THOROUGHBRED®
SOFTWARE INTERNATIONAL, INC.

DICTIONARY-IV®

Administrator Guide

Version 8.9.1

Thoroughbred Software International, Inc.

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INTRODUCTION - SETTING UP DICTIONARY-IV

Operating System Support:
UNIX, Linux, and Windows
For specific information, please contact your Thoroughbred Sales Representative.

Before you can begin to create applications using Dictionary-IV, you must prepare your system. Procedures with which you must be concerned include: creating operator codes, providing security, and system configuration.

Procedure for Set-up

This section will take you through the steps you should follow in setting up Dictionary-IV.

NOTE: If you already have Thoroughbred Basic installed on your system, you may have already completed some of the procedures described below (such as terminal configuration).

Login

You can start Thoroughbred Dictionary-IV using one of the following methods:

- From the Thoroughbred Basic Utilities menu, type **ID** and press **Enter**.
- From Thoroughbred Basic Console Mode, type **RUN"ID"** and press **Enter**.

The system displays the Thoroughbred Dictionary-IV copyright screen. Press **Enter** to continue to the Operator Login Screen. The system prompts:

Enter Operator Code:

TSI is the default operator code supplied with the product. Type **TSI** and press **Enter**.

NOTE: Note: To login and avoid the Dictionary-IV Copyright screen type the program below and save it using the Dictionary-IV login name.

```
0010    DIM ]7$(400);
        ]7$(77,3)="xxx"   !specify 3-character operator code
        ]7$(228,1)="A";
        CALL "IDPUB4",]6$,]7$,]8$,]9$;
        CALL "8ZPSYS",]SYSV$;
        RUN "ID"
```

This program logs into Dictionary-IV using the specified operator code, avoids the Dictionary-IV Copyright screen, and opens the operator's specified master menu. For more information see Operator Information in the Utilities Reference section of this document.

If the operator code has an entry program specified, the program will be executed prior to displaying the master menu.

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Create Operator Codes

Select **Operator Information** from either the Dictionary-IV Control Menu or the Dictionary-IV Utilities Menu.

This option allows you to add, change, or delete operator codes. You can specify the entry and exit programs as well.

Set up an operator code for each user on the system. You may use the default operator code (TSI), and you may add a password.

For more information see Operator Information in the Utilities Reference section of this manual.

NOTE: Dictionary-IV provides the ability to use multiple spoken languages. If you are an international site you may require this function. However, before enabling it see the Multi-Language section of this document.

Establish a System Password

Select **Security** from either the Dictionary-IV Control Menu or the Dictionary-IV Utilities Menu.

This option controls access and restrictions throughout Dictionary-IV (with the exception of operator login). The passwords are in effect only when security is active.

Establishing a system password enables system security. Removing the password disables system security.

NOTE: The Security field in Format definition that can restrict access to add, change, and display modes, and the Delete Record fields that can limit the deletion of records are not affected by system security status.

For more information see Security in the Utilities Reference section of this document.

Configure Your Terminal

Select **Terminal Configurator** from the System Administration options.

This runs 8NPSD from Dictionary-IV and configures your terminal for Basic. With 8NPSD you can maintain the following Thoroughbred terminal tables:

- TCONFIG8 - the file holding non-window terminal tables.
- TCONFIGW - the file holding window terminal tables.

From this option you can add, change, delete, and copy terminal tables. You can also add, change, or delete the user terminal table assignment. These assignments can be used whenever Thoroughbred Basic is executed or only for the current session of Thoroughbred Basic.

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If you are running Thoroughbred Dictionary-IV 8.3 and above you should configure your terminals for Thoroughbred Windows (TCONFIGW).

For more information see *Terminal Configurator* in the Utilities Reference section of this document. Also see the Thoroughbred Basic Reference Manual.

Configure Your Printer

Select **Printer Table Maintenance** from the System Administration options.

Your printers must be defined in Printer Table Maintenance. This option allows you to create and change the contents of the printer tables, which contain special codes for printer control.

For more information see Printer Table Maintenance in the Utilities Reference section of this document.

Select **Printer Assignment** from the System Administration options.

You can now associate your printer table with a two-character printer code (LP, P1, etc.). Whenever you print, you may select only from these configured printers.

For more information see Printer Assignment in the Utilities Reference section of this document. For more information on configuring printers for the TS ReportServer, see the VIP Gateway for Windows Reference Manual.

Set Your Backup/ Restore Devices

Select **Backup/Restore Parameters** from the System Administration options.

For more information see Backup/Restore Parameter in the Utilities Reference section of this document.

Configure the Thoroughbred Windows

Select **Window Configurator** from the System Administration options. From this option you may design the attributes of Thoroughbred Dictionary-IV windows.

Five types of windows can be configured: Menus, Views, Screens, Help, and Editor. A sample of each window type remains on the screen for reference.

Configurable Window Parameters	
Window Attributes	Foreground, background, reverse video, blink, underscore
Window/Border Colors	16 foreground and background colors
Border Parameters	Border type, border/select attributes, paint mode
Special Window Areas	Light bars, view headings, field entry

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For more information see Window Configurator in the Utilities Reference section of this document.

Convert Dictionary-IV Definitions

You may convert definitions from older versions of Dictionary-IV to your new version.

For more information see Dictionary Update in the Utilities Reference section of this document.

Set the Installation Information

Select **Installation Information** from the Dictionary-IV Utilities Menu.

You can set the default values for the master menu, exit program, and the menu timeout. You can also set Screen and Menu functions.

For more information see Installation Information in the Utilities Reference section of this document.

Set Developer/User Flag

Select **Set Developer/User** from the System Administration options.

Setting the internal flag that defines the operator as a developer or user, enables and disables certain system functions.

For more information see Set Developer/User in the Utilities Reference section of this document.

Set Default File Locations

Two special Link definitions are used to maintain the default disk number for data and work files. The DataFileName column in Link UTWRKFIL contains the default disk number for creating work files. The DataFileName column in Link UTDATFIL contains the default disk number for creating data files.

To change these values, select Dictionary-IV Link maintenance. Change the DataFileName to any disk number defined on a DEV line in the IPLINPUT file. For more information about this please refer to the Thoroughbred Basic Customization and Tuning Guide (System Files).

To Run Another Program

To return to Thoroughbred Basic Utilities:
Select the **BASIC Utilities Menu** option from the Thoroughbred Dictionary-IV Control Menu.

To run another Thoroughbred Software product:
Press **F3** and make a selection. When you run one of these products from Dictionary-IV, you are automatically logged in with the current operator code.

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To run a program:
Type a slash (**/**) or a colon (**:**) followed by the program name and press **Enter**. Examples: /ID or :ID.

To run another menu:
Type **;menu-name** and press **Enter**. The menu-name is the 3 to 8 alphanumeric character name of the menu to display. Example: ;UTMENU1.

To Logoff

There are several ways to exit Thoroughbred Dictionary-IV:

To return to the Operator Login Screen:
Type **LOF** at any Dictionary-IV menu and press **Enter**.

To return to the operating system:
Select the **Terminal Logoff** option from the Thoroughbred Dictionary-IV Control Menu or the Thoroughbred Dictionary-IV Development Menu.

To return to the Operator Exit program:
Press **F4** at any Dictionary-IV menu until you reach the master menu. When you reach this menu press **F4** to run the operator exit program. You may define this exit program using the Operator Information utility. For more information see Operator Information in the Utilities Reference section of this document.

Timeout:
Exits to the Operator Login screen. Timeouts occur when you leave a terminal unused at a Dictionary-IV menu. The amount of time before logoff can be set in the System Administration options.

Thoroughbred Dictionary-IV Menus

In this section the menus distributed with Thoroughbred Dictionary-IV are briefly described. For more information you should refer to the appropriate Dictionary-IV Reference Manual.

The following menus are provided:

- Thoroughbred Dictionary-IV Control Menu
- Thoroughbred Dictionary-IV Development Menu
- Thoroughbred Dictionary-IV Utilities Menu
- Thoroughbred Dictionary-IV Supplemental Utilities Menu
- Window Conversion Utilities
- Thoroughbred Dictionary-IV Multi-Language Utilities Menu
- Thoroughbred Dictionary-IV Upgrade Menu
- System Administration Pop-up Menu

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Thoroughbred Dictionary-IV Control Menu (UTMENU10)

Utility Selections

System Administration
Displays a menu of options that control Installation Information, Operator Information, Terminal configuration, Printer assignment, etc.

Operator Information
Maintains the operator login codes and other operator information.

Set System Date/Time
Sets the date and/or time.

Security
Switches the system security on/off.

System Selections

Dictionary-IV Development Menu
Selects the Development Menu (see following pages).

Dictionary-IV Utilities Menu
Selects the Utilities Menu (see following pages).

Dictionary-IV Supplemental Utilities Menu
Selects the Supplemental Utilities Menu (see following pages).

