FORTRA

Robot Easy View 8.36

User Guide

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Introduction

Easy View is one of the Robot products by Fortra that can increase programmer productivity on IBM Power Systems (System i, iSeries, AS/400) running IBM i (OS/400, i5/OS). It reduces the need for DFUs and Queries to view or change the contents of database files. Anyone who debugs programs that change database files needs Easy View. Hundreds of programmers are using it right now.

Displays Any Data File

Easy View can display every type of data file, including:

- Keyed and arrival sequence files.
- Logical files built over one or more physicals, including join files.
- Source files
- DDM files to display databases on remote systems.

Easy View makes it easy to check the changes a program made. Just display the file in arrival sequence and look at the last records in the file. You can see immediately whether records are being written correctly.

Hex record printouts are a pain to use. Easy View formats each record so it is easy to read. Each field can have a heading identifying it. Numeric fields are unpacked and edited. All without additional programming.

Ten Display Modes

Easy View offers ten ways to display records:

- Spreadsheet mode (one record per line and one field per column).
  - With field text as column headings.
  - With field names as column headings.
- EZFIELD mode (one field per line).
  - With field text as line headings.
  - With field names and field text as line headings.
  - Expanded field names and field text.
- Character mode (unformatted sequence of characters).
  - 16 records per screen.
  - 5 records per screen, with the field name marking the beginning of each field.
- Hexadecimal mode (unformatted sequence of characters and hexadecimal codes).
  - 4 records per screen.
  - 2 records per screen, with the field name marking the beginning of each field.
  - 1 record per screen, folded to show up to 240 bytes of data.

You can choose the display mode that best suits the layout of the file you are currently viewing, or navigate through different modes by pressing **F10**.

Display Only What You Want to See

It's irritating when the fields you want to see are 100 positions apart and you have to window back and forth to see each. With Easy View, you select the fields you want to work with and they are displayed next to each other in the order you selected. You can store these combinations as data models for later use.

Correct Database Errors

Easy View makes it easy to correct your database files. You can add new records, print and change existing records, and delete records. You can display the record being changed two ways:

- Horizontally, for entering characters or hexadecimal codes.
- Vertically, with each field value on a separate, labeled line.

Easy View takes care of packed fields and hexadecimal conversions for you. Fields that do not convert correctly are flagged so you can see possible decimal errors. You can even custom design your entry screen. Just pick the fields you want and you instantly have a data entry program.

Scan and Replace or Scan and Delete

Instead of coding a one-time, fix-it program, use Easy View to find, edit, and/or delete records that meet complex scan criteria. Easy View can scan for values, including null values, in multiple fields using relational operators and AND/OR logic. Easy View can replace a field value or null value with a specific value, the value from another field, or the results of a calculation, or it can delete the records. You can submit the operation to batch, and you can even use Easy View to fix decimal data errors.

Ever have a batch record-add program run accidentally, or run twice? Now it's easy to remove those records without programming. You can use the EZSCAN command to use a saved scan definition to scan and replace from a command line or in batch.

Replicate Test Data

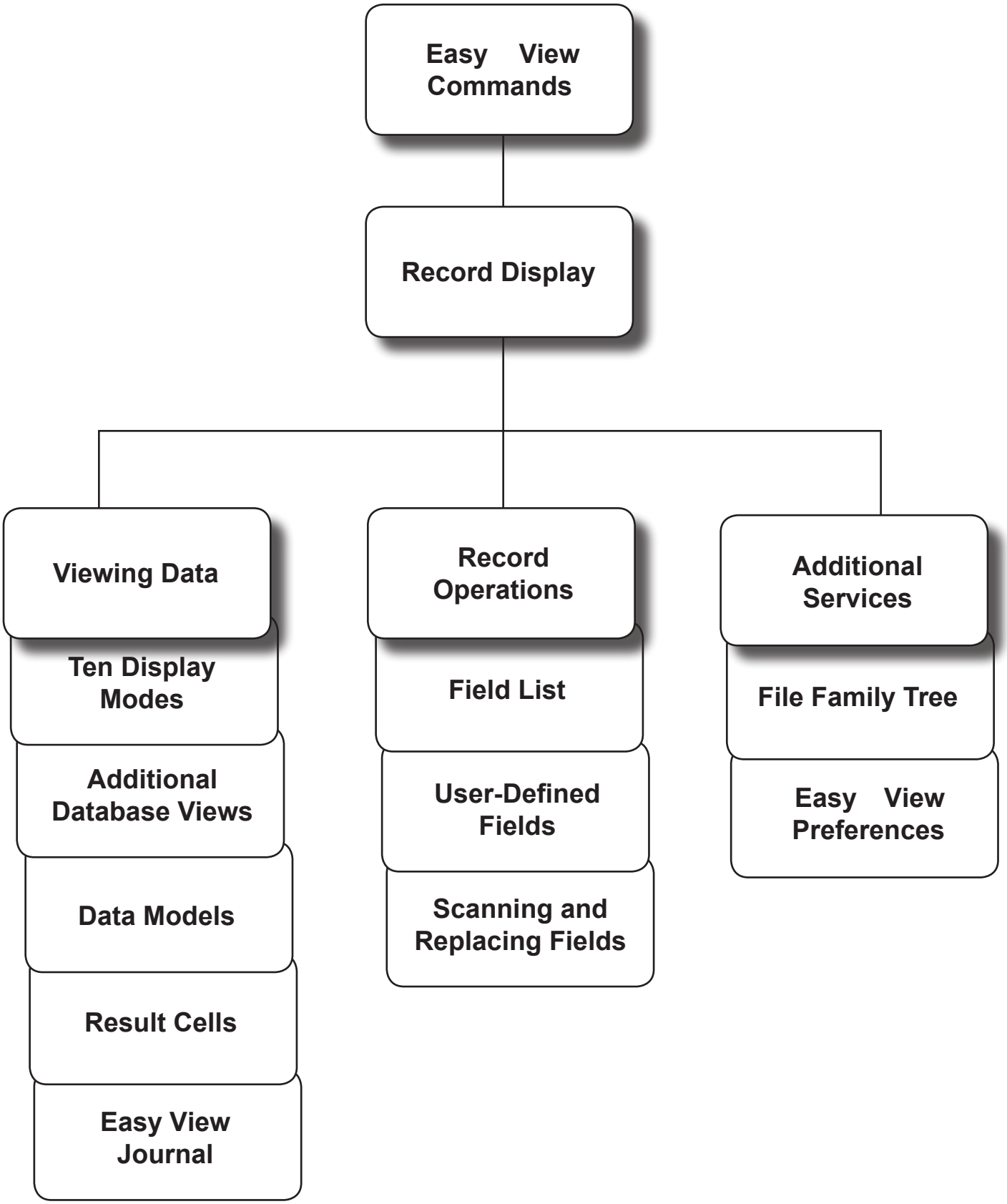
Easy View lets you create test records quickly. You can add records and replicate them, changing one or more fields to create unique data. In almost no time, you have your test file.

View Journal Entries

You can use the Easy View Journal feature to view entries from journaled files. It's a great investigative tool for hard-to-find update bugs. This journal feature can also be useful for recovering from a power or hardware failure—you can inspect journal entries quickly to determine where an application halted.

Exporting Options

You can use the Easy View export file option to convert file data into a column delimited file that is readable by any spreadsheet program. You can also export parts of a record into a new or existing file.


Easy View Commands
Record Display
Viewing Data
Ten Display Modes
Additional Database Views
Data Models
Result Cells
Easy View Journal
Record Operations
Field List
User-Defined Fields
Scanning and Replacing Fields
Additional Services
File Family Tree
Easy View Preferences

Easy View Security

You can customize Easy View to ensure the security of your database:

- Define global Easy View capabilities and capabilities for specific user profiles.
- Let your programmers look for database problems caused by their program bugs without allowing them to change the data.
- Prohibit updates to production libraries, allowing changes to test libraries only.
- Create an audit trail record of all database changes made using Easy View.

Easy View Overview

The diagram on the preceding page outlines the capabilities of Easy View. Each capability is described in detail later in this manual.

Starting Easy View

You can use many commands to start Easy View and select the file and function to work with. The following are three common commands:

- GO EZVIEW—Use this command to display the Easy View Menu with commands for the tasks you perform most often.
- EZVIEW—Use this command to work with a database file. It starts Easy View and displays the file. You can specify a file to display, or *PRV to continue the previous Easy View session. You can also display additional files without leaving Easy View.
- EZVIEW *SELECT—Use this command if you don't remember the name of the file you want to work with. It displays a panel listing the files and functions you can select.

Record Display

When you display a database file, you see the Easy View record display, which lists the contents of the file records. You can position the file right and left, forward and backward, and to a specific record (described in the Getting Around section). You can access almost all Easy View capabilities from the record display.

Formatting Data

Easy View offers several ways to change how data is presented on the record display:

- You can choose from nine display formats.
- You can use user-defined fields to split or concatenate fields on the display.
- You can use data models to choose which fields are displayed in what order.
- You can define result cells to display the results of arithmetic operations on numeric fields in the record.

You can switch between these database views without leaving Easy View.

Finding and Changing Data

Assuming you have authority to change the file, Easy View helps you find specific records to change. Easy View lets you add, delete, print, and replicate (copy) records. After you copy the record, you can change field values to create a new record.

Scanning and Replacing Values, Including Null Values

Easy View has powerful scan capability:

- You can specify one or more fields as scan fields and direct Easy View to select records whose scan fields meet your criteria.
- You can scan for and replace specific values, such as character strings, null values, or decimal data errors, using EASY VIEW's relational operators and AND/OR logic.
- You can have Easy View delete or replace a field in the records found by scanning.
- You can limit further work on the file to the set of records found by the scan.
- You can save your Scan definition to be used again as needed.
- You can use use the EZSCAN command to run a saved Scan and Replace definition from your Robot Schedule job or batch program.

Additional Services

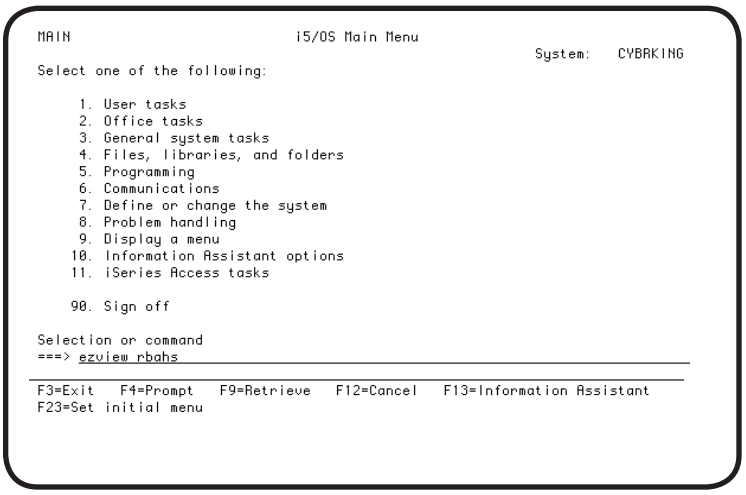
Easy View provides other valuable services:

- You can display and print a list of the DDS field specifications for the file.
- You can trace database relations between physical and logical files using the file family tree.
- You can tailor EASY VIEW's defaults for specific user profiles.

Easy View Journal

Easy View also offers a feature called Easy View Journal. You can use this feature and its powerful EZJOURNAL command (EZJRN) to create views of journal entries, display the views, and edit and use journal entries.

Quick Tour: Installing and Using Easy View

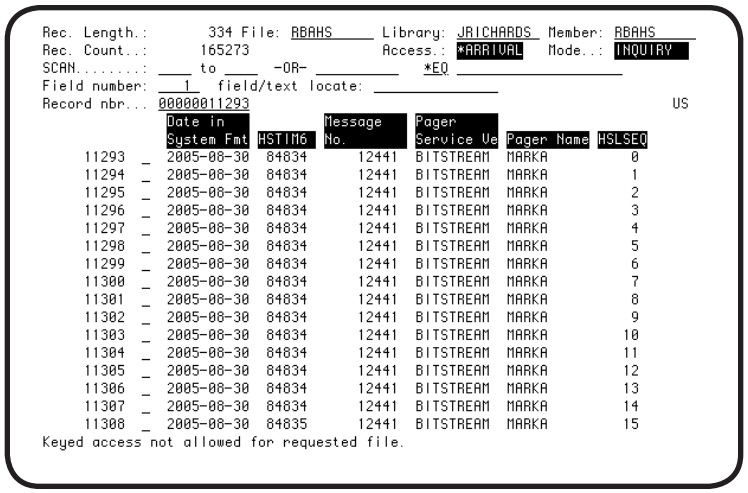


1. Install Easy View following the installation instructions that came with the package.

2. Add the Easy View library to your library list using the following command:

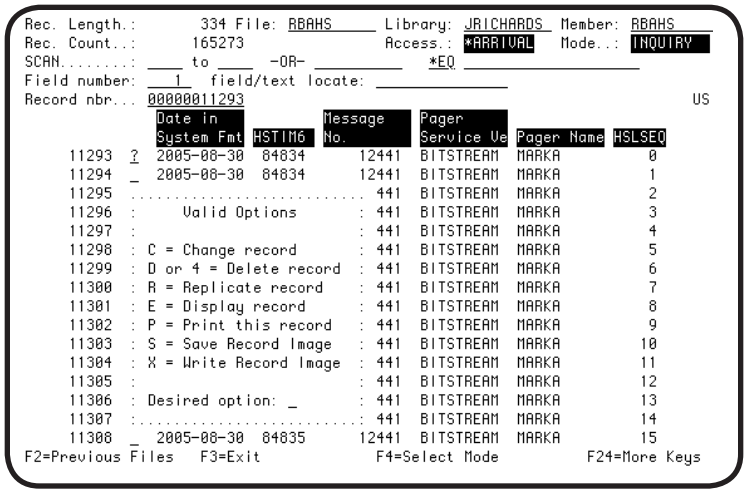
   ADDLIBLE EZVIEW

3. Start Easy View, by entering the **EZVIEW** command followed by the name of the file you want to display.



Easy View displays the file records using your display mode. The default display mode is spreadsheet mode, which you can change.

4. Press **F4** to display a window listing the display modes. You select a mode by entering its number.



5. To add a record, press **F6**. Or, to see the available option codes, enter a **?** in the option field before a record and press Enter. The window shows options to change, delete, or replicate the record, display it in EZFIELD mode, or print its image.

6. To remove the Valid Options window without doing a record operation, press **F3**.

```
EV180R                    File Field Reference                    CYBRKING
                                                          7/18/07 14:55:24
 File: RBAHS      Lib: JRICHARDS

 Type Options, Press Enter.        Text Search: __________
   V=Add to Temporary View

  Name       Keys      Typ  Len Dec From    To  Colhdg or Text

    FORMAT:  HSFMT
_ HSDATE                L    10        1    10  Date in System Fmt
V HSTIM6                P     6  0    11    14  HSTIM6
_ HSMNUM                P     9  0    15    19  Message No.
_ HSVEND                A    10       20    29  Pager Service Vendor Name
V HSTOPG                A    10       30    39  Pager Name
_ HSLSEQ                P     5  0    40    42  Log Sequence  Number
_ HSLTYP                A     1       43    43  Log Type
_ HSMJMN                A     4       44    47  Major/Minor Return Code
_ HSLGTH                P     3  0    48    49  Length of Data Logged
_ HSLTX                 A   256       50   305  Message Text Field
_ HSYMD                 L     8      306   313  HSYMD
_ HSMDOP                A     1      314   314  Mode of Operation
_ HSCJBN                A    10      315   324  Comm Job Name                +
F3=Exit  F6=User define  F9=Print listing  F21=Command line  F24=More keys
```

7. To see a list of the DDS fields in the file, press **F5**.

8. On the File Field Reference panel, you can superimpose your own field definitions on the file. Press **F6** to define one or more fields.
   You also can define a temporary data model to limit the fields displayed. Just enter a **V** before each field to be shown. Then, press Enter to return to the record display.

```
Rec. Length.:       334 File: RBAHS     Library: JRICHARDS  Member: RBAHS
Rec. Count..:      165273               Access.: *ARRIVAL   Mode..: INQUIRY
SCAN........: ____ to ____  -OR- __________   *EQ ________________
Field number: __1__  field/text locate: ______________
Record nbr... 00000011293                                              US
*TEMP VIEW*
              HSTIM6  Pager Name
     11293  _   84834  MARKA
     11294  _   84834  MARKA
     11295  _   84834  MARKA
     11296  _   84834  MARKA
     11297  _   84834  MARKA
     11298  _   84834  MARKA
     11299  _   84834  MARKA
     11300  _   84834  MARKA
     11301  _   84834  MARKA
     11302  _   84834  MARKA
     11303  _   84834  MARKA
     11304  _   84834  MARKA
     11305  _   84834  MARKA
     11306  _   84834  MARKA
     11307  _   84834  MARKA
     11308  _   84835  MARKA
F2=Previous Files   F3=Exit            F4=Select Mode         F24=More Keys
```

9. On the record display, you see the ***Data Model*** indicator. The fields shown are those you selected with V on the File Field Reference panel. To return to the record display and keep the temporary view, press **F5** and **F12**.

   The temporary data model remains in effect until you switch to another model, press **F3** on the File Field Reference panel, or exit the session.

```
EV320R                    Extended Scan Parameters                CYBRKING
                                                          7/18/07 14:57:12
     Display Conditions:
      Occurrence to Display/Change: 1  (1=Next; 2=All)
      Number of Records to Read:     1500
      Process as Subset:            N
      Print Selected Record (Y/N):  N
Scan Options,
A=And   O=Or   R=Replace   D=Delete

Option Field Name From Thru  Operand Scan Data
       HFATM2    ____ ____    *EQ   0
   A   HFATYP    ____ ____    *EQ   SNDBKD
   O   HFATM2    ____ ____    *EQ   0
   _   __________ ____ ____    ___   ____________________________________
   _   __________ ____ ____    ___   ____________________________________
   _   __________ ____ ____    ___   ____________________________________
   _   __________ ____ ____    ___   ____________________________________
   _   __________ ____ ____    ___   ____________________________________
   _   __________ ____ ____    ___   ____________________________________
   _   __________ ____ ____    ___   ____________________________________
   _   __________ ____ ____    ___   ____________________________________ +

F3=Exit            F9=Retreive Scan    F21=Command Line        F24=More Keys
```

10. You can scan from the record display using a single scan field. To scan using multiple scan fields, press **F14** to display the Extended Scan Parameters panel. Enter the scan criteria and press **F7** to scan forward, or **F8** to scan backward.

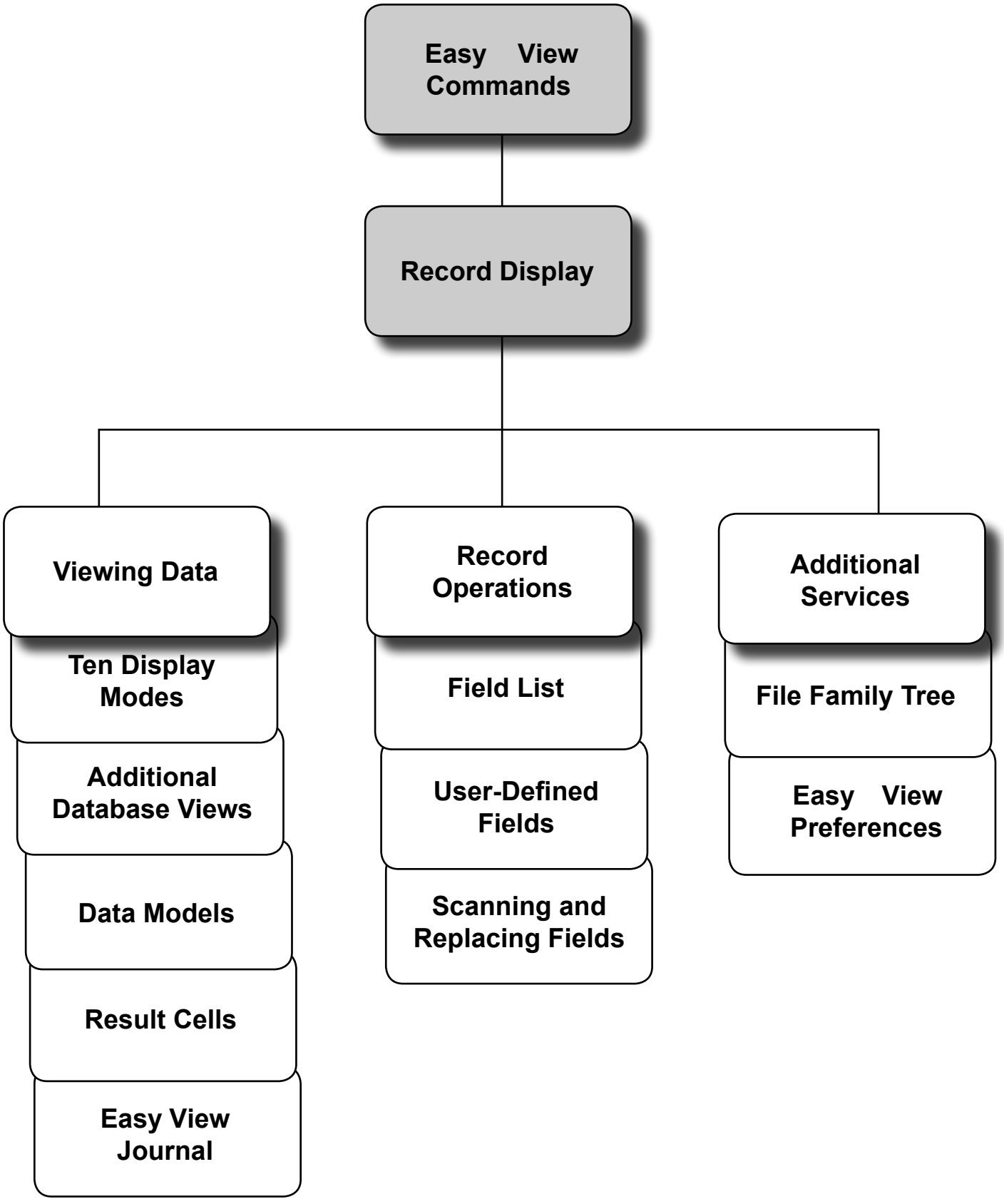
11. To return to the record display, press **F3**.

```
Rec. Length.:       334 File: RBAHS     Library: JRICHARDS  Member: RBAHS
Rec. Count..:      165273               Access.: *ARRIVAL   Mode..: INQUIRY
SCAN........: ____ to ____  -OR- __________   *EQ ________________
Field number: ___ ..............................................
Record nbr... 000 :              R08M000000000                 :          US
              Do :           Additional Services              :
              Sy :                                            : e HSLSEQ
     11293  _  20 :  1. Family Tree.                           :       0
     11294  _  20 :  2. Display Field List.                    :       1
     11295  _  20 :  3. Print Field List.                      :       2
     11296  _  20 :  4. Display Current Locks for File.        :       3
     11297  _  20 :  5. Display Authority for File.            :       4
     11298  _  20 :  6. Change Tailoring for Current User.     :       5
     11299  _  20 :  7. Retrieve File Descriptions.            :       6
     11300  _  20 :  8. Maintain/Create Composite Models.      :       7
     11301  _  20 :  9. Display Object Description             :       8
     11302  _  20 : 10. Export to Delimited Text File          :       9
     11303  _  20 :                                            :      10
     11304  _  20 :     Select Desired Option: __              :      11
     11305  _  20 :                                            :      12
     11306  _  20 : F3=Exit                                    :      13
     11307  _  20 :                                            :      14
     11308  _  20 :............................................:      15
Keyed access not allowed for requested file.
```

12. Easy View offers more services from its Additional Services Menu. Press **F9** to see the menu and select an option by entering its number.

    This quick tour has shown you some of EASY VIEW's capabilities. These capabilities and others are described in detail in the rest of this manual.

Notes:


Easy View Commands
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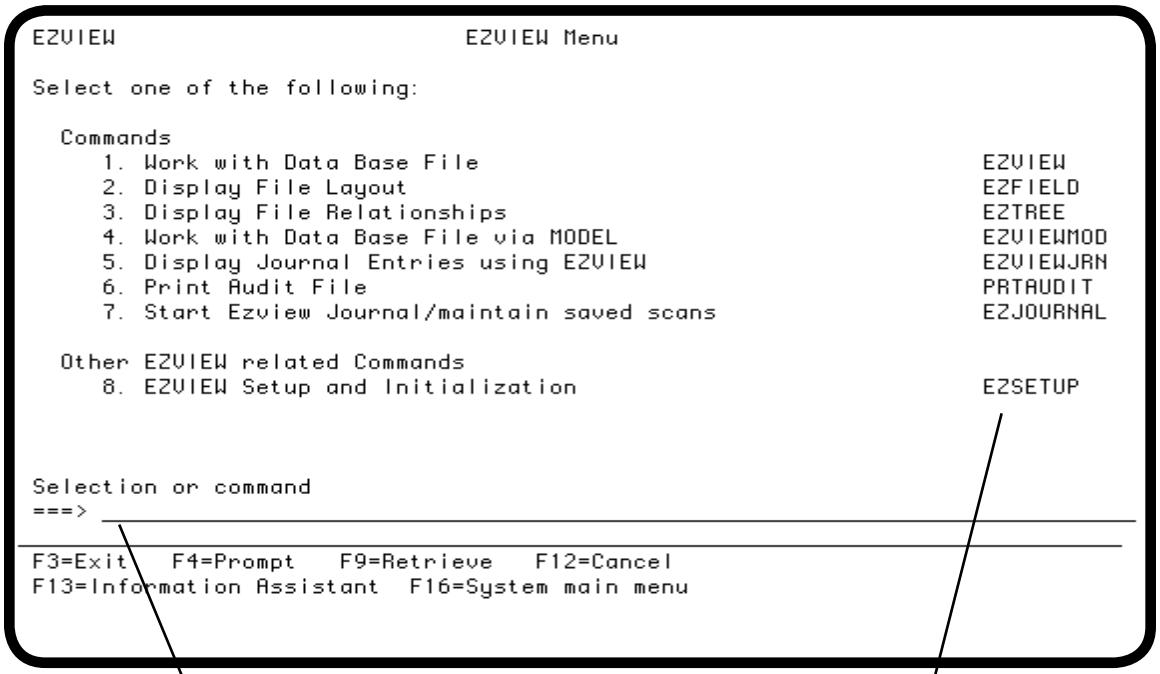
Using Easy View

To display the EZVIEW menu, add the EZVIEW library to your library list and use the GO EZVIEW command. The default EZVIEW menu shows the most commonly used Easy View commands. You can change the options on this menu by editing the EZVMENU file in the EZVIEW library.

- To start Easy View and work with a database file, add the EZVIEW library to your library list and enter the command EZVIEW on any command entry line. If you add a filename after the command, you see the record display for the file. If you do not add a filename after the command, the Easy View a File (EZ-VIEW) panel displays, shown on the following page.

- To display the Select Files for Easy View panel, use the command EZVIEW *SELECT. Use this panel to select the file and Easy View function you want to work with. See the section, Select Files for Easy View Panel.

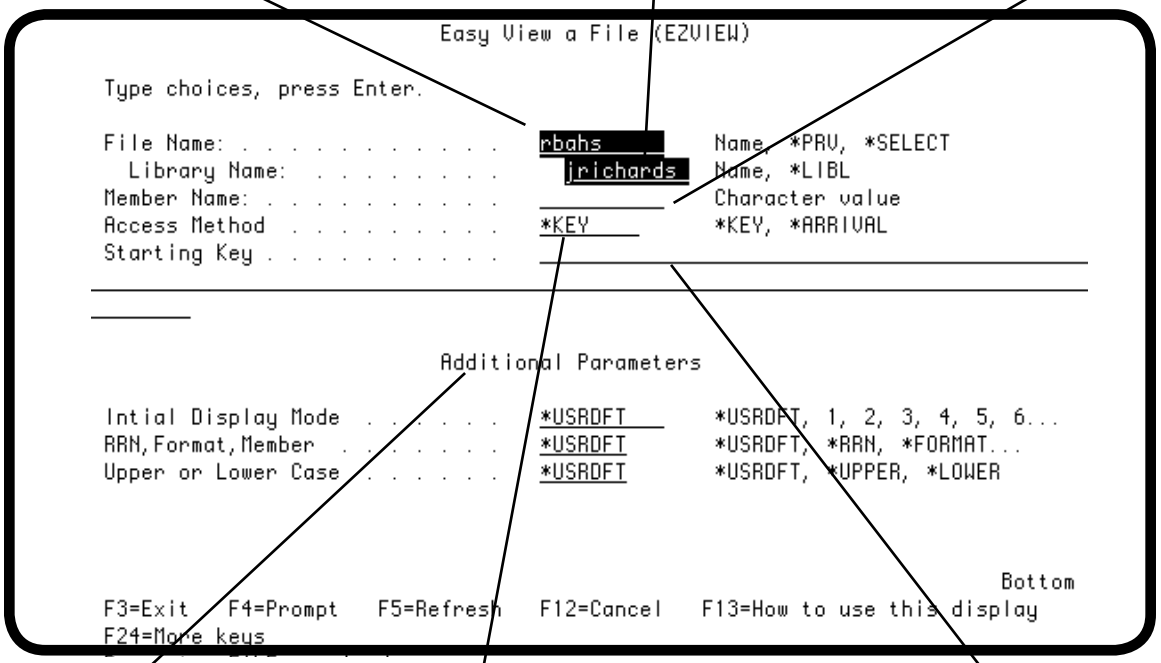


Type **1** and press Enter to prompt the EZVIEW command.

Enter these commands on the IBM i command line to use the corresponding function. Each command on this menu is discussed in detail later in this manual.

Easy View a File (EZVIEW) Panel

The Easy View a File panel displays when you enter the EZVIEW command without a filename, or select **option 1** from the Easy View menu. You must identify the name of the file you want to display. You can specify ***PRV** to continue the previous Easy View session, or type ***SELECT** to display a list of files to choose from. You can specify the file member and access method. Press Enter to display the Starting Key parameter, where you can specify the first record you want to display. Press Enter again to see the record display for the file.



Enter the name of the file to be displayed, enter ***PRV** to continue the previous Easy View session, or enter ***SELECT** to generate a file list to choose from.

Enter the name of the library containing the file. The default is *LIBL, the current library list.

Enter the member to be displayed. The default is the first member. ***ALL** displays all members.

F10 displays the additional parameters, which allow you to change the way the record displays.

Enter the record access path: ***KEY** for key value order, ***ARRIVAL** for record number order. The default is *KEY if the file is keyed.

Press Enter or **F10** to display this parameter. If the access method is *KEY, you can enter the key value of the first record to be displayed. If the access method is *ARRIVAL, you can enter the number of the first record to be displayed.

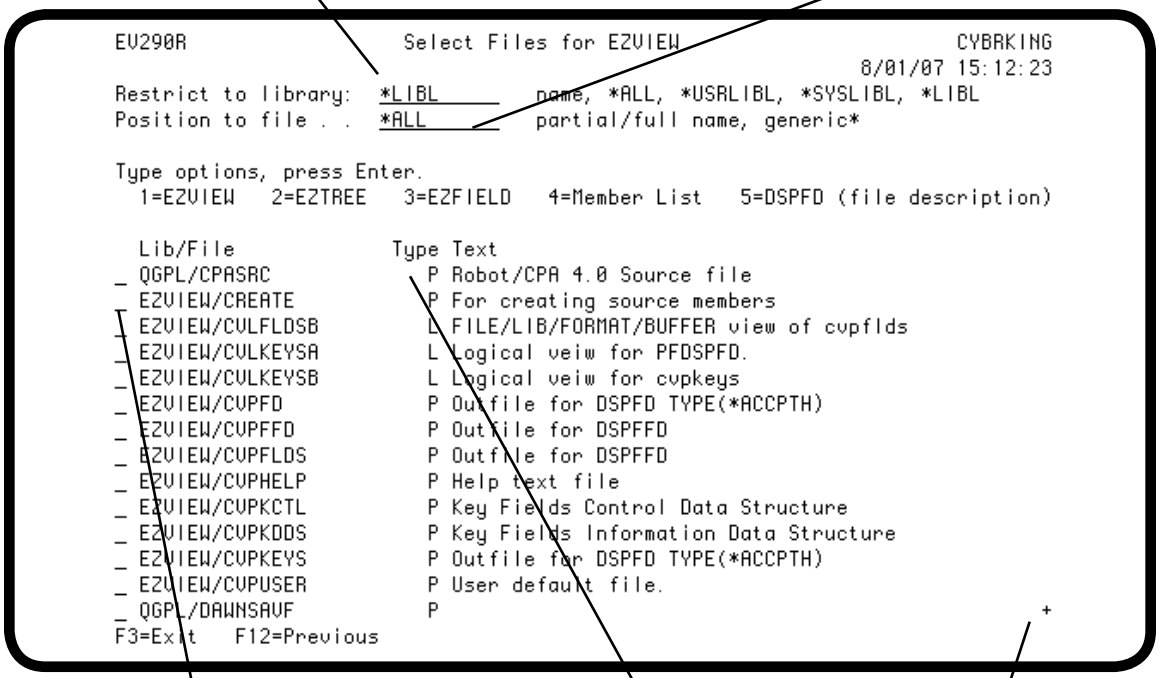
Select Files for EZVIEW Panel

The Select Files for EZVIEW panel displays when you request a file list by using the EZVIEW *SELECT command or by entering *SELECT in the File Name field of the Easy View a File panel. To select a file, enter an option in the blank before it. Easy View allows you to view only files you are authorized to view.

Enter the name of the library whose files are to be listed, or one of the following names:

***ALL**	All libraries on the system.
***USRLIBL**	All libraries in the user library list for this session.
***SYSLIBL**	All libraries in the system portion of the library list for this session.
***LIBL**	All libraries in the library list for this session.

Enter the full or partial name of the first file to display or enter a generic name restricting the list of files. For example, if you enter the generic name RBT*, only file names beginning with the letters RBT are listed.



Enter the Easy View option you want to perform on the file:

1	View the file records.
2	Display the data base relations.
3	Display the field listing.
4	List the file members.
5	Display the file description.

File type:

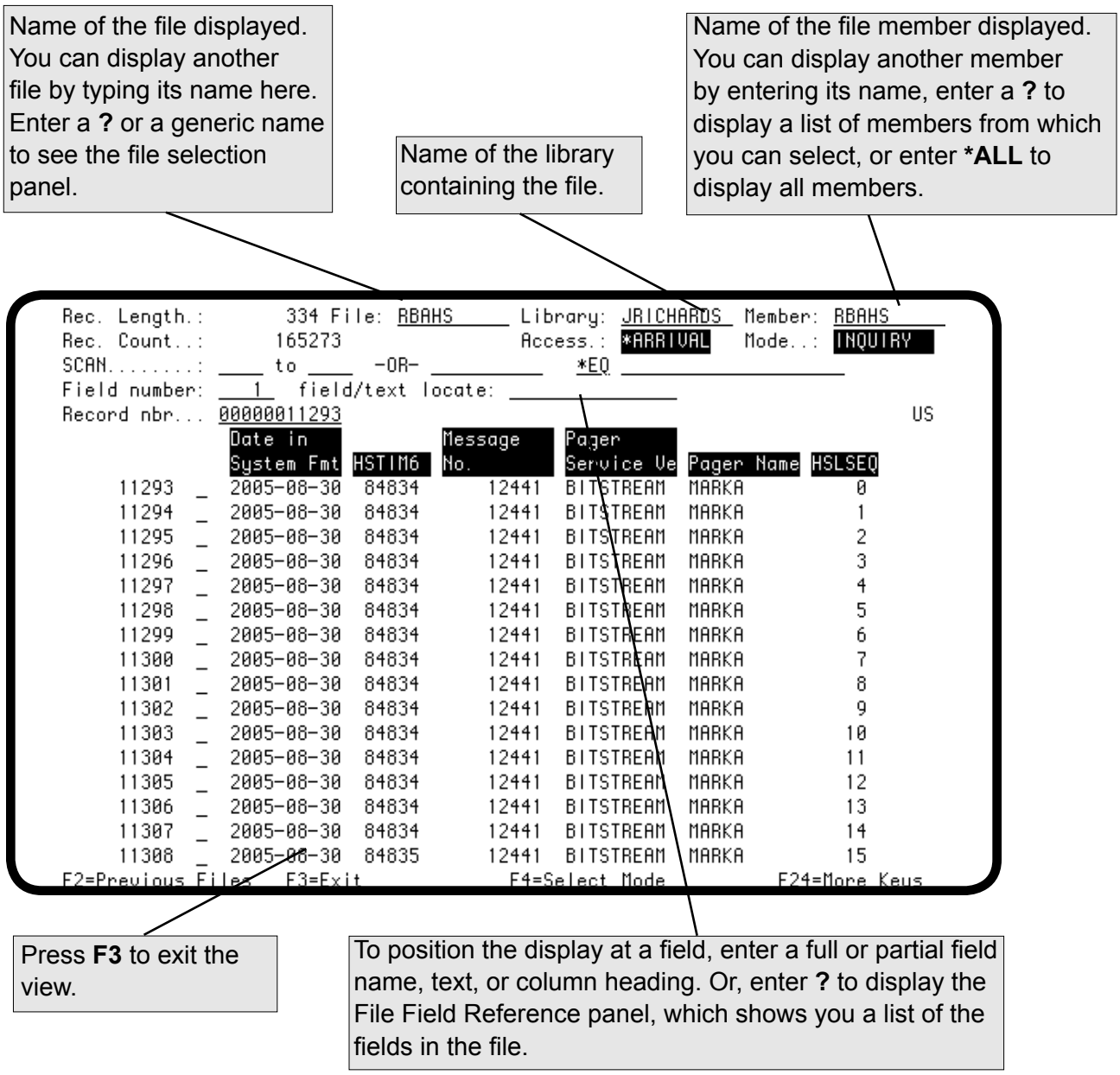
P = physical

L = logical

A plus sign (+) indicates that there are more files to select from. Press the Page Down key to view more files.

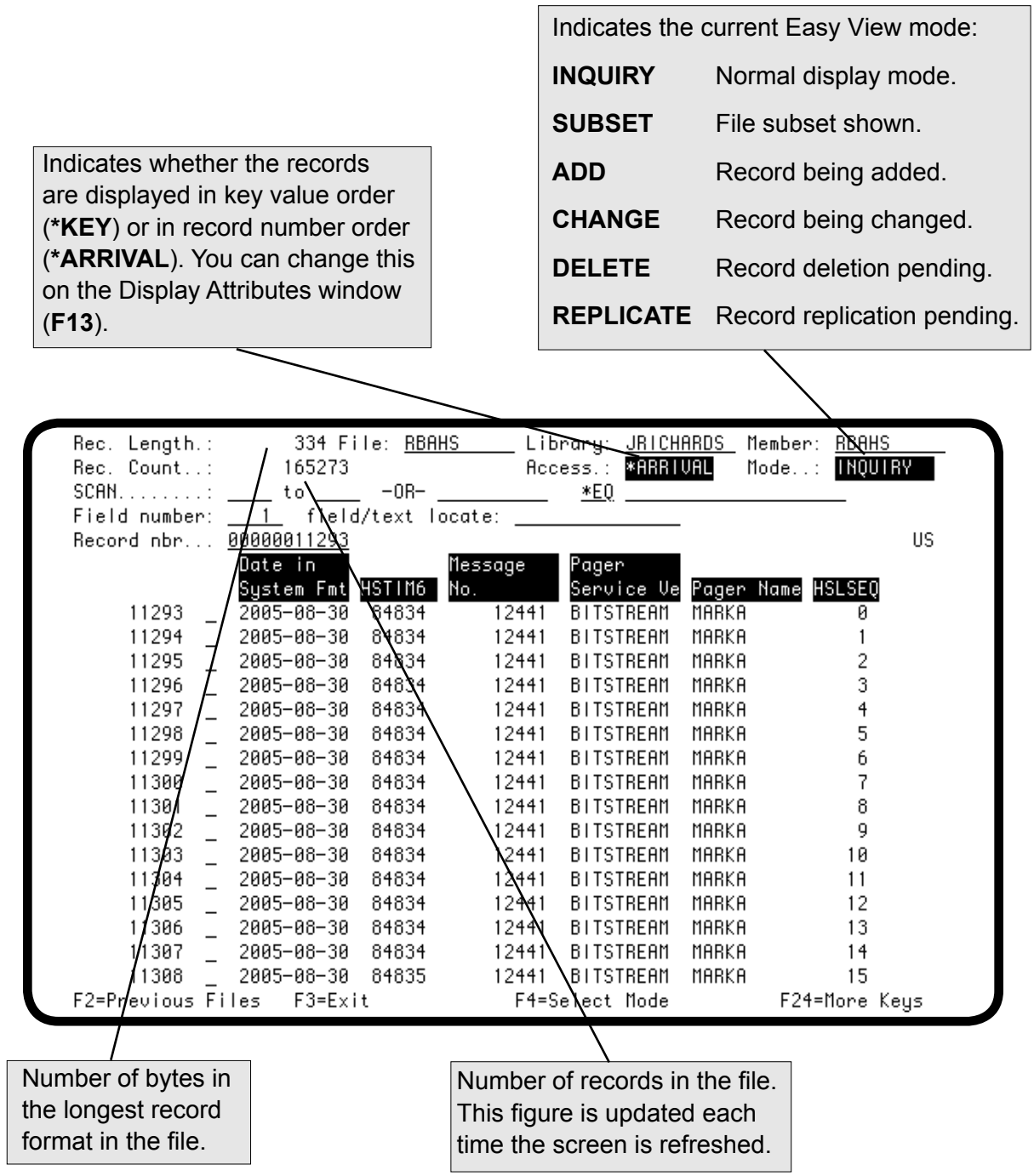
Easy View Record Display

After you specify the file you want to view, Easy View displays the records in the file. You can change the file or member displayed using the File and Member fields. (You also can display additional files as described in the section, Additional Database Views.)



Easy View Heading Fields

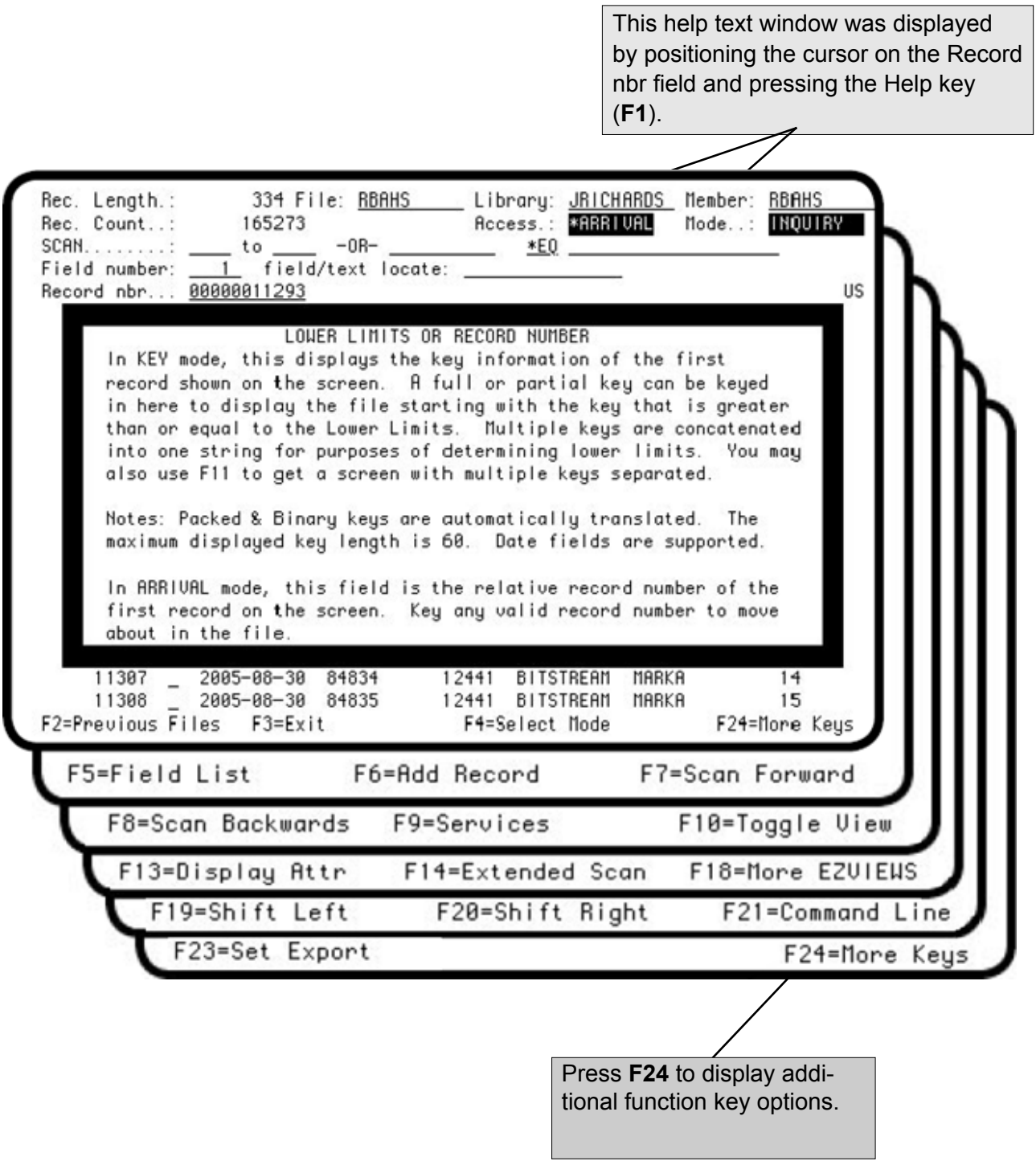
In addition to the File, Library, and Member fields, the record display heading also contains the Record Length, Record Count, Access, and Mode fields (described below).



Easy View Function Keys and Help Text

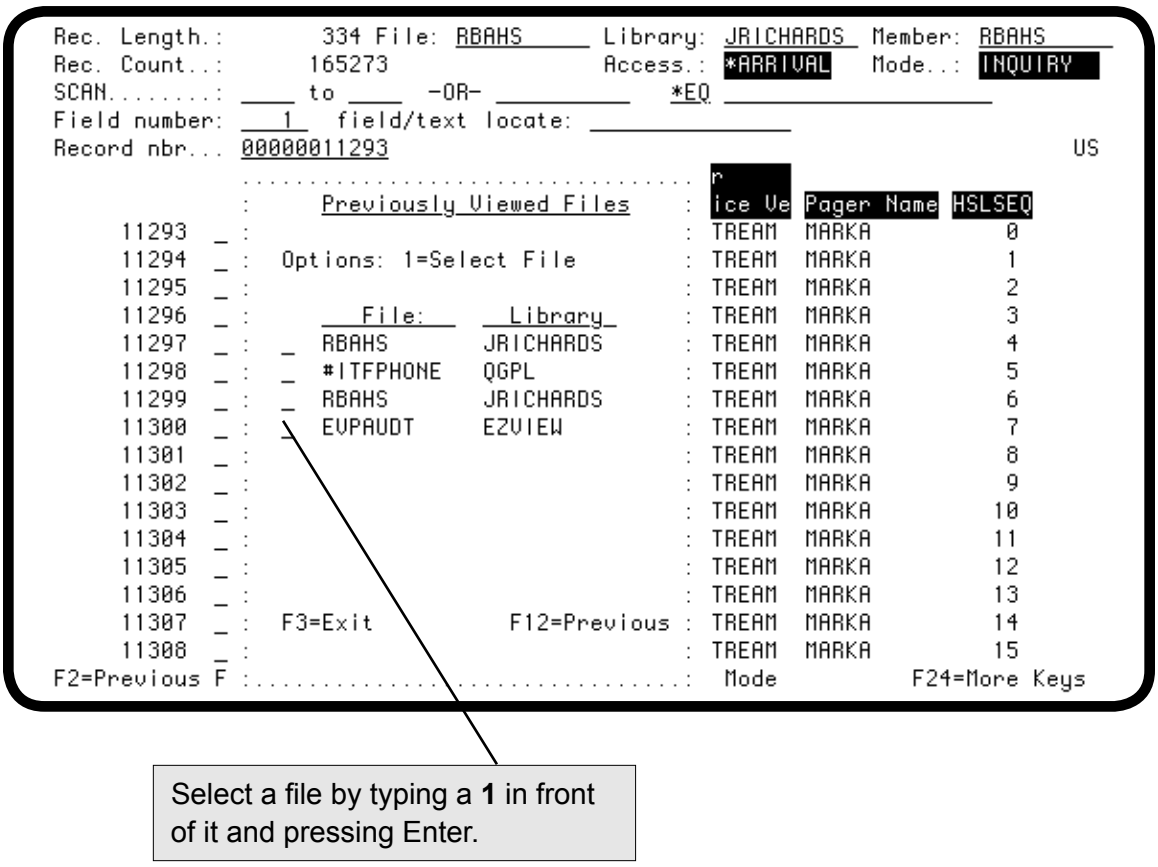
The bottom line on each Easy View panel shows function key prompts. If the function key prompts do not fit on the panel, **F24** displays, which you can use to see other prompts. All allowable function keys are effective even when their prompt is not displayed.

To learn more about an area on the display, position the cursor on the area and press the Help key or **F1**. To get help for a function key, press the Help key followed by the function key. To remove the help text window, press Enter.



Previously Viewed Files

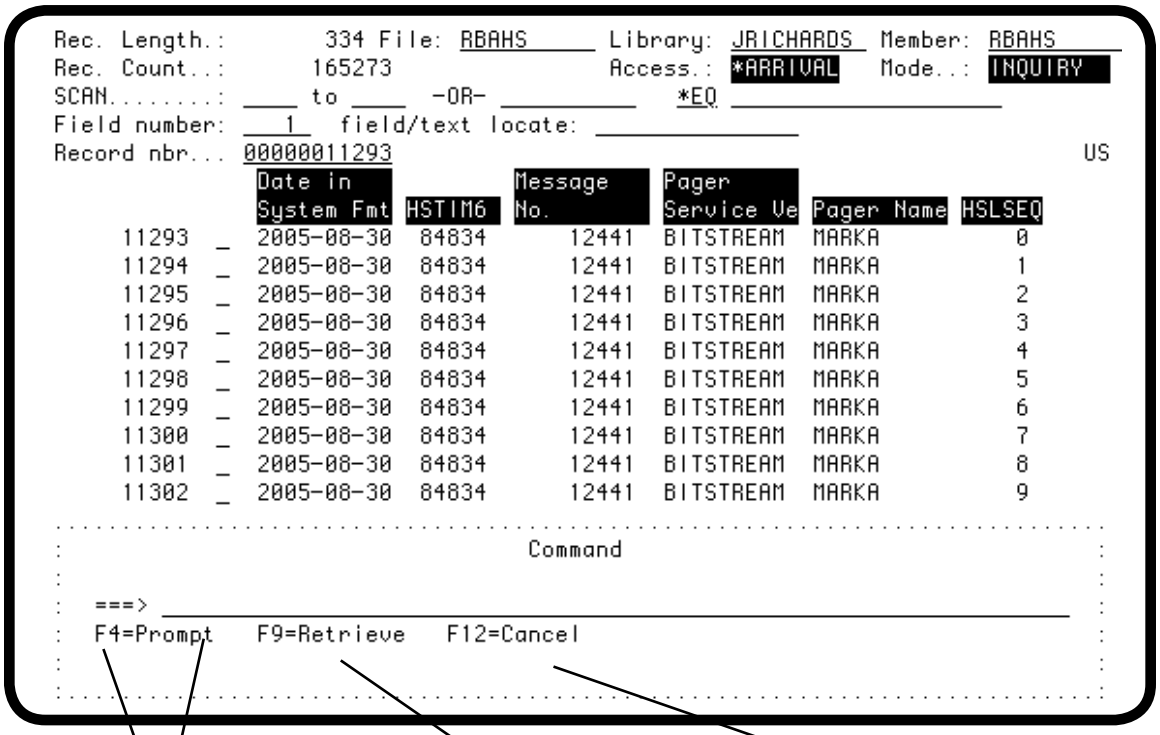
To display a list of files you worked with recently, press **F2**. You can select a file from the list by typing a **1** in front of it and pressing Enter. The list remains after you sign off.



Command Line

You can enter system commands without leaving Easy View. Press **F21** to display a command line.

The ability to display the command line is controlled by an Easy View default value. You can change the default value by using the CHGSYS command (see the section, Easy View Preferences).



Type a command and press **F4** to display the prompt screen for the command.

Press **F9** to retrieve the last command entered on the line.

Press **F12** to remove the command line. Any command left on the command line is ignored.

Display Attributes

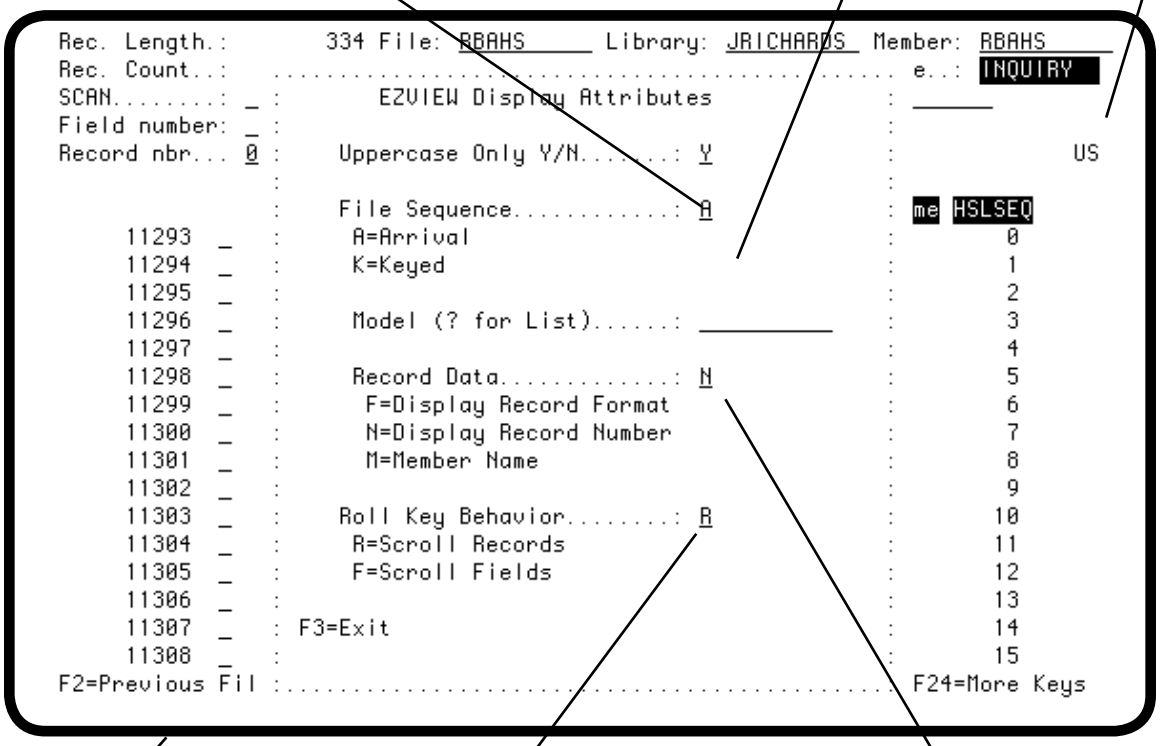
To change display attributes, press **F13** to see the Easy View Display Attributes window. Press Enter after making your changes to remove the window.

Use the Uppercase Only field to specify the case for data to be entered:

- Specify **Y to enter data in uppercase only (caps locked).**
- Specify **N** to enter data in both uppercase and lowercase. You can change the default (see the section, Easy View Preferences).

Enter **A** to display the records in record number order; enter **K** to display records in key value order.

US indicates upper shift entry only; **LS** indicates lower shift entry also.



To change the data model used, enter its name or enter a **?** to see a list of models for the file.

Selects the behavior for roll keys when viewing files that do not fit on one page.

R The roll keys scroll through records and function keys 19 and 20 scroll through fields within a record (default).

F The roll keys scroll through fields within a record and function keys 19 and 20 scroll through records.

Selects the record information displayed. The default can be changed (see the section, Easy View Preferences).

F Record format name.

N Record number.

M File member name. Use M when displaying all members to avoid changing the wrong member.

Positioning the File by Relative Record Number

If the records are shown in arrival sequence, you can position the file by relative record number. To display a keyed file in arrival sequence, press **F13** to see the Display Attributes window and enter **A** for the File Sequence option. Any gaps in the record number sequence are for records that have been deleted. To position the file at a record, enter its record number in the Record nbr field.

Enter the relative record number of the first record to be displayed.

