AssetCenter™

Version 3.x

Bar-code module

User's Guide

Peregrine
S Y S T E M S ®

The Infrastructure Management Company™

AssetCenter and InfraCenter for Workgroups data integrity

AssetCenter and InfraCenter for Workgroups are extremely rich in functionality. This richness relies on a complex database structure: The database contains a large number of tables, fields, links and indexes; certain intermediary tables are not displayed by the graphical interface; certain links, fields and indexes are automatically created, deleted or modified by the software.

Only the interfaces designed for AssetCenter and InfraCenter for Workgroups (graphical interface, APIs, import program, Web interface and gateways) are capable of modifying the database with respect to its integrity. **You must never modify the structure and/or the contents of the database by any means other than those intended for use with the software**; such modifications are highly likely to corrupt the database and bring about symptoms such as involuntary loss or modification of data or links, creation of "ghost" links or records, serious error messages, etc. Alterations to the database resulting from manipulations of this type void the guarantee and technical support provided by Peregrine Systems.

Environments supported by AssetCenter and InfraCenter for Workgroups
The list of environments supported by AssetCenter and InfraCenter for Workgroups can be found in the manual entitled "Installation and Upgrade Guide". Using AssetCenter or InfraCenter for Workgroups in environments other than those for which it is intended is done at the user's risk. Alterations made to the database resulting from using AssetCenter or InfraCenter for Workgroups in environments other than those for which they are intended void the guarantee and technical support provided by Peregrine Systems.

Foreword

This document is a complement to the AssetCenter Reference Guide. It provides a detailed description of how the bar-code module works.

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Chapter 1 - Introduction

Why use bar-codes for inventory?

The bar-code module allows you to:

- quickly and reliably make an inventory of your company's assets in order to build the AssetCenter database.
- uniquely identify each of the company's assets in order to keep track of changes in your inventory. This makes it easy to detect movements, acquisitions, loss or theft.

We selected bar-codes for several reasons:

- Attaching a bar-code label on each asset enables you to identify your assets individually. This labeling is necessary to control asset movements (addition, change of location, disappearance) in your company when making regular inventories.
- Bar-codes can be read very quickly with a bar-code reader. The reliability of bar-code readers is nearly perfect.
- Bar-code technology can also be used to facilitate asset description. Using bar-code catalogs, which are a kind of reference book, you can read the major features of each asset, and later manage this information in AssetCenter.

The AssetCenter bar-code module

You need the following to perform an inventory:

- Software: AssetCenter and its Bar-code Module

- Hardware: a portable data-entry terminal
- Consumables: bar-code labels
- Human resources: an inventory supervisor and eventually one or several technicians to make the inventory.
- A method

The AssetCenter bar-code module provides the following elements to help you make your inventory:

✎ The software, including the AssetCenter software and a program designed especially for the bar-code data-entry terminal.

✎ The hardware, including:

❖ A portable data entry terminal. This unit includes a laser-based device to read the bar-codes. It also includes a screen and a keypad. It is battery operated, giving it the necessary autonomy for a full day's inventory.

❖ A base (also known as a cradle). This cradle communicates with the work station using a cable connected to the computer's serial port. The cradle provides the ability to program the reader, retrieve data collected, and recharge the batteries.

✎ A methodology and advice on how to design the inventory process.

How to use this guide

This guide was designed to help you prepare and perform a bar-code inventory and to quickly learn about the tools provided. The guide is written for the inventory manager or others interested in the advantages of bar-code inventories. The appendixes include a quick reference guide to the data entry terminal, particularly useful for those making the inventory.

- The first section of the guide explains the principles of an inventory and provides advice on the various steps involved in preparing and making the inventory. This is not a set of directions to be followed to the letter, but advice that should be adapted to each particular case.
- The second section helps you install the software.

- The third section describes the tools used to perform the **initial inventory**. These tools are presented in chronological order according to their use. The sample database included with AssetCenter and some real-life examples included in the appendixes will let you practice the initial inventory before the real thing.
- The appendixes also include practical advice on making important decisions.

Chapter 2 - Overview: Inventory methodology

The inventory process can be divided into five steps:

- ✥ Preliminary study
- ✥ Preparing data entry books
- ✥ Pilot inventory : tests, selecting people to perform inventory
- ✥ Initial inventory : collecting data on site
- ✥ Creating the AssetCenter database

Preliminary study

The preliminary study is undoubtedly the key part of the inventory. Decisions made during this study will influence the entire inventory process, and the final make-up of your AssetCenter file.

During the preliminary study you will:

- Define and classify the asset categories you want to count in your inventory
- Decide the data to be collected on site:
    - ❖ for all assets (location, user, condition)
    - ❖ depending on their category (color, dimensions, etc.)
- Estimate the number of assets
- Create location codes
- Prepare and order the labels
- Define label positioning
- Recruit and test inventory technicians

- Plan for and order the necessary material
- Plan the inventory process
- Prepare the administrative procedures

Inventory asset categories

First you must decide what types of assets you want to manage with AssetCenter. These assets must be divided into categories and sub-categories. See the AssetCenter reference guide for more information on the hierarchical structure of categories.

The best place to obtain an initial estimate of your company's inventory is often the accounting department. Study the file of fixed assets and invoices to obtain an initial overview of the various types of assets your company has acquired. This survey of the accounting file will also help you make an initial rough estimate of the size of the company's inventory.

The next step involves selecting from the list of all existing categories of your company's assets those which should be included in the inventory. The bar-code inventory does not necessarily need to cover all your company's assets. Some assets are too large or complex to be labeled, while others are not of sufficient value.

We have created a standard nomenclature to help you with this process. It is included in the demonstration database delivered with AssetCenter. You can adapt it according to your requirements.

A quick visit through your premises will let you refine this list and add certain types of assets you may have forgotten or which do not appear clearly in the accounting files.

Information to gather

Next you must determine the level of detail you need when describing your assets. The AssetCenter bar-code solution is very flexible in this area.

Information collected during the inventory can be divided into two categories:

- information common to all categories of assets,
- information specific to one asset category.

For information common to all categories, answer the following questions:

- Do you want to record the asset location?

- Do you want to record the name of the person using the asset?
- Do you want to record the asset condition?
- Do you want to record the asset's serial number?

For information specific to an asset category, determine the specific features associated with the category that will be recorded.

A chair will not be described by the same features as a photocopier. Therefore, each AssetCenter category is associated with a list of features that describe the category's assets.. Use the category list defined in the previous section to create a list of the features used for each category. Then you must specify which features should be recorded on site.

The following table summarizes the results of this part of the study:

Categories and sub-categories	Category features	Features for the inventory
Chairs	Arm rests	Arm rests
	Back	Back
	Color	Color
	Base (wheels or sliding)	Base (wheels or sliding)
	Cover	
Photocopiers	Height	Height
	Width	Width
	Depth	Depth
	Number of copies/minute	
	Zoom	

The product catalog

In the preliminary study you described each asset by a category and a list of features. If you stop here, the inventory will be a long and tedious process. Therefore, AssetCenter has introduced the concept of products. A product is a reference that corresponds to an article available on the market, and is identified by a by a brand and a model. Products include information such as:

- the manufacturer's name
- the list of descriptive features

- information concerning internal operating procedures within the company:
  - ❖ catalog certification
  - ❖ standard depreciation
  - ❖ list of potential suppliers, etc.