BASIC Utilities Menu
Exits Thoroughbred Dictionary-IV and selects the Thoroughbred Basic Utilities Menu (see THE Thoroughbred Basic Reference Manual).

Terminal Logoff
Exits Dictionary-IV and returns to the operating system.

Thoroughbred Dictionary-IV Development Menu (IDMENU1)

The Dictionary-IV Development Menu can be selected from the Dictionary-IV Control Menu.

This menu can be used for most of your development work: creating and printing class definitions, maintaining libraries, compiling scripts, printing reports, and performing database maintenance. This menu contains the following selections:

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Dictionary-IV Maintenance: Definition

Edit
Allows you to access Definition Maintenance, where you can add, change, delete, rename, and copy a definition in the System Dictionary.

List
Provides a list of definition names and descriptions.

Print
Allows you to obtain a printed copy of definitions.

Dictionary-IV Maintenance: Library

Edit
Allows you to access Library Maintenance, where you can add, change, delete, rename, and copy libraries of definitions.

List
Provides a list of library names and descriptions.

Database Maintenance

Screen
Allows you to perform database maintenance using CONNECT SCREEN.

View
Allows you to perform database maintenance using CONNECT VIEW.

Script-IV/ Report-IV Utilities

Generate Compile List
Creates a list of scripts to be compiled.

Compile from Generated List
Compiles the scripts in the generated list.

Compiling Error Report
Produces a listing (display or hard copy) of the compiling errors that occurred during the last compiling session. The listing includes the script name, procedure, and error encountered.

Compile Scripts
Compiles specified scripts.

Print Reports
Allows you to print or display reports.

System Selections

Dictionary-IV Utilities Menu
Selects the Thoroughbred Dictionary-IV Utilities Menu (see below).

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Terminal Logoff
Exits Thoroughbred Dictionary-IV and returns to the operating system.

Thoroughbred Dictionary-IV Utilities Menu (IDMENU2)

The Thoroughbred Dictionary-IV Utilities Menu can be selected from the Thoroughbred Dictionary-IV Control Menu (UTMENU10) or Thoroughbred Dictionary-IV Development Menu (IDMENU1).

This menu provides supporting utilities for your development work and contains the following selections:

Audit File Information
Displays or prints the audit file report.

Backup/Restore
Allows you to backup and restore the contents of the System Dictionary.

Build Global Dictionary
Allows you to build the global dictionary from existing formats.

Dictionary Expansion
Provides optimum free space in the System Dictionary.

Dictionary Report
Provides a report on the contents of the System Dictionary.

Dictionary Update
Verifies the integrity of the System Dictionary.

Installation Check
Verifies the integrity of all Thoroughbred Dictionary-IV programs.

Installation Information
Maintains installation information such as the installation name, default login menu, default exit program, and date format. Displays the release number and release date.

Dictionary Compare
Allows you to compare a new dictionary with an old one or a translated dictionary with a standard TSI dictionary.

Multi-tasking Information
Allows you to create and maintain multi-tasking menu selection conflict tables.

Operator Information
Maintains the operator login codes and other operator information.

Operator Listing
Lists operators.

Printer Assignment
Allows you to assign defined printer tables to printers.

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Printer Table Maintenance
Allows you to define and maintain printer tables.

Remove Help (Dictionary-IV)
Removes all old style Dictionary-IV help from the System Dictionary, creating free space.

Screen Characters
Allows you to set up screen display codes for international keyboards.

Security
Switches the system security on/off.

Set System Date/Time
Sets the date and/or time.

System Error Report
Prints a listing of system errors.

Terminal Configurator
Configure terminals using 8NPSD (TCONFIGW).

Thoroughbred Dictionary-IV Supplemental Utilities Menu (UTMENU11)

The Thoroughbred Dictionary-IV Supplemental Utilities Menu can be selected from the Thoroughbred Dictionary-IV Control Menu.

This menu provides secondary utilities for conversion operators or special management functions and contains the following selections:

Convert Report to Dictionary-IV (Report-IV)
File Definition (to Format)
Copies and converts a Report file definition to a Dictionary-IV format.

Printer Table
Copies and converts a printer table from Thoroughbred Report to Dictionary-IV.

Report Definition
Copies and converts a report definition for Report to Dictionary-IV.

Convert WORD to Dictionary-IV
Printer Table
Copies and converts a printer table from Thoroughbred WORD to Dictionary-IV.

MISC Report-IV
Report-IV: Compile Reports
Allows you to compile all Report-IV reports, individually or as a group.

Report-IV: Compile Errors
Allows you to view report compile errors. You also have the option of printing the compile errors.

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Window Conversion Utilities
Window Conversion Utilities
Displays the Window Conversion Utilities pop-up menu (see the next page)

Multi-Language Utilities
Multi-Language Utilities Menu
Selects the Thoroughbred Dictionary-IV Multi-Language Utilities Menu (see the following pages).

Miscellaneous
Rebuild Link Sorts
Allows you to rebuild sorts for a library or a range of link names, display the Sort Rebuild Log, and print the Sort Rebuild Log report.

Dictionary Compare
Allows you to compare a new dictionary with an old one or a translated dictionary with a standard TSI dictionary.

Window Conversion Utilities

Convert Help Text Into Window Format
Converts standard Dictionary-IV help text into level 8.n on-line windows. This replaces the original help text in the dictionary.

Convert Screens Into Window Format
Converts standard Dictionary-IV Screens into level 8.n window format. This replaces the original Screen definitions with the converted Screen definitions. The Screen size will be increased by two (characters and lines) to account for the window border.

Screen Conversion Log
Displays the screen conversion error log generated by the conversion utility.

Convert Help Graphic Characters
Converts graphics characters in help text to use the current graphics character base defined in IPLINPUT.

Convert Screen Graphic Characters
Converts graphics characters in screen text to use the current graphics character base defined in IPLINPUT.

Thoroughbred Dictionary-IV Multi-Language Utilities Menu (UTMENU13)

Performs dictionary comparison and language conversion.

SYSTEM UTILITIES
Backup/Restore
Allows you to backup and restore the contents of the System Dictionary.

System Administration
Displays a menu of options that control Installation Information, Operator Information, Terminal configuration, Printer assignment, etc.

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Language Code Parameters
Enable or Disable the Language Codes.

Installation Information
Maintains installation information such as the installation name, default login menu, default exit program, and date format. Displays the software serial number, release number, and release date.

Operator Information
Maintains the operator login codes and other operator information.

Dictionary-IV Login
Returns you to the Thoroughbred Dictionary-IV copyright screen.

Terminal Logoff
Exits Dictionary-IV and returns to the operating system.

CONVERSION UTILITIES
Dictionary Compare
Compares the dictionary of a new release with that of a previous release. This reports definitions that have been changed or added in the new release. It compares the English (EN) version of each definition.

It also compares two dictionaries and report definitions with language codes other than English (EN).

Definition Conversion
Copies definitions from one language to another.

Thoroughbred Dictionary-IV Upgrade Menu (UTMENU12)

From any Dictionary-IV menu type **;UTMENU12** to access the Thoroughbred Dictionary-IV Upgrade Menu.

SYSTEM UTILITIES
System Administration
Displays a menu of options that control Installation Information, Operator Information, Terminal Configuration, Printer Assignment, etc.

Operator Information
Maintains the operator login codes and other Operator Information.

Installation Information
Maintains installation information such as the installation name, default login menu, default exit program, and date format. Displays the software serial number, release number, and release date.

Basic Utilities Menu
Exits Thoroughbred Dictionary-IV and selects the Thoroughbred Basic Utilities Menu (see the Thoroughbred Basic Reference Manual).

Terminal Logoff
Exits Dictionary-IV and returns to the operating system.

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UPGRADE UTILITIES

Dictionary Update
Verifies the integrity of the System Dictionary.

Rebuild Sorts
Rebuilds Link Sorts. It allows you to rebuild Sorts for a library or range of link names, display the Sort Rebuild Log, and print the Sort Rebuild Log Report.

Script-IV: Compile Scripts
Compiles specified scripts.

Script-IV: Compile Errors
Produces a listing (display or hard copy) of the compiling errors that occurred during the last compiling session. The listing includes the script name, procedure, and error encountered.

Source-IV
Exits the Thoroughbred Dictionary-IV Upgrade Menu and executes Thoroughbred Source-IV.

Report-IV: Compile Reports
Allows you to compile all Thoroughbred Report-IV reports, individually or as a group.

Report-IV: Compile Errors
Allows you to view report compile errors. You also have the option of printing the compile errors.

System Administration

Window Configurator
Executes the window configurator.

Terminal Configurator
Configures terminals using 8NPSD.

Printer Table Maintenance
Maintains printer tables.

Printer Assignment
Configures system printers for Dictionary-IV.

Generate Printer Tables
Generates the Thoroughbred Basic Printer Table records from the Dictionary-IV configured printers.

System Security
Enables and disables definition maintenance functions. If it is disabled, you may view definitions but any changes made will not be saved.

