

*Super-MICAR*

*1996 Version*

*User's Guide*

9/03/96

Document Version 96.1.1

---

---

**TABLE OF CONTENTS**

<b>INTRODUCTION</b> .....	1
<b>What This Manual Is</b> .....	1
<b>Who This Manual Is For</b> .....	2
<b>Changes in This Manual</b> .....	3
<b>Changes from the 1995 Version</b> .....	3
<b>Changes in the 1996 Version</b> .....	4
<b>OVERVIEW</b> .....	5
<b>Basic Steps</b> .....	5
<b>Extra Utilities</b> .....	7
<b>THE MENU SYSTEM</b> .....	11
<b>Quick List of Menu Options</b> .....	11
<b>Using the Super-MICAR Menu System</b> .....	13
<b>GETTING STARTED</b> .....	15
<b>Starting Super-MICAR</b> .....	15
<b>About the Main Screen</b> .....	16
<b>Creating a New Certificate File</b> .....	16
<b>Opening an Existing File</b> .....	19
<b>ENTERING AND SAVING CERTIFICATE DATA</b> .....	21
<b>Adding Certificates</b> .....	21

---

<b>Editing Additional Information</b> .....	30
<b>What Constitutes Additional Information?</b> .....	31
<b>Accessing the Additional Information Screen</b> .....	32
<b>Editing Industry/Occupation</b> .....	35
<b>CORRECTING MISPELLED OR ILLEGIBLE WORDS</b> .....	38
<b>Marking Misspellings/Illegibles</b> .....	38
<b>Correcting Misspellings/Illegibles</b> .....	39
<b>PROCESSING A CERTIFICATE FILE</b> .....	42
<b>Processing Records</b> .....	43
<b>Processing Rejects</b> .....	44
<b>Processing Additional Information</b> .....	48
<b>GENERATING A MICAR100 FILE</b> .....	51
<b>CREATING BACKUPS</b> .....	53
<b>Backing Up All the Files</b> .....	53
<b>Creating Backups for NCHS</b> .....	54
<b>CLOSING A FILE</b> .....	55
<b>EDITING FUNCTIONS</b> .....	56
<b>Editing Header Information</b> .....	56
<b>Browsing Through the Certificates</b> .....	58
<b>Finding a Record</b> .....	60

---

Undoing Changes .....	62
Showing Processed Output .....	62
<b>DELETING RECORDS .....</b>	<b>64</b>
Deleting Certificates While Editing a Certificate File .....	64
Deleting Several Certificates at Once .....	65
<b>GENERATING REPORTS .....</b>	<b>66</b>
Generating a Sequence Check .....	66
Printing an Error Listing .....	68
Printing All the Certificates .....	68
Printing a Single Certificate .....	69
<b>EXITING Super-MICAR .....</b>	<b>70</b>
<b>APPENDIX A - NCHS STATE CODES .....</b>	<b>71</b>
<b>APPENDIX B - MENU LISTINGS .....</b>	<b>72</b>
<b>APPENDIX C - DICTIONARY OF TERMS USED .....</b>	<b>75</b>
<b>APPENDIX D - CONVENTIONS USED IN THIS MANUAL .....</b>	<b>77</b>
<b>APPENDIX E - SPECIAL SYMBOLS .....</b>	<b>78</b>
<b>APPENDIX F - PROCESSING REJECTED RECORDS .....</b>	<b>79</b>
<b>INDEX .....</b>	<b>82</b>

---

---

## INTRODUCTION

---

This manual is for use with the 9/05/1996 version of Super-MICAR. Please check the date on the About Super-MICAR screen by pressing {ALT-F1} from the main screen of Super-MICAR.

### What This Manual Is

This is the *Super-MICAR User's Guide*. Super-MICAR is an automated cause-of-death data processing system designed for data entry, editing, and processing of medical information reported on a death certificate in the United States. Very little training is required to use Super-MICAR and the on-screen prompts allow data to be entered with ease.

In the event that the software needs to be ordered, there are questions concerning the software, or if there are questions about data entry, please contact NCHS at one of the following numbers:

Software Helpline: **1-800-642-8908**

Nosology Helpline: **1-800-235-1830**

Super-MICAR is one part of the National Center for Health Statistic's Mortality Medical Data System. NCHS began developing the system in 1967 to automate the entry, classification, and retrieval of cause-of-death information reported on death certificates. Mortality medical data is processed through four basic programs: Super-MICAR, MICAR<sup>1</sup>, ACME<sup>2</sup>, and TRANSAX<sup>3</sup>.

- **Super-MICAR** Automates MICAR data entry and medical cause-of-death data processing, including reporting procedures, full-screen data entry and editing, query letter generation, and additional information processing. Super-MICAR is designed to automatically encode

---

<sup>1</sup> Mortality Medical Indexing, Classification, and Retrieval

<sup>2</sup> Automated Classification of Medical Entities

<sup>3</sup> TRANSlation of Axis

medical cause-of-death data into numeric entity reference numbers in accordance with the rules expressed in Part 2g of the Vital Statistics Instruction Manual (VSIM) series. Super-MICAR output is used by later programs to classify causes of death to their International Classification of Death (ICD) codes. Super-MICAR only runs on personal computers.

- **MICAR** Automates the multiple cause coding rules (see Parts 2b and 2e of the VSIM series) and assigns ICD codes to each entity.
- **ACME** Applies World Health Organization (WHO) rules to the ICD codes determined by MICAR and selects an underlying cause of death (see Part 2a and 2c of the VSIM series). ACME is available on both the mainframe and the personal computer. On the PC, ACME and TRANSAX are distributed as a single product.
- **TRANSAX** Facilitates the tabulation and use of multiple cause-of-death data. Through the application of the ICD linkage and modification rules, TRANSAX translates the axis of classification from an entity to a record base. TRANSAX is available on both the mainframe and the personal computer.

The only other manual specifically associated with this one is the *Super-MICAR System Manager's Manual*. The *System Manager's Manual* contains information on the installation and maintenance of the Super-MICAR software, as well as some utilities that may need to be used.

### **Who This Manual Is For**

This manual is intended for data entry and data processing personnel. It contains instructions on using Super-MICAR to enter cause-of-death information and to process that information, including reject processing. Only those sections of Super-MICAR that deal with data entry and processing operations are addressed in this manual. It is organized on the assumption that the user has little or no familiarity with Super-MICAR. Therefore, the subjects in this manual are arranged so the user receives all of the instructions necessary to perform a given task at once.

## **Changes in This Manual**

The *Super-MICAR User's Guide* has been updated to match changes that have been made in the software. These changes are listed below:

### **Minor Corrections**

Various minor corrections have been made to this manual so that it accurately matches what is in the software. Also, the helpline numbers have been added to the introduction to aid in customer support.

### **Retitled**

The most basic change is that this manual has been renamed. Originally, it was called the *Super-MICAR Data Processing Manual*. In order to standardize all the manuals associated with Super-MICAR, PC-MICAR 100/200, and ACME/TRANSAX, this book has been retitled the *Super-MICAR User's Guide*.

### **Screen Captures**

Several problems were reported with the screen captures contained in this manual. Most of these were due to differences in types of printers. The screen captures have been reformatted so that they should appear clean and straight.

## **Changes from the 1995 Version**

The 1996 version of Super-MICAR software includes numerous changes from the 1995 and other previous versions. Many of the changes are easily apparent, and others might go almost unnoticed. This section outlines the differences, so that you can quickly familiarize yourself with them.

### **Moved Menu Items**

Several of the Functions in the drop-down menus have been moved around. **Table 2** (pg. 12) has a complete listing of all menus and Functions.

### **Exit to DOS**

An Exit to DOS Function has been added under the **File** menu. This allows the user to immediately access a DOS subsession and enter DOS commands.

### **Reporting Area**

The Reporting Area field that appeared on the batch information screen has been removed. This data is no longer collected.

**Coder Status**

At the request of several states, the values for this field have been expanded to allow entry of single-digit numbers 0 through 9.

**Place of Injury**

Super-MICAR will now accept full text and generate the Place of Injury code from text entered by the user.

**Activity Code**

A new field, Activity Code, has been added. This new field collects information about the decedent's activity at the time of death. A pop-up menu of options is available by entering a question mark in the field. For a complete list of the activity codes, refer to the 1996 version of the 2g manual.

**Backup/Remove Option**

This new option backs up the open file to a floppy disk, then, if the backup is successful, deletes the file from your hard drive.

**Backup and MICAR 100 Export Paths**

In Super-MICAR 1996, it is possible to set up a subdirectory on the computer's hard drive or on a network drive in which to store data backups and exported MICAR 100 input files. These options facilitate putting important data on network drives where it can be easily protected by the local network administrator. These paths should be set by the system manager. By default, these files are stored in the <DATA> directory.

**Changes in the 1996 Version**

All of the changes in the 1996 version of the Super-MICAR software have been bug corrections. These are detailed in the *Super-MICAR System Manager's Manual*.

## OVERVIEW

---

### Basic Steps

Super-MICAR is designed to allow both data entry and data processing through the menu system. When collecting and processing data through Super-MICAR, certain steps should be followed in order to guarantee the best results with the least wasted time. What follows is a general outline of the MINIMUM data entry and processing steps for Super-MICAR. Super-MICAR contains several utilities and reports that are helpful in validating data and keeping track of data entry and processing. Utilities and reports are described in the next section, with indications of where they would be most useful.

Note that the relevant sections of this manual are listed next to each step. A flow chart depicting the Super-MICAR process has been provided at the end of this section for convenience.

1. Start Super-MICAR (**STARTING Super-MICAR**, pg. 15).
2. Open a certificate file (**Creating a New Certificate File**, pg. 16 or **Opening an Existing File**, pg. 19). This step opens a file so that data can be entered and processed. You can either open an existing file or create a new file. With very few exceptions, every function that Super-MICAR can perform requires that a file be opened before the function can be performed.
3. Edit the certificate file header information as needed (**Creating a New Certificate File**, pg. 16). The header information contains constant data that is the same for every record in the certificate file, such as the data year and the state code.
4. Add certificates to the database (**ENTERING AND SAVING CERTIFICATE DATA**, pg. 21). This is the main data entry process. Data can also be read into Super-MICAR from properly-formatted files. Information in importing and exporting data is contained in the *Super-MICAR System Manager's Manual*.
5. Mark misspellings/illegible entries for correction (**Marking Misspellings/ Illegibles**, pg. 38). This function checks all of the records in the file for words that Super-MICAR does not recognize and/or for the word ILLEGIBLE. (When a data entry operator cannot read a word on a death certificate, typing the word ILLEGIBLE will cause this function to mark the record.) Misspelling and illegibles

must be marked before they can be corrected, and the process of marking and correcting these words should be done after data entry is complete and before processing the file.

6. Correct marked misspellings/illegibles (**Correcting Misspellings/Illegibles**, pg. 39). This function allows the user to go directly to those records that were marked as having misspelled or illegible words and correct them. This function can only be used after misspellings and illegibles have been marked, and should be used before processing the file.
7. Process the certificate file (**PROCESSING A CERTIFICATE FILE**, pg. 42). When a file is processed, Super-MICAR assigns entity reference numbers (ERNs) to the medical causes of death that were listed in the certificate file. Two steps are required to completely process a file:
  - A. Process the entire file (**Processing Records**, pg. 43). This process attempts to assign entity reference numbers (ERNs) to all of the medical causes of death for each record in the open certificate file. This process is done wholly by Super-MICAR, requiring no input from the user. (This process can also be performed as a batch process, without going through the menu system. See the section **BATCH PROCESSING FROM THE COMMAND LINE** in the *Super-MICAR System Manager's Manual* for more information on batch record processing.)
  - B. Process the rejects (**Processing Rejects**, pg. 44). Reject processing requires a trained MICAR coder. Under reject processing, Super-MICAR displays any records that were rejected by the Processing Records function. A trained MICAR coder can examine the record and make whatever changes are necessary to allow the record to be coded. In order to preserve the original data, modifications can be made on the Additional Information Screen (**Editing Additional Information**, pg. 30).
  - C. Process Additional Information (**Processing Additional Information**, pg. 48).
8. Use the editing functions to edit any certificates that were rejected or had other problems during processing (**EDITING FUNCTIONS**, pg. 56). The **Edit** menu contains several utilities for use in editing the certificates.
9. Generate MICAR100 file (**GENERATING A MICAR100 FILE**, pg. 51). This file is used by other MICAR software to continue the process of encoding cause-

of-death data. **Note:** Data files that will be processed by the 1996 versions of PC-MICAR100/200 do not require this step.

10. Create a backup for shipment to NCHS (**Creating Backups for NCHS**, pg. 54). This function creates a file that can be shipped to NCHS. The file contains all of the data collected by Super-MICAR, plus the MICAR100 file generated in the previous step.
11. Close the certificates file (**CLOSING A FILE**, pg. 55).
12. If there are other certificate files to process, repeat steps 2 through 7.
13. If there are no more files to process, exit Super-MICAR and return to DOS (**EXITING Super-MICAR**, pg. 70).