Indicates that records are displayed in arrival sequence.

```
Rec. Length.:        334 File: RBAHS      Library: JRICHARDS  Member: RBAHS
Rec. Count..:       165273                Access.: *ARRIVAL   Mode..: INQUIRY
SCAN........: ____ to ____  -OR- __________   *EQ ____________________
Field number:  1   field/text locate: ______________
Record nbr... 00000011293                                                US
```

		Date in System Fmt	HSTIM6	Message No.	Pager Service Ve	Pager Name	HSLSEQ
11293	E	2005-08-30	84834	12441	BITSTREAM	MARKA	0
11294	_	2005-08-30	84834	12441	BITSTREAM	MARKA	1
11295	_	2005-08-30	84834	12441	BITSTREAM	MARKA	2
11296	_	2005-08-30	84834	12441	BITSTREAM	MARKA	3
11297	_	2005-08-30	84834	12441	BITSTREAM	MARKA	4
11298	_	2005-08-30	84834	12441	BITSTREAM	MARKA	5
11299	_	2005-08-30	84834	12441	BITSTREAM	MARKA	6
11300	_	2005-08-30	84834	12441	BITSTREAM	MARKA	7
11301	_	2005-08-30	84834	12441	BITSTREAM	MARKA	8
11302	_	2005-08-30	84834	12441	BITSTREAM	MARKA	9
11303	_	2005-08-30	84834	12441	BITSTREAM	MARKA	10
11304	_	2005-08-30	84834	12441	BITSTREAM	MARKA	11
11305	_	2005-08-30	84834	12441	BITSTREAM	MARKA	12
11306	_	2005-08-30	84834	12441	BITSTREAM	MARKA	13
11307	_	2005-08-30	84834	12441	BITSTREAM	MARKA	14
11308	_	2005-08-30	84835	12441	BITSTREAM	MARKA	15

```
F2=Previous Files   F3=Exit            F4=Select Mode          F24=More Keys
```

A record selected by an **E** on the spreadsheet format is displayed in EZFIELD format with its relative record number in the RRN field.

- The RRN field cannot be changed.
- The maximum field length that can be shown in EZFIELD format is 120 bytes.

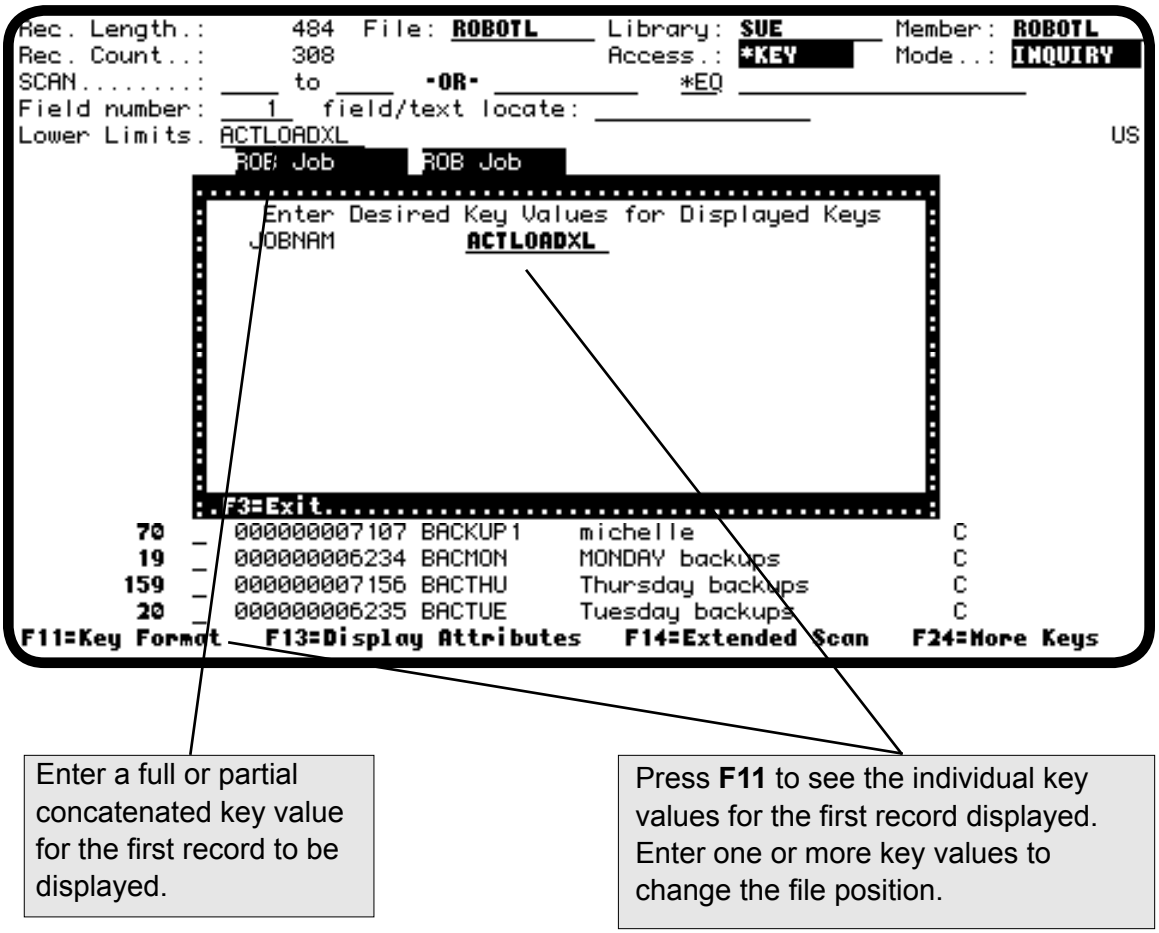
```
Rec. Length.:        334 File: RBAHS      Library: JRICHARDS  Member: RBAHS
Rec. Count..:       165273                                   Mode..: INQUIRY
Format......: HSFMT
RRN.........:        11293


Date in System Fmt......:   2005-08-30
HSTIM6..................:    84834
Message No..............:       12441
Pager Service Vendor Nam:   BITSTREAM
Pager Name..............:   MARKA
Log Sequence  Number....:       0
Log Type................:   M
Major/Minor Return Code.:   ___
Length of Data Logged...:    0
Message Text Field......:   Connected to host SMTP.VISI.COM.
_____________________________________________________________________
HSYMD...................:   05/08/30
Mode of Operation.......:   M
Comm Job Name...........:   RBAC02T
Comm Request ID.........:        30148
                                                                  More...
F3=Exit   F11=Toggle View   F12=Previous   F21=Command Line
```

Positioning the File by Key Value

On a key sequence display, you can change the file position by entering the key value of the first record to be displayed. Easy View displays a keyed file, by default, in key value order. The full concatenated key value of the first record displayed is shown in the Lower Limits field. Packed and binary key values are automatically translated. The maximum displayed key length is 60.

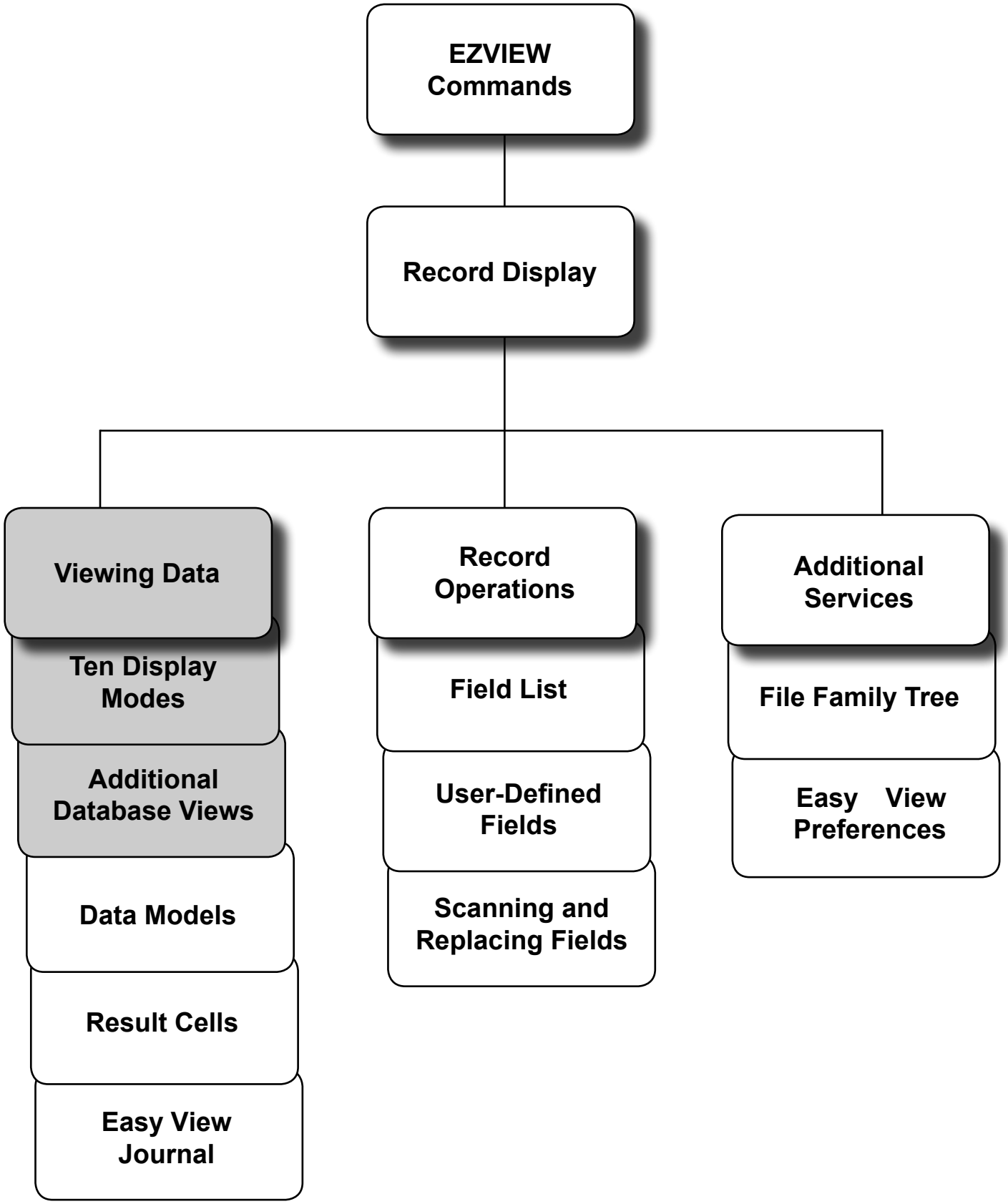
You can change the first record displayed by entering a full or partial key value in the Lower Limits field. Or, you can press **F11** to display a window listing each of the key values for the first record displayed. The key values in the window can total up to 99 bytes. To position to the record with the lowest key value, blank out the Lower Limits field. To position to the record with the highest key value, enter 9s in the Lower Limits field.

You can change any of the key values in the window. Easy View displays the file starting with the key value greater than or equal to the entered value.



Enter a full or partial concatenated key value for the first record to be displayed.

Press **F11** to see the individual key values for the first record displayed. Enter one or more key values to change the file position.


EZVIEW Commands
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Ten Display Modes

Easy View provides ten different display modes or formats for viewing your file records, each display mode having particular features described here.

Spreadsheet Mode

Spreadsheet mode formats the data so that each field is in a separate column and each record is on a separate line. Each column has a heading, either the field text or the field name. Numeric fields are formatted to present their numeric value.

Spreadsheet mode cannot display multiple record formats that require different column widths. (If the formats can use the same column layout, you can use spreadsheet mode.) Spreadsheet mode shows you only the first 60 characters of a field (the display width is 60 characters. When you shift the display, it moves to the next field boundary). To see the rest of a field, use a different display mode.

EZFIELD Mode

In spreadsheet mode, you can select an individual record for display in EZFIELD mode.

EZFIELD mode also formats the data like spreadsheet mode, but presents only one record on the screen at a time. Each field of the record displays on a separate line, preceded by either its field text or field name and field text. The maximum field length shown is 512 bytes. Numeric values are translated.

EZFIELD mode can be used for files with multiple record formats.

Character Mode

Character mode displays the record as an unformatted sequence of characters. This mode is especially useful when working with fixed positions in the record or working with files that have no DDS.

Of all the display modes, character mode can display the most data on a screen at one time—16 records, one per line. A ruler above the data marks the character positions. Numbers below the ruler mark the key fields and indicate their sequence. In addition, you can display field names vertically to mark the beginning of each field in the record. (With field names displayed, only eight records can fit on the screen.)

Hexadecimal Mode

Hexadecimal mode displays the record as an unformatted sequence of characters and hexadecimal codes. The first digit of the hexadecimal code represents the first four bits of the byte; the second digit represents the second four bits. Thus, you can change positions at the bit level. You can also change control codes, and packed and binary fields.

In hexadecimal mode you can display four records at a time, with a ruler above the data. Or, you can display the field names vertically to mark the beginning of each field in the record, with two records on the screen. Or, you can display a single record, folded to display up to 240 bytes at a time.

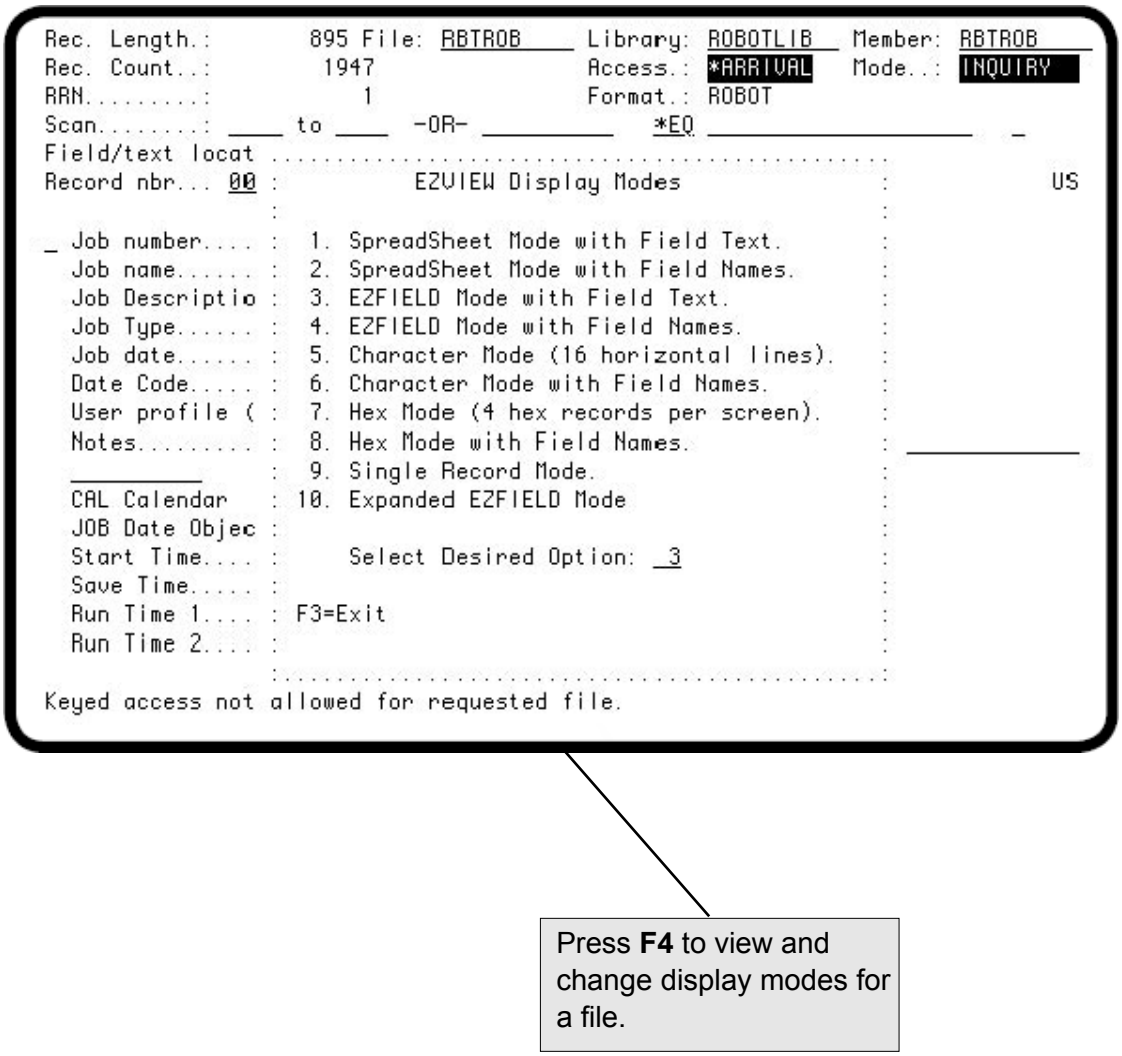
Display Modes Window

Easy View offers ten record display modes. The spreadsheet and EZFIELD modes separate and format the record fields for you. Other modes present the record data as an unformatted sequence of characters and/or hexadecimal codes.

The default display mode is spreadsheet mode with field text. When multiple record formats cannot be displayed in spreadsheet mode, Easy View switches to EZFIELD display mode, automatically. To change your default display mode, see Easy View Preferences.

To switch display modes, press **F10** until you reach the display mode you would like to use.

To view all the display modes available for a given file, press **F4.** Select a display mode by entering its number.

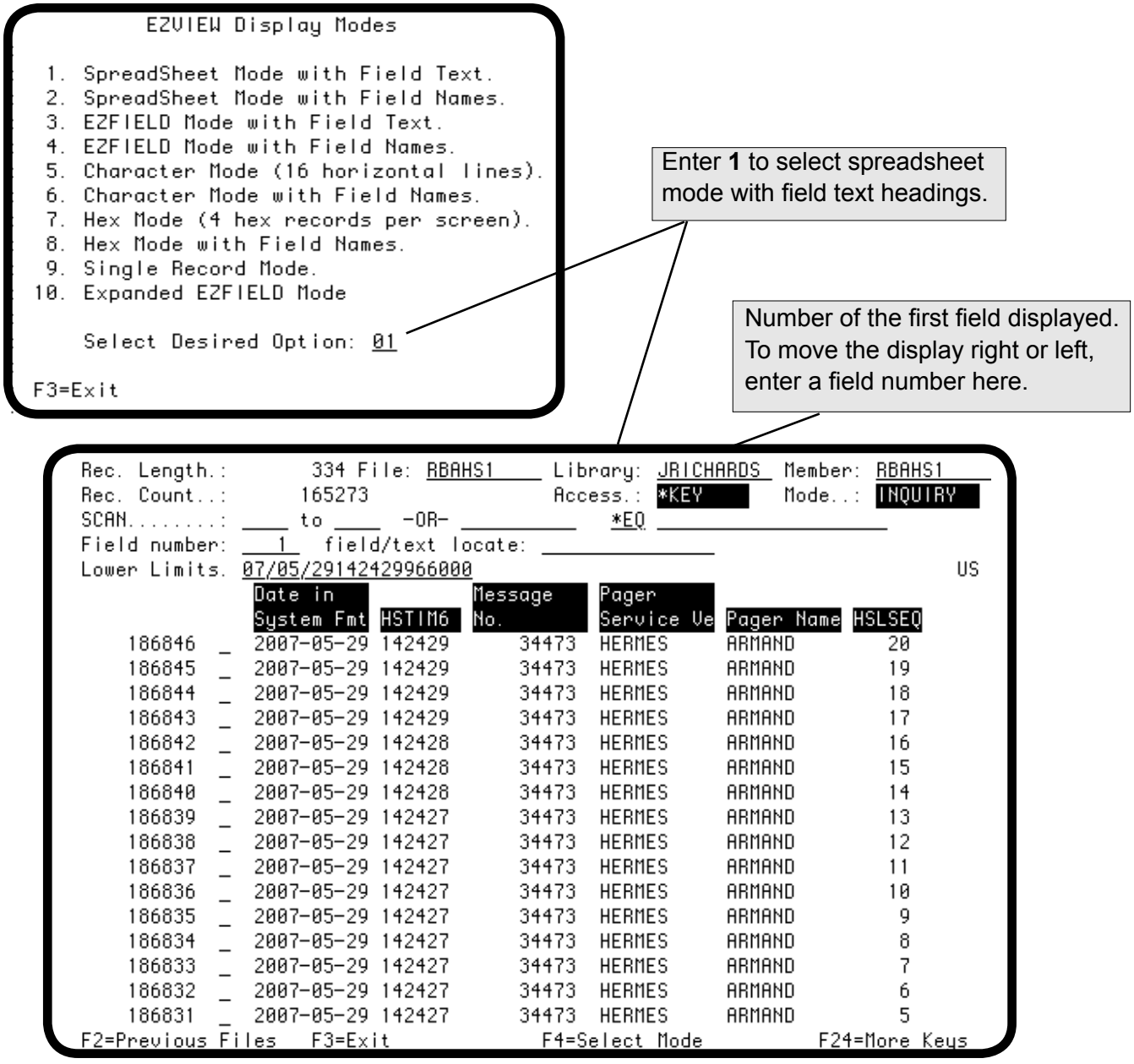


Spreadsheet Mode with Field Text

Spreadsheet mode displays one record per line, with each record field in a separate column. Option **1** uses the field text as the column heading if that is possible in the space available. Otherwise, it uses the field name. Easy View uses the most meaningful fit possible based on the width of the column. Packed, binary, and zoned fields are formatted for you. Spreadsheet mode cannot show multiple record formats that require different column layouts.

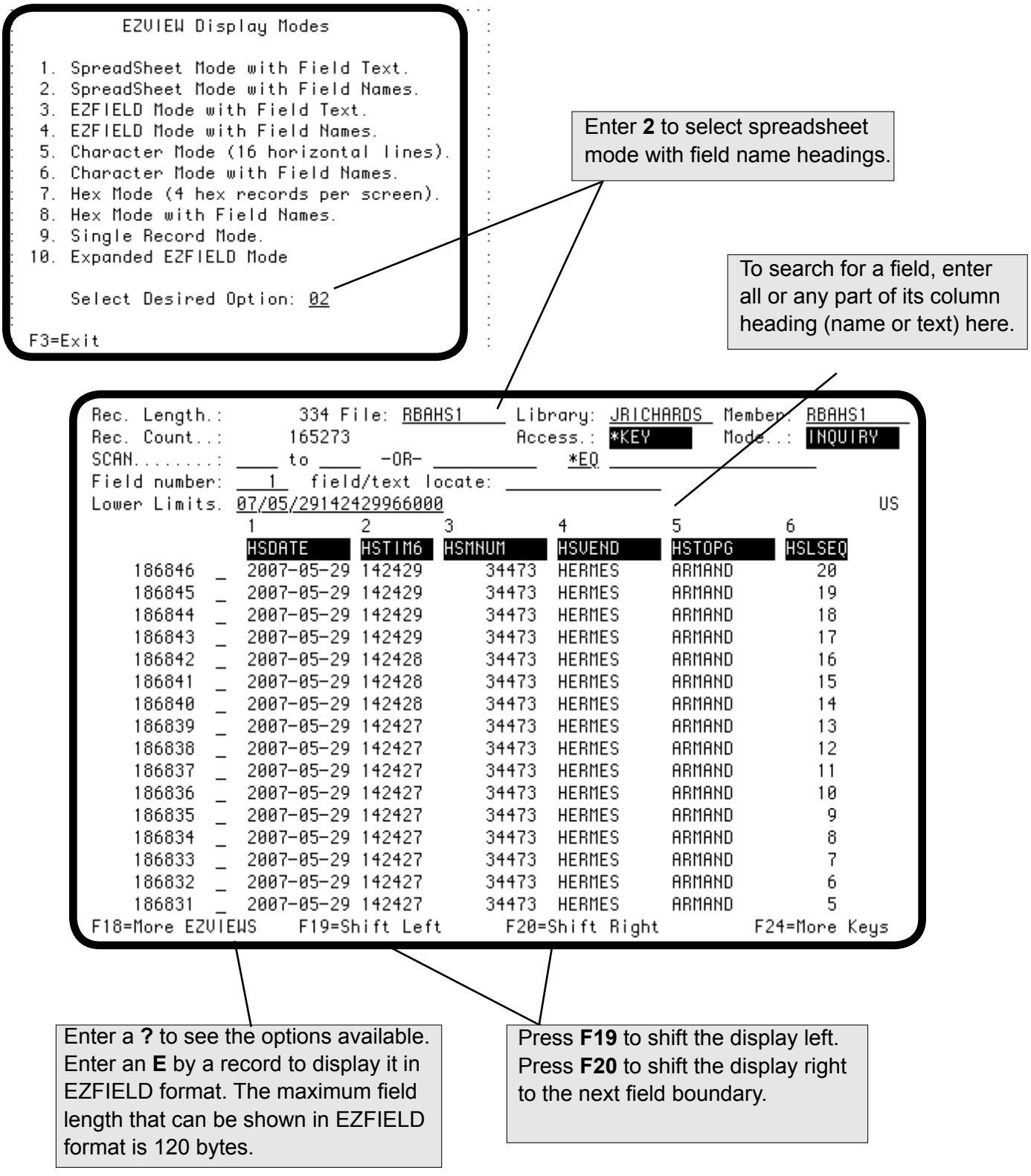
F19 and **F20** shift the display left and right on field boundaries, so only the first 60 characters of a field can be shown. Spreadsheet mode offers two more methods for moving the display:

- To position a specific field at the left of the display, enter its number in the Field number field (fields are numbered consecutively from left to right)
- Enter all or any part of the column heading (the field name or field text) in the field/text locate field.



Spreadsheet Mode with Field Names

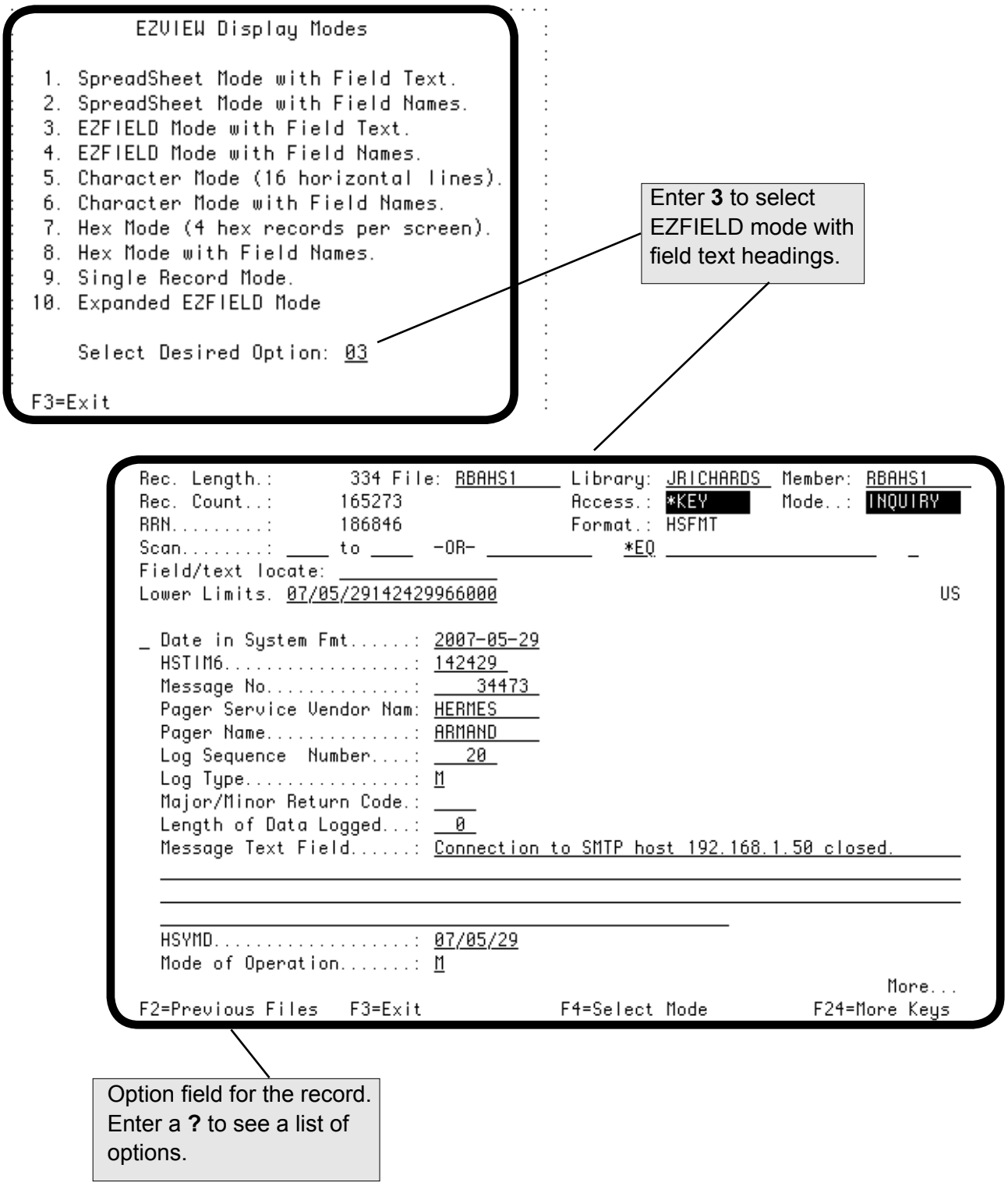
Spreadsheet mode with field names, option **2**, displays one record per line with each record field in a separate column. This display mode is the same as option **1**, except that the field names are always used as the column headings.



EZFIELD Mode with Field Text

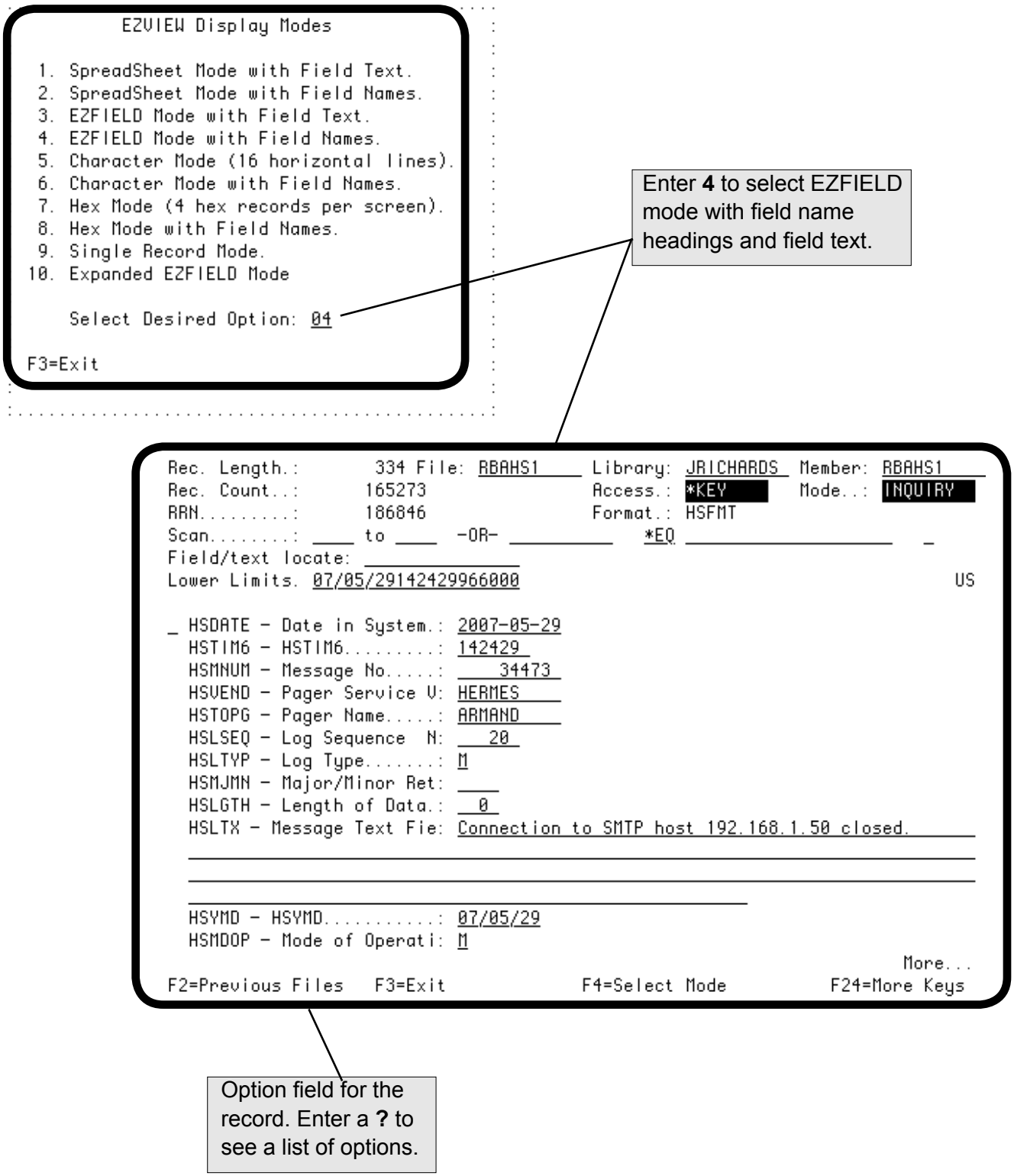
Option **3** on the Display Modes window displays a single record with each record field on a separate line. The field text serves as the line heading. All numeric fields are translated. This mode is useful for displaying multiple record formats.

The maximum field length that can be displayed is 512 bytes. If the number of fields exceeds the display size, use **F19** and **F20** to shift the display left and right. Roll the display to see other records.



EZFIELD Mode with Field Names

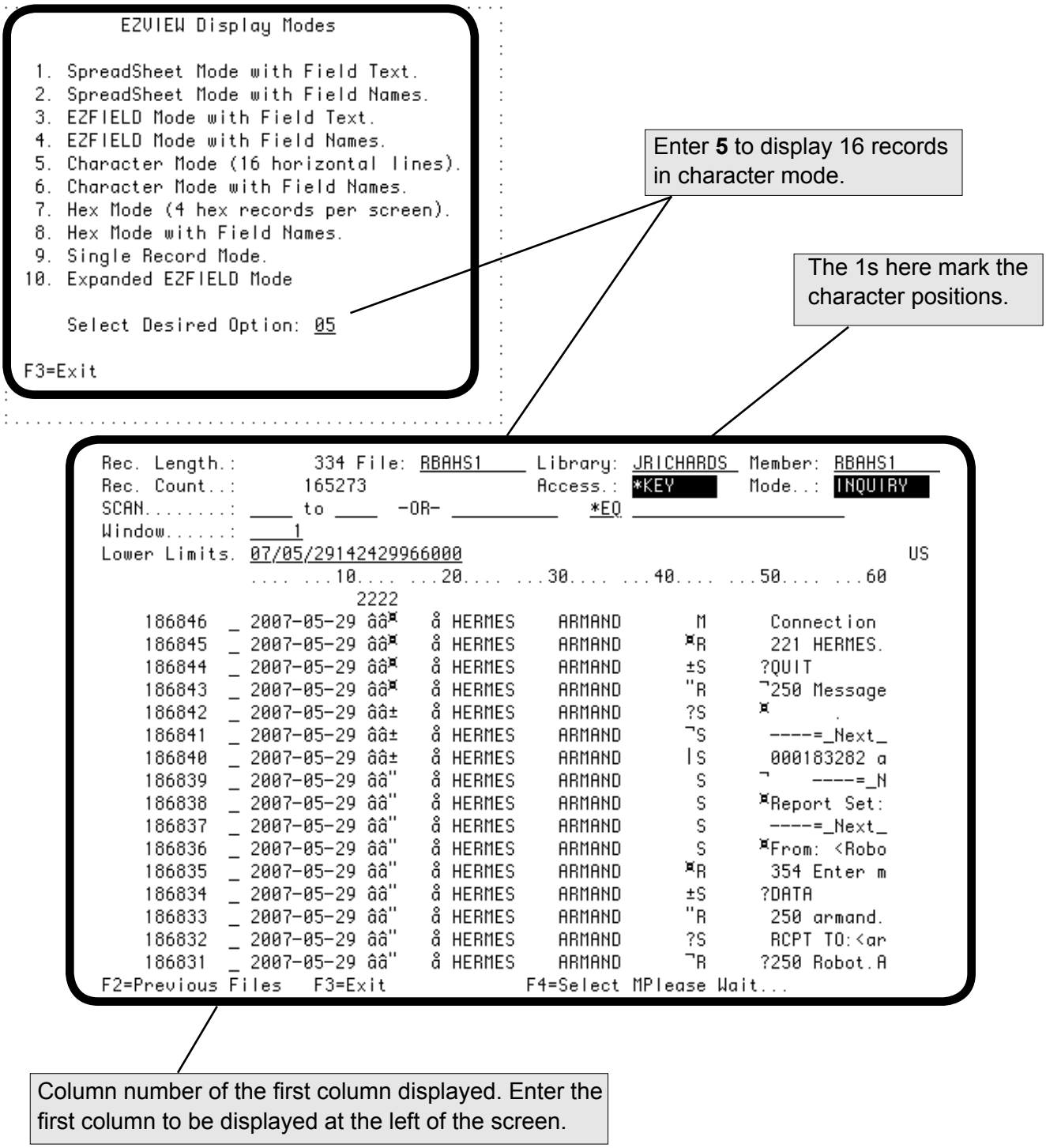
Option **4** on the Display Modes window displays a single record with each record field on a separate line. This display mode is the same as option 3, except that field names are combined with text. If the number of fields exceeds the display size, use **F19** and F**20** to shift the display left and right. Roll the display to see other records.



Character Mode (16 Horizontal Lines)

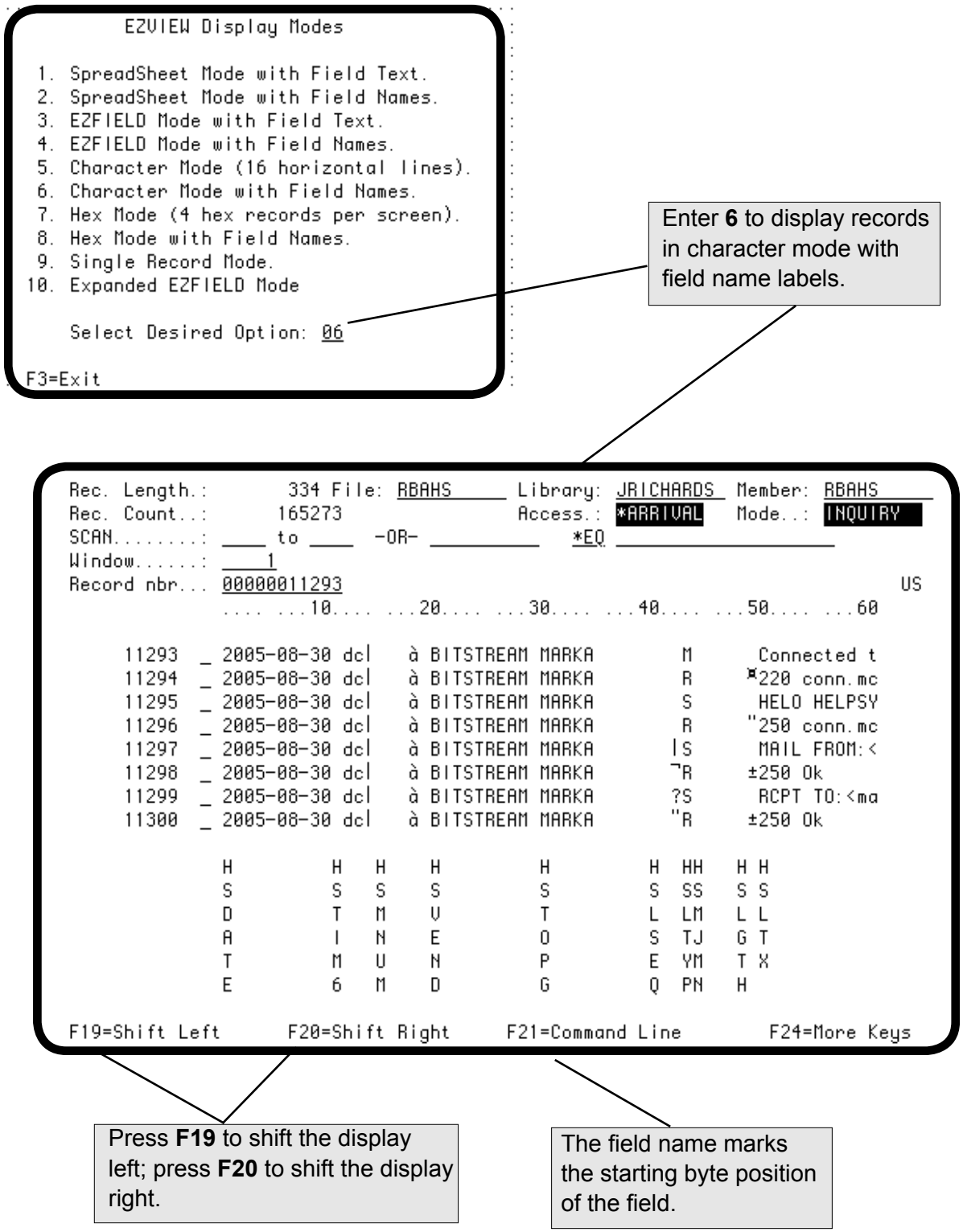
Option **5** on the Display Modes window displays 16 records, one per line, presented as characters. A ruler above the display shows the character positions. Numbers below the ruler indicate the key field sequence. Of all the display modes, this mode shows the most data on a screen.

If you select to display the record format names (option **F** on the **F13** window), the format name is displayed to the left of the record. Roll the display to see other records. To move the display right and left, press **F19** and **F20**, or enter a column number in the Window field.



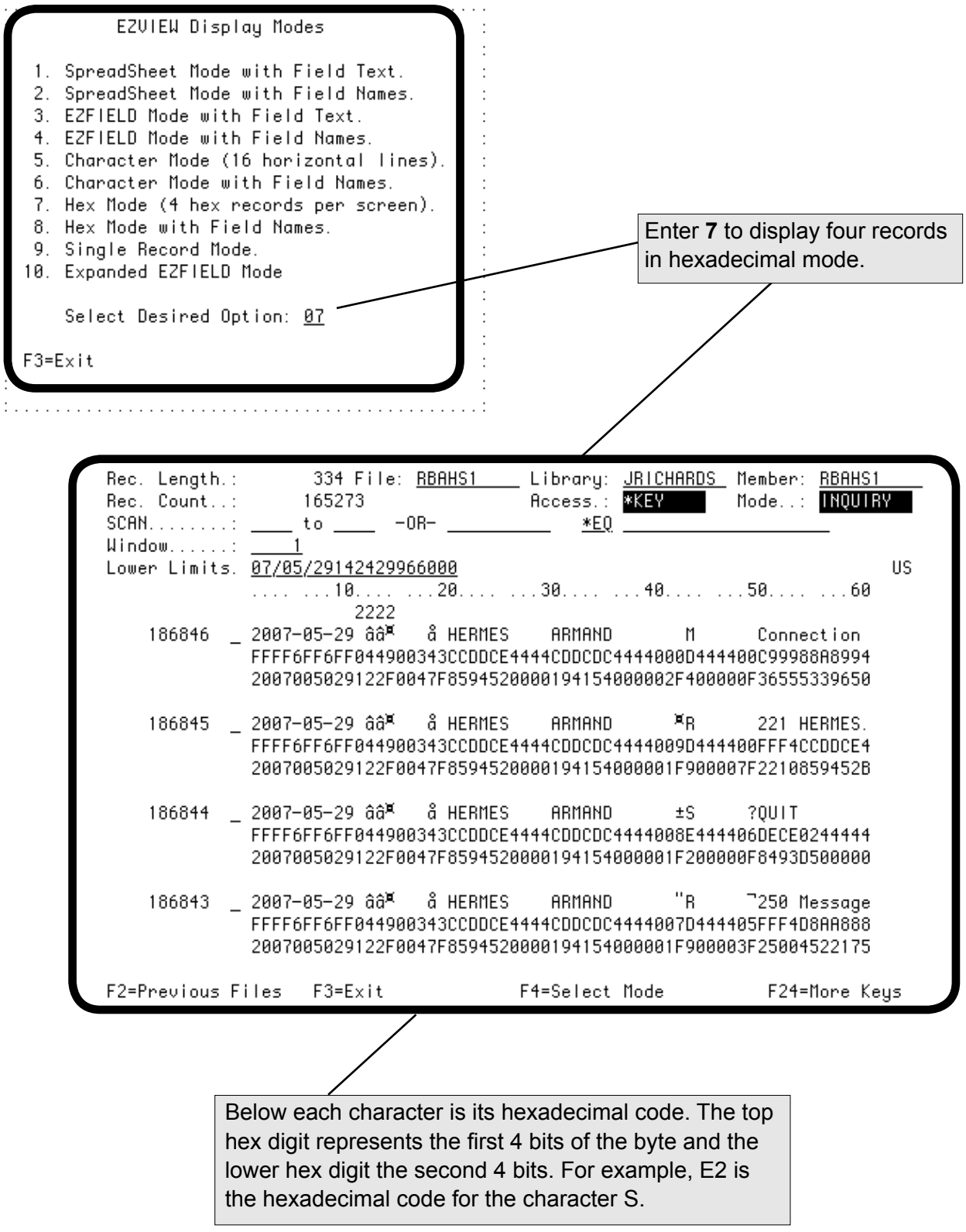
Character Mode with Field Names

Option **6** on the Display Modes window displays eight records, one per line, presented as characters. This display mode is the same as option 5 except that the field names, displayed vertically, mark the starting byte position of each field.



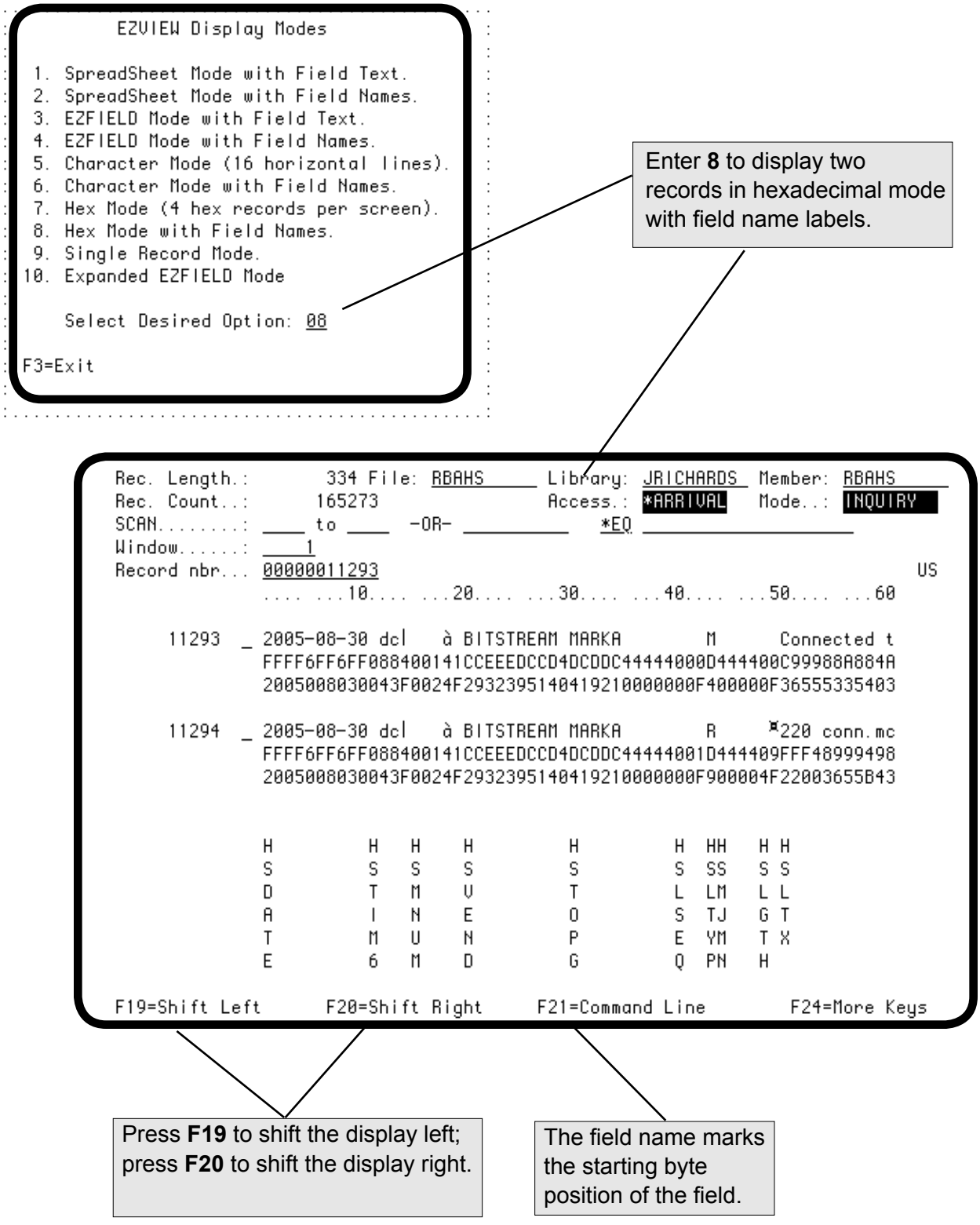
Hexadecimal Mode (4 Records Per Screen)

Option **7** on the Display Modes window displays four records at a time, three lines for each, one line showing characters and the two lines below it showing the corresponding hexadecimal codes. This display mode allows the data to be seen and changed at the bit level. Roll the display to see other records. To move the display left and right, press **F19** and **F20**, or enter a column number in the Window field.



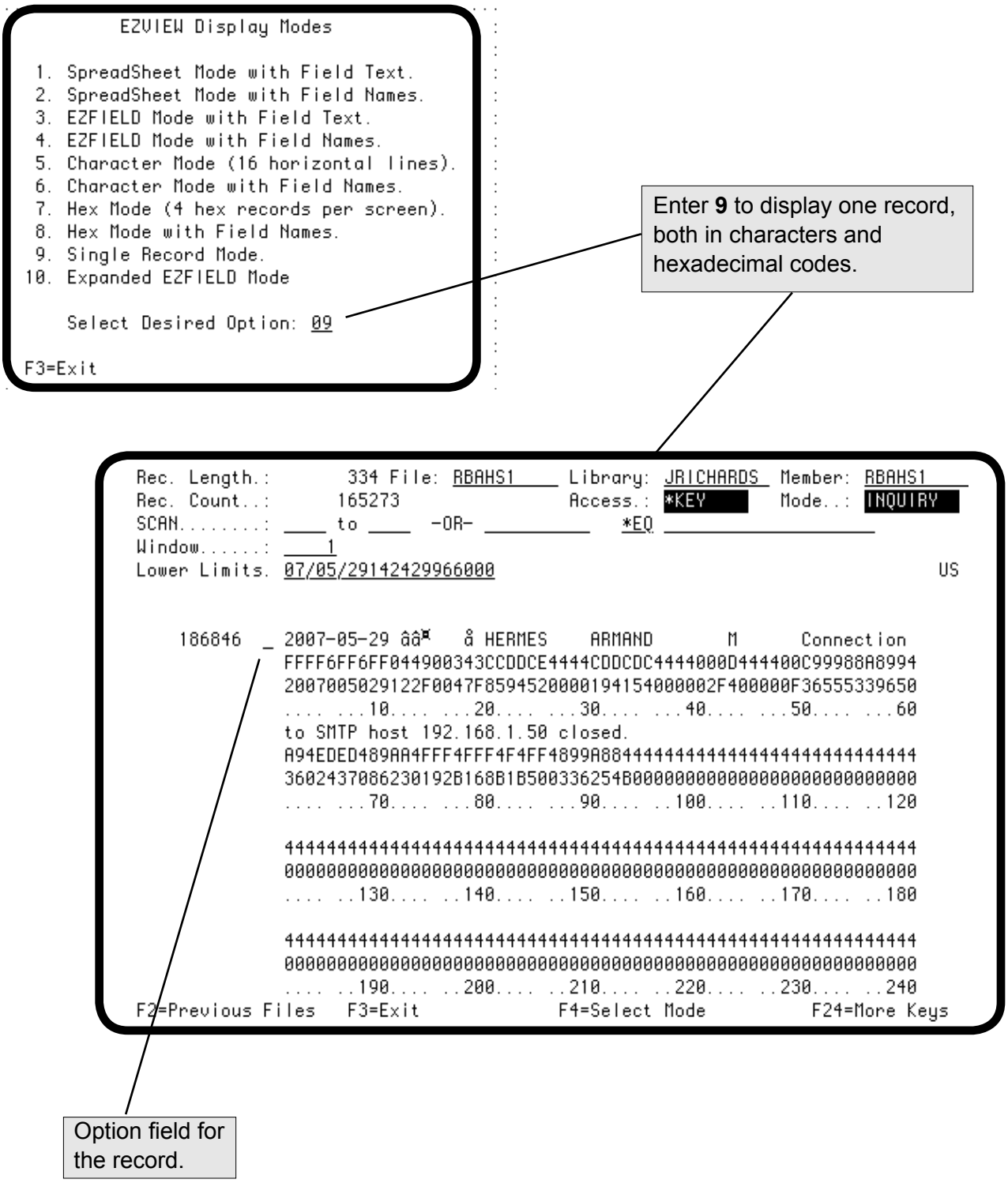
Hexadecimal Mode with Field Names

Option **8** on the Display Modes window displays two records, three lines for each, one line showing characters and the two lines below it showing the corresponding hexadecimal codes. This display mode is the same as option **7** except that the field names, presented vertically, mark the beginning of each field.



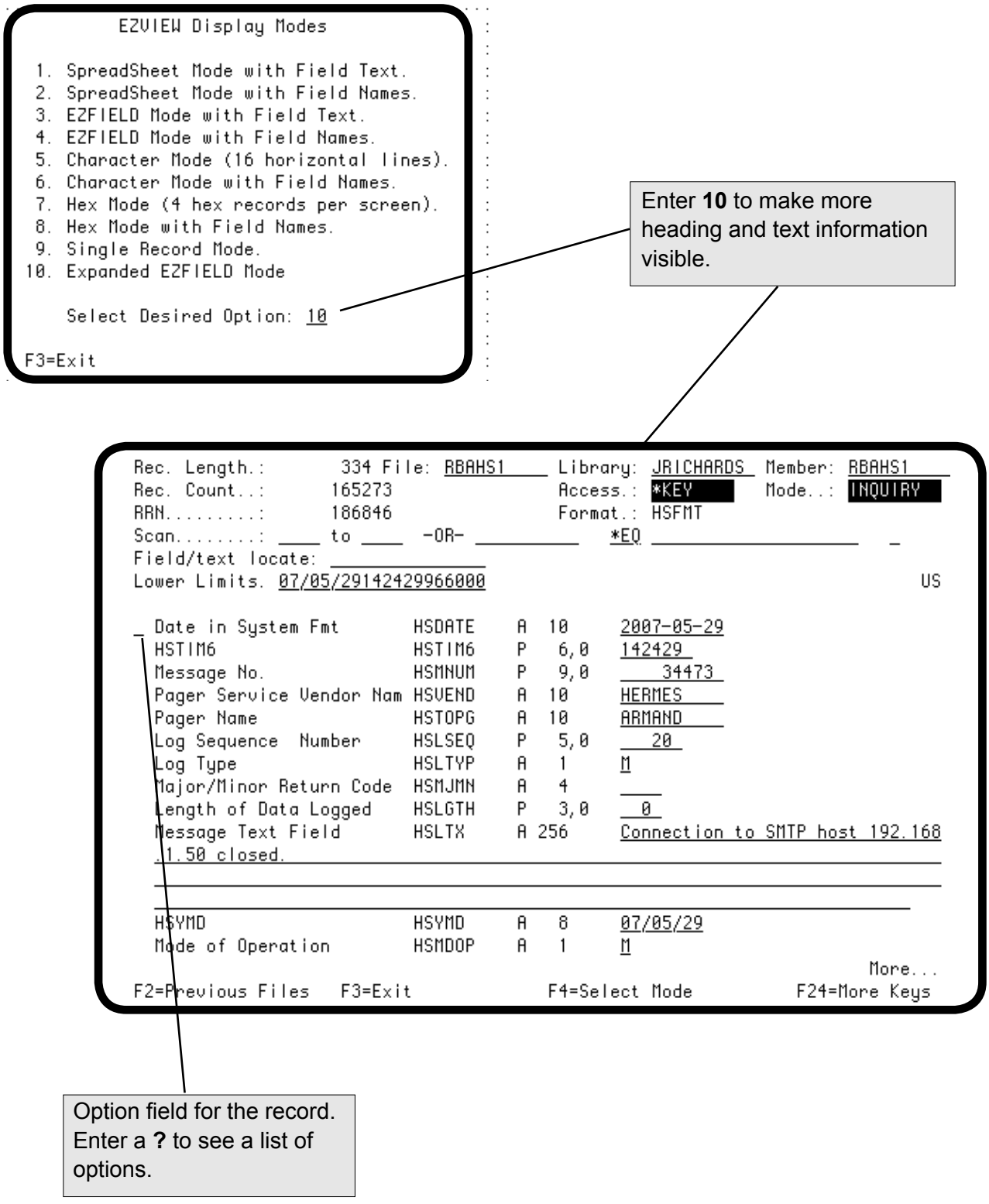
Single-Record Mode

Option **9** on the Display Modes window displays one record, presented as both characters and hexadecimal codes, with a ruler beneath. This mode shows the most data for a record, up to 240 bytes. If the record is longer than 240 bytes, enter a character position in the Window field to see the rest of the record. Roll the display to see other records. To move the display left and right, press **F19** and **F20**.