Set Developer/User
Sets the internal flag that defines the operator as a developer or user, enables and disables certain system functions.

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System Password
Allows you to assign a system password.

During development of a Dictionary-IV application system, it is important to have access to Thoroughbred Dictionary-IV definitions while testing Views, Screens, Menus, and Help. It is helpful to have this access with a minimal number of key strokes.

Once development is complete, this access should be disabled.

Installation Information
Changes parameters in the Installation Record.

Operator Code Information
Changes parameters for the current operator code.

Query-IV Parameters
Changes parameters for Thoroughbred Query-IV.

Basic PRMs
Changes PRMs for Thoroughbred Basic.

Language Code Parameters
Changes the language code parameters.

Backup/Restore Parameters
Configures the backup device names for the Thoroughbred Dictionary-IV Backup/Restore Utility.

Generate Sample Files
Generates sample files for example definitions.

Generate Script Skeletons
Generates skeleton files used by Script-IV.

Generate Help Topics
Generates help topic files. You may select one or more files from a list of libraries.

Operator Stats Report
Produces a report of the Operator Statistics File for audit purposes.

Maintain Date Masks
Allows you to change the Input Date Mask.

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Thoroughbred Dictionary-IV now supports a new date type. The new type is type 8 that stores the Thoroughbred Basic SQL date as a number in your data files.

The new date type 8 can support date, time, and date and time:

Description	Length
Date only	6.0
Time only	7.6
Date and Time	11.4

Activate Dictionary-IV
Displays the Dictionary-IV Activation Screen.

Version Manager
Displays the release number and date information.

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UTILITIES REFERENCE

This section contains information on the following:

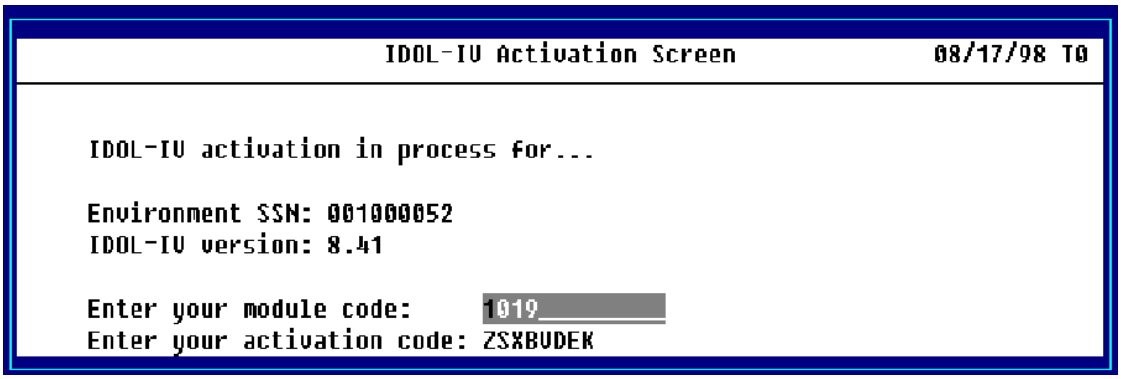
Activate Dictionary-IV
Audit File Information
Backup/Restore
Backup/Restore Parameters
Basic PRMs
Build Global Dictionary
Convert Help Graphic Characters
Convert Help Text into Window Format
Convert Report to Report-IV
Convert Word to IDOL
Convert Screen Graphic Characters
Convert Screens into Window Format
Desk Services/Hotkey Menu
Dictionary Compare
Dictionary Expansion
Dictionary Report
Dictionary Update
Generate Help Topics
Generate Printer Table
Generate Sample Files
Installation Check
Installation Information
Language Code Parameters
Mail System
Multi-Tasking Information
Operator Information, Dictionary-IV Utilities
Operator Code Information, System Administration
Operator Listing
Operator Stats Report
Printer Assignment
Printer Table Maintenance
Query-IV Parameters
Rebuild Link Sorts
Remove Help (Dictionary-IV)
Screen Characters
Screen Conversion Log
Security
Set Developer/User
Set System Date/Time
System Error Report
System Security
Terminal Configurator
Upgrade Administration
Version Manager
Window Configurator

All Thoroughbred Dictionary-IV utilities are listed in this section alphabetically.

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Activate Dictionary-IV

This option is used when activating Dictionary-IV. This is only required if VIP Gateway for Windows, or Report-IV to PDF is being used. The system displays the Dictionary-IV Activation Screen:



The system displays the Environment SSN and the Dictionary-IV version. You enter your module code and activation code.

If a product is not activated, the activation screen will automatically display periodically when accessing the product. Products can be activated at any time by selecting IDOL-IV Activation from the OPENworkshop System Administration menu.

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Audit File Information

This utility displays or prints an Audit File Report and allows you to clear or delete the audit file.

Audits are defined in the Format (Audit attribute) and activated in the Link (Audit Indicator). For more information see the Formats and Links section of the Dictionary-IV Developer Guide.

Dictionary-IV provides a default audit file named IDAUDT. You may use this file or create your own.

Audit Report is a protected utility. If security is active, access to this utility is given only to those with knowledge of the system password.

Select **Audit File Information** from the Thoroughbred Dictionary-IV Utilities Menu. The system displays the following:

Audit File Information Options



Audit Filename - Printing the Audit File

If you already know the name of the audit file select **Audit filename**. The system prompts:



Type the name of the audit file and press **Enter**. The name may be from 3 to 8 characters in length. The system prompts:

Do you want a printed copy?

Select one of the following:

Y Prompts for the printer name and prints the report.

N Displays the report on the terminal.

The system displays a report similar to the following:

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Audit Report - Sample

```
08/17/98 01:46 PM            IDOL-IV Audit Report                    Page:  1
                   Thoroughbred Software International, Inc
                              Audit File: OOAUDT

--------------------------------------------------------------------------------
                   Opr                        M
Date     Time      Cde Term Data file         d Key
================================================================================

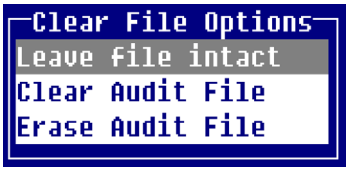
01/22/98 10:10:44 tsi T0   OECUST            A
Fld  9: 0
Fld 10: 0
Fld 14: 0

01/22/98 10:10:45 tsi T0   OECUST            a
Fld  9: 0
Fld 10: 0
Fld 14: 0

01/22/98 10:10:46 tsi T0   OECUST            D zzzzzz
Fld  1: zzzzzz
Fld  9: 0

    <CR> to continue.
```

After the report is completed the system then displays the **Clear File Options**:



Select one of the following:

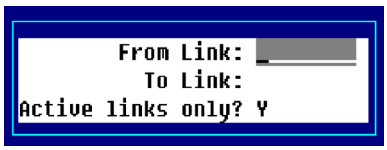
Leave file intact
Exits the report and leaves the audit file intact.

Clear Audit File
Clears the data from the file but retains the audit file.

Erase Audit File
Deletes the audit file.

Link/Format Search

If you do not know the name of the audit file, select **Link search** or **Format search**. Select one of these options and the system displays:



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Press **F2** from the above windows to display the Link or Format view.

Enter the following information:

From
Type the name of the first link (format) in the range and press **Enter**. The name may be from 3 to 8 characters in length.

To
Type the name of the last link (format) in the range and press **Enter**. The name may be from 3 to 8 characters in length.

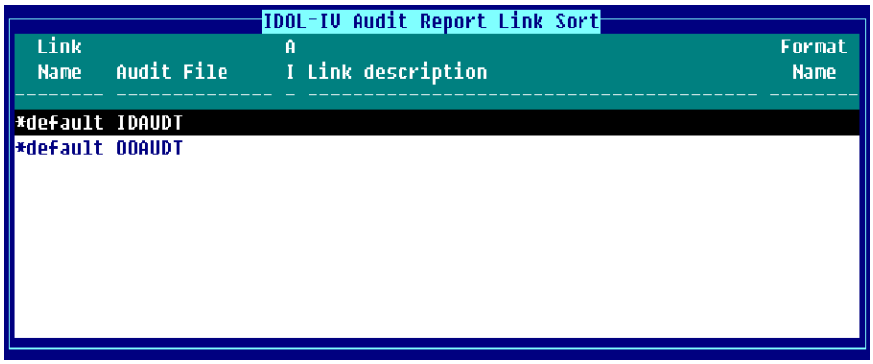
If you select **Link search** you must answer a final prompt:

Y Processes links only when the audit indicator is set to "Y" or "A".

N Processes all links in the specified range.

The system displays a window similar to the following:

Audit File Information - Display Links



Audit File Format

This section provides information on the format of the audit file that can be used if you want to write a custom audit report.

There are two types of audit files:

Indexed files created by audits in single record maintenance and multi-record maintenance.

Text files created by audits in connect screen and connect view.

