

Hose
Equipment
Repair
Organizer™

HERO™ User's Guide - Version 1.0



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1.0 INTRODUCTION

Thank you and congratulations for choosing HERO™. HERO™ is a user-friendly Hose Equipment Repair Organizer tool, consisting of a relational databases plus various utilities, that makes the control of fire hose inventories easier, and virtually error free. Used properly, HERO™ will save time, reduce your workload and save your department money.



1.1 HERO™ Overview

HERO™ has been designed to be user-friendly, with easily learned, full-screen interfaces for editing, modifying, adding, and deleting data in a consistent manner, for all databases. The following is an overview of each database:

- | | |
|-----------------|--|
| Station: | Manages information regarding the names, addresses, contacts, telephone numbers and hose requirements (i.e., how many feet of each diameter of hose <u>should</u> be at each station). |
| Hose Inventory: | Manages information regarding each section of hose (with couplings), including length, diameter, type of hose, manufacturer name and date, test information, as well as a complete repair history log. |

Each database is capable of supporting any number of records, depending only on the amount of disk storage space available. In addition, each database is equipped for printing reports for inventory and auditing purposes.

Optional hardware consists of a laser bar code scanner and bar code labels, to speed the physical inventory process of hoses and couplings. If you do not already have a HERO™ portable bar code scanner and a quantity of pre-printed bar code labels to place on hoses/couplings, please contact SIMS Software to place your order.

SIMS Software
P.O. Box 607
Solana Beach, CA 92075

Tel: (619) 481-9292
FAX: (619) 481-3557

1.2 Technical Support

Even though HERO™ is exceptionally easy to understand and use, especially in conjunction with this manual, you still might have a question about the program or a suggestion to improve or expand our product. For immediate help using HERO™, please call us at (619) 481-9292. Our regular service hours are 8 am to 5 pm, Monday through Friday, Pacific Time. You may leave messages at any time.

Because we recognize that the fire protection industry is not static and that changes in procedure are the rule rather than the exception, we expect that the HERO™ product will continually be improved. To that end, your comments and suggestions are welcomed. Please feel free to contact us at:

SIMS Software
P.O. Box 607
Solana Beach, CA 92075

Tel: (619) 481-9292
FAX: (619) 481-3557

If You Need to Call

If you need assistance *after following the steps below*, you may call SIMS Software at (619) 481-9292. Before you call, please:

- Take one last look at the manual,

- Write down the details of the problem, including:
 - 1) What you were doing immediately before the problem occurred;
 - 2) What you were trying to do; and,
 - 3) What actually happened.
- Be prepared to give the current version number of the software and the serial number from your original disk.

Technical support is available Monday through Friday from 8:00 a.m. to 5:00 p.m. Pacific Time. Please ask for technical support and indicate that you are calling regarding HERO™ for Microsoft Windows 3.1. If all our technicians are busy, your call will be returned as soon as possible.

2.0 INSTALLATION

If you are unfamiliar with computer operating conventions such as pointing, clicking, opening and selecting from menus with a mouse, copying files, launching programs, etc., please review your computer's operation manual, especially if you are a new computer user. HERO™ is not complicated, but it does assume some familiarity with the computer keyboard and mouse. You should know how to do the following:

- Set up and start your computer;
- Use the keyboard letter, number, Left-Right-Up-Down Arrow and Enter keys;
- Use a mouse to point and click;
- Pull down menus and choose commands;
- Set up and use your printer to print documents;
- Make and change directories;
- Copy files;
- Install and run Windows 3.1 programs; and,
- Backup files.

2.1 System Requirements

To operate HERO™ for Windows optimally, we recommend:

- An Intel 80386, 80486 or better computer system.
- The computer system should have at least 4 MB of total RAM.
- Install Microsoft Windows 3.1 or later.
- A hard disk drive with at least 5 MB of free space is required.
- A color or monochrome monitor is required, although color is better.
- A keyboard and mouse is also required.

- | |
|---|
| <ul style="list-style-type: none">• Note that all printers must be installed and configured through the Windows Control Panel, Printers, Setup, to ensure that the printer memory shown actually matches that available with the printer. |
|---|

For multi-user HERO™ implementations, network operating system software that supports the standard NETBIOS interface and is compatible with PC/MS-DOS 3.1 (or higher) is required. Most currently available networks meet these requirements, including:

- 3Com 3+
- Banyon Vines
- IBM PC Network
- Novell Advanced Netware (rev. 1.02 or higher)
- Novell Netware 286
- Novell Netware 386
- Lantastic
- Invisible Net
- ...and many, many others.

2.2 Installation Procedure

2.2.1 CONFIG.SYS and AUTOEXEC.BAT Files

Before installing HERO™ on the computer, be sure that the operating system startup disk's *CONFIG.SYS* file is set to allow at least 100 files to be open at once, as shown below:

FILES=100

In addition, we recommend adjusting the number of buffers to be between 20 and 40 by including a *BUFFERS* command in the *CONFIG.SYS* file. If, for example, to make 20 buffers available, the command would look like this:

BUFFERS=20

To optimize performance of the computers hard disk drive, we recommend that a small disk cache be installed, by including the following in the *AUTOEXEC.BAT* file:

SMARTDRV.EXE 512 256

Consult the MS-DOS manual for more information on the *FILES*, *BUFFERS*, and *SMARTDRV* commands. In addition, consult the MS-DOS manual for instructions on using the

DEVICE=HIMEM.SYS

(Extended memory manager)

DOS=UMB

(Frees upper memory blocks)

DOS-==HIGH

(Loads DOS into high-memory but only using MS-DOS 5.0 or later)

commands in the computer's *CONFIG.SYS* file.

2.2.2 Printer Installation

All printers must be installed and configured through the Windows Control Panel, Printers, Setup, to ensure that the printer memory shown actually matches that available with the printer.

2.2.3 Software Security Device Installation

If a SIMS Software Security Device has been supplied, to install the device, turn the computer off and then plug the device directly into the HERO™ workstation's parallel (printer) port (LPT1:, LPT2:, or LPT3). Do not connect the SIMS Software Security Device to an A/B type shared printer switch; instead, plug it directly into the computer's parallel port. The printer cable, (if a printer is attached to the computer) may then be plugged directly into the SIMS Software Security Device. Do not attempt to use a printer cable longer than six-feet, since the longer cable may adversely affect the performance of the SIMS Software Security Device. The Software Security Device must be connected to the computer's parallel port at all times that HERO™ is running. Be advised that the SIMS Software Security Device should not effect the performance of any other software or printers.

