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MICAR200 75

ACME/TRANSAX 89

MMDSHelp

Welcome to MMDS for Windows

This online help file will offer you help with the MMDS for Windows software suite. You can find help by clicking on one of the tabs in the left-side frame of this Help program…

Table of Contents: The Table of Contents displays topics in a hierarchy. Double-click on a topic to display its help contents.

Index: You may scroll through the index until you find a topic about which you want help. Choose a topic by double-clicking it.

Search: You may enter keywords for a search. Choose a topic from the search results by double-clicking on that topic.

What is MMDS for Windows?

MMDS for Windows is a suite of software provided by NCHS to help coders input ICD-10 cause of death codes for statistical purposes. MMDS for Windows is a 32-bit Windows © application that takes the place of any previous versions of MMDS software distributed by NCHS. Three main programs make up the MMDS software suite: SuperMICAR, MICAR200, and ACME/TRANSAX. An older data-entry program, PCMICAR, has been set aside in favor of the more robust SuperMICAR.

SuperMICAR	Automates data entry and medical cause-of-death data processing, including reporting procedures, full-screen data entry and editing, and additional information processing. SuperMICAR is designed to automatically encode 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. SuperMICAR output is used by later programs to classify causes of death to their International Classification of Death (ICD) codes. SuperMICAR only runs on IBM-compatible personal computers.
MICAR200	Automates the multiple cause coding rules (see Part 2b of the VSIM series) and assigns ICD codes to each entity.
ACME/TRANSAX	Applies World Health Organization (WHO) rules to the ICD codes determined by MICAR200 and selects an underlying cause of death (see Part 2a and 2c of the VSIM series). Facilitates the tabulation and use of multiple cause-of-death data. Through the application of the ICD linkage and modification rules, ACME/TRANSAX translates the axis of classification from an entity to a record base.

System Requirements

The MMDS for Windows software (SuperMICAR, MICAR200, and ACME/TRANSAX) requires user PCs to be running a 32-bit operating system (Windows95, Windows98, WindowsNT, Windows2000) with at least the following <u>minimum</u> hardware specificiations:

- IBM or IBM-compatible PC.

- Pentium 166 MHz processor.

- 32M RAM

- Hard Drive with adequate available space (100MB of free space is recommended)

- Color monitor, with screen resolution set to 800 x 600 pixels or greater, using standard Windows (small) fonts.

- CD-ROM drive for installation (not required, but highly recommended).

Help! – Accessing MMDS Help Topics

An important feature of the MMDS for Windows software suite is the integrated electronic help documentation (which you're now viewing). This help documentation explains how to use the programs and offers users help with common tasks. While running one of the programs in the MMDS suite, either press {F1} or Press {Alt+H} to jump directly to the help "Contents" view. From the contents view, you can choose the "Index" tab to find a help topic by keyword. You can choose the "Search" tab to perform a more exhaustive search through all the help topics.
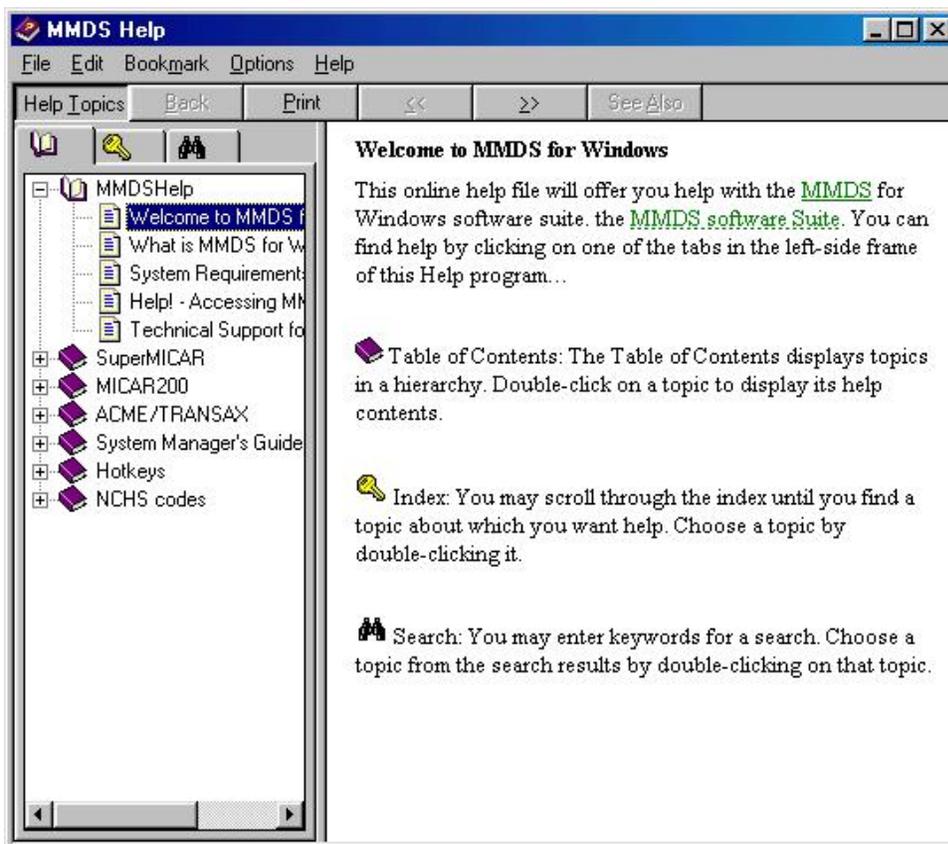
Contents: The "standard" Windows help view, listing the contents of the online help in Table of Contents format. By pressing the forward arrow (>>) in the contents view, you can read through the help files in topic order, much like you would read through a book.

Index: The index view allows you to search through a list of indexed words for a specific term (e.g., "Delete"). The index will list any topic titles containing that term throughout the online help documentation for the MMDS suite.

Search: To use the search function, go to Help Contents view and click the "Search" tab. The search view allows you to search a database containing every word in the entire online help files. While the index lists only topic titles, the search database also searches the text WITHIN the individual help topics. Very specific terms (ones that might appear within a topic but not in the topic title) can be found using the Search window.

About: The "about" box gives important information about the version number for the MMDS program(s). This information can be vital to our technical support staff assisting you with any program difficulties. The "about" box is also a fast way to find the NCHS technical support phone number.

Technical Support for MMDS Software

If you're having difficulty using the MMDS software, your state's System Manager may be able to help. The System Manager generally has greater knowledge of state-level activities and may know more about your particular situation (e.g., data paths and file names).

Another good source of information is this help documentation you're reading now. This documentation offers help and detailed instructions for using all three programs of the MMDS software suite (SuperMICAR, MICAR200, and ACME/TRANSAX). The help documentation also includes a section to help System Managers understand more technical aspects of the MMDS software (working with paths, repairing files), and additional support documents that you may find useful.

If after reading the help documentation you still have questions about any of the MMDS programs, or if you need to order additional NCHS software, please call or e-mail NCHS at:

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

E-mail: MICAR@CDC.GOV

Or, if you have data entry or coding questions:

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

E-mail: ICD10@CDC.GOV

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SuperMICAR

Purpose of SuperMICAR Help Documentation

The SuperMICAR section of this help documentation is intended for data entry and data processing personnel. It contains instructions for using SuperMICAR to enter cause-of-death information and to process that information, including reject processing. It is organized to help SuperMICAR users (even new users) perform common data entry tasks. Therefore, most of the topics in this help documentation contain all of the instructions necessary to perform a given task at once.

Basic Steps for using SuperMICAR

SuperMICAR is designed to allow both data entry and data processing through the menu system. When collecting and processing data through SuperMICAR, 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 SuperMICAR. SuperMICAR contains several utilities and reports that are helpful in validating data and tracking data entry and processing. For more about these useful functions, see Expanding SuperMICAR Functionality.

1. Start SuperMICAR (see Starting SuperMICAR).

2. Open a certificate file (see Creating a New SuperMICAR File or Opening an Existing SuperMICAR File). 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 of SuperMICAR requires that a file be opened before the function can be performed.

3. Edit the certificate file header information as needed (see Creating a New SuperMICAR File). 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 certificate file (see Adding Certificates Using SuperMICAR). This is the main data entry process. Data can also be read into SuperMICAR from properly formatted files. Information on importing and exporting data is contained in the System Manager's Guide (See Importing from an ASCII File, Exporting to ASCII Files).

5. Correct marked misspellings/illegible entries (see Correcting Misspellings/Illegibles). This function allows the user to go directly to those records that were marked as having misspelled or illegible words and correct them. Someone other than the person who entered the certificates should correct the misspellings and/or illegibles. This function may be used before processing the file.

6. Process the certificate file. When a file is processed, SuperMICAR attempts to assign entity reference numbers (ERNs) to the medical causes of death that were listed in the certificate file. The three types of processing that can be done using SuperMICAR are explained below.
Note: If any editing has been done to the file (including adding additional information), the entire file must be processed (see Processing Records using SuperMICAR) before "Generate MICAR200" (step 7) is possible.

   A.   Process the entire file (see Processing Records using SuperMICAR). 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 SuperMICAR, requiring no input from the user.

   B.   Process the rejects (see Processing SuperMICAR Rejects). Processing rejects - an optional step in processing - requires a trained MICAR data entry coder. Under reject processing, SuperMICAR displays any records that were rejected by the Processing Records function. A trained coder stepping through the rejected records can examine each record and make the changes necessary to allow the record to be coded. In order to preserve the original data, modifications can be made on the Additional Information Screen (see Adding/Editing Additional Information).

   C.   Process Additional Information (see Processing AI using SuperMICAR). This function processes just the certificates with AI.
        Note: If any editing has been done to the file (including adding additional information), the entire file must be processed (see Processing Records using SuperMICAR) before "Generate MICAR200" (step 7) is possible.

7. Generate MICAR200 file (see Generating a MICAR200 File from SuperMICAR). This file is used by other MICAR software to continue the process of encoding cause-of-death data.

8. Create backup(s):

   A. Create a SuperMICAR backup (see Creating SuperMICAR Backups) and proceed to further processing using MICAR200.

      or

   B. Create a backup for shipment to NCHS (see Creating SuperMICAR Backups for NCHS). This function creates a compressed ("zipped") file that can be shipped to NCHS. The compressed file contains all of the files that were created by SuperMICAR (including the MICAR200 file generated in the previous step).

9. Close the certificates file (see Closing a SuperMICAR File).

10. If there are other certificate files to process, repeat steps 2 through 7.

11. If there are no more files to process, exit SuperMICAR (see Exiting SuperMICAR).

Flow Chart: Steps in SuperMICAR Processing
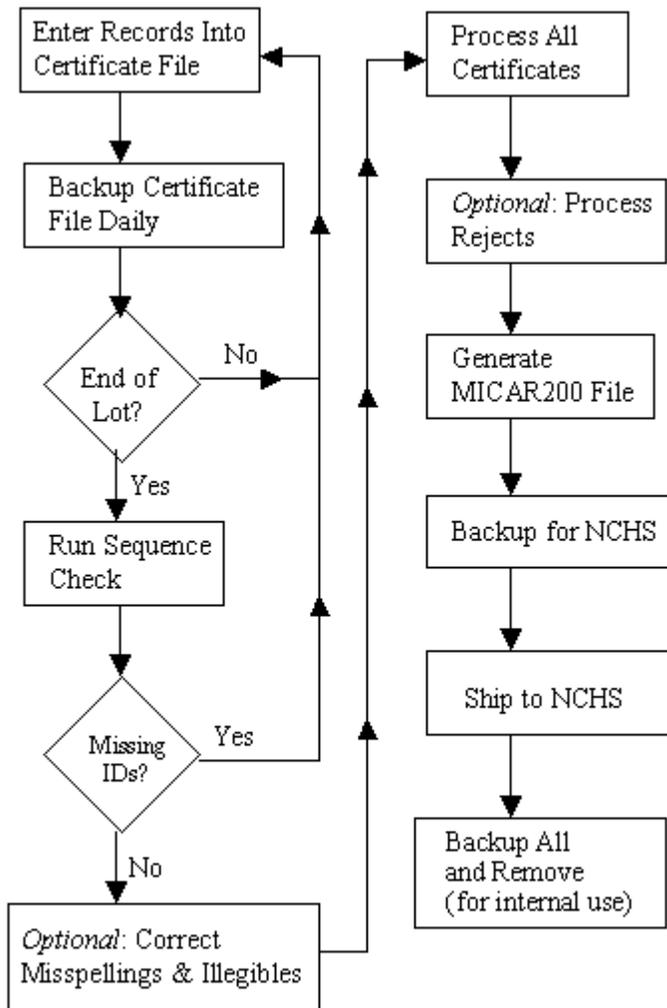
Expanding SuperMICAR Functionality

In addition to the basic SuperMICAR functions, most of the following functions can be used at any time with SuperMICAR. Most of these functions require a certificate file to be open. See the individual help topics for more details. Note that additional SuperMICAR functions are described in the System Manager's Guide section of this help documentation.

1. View and edit the certificates in a file (see SuperMICAR Editing: An Overview). This function allows the user to edit information in the certificate database, which may be necessary at any time.

2. Delete a certificate while editing (see Deleting SuperMICAR Certificates While Editing a Certificate File). This function allows the user to remove a record from the certificate file or delete several certificates at once. This function also 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.

3. Generate a sequence check (see Generating a SuperMICAR Sequence Check). 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.

4. Print a list of errors detected during last processing (see Printing a SuperMICAR Error Listing). This function prints a report listing all of the certificates that were not completely processed by SuperMICAR. This report may be useful to the person who will perform reject coding.

5. Print selected certificates for review (see Printing a Single SuperMICAR Certificate).

6. Create a daily backup (see Creating SuperMICAR Backups). Backups should be made to prevent accidental loss of data. NOTE: Backups should be made daily! Backing up data is the only protection available against losing data due to a failed computer system. At a minimum, it is good practice to back up the certificate file at the end of every day - periodically throughout the day would be even better.

There are more Menu Options and functions available in SuperMICAR than will be used by data entry personnel. Some of these other Menu Options and functions will be used by the system manager. System Managers will find more detailed instructions in the System Manager's Guide section of this help documentation.

Getting Started in SuperMICAR

Starting SuperMICAR

1. To start using SuperMICAR, double-click the SuperMICAR icon on your desktop.

2. The main menu screen will be displayed. See Using SuperMICAR Menus for more details on the main screen and the Menu Bar.

When the main screen appears, SuperMICAR is ready to use (see Creating a New SuperMICAR File or Opening an Existing SuperMICAR File). SuperMICAR will "remember" the last file that was opened, so unless the previous file was specifically closed (see Closing a SuperMICAR File) the last file will be open and ready each time SuperMICAR is started.

About the SuperMICAR Main Screen

The main screen of SuperMICAR has several useful features:

1. At the top of the main screen will be the title - SuperMICAR. This line will also show the name of the current file if one is open (see Opening an Existing SuperMICAR File). On the far right of this first line you'll also find the standard Windows controls for minimizing, maximizing, and exiting windows programs.

2. The second line of the screen contains the Menu Options available in SuperMICAR. By looking under these Menu Options (e.g., clicking on "File" or pressing {Alt+F}) you'll reveal available SuperMICAR functions. Note that functions currently unavailable will be "grayed out" indicating that they are inactive. See Using the SuperMICAR Menu System for more details.

3. The bottom line of the SuperMICAR screen is the status bar, which displays the following information:

   A. In the bottom left corner, you'll see a note about the {F1} key. Pressing {F1} will display the MMDS online help feature. The online help is designed to offer you the most appropriate help available for the function you're using at that time. Accessing additional help topics is easy by searching by topic or keyword (See Help! - Accessing MMDS Help Topics).

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The lower left corner also 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.

B. In the bottom center, you'll find a box that displays the status of the coder statistics option (on/off).

C. In the bottom right corner is a clock showing the current time and date.

Using the SuperMICAR Menu System

The functions of the MMDS software are available through a standard Windows drop-down menu system. This menu system allows users quick and easy access to various MMDS software functions.

In addition to using the mouse to access menu items, there are two ways to access the menu:

Alt+key: Pressing and holding the {Alt} key and then pressing the underlined letter key of a main menu item (e.g. "F" for the File Menu, "E" for the Edit Menu) will display the drop-down menu for that menu. Then you can use the up arrow and down arrow keys to highlight an item on the menu. Press {ENTER} to select the highlighted option. Use the left arrow and right arrow keys to open the submenus under each main menu option. Pressing {ESC} from a dropped-down menu closes the menu. Pressing {ESC} from the main screen will exit the program.

Hotkeys: Many functions can also be performed by pressing an associated Hotkey or "shortcut" key. The Hotkey assignments are shown on each drop-down menu and are also listed in the Master Hotkey List. Pressing a Hotkey will immediately access the associated function. For example, pressing {F2} will select the Open Existing File function. Hotkeys are a fast, easy way to access functions in the MMDS software. As users become familiar with the programs in the MMDS software suite, they will probably find the hotkeys convenient to use.

To select a function from a drop-down menu:

1. Use the mouse to choose the desired function by moving your mouse cursor over the appropriate menu item and left-clicking, or

2. Use the up arrow and down arrow keys to highlight an option, or press the (underlined) letter of the desired function. The active (selected) function is highlighted. Pressing the selection letter will move the highlight bar to the corresponding function option.

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). When an option is inactive, it cannot be selected (the highlight bar will skip over that

item and it's Hotkey will not function).

For example: When a file is open, users will not be able to gain access to the Tools | Option screen. The open file must first be closed - because changing options can have a direct impact on opening and closing files.

Creating & Opening Files in SuperMICAR

Creating a New SuperMICAR File

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

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 **New** File Function and press {ENTER}.
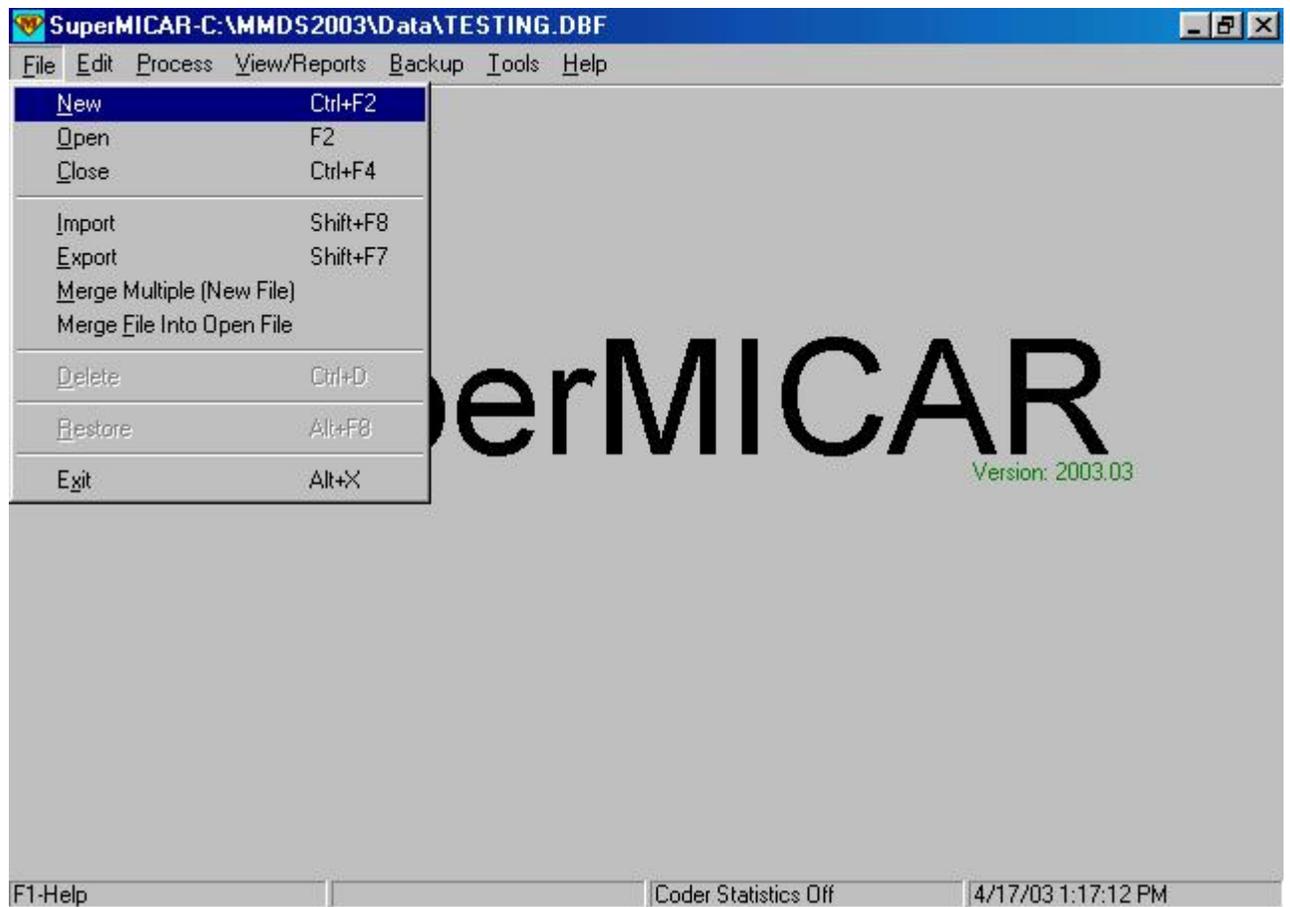
3. If a file is currently open, a message window will be displayed.

    A. To close the currently open file and open a new one, press {Y} and go on to step 4.

    B. To cancel opening a new file and keep using the currently open file, press {N}. The main screen will be re-displayed. Continue using SuperMICAR normally.

4. A window will be displayed requesting a filename. Type in the desired 7-character filename (without the extension) and press {ENTER}. If a file with that name already exists in the data directory, a message will prompt you to choose a different name. A filename MUST be 7 characters with no file extension (Example: NC03001). See File Naming Conventions for information on suggested file name conventions.
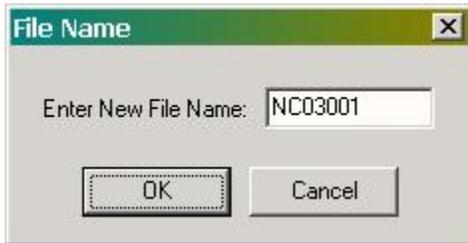
5. To accept the name for the new file, press "OK." A second window will then be displayed asking to confirm the name for the new file. To accept this name for the new file, press {Y} and the Edit Header Information Screen will be displayed. To reject this name, press {N} to return to the File Name dialog box.
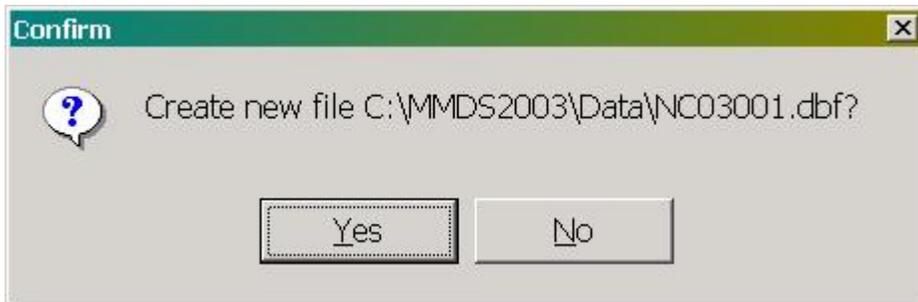
6. The Specify Header Information screen will be displayed (remember that the header information will be the same for each record in the file). After filling out all of the fields on the Header Information Screen, press {OK} to create the new file, or {ESC} to cancel creation of the file. For specifics on the Header Information fields, see below.

| **Shipment** | Three characters to identify the batch when the file is sent to NCHS. The first character can be either alpha or numeric; the second and third characters must be numeric. |

Lot #   A number from 1-9999.

Section #   A number from 0-9. This may prove very useful if you divide batches.

Data Year   Four-digit year from the death certificate.

State Code   A two-letter abbreviation identifying the state from which the death certificate originates. (For a full list of these codes, see NCHS State Code List). If the program does not recognize the code, it will display an error message and then show a pick-list of states. Entering a question mark {?} in this field will also cause the 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 2000, from the State of Alaska, with shipment number U03, lot 0002, and coder status 1 would have the following entries:
Shipment U03
Lot # 0002
Section 5
Data Year 2000
State Code AK
Coder Status 1.

7. To save the header information and open the database file for use, press {ENTER}. The main screen will now show the new filename at the top.

8. To exit the Header Information screen without saving, press {ESC}. The main screen will be re-displayed.

Opening an Existing SuperMICAR File

Follow the steps below to open an existing SuperMICAR file:

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 **Open** Function and press {ENTER}.
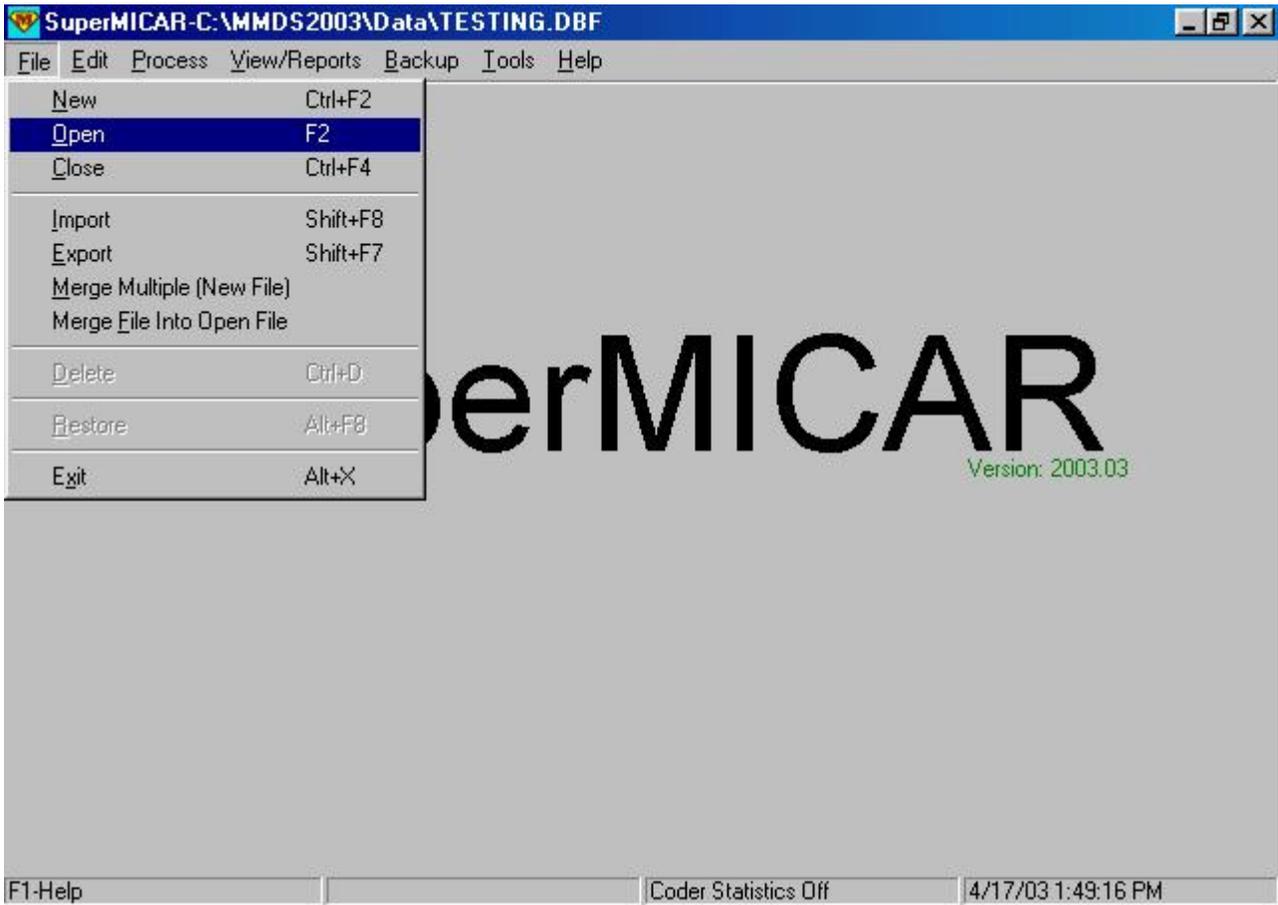
3. If a file is currently open, a message window will be displayed.

    A. To close the currently open file and open a new one, press {Y} and go on to step 4.

    B. To cancel opening a new file and keep using the currently open file, press {N}. The main screen will be re-displayed. Continue using SuperMICAR normally.

4. From the file open dialogue box use the {TAB} key to activate the listed files.
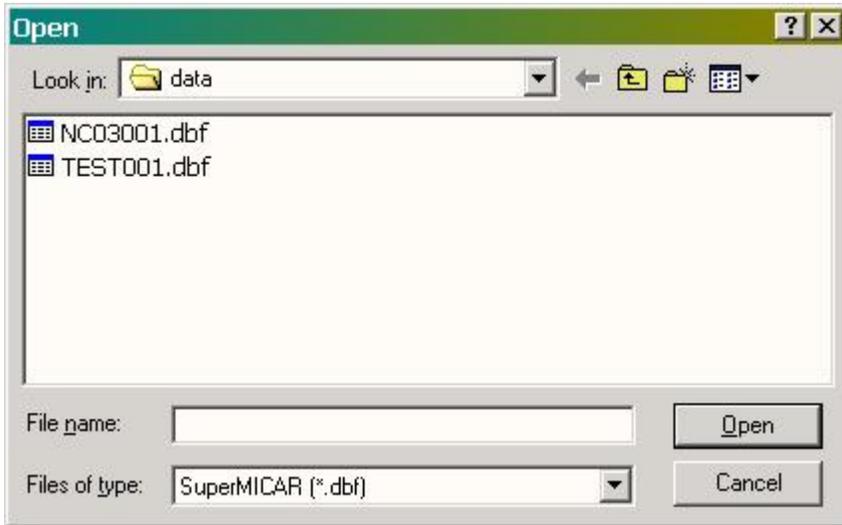
5. Use the up and down arrow keys to highlight the desired file. Press {ENTER}.

6. The main screen will be re-displayed with the name of the open file at the top.

Entering & Saving Certificate Data

Adding Certificates Using SuperMICAR

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

Opening a file (**New** Certificate File or **Open** an Existing File).

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 no longer be entered using SuperMICAR.

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 **Certificate** Function and press {ENTER}.

3. The Certificate Information Screen will be displayed. See the SuperMICAR Hotkey List (or press Alt-F1) as a useful reference for editing shortcuts.

4. Enter the certificate information in the corresponding fields on the screen. NCHS rules on how the data should be entered have been provided within each field description (check on the leftmost panel of the status bar, or "hover" your mouse over the field). 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.

Note: If a user tries to create a duplicate number (certificate already exists in current file), a message window will be displayed informing the user of the problem. In this case, the window will ask whether to overwrite the original record or not.

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. The numeric codes for sex may also be entered here (e.g., "1" for male).

Date of Death - The date of the descendant's death as reported on the death certificate. Give it in the following format: MM/DD, where MM = the month (01-12, 99) and DD = the day of the month (01-31, 99). The year will be automatically supplied from the header information. Dates after the current date will not be accepted. If any element of the date of death is unknown, enter "99." For example, enter "99/99" for a totally unknown date of death.

Age: *Number of Units* - Enter the number for 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. <u>If this field is left blank, the age unit will default to YEARS.</u>

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 (will default to "Unknown" - 999) and enter the appropriate Unit.
For 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.

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 - SuperMICAR 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, but use caution when doing so - this can cause the state file to have an improper file name.

Cause of Death, Part I - Type in the cause of death <u>exactly</u> 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 entered.

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(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(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, as commonly used on the Cause of Death sections of a death certificate.

\#   "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."

$\overset{\circ}{I}$ "Hour." Substitute for the word "Hour." Example: For "1 $\overset{\circ}{I}$," type "1 HOUR."

$\overset{\circ\circ}{II}$ "Secondary to." Substitute for the words "secondary to." Example: For "Pneumonia $\overset{\circ\circ}{II}$ 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."
$\overline{c}$	"With." Substitute for the word "with." Example: For "Heat stroke $\overline{c}$ myocardial infarction," type "HEAT STROKE WITH MYOCARDIAL INFARCTION."
$\overline{p}$	"After." Substitute for the word "after." Example: For "Spontaneous bleeding $\overline{p}$ tracheal tube removal," type "SPONTANEOUS BLEEDING AFTER TRACHEAL TUBE REMOVAL".
$\overline{s}$	"Without." Substitute for the word "without." Example: For "Three weeks $\overline{s}$ 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."
w/o	"Without." Substitute for the word "without." Example: For "Three weeks w/o taking medication," type "THREE WEEKS WITHOUT TAKING MEDICATION."

Duration - Type in the interval between the onset of the condition and death <u>exactly</u> 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 also apply to the Duration field. See Special Symbols in SuperMICAR.

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 Try to duplicate the information exactly as it is reported, using whatever punctuation is used on the certificate.

B. All abbreviations and symbols listed in Special Symbols in SuperMICAR also apply to Cause of Death, Part II.

Was an Autopsy Performed? – Enter the single-character code for whether an autopsy was performed or not. Typing a question mark {?} will display the following pick-list of valid choices:

N   No

Y   Yes

U   Unknown

       Blank

Use the arrow keys to highlight the desired entry and press {ENTER} to select it.

Were Autopsy Findings Available? – Enter the single-character code for whether any autopsy findings were available. Typing a question mark {?} will display the following pick-list of valid choices:

N   No

Y   Yes

U   Unknown

       Blank

Use the arrow keys to highlight the desired entry and press {ENTER} to select it.

Tobacco Use Contribute to Death? – Enter the single-character code for whether or not tobacco use contributed to death. Typing a question mark {?} will display the following pick-list of valid choices:

N   No

Y   Yes

P   Probably

U   Unknown

C   Not on certificate

       Blank

Use the arrow keys to highlight the desired entry and press {ENTER} to select it.

Pregnancy: – Enter the single-character code for any conditions of pregnancy of the decedent. Typing a question mark {?} will display the following pick-list of valid choices:

1	Not pregnant within past year
2	Pregnant at time of death
3	Not pregnant, but pregnant within 42 days of death
4	Not pregnant, but pregnant 43 days to 1 year before death
7	Not on certificate
8	Not applicable
9	Unknown if pregnant within last year
	Blank

Use the arrow keys to highlight the desired entry and press {ENTER} to select it.

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 the following pick-list of valid manner of death codes:

N	Natural
A	Accident
S	Suicide
H	Homicide
P	Pending Investigation
C	Could Not Be Determined
	Blank

Use the arrow keys to highlight the desired entry and press {ENTER} to select it. Leaving this field blank will default to Not Specified.

Date of Surgery - Date of surgery. Used only for states that have a specific surgery item on the certificate. If the certificate states that the date of surgery is unknown, then enter "99/99/9999" for the year. If a date is given, enter MM/DD/YYYY where MM = two-digit month, DD = two-digit day, and YYYY = four-digit year. A blank for date of surgery is valid.

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, <u>do</u> <u>not</u> 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 field.

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, so SuperMICAR will not allow such an entry.

Activity Code – Single-digit code for the activity the decedent was undertaking when death occurred. Typing a question mark {?} will display the following pick-list of valid activity codes:

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, or engaging in other vital activities
8	While Engaged in Other Specified Activity
9	During Unspecified Activity

Use the arrow keys to highlight the desired entry and press {ENTER} to select it. <u>Leaving this field blank will default to Blank</u>.

Date of Injury – Month (01-12, blank), day (01-31, 99, blank), and year (0000-2400, 9999, blank) injury occurred (Ex: 01/01/1992). If the certificate reports the date of injury as unknown, then 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, so SuperMICAR will not allow such an entry.

Time of Injury – This field can hold up to 4 digits that comprise a valid time (0000-2400, 9999, blank) for the unit of time field (immediately following). Typing a question mark {?} in the **unit** field will display the following pick-list of valid time units:

A	AM
P	PM
M	Military Time
	Blank

Use the arrow keys to highlight the desired pick-list entry and press {ENTER} to select it.

Injury at Work? - Type the appropriate code according to what was reported on the death certificate.

Y   Yes

N   No

U   Unknown

        Blank

Place of Injury – Type the full text in the Place of Injury field as it appears on the death certificate. After validation of this field, the code assigned to this entry will be displayed to the right of the field in parentheses. Valid Place of Injury Codes are the following:

A   Home

B   Farm

C   Residential Institution

D   Military Residence

E   Hospital

F   School, Other Institution, Administrative Area

G   Industrial and Construction

H   Garage/Warehouse

I   Trade and Service Area

J   Mine/Quarry

K   Street/Highway

L   Public Recreation Area

M   Institutional Recreation Area

N   Sports and Recreation Area

O   Other Building

P   Other Specified Place

Q   Unspecified

        Blank

Injury Description - Type in the description <u>exactly</u> as it appears on the death certificate.

Transportation Injury – This field can hold up to thirty (30) characters. Typing a question mark {?} and pressing {Enter} will display the following pick-list of valid Transportation codes:

DR   Driver/Operator

PA   Passenger

PE   Pedestrian

Enter the full text or use the arrow keys to highlight the desired entry and press {ENTER} to select it.

Certifier – This field can hold up to thirty (30) characters. Typing a question mark {?} and pressing {Enter} will display the following **display** (display ONLY) list of valid Certifier codes:

D   Certifying Physician

P   Pronouncing & Certifying Physician

M   Medical Examiner/Coroner

You may choose to type in the full text for an individual legally allowed to certify. Or you may use one of the standard codes for the certifier by typing in the code (this field has a **display** box only, not a pick-list). After you're done viewing the display list, press the "OK" button with your mouse or press {Esc} to close the display list box.

State Specific Data – Optional (for use by the states). This field can hold up to 30 characters of state-specific data. Consult your System Manager for details about how to use the State-Specific Data field.

Record Count - The status bar at the bottom of the screen indicates both the current record being edited, as well as the total number of certificates in the current file.

5. When you are through entering data for this certificate, press {CTRL+ENTER} or {PgDown}. The certificate will be saved and a blank screen for a new record will be displayed.

6. The Add Certificate Information screen will be re-displayed with all but one of the fields blank (the certificate number field will contain data). The certificate number will be automatically incremented by the program. Go to step 4 above to enter field information for another certificate.

7. To exit the Add Certificate Function, either press the {ESC} key or press Alt-F9. If you press {ESC} or {Alt-F9} from a certificate screen that contains unsaved data, a message box will ask whether you want to save the certificate information before leaving Edit mode.

8. The main screen will be redisplayed.

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 SuperMICAR. However, the SuperMICAR 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. SuperMICAR 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 with AI***:**

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. 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 with AI***:**

Specific causes of death are questionable under certain circumstances. When these special cases are encountered, many states send the physician(s) query letters asking for confirmation or clarification of the death conditions. The results of these query letters can be entered by accessing the AI screen from the Edit Certificates Function. To access the AI screen from the Edit/Browse Certificates screen, press {F9}.

*Reject Processing***:**

When processing rejected records through the SuperMICAR 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, allowing the user to make changes. From the Reject Editing screen, press {F9} to access the AI screen. For more information on reject processing, see Processing SuperMICAR Rejects. 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 SuperMICAR 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 SuperMICAR'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

In order to view any AI (see What Constitutes Additional Information), the following actions must have already been performed:

Opening a file (**New** Certificate File, or **Open** an Existing File).

Each record in a SuperMICAR 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. Certified copies of the death certificate information could be taken from this screen. The second screen, the Additional Information (AI) screen, contains the overriding information that will be processed by SuperMICAR.

You cannot jump directly to an AI screen. To access an AI screen, you must first navigate to the associated record/certificate (see Finding a SuperMICAR Record). From there, you can press {F9} to view the AI screen associated with that certificate. Even from the AI view, you cannot jump directly to a new AI record - To find a different AI record you must first close any currently-open AI screen by pressing {Esc} and then navigate to the desired certificate in normal edit view. From there you can again press {F9} to see the associated AI screen for that certificate. In standard edit certificate view, if a particular certificate has associated AI, a red indicator will appear in the status bar along the bottom of the screen:

The information on the AI 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 SuperMICAR processor in assigning Entity Reference Numbers to the medical conditions on the record. For most records, SuperMICAR 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 SuperMICAR'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.

Spelling & Illegibles

Correcting Illegibles in SuperMICAR

Certificates may fail to process because they contain words that were entered as "ILLEGIBLE" during data entry. This can be corrected through the use of SuperMICAR's Illegibles function. The Illegibles function checks for the word "Illegible(s)" or "Unintelligible(s)" in the cause fields (including Part II), duration fields, and the injury description field. The Illegibles function allows you display and correct those records in which illegible words were found.

1. From the main screen, press {Alt+T} to select the **Tools** Menu Option.

2. Use the up and down arrow keys to highlight the Illegibles function. Press {ENTER}.
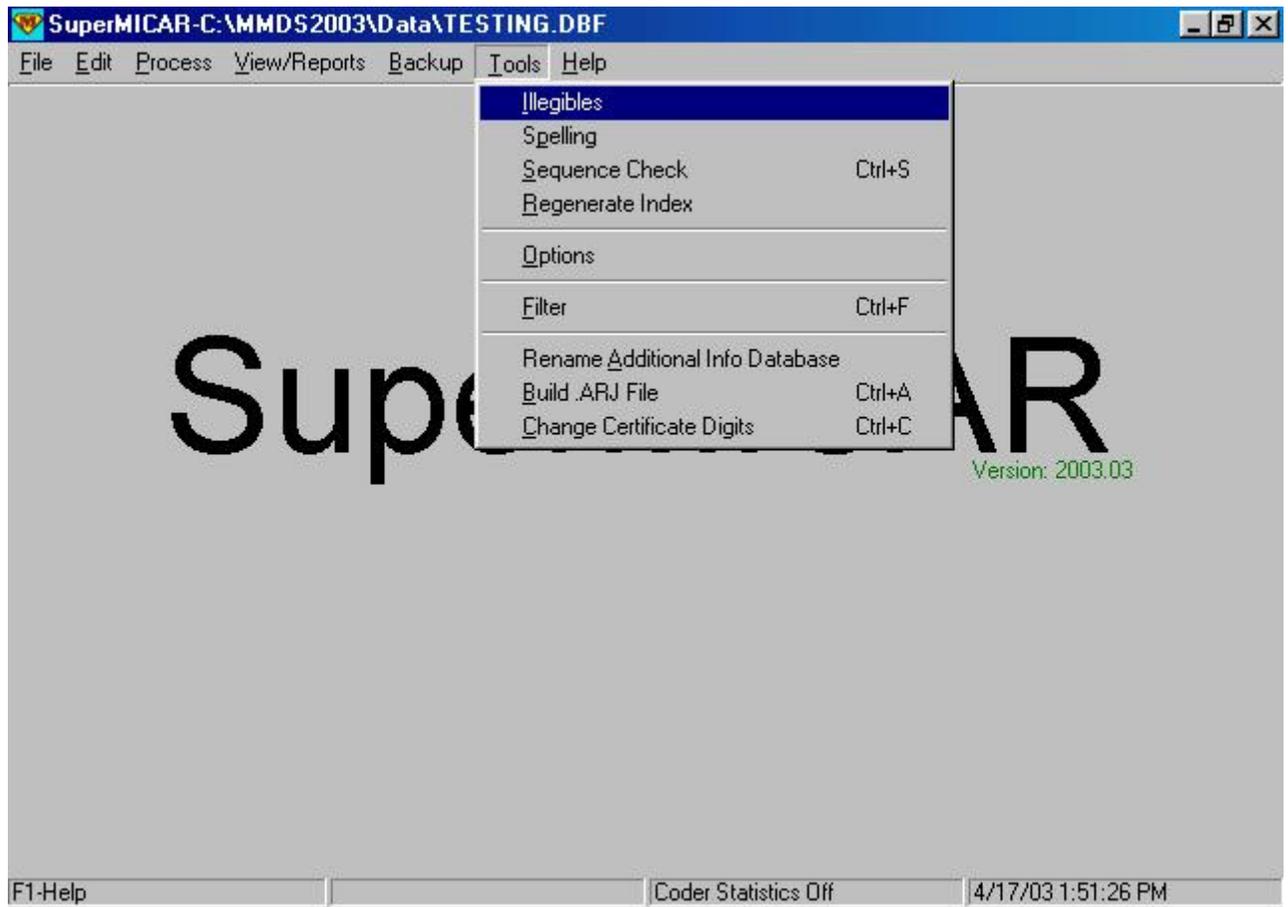
3. A window will be displayed:

A. To check illegibles, press {C}. After checking the illegibles, SuperMICAR will display a report window showing the certificates that contained illegibles. You may either press {Alt-P} to print this report or {Alt-C} to close the form without printing.

B. To edit illegibles, press {E}. The edit certificates screen will be displayed for each certificate that contained illegibles. You can edit those records to correct the illegibles (see Editing SuperMICAR Records). After the final illegible has been edited, a message box will indicate that the illegibles check is completed. Press {ENTER} to continue.