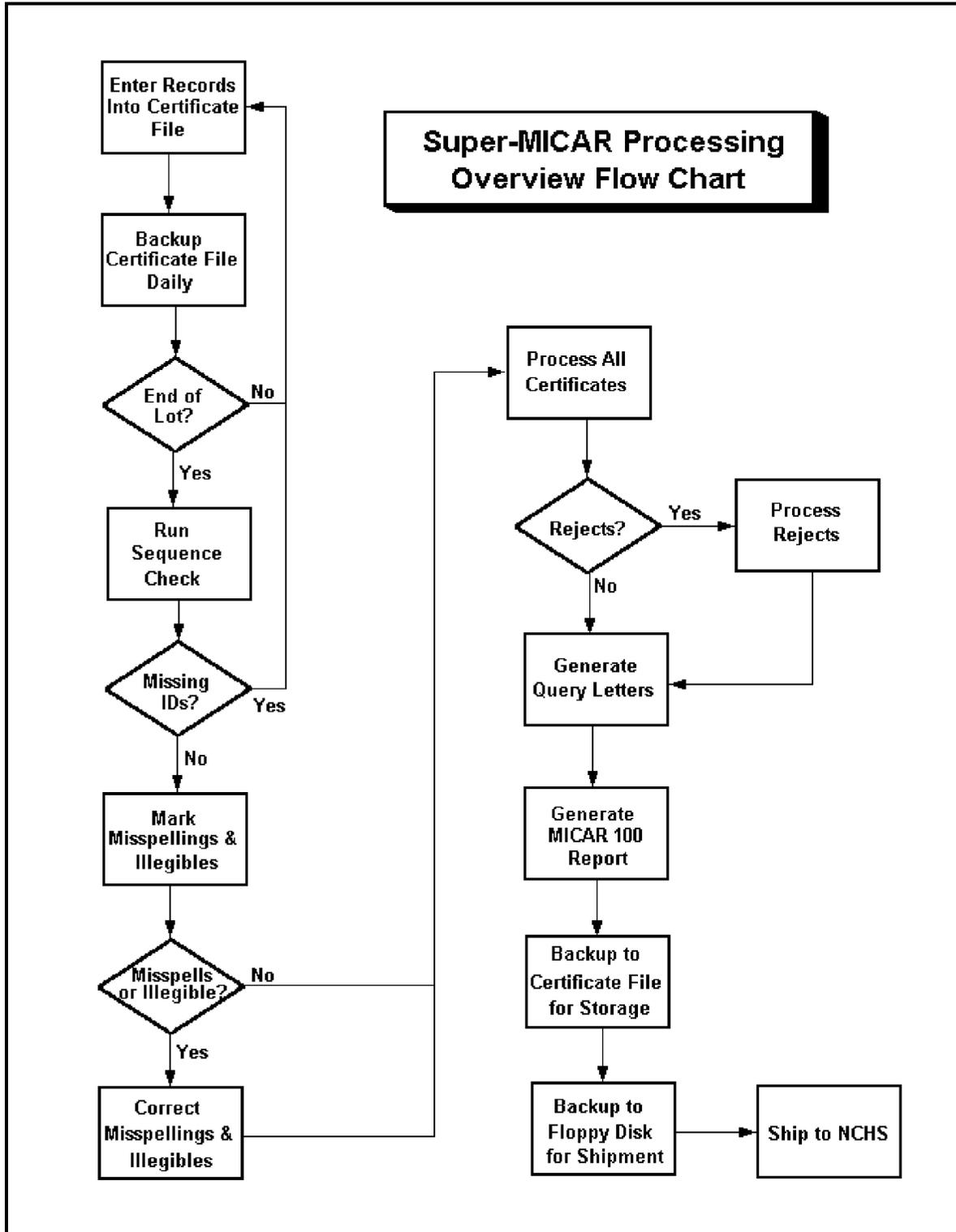
### **Extra Utilities**

Below are listed additional functions that Super-MICAR can perform. Most of these utilities can be used at any time with Super-MICAR. Most will require that a certificate file be open. See the individual description of each utility for more details. Please note that there are more utilities described in the *Super-MICAR System Manager's Guide*.

1. Browse through and edit the certificates in a file (**Browsing Through the Certificates**, pg. 58). This function allows the user to edit information in the certificate database, which may be necessary at any time.
2. Find a specific certificate number/record in a file (**Finding a Record**, pg. 60). This function is available only when browsing through the certificates and allows the user to display a particular record by specifying its certificate number.
5. Delete a certificate while editing (**Deleting Certificates While Editing a Certificate File**, pg. 64). This function allows the user to remove a record from the certificate file.
6. Delete several certificates at once (**Deleting Several Certificates at Once**, pg. 65). This function allows the user to remove a block of several records from the certificate file. Use this option if an error has occurred and several certificates have been entered into the wrong file.

7. Generate a sequence check (**Generating a Sequence Check**, pg. 66). This function generates a report that checks the sequence of the certificate numbers in the file. It is useful in determining if all of the records that should be in the file have been entered, if unwanted records have been entered, or if records have been entered with an incorrect certificate number. This function can be used at any time, but is most useful between data entry and processing to determine if the file is complete.
8. Print a list of errors detected during last processing (**Printing an Error Listing**, pg. 68). This function prints a report listing all of the certificates that were not completely processed by Super-MICAR. This report may be useful to the person who will perform reject coding.
9. Print all or selected certificates for review. See **Printing All the Certificates** (pg. 68) and/or **Printing a Single Certificate** (pg. 69).
10. Perform a daily backup. (**Backing Up All the Files**, pg. 53). This function creates a backup copy of the open certificate file either on your system's fixed drive or on a floppy. Backing up data is the only protection available against losing data due to a failed computer system. It is a good idea to back up the certificate file at the end of every day.

There are more Menu Options and Functions available in Super-MICAR than will be used by data entry personnel. These other Menu Options and Functions will be used by the system manager. The instructions for them are contained in the *Super-MICAR System Manager's Manual*.



THIS PAGE INTENTIONALLY LEFT BLANK

---

**THE MENU SYSTEM**

---

**Quick List of Menu Options**

<b>TABLE 1: Super-MICAR Menu Options</b>	
<b>Key Combination</b>	<b>Menu Option Accessed</b>
{ALT-F}	<b>File</b> Menu Option
{ALT-E}	<b>Edit</b> Menu Option
{ALT-P}	<b>Process</b> Menu Option
{ALT-R}	<b>Reports</b> Menu Option
{ALT-B}	<b>Backup</b> Menu Option
{ALT-H}	<b>Help</b> Menu Option

<b>Super-MICAR Function Listing</b>	
<b>File</b>	
{ALT-F2}	Create New File
{F2}	Open Existing File
{ALT-F4}	Close File
{SHIFT-F7}	Export to ASCII File
{SHIFT-F8}	Import from ASCII File
	Repair File Index
	Merge Another File
{ALT-F6}	Set Data File Path
{SHIFT-F6}	Set Table File Path
	Set Backup File Path
	Set MICAR100 Export Path
	DOS Subsession
{ALT-X}	Exit Super-MICAR
<b>Edit</b>	
	Edit/Browse Header Info
{F3}	Add Certificates
{F4}	Edit/Browse Certificates
{F9}	Edit Additional Info
{ALT-O}	Edit Industry/Occupation
{F8}	Delete Records
{F5}	Find a Record
{F7}	Print a Record
{ALT-U}	Undo Changes
<b>Process</b>	
	Mark Misspellings/Illegibles
	Correct Misspellings/Illegibles
	Process All Records
	Process Rejects
	Process Additional Info
	Generate MICAR100 File
{F6}	Show Processed Output

<b>Reports</b>	
	Sequence Check
	Generate QC Database
	Print Error Listing
	Print All Certificates
	Generate Query Letters
<b>Backup</b>	
{ALT-F7}	Backup All Files
	Backup for NCHS
{ALT-F8}	Restore from Backup
	Backup and Remove
<b>Help</b>	
{F1}	View Help File
{ALT-F1}	About Super-MICAR

### Using the Super-MICAR Menu System

Super-MICAR functions are available through a drop-down menu system. The menu system allows the user to select functions to perform and to move from task to task quickly and easily. Unlike the menu lists available through other types of software, Super-MICAR uses a menu system that allows options to be selected from the menu even when another function is active. This allows users to select Functions more quickly, without having to exit their way 'back up the tree' before they can select another function.

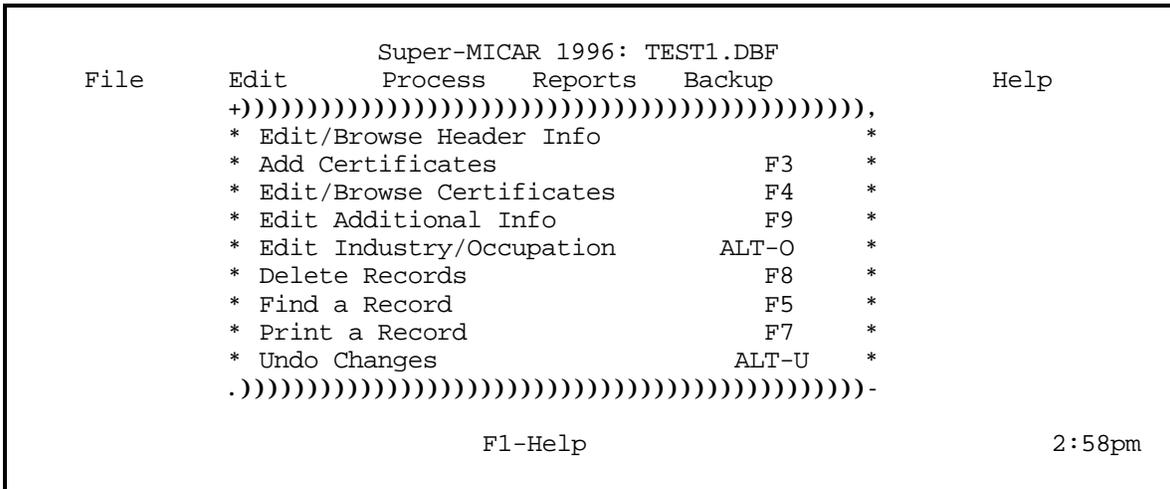
There are two ways to access the menu:

**ALT-X:** Simultaneously pressing the {ALT} key and the highlighted letter key of a main menu item will display the drop-down menu for that item. (The Alt keys for each menu option are listed in Table 1.) Then use the up and down arrow keys to highlight an item on the menu. Press {ENTER} to select the option. Use the left and right arrow keys to open submenus for other main menu options. Pressing {ESC} from a dropped-down menu closes the menu. Pressing {ESC} from the main menu will exit Super-MICAR.

**Hotkey:** Many of the functions in the menus have an associated Hotkey. The Hotkey assignments are shown on the drop-down menus and are listed in Table 2. Pressing a Hotkey will immediately access the associated function. (For

example, pressing {F2} will select the Open Existing File Function.) Hotkeys are the fastest, easiest way to move around Super-MICAR. As users become familiar with Super-MICAR, they will find the hotkeys easier to use.

To select a function from a drop-down menu, either use the up and down arrow keys to highlight an option or press the option's selection letter. The selection letter is displayed in red (on color monitors) or highlighted (on monochrome monitors). Pressing the selection letter will move the highlight bar to the selected option.



**Figure 1:** The **Edit** Menu Option and its Functions.

**Figure 1** gives an example of the **Edit** Menu Option and its Functions.

Not all functions are available at all times. In order to prevent users from selecting functions that should not be accessed during a particular process, the menu system will make certain functions available (active) or unavailable (inactive). On color monitors, the active options are shown in black while inactive options are shown in gray. On monochrome monitors, inactive options do not have a highlighted selection letter. When an option is inactive, it cannot be selected (the highlight bar will skip over that item and it's Hotkey will not function).

---

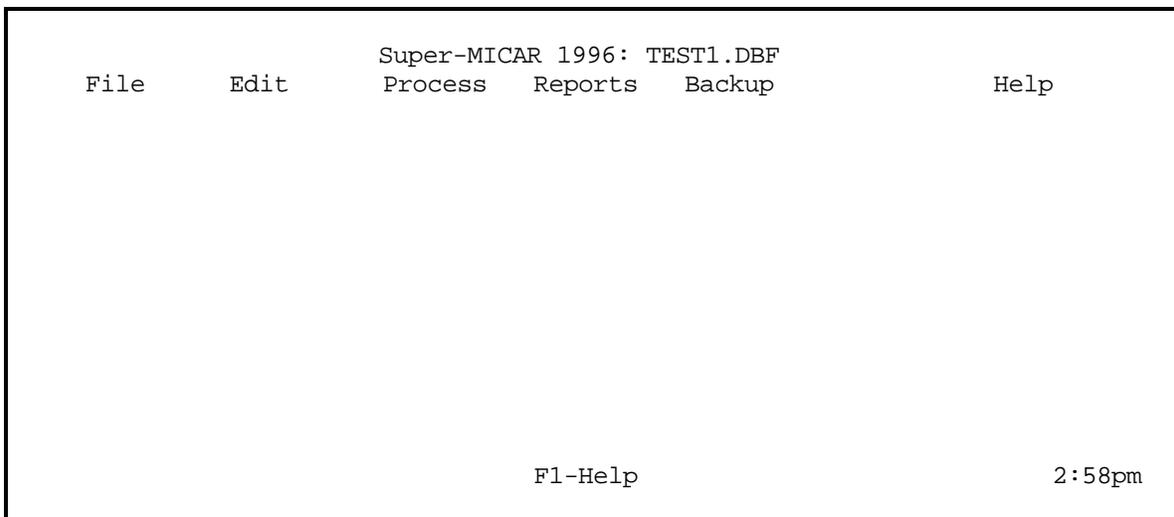
## GETTING STARTED

---

### Starting Super-MICAR

To start Super-MICAR from DOS, use the following steps:

1. Make sure that DOS is currently in the <SUPMICAR> directory.
  - A. To check to see if the current directory is the <SUPMICAR> directory, type CD and press {ENTER}. The current directory name will appear on the screen.
  - B. To change the current directory to the <SUPMICAR> directory, type CD \SUPMICAR and press {ENTER}.
2. To start Super-MICAR, type SUPMICAR and press {ENTER}.
3. The main menu screen (**Figure 2**) will be displayed. Refer to the section **Using the Super-MICAR Menu System** (pg. 13) for more details on the main screen and the Menu Bar.