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Indexed File Format
The audit file is an index file with a physical record size of 32. Since the audit data may exceed 32 bytes, each logical audit record may be contained in more than one physical record. The first part of the logical record contains the audit record information in a fixed format as follows:

Bytes	Description
1 to 2	Length of Logical Audit
3 to 8	Date (YYMMDD)
9 to 14	Time (HHMMSS)
15 to 22	Link/Data File Name
23	Maintenance Mode (A, C, D)
24 to 26	Operator Code
27 to 30	Terminal ID
31	Length of Key Data (binary)
32 to x	Key of Audited Record

The remainder of the logical record contains all the audit data for the record. The total length of this data varies depending upon the length of the data in each audited field and the number of audit fields in the record. The format of the audit data for each audit field in the record is as follows (where x is the last byte of the last value in the table above):

Bytes	Description
x + 1	Element Number (binary)
x + 2	Length of Element Data (binary)
x + 3 to y	Element Data Added, Deleted, or Before/After Change

In the case of a change, both the before and after values are recorded. The end of the logical record is indicated by an element number of zero. The file must be read using the Basic READ RECORD directive.

Text File Format:
The audit file is a text file. The format of the audit file is:

File Header:

Start	Length	Field
1	4	Next byte address (binary)
5	n	Audit records (see below)

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Audit Record:

Start	Length	Field
1	2	Audit record length (binary) [rsz]
3	6	Date (YYMMDD)
9	6	Time (HHMMSS)
15	1	Maintenance mode (A,C,D)
16	3	Operator code
19	2	Terminal ID
21	8	Format name
29	1	Length of data file name (binary) [fn]
30	fn	Data file name
30+fn	rsz-30-fn	Audit data

The format of the audit data file is:

```
|K| Key data |A| B Element data |A|$00$|OO|B|Element data|etc|
```

Where: K=Length of key data (binary)

A=Element number (binary)

B=Length of element data (binary)
If B is zero (0) the following 2 bytes contain the data's occurrence number followed by the length of the element's data (binary)
00=Occurrence Flag
OO=Occurrence value (binary)
B=Element number (binary)

The key data field will contain the key of the record that is added, changed or deleted. The element data field, in the case of add or delete contains the contents of the audited fields. In the case of change, the data field contains the data element before and after it was changed.

The Dictionary-IV audit file report automatically merges audit file types into a work file. The Report-IV definition "IDAUDIT" produces the audit report from this work file.

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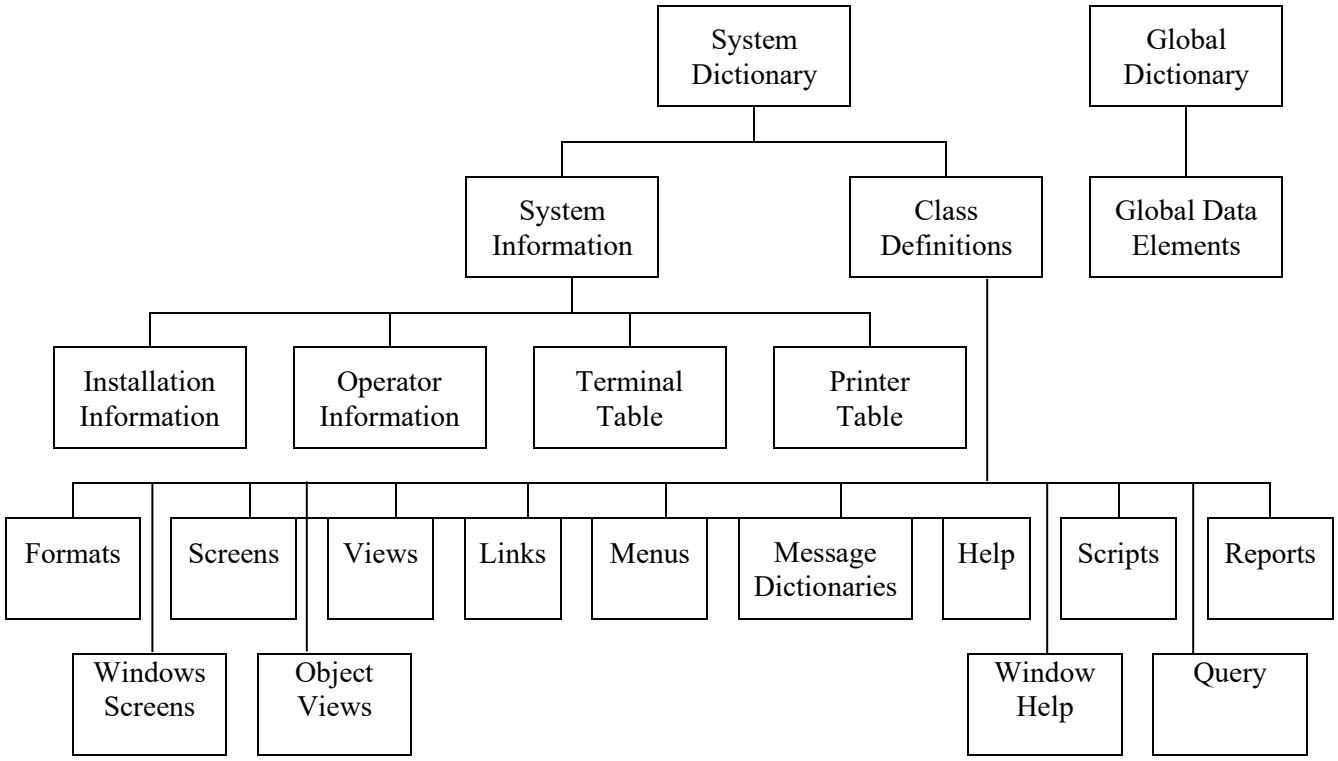
Backup/Restore

This utility allows you to backup or restore the contents of the System Dictionary file (IDDBD), the Global Dictionary file (IDGBD), and the data files associated with links. It does not backup/restore data files external to Dictionary-IV.

If you wish to backup data files external to Dictionary-IV, you must use the backup facilities provided by your operating system.

This option allows you to backup and restore the following components:

Backup and Restore Components



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Select **Backup/Restore** from the Thoroughbred Dictionary-IV Utilities Menu. The system displays the following:



NOTE: The Dictionary Backup/Restore has been modified to convert the definition dates as needed to be compatible with previous versions. If a definition backup is done in 8.4.2 or later and restored on a pre 8.4.2 release, the definition dates will be converted to their old format.

Backup

The backup files are created on your system hard disk. If you wish to transfer the files to diskette or tape, you need to use the facilities provided by your operating system.

The **Escape** key can be used to terminate a backup.

Select **Backup** and the system prompts:

Enter name for backup file (IDDbkxxx): IDDbk_____

IDDbk with 3 optional alphanumeric characters for a suffix is the suggested naming convention, however not required. The backup file name is not limited to 8 characters it can be up to 14 characters or can have a fully qualified path of up to 60 characters. A full path to the backup file can be used only if a hierarchical directory is defined in the IPL file. Type the backup file name and press **Enter**.

If the file doesn't exist, you will be prompted to create the new backup, which you will be able to edit.

If the file name exists, the system prompts:

File exists: Append Clear

Select one of the following:

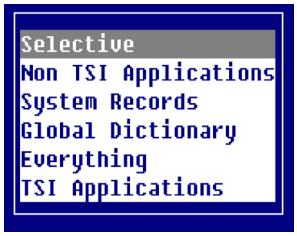
Append
Adds the new backup files to the end of the existing file.

Clear
Writes the new backup files over the existing file.

The backup is accomplished by using the Backup Selection screen to build a list of components to be included in the backup. On completion of the selection process, backup files are built.

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The system displays the following pop-up menu:



Select one of the above and press **Enter:**

Selective
This selection will display the Backup/Restore Selection View. For each library the specific definition types can be selected or unselected. All libraries except for TSI libraries will be included in this view. None of the definition types will be selected as the default.

Non-TSI Applications
This selection will display the Backup/Restore Selection View. For each library the specific definition types can be selected or unselected. All libraries except the TSI product libraries will be included. All definition types except for system records will be selected as the default.

System Records
This selection will display the Backup/Restore Selection View. For each library the specific definition types can be selected or unselected. All system record types except the Global Dictionary will be selected.

Global Dictionary
This selection will backup the Global Dictionary. No other options are available.

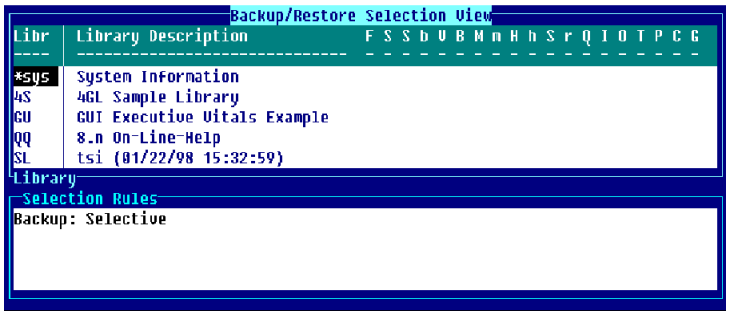
Everything
This selection will display the Backup/Restore Selection View. For each library the specific definition types can be selected or unselected. All libraries and all definition types including system records and TSI libraries will be selected.