When making the inventory, it is generally easier and faster to refer to an existing product rather than recording all its features.

In order to identify a certain number of standard products, you can quickly tour the premises, meet with the Purchasing department, study existing invoices or even make a "sample" inventory.

The more information you find on products (such as reference, manufacturer, last purchase price, warranty conditions, accounting code, sales-tax rate, type and duration of normal depreciation, etc.) the more complete your final database. All this information will automatically be transferred to the database for each asset associated with this product.

Studying locations

During the inventory and within the AssetCenter program, each asset's location in the company is specified. You must devise a system to designate every room and area within your premises. AssetCenter enables you to describe your company's sites in a hierarchical table.

Study the floor plans to determine how you want to divide, structure and encode your locations:

- site
- building
- floor
- area
- room

If floor plans are not available, draw them. Each inventory technician will need a floor plan during the inventory. Open-space offices and floor spaces can create problems. You must try to identify landmarks such as pillars, windows, etc. or create areas without any precise information.

You have two methods for entering these locations during the inventory:

✤ You can label each location:

❖ Starting with the locations and their codes entered in AssetCenter, create a set of specific labels either directly in AssetCenter (on a laser printer) or by subcontracting this job to a specialist (contact Peregrine Systems for a list of partners).

❖ The inventory manager should be the person who attaches these labels. This task requires a thorough knowledge of the premises. You should not delegate this job to an inventory technician; it is preferable that the inventory technicians concentrate on making the asset inventory.

✍ Or you can choose to print a document containing the list of these location codes, and give a copy to each inventory technician. In this case, when making the inventory the technician reads the location's bar-code number from the list.

This second method is less reliable and may cause errors, especially if the inventory technician is from an outside company, and is not familiar with the premises.

Labels

Using prefixes

To make the inventory for an asset on site, you read the descriptive bar-codes in sequence (the category, brand, model, product code, etc.) and finally read the bar-code number on the label. It is not easy to distinguish between bar-codes. In order to provide additional security during entry and to perform additional checks, you should use a prefix.

A prefix is a letter positioned before the code. If you use different prefixes for each type of bar-code, the bar-code reader program can verify that you are not entering a location code instead of a product code.

Since you are free to encode assets and locations as you see fit, it is your responsibility to specify whether or not you use prefixes and if so, which ones. Be careful: do not use the letters U, S, C, P, or B because they are reserved by AssetCenter as the prefixes for: user, status, category, product and brand.

You can choose different prefixes according to large asset categories. For example: F for furniture, T for industrial tools, etc. It is not advisable to use several prefixes during a single inventory tour, however, as this can create labeling errors and requires the inventory technician to carry several rolls of labels.

Creating asset and location codes

Asset labels are numbered sequentially, from 1 to x. The system uses type 39 codes.

For type 39 codes, the information to be encoded may include any number of upper-case letters, numbers and the symbols +, -, /, ., $, %, [space]. You must enclose this information between * symbols, and then transcribe the data into a series of bars and spaces as specified by code 39.

If you decide to label your locations, the location codes may be:

- assigned automatically by an AssetCenter counter.
- entered manually by the inventory manager. These codes are normally easier to understand and memorize. For example, it is easy to remember that LADM2O23 represents office 23 on the second floor of the administration building. The automatic coding system would have assigned code L35. If you choose to enter codes manually, we suggest you use a single prefix for all locations (L, for example).

Format

If you decide to label your locations, you must define at least two label formats: one for assets, the other for locations.

For each type of label you must decide:

- How many characters are included in the asset and location codes?
- Is there a legend? (the meaning of the bar-code appears in normal letters along with the bar-code). We suggest you use legends.
- Is there a logo?
- Will you use color?
- How long do you expect the labels to last?
- How many assets and locations do you have to label?

Your labels should be discreet, and they must be attached to all assets or at all locations. You must find the best compromise between label size and readability.

The logo, additional text and maximum number of characters will influence the size and cost of your labels.

When you have determined the label format, contact a printer who will supply you with pre-printed labels, using the standard code 39. (Contact Peregrine Systems for a list of partners).

Don't forget lead times. The lead time for printing labels is generally at least three weeks, without incurring additional charges.

Positioning labels

In order to make future inventories as quick and reliable as possible, labels must be positioned according to precise rules. You should define label positioning for each asset category.

A desk, for example, might have the label attached on the left-hand corner under the desktop, 2 inches from both edges.

You should also think about how to position labels for locations. For enclosed rooms, the most discreet position is on the door frames. The choice of label locations is more difficult for open-space offices. It depends on the way you divide the space: labels can be attached to window recesses, on pillars, etc.

Administrative procedures

The inventory lets you identify each of the company's assets, its location, and optionally associate it with a standard user. To avoid entering out-of-date information, it is important to define organizational procedures and processes for "incoming" and "outgoing" assets, and their "movements".

These procedures often include stopping all deliveries and asset movements during the entire inventory process.

In order to avoid frustration among co-workers, the inventory must be announced ahead of time, and the reasons for the inventory should be clearly explained:

- the advantages of sound asset management
- transparency at the top of the balance sheet
- savings on professional taxes
- savings on insurance premiums

This announcement should be accompanied by an inventory schedule for each location so everyone can organize their own schedules around the inventory, and to make the inventory process as quick as possible.

Human resources

The number of human resources required varies according to the number of assets involved in the inventory. Two roles are involved in the inventory itself:

- The inventory technician:

  The inventory technician performs the work on site. Using a portable data entry terminal and a reference book (the "data entry book"), the technician describes each asset, affixes its bar-code label and records the number. The inventory technician must work at a certain pace, which is determined during a test period. To avoid problems, in particular if an outside subcontractor is performing the inventory, no initiatives should be taken on site without the inventory manager's authorization.

  The quality of the category and the preliminary study are of key importance during this step.

- The inventory manager:

  The inventory manager organizes, manages and controls the work of the inventory technicians. The manager is responsible for maintaining the data entry books. He or she must make sure that each inventory technician has an up-to-date catalog and a terminal that is correctly programmed and configured. The manager determines the areas to be covered by each inventory technician, and sets the pace. At the end of the day or the morning, the manager recovers each terminal and uploads the information to the computer. He then must check the coherency of this information before importing it into the AssetCenter database. On site, the manager verifies that the labels have been correctly positioned, and that the asset corresponds to its description.

At this point in the study you should name the inventory manager. If possible, the manager should take part in the preliminary study. The manager should have a thorough knowledge of the assets involved in the inventory, as well as a good working knowledge of Windows and related tools.

You must also estimate the number of inventory technicians required to perform the inventory, according to the desired duration of the inventory process. You should assume that on average one person can record from 200 to 250 assets per day. The estimates will be refined during the test period, of course, according to the environment and the information to record.