Use of the SIMS Software Security Device gives your organization complete and absolute assurance that the HERO™ program is not being copied and used in violation of the Software License Agreement.

2.2.4 Installing HERO™ on the Hard Disk

To actually load the HERO™ files onto the computer's hard disk:

1. Insert the first HERO™ installation disk into a floppy disk drive and run SETUP.EXE from the Windows, Program Manager, File, Run, Command Line.
2. Insert the additional floppy disk, when requested.

For example, assuming that floppy drive A: is to be used, from the Windows, Program Manager, File, Run, Command Line type:

A:\SETUP.EXE

then follow the instructions provided on the monitor, inserting the required diskettes when requested.

2.2.5 Multi-User Installations

Multi-user HERO™ installation on a LAN follows the same procedure as described in Section 2.3.4 above, using one of the LAN workstation computers. However, one must first be logged into the network with directory and file creation privileges (e.g., as a supervisor). The HERO™ data files will automatically be install in a \DATA directory, beneath the directory where the program files are installed (typically, \HERO\DATA). The HERO™ program files may be then be install on the hard disk of each HERO™ workstation on the LAN using the SETUP.EXE program from the Windows Program Manager.

While the HERO™ program and data files may both be located on the fileserver, for optimum performance, the HERO™ program files should be executed from a workstation's local disk. If the workstation does not have a hard disk, thereby forcing all program files to be located on the fileserver, some HERO™ program files must be located in each HERO™ user's private directory area. For example, to set up HERO™ on a Novell network for sharing one copy of the HERO™ program files:

Given user name "USER1":

- 1) Put the CONFIG.FPW file into the user's local work area. Remove this file from the shared HERO™ program directory:

F:\HOME\USER1\CONFIG.FPW

- 2) Using a text editor, add the following to the CONFIG.FPW file for the user:

**EDITWORK=F:\HOME\USER1
PROGWORK=F:\HOME\USER1
SORTWORK=F:\HOME\USER1**

- 3) Use the DOS "SET" command to specify a DOS environment variable that tells FoxPro where the CONFIG.FP file is located. In the workstation's AUTOEXEC.BAT file, add:

SET FOXPROCFG=F:\HOME\USER1

or, in the user's Novell login script, add:

SET FOXPROCFG="F:\\HOME\\USER1"

- 4) If necessary, change the path to the shared data directory at each HERO™ workstation, via the System, Data Directory menu.

We do not recommend keeping HERO™ program, data, or temporary work files created by HERO™ on a RAM disk, because they could grow to be very large and overflow the capacity of any reasonable RAM disk.

3.0 INTERFACE & OPERATION BASICS

This section describes how to start and quit HERO™, in addition to providing general instruction regarding program operation.

3.1 Starting HERO™

To start the HERO™ program, double-click on the HERO™ icon from the Windows Program Manager.



3.2 Quitting HERO™ Properly

We have gone to great lengths to ensure, to the maximum extent possible, that the user can exit HERO™ only by using the EXIT command from the FILE menu. However, neither we nor anyone else can prevent the user from rebooting the computer by pressing the Ctrl+Alt+Del keys or from removing power from the computer!

HERO™, like other sophisticated database management systems, achieves extra processing speed by retaining substantial portions of files and indexes being processed within the computer's internal random access memory (RAM). Data stored in RAM can be accessed thousands of times faster than data stored on a hard disk drive.

Apart from speed, the most obvious difference between RAM and hard disk storage is that RAM is volatile. When your computer is rebooted or when electrical power is removed, the information contained by RAM is immediately lost.

Because HERO™ retains, in RAM, portions of the data files and indexes that are being used, the most important part of housekeeping that HERO™ performs when quitting via the FILE-EXIT menu choice is to flush these pieces of data files and indexes to the computer's hard disk. If the user reboots or simply shuts off the computer's power without properly quitting, this essential process is bypassed. Any pieces of the data files or indexes which were created or changed and which were stored only in RAM at the moment that the computer was rebooted or power was cut, are never written to disk and are lost forever.

If no data files or indexes are in use, it is likely that no harm will be done. However, please note:

If the user reboots the computer with Ctrl+Alt+Del or shuts the power off without first quitting HERO™ via the FILE-EXIT menu, any data files or indexes which are in use at the time may be damaged or destroyed. It is absolutely essential that the user exits HERO™ only via the FILE-EXIT menu choice.

SIMS Software accepts no responsibility for any difficulties that the user may experience as a result of exiting from HERO™ other than via the FILE-EXIT menu choice.

3.3 Systematic Back Ups

For simplicity, we recommend that all files contained in the HERO™ data directory (typically, C:\HERO\DATA) be backed up. The HERO™ data files should be backed up daily onto one of three sets of backup disks or tapes. On Monday, Wednesday, and Friday, back up onto disk/tape "a". On Tuesday, Thursday, and Saturday, back up onto disk/tape "b". On Sunday, back up onto disk/tape "c". Disk/tape "c" should be kept at a location other than your workstation, to avoid disasters caused by fire, flood, etc.

DO NOT USE THE SAME DISKETTES OR TAPES TO BACK UP TODAY'S DATA FILES THAT WAS USED YESTERDAY. Otherwise, if something happens during the backup procedure, the only good backup will have been ruined.

Note that only the files contained in the directory specified via the HERO™ data path (see Exhibit 3.6-1) need to be backed up, since the HERO program files can always be restored from the original disks.

There is only one way to absolutely ensure the safety of the HERO™ data -- rigorous adherence to a regular program of backing up the data files.

3.4 Disk Fragmentation

To ensure that HERO™ performs optimally on the computer's hard disk, we strongly recommend that a disk de-fragmentation utility similar to Norton's "SPEEDISK" be used periodically.

3.5 Interface Basics

HERO's interface consists of Microsoft Windows standard menu, windows, dialogs, buttons and other features that make it easy for the user to communicate with HERO™.

The interface is *non-procedural*, so the user can perform operations without typing commands. It is also *event-driven* -- it waits for the user to tell it what to do next. The user controls the sequence of actions that the computer performs.

HERO™ is designed for use with a mouse and a standard keyboard. With a keyboard, the arrow keys and keystroke combinations are used to choose objects and control in the interface. Some HERO™ functions require the use of a mouse. With the click of a button, a mouse can accomplish the equivalent of several keyboard keystrokes.

