?

While the Initialization major loop was designed to erase test information during initial setup, it can also be used to clear stored totals once the Accumulator has been in use.

CAUTION!!!
Because both CLEAR? and ERASE? are **irreversible** — and the data deleted cannot be retrieved, be extremely careful when using the Initialization major loop. Always record all stored data in your Manual Log before beginning, then proceed with caution.

The minor loops within the Initialization major loop are described below:

- **Clear**
  This minor loop deletes all copy totals stored in Accumulator memory.
- **Erase**
  This minor loop deletes all account codes and copy totals — as well as resets all options to their default settings.

NOTE:
Because ERASE? should only be used at initial setup, its functions will not be reviewed in this Chapter. If you do ever need to completely re-program your Accumulator, refer back to “Initializing the Accumulator” in Chapter 4.

How to Clear All Copy Totals

Follow this procedure only if you have already recorded all account balances either manually, in your Manual Log, or automatically, using the Collector Software. **Once the copy totals have been cleared, they can not be recovered.**

> **CAUTION!!!**
> Be very careful when using the Initialization major loop so that you do not inadvertently delete copy totals and/or account codes that have not yet been recorded.

To **clear all copy totals**, access Management Mode (Figure 5-7), press [#] until the **INIT?** prompt appears, then follow these steps:

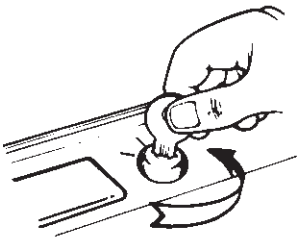

Figure 5-7: *Entering Management Mode*

System Status	User Action
1 Display reads: **INIT?**	Press [*] to enter the **INIT?** major loop.
2 Display reads: CLEAR?	Press [*] only if you want to erase all copy totals.
3 Display reads: SURE?	Press [*] to continue. (Pressing [#] to this prompt returns you to the CLEAR? prompt.)
4 Display reads: PRESS 3 [3]	Press [3] to confirm that you want to clear all copy totals. (Pressing any key other than returns you to the CLEAR? prompt.)

5	Display reads: CLEARED (for about 2 seconds) then reads: **MAINT?**	This signifies the end of the **INIT?** major loop.

If you have other maintenance tasks to perform, turn to the appropriate section(s) in this chapter. Otherwise, turn the Management Key to Normal Mode (Figure 5-8), remove the key, and store it in a secure place.

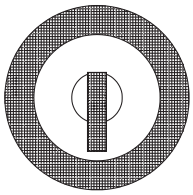

Figure 5-8: *Normal Mode*

Using the VIEW CARD Feature

The VIEW CARD[sm] Feature allows you to read, or *view*, the account code encoded on a swipe reader card.

NOTE:
This Major Loop applies to Swipe-entry (SE) Accumulators only.

To use this feature, access Management Mode (Figure 5-9), press # until the **VIEW CD?** prompt appears, then follow these steps:

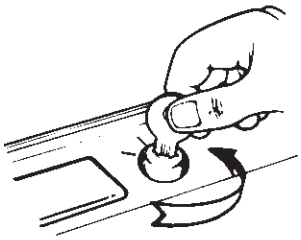

Figure 5-9: *Entering Management Mode*

	System Status	User Action
1	Display reads: **VIEW CD?**	Press * to enter this loop.
2	Display reads: SWIPE	Swipe the card you want to view (magnetic stripe down and facing right) through the Accumulator's magnetic card reader.
3	The Account Code of the swiped card is displayed.	When you are finished viewing this account code, press * and return to Step 2 to view another card — or press # if you are finished viewing cards.
4	Display reads: **COMM?**	This prompt signifies the beginning of the **COMM?** major loop.

If you wish to perform other maintenance functions, turn to the appropriate section in this chapter. Otherwise, turn the Management Key to Normal Mode (Figure 5-10), remove the key, and store it in a secure place.

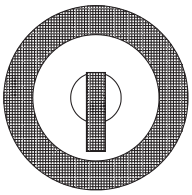

Figure 5-10: *Normal Mode*

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6 Communications

Programming the Communications Options

Detailed instructions concerning the proper settings for the options included in the Communications major loop can be found in your *Collector Software Guide*. For this reason, only the basic prompt structure of the **COMM?** major loop will be reviewed here.

> **NOTE:**
> If you are reviewing the information stored in Accumulator memory manually (by calling the accounts individually to the display) and not using the Collector Software, please skip this chapter.

To program your Accumulator for use with the Collector Software, access Management Mode (Figure 6-1) by turning the key to the left (counter-clockwise), press # until the **COMM?** major loop appears, then follow the steps below:

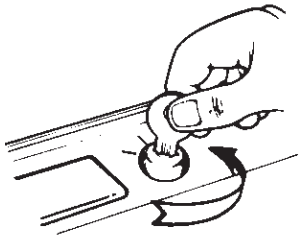


Figure 6-1: *Entering Management Mode*

	System Status	User Action
1	Display reads: **COMM?**	Press * to enter the **COMM?** major loop.
2	Display reads: SEC ID?	Press * to set the Security ID.

3	Display reads: 00000000	Key in the desired Security ID Code, then press * .
4	Display reads: BD RATE?	Press * to set the Baud Rate.
5	Display reads: SPD 1200 SPD 2400 or SPD 300	Press # until the desired setting appears, then press * .
6	Display reads: PARITY?	Press * to set the Parity.
7	Display reads: PAR ZERO PAR ODD PAR ONE or PAR EVEN	Press # until the desired setting appears, then press * .
8	Display reads: RTS?	Press * to enable RTS.
9	Display reads: ON or OFF	Press # until the desired setting appears, then press * .
10	Display reads: TX ZERO?	Press * to transmit accounts with zero counts.
11	Display reads: ON or OFF	Press # until the desired setting appears, then press * .
12	Display reads: **INIT?**	You are finished with the **COMM?** major loop.

Turn the Management Key back to Normal Mode (Figure 6-2), remove the key, and store it in a safe place. If you need more detailed explanations of these prompts, refer to your *Collector Software Guide.*

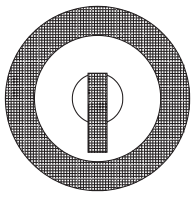


Figure 6-2: *Normal Mode*

7 User Instructions

This chapter describes how to use your Accumulator to access the controlled device. It also includes instructions for using the unit's Bypass Mode to access the copier without the need for access codes.

