MIL-PAC TECHNOLOGY

Defense Contract Management Series™

MIL-STD-129/130
BARCODE LABELING SOFTWARE

STD-BARC®

USER MANUAL

Version 4.1

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Std-Barc Features

Std-Barc is a highly focused solution designed specifically to meet the requirements of Mil-Std-129/130 barcode labeling. It includes many features to speed and simplify the job of compliance labeling:

- Extensive support for compliance label formats:
  - Unit, Intermediate and Exterior Container Labels
  - Military Shipment Label (with linear and 2D barcodes)
  - RFID-tagged Exterior, Pallet and UID-Unit labels
  - Unique Identifier (UID) Labels (with linear and 2D barcodes)
  - Ammunition/Explosives Load Labels (with 2D barcodes)
- Offers the ability to print just one label whenever needed, or all labels for a complete shipment.
- Automatically routes labels to printers based on label stock size.
- Automatically generates labels using DD250 data from Mil-Pac products such as DD-FormStation, and DD-Master, as well as data from other applications and enterprise systems.
- Compiles RFID-tag data necessary for the generation of Advanced Shipment Notice (ASN) transactions.
- Includes built-in tools for speedy and accurate manual label generation.

Std-Barc Overview

Std-Barc has been specifically designed for one purpose only: creating the labels that are necessary for compliance with Mil-Stds 129 and 130. Every effort has been made with the goal to make that job as quick and easy as possible for the user. Rather than being a general-purpose label designer, Std-Barc focuses solely on the needs of the defense contractor. Mil-Pac is committed to eliminating the concern over meeting the stringent requirements of the military standards, even as they continually evolve.

Std-Barc makes labeling simple, by allowing the user to fill in a simple form to create a label, and then creating other labels from that one. Embedded databases for addresses and part descriptions make data entry fast and accurate. Importing a DD250, or other shipment data, can almost entirely automate the process of label generation, nearly eliminating all of the data entry necessary to produce labels.

Throughout this manual you will see references made to other Mil-Pac products. DD-FormStation is a Mil-Pac application that organizes and shares documents, such as the DD250. DD-Master is a highly automated document manager supporting contracts that require multiple DD250/WAWF shipments. RFID Load Manager+ compiles RFID and UID data into Advance Shipment Notices (ASN).

Both Mil-Pac forms products are capable of submitting DD250s both to Wide-Area Workflow (WAWF) and Std-Barc. Using a WAWF DD250 to generate labels is one more way Std-Barc can help to guarantee accuracy and eliminate rejections.

Introduction

Using This Manual

This manual has been designed to assist the user through each step of using the Std-Barc barcode labeling software. The principles of operation are generally the same as those for any other Microsoft Windows application.

While every effort is made to keep this User Manual up to date, the current release of the software often includes features not yet incorporated in the manual. This is particularly true of label formats, which are added as the military standards change, and as standard practices evolve. Therefore, please be sure to refer to the product **ReadMe.Txt** files for updated product features.

Installation

Get Ready to Install Std-Barc

Set Up Personal Computer(s)

System Requirements

Computer: Any Windows compatible system with at least 3.0 MB of free disk space.

Operating System: Windows-95 or later, or a compatible operating system.

Set up one or more personal computers that meet or exceed the minimum hardware requirements. Configure security and connectivity in accordance with your organizational policies.

Decide Where to Store Std-Barc Data

You will need to decide where to save Std-Barc data. You can save Std-Barc data on the individual user's/users' personal computer(s) or on a centralized, networked computer. The following sections describe the differences between these two approaches.

Option 1: Save Std-Barc Data on Individual Personal Computers

When Std-Barc data is stored on individual personal computers, Std-Barc data is accessible from only one personal computer. Each personal computer with Std-Barc installed would not be able to use the data from any other computers where Std-Barc is installed. This installation is most appropriate when one or more of the following conditions are true:

- Only one personal computer has Std-Barc installed.
- There is no desire to share data between Std-Barc personal computers.
- Connectivity between personal computers where Std-Barc is installed is either non-existent or unreliable.

Option 2: Save Std-Barc Data in a Shared Database

Std-Barc can be installed with a shared database, so that users on different personal computers can all share the same data from different personal computers. Shared Std-Barc Database is most appropriate when:

- Std-Barc is installed on more than one computer.
- Users on different personal computers use the same data, such as shipping addresses, contracts, etc.
- Connectivity between personal computers is reliable and full-time.

If you choose to save Std-Barc data on individual personal computers, then you can skip to the next topic. Std-Barc will offer a default folder in which to save this data and allow you to change to a folder of your choosing during installation.

If you choose to save Std-Barc data in a shared database, you will need to set up a network folder that has read and write permissions for each Std-Barc user. Map the network folder on each personal computer where Std-Barc will be installed, using traditional eight-character directory path names, such as M:\Shipping\DD250s. Network administrators typically assist in this step. Mil-Pac software does not support UNC (Universal Naming Convention) names, such as \\Shipping\MilitarySoftware.

Setup Printers

Std-Barc works on many printers supported by Windows. The best results are found on laser and other high resolution (300+ DPI) standard Windows printers and thermal printers designed for label printing. Many thermal transfer printers are supported; contact Mil-Pac for information.

For standard Windows printers, such as laser printers, Std-Barc prints using the Windows printer driver for the specific printer.

For Thermal Printers Std-Barc (version 4.0 and later) prints using the printer manufacturer's printer driver. For Std-Barc versions prior to 4.0, contact Mil-Pac Technology Technical Support.

Set up printer(s) on which you will print labels.

For Microsoft Windows Standard [plain paper] printers:

Follow the printer manufacturer instructions. Use the "Print Test Label" feature in the Microsoft Windows print driver to make sure you have the printer set up correctly. You can also use Notepad or a word processor (such as Microsoft Word) to verify proper printer set up.

For Thermal and Thermal Transfer printers:

Follow the printer manufacturer instructions. Use the "Print Test Label" feature in the printer manufacturer printer driver to make sure you have the printer set up correctly. The test

label will most likely not all fit on the label media, but you should see some text and the Microsoft Windows logo.

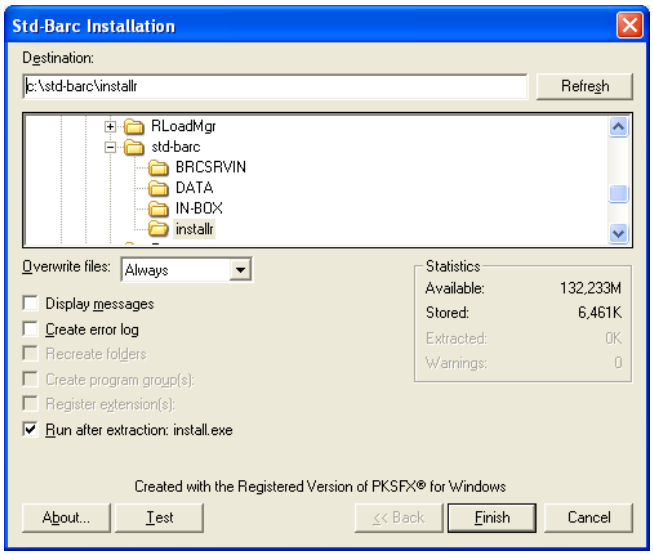
Install Std-Barc

Std-Barc install files are typically distributed either via internet download or CD.

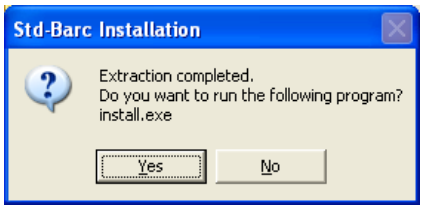
Installing from Internet Download

If you received Std-Barc install files via internet download:

1. Double-click the install file. The install files are in a compressed file that will now uncompress. Just click Finish.



2. When the extraction completes, answer “Yes” to the following question.

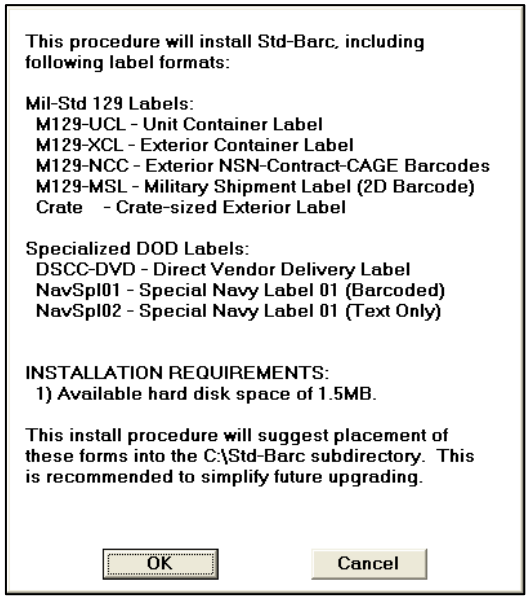


3. The Std-Barc install wizard begins.

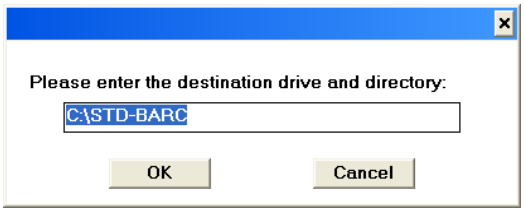
Installing from CD

If you received Std-Barc install files via CD, insert the CD into your personal computer. The Std-Barc install wizard begins.

1. If more than one product or more than one copy of Std-Barc is provided on the disk, select the appropriate one by the serial number assigned to you. Std-Barc is licensed by seat, so each computer installed with Std-Barc should use a different serial number.
2. Evaluation copies of Std-Barc do not need to be removed. Installing the licensed copy of the software from the CD-ROM will simply update the software, turning it into a fully licensed copy. Data used during the evaluation should not be affected.



3. Click “Ok” on the initial screen of the Std-Barc install wizard.
4. You can enter a different directory/folder in which to install Std-Barc or just accept the default (recommended).



5. Click Ok on the final screen.
6. Std-Barc is now installed.

Configure Std-Barc

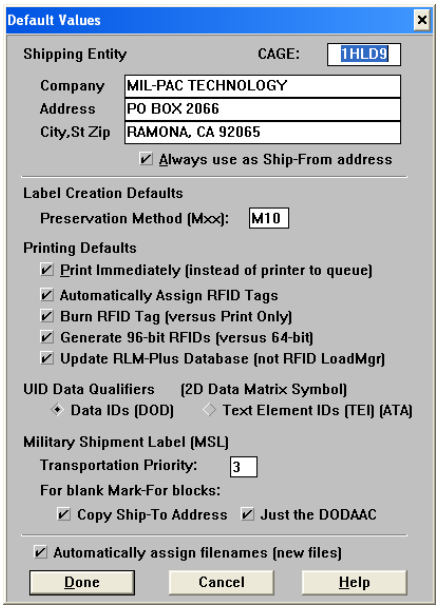
There are basically three areas in Std-Barc that may need configuration:

- Std-Barc operating defaults.
- Location of files
- Printers

Configure Std-Barc Operating Defaults

Std-Barc allows the entry of certain default values to guide how it behaves.

In Std-Barc, click on Options→Defaults.



Enter values in the following fields:

- Prime Contractor – The data entered in these fields will appear as an address that can optionally be used on labels. When you import DD250 data from another source, such as another Mil-Pac Technology software application like DD-FormStation or DD-Master, Std-Barc gives you the choice of using the DD250 Ship From address or using the address you enter here. Additionally, you can check the "Always use as Ship-From address" to use this data as the default Ship-From address and never automatically use the DD250 Ship-From address.
- Preservation Method – Enter the default value that you would like to appear on all Unit and Exterior Containers. If you use Commercial Preservation Methods, enter "COM" or leave blank.
- Print Immediately – There are two ways to print—immediately and to queue. You can over-ride this selection for each print job, but this will be the default selection. The Std-Barc User Manual contains details about this selection, but basically if you plan to print the majority of your labels on sheets of labels, you would most likely want to choose to print to queue (uncheck "Print Immediately"). If you plan to print the majority of your labels on rolls of labels, such as on a thermal printer, you would most likely want to print immediately (check "Print Immediately").
- Automatically Assign RFID Tags – There is a setting on RFID versions of labels to automatically assign RFID data to the RFID tag or to allow you to manually enter RFID data. You would most likely want this set to Automatically Assign RFID Tags, since this is the most common use of this setting.
- Burn RFID Tag – There is a setting on RFID versions of labels to "Burn RFID tag," which is to write RFID data to the tag, or to not write any data to the RFID tag. If you most commonly print RFID labels, you would check this option.
- Generate 96-bit RFIDs – This is provided for backwards compatibility with previous generations of RFID tags. Unless you know that you have 64-bit RFID tags, you should check this box.
- Update RLM-Plus Database – If you are using RFID Load Manager+, check this box. If you are using the older RFID Load Manager, do not check this box.

- Transportation Priority – This is the default transportation priority that will print on Military Shipping Labels (MSLs). Typically this is “3” or blank.
- For blank Mark-For blocks – These fields control what prints in the *Ultimate Consignee / Mark For Consignee* section of the Military Shipment Label, when no Mark For information is entered into Std-Barc. *Just the DODAAC* prints the barcoded Ship-To DODAAC in the Consignee section, and is a recommended setting. *Copy Ship-To Address* copies the Ship-To address to the Consignee section as well.
- Automatically assign filenames – Checking the block causes Std-Barc to automatically generate file names when saving files, which is the recommended setting.

Configure File Locations

During pre-installation steps you should have decided where to save Std-Barc data--either on the individual user’s/users’ personal computer(s) or on a centralized, networked computer.

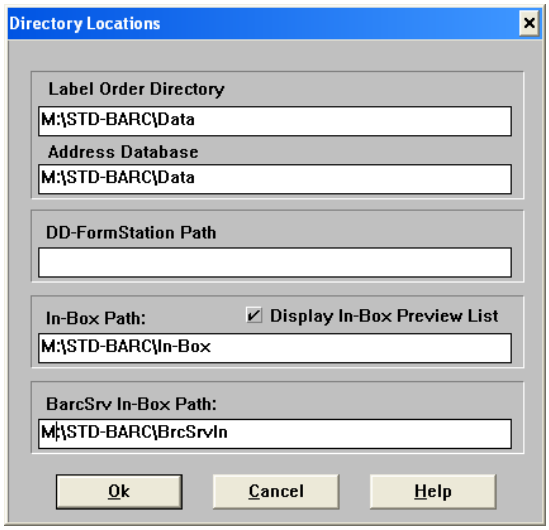
Start Std-Barc, either by double-clicking the Std-Barc icon or through the Start button on your personal computer.

If you are saving Std-Barc Data on a single personal computer (not sharing data between multiple computers):

No file location configuration is necessary.

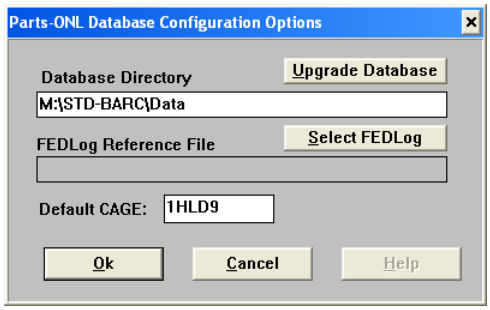
If you are sharing Std-Barc data between more than one personal computer:

1. Click Options->Directories.
2. Enter the mapped network folders where you plan to store Std-Barc data in both the Label Order Directory field and the Address Database field. This is the network mapped drive and folders that you should have created during the pre-installation steps. This must be formatted using traditional eight-character directory path names, such as M:\Shipping\DD250s. Network administrators typically assist in this step. Mil-Pac software does not support UNC (Universal Naming

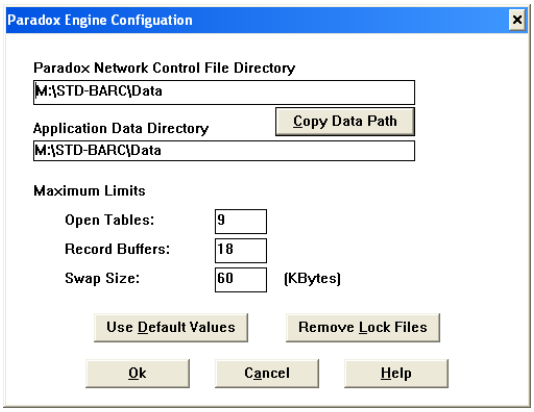


Convention) names, such as \\Shipping\MilitarySoftware.

3. Click Ok.
4. Click Options->Parts Database.
5. Enter the mapped network folders where you plan to store Std-Barc data in the Database Directory field. This is the network mapped drive and folders that you should have created during the pre-installation steps.



6. Click Ok.
7. Click Options->Paradox Engine.
8. Enter the mapped network folders where you plan to store Std-Barc data in the Paradox Network Control File Directory field and the Application Data Directory field. You can just click the “Copy Data Path” button to copy the Std-Barc data directory information into the Application Data Directory field. Leave the other fields at their default values unless instructed to change them by Mil-Pac technical support.



9. Click Ok.

NOTE: In situations in which other Mil-Pac software is installed, such as DD-Master, DD-Formstation, and RFID Load Manager+, we recommend creating a directory structure as follows:

Network share (such as \\Shipping\MilitarySoftware) which would be mapped to a drive letter (such as M:\).

Std-Barc folder (M:\Std-Barc)

Std-Barc Data folder (M:\Std-Barc\Data)

Other Std-Barc sub-folders, as required

DD-Master folder (M:\DDMaster)

DD-Master Data folder (M:\DDMaster\Data)

Other DD-Master sub-folders, as required

Other Mil-Pac folders, following the same organization as noted above…

In this situation, we recommend configuring the Paradox Network Control File Directory for all applications to be the root of the network share, M:\ in our above example.

Configure Std-Barc Printer(s)

We need to configure Std-Barc to know which printer to use to print each label type, and configure a few settings for those printers.