TSI Applications
This selection will display the Backup/Restore Selection View. For each library the specific definition types can be selected or unselected. Only the TSI product libraries will be included. None of the definition types will be selected.

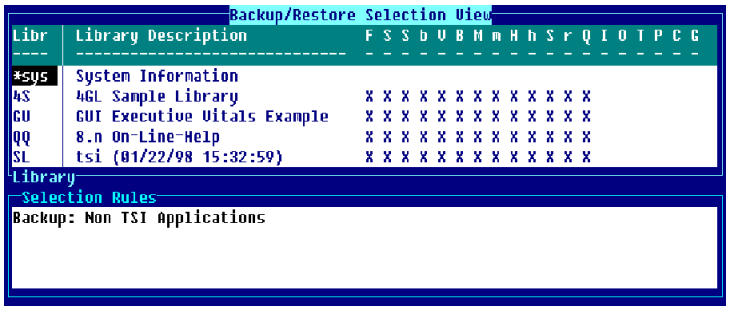
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The system displays one of the following:

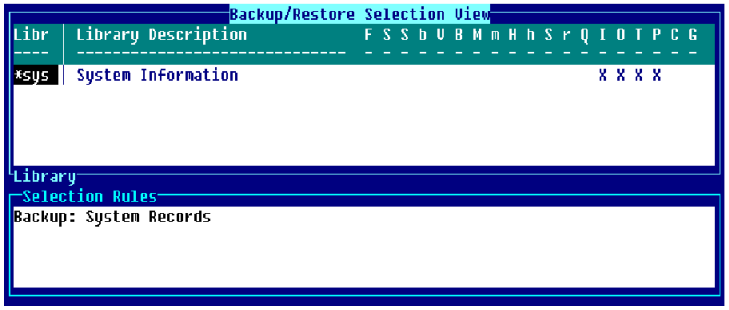
Backup - Selective



Backup - Non-TSI Application

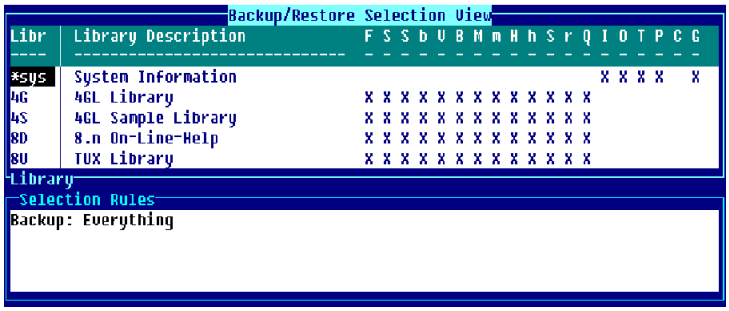


Backup – System Records

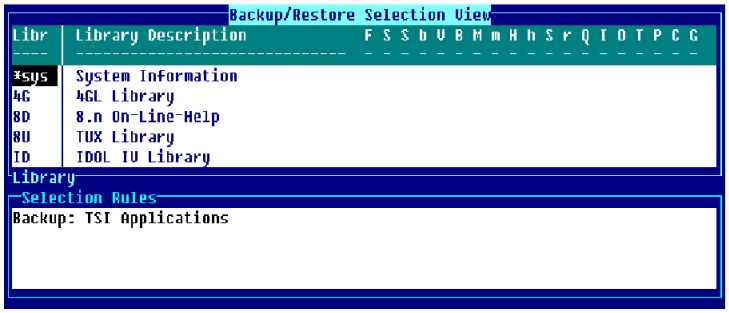


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Backup – Everything



Backup - TSI Application



The information below explains how to select definitions to be included in the backup.

The following applies to Selective, Non-TSI Applications, System Records, Everything, and TSI Applications but not Global Dictionary.

The following keys are available:

Enter Pressing **Enter** twice displays a window from which you may select the definition type.

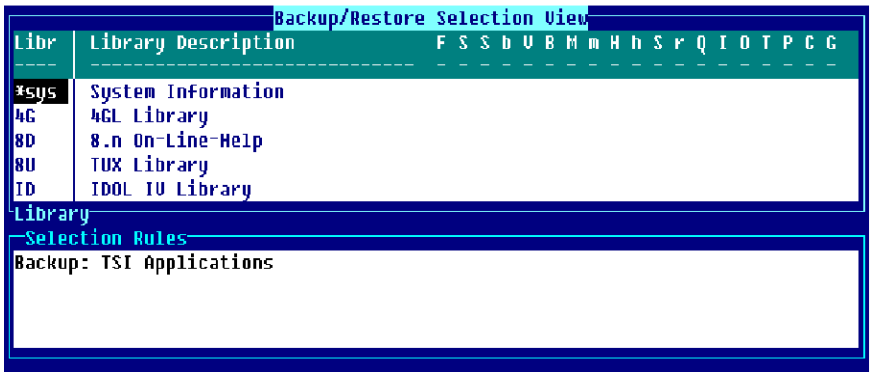
F4 Exits and continues processing.

F6 Displays on-line help.

F10 Goes to the first position in a row, the last position in a row, or a specific row.

Position the cursor at the library name in the list and press the **Left Arrow** and **Right Arrow** keys to select the type of definitions to backup. Type **X** and press **Enter** to select a definition. The system displays a screen similar to the following:

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From the library name you may press **Enter** twice which will display the following toggle menu:



From the toggle menu highlight the options you would like to toggle and press **Enter**, the system displays an X to the right of your selection. To toggle all on or off select **<Toggle All>**. Once your selections are made highlight **<Execute>** and press **Enter**. This executes the backup with the specified/selected options. For more information on toggle menus, see Dictionary-IV Menus in the Dictionary-IV User Guide.

A special library, *sys System Information is included to allow the selection of system records and the Global Dictionary.

The following record types are valid for the *sys library only:

- Installation record
- Operator codes
- Printer table
- Terminal table
- Conflict indicator
- Global Dictionary

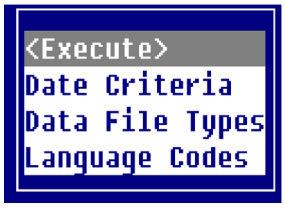
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You may select from the following:

System Dictionary	Class Definition	F	Formats
		S	Screens
		s	Window Screens
		b	Views
		V	Object Views
		B	Links
		M	Menus
		m	Messages
		H	Help
		h	Window Help
		P	Script-IV
		r	Report-IV
		Q	Query-IV
	System Information	I	Installation Record
		O	Operator Codes
		T	Terminal Table
		P	Printer Table
		C	Conflict Indicator
Global Dictionary	Global Data Elements	G	Global Dictionary

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When you have made your selections, the system displays the following toggle menu:

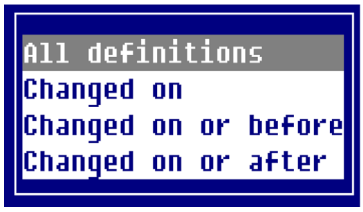


From the toggle menu above highlight the options you would like to toggle and press **Enter**, the system displays an X to the right of your selection. Once your selections are made highlight **<Execute>** and press **Enter**. This executes the backup with the specified/selected options. For more information on toggle menus, see Dictionary-IV Menus in the Dictionary-IV User Guide.

Date Criteria

This option allows you to specify date criteria to determine if a definition type is to be included in the backup process.

Select this option and the system displays the following pop-up menu:



Select one of the following:

Options	Description
All definitions	No date criteria. Default
Changed on	Select only those definitions, which have changed on the specified date.
Changed on or before	Select only those definitions, which have changed on or before the specified date.
Changed on or after	Select only those definitions, which have changed on or after the specified date.

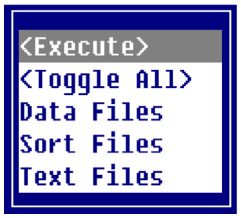
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When you select a date criteria the system prompts:

Enter date:_____

Type the date or press **Enter** to select the current date.

Data File Types
This option allows you to specify which data file types are to be included in the backup process when Links are selected. The system displays the following toggle menu:



From the toggle menu above, highlight the options you would like to toggle and press **Enter**, the system displays an X to the right of your selection. To toggle all on or off select **<Toggle All>**. Once your selections are made highlight **<Execute>** and press **Enter**. This executes the backup with the specified/selected options. For more information on toggle menus, see Dictionary-IV Menus in the Dictionary-IV User Guide.

Select one of the following:

Option	Description
Data Files	Include data files specified in Link definitions selected for backup.
Sort Files	Include sort files specified in Link definitions selected for backup.
Text Files	Include text files specified in Link definitions selected for backup.