Expanded EZFIELD Mode

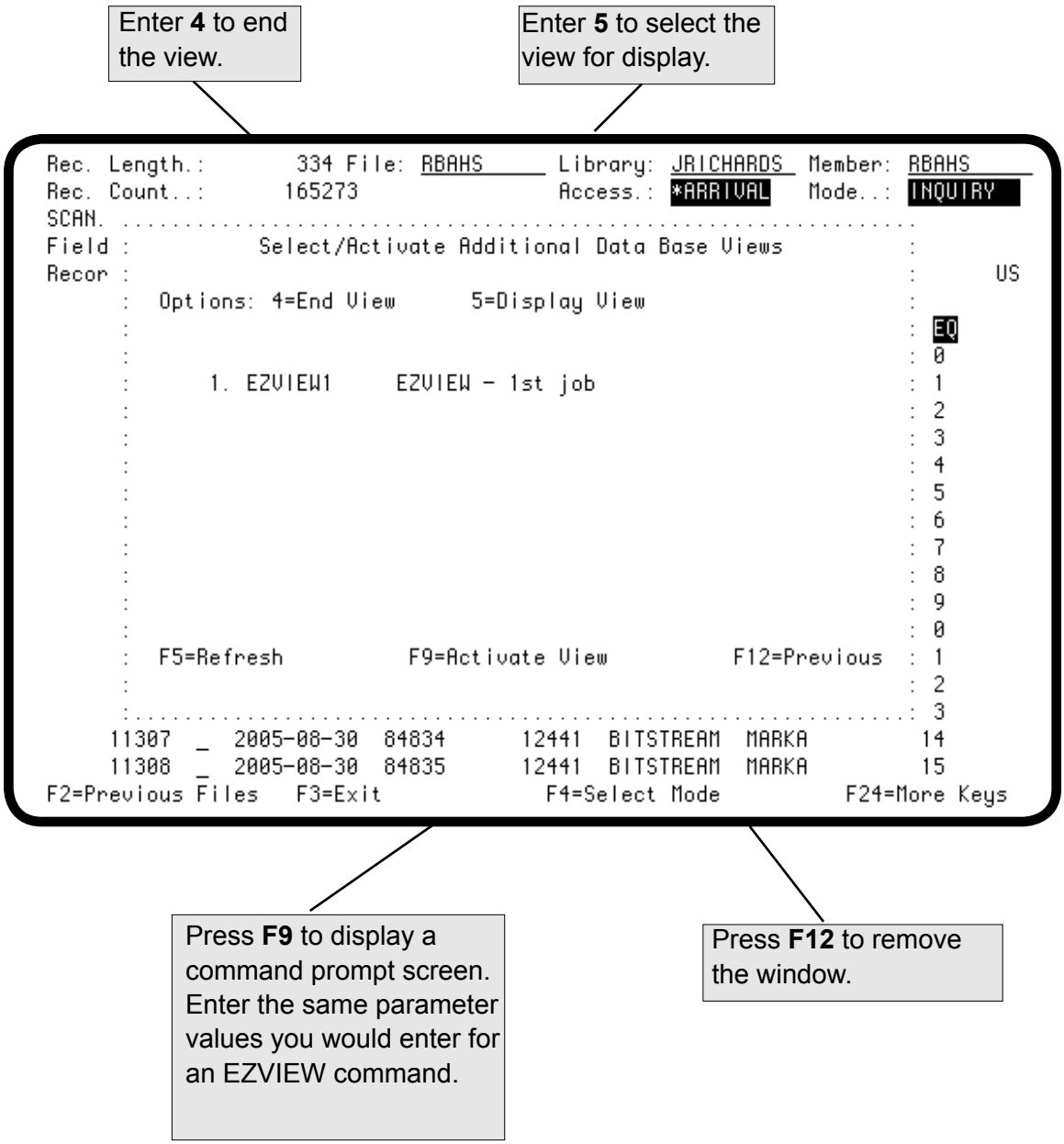
Option **10** on the Display Modes window is an expanded EZFIELD Mode that provides more heading and text information. This is helpful if you need field format information in addition to the field name and text.

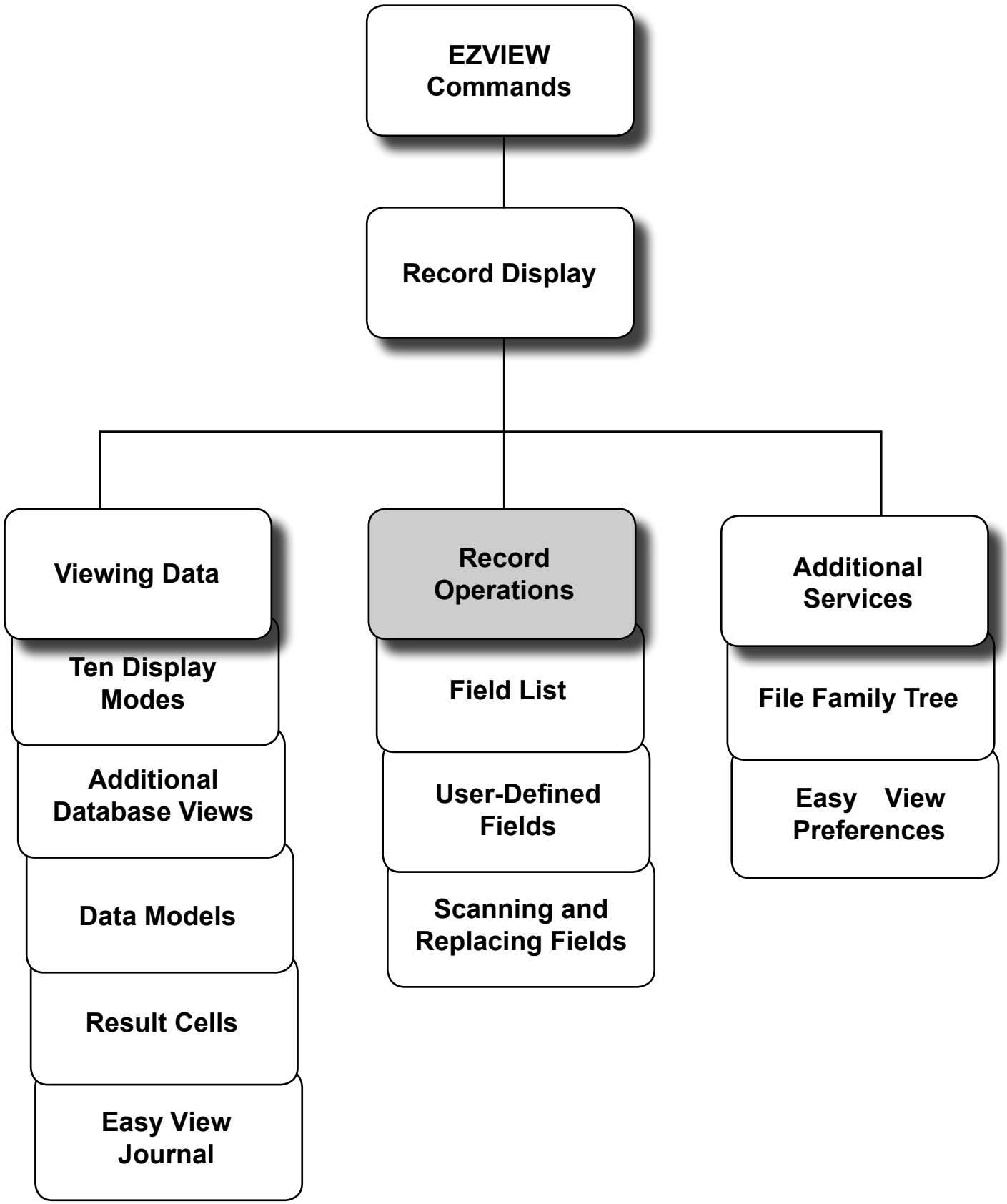


Additional Database Views

Easy View lets you have more than one file view available at the same time so that you can switch between them. Each view is a group job, and you can have as many as 16 group jobs running at a time. Easy View does not affect any other group jobs running at the same time.

- To work with database views, press **F18** to display the Database Views window and press **F9** to specify another file.
- To switch between views on the Database Views window, enter a **5** by the view to be displayed.
- To end a view, enter a **4** by the view (or, press **F3** from the record display). From an additional view, Easy View returns you to the previous view; from the initial view, the Easy View session ends.




EZVIEW Commands
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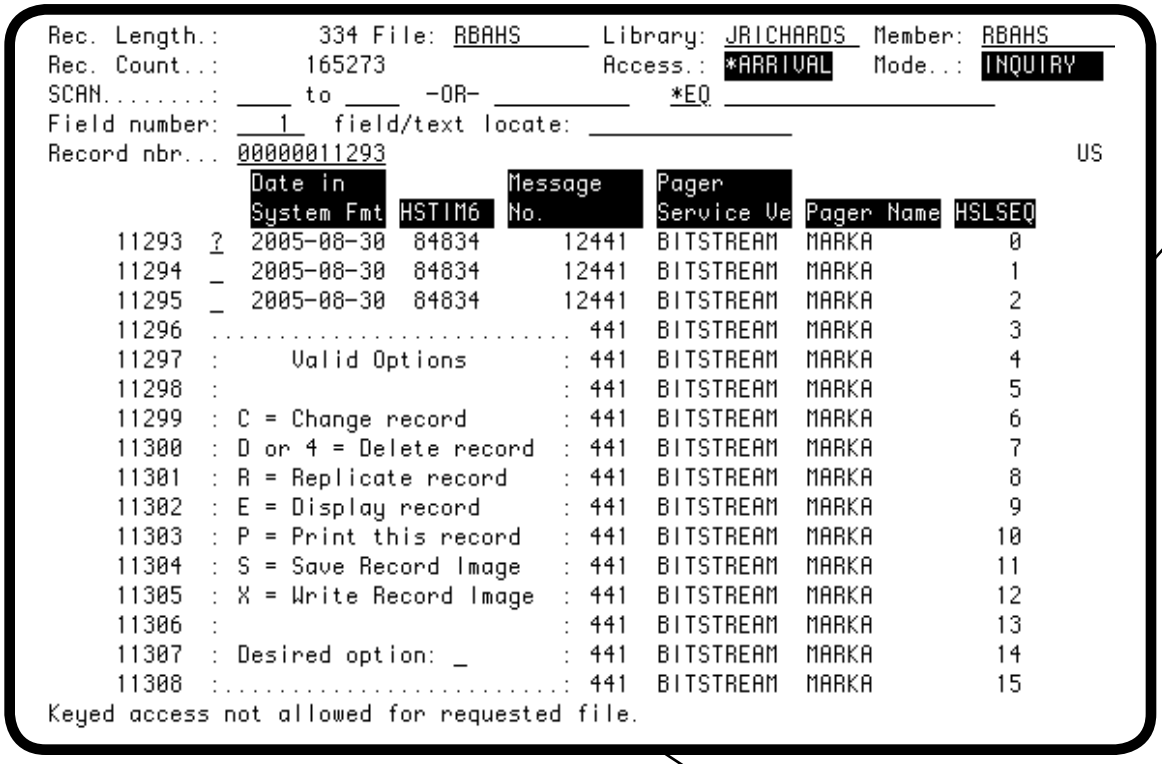
Record Operations

You can change the contents of the file being displayed if your default values allow it (see Easy View Preferences). You can be authorized to add and delete records, replicate and change records, export records to new or existing files, and print and save record images.

Note: Joined logical and DDM files are opened for read-only due to system constraints. If a file is dependent on other files or objects you are not authorized to, the file may not be viewable or changeable.

Every display mode includes an option field at the beginning of each record. Select an operation to perform on a record by entering an option code in the option field for the record. To see the options available, enter a **?** in the options field. To add a record to the file, press **F6**. You stay in Add mode until you press **F3** to make it easy to add several records at once.



Enter a **?** to display the options window.

Enter an option for this record:

C	Change this record.
D or 4	Delete this record.
R	Copy this record and then change the copy.
E	Display this record in EZFIELD mode.
P	Print this record image. In display modes 1—4, the print is formatted in EZFIELD mode. In modes 5—9, Character/Hex mode is used. Each print selected is placed in a separate spool file.
S	Save this record image.
X	Copy this record to a new or existing file.

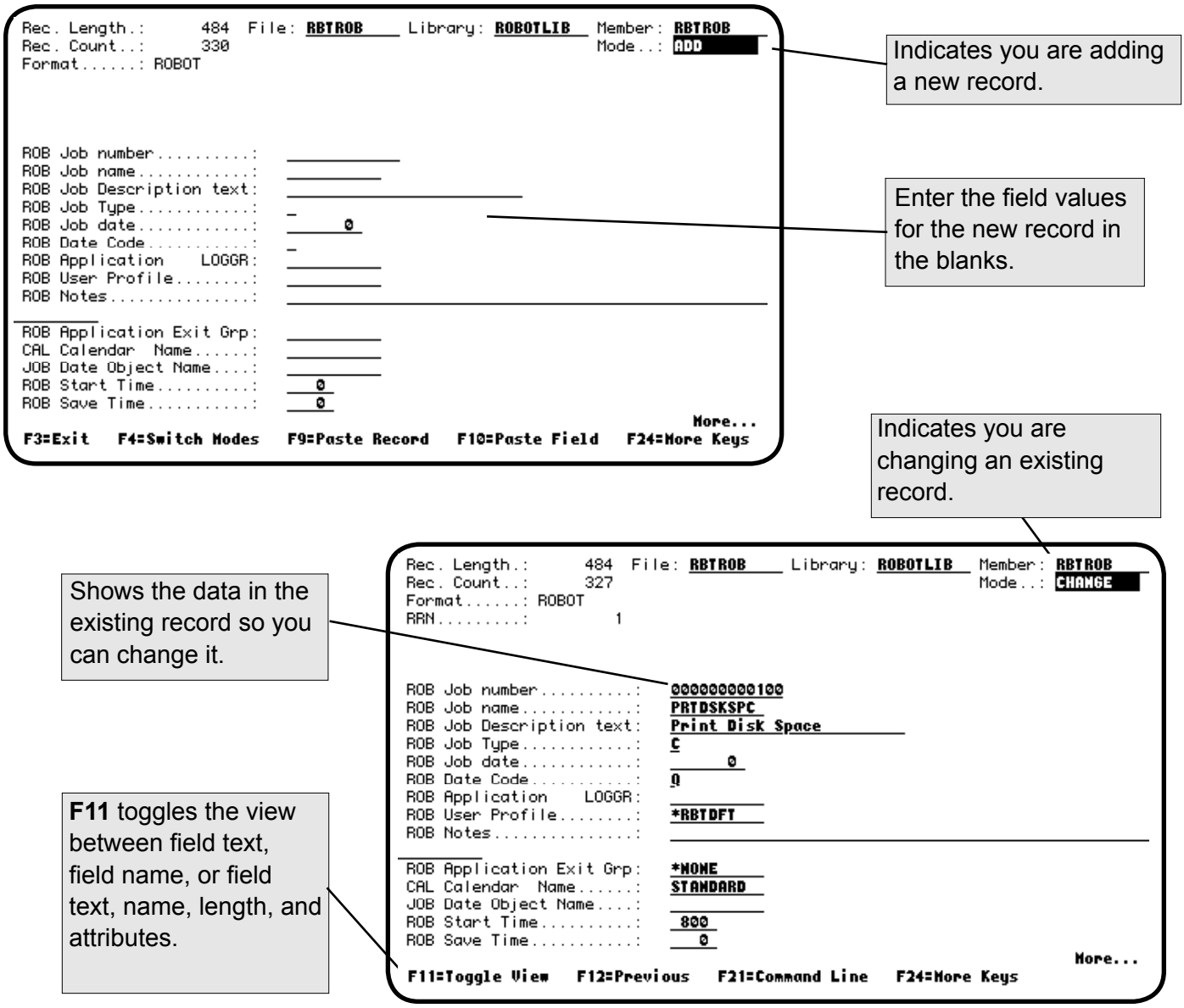
Adding and Changing

The display Easy View presents depends on the record operation you select. When you are adding a record, Easy View presents a record format in which you enter the field values for the new record. Character fields are blank, and numeric fields are zero. When you are changing a record, Easy View presents the existing record so you can change its field values.

You can enter numbers for all numeric fields, even packed fields; Easy View does the conversion for you. You can press the Dup key to duplicate the field value from the previous record entered.

Note: Do not add or change the *DATE and *TIME fields. The operating system has strict requirements for these fields, and the add or change will be rejected if you do not enter exact data.

After you press Enter, Easy View redisplays the record so you can verify the new record or the changes. (The verification default can be changed (see Easy View Preferences.)

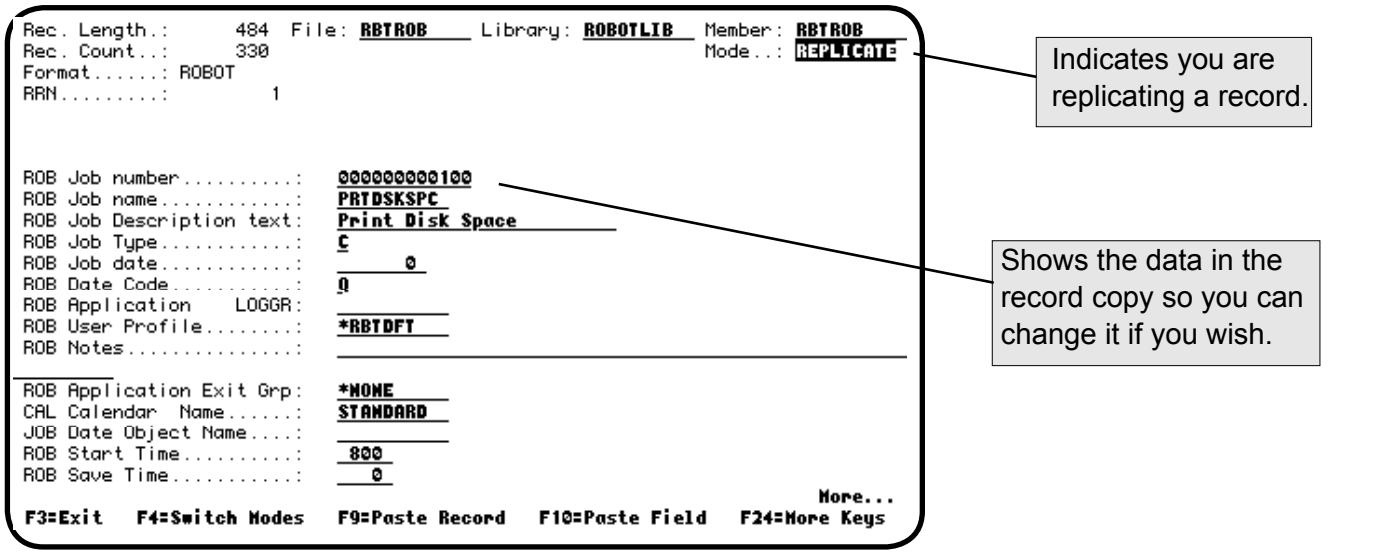


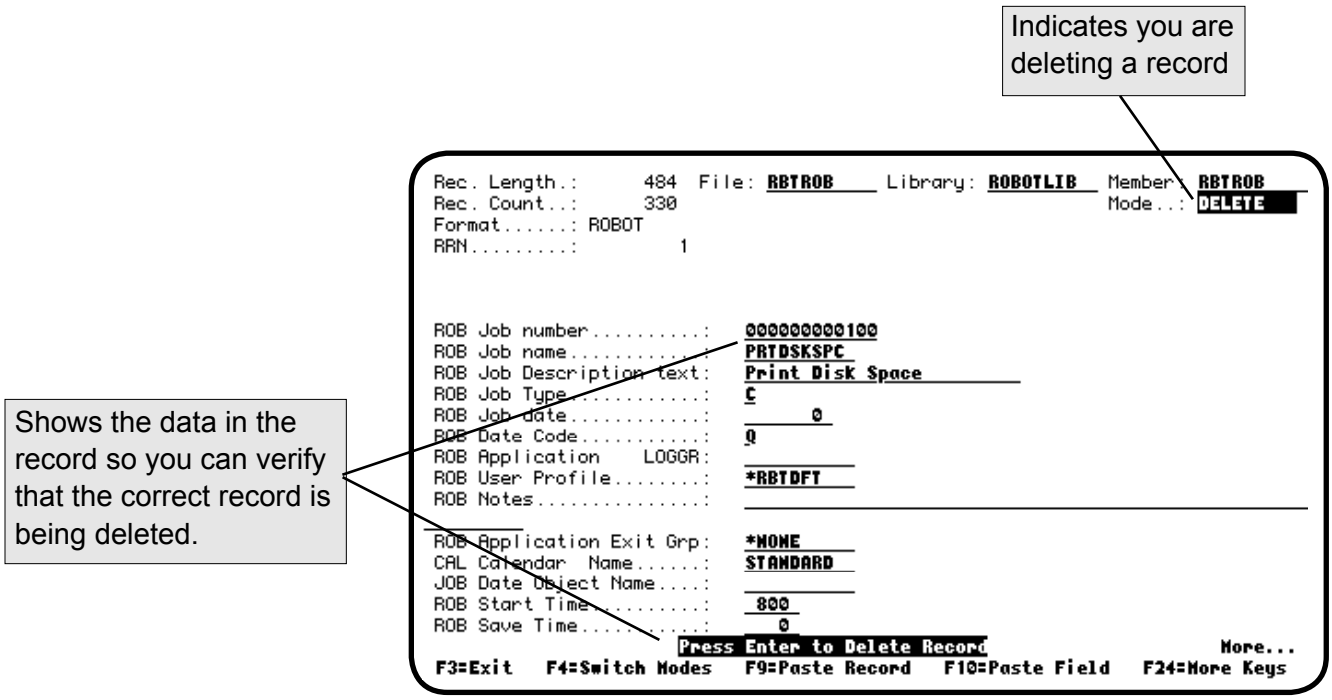
Replicating and Deleting

When you are replicating a record, Easy View presents a copy of the existing record so you can change its field values for the new record. (The Dup key is also effective when replicating.)

Caution: Duplicate keys can be entered.

When you are deleting a record, Easy View presents the existing record so you can verify that it is the record you want deleted. To change the verification default, see Easy View Preferences.



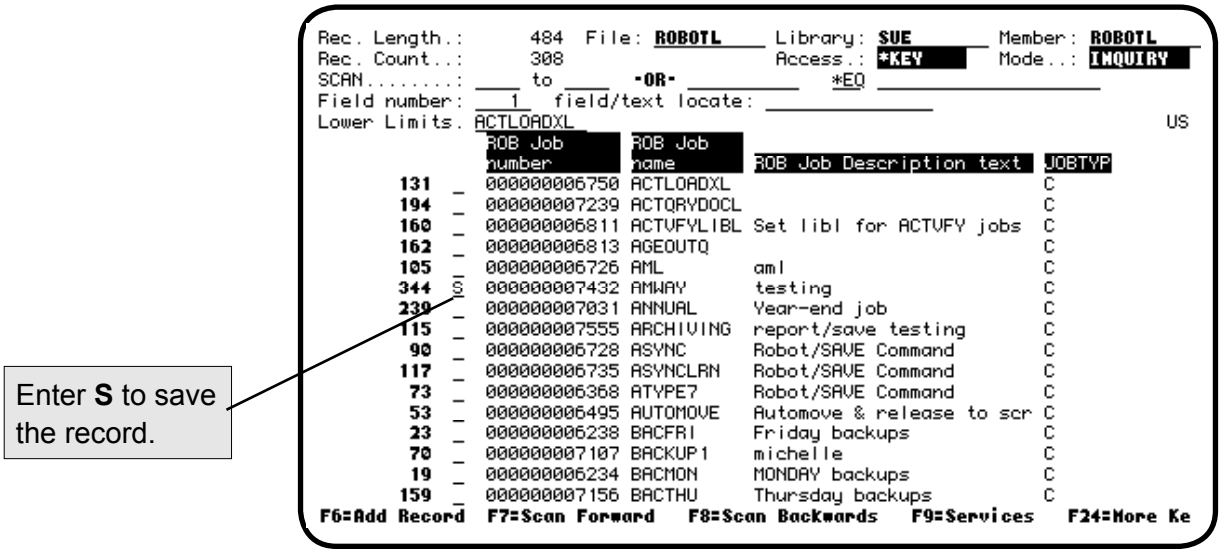


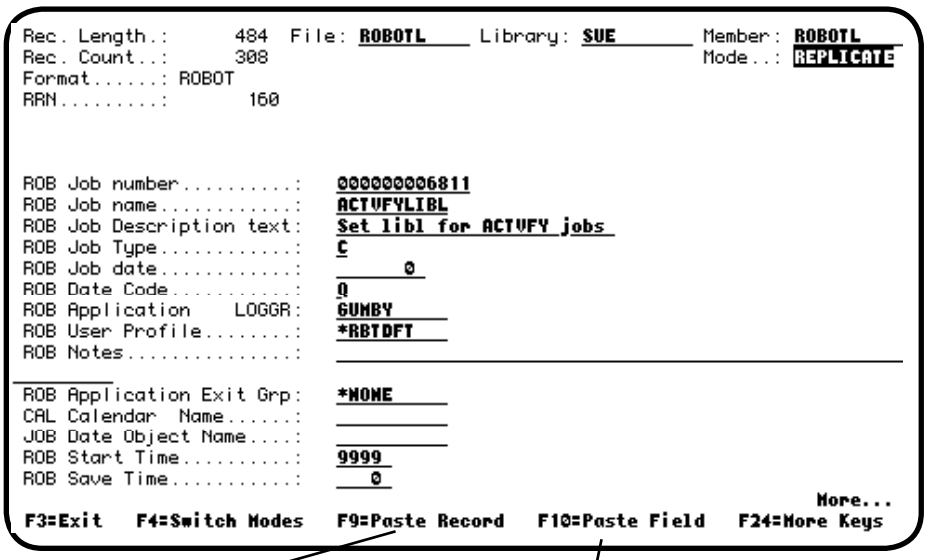
Saving a Record Image

You can save a copy of a record for later use on an Add, Change, or Replicate record display of the same file. This is useful for adding multiple copies of data, or holding on to a record while searching through others.

To save a record, enter **S** in its option field. In the Add, Change, or Replicate record display, press **F9** to paste the entire record, or position the cursor in a field and press **F10** to
replace that field with the field in the saved record.

Caution: Duplicate keys can be entered.

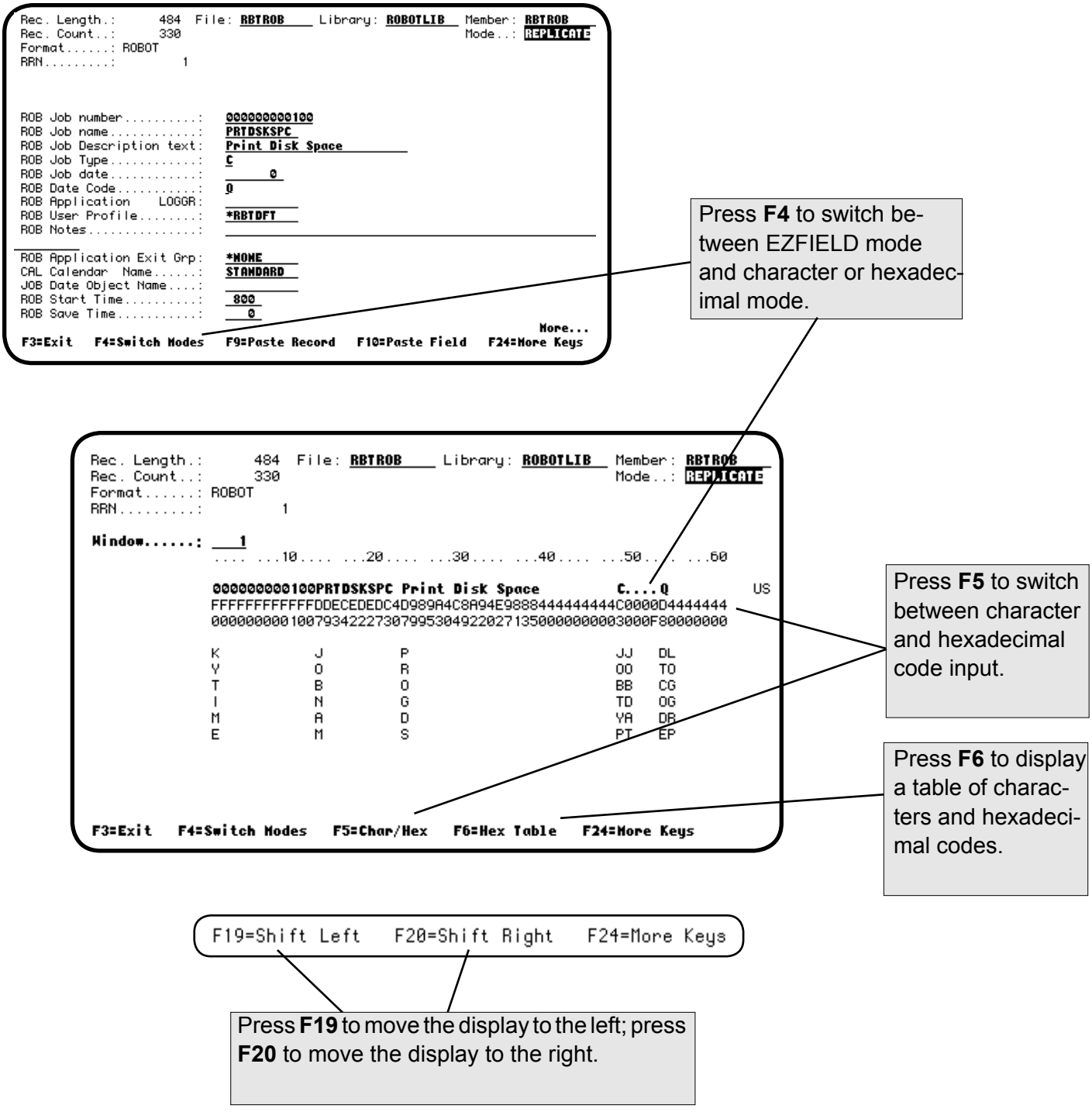




Input Modes

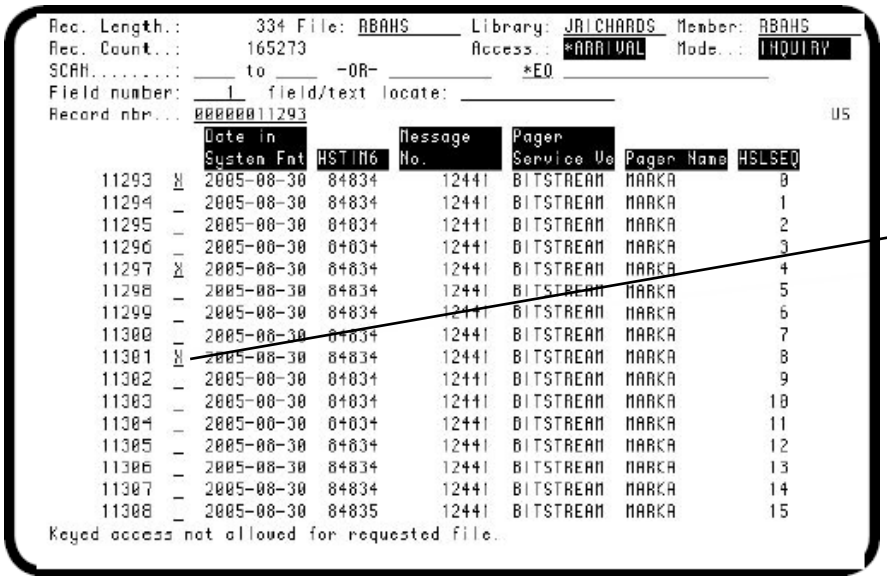
When you enter an option on a formatted record display, the record is initially presented for EZFIELD input as shown on the preceding pages. From EZFIELD input, you can switch to hexadecimal code input or character input. The record is initially presented for character input when the option is entered on an unformatted record display.

Press **F4** to switch between EZFIELD mode and character or hexadecimal mode. Press **F5** to switch between character and hexadecimal code input.

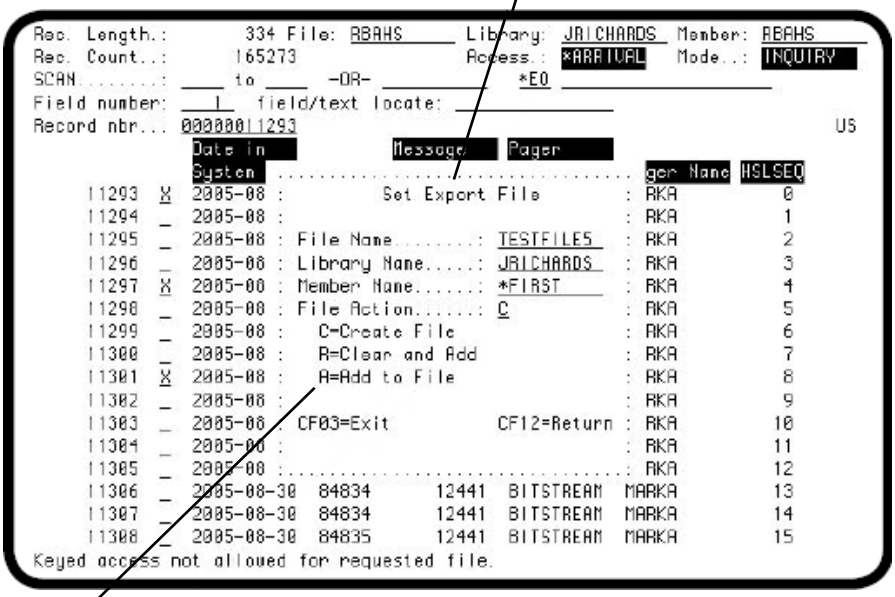


Copying and Transferring Records

You can isolate one or multiple records of a file for testing, analyzing, or some other work function. The Write Record Image option (X) allows you to copy records to a new or existing file. Only physical files can be transferred from and the target record format must be the same as the current file.

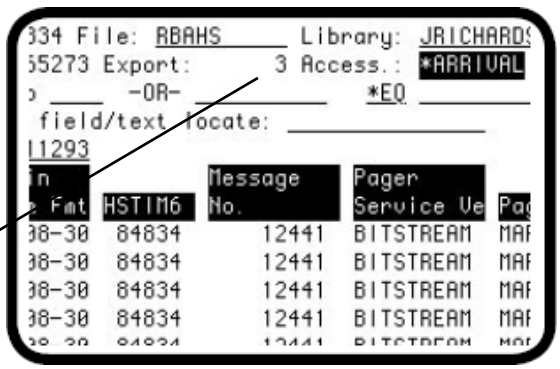


Enter X next to each record you want to transfer and then press Enter.



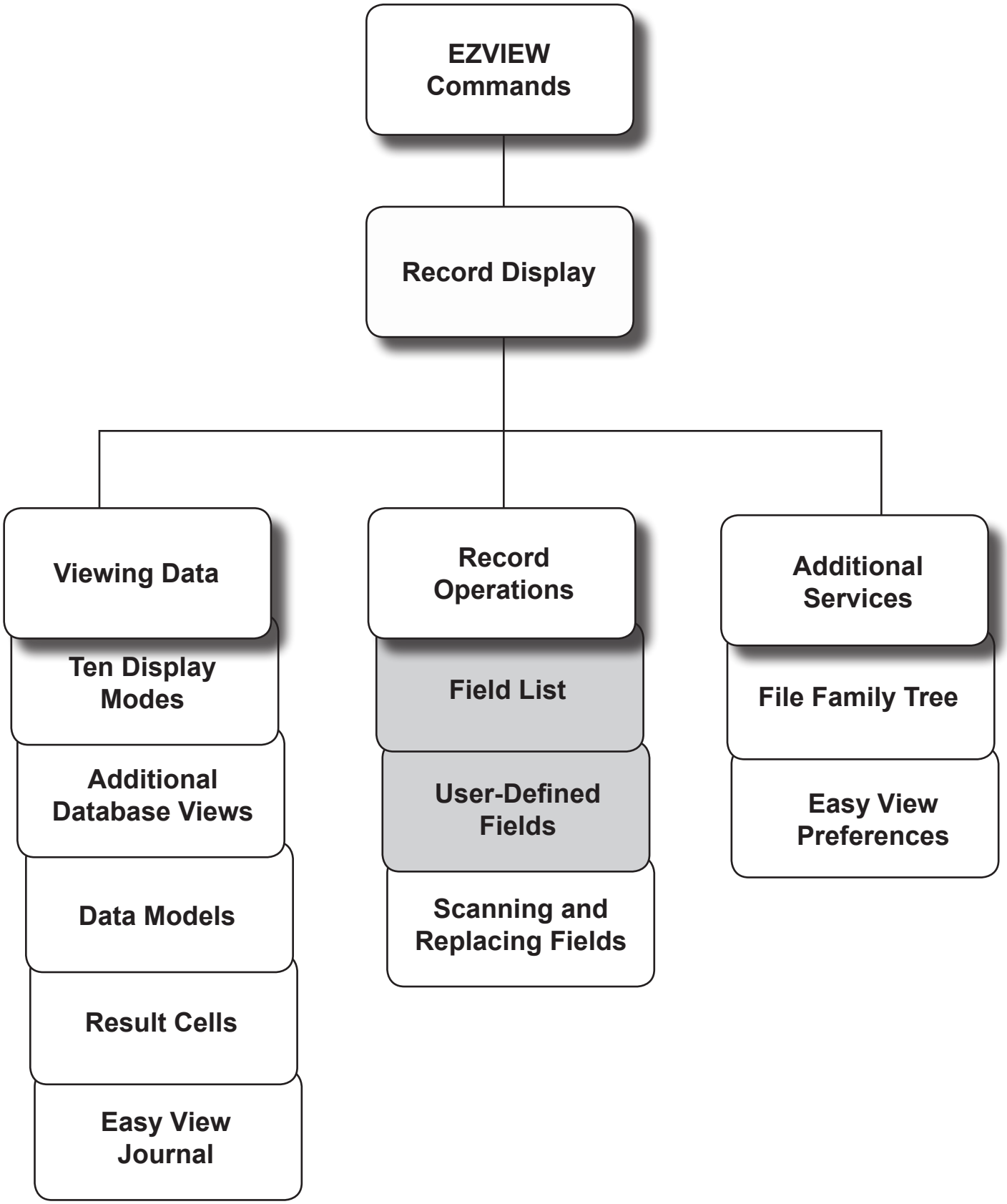
Enter an option for the file action:

C	Create a new file containing the selected records.
R	Replace all records in an existing file
A	Add this record to an existing file



The Export field shows how many files have been updated during the current view.

Notes: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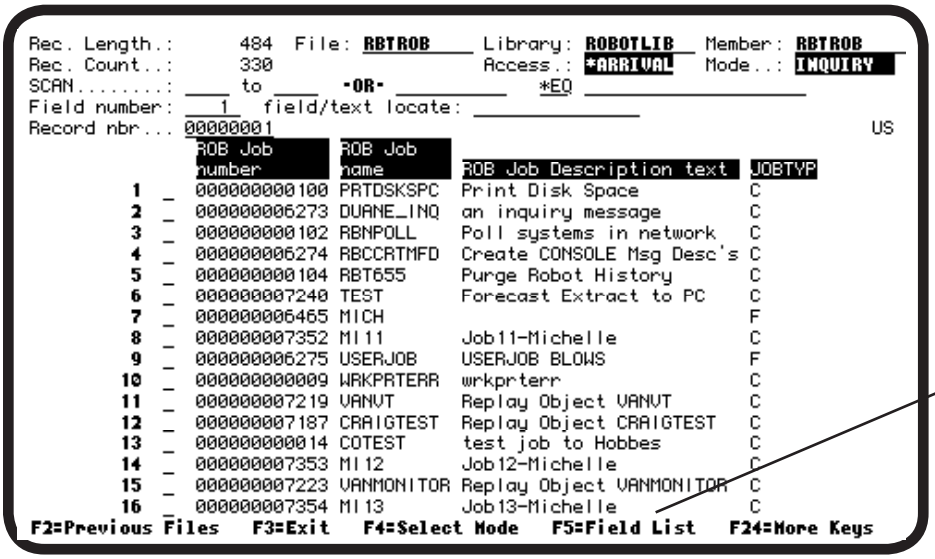
File Field Reference

From any display mode, press **F5** to see a list of the DDS fields for the file. For each field, the list shows the field name, key, data type, length, decimal places, record position and text. Press **F9** to print the list.

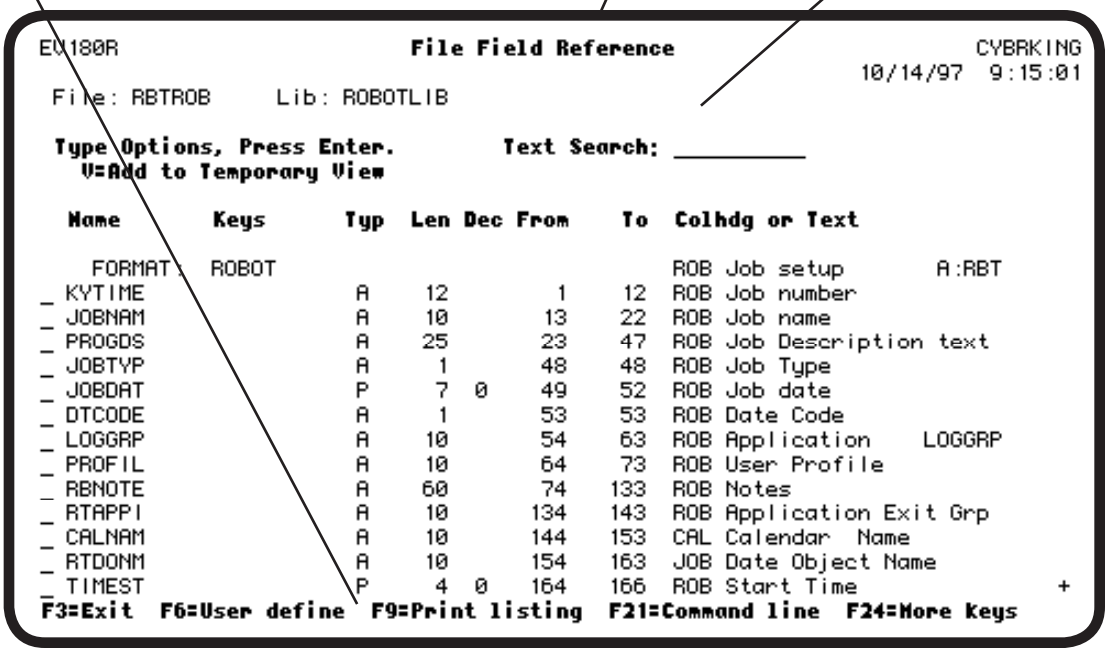
You can also display and print this field list from the Additional Services menu (described later). Outside of Easy View, you can display the field list using the EZFIELD command.



Press **F5** to see a field list.

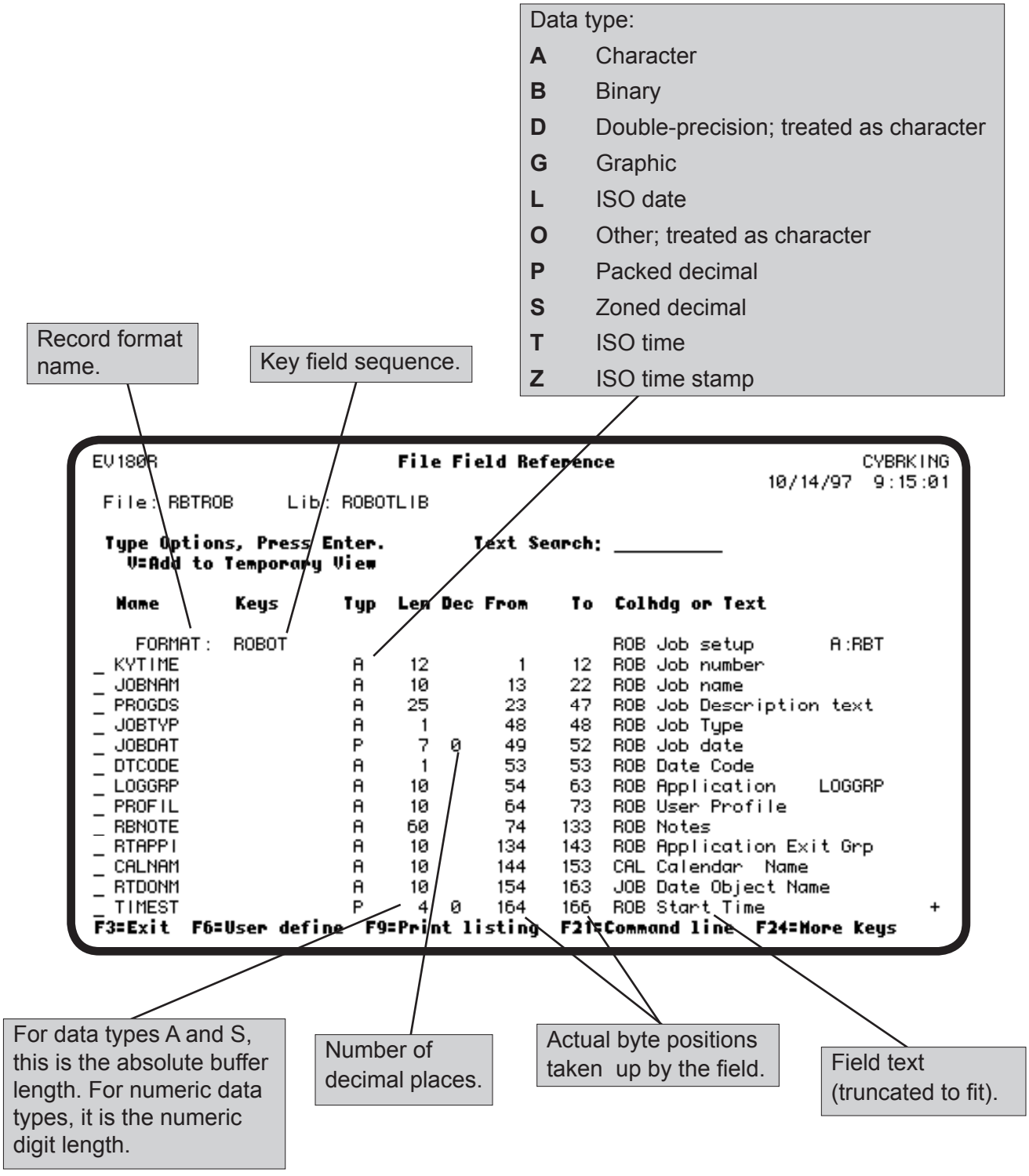
To display a field not shown, enter a string that occurs in either the field name or its text.

Press **F9** to print a listing of the file fields. The page size defaults are set by the system printer file QSYSPRT. The output queue is set as a default value (see Tailoring Easy View).



File Field Reference Panel

The File Field Reference panel lists each field in order with its DDS information.



Temporary Data Model

You can use the File Field Reference panel to limit the fields shown on the record display. Enter a **V** before each field you want to include in the record display. The result is a temporary data model; it is deleted at the end of the Easy View session (see the Data Models section for information on permanent data models).

```
EV180R                    File Field Reference                    CYBRKING
                                                        7/19/07 09:00:56
 File: RBAHS      Lib: JRICHARDS

 Type Options, Press Enter.        Text Search: __________
   V=Add to Temporary View

  Name       Keys      Typ  Len Dec From    To  Colhdg or Text

    FORMAT:  HSFMT
V HSDATE                L    10        1    10  Date in System Fmt
_ HSTIM6                P     6  0    11    14  HSTIM6
_ HSMNUM                P     9  0    15    19  Message No.
V HSVEND                A    10       20    29  Pager Service Vendor Name
_ HSTOPG                A    10       30    39  Pager Name
_ HSLSEQ                P     5  0    40    42  Log Sequence  Number
_ HSLTYP                A     1       43    43  Log Type
_ HSMJMN                A     4       44    47  Major/Minor Return Code
_ HSLGTH                P     3  0    48    49  Length of Data Logged
_ HSLTX                 A   256       50   305  Message Text Field
_ HSYMD                 L     8      306   313  HSYMD
_ HSMDOP                A     1      314   314  Mode of Operation
_ HSCJBN                A    10      315   324  Comm Job Name                +
F3=Exit  F6=User define  F9=Print listing  F21=Command line  F24=More keys
```

Enter a **V** to select each field for a temporary data model, and press Enter to return to the record display.

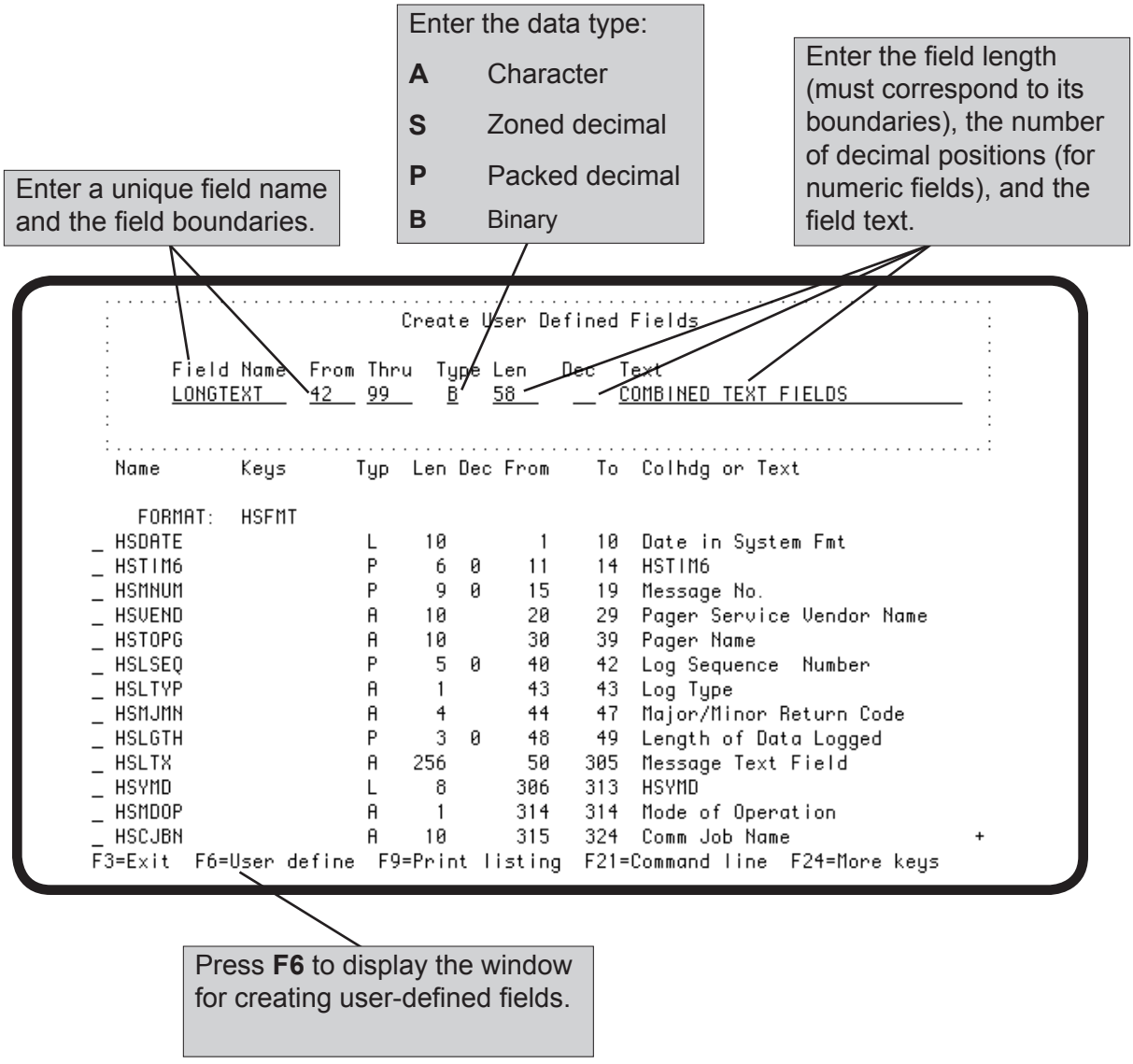
```
Rec. Length.:       334 File: RBAHS      Library: JRICHARDS  Member: RBAHS
Rec. Count..:      165273                Access.: *ARRIVAL   Mode..: INQUIRY
SCAN........: ____ to ____  -OR- __________   *EQ ____________________
Field number: __1__  field/text locate: _______________
Record nbr... 00000011293                                                US
*TEMP VIEW*     Date in    Pager
                System Fmt Service Ve
     11293  _  2005-08-30 BITSTREAM
     11294  _  2005-08-30 BITSTREAM
     11295  _  2005-08-30 BITSTREAM
     11296  _  2005-08-30 BITSTREAM
     11297  _  2005-08-30 BITSTREAM
     11298  _  2005-08-30 BITSTREAM
     11299  _  2005-08-30 BITSTREAM
     11300  _  2005-08-30 BITSTREAM
     11301  _  2005-08-30 BITSTREAM
     11302  _  2005-08-30 BITSTREAM
     11303  _  2005-08-30 BITSTREAM
     11304  _  2005-08-30 BITSTREAM
     11305  _  2005-08-30 BITSTREAM
     11306  _  2005-08-30 BITSTREAM
     11307  _  2005-08-30 BITSTREAM
     11308  _  2005-08-30 BITSTREAM
F2=Previous Files   F3=Exit            F4=Select Mode          F24=More Keys
```

User-De ined Fields

Easy View lets you superimpose your own field definitions on to a file. This is especially useful when the file has no DDS. You can define a field for each piece of information in the record and view the fields using spreadsheet and EZFIELD display modes. Easy View shows both the original fields and the user-defined fields, unless you use a data model that limits the fields shown. User-defined fields can also simplify scanning logic. By defining a numeric field over character data, you can scan for decimal data errors.

To create user-defined fields, press **F6** on the File Field Reference panel. Easy View displays a window you can use to define the fields. For each field, type its information and press Enter. When you are finished defining fields, press **F3** to remove the window.

Note: You can define packed and binary fields (types P and B) only over character fields (type A). Also, packed and binary fields cannot cross existing field boundaries.

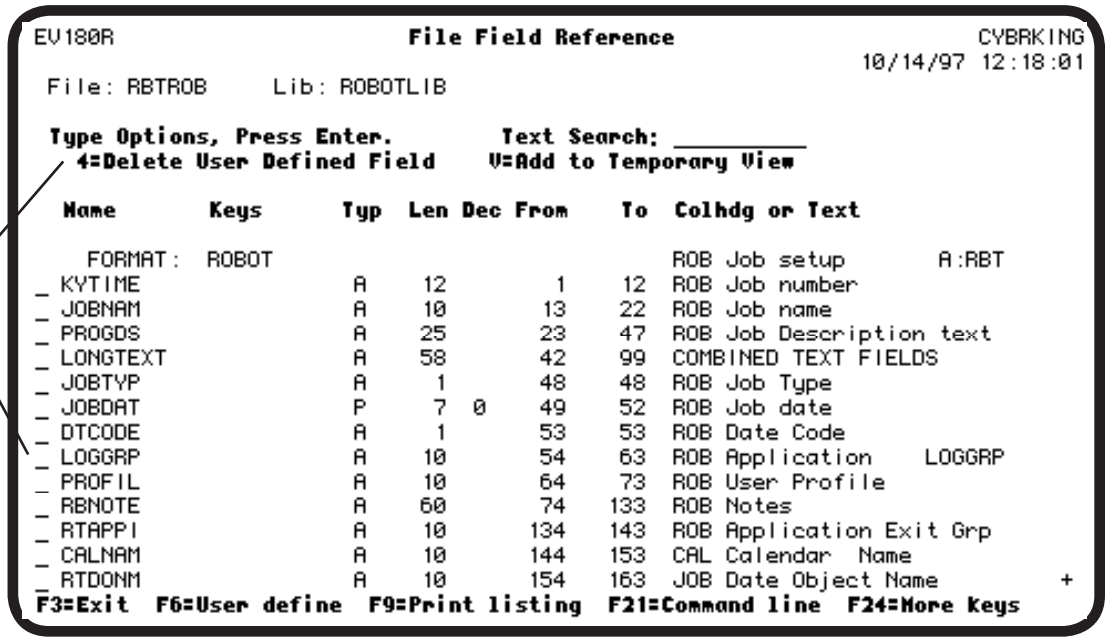


Copying User-Defined Fields

You can copy the fields you defined for the current file to another file if the other file has the same record format. If you copy a data model to another file, you must also copy the user-defined fields used by the data model. Press **F14** to display the Copy User Defined Fields window.

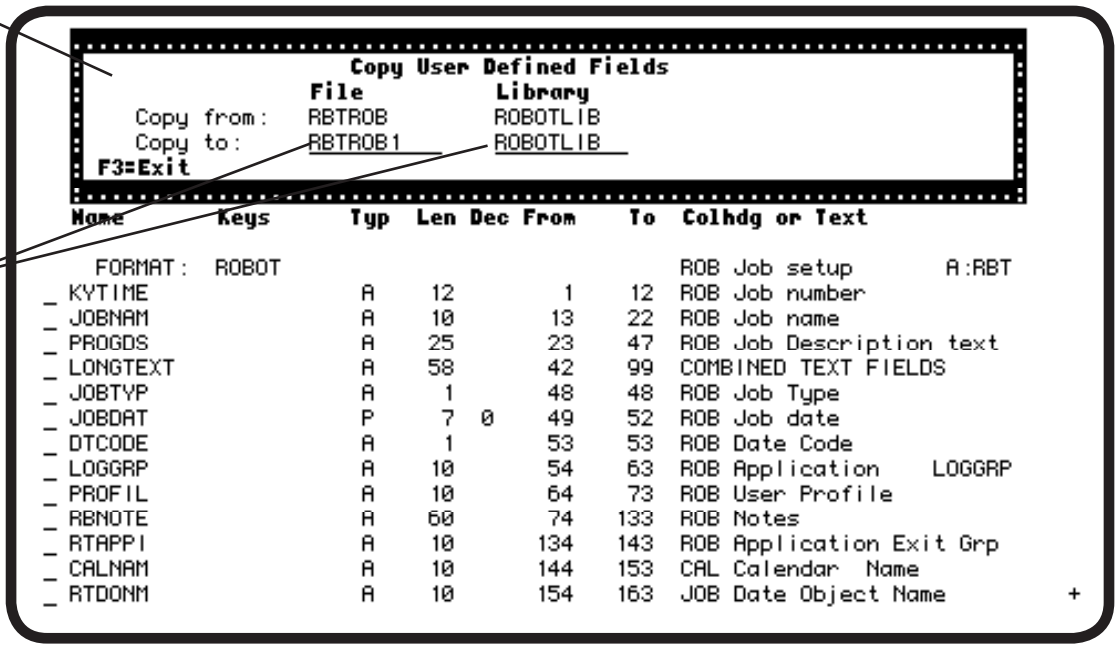
Note: If you copy user-defined fields to a file with an incompatible format, the field definitions will not match the data in the file. Using field definitions to display and change the file can produce undesirable results.

