

*PC-MICAR DATA ENTRY*

*1996 Version*

*System Manager's Manual*

01/15/96

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## INTRODUCTION

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### What This Manual Is

This is the *PC-MICAR System Manager's Manual*. PC-MICAR is a cause-of-death data entry system designed for editing and processing of medical information reported on a death certificate in the United States. **PC-MICAR requires a trained MICAR coder to use!**

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

- **PC-MICAR** Automates MICAR data entry and medical cause-of-death data processing, including reporting procedures, full-screen data entry and editing. PC-MICAR is designed to assist MICAR data entry operators in encoding medical cause-of-death data into numeric entity reference numbers (ERNs) in accordance with the rules expressed in Part 2g of the Vital Statistics Instruction Manual (VSIM) series. PC-MICAR output is used by later programs to classify causes of death to their International Classification of Disease (ICD) codes. PC-MICAR only runs on personal computers.
- **MICAR** Automates the multiple cause coding rules (see Parts 2b and 2e of the VSIM series) and assigns ICD codes to each entity.
- **ACME** Applies World Health Organization (WHO) rules to the ICD codes determined by MICAR and selects an underlying cause of death (see Part 2a and 2c of the VSIM series). ACME is available on both the mainframe and the personal computer. On the PC, ACME and TRANSAX are distributed as a single product.

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

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

<sup>3</sup> TRANSLation of AXis

- **TRANSAX** Facilitates the tabulation and use of multiple cause-of-death data. Through the application of the ICD linkage and modification rules, TRANSAX translates the axis of classification from an entity to a record base. TRANSAX is available on both the mainframe and the personal computer.

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

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

This manual is intended for the System Manager. It contains instructions on using those functions of PC-MICAR necessary to the overall data entry process, as well as installation and file management information. By necessity, some sections of this manual will overlap the *PC-MICAR User's Manual*. However, the *PC-MICAR System Manager's Manual* contains instructions for those Menu Options and Functions not covered in the *PC-MICAR User's Manual*. These additional functions of PC-MICAR will prove useful in helping the System Manager make data entry and processing run smoothly.

### **Changes in 1996**

The 1996 version of PC-MICAR data entry software includes numerous changes from the 1995 and other previous versions. Many of the changes are easily apparent, and others might go almost unnoticed. This section outlines the differences, so that you can quickly familiarize yourself with them. For a graphical overview of the changes, a demonstration of many of them has been provided on the installation diskettes. Refer to the installation instructions for information on installing and running the PC-MICAR Data Entry 1996 demo.

### **The File System**

The most fundamental difference in the 1996 version lies in how it handles files. In the past, each file would contain a single batch of work, and each file could be either open or closed. The open file was the one you were currently using. Closed files were stored in a compressed format in the <BATCHES> directory. In 1996, the file format is changed. Your batches are stored in a <DATA> subdirectory that you can specify through the program. This directory can be on a network drive (See Network Compatibility, below). Any file that exists in your data directory can be opened at any time. Thus, closing a

batch does not include compressing it or moving it to another location. It merely closes that file and allows you to open another one, or create a new one.

Files are also stored in a different database format. The new database files use a Foxpro-compatible X-base database. Data files from previous versions of PC-MICAR cannot be used by the new system, but can be converted by exporting the MICAR100 input file (the mainframe file) from the 1995 version and importing it into PC-MICAR 1996 using the Import MICAR 100 File option from the File menu. However, because of changes in the 1996 external cause prompts, it is not advised to process data entered through a prior system.

In addition, the entire MICAR data structure for all PC-based MICAR software (Super-MICAR, PC-MICAR Data Entry, MICAR100/200, and PC-ACME/TRANSAX) has been universalized. The data file that PC-MICAR creates contains provisions for storing the data from all MICAR programs. Thus, you no longer need to generate a MICAR100 (mainframe) input file unless you are uploading to a mainframe for MICAR processing. The PC versions of MICAR100 can read the same data file format that PC-MICAR uses, as can PC-ACME/TRANSAX. For more information on data sharing between the PC-based MICAR systems, see the section **The Unified Database** later in this manual.

### **Network Compatibility**

The new file system includes provisions for accessing data on network file servers. With this ability, you can keep your files on a local area network, where they can be available to multiple users at all times. As a part of this compatibility, each file is also multi-user accessible. With this ability, multiple users can enter data into the same file simultaneously. It is still recommended, however, that batches be kept small in order to facilitate storing, shipping, and finding the proper files and records. By combining network-compatible files, multi-user access, and multiple file availability, it is possible in the new system to segment data in new ways. For example, it is possible to have one file for each month, and enter all deaths for that month into a single file on a network drive.

### **The Menu System**

The most apparent change in PC-MICAR 1996 is the change from the menu list that was used in earlier versions to the drop-down menu interface that is in the 1996 version. The drop-down menus are easier to use, easier to navigate, and place all the options of PC-MICAR at the user's fingertips. The PC-MICAR 1996 Demo is primarily geared to

showing the menu system and how to access its functions. For more information on the menu system, go through the demo, or read the section "Using the Menus" in this manual.

