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SHUR/Mark®

SUPER SOFTWARE
OPERATIONS MANUAL

VERSION 2.2
MAY 2002



PART S

Super Software

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S.1 License Information

Super Software allows the user to license 2 board numbers without having to purchase an extra



license.

S.2 Super Software Networking Capabilities

Super Software builds on the functionality of TBS' Advanced Software by providing the ability to import data in both operator directed and unattended modes. This functionality is useful where it is desirable to format and print data from Laboratory Information Systems (LIS), and other external systems onto cassettes and slides using the *SHUR/Mark*® Advanced Software features.

The operation's manual provides detailed information on Super Software's data import capabilities as well as simple step-by-step examples that can be used to demonstrate some of its capabilities. To perform these examples, a *SHUR/Mark*® Labeler must be connected to a PC and Super Software must be loaded.

If the user is a previous user of Advanced Software, the Advanced Software must first be removed before installing Super Software. All of the formats used in Advanced software have been stored on the user's hard drive, even after the Advanced Software has been removed.

After Super Software has been installed, the first step is to create a labeler format. This format can be for a slide or cassette, and can be any layout that Advanced Software supports. A format that has been created for manual data entry in Advanced Software can be used as well.

For the following step-by-step demonstration, start Super Software, open the Format Editor, and create a format that contains three fields. Make the first field "**Fixed**", the second field an "**Open**" field, and the third field a "**Counter**" field. Save the format and call it "COUNTER CASSETTE1". This file will be used in the demonstration later in this manual. Enter S-02 into the Fixed field, make the Open field 5 characters wide and make the Counter field 2 characters wide with an incrementing priority of 1 and a range of 1. Also, be sure the "Increment Right Character" box is checked.

Formatting Screen

(See following page)

SHUR/MARK 32

System Format Input Output Window Help

Format: COUNTER CASSETT 5 cassettes in batch X

Labeler: Cassette Unit on Port 1 Batch

Hopper: All = 5 cassettes to print

P	Date	Type	Lab	Hop	F_1	F_2	F_3
0	5/29/02	Cas	1	0	S-02	10000	A
0	5/29/02	Cas	1	0	S-02	10000	B
0	5/29/02	Cas	1	0	S-02	10000	C
0	5/29/02	Cas	1	0	S-02	10000	D
0	5/29/02	Cas	1	0	S-02	10000	E

Auto (1) TYPE-YEAR

S-02

(2) ACCESSION #

10000

(3)

A Order: 1 Range: 5

Cassette PrintQ History

Slide Un Error Log

print 5 entries export

Import delete

Send to Queue Clear Print Now

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S.3A EXPLANATION OF FORMATS

Most Histology laboratories use different formats according to the type of information they want on the cassettes or slides. The following is a simple explanation of the information that may appear in a format:

Fixed Fields – these fields will appear the same on every cassette or slide, without the user having to manually enter the information for every cassette or slide.

Example: S-02 would represent a surgical specimen and the year 2002

Open Fields – these fields are left empty when the formats are created and are then populated with varying information (as specific data is entered during the daily work routine) upon data entry.

Example: a patient number (accession number)

Counter Fields – these fields allow the operator to start with an initial value (alphanumeric) and have it increase according to the specifications in the format.

Example: a field starting with “A” and incrementing 5 times produces A, B, C, D, E

The remainder of the formatting information allows the operator to choose font sizes, spacing and positioning of the information on the cassettes or slides.

**See the Advanced Software section for more specific details on creating formats.

Once the histologist creates the format(s), the Information Technology (IT) department can then organize the data from the facility's Laboratory Information System (LIS) into a usable form, one that Super Software will accept. In general, this information is "comma delimited text." Comma delimited text is "user friendly" text that is easy to export and has an extension of .txt. Data can also be exported with a .dat extension and works in a similar manner as .txt file extensions. (See Section S4 for an explanation of comma delimited test).