These instructions have been set up so they can be easily copied and posted near each copier to assist the users with any basic questions they might have. (You might also want to post the list of user-related error messages found in Appendix B.)

Procedure	For instructions, turn to the section,
Accessing a Copier Controlled by a Keypad or Printer Accumulator	"Using a Keypad or Printer Accumulator," in this Chapter
Accessing a Copier Controlled by a Swipe-entry Accumulator	"Using a Swipe-entry Accumulator," in this Chapter
Accessing a Copier Without Entering Account Codes	"Using Bypass Mode," in this Chapter

Table 7-1: Copier Access Procedures

Using a Keypad or Printer Accumulator

To make copies, follow these instructions:

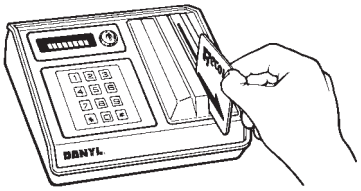
System Status	User Action
1 Display reads: READY	Key in the MAC, if required, directly followed by your account code, then press # .
2 Display reads: T 00000 (or your current account balance)	Make copies as usual. The displayed balance changes as copies are made. When you finish making copies, press # .
3 Display reads: PLS WAIT (for about two seconds), then returns to READY.	

WHAT TO DO IF . . .

- If the display reads “BAD ACCT” or “BAD MAC”, you may have keyed in a wrong code. Retry entering the codes.
- If you interrupt your copying to perform some task, the unit may “time out” and disable the copier. To avoid having to re-key in your account code(s), press * . An “H” should appear in the display window. HOLD will automatically turn off when you resume copying .
- If the word “LIMIT” is displayed after you key in your account code(s), you have exceeded your allowed copy limit. Consult the administrator to clear your account balance.

Using a Swipe-entry Accumulator

To make copies, follow these instructions:



System Status	User Action
1 Display reads: READY	Swipe (slide) your card (magnetic stripe down and facing right) through the slot in the magnetic card reader.
2 Display reads: T 00000 (or your current balance)	Make copies as usual. The displayed balance changes as copies are made. When you finish making copies, press # .
3 Display reads: PLS WAIT (for about two seconds), then returns to READY.	

WHAT TO DO IF . . .

- If the display reads “BAD BDGE” you may have incorrectly swiped your card. Retry swiping the card.
- If the display reads “BAD ACCT,” your account may not be in unit memory. Contact the administrator to add your account.
- If you interrupt your copying to perform some task, the unit may “time out” and disable the copier. To avoid having to re-key in your account code(s), press * . An “H” should appear in the display window. HOLD will automatically turn off when you resume copying .
- If the word “LIMIT” is displayed after you swipe your card, you have exceeded your allowed copy limit. Consult the administrator to clear your account balance.

Using Bypass Mode

The Management Key can be used to place the Accumulator in Bypass Mode. When placed in this mode, the Accumulator activates the copier and allows copies to be made without entry of access codes. The number of copies made in Bypass Mode is charged to a *Local Account*.

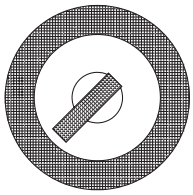


Figure 7-1: *Bypass Mode*

Follow these steps to access the copier using the Management Key:

	System Status	User Action
1	The display reads: READY	Insert the key into the Management Keylock and turn the key full right (as illustrated in Figure 7-1).
2	The copier is enabled and the display window reads: LOCAL MD	Use the copier as normal.
3	After the first copy is made, the balance of the Local Account appears in the display window; as you continue copying, the balance changes to reflect the number of copies made.	When you are finished, turn the key back to the center (Normal Mode) position, remove the key, and store it in a safe place.

A Special Features of PE Models

NOTE:
The information and minor loops discussed in this appendix apply to printer models (8PEs) only.

Because of its integral printer, the 8PE has certain unique features and setup requirements that do not apply to the 8KE and 8SE models. For this reason, it is easier to discuss these items separately from regular setup procedures.

Read the introductory text in the sections entitled, “Before You Begin,” before proceeding with any of the procedures in the following sections.

Procedure	For instructions, turn to the section,
Setting the Date	“Setting the Date,” in this Chapter
Setting Options	“Setting Printer Options,” in this Chapter
Printing Reports	“Generating Reports,” in this Chapter
Replacing Paper and Ribbons	“Printer Maintenance,” in this Chapter

Table A-1: *Special Features of Printer Accumulators*

Step 1: Setting the Date

Before You Begin: DATE?

Printer Accumulators include a date stamp on printed receipts and reports. For this reason, it is important for you to set the correct current date before printing begins.

> **NOTE:**
> Please note that the date **does not increment automatically**. It must be reset *before* each report generation session — or *daily*, if you are printing individual receipts.

To set the date, access Management Mode by turning the key full left (Figure A-1), press # until the **DATE?** prompt appears, then follow these steps:

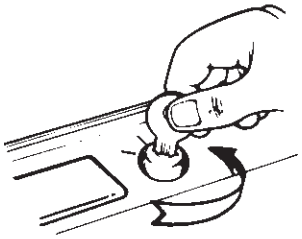


Figure A-1: *Entering Management Mode*

System Status	User Action
1 Display reads: **DATE?**	Press * to enter the current date.
2 Display reads: nn/nn/nn	Key in today's date in mm / dd / yy format, and press * .
3 Display reads: **REPORT?**	This indicates the start of the **REPORT?** major loop (covered later in this Chapter). To continue setting up your Printer Accumulator, turn to the next section, "Setting the Print Options."

Step 2: Setting the Print Options

Before You Begin: PRINTER?

Before you can use your Printer Accumulator to print reports or receipts, you must set the following options found in the Printer major loop:

- **Receipt**
  This minor loop allows you to program the unit to print a receipt for each copy session.

> **NOTE:**
> Keep in mind that if you are printing receipts, you must **reset the date daily** in order for the correct date to appear on the receipt. (Refer to “Setting the Date” in this chapter.)

- **Print Cost**
  This minor loop allows you to select whether copy costing information will be included in the reports.
- **Print Zero**
  This minor loop allows you to select whether accounts for which no usage was reported during a given reporting period will be included in the reports.
- **Cost Per Copy**
  This minor loop assigns a cost (expressed in tenths of a cent) to each copy made. The maximum cost per copy is $0.999. This price is used on the pricing extension for each printed report.

> **NOTE:**
> The cost is applied at the time the report is generated. No history is kept.