### **The Universal External Cause Prompts**

PC-MICAR 1996 is the first system to collect and use the ICD9/ICD10 Universal Prompts for External Causes. These are equivalent to the external cause prompts used in earlier versions of PC-MICAR, but have been revised to make it possible to collect data for both the 9th and 10th revisions of the International Classification of Disease. MICAR data entry coders should familiarize themselves with the new prompts. These prompts are provided in a PDF format with the installation disks, and will also be printed in the 1996 revision of the MICAR Instruction Manual Part 2g. There is a practice package included with the installation disks, called Prompt10, to help coders become familiar with the changes. Instructions for installing the Prompt10 package are in **Installing PC-MICAR**, later in this manual. Instructions for running the Prompt10 package are in Appendix E, **Accessing the Universal Prompt Demo**.

### **The Spelling Checker**

In previous versions of PC-MICAR, terms that did not match the dictionary were brought to the user's attention for correction. These were done on a causal basis. That is, if the cause was not found in the dictionary, a warning was given and the user could select from a list of potential causes. In PC-MICAR 1996, the dictionary match program looks for errors on a word-by-word basis. That is, each misspelled word in the term is matched individually, and the list of suggested corrections is a list of properly-spelled words. If all the words are spelled correctly and the term does not match, this also generates a warning message.

### **Reporting Area**

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

### **Coder Status**

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

**Place of Injury**

The options for this field have been expanded to accommodate new categories required by the Tenth Revision of the ICD. To assist in learning and selecting the new codes, a pop-up menu has been provided, which can be accessed by entering a question mark in the place of injury field. For a complete list of the places, refer to the 1996 version of the 2g manual.

**Activity Code**

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

**Backup/Remove Option**

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

**Backup Directory and MICAR100 Output Directory**

These new options allow you to specify a subdirectory in which to store backup files and place MICAR100 input files, respectively.



## INSTALLING PC-MICAR

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The installation disks provided with this shipment of PC-MICAR contain the PC-MICAR files in a compressed format. The files cannot be simply copied from the disks to your hard drive. PC-MICAR **must** be installed on the computer's hard drive in order to function. It cannot be run from a floppy disk.

### System Requirements

PC-MICAR is a DOS program and should only be installed on a personal computer that meets the following minimum requirements:

- IBM PC or PC compatible computer
- 80386 33 MHz CPU or better
- 640 Kilobytes RAM (see **Memory Requirements** below)
- Hard Drive with sufficient available free storage space (see **Memory Requirements** below)
- Monochrome monitor (color recommended)
- 1 3.5" floppy drive (for 1.44 Mb disks)
- DOS 3.3 or higher (DOS 5.0 or higher recommended)

### Memory Requirements

PC-MICAR requires 470 Kilobytes (470K) of available RAM at the time the program is started. Video drivers, network drivers, mainframe access software, and other "terminate and stay resident" (TSR) programs can take up system RAM so that less than 470K of memory are available when PC-MICAR is started. On systems with DOS 5.0 or greater, use the MEM command from the DOS prompt to display the amount of available RAM on the system where PC-MICAR will be installed. With earlier versions of DOS, use the CHKDSK command to list available memory.

To install PC-MICAR, the computer's hard drive must have 21 Megabytes of free space. If there is insufficient space to install the software, the installation program will warn the user and halt the installation.

### **List of Files on the Installation Disks**

Below is a list of the files on the installation disks provided for the System Manager's convenience.

INSTALL.EXE	The installation program.
INSTALL.CFG	The installation configuration.
PKUNZIP.EXE	A data de-compression program.
DISKx.ZIP	The file containing the compressed PC-MICAR files that will be put into the <PCMICAR> directory. Each installation disk will have a DISKx.ZIP file, where 'x' is the number of the installation disk. (Example: DISK2.ZIP will be on Installation Disk #2.)

### **List of PC-MICAR Files**

Below is a list of the files that will be installed by the PC-MICAR installation program. By default, PC-MICAR is installed in a directory that is named <PCMICAR>. This default can be changed during installation. Two other directories will be created as subdirectories to the <PCMICAR> directory: these are <DATA> and <TABLES>. The <DATA> directory contains all of the data files created by PC-MICAR. The <TABLES> directory contains all of the tables that PC-MICAR uses in processing and spell-checking.

Please note that there are two sets of files. The first set, the data entry files, will always be installed. The second set, the processing files, will be installed only if the System Manager tells the installation program to do so.

### **Processing/Data Entry Files**

These files are necessary for data entry.