Label Stock Selection

Std-Barc includes layouts for popular commercially available label stock. Each label format is associated with a default stock size, appropriate to its data requirements. Non-standard layouts may be added to the list by request.

Laser stocks are laid out according to standard Avery formats because they are widely available and many label stock manufacturers use Avery as a layout standard. Mil-Pac's identification of label stock sizes by Avery numbers is not a recommendation for their use. Nor does Mil-Pac guarantee that labels supplied by any specific manufacturer will meet military standards, which in general require labels to use permanent adhesive, with waterproof printing on a stock offering high contrast (low opacity).

Laser vs. Therm

Std-Barc is designed to print on two kinds of label stock, sheet ("Laser") labels such as those used in laser printers, and roll stock such as used in thermal printers. Std-Barc refers to the first type as *Laser* stock and the other as *Therm* stock. *RFID* is the same as *Therm* but adds the ability to encode RFID tags at the same time that Therm labels are printed.

The difference between the two is how printers handle them. Laser labels come several to a sheet, and Std-Barc will print to each label on the sheet in succession until it is done or runs out of labels on the sheet. Then it ejects the sheet and loads another, if necessary.

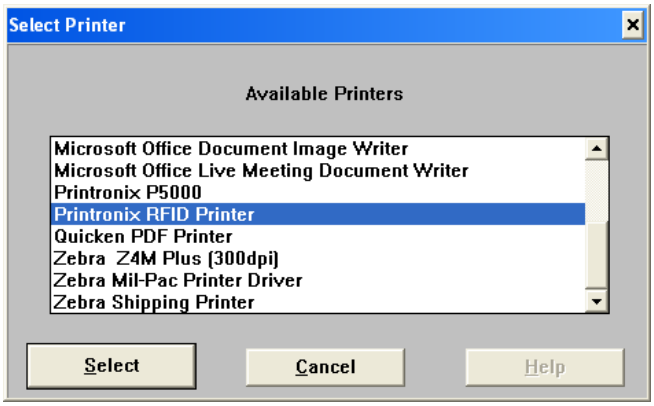
With Therm stock each label is on its own "sheet" which Std-Barc "ejects" after printing, allowing the printer to move to the top of the next one. Some Therm stock may, in fact, have more than one label across, such as a "3-up" roll stock, but it always has just one row per "sheet", and Std-Barc will always print one row of labels then eject, or "form feed" the printer, allowing it to line up the next set of labels.

Printer/Label Setup

Std-Barc uses Label Stock names not only to assure proper printing of labels, but to route labels to the appropriate printer. In practice, you could have a different printer set up with each kind of label stock used, and Std-Barc will automatically select the appropriate printer and apply its specific configuration settings.

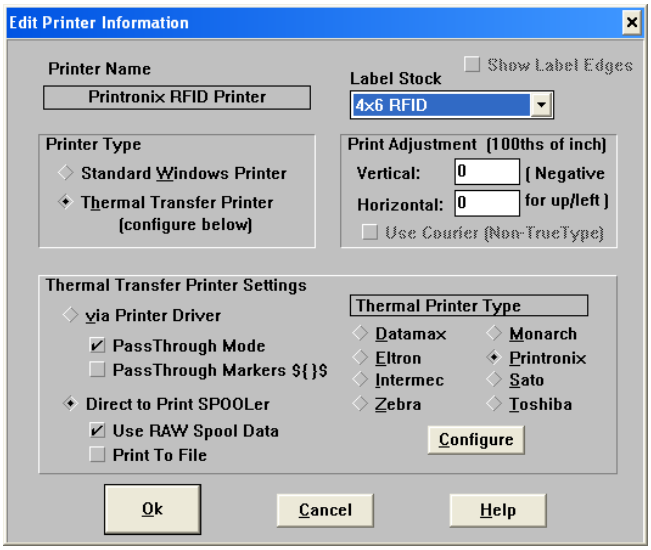
It is typically not necessary to set up printers for Laser Printers. Just select the correct printer at the time that you print the labels. If the printed image on Laser-printed labels needs some small adjustment, then follow the steps below. Always follow the steps below for Thermal Transfer printers.

1. Click Options->Printers.
2. Click the Add button to add a printer configuration.
3. Highlight the printer name that you created when you installed the printer.
4. Click the Select button.



5. Fill in these fields:

- Label Stock – Select the label stock that you will use from the drop down list.
- Show Label Edges – If you need to fine-tune the position of the print on the label, you can click this box to print a border on the label to make it easier to do this. For normal production operation you would typically un-click the option.
- Printer Type – Select Standard Windows Printer for laser and ink-jet printers. Select Thermal Transfer Printer for thermal transfer printers.



- Print Adjustment – These settings allow you to fine-tune the position of the print on the label. Negative numbers move the print image up/left and positive numbers move the print image down/right. Example: to move the printed image up and left ¼ inch, enter 25 in both the vertical and the horizontal fields. Do not enter decimal numbers. Suggest leaving these settings at zero until you print some labels to see if any fine-tuning is necessary.
- Thermal Transfer Printer Settings – These are for Thermal/Thermal Transfer printers only.
    a. Connection Method – Select Direct to Print SPOOLer and Use RAW Spool Data as shown above.

b. Thermal Printer Type – Select the printer type. This will likely cause the Printer Configuration window to appear; if not, click the “Configure” button.

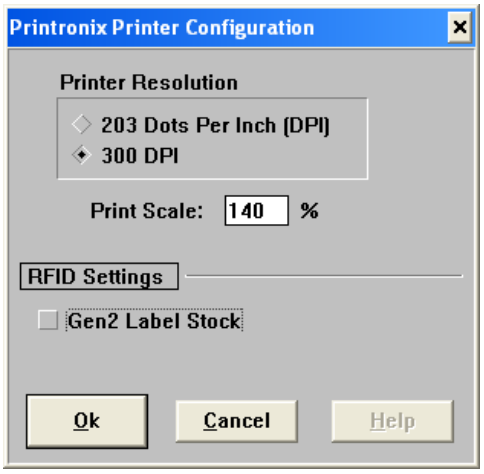
c. Select the proper options for your printer. NOTE: You should always select “Gen2 Label Stock” and “Upgraded Firmware” unless you know these are the wrong settings.

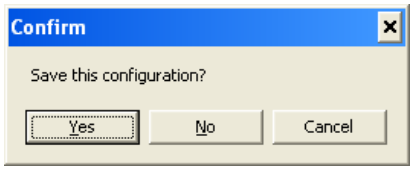
d. Click Ok and Ok again to return to the “Assigned Printers” window.

e. Continue to add printers for each different label type.

f. Click Done when you finish.

g. Click Yes to save the configuration.



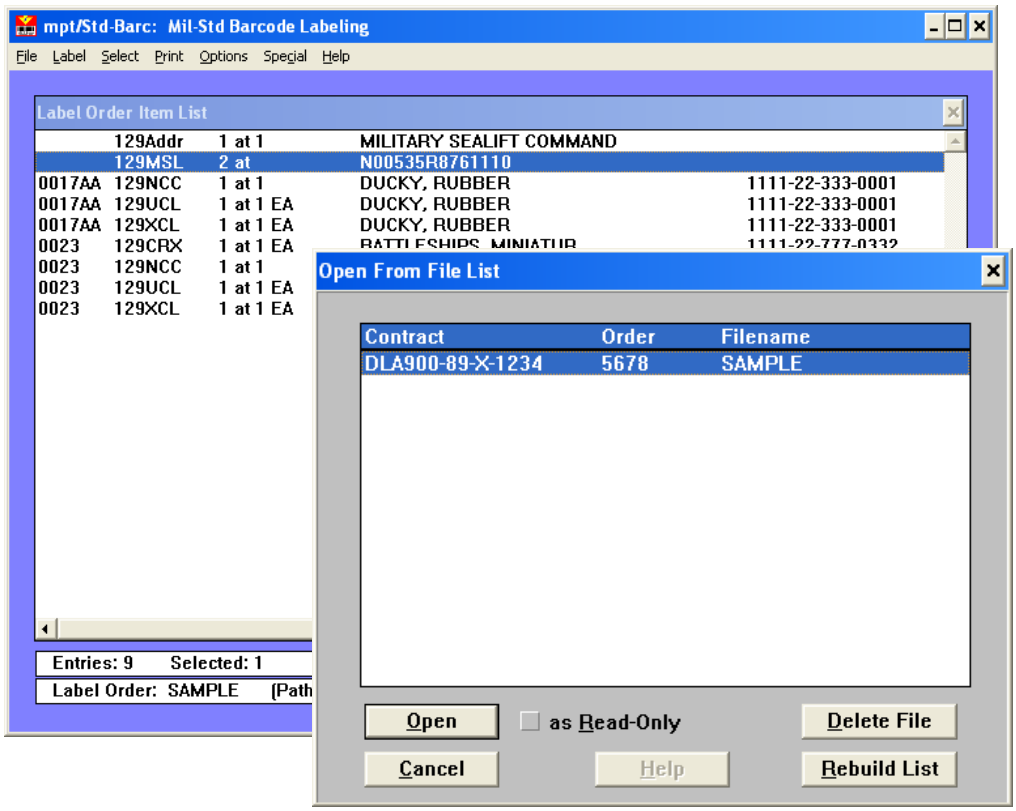


Confirm Installation and Configuration

Now that we've completed the installation and configuration, we need to make sure that everything is installed and configured properly. Here are a few tests to complete.

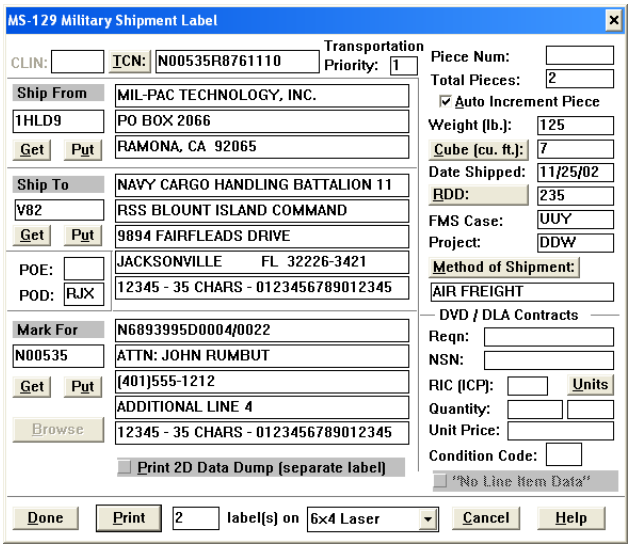
Print Labels

1. In Std-Barc, click on File->Open File.
2. Highlight the SAMPLE file that is provided as part of the Std-Barc install.
3. Click Open.



4. Double-Click on the 129MSL or some other label that is a correct size for your label stock.
5. Std-Barc displays the data entry screen for the label.

6. Select the proper label stock at the bottom of the screen. This must be a label stock that you selected when you set up your printer, meaning that this must be a label stock that is in the Assigned Printers list that you can see when you click Options->Printers.
7. Click Print. A label should print on the printer.
8. Repeat this process for each label type for which you set up printers.



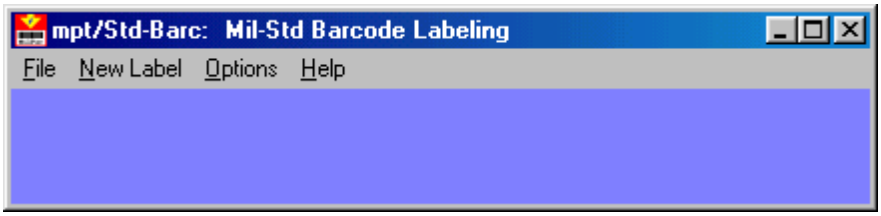
Confirm Multi-User Operation

1. Bring up a label format on a pc.
2. Make a change to the data on the format.
3. Save the label.
4. Open Std-Barc on a different pc.
5. Bring up the changed label format and make sure the change shows on the screen.

Tutorial - Getting Started

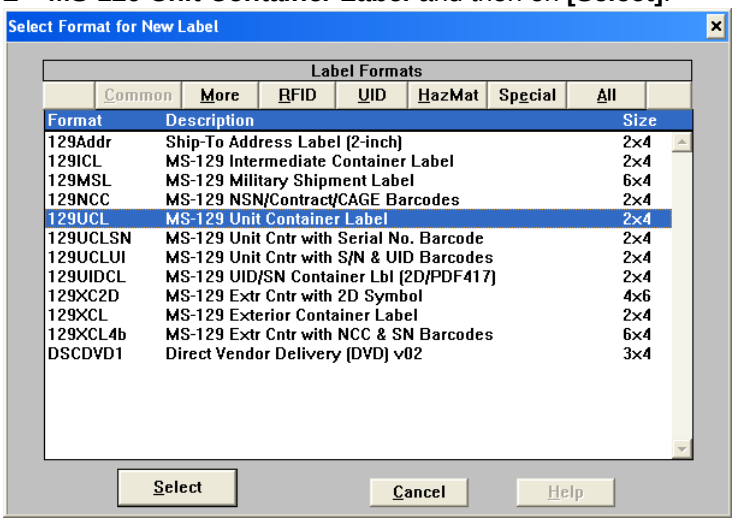
Creating a Unit Container Label

Creating labels requires just a few simple steps. Start by clicking on **New Label**:



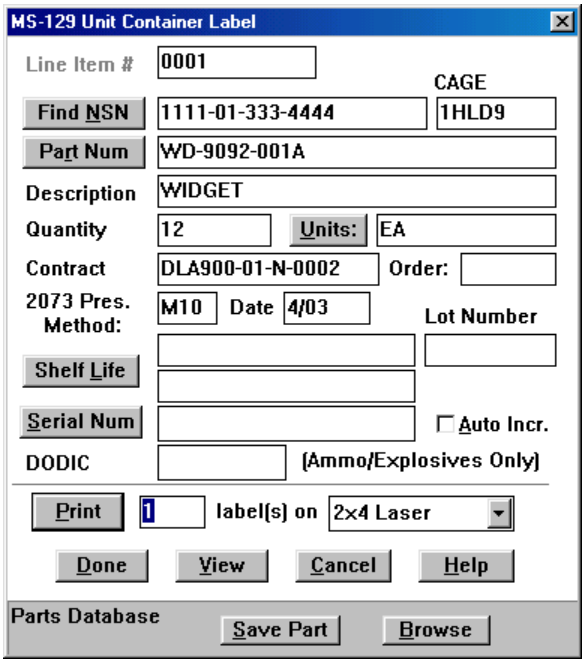
The New Label command will present a list of common formats from which to select. The most common starting point is the Unit Container label.

Click on: ***129UCL – MS-129 Unit Container Label*** and then on **[Select]**.



Note: Your version of Std-Barc may include more formats than shown in this manual, since the software tends to evolve faster than production of the documentation process can accommodate.

Selecting a new Unit Container Label will present a blank dialog into which you can enter the data for the item to be shipped. We have already done that in the example at right.

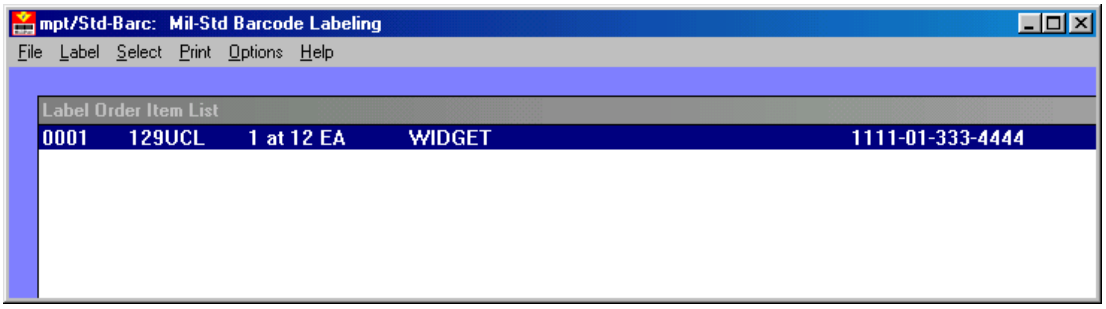


To create your own label:

1. **Fill in the blanks.** For help on completing the fields, click on **[Help]** or refer to the Unit Container Labels description in Mil-Pac's *Guide to Mil-Std 129P*. Your contract may not require data for all fields, so skip over those that do not apply.
2. **Enter the number of labels to be printed** in the box next to the [Print] button, then click on **[Print]** and choose Print Immediately (when prompted). ***NOTE:*** The label stock you are printing on, shown in the label form, must either be a Laser format (like 2x4 Laser) or be a label stock that is set up for a specific printer in Options->Printers. Details on how to set up label stock to print on specific thermal transfer printers is in the Std-Barc Installation Guide.
3. Select **Yes** when asked to *Save Changes to Label* ?.