**Figure 2:** The Super-MICAR Main Screen.

When the main screen appears, Super-MICAR is ready to begin. To start work, see **Creating a New File** (pg. 16), or **Opening an Existing File** (pg. 19). Super-MICAR will "remember" the last file that was opened, so unless the user specifically closes a file (see

**CLOSING A FILE**, pg. 55) the last opened file will be open and ready each time Super-MICAR is started.

### **About the Main Screen**

The main screen of Super-MICAR has several useful features:

1. At the top of the main screen will be the title (Super-MICAR). This line will also show the file name of any open certificate file (see **Opening an Existing File**, pg. 19).
2. The second line of the screen holds the menu bar. The menu bar has several words on it, called Menu Options. Each Menu Option has several Functions that can be used. See **Using the Super-MICAR Menu System** (pg. 13) for more details.
3. At the bottom of the screen is a bar displaying some useful information:
  - A. In the center, a note appears about the {F1} key. The {F1} key will display Super-MICAR's online Help feature. This will give brief instructions about whatever part of Super-MICAR is currently being used.
  - B. In the lower right corner is a clock showing the current time.
  - C. The lower left corner displays useful information concerning the current process. For example, if you are editing a certificate, the lower left corner displays a message describing the field in which the cursor is located. During processing, this area displays the certificate number of the record currently being processed.

### **Creating a New Certificate File**

There are two ways to open a certificate file for use with Super-MICAR. The first way is by **Creating a New Certificate File** (see below). The second way is by **Opening an Existing File** (pg. 19). Before data can be entered into a certificate file, a file must be created and opened. To create a new certificate file, follow these steps:

1. From the main screen, press {ALT-F} to select the **File** Menu Option.

- 2. Use the up and down arrow keys to highlight the Create New File Function and press {ENTER}.
- 3. If a file is currently open, a message window will be displayed.
  - A. To close the currently open file and open a new one, press {Y} and go on to step 4.
  - B. To abort opening a new file and keep using the currently open file, press {N}. The main screen will be re-displayed. Continue using Super-MICAR normally.

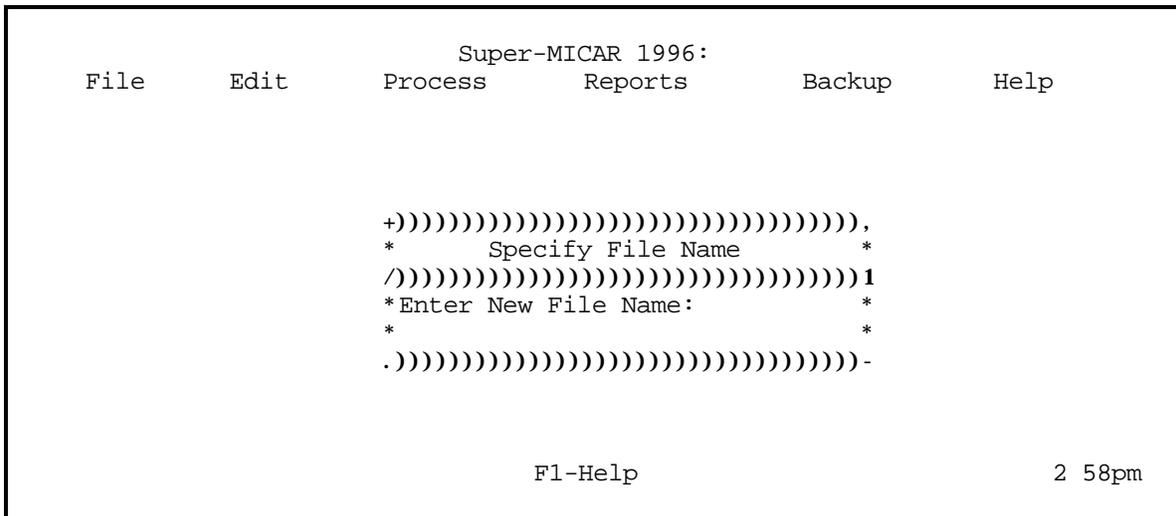
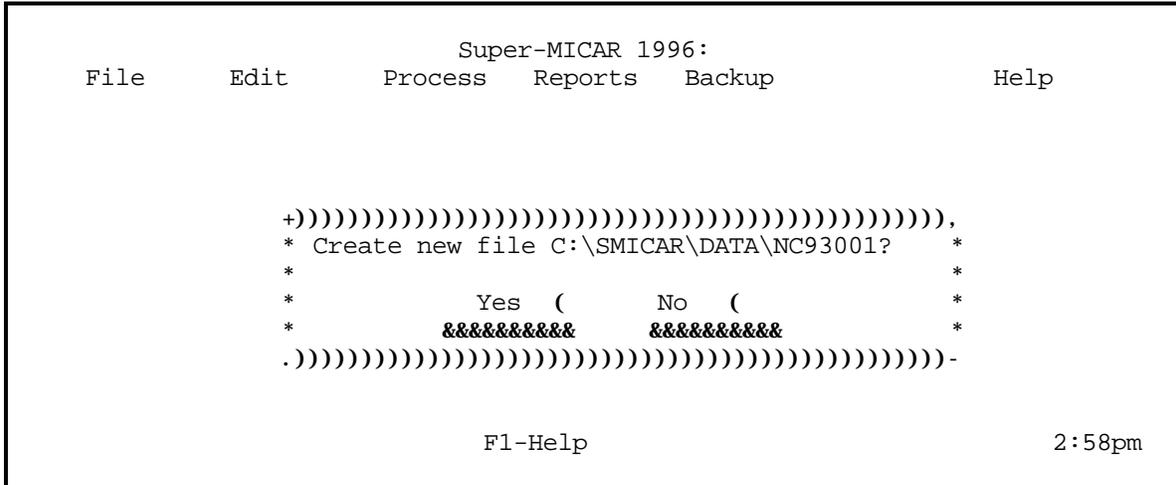


Figure 3: A request for a new certificate filename.

- 4. A window will be displayed (see **Figure 3**) requesting a filename. Type in the desired 7 character filename **WITHOUT** the extension and press {ENTER}. If a file with the entered filename already exists in the <SUPMICAR/DATA> directory, a message window will be displayed. Press {ENTER} and re-enter the filename.

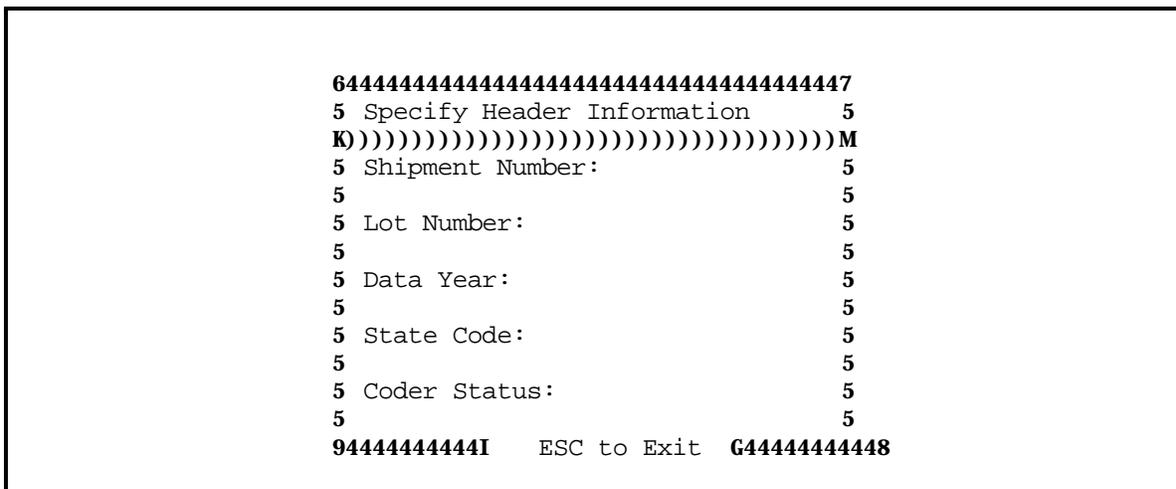
Example: NC93001 {ENTER}

See the *Super-MICAR System Manager's Manual* for information on suggested file name conventions.



**Figure 4:** Confirm creation of a new certificate file.

5. A second window will then be displayed (see **Figure 4**) asking to confirm the creation of the new file.
  - A. To create a new file type {Y}. The header information screen (step 5) will be displayed.
  - B. To abort creation of the new file and return to the main screen, type {N}.



**Figure 5:** The Specify Header Information screen.

6. When the file is created, the Specify Header Information screen (**Figure 5**) will be displayed. The header information will be the same for each record in the file. Fill in the appropriate header information as follows:

- Shipment** - A number from 00-15 commonly used to indicate the receipt month or processing month.
- Lot #** - A number from 000-999. Some states will use "book number."
- Data Year** - The last digit for the year of the death certificate (Example: 1991 = 1, 1997 = 7).
- State Code** - A number identifying the state from which the death certificate originates. (These states codes are listed in **APPENDIX A**, pg. 71). If a two letter abbreviation for a state is entered, the program will automatically insert the correct NCHS state code. If the program does not recognize the abbreviation, it will display an error message and then a pick list of states. Entering a question mark {?} in this field will cause a pick list of states to be displayed.
- Coder Status** - A number from 0-9 used to identify the status of the coder.

Example: Codes for a batch of certificates being processed for data year 1987, from the State of Alaska, with lot number 303, shipment 02, and coder status is the production coder would have the following entries: **Shipment 02, Lot # 303, Data Year 7, State Code 02, Coder Status 1.**

7. To save the header information and open the database file for use, press {CTRL-ENTER}. The main screen will be re-displayed with a new filename at the top.
8. To exit the Specify Header Information screen without saving, press {ESC}. The main screen will be re-displayed.

### Opening an Existing File

The steps below tell how to open an existing certificate file for use with Super-MICAR.

1. From the main screen, press {ALT-F} to select the **File Menu Option**.



---

## **ENTERING AND SAVING CERTIFICATE DATA**

---

There are several Functions that can be used to enter and save data in Super-MICAR. It is recommended that a sequence check (see **Generating a Sequence Check**, pg. 66) and misspellings/illegibles check (see **Marking Misspellings/Illegibles**, pg. 38, and **Correcting Misspellings/Illegibles**, pg. 39) be performed after all of the certificate data has been entered.

### **Adding Certificates**

In order to add certificates, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 16, or **Opening an Existing File** pg. 19).

Adding certificates to a file is the primary data entry function. Use the instructions below to add certificates to an open file. Note that I&O data can also be entered while using the Add Certificates Function. See **Editing Industry/Occupation** (pg. 35) for more information.

1. From the main screen, press {ALT-E} to select the **Edit** Menu Option.
2. Use the up and down arrow keys to highlight the Add Certificates Function and press {ENTER}.
3. A window will appear showing the number of certificates that can be entered. This number is determined by the amount of free space on the hard drive. Press {ENTER}.
4. The Certificate Information Screen (see **Figure 7**) will be displayed.
5. **Table 3** lists the special keys and their functions for adding certificates.

<b>Table 3: Function Keys For Adding Certificates</b>	
{F7}	Print Current Certificate. Prints the currently displayed certificate out on the printer.
{F9}	Additional Information. Switches to the ADDITIONAL INFORMATION SCREEN. See <b>Editing Additional Information</b> (pg. 30). The text next to this key will switch from Add to Edit when AI has been entered.
{ALT-1}	Places the cursor on the Part I, line A field.
{ALT-2}	Places the cursor on the Part II field.
{ALT-D}	Press ALT-D to indicate that a line number (Ib, Ic, Id) or the phrase 'Due to' are marked out on the certificate. When ALT-D is pressed, the line number will disappear. Pressing ALT-D a second time will restore the line number.
{ALT-F9}	Saves the current certificate and exits the editing screen.
{ALT-I}	Press ALT-I to indicate that the certificate contains more information than could be typed in the fields on the screen. This marks the entry as being incomplete, and the abbreviation (INC) will appear on the screen after the certificate number.
{CTRL-ENTER}	Saves the certificate information on disk.
{ESC}	Exits this menu function and returns to the CERTIFICATE EDITING submenu.
{SHIFT-TAB}	Moves the cursor to the previous field.
{TAB}	Moves the cursor to the next field.

6. Enter the following certificate information in the corresponding fields on the screen. NCHS rules on special cases that affect the data entered have been provided as notes after each field description. Remember, the {TAB} and {SHIFT-TAB} keys can be used to move from field to field.