BBDxx.HSH	The BBDxx.HSH files contain an entity reference number dictionary for over 121,000 medical causes of death. These are used during processing to look up entity reference numbers. The BBDxx.HSH files look up text to find a matching ERN. This file is installed in the <TABLES> directory.
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ERNxx.HSH	An index to the entity reference numbers (ERN) that takes an ERN and returns the associated cause of death. This file is installed in the <TABLES> directory.
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.
LEXICON.CFG	A spell-checker configuration file for all of the LEXICON.* files. Contains information on LEXICON.DAT and LEXICON.HSH to tell PC-MICAR how to use these files.
LEXICON.DAT	A spell-checker file containing a list of words for use with PC-MICAR's spell-checking features.
LEXICON.HSH	A spell-checker file containing an index to the words in LEXICON.DAT.
MICAR.CFG	A configuration file for all hash tables (MICAR.HSH, BBDxx.HSH, EXTERNS.HSH, ERNxx.HSH, SNX.HSH, SNXINDEX.HSH). Contains information on hash file contents. Without this file, none of the hash tables will open and operate correctly. This file is installed in the <TABLES> directory.
MICAR1.HSH	A hash indexed file containing spellings and definitions for 8000+ medical terms. Used as a spell-checker during data entry and for word definitions during processing. This file is installed in the <TABLES> directory.
PKUNZIP.EXE	A utility that de-compresses files that were archived using PKZIP. This is called during database restores. This file is installed in the <PCMICAR> directory.
PKZIP.EXE	A utility that compresses files into smaller ZIP-formatted files. This file is installed in the <PCMICAR> directory. This is called during database backups.
PCEDIT.HLP	The HELP file for the certificate editing screen. This file is installed in the <PCMICAR> directory.

PCM96CVT.EXE	A utility program that converts PC-MICAR database file created with the October, 1995 version of PC-MICAR 1996 to the proper format for use with the January, 1996 version of PC-MICAR. For more information on database conversion, see Appendix G, <b>Converting Files</b> . This utility is installed in the <DATA> directory.
PCMICAR.EXE	The PC-MICAR executable program. This file is installed in the <PCMICAR> directory.
PCMICAR.HLP	The HELP file text. This file is installed in the <PCMICAR> directory.
STATES.TXT	A file listing information about the states/province in a country. A list of US states is provided. Any other English speaking country can use PC-MICAR and replace the state list with any ASCII file editor. The format is:

Column	Item
1-2	2 character abbreviation
3-4	2 digit numeric code
5-24	20 character state/province name

### **Database Files**

The following files are PC-MICAR database files. They will be generated by PC-MICAR. The term "filename" is the name of a database file. Database filenames are supplied by the user when the file is created (see **Creating a New Certificate File** in the *PC-MICAR User's Manual*). Database file names are restricted to seven characters in length. (The eighth character is used by PC-MICAR for identification of specific file types.) All of these files will be stored in the <DATA> directory.

filename.CDX	An index to the database file.
filename.DBF	A file containing certificate data.
filename.FPT	A file containing portions of the certificate data that are usually not filled with information, such as the injury block lines and lines 11-20 of the cause of death data.
filename.HDR	A file containing header information for the database file. This

information is the same for every record in the file.

filename.PBK	A backup file created by using the Backup All Files or Backup and Remove Function. This file contains a compressed copy of all of the files associated with a particular batch of certificates.
ssyylll.ZIP	A backup file created by the Backup for NCHS Function. ss = state code, yy = year, lll = lot number.

### **Report Files**

Listed below are PC-MICAR files that contain reports created by PC-MICAR:

filename.SSQ	A report file of missing certificates in the database. Created by the Sequence Check Function (see <b>Generating a Sequence Check</b> in the <i>PC-MICAR User's Manual</i> ).
filename.IIN	A MICAR100 Input file created by PC-MICAR processing.

### **File Naming Conventions**

As mentioned above, PC-MICAR certificate database files can be given any name of up to seven characters. For consistency, however, 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 in which each file is identified by its state abbreviation, lot number, data year, and coder status. Thus, each filename would look like this:

SSYYNNN.xxx, where

SS	is the state abbreviation.
YY	is the year
NNN	is the lot number.
.xxx	is the file extension that identifies each type of file, as indicated above.

Thus, the file for Alabama, lot 412, in year 1993, by the initial coder would have the name AL93412.SIN. 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.

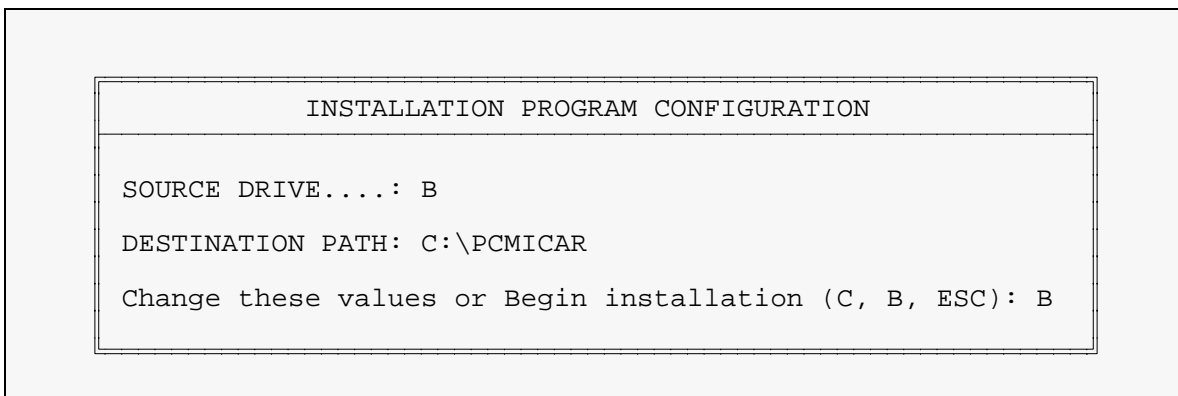
## Installation Instructions

PC-MICAR is very easy to install. Simply follow the directions listed below. NOTE: If PC-MICAR is being re-installed, the old files will be overwritten.