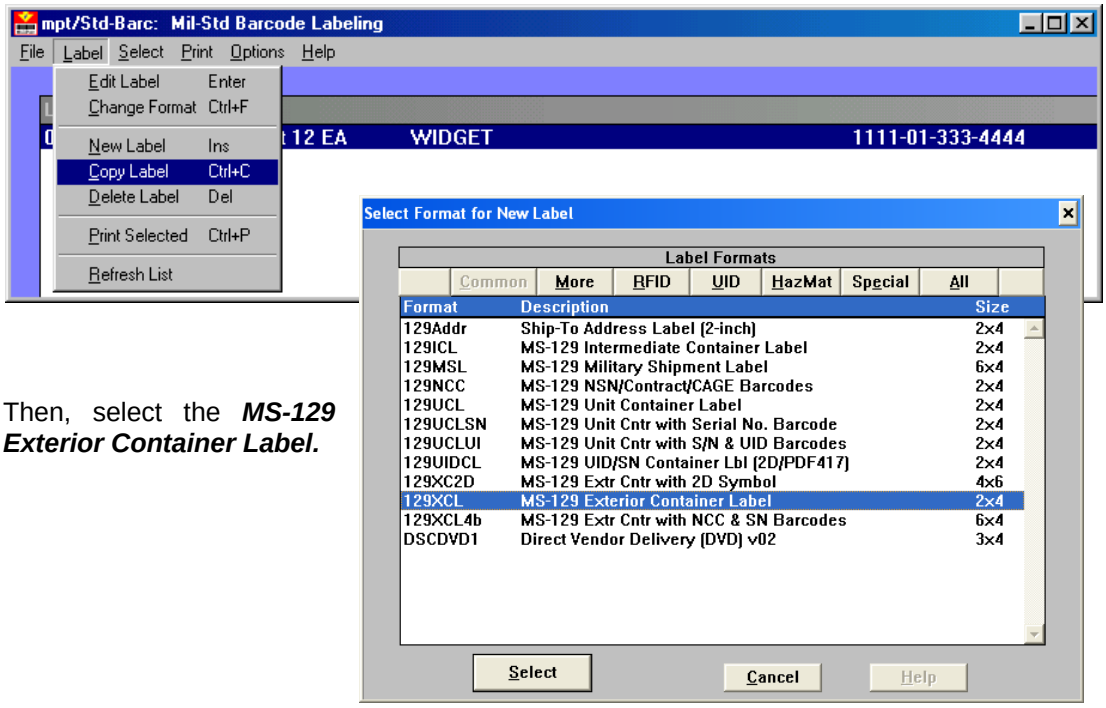
Creating Exterior Container Labels

It is that easy to create your first label in Std-Barc. Of course, you will probably need to create some other formats, such as the Exterior Container Label (XCL).



The Unit Container Label (129UCL) just created now appears in the Label Order Item List, as shown above. The next step is to create an Exterior Container Label. To save time, we will simply copy the 129UCL that we just created.

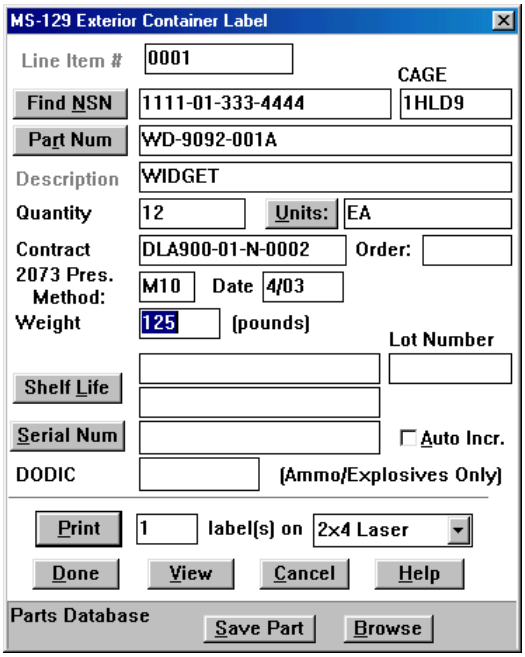
First, select the **Label > Copy Label** command:

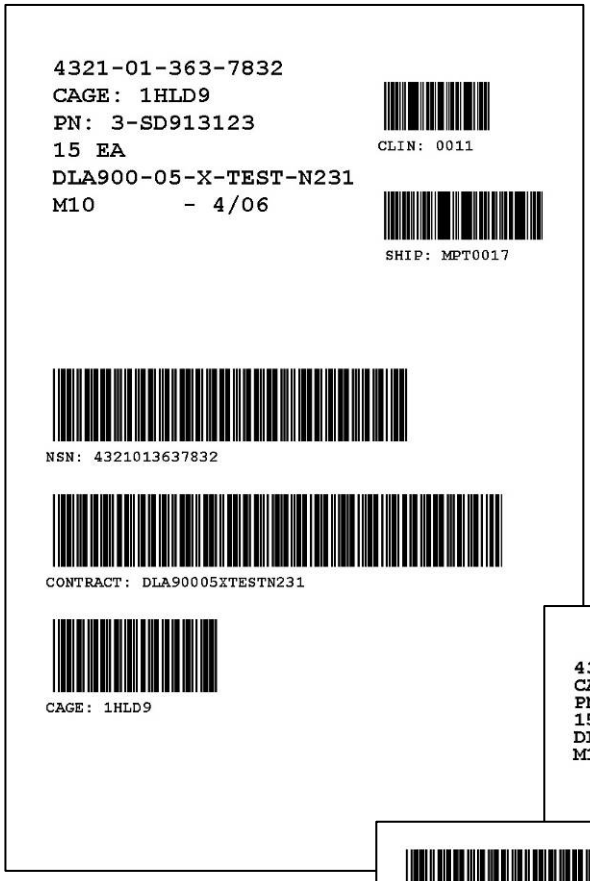


Then, select the ***MS-129 Exterior Container Label.***

The Unit Label has almost all of the data needed for an Exterior Container Label. So, the only thing you would need to enter is the weight of the packaged item, as shown here.

Print the labels just as we did for the Unit Container Label.





The Exterior Container Label can print as a single 4x6 label (as shown to the left) or on separate 2x4-inch labels, as shown below. This allows you to use the same label stock for both unit and exterior labels.

Creating Military Shipment Labels (MSL)

The Military Shipment Label (MSL) replaced the standard address label in Revision P of Mil-Std-129. It may have some fields that are unfamilar to you, in which case, refer to the lastest revision of Mil-Std-129. It is available from a number of sources, including the Mil-Pac web site. The following section includes excerpts from the Mil-Std-129.

Two aspects of the Military Shipment Label distinguish it from other labels:

- Two-dimensional (2-D) PDF-417 symbol, which is comprised of many small rows of data. In fact, the symbol contains all of the data printed on the label, and then some. The data is organized as a data structure defined by Mil-Std-129. No special action is required by the user to print the 2-D symbol, other entering data in the label editor.
- Piece Number Barcode, which assigns a sequence number to each container in a shipment, which is identified by a Transportation Control Number (TCN). Each individual exterior container in a shipment should have an MSL, numbered 1 of n, 2 of n, n of n, where *n* is the total number of containers. Std-Barc automatically increments and prints the Piece Number barcode.

To create an MSL, copy either the Unit Container Label or the Exterior Container Label that we created previously and select 129MSL as the label to which we are copying.

MSL Fields

The following description is taken from Mil-Std-129 with some additional instructions specific to Std-Barc. Not all fields on the MSL are required for every shipment. Consult with your contract officer or quality assurance specialist for assistance.

The current implementation of the Military Shipment Label in Std-Barc is designed only for General Cargo. A Unit Move version can be made available on special order.

Transportation Control Number (TCN). Enter the (alphanumeric) TCN For consolidated shipments, place a lead TCN in this block. The lead TCN shall not duplicate any internally packed TCNs. Use the label editor's TCN Wizard to generate a TCN when not supplied by DoD. [17 characters]

Transportation Account Code (TAC). When applicable, enter the TAC for shipments moving from POE to POD. For mail and other shipments,

leave blank. Enter TAC on the first line of block. On RFID tagged labels, separate TAC and Type Service with a slash ('/') character. [4 characters]

Type Service. Enter abbreviation for the type of transportation service to the "Ship To" address (e.g., Frt LTL, Air Expss, Expss Mail, TGBL UB, DPM HHG). The MSL label editor includes a drop-down list of appropriate abbreviations. [Up to 10 characters]

From. Enter the Consignor DoDAAC/CAGE and in-the-clear address of the shipping activity. For mail include the ZIP code. [Up to 3 lines of 35 characters].

POE. Enter the three digit air/water Port of Embarkation (POE) code, if applicable. [3 chars]

Ship To in-the-clear shipping address [5 lines of up to 35 characters].

Priority. Enter the applicable transportation priority (TP). TP 1, 2, 3, or 4 (deferred air freight) should be clearly identified in the priority block of the MSL using bold text that is 3/4 inch high. [1 digit]

POD. Enter three-digit air/water Port of Debarkation (POD) port designator, if applicable. In-the-clear location name may be included. Blank for mail shipments. [3 characters]

Project Code. Enter project code, if applicable. [3 chars]

Ultimate Consignee/Mark For Consignee. Enter the in-the-clear complete address(s) and the corresponding DoDAAC. [Up to 5 lines of 35 characters]

Weight. Enter actual gross weight (of this piece) in pounds. Round to next whole digit, do not use commas or include 'LB' or '#'. [Up to 5 digits].

RDD. Enter the Required Delivery Date (RDD) in Julian format, or enter the code specified by the requisitioner, if appropriate. Use the RDD Calculator for Julian Dates [3 digits].

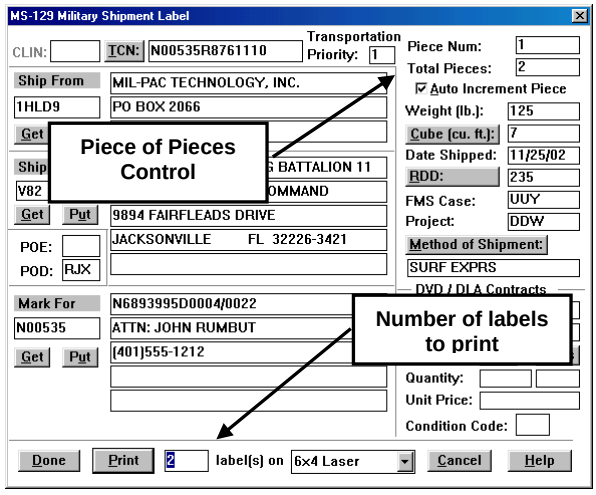
Cube. Enter the volume (of this piece) in cubic feet. Round to next whole digit. Do not include 'CU' or 'FT'. Use the Cube Calculator to simplify this. [Up to 4 digits]

Date Shipped. Enter an in-the-clear date (DD/MM/YY or YYYYMMMDD).

FMS Case Number. Enter as FMS case identifier as appropriate. [3 characters].

Piece Number. Enter the piece number (numeric value assigned to this piece) of the cargo documented by the TCN for this shipment unit. Do not zero fill. [Up to 4 digits]

Total Pieces. Total number (numeric value) of pieces documented by the TCN for this shipment unit. [Up to 4 digits]



Printing a Series of MSL Labels

Printing one MSL is easy. Set *Piece Num* and *Total Pieces* to 1, ignore *Auto Increment Piece* and [Print] 1 label. Printing three labels, (1 of 3, 2 of 3 and 3 of 3) is not much more difficult. Set the *Piece Num* to 1 and *Total Pieces* to 3, enable *Auto Increment Piece* and [Print] 3 labels.

Printing a series of labels where one or more have different weights and cubes or item data counts is a little more difficult. (We are working on a better method.)

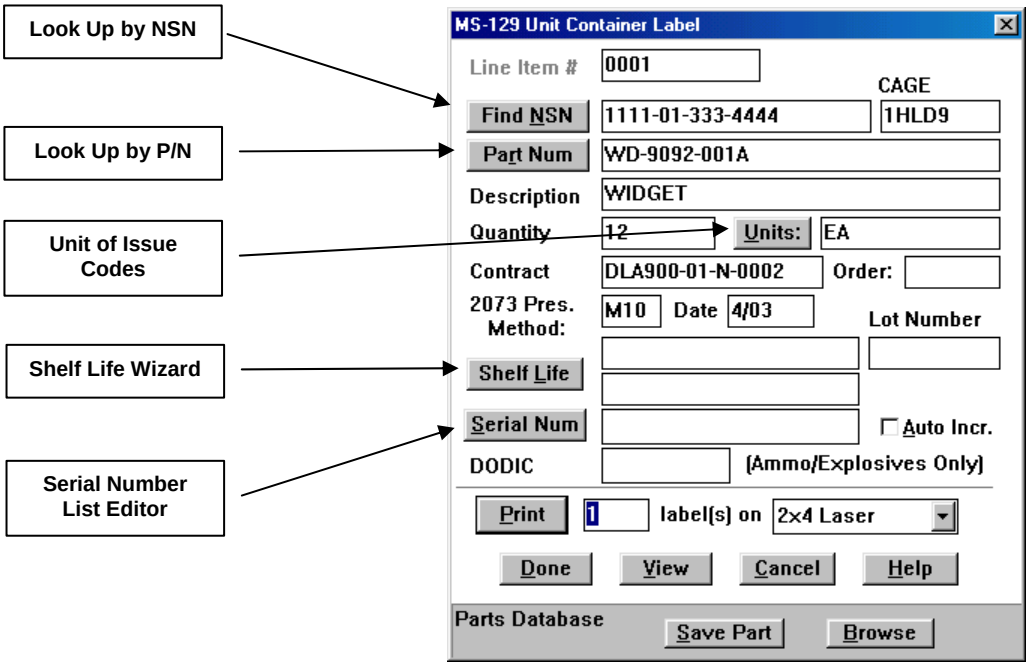
Let's say the third container is different. Start by printing the first two labels:

Piece Num: 1
Piece Total: 3
Auto Increment: Yes
Print [**2**] labels

Then, change the Weight, or whatever, and print the last label:

Piece Num: **3**
Piece Total: 3
Auto Increment: (ignored)
Print [**1**] label

Label Wizards



Each label format has its own specialized editor, like the one shown above for the Unit Container Label. Most have a variety of "wizards" that can help you enter data into the label. Clicking on field labels that look like a buttons, will help you complete that field.

Wizards for Container Labels

The Unit, Intermediate and Exterior labels have a number of wizards, including:

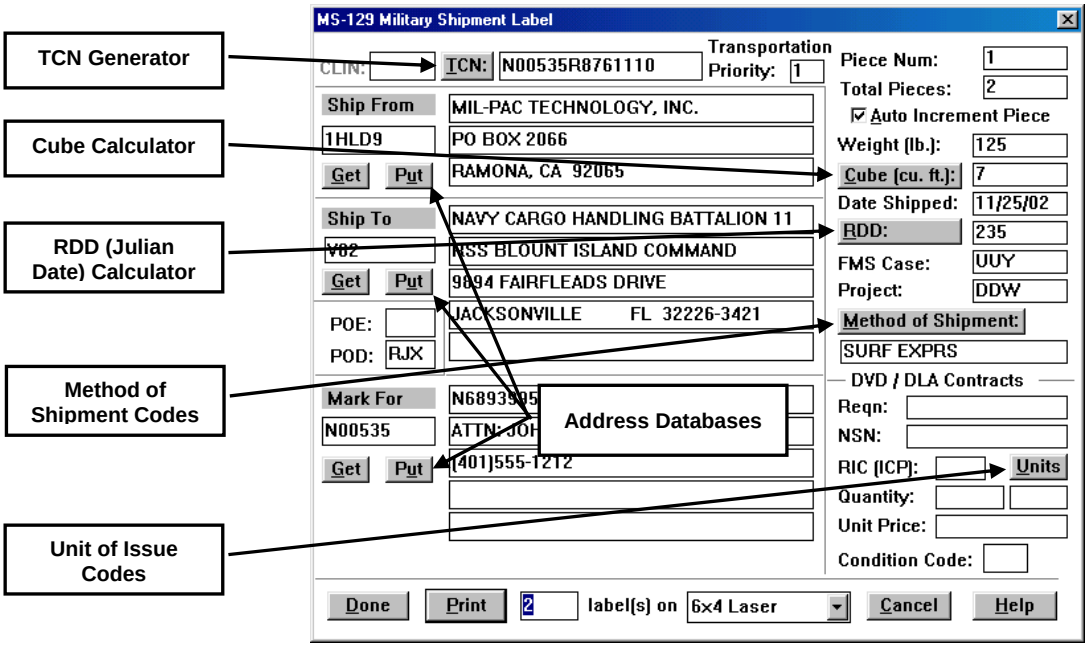
Parts Database allows you to store and retrieve parts by NSN and/or Part Number.

Unit of Issue Codes is a drop-down list of the Unit of Issue codes defined by MS-129.

Shelf Life generates the proper abbreviations and date formats for the shelf life.

Serial Number List Editor allows you to edit and manage lists of Serial Numbers.

Military Shipment Label Wizards



The complex Military Shipment Label has an even greater number of wizards than the Unit Container and other label formats. Each can help you create or locate data for the label. As with the other formats, a field label that looks like a button (such as for TCN above) brings up its wizard/helper. The Military Shipment Label wizards include:

TCN Generator allows you to create Transportation Control Numbers (TCN) for shipments that are FOB Destination, for which you are allowed to create your own TCN so long as you can assure that is unique. The TCN Generator uses the rules defined by the Defense Transportation Regulations (DTRs) for doing so, and logs the TCN so you can later retrieve information about the shipment.

Address Database allows you to quickly retrieve an address you have used and stored in the past. To retrieve an address, enter the DODAAC or CAGE code in the appropriate blank and click on **[Get]**. Leaving the code blank will allow you to browse through the list to select an address. To store an address, simply fill it in, and click on **[Put]**.

These wizards are explained in more detail in the following sections.

Using Label Wizards

There are wizards which help the user generate data and/or correctly format it for compliance with military standards. The sections that follow describe these wizards and their use.

TCN Generator

The TCN wizard simplifies the task of creating the Transportation Control Number (TCN) for an FOB Destination shipment, or such situation. While the TCNs for FOB Source shipments are routinely provided on contract documents, or by the DCMA, the contractor is responsible for generating TCNs when not otherwise provided. Contractor TCNs are required to be unique, and the contractor must be able to retrieve the details for a shipment by its TCN.

The Defense Transportation Regulations (DTR) provides a guideline for military shippers that is commonly recommended for contractors as well, and has been implemented in Std-Barc. This creates a tracking number based on the contractor's CAGE code and the Julian date of shipment, which when combined looks like: 1HLD9X4294X001XXX.