To program the print options, access Management Mode (Figure A-2), press # until the **PRINTER?** prompt appears, then follow these steps:

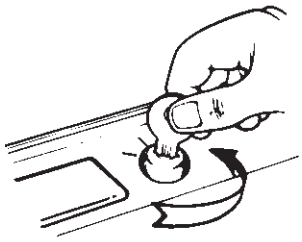


Figure A-2: *Entering Management Mode*

	System Status	User Action
1	Display reads: **PRINTER?**	Press * to enter the **PRINTER?** major loop.
2	Display reads: RECEIPT?	Press * to set the Receipt option.
3	Display reads: OFF or ON	Press # until the desired setting appears, then press *.
4	Display reads: PR COST?	Press * to set whether the reports will include costing information.
5	Display reads: ON or OFF	Press # until the desired setting appears, then press *.
6	Display reads: PR ZERO?	Press * to set whether accounts with zero balances will be included in the report.
7	Display reads: OFF or ON	Press # until the desired setting appears, then press *.
8	Display reads: COST?	Press * to set the Cost Per Copy.

9 Display reads: $0.100	Key in the desired value (up to $0.999), then press [*].
10 Display reads: **COMM?**	This prompt signifies the start of next major loop.

If you have completed all the software setup procedures listed here — and in Chapter 4, your Accumulator is ready for use. Turn the Management Key back to Normal Mode, remove the key, and store it in a safe place. If you wish to try the report generation feature, continue on to the next section.

Generating Reports

The 8PE can generate individual receipts with (Figure A-3) or without (Figure A-4) costing information, that are printed after every copy session — as well as two different activity reports. The first report (Figure A-5) includes the cost per copy at that device, as well as copy totals and total costs for each account. The second report is an abbreviated version of the first that eliminates the costing data (Figure A-6).

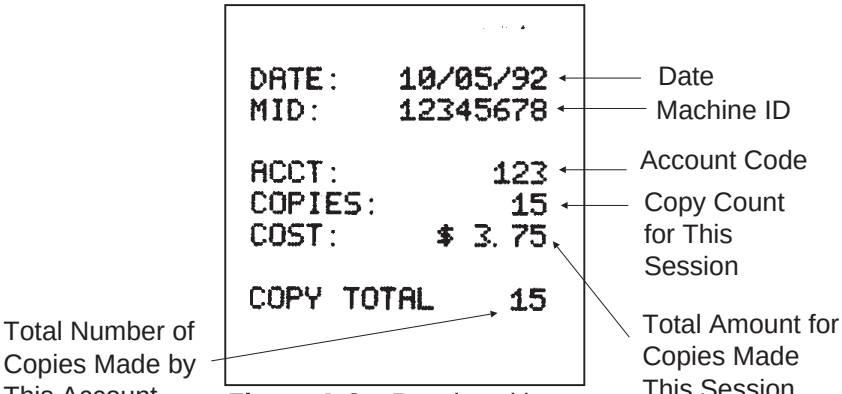


Figure A-3: *Receipt with Cost Information*

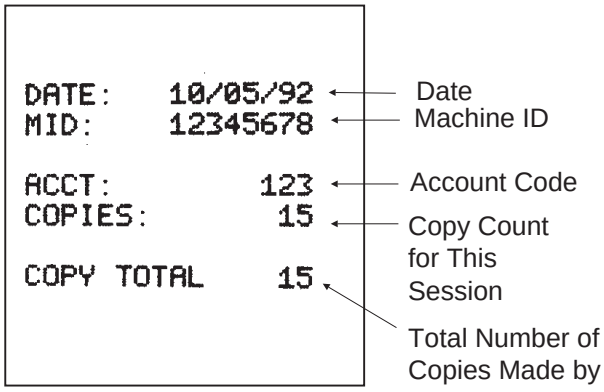


Figure A-4: *Receipt without Cost Information*

```
DATE:     10/05/92
MID:      12345678

COST:     $0.250
MAC:791

C  ACCOUNT COUNT
2      123    15
           $ 3.75
0      321     0
           $ 0.00
5      456    25
           $ 6.25
1      654    10
           $ 2.50
5      789    35
           $ 8.75

6      987    50
          $ 12.50
3     1056     5
           $ 1.25
6     1196    38
           $ 9.50
9 99999999   225
          $ 56.25
**LOCAL***    20
           $ 5.00

TOTAL:       423
COST:    $ 105.75
```

Date

Machine ID

Cost Per Copy

Machine Access Code

Limit Class

Number of Copies Made

Account Code

Amount

Total Copies Made in Local Mode

Total Copies Made

Total Amount for Copies Made in Local Mode

Total Cost for All Copies Made

Figure A-5: *Printed Report with Cost information*

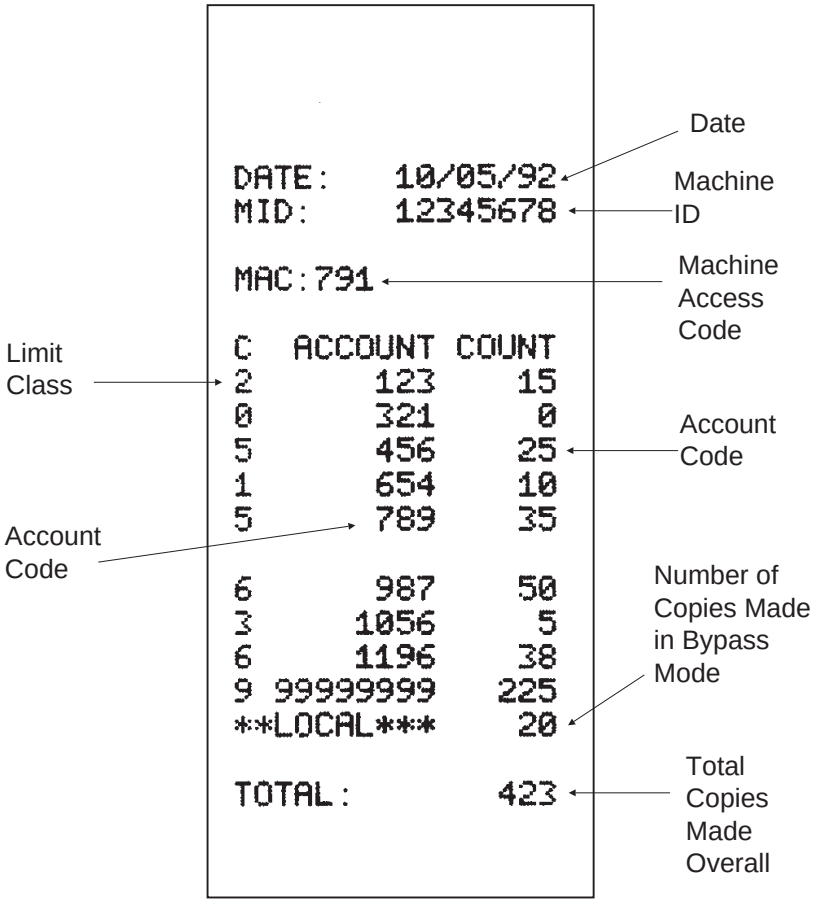


Figure A-6: *Printed Report without Cost Information*

Before You Begin: REPORT?