3.6 Main Menu Interface

The HERO™ menu system consists of a menu bar, menu pads, menu pop-ups with menu options and is the principal means for communicating with HERO™. Each of HERO™ menu pad items, with its associated menu options, are summarized in Exhibits 3.6-1 through 3.6-4.


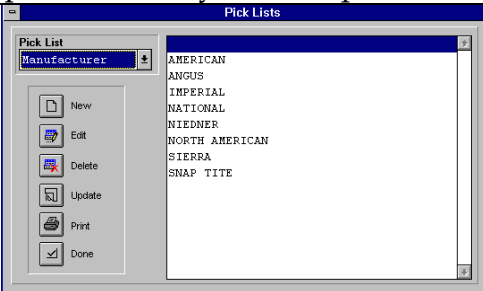
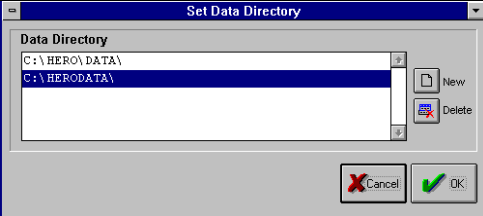
OPTION	KEY	OPTION SELECTION RESULT	FUNCTION
About HERO...	A		Identifies the HERO™ version and displays the copyright notice.
Help	F1	Presents a menu of help topics, from which information may be requested for any of the topics shown.	
Picklists...	P		Allows the user to create customized picklists for Apparatus, Manufacturer, Length, Diameter, Type, Test Status, Test Pressure, Test Status, & Repaired By.
Data Directory...	D		Allows the user to specify the path to the HERO™ Data Directory (typically C:\HERO\DATA).

Exhibit 3.6-1 System Menu Pad Options

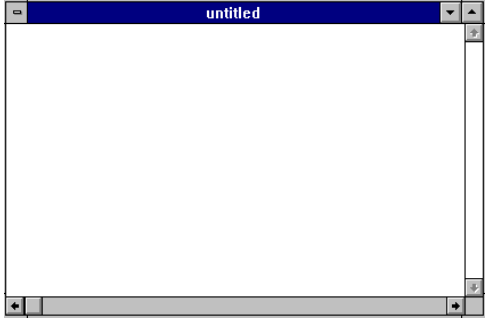
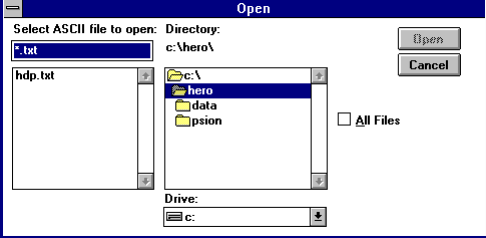
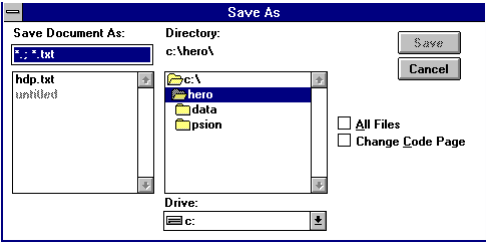
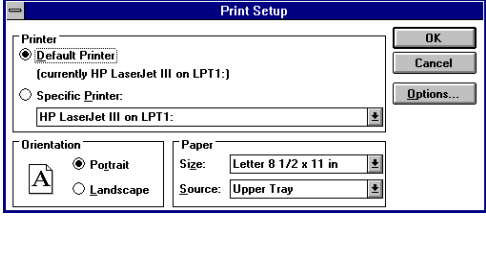
OPTION	KEY	OPTION SELECTION RESULT	FUNCTION
New...	N		Creates and opens a new ASCII file.
Open...	O		Opens an existing ASCII file.
Save	S	Saves the currently open ASCII file.	
Save As...	A		Saves the currently open ASCII file to a file whose name and location is determined by the user.
Revert	R	Resets the ASCII file being edited to its previous contents.	
Print Settings...	I		Allows changing the selected printer for Windows. This window is the equivalent of selecting "Printers" from the Windows Control Panel.
Exit	X	Exits the HERO™ program, after first closing all data files and properly closing out all temporary data storage areas.	

Exhibit 3.6-2 File Menu Pad Options

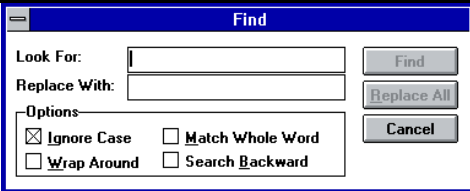
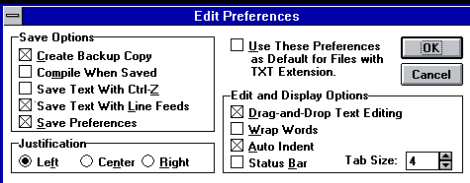
OPTION	KEY	OPTION SELECTION RESULT	FUNCTION
Undo	^U	Reverses the last action that was performed on any text within a field, record or file.	
Redo	^R	Reverses the last "Undo" action.	
Cut	^X	Removes selected text from any field, record or file and places it on the clipboard.	
Copy	^C	Copies the currently selected text from any field, record or file and place the copy on the clipboard.	
Paste	^V	Places the current clipboard contents into the current file or field at the cursor location.	
Select All	^A	Selects all lines of text in the current field.	
Find	^I		Locates the specified word or phrase in the current text field.
Find Again	^G	Locates the next occurrence of the previously found word or phrase in the current text field.	
Replace and Find Again		Replaces a matching string of Look For text with the Replace With text, then continues to search for the next occurrence of matching text, pausing for further instructions.	
Replace All		Replaces every occurrence of matching Look For text with the Replace With text.	
Preferences			Allows specification of the editing preferences to be in effect during an editing session.