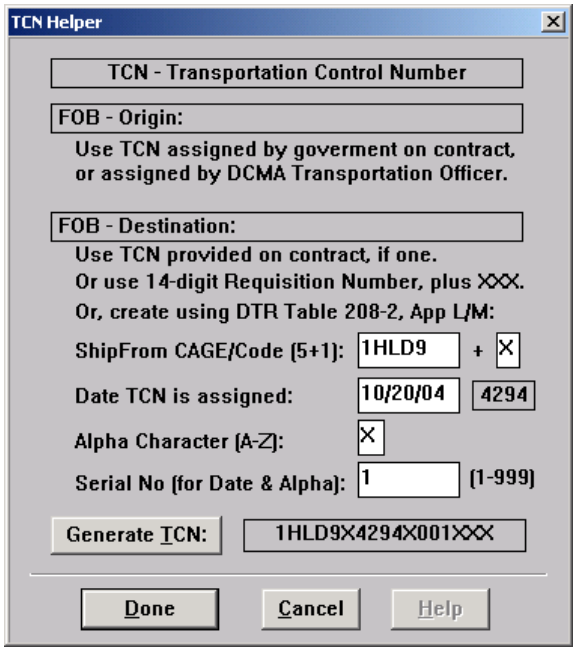
The same TCN must applied to each container in a shipment, unless otherwise indicated by your contract. For example, say you are shipping 100 widgets in 10 exterior containers. The same TCN would be used on all ten Military Shipment Labels required, and they would be numbered piece 1 through 10. A shipment of wombats on the same day would use a different TCN number.

Using the example above the boxes of widgets would marked with

TCN: 1HLD9X4294X001XXX
Pieces: 1 of 10 .. 10 of 10

and the wombats would be marked with

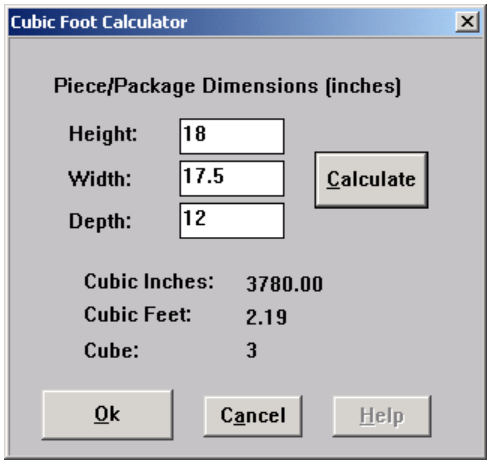
TCN: 1HLD9X4294X002XXX.
Piece: 1 of 1



Cube Calculator

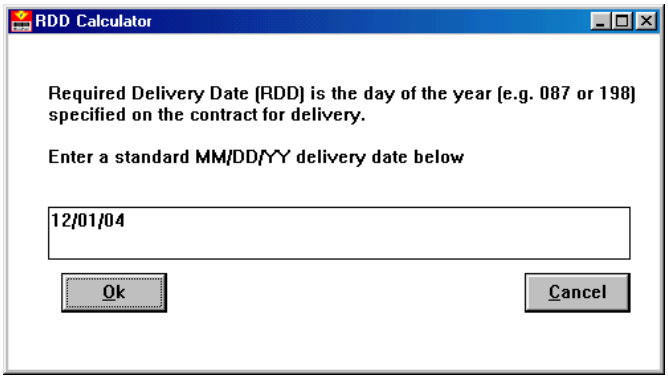
The Cube Calculator simplifies the task of calculating the size of an exterior container, which must be expressed in cubic feet, rounded up to the next whole number.

This illustration shows the entry of the container dimensions, which are expressed in inches. The total (actual) number of cubic feet and inches is calculated, and then rounded up to the next whole cubic foot. Clicking **[Ok]** will insert the Cube into the current label.



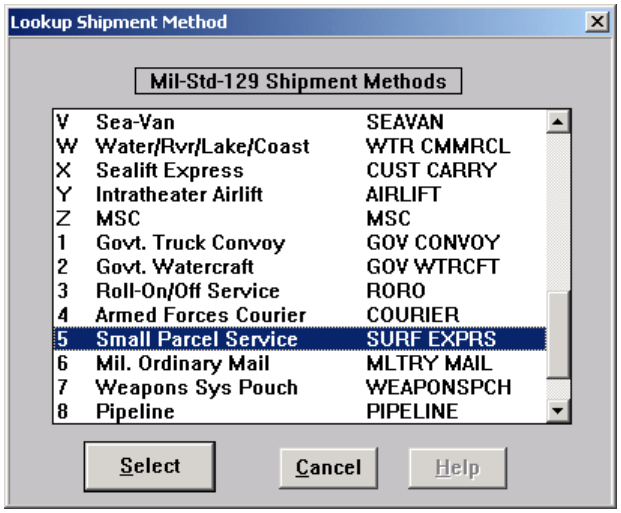
Required Delivery Date (RDD)

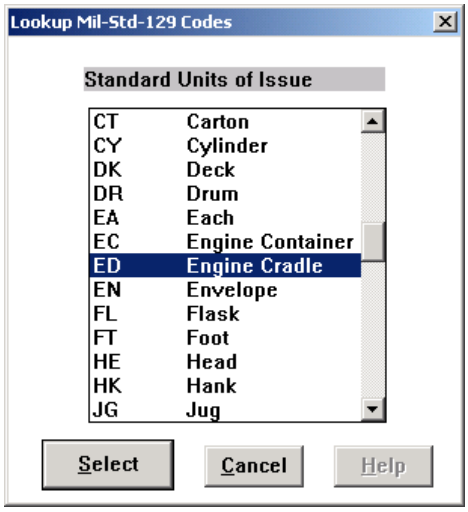
The RDD Calculator converts a standard MM/DD/YY date into the Julian Date format required for certain labels, such as the Military Shipment Label.



Method of Shipment Codes

The Military Shipment Label (MSL) includes a table for Method of Shipment codes. The left column shows the Mil-Std-129 code, as you might see on a DD250. The right column shows standardized abbreviations that fit into the 10-character field that is encoded into the 2D-symbol on the MSL.

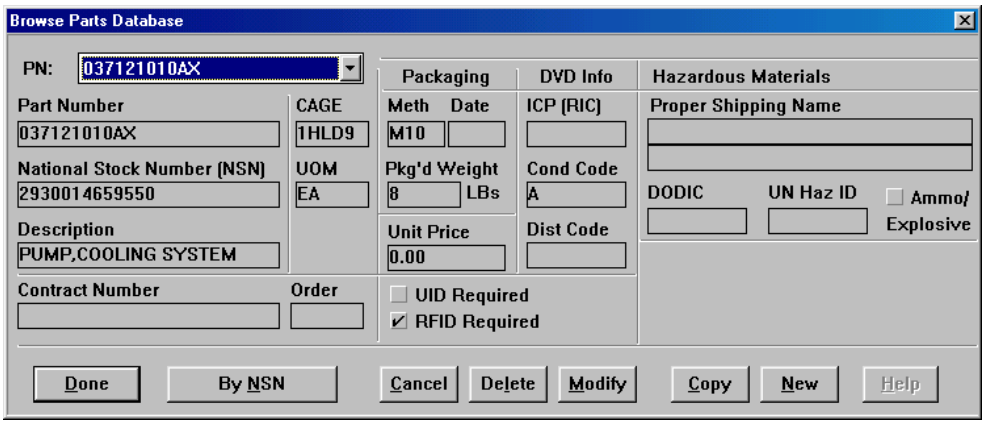




Unit of Issue Lookup

Many labels include a Unit of Issue lookup, which allows you to find less common UOI/UM codes defined by Mil-Std-129.

Parts Database

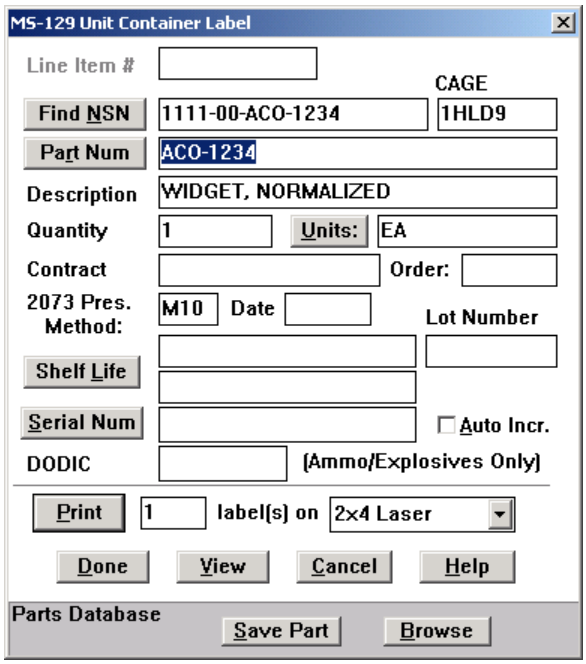


The parts database allows you to store item data that you can then use in a variety of label formats. The Parts Database is accessed via the [Browse] button found on most format editors, like the one below.

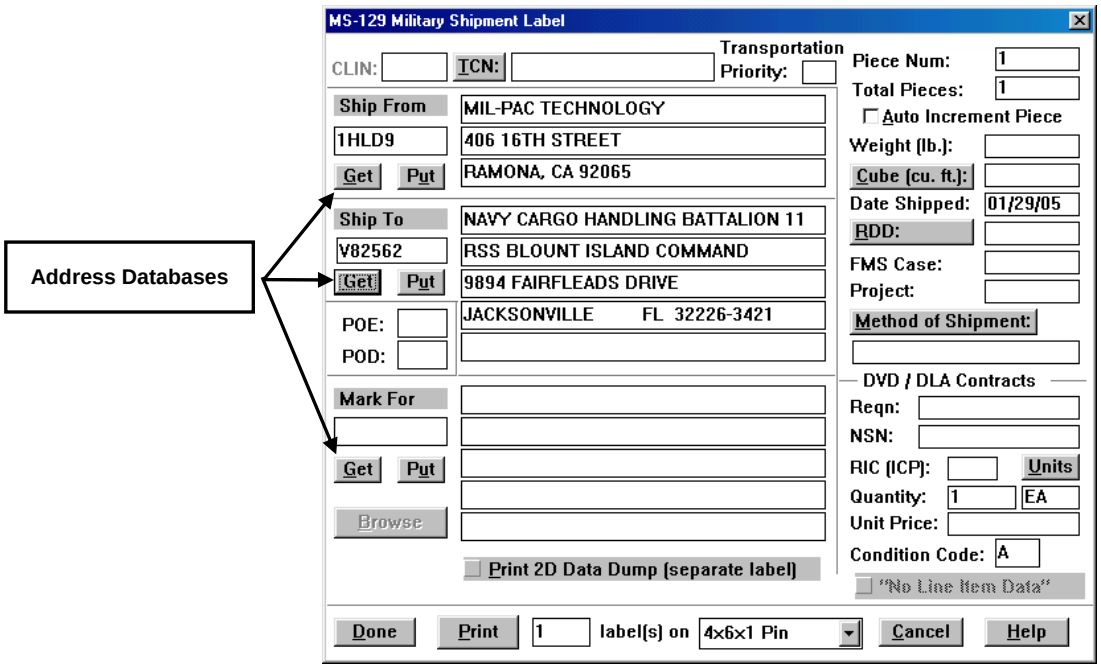
The easiest way to save data into the database is to enter the information into a label format editor as you create a label, then click on [Save Part]. You can also click on [Copy] or [New] while browsing the database.

Once saved, the item can be retrieved by either the NSN or the Part Number, or by clicking on [Browse] to scan through the items in the database.

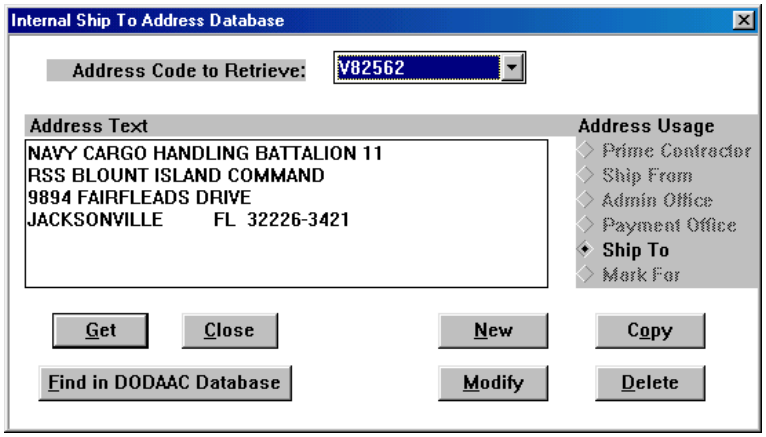
The fastest way is to simply enter the NSN or Part Number into the appropriate field on a label and click on either [**Find NSN**] or [**Part Num**], respectively. Clicking on either of those buttons when the corresponding field is blank will bring up a list of Part Numbers / NSNs that you can browse through to find the item.



Address Databases

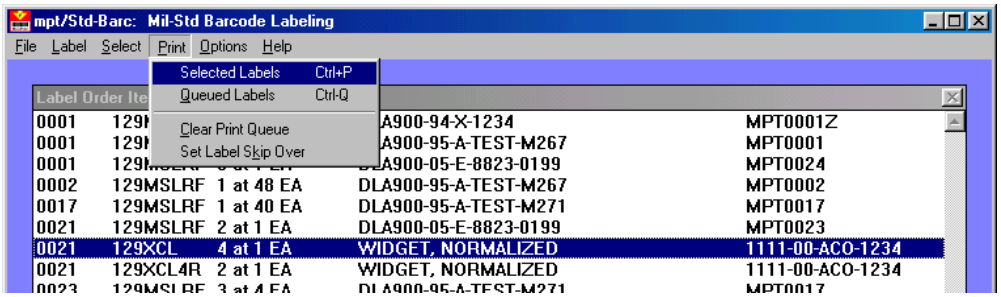


Each of the address blocks is supported by the Address Database. The Military Shipment Label has three address blocks. With a **[Get]** and **[Put]** for each address. To save a part, simply enter the address and its CAGE or DODAAC into the appropriate block, and then click on **[Put]**. Clicking on **[Get]** will retrieve the address stored for the Address ID (CAGE or DODAAC). If the Address ID is blank you will be shown the address browser, from which you can select an address.



Printing Labels

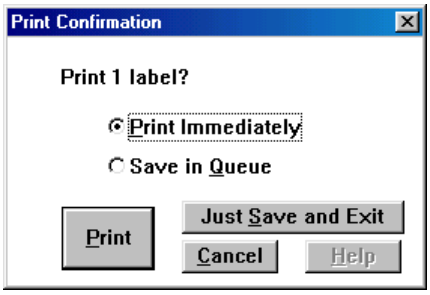
There are two ways to print labels in Std-Barc, the first of which is to select a label from the list, and then select **Print > Selected Labels**. This example will print four “1 EA” Exterior Container (129XCL) Labels.



The other way to print labels is to do so while editing the label. We double-clicked on the entry above, to bring up the label. Now just click on the [**Print**] button. The number of labels to be printed is next to the [**Print**] button. In both cases we would get the same result, four labels with the quantity “1 EA” on them, printed on 2”x4” Laser stock.

Printing Immediately or To Queue

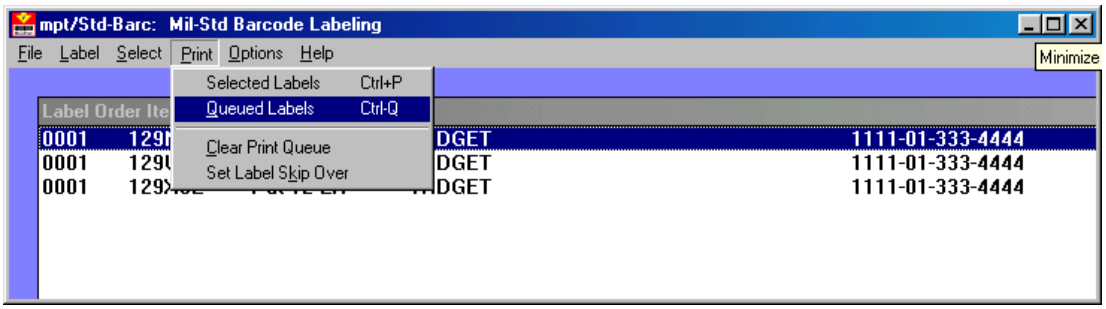
You may have noticed that each time you print you are presented with a choice:



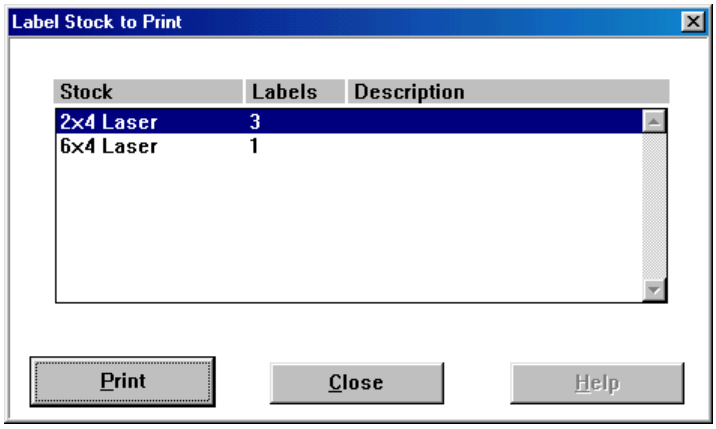
The *Print Immediately* option does just that, immediately sending the label to the printer. However, one of the handy features of Std-Barc is its ability to collect labels in its queue, also referred to as a SPOOL. Doing this allows you to print some Unit labels, then some Exterior labels and Serial Number labels, and finally some NCC labels, and have Std-Barc print them all on the same label sheet, or at least as few label sheets as possible. This saves time and

money. If you are printing labels of different sizes, Std-Barc will collect them for printing on the appropriate label stock.

Once you have queued up all the labels you want to print, simply use the **Print > Queued Labels** command to print them out:



Selecting **Print > Queued Labels** brings up the *Label Stock to Print* dialog. In the example shown below, we can see that there are three labels waiting in the queue to be printed on 2x4-inch laser stock. We can also see one 6x4-inch label is waiting. That was a Military Shipment Label that we had sent to the queue earlier. You can also use this handy feature of Std-Barc to gather up labels for multiple shipments, allowing you to minimize the number of label sheets used on small shipments.