> **NOTE:**
> Be sure to set the current date (refer to, “Setting the Date,” in this chapter) before printing your reports,

To generate a report, access Management Mode by turning the key full left (counter-clockwise) (Figure A-7), press [#] until the **REPORT?** prompt appears, then follow the steps below:

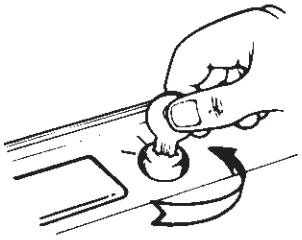


Figure A-7: *Entering Management Mode*

System Status	User Action
1 Display reads: **REPORT?**	Press [*] to generate a report.
2 Display reads: SURE?	Press [*] to answer Yes.
3 Display reads: PRESS 3	Press the [3] key to print the report.
4 Display reads: CLEAR?	If you wish to clear all account totals in preparation for the next accounting period, press [*] to continue. If you do not wish to clear totals at this time, press [#] and skip to step 7. Keep in mind that **clearing account totals is irreversible**. Once cleared, these totals cannot be recovered.

5 Display reads: SURE?	Press [*] to continue or [#] skip to the next loop.
6 Display reads: PRESS 3	Press the [3] key to clear all totals. Pressing any other key skips you forward to the next loop.
7 Display reads: **MAINT?**	If you are finished printing reports, turn the Management Key back to Normal Mode (Figure A-8) remove the key, and store it in a safe place.

NOTE:
If you wish to alter the report configuration (i.e., include/exclude costing information), you must go back into the **PRINTER?** major loop to make the changes.

If your printer paper roll is running low or the print is too light, turn to the next section, "Printer Maintenance," for information on how to perform these maintenance tasks.

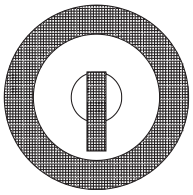


Figure A-8: *Normal Mode*

Printer Maintenance

The following section describes how to replace the Printer's paper roll or the ribbon cartridge.

Replacing the Paper Roll

1. Push down on the rear top of the plastic printer cover where it's marked "PUSH." This causes the cover to pop up slightly. Remove the cover (Figure A-9).

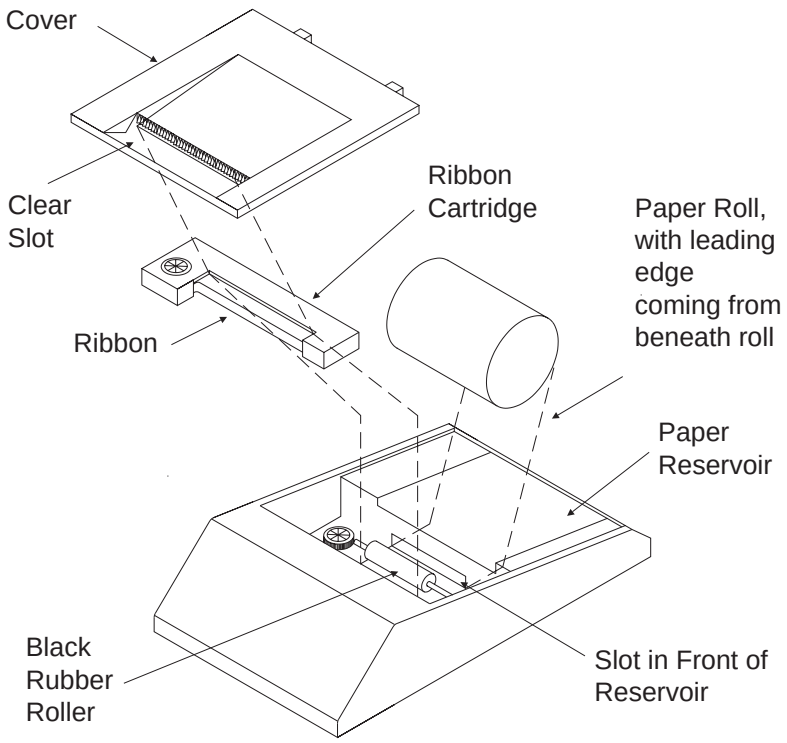


Figure A-9: *Replacing the Paper Roll and Ribbon Cartridge*

2 Push down on the right-hand side of the black ribbon cartridge where it says “PUSH.” This causes the cartridge to pop up slightly. Remove the cartridge.

3 Remove the empty roll from the paper reservoir.

4 Place the new roll of paper in the reservoir so that its leading edge comes forward from *beneath* the roll. (To make it easier to feed the paper through the paper path, you may want to cut the end to form a point before you begin.) (Figure A-10)

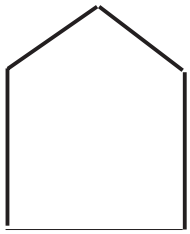


Figure A-10: *Cutting the End of the Paper to Form a Point*

5 Insert the end of paper through the slot in the front of the paper reservoir and under the metal plate. To advance the paper, press the [*] key. (If you’re having trouble inserting the paper, you might try rolling the black rubber roller *away* from you to feed the paper up through the opening.)

6 With the ribbon cartridge in one hand, feed the leading edge of the paper up between the ribbon and the cartridge. Drop the cartridge back into the slot and press firmly until it snaps into place.

7 Holding the lid in one hand, insert the cover tabs into the slots at the back of the paper reservoir. Feed the edge of the paper up through the clear slot in the cover and push down on the cover until it snaps into place.

Replacing the Ribbon Cartridge

1. Push down on the rear top of the plastic printer cover where it's marked "PUSH." This causes the cover to pop up slightly. Remove the cover.
2. Push down on the right-hand side of the black ribbon cartridge where it says "PUSH." When the cartridge pops up, grasp and remove it.
3. With the new ribbon cartridge in one hand, feed the leading edge of the paper roll up between the ribbon and the cartridge. Insert the cartridge into the slot and press firmly until it snaps into place.
4. Holding the lid in one hand, insert the cover tabs into the slots at the back of the paper reservoir. Feed the edge of the paper up through the clear slot in the cover and push down on the cover until it snaps into place.