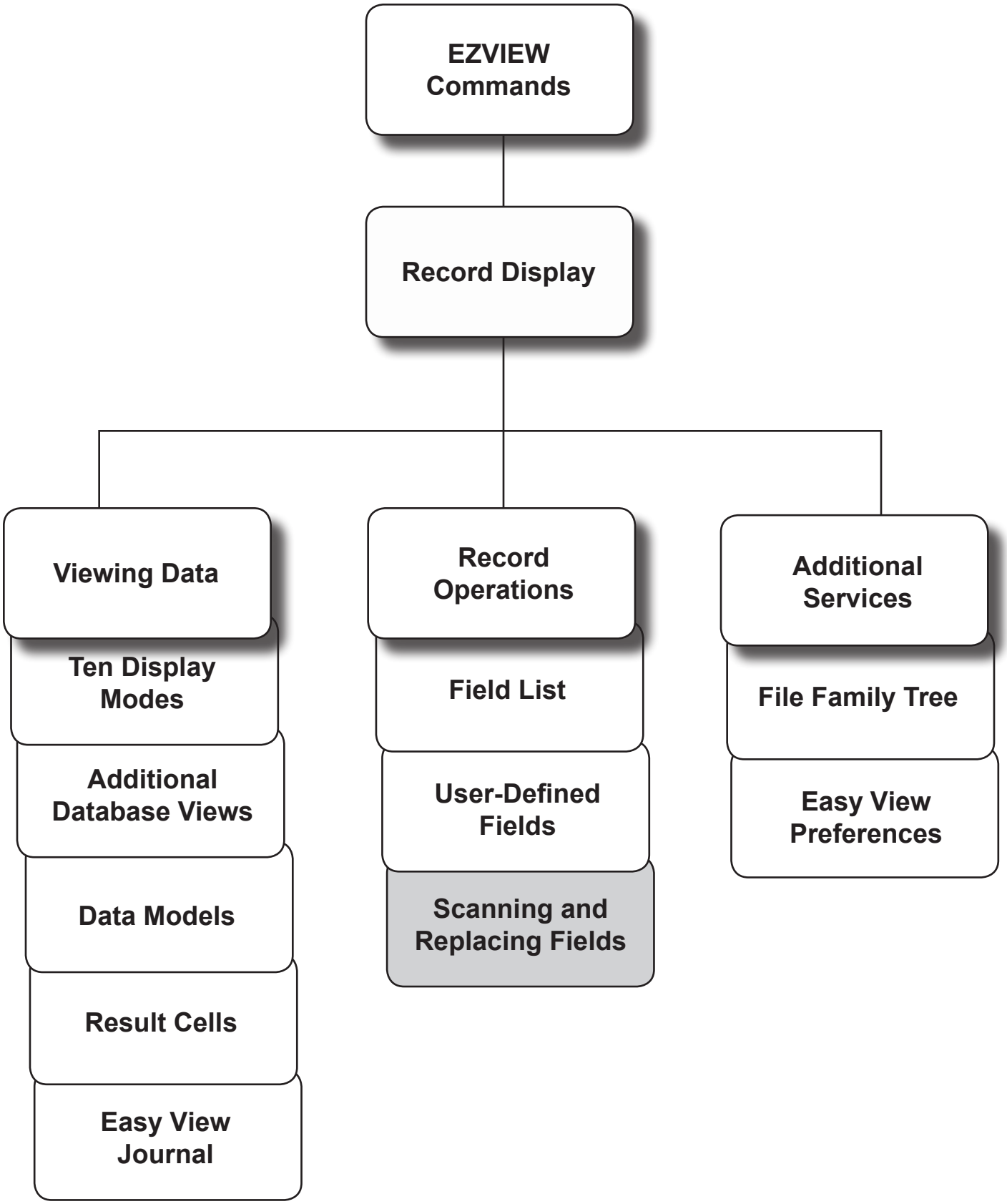
To delete a user-defined field, enter a **4** before the field.



Press **F14** to display this window.

Enter the file and library to which the user-defined DDS is to be copied. Press Enter to perform the copy.

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Scanning Overview

Easy View can search the file for values, including null values. You tell Easy View where to look and what to look for, and it searches the file, forward or backward, until it finds it.

Scan Field

The location in the record at which Easy View looks for a value is called a scan field, which can be a DDS field, any sequence of bytes, or a hex code.

When Easy View reads a scan field, it compares what it finds to what you told it to look for. You specify a relational operator and a value. Easy View performs the comparison and, if it is true, selects the record.

Scan Comparison

To have the scan comparison differentiate between uppercase and lowercase letters, the display attribute for Uppercase Entry Only must set to N. This is shown by an LS indicator on the right of the record display heading. If the indicator is US for uppercase entry only, you can change it by pressing **F13** to display the Display Attributes window and entering N for the first option.

Simple Scan or Extended Scan

Easy View can do simple scans or extended scans. A simple scan uses just one scan field and can be done from the record display. To specify display conditions and multiple scan fields, use the Extended Scan Parameters screen.

For simple and extended scans, Easy View does not start scanning until you press **F7** to scan forward, or **F8** to scan backward from the current file position.

Scan and Replace or Scan and Delete

You also can specify a replace or delete operation on the Extended Scan Parameters screen. You can replace a field with another field, or replace a field value (including a null value) with another value or the results of a calculation. Unless you request no verification, Easy View displays each record for confirmation before replacing or deleting it.

Mass Replace or Delete

The replace or delete operation can be performed on all records in the file, if you wish, with or without verification. On each verification screen, you can choose to confirm the replacement, skip the record but continue the scan, or cancel the scan.

You can submit the mass replace or mass delete operation to batch. But no verification is possible, so be sure to have a current backup of the file before you submit the operation.

Single Scan Field

You can search the file for a field value without leaving the record display. Specify the field, a relational operator, and a value for the field, and press **F7** to scan forward, or **F8** to scan backward. Easy View displays the first record it finds that satisfies the comparison. You can specify the scan field by its boundaries, DDS name, or hex code, using the standard hex format.

- You can use the asterisk wild card character **(*)** in the search data with the *CT (contains) operand. For example, *CT 9**90 finds the string **9,** followed by *any two characters*, followed by **90**, such as 91090 and 93090. *CT MAR* finds the string MAR, such as MARSHA, MARY, and MARVIN.
- You can use *CT to scan for a string anywhere in the specified field or from/thru range.
- You can use the *NL operand to scan for null values in fields within files.

Enter either the starting and ending byte positions of the scan field, the hex code in the standard hex code format, or the DDS name.

The field can be up to 40 characters.

If you leave the to field blank when entering byte positions, the scan field length is the same as the search data length you enter.

When entering hex data, you must enter data in the from and to fields.

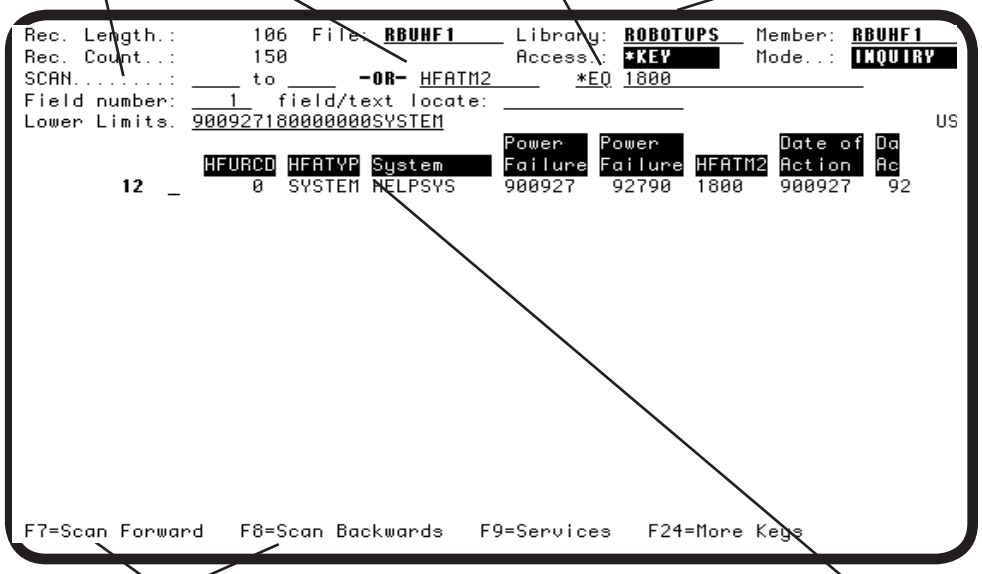
Enter the comparison method for the scan:

***EQ**	Equal to (default)
***NE**	Not equal to
***LT**	Less than
***GT**	Greater than
***LE**	Less than or equal to
***GE**	Greater than or equal to
***CT**	Contains (see the note)
***DE**	Decimal data error (leave scan data blank)
***NL**	Null field (leave scan data blank).

Enter the data to be used in the scan comparison.

Leave this field blank when you use the *DE or *NL operators.

The scan differentiates between uppercase and lowercase only when lowercase data entry is allowed (the LS indicator).



Press **F7** to scan forward or **F8** to scan backward. Press **F16** to return to normal record view

Easy View displays the first record it finds that meets the comparison. To find the next record that meets the comparison, press **F7** or **8.**

Extended Scan

Press **F14** to display the Extended Scan Parameters panel. Use this panel to:

- Specify multiple scan criteria
- Do a scan and replace or scan and delete (use *NL in the operand field to scan for and replace null values in fields within files)
- Limit the Easy View displays to a subset of the records in the file
- Print the selected record.

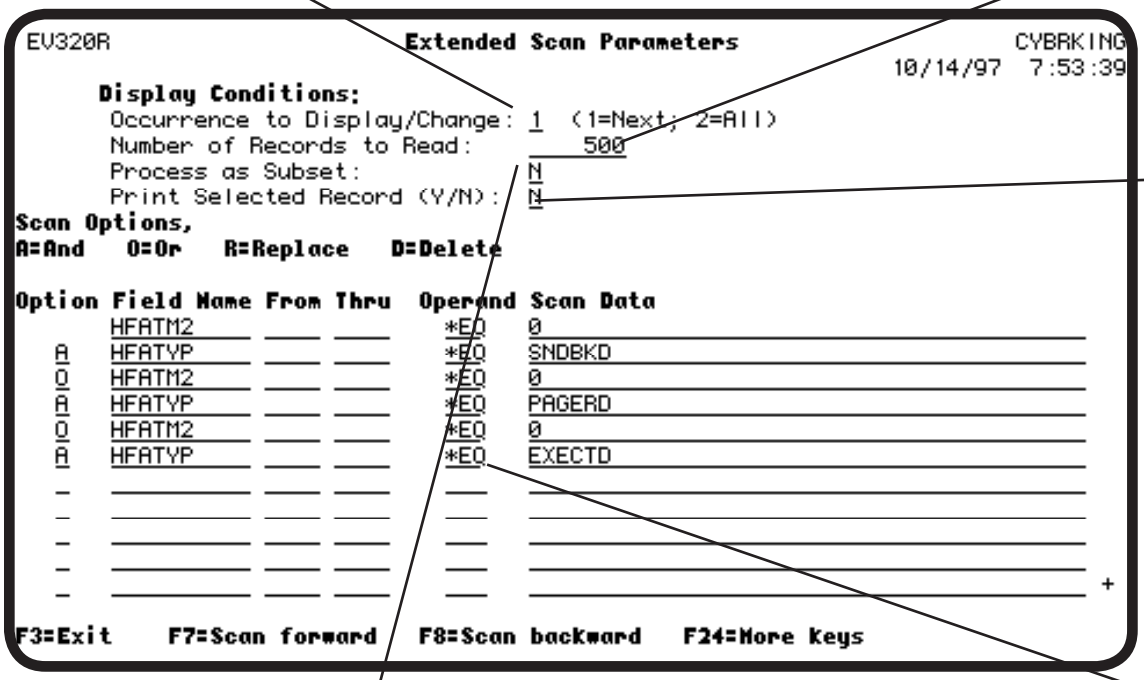
If you perform a certain scan regularly, you can store your scan criteria in a data model to use again. See the section Data Models.

In the Occurrence to Display/Change Field:

Enter **1** to display or replace one record at a time. Press F7 or 8 to display the next record selected.

Enter **2** to display records one screen at a time. Press F7 or 8 to display the next screen of records.

Enter the number of records to be read by a scan. Press **F7** or **8** to read another block of records. By limiting the records read, you can stop a long file scan when it is clear that a record will not be found. You can change the default using the CHGSYS command (described later).



Enter **Y** to print each record found. Printed records that are the result of the same scan operation are placed in the same spool file.

In the Process as Subset field:

Enter **N** if the scan criteria are for the current operation only.

Enter **Y** if the scan criteria will establish a subset for subsequent displays in the session. For best performance, a subset should include most of the records in the file. Enter **2** for the Occurrence to Display/Change option. Otherwise, only one subset record is shown at a time.

Specify *NL in the operand field to scan for and replace null values in fields within files.

Multiple Scan Criteria

When you specify multiple scan criteria, the criteria must be connected by logical operators (AND or OR). AND takes precedence over OR—Easy View does the AND comparisons first. For example, the panel shown here specifies that the HFATM2 field must be 0 and the HFATYP field must be SNDBKD, PAGERD, or EXECTD. Because AND takes precedence over OR, this must be specified as 0 and SNDBKD, or 0 and PAGERD, or 0 and EXECTD.

You can select a scan field from the field list by entering a **?** in the Field Name blank. Each scan criteria must follow the same rules described earlier for a single scan field.

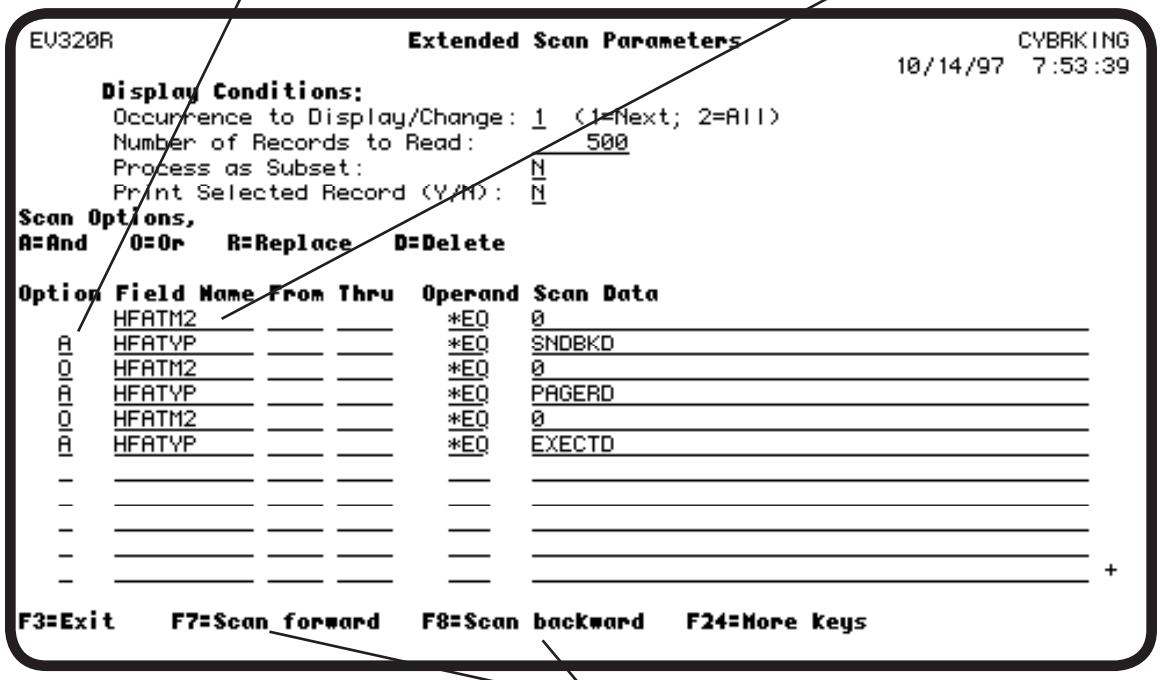
In the Option field:

- Enter **A** to connect the criteria with a logical AND.
- Enter **O** to connect the criteria with a logical OR.

Note: AND takes precedence over OR.

In the Field Name blank:

- Enter a **?** to display the field list.
- Enter a **1** by a field in the list to return the field name to this panel. The field can be up to 40 characters.



The scan begins from the current file position. Press **F7** to begin a scan forward towards the end of the file. Press **F8** to begin a scan backward towards the beginning of the file.

Clears all scan criteria from the list.

Retrieves previous scan criteria.

Scan and Delete or Scan and Replace

You can delete a record by typing **D i**n the Option field following the scan criteria (each scan criteria must follow the same rules described earlier for a single scan field). Leave the other fields on that line blank. You can replace a field value with a specific value, a value from another field, or a calculation cell. To replace a field value with:

- A specific value, type an **R** in the Option field following the scan criteria. On the same line, specify the replacement criteria. You can specify multiple replacement fields for the scan. Leave the Operand field blank. When replacing a field value, numerics are converted (use a decimal point), and character values are left-justified.
- Another field value, enter =*fieldname* in the Scan Data field. Numeric fields are placed starting with the rightmost byte and truncated on the left if needed.
- A calculation cell value, enter =*cellname* in the Scan Data field. This allows you to perform calculations on fields in the file, such as raising prices by 5% for a certain product class, without writing a program.

Notes:

- In the Scan Data field, the equal sign (=) is reserved to search for fields and calculation cells. To search for the equal sign, specify the position in the From and Thru fields, and the hex code for the equal sign (x 7E) in the Scan Data field.
- Scan and replace is much faster using *ARRIVAL access. To select *ARRIVAL, press **F13**.

Use these fields to replace part of a field value. For example, **From** 2 **Thru** 3 indicates that positions 2 through 3 of the target field will be replaced.

Enter **1** to display each record for verification before it is replaced or deleted. To display the next record selected, press **F7** or **8**.

Enter **2** to display records one screen full at a time. To display the next screen of selected records, press F7 or 8. Records are replaced all at once (up to the scan limit).

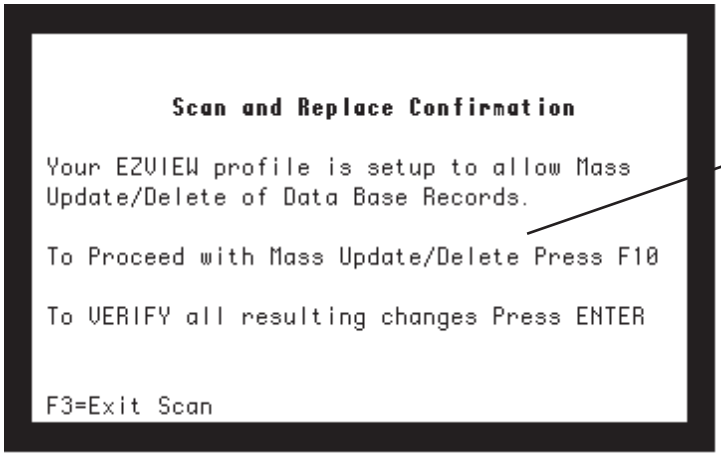
```
EV320R                    Extended Scan Parameters                    CYBRKING
                                                          10/20/97  9:56:35
     Display Conditions:
      Occurrence to Display/Change: 1  (1=Next; 2=All)
      Number of Records to Read:      500
      Process as Subset:            N
      Print Selected Record (Y/N):  N
Scan Options,
A=And   O=Or   R=Replace   D=Delete

Option Field Name From Thru  Operand Scan Data
       HFATM2                  *EQ   0
   A   HFATYP                  *EQ   SNDBDK
   O   HFATM2                  *EQ   0
   A   HFATYP                  *EQ   PAGERD
   O   HFATM2                  *EQ   0
   A   HFATYP                  *EQ   EXECTD
   R   HFATM2                  *EQ   =TOTAL
   _                                                                  +
   _                                                                  +
   _                                                                  +
   _                                                                  +

F3=Exit    F7=Scan forward   F8=Scan backward   F24=More keys
```

To begin the scan, press **F7** to scan forward or **F8** to scan backward.

The value in the HFATM2 field of the selected records will be replaced by the value in the calculation cell named Total."

Verify Replace or Delete

Verification of records replaced or deleted is controlled by a default value (see Tailoring Easy View). If the default is not to require verification, Easy View lets you determine whether you want to verify each change. If you select verification, Easy View displays the before and after versions of each record and allows you to confirm each operation.

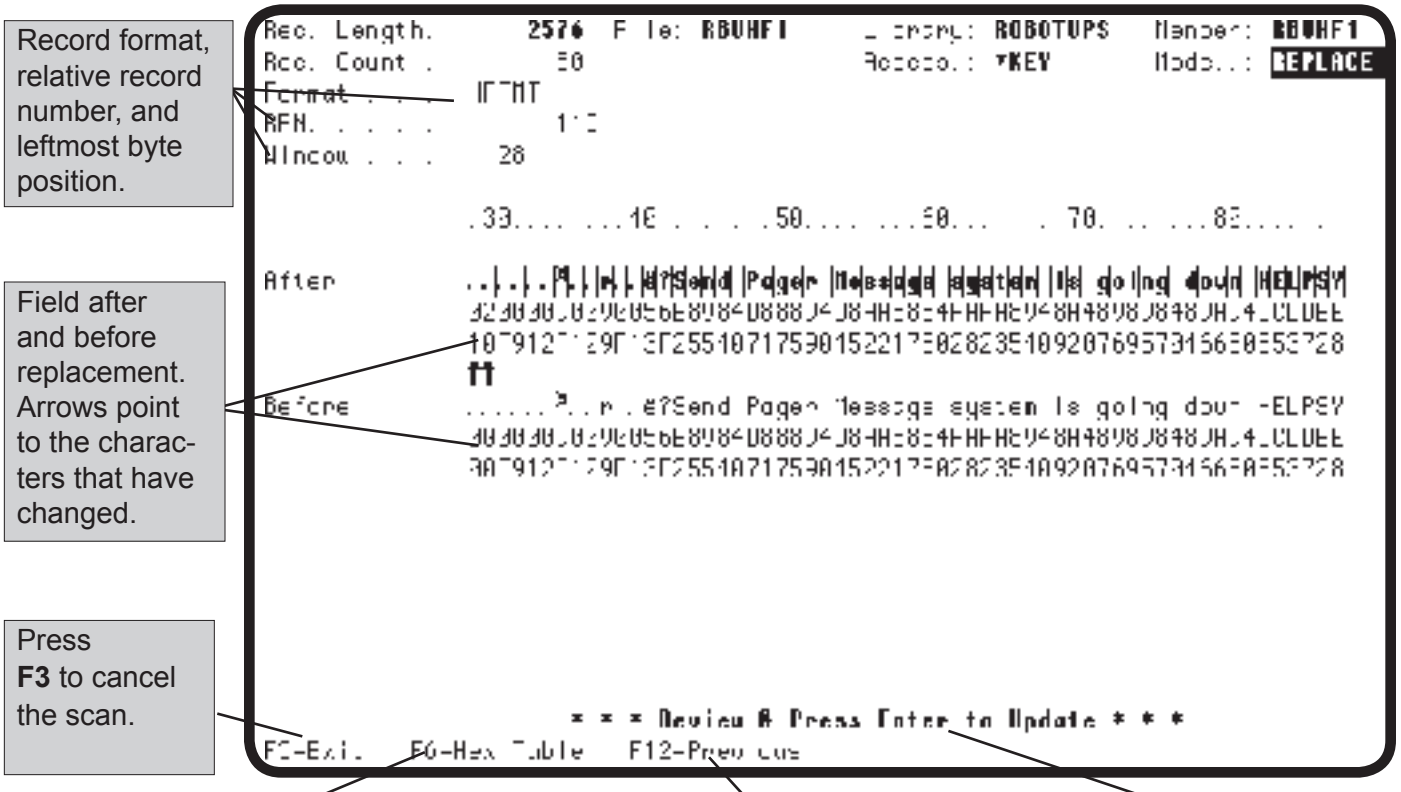


If the default value is to not require verification, Easy View displays this window.

Press **F10** to replace or delete the records without verifying each one.

Press Enter to verify each record.

Press **F3** to cancel the operation.



Record format, relative record number, and leftmost byte position.

Field after and before replacement. Arrows point to the characters that have changed.

Press **F3** to cancel the scan.

Press F6 to see a table listing the character represented by each hexadecimal code.

Press **F12** to skip this record and continue the scan.

Press Enter to confirm the operation on this record and continue the scan.

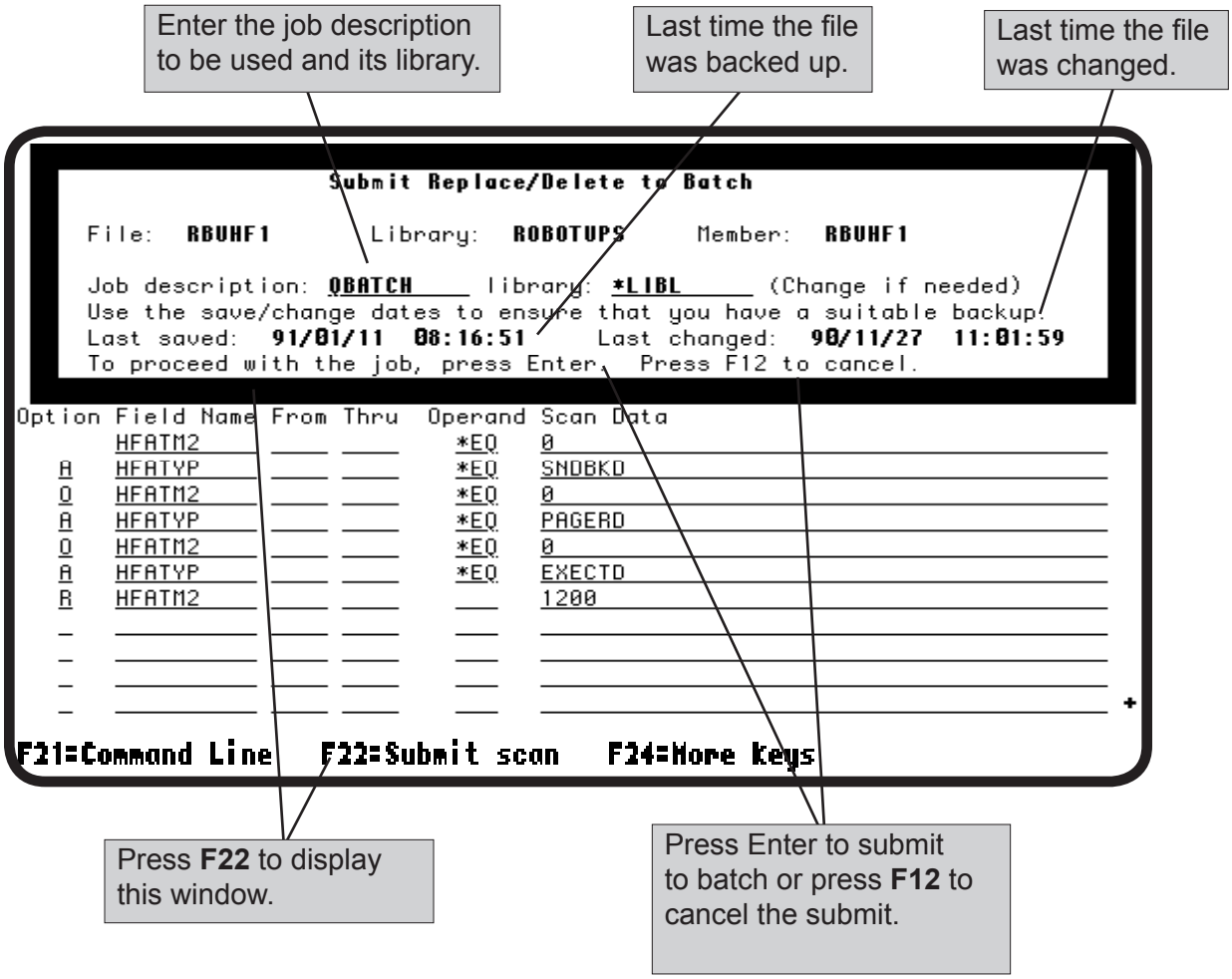
Submitting a Scan to Batch

Scanning a large file can take a long time and have an adverse effect on other users. So when you do a scan and replace or scan and delete, Easy View lets you submit the process to batch. When you submit a scan to batch, you cannot verify the replacements or deletions performed by the scan, so backup the file before submitting the scan to batch.

Prerequisites for a Batch Scan

- The Easy View default for verifying scan and replaces (option **13**) must be N (see Tailoring Easy View).
- On the Extended Scan screen, the Occurrence to Display/Change option must be 2 (for All).
- You must specify either that the selected records be deleted or that a field value in the records be replaced.

To submit the scan, press **F22**. On the window displayed, you can change the job description used and check that a current file backup exists. Press Enter to submit the scan to batch or **F12** to cancel the submit. A scan submitted to batch always scans the entire file; it ignores the file position and the Number of Records to Read entry.



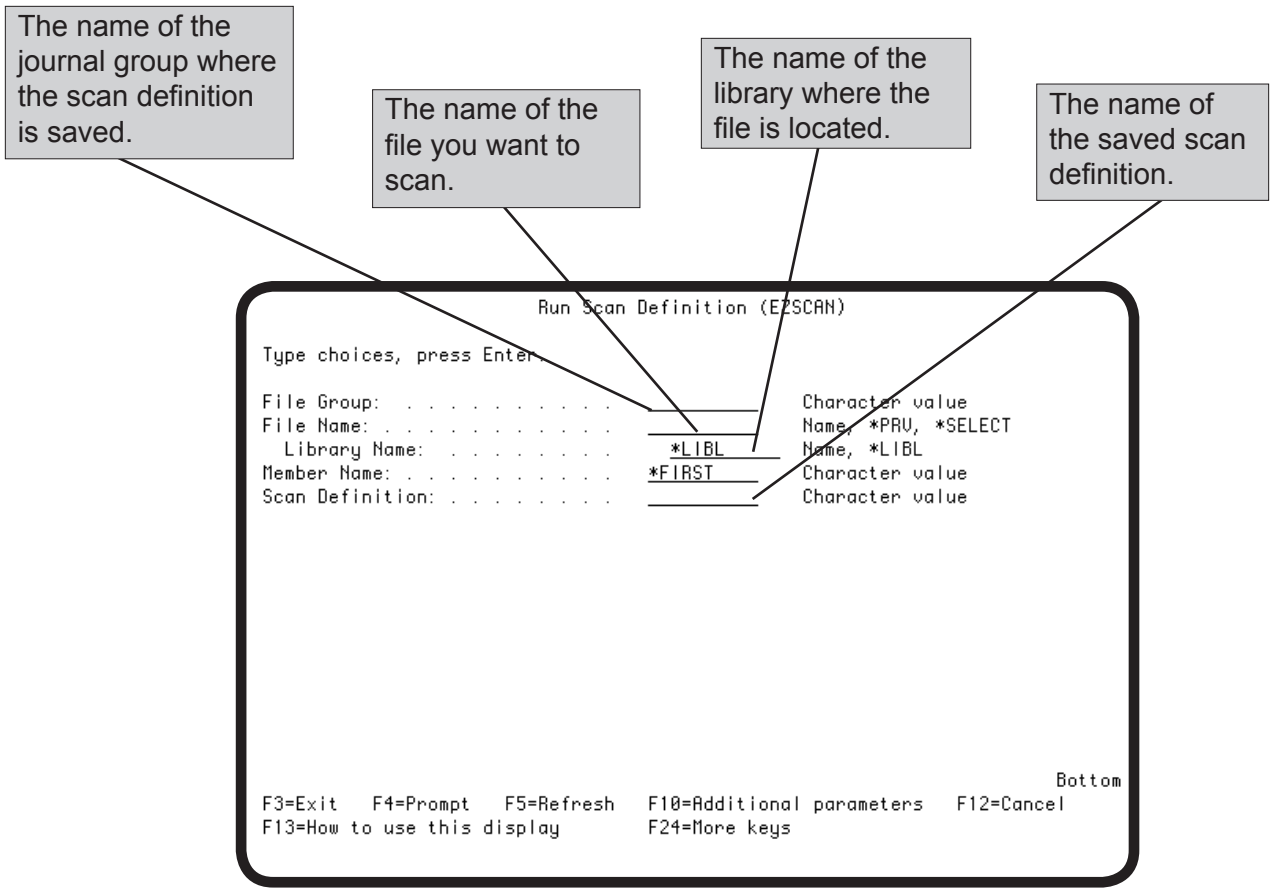
Using the EZSCAN Command

You can define and save a scan definition to use later. The Run Scan Definition (EZSCAN) command uses this saved scan definition to scan and replace from a command line or in batch. This section describes how to create a scan definition and use the EZSCAN command.

To run your scan definition, enter the EZSCAN command on a command line, in a Robot SCHEDULE job, or a CL program. Enter the command as follows:

EZSCAN FILEGROUP(*group_name***) FILE(***library/filename***) SCNDFN(***scan_definition_name***)**

You also can enter the EZSCAN command and press **F4** to display the command prompt panel.



Using the EZSCAN Command

You can also export the results of a scan to a new or existing file. Enter **EZSCAN** in a command line and press **F4** to display the Run Scan Definition (EZSCAN) panel. Press **F10** to display additional parameters.

```
                        Run Scan Definition (EZSCAN)

Type choices, press Enter.

File Group:  . . . . . .                  Character value
File Name: . . . . . .                    Name, *PRV, *SELECT
  Library Name:  . . . . . .     *LIBL     Name, *LIBL
Member Name: . . . . . .        *FIRST    Character value
Scan Definition: . . . . . .              Character value

                          Additional Parameters

Export File Name:  . . . . . .            Name, *PRV, *SELECT
  Library Name:  . . . . . .     *LIBL     Name, *LIBL
Member Name: . . . . . .        *FIRST    Character value
Export File Action:  . . . . .  A         C, R, A




                                                                    Bottom
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

Enter file, library, and member information. Then enter an option for the file action. The records that meet the scan criteria will be used to:

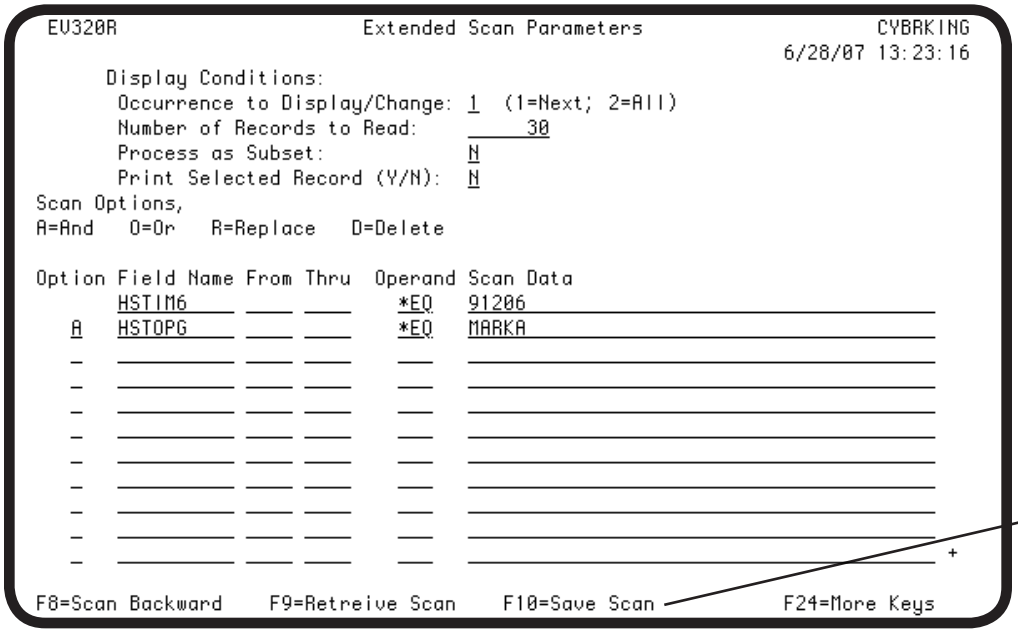
C Create a new file containing the selected records.

R Replace a record in an existing file. This option clears the existing file of all records

A Add this record to an existing file. Adds records from scan results to existing files.

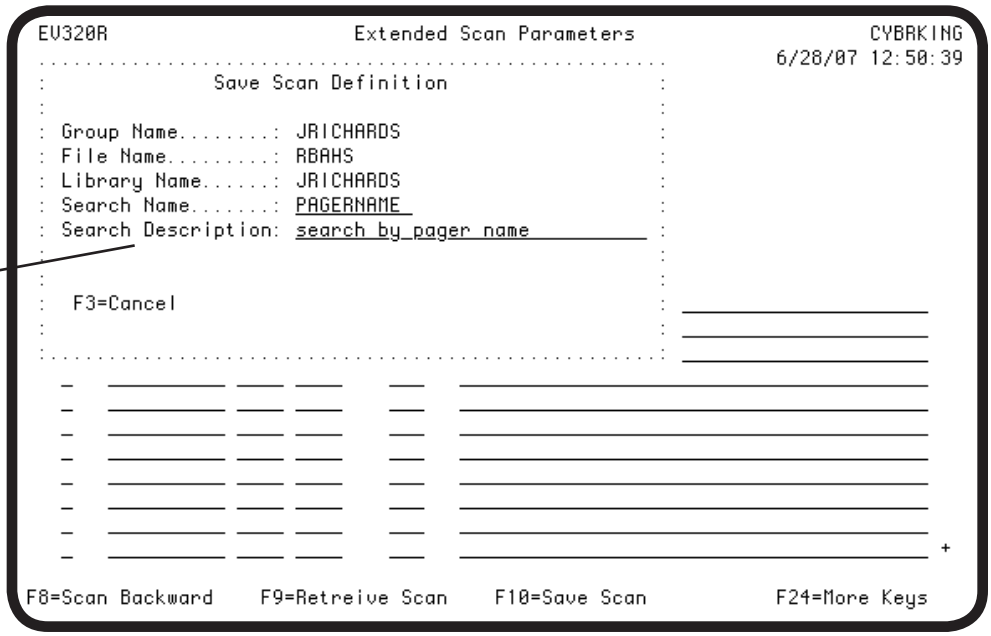
Saving Scan Definitions

Creating complicated scans can take a long time. Use the Save Scan option (**F10**) to save your scan for future use. After entering the information for your search, press Enter to save the search and return to the Extended Scan Parameters panel.



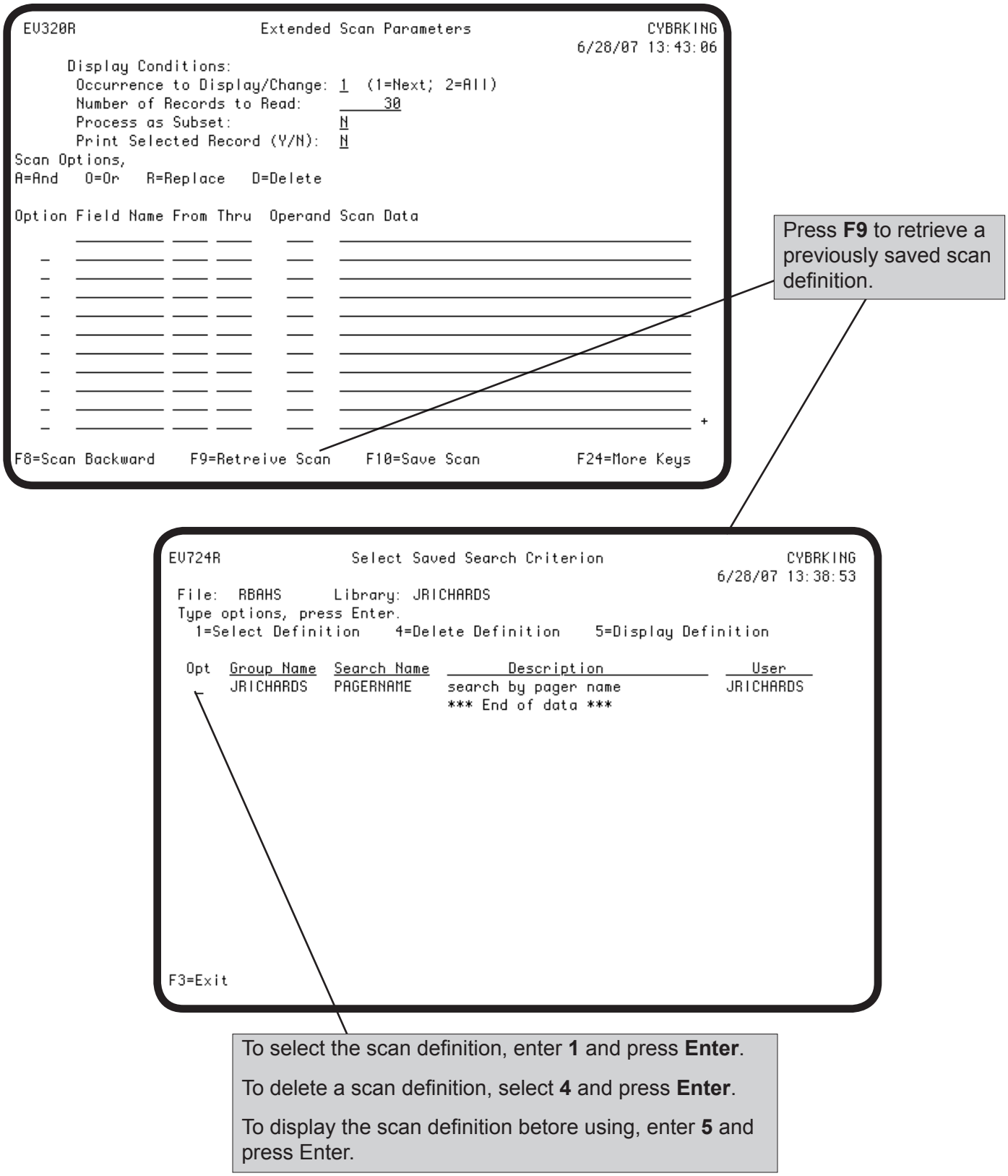
Press **F10** to save the current scan definition.

Enter information relevant to the scan. Press Enter to save the scan definition.



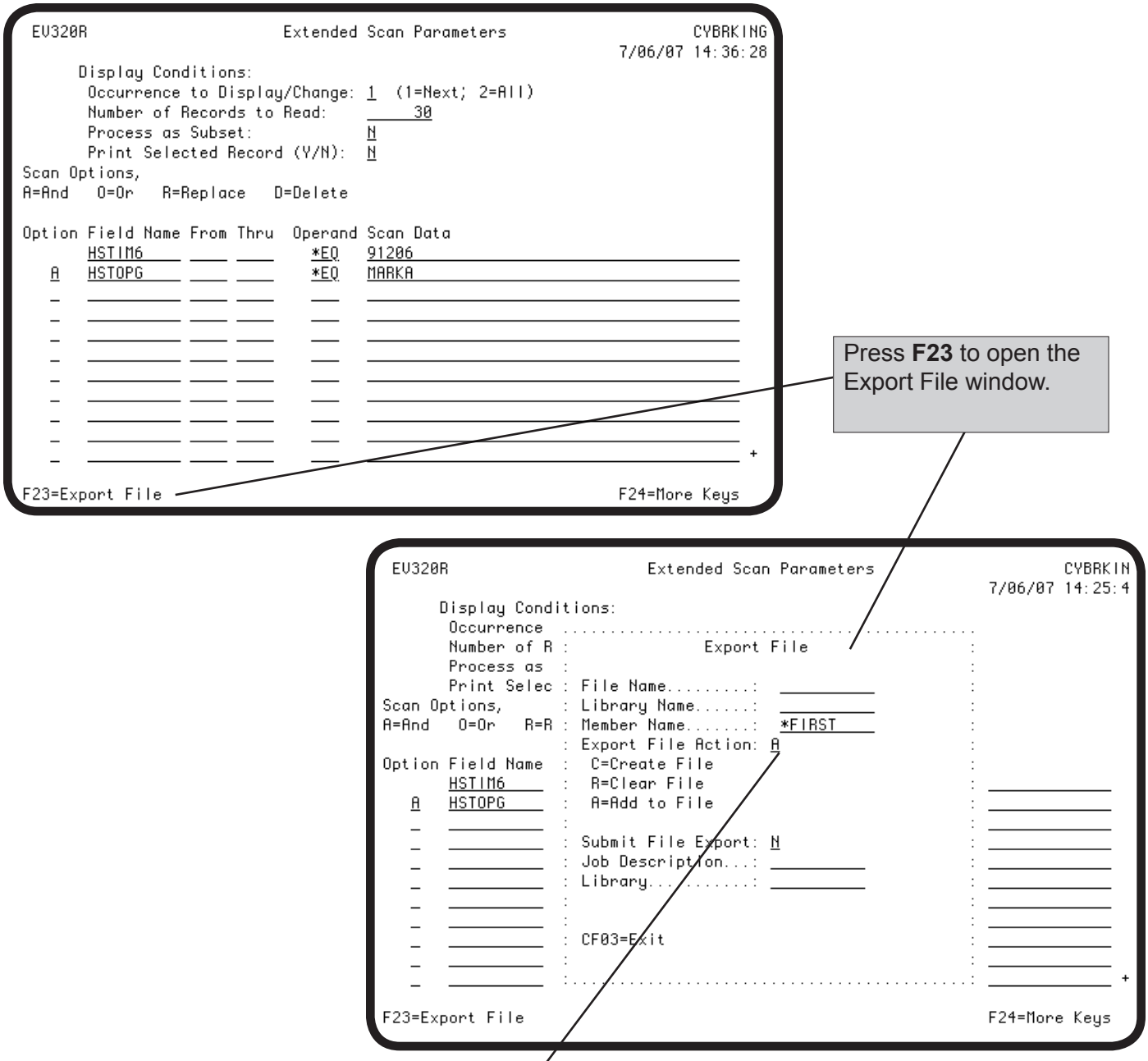
Retrieving Saved Scan Definitions

To retrieve a previously saved scan, press **F9** from the Extended Scan Parameters panel.



Exporting Scan Results

You can export the results of a scan to a new or existing file. After setting the scan definition, press **F23** to open the Export File window.



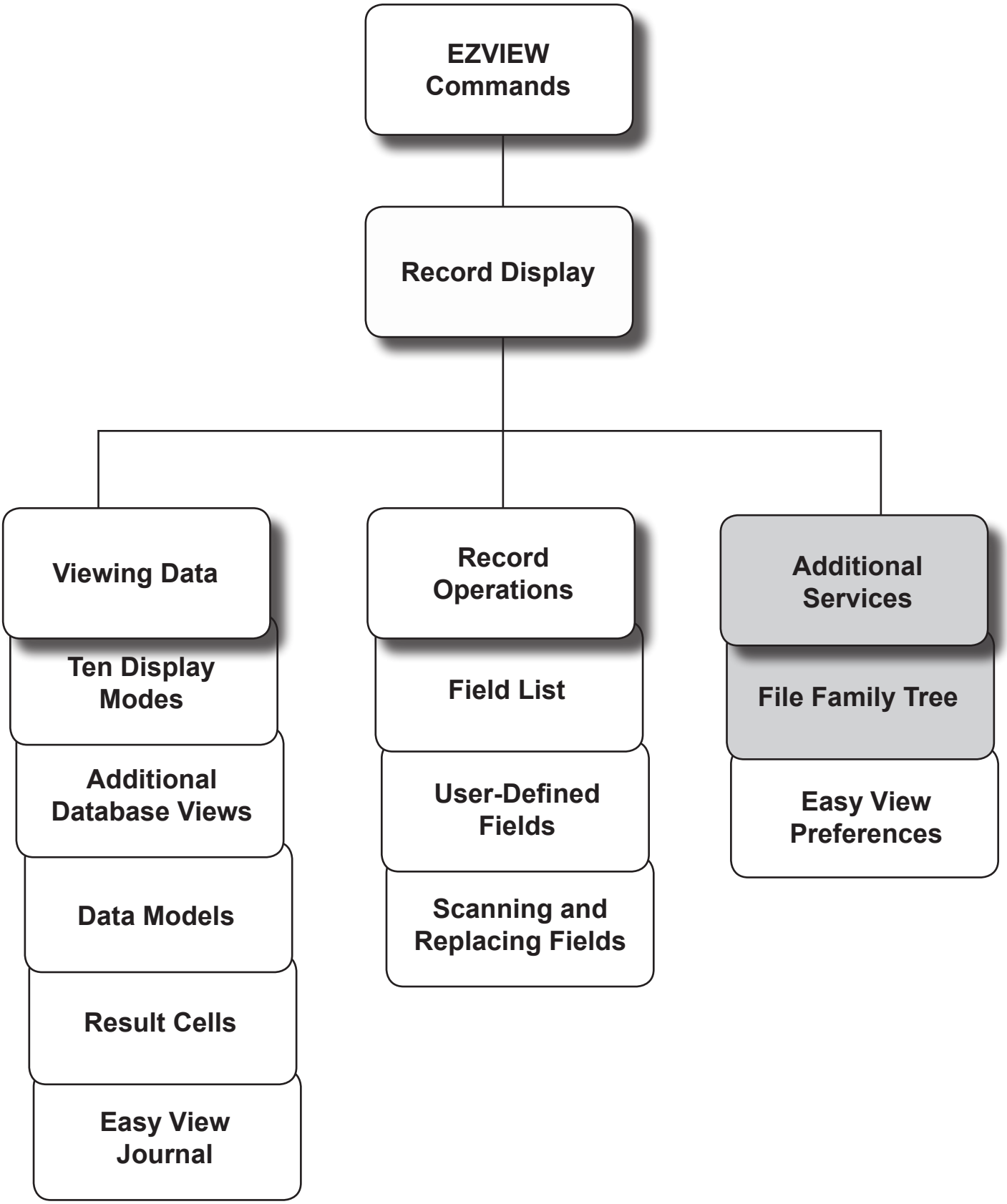
Enter file, library, and member information, then enter an option for the file action. The records that meet the scan criteria will be used to:

C Create a new file containing the selected records.

R Replace a record in an existing file. This option clears the existing file of all records

A Add this record to an existing file. Adds records from scan results to existing files.

Notes: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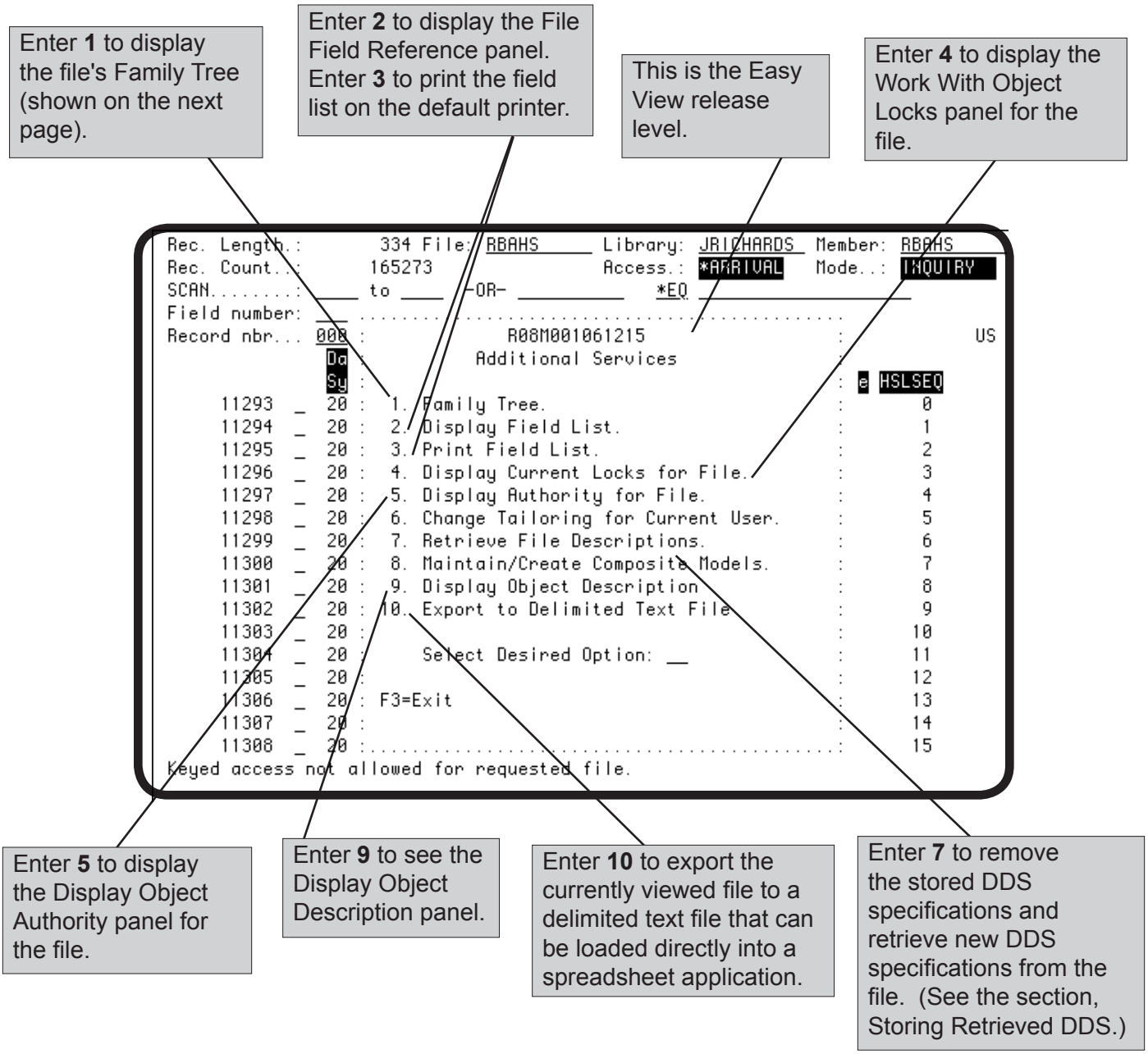
Additional Services Menu

By pressing **F9**, you can display a menu of additional Easy View services. To select an option, enter its number.

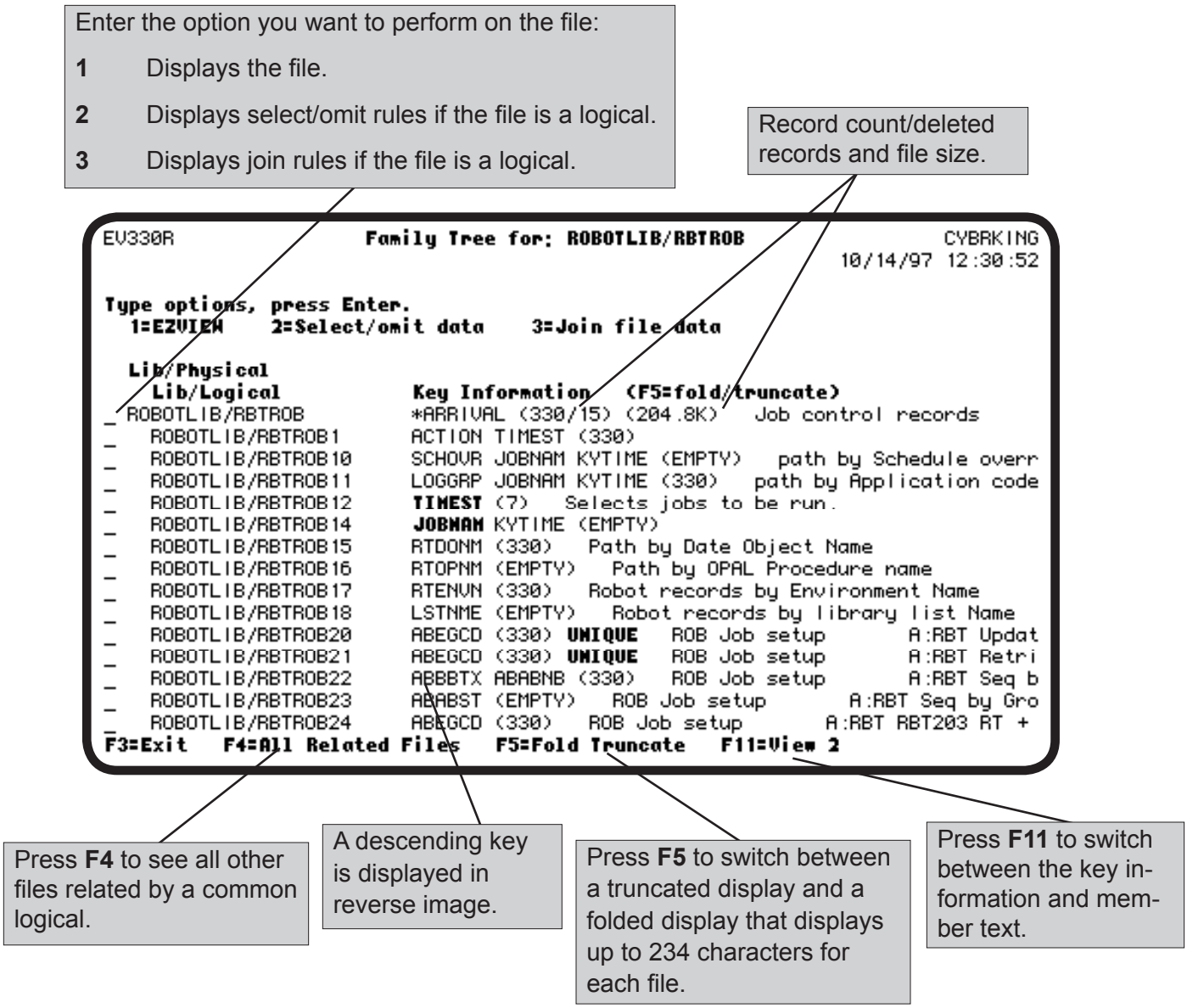
Note: The options not described here are discussed later in this manual: option **6** in Easy View Preferences, option **8** in Data Models, and option **9** in Generating DDS.



Family Tree

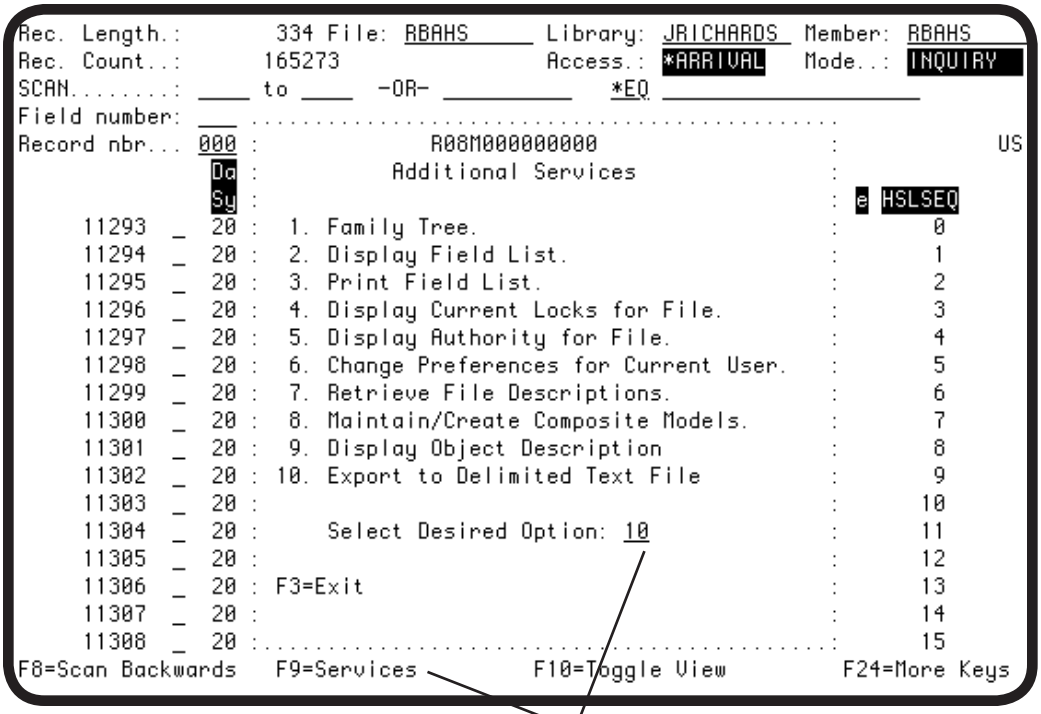
To determine which files are related to a file, you can display the family tree of the file. Select option **1** on the Additional Services Menu or option **3** on the Easy View menu. From outside Easy View, enter the EZTREE command followed by the file name.

The family tree of a physical file lists its logical files. For a logical file, the family tree of the parent physical file displays. To see all other files related by a common logical, press **F4**.

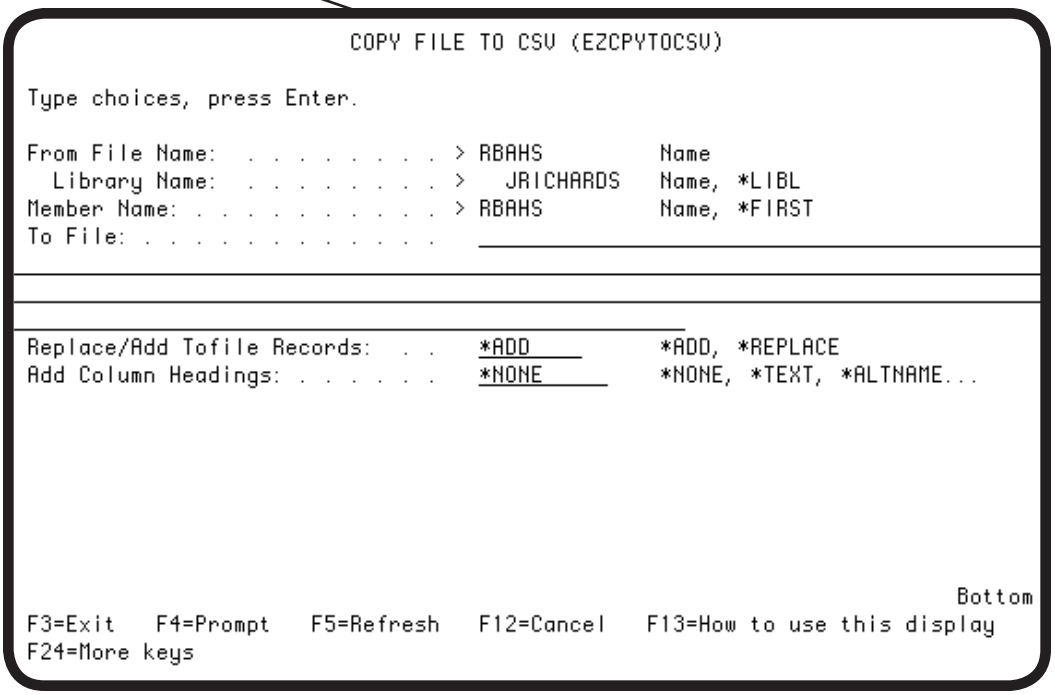


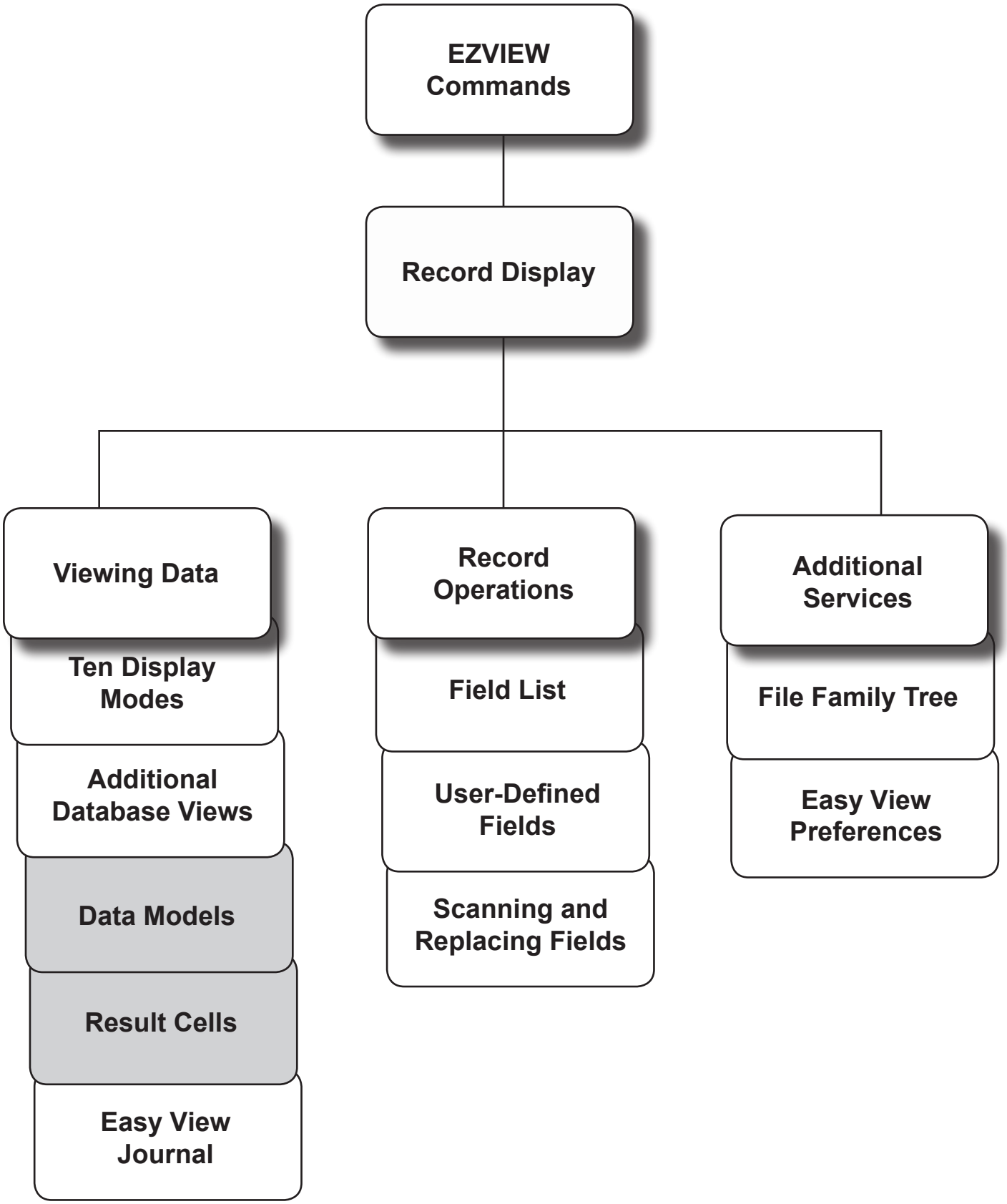
Exporting Records to Delimited Files

You can export the currently viewed file to an integrated file system (IFS) directory in a column-delimited (CSV) format. You can use any spreadsheet program to view file information. Press **F9** to display the Additional Services Menu and enter option **10**. You can also use the EZCPYTOCSV command to display the Copy File to CSV screen.



Press **F9** to display the Additional Services Menu and enter **10** to display the Copy File to CSV screen.

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Data Models Replace Display Programs

Data models are the Easy View replacement for display programs. Instead of coding a display program to define how records are presented and which operations can be performed, just define a data model for the file in Easy View. The file user can enter the EZVIEWMOD command to display and work with the file through the Easy View model.

Data models are stored permanently so they can be used at any time. To be able to change models inside Easy View, you must start the session with the EZVIEW command. When this command is used, all available data models can be selected for display or editing, and new data models can be defined. If you start a session with the EZVIEWMOD command, only the selected data model can be used—it cannot be changed.

Data Model Capabilities

Data models can:

- Omit fields from the display.
- Include user-defined fields.
- Rearrange the field order.
- Define the authorities of the users of the model, including update, add, delete, and replicate authorities.
- Define which fields may be updated.
- Define new field text to be used in the model.
- Define result cells, fields that show the results of specified arithmetic operations on numeric fields in the record.
- Store a set of scan criteria. The model user can use the criteria to search for records, or to limit the records displayed to a subset selected by the criteria.

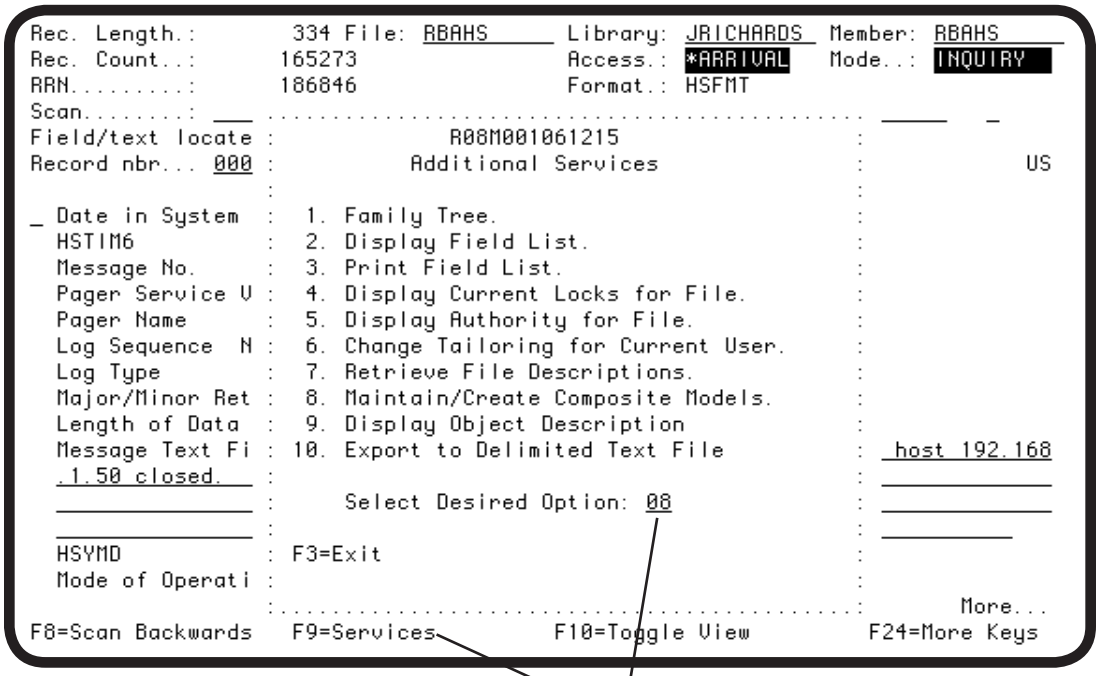
Copy Data Models to Other Files

A data model defined for one file can be copied for use with another file that has the same record format. If the data model includes user-defined fields, you must copy the user-defined fields separately.

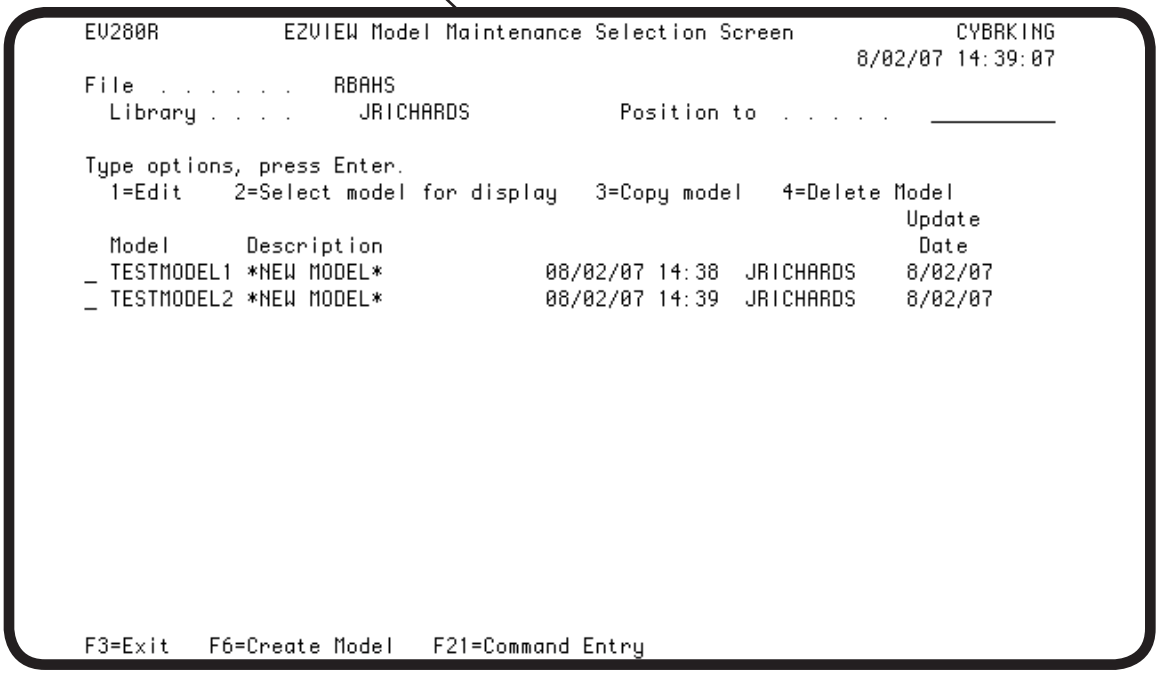
After copying the data model, you can modify it for the other file. Display the other file using the EZVIEW command and select the copied data model from the Model Maintenance Selection Screen.

Creating and Maintaining Data Models

To create a new data model or work with the data models defined for the file, display the Model Maintenance Selection Screen. Press **F9** to display the Additional Services Menu and enter option **8**.



Press **F9** to display the Additional Services Menu and enter **8** to display the Model Maintenance Selection Screen.



Model Maintenance Selection Screen

The Model Maintenance Selection Screen lists the data models defined for the currently displayed file. From this screen, you can:

- Create a new model
- Edit, copy, or delete an existing model
- Select a model to use to display the file.

File for which the data models are defined.

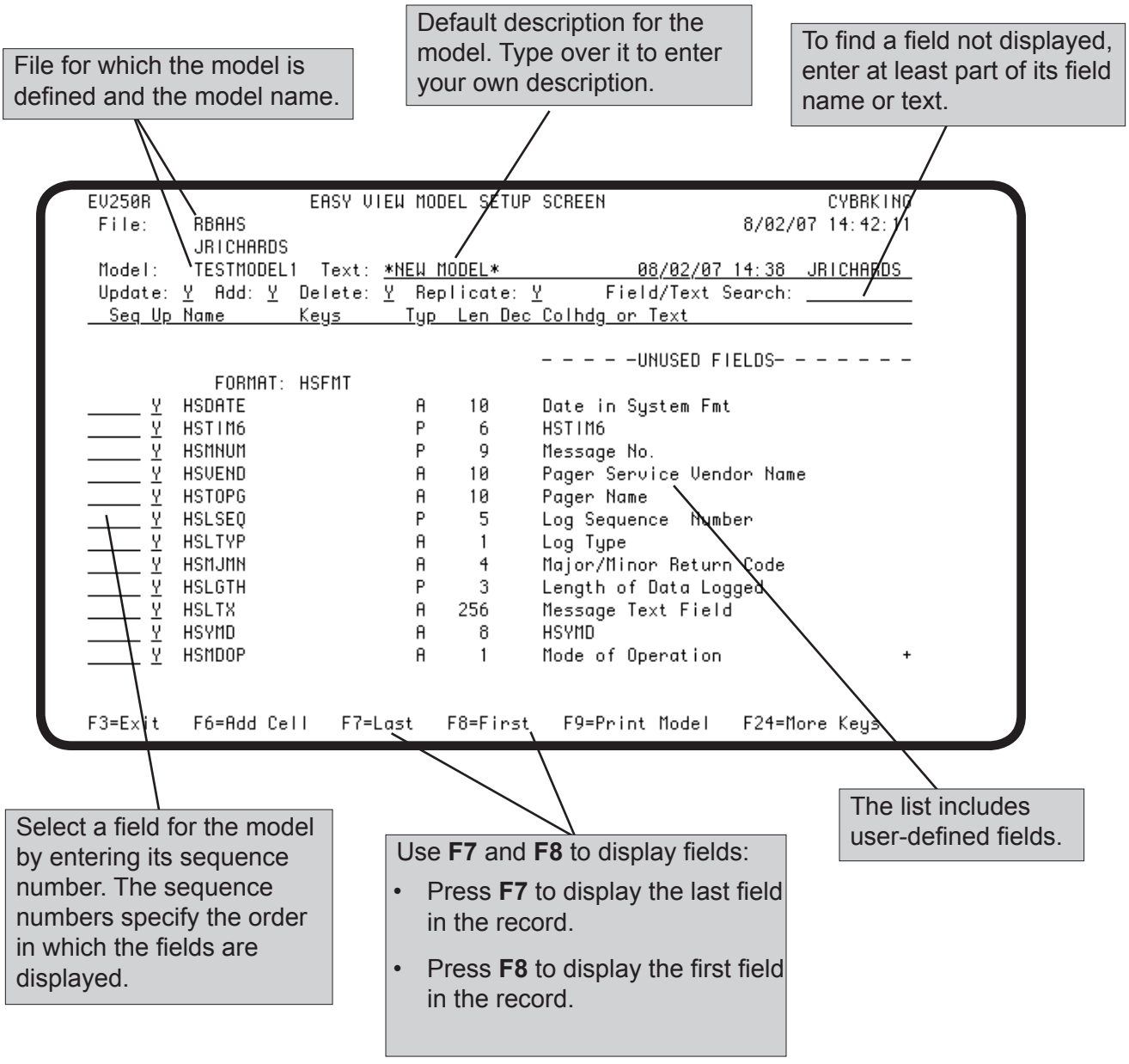
To position a model at the top of the list, enter its name here.