4. The main SuperMICAR screen will be re-displayed.

Correcting Misspellings in SuperMICAR

As fields in the certificate edit screen are filled in, SuperMICAR automatically checks the spelling of terms and other appropriate fields. If SuperMICAR detects a potentially misspelling, the spelling check box is displayed, showing the misspelled word along with a list of the most likely correct word spellings. At that point, you have three choices:

    A.   Press the button to accept the current word as is, with no changes.

    B.   Retype the word in the box and press {Enter} to have SuperMICAR check the new word against its correct word list.

    C.   Choose the correct word spelling from the list of potential matches offered by SuperMICAR.

At any time, you can also run the spellcheck routine to check the spelling on EVERY certificate in the current file [NOTE: You cannot access the Tools | Spelling function directly from the Edit Certificate screen… to access the spellchecker, first close the Edit Certificate screen by pressing {Esc} and then follow the directions below. When searching for misspellings, SuperMICAR checks the words in the Part I Cause of Death fields, the Part II Cause of Death field, and the injury description field. To use the SuperMICAR spelling function:

    1.   From the main screen, press {Alt+T) to select the **Tools** Menu Option.

2. Use the up and down arrow keys to highlight the Spelling function. Press {ENTER}.
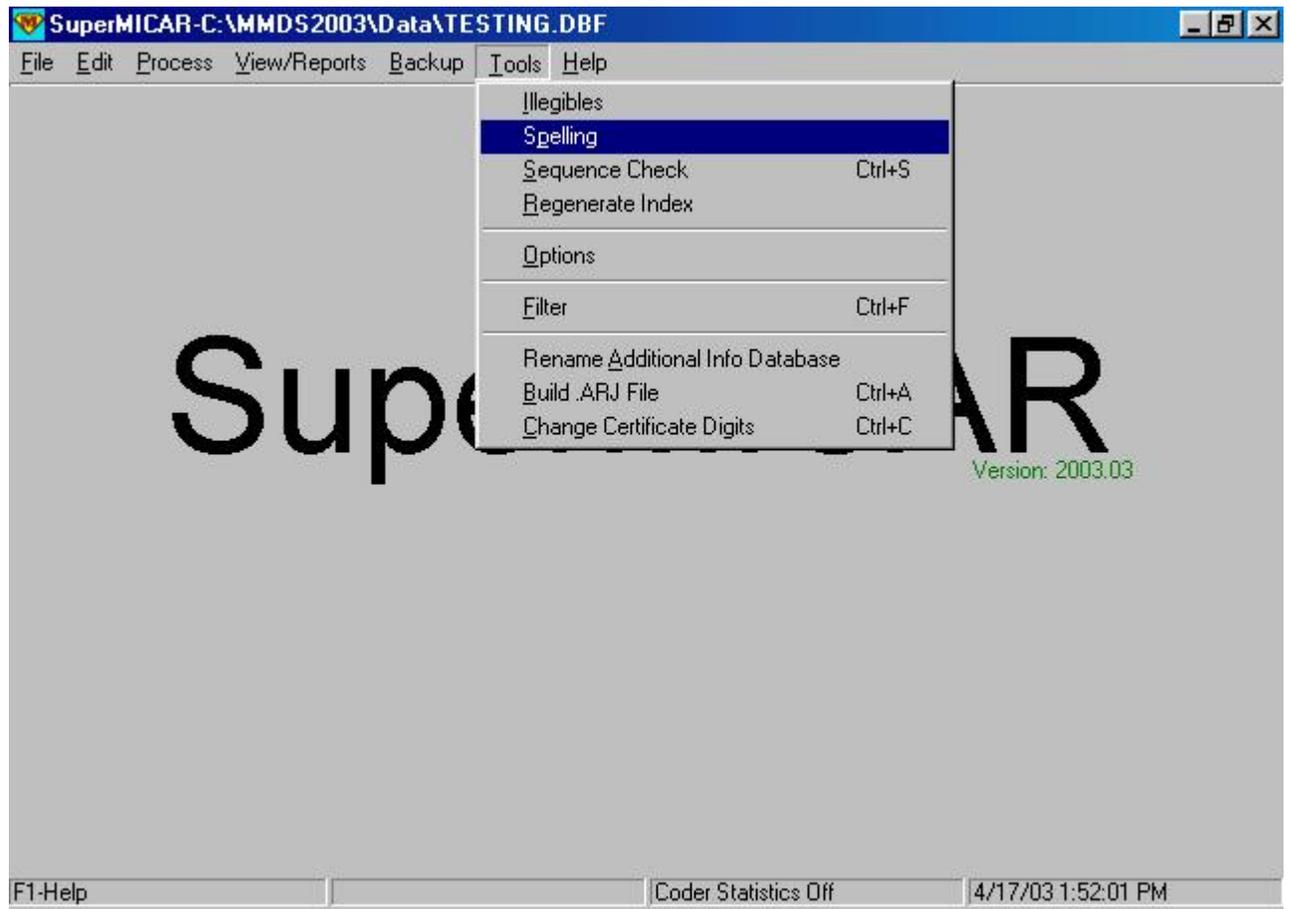
3. A spelling check box displays each misspelled word and, in the background, the certificate edit screen for that record. The certificate edit screen is shown only to provide a context for the spelling error; all spelling changes must be made in the Spelling Check box itself. For each misspelled word, you will have three choices:

A. Press the button to accept the current word as is, with no changes.

B. Retype the word in the box and press {Enter} to have SuperMICAR check the new word against its correct word list.

C. Choose the correct word spelling from the list of potential matches offered by SuperMICAR.

Spelling Check: DISESE

ACCEPT this word not found in dictionary

- OR -

Retype (then press 'Enter' to recheck word):

DISESE

- OR -

Choose from List:

DISEASE
DISUSE
DIESES
DAISES
DOSES
DIOCESE
DICES
DOSERS
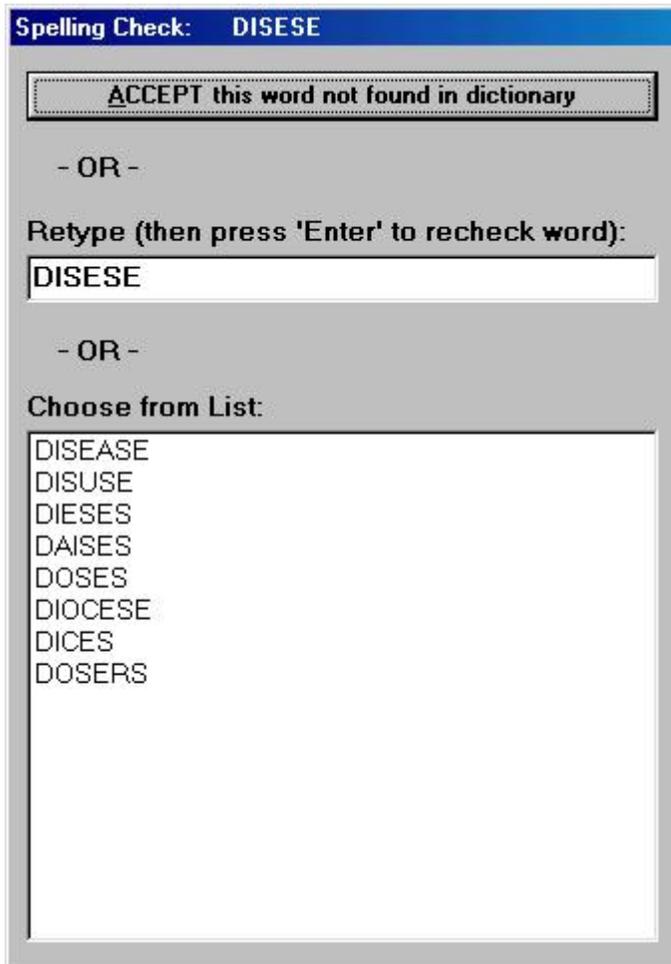
4. After the final misspelling, a message box will indicate that the spelling check is completed. Press {ENTER} to continue.

5. The main SuperMICAR screen will be re-displayed.

Processing & Generating a MICAR200 File

SuperMICAR Processing: An Overview

Processing is how SuperMICAR converts the entered cause of death information into NCHS's Entity Reference Numbers (ERNs). There are three phases of processing in SuperMICAR: Record Processing, Reject Processing, and Additional Information Processing. It is intended that these three processing operations be performed to insure that the certificate data is processed correctly. The three operations are:

Record Processing

The first phase of SuperMICAR processing produces output for all certificates in the database that are perfectly correct. It marks the certificates containing errors as rejects. This process runs in a batch mode without user interaction.

Reject Processing

The second phase of SuperMICAR processing is an interactive session in which only the rejects from the Record Processing are run. A trained MICAR coder can help SuperMICAR 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. **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.

Additional Information Processing

The third phase of SuperMICAR 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.

For instructions for selecting and using each of these processing options, see the following help sections:
Processing Records using SuperMICAR
Processing SuperMICAR Rejects
Processing AI using SuperMICAR

Processing Records using SuperMICAR

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

Opening a file (**New** Certificate File or **Open** an Existing File).

Note: the file must have certificates in it to process.

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 SuperMICAR Reports) and then perform any editing needed (see the help section on Editing Functions in SuperMICAR) or process the rejects (see Processing SuperMICAR Rejects).

To process all the records in a file:

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}.
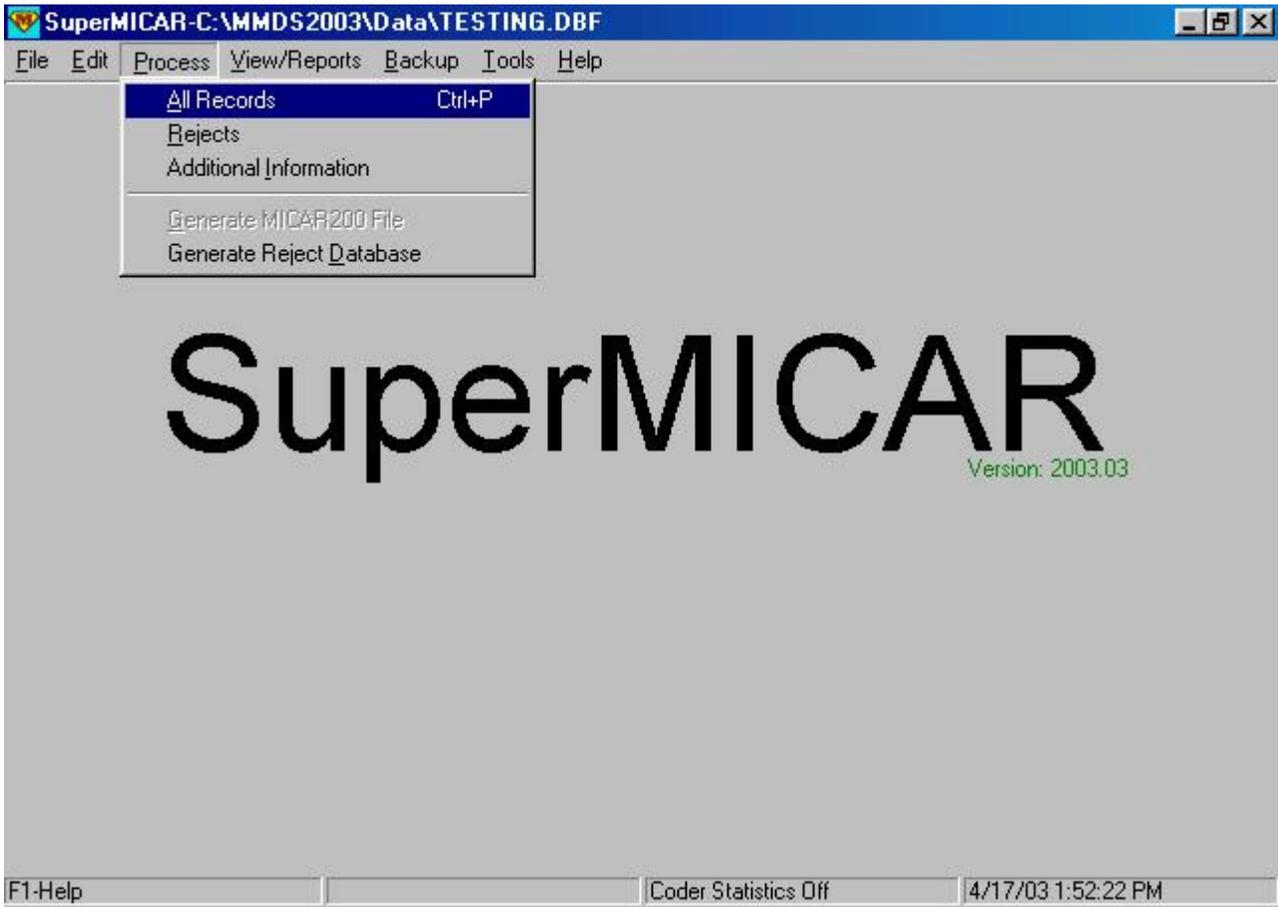
3. A progress bar will be displayed on the screen showing what percentage of the data file has been processed.

4. The certificate number for the certificate currently being processed is displayed in the progress dialog box.

5. No other activity is needed during processing.

6. When the processing is complete, a Processing Results report will be displayed.

Processing Results	Records	Terms
Processed :	4	5
Complete	2	2
Incomplete	2	3
% Complete	50	40
Time:	00:00:01	

Would you like to print the processing results?

[Yes]   [No]
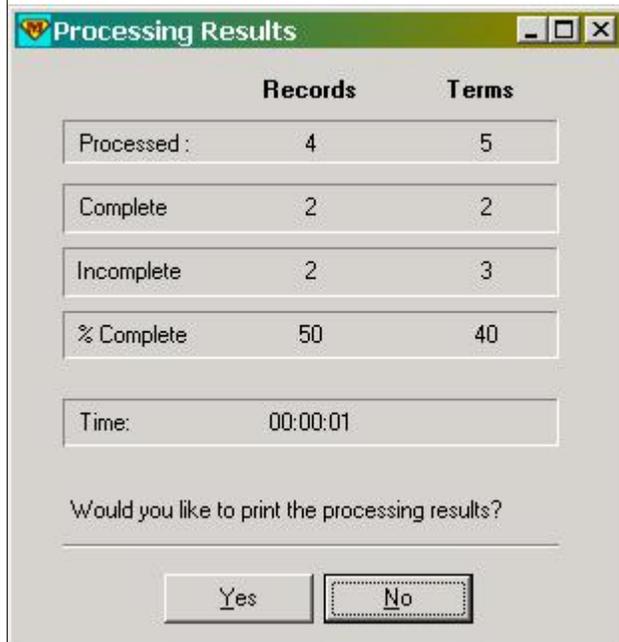
A. To print out a copy of the Processing Results report, click on the "Yes" button.

B. To continue without printing, click on the "No" button or press {ESC}.

7. The main screen will be re-displayed.

Correcting SuperMICAR Rejects

Note: Correcting SuperMICAR rejects is an optional step in the process of using SuperMICAR. Correcting rejects requires training - more than just an understanding of basic medical terminology. Correcting SuperMICAR rejects should generally be done by a trained underlying cause coder.

SuperMICAR 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, SuperMICAR does not generate messages corresponding to the reason for processing failure. This section provides some general instructions for correcting SuperMICAR 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 a reject. In this case, place a semicolon (;) between the two terms and save the certificate. This will solve most problems 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 (you can toggle between insert and overwrite mode by pressing the {Insert} key) to give the certificate the correct spelling for the term. In other cases, a word may appear 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. SuperMICAR 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, SuperMICAR 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, SuperMICAR 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 SuperMICAR encounters an external cause that it cannot interpret, the record will be rejected for manual multiple cause coding. Proper use of the External Cause Prompts require training in MICAR data entry. If this training has not been completed, <u>DO NOT use</u> the external prompts. 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 SuperMICAR Rejects for information on the external cause prompts.)

Multi-Line Terms

Many certificates contain terms that flow from one line to the next. SuperMICAR makes an attempt to identify these terms and bring them together, but sometimes it fails to recognize the condition. In that case, access the Edit 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 SuperMICAR 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.)

Processing SuperMICAR Rejects

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

Opening a file (**New** Certificate File, or **Open** an Existing File).

The file must have been processed already (see SuperMICAR Processing: An Overview).

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

Note: Processing SuperMICAR rejects is an **OPTIONAL** step of SuperMICAR processing, and should not be performed by anyone who is not at least a trained UC (Underlying Cause) coder.

In Processing Rejects, SuperMICAR 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 Correcting SuperMICAR Rejects 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}.
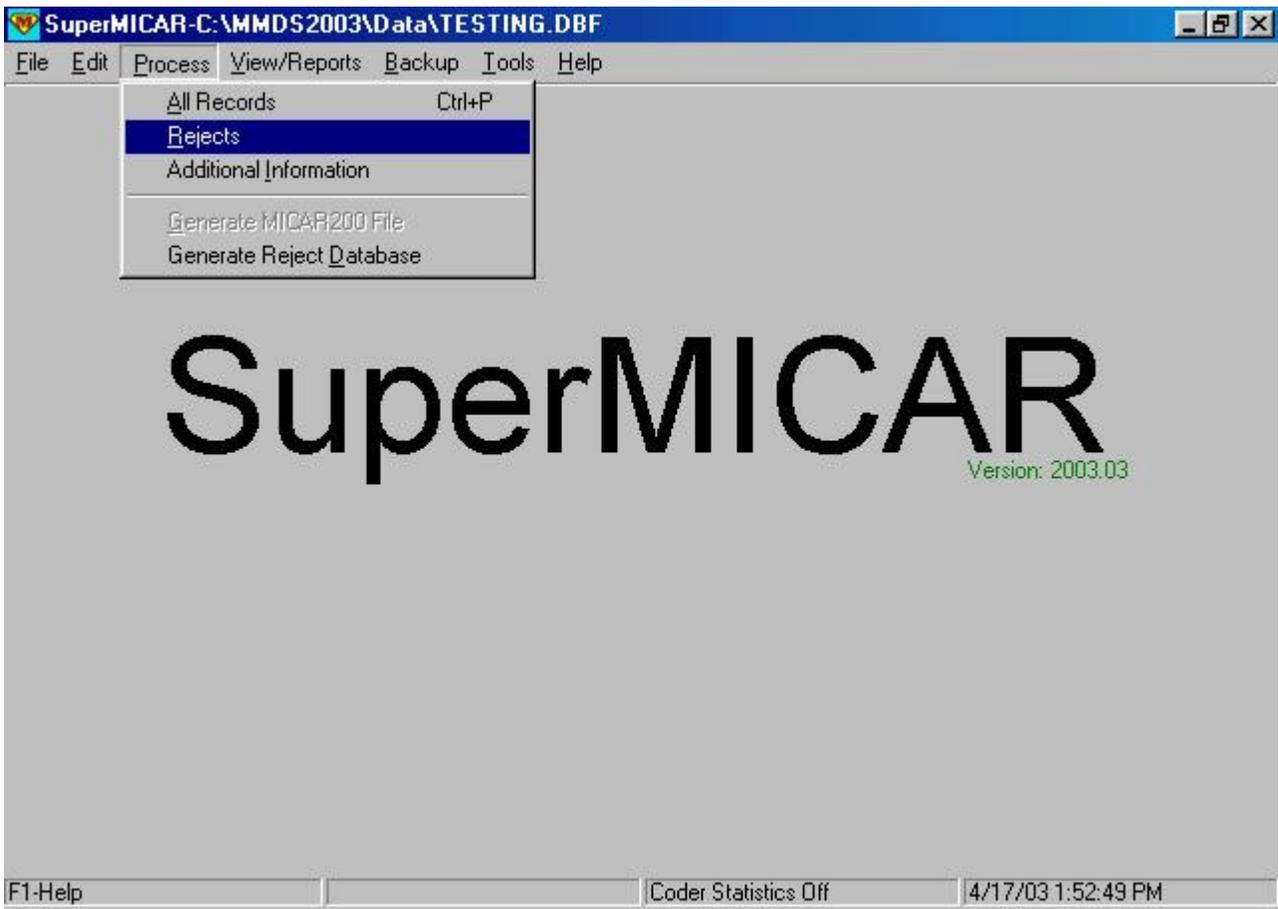
3. A progress bar will be displayed on the screen showing what percentage of the data file has been processed.

   A. When SuperMICAR finds a mismatch or an error, a message window will be displayed. To make a correction, press {Y}. To accept the error as correct and continue with the processing, press {N} (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 {ESC}. To exit without any further processing, press {Y}.

   B. If the {Y} key is pressed to make corrections, the user will be returned to the Certificate Information screen (refer to **Adding Certificates**, for a description of the Certificate Information screen) or the Additional Information Screen, whichever is most appropriate (refer to **Editing Additional Information** for a description of the AI screen). SuperMICAR will fill the fields on the screen with certificate information. Make changes to the fields as described in **ENTERING AND SAVING CERTIFICATE DATA**.

   C. When {F6} is pressed, a Processed Output screen will be displayed. Press {ESC} to return to the Enter Certificate Information screen.

D.   The user must look at the data line 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.

To access the *external cause prompts*:

1)   If the AI screen is not already displayed, access it by pressing {F9}. (External cause prompts are only available through the AI screen.) Position the cursor on the appropriate line for the external cause. Put two greater than signs {>>} in the field at the point to enter the external cause. Immediately upon putting in the second greater than sign, the prompt screen will be displayed.

The box listing the options for each external cause will have an Enter Selection field and a Cancel Button.

To enter an external cause simply type in the one to two letter/number code next to the external cause in the Enter Selection field (alternatively, you can double-click on the list item you wish to select.).

Repeat this process as each new menu appears. When the complete external cause code has been entered, the Certificate Information Screen will be re-displayed with the external cause code in the **Cause** field. (For more information about external cause codes, refer to Part 2g manual)

4.   When the processing is complete, a report will be displayed.

A.   To print out a copy of the coding stats report, click on the Print button

B.   To abort, press {ESC}.

5.   The main screen will be re-displayed.

Processing AI using SuperMICAR

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

Opening a file (**New** Certificate File, or **Open** an Existing File).

The file must have been processed already (see SuperMICAR Processing: An Overview).

Note: 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, if desired, process the AI.
Note: Whenever any editing is done on a certificate (including adding AI), the "Generate MICAR200 File" option is not available (grayed out) until all the records have been processed using "Process All" (see Processing Records using SuperMICAR). After all the records have been re-processed, the MICAR200 file can again be generated (see Generating a MICAR200 File from SuperMICAR), then the file should be backed up and sent to NCHS.

To process Additional Information:

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}.
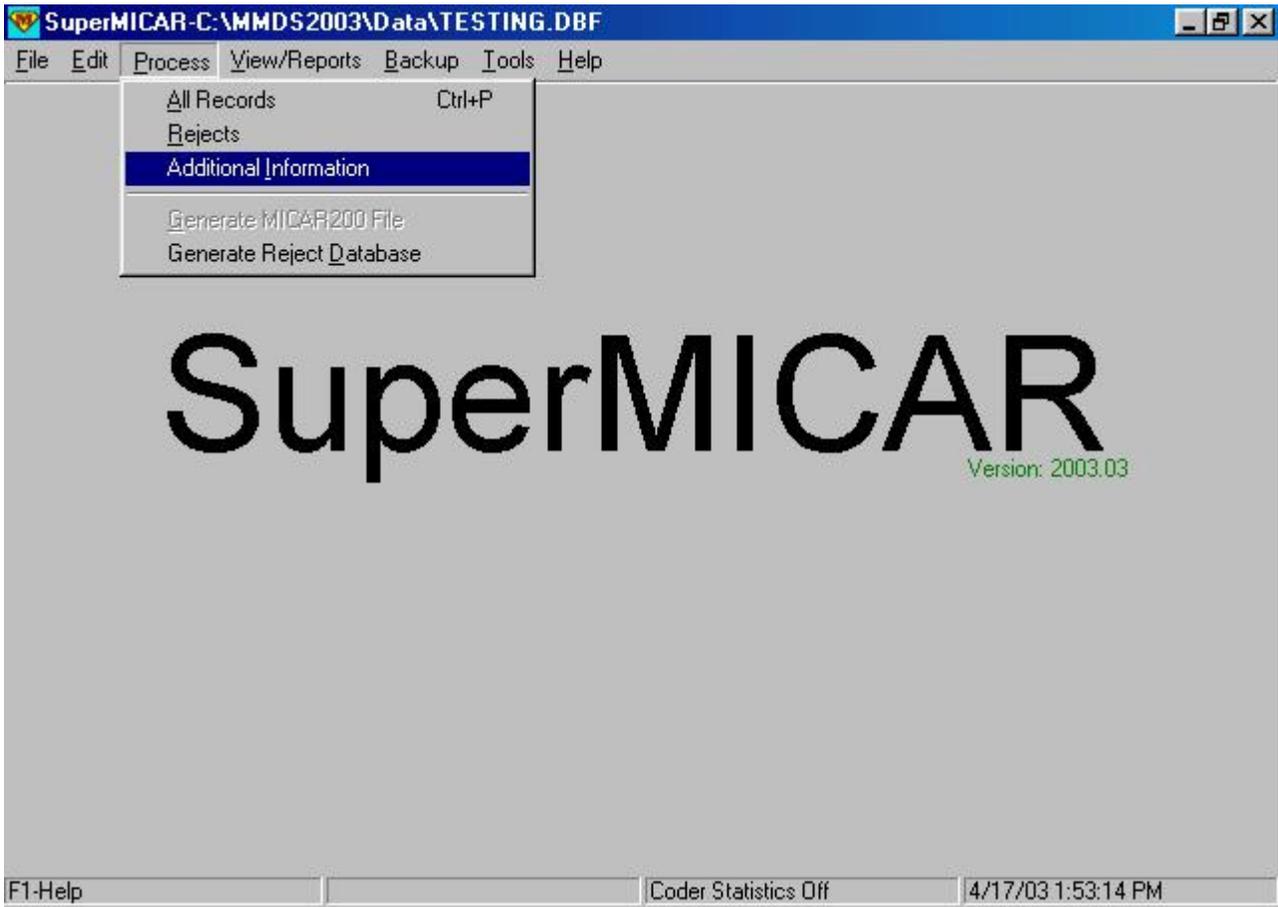
3. A progress bar will be displayed on the screen showing what percentage of the data file has been processed.

   A. When SuperMICAR 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. See Correcting SuperMICAR Rejects for information on how to make corrections.

4. When the processing is complete, a report will be displayed.

   A. To print out a copy of the coding stats report, click on the Print Button

   B. To abort, press {ESC}.

5. The main screen will be re-displayed.

Generating a MICAR200 File from SuperMICAR

Before a MICAR200 file can be generated, the following actions must have already been performed:

Opening a file (**New** Certificate File, or **Open** an Existing File).

Note: the file must have certificates in it to process.

The file must have been processed already (see SuperMICAR Processing: An Overview).

After the certificate file has been processed, a MICAR200 file may need to be generated. The MICAR200 file contains all of the processed entity reference numbers and their identifying information. Ask your System Manager if this file should be generated.

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 Generate MICAR200 File function. Press {ENTER}. Note: If the Generate MICAR200 File function is not available (grayed out), it's because the file has not been processed since last editing. First run Process All (see Processing Records using SuperMICAR) and then try to generate the MICAR 200 file.
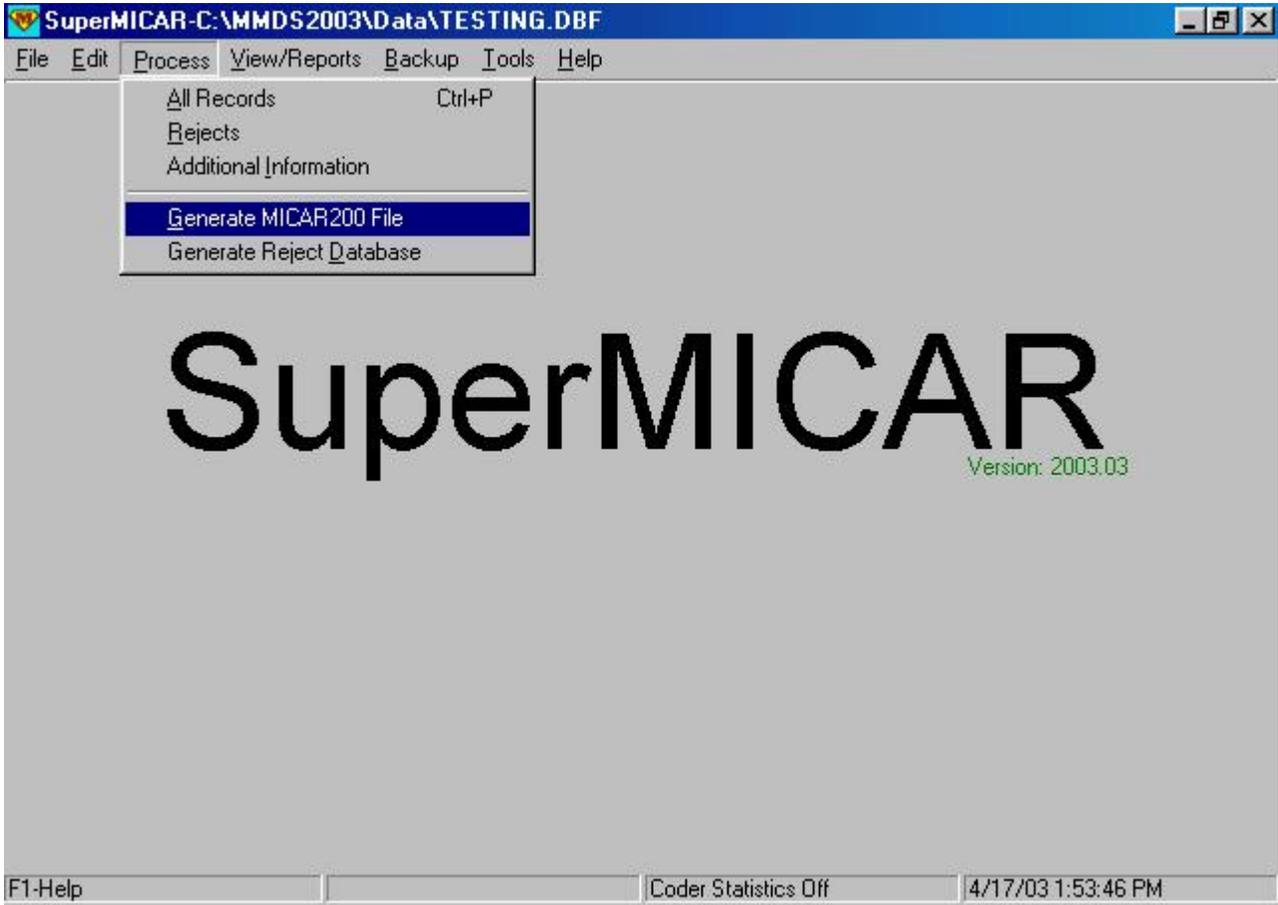
3. A window will be displayed.

   A. To generate a MICAR200 file containing information for all the certificates in the database, press {A}.

   B. To generate a MICAR200 file containing information for only those certificates that have been reprocessed (edited) since the previous export, press {E}. This is most often used after processing Additional Information, since in these cases, the primary MICAR200 file has already been shipped for processing and only the certificates that have changed need to be exported.

4. A progress bar will be displayed showing the percentage of the certificates that have been exported to a MICAR200 file.

5. When the MICAR200 file is complete, the main screen will be re-displayed.

Generate Reject Database

This function, formerly a function of the separate UtilsMICAR program, has now been incorporated directly into SuperMICAR. Other important UtilsMICAR functions (e.g., queries) have also been incorporated directly into SuperMICAR, so UtilsMICAR is no longer maintained as a separate program.
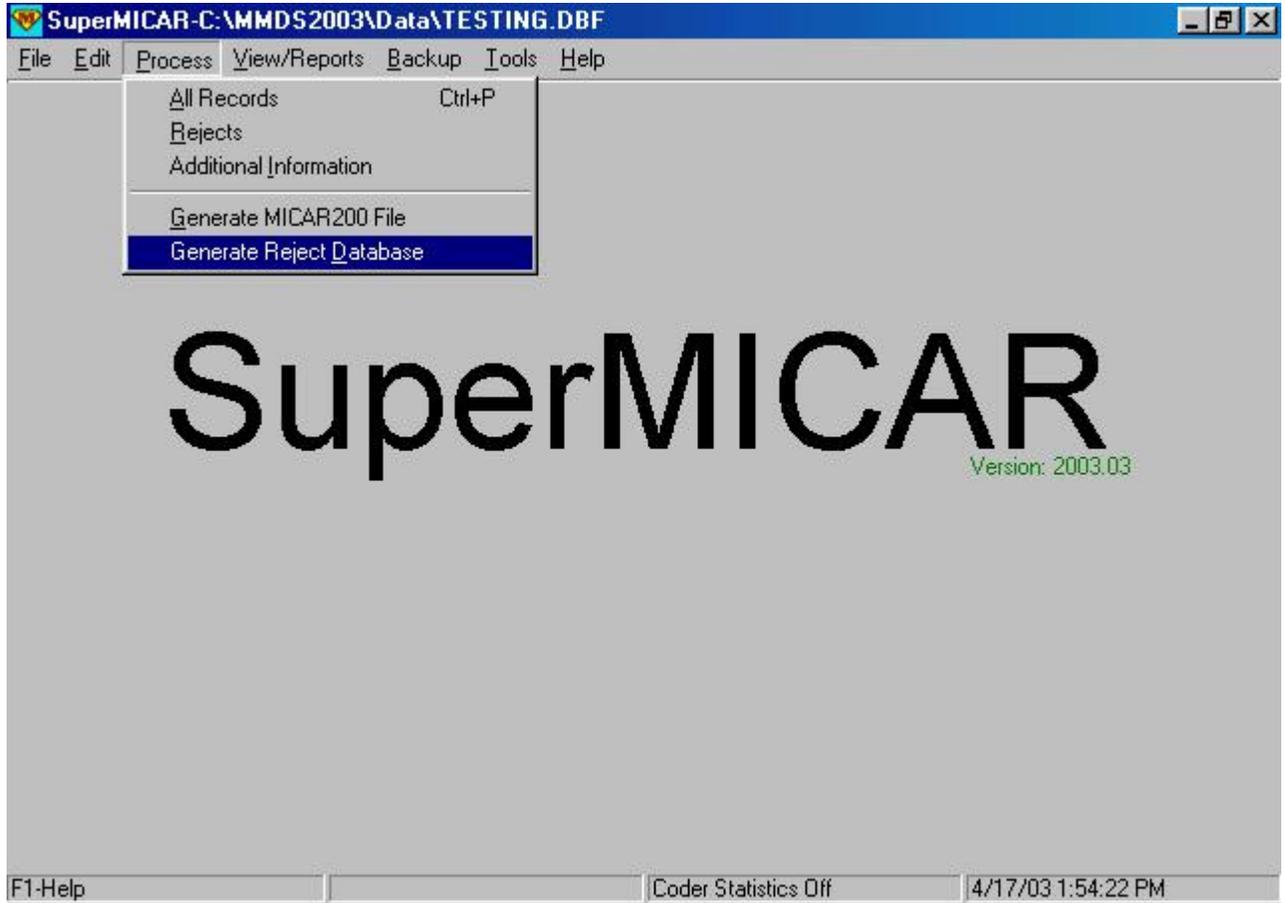
Choosing this function will create a new SuperMICAR database containing only SuperMICAR records that match certificates in a MICAR200 (.MRJ) or ACME (.ARJ) rejects file that the user specifies. Note that this does not remove the records from the current SuperMICAR file; the current SuperMICAR file is left unaffected.

In order for this function to work, there must already be a MICAR200 Rejects file (MRJ, created in MICAR200) or an ACME Rejects file (ARJ, created in ACME). The user must specify the appropriate rejects file to generate a SuperMICAR rejects database. Certificate numbers from this MICAR200 or ACME rejects file are used to determine which records (from the current SuperMICAR file) are included in the new SuperMICAR rejects file.
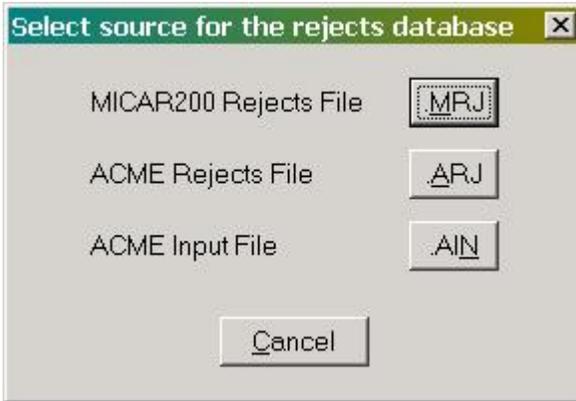
The user must provide a filename and header information for the new "rejects-only" SuperMICAR file.

SuperMICAR Backups

Creating SuperMICAR Backups

Because data security is an important issue, sites may have different backup procedures. Ask your System Manager for more specific instructions on the proper types and times for using backup procedures.

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

Opening a file (New Input File or Open an Existing Input File).

After processing the data files, a backup should be made of the files that have been used and generated by SuperMICAR. All of the data and the associated files will be backed up. It is also recommended to run a backup at the end of each day. To create SuperMICAR backups:

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 All Files Function and press {ENTER}.
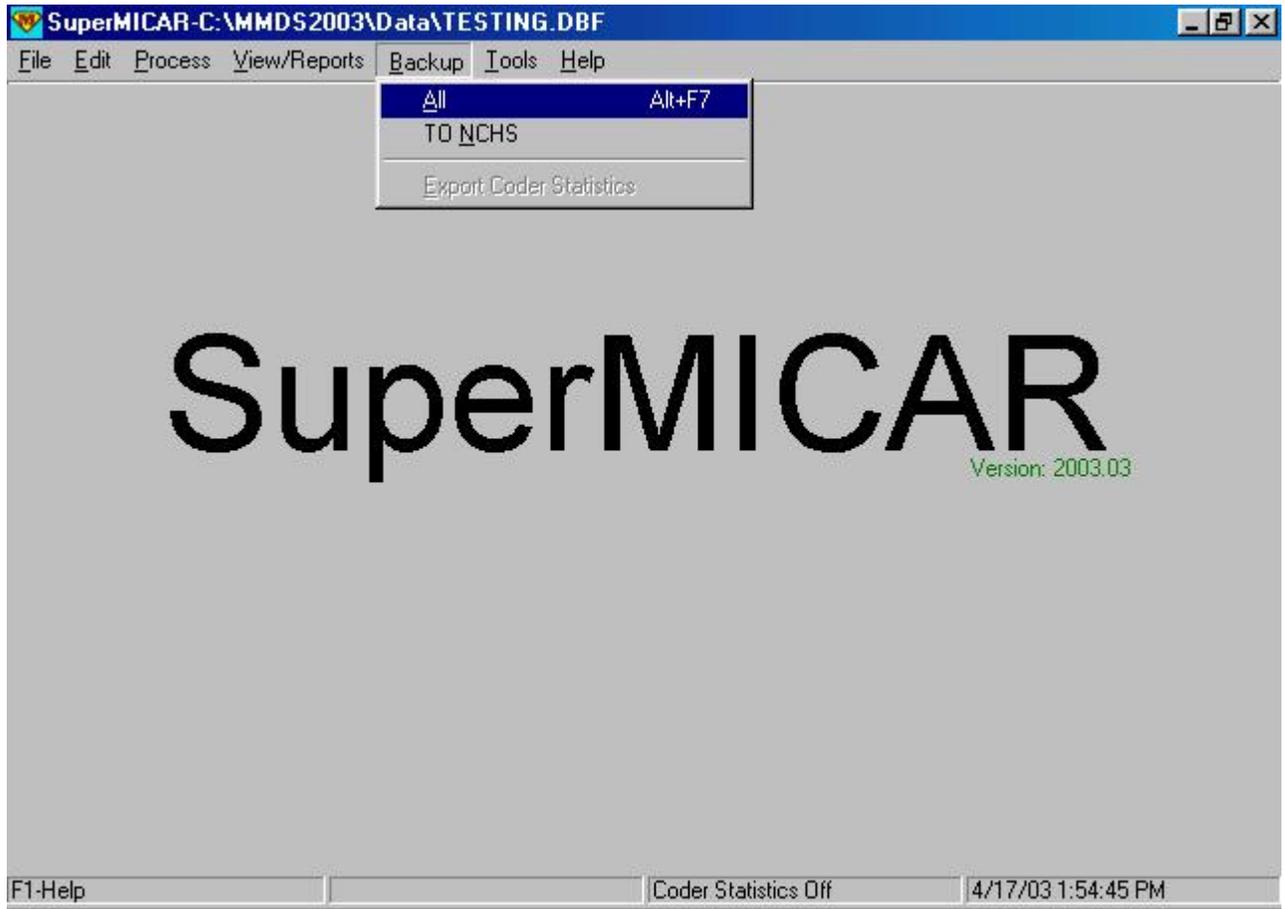
3. A Backup Dialog box will appear with a display box containing the Backup Directory, any drives on your computer, and an option to choose another location. Click to select one of those destinations.
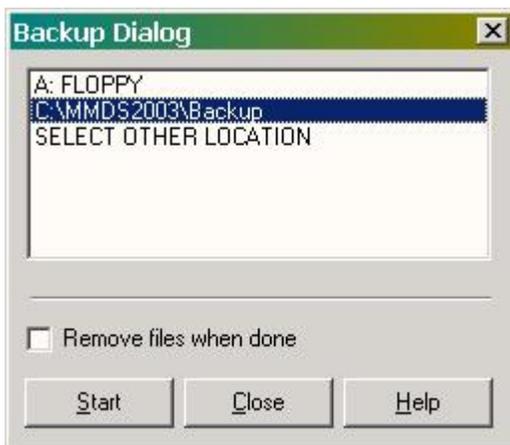
4. Once your destination is selected, you may Click on the Start button to begin the backup, the Close button to abort the Backup or the Help button to use the online help system.

Note: This Backup Dialog box contains a checkbox to "Remove files when done." Checking this box will cause the current data file and associated files to be backed up (into your <Backup> directory) and then REMOVED from your <Data> directory (see Setting SuperMICAR Options). Once the files are removed from your <Data> directory, you cannot open them using SuperMICAR without first restoring them (see Restoring from SuperMICAR Backups).

5. Clicking on the Start button will begin the backup process (filename.SBK). If a previous backup exists, you will be prompted to either abort the backup or replace the previous backup. If you choose to replace the previous backup, that prior backup file will be renamed before the current backup is performed (filename.SB$); Thus one accidental "replace" during backup can still be recovered (see the topic on Recovery Files in the System Manager's section for more information). While the backup is underway, the title of the dialog box will change to "Working." When the backup is complete a "Backup Successful" message will appear.

6. The main screen and Menu Bar will be re-displayed.

Creating SuperMICAR Backups for NCHS

Because data security is an important issue, sites may have different backup procedures. Ask your System Manager for more specific instructions on the proper types and times for using backup procedures.

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

Open a file (**New** Certificate File, or **Open an Existing File**).

Note: 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. This Function will create a ssyy###.SUP file (ss = state code, yy = year, ### = shipment number) containing the MICAR200 file and other associated files. The filename information will be pulled automatically from the Header information, which one important reason the header information (particularly the shipment number) must be updated for each batch.

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 and press {ENTER}.
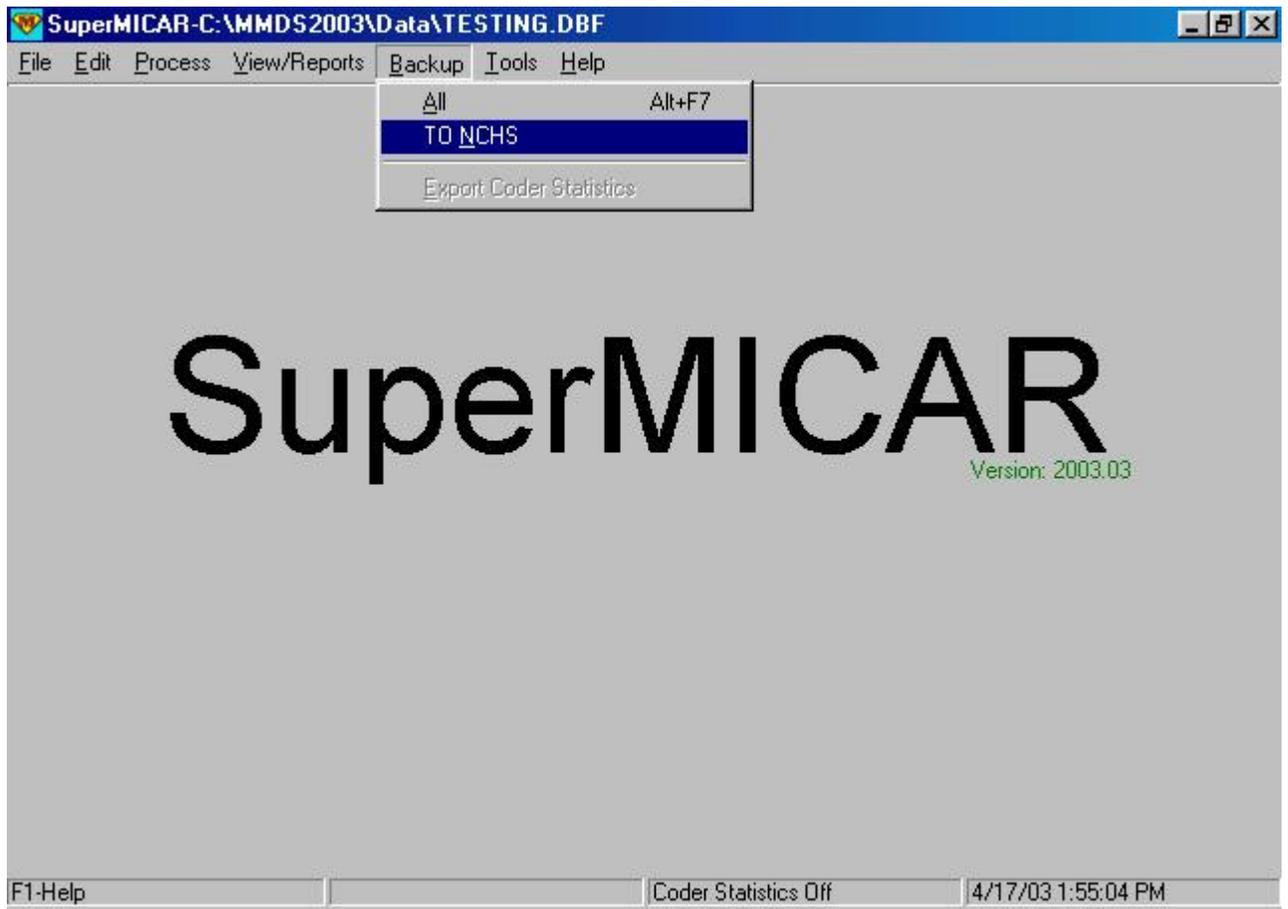
3. A Backup Dialog box will appear with a display box containing the Backup Directory, any drives on your computer, and an option to choose another location. Highlight the desired backup destination.
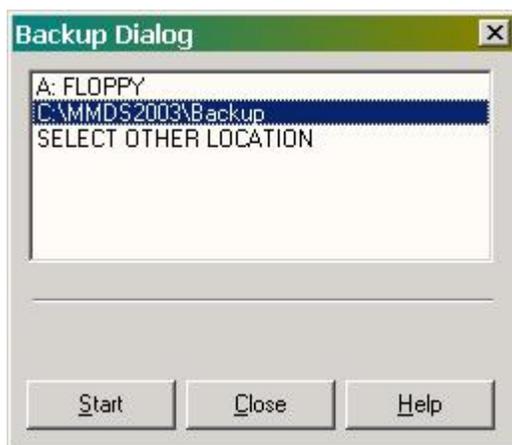
4. Once your destination is selected, you may Click on the Start button to begin the backup, the Close button to abort the Backup or the Help button for more information

5. Clicking on the Start button will begin the process of creating the backup file. A seven-character filename (filename.SUP) is automatically assigned to your backup file based on information gathered from the header of the current file.
The format of the filename: SSYY###.SUP (SS = state, YY = year, ### = shipment number).
If a previous backup exists, you will be prompted to either abort the process or to continue. If you continue, the older backup will be replaced. While the backup is underway, the title of the dialog box will change to "Working" and when the backup is complete a Backup Successful message will appear.

6. The main screen and Menu Bar will be re-displayed.

Restoring from SuperMICAR Backups

At some point it may be necessary to restore a data file from a backup (see Creating SuperMICAR Backups). For the Restore from Backup function to be active, you cannot have a file currently open (see Closing a SuperMICAR File). To use SuperMICAR's Restore function to retrieve data from a backup file:

"Restore From Backup" restores files from the backup (or other chosen) directory to the current data directory. Therefore, it is advisable to verify the current data path before you move through the steps for restoring a file. See Setting SuperMICAR Options to verify (or change) current path settings.