**Certificate** - Enter the certificate number. The certificate number is usually in the upper right hand corner of the death certificate. It is also called the State File Number on the certificate. The abbreviation (INC) indicates that the certificate contains more information than could be typed in the fields on the screen. See **Table 3, {ALT-I}** above.

- A. If another certificate with the same certificate number as the one being saved already exists in the database file, a message window will be displayed.
- B. The message window will inform the user of the specific problem (in this case, attempting to add a duplicate certificate number). Press any key to return to the Enter Certificate Information screen and make corrections.

**Sex** - Type M for Male, F for Female, or U for Unknown. If Sex is not stated on the certificate, determine sex by name. Enter a U for Unknown.

**Date of Death** - Enter a two digit month/day (Example: 08/19). If any element of the date of death is unknown, enter '99' for the month (if the month is unknown) or '9999' for the year (if the year is unknown). Thus, a totally unknown date would be entered as 99/9999.

**Age: Number of Units** - Enter the age of the decedent. The units of time (years, months, minutes, etc) will be entered in the Unit field (Example: For 27 years old, type 27; for 3 days, type 3).

**Age: Unit** - The units of time for the Age: Number of Units field. Units will be given in minutes, hours, days, months, or years. Type {?} and press {ENTER} to obtain a list of valid units. Highlight the desired unit name with the arrow keys and press {ENTER} to select it. If nothing is entered in this field, 'YEARS' is assumed and will be automatically entered into this field.

- A. If the Age (Number of Units) entry on the certificate has an entry of "few minutes" or "few hours" on the certificate, leave the Age (Number of Units) field on the screen blank and enter the appropriate Unit. Example: If the certificate reports age as "few minutes," leave the Age (Number of Units) field blank and type MINUTES in the UNIT field.
- B. If age is not reported on the certificate, derive the decedent's age from the Date of Birth and Date of Death entries on the certificate.

- C. If Age and the Date of Birth entries on the certificate are blank, leave the Age (Number of Units) field blank on the screen. Enter the UNIT as indicated on the certificate, or type UNKNOWN if units are not indicated.
- D. If age cannot be determined from the certificate, but entries of "newborn," "infant," etc. on the certificate indicate an age of less than 1 year old, leave the Age (Number of Units) field on the screen blank and type HOURS in the UNIT field.

Super-MICAR 1996: TEST1.DBF			
File	Edit	Process Reports Backup	Help
Certificate: 000014	Sex:	Date of Death:	
Age:	Unit:	State of Death:	
Conditions Causing Death			Duration
Ia:			
Ib:			
Ic:			
Id:			
II:			
Manner of Death:	Date of Injury:	Injury at Work?:	
Injury Description:			
Place of Injury:		Date of Surgery:	
Activity Code:		State-Specific Data:	
F9: Add AI Screen	Alt-U: Undo	Ctrl-Enter: Save	
	Alt-O: Occ/Ind Screen	Alt-F9: Save/Exit	
		Esc: Exit	
<b>Field Description</b>	F1-Help	<b>Record Count</b>	2 58pm

**Figure 7:** The Certificate Information Screen.

- E. Disregard fractions reported in the number of units for age on the certificate.
- F. If the number of units on the certificate is reported with "approximately," "about," etc., enter the number only.

**State of Death** - Super-MICAR will automatically fill in the state code using the header information. NOTE: The state code can only be changed using the Edit/Browse Header Info Function.

**Cause of Death, Part I** - Type in the cause of death exactly as it appears on the death certificate. Do not make any alterations. If any word or words in the Cause of Death are illegible, type ILLEGIBLE in place of the illegible words. All other legible words should still be typed in.

- A. Be sure to include any numbers in the Cause of Death section of the certificate. The following formats can be used for the numbers: number and dot; number, dot, space; or number and space. Failure to enter the Cause of Death information correctly WILL CAUSE ERRORS in the data.

Examples:

- 1.Myocardial Infarction (number and dot)
- 1. Myocardial Infarction 2. Severe Pneumonia (number, dot, space)
- 1 Myocardial Infarction (number and space)

The above examples would be typed in exactly as they appear:

- I(a) 1. MYOCARDIAL INFARCTION
- I(a) 1. MYOCARDIAL INFARCTION 2. SEVERE PNEUMONIA
- I(a) 1 MYOCARDIAL INFARCTION

- B. If the I(a), I(b), I(c),I(d), "due to" or "as a consequence of" lines are deleted or marked through on the certificate, press {ALT-D} on the matching line of the Certificate Information Screen. This will cause the I(a), I(b), I(c), or I(d) to disappear and indicates that the line number or "due to"/"as a consequence of" phrase was marked out.

- C. Following is a list of symbols, and their meanings, that are commonly used on the Cause of Death sections of a death certificate. This list is also included in **APPENDIX E - SPECIAL SYMBOLS** (pg. 78) at the end of this manual.

# "Fracture." Substitute for the word "fracture." Example: For "Leg #," type "LEG FRACTURE".

- ↓ "Decreased." Substitute for the word "decreased." Example: For "↓ blood pressure," type "DECREASED BLOOD PRESSURE".
- ↑ "Increased." Substitute for the word "increased." Example: For "↑ hemorrhaging," type "INCREASED HEMORRHAGING".
- $\frac{0}{\bar{I}}$  "Hour." Substitute for the word "Hour." Example: For "1  $\frac{0}{\bar{I}}$ ," type "1 HOUR".
- $\frac{00}{\bar{II}}$  "Secondary to." Substitute for the words "secondary to." Example: For "Pneumonia  $\frac{00}{\bar{II}}$  Gunshot wound," type "PNEUMONIA SECONDARY TO GUNSHOT WOUND".
- 1° "Primary." Substitute for the word "primary." Example: For "1° colon cancer," type "PRIMARY COLON CANCER".
- 2° "Secondary to." Substitute for the words "secondary to." Example: For "Pneumonia 2° cardiorespiratory infection," type "PNEUMONIA SECONDARY TO CARDIORESPIRATORY INFECTION".
- $\bar{c}$  "With." Substitute for the word "with." Example: For "Heat stroke  $\bar{c}$  myocardial infarction," type "HEAT STROKE WITH MYOCARDIAL INFARCTION".
- $\bar{p}$  "After." Substitute for the word "after." Example: For "Spontaneous bleeding  $\bar{p}$  tracheal tube removal," type "SPONTANEOUS BLEEDING AFTER TRACHEAL TUBE REMOVAL".
- $\bar{s}$  "Without." Substitute for the word "without." Example: For "Three weeks  $\bar{s}$  taking medication," type "THREE WEEKS WITHOUT TAKING MEDICATION".
- w/ "With." Substitute for the word "with." Example: For "Heat stroke w/ myocardial infarction," type "HEAT STROKE WITH MYOCARDIAL INFARCTION".

**Duration** - Type in the interval between the onset of the condition and death exactly as it appears on the death certificate. Do not make any alterations.  
Example: 3-4 WEEKS, 2 1/2 MONTHS, etc.

- A. Duration may be reported using units of time (YEARS, MONTHS, WEEKS, DAYS, HOURS, etc.) or with words such as BRIEF, CHRONIC, CONGENITAL, MOMENTS, NEWBORN, etc.
- B. Some of the special symbols listed under Cause of Death, Part I (step F) also apply to the Duration field. A complete list of these symbols also appears in **APPENDIX E - SPECIAL SYMBOLS** (pg. 78) of this manual.
- C. If a number other than a "1" or a "2" appears with a degree symbol (Example: 8°) in the Duration, ignore the number and symbol. Do not enter the number and symbol.

**Cause of Death, Part II** - Type in any other significant conditions that are listed in the Cause of Death section of the death certificate in the order as reported.

- A. If more than one entry for Part II is listed on the certificate, enter the information in the order it appears on the certificate. Begin with the upper leftmost entry in Part II and work down and to the right, separating entries with a semicolon (;) if there is more than one entry on the same line.
- B. All abbreviations and symbols listed in **APPENDIX E - SPECIAL SYMBOLS** (pg. 78) apply to Part II.

**Manner of Death** - Type in the code for the Manner of Death listed on the certificate. Type a question mark {?} and press {ENTER} to display a pick list of valid codes for manner of death. (The list is reproduced below for convenience.) Use the arrow keys to highlight the desired entry and press {ENTER} to select it.

- 1 Accident
- 2 Suicide
- 3 Homicide
- 4 Deferred
- 4 Pending Investigation
- 4 Unclassified
- 5 Undetermined
- 6 Self-Inflicted
- 7 Natural
- Not Specified

**Date of Injury** - Month, day, and year injury occurred (Ex: 01/01/1992). To indicate an unknown date of injury, enter '99/99/9999'.

- A. If the date of an injury or external cause appears anywhere on the certificate except the Duration section of Part I, enter the date of that injury or external cause here.
- B. If a span of time is reported for month, day, or year for the injury, enter the earlier date. Example: January 1-7, 1989 would be typed in as 01/01/1989.
- C. The Date of Injury cannot be after the date of death.

**Injury at Work?** - Type a {Y} or leave blank, as reported on the death certificate.

**Injury Description** - Type in the description exactly as it appears on the death certificate.

**Place of Injury** - Type in the Place of Injury as it appears on the death certificate. The code assigned to this entry is displayed to the right of the field, in parentheses.

**Date of Surgery** - Date of surgery. Used only for states which have a specific surgery item on the certificate. To indicate an unknown date of surgery, enter '99/99/9999' for the year.

- A. If "yes" is entered in the "Was operation performed" item on the certificate and no Date of Surgery is specified, type SURGERY as the last condition in Part II. Separate SURGERY from any other items in Part II with a semicolon (;). For example, if "yes" is entered, the certificate data should be entered as follows:

- I(a) CARDIAC ARREST
- (b) BREAST CANCER
- (c)
- (d)
- II PNEUMONIA; SURGERY

- B. If "yes" is entered in the "Was operation performed" item on the certificate and surgery (or a named type of surgery) is recorded elsewhere on the certificate, do not add SURGERY to Cause of Death, Part II. For example, if "yes" is entered with a specific type of surgery already named, the

certificate data would be entered as follows:

- I(a) CARDIAC ARREST
- (b) BREAST CANCER; MASTECTOMY
- (c)
- (d)
- II PNEUMONIA

- C. If "yes" and a date of surgery are entered in the "Was operation performed" item on the certificate, do not enter SURGERY in Cause of Death, Part I or II. Enter the date of the surgery in the Date of Surgery item.
- D. If diseases, injuries, or named surgeries are reported in the "Was operation performed" block, enter these diseases, injuries, or named surgeries as the last entry in Cause of Death, Part II.
- E. The date of surgery cannot be after the date of death.

**Activity Code** - Activity the decedent was undertaking when death occurred. Entering a question mark (?) will cause the following pick list to appear:

- 0: While Engaged in Sports Activity
- 1: While Engaged in Leisure Activity
- 2: While Engaged for Income
- 3: While Engaged in Other Types of Work
- 4: While Resting, Sleeping, Eating (Vital Activities)
- 8: While Engaged in Other Specified Activity
- 9: During Unspecified Activity
- Blank

**State Specific Data** - For use by the states. This field can hold up to 18 characters of state-specific data. Consult the System Manager for information on how to use the State-Specific Data field.

**Field Description** - Brief instructions for entering data in the field the cursor is positioned on will be displayed in the bottom left corner of the screen.

**Record Count** - Number giving the total number of certificates in the file.

- 7. When the end of the last field has been reached, press {CTRL-ENTER} or

- {PgDown}. The certificate will be saved and a blank screen for a new record will be displayed.
8. The Enter Certificate Information screen will be re-displayed with all but one of the fields blank (the certificate number field will contain data). A new certificate number will be automatically generated by the program. Go to step 5 above to enter another certificate.
  9. To exit the Add Certificate Function, press the {ESC} key when a new certificate screen is displayed. **NOTE:** Pressing {ESC} from a screen that contains data WILL NOT save that data. Press {ALT-F9} to save the current certificate and exit the Add Certificates function.
  10. The main screen will be redisplayed.

### **Editing Additional Information**

In order to edit AI, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 16, or **Opening an Existing File** pg. 19).

Each record in a Super-MICAR file can have two separate screens of information associated with it. The first screen, the Certificate Information screen, should contain the cause of death data as it appeared on the death certificate. On color monitors, this screen is blue. Certified copies of the death certificate information could be taken from this screen. The second screen, the Additional Information (AI) screen, contains the information that will be processed by Super-MICAR. This screen is red on color monitors. The information on this screen may be different than that on the Certificate Information screen in cases where information needs to be added to the record as the result of queries. Changes in the record may also be required to assist the Super-MICAR processor in assigning Entity Reference Numbers to the medical conditions on the record. For most records, Super-MICAR will process the original information as it appears on the Certificate Information screen. When the AI screen is first invoked, the information from the original screen is copied onto the new screen. After this, the AI screen will always retain the changes made to it separately from the Certificate Information Screen.

**NOTE:** Once a record has an associated AI certificate, changes made to the original certificate will have no effect on Super-MICAR's processing. Any corrections made to data on the Certificate Information screen should also be made on the AI screen to assure that the record processes correctly.

The following sections provide information on entering additional information on the Additional Information Screen. Additional Information takes only very specific forms in Super-MICAR, and can come from many sources. The section below describes the types of AI that can be entered into Super-MICAR.