**IMPORTANT:** The files on the disk are in a compressed format. PC-MICAR cannot be run from the installation disks. These files **MUST** be installed using the INSTALL.EXE program on Disk #1.

1. Place Installation Disk #1 in a disk drive.
2. Switch to the drive containing Installation Disk #1. This can be done by typing the letter of the drive with a semicolon, and pressing {ENTER} at the DOS prompt. (Example: Type A: {ENTER} to switch to the A drive.)
3. Type INSTALL and press {ENTER}.
4. The Installation Configuration window will appear (see **Figure 1**). Make any changes to the data displayed as necessary. The various fields are explained below.

SOURCE DRIVE            The drive containing the Installation Diskette (usually drive A or drive B).



**Figure 1:**The Installation Configuration window with sample entries.

DESTINATION PATH    The hard drive on the PC (usually hard drive C or hard drive D) and directory that will contain the PC-MICAR files.

Change these values... Pressing the following keys will have the listed effects:

- {C} Allows the System Manager to change the SOURCE DRIVE and DESTINATION PATH.
  - {B} Begins the installation process. See step 5 below.
  - {ESC} Ends the installation process and returns to DOS.
5. When the installation program has been told to install (by pressing "B") the processing files, a window will be displayed in which to select the options to install. By selecting YES or NO, the PC-MICAR 1996 demo and the Universal Prompts demo can be installed.
  6. Once the installation options are selected, a window will be displayed showing the files being installed. A progress bar will also be displayed at the top of the screen showing what percentage of PC-MICAR has been installed. Whenever a new disk needs to be put in, an instruction window will appear, telling which disk number needs to be inserted into the disk drive.
  7. After the installation is complete, an "Installation Complete" message window will be displayed. Press any key to return to DOS. PC-MICAR has now been installed.

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## OVERVIEW

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### Basic Steps

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

Note that the relevant sections of this manual are listed next to each step (the sections without page numbers are from the *PC-MICAR User's Manual*).

1. Start PC-MICAR (**STARTING PC-MICAR**).
2. Open a certificate file (**Opening an Existing 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 that PC-MICAR can perform requires that a file be opened before the function can be preformed.
3. Edit the certificate file header information as needed (**Creating a New Certificate 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 database (**ENTERING AND SAVING CERTIFICATE DATA**). This is the main data entry process. PC-MICAR's editing functions may prove useful in this step (see **EDITING FUNCTIONS**).
5. Process the certificate file (**PROCESSING A CERTIFICATE FILE**). When a file is processed, PC-MICAR assigns entity reference numbers (ERNs) to the medical causes of death that were listed in the certificate file. This step is only necessary if the dictionary was turned off during data entry.
6. Generate MICAR100 file (**GENERATING A MICAR100 FILE**). This file is used by other MICAR software to continue the process of encoding cause-of-death data. This step need not be taken if the data is going to be processed by the PC versions of MICAR100 and 200.



7. Create a backup for shipment to NCHS (**Creating Backups for NCHS**). This function creates a file that can be shipped to NCHS. The file contains the MICAR100 file generated in the previous step.
8. Close the certificates file (**CLOSING A FILE**).
9. If there are other certificate files to process, repeat steps 2 through 7.
10. If there are no more files to process, exit PC-MICAR and return to DOS (**EXITING PC-MICAR**).

### **PC-MICAR Utilities**

Below are listed additional Functions that PC-MICAR can perform. Most of these utilities can be used at any time with PC-MICAR. Most will require that a certificate file be open. See the individual description of each utility for more details.

1. Browse through and edit the certificates in a file (**Browsing Through the Certificates**). This function allows the user to edit information in the certificate database, which may be necessary at any time.
2. Find a specific certificate number/record in a file (**Finding a Record**). This function is available only when browsing through the certificates and allows the user to display a particular record by specifying its certificate number.
5. Delete a certificate while editing (**Deleting Certificates While Editing a Certificate File**). This function allows the user to remove a record from the certificate file.
6. Delete several certificates at once (**Deleting Several Certificates at Once**). This function allows the user to remove a block of several records from the certificate file. Use this option if an error has occurred and several certificates have been entered into the wrong file.
7. Generate a sequence check (**Generating a Sequence Check**). This function generates a report that checks the sequence of the certificate numbers in the file. It is useful in determining if all of the records that should be in the file have been entered, if unwanted records have been entered, or if records have been entered with an incorrect certificate number. This function can be used at any time, but is most useful between data entry and processing to determine if the file is complete.

8. Print all or selected certificates for review. See **Printing All the Certificates** and/or **Printing a Single Certificate**.
9. Perform a daily backup. (**Backing Up All the Files**). This function creates a backup copy of the open certificate file either on your system's fixed drive or on a floppy. Backing up data is the only protection available against losing data due to a failed computer system. It is a good idea to back up the certificate file at the end of every day.