S.3B EXPLANATION OF INPUTTING FILES INTO SUPER SOFTWARE

Using the terminology previously mentioned, (Fixed, Open and Counter fields) data can be exported into formats that contain Open and/or Counter fields. The data file (comma delimited text) must be listed in an order that matches the loaded format:

- ✓ An open field only requires the alpha numeric data for that field
- ✓ A counter field requires the initial value, the incrementing priority and the range (in that order). Looking at the format or data entry screen shows the initial value, the order and the range.
- ✓ Data cannot be read into fixed fields and are skipped

EXAMPLE 1 below is a simplistic ***cassette*** example:

EXAMPLE 1

1. "fixed" field in field 1
2. an "open" field in field 2
3. a "counter" field in field 3

The data from above may hold the following information:

1. S-02, represents a surgical specimen in the year 2002 and is a fixed field
2. An "open" field to include the accession number "5000" on every cassette or slide
3. The letter "A", representing a block number, which has an order of 1 and a range of 5, to print data on 5 cassettes or slides, starting with A and finishing with E.

The following is how the comma-delimited data file would look, using the data from above:

5000,A,1,5 *(NOTE: S-02 is a fixed field, so it is not included in the comma delimited text. Also note there are no spaces)

Where "S-02" is already built into the format and would not show up in the .txt file. "5000" represents the accession number and would be printed on every cassette, "A" represents initial value of the counter field, "1" represents the incrementing priority since only one field has been selected to increment, "5" represents how many cassettes will be printed.



This would create a total of 5 cassettes as follows:

Cassette 1: S-02
5000 A

Cassette 2: S-02
5000 B

Cassette 3: S-02
5000 C

Cassette 4: S-02
5000 D

Cassette 5: S-02
5000 E

EXAMPLE 2 is a more complex *slide* example:

EXAMPLE 2

1. "fixed" field in field 1
2. a "counter" field in field 2
3. another "counter" field in field 3
4. an "open" field in field 4

The data from above may hold the following information:

1. "S-02", represents a surgical specimen in the year 2002
2. "3000", represents an accession number, which is a counter field (I have assigned it to have an incrementing order of 2 and a range of 3)
3. "A" represents another section counter, which is for the block number, (I have assigned it to have an incrementing order of 1 and a range of 2)
4. An "open" field to include the word, "Biopsy" on every slide

The following is how the comma-delimited information would look, using the data from above:

3000,2,3,A,1,2,Biopsy *(NOTE: S-02 is a fixed field, so it is not included here and there are no spaces)

Where "S-02" is already built into the format and would not be sent by the LIS. "3000" represents an accession number, which is a counter field, "2" represents the incrementing priority, "3" represents how many slides will be printed. "A" represents a block number and is the second counter field, "1" represents the incrementing priority and "2" represents the number of slides to be printed and "Biopsy" represents the open field and the data that is requested to be placed in this field. For a detailed explanation of incrementing priority, see that section of the Advanced Manual.

This would create a total of 6 slides as follows:



<u>Slide 1:S-02</u>	3000	<u>Slide 2:S-02</u>	3000	<u>Slide 3:S-02</u>	3001
	A Biopsy			B Biopsy	A Biopsy
 <u>Slide 4:S-02</u>	 3001	 <u>Slide 5:S-02</u>	 3002	 <u>Slide 6:S-02</u>	 3002
	B Biopsy			A Biopsy	B Biopsy

These are just two examples of the many possible variations of formats and comma delimited data files. One of the most important things to remember is that the information being sent from the LIS system must match the format with what is being used in the laboratory. There are three types of fields; **fixed**, **open** and **counter**. From the LIS perspective, data for fixed fields are not included in the comma delimited data file (fixed fields are skipped). Fixed field information is stored in the format and is not sent by the LIS. Open fields will be populated with as much information as are spaces available in the field. For example, if the format of an open field is 5 spaces wide and the comma delimited text is "Biopsy", the information received from the LIS would be "Biops" and the "y" would be dropped because of the width that was pre-determined in the format. Counter fields require the initial value, the incrementing order and the range (in this respective order). If any of the aforementioned information is not included in the data file, the export of data will not be allowed and an error will occur.

S.4 Data File Format

Data files to be imported into Super Software must be in a comma-delimited format and have an extension of .TXT or, as mentioned earlier .DAT. The comma-delimited format is a common one, used to move data between computers and applications for over 25 years. While our example will be on a Windows-based system, comma-delimited files can be created on many operating systems, including DOS, Linux, UNIX, to mention a few of the more commons operating systems.