Another way to collect different labels onto the same page is to select multiple labels you want to print, then select the **Print > Selected Labels** command.

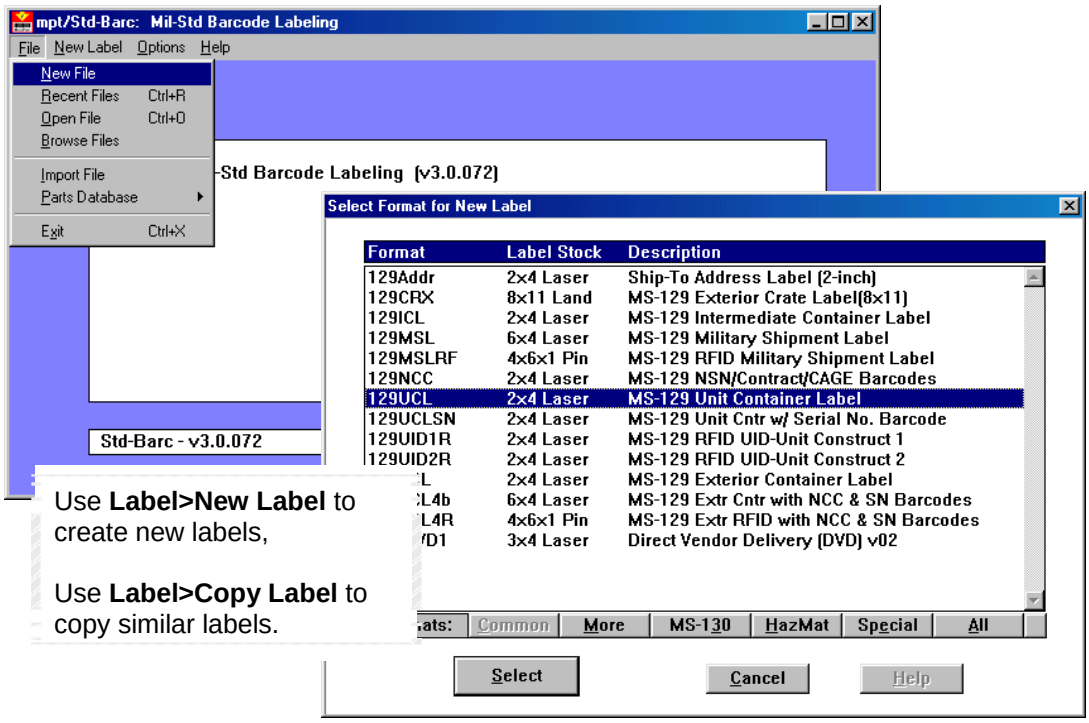
Creating a Label File

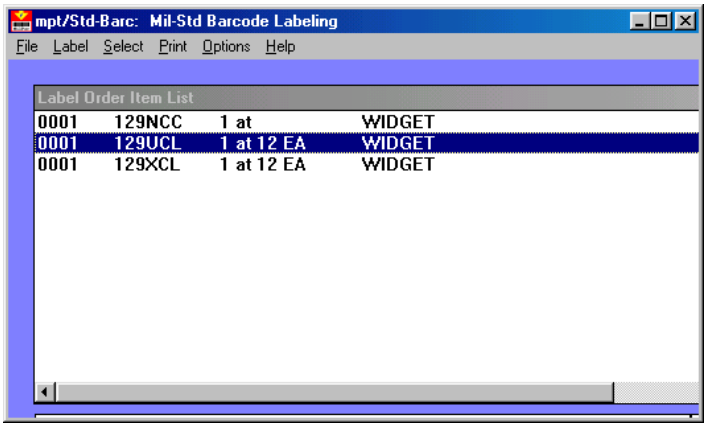
There are several different ways to create a set of labels in Std-Barc:

- **Starting with a Blank File:** Creates an empty file with new labels created from information entered by the user.
- **Copying an Existing Label File:** The Std-Barc user can take advantage of data entered for similar shipments by recycling an existing label file.
- **Importing Mil-Pac DD250s:** This method allows the user to eliminate almost all data entry by utilizing the shipment data that has already been entered onto a DD250 created by any Mil-Pac DD250 product; i.e. FormStation, DD-Master, ShipMan and EDiForm.
- **Importing Data From Other Systems:** Std-Barc can create a label order from shipment data supplied by other business and enterprise systems in plain-text format.

Starting with a New Label File

Use the **File > New File** to manually create a new label file (then **Label > New Label**):



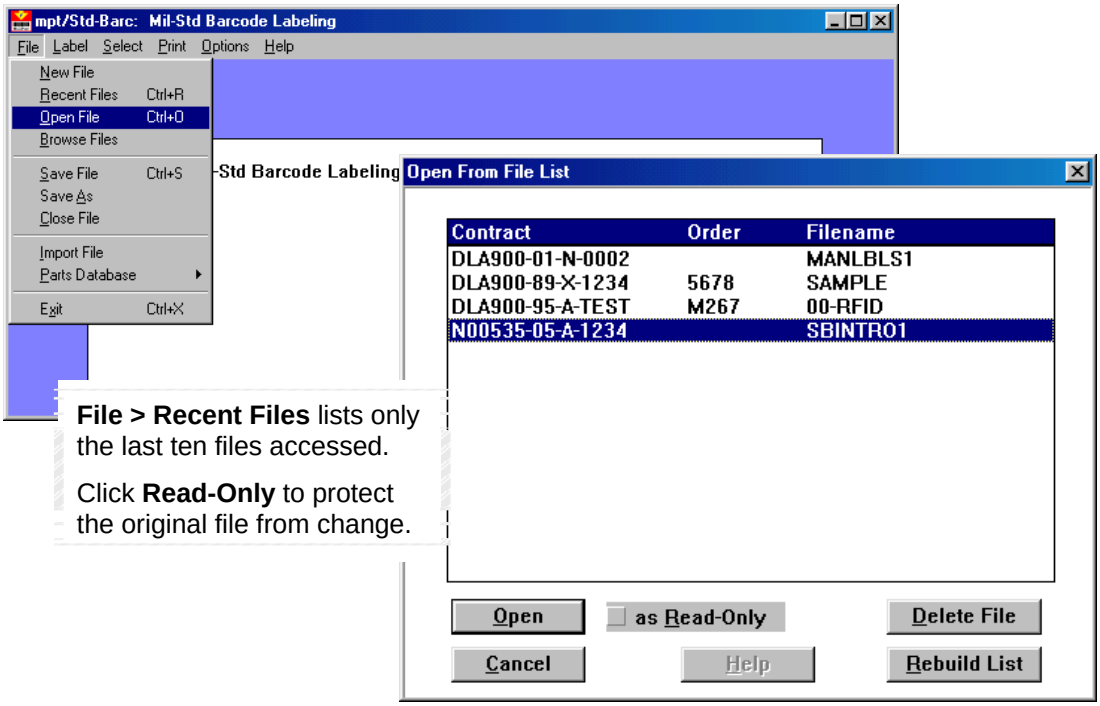


You can save your set of labels when you are done, using **File>Save**. Or just throw them away by starting a new set (File>New, Open, Browse) or exiting out of Std-Barc.

File names are limited in length (with a maximum of eight characters, no spaces, etc.). However, it easy to find them by contract, TCN or by picking from the Recent Files list.

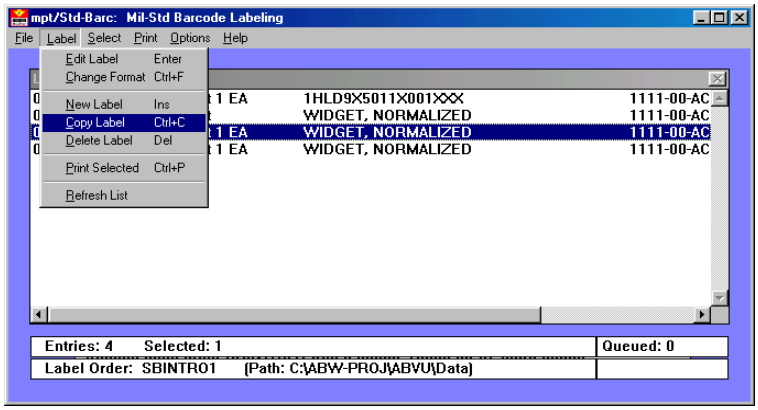
Copying an Existing Label File

One quick way to create labels is to use labels from a previous shipment, or a template file that you might have created. Open the file with **File > Open File** or **File > Recent Files**. You will be presented with a list of files, ordered by contract and order number. The Browse command allows you to search by file name, and in folders other than your designated data directory.



File > Recent Files lists only the last ten files accessed.

Click **Read-Only** to protect the original file from change.

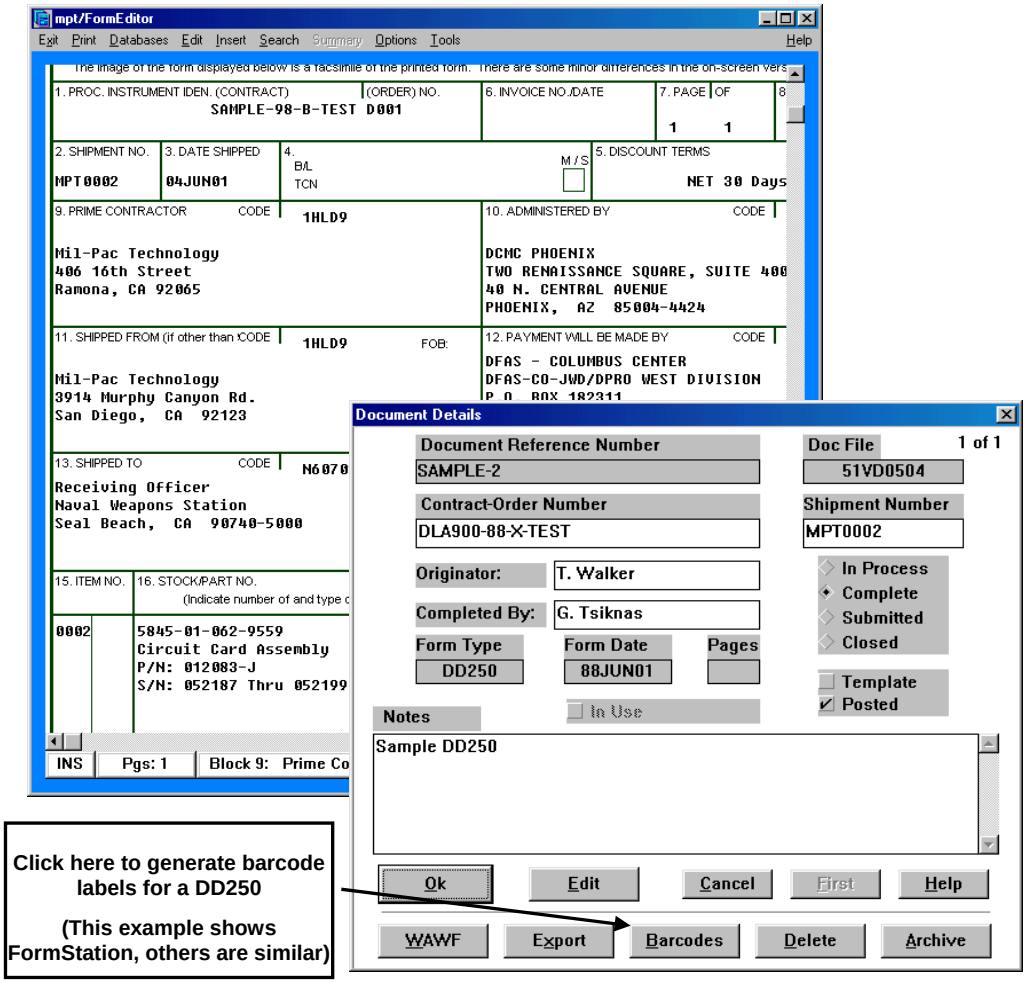


With your template file open, you can either change the existing labels and reprint them, or use **Label > Copy Label** to create new versions of existing labels.

Generating Labels from Mil-Pac DD250s

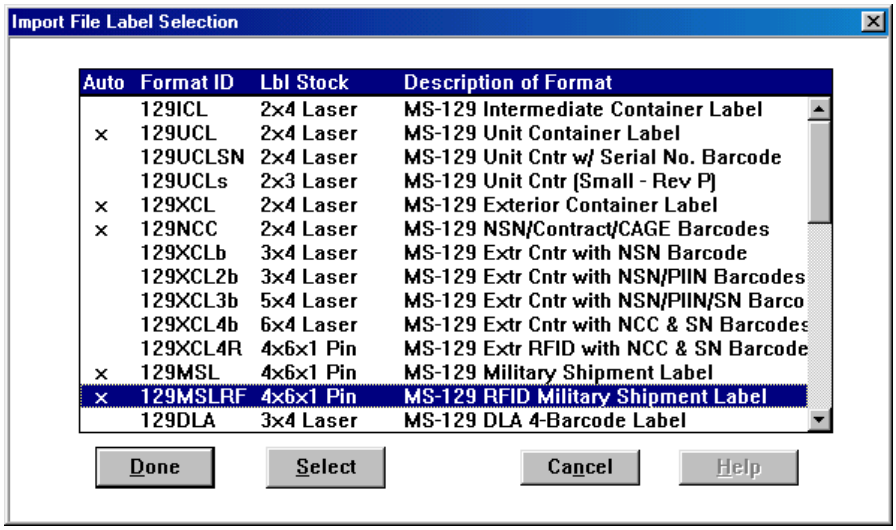
Std-Barc has been designed to take utmost advantage of DD250 documents created by FormStation and DD-Master. Given that most of the data on Mil-Std-129/130 labels is found on a DD250, this capability can save a considerable amount of time and eliminate costly data-entry errors.

All Mil-Pac DD250 products can easily send their DD250s to Std-Barc. The DD250 programs can run Std-Barc itself to quickly create the labels for a shipment, provided both programs are on the same PC. Or the DD250 can simply be deposited into Std-Barc's In-Box for later processing, at the user's convenience. If Std-Barc is on a different machine than the originator, the DD250 must be placed into the Std-Barc In-Box, which would simply be a shared network folder.

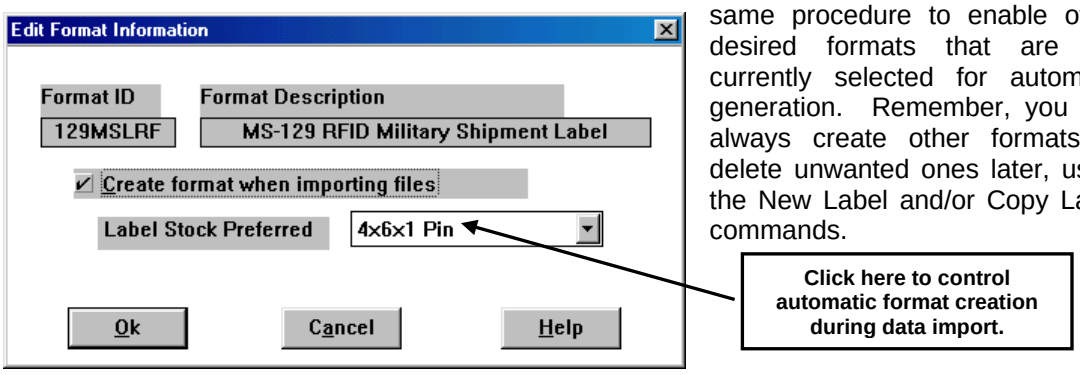


Selecting Labels to Automatically Create

The first thing Std-Barc does with an imported file is to confirm which label formats you wish to create. The 'x' in the right column in the figure indicate that for each item in the DD250, Std-Barc will create Unit Container, Exterior Container and Exterior Barcoded NSN-Contract-CAGE (NCC) labels, along with both the standard and RFID version of the Military Shipment Label (MSL).

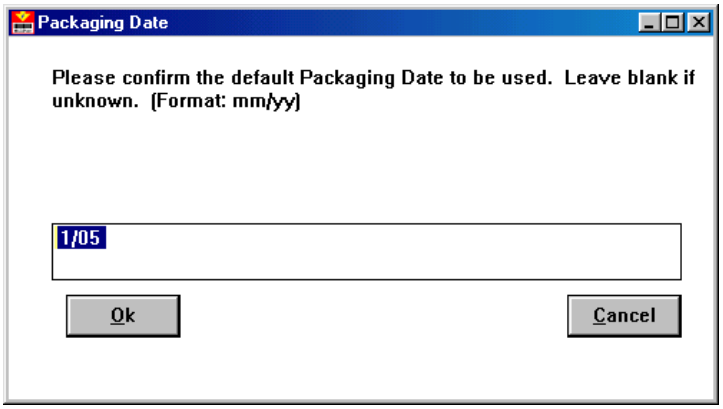


We do not need both kinds of Military Shipment Label, so we will turn off the RFID version for now. Do this by double-clicking on the ***RFID Military Shipment Label*** line (or click once, then click on [Select]). Click off the ***Create format when importing files*** option. Use the same procedure to enable other desired formats that are not currently selected for automatic generation. Remember, you can always create other formats or delete unwanted ones later, using the New Label and/or Copy Label commands.



Click on [**Done**] when you are satisfied with the label formats selected for automatic generation from the imported data. Then, there are just a couple more easy steps.