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B Display Window Messages

Overview

This appendix provides information on most of the error messages that appear in the Accumulator display window. Other messages may occasionally appear; most are self-explanatory.

Many error messages take care of themselves if you just attempt the same action again. If an error message persists, call a service representative or DANYL dealer to correct problems with your Accumulator.

You may want to post the “List of User Display Messages” near each Accumulator to help users resolve problems.

Alphabetical List of Error Messages

BAD ACCT	*Explanation:*	The Account Code keyed in (or encoded on the card) is not stored in Accumulator memory.
	Action:	Add this account.
BAD BDGE	*Explanation:*	On swipe models, the card was not properly swiped through the card reader.
	Action:	Re-try swiping the card. Remember to slide the card **in the direction of the arrow** (shown on both your card and the Accumulator) all the way through the card reader. Do not lift up on the card until it is completely through.
BAD MAC	*Explanation:*	The Machine Access Code keyed in (or encoded on the card) does not match the Machine Access Code stored in Accumulator memory.
	Action:	Check that the correct MAC has been programmed into the unit. You should also check whether the user is supposed to have access to equipment at this site.

CPR HUNG	*Explanation:*	Copier Hung. The copy counting signal has been active too long.
	Action:	Check for copier jams and check cable connections. If these two items are OK, call your copier service technician for assistance.
HI LIMIT	*Explanation:*	The copy limit keyed in for this Limit Class is too high.
	Action:	Key in a number between 0 and 97,000.
LIMIT	*Explanation:*	The number of copies recorded for this account exceeds the maximum limit of allowable copies. **or** The account has been assigned a Limit Class that has a zero (0) copy limit (account has been denied access to the equipment).
	Action:	The problem can be resolved by clearing the copy total for this account or by assigning the account a Limit Class with a higher limit (or a non-zero limit, if this account has wrongly been denied access to the equipment).

LOW BATT	*Explanation:*	Low Battery. The Lithium battery on the processor circuit board needs to be replaced (although the Accumulator will continue to operate normally for as long as AC power is supplied).
	Action:	Call your dealer or service representative for assistance. **Do not remove AC power.**
NO ROOM	*Explanation:*	Accumulator memory is full. Additional account codes can not be added at this time.
	Action:	Delete all unnecessary account codes. Another method of resolving this problem is to record all account balances, erase all account codes, then set the Load Type to “Self Load.”
TOO MANY	*Explanation:*	The Account Code you are trying to add exceeds eight digits.
	Action:	Enter an account code that does not exceed this limit.

List of User Display Messages

BAD ACCT	*Explanation:*	The Account Code keyed in (or encoded on the card) is not stored in Accumulator memory.
	Action:	Notify the administrator.
BAD BDGE	*Explanation:*	On swipe models, the card was not properly swiped through the card reader.
	Action:	Re-try swiping the card. Remember to slide the card **in the direction of the arrow** (shown on both your card and the Accumulator) all the way through the card reader.
BAD MAC	*Explanation:*	The Machine Access Code keyed in (or encoded on the card) does not match the MAC stored in Accumulator memory.
	Action:	Notify the administrator.
LIMIT	*Explanation:*	The number of copies recorded for your account exceeds your maximum limit of allowable copies. **or** Your account has been denied access to the equipment.
	Action:	Notify the administrator.

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C Quick Reference Guide to Management Mode Prompts

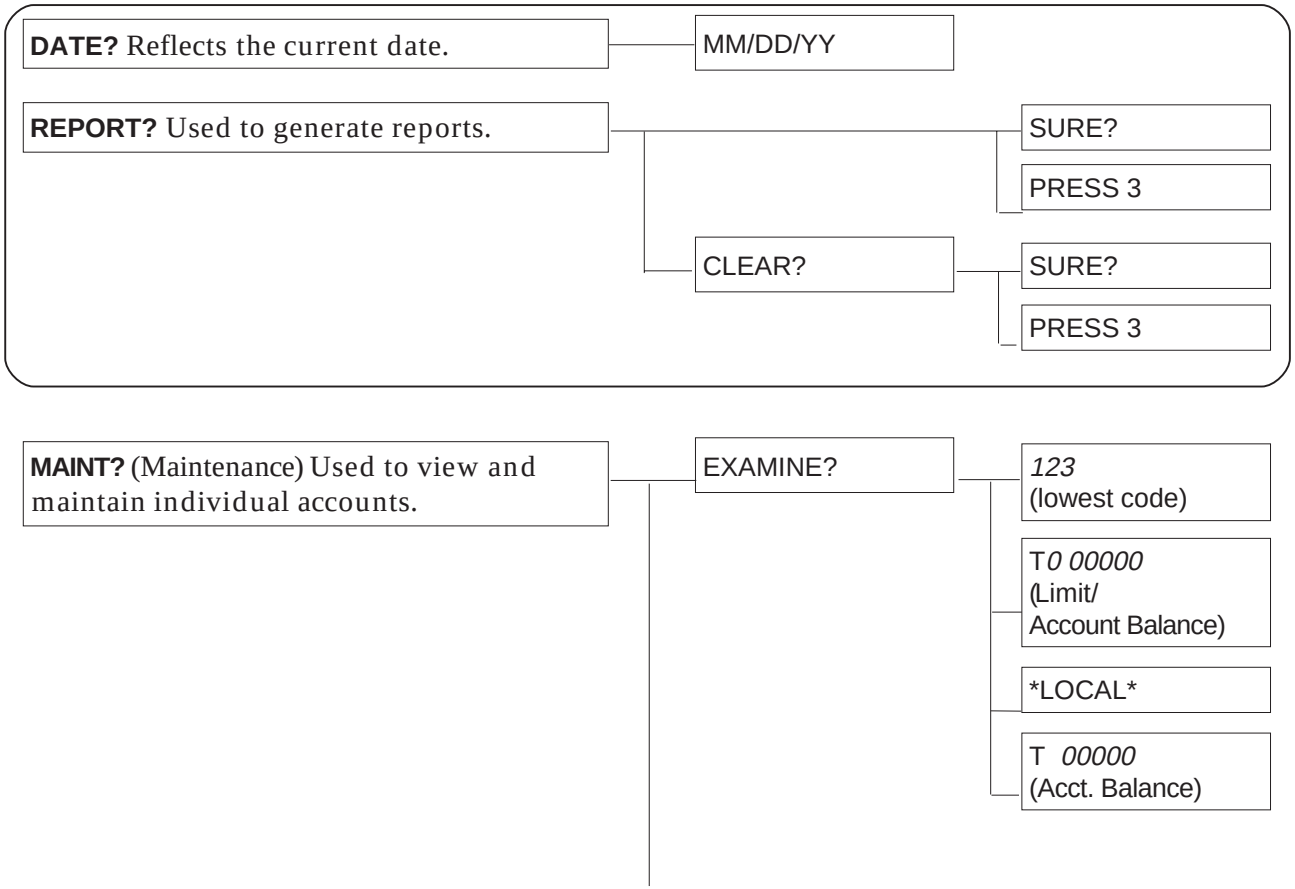
This appendix provides a quick reference to the prompts display in Management Mode. Detailed descriptions of these prompts — as well as step-by-step instructions for reponding to them — are provided in the appropriate chapters of this guide.