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 Restore function and press {ENTER}.
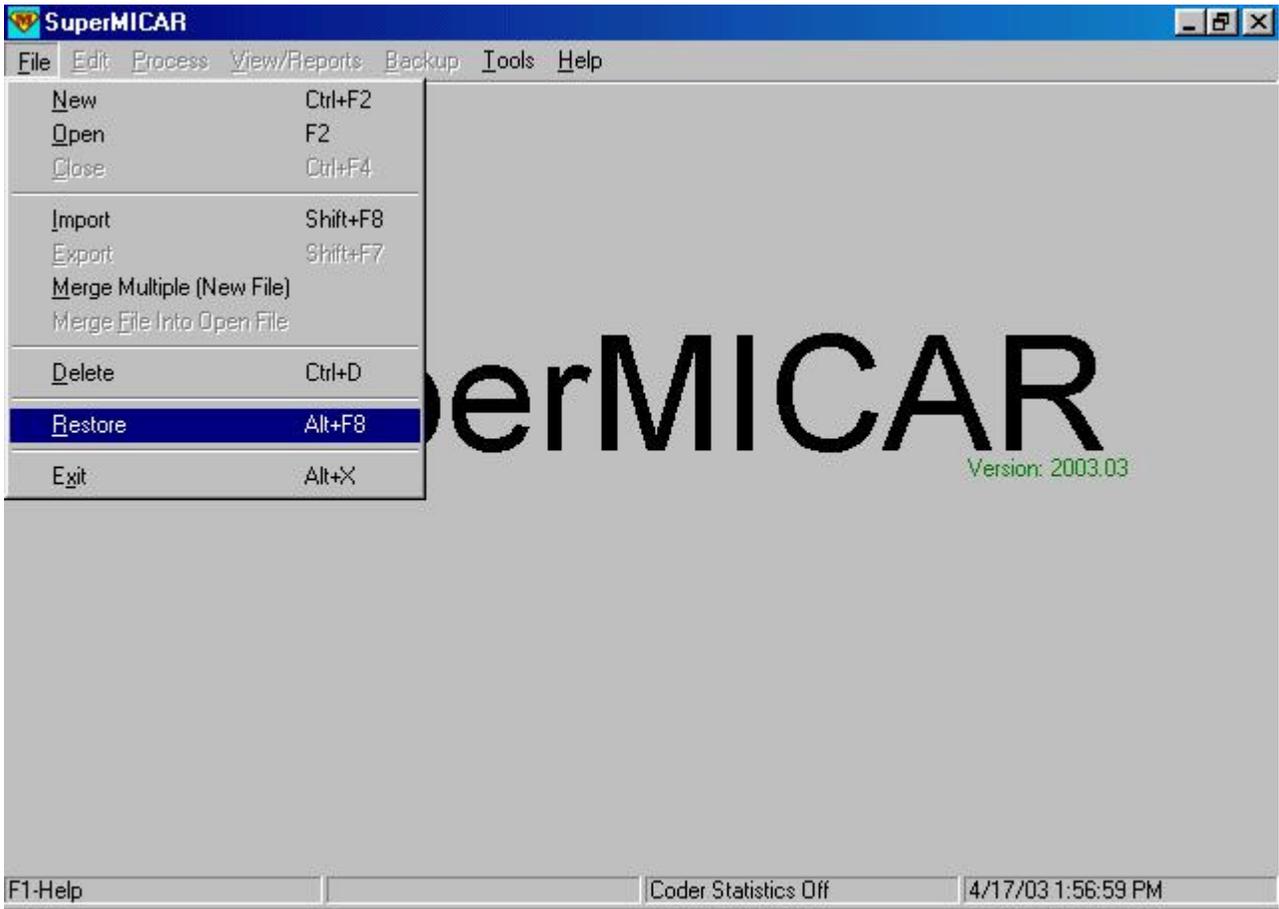
3. A dialog box for Restoring From Backup will be displayed. This is similar to the dialog for Open File and works the same way.
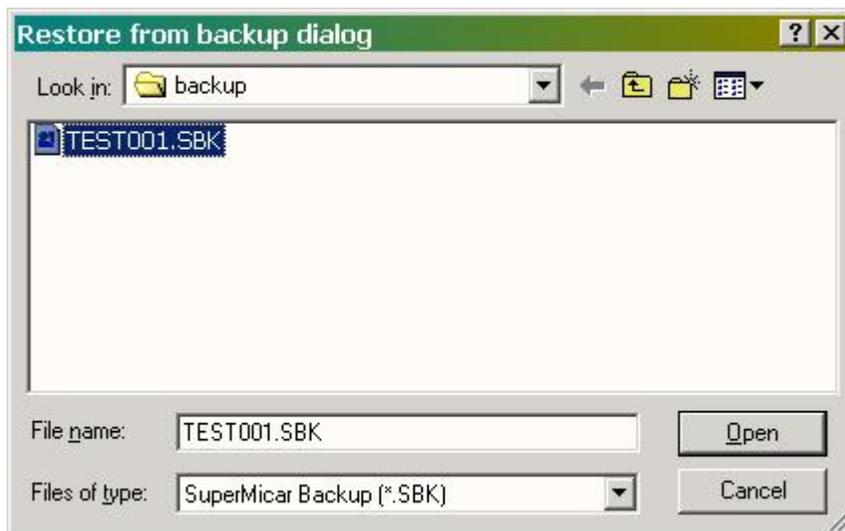
4. Choose the backup file (a file with a .SBK extension) to restore from. You can change the selection in the "Files Of Type" field to choose from among types of valid backup files (e.g., .SBK, .SUP, .SB$, SU$). The available files will be listed in the List of Files. Once the desired file is highlighted, press {ENTER}. The available files will be listed in the List of Files. Once the desired file is highlighted, press {ENTER}.

   Note: If the file you are restoring already exists, a cautionary message will be displayed. If you proceed further, the files currently on your hard drive will be replaced with those from the backup. Restoring over previous files should be rare, usually only occurring when a file has become corrupted. Exercise caution as data loss can result from errors in this step.

5. A Restore dialog box will appear and its title will change to "Working" while the restore is underway.

6. After the restore is complete, the main screen and Menu Bar will be re-displayed.

Editing Functions in SuperMICAR

SuperMICAR Editing: An Overview

SuperMICAR 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** Function (see Editing SuperMICAR Records). Other common functions that will be used to edit certificate data are:
Editing SuperMICAR Header Information,
Adding/Editing Additional Information,
 Finding a SuperMICAR Record.

Editing SuperMICAR Header Information

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

   Opening a file (**New** Certificate File or **Open** an Existing File).

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. Press {H} to edit Header Information. For more information on the parameters for the header fields, see Creating a New SuperMICAR File.
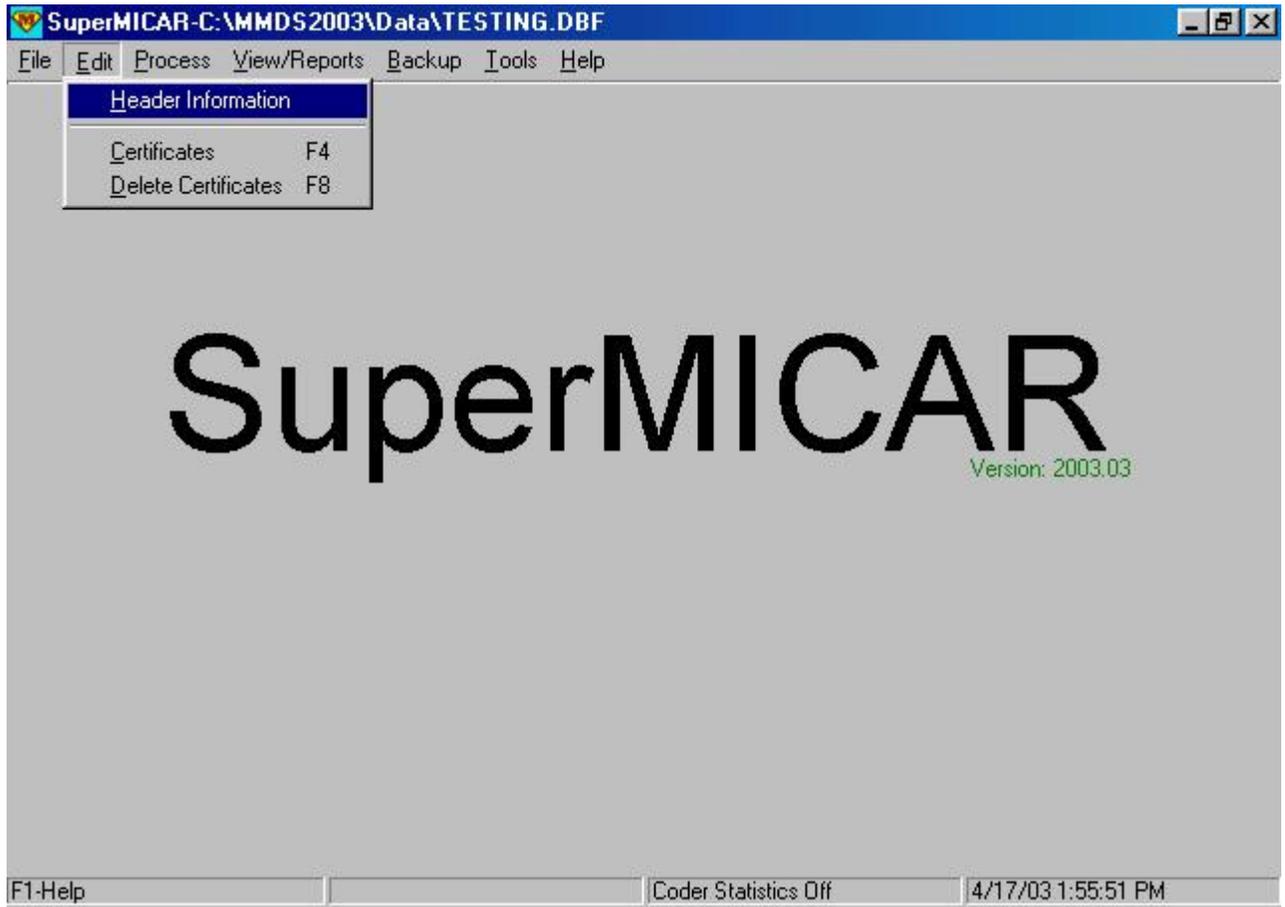
3. After editing the header information, press {OK} to save the header information and return to the main screen (the filename will appear at the top of the screen). The new header information will be applied to all certificates in that file.

4. To exit the header information screen without saving the changes, press {ESC}.

Editing Additional Information

The procedure for editing Additional Information in SuperMICAR is covered in the section on Entering and Saving Certificate Data (see Adding/Editing Additional Information).

Finding a SuperMICAR Record

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

Opening a file (**New** Certificate File or **Open** an Existing File).

Note: The file must have certificates in it to be searched.

The Find a Record Function allows the user to find (jump to) a particular certificate quickly. This is especially useful when editing certificate data in a large file. To find a specific record:

1. While the Certificate Information screen is displayed (see Editing SuperMICAR Records), press {F5}.

2. Type in the certificate number (leading zeros are optional) of the desired certificate and press {ENTER}.

    A. If the certificate number is in the currently open file, data from that certificate will be displayed.

    B. If the certificate number is not in the currently open file, a message will be displayed. Press {ENTER}.

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

Showing Processed Output in SuperMICAR

In order to use the Show Processed Output Function, the certificate file must first be processed (see Processing Records Using SuperMICAR). This Function shows the ERN codes that were generated for the cause(s) of death listed on the certificate.

1. While the Certificate Information Screen is displayed (by using the Edit Certificates function), press {F6} to Show Processed Output.

2. A window listing the cause(s) of death and the ERNs generated will be displayed.

3. When finished viewing the window, press the {ESC} key. The Certificate Information Screen will be re-displayed.

Deleting Records in SuperMICAR

Deleting SuperMICAR Certificates

SuperMICAR also offers the ability to delete certificates, either individually or in groups, from the database. **Warning**: Once certificates are deleted, THEY ARE GONE FROM THE SUPERMICAR DATABASE. The only way to recover deleted certificates is to restore from an existing backup of the file (assuming that a backup file containing the certificate in question exists). See Creating SuperMICAR Backups, Creating SuperMICAR Backups for NCHS, Restoring from SuperMICAR Backups, or ask your System Manager for more information on backing up and restoring files.

There are two ways to delete certificates from SuperMICAR's database. See Deleting SuperMICAR Certificates While Editing a Certificate File for the procedure to delete one certificate at a time. See Deleting Several SuperMICAR Certificates at Once for the procedure to delete any number of certificates in a database file, up to the highest certificate number entered.

Deleting SuperMICAR Certificates While Editing a Certificate File

The steps below can be used when the Certificate Information screen is displayed. The steps allow you to delete the currently displayed certificate from the certificate file.

1. Access the Certificate Information screen for the desired certificate. For specific instructions, see Editing SuperMICAR Records.

2. Press {F8} to delete the current certificate.

3. A message box will ask you to confirm deletion of the displayed certificate record.

    A. To delete the certificate from the certificate file, press {Y}. The next certificate in the file (if available) will then be displayed.

    B. To cancel the deletion, press {N}. The certificate will not be deleted.

Deleting Several SuperMICAR Certificates at Once

If the Delete Records Function is used when the Certificate Information screen is not displayed, the user can delete a group of certificates at once. Note that this is a sequential deletion - you can only delete a contiguous block of certificates (e.g., 1-20, 457-493) and all certificates in that range will be deleted.

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 Certificates Function. Press {ENTER}.

3. A window will be displayed asking for the range of certificate numbers to delete.

4. 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.

5. Another message will be displayed requesting confirmation to delete the specified records.

   A. To delete the records, type {Y}.

   B. To cancel the deletion, type {N}.

6. A message box will ask if you wish 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}.

Deleting an Entire Batch

Delete

This new feature under the File menu allows the user to delete an entire batch. A batch consists of all files with that filename (with any extension - *excluding backup files*).
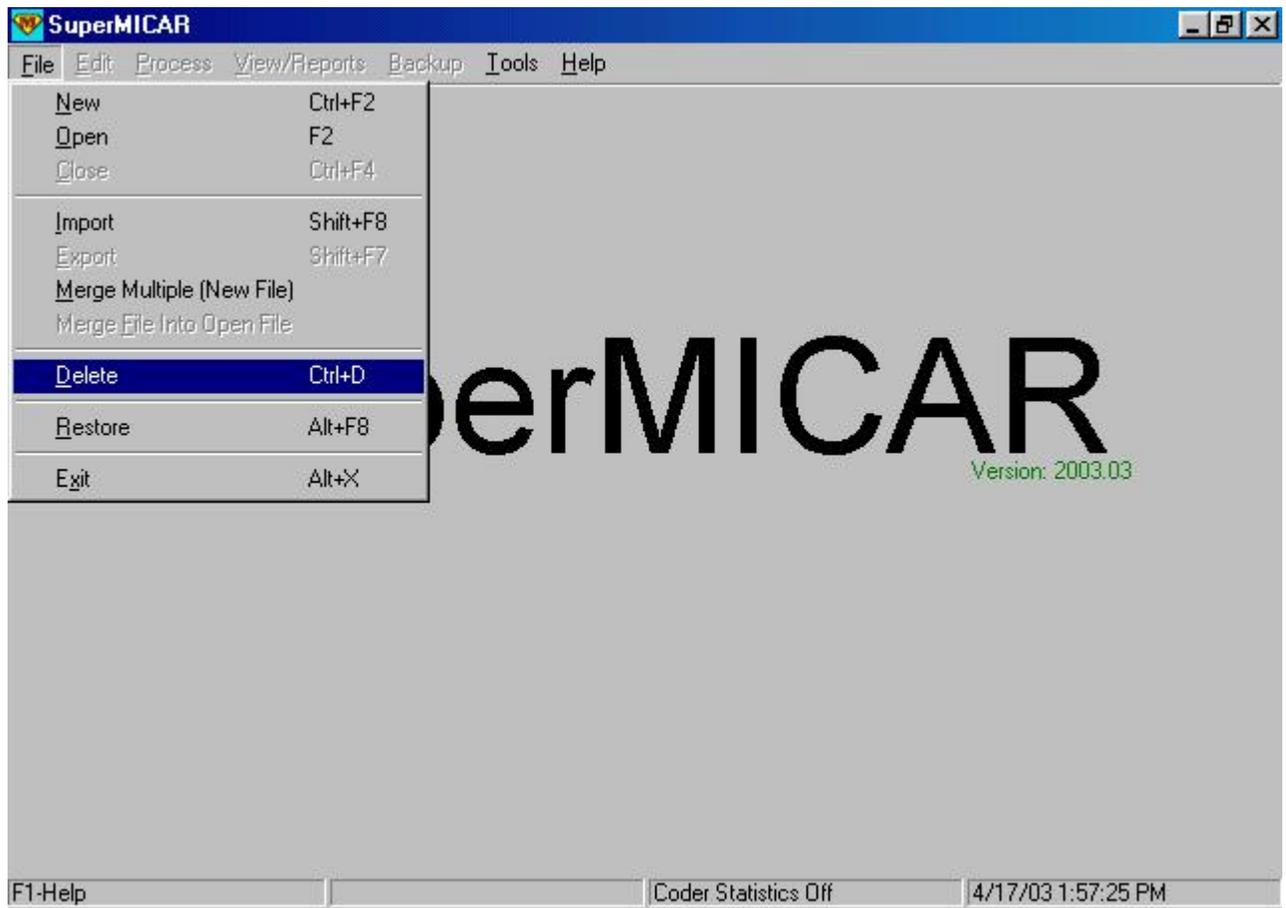
All files with that name, <u>in the directory selected</u>, will be deleted. Note that this batch deletion is limited to the directory the user specifies and that any backup files will not be deleted (although it is strongly recommended that backup files be stored only in the backup directory).
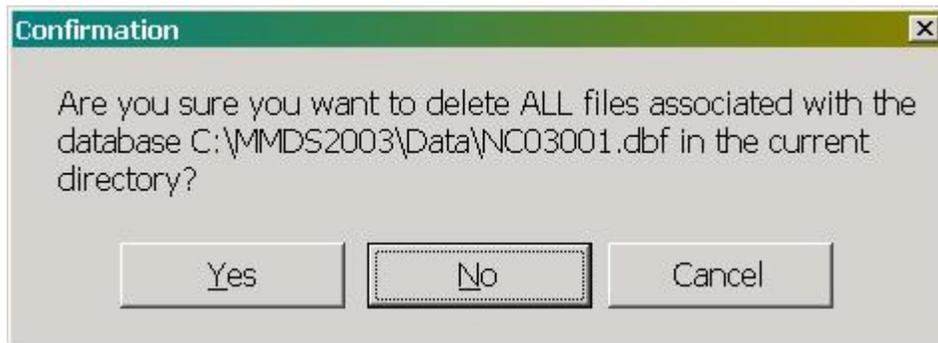
Generating SuperMICAR Reports & Printing

Generating SuperMICAR Reports

Different functions can be used to generate SuperMICAR Reports:

The sequence check, which helps identify missing, extra, duplicate, or out-of-sequence certificates, can produce a number of different reports depending on what type of information is desired. By running a sequence check, you can produce a **standard** report, a **series** report, or an **actual** report (see Generating a SuperMICAR Sequence Check).

Various reports can also be generated using the View/Reports menu:

SuperMICAR Error Listing

Non-Blank Place of Injury Listing

Non-Unit Durations Listing

For help with printing, see the following topics:

Printing a Single SuperMICAR Certificate

Printing All Certificates using SuperMICAR

Generating a SuperMICAR Sequence Check

The Sequence Check Function creates a file (named filename.SSQ) containing a report showing certificate numbers in one of three different formats.

- A ''standard report" will display all of the missing certificate numbers in ascending order.

- A "series report" (the default choice) will display all of the missing certificate numbers in ascending order, *grouped into series based on the first digit* (e.g., all certificates beginning with "1" would be grouped together).

- An "actual report" is a report showing all of the certificates *actually present* in the database. Rather than being a "missing certificates" report (like the "standard report"), the actual report shows the certificates that are actually present in the database.

Together, these reports can reveal if there are missing, extra, duplicate, or out-of-sequence certificates in the database file. The Sequence Check can be used only when a file is currently open. To use the sequence check:

1. From the main screen, press {Alt+T} to select the Tools 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. SuperMICAR automatically fills in the first and last certificate numbers for the current file. To change these certificate numbers:

    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), the ending certificate number (the ending certificate number for the sequence check), or both. Click "OK."

    C. Choose the type of report you wish to generate (standard, series, or actual) in the options box. Series report is the default.

4. The output of the sequence check (filename.SSQ) will then be displayed. Use the up and down arrow keys to scroll through the output (or {Page Up} and {Page Down}). Press the {ESC} key to close the output window. Click the Print button to print the report.

```
Viewing File: C:\MMDS2003\Data\TEST001.SSQ                        _ □ X

SEQUENCE CHECK 'SERIES' REPORT
   for Shipment: C:\MMDS2003\Data\TEST001.DBF

Beginning Requested Number  : 000001
Ending Requested Number     : 000004

Beginning Certificate Number    : 000001   --------0--------
Ending Certificate Number       : 000004
Matched Records Found in Series : 000004
Missing Records in Series        : 000000

Total Records in File    : 000004
Total Missing Records    : 000000
```

```
                                    Print      Close      Help
```
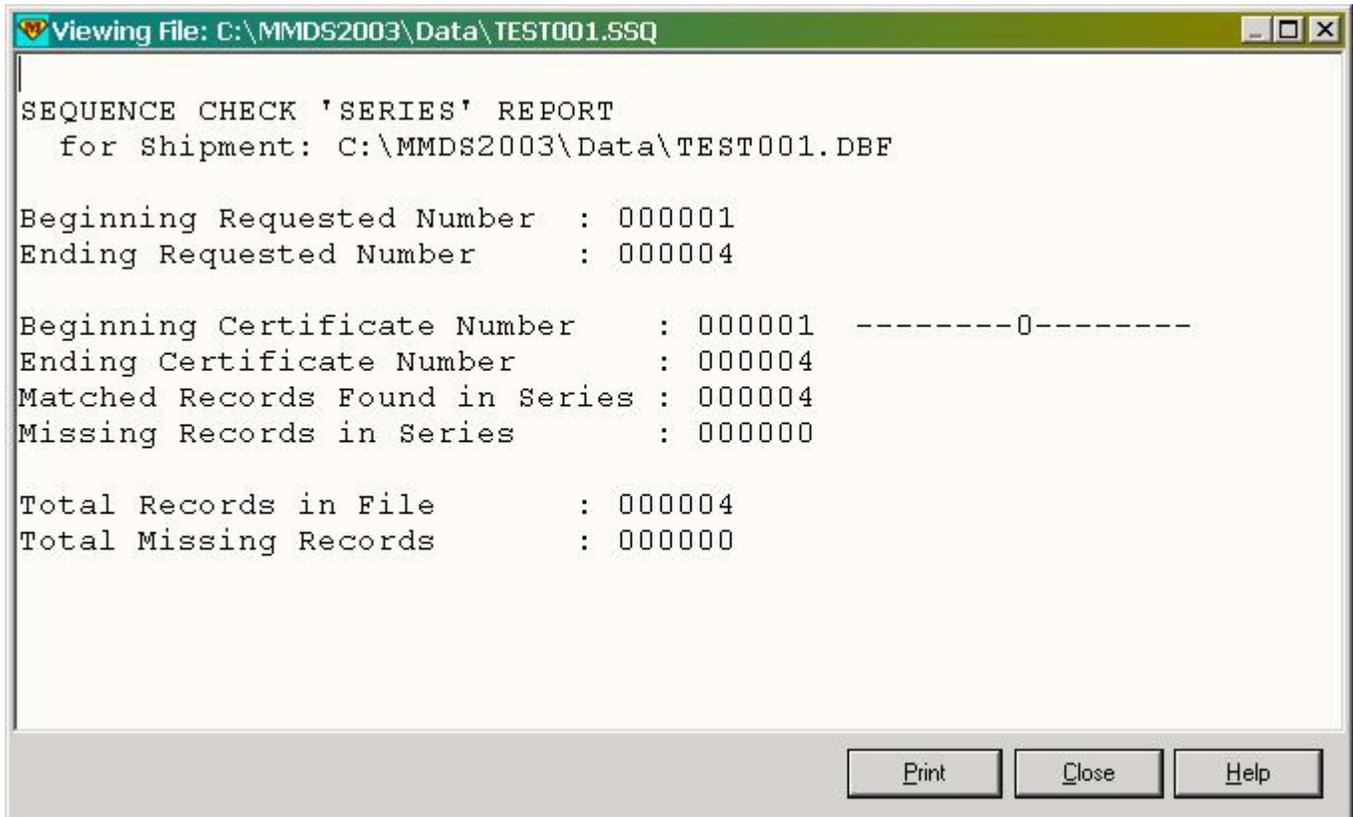
"Total Prior Records" = the # of records in the file BEFORE the Beginning Certificate Number.

"Total Future Records" = the # of records in the file AFTER the Ending Certificate Number.

SuperMICAR Error Listing

The Error Listing Function generates a list of any errors detected during processing. To use the Error Listing Function, 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 **View/Reports** Menu Option.

2. Use the up and down arrow keys to highlight the Error Listing Function and press {ENTER}.

3. At the "Viewing File" window, press the "Print" button. SuperMICAR will print out a listing that will include any errors generated.

Non-Blank Place of Injury Listing

This function (found under View/Reports) displays the certificate number, place of injury code and place of injury text for all certificates with non-blank place of injury entries. This function was designed primarily for use at NCHS to help improve the quality of place of injury coding.
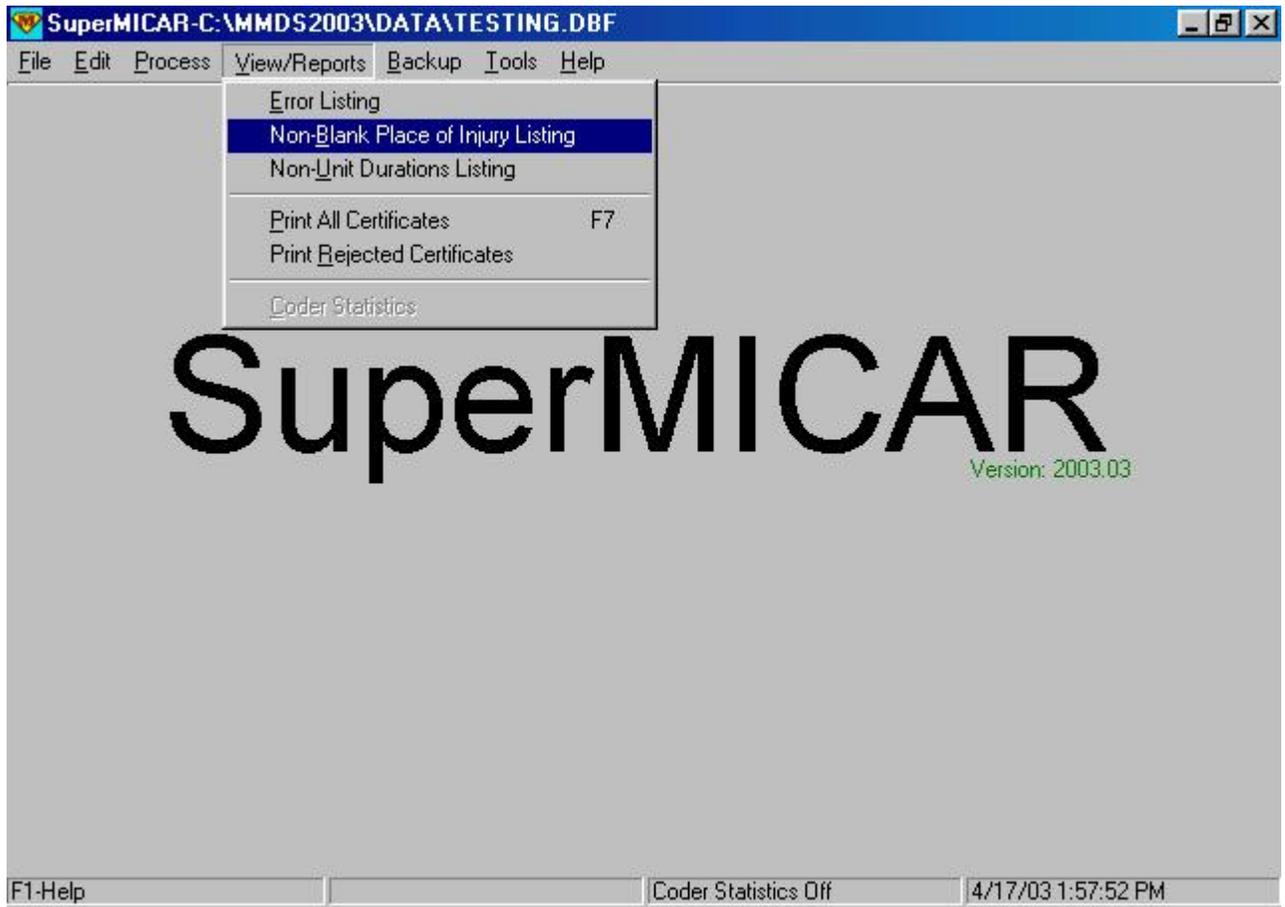
Note that this Non-Blank Place of Injury Listing function does not allow editing. It merely gives users a report of certificates where Place of Injury is not blank.

```
Viewing File: C:\MMDS2003\Data\TEST001.POI                          _ □ ×
                     SuperMICAR Non-Blank Place of Injury Listing

FILE: C:\MMDS2003\Data\TEST001.DBF                              RUN DA!
STATE: NC                                                       DATA Y]
LOT NO: 0022

Certificate      Code      Place of Injury Text
-----------      ----      -------------------------------------------

  000001          F        SCHOOL
  000002          K        DRIVING ON HIGHWAY

◄ |                                                                  ► |
                                    [ Print ]    [ Close ]    [ Help ]
```

Non-Unit Durations Listing

This Non-Unit durations report can be used to identify entries into the "duration" field that do not contain accepted units in SuperMICAR. These may be certificates with duration values but without duration units ("unitless" durations) or they may be certificates with duration units that are misspelled or unacceptable (e.g., "minues" instead of "minutes").

To see a listing of certificates with problematic duration units:

1. From the main screen, press {Alt+R} to select the **View/Reports** Menu Option.

2. Use the up and down arrow keys to highlight the Non-Unit Durations Listing option and press {ENTER}.

3. At the "Viewing File" window, press the "Print" button to send the report to your printer. SuperMICAR will print out a listing that will include any errors generated. Press "Close" to close the report.

Printing a Single SuperMICAR Certificate

To print a single certificate from SuperMICAR:

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 Certificates function and press {ENTER}.

3. A Certificate Information Screen will be displayed. See Finding a SuperMICAR Record for help with finding the specific certificate to print.

4. With the desired certificate displayed, press {F7}. At the confirmation box, press "OK." The certificate will be sent to the printer.

5. When printing is finished, the main screen will be re-displayed.

Printing All Certificates using SuperMICAR

SuperMICAR has a Print All Certificates function. To print all certificates using SuperMICAR:

1. From the main screen, press {Alt+V} to select the **View/Reports** Menu Option.

2. Use the up and down arrow keys to highlight the Print All Certificates function and press {ENTER}.

3. A message box will ask for confirmation of printing ALL certificates.

    A.   To print ALL certificates, press {Y}.

    B.   To cancel the printing and return to the main screen, press {N}.

4. When printing is finished, the main screen will be re-displayed.

SuperMICAR Tools

SuperMICAR Filter

The Filter function, found under the Tools menu, allows the user to perform queries on SuperMICAR files. Using "filters," SuperMICAR can search files for records meeting certain conditions and generate subsets of records that meet those conditions. For example, a state might search an entire file to find all of the certificates (records) where a particular field (e.g., "place of injury") is blank.
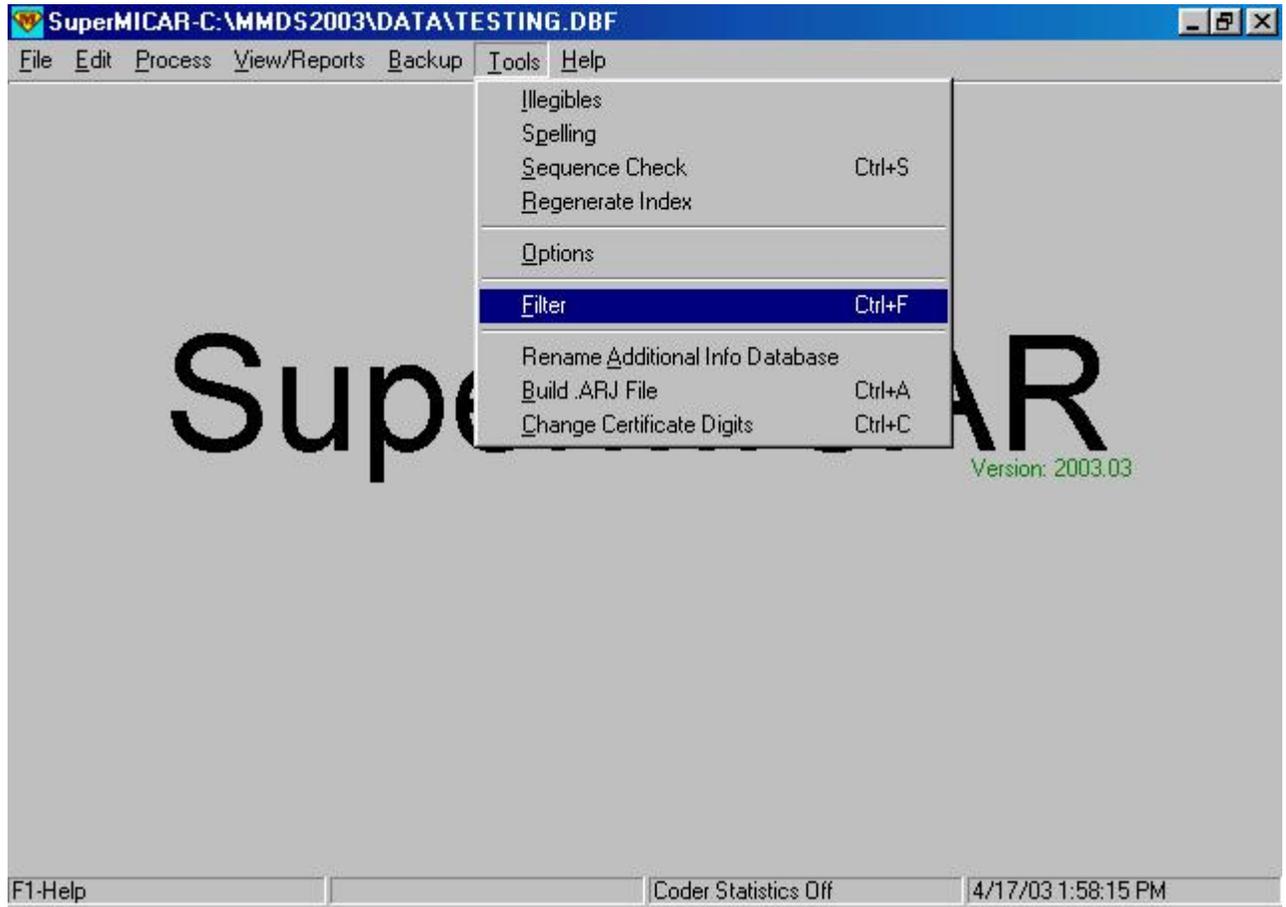
For the filter option to be available, a SuperMICAR file must be open. To enter the first parameter, click on the scroll arrow in the parameter box and select the field to be defined (for example, to set a search for specific causes of death). Similarly, choose the operator and value for the query.

NOTE: The list of operators is customized according to the parameter chosen. This allows the user to select only appropriate operators for a given parameter. For example, if "Cause of Death" (which corresponds to more than one field on the certificate) is chosen, the user can select the operator "All Lines = (equal to)." This would return records where ALL of the fields match (equal) the requested value (e.g., empty). This should prove especially helpful for users who want to search a file for certificates (records) where ALL of the Cause of Death lines are blank.
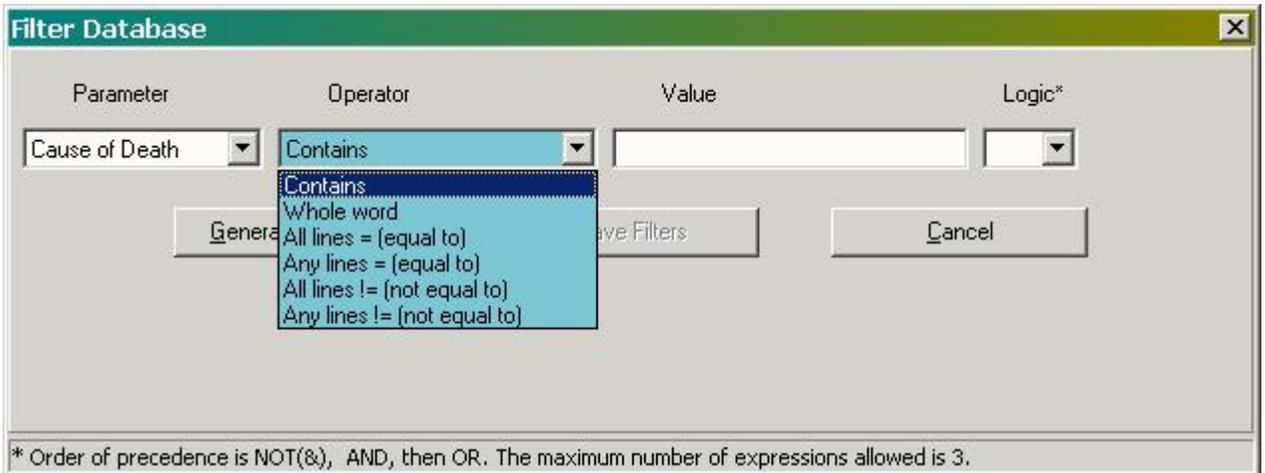
Filters can be set for up to 3 criteria/expressions. To enter additional criteria before applying the filter, click on the logic button. Then select the next criteria and define whether it will look for records satisfying BOTH expressions ("AND") or look for records satisfying EITHER expression ("OR"). Records can also be specifically EXCLUDED from the query results ("NOT").

Note: Large files and complex searches might take a few minutes, please be patient (in the future a progress bar may be added).

After a query is run, a dialogue box will give the option to create a new database from the results set of the query. If new database files are to be created, the user must provide a filename.

Rename AI Database

This function, found under the Tools menu, allows the user to create a new database containing only the records with additional information.
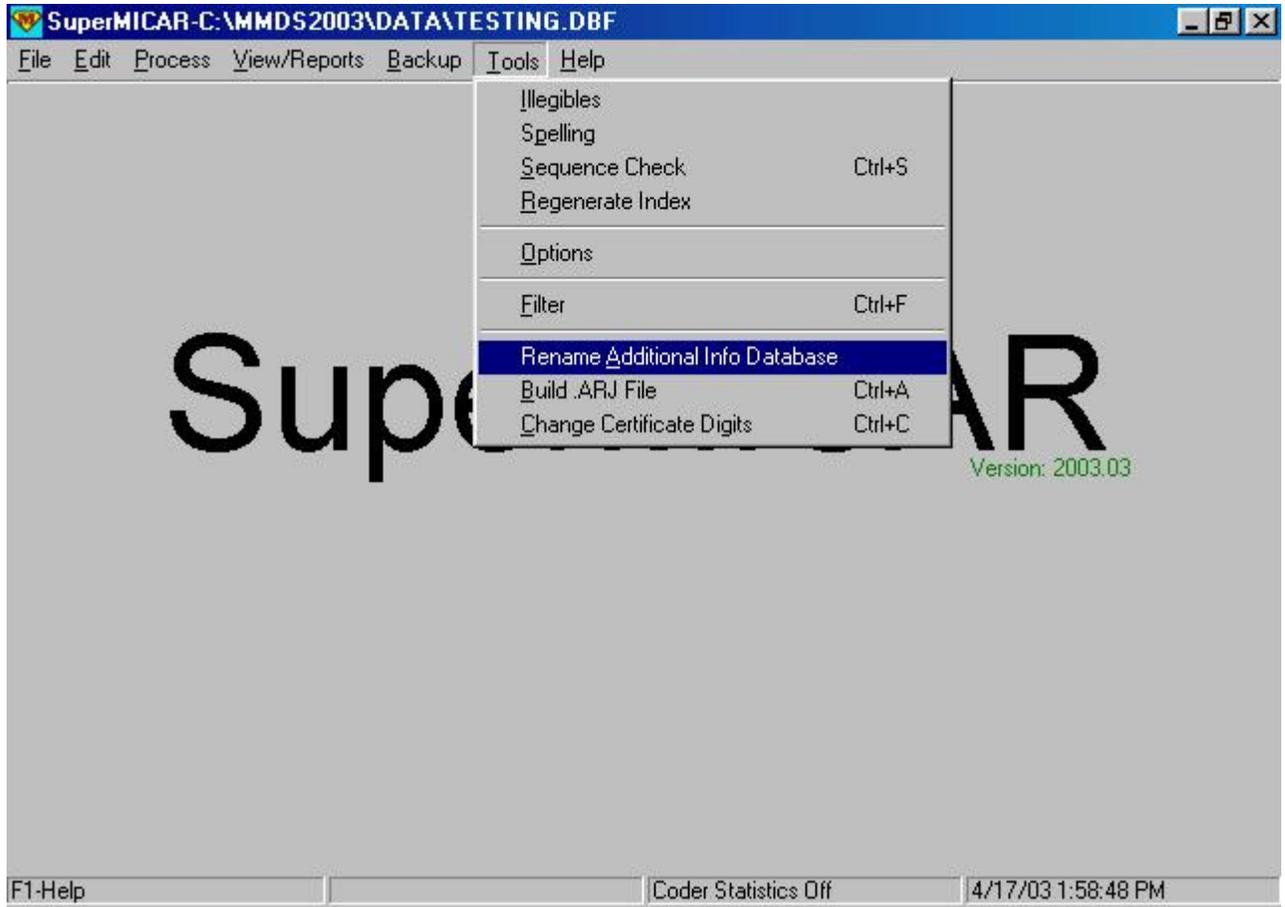
CAUTION: THIS WILL DELETE THE PARENT FILE. Most states will NOT want to use this function - precisely because it deletes the original file. This function was designed primarily for use at NCHS to create AI-only files. This function requires the user to provide a filename and header information for the new AI-only file.
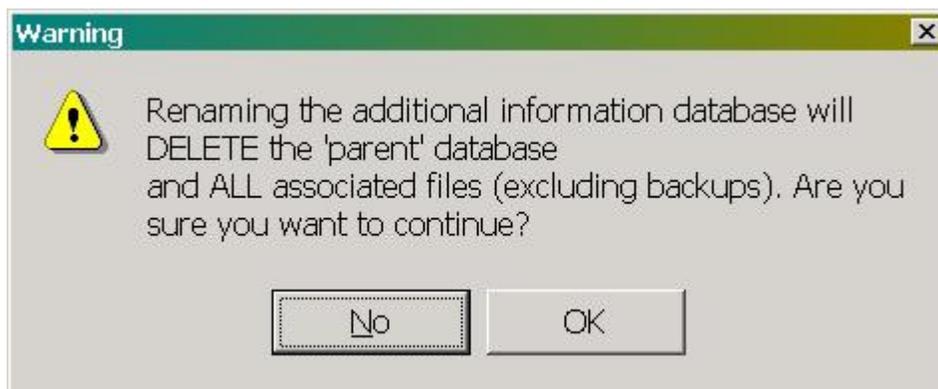
Setting SuperMICAR Options

SuperMICAR stores information entered at setup, such as Data Path, Tables path and Backup path. This information rarely needs to be changed after setup, but if necessary the Tools | Options menu allows this to be changed.

To change the SuperMICAR path information:

1. Use Alt+T to open the Tools menu and use Down arrow or mouse to select Options.

2. Use the up and down arrow keys to highlight Options and press {ENTER}. The Options Menu will be inactive if a file is currently open. Close the current file (see Closing a SuperMICAR File) to access the Options Menu
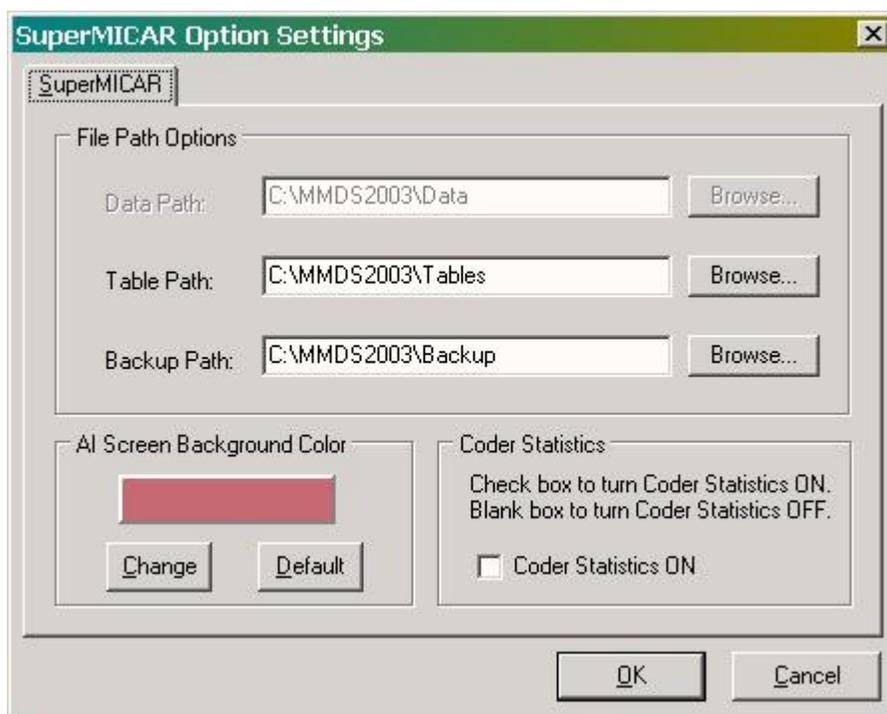
3. Enter the corrected Data Path, Table path, and Backup path. You can either type the information in or use the browse buttons to search for the correct file paths.
   Note: The "Coder Statistics" checkbox should generally remain unchecked (as shown above).

Changing Certificate Digits in SuperMICAR

One of the tools in SuperMICAR is a function that allows a user to change any of the digits in a range of certificate numbers. Note that when this function is invoked, all of the digits in the chosen range are changed to the new value.

