

# HareView

Version 1.0b.00

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## OVERVIEW

**HareView** is an easy to use interactive utility that allows you to examine, modify, create or delete records in an ISAM file in the *Choice!* runtime environment. User ISAM data records may be accessed by this program using a single, simple format, allowing convenient viewing and updating of user data files without having to write special-purpose programs or procedures.

It allows display and updating on a record basis, as field information is not available within an ISAM file.

### Display Options

Data file record contents may be displayed and modified in octal, decimal, hexadecimal and ASCII formats, and record layout and key information is automatically maintained.

Data records are displayed in a split screen format where the left side of the screen is in decimal/octal/hexadecimal format, and the right side of the screen is in ASCII format. This allows convenient entering of both binary and ASCII data, so characters whose value is greater than 127 (decimal) can still be entered and examined. Unprintable characters show up as periods(.) in the ASCII area of the display.

### Keyboard Control

Since HareView may be used with terminals that do not have function keys, it may be controlled with either alphabetic commands or function keys. Most terminals will have function keys, which may be directly used to control program operation. However, a special "alpha mode" exists to allow program control using only standard alphabetic keys.

The commands for HareView can be invoked either by pressing a function key or while you are in alpha mode by pressing the appropriate alphabetic keyboard letter, or by using the appropriate standard function key. For example, pressing function key 2 (f2) will bring up the Start options. If you first type <ctrl>/A and then while in Alpha Mode type the letter "S" (or "s", the program is **not** case sensitive for the command options), the program will bring up the Start options.

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## How to Use HareView

### Starting HareView

To run HareView you must have the Wild Hare *Choice!* software loaded and installed on your system. Once you have HareView loaded, run HareView the same way you would run any other COBOL program using the *Choice!* product.

The *Choice!* command line option **/ISAM=LAYOUT** must be used when running HareView. A sample command line would be:

```
choice /isam=layout hareview [/parameter=logfile ]
```

where *datafile* is the name of the indexed data file to be edited. If the data file is not specified on the command line, you will be asked for the file name when the program is started.

If the */isam=layout* command line option is not specified to *Choice!* a COBOL 9A error will be encountered during any file open request.

Since *Choice!* is used to run the HareView utility, all standard logical name translation and file name translation features are available and effective.

### Numeric Display Base

The numeric base used by default to display record data is hexadecimal. You may explicitly tell HareView what base to display data records in by suffixing the hareview command line name with an appropriate letter: */h* for hexadecimal, */d* for decimal and */o* for octal. For example, to start with decimal display format rather than the default hexadecimal, the following command line could be used:

```
choice /isam=layout hareview/d
```

### Initial Program Switches

There are other program switches

Switch	Function
A	initial keyboard mode is Alpha mode
D	initial numeric display in decimal
H	initial numeric display in hexadecimal
L	New record initial value is all LOW-VALUES rather than default SPACES
O	initial numeric display in octal
R	Read only mode – no record modification, creation or deletion allowed

### Initial Program Switches

### Exiting HareView

From the record display screen, press Function Key 8 (f8) or the letter E (if you are in Alpha Mode) to exit to the filename screen. In the filename screen, if you press Function Key 8 (f8) or the letter E, the program will terminate.

HareView will request confirmation before exiting the program.

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## Main Screens

HareView has two primary screens for performing all of its magic: the FILENAME screen and the RECORD DISPLAY screen. The FILENAME screen is used to by HareView to accept the file name of the data file to be manipulated. Interaction with the file's data records is done within the RECORD DISPLAY screen.

### Filename Screen

When HareView is first started, you will be at the filename screen. HareView will prompt you for the filename of the file you wish to use. Enter the name of the file that you wish to use for this session of HareView. Once the file is found and opened, HareView will display the first record of the file in the record display screen.

The filename may be up to 60 characters long, and may include any characters for file and path specification.