Read these notes before attempting to use this appendix:

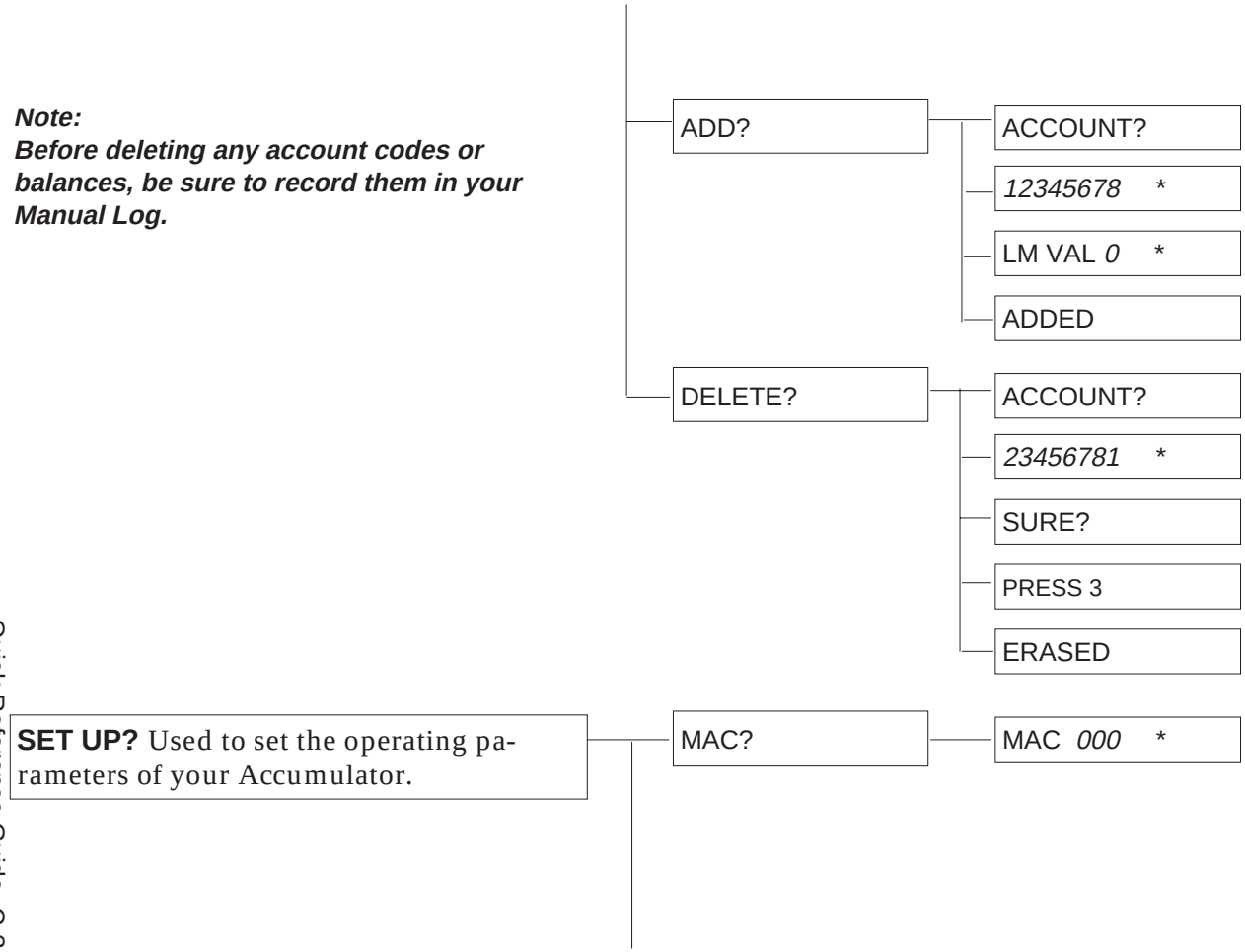
- The default settings for features and options are shown in bold type.
- An asterisk (*) appears next to prompts that require more than just a “yes / no” response (e.g., next to prompts that require you to key in information — such as an account number).
- If a group of prompts is surrounded by a box , it indicates that these prompts only apply to a particular model of Accumulator (e.g., prompts in the **PRINTER?** major loop only apply to PE models).
- Type in italics represents an example of the type of information that is displayed in response to a particular prompt (e.g., *123*, where “123" would represent the lowest-numbered account code).

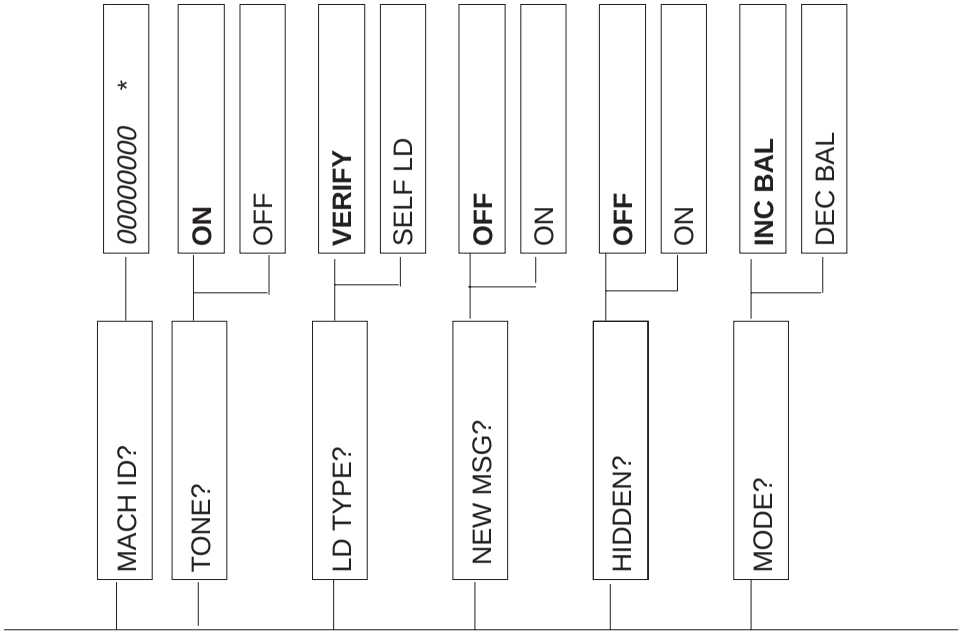
As you’re setting up your Accumulator, you may want to circle or highlight the settings you select. This way, if you ever need to re-program the unit, you can use this chart as a blueprint to guide you along.