### **What Constitutes Additional Information?**

In the past, additional information was defined as information gathered as a result of queries to the physician, results of investigations by coroners or other officials, traffic accident reports, etc. These definitions still hold true in Super-MICAR. However, the Super-MICAR Additional Information screen is used for these and other types of data.

Specifically, AI includes any information or changes of information made to the original certificate. Super-MICAR assumes that preserving the original death certificate information is important, and therefore, any changes to that information are made on the Additional Information Screen. These changes can be made in several different places for several different reasons.

#### **Adding Certificates:**

While adding certificates to a database file, additional information from police reports, pending investigations, or coroner's reports may be included with the original certificate. Further, there are times when numbers that are spelled out on the original certificate should be entered as digits on the AI screen. This information can be entered during the Add Certificates Function by accessing the Additional Information screen from the Certificate Data screen. To access the AI screen, press {F9}.

#### **Browsing Certificates:**

Specific causes of death are questionable under certain circumstances. Many states send query letter to the physician asking for confirmation or clarification of the death conditions when these special cases are encountered. The results of these query letters can be entered by accessing the AI screen from the Edit/Browse Certificates Function. To access the AI screen from the Edit/Browse Certificates

screen, press {F9}.

**Reject Processing:**

When processing rejected records through the Super-MICAR reject processor, it is often necessary to make changes to the certificate information in order to get the record to process completely. These changes may consist of supplying a correct spelling for a misspelled word, adding punctuation to divide two terms, re-ordering the terms on a line, or selecting an external cause of death from the External Cause prompts. (Note: External Cause prompts should only be used by a qualified MICAR coder.) All of these changes should be made on the AI screen so that the original certificate data can be preserved unchanged. During processing, the Reject Editing screen will appear to allow the user to make changes. From the Reject Editing screen, press {F9} to access the AI screen. (For more information on reject processing, refer to **APPENDIX G - PROCESSING REJECTED RECORDS**, pg. 79.)

During reject processing, if an AI entry for a certificate already exists, the AI screen will be displayed by the reject processor, bypassing the Reject Editing screen altogether.

It is important to remember that Super-MICAR will process only the information on the AI screen if an AI entry for a particular certificate exists. This means that for any certificate that has both original information and additional information, changes to the original certificate will have no effect on Super-MICAR's attempts to match causes of death to their medical entity reference numbers. Only those changes made on the AI certificate will be processed. Of course, for certificates that have no AI information, the data on the original certificate is processed.

**Accessing the Additional Information Screen**

Before the AI screen can be used, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 16, or **Opening an Existing File** pg. 19).

The Certificate Information Screen must be displayed (**Adding Certificates** pg. 21, 30, or **Browsing Through the Certificates** pg. 58).

The Additional Information Screen can be accessed from the Certificate Information Screen by pressing {F9}. It functions exactly the same as the Certificate Information Screen. To use the Additional Information Screen, do the following:

1. Access the Certificate Information Screen for the desired certificate. The instructions for doing this can be found in the **Adding Certificates** (pg. 21, 30) section of this manual.

Super-MICAR 1996: TEST1.DBF			
File	Edit	Process Reports	Backup Help
Certificate: 000014	Sex:	Date of Death:	
Age:	Unit:	State of Death:	
Conditions Causing Death		Duration	
Ia:			
Ib:			
Ic:			
Id:			
II:			
Manner of Death:	Date of Injury:	Injury at Work?:	
Injury Description:			
Place of Injury:		Date of Surgery:	
Activity Code:		State-Specific Data:	
F6: Show ERNs	F8: Delete	Alt-U: Undo	Ctrl-Enter: Save
			Alt-F9: Save/Exit
			Esc: Exit
<b>Field Description</b>	F1-Help		2 58pm

**Figure 8:** The Additional Information Screen.

2. Press {F9}. This will cause a screen very similar to the Certificate Information Screen to appear (see **Figure 8**). On a color monitor, the background of this screen will be red. On a monochrome monitor, the title of the screen, **ADDITIONAL INFORMATION**, will appear at the bottom of the screen in bold letters. When the Additional Information Screen initially appears, the data from the Certificate Information Screen will be copied onto the AI Screen.

3. Enter the additional information in the same manner as described in **Adding Certificates** (pg. 21, 30). The restrictions on what the data fields can hold is the same. The special keys and their functions used on the AI SCREEN are listed below in **Table 4**.

{ALT-1}	Places the cursor on the Part I, line A field.
{ALT-2}	Places the cursor on the Part II field.
{ALT-D}	Press ALT-D to indicate that a line number (Ib, Ic, Id) or the phrase 'Due to' are marked out on the certificate. When ALT-D is pressed, the line number will disappear. Pressing ALT-D a second time will restore the line number.
{ALT-I}	Press ALT-I to indicate that the certificate contains more information than could be typed in the fields on the screen. This marks the entry as being incomplete, and the word INCOMPLETE will appear in the top right corner of the screen.
{CTRL-ENTER}	Saves the certificate information on disk.
{ESC}	Exits the AI screen without saving any changes and returns to the Certificate Information screen.
{CTRL-DEL}	Deletes all of the Additional Information on the AI screen.

- A. If "pneumoconiosis" is listed on the death certificate and the decedent's occupation is "coal worker" or "miner," enter COAL WORKERS PNEUMOCONIOSIS.
- B. On some occasions, additional information (A.I.) will be attached to the death certificate. If the A.I. states the underlying cause of a specific disease in Part I, the A.I. is considered to be reported on the line below the indicated disease. Adjust all other reported conditions accordingly. For example:
- I(a) Congestive heart failure
  - (b) Arteriosclerosis

(c)

(d)

II

A.I.: The underlying cause of the congestive heart failure was ASHD

The above should be typed in as:

I(a) CONGESTIVE HEART FAILURE

(b) ASHD

(c) ARTERIOSCLEROSIS

(d)

II

If a disease is modified by A.I., treat the disease as modified by the A.I. where the disease is first reported. Example:

I(a) Pneumonia

A.I. Lobar pneumonia

The above should be typed as:

I(a) LOBAR PNEUMONIA

C. If an "amended certificate" is submitted, enter the data on the amended certificate only.

6. When all of the changes have been made, press {CTRL-ENTER} to save the information. After changes have been made and saved on the AI SCREEN, subsequent viewings of the AI SCREEN will show the additional information. Also, the text next to the {F9} key on the screen will switch from "Add" to "Edit."

### **Editing Industry/Occupation**

Before Industry and Occupation (I&O) data can be edited, the following actions must have already been performed:



4. Type in the following information. The {TAB} and {SHIFT-TAB} keys can be used to move through the fields on the Edit Industry and Occupation window.
  - A. Enter the Industry as it appears on the certificate. Press {ENTER}.
  - B. Enter the Occupation as it appears on the certificate. Press {ENTER}.
  - C. Type in the appropriate Education code, or a {?} for a pick list of valid codes. If this field is left blank, Super-MICAR will check the person's age. If the age is less than 4 years, the Education code will default to '00'. If Education is left blank and the age is greater than 4 years or unknown, the Education will be coded as '99'.
5. Industry and Occupation data will be saved when all the displayed fields have data in them.

---

## **CORRECTING MISPELLED OR ILLEGIBLE WORDS**

---

Often, certificates will fail to process because they contain misspelled words or words that were entered as "ILLEGIBLE" during data entry. These two conditions are easily remedied through the use of Super-MICAR's Misspellings and Illegibles functions. There are two functions related to this task. The first Function, Mark Misspellings/Illegibles, goes through the entire certificate file and marks any records containing words that were not found in Super-MICAR's dictionary and any certificates containing the word ILLEGIBLE. (When searching for misspellings, Super-MICAR checks the words in the Part I Cause of Death fields and the Part II fields. Illegibles are checked for in these fields as well as the interval fields and the injury description.) The second Function, Correct Misspellings/Illegibles, allows the user to display and correct those records in which misspelled or illegible words were found.

Note that both illegibles and misspellings need not be marked. The user can choose to mark one or both. Data entered through the Add Certificates Function is checked for misspellings at that time. Thus, it may only be necessary to mark and correct illegible words.

### **Marking Misspellings/Illegibles**

This function is used to mark certificates containing misspelled words or the word "ILLEGIBLE". Mark Misspellings/Illegibles **MUST** be used before the Correct Misspellings/Illegibles Function can be performed. To mark misspellings and illegibles, follow these steps:

1. From the main screen, press {ALT-P} to select the **Process** Menu Option.
2. Use the up and down arrow keys to highlight the Mark Misspellings/Illegibles Function. Press {ENTER}.
3. A window (see **Figure 10**) will be displayed:
  - A. To mark misspellings only, press {S}.
  - B. To mark illegibles only, press {I}.
  - C. To mark both misspellings and illegibles, press {B}.





standard dictionary.

- Spellcheck      Selecting the Spellcheck option displays a list of possible spellings in a pick list. The user may select the correct spelling from this list. Press {S} to display the pick list. If the list does not contain the proper spelling of the word, press {ESC} to return to the spell-check selection window and choose either Accept or Retype to accept or retype the word. To select a word from the pick list, use the up and down arrow keys to highlight the correct word. When the correct word is highlighted, press {ENTER} to select it. The misspelled word is replaced with the correct spelling and spell-checking continues with the next misspelled or illegible word. Further, the misspelled word and the correct spelling are remembered so that later instances of the same misspelling are corrected automatically.
6. When a record containing an illegible word is encountered, the Edit/Browse Certificates screen for that record is displayed. Use the editing keys described in the section **Browsing Through the Certificates** (pg. 58) above to edit the record, replacing the illegible word. When all editing is complete, press {CTRL-ENTER} to save the record and go on to the next record containing a misspelled or illegible word.
  7. When all misspelled and illegible words have been corrected, a window will appear saying that the spelling check is complete. Press {ENTER} to return to the main screen.

---

## PROCESSING A CERTIFICATE FILE

---

Processing is the method Super-MICAR uses to convert the cause of death information into NCHS's Entity Reference Numbers (ERN). There are three phases of processing in Super-MICAR: Record Processing, Reject Processing, and Additional Information Processing. Each of these is described below. It is intended that these three processing options be selected in order to insure that the certificate data is processed correctly. The three options are:

- |                                   |  |
|-----------------------------------|--|
| Record Processing                 | The first phase of Super-MICAR processing produces output for all certificates in the database that are perfectly correct. It marks the certificates containing errors as rejects. This process runs without user interaction and can be run through a batch process (see <b>BATCH PROCESSING FROM THE COMMAND LINE</b> in the <i>Super-MICAR System Manager's Manual</i> ).   |
| Reject Processing                 | The second phase of Super-MICAR processing is an interactive session in which only the rejects from the Record Processing are run. A trained MICAR coder can help Super-MICAR processing by changing the data on the certificate using MICAR data entry rules, making additions on the AI screen, or selecting external cause codes from the External Cause prompts. The results of Reject Processing are merged with the results of Record Processing to produce a complete MICAR file. <b>NOTE:</b> Proper use of the External Cause Prompts requires training in MICAR data entry. If the user has not been trained, he or she should not use the External Cause Prompts. |
| Additional Information Processing | The third phase of Super-MICAR processing is designed to allow the user to process any certificates that were changed as the result of collecting additional information. Additional Information, in this sense, is any information that was provided after reject processing was completed. When Additional Information processing is selected, only those certificates that have been modified since the rejects were run will be processed.   |

Instructions for selecting and using each of these processing options are provided below.

**Processing Records**

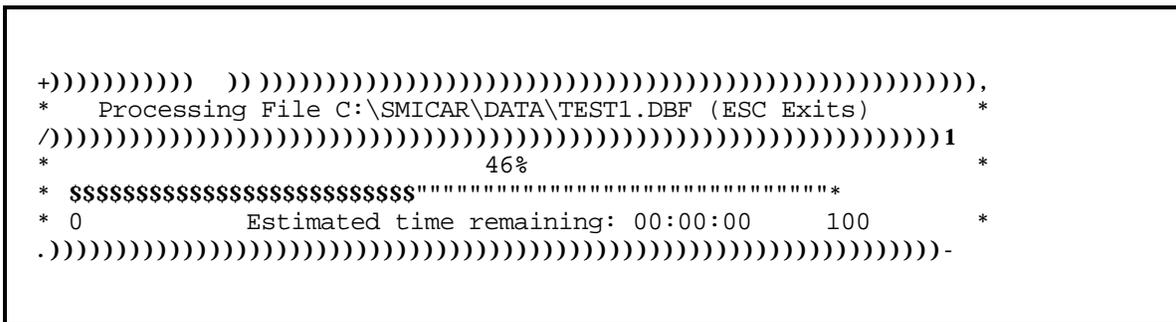
Before records can be processed, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 16, or **Opening an Existing File** pg. 19).

Please note that the file must have certificates in it to process.

The Process All Records Function can process approximately 2500 certificates per hour on an average computer. The user does not need to do anything while the processing is occurring. After the processing is finished, the user can generate a batch error listing (see **GENERATING REPORTS**, pg. 66) and then perform any editing needed as described in **ENTERING AND SAVING CERTIFICATE DATA** (pg. 21) or process the rejects as described in **Processing Rejects** (pg. 44). The instructions for Processing Records are:

1. From the main screen, press {ALT-P} to select the **Process** Menu Option.
2. Use the up and down arrow keys to highlight the Process All Records Function and press {ENTER}.
3. A message window will be displayed saying that the dictionaries are being initialized.
4. When the dictionaries are initialized, a progress bar (see **Figure 12**) will be displayed on the screen showing what percentage of the data file has been processed.