## Record Display Screen

At this point, you are ready to take advantage of all of the features that HareView has to offer you for file manipulation! At the top of the Record Display Screen you will see the following information:

Rec num	This is reserved for future use
Type	type of file being manipulated: 3 DG ICOBOL 1.3 ISAM format 5 DG ICBOOL 1.5 ISAM format C C-ISAM or C-ISAM-compatible format O ODBC data source
I/O Status	COBOL file status of the last I/O operation performed
Key	Which key path is being used: P Primary Key 1 First Alternate Key 2 Second Alternate Key 3 Third Alternate Key 4 Fourth Alternate Key
Start	Starting byte position in the record for the key being used
Size	Size in bytes of the key being used
Key value	Key value of the record being displayed

At the bottom of the Record Display Screen are most of the Options available to you. They are described in the Command Keys section as well as in detail later in this document.

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## Function Modes

Controlling HareView by a user console is most conveniently done using terminal function keys. However, some terminals do not have, or do not have enough, function keys to indicate desired operations. Therefore, either logical function keys or character keys may be used to control program operation.

### Function Key Mode

When you first enter HareView, you will by default be in Function Key Mode. This allows you to select any of the options by pressing the appropriate function key. If you do not have function keys for your terminal type, or you wish to use characters to select the various options, press <ctrl>a to toggle to Alpha Mode and then you can select the appropriate option using the assigned letter.

### Alpha Key Mode

Alpha key mode may be specified as the initial mode by using the /A program switch.

### More

Since there are more options available than will fit at the bottom of the Record Display Screen, you can select the More Option (Function Key 1 or the letter M) to toggle between the list of options.

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## Record Operations

### Start Record

When you press Function Key 2 (f2) or the letter S, HareView will display a screen to allow you to enter your Start selection(s). At any time in the Start Screen you can press <ctrl>a to cancel the Start request. The first part of the Start Screen will ask you for one of the following start selections:

Key	Start function
F	First record on file
L	Last record on file
<	Record whose key is less than the key entered by the user
>	Record whose key is greater than the key entered by the user
\	Record whose key is less than or equal to the key entered by the user
#	Record whose key is greater than or equal to the key entered by the user
=	Record whose key is equal to the key entered by the user
!	Record whose key is not less than the key entered by the user

### Start function options

If a key is required, the second half of the screen will appear and you will be asked to enter which key you wish to use (primary, alternate key 1, etc.) and a key value. HareView will then attempt to read a record based on your start criteria. If HareView is successful, the record will be displayed in the Record Display Screen. If HareView is not successful in reading a record with the start criteria, HareView will display the file status error and allow you to enter a new start selection.

### Read Record

For the read option, you press Function Key 3 (f3) or the letter R. This option allows you to read a record based on a key value entered. The Read screen will prompt you for which key you wish to use for your read as well as ask you to enter the key value. If HareView is successful in reading the record requested, HareView will return to the Record Display Screen and display the record read. If HareView is not successful in reading the record, an error message will appear containing the file status value and HareView will then allow you to reenter the key request. At any time you can press <ctrl>a to cancel the read request.

### Read Backward (Previous) Record

HareView will attempt to perform a read previous using the key path that is currently displayed at the top of the Record Display Screen if you press Function Key 4 or the letter B. If you are at the beginning of the file, HareView will alert you that a Read Backward cannot be performed and will continue to display the record that was on the screen when the Read Backward option was selected.

### Read Forward (Next) Record

If you press Function Key 5 or the letter F, HareView will attempt to perform a read next using the key path that is currently displayed at the top of the Record Display Screen. If you are at the last record in the file when the Read Forward was requested, HareView will alert you that a Read Forward cannot be performed and will continue to display the record that was on the screen when the Read Forward option was selected.

### Create Record

A new record can be created if the HareView was not started in read-only mode

If you press the Shift Key and Function Key 1 (Shift F1) or the letter N, HareView will clear the record area with space characters in the Record Display Screen and allow you to enter a record into the file.

The record will be saved whenever another record is sought for manipulation, or when the program is exited.