A comma-delimited file has the following characteristics.

The file must contain only ASCII characters with values between 00h and 7Fh and no special formatting characters. Files created by Windows' Notepad or DOS' Edit meet this requirement. Word, Excel, or Access can create them by choosing appropriate output or Save As options. Note that some programs save comma-delimited files with an extension other than .TXT by default, notably Excel that uses .CSV, for Comma Separated Value, as it's default.

Commas separate the data contained in the file, hence the name, comma-delimited. For example, the line "Data1, Data2, Data3" contains three data values separated by commas. Sometimes a data value will be null; for example "Data1,,Data3" contains three data values, with the second one being a null, or empty value.

S.5 How Super Software reads files and uses the data

Super software opens a comma-delimited file, reads the values and fills the fields in the selected format in the order they occur. For example, if the selected Labeler format file has three Open fields, and the comma-delimited file has a line containing “Data1, Data2, Data3”, then Data1 will be inserted into the first Open field, Data2 into the second Open field, and Data3 into the last Open field, i.e., one datum is used per Open field.

Fixed fields contain data defined with the Format Editor, and are skipped by Super software when it's parsing input data into a format's fields.

Counter Fields require three values each. Those values are the Initial value, the Incrementing Order, and the Range. The Initial value is the beginning value for the counter, ie. 1000. The Order value is used to determine which counter field increments first where there is more than one Counter field in a format. For more information, see the section of the Advanced Software manual on Format Fields.

Open Fields accept any alphanumeric data within the Labeler's character set. The value of a datum can be a number, letters, or any combination, such as 123-22, TRIANGLE, LIVER, or TBS002. A single datum fills a single Open Field when imported by Super Software.

S.6 How Super Software receives the data

Super Software can receive data files in two ways. One is “Attended” mode, where the user can read files into Super Software for processing using the Import Data function. This function is selected by choosing **Input**, then **Import Data** from the tool bar. When this function is selected, the user is presented with the Import screen, where they specify a Format to be loaded, Select a Labeler, and then choose a File to load. The file is then and processed, and the user may either select the records they wish to print, or delete them.

The other way Super Software can receive data is called “Unattended” Mode. In the “Data Entry” screen, the format must first be selected. Then select **Input** and **Await LIS**. (For a more detailed explanation, see the examples later in the manual). Super Software will begin to check the folder C:\ProgramFiles\Labeler\Labeler32\Input at one-second intervals for files that meet the specifications above, i.e. comma-delimited with a .TXT or .DAT extension. When it finds such a file, the data is read, placed into the format chosen before starting Unattended Mode, moved to the Print Queue and immediately printed.

Because Super Software simply monitors for the presence of files in the Input folder, how the files get there is left up to whatever mechanism is easiest for the user, and how the system is configured. Files can be copied from other drives such as floppy, CD, ZIP, or a network drive. In a network environment, the Input folder can be shared to the network, and files can simply be put there by other users and wait for processing by Super Software.

For example, if the PC running Super Software is configured to share files on a Microsoft network, and is named SHURMARKHOST, and the Input folder is shared as INPUT, then any other system on the network could write data files to the network address <\\shurmarkhost\input> by simply copying them there, and Super Software would process them into the format selected.

S.7 SHUR/Mark[®] Super Software Demonstration

In this demonstration, we will see the three ways Super Software provides to create slides or cassettes from data.

Step 1: Verify that Labeler & CASSETTE COUNTER1 example format work.

Open SHUR/Mark[®] and select the format we created above, COUNTER CASSETTE1.

Enter Data in the available fields, and print it to the labeler.

Note the fields and the data they require. The first field is Fixed, and no input is required.

The second field is Open, and can contain any alphanumeric value.

The third field is a Counter and requires an initial value, an Incrementing Order and Range.

Step 2: Create Data folder and files

Create SM_Demo folder on the Desktop. Right-click on the desktop, choose New, then Folder, and name it SM_Demo

Step 3: Set folder to show file extensions

Open SM_Demo folder in Explorer.

Click Tools, Folder Options, View and remove the checkmark next to Hide File Extensions for known file types. Click OK.

Step 4: Create data files manually. (This is one way to create a data file)

Open Notepad.