Hardware resources

- Workstation

  The AssetCenter program and the additional bar-code module are installed on a workstation with two serial ports (one for the mouse, the other to communicate with the portable data entry terminal). This workstation must have Windows installed. See the section entitled "Minimum Configuration" in the "Installation" Chapter for more information.

- Terminal + cradle

  The Peregrine Systems bar-code module operates with the following configurations:

  ❖ In AssetCenter version 3.01 or less, with the Telxon PTC 912 terminal with a minimum of 512 Kbytes memory (1 MB recommended).The version level of the BIOS must be 5.2.

  ❖ In AssetCenter version 3.02 and higher, with the Telxon PTC 912 terminal (the standard BIOS version 6.3 is supported and recommended) or the PTC 960 LE terminal.

  Each inventory technician needs a terminal. Terminals are available for rent from some partners (contact Peregrine Systems for the list).

  The base (Telxon calls it the cradle) is required to communicate with the PC and to recharge the batteries. This cradle is made up of a base to hold the reader and an extra battery. It is linked to the computer with a TXRX cable (available as an option from Telxon).

The schedule

You should establish a draft schedule for each inventory technician and each location, following the estimated number of assets involved in the inventory. This schedule will be revised after the pilot inventory.

Preparations in AssetCenter

For maximum efficiency and security, the data entry terminal program makes a series of bar-code readings (category, brand, model, features or product code) to describe each asset before identifying it with a unique number attached to the asset and recorded in the terminal.

These descriptive bar-codes are collected in a document which we call the "Data entry book".

This "Data entry book" is created from information entered previously into AssetCenter. Once the preliminary study is finished, continue preparing the inventory in AssetCenter by:

- entering the various reference directories: locations, departments and personnel, categories, features, products.
- entering the inventory parameters into each terminal.

Entering and printing the "Date entry books"

AssetCenter uses reference tables called "directories" to locate assets in the company and to describe them (associations with products, categories, features, etc.). For the inventory, each entry in these directories is automatically associated with a "bar-code" identifier.

When all the directories have been entered, you prepare the page layout and print this information to create the "data entry books". AssetCenter creates a text file which you can modify using a Windows word processor.

Configuring the terminals

The Telxon bar-code data entry terminals must undergo two processes before being handed over to an inventory technician:

✎ The program that will manage the inventory on site must be downloaded into the terminal. This operation must be performed by Peregrine Systems. All material ordered directly from Peregrine Systems is pre-programmed. If you choose to obtain your material via other means, make sure you check this point. Telxon can perform this operation if you ask them when you place your order.

✎ The second process configures the data entry terminal with your company's parameters and those of the inventory about to be carried out. These parameters include:

❖ Information identifying the source of the files created by the inventory:

❖ the terminal number

❖ the name of the inventory technician

❖ the inventory date

❖ Information to adapt the program to your requirements:

❖ Should the asset's user name be recorded?

❖ Should the status be recorded?

❖ What features are required for each category?

This second process is performed by AssetCenter.

Selecting and training inventory technicians for the pilot inventory

Several inventory technicians will be required for companies with a large number of assets. These technicians, either company personnel or individuals hired especially for the inventory, rarely receive proper training for this job.

The inventory manager selects and trains the inventory technician over a 3 to 5 day period.

The tests are generally performed in a real situation during a small pilot inventory. You should take advantage of this step to:

- accurately determine the productivity of each inventory technician
- refine the schedule
- optionally complete the product catalog

Initial inventory and marking assets

Each day the inventory manager assigns a work area to the inventory technician. The inventory is carried out room by room, area by area.

The first thing to read is the location.

Then, for each asset the inventory technician should:

↳ Describe the asset: product code, category, brand, model, and features by reading in turn the corresponding bar-codes in the data entry book. (Of course, you only collect the data you require.)

↳ Attach a bar-code label to the asset in the position defined during the preliminary study.

↳ Use the laser reader to read the bar-code.

↳ Then go to the next asset.

The "Data entry book" enables you to describe the asset in only a few seconds.

Before going on to the next area or room, the inventory technician should ensure that no assets have been forgotten. Here are a few tips on methodology:

- Count the number of assets for inventory as soon as you enter the room.
- If one area includes 4 or 5 different products, do not enter the assets category by category (in other words, all the chairs, then all the desks, then all the filing cabinets, etc.).
- Work as systematically as possible: from left to right or from right to left.
- Do not attach a label to an asset before it has been entered. Read the asset's bar-code just before or just after attaching its label, or you can install a visual system to identify "forgotten" assets (chalk mark, colored sticker, etc.). You should not attach labels to assets before the inventory.
- When all the assets in a room have been entered, compare the number of assets entered on the terminal to the number you counted when entering the room.
- If you cannot use a label (a mistake when attaching the label, bad glue, etc.), carefully write down its number. Labels are numbered sequentially. You can trace errors by checking any skips in the sequence.

Creating the AssetCenter database

Each day the inventory technicians create a text file which associates asset bar-codes, category, user, brand, model, etc. These text files are transferred daily from the data entry terminal to the workstation.

These files are not entered directly into the AssetCenter database. This provides time for the inventory manager to check the contents of the files.. Assets are created by importing the files using a specific item in the Inventory menu.

This is a meticulous task requiring careful attention. It is usually performed by the inventory manager, who must:

- Check that all the files are imported correctly.

- Ensure that no records are forgotten.

AssetCenter provides a few tools to help the inventory manager with this task:

- An error recovery file for each imported file
- When the file has been imported, the system creates a printable list of assets sorted by bar-code number. Since these numbers are sequential, it is easy to find missing numbers.

You can import these files on a daily basis, or group them together at the end of the week or at the end of the inventory period.

Chapter 3 - Installation

Minimum configuration

You will need the following to install and operate the Bar-code Module for AssetCenter:

- A microcomputer with a 486 processor at 25 MHz running Windows 3.x or later, and 4 Mbytes of RAM, connected to a laser printer to print the catalogs.
- the AssetCenter program
- A Telxon PTC 912 or Telxon PTC 960 LE portable data-entry kit with 1 MB of memory minimum and a terminal/PC communication facility (cradle + TXRX cable). You can obtain this kit from Peregrine Systems or from any authorized Telxon dealer. If you choose the latter, ensure that the terminal has been correctly programmed by Telxon, or give the material to Peregrine Systems so we can program it ourselves.

Hardware installation

Gently place the data entry
terminal in the cradle socket as
shown below.

An additional socket on the right
can hold an optional second
battery.

The computer must be
connected to a laser printer
to print the catalogs.