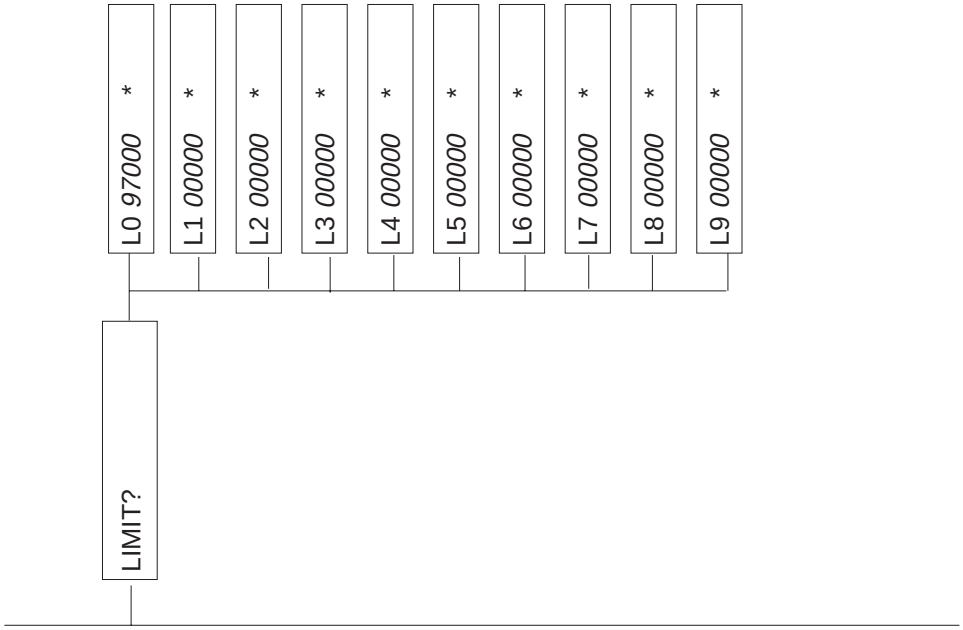
Printer (PE) models only

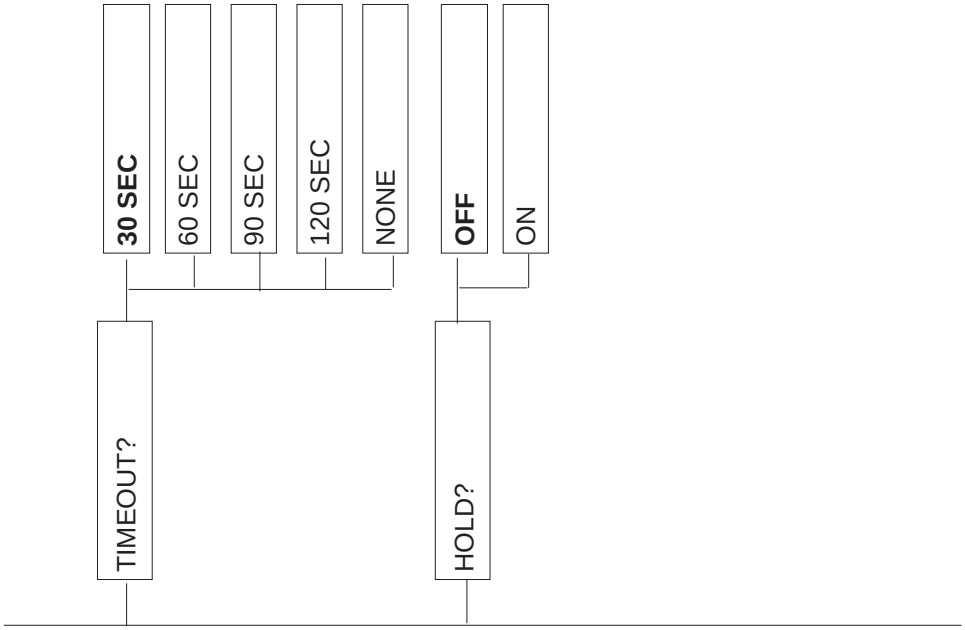


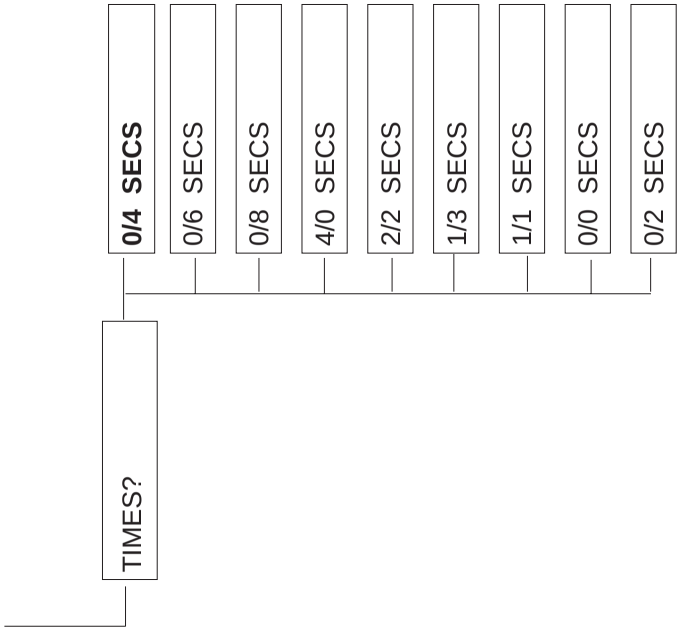
Note:
Before deleting any account codes or balances, be sure to record them in your Manual Log.