To access this utility, choose Tools | Change Certificate Digits.
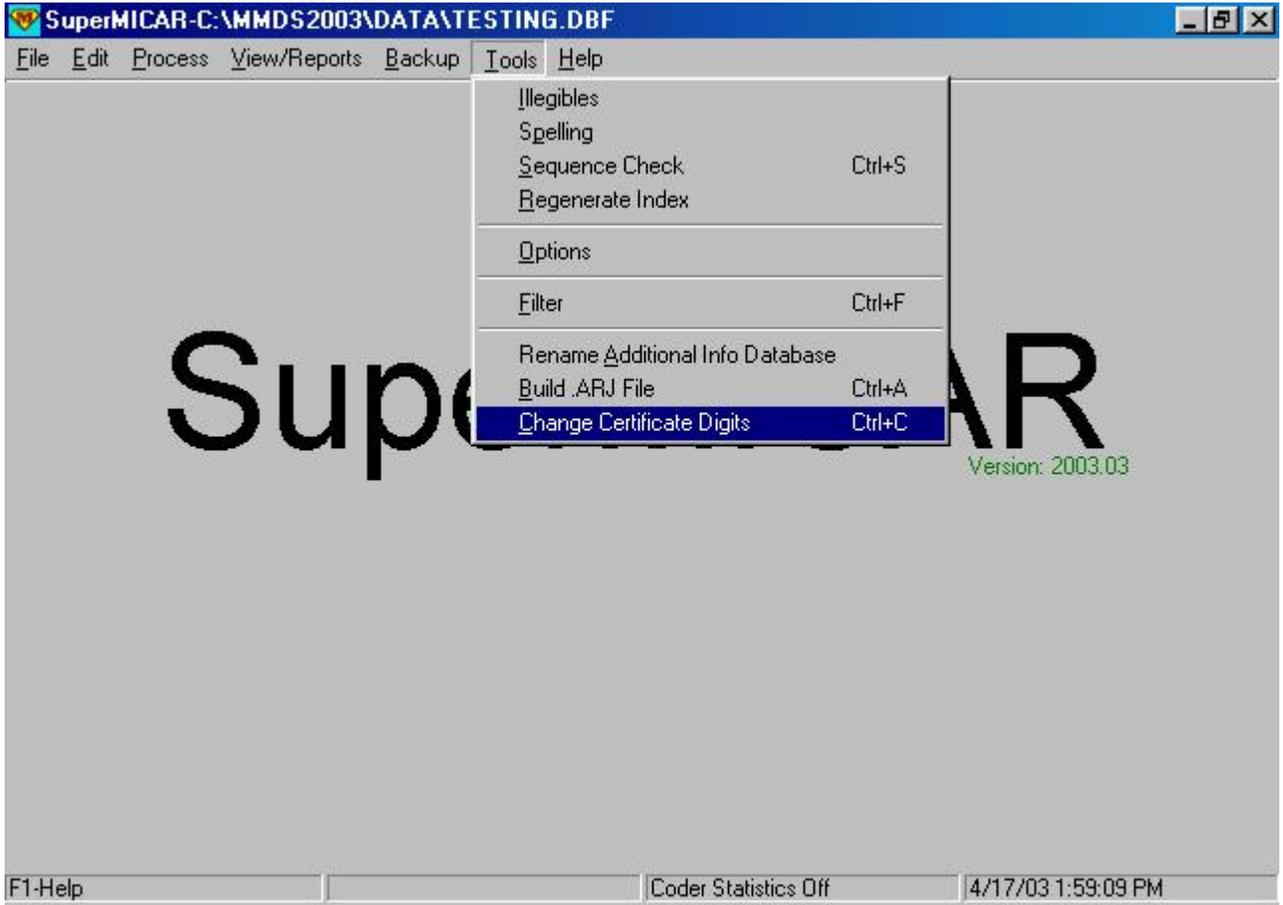
If changing the chosen digit(s) for a certificate would create a duplicate certificate number (which is not permissible), then the potential duplicate is avoided according to the choice in the dialogue box…
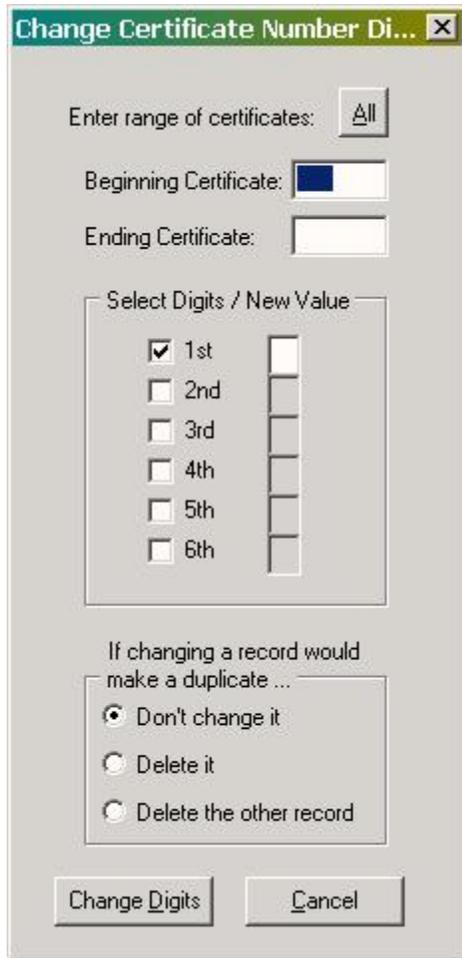
Understanding the "radio button" choices for dealing with duplicates:

"Don't change it"   If the user chooses this option, then the new digit is simply not
                           assigned. The current numbers of both certificates are retained.

"Delete it"   If the user chooses this option, the certificate for which the digit
                           change was requested is instead simply deleted – rather than
                           changing its digit(s).

"Delete the other   If the user chooses this option, the digit change is carried out
record"   regardless – the certificate number that would have been an
                           impediment is deleted.

Build an ARJ File using SuperMICAR

Sometimes a user might want to create an ARJ file manually (rather than wait for SuperMICAR to create
the ARJ file). It is for such times that the Build an ARJ File function were created.

1.   From the main screen, press {Alt+F} to select the **File** menu option.

2.   Enter the 2-digit abbreviation for the state.

3.   Enter certificate numbers, one at a time, into the Certificate Number field on the dialogue box.
        Pressing {Enter} after each certificate number will add the certificate to the list.

4.   Press "Build" to create the ARJ file, or press "Cancel" to cancel without creating the file.

5.	For the ARJ file to be created, you must enter a 7-character filename.

Suggested filename format: ssyyS## where ss = the 2-digit state abbreviation, yy = the 2-digit year, and ## = its numerical sequence (e.g., 01 for first manual ARJ, 02 for second manual ARJ).

6.	Choose "Yes" to create the new file, or "No" to cancel.

Exiting SuperMICAR

Closing a SuperMICAR 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 SuperMICAR File. At other times, SuperMICAR will require that the certificate file be closed to perform some of the menu functions. In any case, closing a SuperMICAR file is very easy:

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

2.	Use the arrow keys to highlight the **Close** File Function and press {ENTER} (or press Ctrl-F4).

3.	The currently open file will be closed. The filename will disappear from the top of the screen. SuperMICAR is now ready to open another file for processing.

Exiting SuperMICAR

There are numerous ways to exit SuperMICAR. For shortcut keys such as {Alt+X} and {ESC}, see the Master Hotkey List).
To exit SuperMICAR through the File Menu:

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** SuperMICAR Function and press {ENTER}.
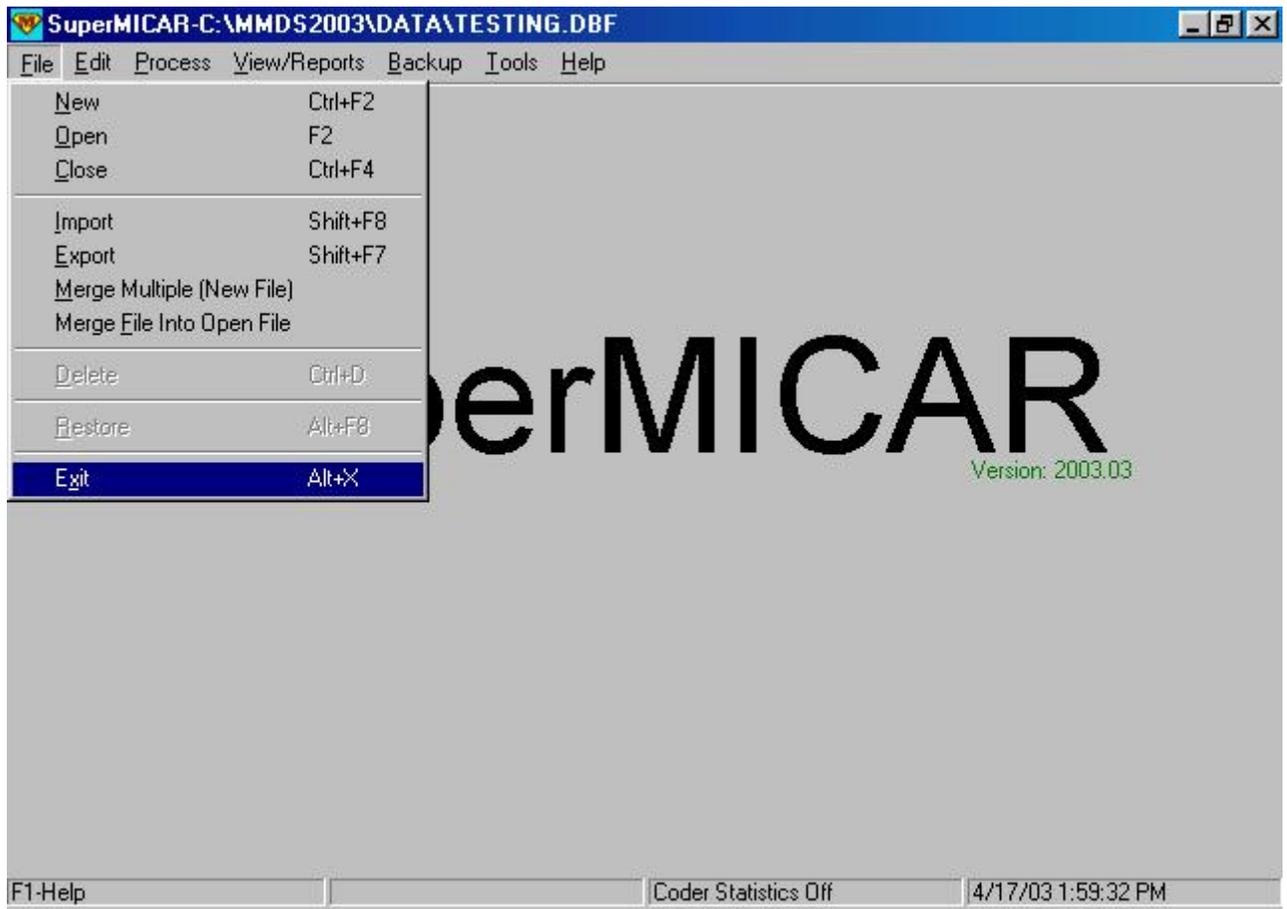
3. A message window will be displayed.

   A. To exit SuperMICAR, press {Y}. The SuperMICAR program will close.

   B. To cancel the exit, press {N}. The main SuperMICAR screen will be re-displayed.

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MICAR200

Purpose of MICAR200 Help Documentation

The MICAR200 software uses output files created from SuperMICAR. MICAR200 handles mainly processing functions, so the software requires very little user interaction. The topics in this section of the help documentation will help guide users through the various MICAR200 functions to create files for use with the ACME/TRANSAX software.

Basic Steps for Using MICAR200

The MICAR200 software uses output from SuperMICAR (see the SuperMICAR section of this help documentation for more information) to (1) assign entity reference number (ERNs) to any unassigned text and (2) convert those ERNs to ICD codes. This help documentation will help you process an output file from SuperMICAR through the MICAR100 process and the MICAR200 process to create the two files (.MRJ and .AIN) used by ACME/TRANSAX for creating the TRANSAX output file. That TRANSAX file, the end result of the processing done by the MMDS software, is then sent to NCHS for statistical use.

Because there is no data entry into MICAR200, very little user interaction is required to perform these processing tasks. The program assigns ERNs (a process formerly handled in MICAR100) and then assigns ICD-10 codes (a process formerly handled in MICAR200) to certificate data elements. The general outline to follow in this manual is given below.

1. Start MICAR200 (see Starting MICAR200).

2. Open a 10N file (see Opening a MICAR200 File). This step opens the output from SuperMICAR (*.10N) for processing in MICAR200.

3. Process all records (see Processing a MICAR200 Input File). When a file is processed, the initial (MICAR100) processing assigns entity reference numbers (ERNs) to the medical causes of death that were listed in the certificate file. The second (MICAR200) step of processing then assigns ICD10 codes.

4. Close the input file (see Closing a MICAR200 File).

5. If there are more 10N files to process, repeat steps 2 through 5.

6. Exit MICAR200 (see Exiting MICAR200). At this point you should proceed to using the ACME/TRANSAX program. For detailed information about using ACME/TRANSAX, see the ACME/TRANSAX section of this help documentation.

Getting Started in MICAR200

Starting MICAR200

1. To start using MICAR200, double-click on the MICAR200 icon on your desktop.

2. The main menu screen will be displayed. See Using the MICAR200 Menu System for more details on the main screen and the Menu Bar.

About the MICAR200 Main Screen

The main screen of MICAR200 has several useful features:

1. At the top of the main screen will be the title - MICAR200. This line will also show the name of any currently open file (see Opening a MICAR200 File). On the far right of this first (top) line, you'll also find the standard Windows controls for minimizing, maximizing, and exiting programs.

2. The second line of the screen contains the Menu Options available in MICAR200. By looking under these Menu Options (e.g., clicking on "File" or pressing {Alt+F}), you'll reveal available MICAR200 functions. Note that functions currently unavailable will be "grayed out" indicating that they are currently inactive. See Using the MICAR200 Menu System for more details.

3. The bottom line of the screen is the status bar, which displays the following information:

   A. In the center, you'll see a note about the {F1} key. Pressing {F1} will display the MMDS online help feature. The online help will offer you the most appropriate help available for the function you're using at that time.

   B. In the lower right corner is a clock showing the current time and date.

   C. The lower left corner of the screen displays information concerning the current process. For example, during record processing, the information in the lower left corner of the screen will indicate that MICAR200 is currently processing records.

Using the MICAR200 Menu System

The functions of the MMDS software are available through a standard Windows drop-down menu system. This menu system allows users quick and easy access to various MMDS software functions.

In addition to using the mouse to access menu items, there are two ways to access the menu:

Alt+key: Pressing and holding the {Alt} key and then pressing the underlined letter key of a main menu item (e.g. "F" for the File Menu, "P" for the Process Menu) will display the drop-down menu for that menu. Then you can use the up arrow and down arrow keys to highlight an item on the menu. Press {ENTER} to select the highlighted option. Use the left arrow and right arrow keys to open the submenus under each main menu option. Pressing {ESC} from a dropped-down menu closes the menu. Pressing {ESC} from the main menu will exit the program.

Hotkeys: Many functions can also be performed by pressing an associated Hotkey or "shortcut" key. The Hotkey assignments are shown on each drop-down menu and are also listed in the Master Hotkey List. Pressing a Hotkey will immediately access the associated function. For example, pressing {F2} will select the Open Existing File function. Hotkeys are a fast, easy way to access functions in the MMDS software. As users become familiar with the programs in the MMDS software suite, they will probably find the hotkeys convenient to use.

To select a function from a drop-down menu:

5. Use the mouse to choose the desired function by moving your mouse cursor over the appropriate menu item and left-clicking, or

6. Use the up arrow and down arrow keys to highlight an option, or press the (underlined) letter of the desired function. The active (selected) function is highlighted. Pressing the selection letter will move the highlight bar to the corresponding function option.

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). When an option is inactive, it cannot be selected (the highlight bar will skip over that item and it's Hotkey will not function).
For example: When a file is open, users will not be able to gain access to the Tools | Option screen. The open file must first be closed - because changing options can have a direct impact on opening and closing files.

Opening a MICAR200 File

Only files with the extension .10N can be used as MICAR200 input files. To open an input file (10N format):

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 **Open** File function and press {ENTER}. You cannot open more than one file in MICAR200. If a file is already open (the filename will be displayed in the status bar at the top of the main screen), you must close that file (see Closing a MICAR200 File) before opening another file.

3. A file selection window with the following fields will be displayed:

   Look In:
   > Used to select the directory of files to be listed. Defaults to the current MICAR200 Data Path as set in Tools|Options (see Setting MICAR200 Options). Clicking on the list arrow at the right side of that field will allow you to browse through directories.

   List of 10N files:
   > Displays all valid (*.10N) files in the currently directory.

   File Name:
   > Allows user to enter a specific filename or will display the name of the selected file.

   Files of Type:
   > Restricted to 10N file type only.

   OK and Cancel Buttons:
   > Used to accept selected file or to cancel open file operation.
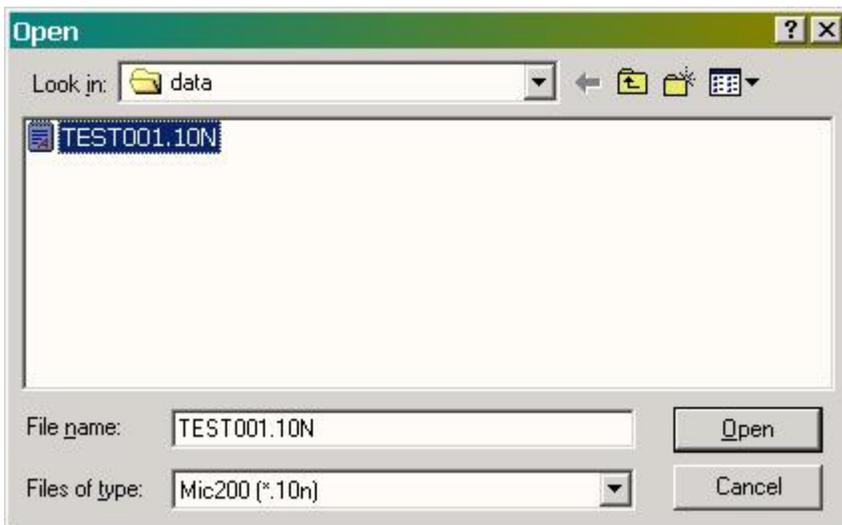
4. To select a file from the **List of 10N files** for processing, do the following:

   A. Use the {TAB} key to put the cursor in the **List of 10N files** and use the up and down arrow keys to highlight the desired filename. The list will scroll up or down to display additional files. Press ENTER to proceed with opening the selected file.

   or

   B. Use the mouse to click on the file shown in the **List of 10N files** and either double-click on the file or click on the OK button to proceed with processing the selected file.

NOTE: You can only select one file. Choosing multiple files at once is not possible.

5. Once a valid file has been selected, the file will be opened. The main screen will be re-displayed with the name of the selected file at the top of the screen.

Sequence Check

Running a Sequence Check Using MICAR200

After an input file has been selected, you should run a sequence check to ensure that all of the certificates are present in the file. In order to run a sequence check, you must have a MICAR200 file open (filename in the title bar at the top of the screen). To run a MICAR200 sequence check:

The Sequence Check Function creates a file (named filename.SSQ) containing a report showing certificate numbers in one of three different formats.

- A ''standard report'' will display all of the missing certificate numbers in ascending order.

- A "series report" (the default choice) will display all of the missing certificate numbers in ascending order, *grouped into series based on the first digit* (e.g., all certificates beginning with "1" would be grouped together).

- An "actual report" is a report showing all of the certificates *actually present* in the database. Rather than being a "missing certificates" report (like the "standard report"), the actual report shows the certificates that are actually present in the database.

Together, these reports can reveal if there are missing, extra, duplicate, or out-of-sequence certificates in the database file. The Sequence Check can be used only when a file is currently open. To use the sequence check:

7. From the main screen, press {Alt+T} to select the Tools Menu Option.

8. Use the up and down arrow keys to highlight the Sequence Check Function. Press {ENTER}.

9. A window will be displayed requesting a beginning certificate number and an ending certificate number. ACME automatically fills in the first and last certificate numbers for the current file. To change these certificate numbers:

    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), the ending certificate number (the ending certificate number for the sequence check), or both. Click "OK."

C. Choose the type of report you wish to generate (standard, series, or actual) in the options box. Series report is the default.

10. The output of the sequence check (filename.SSQ) will then be displayed. Use the up and down arrow keys to scroll through the output (or {Page Up} and {Page Down}). Press the {ESC} key to close the output window. Click the Print button to print the report.
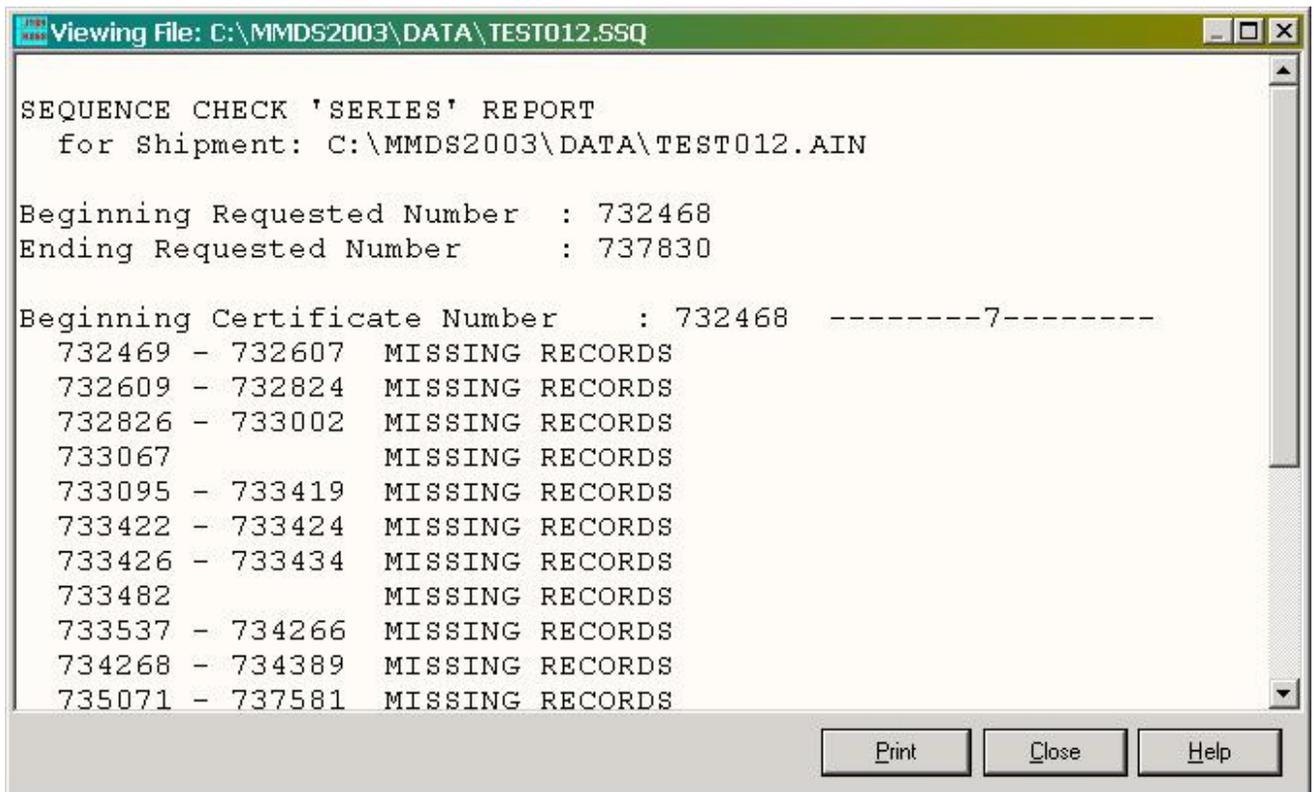
"Total Prior Records" = the # of records in the file BEFORE the Beginning Certificate Number.

"Total Future Records" = the # of records in the file AFTER the Ending Certificate Number.

Processing

Processing a MICAR200 Input File

MICAR200 processing uses an input file consisting of ERNs (Entity Reference Numbers) to create an output file (*.AIN) of ICD codes for use by ACME/TRANSAX. Under certain conditions, MICAR200 will also produce a MICAR Reject file (*.MRJ). Processing time will depend on the size of the input file and the speed of the computer used. For the processing function to be active, you must have a file currently open. To start processing a MICAR 200 input file (*.10N):

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. MICAR200 will begin generating ICDs for the certificates. A progress bar will be displayed showing what percentage of the input file has been processed.

4. To halt processing, press the {ESC} key. If processing is halted, a message window will be displayed. Press {ENTER}.

5. When MICAR200 finishes processing, a "Process Completed" box will display. Press {ENTER} to return to the main screen.

Viewing Stats and Rejects

Viewing Reports in MICAR200

Because the primary purpose of MICAR200 is processing – the program has no editing functions –any results of that processing can be important to users. Different functions can be used to generate various MICAR200 Reports:

The processing performed by MICAR200 can actually be divided into two distinct steps: MICAR100 processing and MICAR200 processing. A certain level of coding is the goal by the end of each step. Therefore, it can prove helpful to view reports of the processing as it moves through these steps.

By the conclusion of MICAR100 processing, the program will have attempted to push every condition on the certificates to the level of ERN (Entity-Reference Numbers) – an internal reference schema that can be cleanly correlated to ICD codes. For instructions on viewing a summary of the MICAR100 processing, see Viewing the MICAR100 Statistical Summary.

By the conclusion of MICAR200 processing, the program will have attempted to push every condition on the certificates to the level of ICD codes. For instructions on viewing a summary of the MICAR200 processing, see Viewing the MICAR200 Statistical Summary.

During both steps of processing (MICAR100 and MICAR200 processing), various problems (e.g., term not in dictionary) can cause the certificate to be rejected. For help on how to display a report of these "MICAR rejects" using MICAR200, see Viewing MICAR Rejects Using MICAR200. Note that the very same report can be viewed using the ACME/TRANSAX program (see Viewing MICAR Rejects Using ACME/TRANSAX).

Viewing the MICAR100 Statistical Summary

During the Process All Records function (see Processing a MICAR200 Input File), MICAR200 generates a MICAR100 statistical file (filename.1ST). This file contains information about the records that were processed. To view the MICAR100 Statistical Summary file:

1. From the main screen, press {Alt+V} to select the View/Reports Menu Option.

2. Use the up and down arrow keys to highlight the View MICAR100 Statistics function and press {ENTER}.
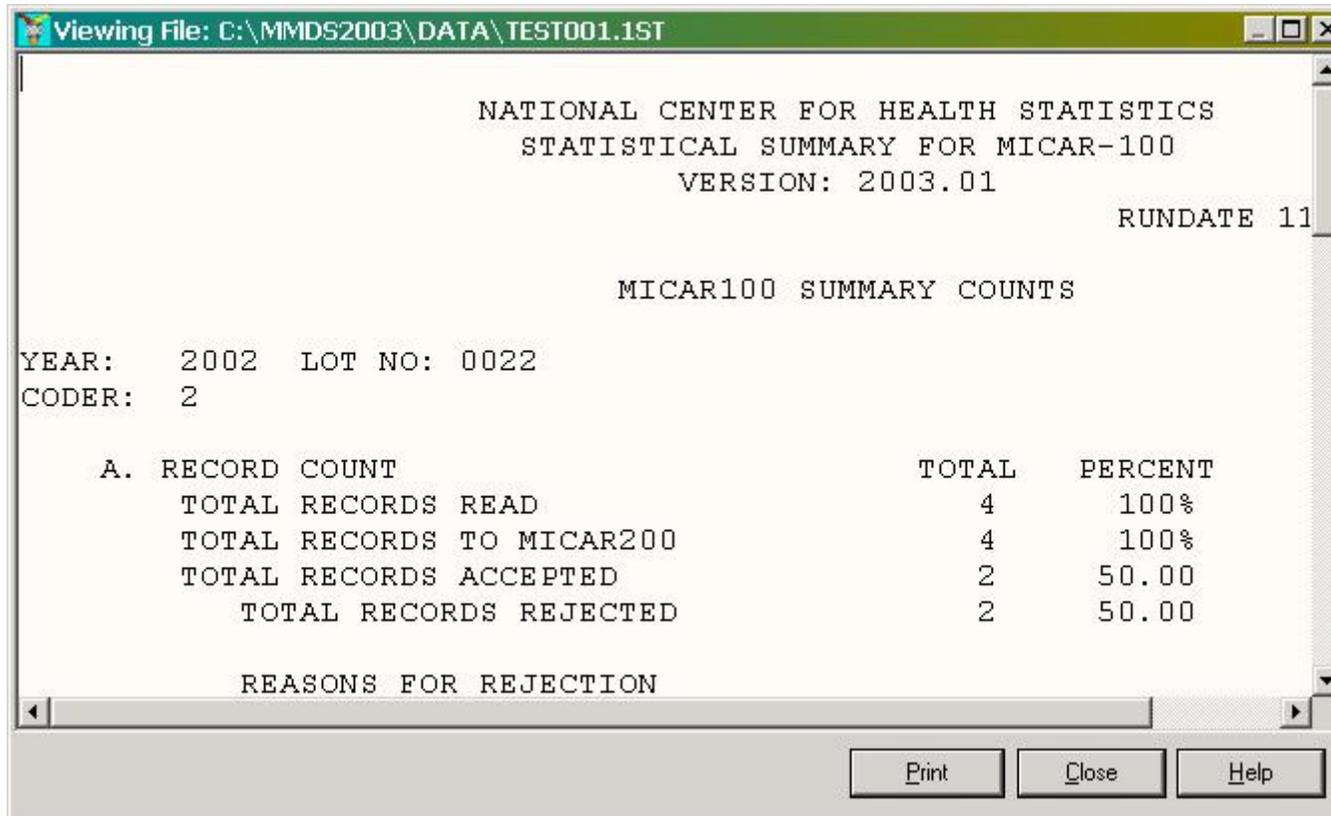
3. A report window will be displayed.

```
Viewing File: C:\MMDS2003\DATA\TEST001.1ST                    _ □ X

                     NATIONAL CENTER FOR HEALTH STATISTICS
                        STATISTICAL SUMMARY FOR MICAR-100
                              VERSION: 2003.01
                                                      RUNDATE 11

                           MICAR100 SUMMARY COUNTS

YEAR:     2002  LOT NO: 0022
CODER:    2

       A.  RECORD COUNT                           TOTAL     PERCENT
           TOTAL RECORDS READ                       4        100%
           TOTAL RECORDS TO MICAR200                4        100%
           TOTAL RECORDS ACCEPTED                   2        50.00
              TOTAL RECORDS REJECTED                2        50.00

           REASONS FOR REJECTION

                                          Print      Close      Help
```

4. Use the {Page Up} and {Page Down} keys, or the scroll bars and mouse, to scroll through the report. To print the report, press the "Print" button. To exit the report, press the {ESC} key or the "Close" button.

5. The main screen will be re-displayed.

Viewing the MICAR200 Statistical Summary

During the Process All Records function (see Processing a MICAR200 Input File), MICAR200 generates a MICAR200 statistical file (filename.2ST). This file contains information about the records that were processed. To view the MICAR200 Statistical Summary file:

1. From the main screen, press {Alt+V} to select the View/Reports Menu Option.

2. Use the up and down arrow keys to highlight the View MICAR200 Statistics function and press {ENTER}.
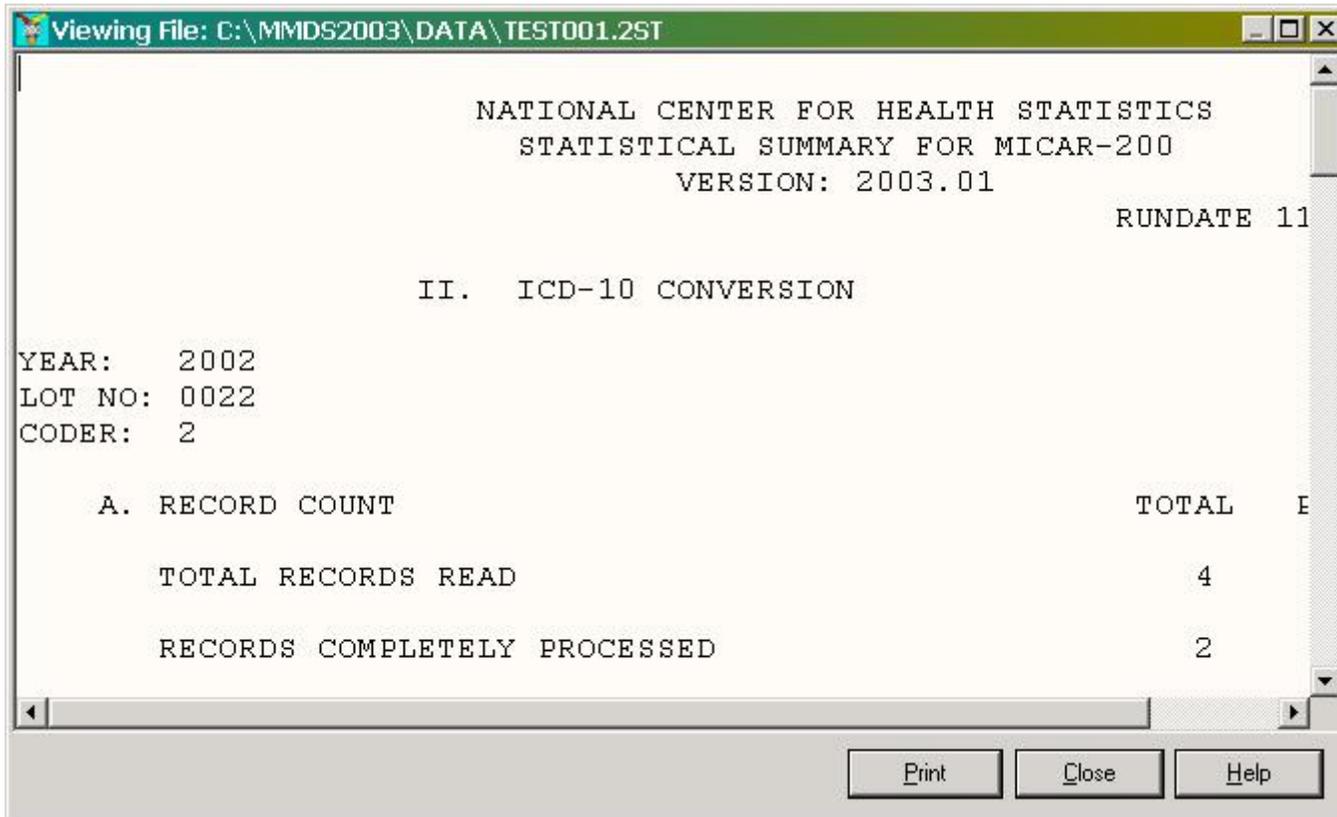
3. A report window will be displayed.

4. Use the {Page Up} and {Page Down} keys, or the scroll bars and mouse, to scroll through the report. To print the report, press the "Print" button. To exit the report, press the {ESC} key or the "Close" button.

5. The main screen will be re-displayed.

Viewing MICAR Rejects Using MICAR200

After you've processed all records (see Processing a MICAR200 Input File), you can review the MICAR reject file in ACME input file format.
Note: You can only view MICAR Rejects if a MICAR Reject file (*.MRJ) was created during processing.

To view the MICAR Rejects:

1. From the main screen, press {Alt+V} to select the View/Reports Menu Option.
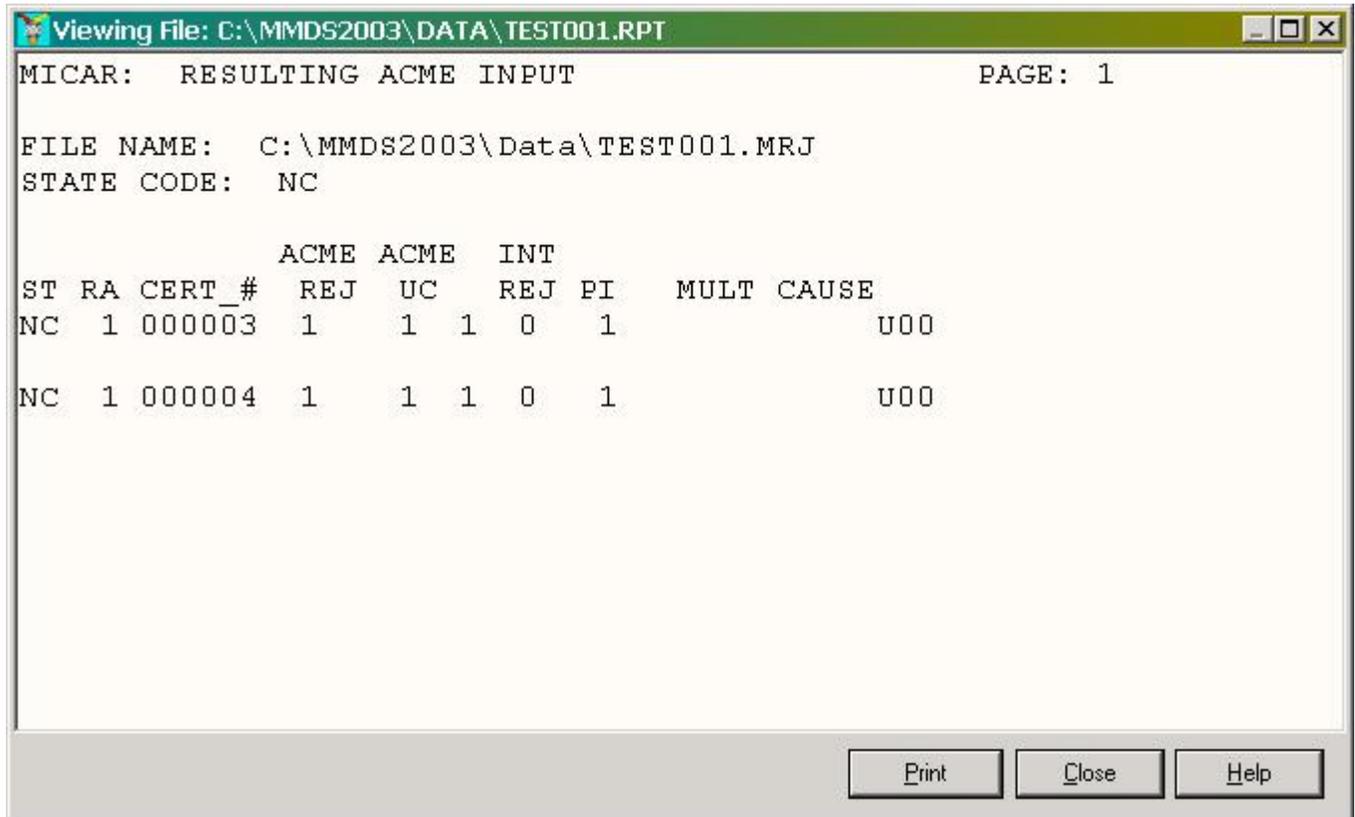
```
Viewing File: C:\MMDS2003\DATA\TEST001.RPT                              _ □ ×

MICAR:   RESULTING ACME INPUT                            PAGE:  1


FILE NAME:   C:\MMDS2003\Data\TEST001.MRJ
STATE CODE:   NC


                 ACME  ACME   INT
ST RA CERT_#    REJ   UC    REJ PI    MULT CAUSE
NC  1 000003    1      1   1   0    1                    U00

NC  1 000004    1      1   1   0    1                    U00
```

```
                                        Print      Close      Help
```

2. Use the up and down arrow keys to highlight the View MICAR Rejects function and press {ENTER}.

3. A report window will be displayed.

4. Use the {Page Up} and {Page Down} keys, or the scroll bars and mouse, to scroll through the report. To print the report, press the "Print" button. To exit the report, press the {ESC} key or the "Close" button.

5. The main screen will be re-displayed.

MICAR200 Options

Setting MICAR200 Options

MICAR200 stores information entered at setup, such as Data Path, Tables path and Backup path. This information rarely needs to be changed after setup, but the TOOLS | Options menu allows this to be changed. **Note**: MICAR200 options cannot be changed while a file is open (the Options function will be "grayed out"). To activate the Options function, first close the current file.

To change the MICAR200 setup information:

1. Use Alt+T to open the Tools menu.

2. Use the arrow keys to highlight Options and press {ENTER}. The Options Menu will be inactive if a file is currently open. Close the current file (see Closing a MICAR200 File) to access the Options Menu.
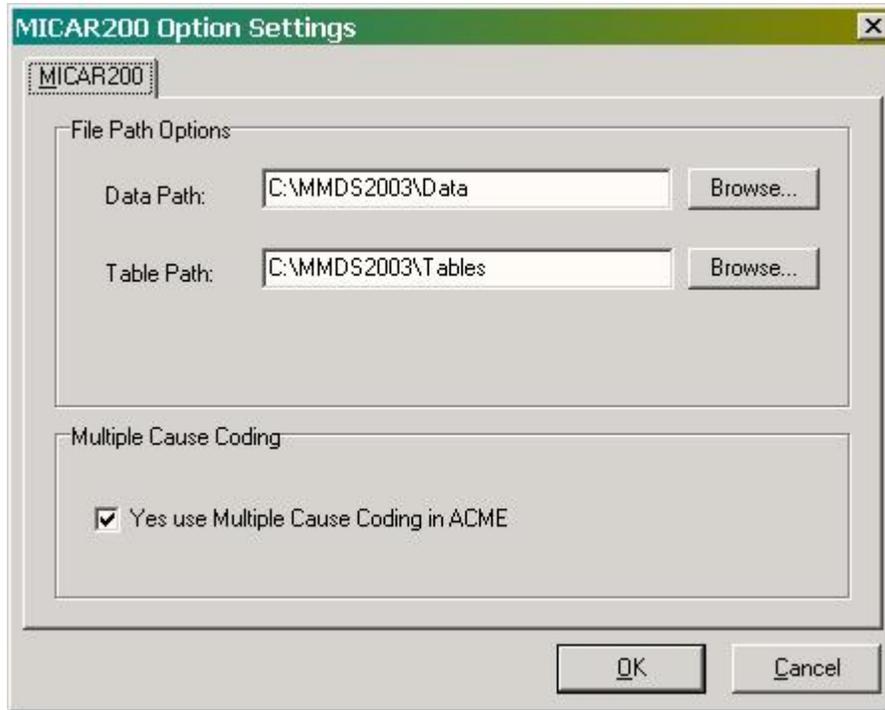
3. Enter the corrected Data Path, Table path, and Backup path. You can either type the information in or use the browse buttons to search for the correct file paths.

Note: The MICAR200 Options box also holds the setting for the Multiple cause coding flag. Check the box to ENABLE Multiple Cause coding during MICAR200 processing, or uncheck the box to DISABLE Multiple Cause coding during MICAR200 processing.

Exiting MICAR200

Closing a MICAR200 File

Before accessing some functions (e.g., re-setting the data path), you must close an open MICAR200 file. To close a MICAR200 file:

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 status bar at the top of the main screen. To open a new file, see Opening a MICAR200 File.

Exiting MICAR200

There are numerous ways to exit MICAR200. For shortcut keys such as {Alt+X} and {ESC}, see the Master Hotkey List).
To exit MICAR200 through the File Menu:

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** MICAR200 Function and press {ENTER}.

3. A message window will be displayed.

    A. To exit MICAR200, click "OK" or press {Enter}. The MICAR200 program will close.

    B. To cancel the exit, click "Cancel" or press {Esc}. The main MICAR200 screen will be re-displayed.

ACME/TRANSAX

Purpose of ACME/TRANSAX Help Documentation

The ACME/TRANSAX section of this help documentation is intended to help users of ACME/TRANSAX use the program functions to create a final TRANSAX output file (.TRX) for shipment to NCHS. The Process ACME Input File function uses the output from the MICAR200 software (.AIN files and .MRJ files) to identify ACME rejects (.ARJ file) to be reconciled. When all ACME rejects are reconciled, ACME will create a TRANSAX input file (.TIN). The TRANSAX processing uses this TRANSAX input file to create the final TRANSAX output file (.TRX) for shipment to NCHS for statistical use. The primary responsibility for users of ACME/TRANSAX is to use the program to process Multiple Cause codes and, where necessary, edit the codes so that there are no errors (ACME Rejects) in the processing. Most of the individual topics in this help documentation contain all of the instructions necessary to perform a given task at once.

Basic Steps for Using ACME/TRANSAX

Below are the general procedures for using ACME/TRANSAXs Menu Options and functions. It may be necessary at times to alter the overall process. Contact your supervisor for more site-specific information.

1. Create a new data file OR open a data file for processing (see Creating a New ACME Input File or Opening an Existing ACME Input File). The input file is the file containing the certificate data. The user will need to select an input file every time ACME/TRANSAX is started or when a new batch of data is being used.

2. (Optional): Print MICAR rejects. Data files that have been generated using SuperMICAR, run through MICAR200 processing, and then opened in ACME/TRANSAX may have MICAR rejects. If necessary, these MICAR rejects may be printed out before coding (see Viewing MICAR Rejects Using ACME/TRANSAX).

3. Edit MICAR rejects. If the selected file has any MICAR rejects, these rejects must be edited before any ACME or TRANSAX processing is performed (see Editing MICAR Rejects Using ACME/TRANSAX). Many users will find the Superview feature (see The Three "Faces" of ACME Editing) very helpful for editing MICAR rejects.

4. Edit and correct the ACME Input File. This step will only be necessary if the file has been created new using ACME/TRANSAX. In such cases, adding certificates (see Adding Certificates Using ACME/TRANSAX) or other editing may be performed on existing certificates (see Editing an ACME Input File).

5. Check the file sequence. A sequence check will tell the user if there are any certificates missing from the batch. This check assumes that all of the certificate numbers are sequential. See Running a Sequence Check on an ACME Input File.

6. Process an ACME File. This is the processing stage of ACME, where the input file is processed and an underlying cause of death is determined. See Processing an ACME Input File.

7. View ACME statistics. The results of the processing can be viewed to determine how many records have been rejected and why those records have been rejected. If there are rejects, the Run option will be inactive and the Editing ACME Rejects function will become active. See Viewing ACME Stats.

8. Edit ACME rejects. If ACME processing uncovers any errors - ACME rejects - those records must be edited to eliminate the ACME rejects (see Editing ACME Rejects).

9. Process ACME Rejects. If any ACME rejects were edited, those previously-rejected records will need to be processed before TRANSAX processing is possible. See Processing ACME Rejects.
Note: If any records are (still) rejected during processing of ACME rejects, those lingering ACME rejects must be corrected (step 8 - Edit ACME Rejects) and processed (step 9 - Process ACME Rejects) before TRANSAX processing is available.

10. Run TRANSAX processing. TRANSAX processing (the final part of ACME/TRANSAX processing) will process the ACME output, performing manipulations of the data to generate record-axis data. See Processing a TRANSAX File.

11. View TRANSAX statistics. The final step in processing a batch of data is to examine the TRANSAX statistics for any mistakes or discrepancies. See Viewing TRANSAX Stats.

12. View the Rare Causes file (see Viewing Rare Causes) to determine if there were Rare Causes in the batch.

13. Create backups. Backups of the processed data from an open file should be made to prevent accidental loss of data. First use the Backup All Files menu item to insure that all of the data and the associated files will be backed up.
NOTE: Backups should be made daily (backups can be made with incomplete files)!. See Creating ACME/TRANSAX Backups. Files that have been completely processed into TRANSAX (.TRX) files can then be backed up for sending to NCHS using the Send to NCHS function (see Creating ACME/TRANSAX Backups for NCHS).

14. Exit ACME/TRANSAX. At this point, the data has been processed and the user can either exit ACME/TRANSAX (see Exiting ACME/TRANSAX) or begin processing a new batch. To process a new batch, simply start the process described above over again.