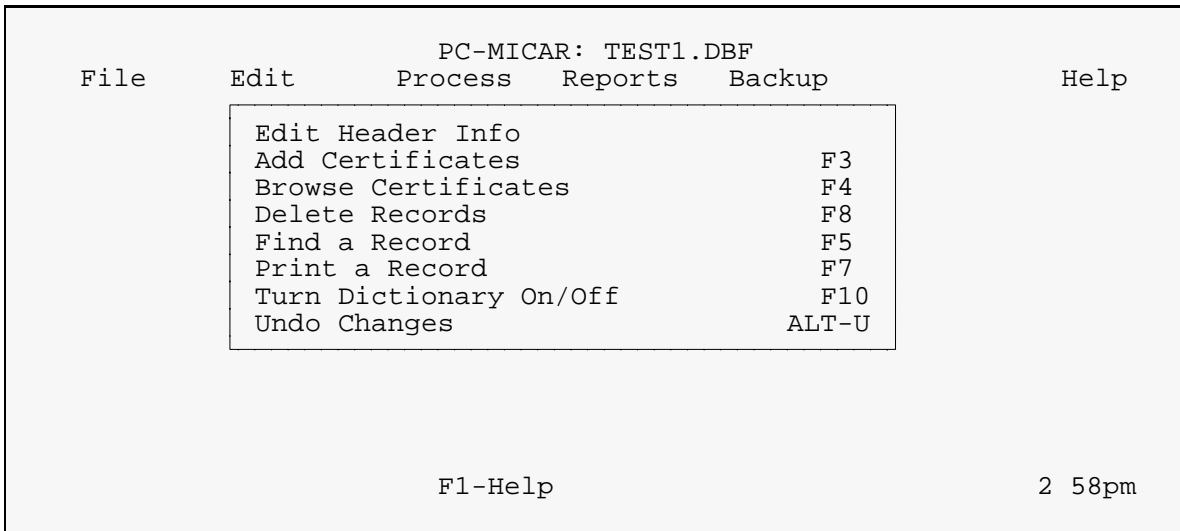
### **System Manager Functions**

The following functions may require additional technical knowledge and should only be accessed by the System Manager:

1. Repair File Index (**REPAIRING A FILE INDEX**, pg. 19).
2. Restore from Backup and Backup and Remove (**BACKUPS AND RESTORES**, pg. 20, 24).
3. Set Data File Path (**SET DATA FILE PATH**, pg.22).
4. Set Table File Path (**SET TABLE FILE PATH**, pg. 23).
5. Set Backup File Path (**SET BACKUP FILE PATH**, pg. 24).
6. Set MICAR100 Export Path (**SET MICAR100 EXPORT PATH**, pg. 25).
7. Access the DOS Prompt (**GETTING TO A DOS PROMPT**, pg. 26).

## Using the PC-MICAR Menu System

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



**Figure 2:** The **Edit** Menu Option and its Functions.

There are two ways to access the menu:

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

**HotKey:** Many of the functions in the menus have an associated hotkey. The hotkey assignments are shown on the drop-down menus and are listed in Table 2. Pressing a hotkey will immediately access the associated function. (For example, pressing {F2} will select the Open Existing File function.)

Hotkeys are the fastest, easiest way to move around PC-MICAR. As users become familiar with PC-MICAR, they will find the hotkeys easier to use.

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

**Figure 2** gives an example of the **Edit** Menu Option and its Functions.

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

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

<b>Table 2: Function Listing</b>	
<b>File</b>	
{ALT-F2}	Create New File
{F2}	Open Existing File
{ALT-F4}	Close File
	Repair File Index
{ALT-F6}	Set Data File Path
{SHIFT-F6}	Set Table File Path
	Set Backup Path
	Set MICAR 100 Export Path
{ALT-X}	Exit PC-MICAR
<b>Edit</b>	
	Edit/Browse Header Info
{F3}	Add Certificates
{F4}	Edit/Browse Certificates
{F8}	Delete Records
{F5}	Find a Record
{F7}	Print a Record
{F10}	Turn Dictionary On/Off
{ALT-U}	Undo Changes
<b>Process</b>	
	Process All Records
	Generate MICAR100 File
<b>Reports</b>	
	Sequence Check
	Print All Certificates
<b>Backup</b>	
{ALT-F7}	Backup All Files
	Backup for NCHS
{ALT-F8}	Restore from Backup
	Backup and Remove
<b>Help</b>	
{F1}	View Help File
{ALT-F1}	About PC-MICAR

## REPAIRING A FILE INDEX

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Occasionally, the file index may be damaged and need to be repaired. The Repair File Index Function rebuilds the file index from the data file.

1. Press {ALT-F} to select the **File** Menu Option.
2. Use the up and down arrow keys to highlight the Repair File Index Function and press {ENTER}.
3. A window will be displayed while the index is being rebuilt.
4. When the file index has been completely rebuilt, the main screen will be re-displayed.