### Delete Record

The current record can be deleted if the HareView was not started in read-only mode

If Shift Function Key 8 or the letter E is selected, HareView will ask you to confirm that you wish to delete the record currently being displayed. If you do not answer “Y” or “y” to the question, the record is NOT deleted and HareView returns to the Record Display Area. If you answer yes, then HareView will delete the current record from the data base.

### Undelete Record

The COBOL undelete record function is not supported at this time.

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## Information Display

### Screen Up

The Screen Up option is invoked by pressing Function Key 6 or the letter U in the Record Display Screen. This option will display the next screen of data for the current record if the record cannot fit in one screen. If all of the data for the record is currently on the screen or the end of the record is currently being displayed on the screen, HareView will just redisplay the current screen.

### Screen Down

The Screen Down option is invoked by pressing Function Key 7 or the letter D in the Record Display Screen. This option will display the previous screen of data for the current record if the record cannot fit in one screen. If all of the data for the record is currently on the screen or the beginning of the record is currently being displayed on the screen, HareView will just redisplay the current screen.

### Record Information

The Record Information option (Shift Function Key 2 (Shift F2) or the letter I) will display the following information about the record currently being displayed on the Record Display Screen:

Type	type of file being manipulated: 3 DG ICOBOL 1.3 ISAM format 5 DG ICBOOL 1.5 ISAM format C C-ISAM or C-ISAM-compatible format O ODBC data source
Record Size	The size of the record
Key Information:	
Primary Key	The starting byte and length of the Primary Key
Alternate Key 1	The starting byte and length of the first Alternate Key
Alternate Key 2	The starting byte and length of the second Alternate Key
Alternate Key 3	The starting byte and length of the third Alternate Key
Alternate Key 4	The starting byte and length of the fourth Alternate Key

By pressing the Enter key after the Record Information Screen is displayed, the Record Display Screen will redisplay.

## Swap

If you select the Swap option (Shift Function Key 4 (Shift F4) or the letter W), HareView will give you the following options:

Key	Function
R	Position the cursor on the Right side (ASCII area) of the screen
L	Position the cursor on the Left side (octal/decimal/hex area) of the screen
O	Display the Left side of the screen in Octal format
D	Display the Left side of the screen in Decimal format
H	Display the Left side of the screen in Hexadecimal format

### Swap functions

This allows you to change the current numeric display format, or change position between numeric and alphabetic display sides.

## Summary Tables

Function Key	Alpha Key	Function
<ctrl>/A		Toggle between Function Key Mode and Alpha Mode (See MODE section for more detail)
f1	M	Look at more options on the screen (See MORE section for more detail)
f2	S	Use the Start command to look at a specific record (See START section for more detail)
f3	R	Find a record with a specific key (See READ section for more detail)
f4	B	Display the previous record in the file (See READ BACKWARD section for more detail)
f5	F	Display the next record in the file (See READ FORWARD section for more detail)
f6	U	Display the next screen of record data (See SCREEN UP section for more detail)
f7	D	Display the previous screen of record data (See SCREEN DOWN section for more detail)
f8	E	Exit HareView Program or Exit Record Display Screen (See EXITING HAREVIEW section for more detail)
F1	N	Create a new record for this file (See NEW RECORD section for more detail)
F2	I	Display the key and record layout information (See RECORD INFORMATION section for more detail)
F4	W	Change the display of the record information (See SWAP section for more detail)
F8	E	Delete the current record (See DELETE RECORD section for more detail)

### Command Key Summary

Switch	Function
A	initial keyboard mode is Alpha mode
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H	initial numeric display in hexadecimal
L	New record initial value is all LOW-VALUES rather than default SPACES
O	initial numeric display in octal
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### Initial Program Switches

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## Special Notes

1. HareView may be used with both DG ISAM and C-ISAM file systems.
2. No interpretation of the user data is performed by HareView.
3. No validity or type checking is performed by HareView on user data.
4. User terminal definition is controlled by the standard 'choice.trm' file