Flow Chart: Steps in ACME/TRANSAX Processing

Open AIN File

Edit/Correct all MICAR Rejects & Merge MRJ with AIN

Run ACME Sequence Check

Missing Records? — Yes → Add Missing Records

No

Process ACME Input

Rejects? — No

Yes

Edit ACME Rejects

Process ACME Rejects

Run Process TRANSAX

Run TRANSAX Sequence Check

Missing Records? — Yes → Back to Appropriate Step

No

Backup for NCHS

Backup All (for internal use)
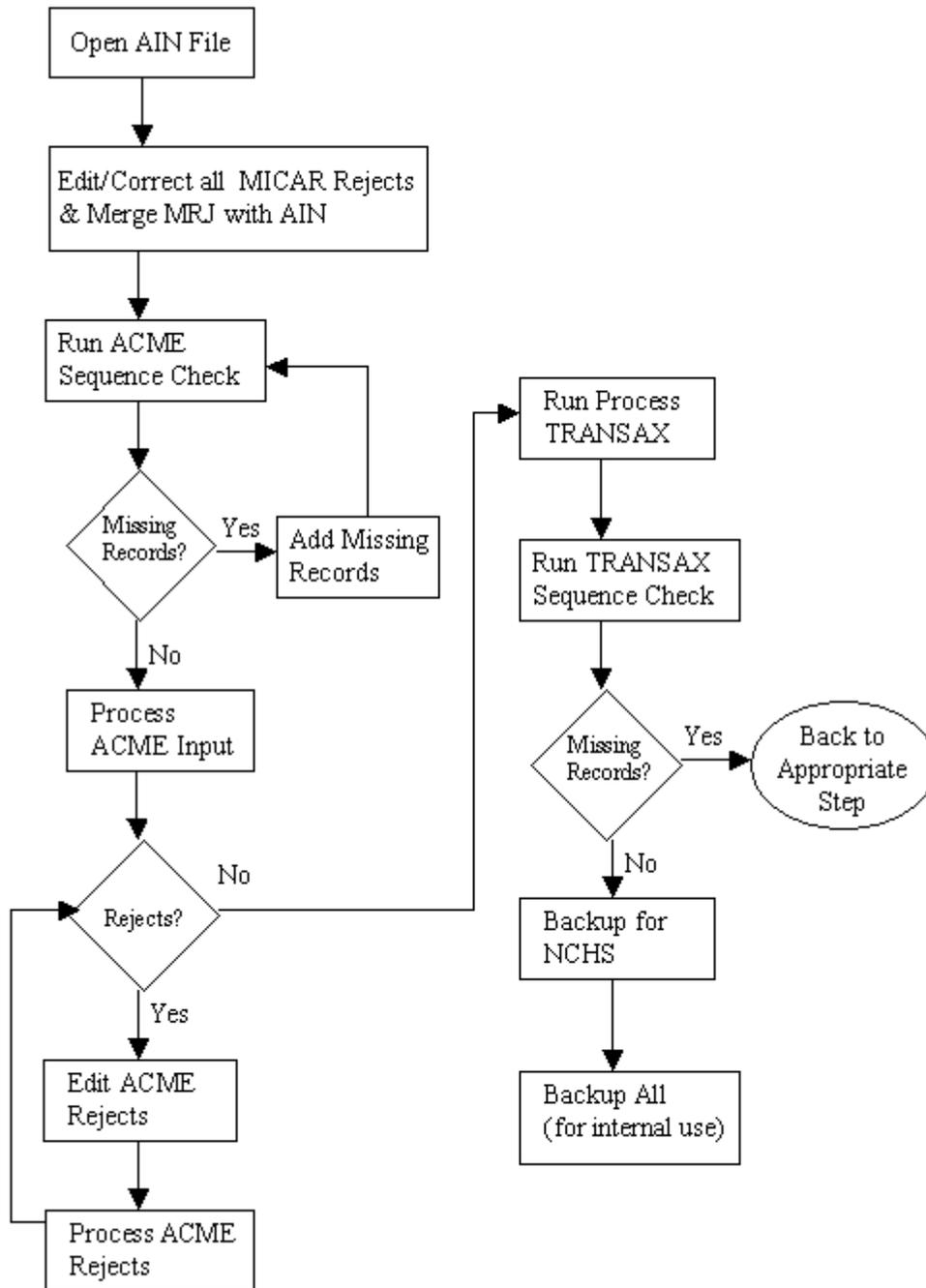
Expanding ACME/TRANSAX Functionality

In addition to the basic ACME/TRANSAX functions, most of the following functions can be used at any time with ACME/TRANSAX. Most of these functions will require that a certificate file be open. See the individual description of each utility for more details. Note that additional ACME/TRANSAX functions are described in the System Manager's Guide section in this help documentation.

1. Browse through and edit the certificates in a file (see Editing an ACME Input file, Editing MICAR Rejects Using ACME/TRANSAX, or Editing ACME Rejects). The edit functions allow you to edit information in the certificate database, which may be necessary at any time.

2. Find a specific record in a file (see Finding an ACME Record). This function is available only when browsing through the certificates and allows the user to display a particular record by specifying its certificate number.

3. Delete a certificate while editing (see Deleting an ACME Certificate While Editing). This function allows the user to remove a record from the certificate file. Note: certificates should not be deleted using ACME/TRANSAX if the file originated in SuperMICAR - because re-processing the file using MICAR200 (see Processing a MICAR200 Input File) would cause the certificate to reappear.

4. Running sequence checks (see Running a Sequence Check on an ACME Input File and Running a Sequence Check on a TRANSAX Output File). 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.

5. Perform a daily backup (see Creating ACME/TRANSAX Backups). This function creates a backup copy of the open certificate file either on your PC's hard 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 ACME/TRANSAX than will be used by data entry personnel. Some of these other Menu Options and functions will be used by the system manager. System Managers will find more detailed instructions in the System Manager's Guide section of this help documentation.

Getting Started in ACME/TRANSAX

Starting ACME/TRANSAX

1. To start using ACME/TRANSAX, double-click on the ACME/TRANSAX icon on your desktop.

2. The main menu screen will be displayed. See Using the ACME/TRANSAX Menu System for more details on the main screen and the Menu Bar.

NOTE: Changes in record formats have made it critical that data from different calendar years be processed using different versions of ACME/TRANSAX. To help make this clear, different versions of ACME/TRANSAX have been given different color icons.

ACME/TRANSAX icons and corresponding data years:

2003 data
(light blue)

2002 data
(red)

2001 data
(yellow)
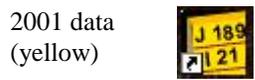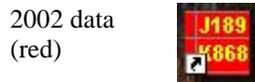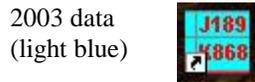
About the ACME/TRANSAX Main Screen

The main screen of ACME/TRANSAX has several useful features:
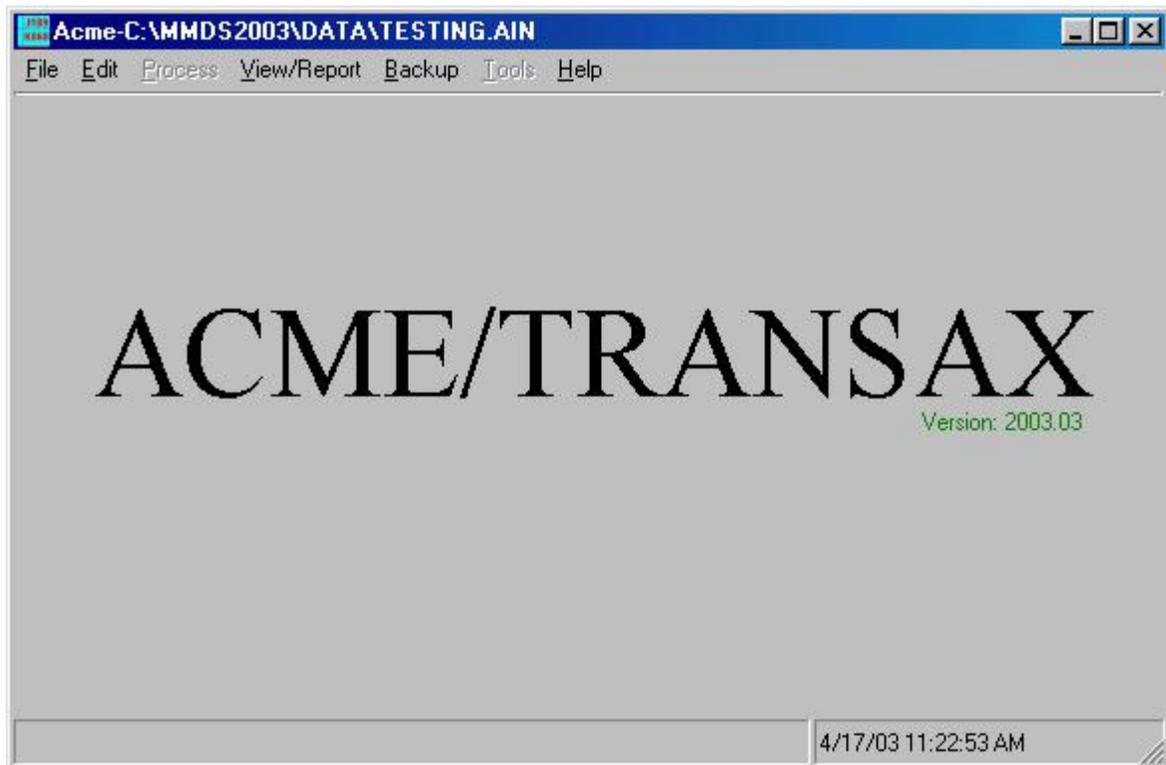
1. At the top of the main screen will be the title - ACME/TRANSAX. This line will also show the name of any currently open file (see Opening an Existing Input File). On the far right of this first (top) line, you'll also find the standard Windows controls for minimizing, maximizing, and exiting programs.

2. The second line of the screen contains the Menu Options available in ACME/TRANSAX. By looking under these Menu Options (e.g., clicking on "File" or pressing {Alt+F}), you'll reveal available ACME/TRANSAX functions. Note that functions currently unavailable will be "grayed out" indicating that they are currently inactive. See Using the ACME/TRANSAX Menu System for more details.

3. The bottom line of the screen is the status bar, which displays the following information:

    A. In the center, you'll see a note about the {F1} key. Pressing {F1} will display the MMDS online help feature. The online help will offer you the most appropriate help available for the function you're using at that time.

    B. In the lower right corner is a clock showing the current time and date.

    C. The lower left corner of the screen displays information concerning the current process. For example, during record processing, the information in the lower left corner of the screen will indicate that ACME/TRANSAX is currently processing records.

Using the ACME/TRANSAX Menu System

The functions of the MMDS software are available through a standard Windows drop-down menu system. This menu system allows users quick and easy access to various MMDS software functions.

In addition to using the mouse to access menu items, there are two ways to access the menu:

Alt+key: Pressing and holding the {Alt} key and then pressing the underlined letter key of a main menu item (e.g. "F" for the File Menu, "E" for the Edit Menu) will display the drop-down menu for that menu. Then you can use the up arrow and down arrow keys to highlight an item on the menu. Press {ENTER} to select the highlighted option. Use the left arrow and right arrow keys to open the submenus under each main menu option. Pressing {ESC} from a dropped-down menu closes the menu. Pressing {ESC} from the main menu will exit the program.

Hotkeys: Many functions can also be performed by pressing an associated Hotkey or "shortcut" key. The Hotkey assignments are shown on each drop-down menu and are also listed in the Master Hotkey List. Pressing a Hotkey will immediately access the associated function. For example, pressing {F2} will select the Open Existing File function. Hotkeys are a fast, easy way to access functions in the MMDS software. As users become familiar with the programs in the MMDS software suite, they will probably find the hotkeys convenient to use.

To select a function from a drop-down menu:

1. Use the mouse to choose the desired function by moving your mouse cursor over the appropriate menu item and left-clicking, or

2. Use the up arrow and down arrow keys to highlight an option, or press the (underlined) letter of the desired function. The active (selected) function is highlighted. Pressing the selection letter will move the highlight bar to the corresponding function option.

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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). When an option is inactive, it cannot be selected (the highlight bar will skip over that item and it's Hotkey will not function).

For example: When a file is open, users will not be able to gain access to the Tools | Option screen. The open file must first be closed - because changing options can have a direct impact on opening and closing files.

Setting ACME/TRANSAX Options

ACME/TRANSAX stores information entered at setup, such as Data Path, Tables path and Backup path. This information rarely needs to be changed after setup, but if necessary the TOOLS | Options menu allows this to be changed. To change the ACME/TRANSAX setup information:

1. Use Alt+T to open the Tools menu.

2. Use the up and down arrow keys to highlight Options and press {ENTER}. The Options Menu will be inactive if a file is currently open. Close the current file (see Closing an ACME/TRANSAX File) to access the Options Menu.
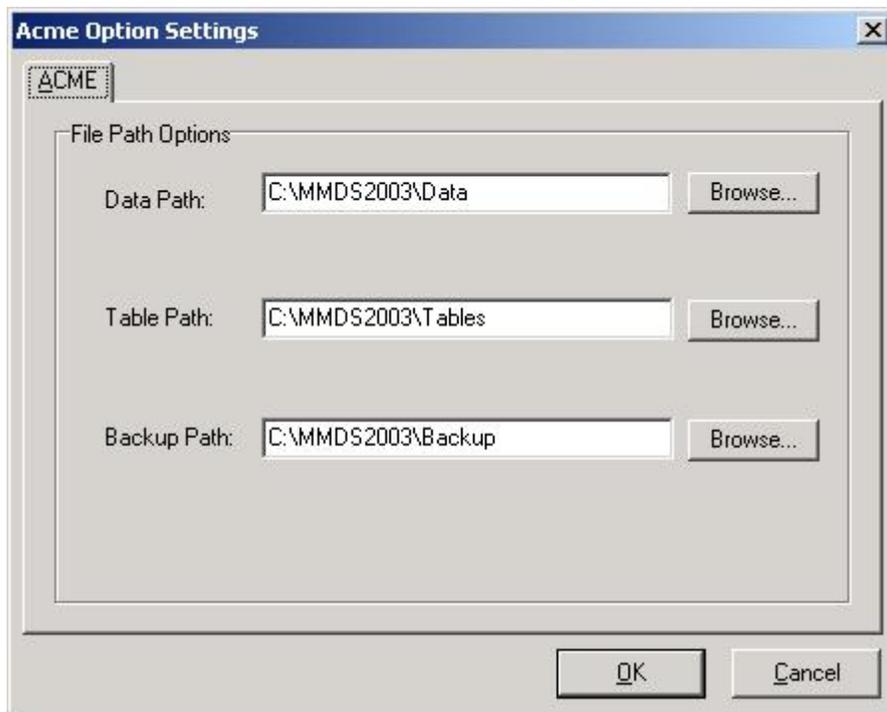
3. Enter the corrected Data Path, Table path, and Backup path. You can either type the information in or use the browse buttons to search for the correct file paths.

Creating, Opening, and Restoring ACME/TRANSAX Files

Creating a New ACME Input File

To create a new ACME input file using ACME/TRANSAX:

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 New Input File function and press {ENTER}.
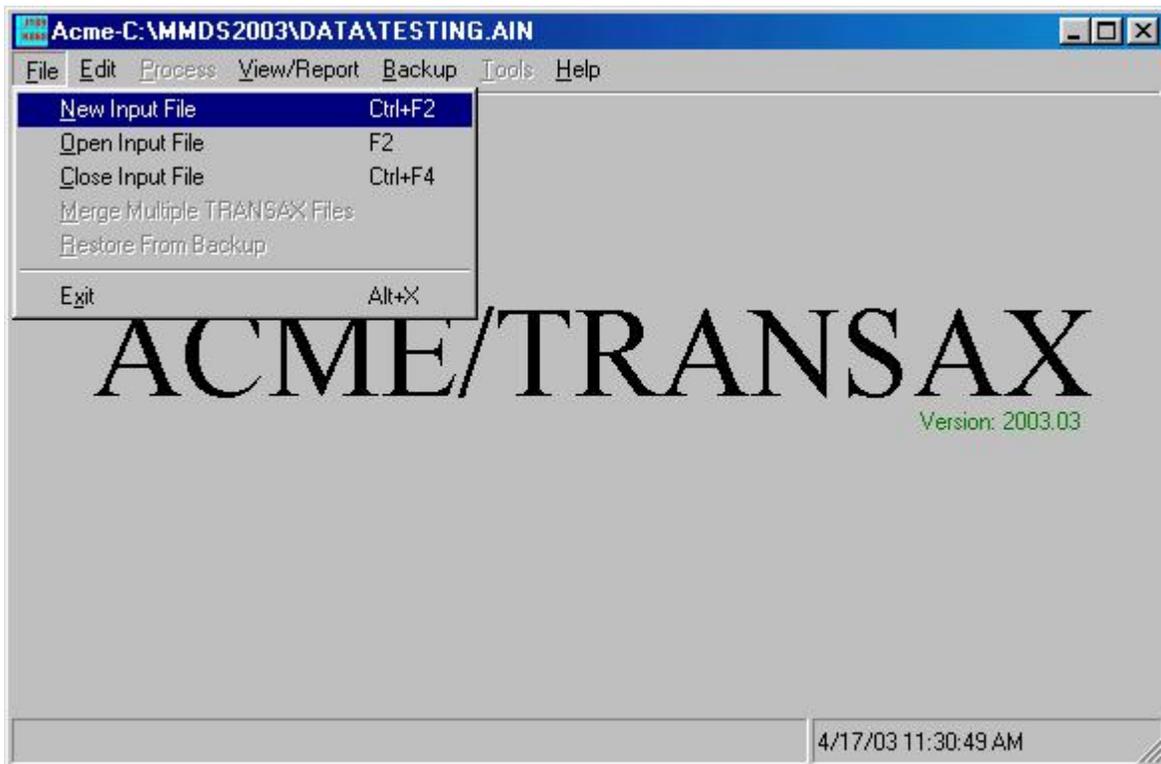
3. A window will be displayed requesting a filename. Type in a valid, 7-character filename (without the extension) and press {ENTER}. The extension will be automatically added by ACME/TRANSAX. The filename you choose should be meaningful to you and to other users of the same file. For example, NCHS uses the following format for filenames when processing MICAR data from states:

[ssddnnn]

   ss =   2-character state abbreviation (see NCHS State Code List).

   dd =   2-digit data year.

   nnn = 2- or 3-digit shipment number. This number is unique for each file.

Thus: IN93076 has IN as the 2 character state abbreviation, 93 as the 2 digit data year, and 076 as the shipment number.

4. When the file is created, the Specify Header Information screen 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   Three characters to identify the batch when the file is sent to NCHS. The first character can be either alpha or numeric; the second and third characters must be numeric.

Lot #   A number from 1-9999.

Section #   A number from 0-9. This may prove very useful if you divide batches.

Data Year   Four-digit year from the death certificate.

State Code   A number identifying the state from which the death certificate originates. (For a full list of these codes, see NCHS State Code List). 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 show a 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 1988, from the State of Alaska, with shipment number U03, lot 0002, and coder status 1 would have the following entries:
Shipment U03
Lot # 0002
Section 5
Data Year 2000
State Code 02
Coder Status 1.

5. When the coder status has been entered, press {ENTER} or click "OK" to save the header information. The main screen will be re-displayed with the new filename at the top.

6. To exit the Specify Header Information screen without saving, press {ESC} or click "Cancel." The main screen will be re-displayed.

Opening an Existing ACME Input File

To open an existing ACME Input File Using ACME/TRANSAX:

1. From the main screen, press {Alt+F} to select the File Menu Option.

2. Use the arrow keys to highlight the **Open** File function and press {ENTER}. You cannot open more than one file at a time using ACME/TRANSAX. If a file is already open (the filename will be displayed in the status bar at the top of the main screen), you will be prompted to close that file before opening a new one:

    A. To close the current file and choose a new file to pen, press {Y} to continue with opening an existing input file.

    B. Press {N} to cancel opening a different file and keep the current file open. The main screen will be re-displayed with the open filename in the status bar at the top of the screen.

3. A file selection window with the following fields will be displayed:

Look In:
    Used to select the directory of files to be listed. Defaults to the current ACME/TRANSAX Data Path as set in Tools|Options (see Setting ACME/TRANSAX Options). Clicking on the list arrow at the right side of that field will allow you to browse through directories.

List of AIN files:
    Displays all valid (*.AIN) files in the currently directory.

File Name:
    Allows user to enter a specific filename or will display the name of the selected file.

Files of Type:
    Type of files allowed (e.g., .AIN, .TRX).

OK and Cancel Buttons:
    Used to accept selected file or to cancel open file operation.
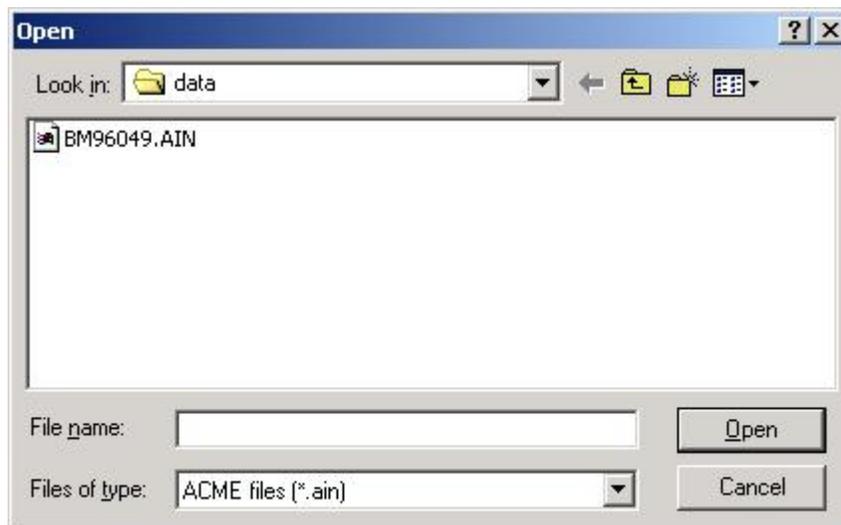
4. To select a file from the **List of AIN files** for processing, do the following:

    A. Use the {TAB} key to put the cursor in the **List of AIN files** and use the up and down arrow keys to highlight the desired filename. The list will scroll up or down to display additional files. Press ENTER to proceed with opening the selected file.

    or

    B. Use the mouse to click on the file shown in the **List of AIN files** and either double-click on the file or click on the OK button to proceed with processing the selected file.

    NOTE: You can only select one file. Choosing multiple files at once is not possible.

5. Once a valid file has been selected, the file will be opened. The main screen will be re-displayed with the name of the selected file at the top of the screen.

Restoring from ACME/TRANSAX Backups

Occasionally, it may be necessary to restore a data file from a backup (see Creating ACME/TRANSAX Backups). ACME/TRANSAX has a Restore From Backup function that will recover data from a backup file. It is strongly recommended that users create a backup file after each file is processed and also at the end of each day. To restore from an existing ACME/TRANSAX backup:

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 Restore From Backup function and press {ENTER}.

3. A file selection window will be displayed. Refer to Opening An Input File for instructions on how to use the file selection window. The directory displayed will be the one specified by the Data path.

Restore from backup dialog	? ×

Look in: 📁 backup ▾ ← 🔼 📑 🔢▾

📄 BM96049.ABK
📄 BM96051.ABK
📄 BM96059.ABK

File name:		Open
Files of type:	Acme Backup (*.ABK) ▾	Cancel
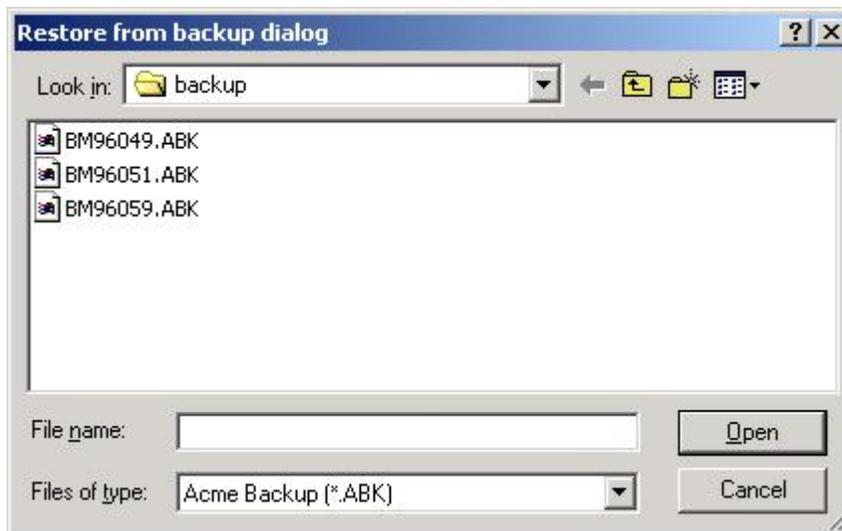
4. Choose the backup file (a file with a .ABK extension) to restore from. The available files will be listed in the List of Files.

Note: In addition to .ABK files, ACME/TRANSAX can also restore from .ZIP, .AB$, and .ZI$ filetypes, if they exist in the chosen directory.
Once the desired file is highlighted, press {ENTER}. If the file you are restoring already exists, a cautionary message will be displayed. If you proceed further the files currently on your hard drive will be replaced with those from the backup. (Restoring over previous files should be rare, usually only occurring when a file has become corrupted. Exercise caution as data loss can result from errors in this step.)

5. A Restore dialog box will appear and its title will change to "Working" while the restore

6. The main screen and Menu Bar will be re-displayed.

Viewing MICAR Rejects Using ACME/TRANSAX

Before MICAR rejects can be viewed, the following actions must have already been performed:

Opening a file (see Opening an Existing ACME Input File).
Note: Once the MICAR rejects have been edited (see Editing MICAR rejects using ACME/TRANSAX), you will no longer be able to view the MICAR rejects using ACME/TRANSAX.

It is recommended that the MICAR rejects file be viewed and/or printed before any editing is performed. To view The MICAR rejects file:

1. From the main screen, press {Alt+V} to select the View/Reports Menu Option.

2. Use the up and down arrow keys to highlight the View MICAR Rejects function and press {ENTER}.

3. A report window will be displayed. Use the {Page Up} and {Page Down} keys, or the scroll bars and mouse, to scroll through the report.

Viewing File: C:\MMDS2003\DATA\BM96049.RPT

```
MICAR:   RESULTING ACME INPUT                    PAGE: 1

FILE NAME:    C:\MMDS2003\DATA\BM96049.MRJ
STATE CODE:   AK

               ACME ACME   INT
ST RA CERT_#  REJ  UC    REJ PI   MULT CAUSE
AK  1 072004  1                   I509/I270 U00


AK  1 072005  1              0    T509 &X44 U00*F109 U00


AK  1 072006  3              0    T403 &X42*U00
```

4. To print the report, press the "Print" button. To exit the report, press the {ESC} key or the "Close" button.

5. The main screen will be re-displayed.

Editing and Saving Certificate Data Using ACME/TRANSAX

The Three "Faces" of ACME Editing

As the main interface many users have with the ACME/TRANSAX program, the look of the ACME Edit Screen is important. The ACME Edit Screen has three distinct looks depending on the mode of operation chosen by the user: the **standard** ACME Edit Screen, the ACME Edit Screen in **Superview**, and the ACME Edit Screen with **ACME Messages** turned ON

These three distinct modes (the three "faces" of ACME) do not change the usability of the program or the functions available, but they are designed to display different information, as detailed below.

1. ACME Edit Screen in **standard** mode.

    The standard mode is the default setting for the ACME Edit Screen, so every time the user enters the ACME Edit Screen it will show the standard look (see screenshot below). This highly interactive grid allows users to edit data either in the grid itself or in the string line above the grid. For more information

2. ACME Edit Screen in **Superview** mode.

By pressing Alt-S, the user will enter the Superview mode of the Edit Screen (see screenshot below). In Superview mode, the standard ACME grid is replaced with SuperMICAR information for that particular certificate. While editing in the ACME grid can not be done while Superview mode is on, users <u>can</u> edit the string line above the SuperMICAR information. In order for any SuperMICAR information to be displayed, of course, there must be a corresponding SuperMICAR file present in the correct directory. Note that Superview gives preference to any SuperMICAR AI (Additional Information) on the current certificate and thus displays the AI information rather than the original SuperMICAR certificate information. Essentially, the Superview mode allows ACME/TRANSAX to reach "back" into SuperMICAR files and display that information without ever leaving ACME/TRANSAX. Alt-S acts as a toggle to turn the Superview mode on and off, and pressing the "Esc" key always returns to standard edit mode.

3. ACME Edit Screen with **ACME Messages** turned ON.

By pressing Alt-M, the user will enter the ACME Messages mode of the Edit Screen (see screenshot below). In ACME Message mode, the standard ACME grid is replaced with a box showing the ACME Reject Error Messages for that certificate. While editing in the ACME grid cannot be done while ACME messages are turned on, users <u>can</u> edit the string line above the ACME messages. If there are no ACME Reject Error Messages for a certificate, the message box will be empty. Alt-M acts as a toggle to turn the ACME Messages on and off, and pressing the "Esc" key always returns to standard edit mode.
NOTE: Once TRANSAX Processing has been completed (see Processing a TRANSAX File), the ACME Messages for that batch of certificates will be deleted. In that case, ACME Messages would simply be blank.

Fields on the ACME Edit Screen

Certificate Number Field

The field contains the death certificate number. This field is required for all records. The field accepts numeric values only, and the input must be six digits long. The field can only be edited when adding a new record. When adding a new record, the value initially placed into the field is one greater than the last record in the file. This field is always in replace mode, and characters cannot be inserted.

Entity Axis Codes Field

This field contains a single line representation of all of the ICD codes contained on the record. The individual codes are separated by the following delimiters, indicating where the next term is located on the record: SPACE (next code on same line); SLASH ('/') (next line); ASTERISK ('*') (part II).

This field contains the same data that the Grid contains, and is simply displayed differently. This field can toggle between insert mode and replace mode by pressing the INSERT key. The current mode for this field is displayed in the lower right hand corner of the screen. This field can accept any text.

ICD Code Grid

The grid is an eight by six array, which displays the ICD codes in a spreadsheet format. Lines a-e contain Part I data, while the last line contains Part II data. The individual cells of the Grid can contain one (and only one) ICD code. The ICD-10 code must be in the format A####, where A is an alpha character and # is a number. The cells can also accept a leading ampersand ('&'). The code can have less than four numeric digits, but must have the leading alpha character and/or ampersand before digits can be entered.

To navigate the grid, one can use the array keys, tab and back tab, or the mouse. The down arrow key will automatically move to the beginning of the next line down. There are a number of ways to exit the grid in addition to the mouse. To exit the grid and move to the Place of Injury field, press the down arrow (when on the last line of the grid), ENTER key, or Alt+P. To move from the grid to the Entity-Axis Codes field, you must press Alt+E. You can also jump directly to the UC field from anywhere on the record by pressing the F7 key.

As data is entered into the grid, the Entity-Axis Codes field is automatically updated with each keystroke.

Place of Injury

The Place of Injury field is a single digit field, accepting the values 0-9 or blank. The values are defined as follows:
0   Home
1   Residential Institution
2   School, other institutions, Administrative Area
3   Sports and Recreation Area
4   Street/highway
5   Trade and service area
6   Industrial and construction area
7   Farm
8   Other specified places
9   Unspecified place
        blank

Intentional Reject

The Reject Field is a single digit field, accepting the values 1-6, 9 or blank. See NCHS Instruction Manual 2b for code instructions.

Underlying Cause

The UC Field is where the user can enter the underlying cause of death for the record. The field holds up to five characters in the format A####, where A is an alpha character and # is a number. When editing ACME rejects, the UC which ACME has chosen will be displayed. The user can choose to leave the UC or edit it. The user can jump directly to the UC field from anywhere in the editor by pressing the F7 key.

ACME Reject

The ACME Reject code indicates why a given record has been rejected. **THIS CODE SHOULD NOT BE CHANGED**. The single-digit codes mean:
0   Not a reject
1   MICAR reject - dictionary match

2   ACME reject
3   MICAR reject – rules application
4   Reviewed
       blank

Manner of Death

The Manner of Death field is a single digit field, accepting the values 1-7 and space. The values are defined as follows:

N   Natural
A   Accident
S   Suicide
H   Homicide
P   Pending investigation
C   Could not be determined
       blank

Activity

The Activity Code field is a single digit field, accepting the values 0-4,8,9 and space. The values are defined as follows:

0   While engaged in sports activity
1   While engaged in leisure activities
2   While working for income
3   While engaged in other types of work
4   While Resting, Sleeping, Eating, or engaging in other vital activities
8   While engaged in other specified activities
9   During unspecified activity
       blank

Was an Autopsy Performed?

This field holds a single digit code for whether and autopsy was performed or not. The values are defined as follows:

N   No
Y   Yes
U   Unknown

Were Autopsy Findings Available?

This field holds a single digit code showing whether autopsy findings were available or not. The values are defined as follows:

N   No
Y   Yes
U   Unknown
X   Not Applicable (computer-generated)

Certifier

This field can hold up to thirty (30) characters. The codes are defined as follows:
D   Certifying Physician
P   Pronouncing & Certifying Physician
M   Medical Examiner / Coroner

[Enter full text for other individual legally allowed to certify]

State Data

The State Specific Data field (optional) is a text field, which can hold up to thirty (30) characters. This allows states to enter additional information that will be stored with the record.

Tobacco Use Contribute to Death?

This field holds the single-character code for whether or not tobacco use contributed to death. The codes are defined as follows:
N   No
Y   Yes
P   Probably
U   Unknown
C   Not on certificate

Pregnancy?

This field shows the single-character code for any conditions of pregnancy of the decedent. The codes are defined as follows:
1   Not pregnant within past year

2   Pregnant at time of death

3   Not pregnant, but pregnant within 42 days of death

4   Not pregnant, but pregnant 43 days to 1 year before death

7   Not on certificate

8   Not applicable (computer-generated)

9   Unknown if pregnant within last year

Finding an ACME Record

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

Opening a file (**New** Certificate File, or **Open** an Existing File).

The file must have certificates in it to be searched.

The Find function allows the user to find a particular certificate quickly. This is especially useful when editing certificate data. To find a specific certificate:

1. While the Certificate Information screen is displayed (see Editing an ACME Input File), press {F5}.

2. Type in the certificate number of the desired certificate and press {ENTER}.

    A. If the certificate number is in the currently open file, data from that certificate will be displayed.

    B. If the certificate number is not in the currently open file, a message will be displayed. Press {ENTER}.

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

Deleting an ACME Certificate While Editing

This procedure can be used when the Certificate Information Screen is displayed.

Note: Certificates cannot be deleted during "Reject Editing" (see Editing MICAR Rejects Using ACME/TRANSAX or Editing ACME Rejects - General Procedure).

To delete the currently displayed certificate:

1. Access the Certificate Information Screen for the desired certificate (see Editing an ACME Input File or Finding an ACME Record).

2. Press {F8} to delete the current certificate.

3. A window will ask for confirmation to delete the specified certificate.

    A. To delete the certificate from the certificate file, press {Y}. The next certificate in the file will then be displayed.

    B. To cancel the deletion, press {N}. The certificate will be re-displayed.

4. The Certificate Information Screen will be displayed.

Editing MICAR Rejects Using ACME/TRANSAX

Before MICAR rejects can be edited, the following actions must have already been performed:

Opening a file (see Opening an Existing ACME Input File).
Note #1: Some files may not have MICAR rejects to edit.
Note #2: Users cannot <u>add</u> records to the MICAR rejects file; MICAR rejects are identified (and this file is generated) during MICAR200 processing.

If the current input file has any MICAR rejects, those rejects will need to be edited before continuing in ACME/TRANSAX. To edit MICAR rejects:

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 MICAR Rejects function and press {ENTER}. Note: If there are no MICAR rejects for this input file, this function will not be accessible.
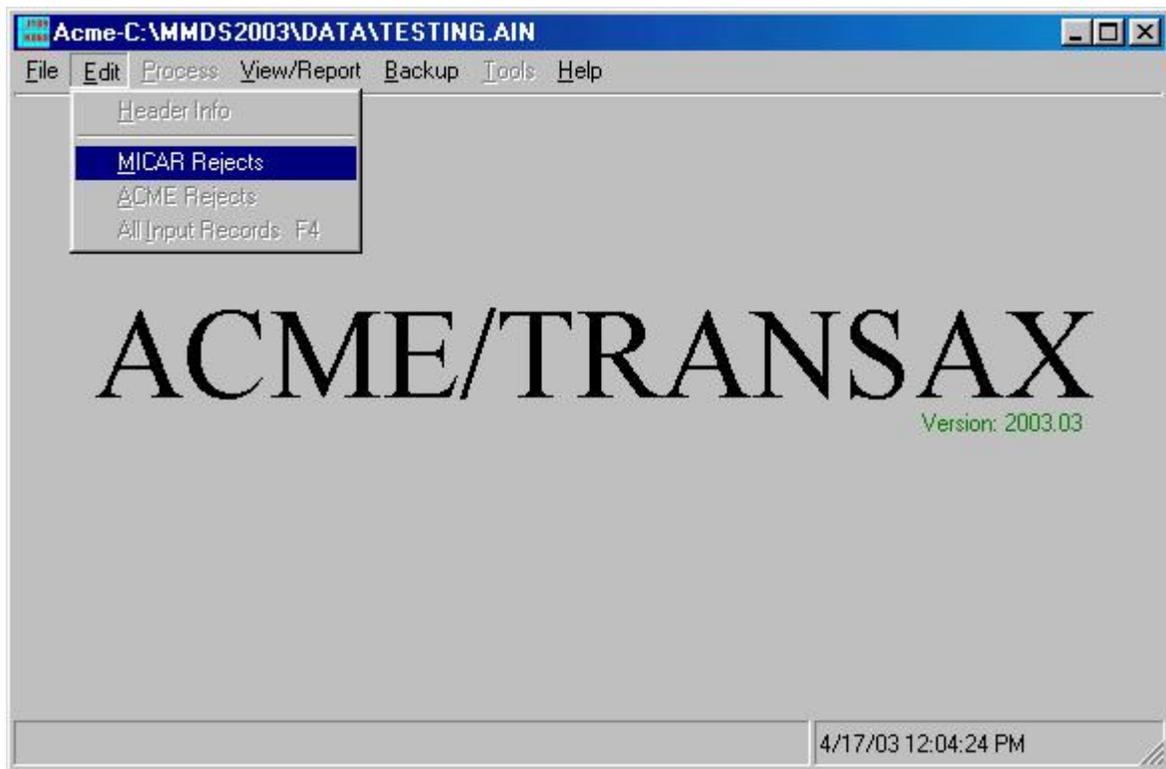
3. The Edit Rejected Records screen will be displayed. Make the necessary corrections/edits to the MICAR rejects (see Making Changes to MICAR Rejects).

4. When the corrections are complete, press {CTRL-F9} to save the changes. **It is advisable to save changes frequently**! A message box will ask if you've finished making changes to ALL of the records. To reserve the ability to edit more MICAR rejects, press {N}. The changes to the current record will be saved and the main screen will be re-displayed. If you've finished editing ALL MICAR rejects, press {Y}. Another message box will ask for confirmation to merge the MRJ file with the AIN file.

   A. To merge the corrected records with the ACME input file, press {Y}. The MRJ file will be merged with the AIN file and the main screen will be re-displayed.

      WARNING: If you merge the edited records with the input file, **you will no longer be able to use the Edit MICAR Rejects function to re-edit MICAR rejects**. Any further corrections to the MICAR rejects will then require using the Editing ACME input records function (see Editing an ACME Input File).

   B. To exit the Edit MICAR Rejects function without merging the rejects, press {N}. The current record will be saved and the main screen will be re-displayed.

Making Changes to MICAR Rejects

Files containing records rejected by the MICAR programs are generated in ACME input file format. These records must be reviewed and coded in accordance with the NCHS multiple cause coding instructions given in

Part 2b and Part 2e of the Vital Statistics Instruction Manual (VSIM) series. On most certificates, the reject record will have tentative ICD-10 codes for multiple cause data and may have codes for the place of injury and the intentional reject items. However, these codes are only provisional. The data must be reviewed carefully. Replace any incorrect data with correct multiple cause codes.

1. Multiple Cause Codes:

A. Records with one or more terms that did not match the dictionary:

MICAR assigns ICD-10 code U00 for all terms which did not match the dictionary. These codes must be replaced by the correct ICD-10 code or deleted. In addition, all other multiple cause codes must be verified for accuracy.

For example:

> Ia   1   HEMORRHAGE
>
> b   1   BACK INJURY
>
> c   1   INTERCOSTAL SPACE STAB WOUND
>
> Tentative ICD-10:)S399/S399/U00*&X59

> Ia   1   HEMORRHAGE
>
> b   1   INTERCOSTAL SPACE STAB WOUND
>
> c   1   BACK INJURY
>
> Tentative ICD-10: R5800/U00/S399*&X59

In the first example, the MICAR system has enough information to make the HEMORRHAGE traumatic. However, in the second example, the system did not have enough information to convert the HEMORRHAGE to traumatic because the term which was not in the dictionary is reported on line b. MICAR rejects must be coded based upon a thorough knowledge of NCHS multiple cause coding rules.

B. Records with indications of surgery:

In many cases, MICAR will contain an extra ICD-10 code immediately following the code for the external cause. Generally, this code must be deleted. It is also important to remember to precede the appropriate code with an & as required by multiple cause coding.

C. Records with medical misadventures and drug therapy:

In most cases, MICAR will NOT provide ICD-10 codes for records interpreted as requiring a drug therapy code. The multiple cause coder must provide all the codes for these records.

2. Place of Injury:

The place of injury code is assigned according to ICD-10 specifications (valid codes, blank, 0-9). This code is converted and copied from the MICAR input record. This code must be verified and deleted or retained based upon multiple cause coding rules.

3. Intentional Reject:

This code appears to the right of the label REJECT on the reject editor screen. MICAR may assign an intentional reject 1 - 5 on records with one or more inconsistencies reported in the duration blocks or a 9 on records with more than four "due to" relationships. It is the responsibility of the multiple cause coder to correct the MICAR code assignment when necessary.

4. Underlying Cause:

A manual underlying cause (UC) code should not be assigned to the MICAR rejects. The corrected reject records will be combined with the records completely processed by the MICAR system and then they will be processed by the full ACME program. Additional rejects may occur if a record has an ambivalent causal relationship, an intentional reject code 5 or 9, or invalid codes or format errors. If a manual UC is assigned, the codes and format will be validated; records with invalid data will reject. In addition, the manual UC will be compared with the ACME underlying cause and the records will be rejected for review if the codes are different.

5. ACME Reject:

 The ACME Reject is an action code supplied by the system. As a rule, this code should not be changed during MICAR or ACME reject processing. When adding records to an ACME input file, this item should be left blank. On records rejected by MICAR, a 1 indicates that the record contains a term which is not in the MICAR dictionary; a 3 indicates that MICAR has identified the record as having conditions which cannot be handled automatically by the multiple cause rules application program. Action code 2 is assigned by the ACME processor. The purpose of action code 2 is to cause the ACME program to execute the editing and validation features but to skip the underlying cause selection portion of the program logic. The manual underlying cause code is accepted as the final underlying cause-of-death.

Rebuilding MRJ File

The "MRJ File" is the MICAR Reject File – the file that contains the records rejected during MICAR200 processing. If any MICAR Rejects exist, the .MRJ File will still exist.

Before ACME processing can occur, there can be no existing .MRJ File. So to move on to ACME processing, the user must edit any MICAR Rejects, and then must save those changes (Alt + F9) and merge the .MRJ file into the .AIN file. See Editing MICAR Rejects Using ACME/TRANSAX for more information on editing MICAR rejects and merging the .MRJ with the .AIN.

Once the .MRJ File has been merged with the .AIN File, the .MRJ file is deleted. In rare instances (e.g., a user accidentally merged the .MRJ with the .AIN before MICAR Reject editing was complete), a user may wish to "back up" a step and recreate the .MRJ File.

In such a case, the user can use the Rebuild MRJ File function to recreate the .MRJ File (prior to ACME processing). The user would then need to finish editing all of the MICAR Rejects before continuing on to ACME processing.
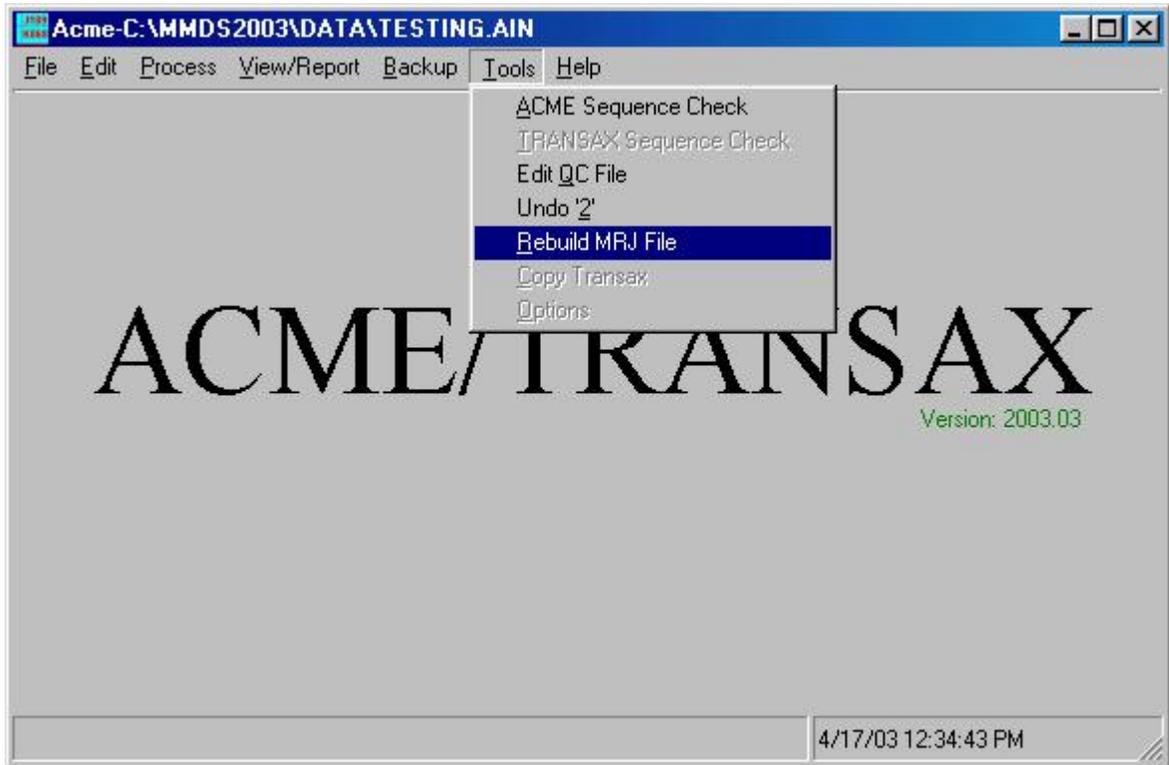
Editing an ACME Input File

Before an ACME input file can be edited, the following actions must have already been performed:

Opening a file (New Input File or Open an Existing Input File).

Some input files will need to be edited. This may include editing existing certificates in the file and adding new certificates to a file. Follow the steps below to access the Edit ACME Input File function. For help adding certificates, see Adding certificates Using ACME/TransAX.