Enter the following "5000,A,1,5" without the quote marks.

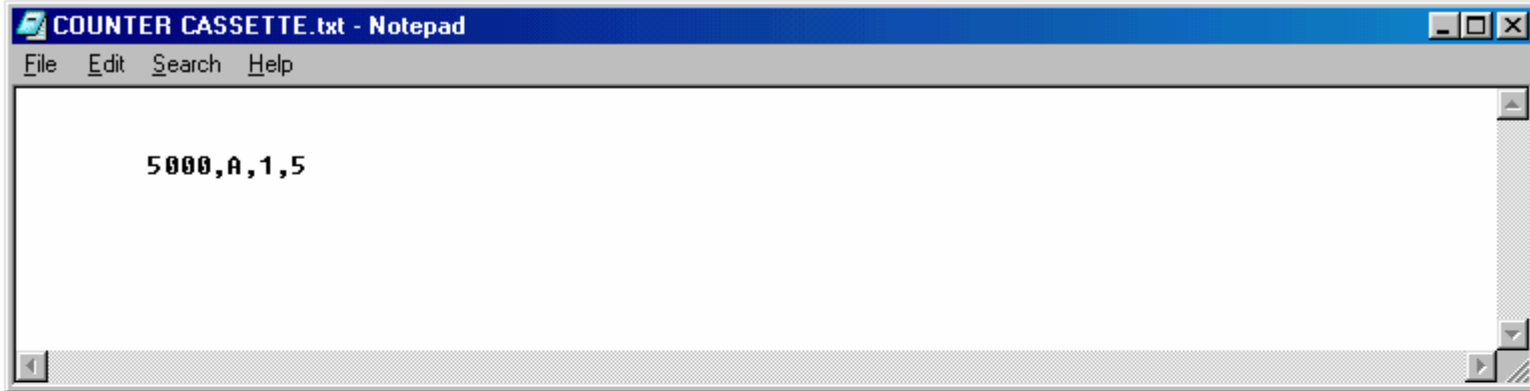
Save the file to the SM_Demo Folder and name it COUNTER CASSETTE1

Note the file is now in the folder and has an extension of .TXT.

Change the values to 3000,A,1,2 and Save As COUNTER CASSETTE2

Change the values to 10000,1,1,5 and Save As COUNTER CASSETTE3

The following is an example of comma delimited text that was created in Notepad, for or example "COUNTER CASSETTE1."



Step 5: Create data files from an application (This is another way to create a data file)

Open Excel

Enter data in four cells as follows: EXCEL1,3000,1,4

Choose File, Save As, select the SM_Demo folder; select Save as type CSV (comma-delimited)

Note that this file has an extension of .CSV and won't be accepted by Super until this is changed to TXT.

Close Excel.

Open file with Notepad; observe the structure of the data.

Close Notepad, and minimize the SM_Demo folder.