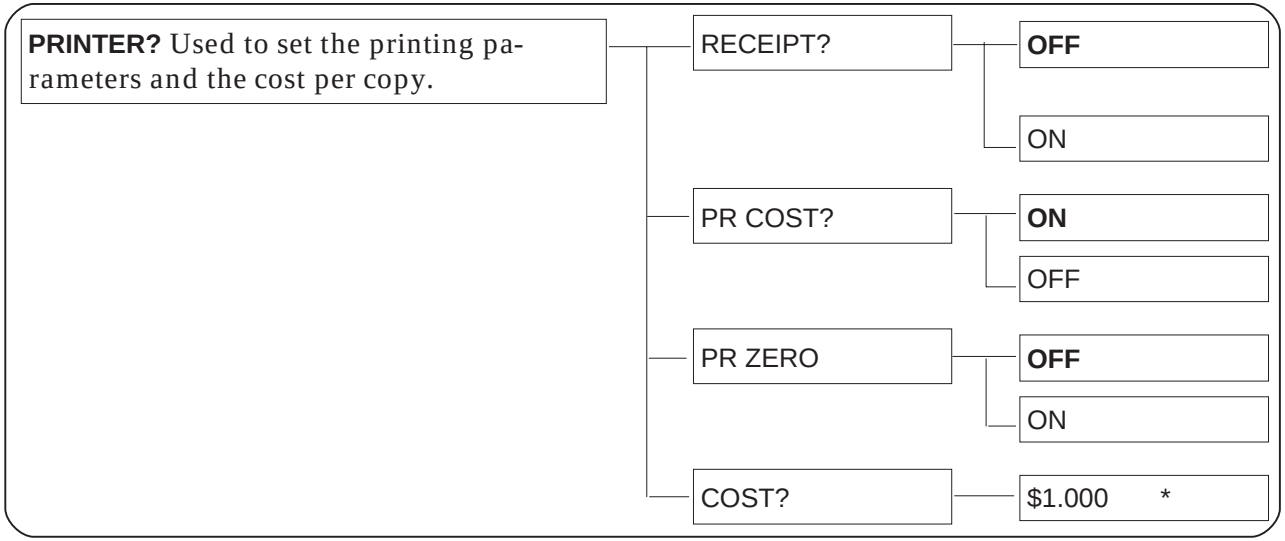

MACH ID?
00000000 *
TONE?
ON
OFF
LD TYPE?
VERIFY
SELF LD
NEW MSG?
OFF
ON
HIDDEN?
OFF
ON
MODE?
INC BAL
DEC BAL


LIMIT?
L0 97000 *
L1 00000 *
L2 00000 *
L3 00000 *
L4 00000 *
L5 00000 *
L6 00000 *
L7 00000 *
L8 00000 *
L9 00000 *

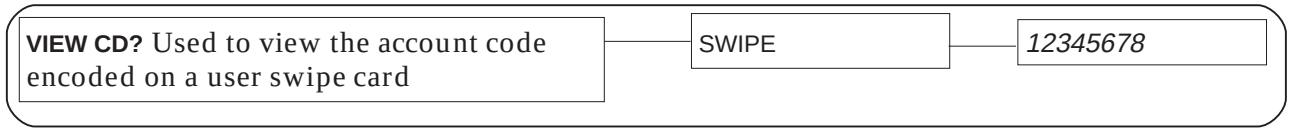

TIMEOUT?
30 SEC
60 SEC
90 SEC
120 SEC
NONE
HOLD?
OFF
ON


TIMES?
0/4 SECS
0/6 SECS
0/8 SECS
4/0 SECS
2/2 SECS
1/3 SECS
1/1 SECS
0/0 SECS
0/2 SECS

Printer (PE) models only

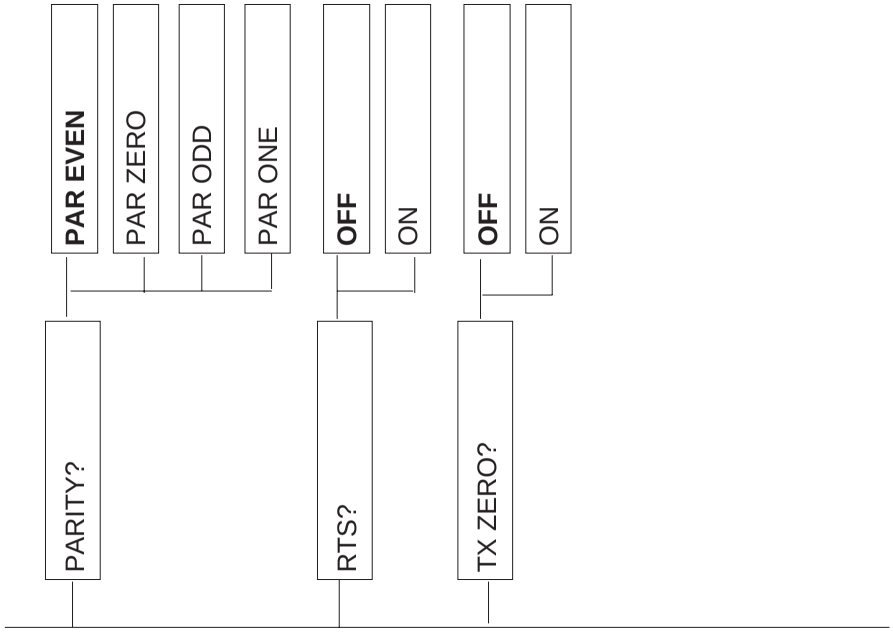


Swipe (SE) models only



COMM? Used to prepare the Accumulator for communication of data, such as down-loading the account codes, via the Collector Software. If you need to configure this loop, refer to your Collector Software Guide.

- SEC ID?
  - 00000000 *
- BD RATE?
  - **SPD 1200**
  - SPD 2400
  - SPD 300


PARITY?
PAR EVEN
PAR ZERO
PAR ODD
PAR ONE
RTS?
OFF
ON
TX ZERO?
OFF
ON

INIT? (Initialization.) Used to initialize the Accumulator and to globally maintain accounts.

- CLEAR?
  - SURE?
  - PRESS 3
  - CLEARED
- ERASE?
  - SURE?
  - PRESS 3
  - ERASED

CAUTION:
Once your Accumulator has been in use, be very careful when entering this loop so that you do not inadvertently delete all copy totals. Once this data has been erased, it can not be recovered.

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