Exhibit 3.6-3 *Edit Menu Pad Options*

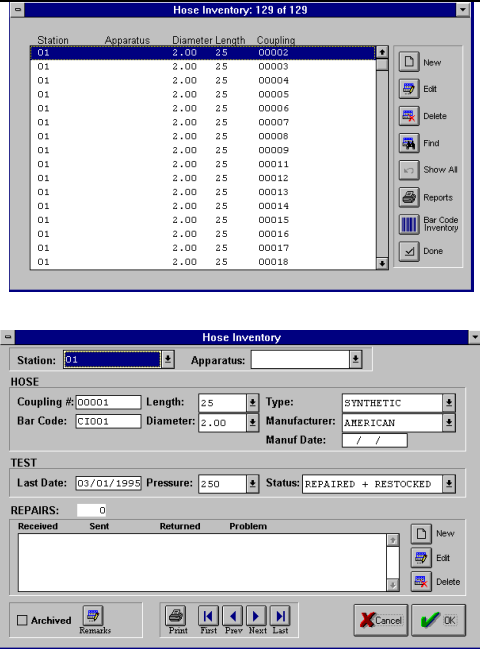
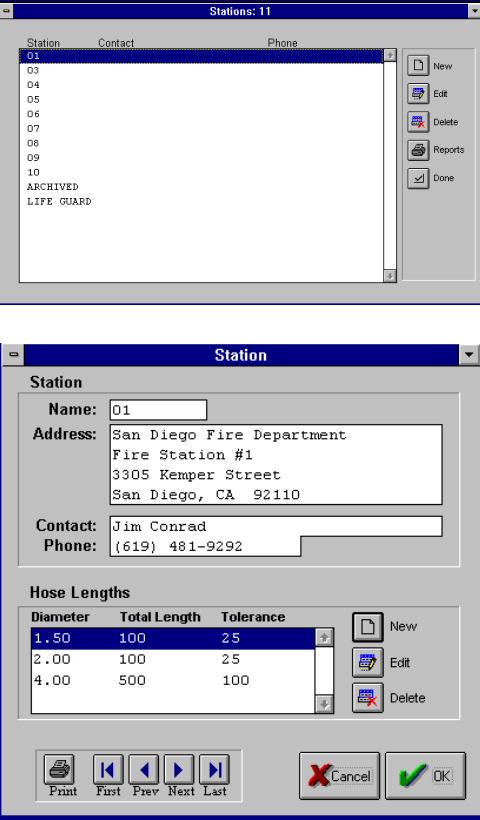
OPTION	KEY	OPTION SELECTION RESULT	FUNCTION
Hose Inventory	H	 <p>The screenshot shows two windows from the HERO software. The top window, titled 'Hose Inventory: 129 of 129', displays a table with columns: Station, Apparatus, Diameter, Length, and Coupling. The bottom window, titled 'Hose Inventory', shows a detailed form for a selected hose with fields for Coupling #, Length, Type, Bar Code, Diameter, Manufacturer, and Manufacture Date. It also includes a TEST section with Last Date, Pressure, and Status, and a REPAIRS table with columns Received, Sent, Returned, and Problem.</p>	<p>Manages information regarding each section of hose (with couplings), including length, diameter, type of hose, manufacturer name and date, test information, as well as a complete repair history log.</p>
Station	S	 <p>The screenshot shows two windows. The top window, titled 'Stations: 11', lists stations with columns Station, Contact, and Phone. The bottom window, titled 'Station', shows a form for station details including Name, Address, Contact, and Phone. It also features a 'Hose Lengths' table with columns Diameter, Total Length, and Tolerance.</p>	<p>Manages information regarding the names, addresses, contacts, telephone numbers and hose requirements (i.e., how many feet of each diameter of hose <u>should</u> be at each station).</p>
Utilities	U	<p>Three database utilities are provided: Reindex, Pack, & Repair files.</p>	

Exhibit 3.6-4 HERO Menu Pad Options

4.0 STATION

4.1 Purpose

The purpose of the Station database is to manage information regarding the names, addresses, contacts, telephone numbers and hose requirements (i.e., how many feet of each diameter of hose should be at each station. The stations entered into this database will appear on the *station* pop-up pick-list in the Hose Inventory database.

4.2 Screens, Reports & Data Field Descriptions

4.2.1 Station Input Screen #1

The first Station input screen is shown in Exhibit 4.2-1. The total number of stations in the database are displayed at the top of the screen, with the individual station names, contacts and phone numbers shown in the scrolling center area. The *New*, *Edit*, *Delete*, *Reports* and *Done* buttons are on the right of the screen.

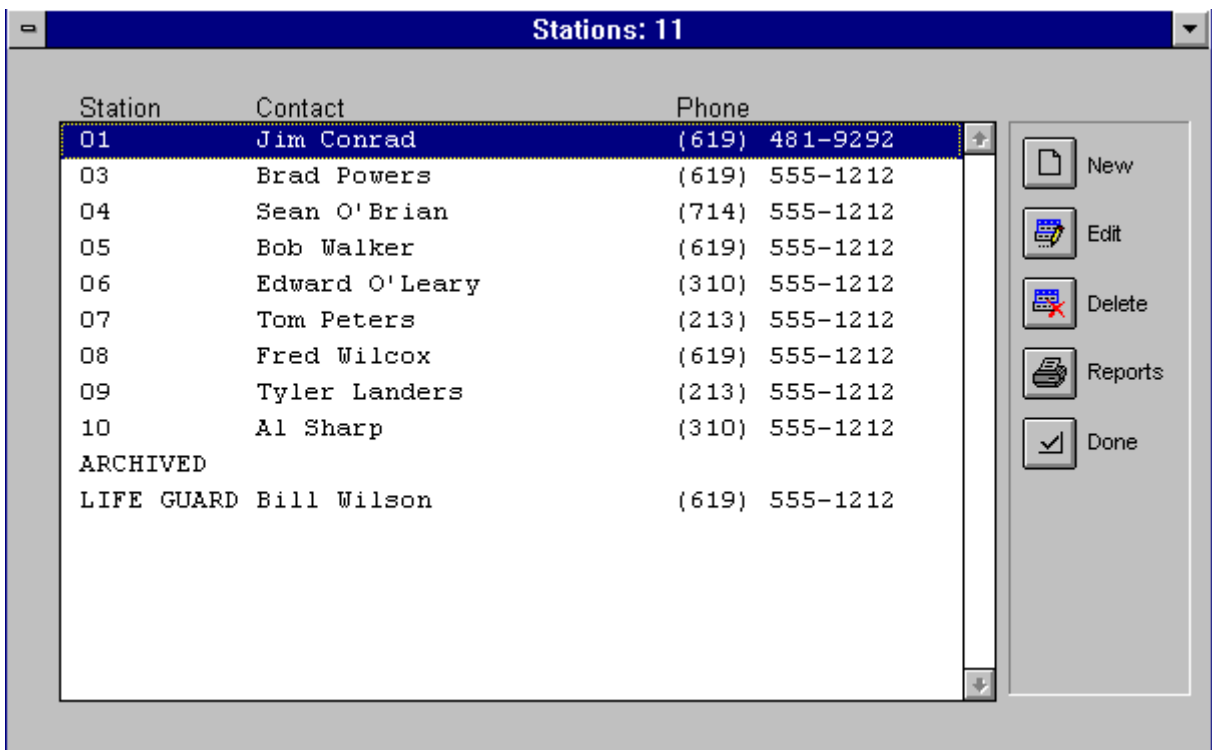


Exhibit 4.2-1 Station Input Screen #1

Existing records may be selected by using the <Up>-<Down> arrow keys and then pressing the <Enter> key, or by double-clicking on the desired record, with the mouse. New records may be added by clicking on the *New* button. An existing record may be edited or deleted by first selecting the desired record and then clicking on the *Edit* or *Delete* button, respectively. See Section 4.2.2 regarding the reports available. Click on the *Done* button, to return to the main HERO™ screen.