Use the serial cable delivered with
the data entry terminal to connect
the left-hand connector of the
cradle to one of your computer's
serial ports.
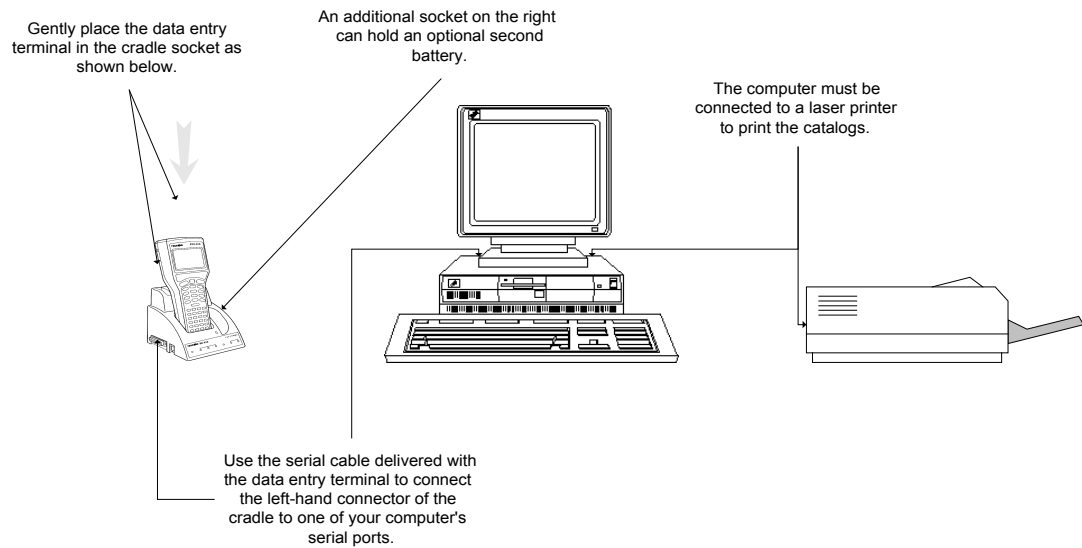
Connecting the hardware

Installing the bar-code font

The "Data entry books" require a special font to convert the alphanumeric code entered in AssetCenter into a series of "Code 39" bars. This font is located on the diskette supplied with the AssetCenter Bar-code module. Click the "Font" icon in the Windows "Control Panel" to install the font.

Refer to your Windows guide for more information on installing fonts.

The Inventory menu in AssetCenter

The **Repository** menu in AssetCenter includes a **Bar-code inventory** menu item.

Click this menu item to display the following window:
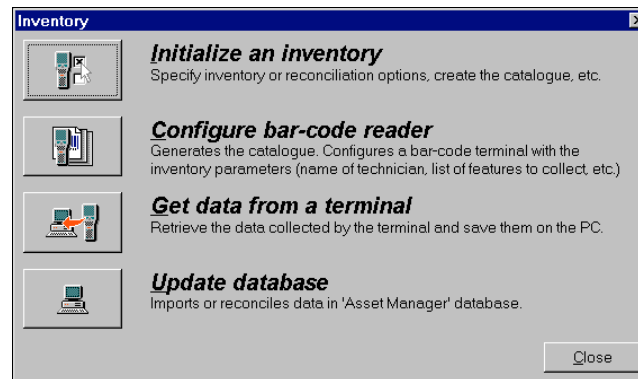
Inventory menu

Each of the four buttons above represent a step in the inventory process. These buttons are described in the following pages.

Chapter 4 - Initial inventory

Preparations in AssetCenter

These preparations involve the following:

Ä Enter the reference directories: locations, personnel, categories, features, products

Ä Select the categories and features involved in the inventory

Ä Prepare the "Data entry book"

Ä Configure the inventory

Ä Program the data entry terminals that will be used by the inventory technicians

Entering information in the directories

You must enter the following directories depending on the way you want your inventory entered. It is preferable to enter information in the directories in the following order:

- Locations
- Employees & Departments
- Categories
- Features
- Products

If you decide to record the condition of each asset on site, do not forget to create items in the **amStatus** itemized list through the **Tools/ Administration/ Itemized lists** menu item.

If you require more information on how to create new employees, categories or products in AssetCenter, refer to the "Reference Guide: Asset Management".

Selecting the categories and features for the inventory

You do not have to include all the categories of assets managed by AssetCenter in your bar-code inventory. Furthermore, for a given category, you can choose to enter only certain features during your inventory.

The *To be inventoried* checkbox of the categories:

The Carpet category will not be inventoried
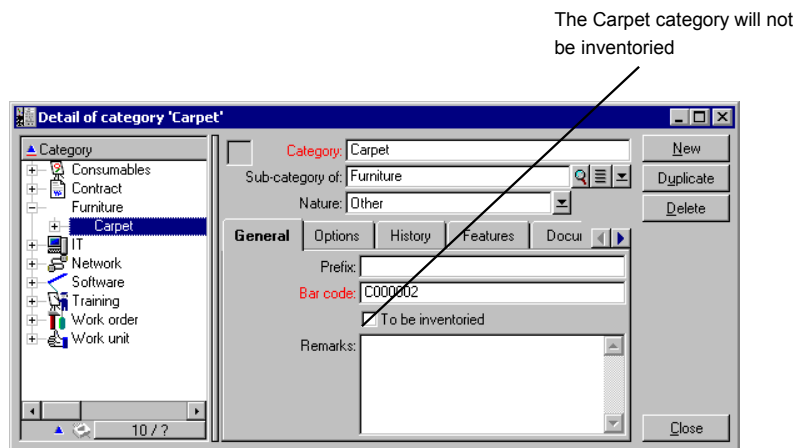
Selecting the categories to be inventoried

✎ Open the category window and display the list and details.

✎ In the list section, select all the categories you do not want to include in the inventory (click successively on each category in the list while holding down the Ctrl key).

✎ Clear the **To be inventoried** checkbox in the **General** tab.

✎ Click **Modify**.

The *To be inventoried* checkbox of the feature:
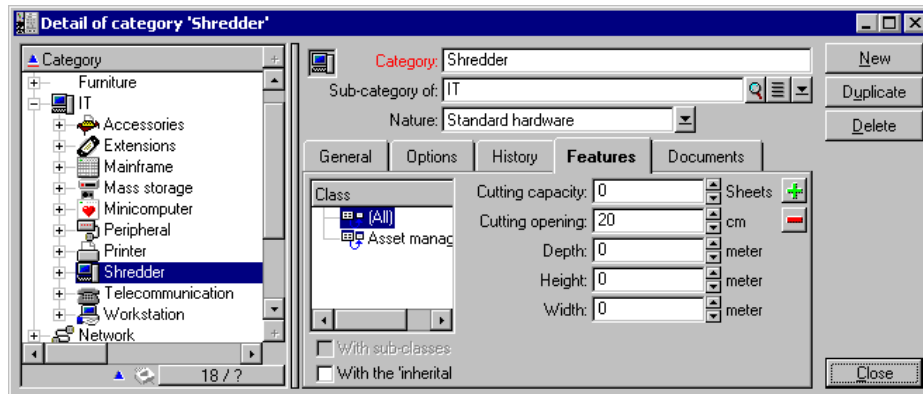
The Cutting Opening and Cutting Capacity features in the Shredder category will not be inventoried.
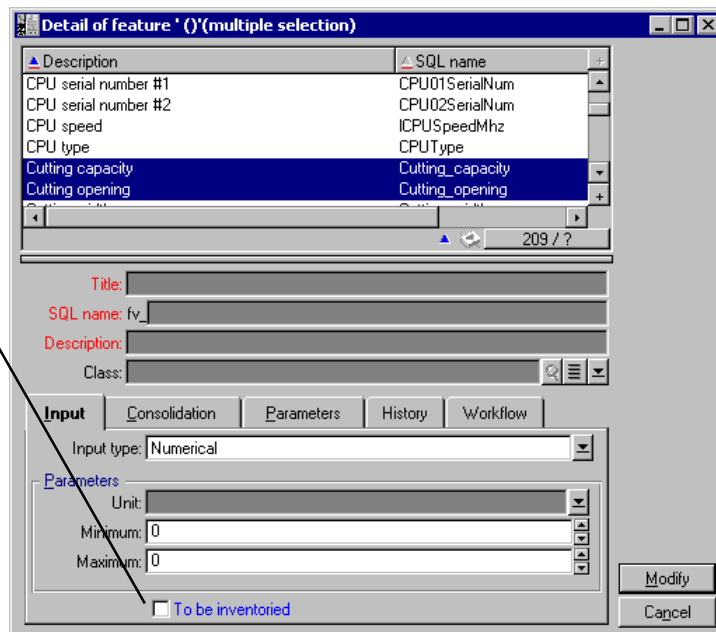
Selecting the features to be inventoried