**Figure 12:** A bar graph showing the progress of file processing.

5. The certificate number for the certificate currently being processed is displayed in

the lower left corner of the screen.

6. Occasionally, Super-MICAR will take a long time to process a certificate. In these cases, the word "Thinking" will be displayed in the lower left corner of the screen, beside the certificate number. A 'spinning wheel' beside the word indicates that Super-MICAR is still processing the record.
7. No other activity is needed during processing.
8. When the processing is complete, a coding stats report will be displayed.
  - A. To print out a copy of the coding stats report, press {Y}.
  - B. To abort, press {N}.
9. The main screen will be re-displayed.

### **Processing Rejects**

Before records can be processed, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 16, or **Opening an Existing File** pg. 19).

Please note that the file must have certificates in it to process.

In Processing Rejects, Super-MICAR will stop the processing whenever a term that it cannot translate is encountered. At the user's option, the user may edit the cause of death information and process the rejected record again. NOTE: This Function cannot be used until the Process All Records Function has been used. See **Processing Records** (pg. 43) for more details. The details of Processing Rejects are as follows:

1. From the main screen, press {ALT-P} to select the **Process** Menu Option.
2. Use the up and down arrow keys to highlight the Process Rejects Function and press {ENTER}.
3. A message window will be displayed saying that the dictionaries are being loaded.

4. When the dictionaries are loaded, a progress bar (see **Figure 12**) will be displayed on the screen showing what percentage of the data file has been processed.
- A. When Super-MICAR finds a mismatch or an error, a message window will be displayed. To make a correction, press the {E} key. To accept the error as correct and continue with the processing, press the {A} key (the record is marked as correct and will not be re-processed during future reject runs). To cancel editing of the error and return to processing, press the {C} key (the record will still be marked as rejected).
- B. If the {E} key is pressed to make corrections, the user will be returned to the Certificate Information screen (refer to **Adding Certificates**, pg. 21, 30, for a description of the Certificate Information screen) or the Additional Information Screen, whichever is most appropriate (refer to **Editing Additional Information** (pg. 30) for a description of the AI screen). Super-MICAR will fill the fields on the screen with certificate information. Make changes to the fields as described in **ENTERING AND SAVING CERTIFICATE DATA** (pg. 21). Note that **Table 5** below contains a list of special keys and their functions:

F1	Displays the Help file.
F6	Show Processed Data. Displays the cause of death information and entity reference numbers for the cause of death text (see <b>Figure 13</b> ). Press the {ESC} key to return to the Enter Certificate Information screen.
F9	Additional Information. Switches to the Additional Information Screen. See <b>Editing Additional Information</b> (pg. 30).
ESC	Returns to processing without making any changes. The certificate is marked as correct and will not be processed in future sessions. Use this key if you have determined that no changes can be made that will alter the certificate's processing.
ALT-1	Places the cursor on the Part I, line A field.

ALT-2	Places the cursor on the Part II field.
ALT-D	Press ALT-D to indicate that a line number (Ib, Ic, Id) or the phrase 'Due to' are marked out on the certificate. When ALT-D is pressed, the line number will disappear. Pressing ALT-D a second time will restore the line number.
ALT-I	Press ALT-I to indicate that the certificate contains more information than could be typed in the fields on the screen. This marks the entry as being incomplete, and the word INCOMPLETE will appear in the top right corner of the screen.
CTRL-ENTER	Saves changes to the certificate. A message window will be displayed asking if the user wishes to save changes to the certificate. Type {Y} to save the changes. Type {N} to leave the file unchanged. The user will then be returned to processing

- C. When {F6} is pressed, a screen like the one in **Figure 13** will be displayed. Press {ESC} to return to the Enter Certificate Information screen.
- D. The user must look at the data line (see **Figure 13**) and determine if the entry is an external cause. If the item is an external cause, the external cause prompts will need to be used to generate an External Cause Code for the Cause of Death.

**NOTE:** Proper use of the External Cause Prompts requires training in MICAR data entry. If the user has not been trained, he or she should not use the External Cause Prompts. Press {ESC} to return to the Certificate Information screen.



top of the screen.

- 3) As more lists appear on the screen, the entries become more specific. Super-MICAR will build an External Cause Code based on the selections made from the lists. Press {CTRL-ENTER} to save the changes and return to processing.
- 4) When the External Cause Code is complete, no more lists will be displayed on the screen. The code is embedded in the line from which the External Cause prompts were called. The user may need to delete words or phrases on the certificate that relate to the encoded External Cause. Press {CTRL-ENTER} to save the changes and return to processing.
5. When the processing is complete, a coding statistics report will be displayed.
  - A. To print out a copy of the coding stats report, press {Y}.
  - B. To abort, press {N}.
6. The main screen will be re-displayed.

### **Processing Additional Information**

Before records can be processed, the following actions must have already been performed:

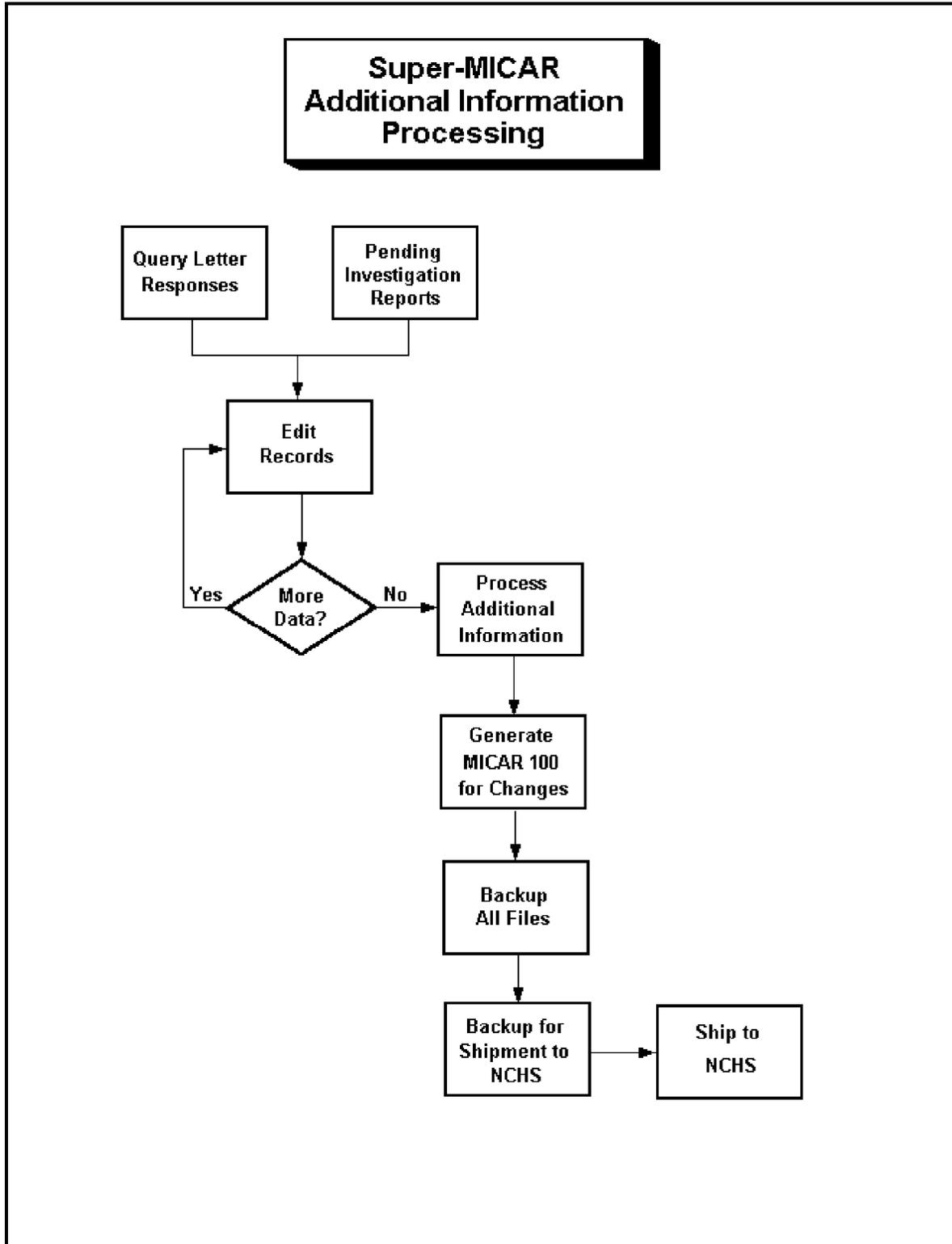
Opening a file (**Creating a New Certificate File** pg. 16, or **Opening an Existing File** pg. 19).

Please note that the file must have certificates in it to process.

Sometimes, Additional Information will be received after the certificates have been processed (as in a pending investigation, for example). In these cases, the user should edit the certificate's Additional Information and then process the AI. Once AI is processed, a MICAR 100 file for the modified records should be generated, then the batch should be backed up and sent to NCHS. A chart depicting the Additional Information Processing cycle is given at the end of this section. To process Additional Information, follow these steps:

1. From the main screen, press {ALT-P} to select the **Process** Menu Option.

2. Use the up and down arrow keys to highlight the Process Additional Information Function. Press {ENTER}.
3. A message window will be displayed saying that the dictionaries are being loaded.
4. When the dictionaries are loaded, a progress bar (see **Figure 12**) will be displayed on the screen showing what percentage of the data file has been processed.
  - A. When Super-MICAR finds a mismatch or an error, a message window will be displayed. To make a correction, press the {Y} key. To continue with the processing, press the {N} key.
  - B. If the {Y} key is pressed to make corrections, the Additional Information Screen will be re-displayed. Refer to step 3B under **Processing Rejects** (pg. 44) for information on how to make corrections. Refer to **APPENDIX G - PROCESSING REJECTED RECORDS** (pg. 79) for information on types of rejected records and how they can be modified so that Super-MICAR can encode them.
5. When the processing is complete, a coding stats report will be displayed.
  - A. To print out a copy of the coding stats report, press {Y}.
  - B. To abort, press {N}.
6. The main screen will be re-displayed.





often used after processing Additional Information, since in these cases, the primary MICAR100 file has already been shipped for processing and only the certificates that have changed need to be exported.

4. A progress bar (**Figure 12**) will be displayed showing what percentage of the certificates have been exported to a MICAR100 file.
5. When the MICAR100 file is complete, the main screen will be re-displayed.



3. A window (see **Figure 16**) will be displayed requesting a drive name (such as A, B, or C) to put the backup file on. Type in the letter of a valid drive and press {ENTER}.
4. After a valid drive has been entered, a message window will be displayed while the backup is being made.
5. When the backup is complete, the main screen will be re-displayed.

**NOTE:** The backup file will not necessarily have the same name as the open file. The NCHS backup will be named SSYYLLL.SUP, where SS is the state code, YY the data year, and LLL the lot number. .SUP is the file extension.

### Creating Backups for NCHS

Before backups can be created, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 16, or **Opening an Existing File** pg. 19).

Please note that the file must have certificates in it in order to create the backup.

After all editing and processing has been finished, backups of the certificate data should be made. The backups should be sent to NCHS for further processing.

1. From the main screen, press {ALT-B} to select the **Backup** Menu Option.
2. Use the up and down arrow keys to highlight the Backup for NCHS Function. Press {ENTER}.
3. A window (see **Figure 16**) will be displayed requesting a drive name (such as A, B, or C) to put the backup file on. Type in the letter of a valid drive and press {ENTER}.
4. After a valid drive has been entered, a message window will be displayed while the backup is being made.
5. When the backup is complete, the main screen will be re-displayed.

## **CLOSING A FILE**

---

A certificate file will normally be closed when the user is ready to start on a new batch of certificates (which involves creating a new certificate file, as described in **Creating a New File**, pg. 16). At other times, Super-MICAR will require that the certificate file be closed to perform some of the menu functions. In any case, closing a Super-MICAR file is very easy:

1. From the main screen, press {ALT-F} to select the **File** Menu Option.
2. Use the up and down arrow keys to highlight the Close File Function and press {ENTER}.
3. The currently open file will be closed. The filename will disappear from the top of the screen. Super-MICAR is now ready to open another file for processing.

---

## **EDITING FUNCTIONS**

---

Super-MICAR has several Functions that can be used to edit a certificate file and the data it contains. The most commonly used Function for this will be the Edit/Browse Function (see **Browsing Through the Certificates** on pg. 58). Other Functions that will be used to edit certificate data are: the Edit/Browse Header Information function, the Edit Additional Information Function, Edit Industry/Occupation Function, and the Find a Record Function. The Exit Super-MICAR, Delete Records, and Show Processed Output can also be used and are described in other parts of this manual.

### **Editing Header Information**

Before header information can be edited, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 16, or **Opening an Existing File** pg. 19).

The steps below are used to edit the certificate file's header information. This Function can be used only when a certificate file is open.

1. From the main screen, press {ALT-E} to select the **Edit** Menu Option.
2. Use the up and down arrow keys to highlight the Edit/Browse Header Info Function and press {ENTER}.
3. The Specify Header Information screen (**Figure 17**) will be displayed. Fill in the appropriate header information as follows:

<b>Shipment</b>	- A number from 00-15 commonly used to indicate the receipt month or processing month.
<b>Lot #</b>	- A number from 000-999. Some states will use "book number."
<b>Data Year</b>	- The last digit for the year of the death certificate (Example: 1991 = 1, 1997 = 7).