4.2.2 Reports

As shown by Exhibit 4.2-2, two Station reports are available, by clicking on the *Reports* button of Screen #1. The *Station Listing* report contains all of the information that has been entered for each station, including Station Name, Contact, Phone Number, Address, and the amount of hose of each diameter that should be located at each station. The *Station Listing with Hose Lengths compared with Actual Lengths* report contains the same information contained in the *Station Listing* report, in addition to a comparison of the amount of hose of each diameter that should be at each station with the amount of hose that is actually at each station. This latter report is useful for determining where to reissue hose after repair, based on stated requirements.

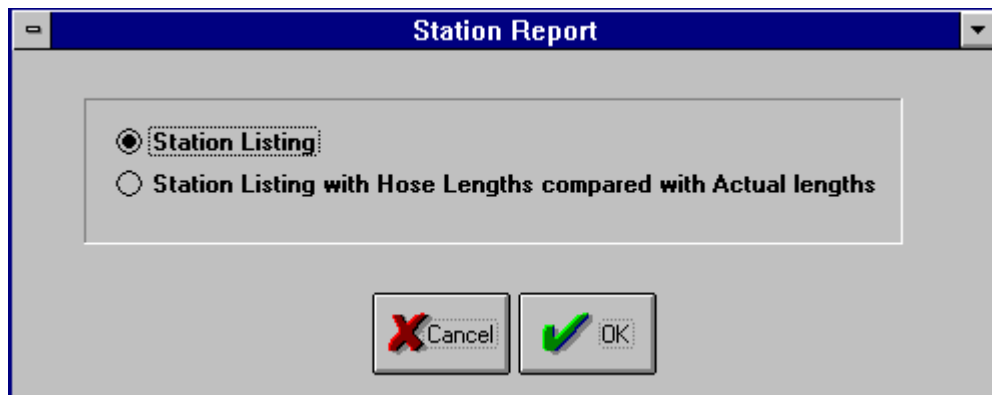


Exhibit 4.2-2 *Station Reports Screen*

4.2.3 Station Input Screen #2

The second Station input screen is shown in Exhibit 4.2-3. This screen is accessed from the first Station input screen by selecting *Add* or *Edit*, or by double clicking on a record. This second Station input screen contains fields for entering the station name, address, contact, phone number, and how much hose of each length should be located at the station (within the specified tolerance limits). The interface for adding, editing and deleting hose specifications is similar to that for the station itself, on the previous screen, via the *New*, *Edit* and *Delete* buttons. Click on the *OK* button, to return to the previous screen.

Station

Name: 01

Address: San Diego Fire Department
Fire Station #1
3305 Kemper Street
San Diego, CA 92110

Contact: Jim Conrad

Phone: (619) 481-9292

Hose Lengths

Diameter	Total Length	Tolerance
1.50	100	25
2.00	100	25
4.00	500	100

Buttons: New, Edit, Delete, Print, First, Prev, Next, Last, Cancel, OK

Exhibit 4.2-3 Station Input Screen #2

5.0 HOSE INVENTORY

5.1 Purpose

The purpose of the Hose Inventory database is to manage information regarding each section of hose (with couplings), including length, diameter, type of hose, manufacturer name and date, test information, as well as a complete repair history log.

5.2 Screens, Reports & Data Field Descriptions

5.2.1 Hose Inventory Input Screen #1

The first Hose Inventory input screen is shown in Exhibit 5.2-1. The total number of hoses in the database are displayed at the top of the screen, with the individual station names, apparatus, diameters, lengths and coupling numbers shown in the scrolling center area. The *New*, *Edit*, *Delete*, *Find*, *Show All*, *Reports*, *Bar Code Inventory* and *Done* buttons are on the right of the screen.

Station	Apparatus	Diameter	Length	Coupling
01		2.00	25	00002
01		2.00	25	00003
01		2.00	25	00004
01		2.00	25	00005
01		2.00	25	00006
01		2.00	25	00007
01		2.00	25	00008
01		2.00	25	00009
01		2.00	25	00011
01		2.00	25	00012
01		2.00	25	00013
01		2.00	25	00014
01		2.00	25	00015
01		2.00	25	00016
01		2.00	25	00017
01		2.00	25	00018

Exhibit 5.2-1 *Hose Inventory Input Screen #1*

Existing records may be selected by using the <Up>-<Down> arrow keys and then pressing the <Enter> key, or by double-clicking on the desired record, with the mouse. New records may be added by clicking on the *New* button. An existing record may be edited or deleted by first selecting the desired record and then clicking on the *Edit* or *Delete* button, respectively. Click on the *Find* button to search for a particular hose record or group of records. Note that if more than one field is specified via the *Find* command, the fields are “anded” together (i.e., the record(s) selected must match all of the specified field criteria). Having selected a specific record(s), click on *Show All* to, once again, view all records in the database. See Section 5.2.3 regarding the reports available. See Section 5.2.4 regarding the Bar Code Inventory feature. Click on the *Done* button, to return to the main HERO™ screen.

5.2.2 Find & Show All

As shown by Exhibit 5.2-2, selecting the *Find* button of Screen #1 allows hoses to be located based on any of the hoses’ attributes, including previous repair problems. If data is entered into more than one field on this screen, the fields are “anded” and only those hoses that match all of the entered criteria will be selected for display. Click on the *Show All* button of Screen #1, to once again display all hoses in the database.

The screenshot shows a software window titled "Find" with a blue header bar. Below the header, there are two dropdown menus: "Station:" and "Apparatus:". The main content area is divided into three sections: "HOSE", "TEST", and "DATE".