To define the features to be included in the inventory:

    ✋ Click the features tab in the category detail

    ✋ Double click a feature to view its details

    ✋ Click **To be inventoried**

    ✋ Confirm the modification and close the window.

> Note: To select several features in the same category, enter List & Detail view when you are in the Feature Value detail.

Initializing the inventory

After you have finished data entry and selected the features and categories to include in the inventory, click the "Initialize an inventory" button in the "Repository/ Inventory" menu.

The inventory date is the same for all assets in the inventory. This is usually the inventory start date. This date will be used in the "Inventory date" field of each asset created from this inventory.

Select or create a new directory where all the files created during the inventory will be stored.

Check the information that should be included in the inventory. These choices will modify the program in the terminal.

Prefixes let the terminal program automatically determine the type of bar-code read.

Click this button if you do not want to use prefixes.

Click this button if you want to use prefixes (suggested option: see page 8)

If you do use prefixes, define the prefixes used here (uppercase letters only).

Initializing the inventory

When you click "Create", AssetCenter generates the following files in the specified directory:

- the INVENT.INI file contains parameters for the reader program, and the options defined above.
- the CAT.DAT file contains the list of categories and features to include in the inventory.

Preparing the hardware

When you have initialized the inventory, click the second button in the "Repository/ Bar-code inventory" menu.

Enter the name of the inventory directory. The default is the last directory used in the Configure inventory window.

Click this button to create the RTF file which you can use to print the inventory's "Data Entry Book".

The name of the inventory technician and the reader number are stored in each file created by the data entry terminal. This information is useful to return to the source in case of problems or repeated errors.

Indicate the serial port to which the terminal is connected.

After having placed the terminal in its base, and executed the "Programming" option, activate the OK button on the terminal (the [SP] key on the terminal) and click on the "Configure bar-code reader" button on the PC.

You may wait a few seconds between these two operations without any adverse consequences.

Configuring the readers and generating the Data Entry Books.

On site, the inventory technician will have a data entry terminal and a Data Entry Book. This window lets the technician prepare these two tools.

- Click on the "Generate catalog" button to create the CAT.RTF file in the inventory folder. This file, in the standard (Rich Text Format) format recognized by most word processors, will be used as the basis for the data entry books for the inventory technicians.

   The CAT.RTF file already contains some page layout options: fonts, sizes, styles, tabs, page and section breaks. You can adapt this page layout to meet your needs, and then print the "Data entry books".

   Here are a few tips to guarantee optimal reading:

Do not modify the size of the bar-codes. They use a special font called C39T30Lfz delivered with the bar-code module, and which should ideally be used with a size of 30 points. If you vary this recommended size by more than 10% you may have problems reading bar-codes.

Print your catalogs on a good quality laser printer. Make sure the toner cartridge is full and that the paper feed mechanism is clean and does not leave any traces.

To facilitate reading and avoid errors, bar-codes must be spaced approximately 2 cm (3/4 of an inch) apart.

- The "Configure bar-code reader" button should be used when the data entry terminal is connected to the computer (make sure you use the cradle) and ready to be programmed (the "Programming" option in the terminal's menu). This enables you to load the following information into the terminal:

✥ The reader number

✥ The name of the inventory technician assigned to the terminal

✥ Optional information that must be entered on-site (the "Option" section in the inventory initialization window)

✥ The prefixes used

✥ The list of categories and features to be inventoried

Using the data-entry terminal

The Telxon PTC-912 (or PTC 960 LE) data-entry terminal and its cradle each have their own user guide. They explain how to maintain your terminal, as well as provide instructions on functions such as how to use the keys and control the display brightness. In the pages that follow we will describe the use of the inventory program itself. We assume that you already know how to:

- Turn on the terminal
- Use the keypad
- Read a bar code

The main menu

Displays the window for entering assets.

Puts the terminal in program mode to change the start of inventory parameters. This option becomes "Save" as soon as an asset has been entered.

```
AAM Bar-Code
Input...
Program...
Information...
```

Displays an information window: free memory, terminal number, number of assets entered, etc.
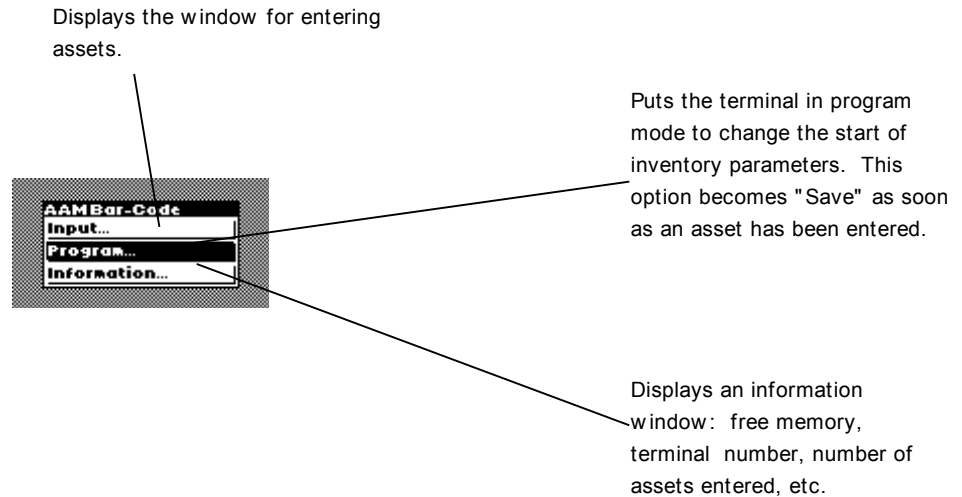
This is the first menu that appears when you turn on the terminal.

 ✋ Use the [ENTER] key to move the selection zone.
 ✋ Use the [SP] key to activate one of these lines and start the corresponding function.