## **Browsing Through the Certificates**

Before the Edit/Browse Function can be used, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 16, or **Opening an Existing File** pg. 19).

This Function allows the user to manually browse through a certificate file. Other **Edit** Functions can be used with the Edit/Browse Function.

1. From the main screen, press {ALT-E} to select the **Edit** Menu Option.
2. Use the up and down arrow keys to highlight the Edit/Browse Certificates Function and press {ENTER}.
3. The Certificate Information Screen (see **Figure 7**) will be displayed. Descriptions of this screen and its fields can be found in the section **Adding Certificates** (pg. 21, 30) earlier in this manual.
4. The {PgUp} and {PgDn} keys will cause the preceding or next certificate to be displayed.
5. Any of the following Functions may be used while in Browse:
  - File** - Exit Super-MICAR
  - Edit** - Add Certificate, Edit Additional Information, Edit Industry/Occupation, Delete Records, Find a Record, Undo Changes
  - Process** - Show Processed Output (see **Showing Processed Output**, pg. 62 - this will be available only if the file has been processed.)
6. To edit the data for a certificate, simply type in the changes in the appropriate field. Editing keys are listed in **Table 6**.
7. When all of the changes have been made, save the certificate data by pressing {CTRL-ENTER}.
8. When finished viewing the certificates, press the {ESC} key. The main screen will be re-displayed.

<b>Table 6: Function Keys For Editing Certificates</b>	
{F7}	Print Current Certificate. Prints the currently displayed certificate on the printer.
{F7}	Deletes the currently displayed certificate from the database.
{F9}	Additional Information. Switches to the ADDITIONAL INFORMATION SCREEN. See <b>Editing Additional Information</b> (pg. 30).
{ALT-1}	Places the cursor on the Part I, line A field.
{ALT-2}	Places the cursor on the Part II field.
{ALT-D}	Press ALT-D to indicate that a line number (Ib, Ic, Id) or the phrase 'Due to' are marked out on the certificate. When ALT-D is pressed, the line number will disappear. Pressing ALT-D a second time will restore the line number.
{ALT-F9}	Saves the currently displayed certificate and exits the editing screen.
{ALT-I}	Press ALT-I to indicate that the certificate contains more information than could be typed in the fields on the screen. This marks the entry as being incomplete, and the word INCOMPLETE will appear in the top right corner of the screen.
{CTRL-ENTER}	Saves the certificate information on disk.
{ESC}	Exits this menu function and returns to the CERTIFICATE EDITING submenu.
{SHIFT-TAB}	Moves the cursor to the previous field.
{TAB}	Moves the cursor to the next field.

**Finding a Record**

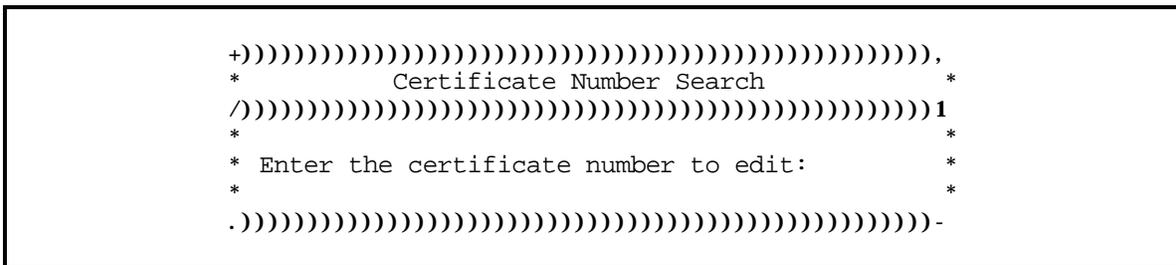
Before the Find a Record Function can be used, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 16, or **Opening an Existing File** pg. 19).

The file must have certificates in it to be searched.

The Find a Record Function allows the user to find a particular certificate quickly. This is especially useful when editing certificate data.

1. While the Certificate Information screen is displayed (by using the Edit/Browse Certificates Function), press {ALT-E} to select the **Edit** Menu Option.
2. Use the up and down arrow keys to highlight the Find a Record Function. Press {ENTER}.
3. A window (see **Figure 18**) will be displayed.
4. Type in the certificate number of the desired certificate and press {ENTER}.
  - A. If the certificate number is in the currently open file, that certificate's data will be displayed.
  - B. If the certificate number is not in the currently open file, a message will be displayed. Press {ENTER}.



**Figure 18:** Enter the number to find.

5. The Certificate Information Screen will be re-displayed.



2. Use the up and down arrow keys to highlight the Show Processed Output Function. Press {ENTER}.
3. A window listing the cause(s) of death and the ERNs generated will be displayed (see **Figure 19**).
4. When finished viewing the window, press the {ESC} key. The Certificate Information Screen will be re-displayed.

---

## **DELETING RECORDS**

---

Super-MICAR also offers the ability to delete certificates, either individually or in groups, from the database. A word of warning: Once a certificate is deleted, IT IS GONE from Super-MICAR's database. The only way to recover deleted certificates is to restore from an existing backup of the file. This assumes that a backup exists. See the section **Creating Backups For NCHS** (pg. 54) or any of the backup routines in the *Super-MICAR System Manager's Manual* for information on backing up and restoring files.

Given below are two ways to delete certificates from Super-MICAR's database. The first method deletes one certificate at a time. The second can delete any number of certificates in a database file, up to the highest certificate number entered. Note that {CTRL-Delete} can be used in conjunction with the Edit/Browse Certificates Function (see **Browsing Through the Certificates**, pg. 58).

### **Deleting Certificates While Editing a Certificate File**

The steps below can be used when the Certificate Information Screen (see **Figure 7**) is displayed. The steps below allow the user to delete the currently displayed certificate from the certificate file.

1. Access the Certificate Information Screen for the desired certificate. The instructions for doing this can be found in the **Browsing Through the Certificates** (pg. 58) section of this manual.
2. Press {ALT-E} to select the **Edit** Menu Option.
3. Use the up and down arrow keys to highlight the Delete Records Function. Press {ENTER}.
4. A window will be displayed asking to confirm deleting the displayed certificate data.
  - A. To delete the certificate from the certificate file, press {Y}. The next certificate in the file will then be displayed.
  - B. To abort the deletion, press {N}. The certificate will be re-displayed.
5. The Certificate Information Screen (**Figure 7**) will be displayed.

### Deleting Several Certificates at Once

If the Delete Records Function is used when the Certificate Information screen (see **Figure 7**) is not displayed, the user can delete a group of certificates at once. Note that this is a sequential deletion - the certificates to be deleted must appear one after another.

1. From the main screen, press {ALT-E} to select the **Edit** Menu Option.
2. Use the up and down arrow keys to highlight the Delete Records Function. Press {ENTER}.
3. A window will be displayed requesting a range of certificate numbers to delete.
4. Use the {TAB} key to move past the last field and begin the sequence check.
5. Type in the certificate number of the last (ending) certificate to be deleted and press {ENTER}. If the beginning and ending certificate numbers are the same, only that one certificate will be deleted.
6. Another message will be displayed requesting confirmation to delete the specified records.
  - A. To delete the records, type {Y}. A progress bar (**Figure 12**) will be displayed showing what percentage of the certificates have been deleted.
  - B. To abort the deletion, type {N}.
8. A third message will be displayed asking if the user wishes to delete more records.
  - A. To delete another group of certificates, type {Y} and repeat the steps above.
  - B. To exit and re-display the main screen, type {N}.

---

## **GENERATING REPORTS**

---

The Functions given below can be used to generate Super-MICAR Reports. The Sequence Check tells the user if there are any missing certificate numbers. The Generate MICAR100 File Function is described under **GENERATING A MICAR100 FILE**, pg. 51. Print Error Listing allows the user to print a compiled list of errors detected during processing. The Generate Query Letters Function is described in the *Super-MICAR System Manager's Manual*.

### **Generating a Sequence Check**

The Sequence Check Function creates a file (named filename.SSQ) containing a report on missing, extra, duplicate, and out of sequence certificates by certificate number in the database file. The Sequence Check can be used only when a file is currently open. To use the sequence check, do the following:

1. From the main screen, press {ALT-R} to select the **Reports** Menu Option.
2. Use the up and down arrow keys to highlight the Sequence Check Function. Press {ENTER}.
3. A window will be displayed requesting a beginning certificate number and an ending certificate number (see **Figure 20**). Normally, Super-MICAR will have already filled in the appropriate numbers. If these need to be changed, or the fields are empty, do the following:
  - A. Use the {TAB} key to place the cursor in the desired field.
  - B. Type in either the beginning certificate number (the starting certificate number for the sequence check) or the ending certificate number (the ending certificate number for the sequence check).
4. A progress bar (see **Figure 12**) will be displayed showing the progress of the sequence check.
5. When the sequence check is completed, a message window will be displayed. Press any key to continue.



### **Printing an Error Listing**

The Print Error Listing Function generates a printout of any errors detected during processing. There must be an open certificate file and the certificates must have already been processed.

1. From the main screen, press {ALT-R} to select the **Reports** Menu Option.
2. Use the up and down arrow keys to highlight the Print Error Listing Function and press {ENTER}.
3. Super-MICAR will attempt to print out an error listing.
  - A. If Super-MICAR is unable to find a printer, an error message will be displayed. Press {ENTER} to re-display the main screen.
  - B. If the printer is located, Super-MICAR will display a "Printing in progress" message window while the report is being printed.
4. If the report is successfully printed, Super-MICAR will automatically re-display the main screen.

### **Printing All the Certificates**

Super-MICAR allows the user to print out all of the certificates within a file. These hardcopy printouts can be used to check for errors as well as any other purposes determined by the Supervisor.

1. From the main screen, press {ALT-R} to select the **Reports** Menu Option.
2. Use the up and down arrow keys to highlight the Print All Certificates Function and press {ENTER}.
3. A message window will be displayed saying, "Printing in progress. Please wait." The certificates will be printed.
4. When printing is finished, the main screen will be re-displayed.

### **Printing a Single Certificate**

Super-MICAR also allows single certificates to be printed. The process for doing this is described below:

1. From the main screen, press {ALT-E} to select the **Edit** Menu Option.
2. Use the up and down arrow keys to highlight the Edit/Browse Certificates Function and press {ENTER}.
3. A Certificate Information Screen (see **Figure 7**) will be displayed. Use the instructions under **Finding a Record** (pg. 60) to find the specific certificate to print out.
4. With the desired certificate displayed, press {ALT-E} to select the **Edit** Menu Option. Alternatively, press {F7} and go directly to step 6.
5. Use the up and down arrow keys to highlight the Print a Record Function and press {ENTER}.
6. A message window will be displayed saying, "Printing in progress. Please wait." The certificates will be printed.
7. When printing is finished, the main screen will be re-displayed.

**EXITING Super-MICAR**

---

There are two ways to exit Super-MICAR. The first, and easiest, is by pressing {ALT-X} and then pressing {Y}. The second method is described below.

1. From the main screen, press {ALT-F} to select the **File** Menu Option.
2. Use the up and down arrow keys to highlight the Exit Super-MICAR Function and press {ENTER}.
3. A message window will be displayed.
  - A. To exit Super-MICAR, press {Y}. Super-MICAR will end and the DOS prompt will be displayed.
  - B. To abort the exit, press {N}. The main screen will be re-displayed.

**APPENDIX A - NCHS STATE CODES**

<u>Code</u>	<u>State</u>	<u>Abbrev.</u>	<u>Code</u>	<u>State</u>	<u>Abbrev.</u>
01	Alabama	AL	28	Nebraska	NE
02	Alaska	AK	29	Nevada	NV
03	Arizona	AZ	30	New Hampshire	NH
04	Arkansas	AR	31	New Jersey	NJ
05	California	CA	32	New Mexico	NM
06	Colorado	CO	33	New York	NY
07	Connecticut	CT	34	North Carolina	NC
08	Delaware	DE	35	North Dakota	ND
09	Dist. Columbia	DC	36	Ohio	OH
10	Florida	FL	37	Oklahoma	OK
11	Georgia	GA	38	Oregon	OR
12	Hawaii	HI	39	Pennsylvania	PA
13	Idaho	ID	40	Rhode Island	RI
14	Illinois	IL	41	South Carolina	SC
15	Indiana	IN	42	South Dakota	SD
16	Iowa	IA	43	Tennessee	TN
17	Kansas	KS	44	Texas	TX
18	Kentucky	KY	45	Utah	UT
19	Louisiana	LA	46	Vermont	VT
20	Maine	ME	47	Virginia	VA
21	Maryland	MD	48	Washington	WA
22	Massachusetts	MA	49	West Virginia	WV
23	Michigan	MI	50	Wisconsin	WI
24	Minnesota	MN	51	Wyoming	WY
25	Mississippi	MS	52	Puerto Rico	PR
26	Missouri	MO	53	Virgin Islands	VI
27	Montana	MT	54	Guam	GU
			55	New York City	YC*

\* Code 55 is used for occurrence data only. When coding residence data on the demographic file, code 33 (New York State) must be used.