```
EV280R          EZVIEW Model Maintenance Selection Screen          CYBRKING
                                                          8/02/07 14:39:07
File . . . . . .   RBAHS
  Library . . . .     JRICHARDS          Position to . . . . .  _________

Type options, press Enter.
  1=Edit    2=Select model for display   3=Copy model   4=Delete Model
                                                              Update
  Model      Description                                       Date
_ TESTMODEL1 *NEW MODEL*            08/02/07 14:38  JRICHARDS    8/02/07
_ TESTMODEL2 *NEW MODEL*            08/02/07 14:39  JRICHARDS    8/02/07
_
_
_
```

Model Setup Screen

If you select a model for editing or press **F6** to create a new model on the Model Maintenance Selection Screen, Easy View displays the Model Setup Screen. On this screen, you select the fields for the model and assign model authorities.



Model Setup Screen

Each time you press Enter, Easy View re-sorts the fields. The fields selected for the model appear in the top list in sequence number order; the unselected fields remain in the bottom list. To change the field order for the model, change the sequence numbers of the fields. To remove a field from the model, enter blanks for its sequence number.

Consider carefully the operations the model should allow. You set the authorities to add, change, delete, and replicate records using the model. If a user is allowed to add or replicate records, the model should include the key fields for the file; otherwise, the new records will have duplicate key values.

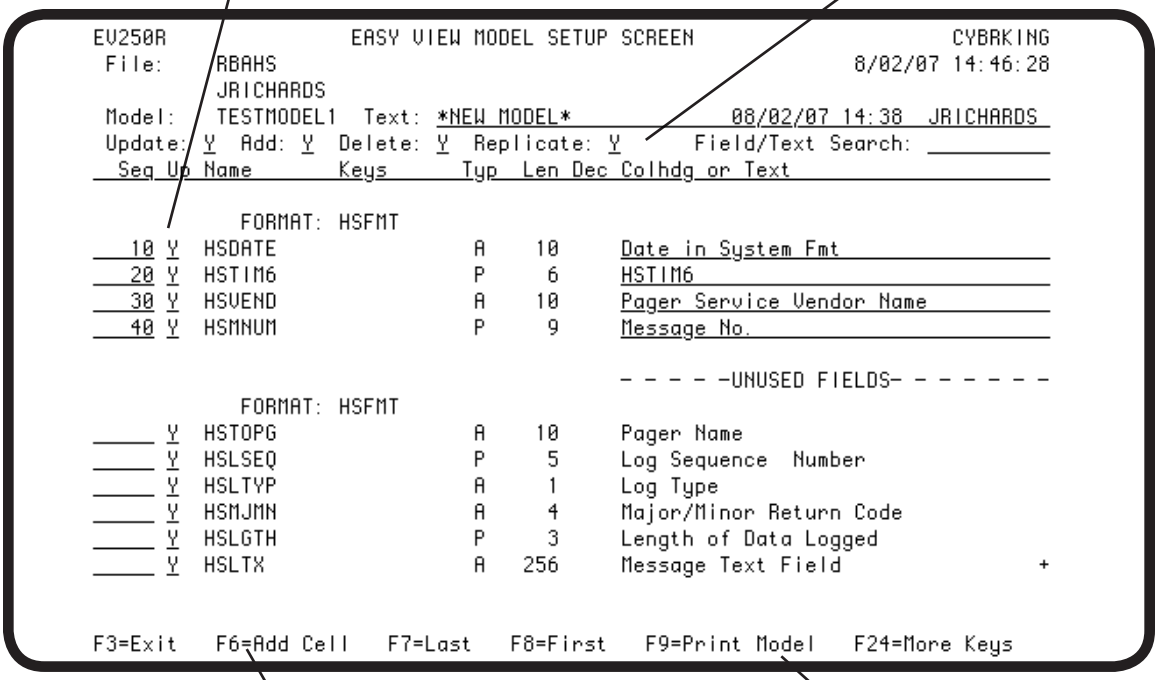
Indicates whether the data in the field can be changed, or just displayed:

- Enter **Y** if the model should let the data in this field be changed.
- Enter **N** if the model should display the field, but not let its data be changed.

Model authorities:

Y The model lets the user perform the indicated Easy View record operation.

N The model does not let the user perform the operation.

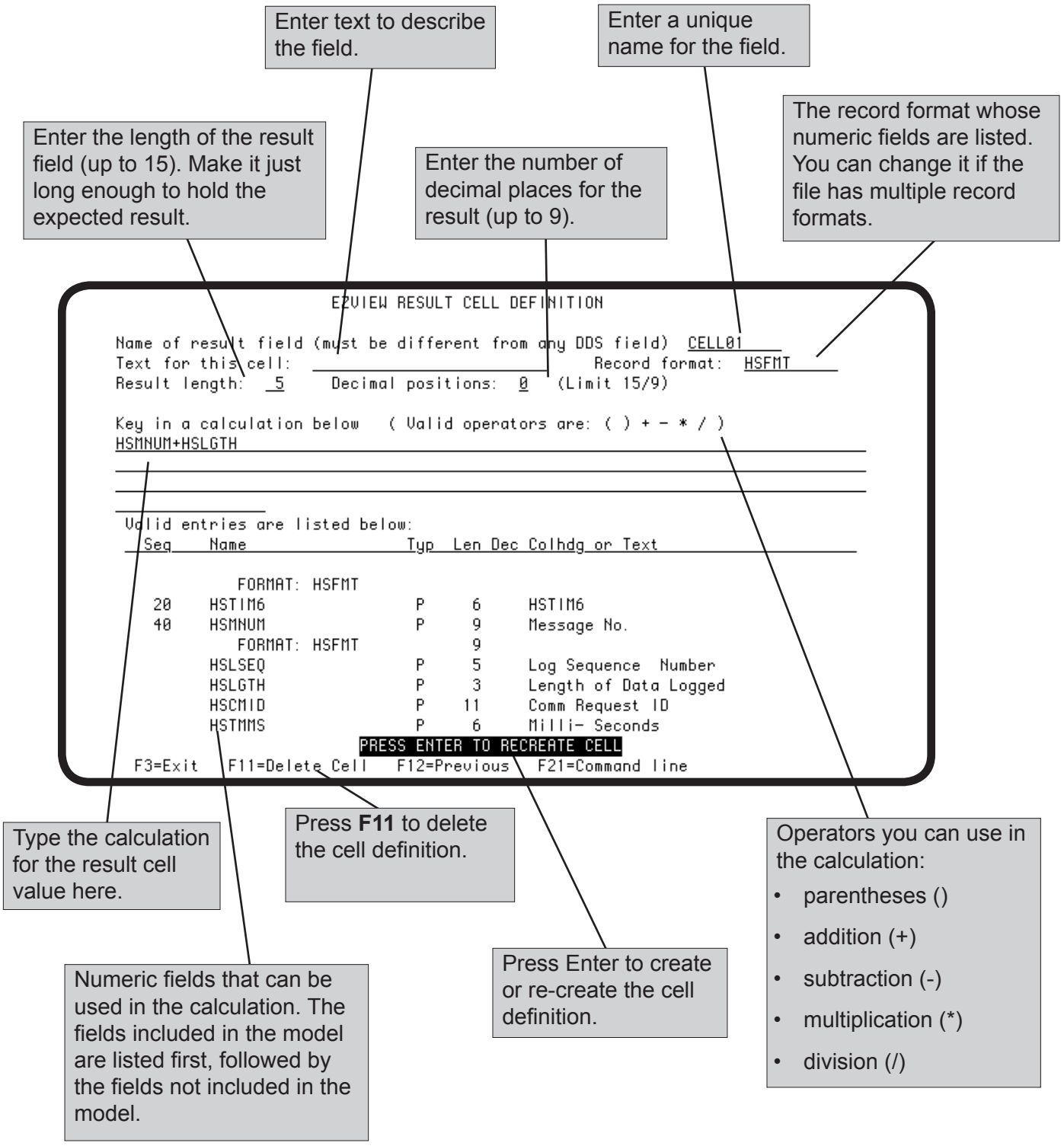


Press **F6** to display the Result Cell Definition screen.

Press **F9** to print a description of the model.

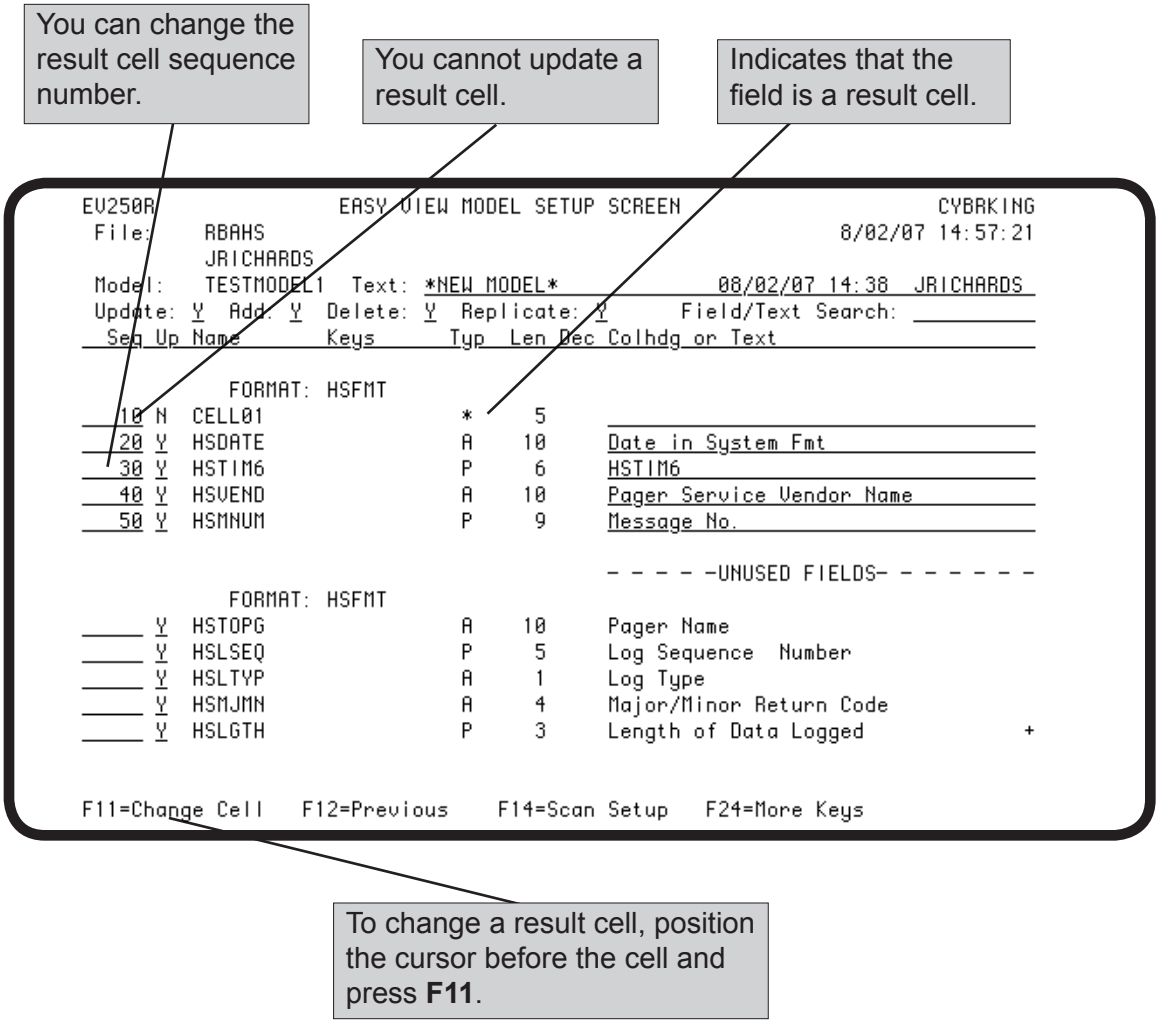
Result Cell Definition

You can define one or more result cells as part of a data model. A result cell is a user-defined field whose value is calculated by Easy View from the values of two or more numeric fields. A result cell resides only in a data model.



Result Cell Definition

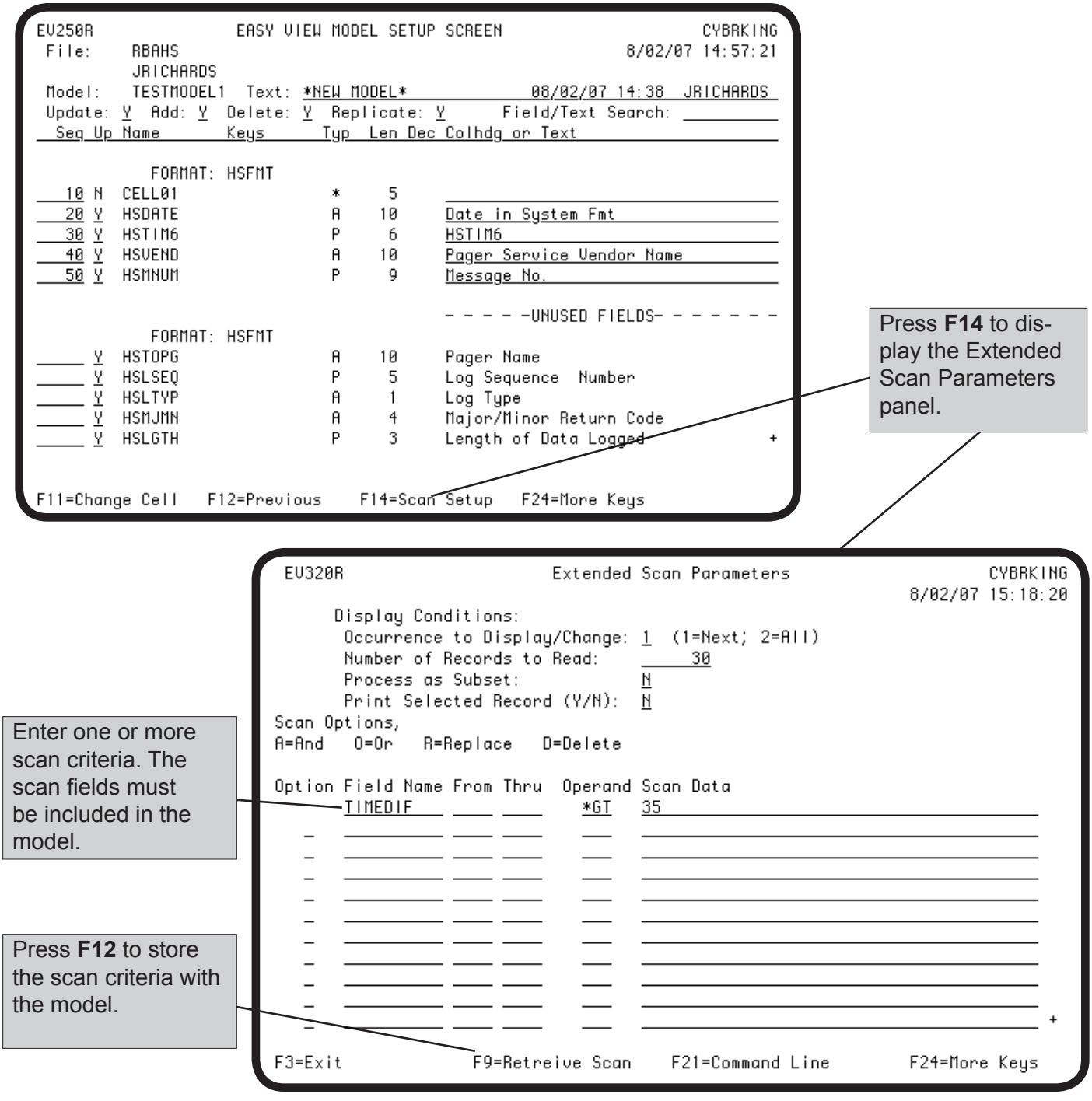
After you press **F12** to return to the Model Setup Screen, the result cell appears in the list of fields for the data model. You can change the location of the result cell in the field order by changing its sequence number.



Storing Scan/Replace Criteria with the Model

You can store a set of scan/replace criteria with a model. Whenever the file is displayed using the model, the stored criteria are available to scan the file, or to define the subset of records displayed. A user can change the scan/replace criteria while using the model, but the changes do not affect the stored criteria.

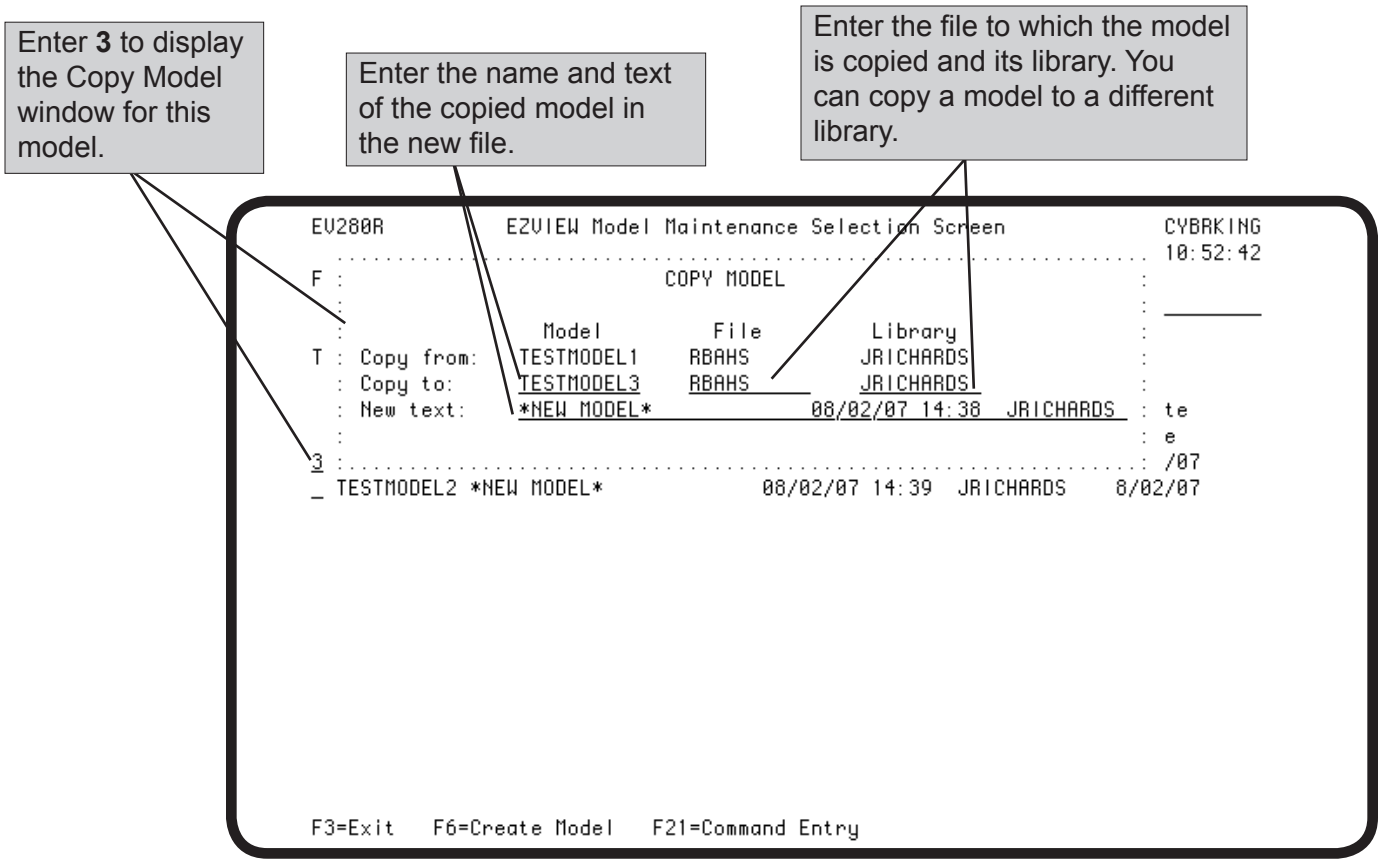
To store scan/replace criteria, press **F14** on the Model Setup Screen and specify one or more scan/replace criteria on the Extended Scan panel. The fields scanned by the criteria must be fields included in the data model. For more information on entering scan/replace criteria, see the Scanning section earlier in this manual.

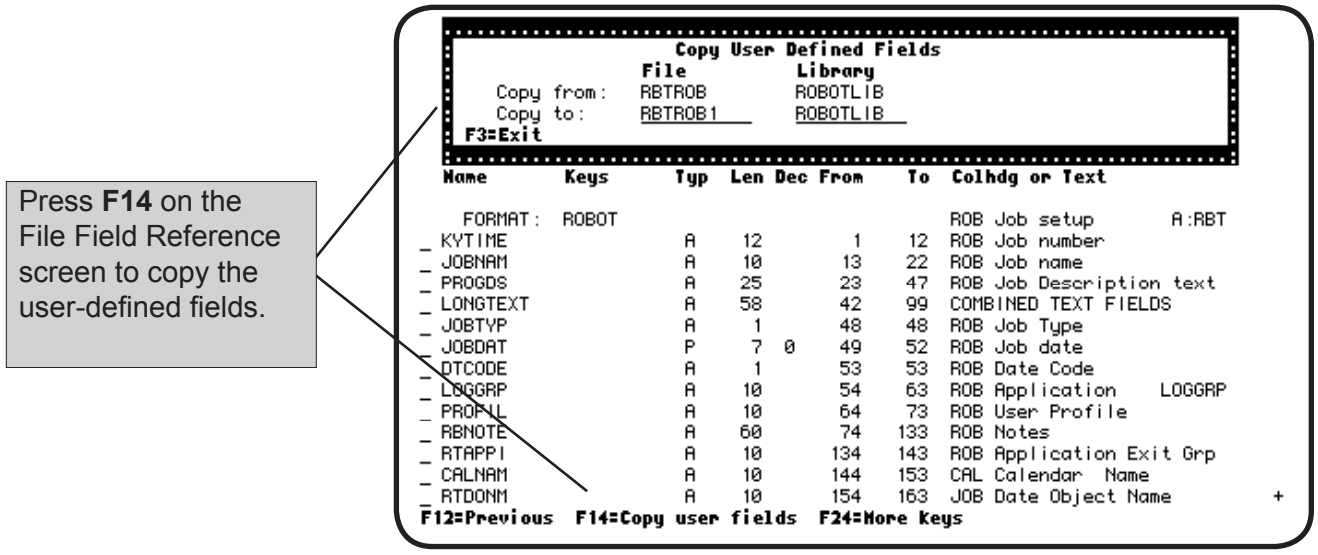


Copying Data Models

To use a data model to display another file, you must copy the data model to the other file. The other file must have the same fields used by the model. If the data model includes user-defined fields, you must also copy the user-defined field definitions to the other file.

To copy a data model from one file to another, display the Model Maintenance Selection Screen and enter a **3** in the option field before the model to be copied. To copy user-defined fields used by the model, display the File Field Reference screen and press **F14**.

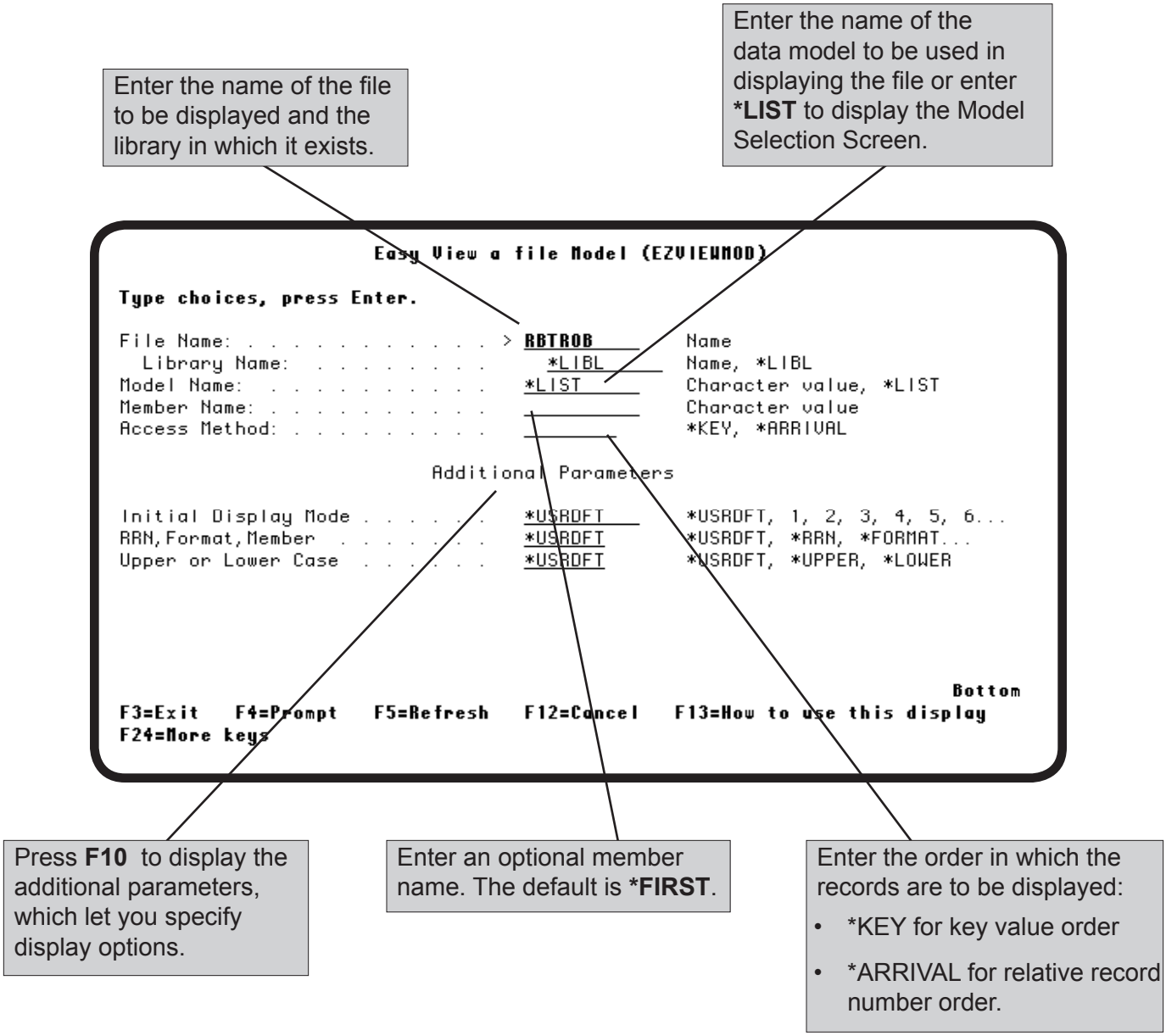




EZVIEWMOD Command

When you use the EZVIEW command to start Easy View, you can select the data model used from the Display Attributes window or the Model Maintenance Selection Screen. When you use the EZVIEWMOD command to start Easy View, you are limited to the to the constraints of the data model you specified on the command. You cannot change to another file, member, or model. If you specify *LIST on the EZVIEWMOD command, you are shown a list of models to select from.

Note: In an EZVIEWMOD session, the Additional Services Menu (**F9**) and Additional Database Views window (**F18**) are not available.



Model Selection Panel

If you specify *LIST on the EZVIEWMOD command, the Model Selection panel displays, listing the data models defined for the file. You can also display this panel in an EZVIEW session by entering a **?** in the Model blank on the Display Attributes window (**F13**).

On the Model Selection panel, you can list the fields used by a data model and select a data model to use to display the file.

Indicates whether the model lets you perform the indicated Easy View record operation:

UPD Changing records.

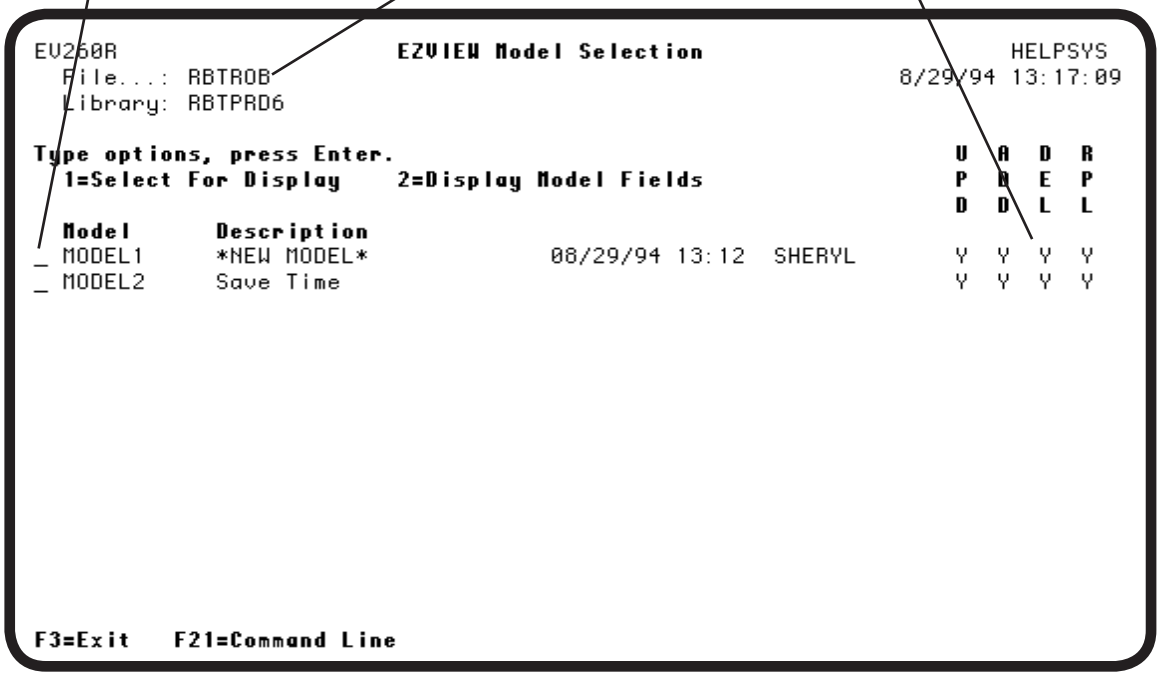
ADD Adding new records.

DEL Deleting records.

RPL Replicating records.

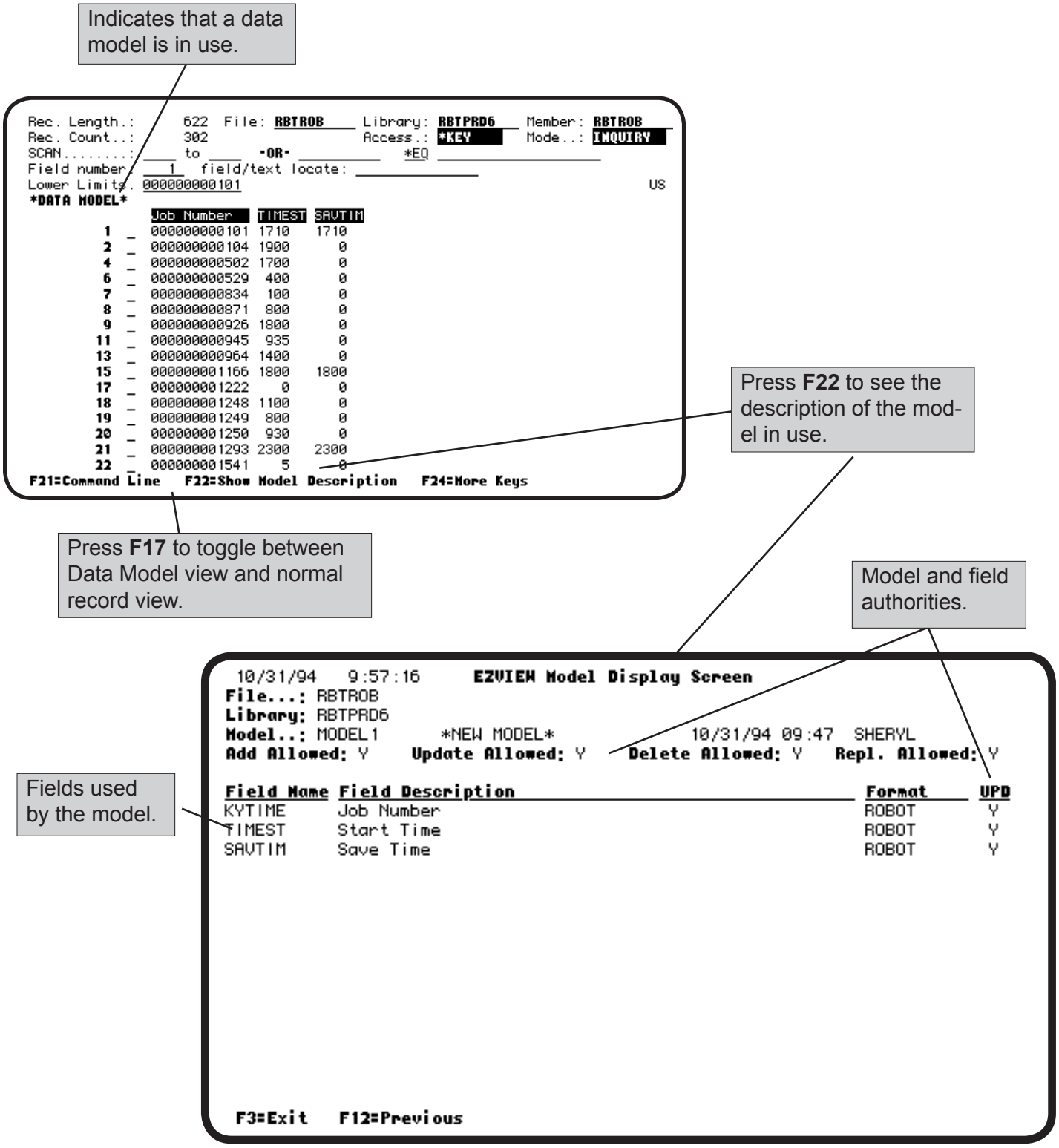
Enter **1** to select the model to use for displaying records. Enter **2** to list the fields included in the model.

File and its library for which the data models are defined.

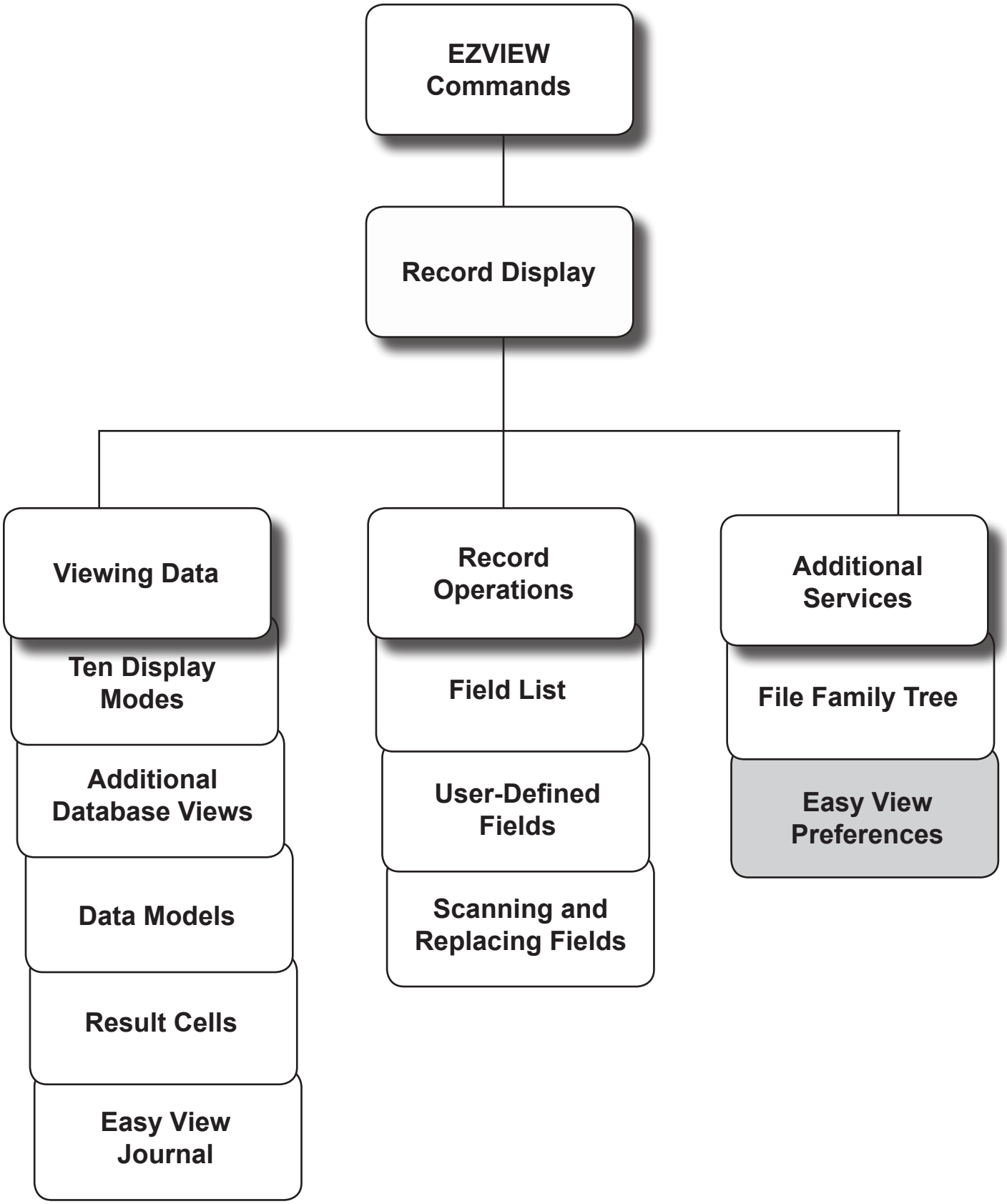


Model Display Screen

From the data model record display you can display the model description by pressing **F22**.



Notes: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Overview

Easy View lets you adjust default values for the needs of your site.

Changing Default Values without CHGSYS

You can change the following five default values at any time without CHGSYS authority:

- Number of records scanned before interrupt
- Default output queue
- Display of relative record number, record format, or member name
- Lowercase data entry as default
- Default display mode

Press **F9** to display the Additional Services menu and select option **6**.

Changing Default Values with CHGSYS

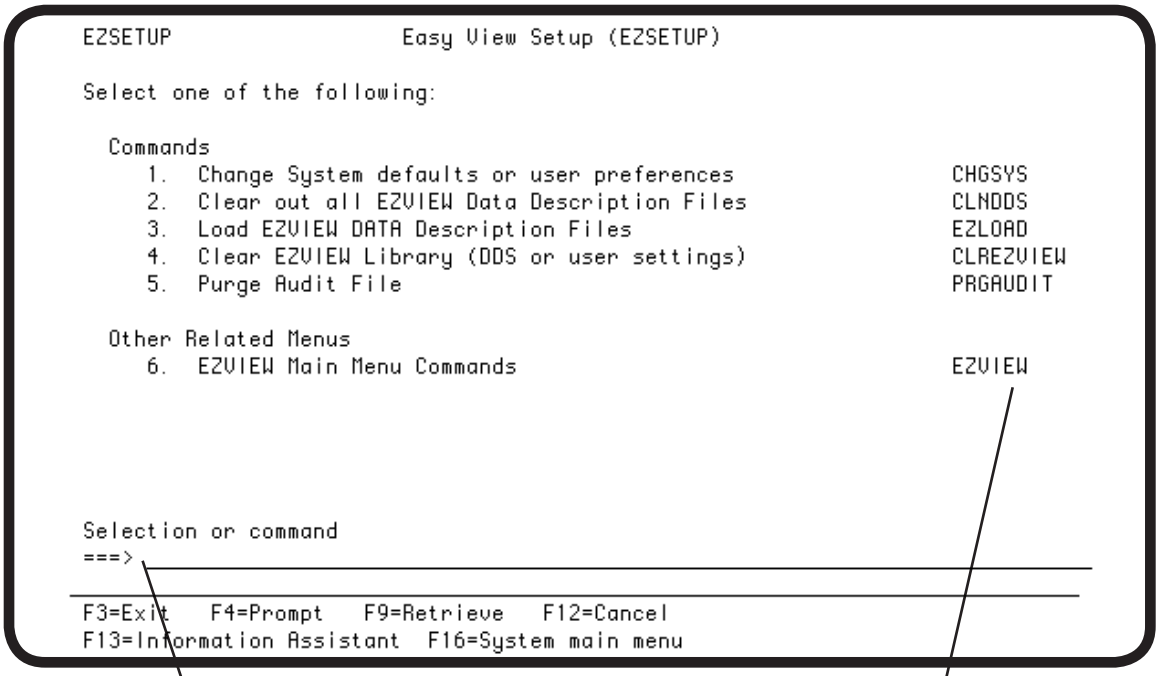
You can change the rest of EASY VIEW's default values by using the CHGSYS command outside Easy View, or by selecting option **1** from the Easy View Setup menu. Only the security officer can use the CHGSYS command unless they grant authority. The security officer can grant CHGSYS authority to a user by entering the following command:

```
GRTOBJAUT OBJ(CHGSYS) USER(USER) AUT(*USE)
```

Global default values for all Easy View users are in the default record *SYSTEM, which cannot be deleted. Default records for individual user profiles can be defined using the CHGSYS command. If a user profile has an individual default record defined, those values override the global default values for that user.

Easy View Setup (EZSETUP) Menu

The Easy View Setup menu has commands for changing system or user defaults and working with data description files. To display the menu, select option **8** from the Easy View menu, or enter the GO EZSETUP command from outside Easy View. You can add or remove options from this menu, based on your security needs. This menu is in source file EZVMENU, and source member EZSETUP, in the EZVIEW library. Use PDM or SELL to edit EZVMENU.



Enter **1** to display the Easy View Profile Preferences panel.

Use these commands on the IBM i command line to start the corresponding function.

- The CHGSYS command is described in Easy View Preferences.
- The CLNDDS, EZLOAD, and CLREZVIEW commands are described in Storing Retrieved DDS.
- The PRGAUDIT command is described in Deleting the Audit File.

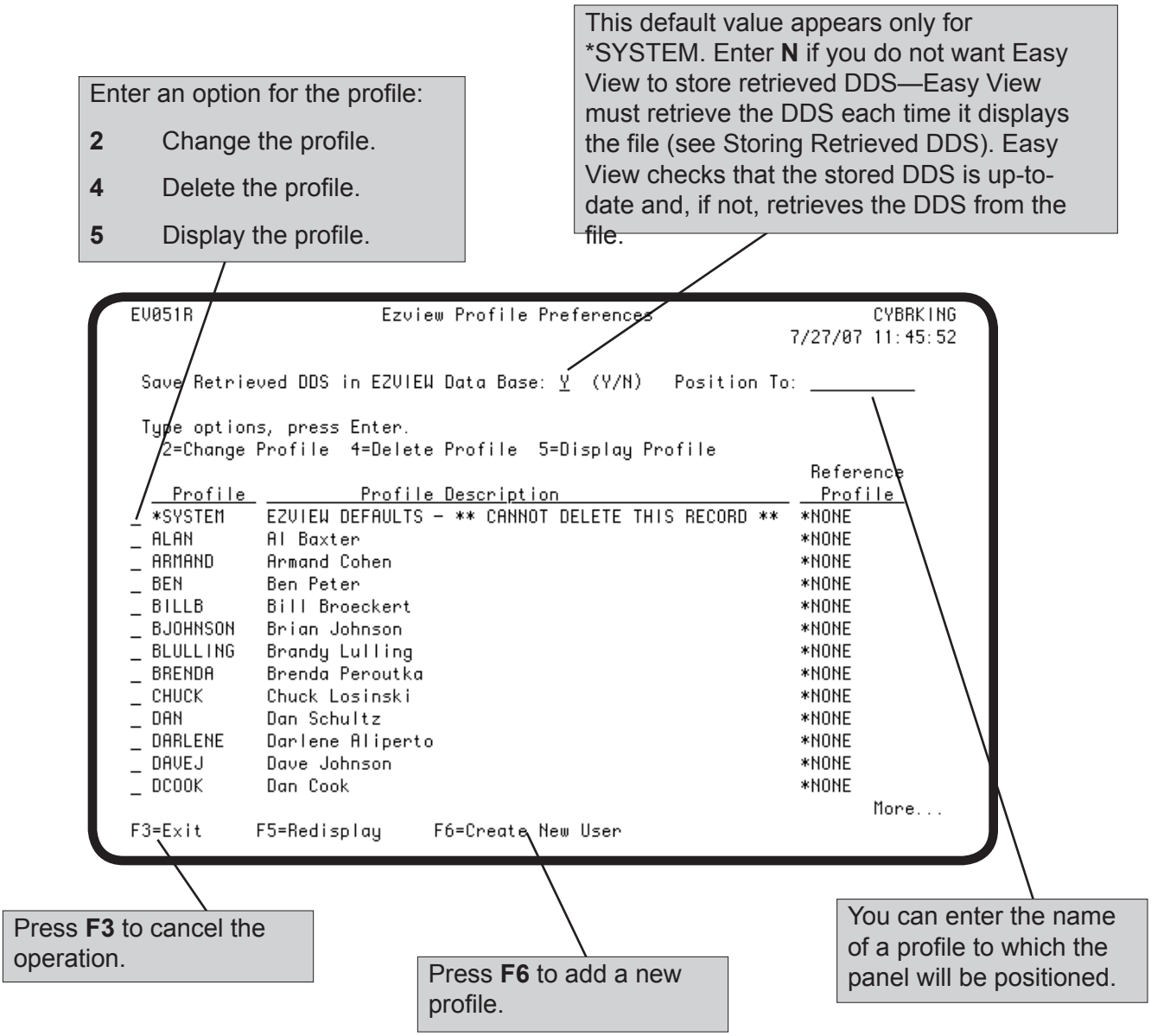
EZVIEW Profile Preferences Panel

The Easy View Profile Preferences panel allows you to add and delete profiles, display and change profiles, and determine whether you want the profile to save retrieved DDS in the Easy View database.

Note: The *SYSTEM profile cannot be deleted.

If you have CHGSYS authority, the panel displays when you do one of the following:

- Outside of Easy View you enter the CHGSYS command, the GO EZSETUP command to display the Easy View Setup menu, and select **option 1**.
- Inside Easy View, you select **option 8** from the Easy View menu to display the Easy View Setup panel and select **option 1**.



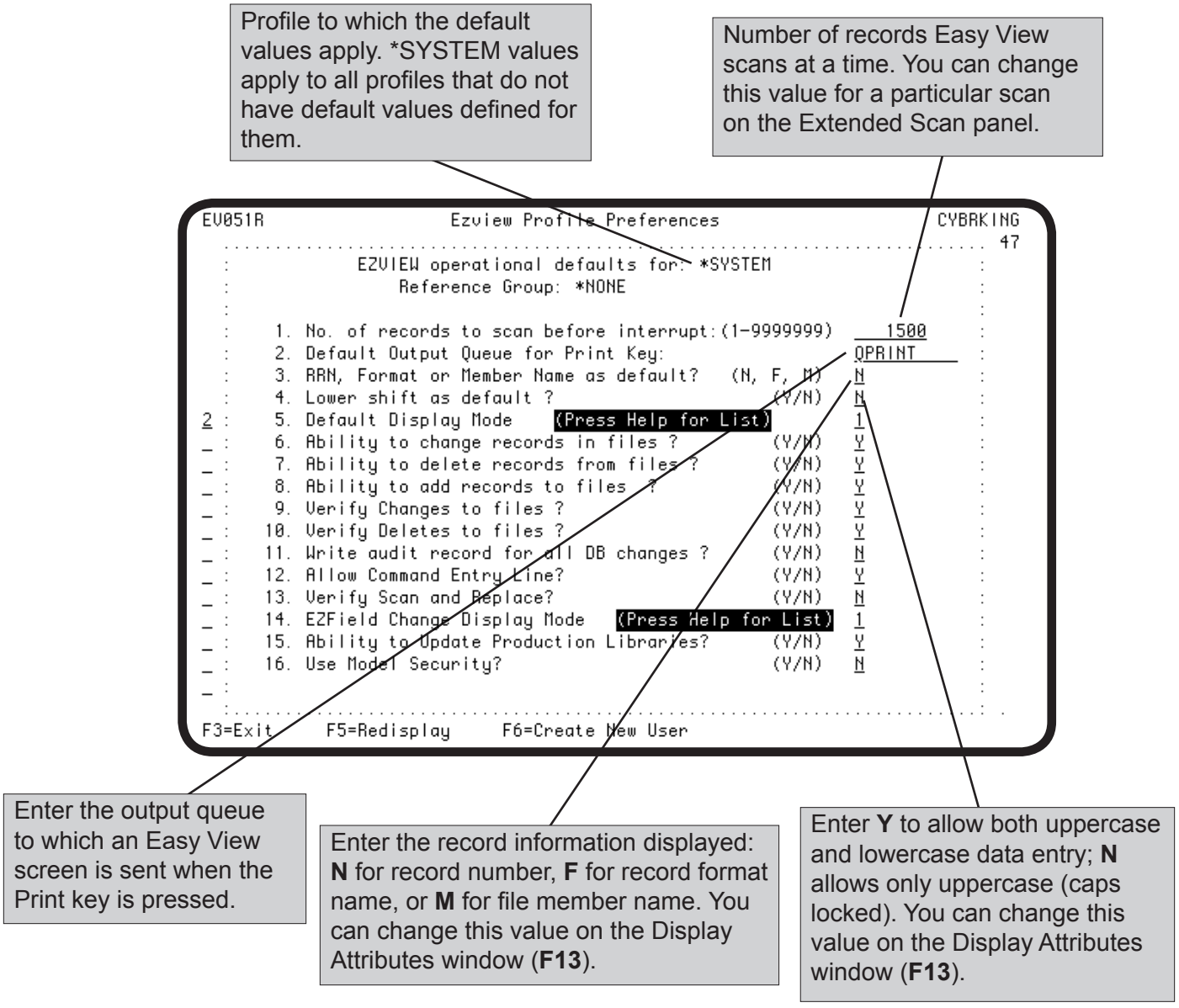
Operational Defaults

The EZVIEW operational defaults panel lists the current default values for the profile. The panel displays when you do either of the following:

- Select **option 6** from the Additional Services menu. Your profile displays and you can change only the first five options on the panel.

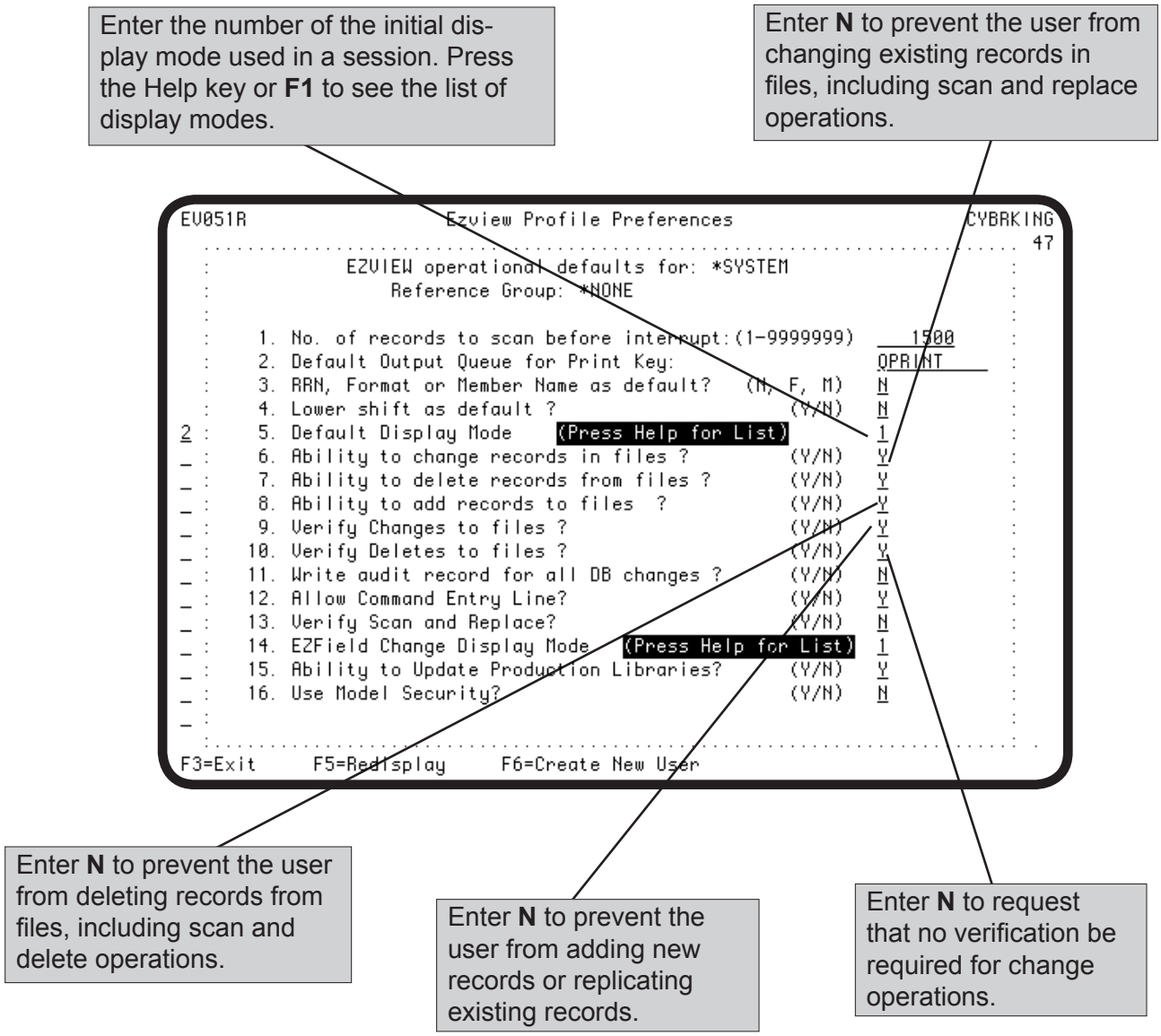
- Enter the CHGSYS command and select the profile you want to display. You can change any default values and the global default values (profile *SYSTEM). The global default values apply if specific default values have not been defined for a user profile.

Change the values you want and press Enter to record your changes. Press **F3** to exit the panel without saving any changes.



Display Defaults

You can set the default values that specify the default output queue, the default run attributes, the initial display mode, and whether a command line can be displayed.



Record Operation Defaults

Two types of record operation default values are provided: defaults that allow you to prevent the user profile from performing record operations and defaults that indicate whether verification screens should be presented.

Enter **Y** to have Easy View write a record for each file change in an audit file (see the section, Audit File).

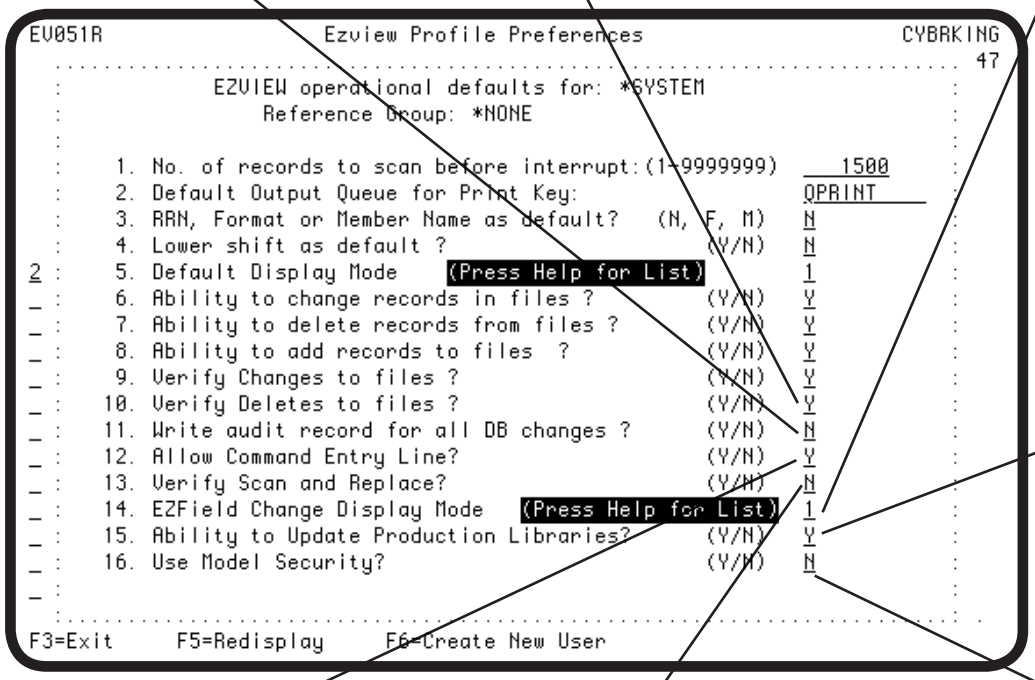
Enter **N** to request that no verification be required for deletions.

Specify the information that displays when updating a record in EZFIELD mode:

1 Field text (the default)

2 Field text and name

3 Field text, name, and attributes



To be able to update files in production libraries, enter **Y**. If you enter **N**, only files in test libraries can be updated.

Enter **N** to prevent the user from entering system commands within Easy View.

Enter **Y** to request verification for each record selected by a scan and replace, or scan and delete operation. The default, **N**, requests verification only at the beginning of the scan (**N** is required for submitting a scan to batch.)

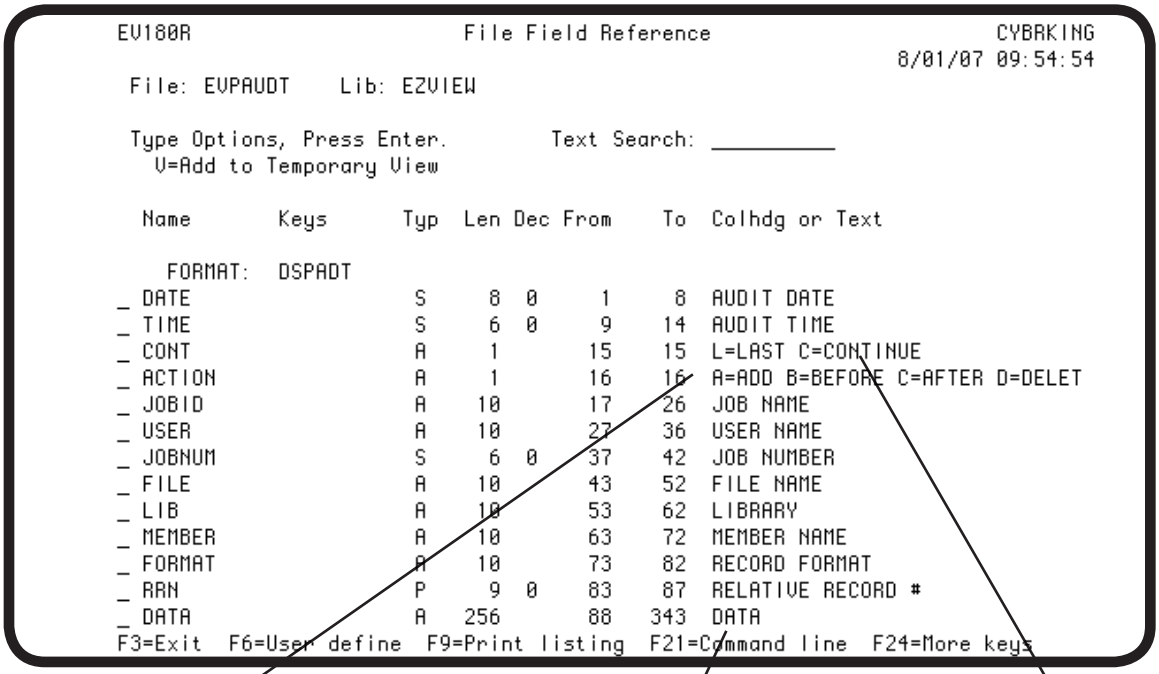
If set to **Y**, the Model Security settings override the normal settings for this user.

Audit File

As the security officer, you can direct Easy View to record every file change it makes in an audit file. To request that changes made by a specific user be recorded, enter **Y** for **option 11** on the operational defaults panel for that user profile. Or, you could enter **Y** for **option 11** on the operational defaults panel for *SYSTEM and then exempt a specific user by entering **N** for **option 11** on the user's defaults panel.

The audit file Easy View uses is EZVIEW/EVPAUDT. The screen on this page shows the record format for the audit file. You can view the audit file at any time using Easy View, or print it from the Easy View menu. To make the record data in the audit records easier to read, you may want to add user-defined fields to format the data.

Note: Use the PRGAUDIT command to purge audit information that is no longer needed. See Deleting the Audit File in this section.



```
EV180R                        File Field Reference                      CYBRKING
                                                                 8/01/07 09:54:54
 File: EVPAUDT    Lib: EZVIEW

 Type Options, Press Enter.          Text Search: _________
   V=Add to Temporary View

  Name       Keys      Typ  Len Dec From    To  Colhdg or Text

    FORMAT:  DSPADT
_ DATE                  S     8  0     1     8  AUDIT DATE
_ TIME                  S     6  0     9    14  AUDIT TIME
_ CONT                  A     1        15    15  L=LAST C=CONTINUE
_ ACTION                A     1        16    16  A=ADD B=BEFORE C=AFTER D=DELET
_ JOBID                 A    10        17    26  JOB NAME
_ USER                  A    10        27    36  USER NAME
_ JOBNUM                S     6  0     37    42  JOB NUMBER
_ FILE                  A    10        43    52  FILE NAME
_ LIB                   A    10        53    62  LIBRARY
_ MEMBER                A    10        63    72  MEMBER NAME
_ FORMAT                A    10        73    82  RECORD FORMAT
_ RRN                   P     9  0     83    87  RELATIVE RECORD #
_ DATA                  A   256        88   343  DATA
F3=Exit  F6=User define  F9=Print listing  F21=Command line  F24=More keys
```

Data stored in the audit record:

A New record added to the file.

B Record before it was changed.

C Record after it was changed.

D Record deleted from the file.

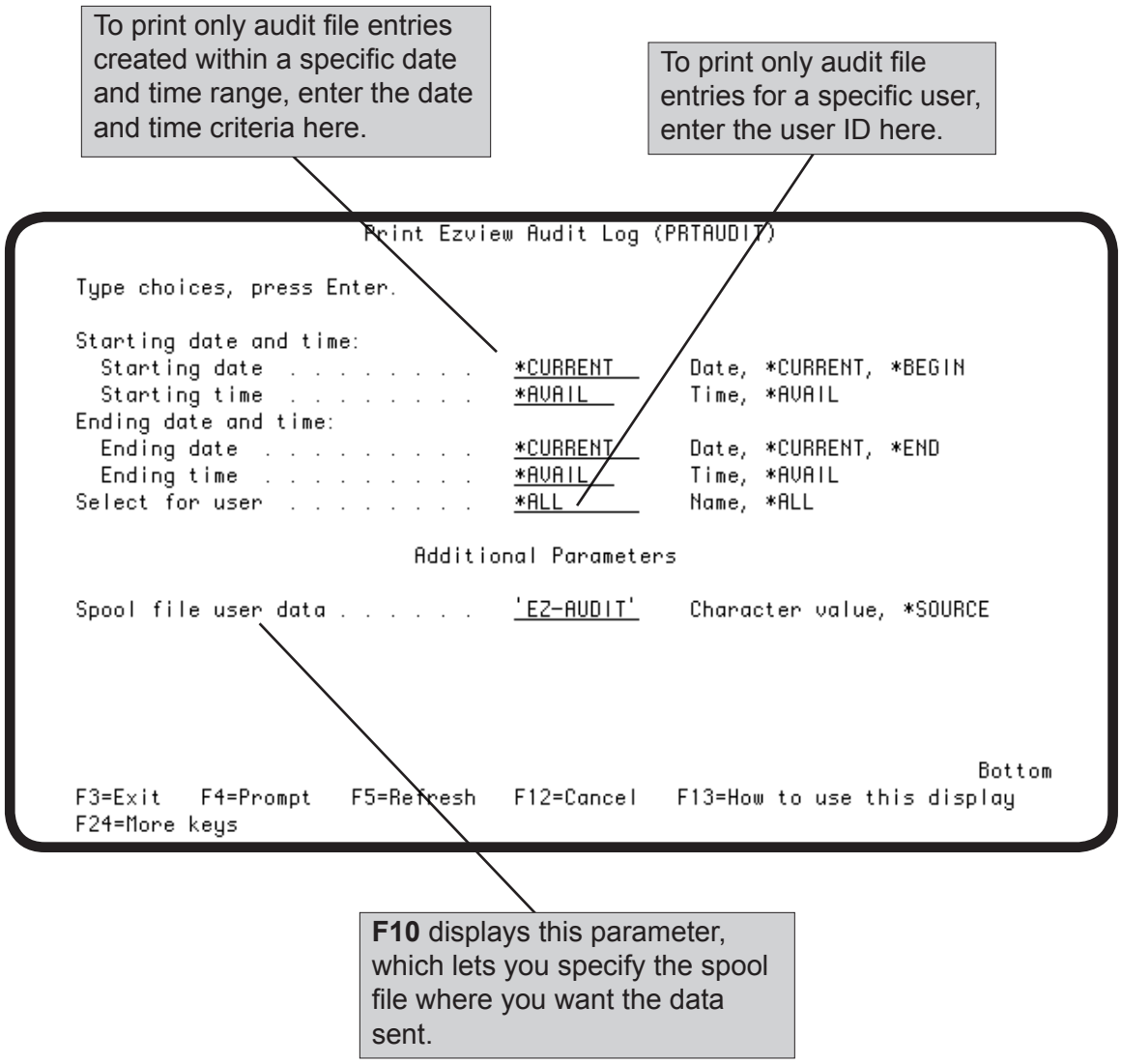
The first 256 bytes of record data are stored here.

If the record is longer than 256 characters, Easy View stores a **C** in this field and writes subsequent records for the remainder of the data.

Printing the Audit File

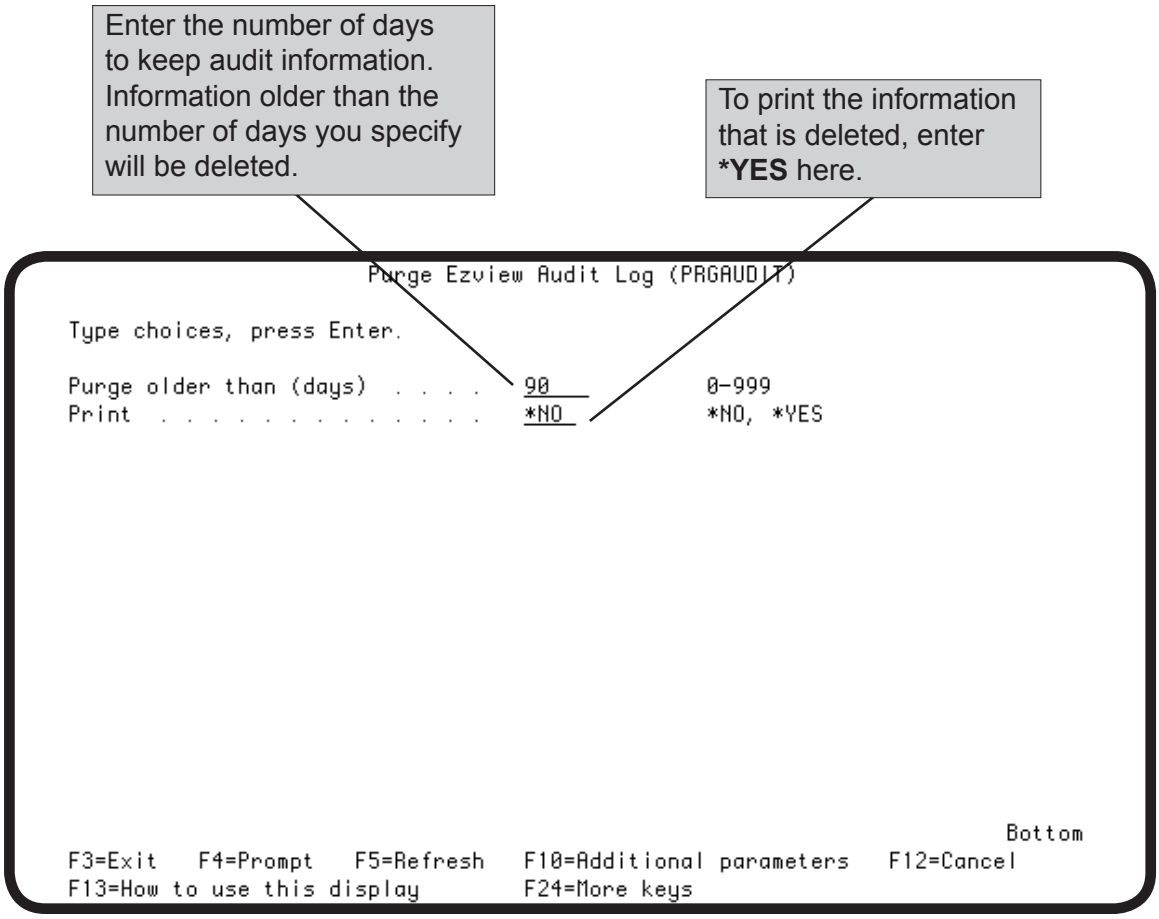
You can print the audit file by selecting **option 6** from the Easy View menu. To print the file outside Easy View, enter the PRTAUDIT (Print Ezview Audit Log) command on the IBM i command line and press **F4** to prompt the command. The Print Ezview Audit Log (PRTAUDIT) panel displays, allowing you to specify the starting and ending date and time for the entries you want to print.

You can also print audit file entries of a specific user. Press **F10** to display the Spool file user data field, where you can change the name of the spool file to which the data is sent.



Deleting the Audit File

You can delete old audit information from the audit file by selecting **option 5** from the Easy View Setup menu. Outside Easy View, enter the PRGAUDIT (Purge Ezview Audit Log) command on the IBM i command line and press **F4** to prompt the command. The Purge Ezview Audit Log (PRGAUDIT) panel displays, allowing you to specify the numbe of days to keep audit information You can also print the information that is deleted.



Easy View Can Store DDS for Faster Record Displays

If a file has DDS, Easy View uses it to display the file, but retrieving the DDS from the file takes time. Easy View gives you the option of storing a copy of the DDS for each file that Easy View displayed. Easy View stores the DDS in its own internal files. When you ask Easy View to display a file, it looks for the file's DDS in its stored DDS files and checks that the stored DDS is up-to-date. If it has not stored the DDS, or the stored DDS is out-of-date, it retrieves the DDS from the file.

To select the option to store DDS, enter the CHGSYS command for the *SYSTEM record as described in the Tailoring Easy View section. On the EZVIEW Profile Tailoring panel, enter **Y** for the option, Save Retrieved DDS in EZVIEW Database.

Clean Up Stored DDS with CLNDDS

If you select the Store DDS option, Easy View stores the DDS of every file it displays. It continues to store the DDS even if the file is deleted. The **CLNDDS** command removes the DDS for files that no longer exist. To process the command interactively, enter CLNDDS on the AS/400 command line. CLNDDS checks each file whose DDS Easy View has stored and removes the DDS if the file no longer exists. Because this can be a long process, we recommend that you submit the command to batch.

Load DDS with EZLOAD

Easy View provides another command for mass retrieval of DDS. Specify one or more libraries on the command **EZLOAD a**nd submit the command from Easy View by selecting **option 3** from the Setup menu. Easy View retrieves and stores the DDS for each file in the specified libraries. Again, this can be a long process, so we recommend that you submit the command to batch.

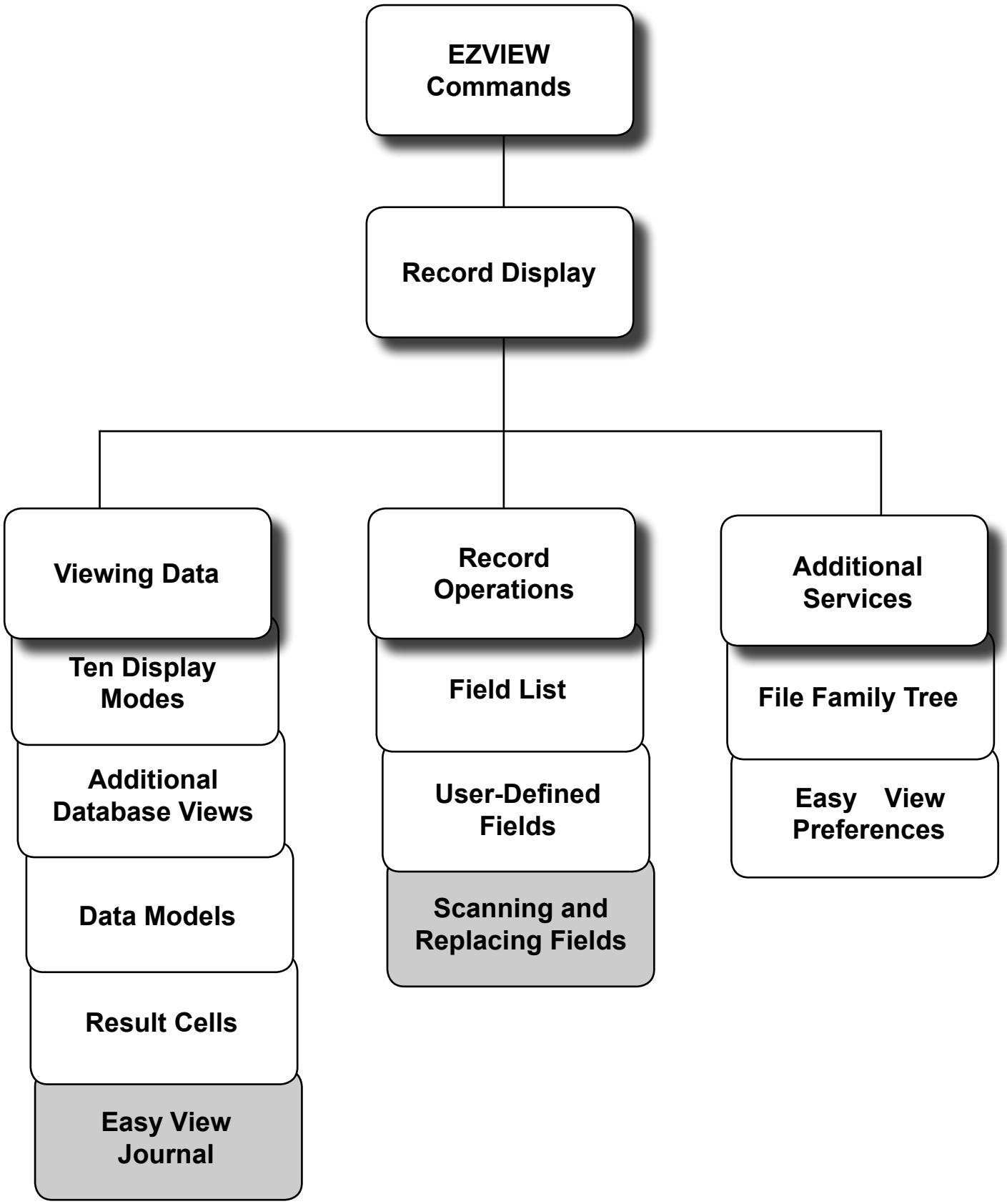
Clear Easy View Work Files with CLREZVIEW

The CLREZVIEW command lets you clear all or part of the Easy View work files.

- *DDSONLY clears only the stored DDS.
- *ALL clears everything, including user options, and resets Easy View to its shipped state.

You can submit the CLREZVIEW command from Easy View by selecting **option 8** from the Easy View menu and **option 4** from the Easy View Setup menu.

Notes:


EZVIEW Commands
Record Display
Viewing Data
Ten Display Modes
Additional Database Views
Data Models
Result Cells
Easy View Journal
Record Operations
Field List
User-Defined Fields
Scanning and Replacing Fields
Additional Services
File Family Tree
Easy View Preferences

Easy View Journal Makes Journal Entries Easy to Use

Journaling is a valuable capability on IBM i machines. By recording changes made to a database file, journal entries serve as a backup if database changes are lost. You can also use journal entries to diagnose problems in your database update programs. Journal entries can be difficult to read because the record data is saved as a string of hexadecimal codes. Easy View Journal makes journal entries easy to find and read.

Easy View Journal Feature

Easy View Journal is a special feature of Easy View. It reads journal entries and breaks them into the fields defined by the DDS of the database. It is easy to read the entries using EASY VIEW's formatted record displays and search for field values using its scan functions.

Use for Debugging, Testing, and Investigating

You can use the Easy View Journal to:

- Find errors by scanning before and after images of changed records. By viewing the time, date, workstation, and program that caused the errors, you can find their cause easily.

- Test your update programs.
  Journal your test files and use Easy View Journal to see the before and after images of the records you changed. Any fields updated incorrectly will be easy to spot.

- Find the source of unauthorized access to the employee salary master. Scan your journal entries for the employee number and salary amount. You can see the workstation, date, and time of access in the journal entry.

- Build Data Models to view journal entries so future testing or investigation is easy.

Enter Selection Criteria

The Display Journal Images panel allows you to enter the journaled file name and work file name quickly. Parameters on the panel let you limit journal entries in the work file to meet specific criteria.

Copies Entries to Work File

Easy View Journal copies the selected journal entries into a work file, offering these advantages:

- If your journal receiver is large, journal entry retrieval can take a long time. With a work file, you can submit the process to batch and view the journal entries later.

- Often you look at a few entries, examine your programs, and then look at a few more entries. To avoid multiple retrievals, Easy View Journal keeps the selected journal entries in the work file.

- You can retrieve several sets of journal entries, using different selection criteria, with a work file for each set.

EZJOURNAL Command Makes It Easy to Work With Journal Entry Views

The new EZVIEW command, EZJOURNAL (EZJRN), automates the process of viewing journal output files. It provides a user-friendly environment for you to work with journal commands, organize and customize journal entry views, and see the results. Any journal entry views that you create are saved for reuse. You can see and control the current journal status of your files easily using EZJOURNAL. You can also access any saved extended scans by using the EZJOURNAL command.

It is easy to view and access journal entries because the EZJOURNAL environment supports an organizational hierarchy of groups-files-views. By creating views you can customize the way journal entries are presented. As a result, you do not need to know any system (or user) fields in advance. You organize files into groups, and create multiple views of journal entries for each file in the group that is journaled, based on your specifications. Then you can save these defined views and use them over and over again to view records for a journaled file. It's a clean, logical, easy way to organize and work with journal entries.

Example

The following is an example of a journaled file with three views specified. Each view displays the records for one journal field, JOJOB, and all of the database fields in the file. The first view displays all journal entries for the file; the second view displays only journal entries resulting from updates to the file; the third view displays only journal entries resulting from deletions to the file. For more information, see the topic Work With Views in Files.

Example Group Containing Three Views

View 1—All Entries
Journal Field = JOJOB
Database Fields = *ALL
Type of file transactions = *ALL

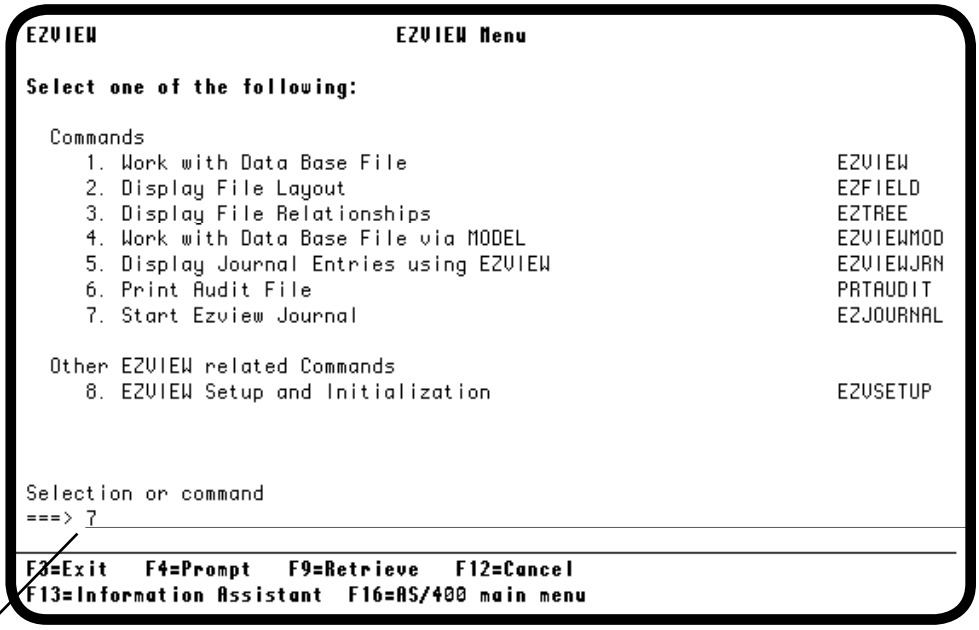
View 2—Entries from updates
Journal Field = JOJOB
Database Fields = *ALL
Type of file transactions = *UPDATE

View 3—Entries from deletions
Journal Field = JOJOB
Database Fields = *ALL
Type of file transactions = *DELETE

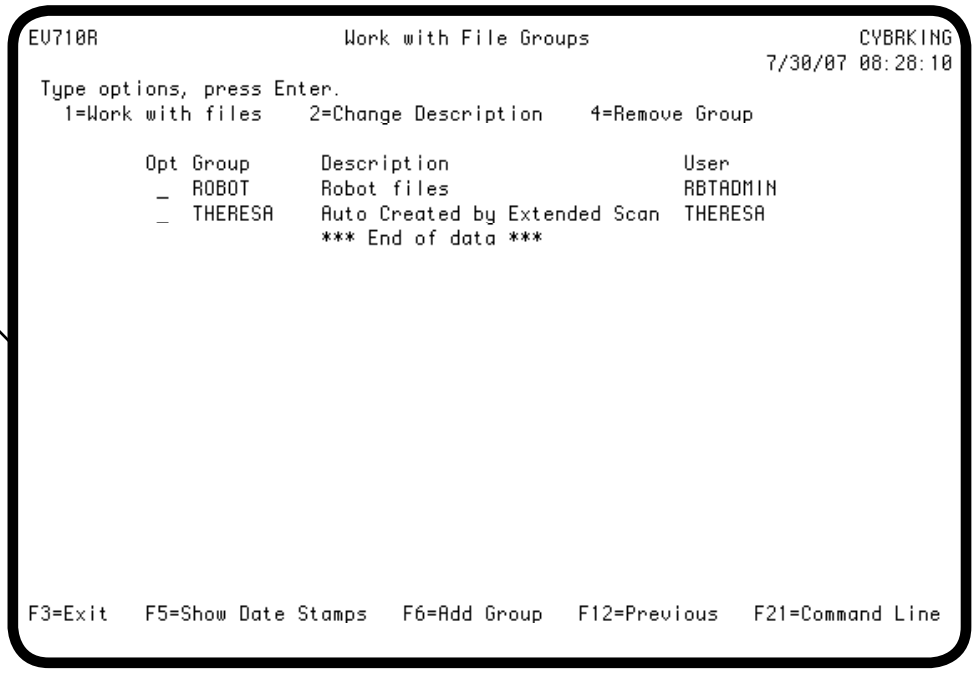
EZJOURNAL Command—Work With File Groups, Journals, and Saved Scan Definitions

To work with journal groups, files, and views, enter the EZJOURNAL or EZJRN command outside Easy View, or select option **7** from the Easy View menu. The Work with Journal Groups panel displays, offering the following options:

- Work with Files in a Group (option **1**)
- Change a Group Description (option **2**)
- Remove a Group (option **4**)
- Show Date Stamps (**F5**)
- Create a Group (**F6**)



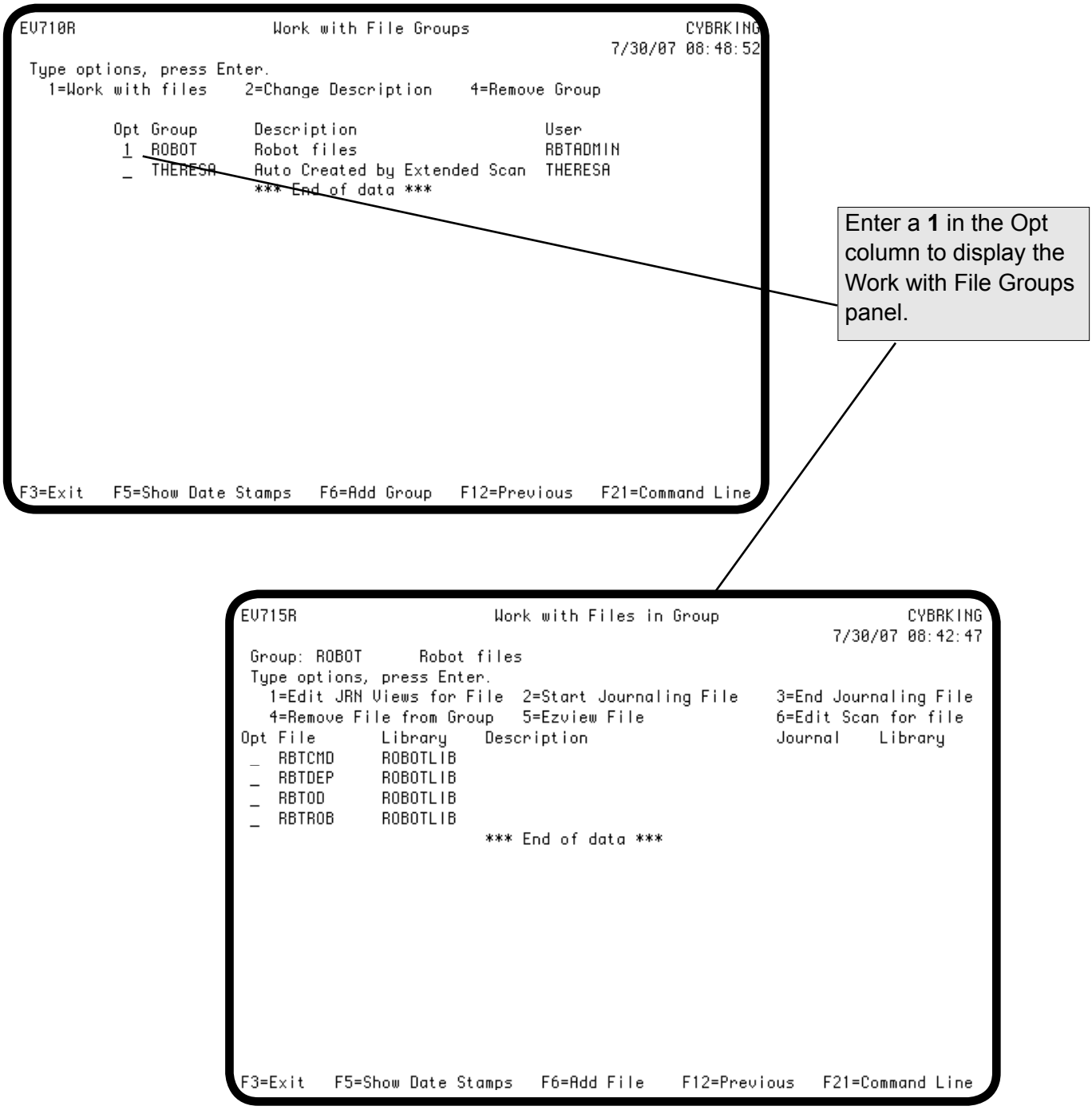
Use option **7** to display the Work with File Groups panel.



Work With Files in Groups

To work with the files from existing journal groups, enter a **1** in the Opt column next to the group you want work with and press Enter. The Work with Files in Group panel displays, offering the following options:

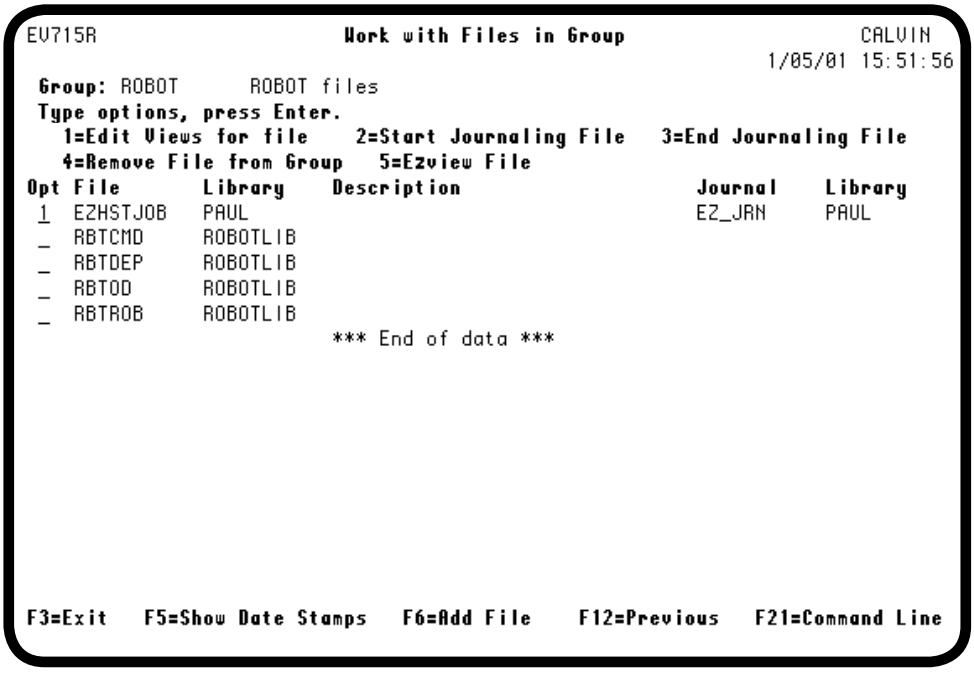
- Edit Views for a Files (option **1**)
- Start Journaling a File (option **2**)
- Stop Journaling a File (option **3**)
- Remove a File from a Group (option **4**)
- Ezview a File (option **5**)
- Edit Scan for File (option **6**)
- Show Date Stamps for a File (**F5**)
- Add a File to a Group (**F6**)



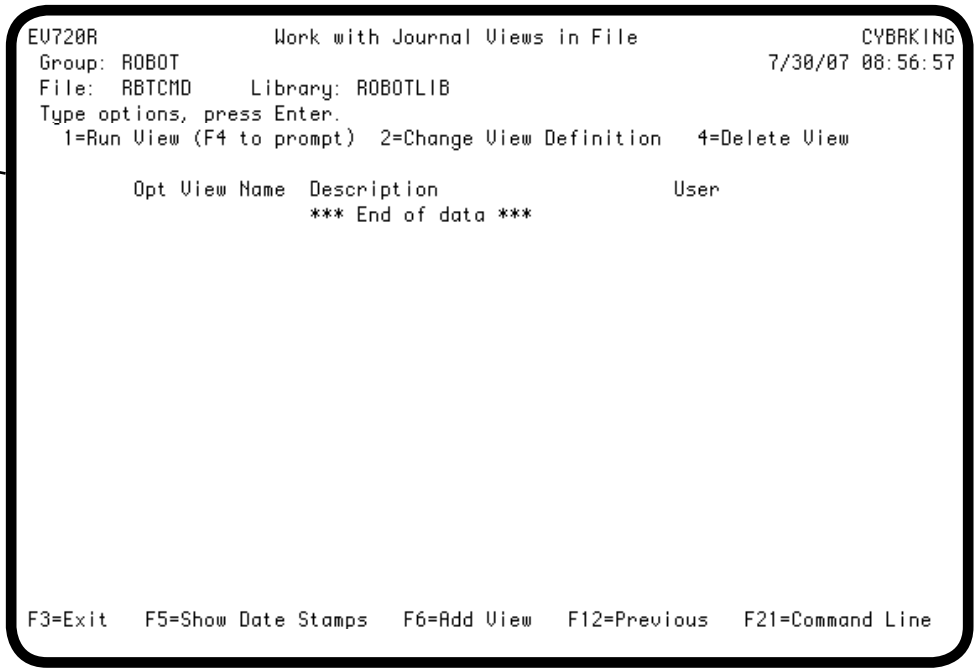
Work With Files in Groups—Work With Journal Views in Files

To edit a view for a file, select the file by entering a **1** in the Opt column next to the file name and pressing Enter from the Work with Files in Groups panel. The Work with Journal Views in File panel displays, listing any views that currently exist for the file and offering the following options:

- Run a View (option **1**)
- Change (Edit) a View Definition (option **2**)
- Delete a View (option **4**)
- Add a View (**F6**)

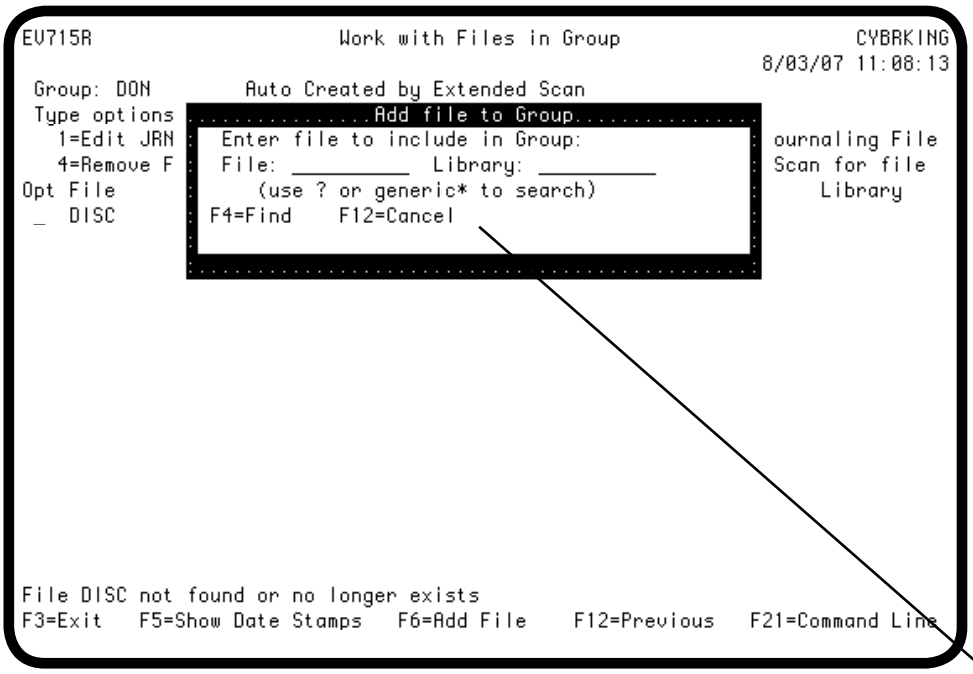


No views exist for this file.

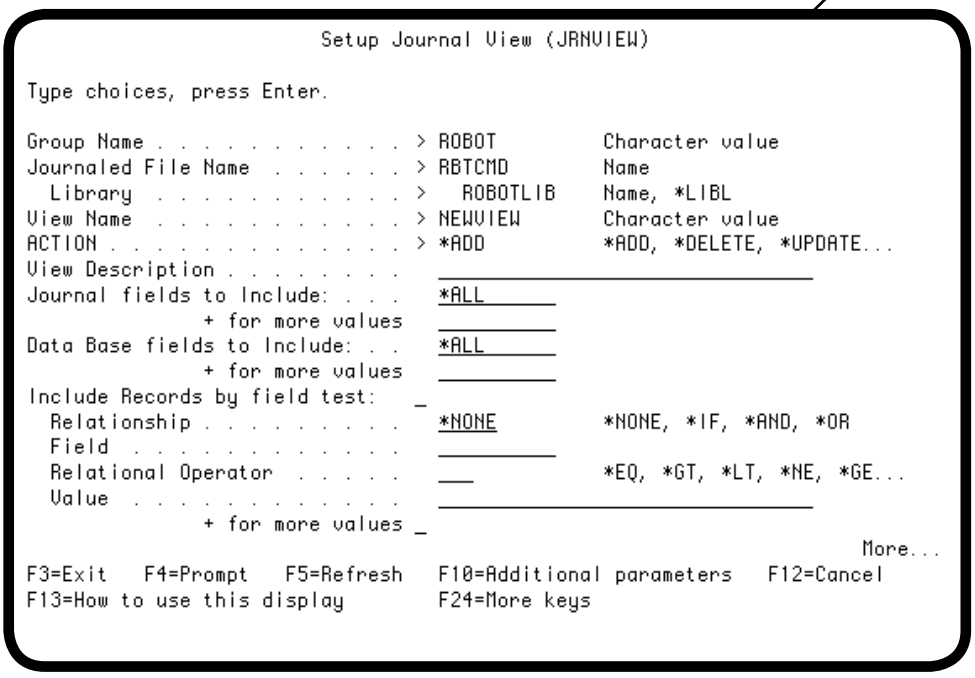


Work With Journal Views in Files—Add a View

To add a view, press **F6** from the Work with Journal Views in File panel. The Add View window appears, allowing you to specify a name for the view. After you specify a name, press Enter.



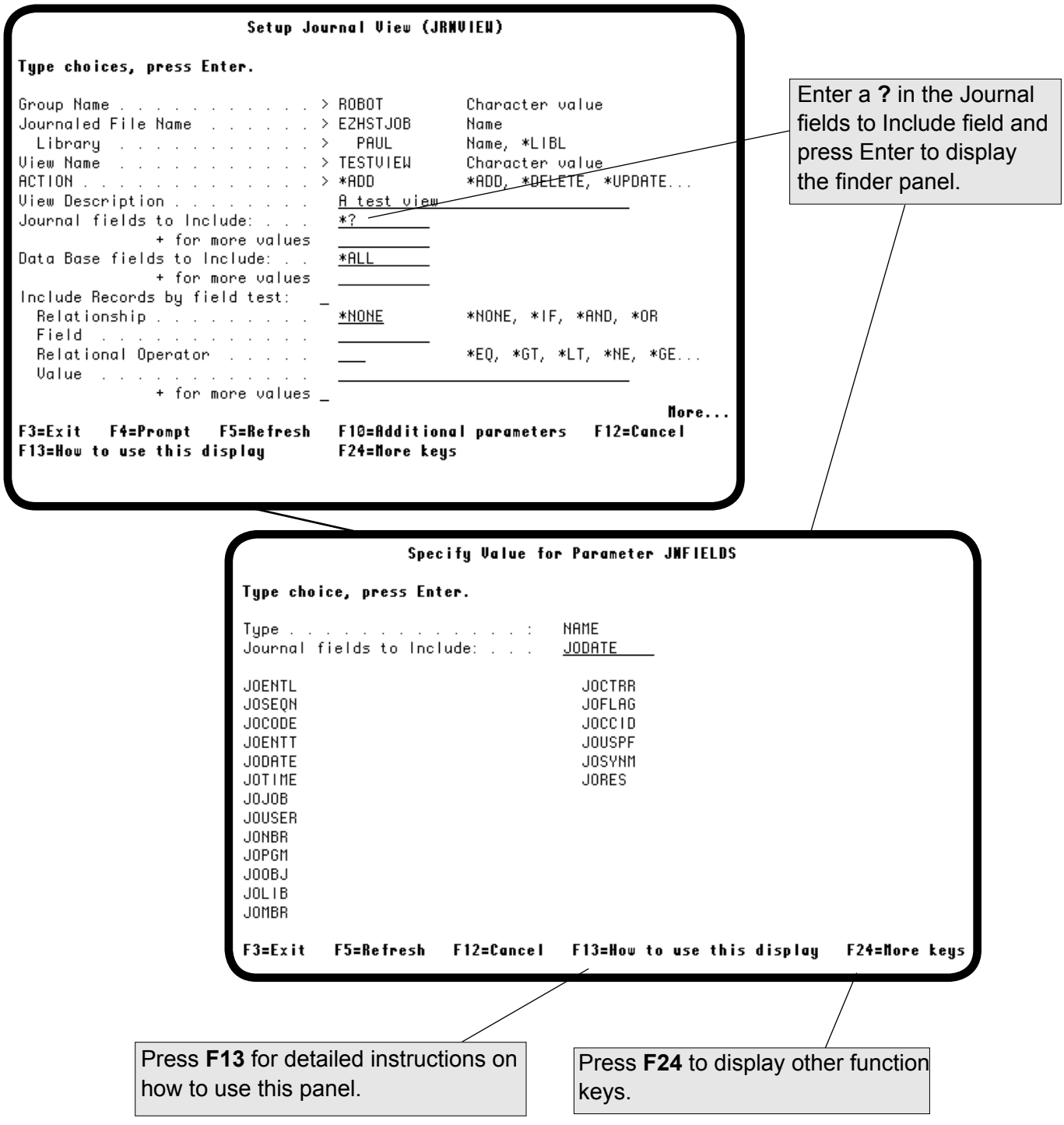
Enter the file name and library, then press **F4**. The Setup Journal View panel displays.



Work With Journal Views in Files—Specify Journal Fields

You can use the Setup Journal View (JRNVIEW) panel to specify the journal fields to include in your view. Journal fields are the fields IBM creates for every journal entry.

Easy View provides a finder for the "fields to include" fields on the panel. Press **F4**, or enter a question mark (?) in the Journal fields to include field and press Enter. A finder panel appears indicating the journal fields that you can select. Select a field and press Enter to return to the Setup Journal View panel. Repeat this process for each journal field you want to include in the view.



Work With Journal Views in Files—Specify Database Fields

You can also use the Setup Journal View (JRNVIEW) panel to specify the database fields to include in your view. Database fields are the fields that are defined for the physical file.

To specify a database field to include in a view, press **F4**, or enter a question mark (?) in the Database Fields to include field and press Enter. A finder panel appears indicating the database fields that you can select. Select a field and press Enter to return to the Setup Journal View panel. Repeat this process for each database field you want to include in the view.

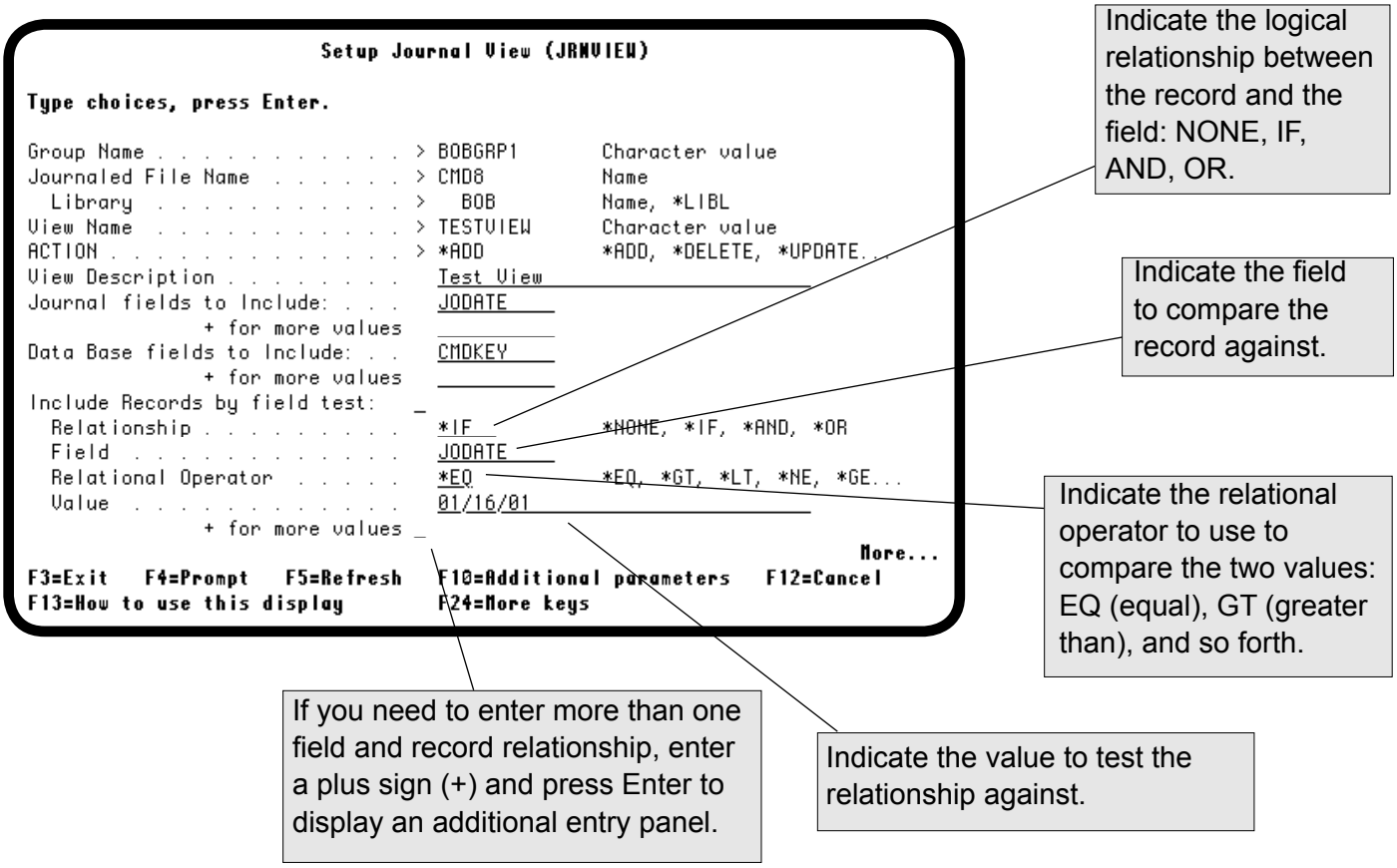
```
                    Setup Journal View (JRNVIEW)