If a Link contains a file suffix, only those data files matching the current file suffix will be included. For more information see the Links section in the Dictionary-IV Developer Guide.

Data file names will be output to a file list (IDDflxxx) which can be used with the UNIX tar to cpio command to backup the data files to diskette, tape, or to an archive file.

Select one or more of the above file types.

Language Codes
This option allows you to specify which language codes are to be used for the language code criteria. The system displays the Language Codes and you may select one or more of them to backup. The current language is the default.

NOTE: This only applies to those definition types, which support the Multi-Language feature. For Format definitions, the language code criteria only apply to the Multi-Language data element descriptions. For more information see the Language Code utility in this section and the Multi-Language section later in this document.

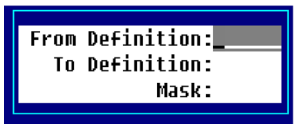
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The selection of language codes is not restricted to those, which have been enabled. Any of the valid language codes may be selected for the backup process.

Execute
Executes the backup with the specified/selected options.

Select **<Execute>**.

If only one library and one definition type for that library has been selected, the system prompts:



When all selections are made the system prompts:

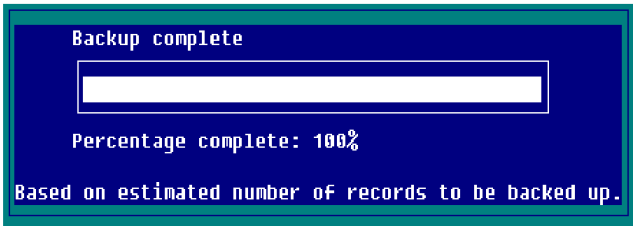
Selections correct?

Select one of the following:

Y The system begins the backup.

N Exits back to the Backup/Restore menu.

If you select **Y** the backup begins and the system displays a bar showing the progress of the backup:



Restore

This procedure allows you to transfer Dictionary-IV components from the backup files into Dictionary-IV. The backup files are not erased by this procedure. The operation of the restore option is similar to that of the backup option.

NOTE: The **Escape** key can be used to terminate a restore.

Select **Backup/Restore** from the Dictionary-IV Utilities Menu.

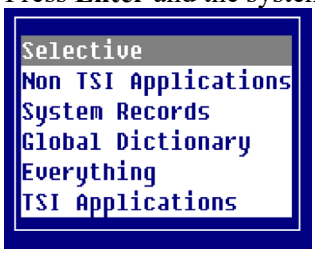
Select **Restore** from the pop-up menu and the system prompts:

Enter name for backup file (IDDbkxxx): IDDbk_____

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IDDbk with 3 optional alphanumeric characters for the suffix is the suggested naming convention, however not required. The backup file name is not limited to 8 characters it can be up to 14 characters or can have a fully qualified path of up to 60 characters. A full path to the backup file can be used only if a hierarchical directory is defined in the IPL file. Type the backup file name and press **Enter**.

Press **Enter** and the system displays the following pop-up menu:

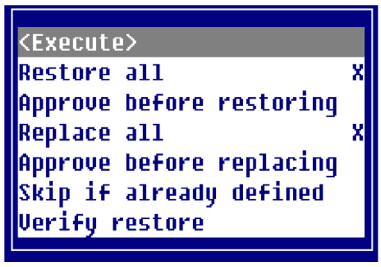


Select one of the above and press **Enter**.

The selections are the same as in the Backup section. For more information see the Backup section of this utility.

NOTE: If you restore the backup file created prior to 8.3 after restore is done Backup/Restore will automatically do the dictionary update on those definitions just restored. This is not an option. Restore will force this.

After you have defined your Restore criteria the system displays the following toggle menu:



This selection allows you to select one restore rule and one replace rule. You also have the option to verify any combination of restore and replace rules selected. Once your selections are made highlight **<Execute>** and press **Enter**. This will execute the restore with the specified/selected options.

Option	Description
Restore all	Restores all definitions. Does not ask for approval.
Approve before restoring	Before restoring a definition, the system prompts for approval.
Replace all	Replaces any existing definition.
Approve before replacing	Before replacing an existing definition, the system prompts for approval.
Skip if already defined	If the definition exists, do not replace it.
Verify restore	When the restore is complete, run the dictionary update to verify the integrity of the definitions restored to the data dictionary.

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Make your selection and the system prompts:

Selections correct?

Select one of the following:

Y Begin the Restore.

N To exit.

Edit

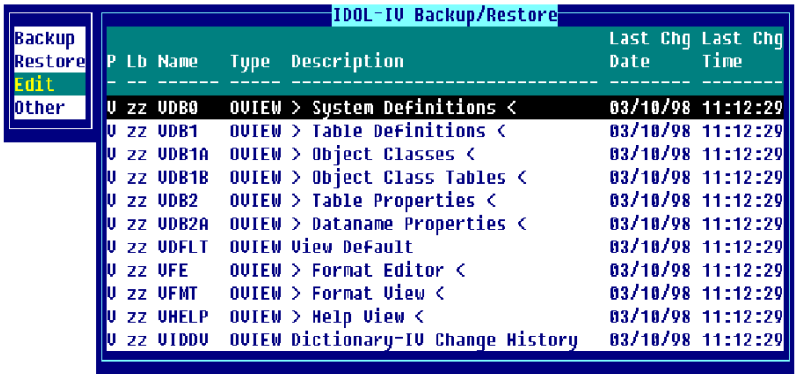
Edit allows you to display a lookup of all the definitions in the backup file. You may then:

- Delete a definition.
- Insert a definition.
- Print a hard copy of the lookup.

Select this option and the system prompts:

Enter name for backup file (IDDbkxxx): IDDbk_____

Type the backup file name you want to display or edit and press **Enter**. The system displays a lookup of the definitions in that backup file.



The following keys are available:

Line Delete	Deletes a definition from the backup file.
Line Insert	Adds a definition to the backup file.
Up/Down Arrow	Moves the lightbar up/down one row.
Page Up/Down	Moves the lightbar up/down one window.
Home	Goes to the top/bottom definition of the backup file.

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F2 Moves the screen.

F4 Exits.

F6 On-line Help.

F10 Goes to the first match of the goto value.

Example:
B goes to the first Link definition.
FUT goes to the first Format definition in the UT library.
FUTC goes to the first Format definition beginning with a C in the UT library.

F16 Outputs a hard copy of the view to the defined printer.

Delete a definition
Position the lightbar on the file and press **Line Delete**. The system displays the following window:



The system prompts:

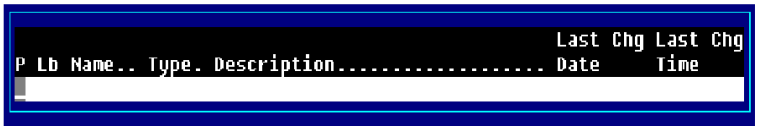
Delete this record?

Select one of the following:

Y To delete the definition from the backup file.

N To leave the definition in the backup file.

Add a definition
Position the lightbar anywhere on the file and press **Line Insert**. The system displays the following window:



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Type the following information:

P Prefix:
Select one of the following for the definition type. You may press **F2** for a lookup at this field. Valid entries are:

F Formats
S Screens
s Window Screens
b views
V Object Views
B Links
M Menus
m Messages
H Help
h Window Help
P Script
r Report
Q Query

Lb Library Name:
Type the library name and press **Enter**. You may press **F2** for a lookup of library names.

Name Definition Name:
Type the definition name and press **Enter**. You may press **F2** for a lookup of definitions in the selected library for selected types.

The system prompts:

Add this record?

Select one of the following:

Y To add the definition to the backup file.

N To leave the definition out of the backup file. The system automatically places the definition in the proper order (by format, library, and file name).

Other

This option allows you to regenerate a backup file and archive backup files to or from a floppy, tape or archive file. Select **Other** and press **Enter**. The system displays the following pop-up menu:



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The system prompts:

Enter name for backup file (IDDbkxxx): IDDbk_____

The system displays the default backup file name. You may type another file name. Press **Enter**.

Refresh bk file
This option regenerates a backup file (IDDbkxxx) based on the current contents. It will not refresh a Global backup file (IDGbkxxx).

Archive out
This option allows you to construct and execute the operating system's backup commands to archive the backup files to floppy, tape, or into an archive file. There is also a command line option where any system command can be entered and executed.

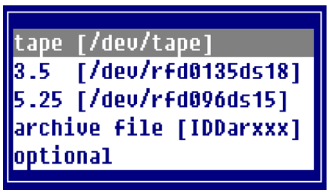
Archiving into a file will create a file called IDDarxxx, which matches the suffix used in the backup file name. For example, if the backup file name is IDDbkTSI, the archive file name will be IDDarTSI.