- HOSE Section:** Contains fields for "Coupling #:", "Length:", "Type:", "Bar Code:", "Diameter:", and "Manufacturer:". The "Manuf Date:" field is a range selector with "Between" and "and" labels and date input boxes.
- TEST Section:** Contains fields for "Last Date:" (range selector), "Pressure:" (dropdown), and "Status:" (dropdown).
- DATE Section:** Contains three range selectors for "Received for Repair:", "Sent out for Repair:", and "Returned to Service:". To the right of these are three radio buttons: "Current", "Archived", and "Either" (which is selected).

At the bottom of the window, there are two more fields: "Problem:" and "Repaired by:". In the bottom right corner, there are two buttons: "Cancel" (with a red X) and "Find" (with a magnifying glass icon).

Exhibit 5.2-2 Hose Inventory Find Screen

5.2.3 Reports

As shown by Exhibit 5.2-3, two Hose Inventory reports are available, by clicking on the *Reports* button of Screen #1. The *Selected record* report contains all of the information that has been entered for a particular hose (the previously selected record), including length, diameter, type of hose, manufacturer name and date, test information, as well as a complete repair history log. The *All records* report contains the same information contained in the *Selected record* report, but it includes all hose records in the database. Note that the primary sort field may be specified, for either report.

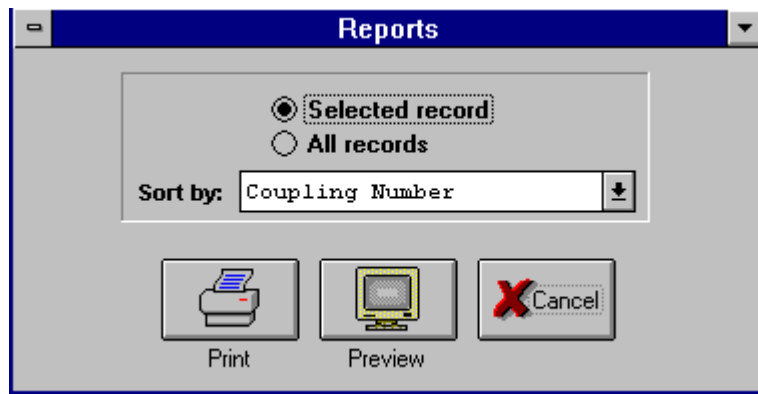


Exhibit 5.2-3 *Hose Inventory Reports Screen*

5.2.4 Hose Inventory Input Screen #2

The second Hose Inventory input screen is shown in Exhibit 5.2-4. This screen is accessed from the first Station input screen by selecting *Add* or *Edit*, or by double clicking on a record. This second Hose Inventory input screen contains fields for selecting the Station, Apparatus, Length, Type, Diameter, and Manufacturer from pop-up menus. The Coupling #, Bar Code # and Manufacture Date must be entered via the keyboard. Fields are also provided for recording the test and repair status and history. A Remarks field is also provided, for entering any additional information not specifically identified in other fields. The interface for adding, editing and deleting repair information is similar to that for the hose itself, on the previous screen, via the *New*, *Edit* and *Delete* buttons. Click on the *OK* button, to return to the previous screen.

Station: 01 **Apparatus:** ENGINE 7

HOSE

Coupling #: 00001 **Length:** 25 **Type:** SYNTHETIC
Bar Code: CI001 **Diameter:** 2.00 **Manufacturer:** AMERICAN
Manuf Date: 01/05/1993

TEST

Last Date: 03/01/1995 **Pressure:** 250 **Status:** REPAIRED + RESTOCKED

REPAIRS: 2

Received	Sent	Returned	Problem
03/01/1995	/	03/02/1995	RECEIVED FOR TESTING.
05/02/1994	/	06/01/1994	TEAR NEAR MALE COUPLING.

Archived Remarks Print First Prev Next Last Cancel OK

Exhibit 5.2-4 *Hose Inventory* Input Screen #2

5.2.5 Bar Code Inventory

The capability to perform a bar code inventory of hoses is a powerful HERO™ feature. For example, suppose you needed to perform an inventory of all hoses that are pending repair. Using a portable bar code scanner, you would simply scan the bar code of all hoses in your facility that were believed to be pending repair, specifying a “Test Status” value of “Pending Repair” as the inventory criteria in HERO™, as shown by Exhibit 5.2-5. Any and all discrepancies would be noted on the HERO™ printout. Similarly, an inventory of all hoses at a station could be conducted, specifying a “Station” value naming the station being inventoried.

Item	Value
<input type="checkbox"/> Station	
<input type="checkbox"/> Apparatus	
<input type="checkbox"/> Manufacturer	
<input type="checkbox"/> Length	
<input type="checkbox"/> Diameter	
<input type="checkbox"/> Type	
<input checked="" type="checkbox"/> Test Status	PENDING REPAIR
<input type="checkbox"/> Test Pressure	

Read from scanner
 Read from file

Exhibit 5.2-5 Example Bar Code Inventory Criteria

If you do not already have a HERO™ portable bar code scanner and a quantity of pre-printed bar code labels to place on hoses/couplings, please contact SIMS Software to place your order.

SIMS Software
 P.O. Box 607
 Solana Beach, CA 92075

Tel: (619) 481-9292
 FAX: (619) 481-3557

Using the HERO™ Portable Bar Code Scanner

The PSION Model XP has been pre-programmed to scan Code 3 of 9 bar code labels of 30 alphanumeric characters or less, in conformance with the requirements of HERO™. The bar code scanner makes easy work of hose inventories of by: station, manufacturer, hoses pending repair, or many other criteria. To begin using the scanner with HERO™, please do the following:

Scanning Bar Codes

1. Connect the bar code scanner cable to the PSION Model XP.
2. Press the PSION Model XP's **ON/CLEAR** key twice to power the unit on and to load the scanner software from the interface cable plug.

3. Select HERO from the menu using the arrow keys and press the **EXE** key. The user will be asked whether to append any new bar code scans to the existing database file (perhaps an inventory was interrupted to answer the telephone). If an affirmative response is given (by pressing **Y**), the user may then begin scanning. If a negative response is given (by pressing **N**), the user will be provided with two chances to be sure that it is OK to erase the existing database file.
4. As each hose/coupling bar code is scanned, the PSION's menu will show how many bar codes have been scanned during this session, the contents of the last bar code scanned, as well as informing the user that by pressing any key on the Model XP's keypad the scanning session may be terminated.