Type choices, press Enter.

Group Name . . . . . > ROBOT         Character value
Journaled File Name . . . . . > EZHSTJOB      Name
  Library . . . . . >   PAUL         Name, *LIBL
View Name . . . . . > TESTVIEW       Character value
ACTION . . . . . > *ADD          *ADD, *DELETE, *UPDATE...
View Description . . . . . > 'A test view'
Journal fields to Include: . . . > JODATE
             + for more values
Data Base fields to Include: . .   ?
             + for more values
Include Records by field test:   _
  Relationship . . . . . .   *NONE         *NONE, *IF, *AND, *OR
  Field . . . . . .
  Relational Operator . . . . .   ___        *EQ, *GT, *LT, *NE, *GE...
  Value . . . . . .
             + for more values _
                                                                More...
F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display        F24=More keys
```

Enter a **?** in the Data Base fields to Include field and press Enter to display the finder panel.

```
                  Specify Value for Parameter DBFIELDS

Type choice, press Enter.

Type . . . . . :   NAME
Data Base fields to Include: . .   JSDATE

JJOBNO                                JTRMCD
JJOBNM                                JRTGST
JPROFL                                JNTIME
JACCNO                                JNDATE
JBILL                                 JTOTRS
JMODFY                                JTRN#
JSBSYS                                JAUX#
JSDATE                                JOBTYP
JSTIME                                JLINES
JEDATE                                JDBPTS
JETIME                                JDBGTS
JELAPS                                JDBUPS
JCYCLE                                JSTAT                          +