The system displays the following pop-up menu:



Option	Description
tar to archive	This option constructs a standard tar command to copy the backup files (IDDbkxxx, IDGbkxxx) and the files from the backup file list (IDDflxxx) from the hard disk to a specified device. Once selected you will have the option to select a device.
tar verify archive	This option constructs a standard tar command to verify the tar archive. Once selected you will have the option to select a device.
cpio to archive	This option constructs a standard cpio command to copy the backup files (IDDbkxxx, IDGbkxxx) and the files from the backup file list (IDDflxxx) from the hard disk to a specified device. Once selected you will have the option to select a device.
cpio verify archive	This option constructs a standard cpio command to verify the cpio archive. Once selected you will have the option to select a device.
command line	Enter and execute any system command from this one-line window. You may enter a command up to 255 bytes in length.

When you select tar or cpio to archive or verify archive, the system displays the following pop-up menu:



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Option	Description
tape, 3.5, 5.25	These options allow you to select the device name to be used with the tar or cpio command. The system device name is displayed in brackets. If /dev/device name appears in the list of device names, do not select it. This is not a valid system device name and will be used only when a system device has not been correctly entered in the Device Name menu.
archive file	This option uses the archive IDDarxxx, where xxx is the backup file suffix (IDDbkxxx).
optional	This option allows you to enter any device name. The system displays the command line editor with /dev/device name. Replace this with the appropriate device name.

For more information see Backup/Restore Parameters later in this section.

Archive in

This option allows you to construct and execute either tar or cpio commands to recover the backup files from floppy, tape, or from an archive file. There is also a command line where any system command can be entered and executed.

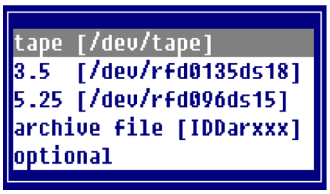
The system displays the following pop-up menu:



Option	Description
tar from archive	This option constructs a standard tar command to copy from a specified device to the hard disk. Once selected you will have the option to select a device.
tar verify archive	This option constructs a standard tar command to verify the tar archive. Once selected you will have the option to select a device.
cpio from archive	This option constructs a standard cpio command to copy from a specified device to the hard disk. Once selected you will have the option to select a device.
cpio verify archive	This option constructs a standard cpio command to verify the cpio archive. Once selected you will have the option to select a device.
command line	Enter and execute any system command from this one-line window. You may enter a command up to 255 bytes in length.

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When you select tar or cpio to archive or verify archive, the system displays the following pop-up menu:



Option	Description
tape, 3.5, 5.25	These options allow you to select the device name to be used with the tar or cpio command. The system device name is displayed in brackets. If /dev/device name appears in the list of device names, do not select it. This is not a valid system device name and will be used only when a system device has not been correctly entered in the Device Name menu.
archive file	This option uses the archive file IDDarxxx, where xxx is the backup file suffix (IDDbkxxx).
optional	This option allows you to enter any device name. The system displays the command line editor with /dev/device name. Replace this with the appropriate device name.

For more information see Backup/Restore Parameters later in this section.

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Backup/Restore Parameters

This option allows you to configure the devices to be used for backup restore archive functions.

Select **Backup/Restore Parameters** from the System Administration options. The system displays the following:

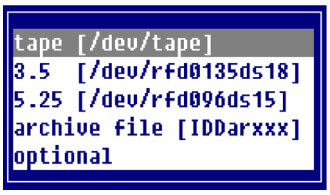


Device Name
The device names used by the backup/restore utility are defined in the pop-up menu IDBRM11. When the Dictionary-IV product is shipped, this menu contains /dev/device-name as the device name. Replace this with the appropriate device name for your site.

The device name appears both in the menu body (text) and again as the actual selection value. Device names can be added or deleted.

You are editing a pop-up menu. The device names IDDar (archive file) and dev= (optional device name) should not be altered. They may, however, be deleted.

To edit IDBRM11, select the **Backup/Restore Parameters** option from the System Administration menu, then select **Device Names**. The system displays the following pop-up menu:



Press **F1** to select the edit mode. The standard editing keys are available.

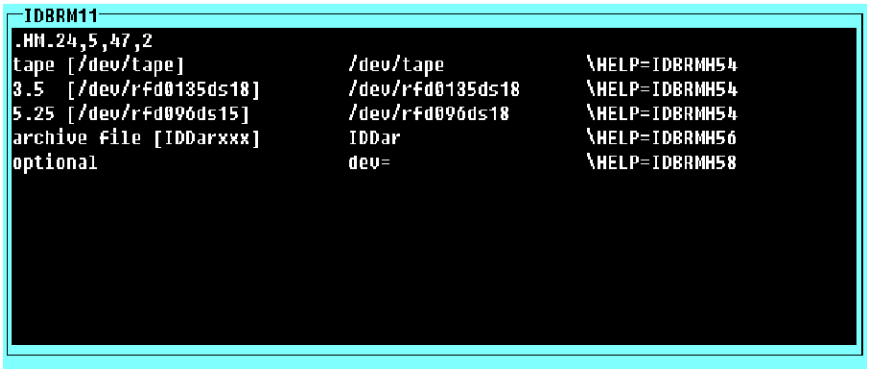
NOTE: The developer/user flag in system administration must be set to developer to do this. For more information see the Set Developer/User section in this section.

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IDBRM11 as shipped:



IDBRM11 after edits:



Commands
The commands used by the backup/restore utility are defined in the pop-up menu IDBRM09.

You are editing a pop-up menu. The command cmd= (command line) should not be altered. It may however, be deleted.

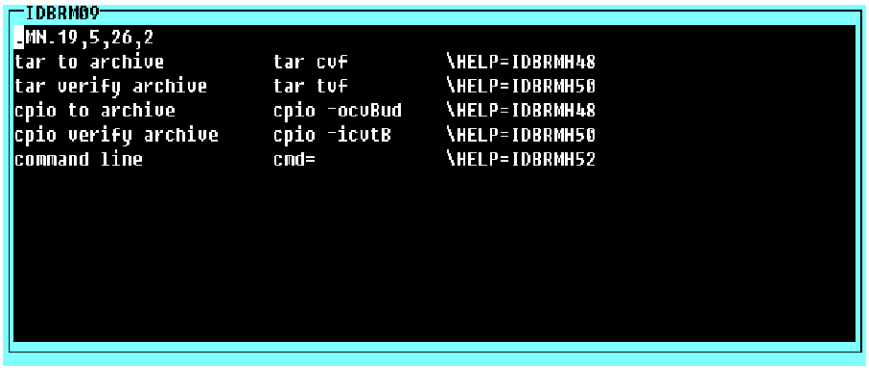
To edit IDBRM09, select the **Backup/Restore Parameters** option from the System Administration Menu, then select **Commands**. The system displays the following pop-up menu:



Press **F1** to select the edit mode. The standard editing keys are available.

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IDBRM09 as shipped:



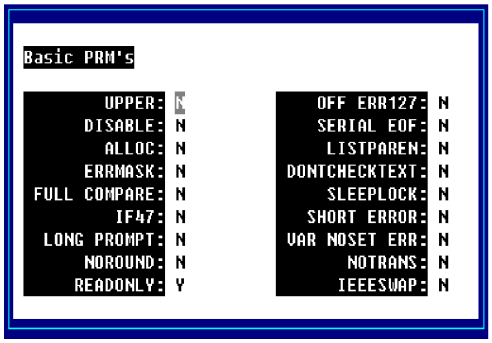
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Basic PRMs

Basic PRMs tell Thoroughbred Basic how to interpret certain situations and how to change its interface with the operating system.

Select **BASIC PRMs** from the System Administration options. This option allows you to turn on or turn off the following Basic PRMs:

Basic PRMs



NOTE: Changes made here are not permanent. To make permanent changes to the PRMs, edit the IPLINPUT file.

Use the **Up Arrow** and **Down Arrow** to select a PRM. Press the **Enter** key to turn the selected PRMs on or off.

For more information about PRMs see the Thoroughbred Basic Reference Manual or move to the desired entry and press **F6** to view on-line help for that PRM.

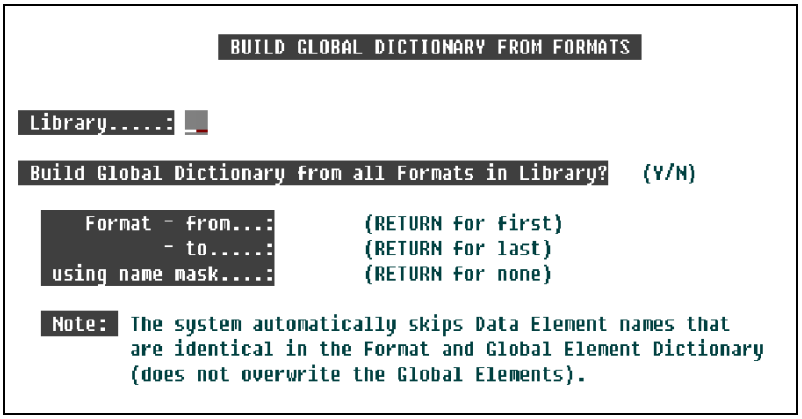
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Build Global Dictionary

This utility allows you to copy data elements from existing formats into the Global Dictionary. You can select formats by library, range, and mask.