Note: As soon as information has been entered into the terminal, the "Programming" option is replaced by the "Upload" option. To return to the "Programming" state, you must upload information (see pages 40 and 41). If you do not wish to upload this information, press successively on the [CTRL] [FCT] and [0] keys. **Warning:** this operation definitively deletes the information stored in the terminal.

Programming the terminal

This window is displayed as soon as the "Programming" line has been confirmed.

Activate this button ([SP] key) to start the transfer.

Activate the Cancel button to close the window and return to the main menu, without transferring any data.

Use the ENTER key to go from the [OK] button to the [Cancel] button and vice-versa. Press the [SP] key to activate the selected button.

To transfer data:

✍ The terminal must be in the cradle.

✍ The cradle must be powered on and connected to the computer's serial port.

✍ You must have executed the "Configure a bar-code reader" button in the "Repository/ Inventory" menu item of AssetCenter, and entered the appropriate parameters in the "Serial port" fields.

✍ You must have clicked the "Start configuration" button (see above).

There is no required order and no hurry for pressing the "Start configuration" button on the computer and activating the "OK" button on the terminal. Both operations must be performed within a 10 second interval.

The Invent.ini and Cat.dat files will be copied to the terminal.

Displaying information

This window displays important information concerning the terminal status and the main program parameters.

Number assigned to the
terminal when it was
programmed.

Name of the inventory
assistant.

Apsylog 1996
Terminal:CBR1
    User:John Smith
Prefixes:LUPCB_SA
    Free:35%   OK
Assets:0

Prefixes used.

Percentage of memory
available.

Number of assets entered.
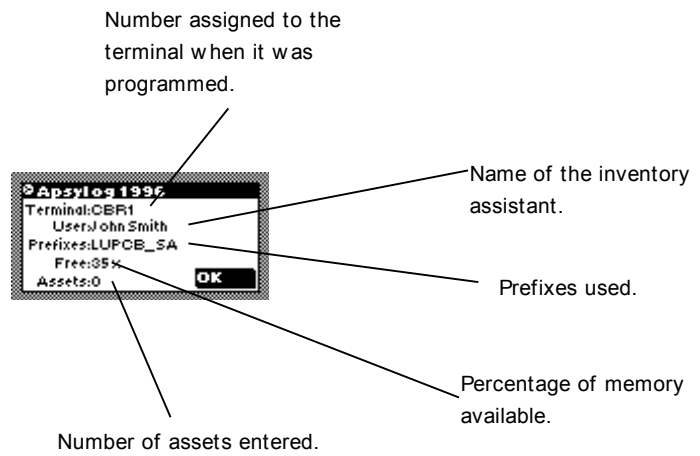
Press the [SP] key to close this window and return to the main menu.

Entering assets

Overview

The next window is displayed as soon as you execute the "Enter assets"
item on the main menu.

Counter: number of assets entered in the current location.

Counter: total number of assets entered.

Prod and Feat are used to describe an asset without using a known product code. Refer to the section entitled "Describing an asset by category, brand, model and features".

```
Input-Loc:0Total:3
ocation:_____Prod
   User:_____
Product:_____
Serial#:_____
 Status:_____Rem
  Asset:_____End
```

Opens the search asset window.

Opens the window to authorize the entry of remarks.

Closes the data entry window and returns to the main menu. **Warning:** this button does not save the information that was entered after the last asset bar-code.

Use the [ENTER] key to go from one zone to the next and the [SP] key to activate the selected button.

Press **sequentially** on [SHIFT] then [ENTER] to go up to the preceding zone or button. (You must release the [SHIFT] button before pressing [ENTER].)

A vertical bar indicates the position of the cursor and the place where data will be entered. All information can be entered from the keypad or by reading a bar-code. You are never held up by an illegible or damaged bar-code.

There are two ways to enter asset descriptions:
- By referring to a product
- By entering the asset's category, brand, model and features.

In the first case, the asset's brand, model and features will be inherited from the product when the asset is created in AssetCenter. In the second case, the inventory technician must completely describe the asset. Both methods are described below.

If all the necessary information has been entered, the asset is saved as soon as a bar-code has been entered and validated. The last information entered is kept so you can enter several identical assets in succession without having to describe them again.

Optionally you can enter a serial number, a condition or a comment. All the other information is mandatory, and required for the asset to be saved. An error message is displayed if you try to save an asset without having entered all the necessary information.

Note: The [End] button closes the window and returns to the main menu. The information entered since reading the last asset label will be lost.

When you read the label attached to an asset, the program systematically searches the information already entered to see if this number has already been used. If so, you will hear a beep and the following window is displayed:

Replaces old values entered by the value that was just entered before re-entering the bar-code.

Cancels the bar-code just entered and closes the window without further action.

Entering data with the keypad

To enter information with the keypad, move the cursor to the zone you want using the [ENTER] or [SHIFT] [ENTER] keys.

If erroneous information appears in the field, use the [ESC] key to clear the field.

Your data entry is validated when you press the [ENTER] key. The cursor automatically moves to the next field.

You can always enter data on the keypad instead of using the bar-code reader. When entering a brand that is not in the list, do not forget to add the prefix B.

Reading a bar-code

According to the prefix options chosen by the inventory manager, the program's operating mode changes slightly.

Reading with prefixes:

Wherever the cursor is positioned, find the bar-code corresponding to the desired information in the "Data entry book" and read it. The program immediately recognizes the type of information read and automatically places it in the corresponding field.

If you have chosen to use prefixes, the cursor position and the order for reading information has no importance. You must make sure that you do not forget any information.

Reading without prefixes:

In this case, the program is totally incapable of knowing the type of code read. You must therefore make sure the cursor is positioned on the correct field before each entry.

Once you have read the code, the cursor automatically moves to the next field.

Describing an asset by a product code

Asset location. Entered by reading a bar-code.

Asset user. Entered by reading a bar-code on the "data entry book".

Product code with which an asset may be associated. Entered by reading a bar-code in the "data entry book".

```
Input-Loc:1Total:1
ocation:L1_____  Prod
   User:U24_____  3'x at
Product:P23_____  🏢
 Serial#:SN145678___
  Status:_____  Rem
   Asset:G456782__  End
```
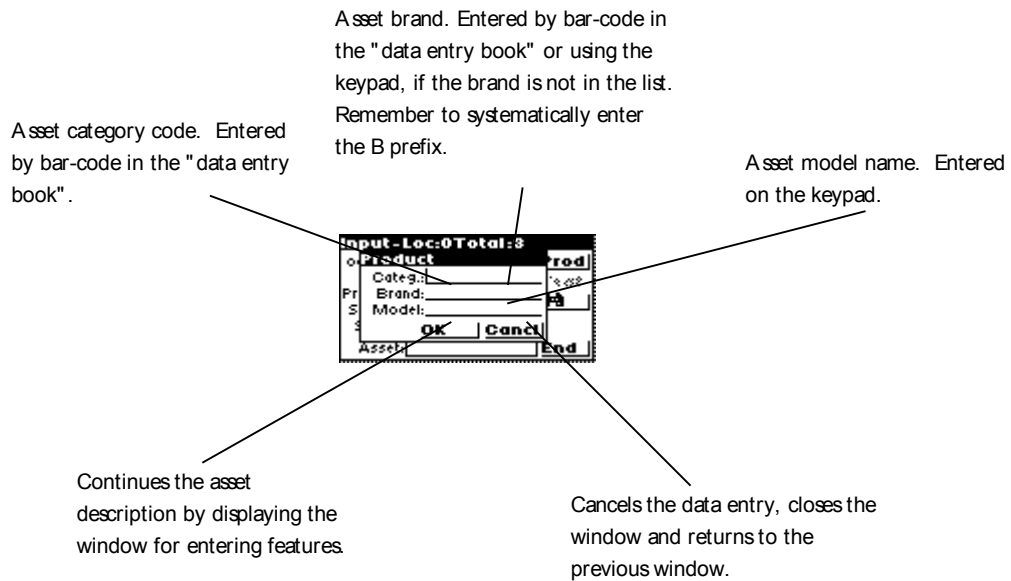
Asset serial number. Entered on the keypad or by reading a manufacturer's bar-code (only code 39).