Transferring Bar Code Data to HERO™

To download scanned bar code data from the PSION Model XP Organizer to HERO™ on the PC:

1. Connect the Comms Link cable between the serial port (RS232) on the PC (designated as COM1:) and the PSION Model XP.
2. Press the **CLEAR/ON** key on the PSION Model XP twice to load the COMMS program from the Comms Link cable plug.
3. While running the HERO™ program on the PC, select "Bar Code Inventory" from the "Hose Inventory" screen #1 menu and then select the basis for the inventory (e.g., a "Test Status" of "Pending Repair" of "Station" of "SD20"). Use the default choice of "Read from Scanner" then click on the "OK" button.
4. Select **COMMS** from the PSION Model XP's menu using the arrow keys, and press the **EXE** key to begin the **COMMS** program.
5. Press the **EXE** key again on the PSION Model XP to select **TRANSMIT** from the menu, then press the **EXE** key once more to select **FILE** from the menu.
6. The PSION's menu should then show:

SEND A: MAIN

Press the **ON/CLEAR** key to remove the word "MAIN" from the menu.

7. Type "SCANFILE" (without the quotes) and then press the EXE key so that the Model XP's menu reads:

SEND A: SCANFILE TO: SCANFILE

8. Finally, press the **EXE** key to begin the file transfer process.
9. After downloading is complete, to exit from the COMMS program on the PSION Model XP, first unplug the Comms Link cable and then press the **ON/CLEAR** key three times to return to the main menu, and then press the **O** key to power off.

Reloading the HERO™ Bar Code Scanning Program

NOTE: You must not be running Microsoft Windows when doing the following.

The PSION Model XP has been pre-programmed with the HERO™ bar code scanning software. However, should the battery malfunction or if it is removed for more than a few seconds during replacement, it is possible that the HERO™ bar code scanning program could be lost. To reload the PSION Model XP's HERO bar code scanning program from the PC, perform the following steps:

1. Connect the Comms Link cable between the serial port (COM1:) on the PC and the PSION Model XP Bar Code Scanner Computer.
2. Press the **CLEAR/ON** key on the PSION Model XP twice to load the COMMS program from the Comms Link cable plug.
3. On the PC, go to the directory where the HERO™ program files have been loaded (typically **C:\HERO\PSION**) and type **CL** followed by the **<Enter>** key, to start the Comms Link program.
4. Select **COMMS** from the PSION Model XP's menu using the arrow keys and press the **EXE** key to begin the **COMMS** program.
5. Select **SETUP** from the Model XP's menu using the arrow keys and press **EXE** to display the current parameters. Use the up-down arrow keys to scan through

the parameters and the left-right arrow keys to change the values shown until they match those below:

BAUD	9600	
PARITY	NONE	
BITS	8	
STOP	1	
HAND	XON	
PROTOCOL	PSION	<i>Use left-right arrows to make this change.</i>
ECHO	HOST	
WIDTH	NONE	
TIMEOUT	NONE	
REOL	<CR><LF>	
REOF	<SUB>	
RTRN	NONE	
TEOL	<CR><LF>	
TEOF	<SUB><CR>	Press EXE key, then type 26,13 and press the EXE again to make this change.
TTRN	NONE	

6. Press the **MODE** key on the PSION Model XP to return from the communications parameter setup list and press the **EXE** key to select **EXIT**.
7. Press the right arrow key once to select **RECEIVE** from the menu, then press the **EXE** key. Next, press the right arrow key one more time, followed by the **EXE** key to select **PROCEDURE** from the menu.
8. The PSION Model XP's menu should then show:

RECV A:

9. Type HERO and then press the **EXE** key so that the Model XP's menu reads:

RECV A:HERO
 FROM: HERO

Then press the Model XP's **EXE** key once more to begin the file transfer process.

10. After file transfer has completed (approximately 10 seconds will have elapsed), press the Model XP's **ON** key three times until the main menu one again

- appears. Next, use the arrow keys to select **PROG** from the menu and then press the **EXE** key to select that choice.
11. Once in the PROG sub-menu, select **EDIT** and press the **EXE** key. Next, type: *HERO* followed by pressing the **EXE** key. Please make no changes to the HERO program, but instead, immediately press the **MODE** key to leave the editing mode. Next, select **TRAN** from the menu and press the **EXE** key to begin program translation (this will take several moments, so please be patient). Once translation has completed, select **SAVE** from the menu and press the **EXE** key to save the compiled program.
 12. Press the **ON** key four times to return once again to the main menu and then press the **MODE** key to insert the HERO program into the menu stack by typing: *HERO* followed by the **EXE** key. The HERO Bar code scanning program has now been completely reloaded, re-compiled and reinserted into the PSION Model XP's menu stack. Press the **Q** key followed by the **Y** key on the PC's keyboard, to stop execution of the Comms Link program.
 13. Select **COMMS** from the PSION Model XP's menu using the arrow keys and press the **EXE** key to begin the **COMMS** program.
 14. Select **SETUP** from the Model XP's menu using the arrow keys and press **EXE** to display the current parameters. Use the up-down arrow keys to scan through the parameters and the left-right arrow keys to change the values shown until they match those below:

BAUD	9600	
PARITY	NONE	
BITS	8	
STOP	1	
HAND	XON	
PROTOCOL	NONE	<i>Use left-right arrows to make this change.</i>
ECHO	HOST	
WIDTH	NONE	
TIMEOUT	NONE	
REOL	<CR><LF>	
REOF	<SUB>	
RTRN	NONE	
TEOL	<CR><LF>	
TEOF	<SUB><CR>	Press EXE key, then type 26,13 and press the EXE again to make this change.
TTRN	NONE	

15. Press the **MODE** key on the PSION Model XP to return from the communications parameter setup list and press the **EXE** key to select **EXIT**. Press the **ON** key to return to the main menu and press the **O** key to turn the unit off.