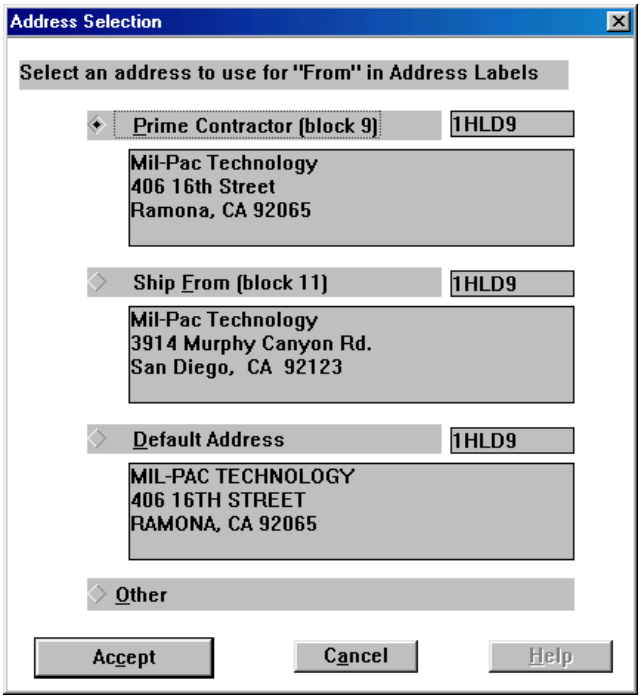
Hint: You can set up the default selection of labels to created during import, in the **Options > Labels** dialog. You can also select the default label stock for each.



Before automatically generating labels from imported data, Std-Barc will ask you to supply a couple more pieces of data. The first is Packaging Date, which is something not normally found on a DD250 or in imported data. This date, expressed MM/YY, is the date when the Mil-Std-2073 Method of Preservation was applied to the item(s), as required by the contract. If Mil-Std packaging was not required, simply enter the date of packaging. For your convenience, this date will be applied to each label format generated, but can be set individually for each label.

We must also quickly verify the Ship From address to be used on the Military Shipment Label. It is not always possible to accurately determine this address from imported data, so Std-Barc will make its best guess, and leave it to the user to confirm the address to be used.

Hint: The Default Ship-From Address is created in **Options > Defaults.**



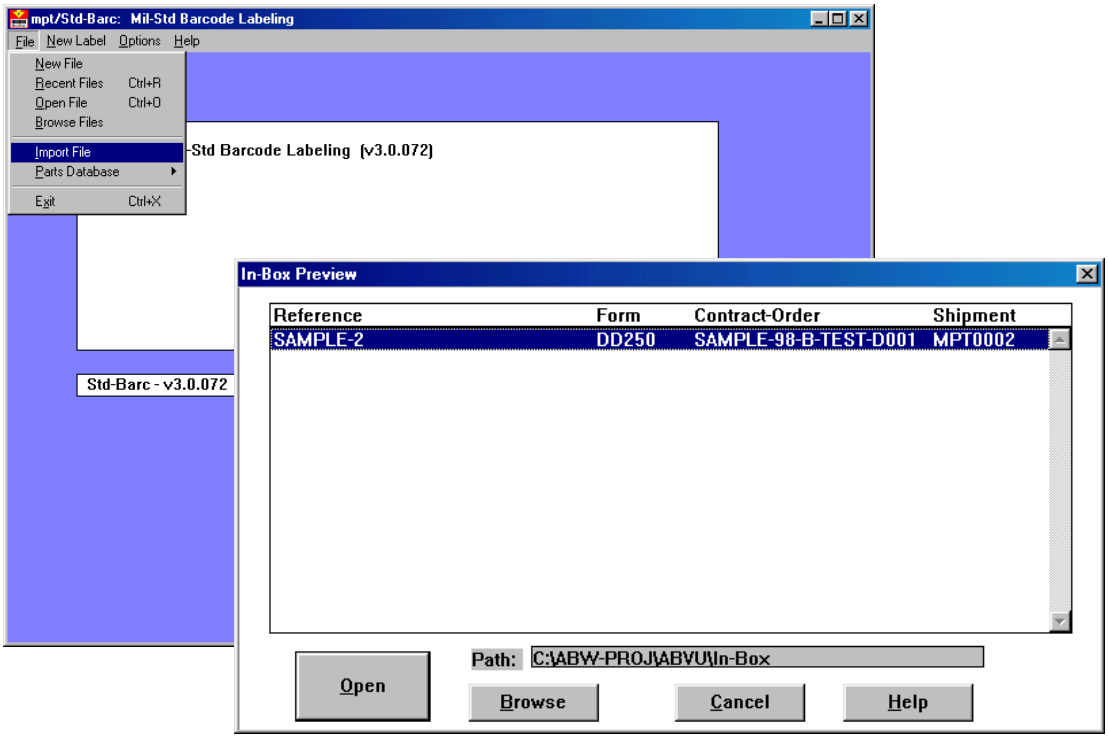
Printing Automatically Generated Labels

With a few clicks you can go from a DD250 to all the barcode labels for a shipment, and with a simple **Print > Selected Labels**, you could be done. Although first, you should review each label to make sure the data is correct. For some formats, you will still need to add some data, such as Weight on the Exterior Container Label, and several fields on the Military Shipment Label. Then you can print them all.

Manually Selecting Files to Import

You may find it is easier to just send DD250 files to Std-Barc, and then open them later to create labels. When the DD250s are created on a different machine, this is the only option.

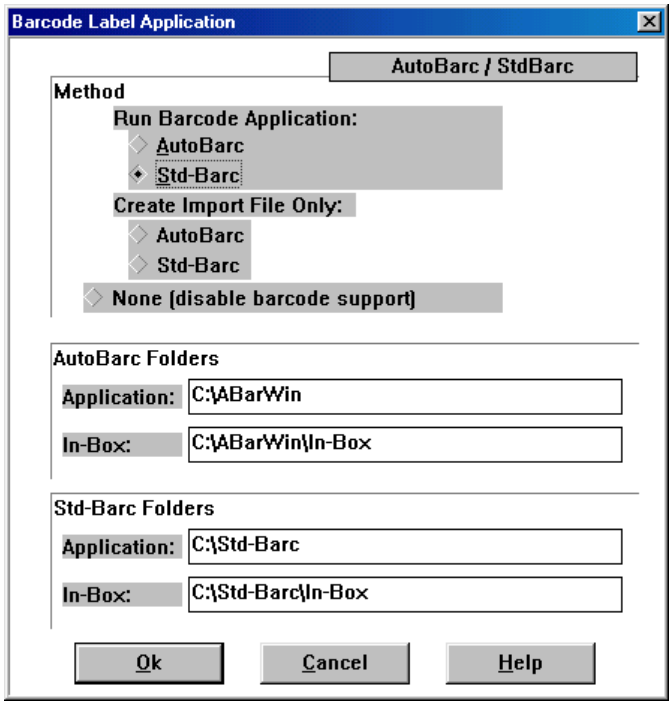
To open a file that has been placed in the Std-Barc In-Box, just select **File > Import File**. A list of the data files, by Contract, Order and Shipment numbers, along with a Reference Number that may have been assigned are listed in the In-Box Preview.



Import data files that are not located in the Std-Barc In-Box can be located and opened using the [Browse] button. Be careful using this feature, because Std-Barc may delete import files once it has processed it.

Configuring Mil-Pac DD250 Software

Mil-Pac DD250 products (FormStation and DD-Master) come ready to send DD250s to Std-Barc for automated label generation. This feature is generally disabled by default (the None option checked) so as to prevent any undesired results should the [Barcodes] button be clicked accidentally.



As an example, to configure FormStation go to its **Options > Barcoding** dialog. Click on the **Std-Barc** option of *Run Barcode Application*. If you would rather just export the data to Std-Barc to be processed later, or if Std-Barc is on a different machine, click on **Std-Barc** under *Create Import File Only*. Some earlier versions of DD250 software may not have an option to allow you to run Std-Barc, and thus, your choice would be to create *Create Import File Only*, sending the data to C:\Std-Barc\In-Box.

When Std-Barc and the DD250 software are on different machines it will be necessary to create a shared network folder for the purposes of passing the DD250 to Std-Barc. The network folder should be mapped so that it can be addressed with a drive letter and 8.3-style path names, e.g. S:\shipping\labels\in-box.

The Std-Barc user must have read-write permission for the In-Box folder so that Std-Barc can delete import files as they are processed. Otherwise, the list of files to be processed will continue to grow.

Importing From Other Systems

Std-Barc supports several different methods of importing data from non-Mil-Pac systems, both to generate labels for a shipment, and to populate its parts and address databases.

Importing Data for Shipment Labels

Std-Barc's plain-text import capability allows users of other software, including enterprise systems, to automatically create Mil-Std-129 labels for a shipment. Supplied with externally generated address and line item data, Std-Barc can greatly speed label generation and increase its accuracy. This capability makes Std-Barc an excellent back-end barcode labeling application.

Data can be passed into Std-Barc in a plain-text file, in what is referred to as M12 format, defined in the *Import File Specification* found on the Mil-Pac Technology website. Your software may not be able to export data in the M12 format. In this case, you may need to contact your technical support provider or Mil-Pac Technical Support for help with interfacing your system. A simple utility program may be necessary to convert data from a third-party application. Import filters for Excel/Access type comma separated (CSV) files are available upon request.

The first step before importing data from another system is to designate a directory in which to receive imported files, then inform Std-Barc to look there. Do this by setting the **Options > Directories** *In-Box* to this directory path (see *Directory Locations*). If both applications are on the same computer, simply use the In-Box directory path that is created when Std-Barc is installed (normally **C:\Std-Barc\In-Box**). Imported data can also be provided on a floppy disk. Directory paths should be to mapped drives, and expressed in legacy 8.3 format, e.g. X:\shared\shipping\label\in-box.

To process an imported file, start by using the **File > Import File** command. A list of files waiting in the In-Box will be shown. Select one of them and a new label order will be created from the file's data.

Refer to the previous section entitled **Selecting Labels to Automatically Create**, for more details on the use of imported shipment data.

Importing Into Parts Database

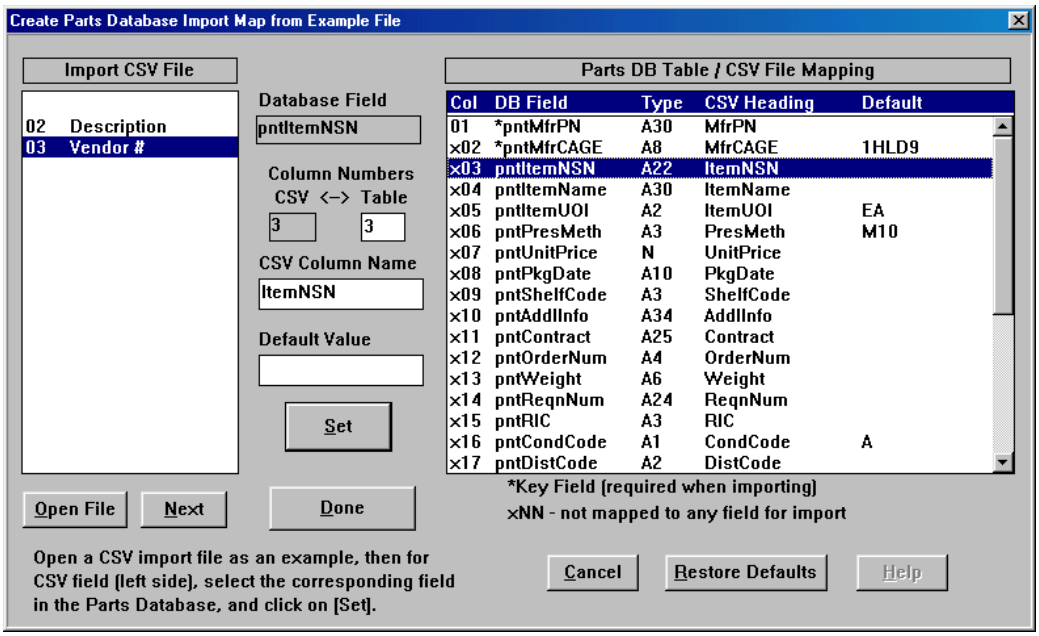
Std-Barc can import data in Excel/Access type comma separated (CSV) files into its Parts Database File data columns can be in any order, such as:

```
Part Number,Description,NSN
12549784,LOCK ASSEMBLY,1992-01-233-1223
12901254,"BOX,AMMUNITION STOW",1992-01-233-8887
12549108,"CHUTE,AMMUNITION",1946-01-552-1996
12549716,TRIGGER ASSEMBLY,1992-01-538-0087
12932161,"SUPPORT,CHUTE AMMUN",1255-01-669-4423
```

with column headings optional. The import file does not have to have all of the same data fields as the database itself. Use the Import File Mapper to interface the file.

Import File Mapping

The Import File Mapping enables Std-Barc to relate each column of import data to the fields in the Parts Database. The figure below shows after we have opened the file on the previous page. The left windowpane shows the columns in the file. The right pane shows all of the Parts Database fields. Column numbers starting with an 'x' have yet to be mapped, and are displayed with their default mappings.



The example above, the Part Number columns (01) have already mapped. We are about to map the import column named *Vendor* # (03) with the database field pntItemNSN (x03).

Clicking [**Set**] would do so. Next we would match *Description* (02) with *pntItemName* (x04) and click again on [**Set**].

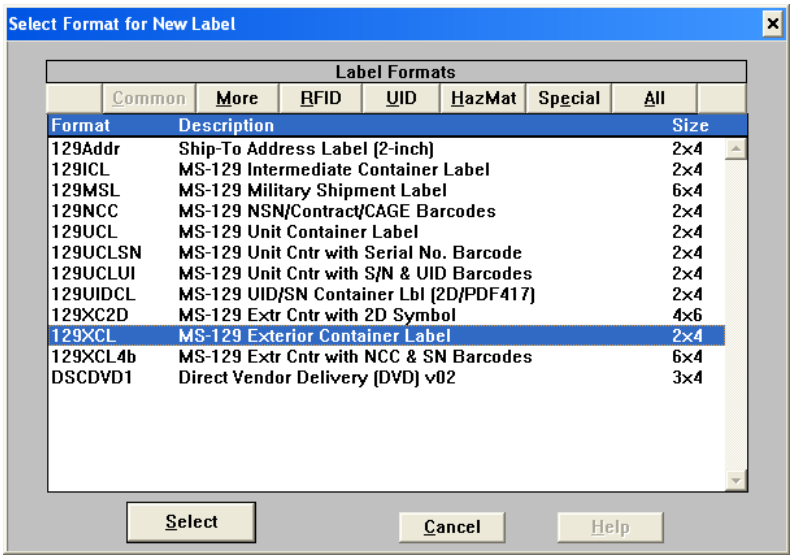
If your import file does not have column headings, you will be shown an a row of data to use for mapping purposes. You can click on [**Next**] to cycle through import data records to find one with data that you can recognize.

It is not necessary to supply import data for every database field. For some fields it makes sense to use default values. To do this, select the database field in the right pane, and then enter a value into *Default Value*, and click on [**Set**]. This has already been done in the example for *MfrCAGE*, *Item UOI*, *Preservation Method*, and *Condition Code*.

The CSV Heading is the column heading (first line) that would be generated for each field when exporting the Parts Database.

Label Formats

There are many different label formats to select from whenever you create a new blank label, create a copy of a label, or change the format of an existing label. The Label Stock Column shows the default for each format. It can be changed for each individual instance of a label format. The default label stock for each format is set in Options > Labels.



Label formats are categorized into order to make finding them easier. Click on one of the category buttons: [**More**], [**RFID**] , [**HazMat**] or [**Special**] to see other categories. Click on [**Common**] to return to the list above. Clicking on the [**All**] button will display all categories.

A list of currently supported label formats starts on the next page.