Asset's unique ID number. Entered by reading a bar-code label attached to the asset.

Asset status. Entered by reading a bar code in the "data entry book".

Describing an asset by category, brand, model and features

Step 1 : Specify Category Brand and Model

Asset brand. Entered by bar-code in the "data entry book" or using the keypad, if the brand is not in the list. Remember to systematically enter the B prefix.

Asset category code. Entered by bar-code in the "data entry book".

Asset model name. Entered on the keypad.

Input-Loc:0Total:3
Product   rod
  Categ.:
Pr Brand:
S Model:
       OK | Cancel
Asset   End

Continues the asset description by displaying the window for entering features.

Cancels the data entry, closes the window and returns to the previous window.

This window is displayed when you activate the [Prod] button or, if prefixes are used, when you read a category or brand bar-code.

Using this window you can define a product that is not in the data entry book. This procedure replaces the data entry method using the product code described on the previous page.

Note: The program systematically requires a prefix for brands. You must therefore enter **BIkea** instead of **Ikea** or **BCanon** instead of **Canon**. (Be careful: lower-case b is not a valid prefix.) The brand field is mandatory. When the brand is not in the data entry book and it does not appear clearly on the asset itself, agree on a code with your inventory technicians (for example, BU = Unknown Brand).

Step 2 : Entering features

Input - Loc: 0 Total: 3
Features
CPU: Total memory (Mb)
16
OK   Cancl
Status: Rem
Asset: End

Depending on the category, the reader asks you to enter a specific list of features.

Input - Loc: 0 Total: 3
Features
CPU: Coprocessor ()
Yes
OK   Cancl
Status: Rem
Asset: End

Refer to the data entry book to know if the feature should be entered by reading a bar-code or by using the keypad.

Input - Loc: 0 Total: 3
Features
CL: Type (Keys)
102
OK   Cancl
Status: Rem
Asset: End

Features follow one another automatically, until the last one.

After entering the last feature, activate the OK button to confirm (the [SP] key), close the window and continue data entry.

The procedure for entering features is started automatically when you have opened and then closed the product definition window (see Step 1) or when you activate the [Featur] button on the asset entry window. The [Featur] button as well as the procedure for entering features cannot be activated until a category has been entered in the "Product definition" window.

Step 3 : Returning to the asset data entry window and creating the asset

Brand and model appear in parenthesis in the Product field.

```
Input-Loc:0Total:2
ocation:L10_____  Prod
    User:U24_____  ¾·öf
Product:(B12,Keyboard1)_ 🔍
Serial#:SN465789____
  Status:S1_____  Rem
   Asset:G000012  ⟍   End
```

Optionally specify a serial number and a status.

The asset is created as soon as the label has been read.

Finding an asset

This window is displayed when you activate the "Binoculars" button in the asset data entry window

You find an asset using its bar-code. You can enter the bar-code by reading a label or by typing the code on the keypad.

```
Input-Loc:0Total:3
ocation:L1_____  Prod
    User:U1_____  ¾·öf
Product:P23_____  🔍
Serial#:SN465789____
  Status:_____  Rem
   Asset:G00012      End
```

The asset was found.

```
Input-Loc:0Total:3
o Search          od
  Search code:      öf
  [_____]
     OK  | Cancl
S_____  Rem
Asset:[_____]  End
```

```
Input-Loc:0Total:3
o Search          od
AAMBar-Code
This bar-code does not match any
existing asset.
              OK
Asset:G00012      End
```

The asset was not found.
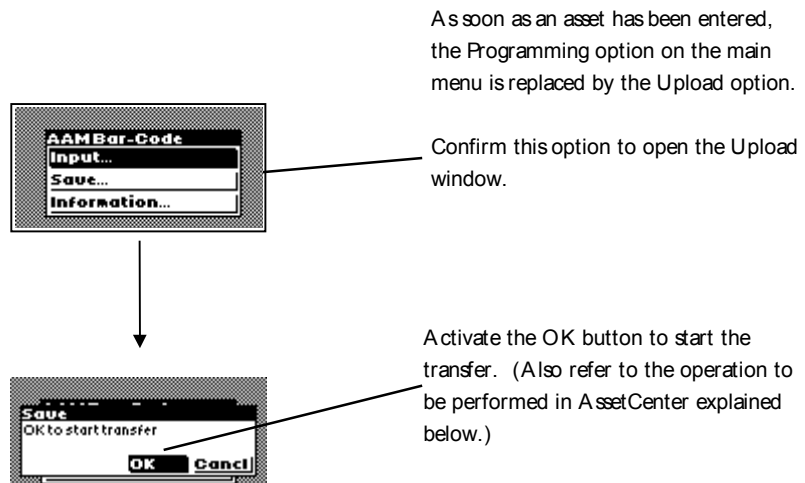
Validate the [OK] button (press the [SP] key) to start the search.

Modifying an asset already entered

To modify an asset that has already been entered, you just need to re-enter it. When AssetCenter creates assets, only the most recent values will be used. To avoid re-entering all the information, proceed as follows:

✎ Search for the asset to display all the information concerning the asset.

✎ Modify the incorrect values.

✎ Re-enter the asset's bar-code.

Uploading a terminal's data

As soon as an asset has been entered, the Programming option on the main menu is replaced by the Upload option.

Confirm this option to open the Upload window.

Activate the OK button to start the transfer. (Also refer to the operation to be performed in AssetCenter explained below.)

After the transfer, the "Upload…" option is again replaced by the "Programming…" option. You can now modify the terminal's parameters.

Integrating data in AssetCenter

Uploading collected data

The data entry terminals have limited autonomy and storage capacity. They must periodically be re-charged and their contents must be transferred to the computer.

Use the third button in the Inventory window to upload data: (*"Upload data from a terminal"*).

This operation enables you to transfer the data contained in your terminal to your computer's disk drive. It also reinitializes the terminal, freeing up memory for a new round of data entry.

When the upload is finished, the window remains open in case you want to repeat the operation for another terminal.

Enter the name of the inventory directory. The default value is the last directory used in the inventory parameter window.

Enter the serial port where the terminal is connected.