6.0 UTILITIES

6.1 Reindex Data

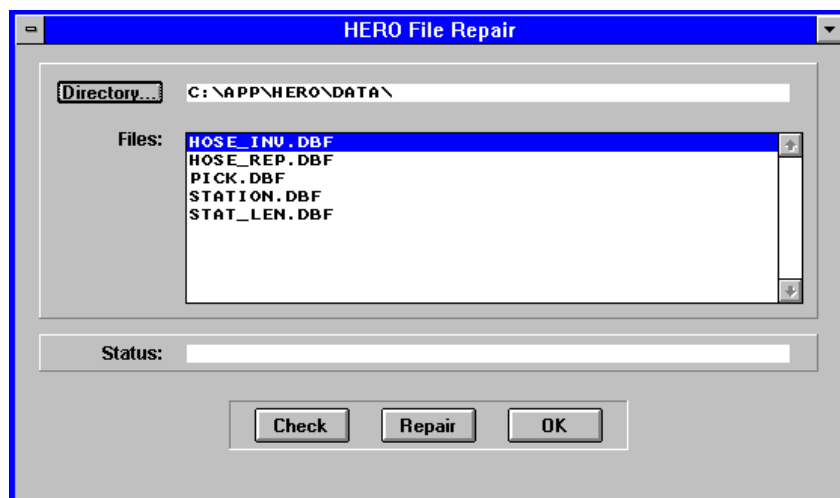
Indexes are like an address book for the records in the database. They are used for quickly accessing records or linking related records in the database. The Reindex utility creates new database indices, based on the data field contents, to speed the search processes and ensure data integrity. The indexes are updated automatically when records are added, deleted or modified. An index can be damaged if there is a power loss or the program is terminated abnormally. If this happens, searching the database may be slow or inaccurate. Run "Reindex" to re-build the indexes.

6.2 Pack Data

When records are deleted, they can no longer be accessed but still take up space on the hard drive. The space used by deleted records is re-used, if available, when a new record is added. If a large number of records are deleted, then pack should be run to free up the space on the hard drive. The Pack utility compresses the database by removing spaces that have been created by deleting records.

6.3 Repair Data

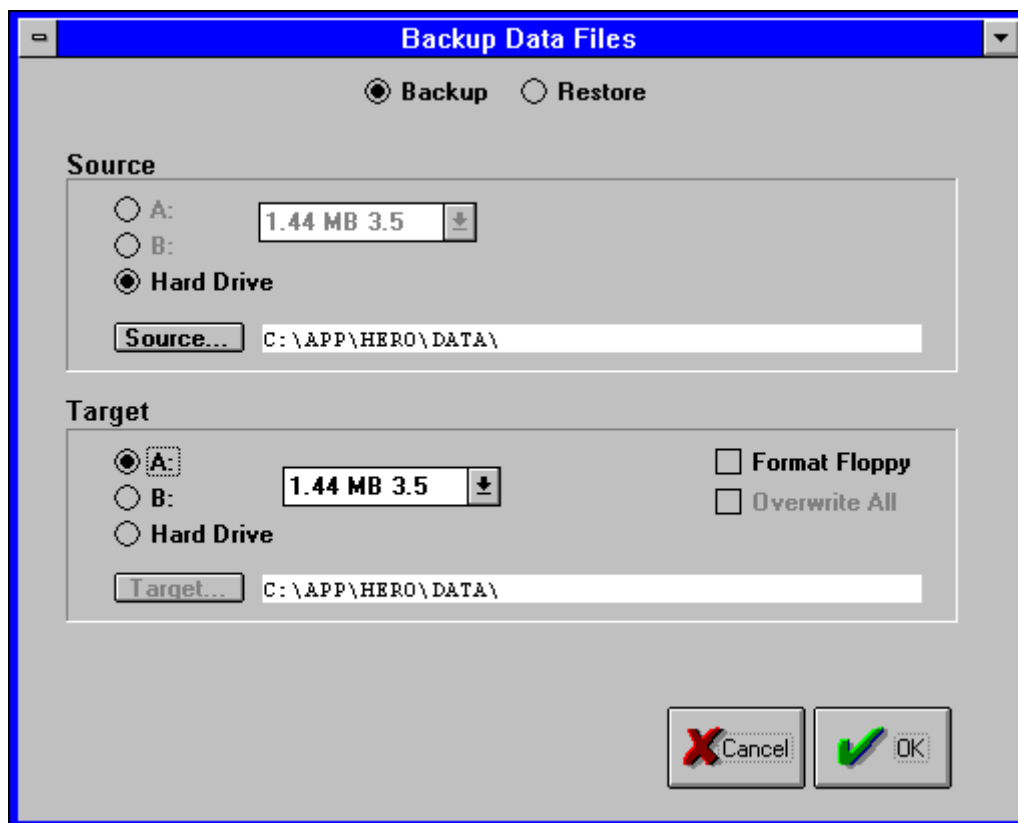
The Repair files utility attempts to repair corrupted data files. If an error occurs, such as "Not a database file" or "Memo file missing or invalid", the database file has been corrupted and needs to be corrected. To correct the file, run the Repair Utility, or if unable to run HERO, launch the Repair Utility outside the program from it's icon.



Select the file that is damaged from the file list. Click on Check to verify the file is damage and then click on Repair until the Status says "OK". If unable to repair the file, then restore a backup.

6.4 Backup Data

Use the Backup Utility to make a copy of the database in case the database is lost or damaged beyond repair. Backups should be performed frequently as described in section 3.3. Backups can be made to a floppy diskette or a hard disk drive. The source directory defaults to the current data directory used. Use the <Source> button if another data directory must be backed up. The target defaults to the A: drive (high density). When <OK> is selected, all of the files in the data directory are compressed into one file called "HERO.SQZ" and copies to the target. If a floppy disk is unformatted, it will be formatted automatically to size specified before use. Use the "Format Floppy" check box if you want to force a format be done even if already formatted.



To Restore a backup, click on the Restore radio button and select the source (typically the A: drive) and specify the hard drive and directory to restore the data to. Select Overwrite All if you want to restore into a directory and overwrite existing data files. If you do not select Overwrite All and files exists, you will be prompted to overwrite or skip the file.

6.5 Global Change

Global changes can be made to a few selected fields in the Hose Inventory database. If one of the fields has a value that was entered incorrectly or must be changed, all records that contain that field's value can be changed to a new value in one step. For example, if an apparatus was changed from E-1 to E-10, all records that have hoses with the apparatus designated as "E-1" were changed to "E-10", rather than stepping through all the affected records, use global change to replace all records with "E-1" to "E-10".

The screenshot shows a dialog box titled "Global Change" with a blue header bar. Inside the dialog, there is a warning message in a grey box: "!!! WARNING !!! The capabilities provided here should be used only with great care, since they involve global modifications to data that may be irreversible." Below the warning, there are two main sections. The first section, titled "Hose Inventory Field to Change:", contains a list of radio buttons: "Station", "Apparatus" (which is selected), "Manufacturer", "Length", "Diameter", and "Type". The second section contains two dropdown menus. The first is labeled "From:" and has "E-1" selected. The second is labeled "To:" and has "E-10" selected. At the bottom right of the dialog, there are two buttons: "Cancel" with a red 'X' icon and "OK" with a green checkmark icon.