---

## BACKUPS AND RESTORES

---

### Taking Backups

PC-MICAR uses PKZIP to compress data put into backup files. There are three types of backup files used by PC-MICAR. Backup All Files creates a backup of a certificate file (plus its associated files) and stores it in a file called [filename].PBK. The second type of backup, Backup for NCHS, does the same thing and creates a backup file called [filename].ZIP. The third type creates a backup (called [filename].PBK) and then gives the user the option to delete the database file from the hard drive. ALL of these files are compressed using PKZIP.

Backup All Files and Backup for NCHS are described in the *PC-MICAR User's Manual*. The Backup and Remove Function is described below:

### Backup and Remove

This Function is used to create a backup of a certificate file. It also removes the file(s) from the hard drive.

1. Press {ALT-B} to select the **Backup** Menu Option.
2. Use the up and down arrow keys to highlight the Backup and Remove Function. Press {ENTER}.
3. A window will be displayed requesting a drive letter to send the backup to. Press the letter of the drive ('A' for the A: drive, 'B' for the B: drive, etc).
4. A message window will be displayed while the backup is being made.
5. When the backup is finished, another window will appear.
  - A. To delete the certificate file and all of its associated files from the hard drive, press {Y} for YES.
  - B. To abort deleting the files, press {N} for NO.
6. The main screen will be re-displayed.

### Restoring From a Certificate File Backup

Below are instructions on restoring from a certificate backup made using either Backup All Files or Backup for NCHS (see **CREATING BACKUPS** in the *PC-MICAR User's Manual*). Note that if there is an open file, it must be closed.

1. Press {ALT-B} to select the **Backup** Menu Option.
2. Use the up and down arrow keys to highlight the Restore From Backup Function. Press {ENTER}.
3. A file selection window will be displayed. Use the {TAB} and arrow keys to move the cursor between fields and select the drive, directory, and file to restore from. When the desired file is highlighted, press {ENTER}.
4. A window will be displayed saying that the restore is in progress.
5. When the restore is finished, the restored file will be open and ready for use.
6. The main screen will be re-displayed.



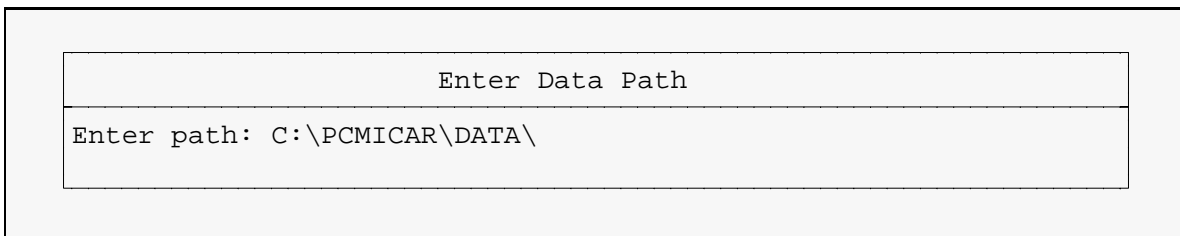
---

## SET DATA FILE PATH

---

The data file path tells PC-MICAR where the certificate data files are located on the hard drive. The data path will need to be changed if the data files are put in a different directory. This menu option will become available only when no data file is open.

1. Press {ALT-F} to select the **File Menu Option**.
2. Use the up and down arrow keys to highlight the Set Data File Path Function and press {ENTER}.



**Figure 3:** The Set Data Path window.

3. A data file path window (see **Figure 3**) will be displayed.
4. Type in the data file path in the following format:  
  
[drive]:[directory\  
  
Example: C:\PCMICAR\DATA\
5. Press {ENTER}. If an invalid path is given, a message window will be displayed. Re-enter the path or press the {ESC} key to return to the main screen.
6. If no errors are encountered, the data path will be changed to the new setting and the main screen will be re-displayed.

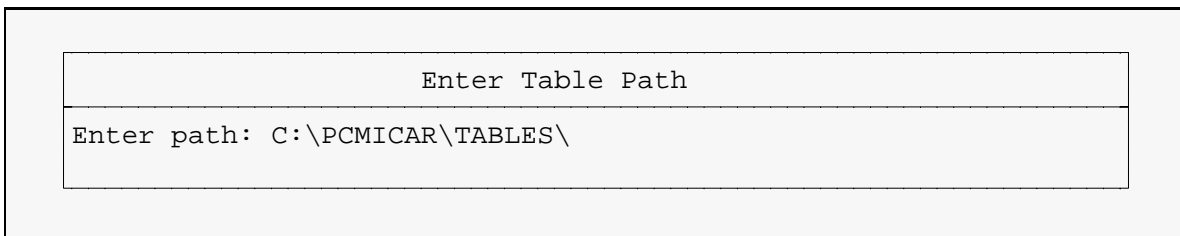
---

## SET TABLE FILE PATH

---

The table file path tells PC-MICAR where the table files are located on the hard drive. The table files contain medical entities and entity reference numbers (ERNs) that PC-MICAR uses during processing.

1. Press {ALT-F} to select the **File Menu Option**.
2. Use the up and down arrow keys to highlight the Set Table File Path Function and press {ENTER}.