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 All Input Records function and press {ENTER}. Note: You must have a file open for this function to be active.
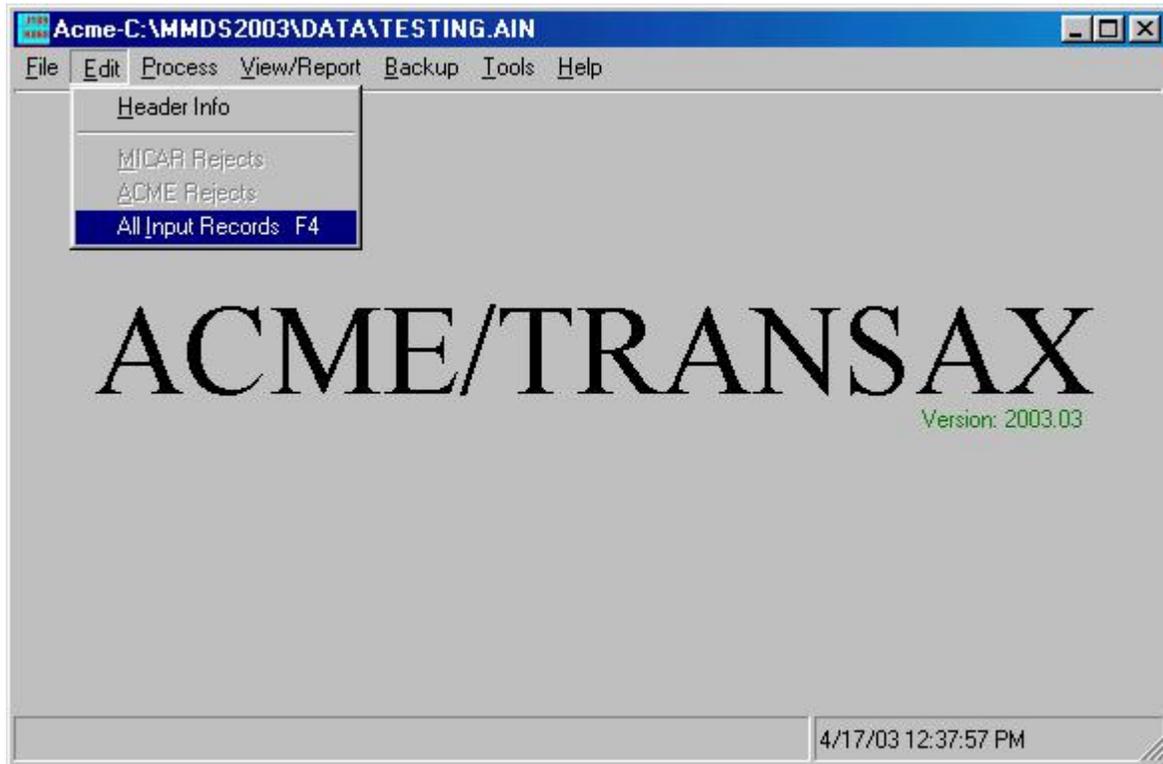
3. Use {Page Up} to move to the previous record and {Page Down} to move to the next record. Edit the fields on the edit screen as necessary (see Master Hotkey List for more information on shortcut keys). See Fields on the ACME Edit Screen for specific information on valid field contents.

4. To save the records and exit the Edit All Input Records function, press {Alt+F9}. The main screen will be re-displayed.

5. To exit the Edit All Input Records function without saving, press {Alt+C} or {ESC}. Press {Y} to confirm that you want to exit without saving. The main screen will be re-displayed.

Quality Control Records in ACME/TRANSAX

Edit QC File in ACME/TRANSAX

This feature was designed to be used by NCHS, mostly for training and quality-control purposes. With "Edit QC File," ACME forces the system reject code for all records in the file to "2." When the system reject code is "2," ACME processing will not produce a UC code, so such records will be "skipped" during processing and will be rejected if they do not already contain a UC code (supplied by the user, not generated by ACME). Because the Edit QC function forces the system reject code to "2" for all records, the

only processing ACME does on a QC file is to validate that the multiple cause and underlying cause codes are valid ICD codes.
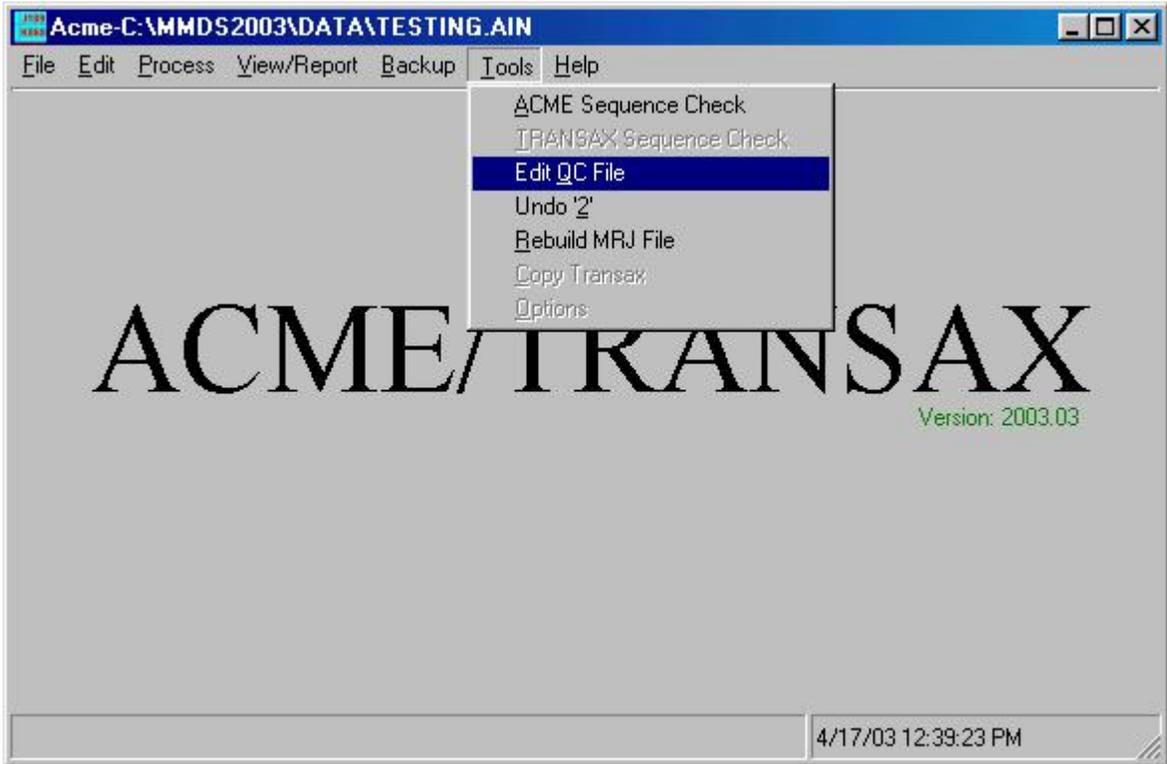
The QC (quality-control) feature should not typically be used by states, as it serves a rather specific training purpose for NCHS.

Entering Quality Control (QC) Certificates

Before entering certificates for Quality Control (QC), the following actions must have already been performed:

Opening a file (see Creating a New ACME Input File or Opening an Existing ACME Input File). Note: you should be sure that the file you open is a QC file.

1. From the main screen, press {Alt+T} to select the Tools Menu Option.

2. Use the up and down arrow keys to highlight the Edit QC function and press {ENTER}.

3. A dialogue box will be displayed asking you to enter a "skip value." New records added in the QC mode will automatically be incremented by this "skip" amount. Enter a skip value and press {ENTER}.

4. The QC edit screen will be displayed. When new records are added, they will be incremented using the skip value. Normal edit functions and hot keys will be active (see Editing an ACME Input File). To exit the QC edit screen, press {Alt+F9} to save changes to the QC file, or {ESC} to exit the QC edit screen without saving.

Undo "2" in ACME/TRANSAX

By design, if a user uses the Edit QC function, the certificates will now be unprocessable (the only validation will be to verify that codes are valid, existing codes). If Edit QC was done in error, this can be a major problem. The Undo "2" feature will go through a file and change any system reject codes from "2" (such as those set to "2" by the Edit QC function) to "0" - which will make it possible to process those records again. This feature may be needed by states who (against advice to the contrary) used the Edit QC function, but to ill effect.
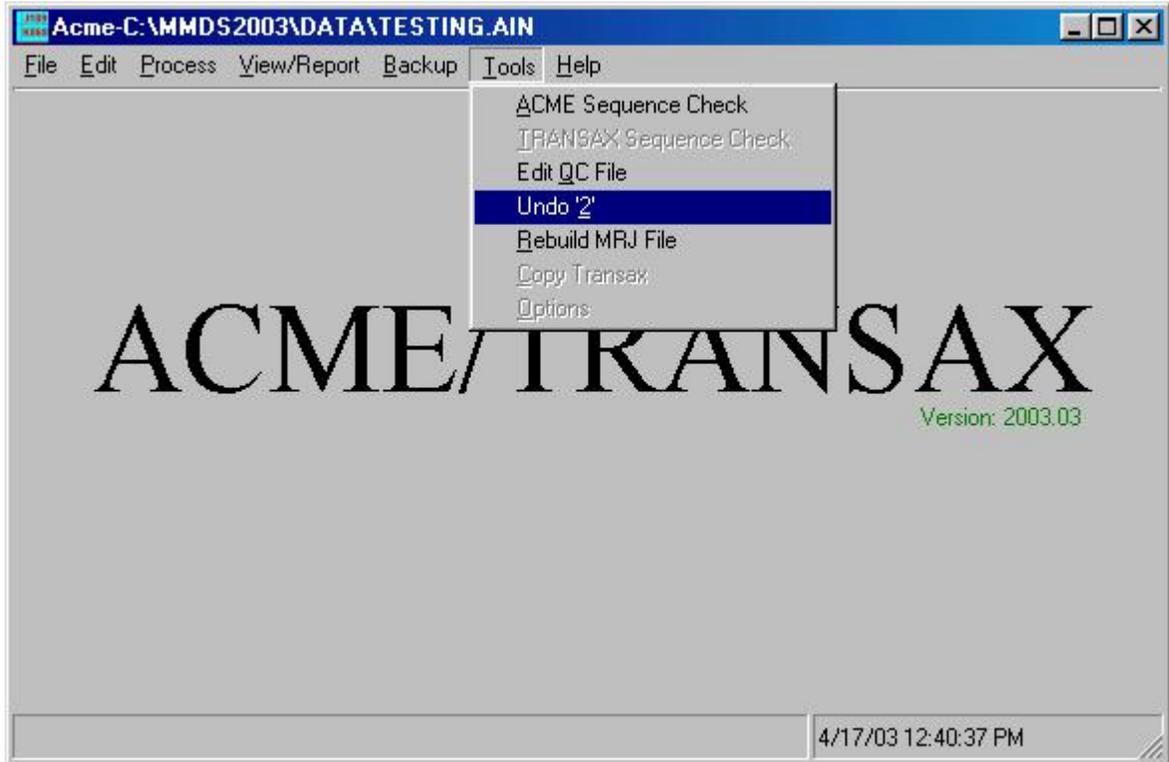
NOTE: When the Undo 2 is complete and system reject codes that were "2" have been set to "0" the Process menu may still be inactive (greyed out). This can happen if the file has been previously processed (ACME processing) and a reject file resulted. No processing is available while rejects remain. If the previous ACME processing was rendered invalid because the system reject codes were altered (e.g., mistaken use of Edit QC), the reject file(s) should be deleted in order to reactivate the Process menu. One simple way to do that is to open/edit the file and save it (Ctrl-F9), which will delete the associated reject file(s).

ALSO NOTE: The Undo "2" function simply resets the system reject code for every record in a file from "2" to "0." Any system reject codes other than "2" (e.g., "1", '3") are left unaltered.

Processing ACME Input

Running a Sequence Check on an ACME Input File

Before a sequence check can be done, the following actions must have already been performed:

Opening a file (see Creating a New ACME Input File or Opening an Existing ACME Input File).
MICAR rejects must be edited (see Editing MICAR Rejects Using ACME/TRANSAX).

The Sequence Check Function creates a file (named filename.SSQ) containing a report showing certificate numbers in one of three different formats.

- A ''standard report" will display all of the missing certificate numbers in ascending order.

- A "series report" (the default choice) will display all of the missing certificate numbers in ascending order, *grouped into series based on the first digit* (e.g., all certificates beginning with "1" would be grouped together).

- An "actual report" is a report showing all of the certificates *actually present* in the database. Rather than being a "missing certificates" report (like the "standard report"), the actual report shows the certificates that are actually present in the database.

Together, these reports can reveal if there are missing, extra, duplicate, or out-of-sequence certificates in the database file. The Sequence Check can be used only when a file is currently open. To use the sequence check:

1. From the main screen, press {Alt+T} to select the Tools 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. ACME automatically fills in the first and last certificate numbers for the current file. To change these certificate numbers:

   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), the ending certificate number (the ending certificate number for the sequence check), or both. Click "OK."

C. Choose the type of report you wish to generate (standard, series, or actual) in the options box. Series report is the default.

1. The output of the sequence check (filename.SSQ) will then be displayed. Use the up and down arrow keys to scroll through the output (or {Page Up} and {Page Down}). Press the {ESC} key to close the output window. Click the Print button to print the report.

"Total Prior Records" = the # of records in the file BEFORE the Beginning Certificate Number.

"Total Future Records" = the # of records in the file AFTER the Ending Certificate Number.

Processing an ACME Input File

Before processing an ACME file, the following actions must have already been performed:

Opening a file (see Creating a New ACME Input File or Opening an Existing ACME Input File).
MICAR rejects must be edited (see Editing MICAR Rejects Using ACME/TRANSAX).

To process an ACME input file:

1. From the main screen, press {Alt+P} to select the Process Menu Option.
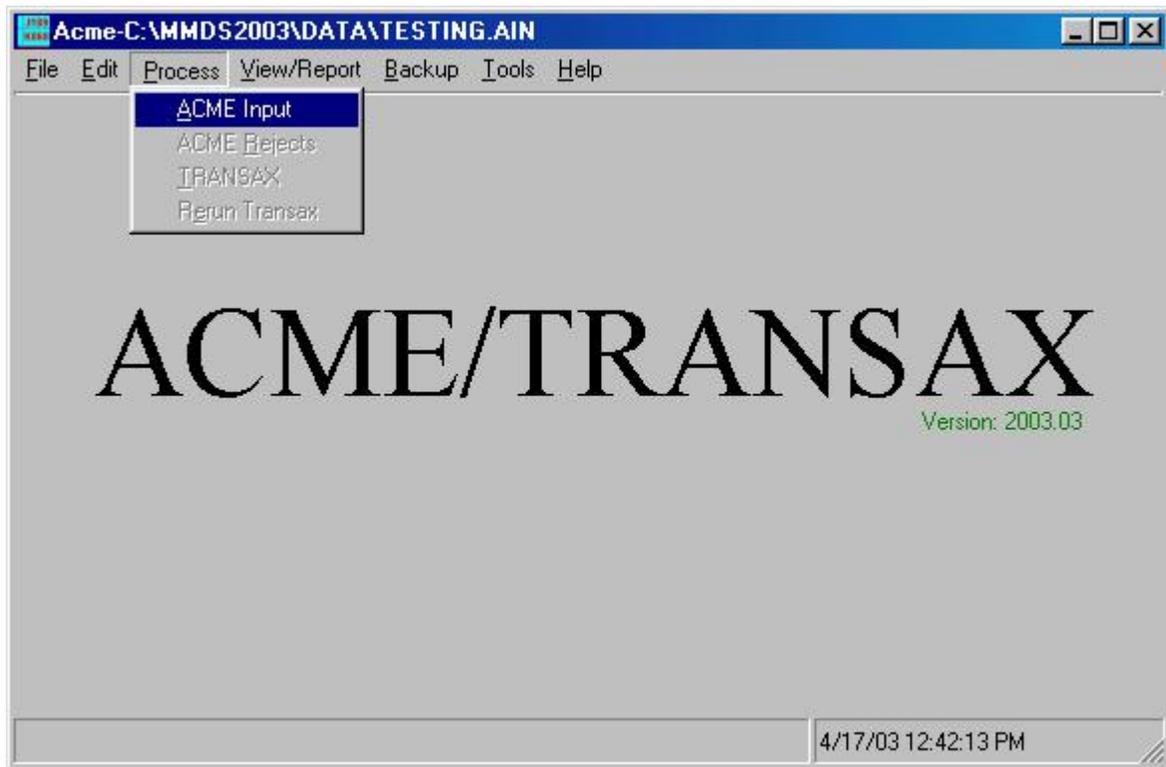
2. Use the up and down arrow keys to highlight the Process ACME Input function and press {ENTER}.

3. A progress bar will be displayed showing the number of records that have been processed. Processing can be halted by pressing the {ESC} key.

4. When processing is finished, a message window will be displayed.

5. Press {ENTER} to return to the main screen.

Editing and Processing ACME Rejects

Viewing ACME Stats

Before ACME stats can be viewed, the following actions must have already been performed:

Opening a file (see Creating a New ACME Input File or Opening an Existing ACME Input File).
MICAR rejects must be edited (see Editing MICAR Rejects Using ACME/TRANSAX).
The ACME file must be processed (see Processing an ACME Input File).

After the ACME input file has been processed, the statistics of the processing should be viewed to check for any discrepancies. To view the ACME Stats:

1. From the main screen, press {Alt+V} to select the View/Reports Menu Option.

2. Use the up and down arrow keys to highlight the ACME Stats function and press {ENTER}.

3. The statistics report will be displayed. Use the {Page Up} and {Page Down} keys to scroll up and down through the report. Use the right and left arrow keys to move the window horizontally through the report.

4. When you finish viewing the report, press the {ESC} key or click the cancel button to exit. Click on the Print button to print the report.

Viewing ACME Reject Error Messages

Before ACME rejects can be viewed, the following actions must have already been performed:

Opening a file (see Opening an Existing ACME Input File).
Editing Micar Rejects, if any existed (see Editing MICAR Rejects Using ACME/TRANSAX).
Processing an ACME Input File.

Note: View ACME Rejects will only be available if there ARE ACME rejects for the current file.

1. From the main screen, press {Alt+V} to select the View/Reports Menu Option.

2. Use the up and down arrow keys to highlight the ACME Rejects function and press {ENTER}.

3. A report window will be displayed. Use the {Page Up} and {Page Down} keys, or the scroll bars and mouse, to scroll through the report.

```
Viewing File: C:\MMDS2003\DATA\MD03Q02.RMS          _|□|×|

MESSAGES FOR ACME REJECT FILE: C:\MMDS2003\DATA\MD03Q02.ARJ

2003MO77334601   J82/E86/N19
2003MO77334602   Intentional Reject = ' '   Place of Inj = ' '
2003MO77334603   Is J82 due to N19? NO
2003MO77334604   No TUC by GenPrin - Apply Rule1
2003MO77334605   Is J82 due to E86? MAYBE
2003MO77334606   Is E86 due to N19? YES
2003MO77334607   Select TUC = N19   - Rule1
2003MO77334608   MANUAL UC:        ACME UC: N19
2003MO77334609   REJECT FOR 'MAYBE'




                                        Print    Close    Help
```

4. To print the report, press the "Print" button. To exit the report, press the {ESC} key or the "Close" button.

5. The main screen will be re-displayed.

List of ACME Reject Error Messages

```
Viewing File: C:\MMDS2003\DATA\MD03Q02.RMS

MESSAGES FOR ACME REJECT FILE: C:\MMDS2003\DATA\MD03Q02.ARJ

2003MO77334601   J82/E86/N19
2003MO77334602   Intentional Reject = ' '   Place of Inj = ' '
2003MO77334603   Is J82 due to N19? NO
2003MO77334604   No TUC by GenPrin - Apply Rule1
2003MO77334605   Is J82 due to E86? MAYBE
2003MO77334606   Is E86 due to N19? YES
2003MO77334607   Select TUC = N19   - Rule1
2003MO77334608   MANUAL UC:        ACME UC: N19
2003MO77334609   REJECT FOR 'MAYBE'
```

```
                                    Print    Close    Help
```

1. The following error messages indicate a need to correct the multiple cause codes and/or format, and to manually assign an underlying cause.

Format Error

    TOO MANY LINES

    TOO MANY *S

    TOO MANY CODES PER LINE

Code Error

    INVALID DIGIT IN CODE

    WRONG LENGTH CODE

    INVALID CODE XXXX

2. The following messages indicate a need to manually assign an underlying cause.

Cause Not Addressed in Tables

NO CAUSAL ENTRY FOR CODE XXXX

Intentional Reject

REJECT CODE = 5 (inconsistent duration which ACME cannot resolve)

REJECT CODE = 9 (more than four "due to" relationships)

Invalid ACME Underlying Cause

INVALID UC - XXXX

INVALID MANUAL UC = XXXX (applicable only to second pass processing)

Other

CIRCULAR LINKAGE LOOP

3. Messages indicating a need to verify and possibly correct the ACME underlying cause assignment.

Ambivalent Table Entries

IS XXXX DUE TO YYYY	MAYBE
DS XXXX YYYY	MAYBE
SENDC XXXX YYYY	MAYBE
SENMC XXXX YYYY ZZZZ	MAYBE
IDDC XXXX YYYY ZZZZ	MAYBE
LMP XXXX YYYY	MAYBE
SMP XXXX YYY	MAYBE
LDP XXXX YYYY	MAYBE

ACME/Manual Discrepancy

MANUAL UNDERLYING CAUSE = XXXX

ACME UNDERLYING CAUSE = YYYY

In these cases, the ACME assignment is conditional. If in the review of the record the conditional underlying cause is found to be correct, no correction need be made.

4. Messages which may accompany the above types but are informational in nature and give the logic followed in assigning the underlying cause. Such messages require no action. The following list is organized by selection/modification rule for sake of clarity.

Selection Rule

IS XXXX DUE TO YYYY   YES

IS XXXX DUE TO YYYY   NO

SELECT INITIAL TUC = XXXX - GENPRIN

SELECT TUC = XXXX - RULE 1

SELECT TUC = XXXX - RULE 2

NO TUC BY GENPRINT - APPLY RULE 1

NO TUC - REJECTED

Rule 3

DS XXXX YYYY

DSC XXXX YYYY ZZZZ

Rule A (senility)

SENDC XXXX YYYY ZZZZ

SENMC XXXX YYYY ZZZZ

SENILITY DISCARDED TUC = XXXX

Rule A (ill-defined)

XXXX IS ID

TUC IS ILL-DEFINED

TUC NOT MODIFIED BY ID: TUC = XXXX

SELECT MODIFIED TUC = XXXX

IDDC XXXX YYYY ZZZZ

SELECT TUC - XXXX - ILL DEF

LAST ID TUC DISCARDED: USE TUC XXXX

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Rule B

XXXX IS TRIVIAL

XXXX IS FROM PART II

NO BETTER CODE - REVERT TO PREVIOUS TUC XXXX

LAST TUC DISCARDED. USE TUC = XXXX

XXXX IS TREATMENT - RULE B

SELECT TUC = XXXX - RULE B

XXXX IS N-CODE OR INVALID

BAD TUC: REVERT TO TREATMENT = XXXX - RULE B

Rule C

LMP XXXX YYYY

LMC XXXX YYYY ZZZZ

LDP XXXX YYYY

LDC XXXX YYYY ZZZZ

SELECT TUC = XXXX - RULE C

Rule D

SMP XXXX YYYY

SMC XXXX YYYY ZZZZ

SDC XXXX YYYY ZZZZ

SELECT TUC = XXXX - RULE D

Recode E-Codes

CANNOT DELETE LAST CODE = XXXX - E-CODE

RECODE E-CODE XXXX

CHOOSE AMP-CODE OVER E-CODE = XXXX - E-CODE

REVERT TO ORIGINAL E-CODE = XXXX - E-CODE

Priority to Ampersand

TUC IS POISONING - PREFER XXXX - AMP E-CODE

TUC IS MED CARE - PREFER XXXX - AMP E-CODE

TUC IS N-CODE. PREFER XXXX - AMP E-CODE

TUC IS INVALID. PREFER XXXX - FIRST AMP CODE

NO GOOD AMP - REVERT TO PREVIOUS TUC XXXX

REVERT TO AMP CODE XXXX

Other

XXXX CONVERTED TO YYYY

MANUAL UC = XXXX   ACME UC = XXXX

TUC = XXXX

IGNORE INCONSISTENT DURATION

Abbreviations:

ACME UC	ACME-assigned Underlying Cause code
AMP	Ampersanded code
DS	Direct Sequel
DSC	Direct Sequel Combination
E-CODES	External Cause of Injury and Poisoning Code
ID	Ill-Defined condition
IDDC	Ill-Defined Due To Combination
LDC	Linkage Due To Position Condition
LDP	Linkage Due To Position Preference
LMC	Linkage With Mention Of Combination
LMP	Linkage With Mention Of Preference
MANUAL UC	Manually assigned Underlying Cause code
MED-CARE	Medical Care Code
N-CODES	Nature of Injury and Poisoning Code

NON-ID	Non-Ill-Defined condition
SDC	Specificity Due To Position Combination
SENDC	Senility Due To Combination
SENMC	Senility with Mention of Combination
SMC	Specificity With Mention Of Combination
SMP	Specificity With Mention Of Preference
TUC	Temporary Underlying Cause
TUC2	second Temporary Underlying Cause
XXXX	code
YYYY	code
ZZZZ	code

Editing ACME Rejects - General Procedure

Before ACME rejects can be edited, the following actions must have already been performed:

Opening a file (see Creating a New ACME Input File or Opening an Existing ACME Input File).

MICAR rejects must be edited (see Editing MICAR Rejects Using ACME/TRANSAX).

The file must be processed (see Processing an ACME File).

ACME/TRANSAX is designed to reject records with invalid formats or codes, intentional reject codes (5 and 9), and records that can be assigned only a conditional underlying cause of death. These rejects will need to be edited and re-processed (see Processing ACME Rejects). The screens displayed and the keys used for Editing ACME rejects are the same as those used for editing MICAR rejects (see Editing MICAR Rejects Using ACME/TRANSAX). To edit ACME rejects:

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 ACME Rejects function and press {ENTER}. The Edit Records screen will be displayed.

3. Make corrections as necessary to correct the ACME rejects (see the Master Hotkey List for helpful shortcut keys).

    NEW: Pressing {F7} will jump directly to the UC Field, where you can enter the correct underlying cause.

4. To view the reject messages, press {Alt+M}. Alt+M is a toggle control. Pressing Alt+M will toggle the view messages feature on and off. To edit codes other than the UC, you can now edit the Entity String directly below the Certificate Number field, or you can press Alt+M to toggle off the message view if you want to edit codes directly in the grid.

5. To save the corrections, press {Alt-F9}. The main screen will be re-displayed. Note: You can save changes and then go back to make more corrections later as long as the file has not been re-processed. For instructions on how to re-process the correct batch, see Processing ACME Rejects.

Using Error Messages to Edit ACME Rejects

Correction Instructions:

1. Obtain the certificate(s) and any available additional information.

2. For each record in the file, you MUST do one of the following:

    A. Manually assign an underlying cause of death

    B. Correct an erroneous conditional underlying cause assignment made by ACME

    C. ACME is allowed to keep the conditional assignment made if the assignment is correct. This is the default option and requires no action by the individual processing the reject lists.

    If the Error Messages indicate invalid codes, you should also modify multiple cause codes as necessary.

3. The following table lists what corrective action should be taken with a given error message.

<p align="center">TABLE OF MESSAGES REQUIRING ACTION</p>

Error Message	Correct Multiple Cause Codes and/or Format	Manually Assign Underlying Cause	Check ACME Underlying Cause & Manually Assign if Incorrect
TOO MANY LINES	X	X	
TOO MANY *'S	X	X	
TOO MANY CODES PER LINE	X	X	
INVALID DIGIT IN CODE	X	X	
WRONG LENGTH CODE	X	X	
INVALID CODE XXXX	X	X	
INVALID CODE IN PARENTHESES	X	X	

NO ENTRY IN TABLE C FOR CODE XXXX		X	
REJECT CODE = 5		X	
REJECT CODE = 9		X	
XXXX IS INVALID UNDERLYING CAUSE		X	
INVALID MANUAL UNDERLYING CAUSE = XXXX (second-pass processing only)		X	
CIRCULAR LINKAGE LOOP		X	
CAN XXXX BE DUE TO YYYY	MAYBE		X
XXXX DS YYYY	MAYBE		X
XXXX SENDC YYYY	MAYBE		X
XXXX SENMC YYYY ZZZZ	MAYBE		X
XXXX IDDC YYYY ZZZZ	MAYBE		X
XXXX LMP YYYY	MAYBE		X
XXXX SMP YYYY	MAYBE		X
XXXX LDP YYYY	MAYBE		X
MANUAL UNDERLYING CAUSE = XXXX			X
ACME UNDERLYING CAUSE = YYYY			X

Processing ACME Rejects

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

Opening a file (see Creating a New ACME Input File or Opening an Existing ACME Input File).
MICAR rejects must be edited (see Editing MICAR Rejects Using ACME/TRANSAX).
The file must be processed (see Processing an ACME Input File).

To process ACME rejects:

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 ACME Rejects function and press {ENTER}.

3. A progress bar will be displayed showing the number of records that have been processed. Pressing the {ESC} key will halt processing.

4. When processing is finished, a message window will be displayed.

5. Press {ENTER} to return to the main screen.

TRANSAX Processing

Processing a TRANSAX File

Before TRANSAX processing will be available, the following actions must have already been performed:

Opening a file (see Creating a New ACME Input File or Opening an Existing ACME Input File).
MICAR rejects must be edited (see Editing MICAR Rejects Using ACME/TRANSAX).
The ACME file must be processed (see Processing an ACME Input File).
ACME rejects must be edited (see Editing ACME Rejects), if necessary.
ACME rejects must be processed (see Processing ACME Rejects), if necessary.

ACME processing produces a TRANSAX input file that will then need to be processed. Remember that all of the ACME rejects must be edited before TRANSAX processing can be performed. The steps for Processing a TRANSAX File are very similar to those for Processing an ACME Input File, but (because all rejects have been reconciled) no rejects are generated.

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 Run TRANSAX function and press {ENTER}.

3. A progress bar will be displayed showing the number of records that have been processed. Pressing the {ESC} key will halt processing.

4. When processing is finished, a message window will be displayed. NOTE: The ASCII output file will be created automatically.

5. Press {ENTER} to return to the main screen.

Viewing TRANSAX Stats

Before TRANSAX stats can be viewed, the following actions must have already been performed:

Opening a file (see Creating a New ACME Input File or Opening an Existing ACME Input File).
MICAR rejects must be edited (see Editing MICAR Rejects Using ACME/TRANSAX).
The ACME file must be processed (see Processing an ACME Input File).
ACME rejects must be edited (see Editing ACME Rejects), if necessary.
ACME rejects must be processed (see Processing ACME Rejects), if necessary.
 TRANSAX processing must have been performed (see Processing a TRANSAX File).

The directions for viewing TRANSAX statistics are very similar as those for Viewing ACME Stats. To view TRANSAX stats:

1. From the main screen, press {Alt+V} to select the View/Reports Menu Option.

2. Use the up and down arrow keys to highlight the TRANSAX Stats function and press {ENTER}.

3. The TRANSAX stats will be displayed. Use the {Page Up} and {Page Down} keys to scroll up and down through the report. Use the right and left arrow keys to move the window horizontally through the report.

4. When you finish viewing the report, press the {ESC} key or click on the Cancel button. To print the report, click on the Print button.

Running a Sequence Check on a TRANSAX Output File

A sequence check can be performed on the TRANSAX output file (filename.TRX - generated automatically during TRANSAX processing). The procedure for this is nearly identical for running a sequence check on an input file:

1. From the main screen, press {Alt+T} to select the Tools Menu Option.

2. Use the up and down arrow keys to highlight the TRANSAX Sequence Check function and press {ENTER}.

3. A sequence check window will be displayed with the starting and ending certificate numbers in the file. Check the certificate numbers to be sure they are correct.

4. Change the starting and ending certificate numbers, if necessary:

   A. Use the {TAB} key to highlight either the beginning or ending certificate number.

   B. Type in the new certificate number.

5. To begin the sequence check, click the "OK" button.

6. A report window will be displayed. Use the {Page Up} and {Page Down} keys, or the scroll bars and mouse, to scroll through the report.

7. To print the report, press the "Print" button. To exit the report, press the {ESC} key or the "Close" button.

8. The main screen will be re-displayed.

Viewing Rare Causes

Before Rare Causes can be viewed, the following actions must have already been performed:

Opening a file (see Creating a New ACME Input File or Opening an Existing ACME Input File).
MICAR rejects must be edited (see Editing MICAR Rejects Using ACME/TRANSAX).
The ACME file must be processed (see Processing an ACME Input File).
ACME rejects must be edited (see Editing ACME Rejects), if necessary.
ACME rejects must be processed (see Processing ACME Rejects), if necessary.
TRANSAX processing must have been performed (see Processing a TRANSAX File).

The Rare Causes can be viewed in the same manner as Viewing ACME Stats. The certificates will be displayed as lines of code with the assigned ICD Codes in the entity axis positions as shown in the ACME Input File Format. To view rare causes:

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1. From the main screen, press {Alt+V} to select the View/Reports Menu Option.

2. Use the up and down arrow keys to highlight the Rare Causes function and press {ENTER}.

3. The Rare Causes will be displayed. Use the {Page Up} and {Page Down} keys to scroll up and down through the report. Use the right and left arrow keys to move the window horizontally through the report. Note: the report does not highlight the rare causes for you. You must identify the codes yourself.

4. When you finish viewing the report, press the {ESC} key or click on the Cancel button. To print the report, click on the Print button.

Rerun TRANSAX

Once ACME processing is complete - meaning the software has produced a TRANSAX file - this menu option (found under the Process menu) will be available. It is not necessary to run this item: the function is primarily for NCHS use.

Some users have mistakenly run this option because they believed the file was not done until all items in the process menu were complete (meaning grayed out and inaccessible).

NOTE: This item will remain available as long as there is a TRANSAX file. It remains true that once the user has used ACME to create a TRANSAX (.TRX) file, the processing is complete and the file(s) should be sent to NCHS.

Copy Transax

The Copy Transax function of ACME/TRANSAX, found under the Tools menu, is very straightforward – it makes a copy of the existing .TRX file and moves it into the MMDS Backup Directory.

To use the Copy Transax function:

1. Under Tools menu, choose "Copy Transax".

2. The .TRX file will be copied into the Backup Directory.

ACME/TRANSAX Backups

Creating ACME/TRANSAX Backups

Before ACME/TRANSAX backups can be made, the following actions must have already been performed:

   Opening a file (see Creating a New ACME Input File or Opening an Existing ACME Input File).

After processing the data files, a backup should be made of the files that have been used and generated by ACME/TRANSAX. All of the data and the associated files (including the TRANSAX output file) will be backed up. It is also recommended to create a backup at the end of each day. To create a backup:

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 All Files function and press {ENTER}.

3.   A Backup Dialog box will appear with a display box containing the Backup Directory, any floppy disk drives on your computer, and an option to choose another location. Click to select one of those destinations.

4.   Once your destination is selected, you may Click on the Start button to begin the backup, the Close button to abort the Backup, or the Help button for more information.

5.   Clicking on the Start button will begin the backup process (filename.SBK). If a previous backup exists, you will be prompted to either abort the backup or replace the previous backup. If you choose to replace the previous backup, that prior backup file will be renamed before the current backup is performed (filename.AB$); Thus one accidental "replace" during backup can still be recovered (see the topic on Recovery Files in the System Manager's section for more information). While the backup is underway, the title of the dialog box will change to "Working." When the backup is complete a "Backup Successful" message will appear.

6.   The main screen and Menu Bar will be re-displayed.

Creating ACME/TRANSAX Backups for NCHS

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

Open a file (**New** Certificate File, or **Open an Existing File**).
ACME processing AND TRANSAX processing (Process An ACME Input File and Process a TRANSAX File).

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 (see Creating ACME/TRANSAX Backups). A second backup, with ONLY selected files, should then be done using this Backup for NCHS function. These backup files can then be sent to NCHS for further processing.
Note: the Backup for NCHS function is NOT A COMPLETE BACKUP! For a complete backup, use the Backup All Files function. Backup for NCHS should not be relied upon as the only regular backup routine. This Backup for NCHS function will create a ssyylll.ZIP file (ss = state code, yy = year, 1lll = shipment number) containing a MICAR200 file. This information will be pulled automatically from the Header information. You must update your header information, particularly the shipment number, for each batch.

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 Send Files to NCHS function and press {ENTER}.

3. A Backup Dialog box will appear with a display box containing the Backup Directory, any floppy disk drives on your computer, and an option to choose another location. Click to select one of those destinations.

4. Once your destination is selected, you may Click on the Start button to begin the backup, the Close button to cancel the Backup, or the Help button for more information.

5. Clicking on the Start button will begin creating the backup file (*filename*.ZIP). If a previous backup exists, you will be prompted to either cancel the current backup process or to continue. If you continue, the older backup will be replaced. When the backup is complete a "Backup Successful" message will appear.

6. The main screen and Menu Bar will be re-displayed.

Generating Reports in ACME/TRANSAX

ACME Reports

ACME/Transax creates reports detailing aspects of the cause of death data for a given file in many different ways. A list of the available reports is given below (note that some of these reports are covered in other areas of the help documentation). Because these reports are based on information collected during various steps in ACME/TRANSAX processing, not all reports will be available until a final TRANSAX output file is created (menu items for unavailable reports will be grayed out and inaccessible).

MICAR Rejects (covered in Viewing MICAR Rejects Using ACME/TRANSAX).

ACME Rejects (covered in Viewing ACME Reject Error Messages).

ACME Stats (covered in Viewing ACME Stats).

TRANSAX Stats (covered in Viewing TRANSAX Stats).

ACME Input: To access this report, click the menu option View and choose ACME Input. This report shows ACME information from EVERY record in the .AIN file.

Ucode: This report, only available AFTER final TRANSAX processing, simply lists the final Underlying Cause for every record in the TRANSAX file.

Rare Causes (covered in Viewing Rare Causes).

Exiting ACME/TRANSAX

Closing an ACME/TRANSAX File

Before accessing some functions (e.g., re-setting the data path), you must close an open ACME/TRANSAX file. To close an ACME/TRANSAX file:

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 status bar at the top of the main screen. To open a new file, see Opening an Existing ACME Input File.

Exiting ACME/TRANSAX

There are numerous ways to exit ACME/TRANSAX. For shortcut keys such as {Alt+X} and {ESC}, see the Master Hotkey List.
To exit ACME/TRANSAX through the File Menu:

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** ACME/TRANSAX Function and press {ENTER}.

3.   A message window will be displayed.

      A.   To exit ACME/TRANSAX, press {Y}. The ACME/TRANSAX program will close.

      B.   To cancel the exit, press {N}. The main screen will be re-displayed.

System Manager's Guide

Purpose of System Manager's Help Documentation

The System Manager's section of this help documentation contains some of the more technical information and overarching system topics, such as:

- Installation

- data paths / file management

- data flow

- specifics about input/output files.

As you would expect, the System Manager's section covers setup, coordination, and data flow from the perspective of a System Manager. This section contains information applicable to each of the programs in the MMDS software suite (SuperMICAR, MICAR200, and ACME/TRANSAX). For further help with the MMDS software, see Technical Support for MMDS Software.

Installing the MMDS Software

To install the MMDS software, you will need:

1. The latest version of the MMDS software on CD-ROM.

2. These installation instructions (shipped as an enclosure with your software and also contained in the System Manager's Guide section of the help documentation).

Steps for installing:

1. Insert the CD-ROM into the CD-ROM drive. The AutoRun feature should automatically begin the installation process. If the setup does not automatically begin, then you will have to start the install process by double-clicking on Setup.exe located on the CD-ROM (go under Start, Run, and type "d:\setup.exe" where "d" is the letter of your CD-ROM drive).

2. The Setup screen will now ask if you to select the destination directory for the software. "C:/WinMMDS" is the default directory in which the files will be installed. If you need to change the directory, click the Browse button and choose an alternative directory. Note: If you choose a directory other than the default directory, you should be sure to verify the path settings (go under Tools | Options) the first time you run each of the MMDS programs. Click Next to continue.

3. The setup screen will then ask you to choose a Setup type. You can choose from **typical**, **compact**, or **custom** (default is typical). Select the setup you wish and click Next to continue.

A. A **typical** installation will install the entire MMDS software suite, including SuperMICAR (along with UtilsMICAR), MICAR200, and ACME/TRANSAX.

B. A **compact** installation will install only the data entry package: SuperMICAR.
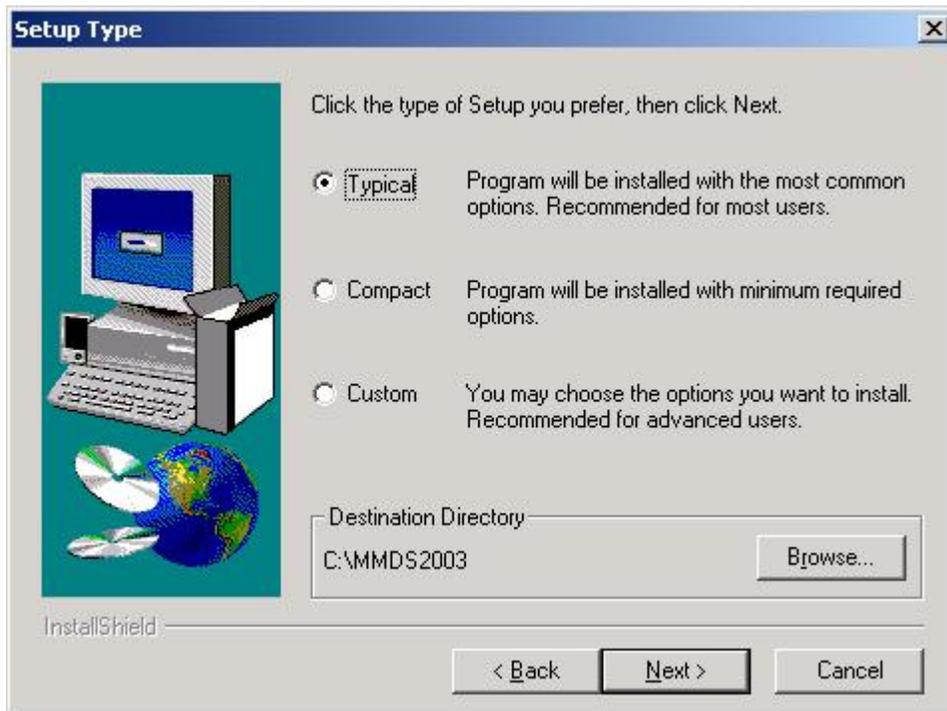
C. A **custom** installation allows you to select which of the programs will be installed. If you click Next, a new dialog box will appear where you can select which program(s) to install. Click Next to continue.
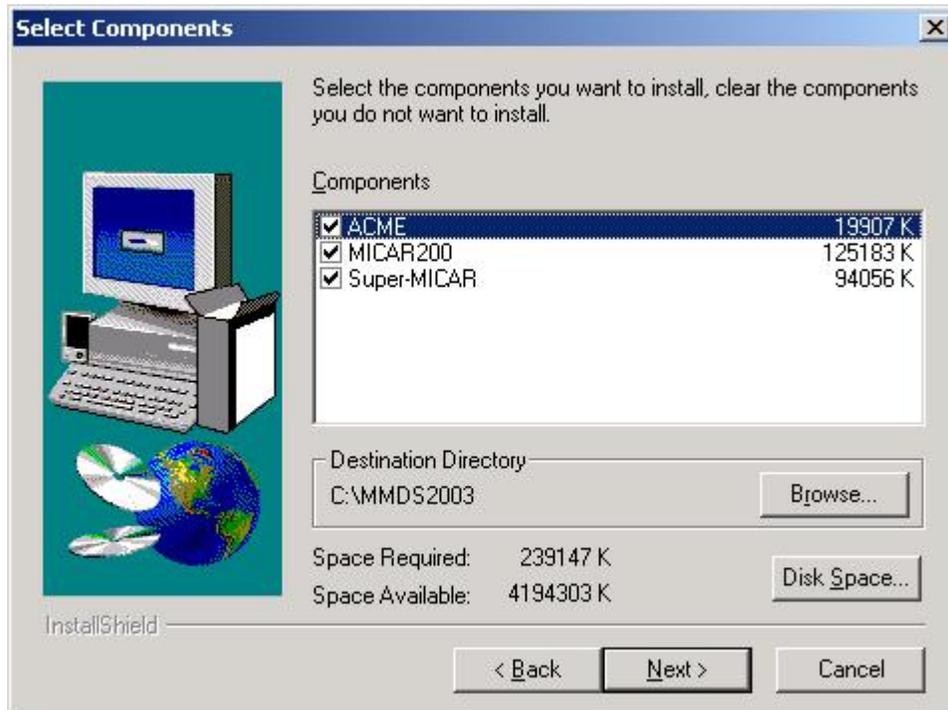
4. The Select Program Folder screen will appear and give you the chance to rename the folder in your Start Menu where the programs icons will be placed (default = "WinMMDS"). To change the name, type over the default folder. Click Next to continue.