A. Demonstrate Super Software's Import ability

Start *SHUR/Mark*[®] Super Software

Choose Import data

Load New Format, choose COUNTER CASSETTE1

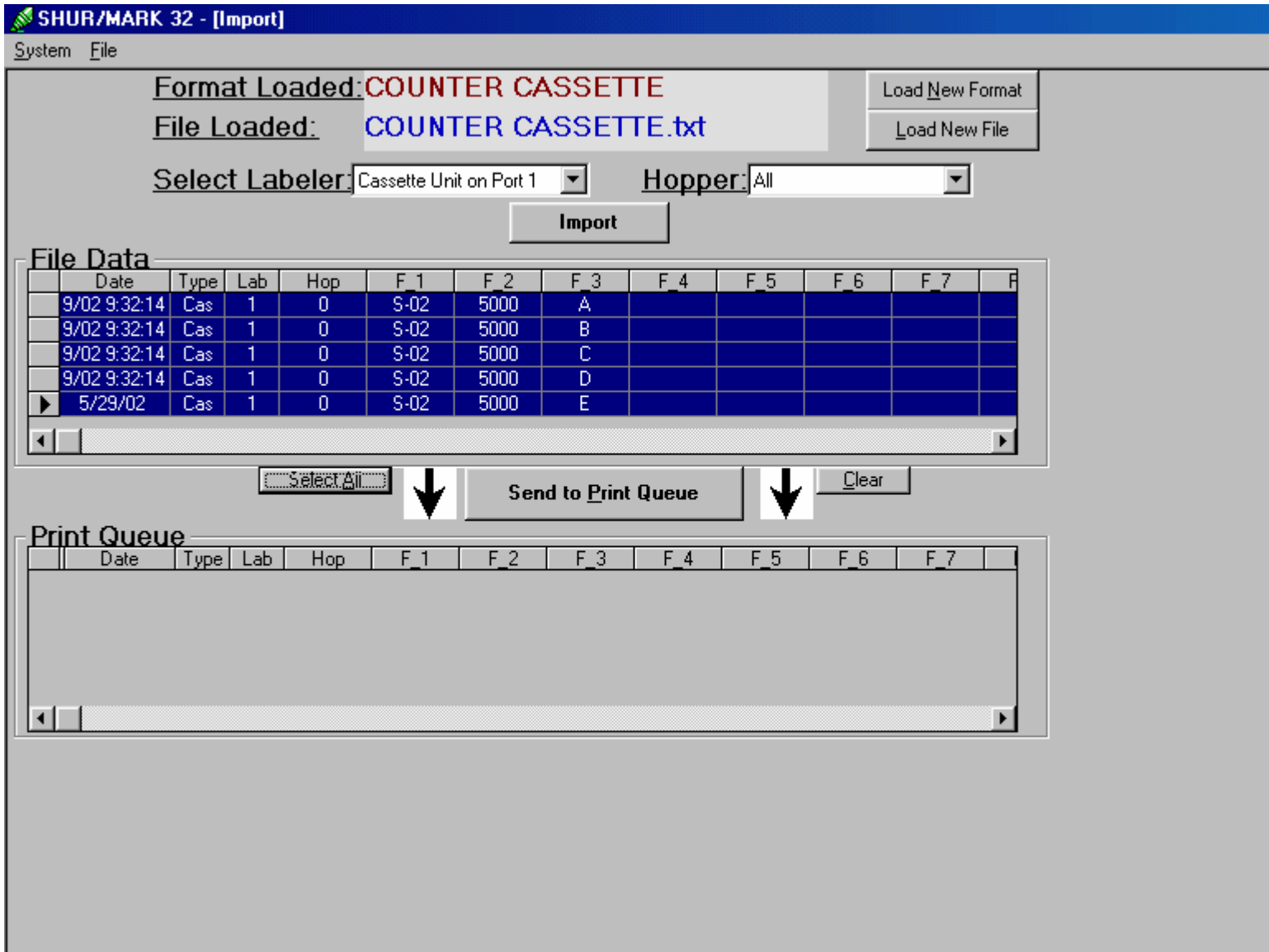
Load New File, point at SM_Demo folder on Desktop, then select file. Note that a file can be imported from any source the PC can access, CD, Floppy, Local Hard drive, or Network Drive.

Select file and import, data will appear in File Data.

Select records and move them to the Print Queue.

Click System; exit Import to return to the main Super Software data entry screen.

Examine output and note the result.