**Figure 4:** The Set Table Path window.

3. A table file path window (see **Figure 4**) will be displayed.
4. Type in the table file path in the following format:  
  
[drive]:[directory\  
  
Example: C:\PCMICAR\TABLE\
5. Press {ENTER}.
  - A. If an invalid path is given, a message window will be displayed. Re-enter the path or press the {ESC} key to return to the main screen.
  - B. If PC-MICAR cannot find the table files on the path, a message window will be displayed. The table path will be reset to its original setting. The main screen will be re-displayed.
6. If no errors are encountered, the table path will be changed to the new setting and the main screen will be re-displayed.

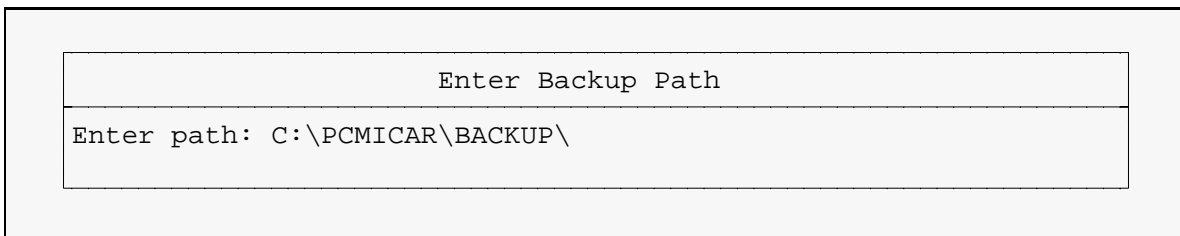
---

## SET BACKUP PATH

---

The backup path tells PC-MICAR where to store backed up data. By default, the backup files are located in the data directory. The backup path will need to be changed if the backup files are put in a different directory.

1. Press {ALT-F} to select the **File Menu Option**.
2. Use the up and down arrow keys to highlight the Set Backup Path Function and press {ENTER}.



**Figure 5:** The Set Backup Path window.

3. A backup path window (see **Figure 5**) will be displayed.
4. Type in the backup path in the following format:  
  
[drive]:[directory]\  
  
Example: C:\PCMICAR\BACKUP\
5. Press {ENTER}. If an invalid path is given, a message window will be displayed. Re-enter the path or press the {ESC} key to return to the main screen.
6. If no errors are encountered, the backup path will be changed to the new setting and the main screen will be re-displayed.

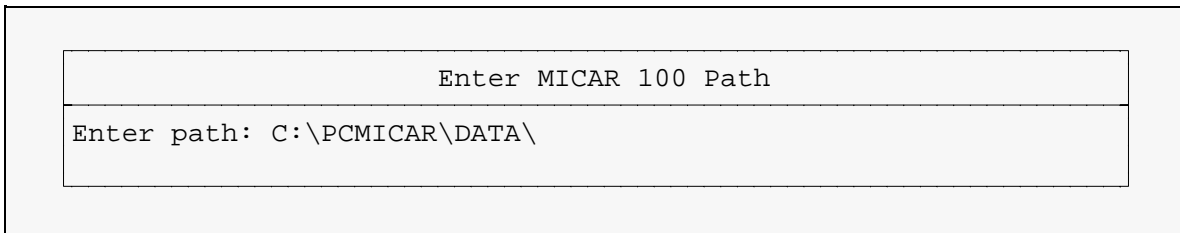
---

## SET MICAR100 EXPORT PATH

---

The MICAR100 export path tells PC-MICAR where to store exported MICAR 100 input files. (These were referred to as mainframe files in previous versions of PC-MICAR.) By default, MICAR100 export files are stored in the data directory. The MICAR100 export path will need to be changed if the files are put in a different directory

1. Press {ALT-F} to select the **File** Menu Option.
2. Use the up and down arrow keys to highlight the Set MICAR 100 Export Path Function and press {ENTER}.



**Figure 6:** The Set MICAR 100 Path window.

3. A MICAR100 path window (see **Figure 6**) will be displayed.
4. Type in the data file path in the following format:  
  
[drive]:[directory\  
  
Example: C:\PCMICAR\MIC100\
5. Press {ENTER}. If an invalid path is given, a message window will be displayed. Re-enter the path or press the {ESC} key to return to the main screen.
6. If no errors are encountered, the data path will be changed to the new setting and the main screen will be re-displayed.

## GETTING TO A DOS PROMPT

---

For those situations when the System Manager needs to get to a DOS prompt quickly, without quitting PC-MICAR, there is a DOS Prompt Function under the **File** menu option.

1. Return to the main screen.
2. Press {ALT-F} to access the **File** menu option.
3. Use the up and down arrow keys to highlight the DOS Prompt Function. Press {ENTER}.
4. This creates a DOS shell. The System Manager can now enter commands through DOS. When finished, type 'EXIT' and press {ENTER} to return to PC-MICAR.