5. A confirmation screen will display your installation choices. Click Back to change any of your installation choices, or click Next to continue.
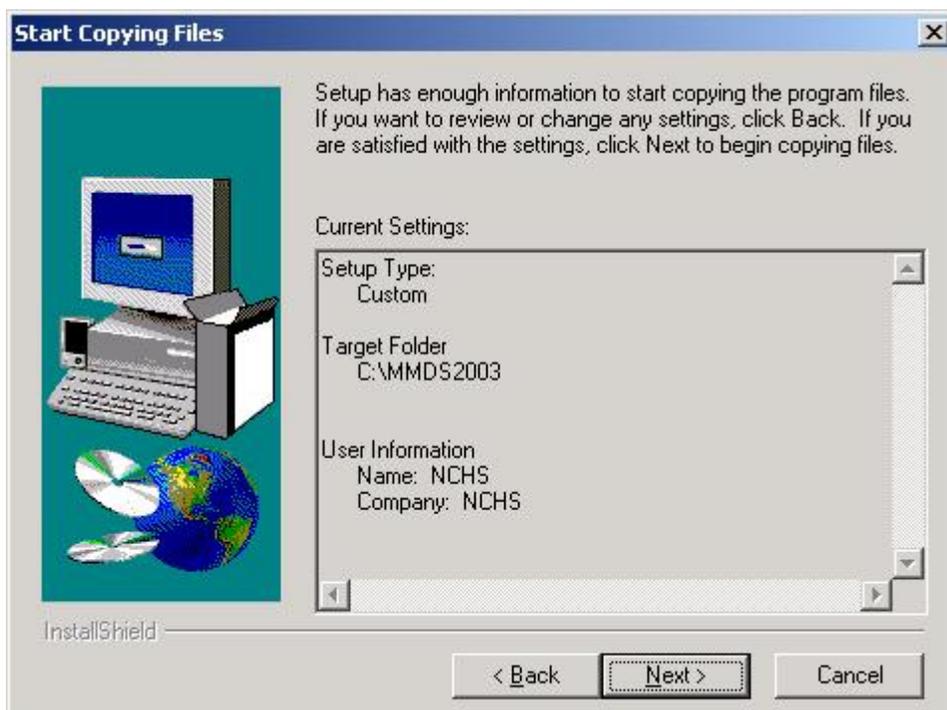
6. Setup will copy the necessary files and install the icons.
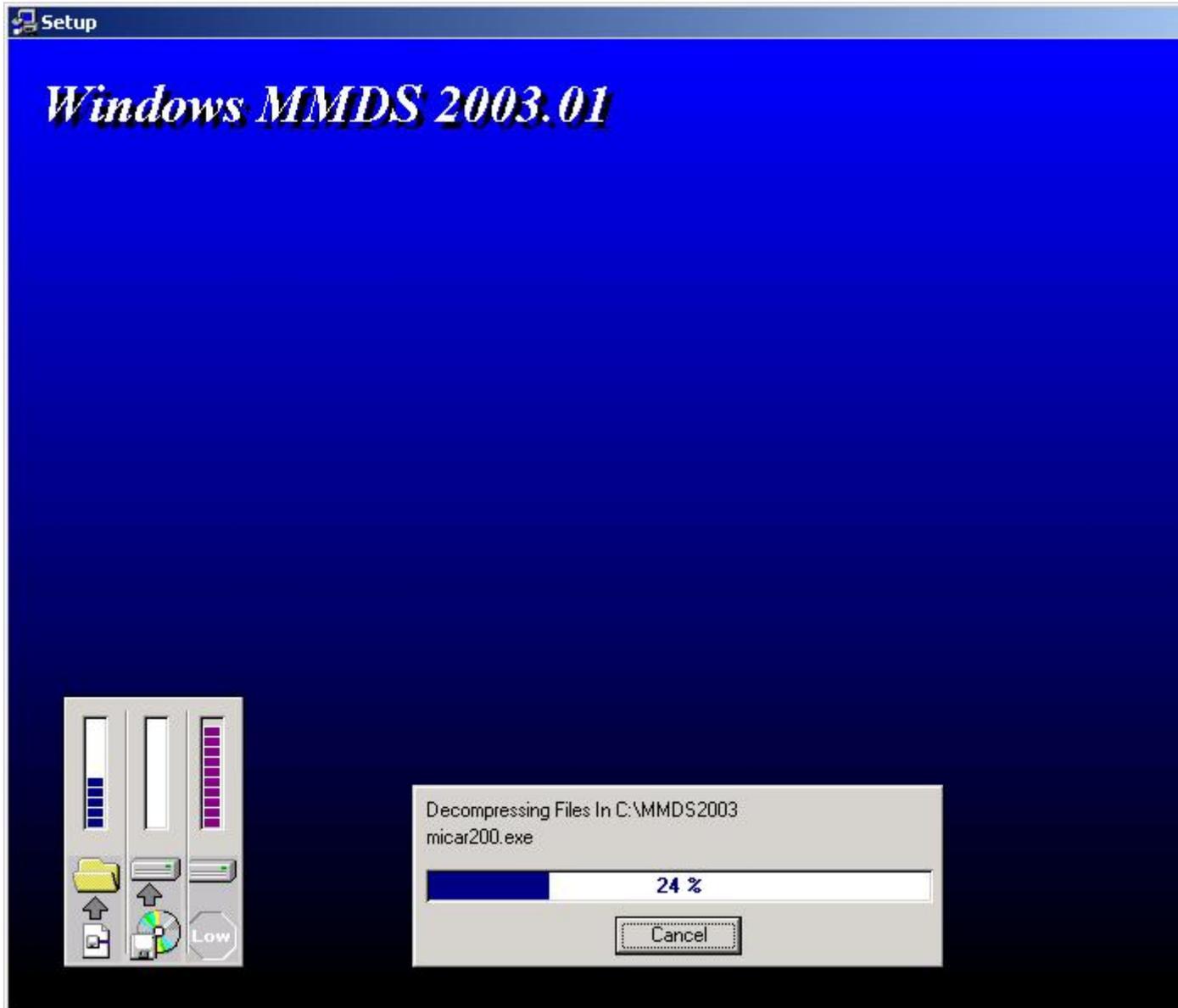
7. When the installation is finished, click Finish to end the MMDS software setup. To run one of the MMDS programs, click onto Start | Programs | WinMMDS (your folder name from step 4) and choose the program you want to run (e.g., SuperMICAR).

File Naming Conventions

SuperMICAR files must be exactly seven characters. For consistency, it is recommended that each state use a file naming convention that allows the system manager to easily identify each file by its name. NCHS uses a file name convention that identifies each file by its state abbreviation, lot number, data year, and coder status. Thus, each filename would look like this:

SSYYLLL.xxx, where

SS   is the state abbreviation.

YY   is the 2-digit data year.

LLL   is the **shipment** number.

.xxx   is the file extension that identifies each type of file. For more information about file types used by the MMDS software, see Files Used by MMDS Software.

Using the NCHS file naming convention, the file for: Alabama, shipment A12, in year 2000

would have the name: AL00A12.DBF.

While the states are free to use any file naming convention they desire, the file name convention described above is used to name the backup file when backing up a batch for shipment to NCHS (The **Backup for NCHS** functions will rename the files to match this convention, drawing their information from the header information).

Work Flow Diagram
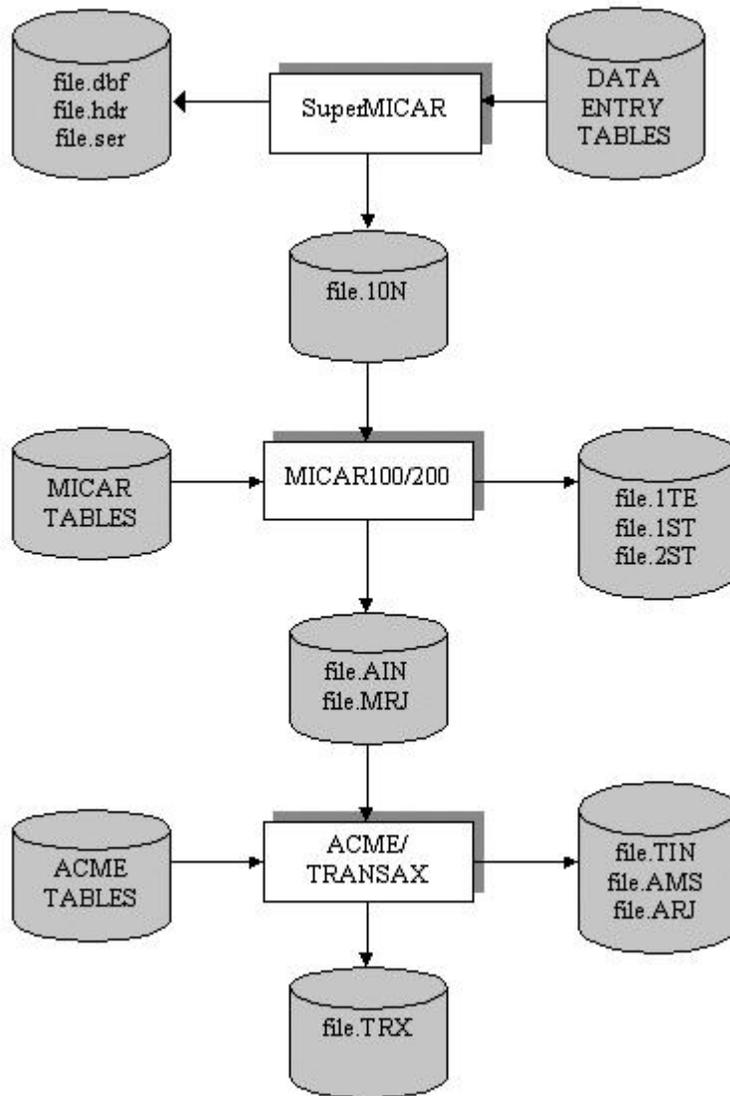
Files Used by MMDS Software

The MMDS software uses a wide variety of file names and file types. These are detailed below.

MMDS Files Include:

Input files are used to begin work.

Working files are used by the programs.

Output files are used to send files to next stage.

Backup files are used to save and transmit data.

Report files are used to show results.

Configuration files store operational information.

Help files contain tips for software use.

Table files are used in processing.

Data Entry Input Files

SuperMICAR

- Uses *filename.*DBF for Open and Create functions. This is a database file containing some of the certificate data. Note: The three Data Entry Working Files (see below) must accompany this file in order for the Input Files to work properly.

- Uses *filename*.S10 for Import function. This is an ASCII file used to take data already captured as text into a SuperMICAR database file.

Data Entry Working Files

SuperMICAR uses the following working files along with the *filename.*DBF files. These three files plus the *filename.DBF* **MUST** be present for the *filename.*DBF file to work properly.

- *filename*.FPT contains some certificate data not found in the DBF file. It is a database file.

- *filename*.CDX is the index for the database files.

- *filename*.HDR is the file containing the header information for each file.

Note: The system will keep these three files plus the *filename*.DBF together. If you ever have to manually copy these files, it is imperative you copy all four of them. A DBF alone is not sufficient to use or from which to recover data!

- *filenameA*.dbf, *filenameA*.cdx, and *filenameA*.fpt combine to hold Additional Information (AI).

Data Entry Output Files

SuperMICAR uses the following file extension for output files.

- *filename*.10N is the output file. It is a "flat file" (ASCII text). The file is created after processing by using the Generate MICAR 200 File function. The file is then used by MICAR200.

Data Entry Backup Files

SuperMICAR

- *filename*.SBK files are created by Backup All function.

- *filename*.SUP files are created by Backup for NCHS function and are renamed by the software.

- *filename*.SB$ files are safe "restore" backups, generated when a previous backup exists to prevent data loss.

- *filename*.SU$ files are "2nd generation" backups. If a backup file already exists, then upon further backup, that information is "pushed" into the *filename*.SU$ file.

Data Entry Report Files

SuperMICAR generates report files used to present information.

- *filename*.SSQ files are created by sequence checks in SuperMICAR.

- *filename*.SER files contain error listing and processing information in SuperMICAR.

- *filename*.POI files contain place of injury listings.

- *filename*.SPL files contain misspellings report(s).

- *filename*.SIL files contain ILLEGIBLEs report(s).

- *filename*.DUR files contain non-unit durations report(s).

- PRINT.TXT file contains the text of the latest Print All Certificates request.

- PRINTREJ.TXT file contains the text of the latest Print Rejected Certificates request.

- MICTIME.RPT file contains the Coder Statistics report.

- MICLOAD.RPT file contains the import validations report.

MICAR200 Input Files

- *filename*.10N file for Open function. This is an ASCII file containing all the information from the data entry software.

MICAR200 Output Files

- *filename*.AIN is the output file

- The *filename*.AIN file is created by the Process All Records function. This contains the records ready for ACME processing. This is an ASCII file.

- A *filename*.MRJ file may also be created if the option to "Code Multiple Cause in ACME" is set to "YES." If this option is set to "No" the MRJ file will not be created. This contains the records requiring coding for data entry errors or multiple cause coding. This is an ASCII file.

These files are then used by ACME/TRANSAX.

MICAR200 Report Files

- *filename*.SSQ files are created by the Sequence Check function. This is an ASCII file.

- *filename*.1ST and filename.2ST files contains the statistics reports from MICAR100/200 Processing and may be viewed with the View MICAR 100 Statistics and View MICAR 200 Statistics functions.

ACME/TRANSAX Input Files

- Uses *filename*.AIN for the Open Input File function. This is an ASCII file.

ACME/TRANSAX Working Files

- *filename*.MRJ file is used by the Edit MICAR Rejects function. This is an ASCII file.

- *filename*.ARJ file contains ACME rejects and is used by the Edit ACME Rejects function. This is an ASCII file.

- *filename*.TIN file is the TRANSAX input file and is used by the Process TRANSAX function. This is an ASCII file.

ACME/TRANSAX Output Files

- *filename*.TRX is the output file for ACME/TRANSAX. This is an ASCII file.

- The *filename*.TRX file is generated by the Process TRANSAX function.

- The *filename*.TRX file is the final output file of the MICAR system.

ACME/TRANSAX Backup Files

- *filename*.ABK files are created by the Backup All Files function.

- *filename*.ZIP files are created by the Backup for NCHS function and are renamed by the software.

- *filename*.AB$ files are safe "restore" backups, generated when a previous backup exists to prevent data loss.

ACME/TRANSAX Report Files

- *filename*.SSQ file is created by the ACME Sequence Check function. This is an ASCII file.

- *filename*.AMS file contains ACME Messages and is created by the Process ACME Input function. This is an ASCII file.

- *filename*.AST file contains ACME Statistics information and is created by the View ACME Stats function. This is an ASCII file.

- *filename*.RAR file is created IF you have rare causes. This is an ASCII file.

MMDS Configuration files

Configuration files store useful program information such as path settings and last file open.

- MMDS2003.ini stores the valid path and other configuration settings for all programs.

MMDS HELP Files

- *MMDSHelp*.HLP is the help file; It is activated by choosing "Contents" or "Index" under the Help Menu or by pressing {F1}. This file can also be run independent of the MMDS software.

- *MMDSHelp*.CNT is the associated Table of Contents file for the electronic help file.

- *RoboEx32.dll* is a "helper" file necessary to properly run the electronic help documentation.

Table Files

The MMDS system relies on a large number of tables to maintain accurate processing. These are installed in the TABLES directory. Each of the .DBF files has a corresponding .CDX file and a corresponding .DAT file as well. None of these files should be modified by the user.

SuperMICAR Tables

Bbd.DBF	The BBD.DBF file contains an entity reference number (ERN) dictionary for over 150,000 medical causes of death. These are used during processing to look up entity reference numbers. The BBD.DAT file looks up text to find a matching ERN.
Ern.DBF	The ERN table
Extern10.DAT	A textual definition of the External Cause prompts. This file is read to create the menus and selections taken from the External Cause prompts. This file is installed in the <TABLES> directory.
Dict.DBF	A list of words recognized by SuperMICAR and their attributes.
Lexicon.DBF	A list of words used by the spell checker.
Ruledata.DBF	A list or words and weightings used for external processing.
Thesaur.DBF	A list of words and their synonyms.
States03.TXT	A list of state abbreviations and codes.

MICAR200 Tables

Abbrev.FIL	Text file of common medical term abbreviations.
Aspatin.W99	Asphyxiation anchor table.
Aspstin.W99	Asphyxiation subanchor table.
BBD.DBF	Table takes TEXT and returns associated ERN.
Cantin.W99	Cancer table.
Cvtern.W99	Table takes ERN and returns associated ICD code. This table also contains the rules control flags, which drive decision-making.
Delword.FIL	Text file of words the system is allowed to drop during lookup.
Eccvtin.W99	E-code conversion table.
ERN.DBF	Table takes ERNs and returns associated TEXT.

Ext-ern.DBF	Table containing ERNs that denote Nature of Injury.
Histcan.W99	Histiological cancer table.
Histsyn.W99	Synonymous subanchor for Histiological cancer table.
Icatin.W99	Intent of Certifier anchor table.
Icstin.W99	Intent of Certifier subanchor table.
Ipsyns.W99	Infectious & Parasitic Disease synonyms table.
Iptable.W99	Infectious & Parasitic Disease table.
Lst1fil.W99	Surgery table 1.
Lst2fil.W99	Surgery table 2.
Lptable.W99	L-prompt table.
Mcatin.W99	Malignant Cancer anchor table.
Mcstin.W99	Malignant Cancer subanchor table.
Rhdtin.W99	Rheumatic heart disease table.
Rmcalc.W99	Relating and Modifying exceptions for Calculus table.
Rmedema.W99	Relating and Modifying exceptions for Edema table.
Rmhemex.W99	Relating and Modifying exceptions for hemorrhage table.
Rmsyns.W99	Relating and Modifying synonyms anchor table.
Rmtable.W99	Relating and Modifying anchor table.
Subern.FIL	Binary file of out-dated ERNs, with new equivalent ERNs.
Synonym.FIL	Text file of synonyms for common medical terms.
Vcodes.W99	ICD-10 code validation table.

ACME/TRANSAX Tables

Conv.2K3	The table used to convert artificial ICD-10 codes to original ICD-10 codes for a selected underlying cause
Taba.2K3	A file of ACME causal relationship tables.
Tabb.2K3	A file of ACME causal modification tables.
Triv.2K3	A TRANSAX file containing pointers to the modification tables.
Vcodes.2K3	A list of valid ICD-10 codes.
Traxtab.2K3	TRANSAX table.
States03.TXT	A list of state abbreviations and codes.

Importing from an ASCII File

SuperMICAR has the ability to read certificate data files created by some other data entry packages, but this data must "imported" into a format that the MMDS software can recognize. Neither ACME/TRANSAX nor MICAR200 need an import function because the input files are in ASCII format (no import is necessary).

SuperMICAR can import from a valid S10 SuperMICAR import file format, a flat ASCII file whose format is specified. This is identical to the SEX SuperMICAR export file format. Note that since the SuperMICAR file retains the original text from the certificate, the literals, this results in a duplicate of that record.

To import data from a file using SuperMICAR:

1. Press {Alt+F} to select the **File** Menu Option.

2. Use the up and down arrow keys to highlight the Import function. Press {ENTER}.

3. If a file is currently open, a window will be displayed asking you to confirm that the file should be closed before the import is done. Selecting "Yes" will close the open file and continue the import. Selecting "No" will abort the import function.

4. An Import file dialog box will be displayed. This is very similar to the Open File dialog box and works the same way except that the files shown will be different. SuperMICAR will display all *.S10 files in the directory. The initial directory shown will be the data directory as set in the Tools|Options function.
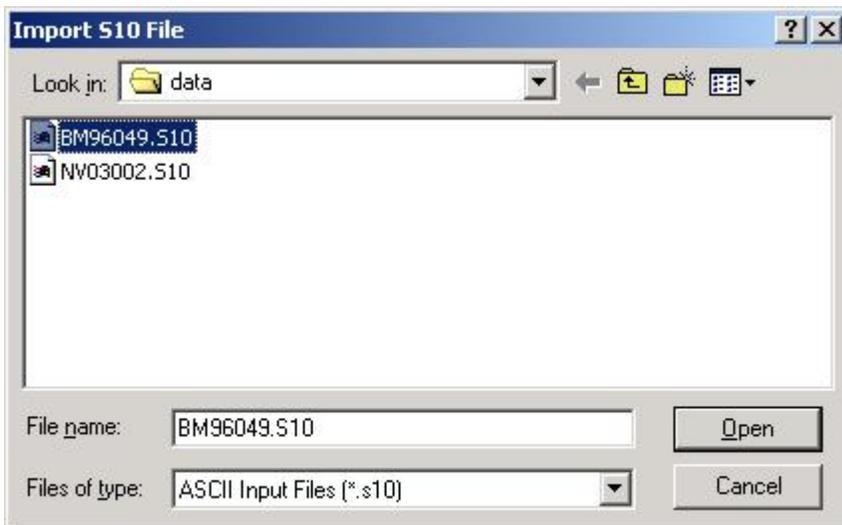
5. The following fields will be displayed on the file selection window:

    Look In: Used to select the directory of files to be listed. Defaults to the current Data Path as set in Tools|Options. Clicking on the list arrow at the right side of that field will allow you to browse through directories.

    List of files: Displays all files of the appropriate extensions in the currently selected directory.

    File Name: Allows user to enter a specific filename or will display the name of the selected file.

    Files of Type: Restricted to the appropriate file type only.

    Open and Cancel Buttons: Used to accept selected file or to cancel open file operation.

6. To select a file from the **List of files** for processing:

    A. Use the {TAB} key to put the cursor in the **List of files** field and use the up and down arrow keys to highlight the desired filename. The list will scroll up or down to display additional files. Press ENTER to proceed with opening the selected file.

    or

    B. Use the mouse to click on the file shown in the **List of files** field and either double-click on the file or click on the OK button to proceed with processing the selected file.

    NOTE: You can only select one file. Choosing multiple files at once is not possible.

7. Once a valid file has been selected it will be imported into a database and other required database files (DBF, FPT, CDX, HDR etc) will be created. A progress bar will be displayed showing what percentage of the file has been imported. When the import is complete, a message will be displayed. Press {ENTER}.

8. When the formatted file has been read, a message window will be displayed. If there were any errors detected during field validation, a report of those errors will be stored in a file called "MICLOAD.RPT." The following errors may be reported as a result of field validation:

"Invalid Certificate Number" (the certificate number is not exactly 6 digits)

"Data Year and/or State Code does not match that of first record" (value for data year or state does not match that of the first record)

"Invalid Age Specification (changed to unknown)" (age equals "000" or does not have exactly 3 digits)

"Invalid Injury Date (changed to unknown)" (injury date is not in valid date format)

Here is a sample of the MICLOAD report (MICLOAD.RPT):

> SuperMICAR Import Error Listing
>
> Certificate 076001: Invalid Age Specification (changed to unknown)
> Certificate 076072: Invalid Age Specification (changed to unknown)
> Certificate 076109: Invalid Age Specification (changed to unknown)
> Certificate 076170: Invalid Age Specification (changed to unknown)
> Certificate 076264: Invalid Age Specification (changed to unknown)
> Certificate 076382: Invalid Age Specification (changed to unknown)
> Certificate 076433: Invalid Age Specification (changed to unknown)

9. Press "OK" to re-display the main screen. The imported file will be open and ready for use. The original text file remains but a set of DBF files using the same filename have been created.

Exporting to ASCII Files

SuperMICAR has the ability to export its data in its entirety into an ASCII file format, identical to the S10 format. This can be useful for providing text files of the original certificate data for use with mainframes, queries and import into other software. ACME and MICAR200 provide for no export functions beyond their typical processing.

Before files can be exported, the following steps must have already been performed:

A certificate file must be open and have certificates in it (see Creating a New SuperMICAR File, or Opening an Existing SuperMICAR File.

1. Only the file that is currently open can be exported. To open a file, see **OPENING A CERTIFICATE FILE FOR PROCESSING** in the *SuperMICAR User's Guide Manual*. The formatted file will be written to [filename].SEX, where [filename] is the name of the currently open file.

2. With the file open, choose the File | Export to ASCII menu option.

3. A progress bar will be displayed showing what percentage of the processing is complete.

4. When the new files has been created, a message window will be displayed. Press {ENTER}. **WARNING**: The Additional Information data from SuperMICAR is given in the same format described in **the S10 file format.** All of the certificate data will be written out, followed by the AI data. A single line of three asterisks (***) will separate the certificate data from the AI. For example:

    All Certificate Data

    ***

    All Additional Information

5. The main screen will be re-displayed.

6. The file is exported into the data directory as set in the Tools|Options. It will be named after the original filename with an SEX extension.

Regenerating a File Index

Occasionally, the file index may be damaged and need to be repaired. The Regenerate File Index function of SuperMICAR rebuilds the file index from the data file.

To regenerate file indexes, you must be running SuperMICAR:

1.   Press {Alt+T} to select the **Tools** Menu Option.

2.   Use the up and down arrow keys to highlight the Regenerate File Index function and press {ENTER}.

3   A message will be displayed, stating that the index is being regenerated.

4.   When the file index has been completely rebuilt, the main screen will be re-displayed.

Merging Several Files Into One File

SuperMICAR can perform two distinctly different merge functions. The "Merge Multiple (New File)" function allows the user to create a brand new file by merging multiple files together (The user must provide the filename for the new file being created). For more information on the "Merge File Into Open File" function, which allows the user to merge another file into the file that is currently open, see Merging a File Into an Open File.

SuperMICAR and ACME/TRANSAX allow you to merge together several files into one file. This can be useful for combining files worked on by several coders before processing or to combine monthly files into an annual file. You can only merge files in the current data directory. If you wish to change directories, exit Merge and use Tools|Option to change the data path.

Note: This merge methodology creates the new merged file and leaves your original files untouched, which is different from the Merge File Into Open File function in SuperMICAR.

SuperMICAR merges DBF files. ACME/TRANSAX merges TRANSAX files, so for the ACME/TRANSAX merge, you must have already finished Processing a TRANSAX File.

To Merge Several Files Into One File:

1.   Press {Alt+F} to select the File menu option.

2. Use the up and down arrow keys to highlight the Merge Multiple (New File) function and press {ENTER}.
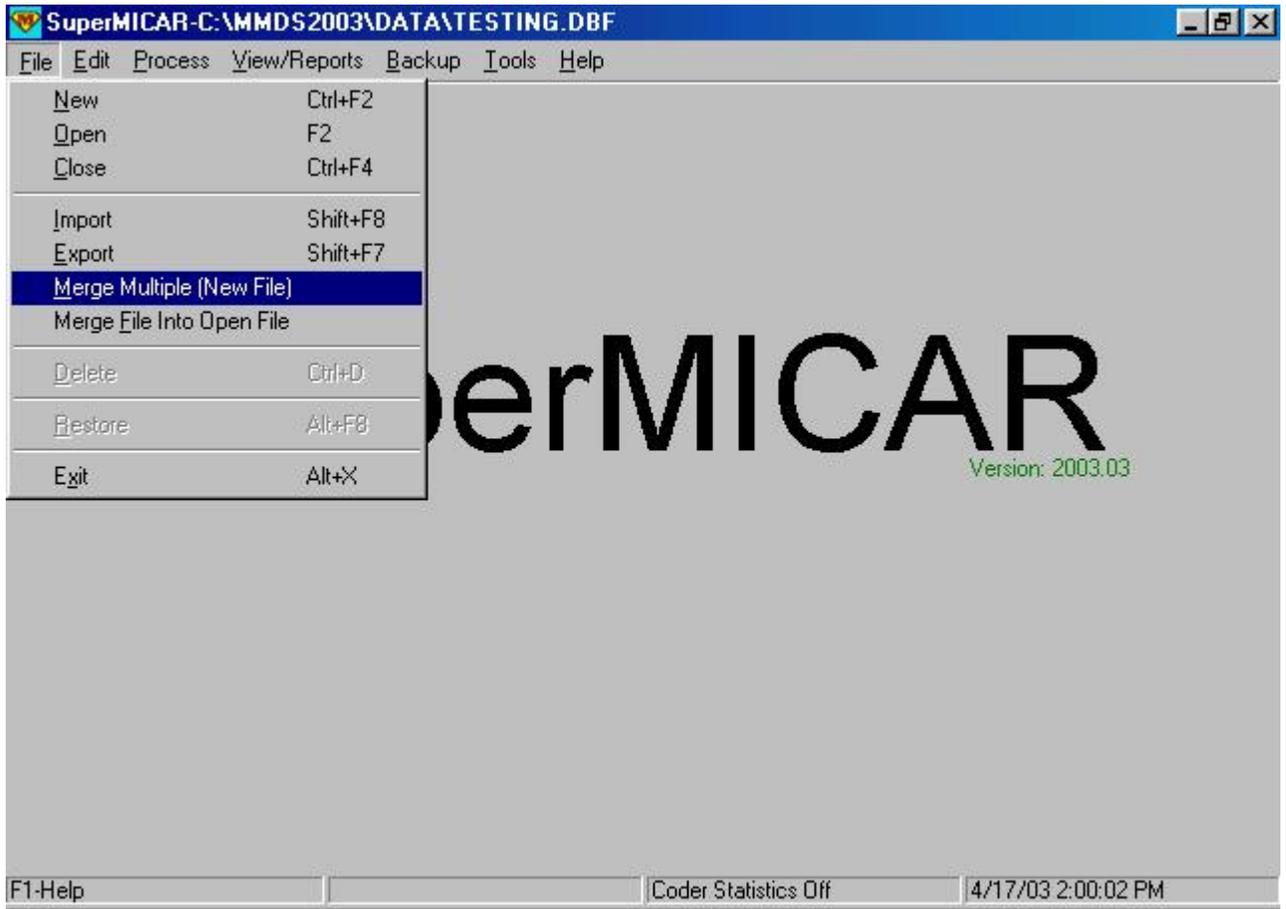
3. A Create File Name dialog will be displayed. You must give a name to the new merged file. This name cannot duplicate an already existing file. Once you have entered the filename, press ENTER.

4. A Merge function dialog will appear. In the large field on the left, all files of the appropriate type will be displayed in the Mergeable Files List. This will be DBF files if you are in SuperMICAR and the TRX files if you are in ACME/TRANSAX. Files on the left you select to merge will appear in the Destination List.

bmc sys009.bmp}

5. To move a single file, click to select it and then click on the single > button (or you can just double-click on the filename). You will see the file removed from the left-hand list and appear in the right-hand list. It can be sent back by clicking on it and clicking the single < button (or just double-clicking the filename). The double >> and double << buttons will transfer ALL FILES in the chosen direction.

6. Once all the files you wish to merge have been placed in the destination window, click OK to merge the files.

CAUTION: The files will be merged in the order they are listed. When a duplicate record (e.g., another certificate #000467) is encountered, the newly-encountered record will OVERWRITE the previous record. Therefore, you should be sure that any update files appear last in the merge list.

Note: All of the files must have identical State and Data Years (see Editing SuperMICAR Header Information) for the merge to be valid; if the chosen files are from different states or different data years, the merge will not be performed.

7. A Header Information Screen will be displayed, giving the user the chance to make any necessary changes to the header information. Note that the shipment number will be blank and the correct shipment number should be inserted at this time.

8. A window will be displayed indicating that the merge is underway.

9. When the merge is completed, a message will be displayed indicating whether the merge was completed successfully.

10. A sequence check window will be displayed. The beginning and ending certificate numbers are already drawn from the newly-created merge file. You may change those values if necessary. Press {ENTER}.

11. The output of the sequence check will be displayed. Use the up and down arrow keys (or {Page Up} and {Page Down}) to scroll through the output. Press {ENTER}. To print a copy of this report, press {Alt+P} (or click on the "Print" button). Press {Alt+C} or {ESC} (or click on the "Close" button) to close the output window.

12. The main screen will be re-displayed.

Merging a File Into an Open File

SuperMICAR can perform two distinctly different merge functions. The "Merge File Into Open File" function allows the user to merge a file into the currently open file. This is distinct from "Merge Multiple (New File)," which allows users to create a brand-new file by merging together more than one existing files (the user must provide the filename for the new file being created). For more information on the "Merge Multiple (New File)" function, see Merging Several Files Into One File.

The "Merge File Into Open File" function will merge an existing file into the currently open file.
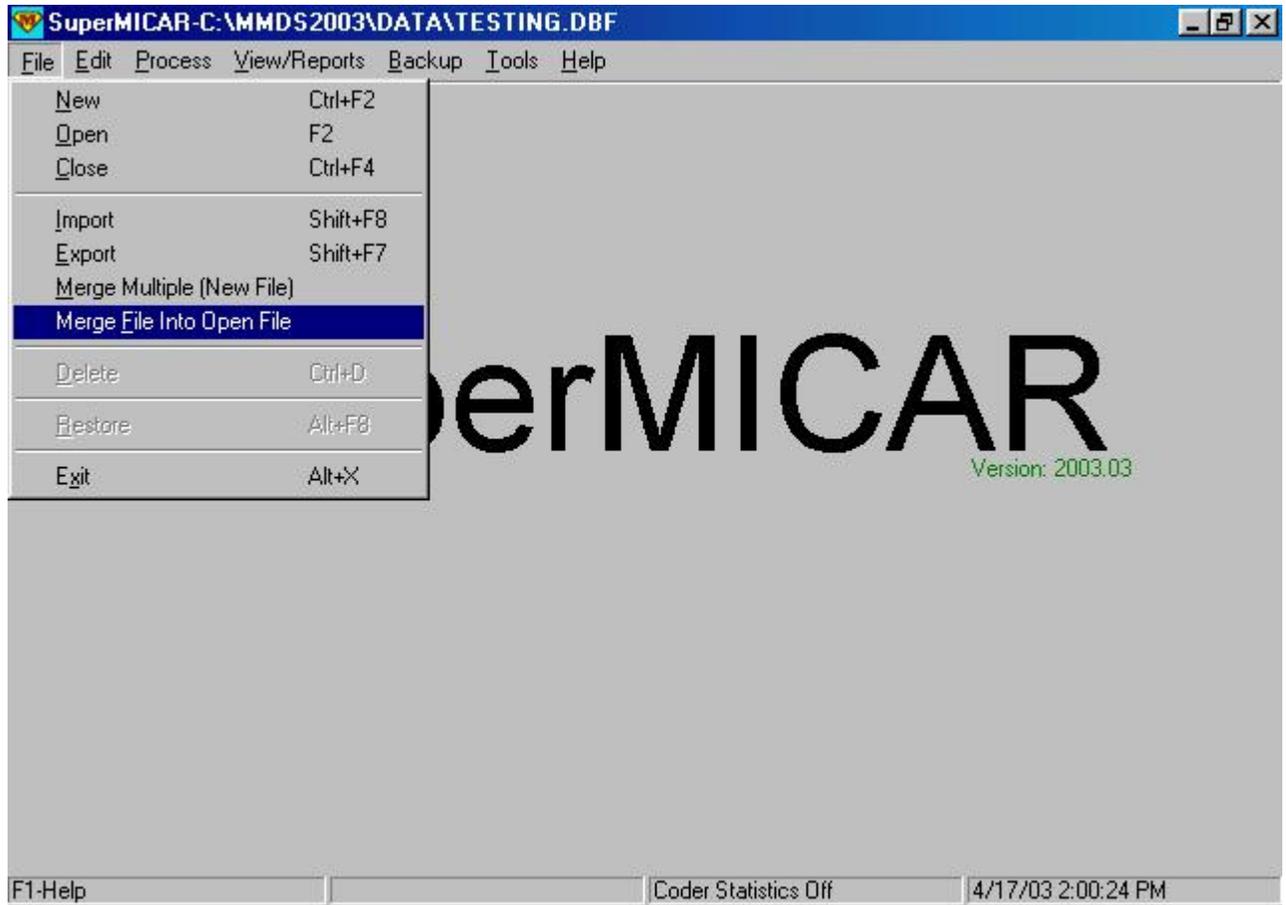
1. With a file open, the user can select "Merge File Into Open File" from the File menu. At the dialogue box, select the file to merge into current file:
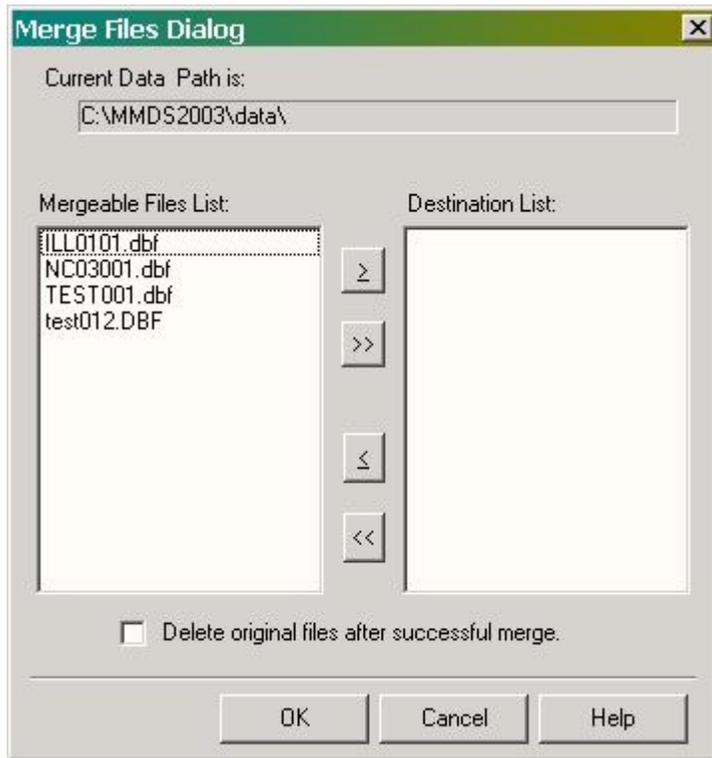
Note: The file being merged into the open file must have identical State and Data Year information (see Editing SuperMICAR Header Information) for the merge to be valid; if the files are from different states or different data years, the merge will not be performed.

2. A window will be displayed indicating that the merge is underway.

3. When the merge is completed, a message will be displayed indicating whether the merge was completed successfully.

4. A sequence check window will be displayed. The beginning and ending certificate numbers are already drawn from the newly-created merge file. You may change those values if necessary. Press {ENTER}.

5. The output of the sequence check will be displayed. Use the up and down arrow keys (or {Page Up} and {Page Down}) to scroll through the output. Press {ENTER}. To print a copy of this report, press {Alt+P} (or click on the "Print" button). Press {Alt+C} or {ESC} (or click on the "Close" button) to close the output window.

6. The main screen will be re-displayed.

The Unified Data Directory

The MMDS for Windows software uses a unified data directory. The files are kept in one location as they go through data entry and then processing with MICAR 200 and even on to ACME/TRANSAX. This greatly simplifies the task of monitoring data paths. Because the software was designed for use with this unified data directory, and because files are often shared between different programs in the software suite, it is very important that the data paths reflect this unified approach. See Setting MMDS Options for more information.

While you can use the Options functions to maintain different paths and different directory structures than the default settings, it is recommend that the unified data path be used.

Setting MMDS Options

Each program has a series of options that need to be set for the program to run properly. In each case you can set all the options by checking under the Tools menu for the Options function.

This will bring up a dialog box with all the available options listed.

Note: Some Options functions will be inaccessible while you have a file open (e.g., you cannot change the data directory with a file currently open). To change inaccessible directories, close the current file.

Default Directories

During installation, the programs of the MMDS suite are written to shared directory. Each of the programs uses that install directory as a default for storing the files it needs to operate. You can change the directories using the Options menu if necessary. The default data, table, and backup directories used during a standard installation are:

Data Path: C:\WinMMDS\Data

Table Path: C:\WinMMDS\Tables

Backup Path: C:\WinMMDS\Backup

Other SuperMICAR Options

Coder Statistics ON: Check this box if you want the coder stats on while using SuperMICAR. Once you've chosen to turn coder stats on, you must enter a coder ID (any combination of eight characters or less). To turn coder statistics off, uncheck that box on the options screen.

Other MICAR200 Options

Multiple Cause Coding: This sets whether the MRJ file will be generated by Process All Records. This should normally be set to Yes. Default is set to Yes.

Backups

SuperMICAR and ACME/TRANSAX have backups functions. These are functionally identical and differ only slightly in the final output products (backup files). See the sections on SuperMICAR and ACME/TRANSAX for more program-specific information on using the backup functions.

When any backup occurs, the data files are copied from the data directory into one backup file in either the backup directory or the selected floppy drive. The backup files themselves are compressed to save space. The backup files use PKZIP compression and can be manually opened with that program.

Backup All Files

This function will backup all files of the given filename in the data directory.

The files will be output as a single backup file in the backup path or to a floppy depending on what you choose. The extension for the backup files will vary depending on the program:
SuperMICAR uses *filename*.SBK
ACME/TRANSAX uses *filename*.ABK

The filename will remain the same as named by the user.

This function is useful for doing daily backups. It is highly recommended you do a backup at least once daily.

When the Backup All Files function is used, a check box appears on the dialog box to "Remove files when done." Check this box to delete the data files after the backup is complete and the data files have been verified. Because the box defaults to unchecked, the files will not be removed unless you specifically check the box. Removing files is useful when work on a batch is done. This function should not be used when the file still has work yet to be finished.

Backup for NCHS

In both programs, this function will backup the files of the given filename NCHS wants from your data directory.

Both programs will rename the files and the backup file to match NCHS specifications. This information will be independent of what filename you had given. **The filename information will be drawn from the header information, so it is imperative that you update the header information for each file before performing this backup**. Specifically the program will draw the state, the year and the shipment number to construct the filename in the following format: SSYYLLL. The file extension will vary from program to program:
SuperMICAR uses *filename*.SUP
ACME/TRANSAX uses *filename*.ABK

This function is to be used for sending files to NCHS when the user is finished with them.

Recovery Files

In doing a backup, SuperMICAR and ACME/TRANSAX check for a previous backup. If one exists you will be prompted whether you want to continue.

If you choose NOT to continue, the backup is cancelled.

If you choose to continue, the previous backup file is renamed and a new one created. At this point there are TWO backup files, the older one and the most recent. This way any given backup file is an accurate representation of the file(s) at a moment in time. The older "recovery" file will have the same filename as the backup but the extensions will be different:

SuperMICAR uses SB$ and SU$ extensions
ACME/TRANSAX uses AB$ and ZI$ extensions

These files can be restored using the restore function (see Restoring from Backup) in case of emergency. They provide one additional level of backup safety.

Restoring from Backup

The Restore function works very similarly to an Open file function (see, for example, Opening an Existing SuperMICAR File). The primary difference is the Restore function extracts the files from a backup file and copies them into the data directory.

Networks and the MMDS software

The MMDS software can accept network drives and directories for any of these paths. However there are some things to consider. See the help section on Troubleshooting Common Problems (e.g., Avoid Networked Tables) for more discussion on problems arising from improper use of the MMDS for Windows software on network drives.

Data Path to a network drive is acceptable but <u>NOT recommended</u>. Keep in mind that your users will be unable to work on these files while the network is down or experiencing instability. We recommend keeping the data path on the hard drive to enable reliable and swift access even during network interruptions.

Backup Path to network drive is acceptable <u>and recommended</u>. This allows you to share files, using Restore to get the data when starting a batch and Backup to return the files to the network file when done. In the meantime, while the files are being worked on, they reside on the PC. This allows for continuous work and sharing of data with minimal impact (both in space used and access time) on the networks. Backup path should NEVER be set to the same directory as the data.

Table Path to the network drives is acceptable but <u>NOT recommended</u>. While it will function, the addition of network lag times will **GREATLY** slow down processing and the high volume of calls to those tables in processing may affect network performance. Also, network failures during processing will cause the access to the tables to be lost, killing the processing in mid-stream. We strongly recommend keeping table files on the PC's hard drive.

Program files on network drives is <u>unacceptable</u> because this creates the possibility of multiple users running the same program from the same location at the same time. MMDS software will <u>not work properly</u> under this setup. It is recommended that the program files be kept on the PC's hard drives.

Contact Information

NCHS maintains a support staff to assist with any questions or issues that arise when using our software. See Technical Support for MMDS Software for more information.

MMDS History 101: From DOS to Windows

Versions of the MMDS software prior to version 2000 (January 2000) were DOS applications, MMDS version 2000 was the first Windows version of the software. There were several advantages to upgrading from a DOS

program to a 32-bit Windows program. The Windows operating system is very common in the market, familiar to most users, and offers a stable operating platform. By migrating to 32-bit technology, the MMDS software no longer depended on outdated technology.

For the most part, the Windows versions of the MMDS software behaved the same as the older DOS versions. While some changes were unavoidable, the Windows versions of the MMDS software generally maintained the same keystrokes and functionality as the older DOS versions.

Troubleshooting Common Problems

Avoid Networked Tables

Placing the MMDS table files on a network for shared use should be avoided for the following reasons:

- The speed with which the MMDS software will perform any processing or "lookups" will be greatly diminished.

- The high volume of operations required by the MMDS software during processing may impact overall network performance (or even cause "timeout" errors with other network software).

- Many MMDS functions will be unavailable if the network system goes down.

Networked Executables are Risky

The "executable" files consist of the MMDS files with the extension ".exe" (e.g., Supermicar.exe). These executable files should generally not be stored on network drives:

- The programs do not support two users working off the same executable file at the same time. In other words, multiple "instances" of the executable files are not allowed.

- It is recommended to have the program executables and data on the "local" PC workstation. It IS advised that backup files be stored on a network.

Networked Data Concerns

Multiple users cannot access the same .dbf file at the same time using the MMDS software. If a .dbf file is being used already, subsequent users attempting to access the file will see what looks like an empty batch, as if no certificates have been entered.

Large Fonts are BAD!

Windows allows users to customize their displays for fonts, colors, and resolution. This customization, however, can have undesirable effects on programs (such as the MMDS software).

The latest version of the MMDS software automatically accommodates for varying end-user resolution settings, but the software does NOT handle the LARGE FONTS setting well at all. Setting the user's system to LARGE FONTS will obscure the data entry screens in all the MMDS programs so that they will become unusable. To avoid this problem, please set user machines to SMALL FONTS.

CODEBASE ERROR

One of the more common errors users of the MMDS software have experienced is called a CODEBASE ERROR:

- Files created (or even worked on) with MMDS software version 2000.03 have the highest likelihood of producing this CODEBASE ERROR.

- Typically the CODEBASE ERROR will occur during processing or in data entry mode.

  The files which produce the CODEBASE ERROR can be fixed, however, using a common (FoxPro) database utility program. If you have a file that produces a CODEBASE ERROR, we suggest you send the file to NCHS (see Technical Support for MMDS Software) to have the file(s) quickly "repaired" and sent back to you.

  When this CODEBASE ERROR occurs in files later than MMDS software version 2000.03, there is typically an external cause for the error:

- The error could indicate trouble reading or writing due to: limited access rights to a network, low hard drive space available, or some other disk-space-related problem.

- The error could indicate a file corruption due to power failure or improperly shutting down the user's PC while an MMDS file was open.

- Other network instability could cause corruption of the MMDS file.

  Note: NCHS is currently working to build a routine into the MMDS software that will correct such corruption problems automatically (without requiring files to be sent back to NCHS).

Auto-Open Woes

One particular default behavior for SuperMICAR and ACME is referred to as "auto-open." This means the programs normally open with the file status the same as it was when the user exited program. This means that if the user had a file (e.g., .dbf) open when he/she quit using the MMDS software, the software (e.g., SuperMICAR) will attempt to re-open that same working file automatically when the program is next run.

The benefit of this approach is that if data entry or coding on a particular file takes several days, the user will not have to go through the File | Open process every time he/she re-starts the MMDS software.

The detriment to this approach is that even if the file is corrupted, the MMDS software will attempt to re-open that damaged file each time the program (e.g., SuperMICAR) is launched. Thus a user might be stuck watching SuperMICAR lock-up trying to open a corrupt data file whenever SuperMICAR is run.

Because shutting down and re-starting SuperMICAR will only result in the same problem (SuperMICAR will continue to attempt to open the corrupt file), the "Auto-Open Last File" feature can be disabled. Disabling this feature requires editing the MMDS2003.INI file using any text editor (such as Notepad or DOSEdit).

To disable the Auto-Open Last File feature:

1. Close all MMDS programs, and open the MMDS2003.INI file using the text editor of your choice (e.g., Notepad). The file (MMDS2003.INI) will be found in the same location as the executables - typically C:\WinMMDS.

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2. This .INI file holds information used by the programs of the MMDS software suite. Therefore, each program has it's own "section" (e.g., "[SuperMICAR]"). Find the section(s) for the program for which you want to disable the Auto-Open Last File feature.

3. Within each section (e.g., "[SuperMICAR]"), you'll find the following line: "AutoOpenLastFileOpened=true". In order to disable the feature, change the "true" to "false".

4. In the next line (last line of the section), remove any file path information following the equal sign. Thus the line should be: "LastFileOpened=".

Uncorrupting Files Using FoxPro

CODEBASE ERRORS can often be corrected without data loss. Here are some important tips when trying to fix corrupt files:

- SuperMICAR database files are, for the most part, FoxPro database files. However, the words "*for the most part*" are very important!

- Using Windows-based FoxPro (such as FoxPro 6.0) will allow you to access the SuperMICAR .dbf files directly.