B. Demonstrate Super Software's Unattended LIS ability

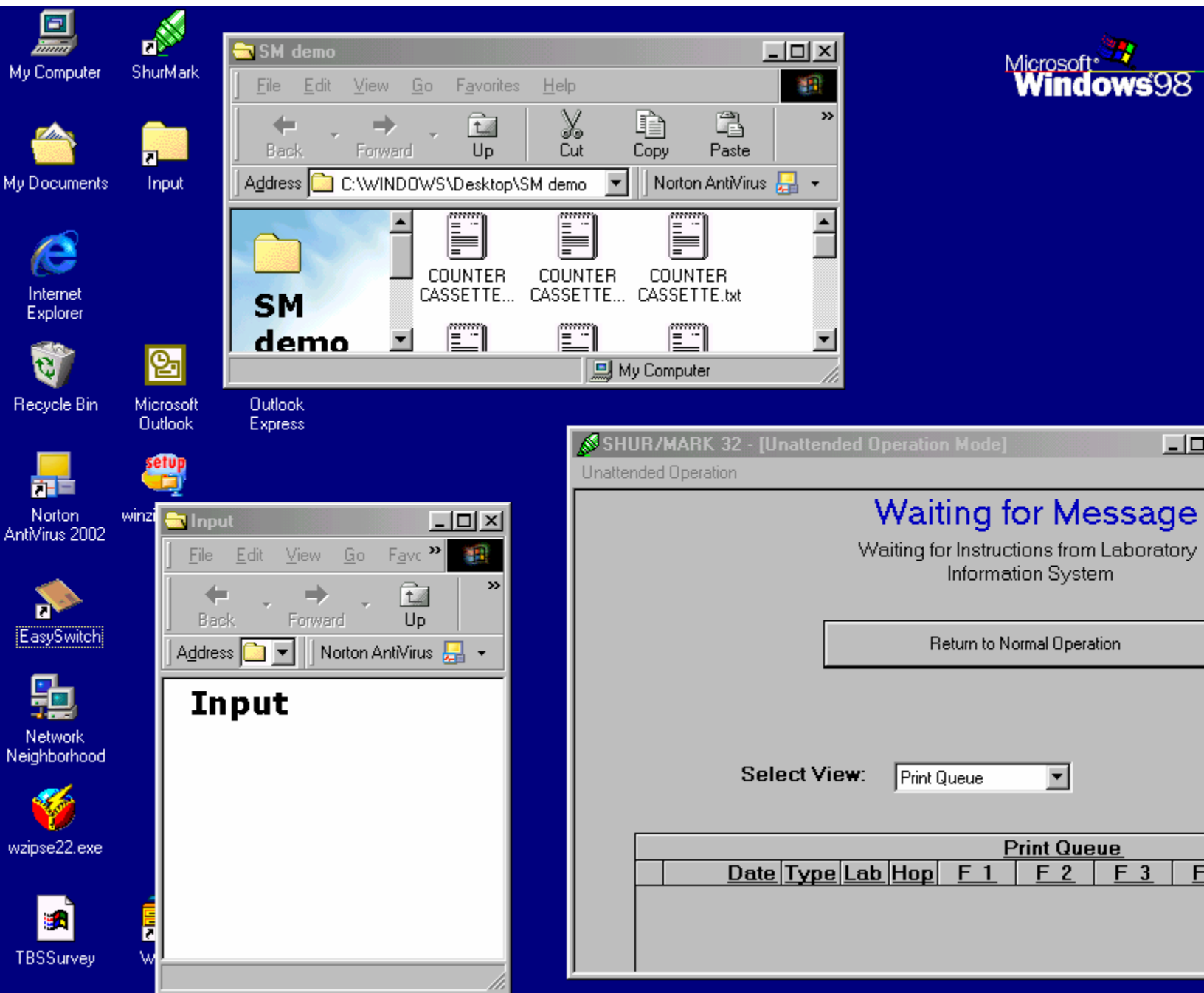
Start SHUR/Mark® and select the format to be used with the comma delimited files. Select Input, then Await LIS mode, and minimize the program.

Right-click the Desktop, click on New, Shortcut, and enter "C:\Program Files\labeler\Labeler32\Input" for the command line, and name it Input at the next prompt. Click on the Input shortcut and leave it open on the Desktop.