Std-Barc Label Formats

This list may vary somewhat from your software version, as Mil-Pac maintains the formats meet current defense industry requirements. At the time this manual was published the following formats were supported:

Format ID	Horizontal Dimension	Vertical Dimension	Format Description
Unit Containers			
129UCL	4.00	2.00	MS-129 Unit Container Label
129UCLSN	4.00	3.00	MS-129 Unit Cntr, Barcoded SN
129UCLUI	4.00	3.00	MS-129 Unit Cntr, Barcoded SN/UID
129UCLs	2.66	2.00	MS-129 Small Unit Cntr Label
129UCL	3.00	2.00	MS-129 Small Unit Cntr Label
129UID1R	4.00	1.00	MS-129 RFID UID-Unit Construct 1
129UID2R	4.00	1.00	MS-129 RFID UID-Unit Construct 2
Intermediate Containers			
129ICL	4.00	2.00	MS-129 Intermediate Cntr Label
Exterior Containers			
129XCL	3.90	2.00	MS-129 Exterior Container Label
129XCLb	3.90	3.00	MS-129 Extr Cntr with NSN Barcode
129XCL2b	3.90	3.00	MS-129 Extr Cntr with NSN/PIIN Barcodes
129XCL	3.00	2.00	MS-129 Exterior Container Label
129XCLb	3.00	3.00	MS-129 Extr Cntr with NSN Barcode
129XCL2b	3.00	3.00	MS-129 Extr Cntr with NSN/PIIN Barcodes
129XCL3b	4.00	6.00	MS-129 Extr Cntr with NSN/PIIN/SN Barcodes
129XCL4b	4.00	6.00	MS-129 Extr with NSN/PIIN/CAGE/SN Barcodes
129XCL4b	4.00	5.00	MS-129 Extr with NSN/PIIN/CAGE/SN Barcodes
129XCL4R	4.00	6.00	MS-129 Extr with NSN/PIIN/CAGE/SN Barcodes
129XCL4R	4.00	5.00	MS-129 Extr with NSN/PIIN/CAGE/SN Barcodes
129XC2D	4.00	4.00	MS-129 Extr Cntr with 2D Symbol
129XC2DR	4.00	4.00	MS-129 Extr Cntr with 2D Symbol
129NCC	3.90	2.00	MS-129 NSN/Contract/CAGE Barcodes
129NCC	3.90	3.00	MS-129 NSN/Contract/CAGE Barcodes
129NCC	2.90	2.00	MS-129 NSN/Contract/CAGE Barcodes
129NCC	2.90	3.00	MS-129 NSN/Contract/CAGE Barcodes
129NCCRF	3.90	2.00	MS-129 NSN/Contract/CAGE Barcodes(RF)
129NCCRF	3.90	3.00	MS-129 NSN/Contract/CAGE Barcodes(RF)
129SNL	8.00	10.00	Mil-Std-129 Barcoded Serial Number List
129CRX	8.00	10.00	MS-129 Exterior Crate Label(8x11)
129CRXCT	8.00	10.00	MS-129 Clothing/Textiles Crate Label(8x11)
Hazardous Material			
129HXCSN	3.90	3.00	MS-129 HazMat Exterior Cntr Label
129HXC	3.90	2.00	MS-129 HazMat Extr Cntr - No SerNo
129Ammo1	4.00	4.00	Ammo/Explosives Load Label
Military Shipment Labels (MSL)			

Format ID	Horizontal Dimension	Vertical Dimension	Format Description
129MSL	4.00	6.00	MS-129 Military Shipment Label
129MSLRF	4.00	6.00	MS-129 RFID Military Shipment Label
DLA and DVD			
129DLA	4.00	3.00	MS-129 DLA 4-Bar Label
129DLA	4.00	2.00	MS-129 DLA 4-Bar Label
DSCDVD1	4.00	2.00	DVD Label(MS-129P)
DSCDVD1	4.00	3.00	DVD Label(MS-129P)
GSA-XCL	4.00	6.00	GSA Extr Cntr / Trans Pkg Label
UID			
130UID1	4.00	2.00	MS-130 UID Construct 1
130UID1H	4.00	1.00	MS-130 UID Construct 1H
130UID1	3.00	2.00	MS-130 UID Construct 1
130UID1H	3.00	1.00	MS-130 UID Construct 1H
130UID2	4.00	2.00	MS-130 UID Construct 2
130UID2H	4.00	1.00	MS-130 UID Construct 2H
130UID2	3.00	2.00	MS-130 UID Construct 2
130UID2H	3.00	1.00	MS-130 UID Construct 2H
130UID1D	1.00	0.00	MS-130 UID Mark-Only Type 1
130UID2D	1.00	0.00	MS-130 UID Mark-Only Type 2
130CPNH	3.00	1.00	MS-130 UID Current Part Num H
130CPN	4.00	1.00	MS-130 UID Current Part Num
130CPN	3.00	1.00	MS-130 UID Current Part Num
130CPNH	4.00	1.00	MS-130 UID Current Part Num H
129UIDCL	4.00	2.00	UID 2D Label
Miscellaneous			
129Item	4.00	1.00	MS-129 Item NSN Label
129Item	4.00	2.00	MS-129 Item NSN Label
129Addr	4.00	2.00	MS-129 Ship-To Address Label
129Ship2	4.00	3.00	MS-129 Ship-To/MarkFor Label
Gen3BC	4.00	2.00	Generic 3 Barcode Label
Gen4BC	4.00	3.00	Generic 4 Barcode Label
Gen3NoHR	4.00	2.00	Generic 3 Barcode (No HRI)
Gen4NoHR	4.00	3.00	Generic 4 Barcode (No HRI)
Gen4BC	4.00	6.00	Generic 4 Barcode Label
AutoTxt1	4.00	6.00	Auto-Fill Text Label (Internal Use)
GenTxt-0	4.00	2.00	General Purpose Text Label
GenTxt-1	4.00	2.00	General Purpose Label with 1 Barcode
GenTxt-2	4.00	3.00	General Purpose Label with 2 Barcode2

Format ID	Horizontal Dimension	Vertical Dimension	Format Description
GenTxt-2	4.00	2.00	General Purpose Label with 2 Barcode2
SNTxtD1	4.00	2.00	Generic S/N Barcode Label (DRS Variant)
ArmyInv1	3.00	1.00	Army Inventory Tag (Style 1)
Boe3-301	4.00	6.00	Boeing 3.301B (Douglas) Shipping Label
Oshkosh1	4.00	6.00	Oshkosh Basic Label
Generic RFID			
129RFTag	4.00	2.00	MS-129 Generic RFID Tag

Other Topics

RFID Labels

What makes an RFID label different from other labels is the very thin chip and antenna that are embedded in each label. These labels are designed to work with RFID readers, which send a radio frequency signal to the RF chip causing it to respond with some data. In the current DOD implementation, this data is simply an identifier (like a license plate) that you have assigned to a package that you have shipped.

RFID tags are really little different than the tracking number barcodes put on commercially shipped packages. But what makes them very useful to the DOD is the way they are used. When you send an RFID-tagged container, you must also tell DOD what is in the container, using an Advance Shipment Notice (ASN) or by entering the data into the WAWF web interface. When an RFID-tagged container arrives at the destination, the receiver knows that they have received a certain number of specific line items (CLIN) shipped in a specified shipment number for a specified contract number. All this without having to scan any barcodes on any boxes.

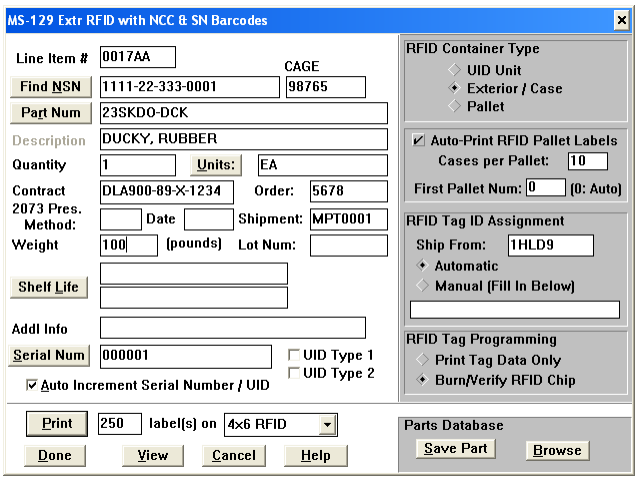
The actual appearance of a label with an RFID tag is not defined by Mil-Std-129. The tag itself is a thin strip approximately four inches by one-half inch. It can be a plain, unmarked tag, or it can be embedded in an Exterior Container Label (XCL) or Military Shipment Label (MSL). It can also be embedded in a generic non-Mil-Std-129 label.

Std-Barc supports a variety of RFID formats. Each approach has its own

advantages. Encoding the RFID tag at the same time the XCL and/or MSL is printed allows Std-Barc to collect the data necessary to create the Advance Shipment Notice (ASN), which is sent ahead of your shipment to inform the receiver of the contents of each pallet and container. The generic label formats can be independent of a specific contract and/or shipment, so they may be printed separately, and then applied as needed for different shipments and contracts.

Generating an RFID-tagged label is not as difficult as it may seem. It does require an RFID-capable printer. Std-Barc supports the most popular RFID printers.

The label editors for the RFID-tagged versions of the Exterior Container Label and the Military Shipment Label are distinguished by the RFID section on the right, which controls the RFID-chip programming.



The relevant controls to be set are:

RFID Container Type – is the type of container to which this RFID tag will be attached.

Auto-Print RFID Pallet Labels – See the separate section on this topic for details.

Ship From – is the CAGE code for the entity that is assigning the RFID-tags, and is responsible to ensure that they are unique. Generally, this will be the prime contractor. The nature of the ASN, however, makes it feasible for third-party shippers to assign RFID tags and submit ASNs for shipments without knowing many specific contract details.

RFID Tag ID Assignment – would generally be set to *Automatic*, allowing Std-Barc to sequentially allocate RFIDs. However, should you wish to use a specific ID, perhaps to create a replacement label, you can set this option to *Manual*, and fill in the blank.

RFID Tag Programming – determines whether or not the printer will be instructed to encode the embedded RF chip. Generally this will be set to *Burn/Verify RFID Chip*. However, if you are using a non-RFID thermal transfer printer and a separate encoder, set the option to *Print Tag Data Only*. The Print-Only option used with the Generic RFID-Tag format would allow you to use RFID encoders that can read the RFID from the linear barcode and use that ID for encoding the RF chip.

RFID Verification

RFID-capable thermal transfer printers include a reader as part of the encoder. This allows the printer to verify that the RFID data was successfully encoded in the tag. Std-Barc fully utilizes this feature, actually printing on the label the RFID that was read from the tag. Though the specifics vary with manufacturer, Std-Barc first encodes the RF chip with the tag number (ID), then reads the RFID tag and prints the ID on the label. Labels that fail verification are

automatically printed with VOID in place of the ID, or otherwise marked as invalid by the printer.

Advance Shipment Notice (ASN) Preparation

A requirement for RFID-compliance is the submittal to Wide Area Workflow (WAWF) of a list of the containers shipped, including the following data for each one:

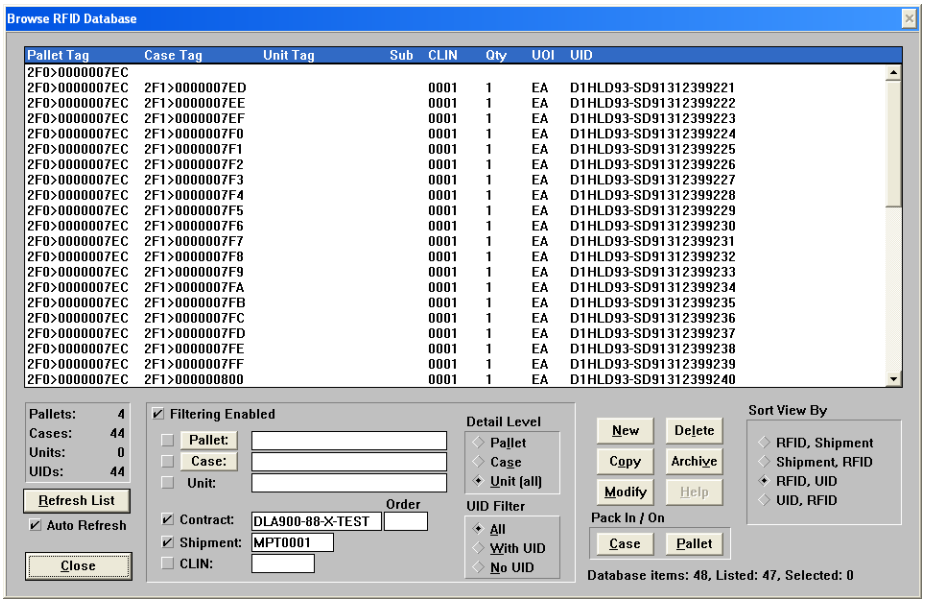
- RFID tag number
- Container Type (Pallet, Case or UID-Unit)
- Contract Line Item Number(s) (CLIN)
- Quantity of CLIN

When exterior containers (cases) are placed onto pallets, and/or when UID-Units are placed into cases, the relationship between all three RFID-tagged container types must also be submitted.

All of this data, referred to as the Load Configuration, is necessary to allow the receiving activity to know what is in each of the containers and on each of the pallets it receives. The Load Configuration can be manually entered into the WAWF web interface, or via an electronic transaction known as an Advance Shipment Notice (ASN).

Whenever Std-Barc generates an RFID-tagged label, it saves the contract and shipment information necessary to create the ASN. This data is then used by Mil-Pac's RFID Load Manager software to create and transmit the Advance Shipment Notice to WAWF.

To view and manage the RFID data saved by Std-Barc, click on File->Databases->RFID



Database->Browse RFID Pack Data.

This example shows a shipment of 44 cases on 4 pallets. Double-click any pallet or case for more information or to modify the entry.

Filtering Enabled is turned on by default and set to the current shipment. You can change these values to see different data, or turn filtering off altogether to see all data for all shipments.

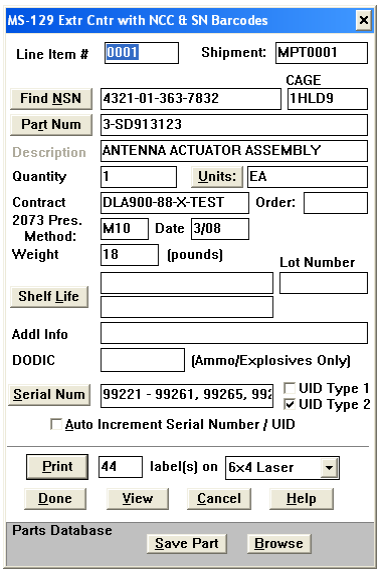
Select any one or more entries and click on the following buttons:

- Copy (may only be used on one pallet or case at a time) – creates a copy of the selected entry, allowing you to change data for the new entry.
- Modify – changes data for the selected entry, such as contract, order, shipment clin, quantity, unit of issue, and pallet or case assignment.
- Delete – permanently deletes the selected entries. NOTE: There is no reversing this action.
- Archive – permanently archives the selected entries. This can clean up the active list of RFID data, but still allow view-only access to the archived entries.
- Pack In/On (Case or Pallet) – Allows you to associate Unit RFID tags with Case or Pallet RFID tags, and to associated Case RFID tags with Pallet RFID tags. You can also break these associations.

Sort View By changes the sort order for the displayed data.

UID (Unique Identification)

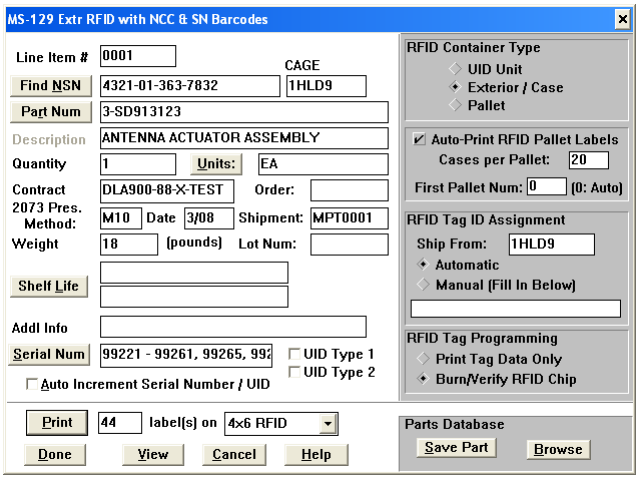
The government UID mandate consists of four basic elements—mark the part, mark the shipping container, register the UID, and perhaps to report how the UID shipment is configured. Mil-Pac software can assist with all of these elements. Std-Barc can print a limited number of part mark labels, has robust shipping container labeling capability and can associate UID data to RFID data when that is appropriate.



To print UID container labels, you can type serial numbers into a label editor or bring in serial numbers from a Mil-Pac Technology Forms Automation application (like DD-Master or DD-Formstation), as described in the section titled

Generating Labels from Mil-Pac DD250s on page 35. For UID Construct 2, simply check box "UID Type 2" to use the prime CAGE code, the CLIN part number and the list of serial numbers to generate a list of UIDs to print.

When a contract calls for both UID and RFID, the Advance Shipment Notice (described in section titled *Advance Shipment Notice (ASN) Preparation*, page 50) must contain both RFID and UID data. Std-Barc can automatically associate UIDs to the RFIDs. Simply print one RFID container label for each UID marked part. If you need to put more than one UID marked part in each RFID marked container, contact Mil-Pac Technology Technical Support for guidance.

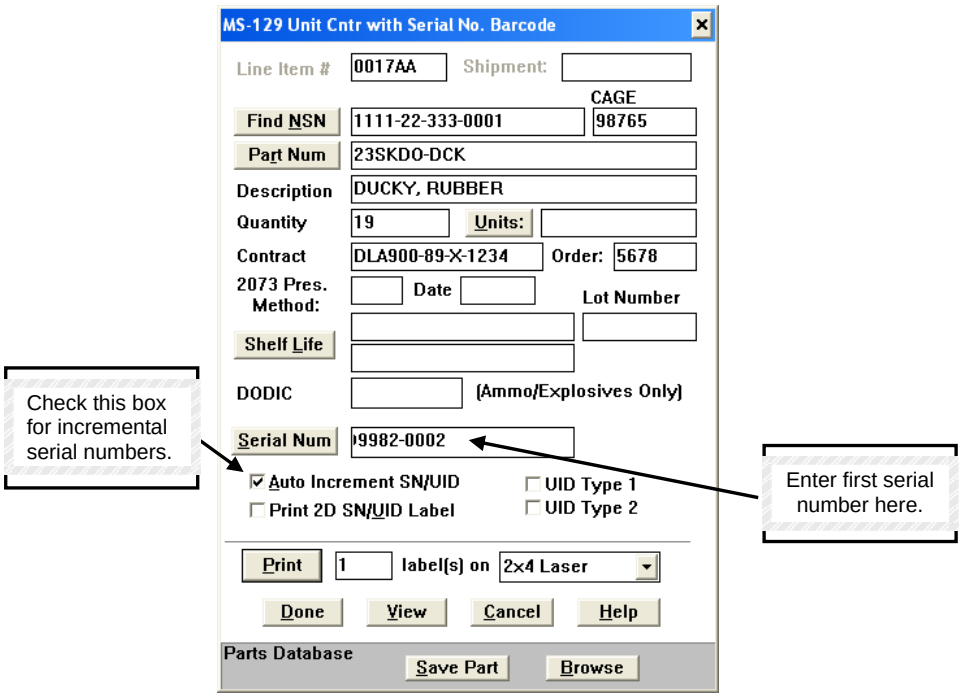


Serial Number Processing

Labels can be printed with serial numbers that are either sequentially generated or taken from a list. These serial numbers are entered with the other information describing an item using the Edit Line Item Data dialog.