---

**APPENDIX A - NCHS STATE CODES**


---

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

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

---

**APPENDIX B - MENU LISTINGS**

---

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

<b>Function Listing</b>	
<b>File</b>	
{ALT-F2}	Create New File
{F2}	Open Existing File
{ALT-F4}	Close File
	Repair File Index
{ALT-F6}	Set Data File Path
{SHIFT-F6}	Set Table File Path
	Set Backup File Path
	Set MICAR 100 Export Path
{ALT-X}	Exit PC-MICAR
<b>Edit</b>	
	Edit/Browse Header Info
{F3}	Add Certificates
{F4}	Edit/Browse Certificates
{F8}	Delete Records
{F5}	Find a Record
{F7}	Print a Record
{F10}	Turn Dictionary On/Off
{ALT-U}	Undo Changes
<b>Process</b>	
	Process All Records
	Generate MICAR100 File
<b>Reports</b>	
	Sequence Check
	Print All Certificates
<b>Backup</b>	
{ALT-F7}	Backup All Files
	Backup for NCHS
{ALT-F8}	Restore from Backup
	Backup and Remove
<b>Help</b>	
{F1}	View Help File
{ALT-F1}	About PC-MICAR



---

**APPENDIX C - DICTIONARY OF TERMS USED**

---

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

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

- Menu - A list from which to select an action that PC-MICAR can perform. PC-MICAR has both a main menu and submenus. The main menu appears as a bar across the top of the screen, just below the program name. From the main menu, a submenu can be selected listing actions to be performed. See the section **Using the PC-MICAR Menu System** (pg. 16) for more details on how to use the menu.
- Pick List - A list of items that can be selected (picked) by using the up and down arrow keys to highlight the desired item and then pressing {ENTER}.
- Subdirectory - See Directory above.
- Submenu - A group of related actions arranged into a list from which an action can be selected. Submenus are available through the main menu. See the section **Using the PC-MICAR Menu System** (pg. 16) for more information on the menu system.
- Table Directory - A subdirectory on the computer where PC-MICAR processing files are stored. By default, the table directory is a subdirectory of the <PCMICAR> directory called <TABLES>. The default value can be changed through PC-MICAR.

---

## APPENDIX D - CONVENTIONS USED IN THIS MANUAL

---

The conventions used in this manual are the same as for the *PC-MICAR User's Manual*. They are repeated here for convenience.

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

---

## APPENDIX E - ACCESSING THE UNIVERSAL PROMPT DEMO

---

PC-MICAR incorporates the new universal external cause prompts. The prompts are designed to capture information needed by ICD-10 to code external causes, while losing none of the required data for ICD-9. To help users familiarize themselves with the new prompts, a demonstration package has been provided. This package displays a number of injury descriptions, along with the place of injury, and allows the user to select the corresponding prompt via the external cause prompt system. Three attempts are allowed for each record. The number of tries required to get a correct prompt is displayed at the bottom of the screen.

To access the external cause prompt demonstration package, follow these steps:

1. From the DOS prompt, change to the <PCMICAR> directory. This can be accomplished by entering the following command at the DOS prompt:

```
CD \PCMICAR
```

2. At the DOS prompt, type the command PROMPT10 and press <ENTER>.
3. The first record will be displayed. Continue to select prompts from the screen. After each record is completed, a message will ask if the user wishes to continue. Select YES to go on to the next record. Select NO to exit the prompt demo.
4. When the prompt demo package is restarted, it can be run from the beginning or from the point where the last user exited.

---

**APPENDIX F - ACCESSING THE PC-MICAR 1996 DEMO**

---

Because PC-MICAR 1996 is very different from prior versions, a demonstration package has been provided that outlines the changes in the screens, the menu system, the external cause prompts, and the data files. Users should go through this demo to familiarize themselves with aspects of this new software. It should take 10 to 15 minutes to complete the demo.

To access the PC-MICAR 1996 demo, follow these steps.

1. From the DOS prompt, change to the <PCMICAR> directory. This can be accomplished by entering the following command at the DOS prompt:

```
CD \PCMICAR
```

2. At the DOS prompt, type the command PCMDemo and press <ENTER>.
3. A series of screens containing information will be displayed. Press <ENTER> after reading each screen to go on to the next one. When the demo is complete, the DOS prompt will once again be displayed.

---

## APPENDIX G - CONVERTING FILES

---

For those who implemented the October 1995 version of PC-MICAR 1996, this section outlines how to convert files created with that system to a format usable by the second release of PC-MICAR 1996. The new database format is much more compact than the previous one. As a result, converting the files could save significant hard drive space. **Files must be converted before they can be used with this version of PC-MICAR 1996.**

To convert a data file, follow these steps.

1. From the DOS prompt, change to the <DATA> directory using the following command:

*CD directory*

Where *directory* is the full path name of the directory where data files are stored.

2. Run the conversion program from the DOS prompt by typing:

PCM96CVT <ENTER>

3. A file selection window is displayed showing all the database files in the data directory. Use the up and down arrow keys to highlight the name of the file to be converted. When the file name is highlighted, press <ENTER>.
4. The file will be converted. The old file will be stored as a database file. Its name will be the same as the name that it had before, with the letter O appended to the end of the file name. For example, the backup for a file named TEST.DBF would be TESTO.DBF. Once it is confirmed that the conversion was successful, the old file can be deleted to make more space on your hard drive.
5. Repeat steps 2 through 4 to convert other files.

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