The FoxPro commands to rebuild SuperMICAR data files are shown below:


```
set default to c:\mmdswork\fl
use fl0921a
copy with cdx to fixfile
```

"For the Most Part?"

SuperMICAR database files violate a field length rule employed in FoxPro (in one place - the "output to MICAR200" field). Consequently, if a SuperMICAR database is repaired (uncorrupted) using FoxPro (e.g., by using the above commands), the size of that field is automatically "fixed" by FoxPro to a shorter length. If left this way, that will prevent the SuperMICAR database file from producing valid output to MICAR200.

Fixing the FoxPro "Fix"

After using the FoxPro commands to create the fixfile.dbf (note: FoxPro also produces accompanying .fpt and .cdx files), this fixfile can be turned back into a SuperMICAR file. This involves using SuperMICAR to export the file to an ASCII file, preparing files for import, and using SuperMICAR to import an S10 file: For more detailed information on this procedure, please contact NCHS Technical Support (see Technical Support for MMDS Software).

Troubleshooting: "My Work is Gone!"

If a user calls you and says, "Help! My work is gone!" here are some likely causes to consider:

The paths on the user's system are set strangely or incorrectly. Check to see if the data paths have been changed - this could give you clues as to where to look for the file(s). Another tip: use searches (e.g., Windows Explorer under Tools | Find | Files or Folders) to find the files by name but in unexpected locations.

The file was misnamed. Check the data directory for oddly-named files that are dated the same times/dates that the "missing" file was thought to have been saved.

Accidental Restore/Backup

Sometimes a user begins a new day's work but discovers work he/she KNOWS was done yesterday is not in the file. In this situation the <u>file</u> is there, but work the user knows was completed is gone. This situation often reveals that the user inadvertently did a <u>Restore</u> instead of a <u>File | Open</u> or a <u>Restore</u> instead of a <u>Backup</u>.

<u>Restore instead of File | Open</u>. If the user properly backup up the file at the end of the day and then mistakenly restored the file (instead of opening it) at the start of the new day, then there is a reasonably good chance of recovering the data.

<u>Restore instead of Backup</u>. If the user mistakenly did a Restore at the end of the day (instead of a Backup), then the user has pulled in old files to overwrite the work done that day. In this case, full recovery of the data is less likely. A good indicator that the user has restored instead of backing up is the date/time stamp of the backup files:

- If the .dbf and .fpt files have a recent time/date (indicating the time/date of the last backup) and the other files are older (especially by a day or more), then likely there was an inadvertent Restore. In this case, go through the backup files and safety backups to see if those files contain some of the lost work. If not, the work probably cannot be recovered.

Troubleshooting: Missing Files

If the missing file is a .dbf or .fpt file:

- Look for a backup copy of the batch. Without a backup copy, this information cannot be recreated without re-entering the data.

- If the file was sent to you, ask your user to resend and list the files needed.

- If the file is on a local PC, check that PC and all related backups. For the missing file(s)

  If the missing file was a .cdx file, the menu item "Tools | Rebuild Index" can re-create the missing file (as long as all the other files are in place). But in order to even access the Rebuild Index menu item, you'll need to create a "fake" .cdx file - because if no .cdx file exists, SuperMICAR will not even allow the file to be opened.

1. Use File | New to create a new batch (which will include a "fake" .cdx file)

2. Rename that "fake" .cdx to match your missing *filename*.cdx.

3. Open the batch in SuperMICAR (File | Open).

4. Choose the menu item Tools | Rebuild Index.

Troubleshooting: Everything Rejected?

If every record in an ACME file is rejected, look at the reject codes showing on the edit screen:

If they are all reject code "2," then it is likely that the "Edit QC File" option under the Tools menu was improperly chosen at some point.

To correct this, chose the Tools | Undo "2" menu item and reprocess the file.

Be Very Careful with MICAR200

Do not reprocess a file in MICAR200 if you have done any reject coding in ACME!

MICAR200 produces a new .ain file from the original data entry.

The .ain file stores the work you did coding multiple cause and underlying cause in ACME.

If MICAR200 Process All is rerun after ACME coding, you will lose that coding because the existing .ain will be overwritten.

Alt-F9 Saves

In ACME can be important that users press Alt-F9 to save work periodically. ACME does not save the file between each record (e.g., Page Down). Instead, all current work is stored in memory until F9 is used (or File | Save is chosen from the menu).

Therefore, if the user's PC crashes, or the power goes out, or any other problem forces an unconventional shut-down of ACME, all the work stored only in memory (rather than on the hard drive) will be lost.

In this regard, ACME behaves unlike SuperMICAR, where going on to the next record automatically saves that record to the hard drive.

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MMDS File Formats

SuperMICAR Input File Record Format

The Additional Information data from SuperMICAR is given in the same format described in the following table. All of the certificate data will be written out, followed by the AI data. A single line of three asterisks (***) will separate the certificate data from the AI. For example:

All Certificate Data

***

All Additional Information

SuperMICAR Input Record Format

Variable	Position	Length	Description
Date of death – Year	01-04	4	Year of Death (Numeric)
State of death	05-06	2	Alpha, see FIPS Table 5-2; NCHS part 8 Instruction Manual
Certificate Number	07-12	6	6-digit number, padded with 0's on left (000001-999999)
Coder Status	13	1	Numeric: Valid codes 0 - 9
Lot	14-17	4	NCHS ID Information, Numeric, 0001-9999 (States commonly use "book number")
Section Number	18	1	NCHS ID Information. Numeric, 0-9
Shipment Number	19-21	3	NCHS ID Information, Alpha\Numeric (Usually month of death or month of receipt)
Receipt Date	22-29	8	NCHS ID Information. Data inserted at the time file is received by NCHS-MMDDYYYY
PGM Version Control	30-33	4	Version number for the SuperMICAR program (computer-generated)
Date of Death - Month	34-35	2	Date of death (month): 01-12. 99
Date of Death - Day	36-37	2	Date of Death (day): 01-31, 99
Sex	38	1	Male..................... M Female .... F Unknown .... U

Age: units	39	1	Years .... 1 Months................ 2 Weeks.................. 3 Days.................... 4 Hours .... 5 Minutes............... 6 Unknown 9
Age: number of units	40-42	3	001 - 135, 999
Cause of Death Part I Line a	43-162	120	Literal information reported on Line a
Cause of Death Part I Interval, Line a	163-182	20	Duration reported on Line a
Cause of Death Part I Line b	183-302	120	Literal information reported on Line b
Cause of Death Part I Interval, Line b	303-322	20	Duration reported on Line b
Cause of Death Part I Line c	323-442	120	Literal information reported on Line c
Cause of Death Part I Interval, Line c	443-462	20	Duration reported on Line c
Cause of Death Part I Line d	463-582	120	Literal information reported on Line d
Cause of Death Part I Interval, Line d	583-602	20	Duration reported on Line d
Cause of Death Part II	603-842	240	Literal information reported in Part II
Did Tobacco Use Contribute to Death?	843	1	Yes...............................Y No................................N Probably ....P Unknown ....U Not on certificate.........C Blank ....blank
Pregnancy	844	1	Not pregnant within past year....... 1 Pregnant at time of death.............. 2 Not pregnant, but pregnant within 42 days of death................. 3 Not pregnant, but pregnant 43 days to 1 year before death...... 4 Unknown if pregnant within past year....................................... 9 Blank .... blank N/A (computer-generated)............ 8 Not on certificate 7
If Female (edit flag: from EDR only)	845	1	Edit Passed .... 0 Edit failed, data queried

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			& verified 1
			Edit failed, data queried
			but not verified 2
Manner of Death	846	1	Natural.......................................N
			Accident ....A
			Suicide.......................................S
			Homicide ....H
			Pending Investigation ....P
			Could Not be Determined..........C
			Blank ....blank

Date of Injury
  Month (2)
  Day (2)
  Year (4)
	847-854	8	Numeric or blank if no injury reported.
			2 digit month (01-12, 99, blank)
			2 digit day (01-31, 99, blank)
			4 digit year (4-digit year, 9999, blank)
			If any portion is not reported 99

Time of Injury	855-858	4	0000-2400, 9999, blank
Units of Time	859	1	AM ....A PM...P Military time (24 hour)..............M Blank ....blank
Place of Injury-literal	860-909	50	Full text for Place of Injury
Injury at Work?	910	1	Yes ....Y No ....N Unknown: ....U Blank ....blank N/A (computer generated).........X
Describe How Injury Occurred-literal	911-1160	250	Literal information reported in How Injury Occurred block
If Transportation Accident, Specify	1161-1190	30	Driver/Operator ....DR Passenger...................................PA Pedestrian ....PE Enter Full Text
Was an Autopsy Performed?	1191	1	Yes.. Y No.. N Unknown .... U Blank .... blank
Were Autopsy Findings Available to Complete theCause of Death?	1192	1	Yes.. Y No.. N Unknown .... U Blank .... N/A: Computer generated............. X

Certifier	1193-1222	30	Certifying Physician .... D Pronouncing and Certifying Physician .... P Medical Examiner/Coroner .... M Enter full text for other individual legally allowed to certify
Date of surgery: Applicable to states with a surgery block, otherwise blank			
Date of surgery - month	1223-1224	2	01-12, 99 (unknown), blank
Date of surgery - day	1225-1226	2	01-31, 99, blank
Date of surgery - year	1227-1230	4	4-digit year, 9999, blank
Incomplete Data Flag	1231	1	Information entered is incomplete (computer-generated) .... 1 Otherwise..................................... blank
Line Ib "Due to" Flag	1232	1	"Due to" deleted by certifier .... 1 Otherwise..................................... blank
Line Ic "Due to" Flag	1233	1	"Due to" deleted by certifier .... 1 Otherwise..................................... blank
Line Id "Due to" Flag	1234	1	"Due to" deleted by certifier .... 1 Otherwise..................................... blank
Part II "Due to" Flag	1235	1	"Due to" deleted by certifier .... 1 Otherwise..................................... blank

Activity at time of death
(computer-generated)
	1236	1	While Engaged in Sports
			    Activity... 0
			While Engaged in Leisure
			    Activities 1
			While Working for Income............. 2
			While Engaged in Other
			    types of Work 3
			While Resting, Sleeping,
			    Eating, or engaging in
			    other vital activities 4
			While Engaged in Other
			    specified Activities 8
			During Unspecified Activity 9

Place of Injury (computer-generated)	1237	1	Home .... A
			Farm .... B
			Residential Institution..................... C
			Military Residence.......................... D
			Hospital .... E
			School, Other Institution, Administrative Area .... F
			Industrial & Construction .... G
			Garage/Warehouse .... H
			Trade and Service Area I
			Mine/Quarry .... J
			Street/Highway .... K
			Public Recreation Area................... L
			Institutional Recreation Area.......... M
			Sports & Recreation Area............... N
			Other Building................................ O
			Other Specified Place .... P
			Unspecified Place .... Q
			Blank .... blank
Auxiliary state file #	1238-1249	12	000000000001-999999999999, blank
State Specific Data	1250-1279	30	Optional. Any information entered through SuperMICAR for state use only

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MICAR100 Input File Record Format

Variable	Position	Length	Description
Date of Death – Year	01-04	4	Year of Death (Numeric)
State of Death	05-06	2	Alpha, see FIPS Table 5-2; NCHS Part 8 Instruction Manual
Certificate Number	07-12	6	6-digit number, padded with 0's on left (000001-999999)
Coder Status	13	1	Numeric: Valid codes 0 - 9
Lot	14-17	4	NCHS ID Information, Numeric, 0001-9999 (States commonly use "book number")
Section Number	18	1	NCHS ID Information. Numeric, 0-9
Shipment Number	19-21	3	NCHS ID Information, Alpha\Numeric (Usually month of death or month of receipt)
Receipt Date	22-29	8	NCHS ID Information. Date inserted at the time file is received by NCHS-MMDDYYYY
PGM Version Control	30-33	4	Version number for the SuperMICAR program (computer-generated)
Date of Death - Month	34-35	2	Date of death (month): 01-12. 99
Date of Death - Day	36-37	2	Date of Death (day): 01-31, 99
Sex	38	1	Male ....M Female.................................F Unknown.............................U
Age: units	39	1	Years ....1 Months ....2 Weeks..................................3 Days ....4 Hours...................................5 Minutes ....6 Unknown.............................9
Age: number of units	40-42	3	001 - 135, 999
Incomplete data flag (computer-generated)	43	1	Information entered is incomplete-reject record for manual review ....1 Blank...................................blank

Conditions and Durations	44-343	300	Free format field. See MICAR Instruction Manual 2g. Information provided through use of Entity-Reference Numbers (ERNs).
Did Tobacco Use Contribute to Death?	344	1	Yes ....Y No ....N Probably.................................P Unknown.................................U Not on certificate....................C Blank....................................blank
Pregnancy	345	1	Not pregnant within past year ....1 Pregnant at time of death.................2 Not pregnant, but pregnant within 42 days of death ....3 Not pregnant, but pregnant 43 days to 1 year before death.........4 Unknown if pregnant within past year ....9 Blank..blank N/A: computer generated ....8 Not on certificate............................7
If Female (edit flag: from EDR only)	346	1	Edit Passed..................................0 Edit failed, data queried & verified ....1 Edit failed, data queried but not verified 2
Manner of Death	347	1	Natural ....N Accident ....A Suicide ....S Homicide.....................................H Pending Investigation..................P Could Not be Determined ....C Blank..blank
Date of Injury-month	348-349	2	01-12, 99, blank
Date of Injury-day	350-351	2	01-31, 99, blank
Date of Injury-year	352-355	4	4-digit year, 9999, blank
Time of Injury	356-359	4	0000-2359 (military), 9999, blank

Injury at Work?	360	1	Yes ....Y
			No ....N
			Unknown
			  (computer-generated)...............U
			Blank..blank
			Not Applicable
			  (computer-generated)...............X

Describe How Injury Occurred	361-420	60	Free format field. See MICAR Instruction Manual 2g. Information provided through use of Entity-Reference Numbers (ERNs).

Field	Position	Length	Values
Was an Autopsy Performed?	421	1	Yes .... Y No .... N Unknown .... U Blank .... blank
Were Autopsy Findings Available to Complete the Cause of Death?	422	1	Yes .... Y No .... N Unknown .... U Blank .... N/A: Computer generated X
Certifier	423-452	30	Certifying Physician .... D Pronouncing and Certifying Physician .... P Medical Examiner/Coronor .... M Or Enter full text for other individual legally allowed to certify
Date of surgery: Applicable to states with a surgery block, otherwise blank			
Date of surgery - month	453-454	2	01-12, 99, blank
Date of surgery - day	455-456	2	01-31, 99, blank
Date of surgery - year	457-460	4	4-digit year, 9999, blank
Activity at time of death	461	1	While Engaged in Sports Activity .... 0 While Engaged in Leisure Activities .... 1 While Working for Income .... 2 While Engaged in Other types of Work .... 3 While Resting, Sleeping, Eating, or engaged in other vital activities .... 4 While Engaged in Other specified Activities .... 8 During Unspecified Activity ...... 9 Blank .... blank
Place of Injury (computer-generated if file generated by SuperMICAR)	462	1	Home .... A Farm .... B Residential Institution .... C Military Residence .... D Hospital .... E School, Other Institution, Administrative Area .... F Industrial & Construction .... G Garage/Warehouse .... H Trade and Service Area .... I Mine/Quarry .... J Street/Highway .... K

Public Recreation Area L
Institutional Recreation Area ...... M
Sports & Recreation Area .... N
Other Building .... O
Other Specified Place.................. P
Unspecified Place........................ Q
Blank.. blank

Auxiliary state file #	463-474	12	000000000001-999999999999, blank
State Specific Data	475-504	30	Optional. Any information entered through SuperMICAR for state use only

MICAR200 Input File Record Format

Variable	Position	Length	Description
Date of death – Year	01-04	4	Year of Death (Numeric)
State Code	05-06	2	Alpha, see FIPS Table 5-2; NCHS Part 8 Instruction Manual
Certificate Number	07-12	6	6-digit number, padded with 0's on left (000001-999999)
Coder Status	13	1	Numeric: Valid codes 0 - 9
Lot	14-17	4	NCHS ID Information, Numeric, 0000-9999 (States commonly use "book number")
Section Number	18	1	NCHS ID Information. Numeric, 0-9
Shipment Number	19-21	3	NCHS ID Information, Alpha\Numeric (Usually month of death or month of receipt)
Receipt Date	22-29	8	NCHS ID Information. Data inserted at the time file is received by NCHS-MMDDYYYY
PGM Version Control – SuperMICAR	30-33	4	Version number for the SuperMICAR program (computer-generated)
Date of Death - Month	34-35	2	01-12, 99
Date of Death - Day	36-37	2	01-31 (based on month), 99
Sex	38	1	Male ....M Female..................................F Unknown.............................U
Age: units	39	1	Years....................................1 Months ....2 Weeks...................................3 Days ....4 Hours....................................5 Minutes ....6 Unknown.............................9
Age: number of units	40-42	3	001 - 135, 999
Maximum Conditions flag	43	1	More than 20 conditions reported or incomplete in SuperMICAR

Condition Codes (ERN)	44-193	150	Max of 15 codes, 10 positions each code
Position 1-2		(2)	Line Number (01-10)
Position 3-4		(2)	Position on the line (1-8)
Position 5-10		(6)	Entity-Reference Number (ERN)
Duration Codes	194-298	105	Max of 15 codes, 7 positions each code
Position 1-2		(2)	Line Number (01-10)
Position 3-4		(2)	Position on the line (1-8)
Position 5-7		(3)	Duration

Did Tobacco Use Contribute to Death?	299	1	Yes .... Y No .... N Probably .... P Unknown .... U Not on certificate .... C Blank .... blank
Pregnancy	300	1	Not pregnant within past year ....1 Pregnant at time of death...............2 Not pregnant, but pregnant within 42 days of death ....3 Not pregnant, but pregnant 43 days to 1 year before death.......4 Unknown if pregnant within past year ....9 Blank...blank N/A: computer generated ....8 Not on certificate..........................7
If Female (edit flag: from EDR only)	301	1	Edit Passed .... 0 Edit failed, data queried & verified .... 1 Edit failed, data queried but not verified 2
Manner of Death	302	1	Natural .... N Accident .... A Suicide .... S Homicide.................................. H Pending Investigation.............. P Could Not be Determined .... C Blank....................................... blank
Date of Injury-month	303-304	2	01-12, 99, blank
Date of Injury-day	305-306	2	01-31, 99, blank
Date of Injury-year	307-310	4	4-digit year, 9999, blank
Time of Injury	311-314	4	0000-2359 (military), 9999, blank

Injury at Work?	315	1	Yes ....Y
			No ....N
			Unknown....................................U
			Blank...blank
			N/A (computer-generated) X
Was an Autopsy Performed?	316	1	Yes ....Y
			No ....N
			Unknown....................................U
			Blank...blank
Were Autopsy Findings Available to Complete the Cause of Death?	317	1	Yes ....Y
			No ....N
			Blank...blank
			N/A (computer-generated) X
Title of Certifier	318-347	30	Certifying Physician....................D
			Pronouncing and Certifying Physician....................P
			Medical Examiner/Coroner.........M
			Enter full text for other individual legally allowed to certify
Date of surgery: Applicable to states with a surgery block, otherwise blank			
Date of surgery - month	348-349	2	01-12, 99, blank
Date of surgery - day	350-351	2	01-31, 99, blank
Date of surgery - year	352-355	4	4-digit year, 9999, blank
Activity at time of death (computer-generated)	356	1	While Engaged in Sports Activity 0
			While Engaged in Leisure Activities...................................1
			While Working for Income 2
			While Engaged in Other types of Work 3
			While Resting, Sleeping, Eating, or engaged in other vital activities...................4
			While Engaged in Other specified Activities 8
			During Unspecified Activity 9
			Not applicable.............................blank

Place of Injury (computer-generated)	357	1	Home..A Farm...B Residential Institution ....C Military Residence ....D Hospital.......................................E School, Other Institution, Administrative Area ....F Industrial & Construction............G Garage/Warehouse ....H Trade and Service Area...............I Mine/Quarry................................J Street/Highway............................K Public Recreation Area ....L Institutional Recreation Area ......M Sports & Recreation Area ....N Other Building ....O Other Specified Place..................P Unspecified Place........................Q Blank...blank
No. of codes on each line	358-381	24	12 codes, 2-digits each
Lowest Used Line in Part I	382-383	2	Numeric, 01-09
Absolute Lowest Used Line	384-385	2	Numeric, 01-12
Instruction flag (1)	386	1	Cancer secondary
Instruction flag (2)	387	1	Part II info from manner of death box
Instruction flag (3)	388	1	Reserved
Auxiliary state file #	389-400	12	000000000001-999999999999, blank
State Specific Data	401-430	30	Optional. Any information entered through SuperMICAR for state use only

ACME Input File Record Format

Variable	**Position**	**Length**	**Description**
Date of Death - Year	01-04	4	Year of Death (Numeric)
State of Death	05-06	2	Alpha, see FIPS Table 5-2; NCHS Part 8 Instruction Manual
Certificate Number	07-12	6	6-digit number, padded with 0's on left (000001-999999)
Coder Status	13	1	Numeric: Valid codes 0 - 9
Lot	14-17	4	NCHS ID Information. Numeric, 0001-9999 (States commonly use "book number")
Section Number	18	1	NCHS ID Information, Numeric, 0-9
Shipment Number	19-21	3	NCHS ID Information, alphanumeric (Usually month of death or month of receipt)
Receipt Date-Month	22-23	2	01-12, blank (inserted at NCHS)
Receipt Date-Day	24-25	2	01-31, blank (inserted at NCHS)
Receipt Date-Year	26-29	4	>= Year of death, blank (inserted at NCHS)
PGM Version Control – SuperMICAR	30-33	4	SuperMICAR version number (computer-generated)
PGM Version Control – MICAR200	34-37	4	MICAR200 version number (computer-generated)
Age: units	38	1	Years ....1 Months ....2 Weeks...................................3 Days ....4 Hours....................................5 Minutes ....6 Unknown..............................9
Age: number of units	39-41	3	001-135, 999
Manner of Death	42	1	Natural ....N Accident ....A Suicide ....S Homicide ....H Pending Investigation ....P Could Not be Determined ....C Blank...blank
Intentional Reject	43	1	1-6, 9 or Blank - See NCHS Instruction Manual Part 2b for code structure

ACME System Reject Codes	44	1	MICAR reject - dictionary match ...... 1 ACME reject .... 2 MICAR reject- rules application .... 3 Reviewed... 4 Not Rejected .... 0 Blank... blank
Place of Injury (ICD10 codes)	45	1	Home .... 0 Residential Institution .... 1 School, Other Institution, Administrative Area .... 2 Sports & Recreation Area .... 3 Street/Highway .... 4 Trade and Service Area .... 5 Industrial & Construction Area .... 6 Farm .... 7 Other Specified Place .... 8 Unspecified Place .... 9 Blank.. blank
Manual Underlying Cause Code	46-50	5	From input; Blank if not coded. Fifth position reserved for use if ICD becomes 5 digit codes.
Entity-axis Codes	51-170	120	120 positions; For coding instructions, refer to Part 2b Instructional Manual; for data entry instructions, refer to Part 2d Instructional Manual.
Was an Autopsy Performed?	171	1	Yes .... Y No .... N Unknown.................................... U
Were Autopsy Findings Available to Complete theCause of Death?	172	1	Yes .... Y No .... N Unknown.................................... U X (computer-generated) .... N/A
Did Tobacco Use Contribute to Death?	173	1	Yes .... Y No .... N Probably..................................... P Unknown.................................... U Not on certificate........................ C
Pregnancy	174	1	Not pregnant within past year ....1 Pregnant at time of death...............2 Not pregnant, but pregnant within 42 days of death ....3 Not pregnant, but pregnant 43 days to 1 year before death.......4 Unknown if pregnant within past year ....9 N/A (computer generated).............8 Not on certificate...........................7

If Female (edit flag: from EDR only)	175	1	Edit Passed..................................0 Edit failed, data queried & verified....................................1 Edit failed, data queried but not verified............................2 Blank..blank
Date of Injury-month	176-177	2	01-12, 99, blank
Date of Injury-day	178-179	2	01-31, 99, blank
Date of Injury-year	180-183	4	4-digit year, 9999, blank
Time of Injury	184-187	4	0000-2359 (military), 9999, blank
Injury at Work	188	1	Yes ....Y No ....N Unknown....................................U Blank..blank N/A (computer-generated) X
Title of Certifier	189-218	30	Certifying Physician....................D Pronouncing and Certifying Physician....................P Medical Examiner/Coronor.........M Enter full text for other individual legally allowed to certify

Activity at time of death (computer-generated)	219	1	While Engaged in Sports
			  Activity 0
			While Engaged in Leisure
			  Activities.....................................1
			While Working for Income 2
			While Engaged in Other
			  types of Work 3
			While Resting, Sleeping,
			  Eating, or engaged in
			  other vital activities 4
			While Engaged in Other
			  specified Activities 8
			During Unspecified Activity 9
			Blank...blank

Auxiliary State file #	220-231	12	000000000001-999999999999, blank
State Specific Data	232-261	30	(Optional) Any information entered through SuperMICAR for state use only

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ACME Message File Format

Note: The first record of the file will be a standard ACME input record (see the ACME INPUT FORMAT). The second through last records will have the format given below.

Variable	Position	Length	Description
Date of Death – Year	01-04	4	Year of Death (Numeric)
State of Death	05-06	2	Alpha, see FIPS Table 5-2; NCHS Part 8 Instruction Manual
Certificate Number	07-12	6	6-digit number, padded with 0's on left
Message Number	13-14	2	Numeric 00-99
Blank Space	15-16	2	Blank
Message Text	17-195	180	Message text. This will be truncated to save space

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TRANSAX Input File Record Format

Variable	**Position**	**Length**	**Description**
Date of Death – Year	01-04	4	0000-9999 (Numeric) Year of Death
State of Death	05-06	2	Alpha, see FIPS Table 5-2; NCHS Part 8 Instruction Manual
Certificate Number	07-12	6	6-digit number, padded with 0's on left (000001-999999)
Coder Status	13	1	Numeric: Valid codes 0 - 9
Lot	14-17	4	NCHS ID Information, Numeric, 0001-9999 (States commonly use "book number")
Section Number	18	1	NCHS ID Information, Numeric, 0-9
Shipment Number	19-21	3	NCHS ID Information, alphanumeric (Usually month of death or month of receipt)
Receipt Date-Month	22-23	2	01-12, blank (inserted at NCHS)
Receipt Date-Day	24-25	2	01-31, blank (inserted at NCHS)
Receipt Date-Year	26-29	4	>= Year of death, blank (inserted at NCHS)
PGM Version Control – SuperMICAR	30-33	4	SuperMICAR version number (computer-generated)
PGM Version Control – MICAR200	34-37	4	MICAR200 version number (computer-generated)
PGM Version Control – ACME/TRANSAX	38-41	4	ACME/TRANSAX version number (computer-generated)
Manner of Death	42	1	Natural ....N Accident ....A Suicide ....S Homicide ....H Pending Investigation ....P Could Not be Determined ....C Blank...blank
Intentional reject	43	1	1-6, 9, or blank. See NCHS Instruction Manual, Part 2b for code structure

ACME system reject codes	44	1	MICAR reject-dictionary match... 1
			ACME reject 2
			MICAR reject-rule application................................. 3
			Record reviewed 4
			Not rejected.............................. 0
			Blank.. blank

Place of Injury (computer-generated)	45	1	Home 0
			Residential Institution 1
			School, Other Institutions, Administrative Area 2
			Sports & Recreation Area 3
			Street/Highway 4
			Trade and Service Area 5
			Industrial & Construction Area 6
			Farm 7
			Other Specified Place 8
			Unspecified Place 9
			Blank...blank

| Manual Underlying Cause Code | 46-50 | 5 | From input; Blank if not coded. Fifth position reserved for use if ICD becomes 5 digit codes. |

| ACME Underlying Cause Code | 51-55 | 5 | ACME-selected underlying cause code. Fifth position reserved for use if ICD becomes 5 digit codes. |

Entity-Axis codes	56-215	160	Maximum of 20 codes. 8 positions each.
			Format for each of 8 positions:
1. Part/line number(s)			Part I. Line a...............................1
			Part I. Line b 2
			Part I. Line c...............................3
			Part I. Line d 4
			Part I. Line e...............................5
			Part II 6

| 2. Sequence within line | | (1) | 1-8 maximum number of codes per line |

| 3-6. ICD code | | (4) | |

| 7. Reserved position | | (1) | Used for NCHS "created" codes; blank for all other codes. NOTE: created codes should be converted to actual ICD-10 code if the EA field is moved to the final mortality data record. |

8. E-code indication		(1)	&
			blank
			The value coded in the 8th position should not be moved to the final mortality data

record

Was an Autopsy Performed?	216	1	Yes ....Y No ....N Unknown......................................U
Were Autopsy Findings Available to Complete Cause of Death?	217	1	Yes ....Y No ....N Unknown......................................U N/A (computer-generated) X
Did Tobacco Use Contribute to Death?	218	1	Yes ....Y No ....N Probably.......................................P Unknown......................................U Not on Certificate.........................C
Pregnancy	219	1	Not pregnant within past year ....1 Pregnant at time of death...............2 Not pregnant, but pregnant within 42 days of death ....3 Not pregnant, but pregnant 43 days to 1 year before death.......4 Unknown if pregnant within past year ....9 N/A (computer generated).............8 Not on certificate...........................7
If Female (edit flag: from EDR only)	220	1	Edit Passed....................................0 Edit failed, data queried & verified......................................1 Edit failed, data queried but not verified..............................2 Blank...blank
Date of Injury-month	221-222	2	01-12, 99, blank
Date of Injury-day	223-224	2	01-31, 99, blank
Date of Injury-year	225-228	4	4-digit year, 9999, blank
Time of Injury	229-232	4	0000-2359 (military), 9999, blank
Injury at Work?	233	1	Yes .... Y No .... N Unknown: .... U Blank .... blank N/A (computer generated)......... X
Title of Certifier	234-263	30	Certifying Physician .... D Pronouncing and Certifying Physician .... P Medical Examiner/Coronor .... M Enter full text for other individual legally allowed to certify

Activity at time of death (computer-generated)	264	1	While Engaged in Sports Activity...0 While Engaged in Leisure Activities ....1 While Working for Income ....2 While Engaged in Other types of Work ....3 While Resting, Sleeping, Eating, or engaged in other vital activities ....4 While Engaged in Other specified Activities ....8 During Unspecified Activity ....9 Blank ....blank
Auxiliary State file #	265-276	12	000000000001-999999999999, blank
State Specific Data	277-306	30	(Optional) Any information entered through SuperMICAR for state use only

TRANSAX Output File Record Format

Variable	Position	Length	Description
Date of Death - Year	01-04	4	Year of Death (Numeric)
State Code	05-06	2	Alpha, see FIPS Table 5-2; NCHS Part 8 Instruction Manual
Certificate Number	07-12	6	6-digit number, padded with 0's on left (000001-999999)
Coder Status	13	1	Numeric: Valid codes 0 - 9
Lot	14-17	4	NCHS ID Information, Numeric, 0001-9999 (States commonly use "book number")
Section Number	18	1	NCHS ID Information, Numeric, 0-9
Shipment Number	19-21	3	NCHS ID Information, alphanumeric (Usually month of death or month of receipt)
Receipt Date-Month	22-23	2	01-12, blank (inserted at NCHS)
Receipt Date-Day	24-25	2	01-31, blank (inserted at NCHS)
Receipt Date-Year	26-29	4	>= Year of death, blank (inserted at NCHS)
PGM Version Control – SuperMICAR	30-33	4	SuperMICAR version number (computer-generated)
PGM Version Control – MICAR200	34-37	4	MICAR200 version number (computer-generated)
PGM Version Control – ACME/TRANSAX	38-41	4	ACME/TRANSAX version number (computer-generated)
Manner of Death	42	1	Natural ....N Accident ....A Suicide ....S Homicide ....H Pending Investigation ....P Could Not be Determined ....C Blank...blank
Intentional reject	43	1	1-6, 9, or blank. See NCHS Instruction Manual, Part 2b for code structure
ACME system reject codes	44	1	MICAR reject-dictionary match...1 ACME reject ....2 MICAR reject-rule application.................................3 Record reviewed........................4 Not rejected ....0 Blank..blank

Place of Injury (computer-generated)	45	1	Home ....0 Residential Institution ....1 School, Other Institutions, Administrative Area ....2 Sports & Recreation Area ....3 Street/Highway ....4 Trade and Service Area ....5 Industrial & Construction Area ....6 Farm ....7 Other Specified Place ....8 Unspecified Place ....9 Blank ....blank
Manual Underlying Cause Code	46-50	5	From input; Blank if not coded. Fifth position reserved for use if ICD becomes 5 digit codes.
ACME Underlying Cause Code	51-55	5	ACME-selected underlying cause code. Fifth position reserved for use if ICD becomes 5 digit codes.
Entity-Axis codes	56-215	160	Maximum of 20 codes. 8 positions each.

1. Part/line number(s)			Format for each of 8 positions:
			   Part I. Line a...............................1
			   Part I. Line b...............................2
			   Part I. Line c 3
			   Part I. Line d...............................4
			   Part I. Line e 5
			   Part II 6

2. Sequence within line		(1)	1-8 maximum number of codes per line
3-6. ICD code		(4)	
7. Reserved position		(1)	Used for NCHS "created" codes; blank for all other codes. NOTE: created codes should be converted to actual ICD-10 code if the EA field is moved to the final mortality data record.
8. E-code indication		(1)	& blank The value coded in the 8th position should not be moved to the final mortality data record
TRANSAX conversion flag (computer-generated)	216	1	Conversion using non-ambivalent table entries..........3 Conversion using ambivalent table entries.................4 Duplicate entity-axis codes deleted; no other action involved ..5 Artificial code conversion; no other action...............................6 No action (blank)...........................blank

Record-Axis Codes	217-316	100	Maximum of 20 codes. 5 positions each:
1-4. ICD code		(4)	
5. Reserved position		(1)	5th position blank. Reserved for use if five-digit codes are implemented (NCHS "created" codes are converted to actual ICD-10 codes).
Was an Autopsy Performed?	317	1	Yes ....Y No...N Unknown ....U
Were Autopsy Findings Available to Complete Cause of Death?	318	1	Yes ....Y No...N Unknown ....U N/A (computer-generated).............X
Did Tobacco Use Contribute to Death?	319	1	Yes ....Y No...N Probably ....P Unknown ....U Not on Certificate C
Pregnancy	320	1	Not pregnant within past year........... 1 Pregnant at time of death.................. 2 Not pregnant, but pregnant within 42 days of death..................... 3 Not pregnant, but pregnant 43 days to 1 year before death.......... 4 Unknown if pregnant within past year .... 9 N/A: computer generated .... 8 Not on certificate............................. 7
If Female (edit flag: from EDR only)	321	1	Edit Passed ....0 Edit failed, data queried & verified ....1 Edit failed, data queried but not verified ....2 Blank ....blank
Date of Injury-month	322-323	2	01-12, 99, blank
Date of Injury-day	324-325	2	01-31, 99, blank
Date of Injury-year	326-329	4	4-digit year, 9999, blank
Time of Injury	330-333	4	0000-2359 (military), 9999, blank
Injury at Work?	334	1	Yes ....Y No ....N Unknown: ....U Blank .... N/A (computer generated)...........X

Title of Certifier	335-364	30	Certifying Physician ....D Pronouncing and Certifying Physician ....P Medical Examiner/Coronor ....M Enter full text for other individual legally allowed to certify

Activity at time of death (computer-generated)	365	1	While Engaged in Sports
			  Activity...0
			While Engaged in Leisure
			  Activities 1
			While Working for Income 2
			While Engaged in Other
			  types of Work 3
			While Resting, Sleeping,
			  Eating, or engaged in
			  other vital activities 4
			While Engaged in Other
			  specified Activities 8
			During Unspecified Activity 9
			Blank ....blank

Auxiliary State file #	366-377	12	000000000001-999999999999, blank
State Specific Data	378-407	30	(Optional) Any information entered through SuperMICAR for state use only

Hotkeys

SuperMICAR Hotkey List

<u>**Hotkeys Accessible from Main Screen**</u>

File:

	New	Ctrl + F2
	Open	F2
	Close	Ctrl + F4
	Import	Shift + F8
	Export	Shift + F7
	Delete	Ctrl + D
	Restore	Alt + F8
	Exit	Alt + X

Edit:

	Certificates	F4
	Delete Certificates	F8

Process:	All Records	Ctrl + P
View/Reports	Print All Certificates	F7
Backup:	All	Alt + F7
Tools:	Sequence Check	Ctrl + S
	Filter	Ctrl + F
	Build ARJ File	Ctrl + A
	Change Certificate Digits	Ctrl + C
Help:	Contents	F1

Hotkeys Accessible from Certificate Edit Screen

Help (context)	F1
Function Key List	Alt + F1
Find Certificate	F5
Show Processed Info	F6
Print Certificate	F7
Delete Certificate	F8
Additional Information (AI)	F9
Goto Part I	Alt + 1
Goto Part II	Alt + 2
Goto State-Specific Data	Alt + S
Goto Certifier Field	Alt + C
Mark Out (Due To)	Alt + D
Incomplete	Alt + I
Wipe Field	Alt + W
End Editing/Adding	Alt + F9
End Editing/Adding	Esc
Beginning of Field	Home
End of Field	End
Next Field	Tab, *or* Enter, *or* Down Arrow
Previous Field	Shift + Tab, *or* Up Arrow
First Field	Ctrl + Home
Last Field	Ctrl + End
Next Record	Page Down
Previous Record	Page Up
First Record	Ctrl + Page Up
Last Record	Ctrl + Page Down

MICAR200 Hotkey List

File Open	F2
File Close	Ctrl + F4
Exit	Alt + X
Help Contents	F1

ACME/TRANSAX Hotkey List

Hotkeys Accessible from Main Screen

Create New File	Ctrl + F2
Open File	F2
Close File	Ctrl + F4
Edit / Browse Certificate	F4
Help Contents	F1

Hotkeys Accessible from Certificate Edit Screen

Find Record	F5	Delete Line	Ctrl + Backspace
Delete Record	F8	End Editing	End
Next Record	Page Down	Next Field	Tab
Previous Record	Page Up	Next Line	Down Arrow
First Record	Ctrl + Page Up	Previous Field	Shift + Tab, *or* Up Arrow
Last Record	Ctrl + Page Down	First Field	Ctrl + Home
Show Messages	Alt + M	Last Field	Ctrl + End
Goto Part II	Alt + 2	Move Cursor Left	Left Arrow
Goto MUC	F7, *or* Alt + U	Move Cursor Right	Right Arrow
Delete Cell	Ctrl + D	Delete previous character	Backspace
Wipe Field	Ctrl + W	Delete next character	Delete
Add Line	Ctrl + Enter		

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NCHS codes

NCHS State Code List

State	Abbreviation	State	Abbreviation
Alabama	AL	Montana	MT
Alaska	AK	Nebraska	NE
Arizona	AZ	Nevada	NV
Arkansas	AR	New Hampshire	NH
California	CA	New Jersey	NJ
Colorado	CO	New Mexico	NM
Connecticut	CT	New York	NY
Delaware	DE	New York City	YC*
Dist. of Columbia	DC	North Carolina	NC
Florida	FL	North Dakota	ND
Georgia	GA	Ohio	OH
Hawaii	HI	Oklahoma	OK
Idaho	ID	Oregon	OR
Illinois	IL	Pennsylvania	PA
Indiana	IN	Rhode Island	RI
Iowa	IA	South Carolina	SC
Kansas	KS	South Dakota	SD
Kentucky	KY	Tennessee	TN
Louisiana	LA	Texas	TX
Maine	ME	Utah	UT
Maryland	MD	Vermont	VT
Massachusetts	MA	Virginia	VA
Michigan	MI	Washington	WA
Minnesota	MN	West Virginia	WV
Mississippi	MS	Wisconsin	WI
Missouri	MO	Wyoming	WY

Territory/Area	Abbreviation	Territory/Area	Abbreviation

American Samoa	AS	US Minor Outlying Islands:
		  Baker Island
		  Howland Island
		  Jarvis Island
		  Johnston Atoll
		  Kingman Reef
		  Midway Islands
		  Navassa Island
		  Palmyra Atoll
		  Wake Island
			UM**

Federated States of Micronesia	FM		
Guam	GU		
Marshall Islands	MH		
Northern Mariana Islands	MP		
Palau	PW		
Puerto Rico	PR		
Virgin Islands (US)	VI		

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

 ** Not recognized as a valid USPS State abbreviation

Place Codes for SuperMICAR

A. Home

Excludes: Abandoned or derelict house (P)
Home under construction, but not yet occupied (G)
Institutional Place of Residence (C)

About home

Private driveway to home

Apartment

Private Garage

Boarding house

Private Garden to home

Cabin

Private Walk to home

Farm house

Private Wall to home

Hogan

Residence

Home for the sick

Swimming pool in private home or garden

Home premises

Trailer camp or court

Home sidewalk

Yard to home

Home swimming pool

Yard NOS

Hospice

House (residential)

Noninstitutional place of residence

Penthouse

B. Farm

Excludes: Farm House and Home Premises of Farm (A)

Barn NOS

Barnyard

Corncrib

Cornfield

Dairy (farm) NOS

Farm buildings

Farm pond or creek

Farmland under cultivation

Field, numbered or specialized

Gravel pit on farm

Orange grove

Pasture

Range NOS

Silo

State farm

Ranch NOS

C. Residential Institution

Almshouse

Children's home

Dormitory

Fraternity house

Institution (any type)

Jail

Nurse's home

Nursing home

Old people's home

Orphanage

Prison camp

Prison

Reform school

State school

Sorority house

D. Military Residence

Army Camp

Military reservation

E. Hospital

Hospital

F. School, Other Institution, Administrative Area

Excludes: Building Under Construction (G)
Residential Institution (C)
Sports and Athletic Areas (N)

Armory

Assembly hall

Campus

Child center

Clubhouse

Church

Cinema

College

Country club (grounds)

Court house

Dance hall

Day nursery

Drive in theatre

Fire house

Gallery

Health resort

Institute of Higher Learning

Kindergarten

Library

Mission

Movie house

Music Hall

Night club

Opera house

Police precinct

Police station or cell

Post office

Private club

Public Hall

Salvation army

School (grounds) (yard)

School (private) (public) (state)

Theatre

Turkish bath

University

YMCA

YWCA

Youth center

G. Industrial and Construction Areas

Building under construction

Coalyard

Construction job

Dairy processing plant

Dockyard

Dry dock

Electric tower

Factory (building) (premises)

Foundry

Grain elevator

Highway under construction

Industrial yard

Loading platform - factory

Logging operation area

Mill pond

Oil field

Oil rig and other offshore installations

Oil well

Plant, industrial

Power-station (coal) (nuclear) (oil)

Produce building

Railroad track or trestle

Railway yard

Sawmill

Sewage disposal plant

Shipyard

Shop

Substation (power)

Subway track

Tannery

Wharf

Workshop

H. Garage/Warehouse

Excludes: Garage in Private Home (A)

Body shop

Garage NOS

Garage - place of work

Loading platform - store

Warehouse

I. Trade and Service Area

Excludes: Garage in Private Home (A)

Airport

Bank

Bar

Cafe

Casino

Electric company

Filling station

Funeral Home

Garage away from highway except home

Garage building (for car storage)

Gas station

Hotel

Motel

Market (grocery or other commodity

Office (building)

Radio/Television broadcasting station

Restaurant

Salvage Lot, Named

Shop, commercial

Shopping center (Shopping mall)

Station (bus) (railway)

Store

Subway (stairs)

Tourist court

Tourist home

J. Mine/Quarry

Coal pit

Gravel pit

Sand pit

Tunnel under construction

K. Street/Highway

Alley

Bridge NOS

Freeway

Interstate

Motorway

Pavement

Roadside

Road

Sidewalk NOS

Named Street/Highway/Interstate

L. Public Recreation Area

Beach - NOS (Private) (Named)

Beach resort

Boy's camp

Holiday camp

Lake resort

Mountain cabin

Mountain resort

Named lake

Park (any) (Amusement) (Public)

Playground NOS

Resort NOS

Seashore resort

Vacation resort

M. Institutional Recreation Area

Playground, school

N. Sports and Athletics Area

Excludes: Swimming Pool or Tennis Court in private home or garden (A)

Baseball field

Basketball court

Cricket ground

Dude ranch

Fives court

Football field

Golf course

Gymnasium

Hockey field

Hunting cabin

Ice palace

Racecourse

Riding school

Rifle range - NOS

Skating rink

Sports palace

Sports ground

Stadium

Swimming pool (public) (private)

Tennis court

O. Other Building

Building NOS

P. Other Specified Place

Abandoned gravel pit

Abandoned public building or home

Air force firing range

Bar pit or ditch

Beach NOS

Camp

Camping grounds

Canal

Caravan site NOS

Cemetery

City dump

Damsite

Derelict house

Desert

Ditch

Dock NOS

Excavation site

Fairgrounds

Field NOS

Forest

Fort

Harbor

Hill

Irrigation canal or ditch

Junkyard

Lake NOS

Manhole

Marsh

Mountain

Named city

Named town

Nursery NOS

Open field

Parking lot

Parking place

Pier

Pipeline (oil)

Place of business NOS

Pond or pool (natural)

Powerline pole

Prairie

Private property

Public place NOS

Public property

Railway line

Reservoir (Water)

River

Sea

Seashore NOS

Sewer

Specified address

Stream

Swamp

Woods

Zoo

Q. Unspecified Place

Bed

Commode

Country

Downstairs

Fireplace

Jobsite

Near any place

On job

Parked car

Sofa

Table

Tree

Place Codes for ACME/TRANSAX

ACME/TRANSAX uses numeric codes to represent the alpha place of injury codes specified in SuperMICAR. The numeric equivalents to the letter codes are:

Numeric Code	Description	Letter Code(s)
0	Home	A
1	Residential Institution	C, D
2	School, other institution and public administrative area	E, F, M
3	Sports and athletics area	N
4	Street and highway	K
5	Trade and service area	H, I
6	Industrial and construction area	G, J
7	Farm	B
8	Other specified places	L, O, P
9	Unspecified place	Q
Blank	Not applicable	blank

Activity Codes

0   While engaged in sports activity

Physical exercise with a described functional element such as:

. golf

. jogging

. riding

. school athletics

. skiing

. swimming

. trekking

. waterskiing

1   While engaged in leisure activity

Hobby activities

Leisure time activities with an entertainment element such as going to the cinema, to a dance or to a party

Participation in sessions and activities of voluntary organizations

Excludes: sport activities (.0)

2   While working for income

Paid work (manual)(professional)

Transportation (time) to and from such activities

Work for salary, bonus and other types of income

3   While engaged in other types of work

Domestic duties such as:

. caring for children and relatives

. cleaning

. cooking

. gardening

. household maintenance

Duties for which one would not normally gain an income

Learning activities, e.g. attending school session or lesson

Undergoing education

4   While resting, sleeping, eating and other vital activities

Personal hygiene

8   While engaged in other specified activities

9   During unspecified activity

Blank   blank