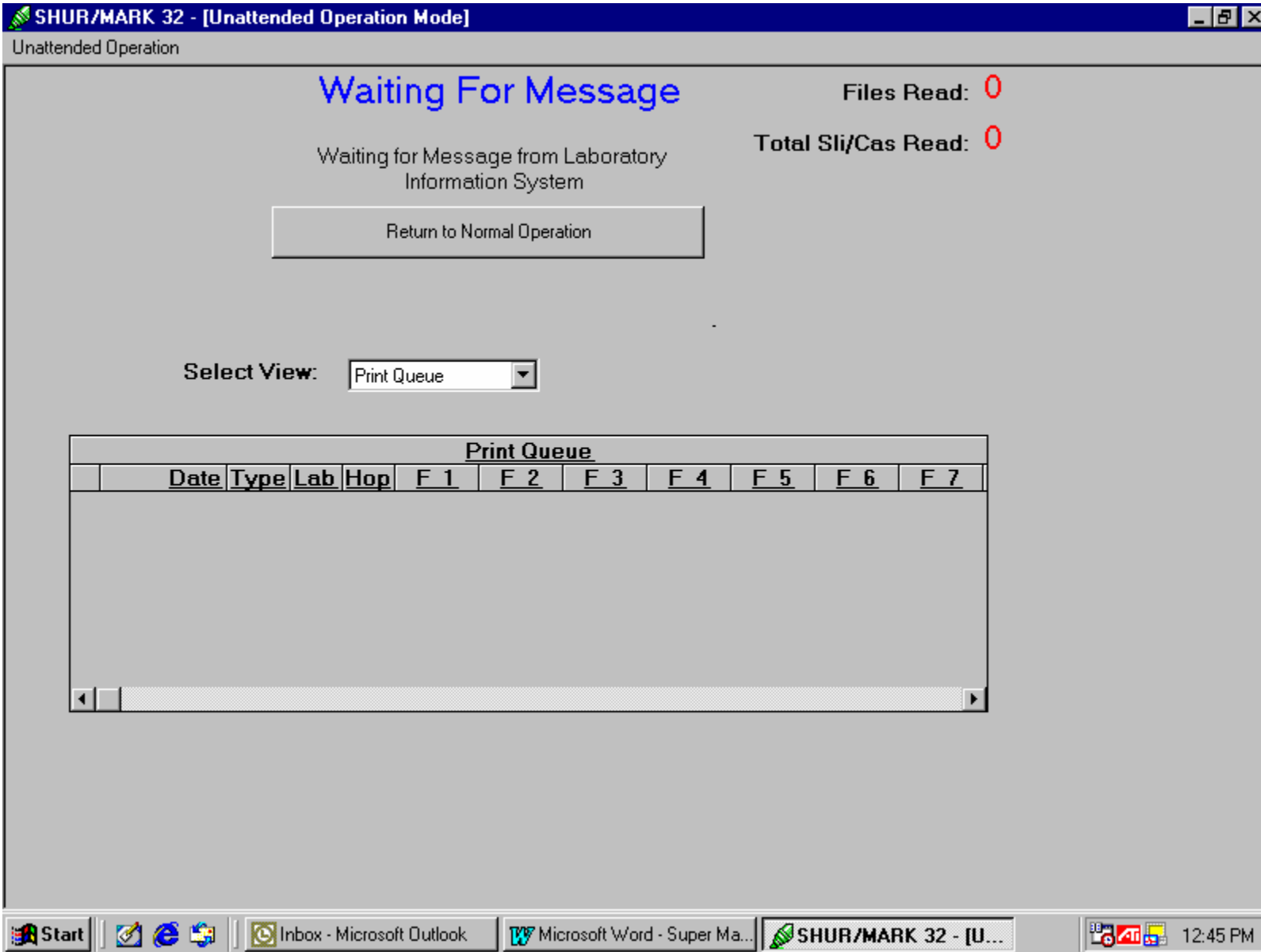
Open SM_Demo folder and leave it open on the Desktop.

Maximize SHUR/Mark®, then resize it; Input, and SM_Demo so all three are visible.

(See below)



Right-click one of the example files in the SM_Demo folder, and select Copy.
 Position the mouse pointer in the Input folder, click it, then right-click and choose Paste. (Other Windows “copy and paste” functions are also available)
 Observe Super Software processing the file, and that it will disappear from the Input folder.
 The file will now be in the “Processed folder” within the “Labeler 32” folder.
 Repeat as desired.



SHUR/MARK 32 - [Unattended Operation Mode]

Unattended Operation

Waiting For Message

Files Read: 0

Waiting for Message from Laboratory Information System

Total Sli/Cas Read: 0

Return to Normal Operation

Select View:

Print Queue										
Date	Type	Lab	Hop	F 1	F 2	F 3	F 4	F 5	F 6	F 7

Start | [Icons] | Inbox - Microsoft Outlook | Microsoft Word - Super Ma... | SHUR/MARK 32 - [U... | 12:45 PM

The “Return to Normal Operation” button will exit the “Unattended” Mode and return to the main data entry screen. From this point, the “History” button on the main screen will show all the files that have been printed.