Sequential Serial Number Generation

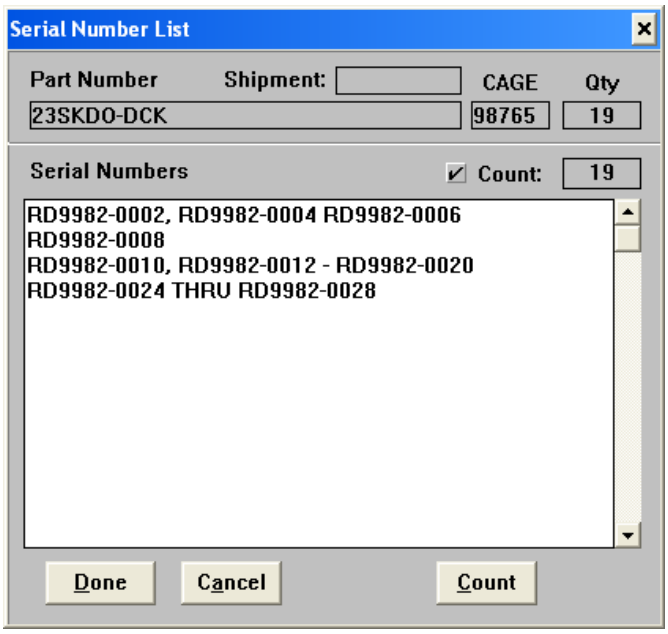
Std-Barc can automatically increment serial numbers, as long as they meet two criteria. They must be no more than twenty-five (25) characters in length, and the incremented part must be at the end of the string. The remainder can be composed of any other characters. Here are several examples: WDG001018; 351-135155; A-020535; or 01-BETA-01235.



To generate labels with sequential serial numbers, enter the first one in the **Serial Num** field and check the **Auto Increment S/N's** box. Std-Barc will increment the serial numbers as the labels are printed.

Non-Sequential Serial Numbers

Std-Barc can also handle lists of serial numbers that appear individually in any order and may include ranges of numbers. These are entered into Std-Barc by clicking on the **Serial Num** button, which brings up the Serial Number List dialog.



Individual numbers can be separated by spaces, commas or placed on individual lines. Ranges are separated by either a dash or the word “thru” with a space on either side. The following example represents several samples of acceptable styles of listing serial numbers.

Lists can be entered in any desired order and will print in the order they are entered. The list processor will count the items in the list and warn you if it does not match the quantity to be shipped. If ranges are used, they must meet the same criteria described for automatically incremented serial numbers; the numbers must be no more than twenty-five (25) characters in length, and the incremented part must be at the end of the string.

NOTE: The dash used to separate a range of serial numbers must be preceded and followed by a space. This is acceptable RD9982-0012 – RD9982-0020. This is not acceptable RD9982-0012–RD9982-0020. In the first example, RD9982-0012 is the first serial number in the range followed by space dash space and then followed by RD9982-0020, which is the last serial number in the range. In the second, unacceptable example, there are no spaces surrounding the dash, so Std-Barc just thinks that the range is one long serial number. Pay attention to the count field and compare that to the number of serial numbers that you expect.

Paradox Engine Configuration

Paradox Overview

Many Mil-Pac applications use Paradox databases to manage many types of data seen by the user. Generally speaking, Paradox Engine configuration must be considered only whenever one or more of the following conditions apply:

1. Databases are stored on a network and shared with others
2. Databases are moved to a new location or machine
3. Windows XP (or other versions requiring administrative rights) is used.

Paradox Engine Lock Files

Paradox creates two types of lock files in order to manage databases:

NET files - are used to identify the various users of a database, so as to know who is using each record. These files, referred to as the Network Control Files, are named PARADOX.NET and PDOXUSRS.NET.

LCK files - are hold the current locks placed on database records by the various users identified by the NET files. The LOCK files keep users from changing the same records simultaneously. These files are named PARADOX.LCK and PDOXUSRS.LCK.

These lock files are transient files and can be deleted without problem, as long as the databases are not currently in use. In many cases, obsolete or invalid lock files are the source of database access errors and simply removing them solves the problem.

Sharing Databases on a Network Drive

Sharing databases used by Mil-Pac applications is fairly simple, although the assistance of a network administrator may be required. First a network directory is defined that is accessible to all users. Then a drive mapping is established using a traditional eight-character directory path names, such as M:\Shipping\DD250s. This is entered into the General Configuration Options of the application to be shared.

Next the Paradox Engine must be told where to store its Network Control (.NET) File(s). This can be on any shared directory; one of the shared application data directories will work just fine. This can be set with the Mil-Pac PXConfig Tool.

Moving Databases to a New Machine or Network Location

Moving databases is simple, yet also the common cause of Paradox access errors. First it is important to remember that Paradox tables consist of at least two, and often three files, all with the same name. The extensions of these files are .PX, .DB and .MB. The FormStation directory consists of, for example, FS-IDX.PX, FS-IDX.DB and FS-IDX.MB. In some rare cases there will not be an MB file. It is important to move the entire set of files at the same time.

The final step is to remove the lock files. as they will cause the database to be inaccessible in its new location. The PXConfig Configuration Dialog can do this for you.

These same steps should be followed when moving a database from a local drive to a network directory. First it is important to follow the steps on database sharing above.

Using Paradox on Windows XP

Paradox-based applications such as Mil-Pac software will work on Windows XP. However, if you are not are operating with administrator privileges, the default Paradox configuration must first be altered. This is something that is simple to do with PXConfig.

The problem with Paradox and XP is that Paradox wants to store its Network Control (.NET) files in the root directory, which XP does not like, and in order to change that the application must change WIN.INI, something that XP allows only administrators to do.

To solve these two problems, run PXConfig as the administrator (right-click on icon, and select Run-As), then:

1. Click on [Copy Data Path] which will tell Paradox to use the application database folder for its Network Control (.NET) files.
2. Click on [Remove Lock Files] to remove any persistent lock files.

Once the Paradox Engine is set to put its Network Control Files in other than the root directory, the application should work fine. Of course, locating the database and the Network Control Files on a shared network drive by following the steps above works as well.

Glossary of Std-Barc Terms

CAGE

A **C**ommercial **a**nd **G**overnment **E**ntity (CAGE) is the code assigned by the Government to identify an address of a commercial or government entity. Formally referred to as FSCM codes. See also: DODAAC.

Contract Line Item (CLIN)

The Contract Line Item (Number) is the basic deliverable unit of a contract, designating a single NSN or item description. The CLIN can be found in the contract schedule immediately to the left of the NSN and/or item description. CLINs are always four numeric digits, from '0001' to '9999'. Sub-CLINs are noted by the addition of two alphabetic characters at the end of the CLIN, e.g. '0001AB'.

Contract Sub-line Item (Sub-CLIN)

Contract sub-line items provide a further subdivision of the basic contract line item when it is necessary for contract performance or administration purposes to separately identify subordinate requirements. There are only two categories of contract sub-lines:

(a) The first category comprises those sub-line items that are included in the PIIN for information purposes only and are identified by a numeric suffix. These sub-line items are an integral part of the associated contract line item but shall not be scheduled separately for delivery, separately identified for shipment or performance or separately priced for payment purposes.

(b) The second category comprises those sub-line items that have a separate delivery schedule, require separate identification at the time of shipment or performance and/or are separately priced for payment purposes. These sub-line items are identified by an alpha suffix.

DD-FormStation

DD-FormStation is a Mil-Pac Technology electronic forms application, which generates documents on forms such as the DD250 and DD1149. DD250s created by the DD-FormStation can be imported into the Std-Barc to automatically generate LOGMARS labels.

DODAAC

A **D**epartment **o**f **D**efense **A**ctivity **A**ddress **C**ode (DoDAAC) is a distinct six-position alphanumeric code assigned to identify specific units, activities, or organizations as found in the Department of Defense Activity Address Directory. The DoDAAC may also be found in the acquisition document “SHIP TO” information.

In-Box (Std-Barc)

The In-Box is a shared directory, usually on a network in which other applications can deposit a data file to be imported into Std-Barc. If these other applications are on the same computer, the In-Box that is created when Std-Barc is installed can be used. See *Directory Locations* in the Guide to Dialogs section for information on setting up the In-Box.

Label Order

The term label order originated in Std-Barc, and refers to all of the labels required for a single shipment. They generally share common data items such as Contract Number, Prime Contractor and Contractor Address. Each label order is stored in a separate file, named by the user.

National Stock Number (NSN)

The National Stock Number identifies a contract deliverable unit according to a standard catalog of items and services.

Noun

The Noun is a shorthand term for “descriptive noun of the item nomenclature”, which generally appears on the first line of a CLIN or ELIN description in block 16 of a DD250. This field should be completed, as it is to appear on shipping documents, such as the DD250.

PIIN / SPIIN

The PIIN and SPIIN are the abbreviations for Procurement Instrument Identification Number and the Supplemental Procurement Instrument Identification Number. Together they serve to identify the contract against which your shipments are credited by the paying office and the receiving activity. These numbers appear in the contract on the upper part of the face page.

QUP / QIP / QEP

These are the abbreviations for Quantities per Unit, Intermediate and Exterior Packages, respectively. For an example, a case of eggs may come in unit packages of a dozen (QUP = 12). Six unit packages (dozens) might be placed in an intermediate container, such as a cardboard box for protection (QUP = 12 x 6 = 72). Then four intermediate boxes packed together in an exterior package to make up a case (QUP = 72 x 4 = 288).

Queue (Print)

A queue is a list of labels that are waiting to be printed.

Troubleshooting

Error Messages

The troubleshooting information is provided here to help you resolve problems you may encounter while using Std-Barc. We encourage you to make full use of Mil-Pac Technical Support should the resolution to your problem not be apparent.

Error Message: **Fatal error initializing Paradox Engine (134)**

Problem: The Paradox Engine has not been proper configured.

Solution: The Paradox Engine is used by Std-Barc to manage some of its underlying databases. Paradox relies on a Network Control File for managing access to the database tables. By default, Paradox wants this to be in the root directory of the C drive, which Windows no longer allows. Run **Options > Paradox Engine**, which will automatically correct this. On some systems, you will have to run Std-Barc as the administrator for this to be effect. To do this, right-click on the Std-Barc icon, and select [**Run As**].

Error Message: **File Error. Cannot find xxxxx.DLL**

Problem: The application cannot locate a required Dynamic Link Library (DLL).

Solution: If this occurs immediately after installation, then the cause is incomplete installation of the StdBarc program or a defective product disk. In this instance, please contact Mil-Pac Technical Support.

If the application has been run successfully in the past, first check to see if the working directory has been altered, by doing the following: Right click on the StdBarc shortcut icon. Go to Properties and click on the Shortcut Tab. In the “Start in” field, verify that the path is entered correctly (i.e.: C:\Std-Barc, which is the default path). The other possibility is that the DLL has been inadvertently deleted.

Condition: **Labels do not print correctly on thermal-transer printer**

Problem: The printer driver supplied by the manufacturer is not properly rendering

the graphic image.

Solution: Follow instructions for thermal transfer printer setup in Printer/Label Setup section.

Condition: Labels print slightly off the label stock

Problem: Generally, the default margins for the printer are affecting print.

Solution: Follow instructions in the Standard Printer Setup section for setting the Print Adjustment. Be sure that you have the correct label stock selected for the type of label, i.e. a “Pin” stock for thermal transfer, and “Laser” stock for sheet labels.

Error Message: Multiple PARADOX.NET files (15)

Problem: The Paradox Engine lock files are corrupted.

Solution: Generally, this means this occurs when the database files have been moved, or their mapping changed, or shared by in improperly configured system. Simply removing the lock files generally corrects this. Run **Options > Paradox Engine**, and select [**Remove Lock Files**].

Problems

Windows Standard (sheet) Labels Won’t Print

Is the Printer Setup and Connected Properly?

Make sure you can print from a simple program, such as Notepad or a Word Processing program such as Microsoft Word. If you can’t print from Notepad or a Word Processing program, get your printer vendor or manufacturer to help you.

Is the Print Job Getting out of Std-Barc?

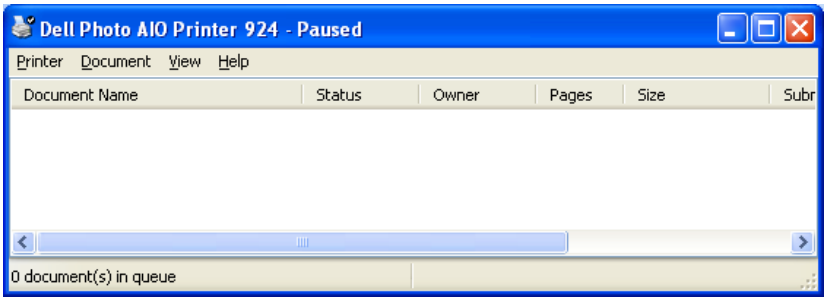
Pause the print queue for the printer so that you can be sure the print job is getting that far.

A) Open Printers and Faxes.

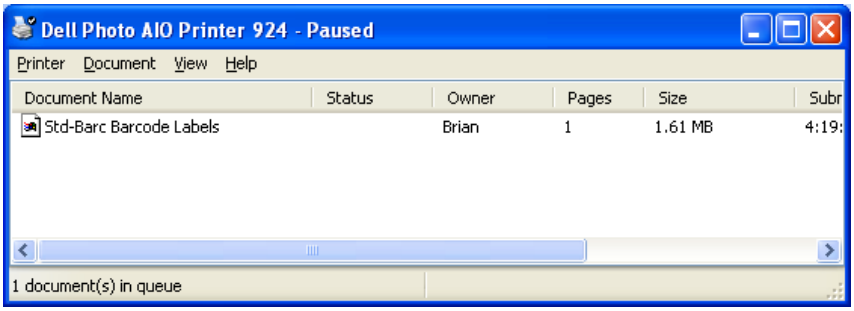
B) Double-click the printer.

C) Select Printer->Pause.

D) The title bar for the printer should tell you that the printer is paused, as shown in this example.



E) Print a label. You should see a print job show up in the print queue, as shown below, and stay there until you release it.



i) If the print job appears in the queue, then the print job is getting from Std-Barc to the Windows print queue. Unpause the print queue. You can first delete the print job if you wish. Contact Mil-Pac Technology Technical Support.

ii) If the print job does not appear in the queue, there is a problem between Std-Barc and the printer setup. Unpause the print queue. Go back to the instructions on setting up the printer in Std-Barc in the section titled *Configure Std-Barc Printer(s)* on page 11. If all else fails, contact Mil-Pac Technology Technical Support.

Thermal/Thermal Transfer Labels Won't Print

The Most Common Cause of Problems – Std-Barc Printer Configuration

The most common cause of thermal/thermal transfer label printer problems is not setting up the printer definition in Std-Barc. Before you go further, please go back and check the set-up instructions in the section titled *Configure Std-Barc Printer(s)* on page 11.

The Second Most Common Cause of Problems – Physical Printer Installation

The second most common cause of thermal/thermal transfer printer problems is that the printer is either not set up properly or there is a problem with connectivity between the pc and the printer. To verify if this is your problem, follow these steps.

A) Find the thermal transfer printer in your pc Printers and Faxes. You were asked to install this during the installation procedures.

B) Right-click on the thermal transfer printer and select Properties.

C) Print a test label by clicking on the button for Print Test Page. You should get something printing on the printer, including some text and the Windows logo, although they will most likely be formatted strangely and run off the edge of the label.

   i) If a label prints on the printer, then the printer appears to be configured adequately and the pc has adequate connectivity to the printer. Continue with the instruction in section *Print Immediately.*

   ii) If you do not get anything printing on the printer, you may try re-booting both the pc and the printer. If this does not help, contact your printer vendor or printer manufacturer for assistance.

Print Immediately

Make sure you select “Print Immediately” in Std-Barc when you print. Otherwise the print job will remain in queue in Std-Barc.

Is the Print Job Getting out of Std-Barc?

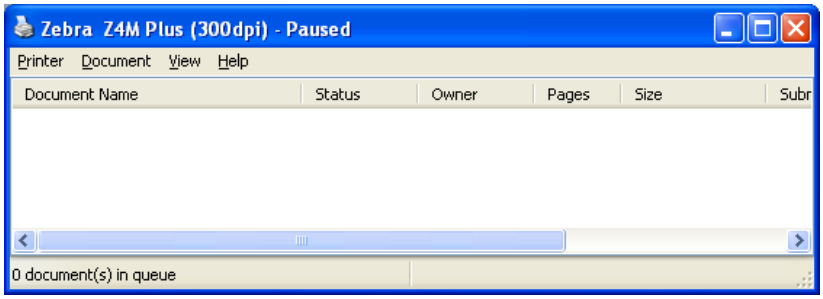
Pause the print queue for the thermal transfer printer so that you can be sure the print job is getting that far.

A) Open Printers and Faxes.

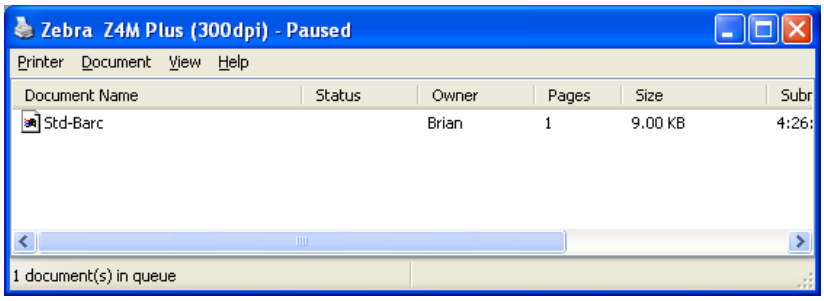
B) Double-click the printer.

C) Select Printer->Pause.

D) The title bar for the printer should tell you that the printer is paused, as shown in this example.



E) Print a label. You should see a print job show up in the print queue, as shown below, and stay there until you release it.



i) If the print job appears in the queue, then the print job is getting from Std-Barc to the Windows print queue. Unpause the print queue. You can first delete the print job if you wish. Contact Mil-Pac Technology Technical Support.

ii) If the print job does not appear in the queue, there is a problem between Std-Barc and the printer setup. Unpause the print queue. Go back to the instructions on setting up the printer in Std-Barc in the section titled *Configure Std-Barc Printer(s)* on page 11. If all else fails, contact Mil-Pac Technology Technical Support.

Contact Mil-Pac Technical Support

Mil-Pac Technology encourages users to make use of Technical Support:

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