---

**APPENDIX B - MENU LISTINGS**

---

<b>Super-MICAR Menu Options</b>	
<b>Key Combination</b>	<b>Menu Option Accessed</b>
{ALT-F}	<b>File</b> Menu Option
{ALT-E}	<b>Edit</b> Menu Option
{ALT-P}	<b>Process</b> Menu Option
{ALT-R}	<b>Reports</b> Menu Option
{ALT-B}	<b>Backup</b> Menu Option
{ALT-H}	<b>Help</b> Menu Option

Super-MICAR Function Listing	
<b>File</b>	
{ALT-F2}	Create New File
{F2}	Open Existing File
{ALT-F4}	Close File
{SHIFT-F7}	Export to ASCII File
{SHIFT-F8}	Import from ASCII File
	Repair File Index
	Merge Another File
{ALT-F6}	Set Data File Path
{SHIFT-F6}	Set Table File Path
	Set Backup File Path
	Set MICAR100 Export Path
	DOS Subsession
{ALT-X}	Exit Super-MICAR
<b>Edit</b>	
	Edit/Browse Header Info
{F3}	Add Certificates
{F4}	Edit/Browse Certificates
{F9}	Edit Additional Info
{ALT-O}	Edit Industry/Occupation
{F8}	Delete Records
{F5}	Find a Record
{F7}	Print a Record
{ALT-U}	Undo Changes
<b>Process</b>	
	Mark Misspellings/Illegibles
	Correct Misspellings/Illegibles
	Process All Records
	Process Rejects
	Process Additional Info
	Generate MICAR100 File
{F6}	Show Processed Output

**Reports**

Sequence Check  
Generate QC Database  
Print Error Listing  
Print All Certificates  
Generate Query Letters

**Backup**

{ALT-F7} Backup All Files  
Backup for NCHS  
{ALT-F8} Restore from Backup  
Backup and Remove

**Help**

{F1} View Help File  
{ALT-F1} About Super-MICAR

---

**APPENDIX C - DICTIONARY OF TERMS USED**

---

Since not everyone will be familiar with the terms used in these instructions, here is a brief glossary of some of the words.

- Certificate File - A file containing certificate data. This term is used interchangeably with Database File.
- Data Directory - A subdirectory on the computer where Super-MICAR certificate files are stored. By default, the data directory is a subdirectory of the <SUPMICAR> directory called <DATA>. The default value can be changed through Super-MICAR.
- Database File - A file containing certificate data. This term is used interchangeably with Certificate File.
- Directory - A specific grouping of files on a disk. Also referred to as a subdirectory. The directory that will be used most with Super-MICAR will be the <SUPMICAR> directory.
- DOS - A Disk Operating System. The System Manager will handle most operations that deal with DOS. The only time the data entry personnel will use DOS will be in the **STARTING Super-MICAR** section of this manual.
- Export - To take data from the Super-MICAR certificate database and place it in a formatted file that is readable by other programs.
- Extension - A 3-letter identifier at the end of a filename that identifies what type of file it is. For example: .EXE is an executable file, .DBF is a database file, and so forth.
- Filename - The name of a file on a disk. Example: SUPMICAR.EXE is made up of the filename SUPMICAR and extension .EXE.
- Hotkey - A key or pair of keys that can be pressed to access a menu function directly, without going through the menu system. For example, pressing the F2 key will access the Open a File menu option.

- 
- |                 |   |
|-----------------|---|
| Import          | - To read data from a formatted file and place it in a Super-MICAR certificate database.  |
| Menu            | - A list from which an action can be selected for Super-MICAR to perform. Super-MICAR has both a main menu and submenus. The main menu appears as a bar across the top of the screen, just below the program name. From the main menu, a submenu can be displayed listing actions to be performed. See the section <b>Using the Super-MICAR Menu System</b> (pg. 13) for more details on how to use the menu. |
| Pick List       | - A list of items that can be selected (picked) by using the up and down arrow keys to highlight the desired item and then pressing {ENTER}.  |
| Subdirectory    | - See Directory above.  |
| Submenu         | - A group of related actions arranged into a list from which an action can be selected. Submenus are available through the main menu. See the section <b>Using the Super-MICAR Menu System</b> (pg. 13) for more information on the menu system.  |
| Table Directory | - A subdirectory on the computer where Super-MICAR processing files are stored. By default, the table directory is a subdirectory of the <SUPMICAR> directory called <TABLES>. The default value can be changed through Super-MICAR.  |

---

## **APPENDIX D - CONVENTIONS USED IN THIS MANUAL**

---

As a rule, any commands that need to be entered while the user is in Super-MICAR will be given in the following format:

1. All of the actual typing and keys that need to be pressed will be given in all-caps (Example: type DIR and press {ENTER} to get a list of files in a directory).
2. Any information that the user needs to provide, such as filenames, will be requested in brackets (Example: type [filename.ext] means that the user needs to type in the filename and its extension, like so: type WY91001.DBF, without the brackets.)
3. When the word "press" appears in front of a word in all-caps, the user needs to press and release a particular key (Example: press {ESC} means press and release the ESC key). Also, the names of all keys will be given in braces { }.
4. Whenever two keys are named with a hyphen ( - ) connecting them, both keys are to be pressed at the same time to perform the listed function (Example: {CTRL-ENTER} = press and hold the {CTRL} and {ENTER} keys at the same time).
5. At times, references will be made to other Menu Options or Functions of Super-MICAR. The following standards will be used in these cases:
  - A. Any selection from the Main Menu (the menu that runs across the top of the Super-MICAR screen, just below the title) will be called a Menu Option (Example: the **File** Menu Option).
  - B. Any selection from a submenu will be called a menu Function or just Function (Example: the Edit/Browse Certificates Function).
6. All directory names will be marked by greater than and less than symbols (Example: The directory containing the Super-MICAR programs is the <SUPMICAR> directory).

## APPENDIX E - SPECIAL SYMBOLS

---

Following is a list of symbols and their meanings commonly used on the Cause of Death sections of a death certificate. This list is for use with **Adding Certificates**, pg. 21, 30.

- # "Fracture." Substitute for the word "fracture." Example: For "Leg #," type "LEG FRACTURE".
- ↓ "Decreased." Substitute for the word "decreased." Example: For "↓ blood pressure," type "DECREASED BLOOD PRESSURE".
- ↑ "Increased." Substitute for the word "increased." Example: For "↑ hemorrhaging," type "INCREASED HEMORRHAGING".
- $\overset{\circ}{\text{I}}$  "Hour." Substitute for the word "Hour." Example: For "1  $\overset{\circ}{\text{I}}$ ," type "1 HOUR".
- $\frac{\circ\circ}{\text{II}}$  "Secondary to." Substitute for the words "secondary to." Example: For "Pneumonia  $\frac{\circ\circ}{\text{II}}$  Gunshot wound," type "PNEUMONIA SECONDARY TO GUNSHOT WOUND".
- 1° "Primary." Substitute for the word "primary." Example: For "1° colon cancer," type "PRIMARY COLON CANCER".
- 2° "Secondary to." Substitute for the words "secondary to." Example: For "Pneumonia 2° cardiorespiratory infection," type "PNEUMONIA SECONDARY TO CARDIORESPIRATORY INFECTION".
- $\bar{\text{c}}$  "With." Substitute for the word "with." Example: For "Heat stroke  $\bar{\text{c}}$  myocardial infarction," type "HEAT STROKE WITH MYOCARDIAL INFARCTION".
- $\bar{\text{p}}$  "After." Substitute for the word "after." Example: For "Spontaneous bleeding  $\bar{\text{p}}$  tracheal tube removal," type "SPONTANEOUS BLEEDING AFTER TRACHEAL TUBE REMOVAL".
- $\bar{\text{s}}$  "Without." Substitute for the word "without." Example: For "Three weeks  $\bar{\text{s}}$  taking medication," type "THREE WEEKS WITHOUT TAKING MEDICATION".
- w/ "With." Substitute for the word "with." Example: For "Heat stroke w/ myocardial infarction," type "HEAT STROKE WITH MYOCARDIAL INFARCTION".

---

## **APPENDIX F - PROCESSING REJECTED RECORDS**

---

Super-MICAR may reject a record for any of several reasons. A word may be misspelled, two separate terms may be listed on a single line with no punctuation between them, or an external cause may be embedded in the record, just to name a few. Unlike ACME, Super-MICAR does not generate messages corresponding to the reason for processing failure. This section provides some general instructions for correcting Super-MICAR records during processing.

### Two Terms on a Line

If two separate terms appear on a single line with no divider to separate them (a divider can be a punctuation mark or any of several words that indicate a division, such as AND or WITH), they may be processed as a single term and thus produce an error. In this case, place a semicolon (;) between the two terms and save the certificate. This will solve most cases of this variety.

Example: II. DIABETES MELLITUS END STAGE RENAL DISEASE  
enter: DIABETES MELLITUS; END STAGE RENAL DISEASE;

### Misspelling/Unrecognized Terms, Extraneous Information

If a misspelled or unknown term appears in a record, simply type over the old term to give the certificate the correct spelling for the term. In other cases, a word appears that has no significance to a death certificate, such as a person's name or the name of a hospital or city. In these cases, access the Additional Information (AI) screen and delete the unnecessary information. Super-MICAR will process the AI information instead of the original certificate data.

Example: Ib. ARTERIOSCLEROTIC HRT DX  
enter: ARTERIOSCLEROTIC HEART DISEASE or ASHD

### Dates and Times

Under most circumstances, Super-MICAR will automatically pull dates and times from a line and will, under certain circumstances, use them to generate a proper duration for the term. But because dates and times can be written in so many ways, Super-MICAR will

sometimes miss a date or time. If this occurs, access the additional information screen for the certificate and remove the date or time from the line. If appropriate, use the deleted date to supply a duration code for the term (if one is not already provided).

Example: II. DIED 25 DAYS AFTER MITRAL REPAIR AND CORONARY  
BYPASS SURGERY

enter: MITRAL REPAIR; CORONARY BYPASS SURGERY

Example: Ib. ESSENTIAL HYPERTENSION 4 YRS

enter: ESSENTIAL HYPERTENSION and in DURATION block: 4 YRS

### External Causes

If Super-MICAR encounters an external cause that it cannot interpret, it applies the codes EXTERN to the term and rejects it. (The EXTERN code appears on the Processed Entries screen.) Proper use of the External Cause Prompts require training in MICAR data entry. If this training has not been completed, DO NOT use the external prompts. The record will be rejected for manual multiple cause coding. If the user is certified in MICAR data entry, access the Additional Information screen for the certificate and use the external cause prompts to generate a code that indicates the external cause. (See Processing Rejects for information on the external cause prompts.)

### Multi-Line Terms

Many certificates contain terms that flow from one line to the next. Super-MICAR makes an attempt to identify these terms and bring them together, but sometimes it fails to recognize the condition. In that case, access the Additional Information screen for the certificate, position the cursor on the line that should be connected with the previous line, and press ALT-D to delete the line number for that line, indicating that the two lines should be considered as one for the purpose of processing it.

### Two Lines Flowed Together

Because Super-MICAR attempts to flow lines together, it will from time to time flow two lines together that should be left separate. This often occurs when a line is improperly formatted, perhaps ending with a modifier that should be applied to a prior lead term. In these cases, access the Additional Information screen and re-format the first line, putting modifiers prior to the terms that they modify. Another condition that may cause lines to

be run together improperly occurs when the last character on a line is a punctuation mark, such as a comma, semicolon, or period. To correct errors of this variety, simply remove the punctuation mark. (This often occurs when periods are used to divide the letters in an abbreviated term, such as C.O.P.D. The periods are not necessary and can all be deleted.)

**INDEX**

BACKUPS		Menu Option listing . . . . .	11
Backup all files . . . . .	53	PRINTING	
Backup for NCHS . . . . .	54	All certificates in a file . . . . .	68
DELETING		Error listing . . . . .	68
During editing . . . . .	64	Sequence check . . . . .	66
Multiple certificates . . . . .	65	Single certificate in a file . . . . .	69
EDITING		REPORTS	
Additional Information . . . . .	30	Error listing . . . . .	68
Browsing . . . . .	58	Sequence check . . . . .	66
Certificates [Browsing] . . . . .	58	SUPER-MICAR	
Correcting Misspellings/Illegibles . . . . .	39	Defined . . . . .	1
Deleting while editing certificates . . . . .	64	Processing a file . . . . .	42
Finding a record . . . . .	60	Processing Additional Information	
Header Information . . . . .	56	. . . . .	48
Industry/Occupation . . . . .	35	Processing all records . . . . .	43
Marking Misspellings/Illegibles . . . . .	38	Processing rejects . . . . .	44
Undo . . . . .	62	Sequence check . . . . .	66
FILES			
Adding certificates to a file . . . . .	21		
Closing . . . . .	55		
Creating a new file . . . . .	16		
Editing . . . . .	56		
Editing Additional Information . . . . .	30		
Generating a MICAR100 file . . . . .	51		
Opening an existing file . . . . .	19		
Printing a certificate . . . . .	69		
Printing all certificates . . . . .	68		
Printing an error listing . . . . .	68		
Processing Additional Information			
. . . . .	48		
Processing records . . . . .	43		
Processing rejects . . . . .	44		
Sequence check . . . . .	66		
State File Number . . . . .	23		
MENU			
Full menu listing . . . . .	72		
Hot key listing . . . . .	12		
Instructions . . . . .	13		