F3=Exit   F5=Refresh   F12=Cancel   F13=How to use this display   F24=More keys
```

Work With Journal Views in Files—Specify Relationships Between Records and Fields

You can specify that certain records be included in the view if they satisfy certain relationship conditions with the field. For example, you can include every record that contains a value greater than the value in a field. For more options, press **Page Down**.



Indicate the logical relationship between the record and the field: NONE, IF, AND, OR.

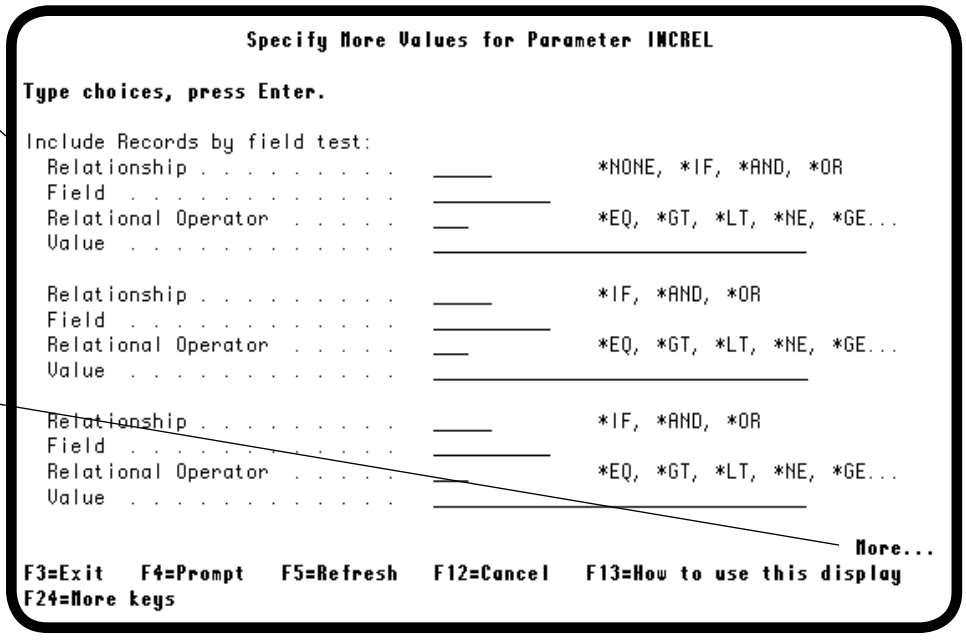
Indicate the field to compare the record against.

Indicate the relational operator to use to compare the two values: EQ (equal), GT (greater than), and so forth.

If you need to enter more than one field and record relationship, enter a plus sign (+) and press Enter to display an additional entry panel.

Indicate the value to test the relationship against.

Use option **8** to display the Work with Journal Groups panel.



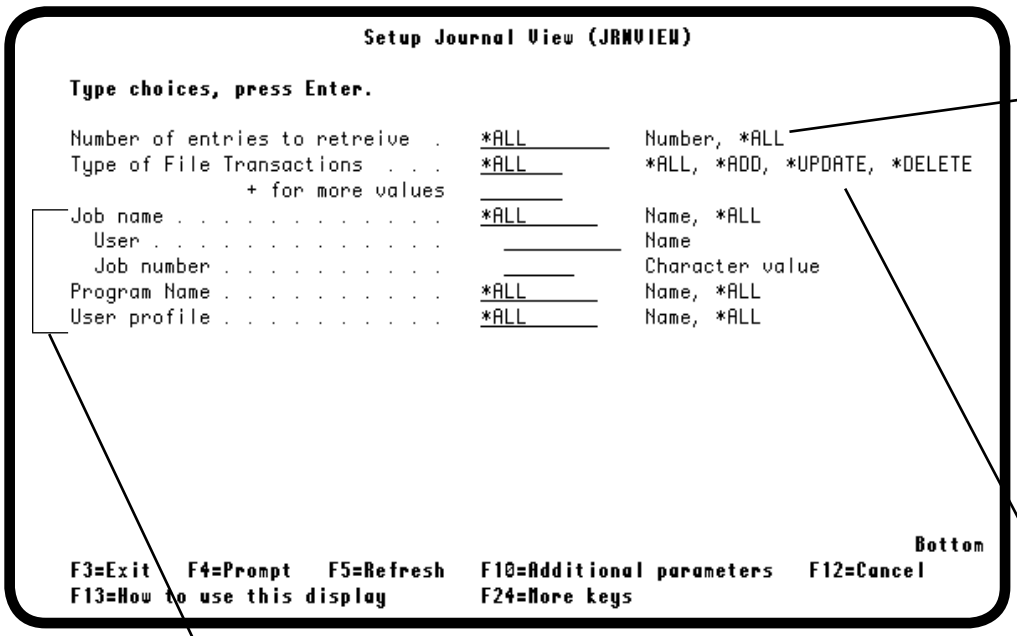
Press **Page Down** for more options.

Work With Journal Views in Files—Specify Journal Entries to Display

When you press Page Down, the remaining options for the Setup Journal View panel are displayed. These options let you specify the following options for displaying journal entries in your view:

- The number of journal entries to display.
- The types of journal entries to display.
- Display journal entries resulting from a transaction associated with a specific job, program, or user profile.

When you are finished, press Enter to update your view.



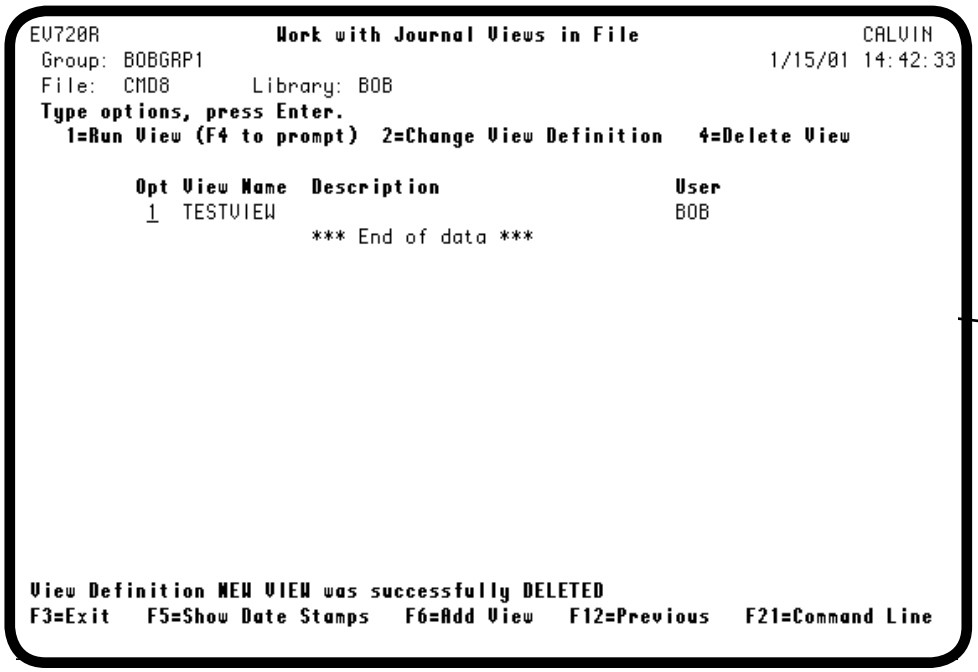
You can display a certain number of entries that meet the other requirements (such as the first ten), or you can display all of them.

You can display journal entries resulting from a transaction associated with a specific job, program, or user profile.

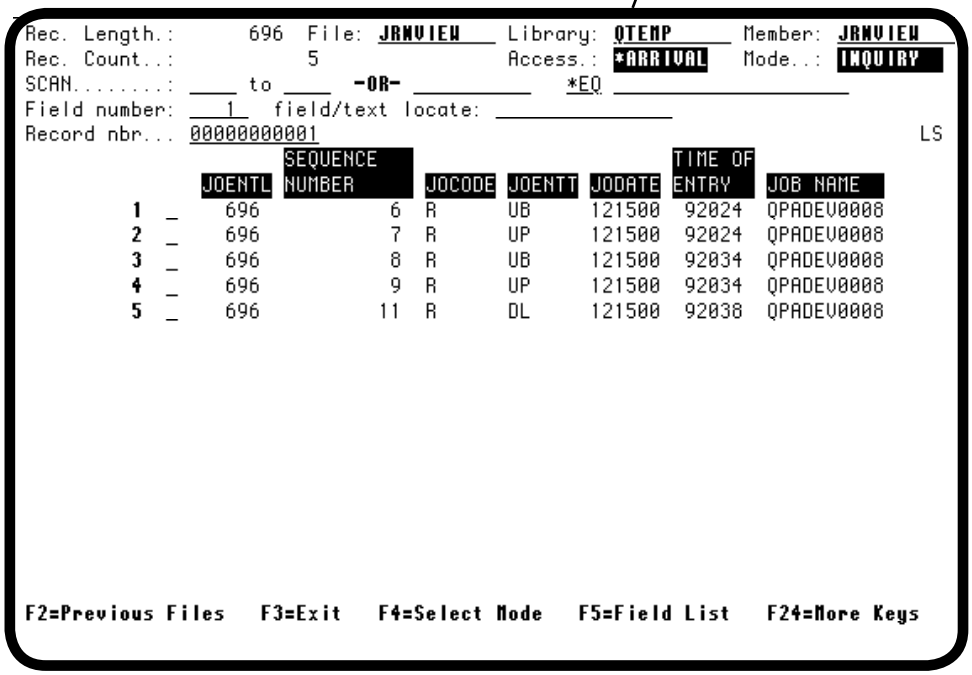
You can display all types of entries, entries due to additions, entries due to updates, or entries due to deletions

Work With Journal Views in Files—Run a View

From the Work with Journal Views in File panel you can "run" the view (assemble and display it) by typing a **1** in the Opt column next to the view you want to run and pressing Enter. The view is assembled and displayed in a temporary file that you can view and save.

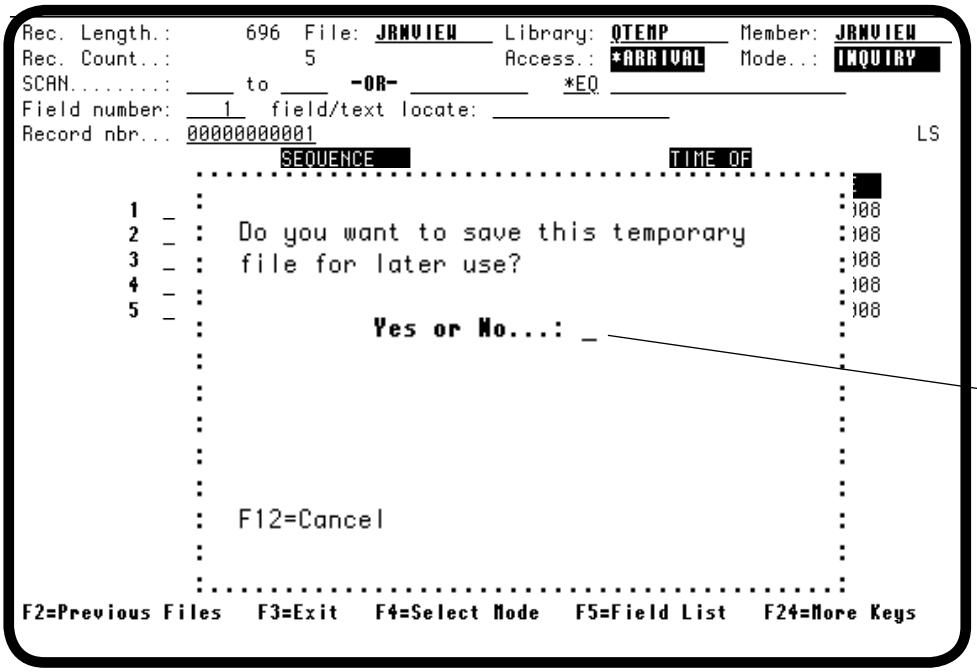


Enter a **1** in the Opt column and press Enter to view the temporary file that you can save.

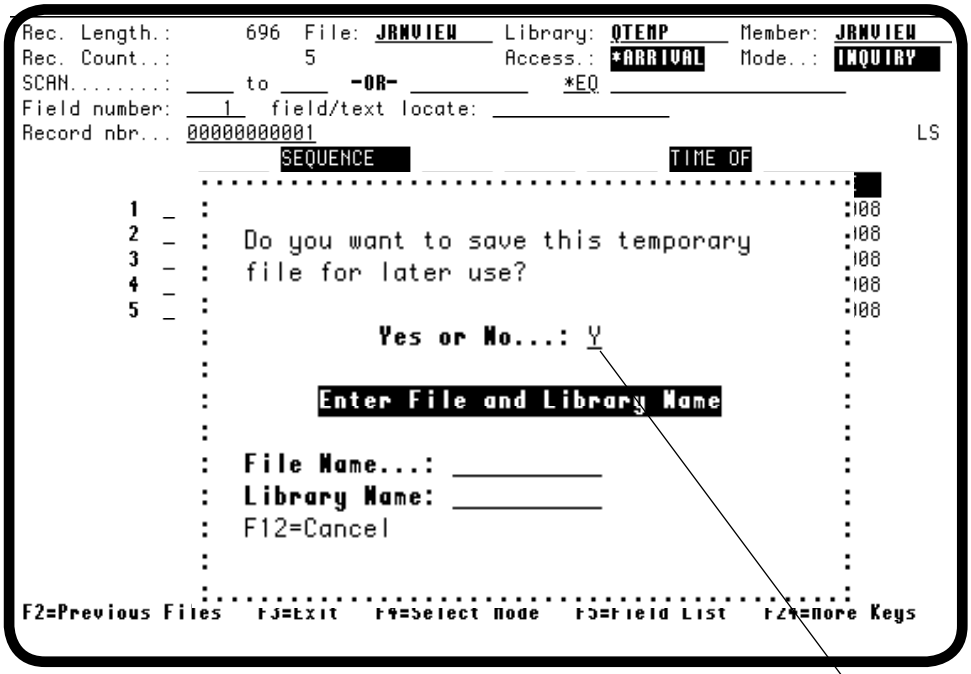


Work With Journal Views in Files—Save a View

When you run a view, the EZJOURNAL view command creates an Ezview of the composite record, based on your view specifications (only the fields you wanted to see). After you have displayed the view, you can save the output file. You can rerun a view as long as the file associated with the view is being journaled.



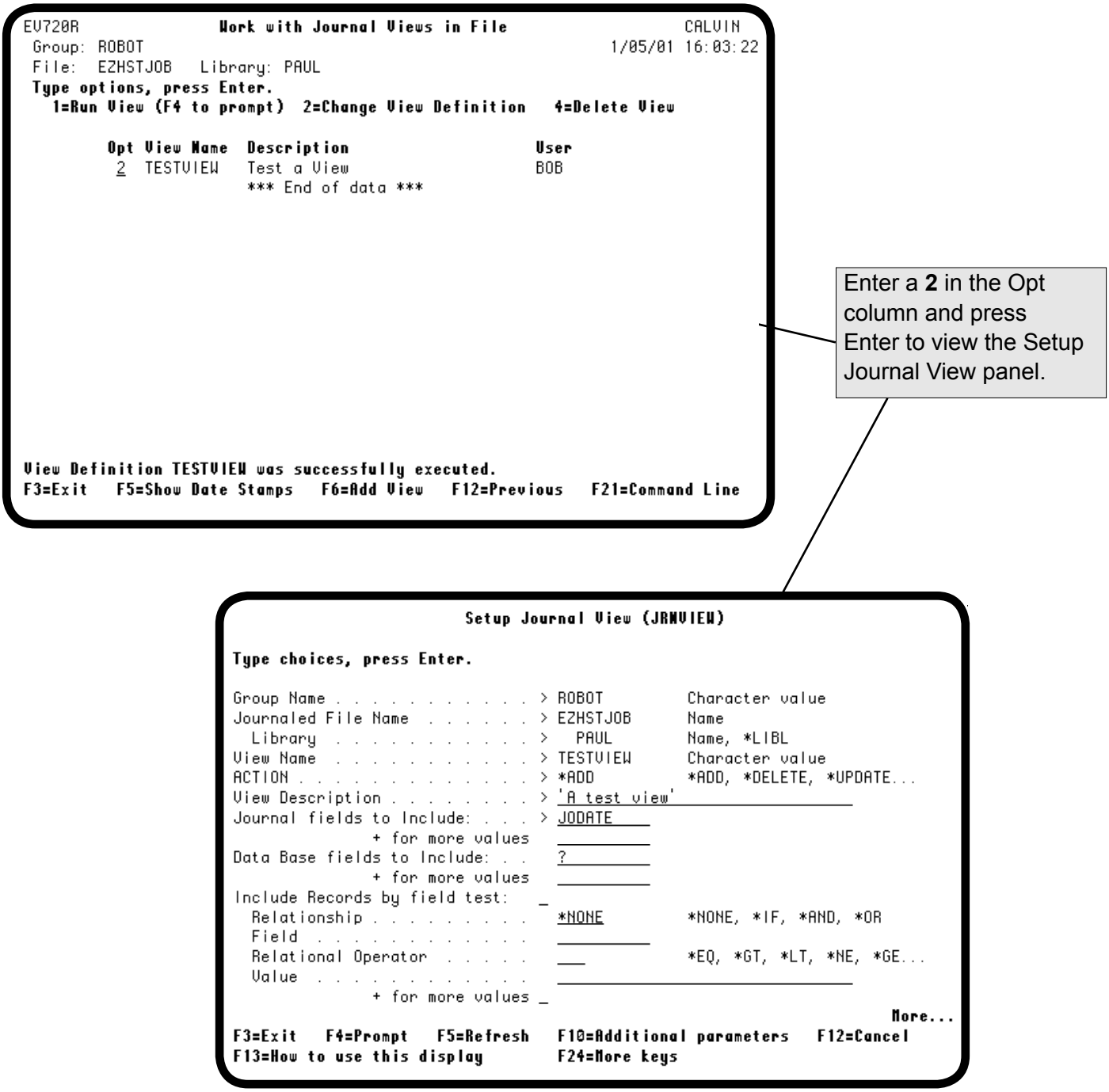
Enter a **Y** and press Enter to set the File Name and Library Name options.



If you decide to save the output file, you can display it again.

Work With Views in Files—Change a View

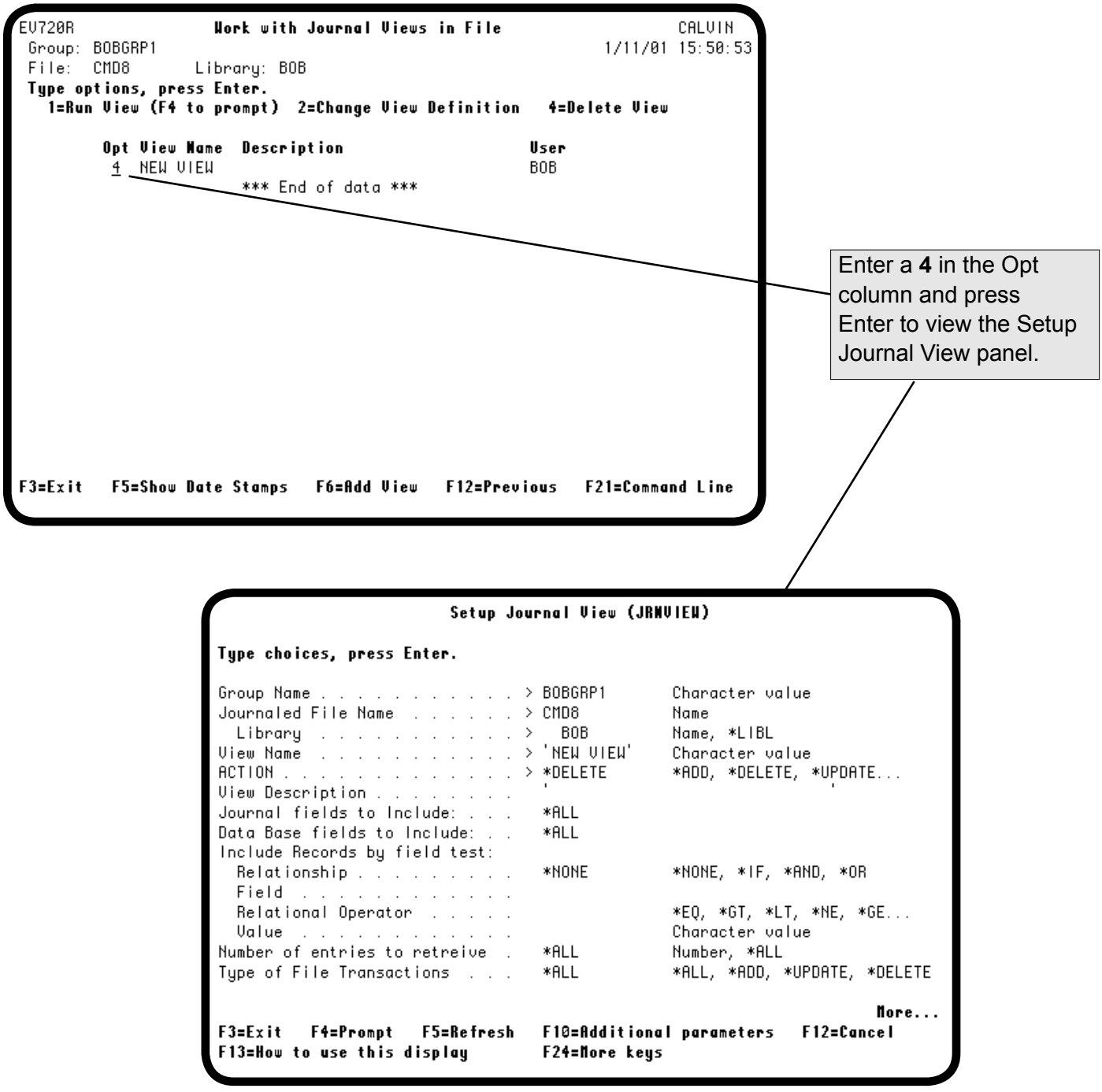
You can edit an existing view by entering a **2** in the Opt column next to the view in the Work with Journal Views in File panel and pressing Enter. The Setup Journal View (JRNVIEW) panel appears with the view you selected displayed. You can edit the various specifications in the view. After you have edited the view, you can display it (run the view) and save the resulting output file. You can rerun the view anytime, as long as the file viewed is being journaled.



Work With Journal Views in Files—Delete a View

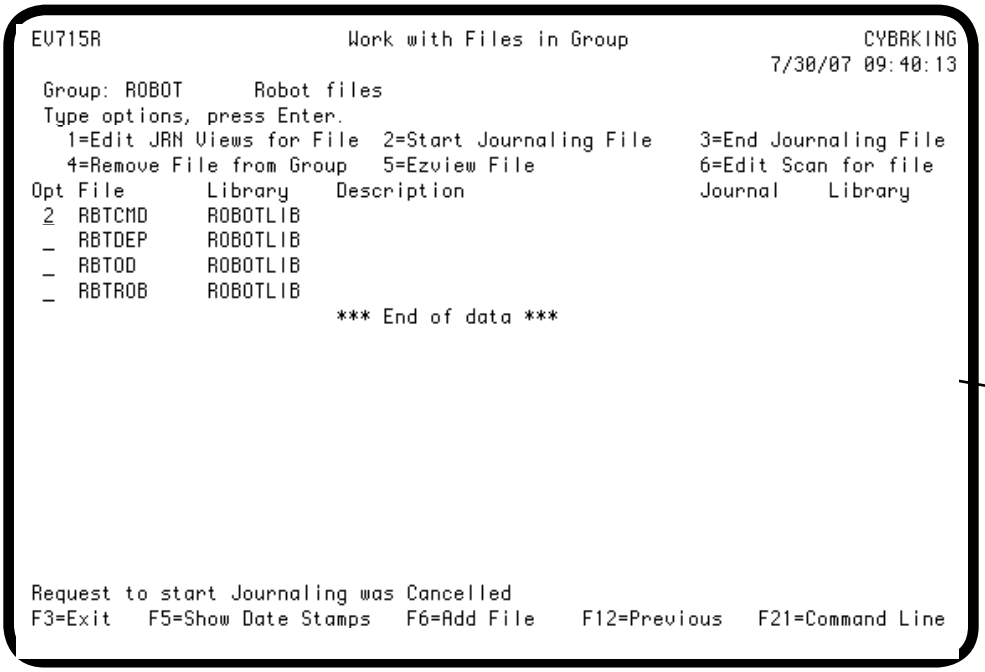
You can delete an existing view by typing a **4** in the Opt column next to the view in the Work with Journal Views in File panel and pressing Enter. The Setup Journal View (JRNVIEW) panel appears. To delete the view, press Enter.

Caution: When you press Enter, Easy View *does not* prompt you for confirmation before deleting the view.



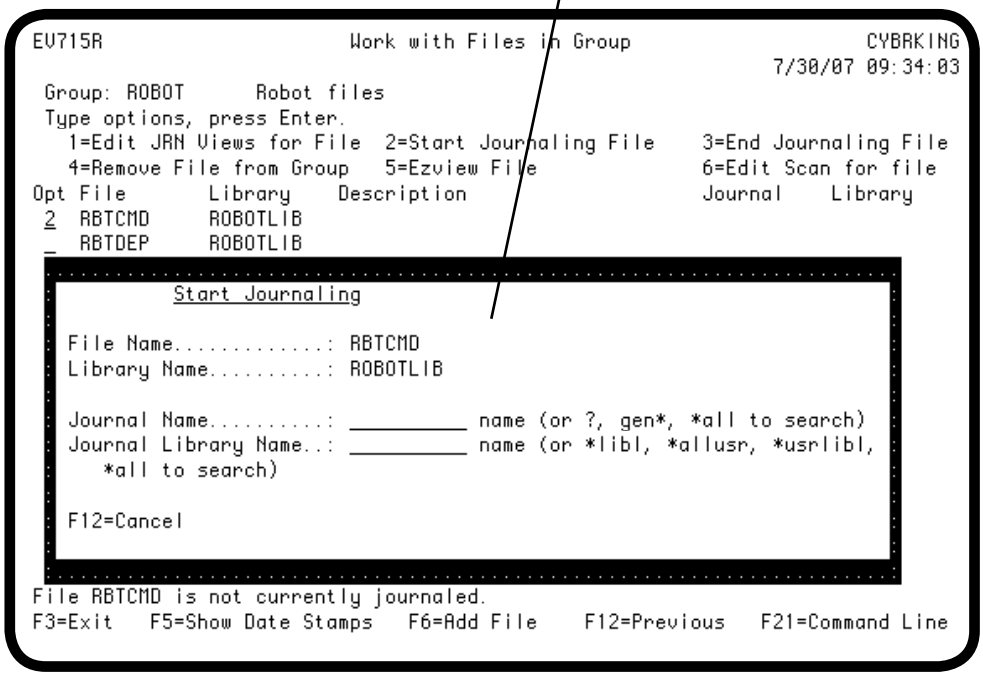
Work With Journal Files in Groups—Journal a File

To journal a file, select the file by entering a **2** in the Opt column next to the file name and pressing Enter from the Work with Files in Groups panel. The Start Journaling window displays.



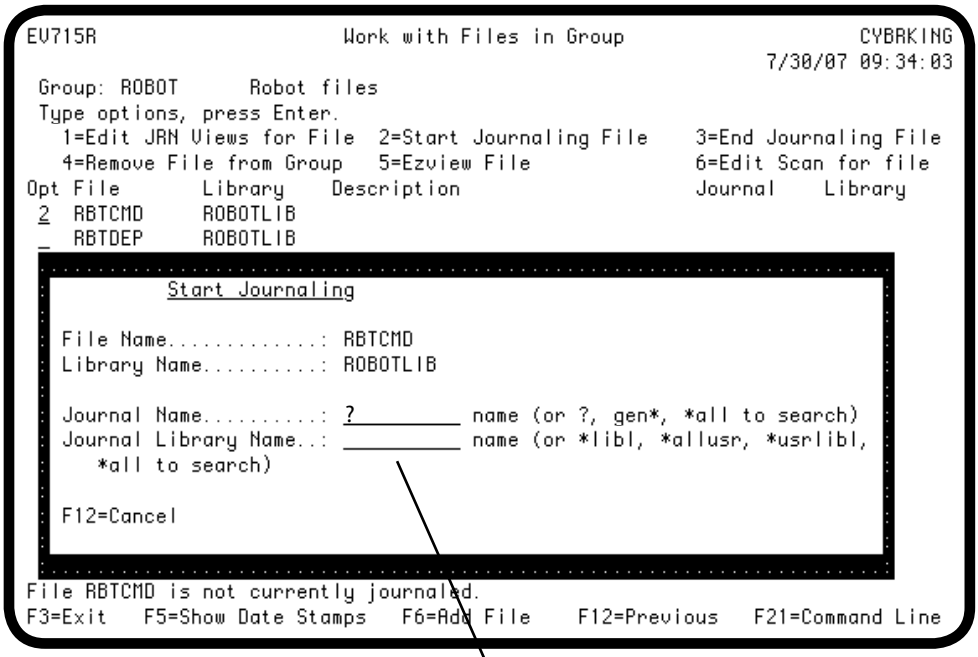
Enter a **2** in the Opt column and press Enter to view the Start Journaling panel.

You must specify the name of the journal and the library where it is located (or use a wild card specification).

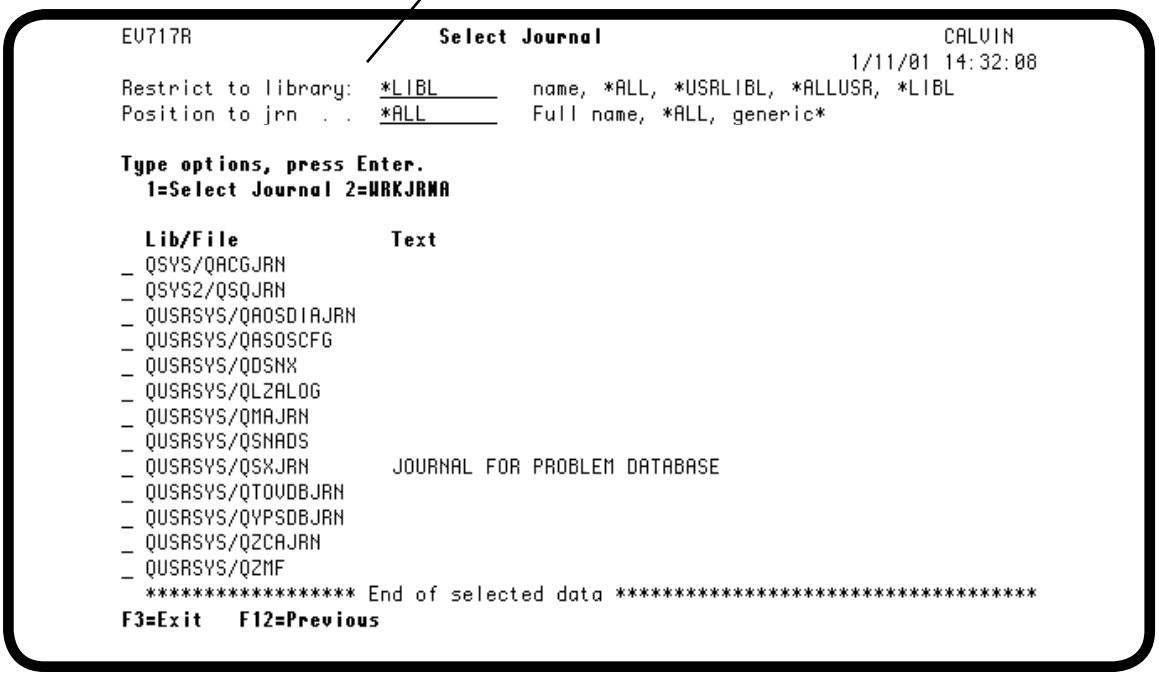


Work With Journal Files in Groups—Journal a File

You can specify the name of the journal, or enter a question mark (?) to display a list of the existing journal names. If you enter a question mark, the Select Journal panel appears, listing all the journals that currently exist in the library you specified.



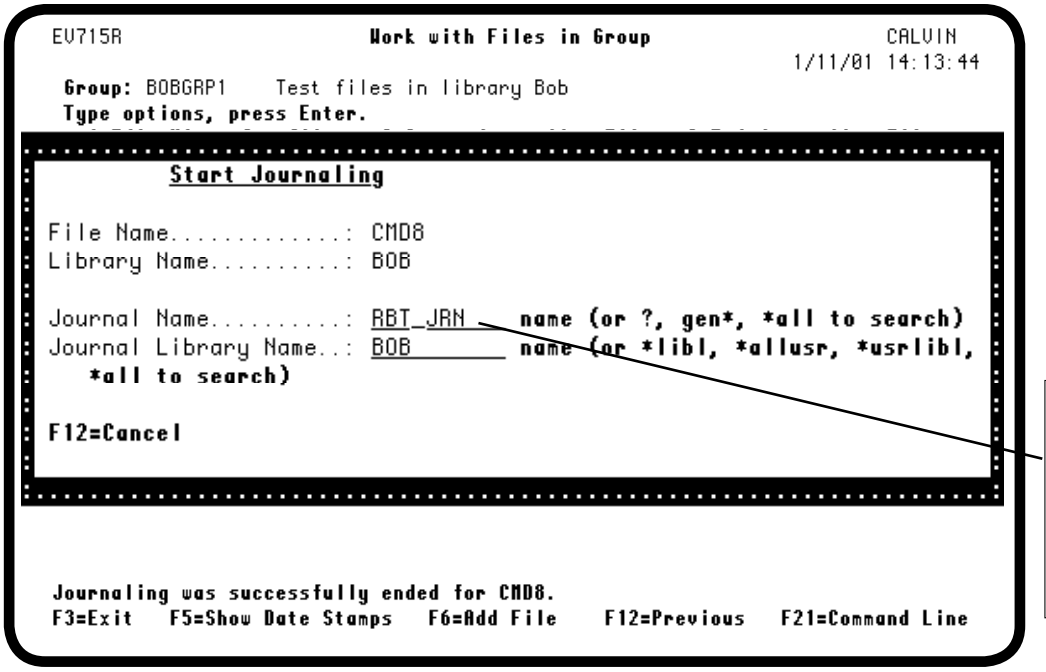
You can press **F4**, or enter a question mark (?) to display a list of options.



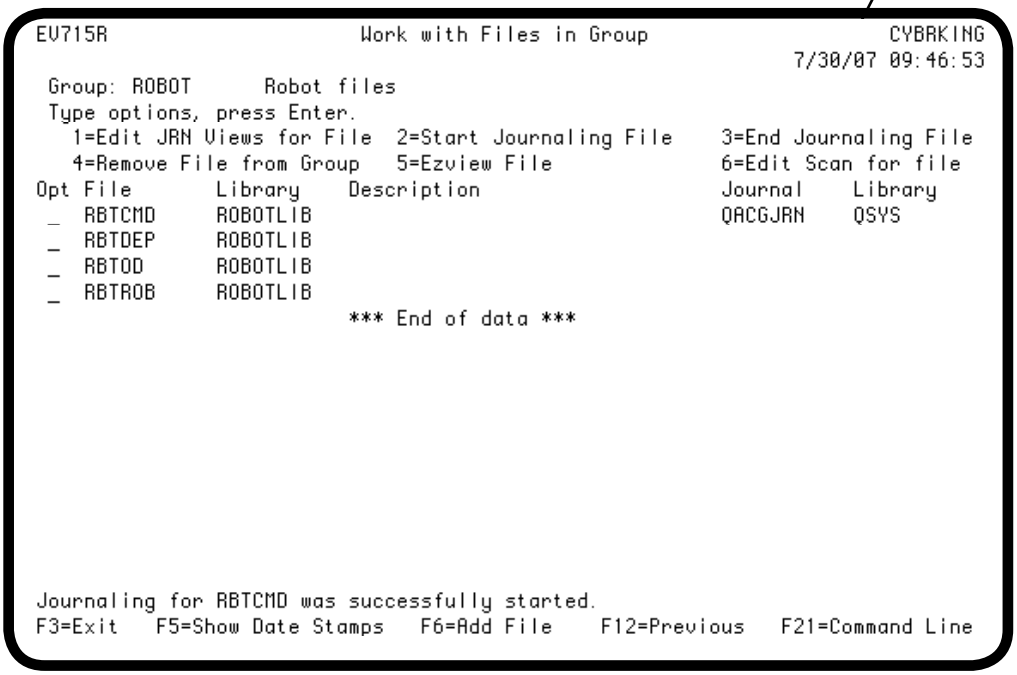
Work With Journal Files in Groups—Journal a File

After you specify the name of the journal, specify the name of the library containing the journal (or use one of the wild card options to display a list of journals to choose from), and press Enter. The Work with Files in Group window reappears, listing the file, the journal you specified, and the library containing the journal.

Note: You must have access privileges to both the journal and the file that you specified.

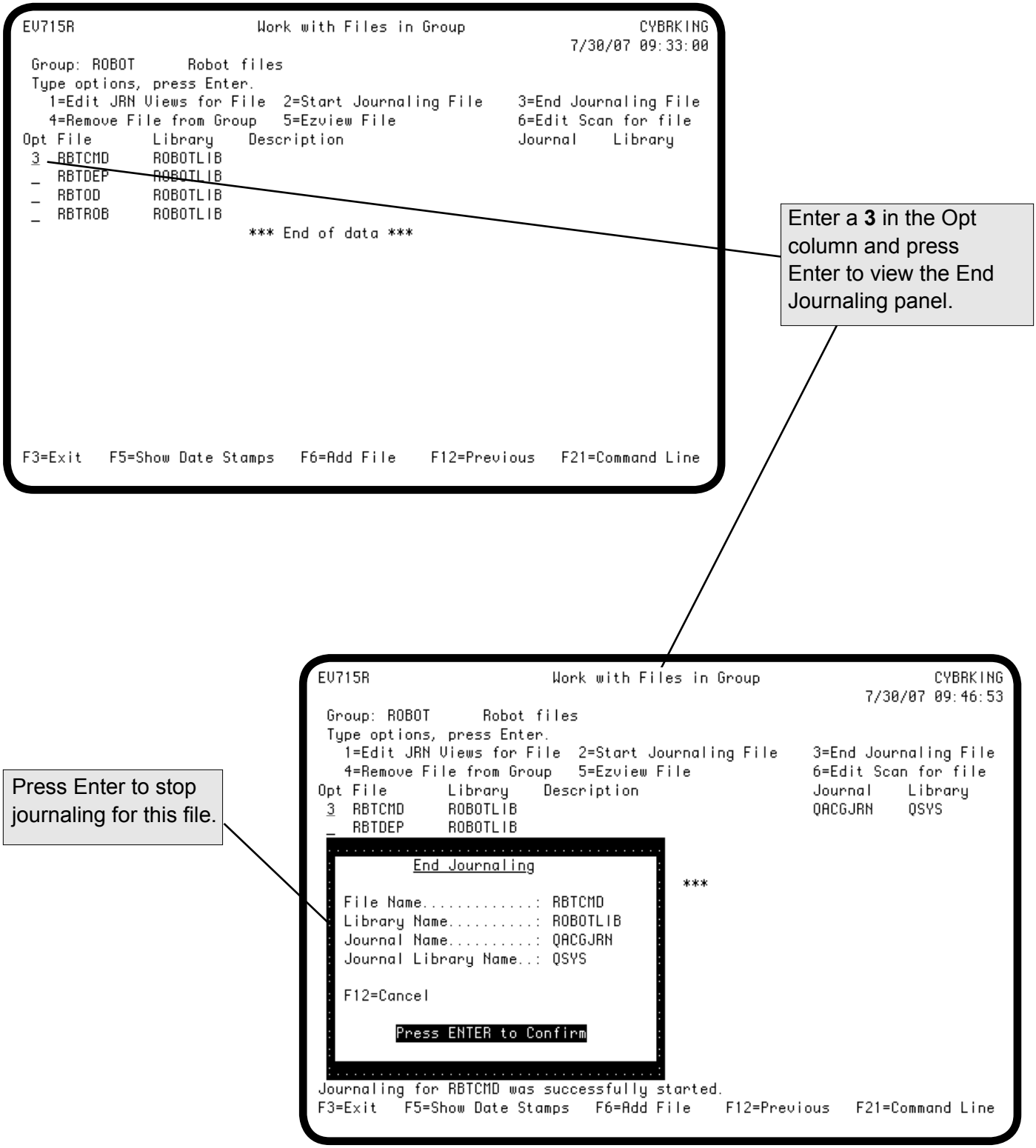


Enter the Journal Name and Journal Library Name, then press Enter. You receive a message that journaling was successfully started.



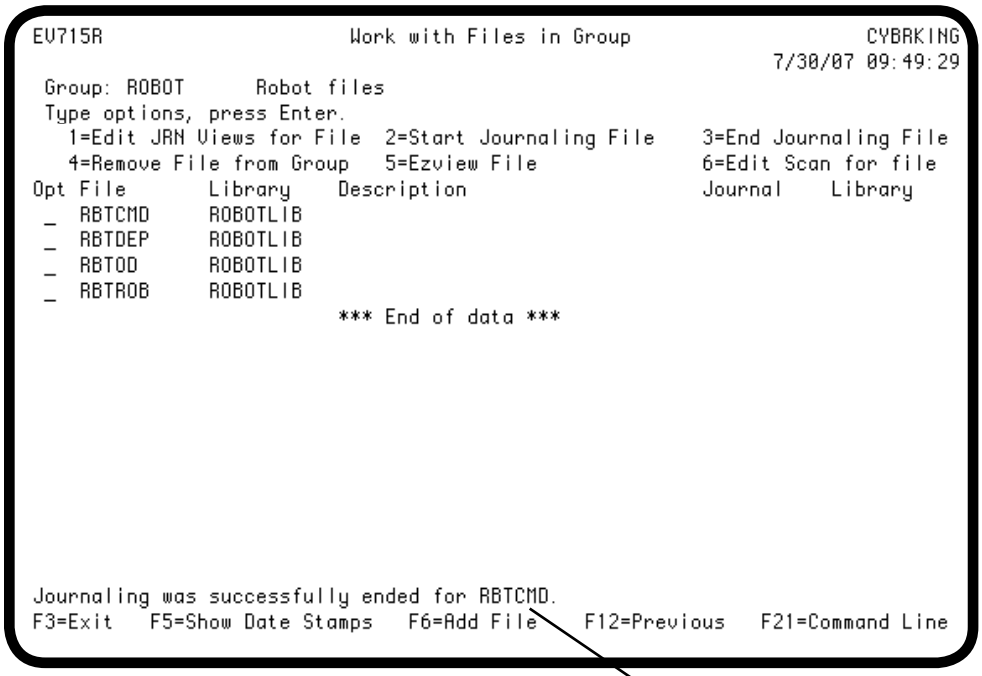
Work With Journal Files in Groups—Stop Journaling a File

To stop journaling for a file, select the file by entering a **3** in the Opt column next to the file name and pressing Enter from the Work with Files in Groups panel. The End Journaling window displays. Press Enter to stop journaling, or **F12** to cancel.



Work With Journal Files in Groups—Stop Journaling a File

You return to the Work with Files in Group panel and a message appears indicating that you have stopped journaling successfully.



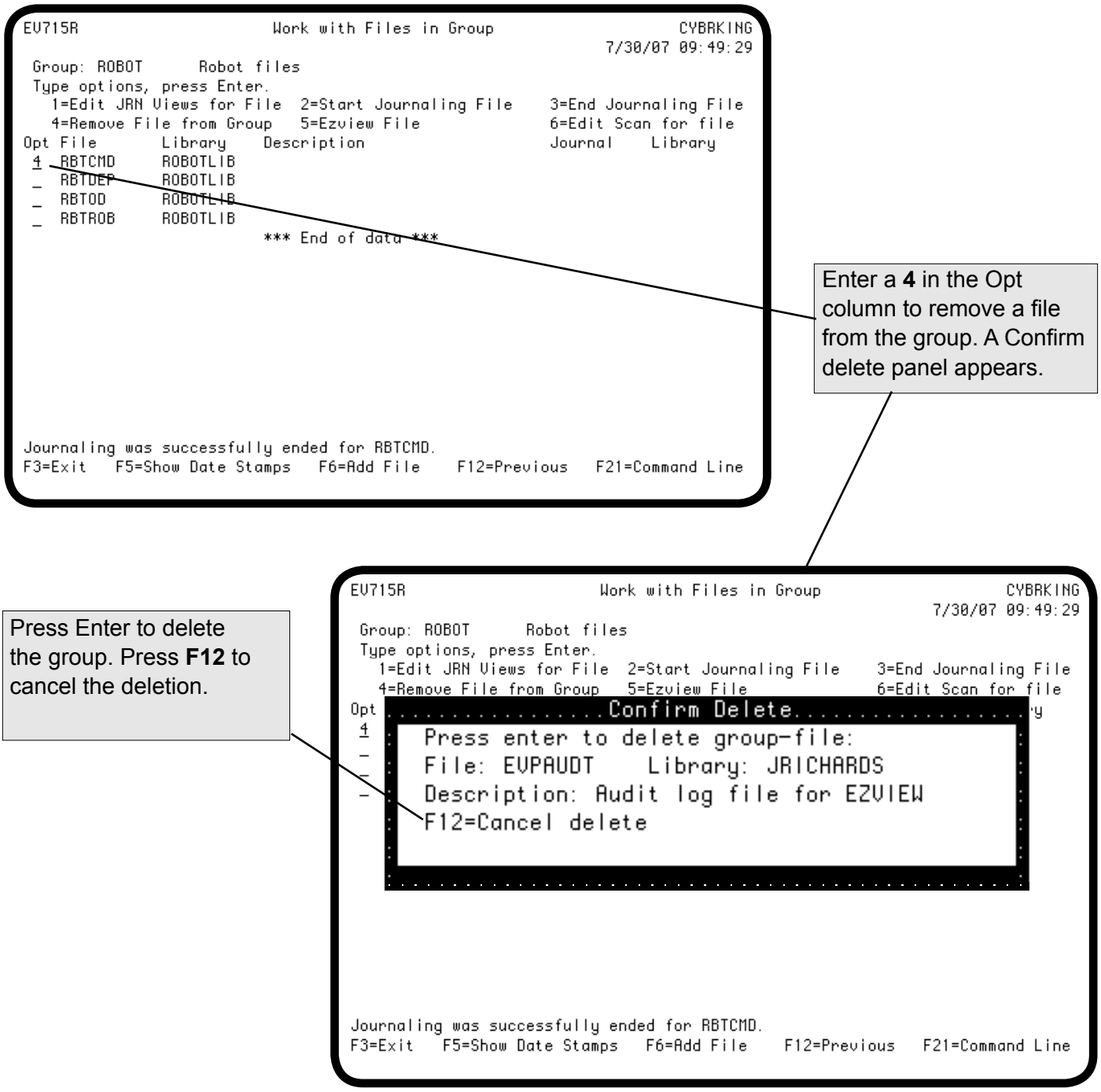
Indicates that journaling was stopped for this file.

Work With Journal Files in Groups—Remove a File From a Group

To remove a file from a group, enter a **4** in the Opt column next to the file you want to remove and press Enter. The Confirm Delete window appears to allow you to verify that you actually want to delete the file.

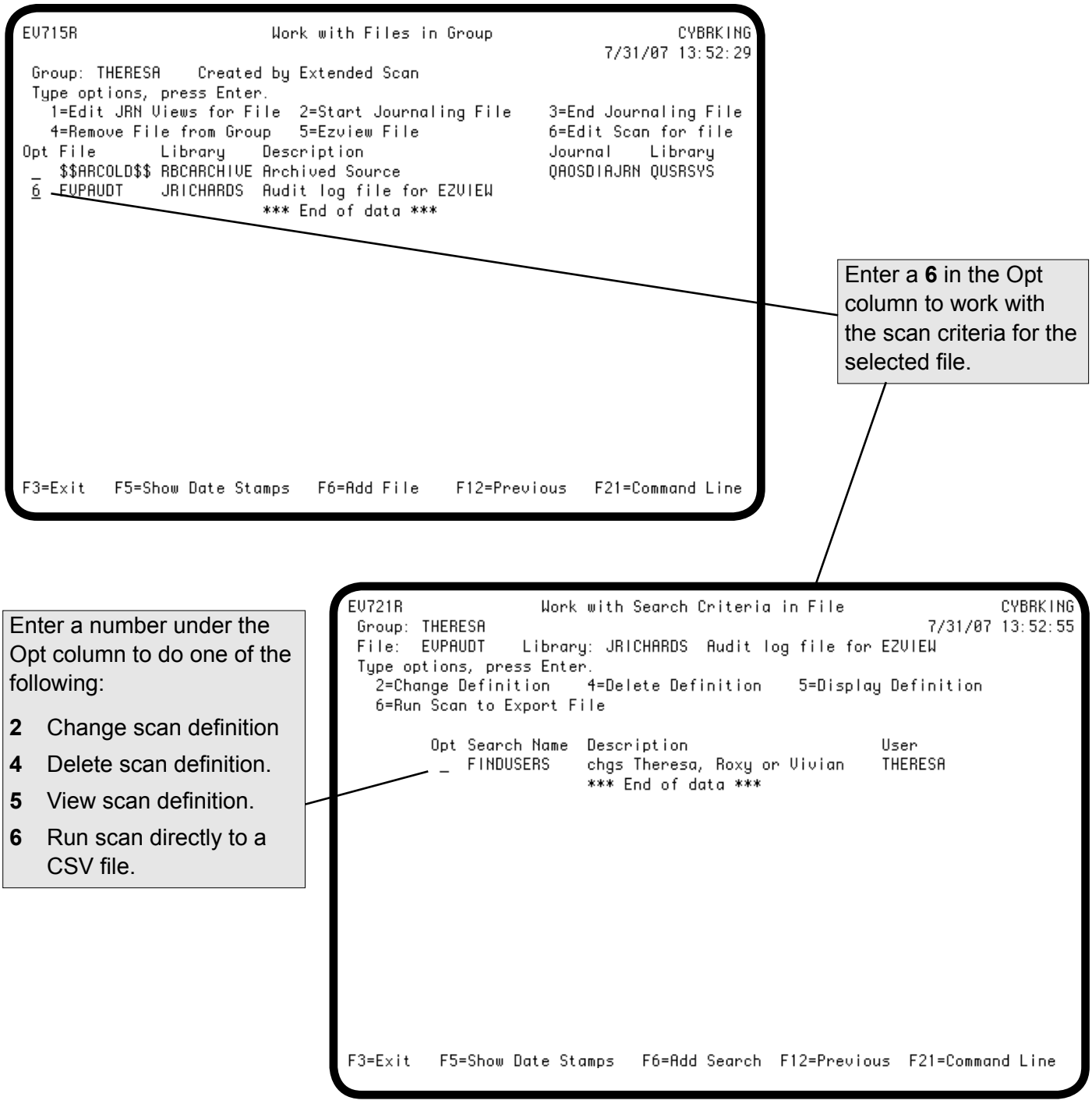
Notes:

- When you remove a file from an Easy View group, you are not deleting the physical file, you are simply removing it from the group structure that Easy View created. The physical file still exists.
- You cannot remove a file that has dependent views. To remove a file with dependent views, you must first remove the views from the file.



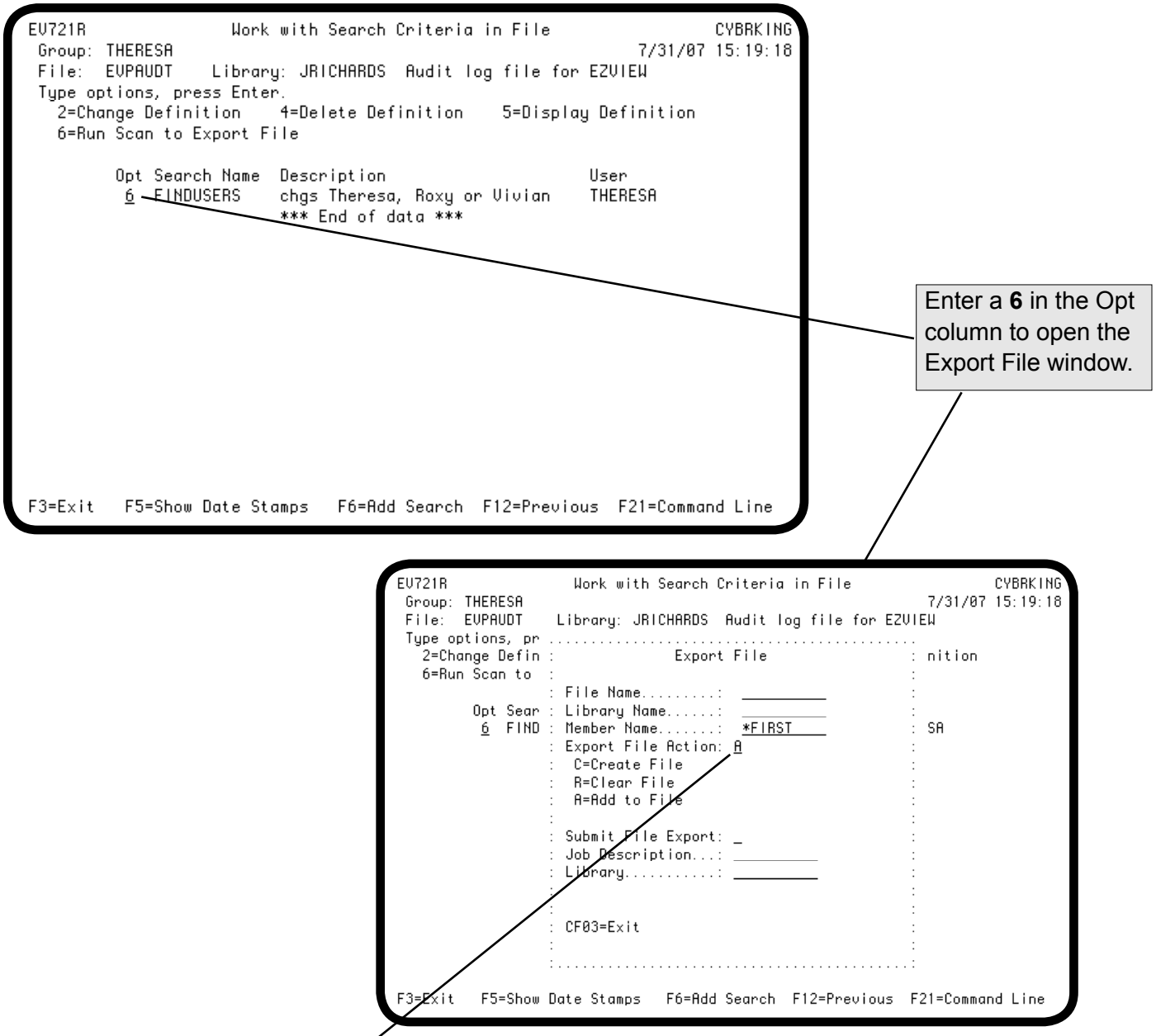
Work With Journal Files in Groups—Edit Scan for File

You can edit saved scans from the Work with Files in Group panel. To edit a saved scan, enter a 6 in the Opt column next to the file that you want to edit and press Enter. The Work with Search Criteria in File panel appears.



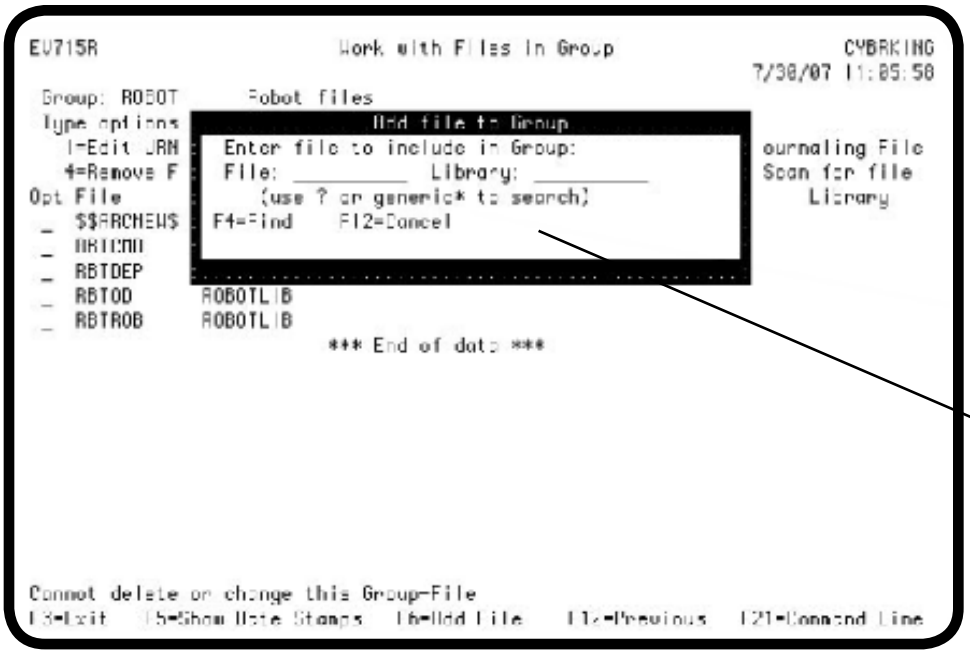
Work With Journal Files in Groups—Run Scan to Export File

You can run saved scans directly to a Column Delimited (CSV) file. To run a scan to a CSV file, enter a 6 in the Opt column next to the scan you want to export and press Enter. The Export File window appears.

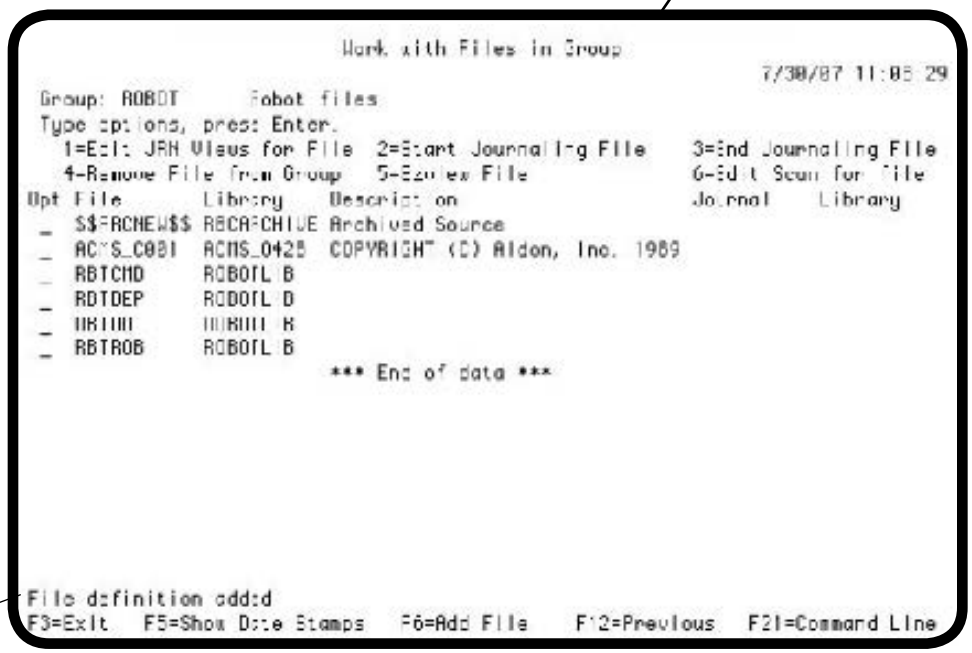


Work With Journal Files in Groups—Add a File To a Group

To add a file to an existing journal group, press **F6** from the Work with Files in Group panel. The Add File to Group window displays. Type the name of the file to add to the group and the library where it is located, and press Enter. The Work with Files in Library panel reappears with the new file added to the group. If the file is currently being journaled, it is indicated in the Journal column to the right.



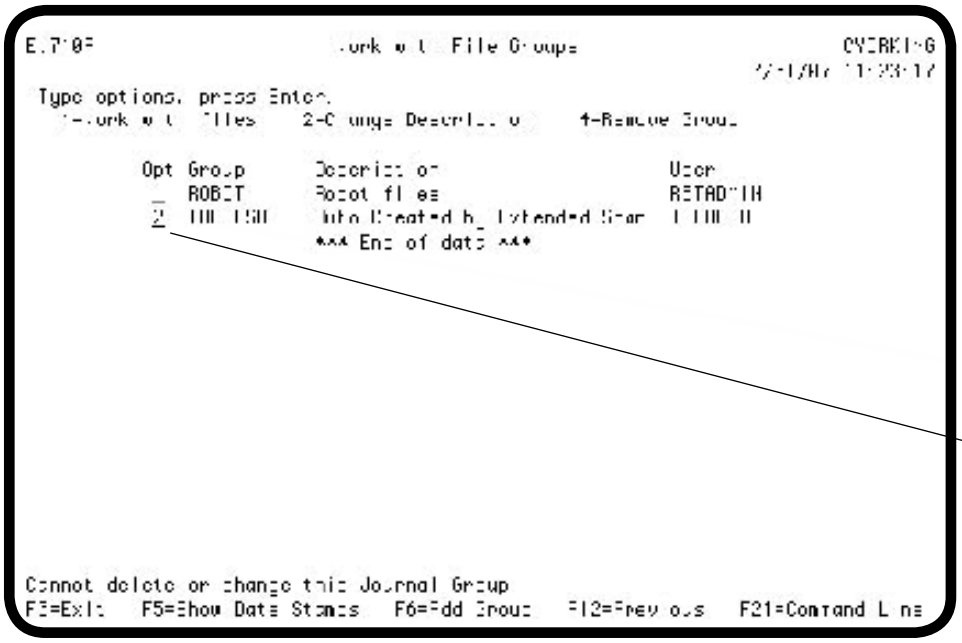
Enter the File name and Library name. Press **F4** to search for a file to add. Press Enter after adding a file.



Indicates that the file was added to the group.

Work With File Groups—Change a Group Description

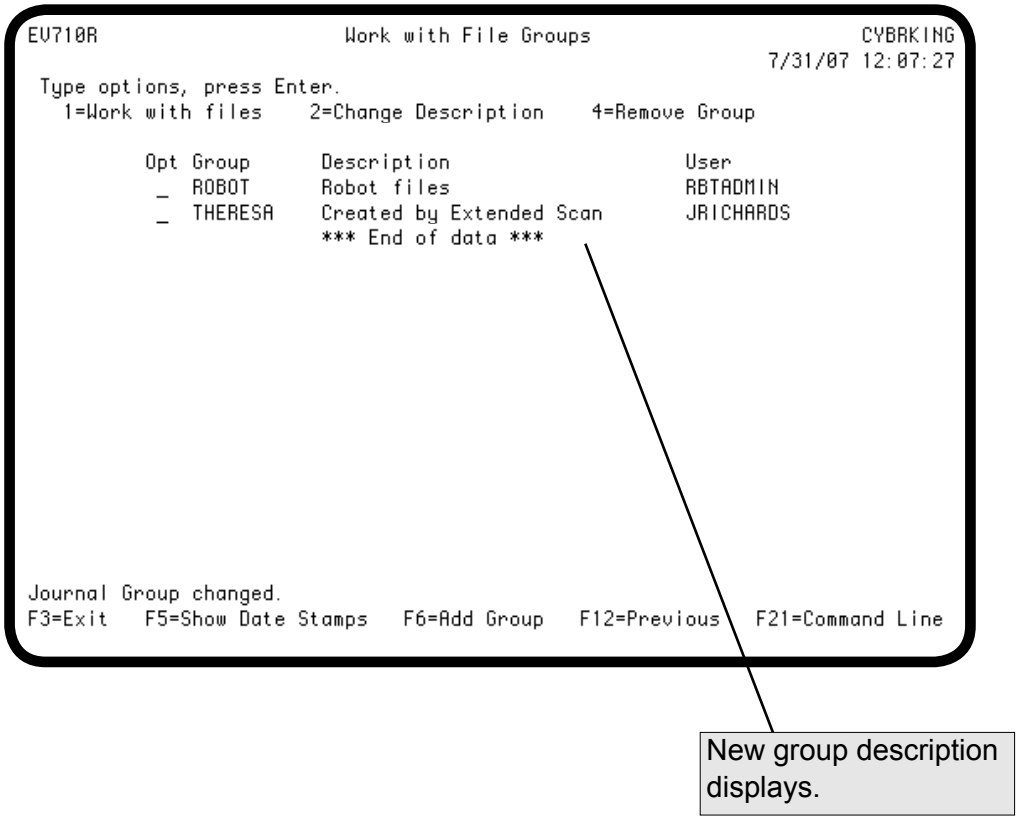
To change the description of an existing file group, enter a **2** in the Opt column next to the group and press Enter from the Work with File Groups panel. The Change Group window displays. You can use this window to change the descriptions of the file group.



Enter a **2** in the Opt column to open the Change Group panel.

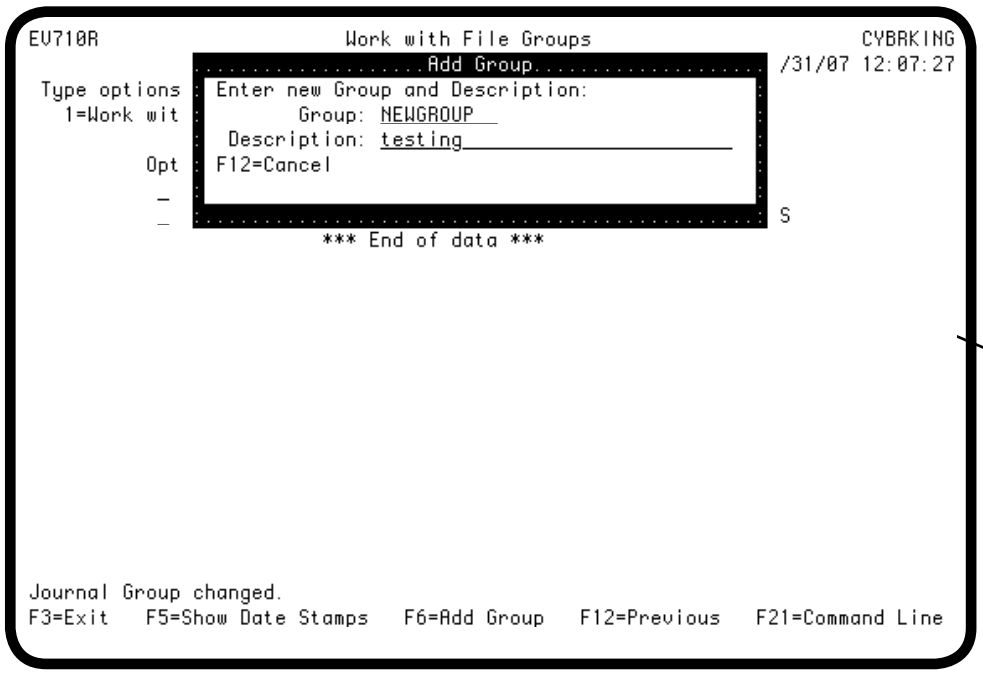
Work With File Groups—Change a Group Description

When you have finished changing the description of the file group, press Enter. The Work with File Groups panel redisplays with your new description.



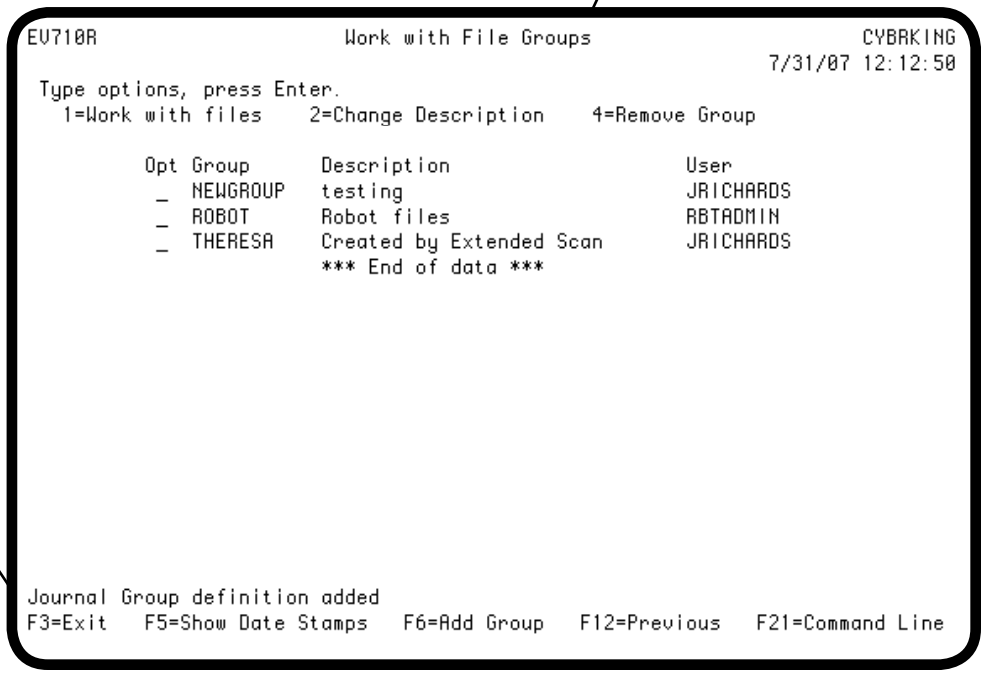
Work With File Groups—Add a Group

To add a file group for displaying journal views, press **F6** from the Work with File Groups panel. The Add Group window displays. Enter a group name and description for your group, and press Enter.



Press **F6** to view the Add Group panel. Add the name of the new group and a short description. Then, press Enter.

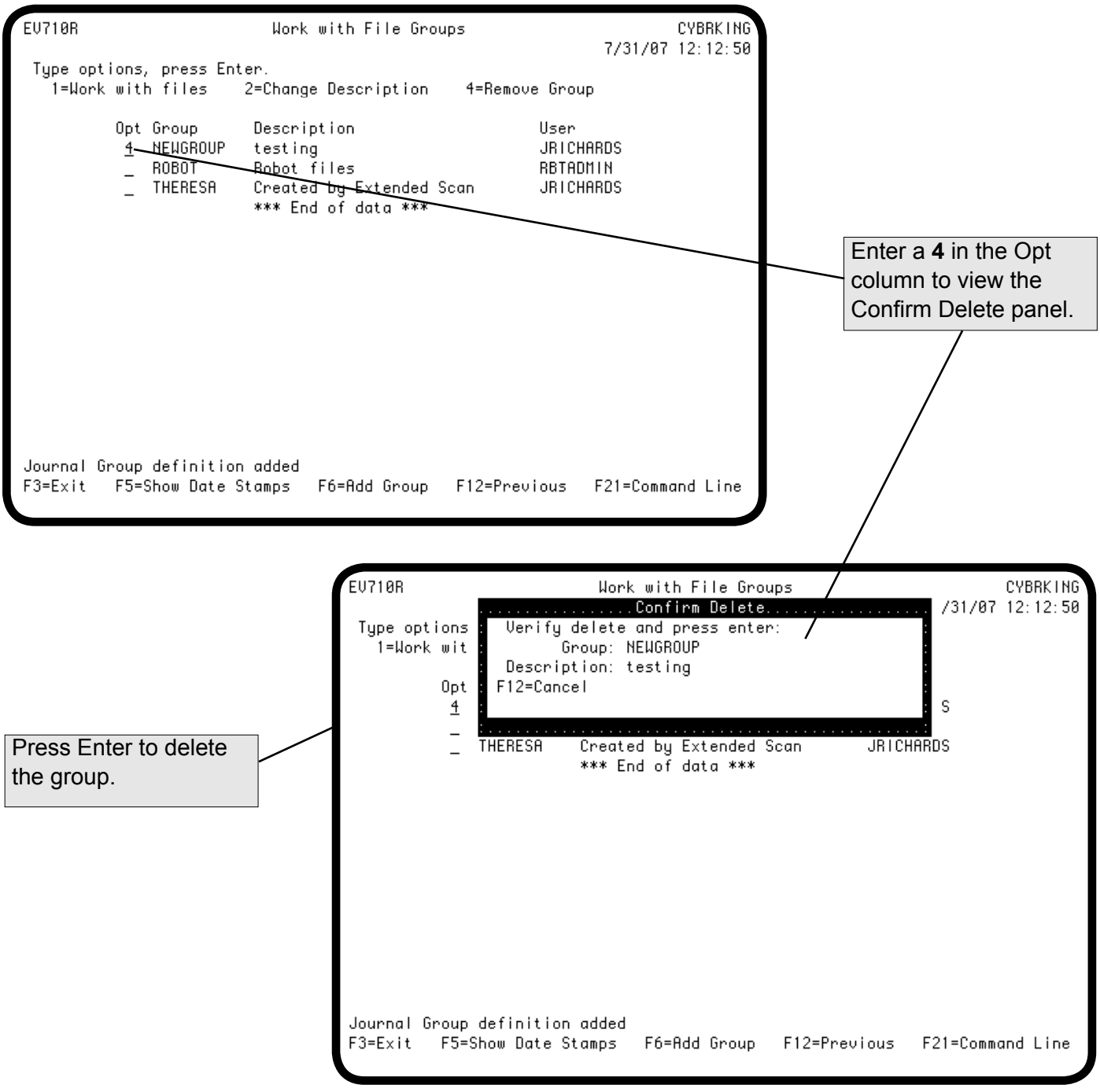
When you create a group successfully, a message appears indicating that a new journal group was defined.



Work With File Groups—Remove a Group

To remove a file group, enter a 4 next to the group you want to remove and press Enter. The Confirm Delete window appears to allow you to verify that you actually want to delete the group.

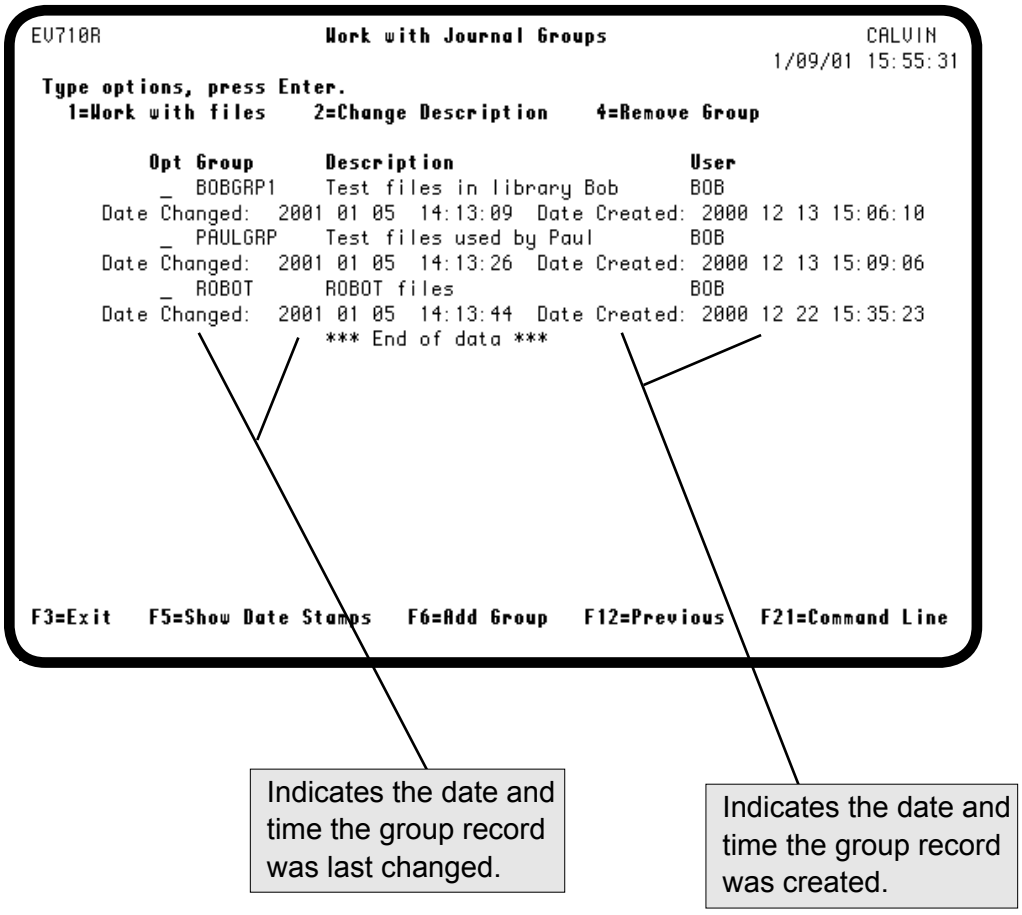
Note: You cannot remove a group that has dependent files or views. You must remove the dependencies. First remove the views from the files, then remove the dependent files from the group. Remember, when you remove a file from Easy View you are not deleting the physical file, you are simply removing the file from the group structure that Easy View created—the physical file still exists.



Work With File Groups—Display Time and Date Stamps

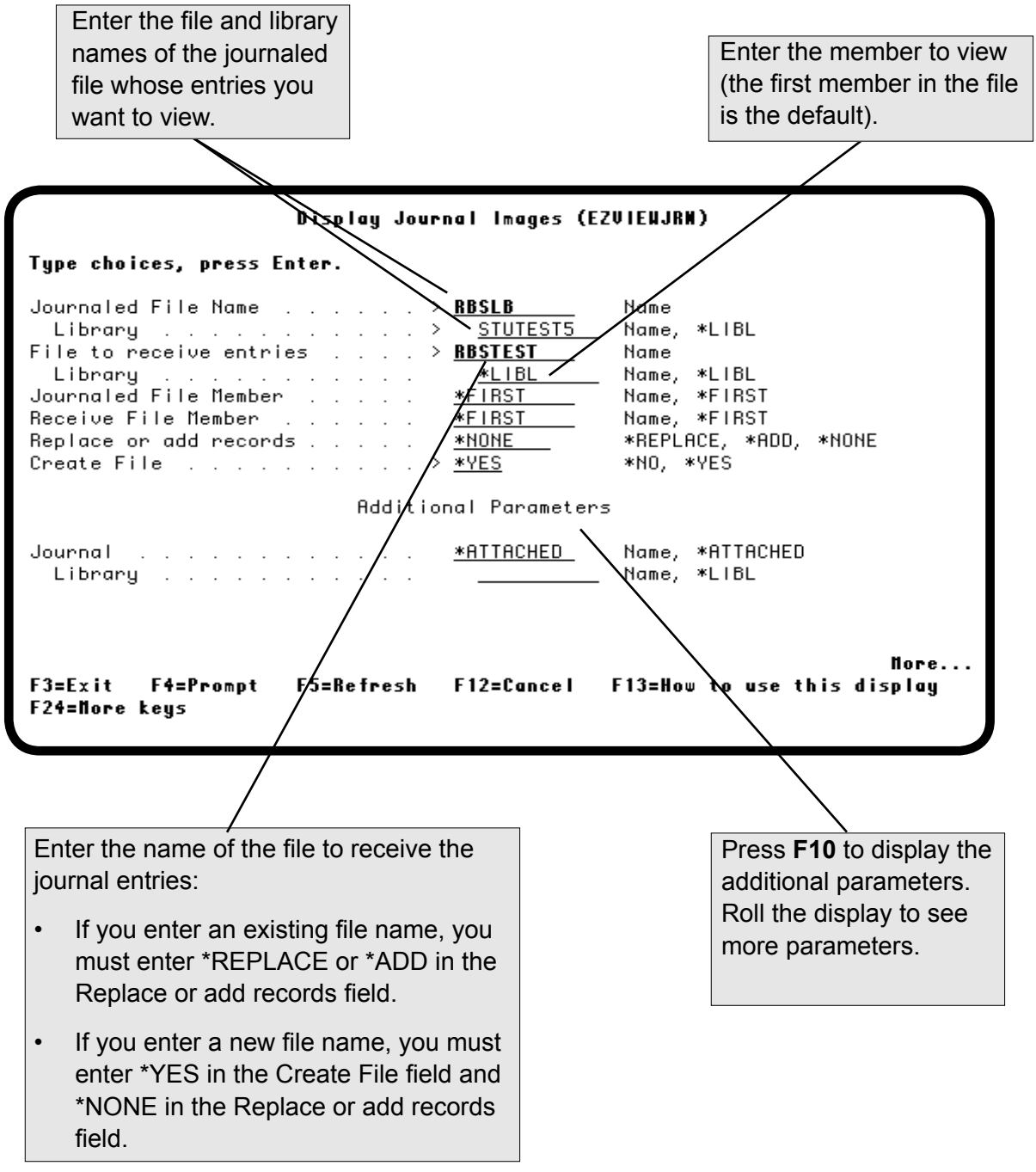
To display the date and time stamps for a group, press **F5**. The Work with Files in Group panel displays the time and date stamp information for all defined groups. Press **F5** again to return the panel to its normal display mode.

Note: This panel indicates the time and date the group was created, or its description was changed. It does not indicate changes to a component of the group, such as a file, view, or field.



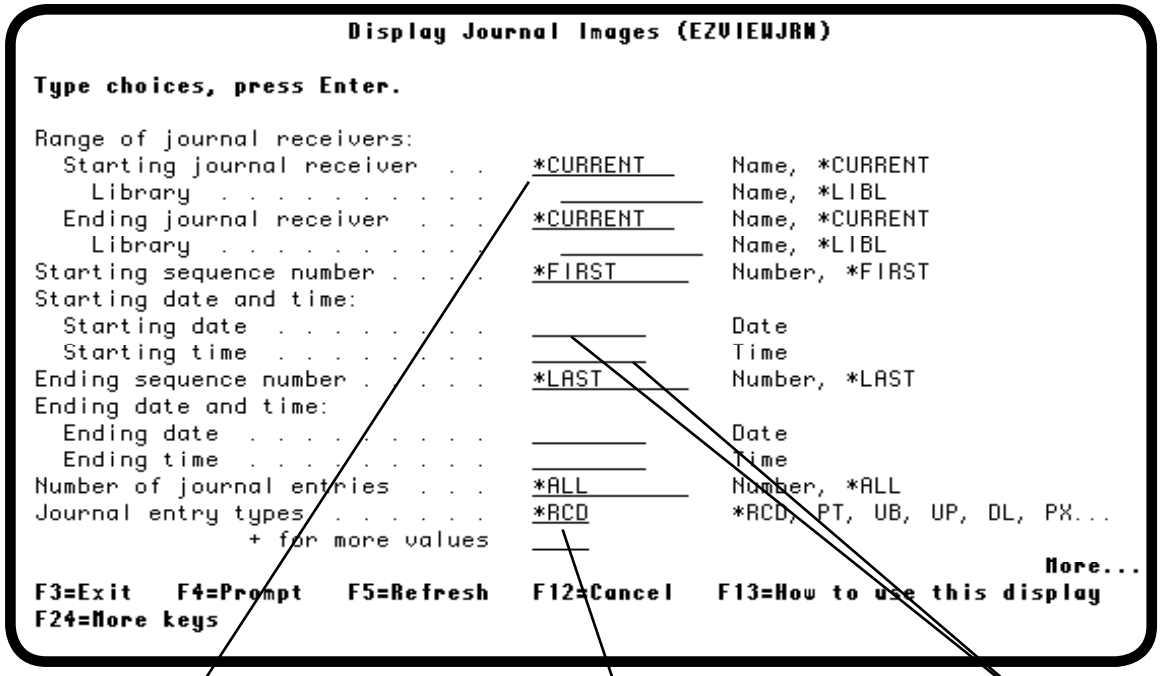
EZVIEWJRN Command

You can use a streamlined version of the EZJOURNAL command to create a work file for viewing journal entries. Enter the EZVIEWJRN command outside Easy View, or select option **5** from the Easy View menu. The Display Journal Images (EZVIEWJRN) panel displays. Enter the journaled file name and the work file name. You can also define the criteria Easy View will use to select records for the work file. When you press Enter, Easy View selects the journal entries and creates the work and output files. You determine the work file name; the output file is named Tempfd.



EZVIEWJRN—Additional Parameters

Additional parameters on the Display Journal Images panel let you limit the journal entries in your output file. Roll the display to see these parameters. When you display the work file using Easy View, you can use the scanning feature to search for specific records, but it is much faster to scan for records if you limit your journal entries in the work file.



Enter the range of journal receivers to search. If blank, Easy View Journal searches the current receiver only.

Enter the journal entry type you want:

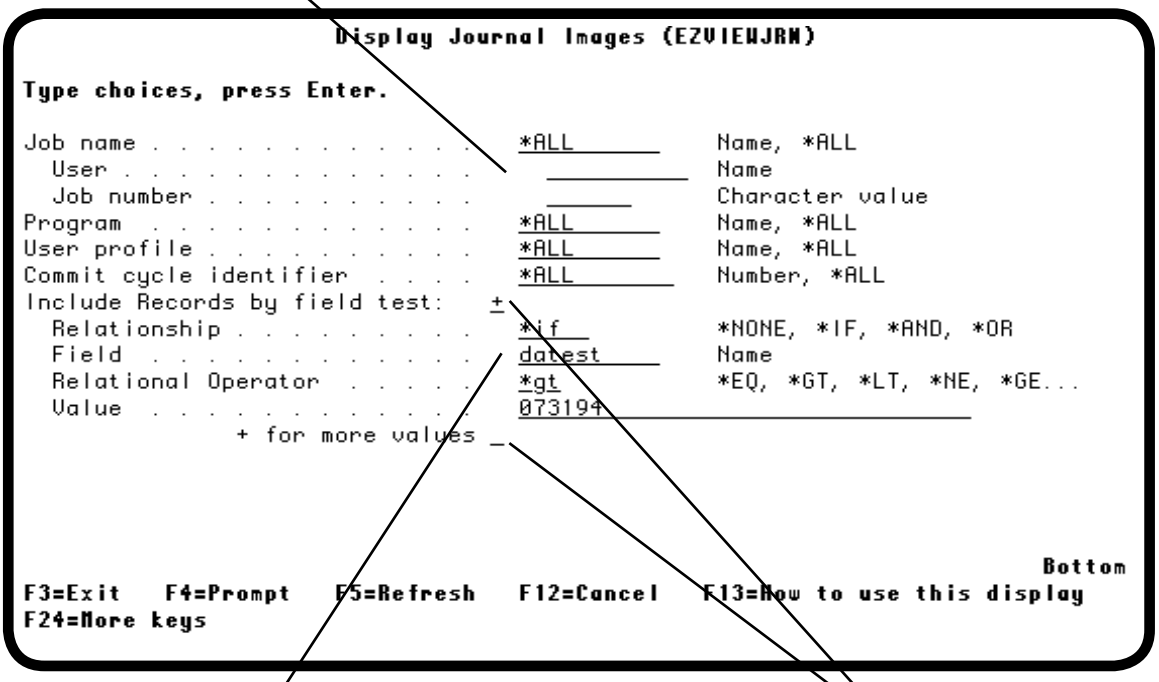
- To enter more types, enter + in the more values field.
- To retrieve all types, leave this selection blank.

Enter the date and time range to search.

EZVIEWJRN—Additional Parameters

Roll the display to see the last journal panel, where you can further limit your journal entries to a specific job, user, program, user profile, and commit cycle identifier. You can define your selection to include records that meet specific comparison criteria, such as jobs that started after a specific date. (This part of the EZVIEWJRN command is similar to the IBM i Copyfile [CPYF] command.)

To limit the search to one job, program, user profile, or commit cycle identifier, enter its name or number here. If blank, all entries for the categories are selected.

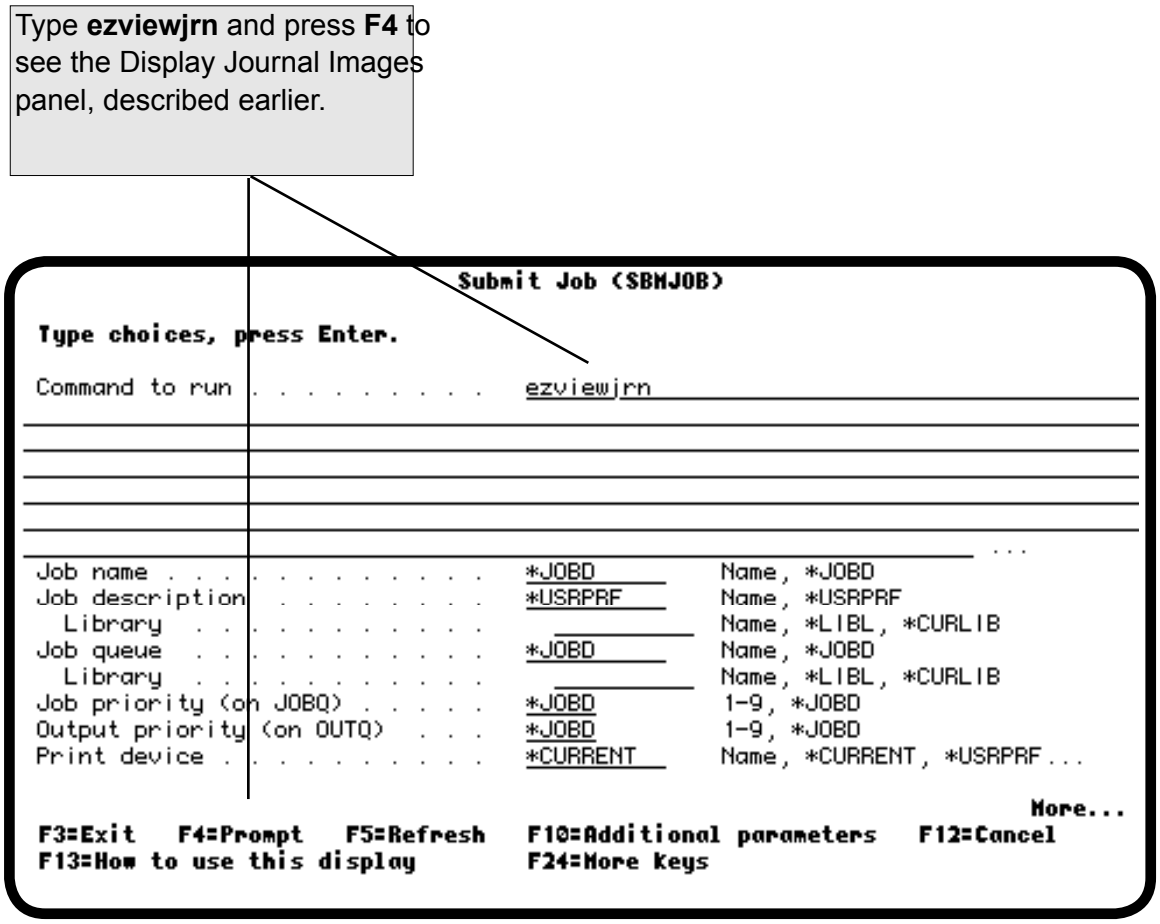


To include only records that meet specific criteria, enter the criteria here.

Enter **+** in either field to display a panel that lets you enter multiple search criteria.

Submitting to Batch

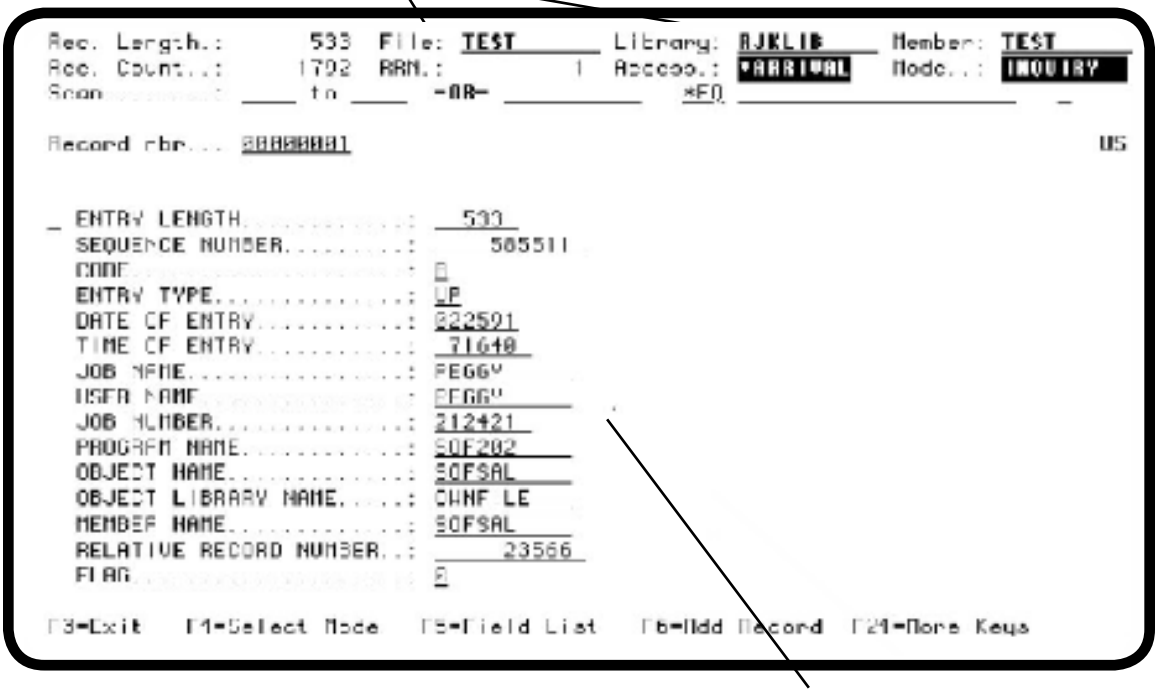
If the journal receiver is large, the selection process can take a long time. You can submit the process to batch using the SBMJOB command. If you want to see the Display Journal Images panel, press **F4** to prompt the SBMJOB command. In the Submit Job panel, enter **ezviewjrn** in the Command to run field and press **F4**. The Display Journal Images panel displays and you can define your selection criteria as described earlier.



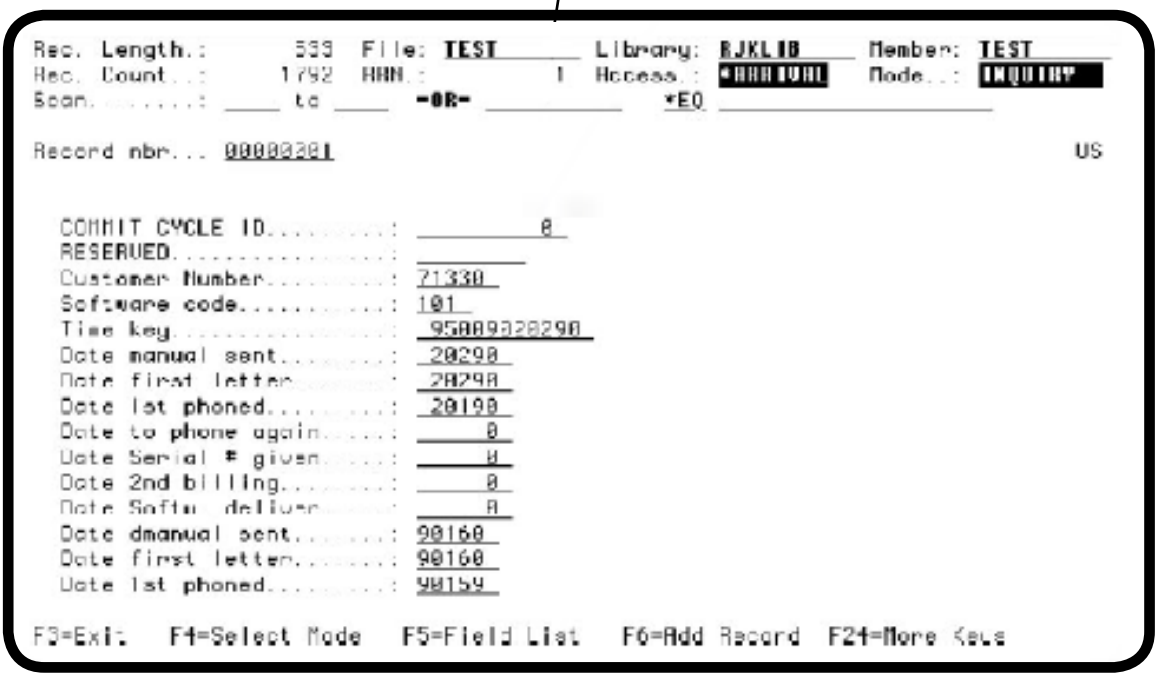
Viewing the Journal Entries

After the selection process completes, you can use Easy View to look at the entries in the work file. Use spreadsheet mode, or EZFIELD mode, to see a formatted display of the entry fields.

On the EZVIEW command, specify the work file and library you entered on the Display Journal Images panel.



These are the heading fields of the journal entry displayed in EZFIELD mode. Roll down to see the data fields.

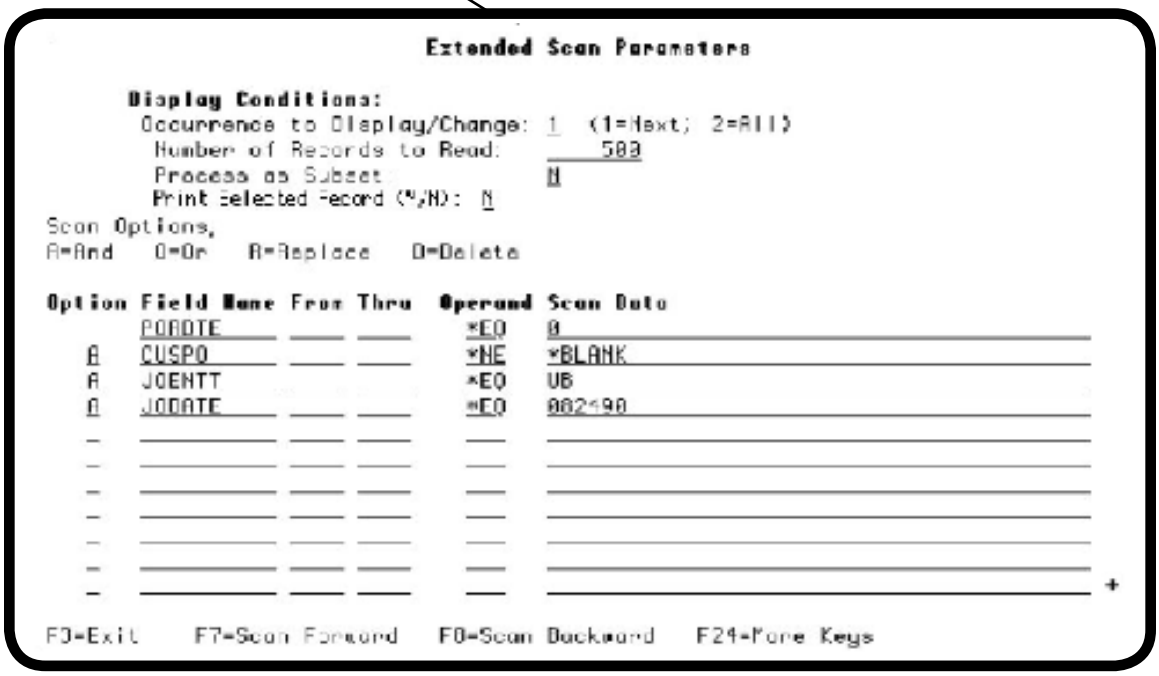


Scanning the Journal Entries

While viewing the work file, you can scan for specific entries. An extended scan (**F14**) lets you find records that were updated incorrectly. Just enter the criteria that identify a record in error and Easy View finds them. You see the time, date, program, user, and workstation that originated the error.

If you journal both before and after images, you can see the values before and after the update. This is useful because many update errors are caused by a combination of values your program did not anticipate. For example, suppose purchase order date is being randomly zeroed out, and one was zeroed out on August 24, 1999. By scanning for a journal date of 082499 and a purchase order date of 0 on the after image, you can find the entry for the transaction that caused the error. The scan finds the transaction, and the before image shows what caused the problem.

From the Easy View record display, press **F14** to display the Extended Scan screen. Enter scan criteria as described earlier.



Notes:

Maximum Length of Records, Composite Keys, and Fields

The following table describes the maximum lengths for records, keys, and fields that Easy View handles:

Maximum	Value
Record Length	9999
Composite key length	121 **Note:** Any number/length of keys is allowed as long as the total of all keys in the format is 121 or less.
Numeric field length	30
Field length that can be shown	• 120 bytes when selecting a record using option E • 512 bytes in EZFIELD mode Either select a record with option 3 or 4 and enter EZFIELD on the command line, or select option 2 from the EZVIEW Menu.
Binary Field Limit	Support for standard binary 2, 4, and 8 fields.
Maximum Decimal Places	63

Recursive Calls to Easy View

Recursive calls to Easy View within the same session are not allowed. To run another instance of Easy View, sign on to another session or initiate another view.

Common Easy View Commands

Introduction

The following is a brief summary of common i5/OS Easy View commands. You can enter these commands from a command line prompt, place them in a CL program, or schedule them using a job scheduler such as Robot SCHEDULE. These commands are described in detail throughout this user guide.

GO EZVIEW

Use this command to display the Easy View Menu with commands for the tasks you perform most often.

EZVIEW

Use this command to work with a database file. It starts Easy View and displays the file. You can specify a file to display, or *PRV to continue the previous Easy View session. You can also display additional files without leaving Easy View.

EZVIEW *SELECT

Use this command if you don't remember the name of the file you want to work with. It displays a panel listing the files and functions you can select.

EZCPYTOCSV

Use this command to create a spreadsheet file from your IBM i data.

EZSCAN

Use this command from a command line or batch program, to retrieve and run a scan definition you have previously created and stored in EZVIEW.

PRTAUDIT

Use this command to print the EZVIEW Audit Log Report.

EZFIELD

Use this command to quickly show the field definitions of a file.

EZTREE

Use this command to easily find the database relations for a file.

EZVIEWMOD

Use this command to directly access a database model you have created for a file.

EZVIEWJRN

Use this command to work with journal entries using EZVIEW. You can specify which journal transactions to work with, then use EZVIEW navigation tools to view your journal entries. See Journal Views and Scan Definitions for complete details.

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