The Upload ID number is displayed here for your information. For example, this is the second file upload.

The name of the inventory sub-directory where the uploaded files are stored is displayed here for your information. In this example, the full directory name is:

After having placed the terminal in its cradle, activate the OK button on the terminal (the SP key) and click *"Launch retrieval"* on the PC.

You can let a few seconds go by between these two operations.
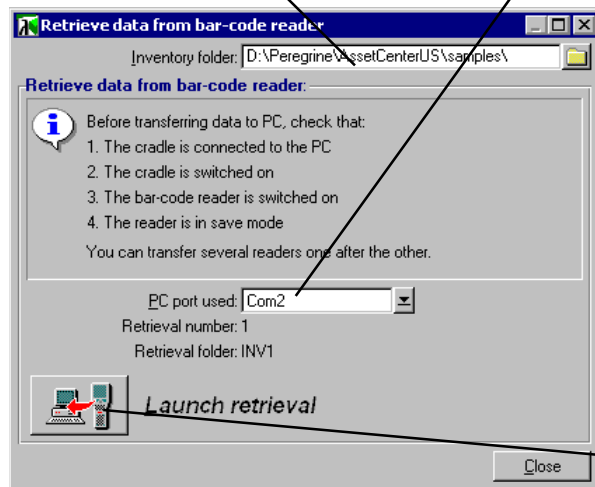
Recovering data from a terminal

Files generated by the terminal program are saved in a sub-directory in the inventory directory. These are tab-separated ASCII files with the

.DAT extension. You can use any word processor or spreadsheet to verify the data before importing it into AssetCenter.

These files are difficult to interpret, however, since they mostly include bar-codes. As a result, during the transfer AssetCenter generates "interpreted" files by adding a description column to the right of the bar-codes. These "interpreted" files have the .IMP extension.

There are three of these files:

- ✥ ASSETP.IMP contains all the assets that were entered associated with a product code.
- ✥ ASSETC.IMP contains all the fully described assets without referring to a product code, without their features.
- ✥ VAL.IMP contains all the features and feature values for the assets listed in ASSETC.IMP.

Importing assets into the database

This is the last phase of the initial inventory. It creates assets in AssetCenter by importing inventory data. This operation can be carried out once at the end of the inventory, or spread out over the entire inventory period as data is uploaded from the data entry terminals.

In any case, we recommend that you make a backup of your database before importing this data.

Once the backup is completed, click on the "Update Database" button in the "Tools/ Inventory" menu.

Enter the name of the inventory directory here. The default is the last directory used.

The STOP button indicates that a problem occurred during the import procedure. Click on the line to display the "Database update indicator" table to know the cause of the problem.

Click on this button to start importing the selected lines.

The OK button indicates that the files for the first data upload were imported successfully.

This table contains the history of the import process corresponding to the line selected in the list of uploaded data. Even the smallest problems are recorded.

For your information, and only during or just after the import process, the number of lines imported appears here, along with a progress indicator for the import process.

Click this button to close the window.

Importing data into the database

When you click the IMPORT button, the assets are created in AssetCenter with other data as per the inventory parameters, such as user, location, etc.

When an asset has been described using an association with a product, this association is kept in AssetCenter and the product inherits all the product's properties.

Now you can display the results of the import process in the AssetCenter asset window.

Note: the "Danger" symbol indicates that the inventory files contain unknown codes. To guarantee a coherent database, the program cannot import these files as long as the error remains. You must therefore edit the corresponding .IMP files and correct the error, or delete the line. These files are in tab-separated text format, and may be edited by most word processors. Once you have corrected the error, return to AssetCenter and click again the "Import" button in the "Repository/ Bar-code inventory/ Update database" menu.

Appendix 1 - Practical advice

Where should I attach the labels?

During the preliminary study, each asset category is reviewed and a location for attaching labels is defined.

For example:

- Tables, desks: under the desktop, 2 inches from the right-hand corner
- Chairs: under the seat, to the right of the seat-back attachment
- Small filing cabinets on wheels: on the left-hand side, to the right of the front wheel, 2 inches from the edge

Some locations should be avoided:

- Labels do not stick to cloth or porous coverings. Make sure the locations you define will keep labels in place.
- Avoid insides of drawers or filing cabinets: they may be locked when the inventory technician does his rounds.
- Unless your inventory technicians are giants, avoid locations that are too high or that are difficult to access.

In general, you must find the best compromise between discretion and easy access.

What type of label should I choose?

For furniture:

Chose a polyester photoset label with glue guaranteed for 10 years.

**For outdoor locations or materials in more severe conditions:**

Choose metallic labels with pre-punched holes that may be riveted in place if necessary.

Appendix 2 - Practice: Entering an asset step by step

To help you practice entering assets using your laser terminal, we have prepared some examples of asset descriptions in the following pages which are based on the directories supplied with the AssetCenter sample database.

Initialize the inventory

Starting with the sample database supplied with AssetCenter, enter the terminal parameters as described below:
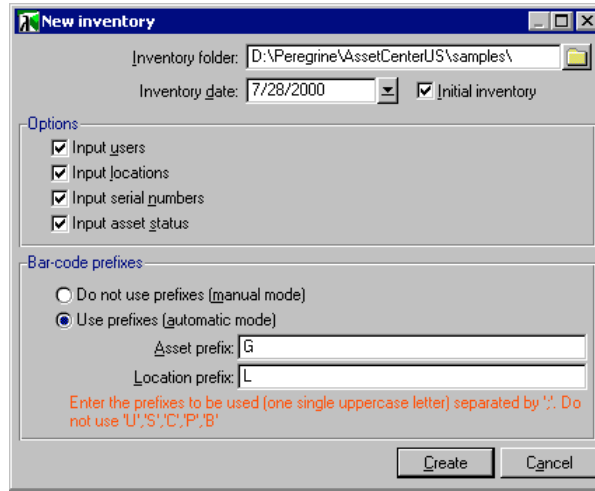
Program the reader

Now you should program the reading following the procedure described on page 30, Then use the tables below to practice entering data.

To complete the cycle, you should transfer this information to the computer, then import it into the AssetCenter sample database.

Asset that can be associated with a product:

Location	/Andrews building/28th floor/002 - Photocopy room * *L17*
User	/TALTEK/Adm. & Financial Mgmt. *U56*
Product code	AIRWELL Air conditioner CAO 230 *P7*
Serial number	LR456456
Status	Good *SEN33554440*
Comments	Enter text on keypad then press [ENTER]
Asset bar-code label	*M00001*

Asset that cannot be associated with a product:

Location	/Greenwood Site/Building 01 */1st Floor/001 - Office *L52*
User	/TALTEK/Information Services Mgmt/Stevens *U5*
Category	/Furniture/Filing Cabinet *C53*
Brand	STARITE Type on keypad: BSTARITE then press [ENTER]
Model	Type on keypad: Unknown or U then press [ENTER]
Number of shelves	Enter a value on the keypad then press [ENTER]
Color	Beige *EN402653204*
Comments	Enter text on keypad then press [ENTER]
Asset bar-code label	*M00003*

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