Select **Build Global Dictionary** from the Dictionary-IV Utilities Menu. The system displays the following screen:

Build Global Dictionary



Library
Enter the 2 alphanumeric character name of the library where the Formats are located.

Build Global Dictionary from all Formats in Library?
This will build the Global Data Elements from all Formats in the selected Library.

Select one of the following:

Y Selects all Formats in the library and displays the first and last formats in the next fields. You may not select a range of names or a mask.

N Allows you to select a range of names or a mask.

Format - from
Type from 3 to 8 alphanumeric characters for the format name in the range you wish to list. Press **Enter** to select the first format name in the library.

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Format - to
Type from 3 to 8 alphanumeric characters for the last format name in the range you wish to list. Press **Enter** to select the same format name in the Format - from field or if from field is **First**, press **Enter** to select the **Last** format.

using name mask
Type from 3 to 8 alphanumeric characters for the mask you wish to use in searching for the formats.

A name mask allows you to select Formats without specifying each individual name. If you do not wish to use a mask, press **Enter** to have **None** put in the field. This is the default.

A mask sets up a matching test. If a Format name matches the mask, then it is selected. If no match is made, it is bypassed.

A mask contains match and passing characters. The characters in a Format name must match all of the match-characters (same character and position) for it to be selected. The pass character (?) is used to indicate that no match in this position is needed.

Mask	Action	Library Names
A?	selects	AB AC A1
	bypasses	aB cA 11

When you have completed the last field, the system prompts:

Selections correct?

Select one of the following:

Y Builds the Global Dictionary.

N Allows you to change the information.

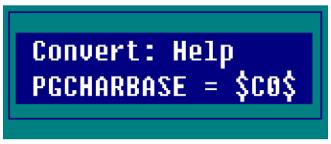
For a global cross reference of the various Dictionary-IV definitions and Source-IV definitions, please see the OPENworkshop Reference Manual.

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Convert Help Graphic Characters

This utility converts the graphics characters of a window help definition based on the current value of the Portable Graphic Character Base (PGCHARBASE) in the current IPL file.

Select **Convert Help Graphic Characters** from the Window Conversion Utilities menu. The system prompts:



$C0$ referenced above is the current value from the active IPLINPUT file.

Enter the following information:



All Libraries
Select one of the following:

Y Convert Help in all libraries.

N Convert Help in the selected libraries.

Library
Type the 2 alphanumeric character library name you wish to select. Press **F2** for a lookup in this field.

From
Type up to 6 alphanumeric characters for the first Help file in the range of files to be converted. The system defaults to **First**. Press **F2** for a lookup in this field.

To
Type up to 6 alphanumeric characters for the last Help file in the range of files to be converted. The system defaults to **Last**. Press **F2** for a lookup in this field.

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Using Name Mask
Type the name mask you wish to use in selecting the Help files to convert. You may use a ? or @ for non-matching characters. The ? must be placed in the proper search position (AB?08?). The @ designates non-matching characters from the @ to the end of the file name (AB).

The system defaults to **None**.

The system prompts:

Selections correct?

Select one of the following:

Y The information is correct, continue with conversion.

N The information is not correct, make corrections or exit.

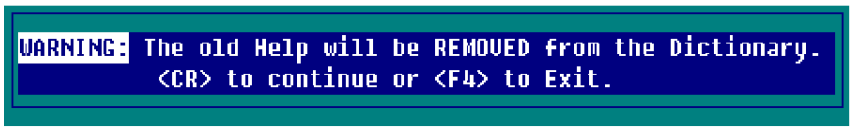
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Convert Help Text Into Window Format

Converts standard Dictionary-IV Help text into level 8.n on-line help windows. This replaces the original help text in the dictionary.

NOTE: You must have your terminal configured for Thoroughbred Windows.

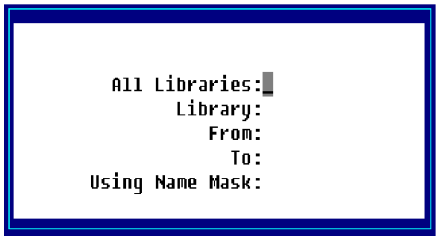
Select **Convert Help Text Into Window Format** from the Windows Conversion Utilities. The system displays the following message:



Enter Continues the conversion.

F4 Exits without converting the files.

If you press **Enter** above the system displays the following:



Enter the following information:

All Libraries
Select one of the following:

Y Converts Help Text in all libraries.

N Converts Help Text in selected libraries.

Library
Type the 2 alphanumeric character library name you wish to select. Press **F2** for a lookup in this field.

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From
Type up to 6 alphanumeric characters for the first Help Text file in the range to be converted. The system defaults to **First**. Press **F2** for a lookup in this field.

To
Type up to 6 alphanumeric characters for the last Help Text file in the range to be converted. The system defaults to **Last**. Press **F2** for a lookup in this field.

Using Name Mask
Type the name mask you wish to use in selecting the Help Text files to convert. You may use a ? or @ for non-matching characters. The ? must be placed in the proper search position (AB?08?). The @ designates non-matching characters from the @ to the end of the file name (AB@).

The system defaults to **None**.

The system prompts:

Selections Correct?

Select one of the following:

Y The information is correct, continue with the conversion.

N The information is not correct, make corrections or exit.

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Convert Report to Report-IV

There are three options in converting Report to Dictionary-IV (Report-IV): File Definition (to Format), Printer Table, and Report Definition.

Select **Convert Report to Report-IV** from the Dictionary-IV Supplemental Utilities menu.

These options allow you to convert existing Thoroughbred Report formats, printer tables, and definitions into Report-IV. You may convert them by library, range, or mask.

The procedure for these options is the same.

Enter the following information:

Library
Type the 2 alphanumeric character library name you wish to select.

Select everything
Select one of the following:

Y Converts all libraries.

N Does not convert all libraries.

From Name
Type up to 6 alphanumeric characters for the first definition in the range to be converted. The system defaults to **First**.

To Name
Type up to 6 alphanumeric characters for the last definition in the range to be converted. The system defaults to **Last** or the same name you type in the From Name field.

Using Name Mask
Type the name mask you wish to use in selecting the definitions to convert. You may use a ? or @ for non-matching characters. The ? must be placed in the proper search position (AB?08?). The @ designates non-matching characters from the @ to the end of the file name (AB@).

The system defaults to **None**.

The system prompts:

Selections correct?

Select one of the following:

Y The information is correct, continue with conversion.

N The information is not correct, make corrections or exit.

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To proceed with the conversion, type **Y** and press **Enter**. The system will convert the specified definitions. If a definition has already been converted, or if a definition already exists by that name, the system will ask if it should replace the existing definition.

XXXXXXXX already exists, replace?

Select one of the following:

Y The system overwrites the existing definition.

N The existing definition is not overwritten and the next definition is read. If an end of file is reached, the conversion is stopped and the Thoroughbred Supplemental Utilities Menu is displayed.

To interrupt the conversion process, press the **Esc** key. The system will ask if you want to terminate, enter the appropriate response.

New Definition Location

Thoroughbred Report Definitions are converted to Report-IV reports and can be accessed by entering the report name in Report-IV.

When accessing Report Definitions using the Report-IV Definition Maintenance, if the library that was converted does not exist in Dictionary-IV, the system will prompt:

Creating new Library, enter Title:

Enter the library description. You will now be able to access definition.

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Convert Word to Dictionary-IV

This Printer Table Conversion Utility allows you to convert Thoroughbred WORD printer tables into definitions that are maintained in Dictionary-IV. You can convert definitions by library, range, or mask.

Select **CONVERT WORD to Dictionary-IV** from the Dictionary-IV Supplemental Utilities Menu.

Library
Type the 2 alphanumeric character library name you wish to select.

Select everything
Select one of the following:

Y Converts all libraries.

N Does not convert all libraries.

From Name
Type up to 6 alphanumeric characters for the first document in the range to be converted. The system defaults to **First**.

To Name
Type up to 6 alphanumeric characters for the last document in the range to be converted. The system defaults to **Last** or the same name you type in the From Name field.

Using Name Mask
Type the name mask you wish to use in selecting the files to convert. You may use a ? or @ for non-matching characters. The ? must be placed in the proper search position (AB?08?). The @ designates non-matching characters from the @ to the end of the file name (AB@).

The system defaults to **None**.

The system prompts:

Selections correct?

Select one of the following:

Y The information is correct, continue with conversion.

N The information is not correct, make corrections or exit.

XXXXXXXX already exists, replace?

Select one of the following:

Y The system overwrites the existing definition.

N The existing definition is not overwritten and the next printer table is read. If an end of file is reached, the conversion is stopped and the menu is displayed.

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To exit while the conversion is in process, press the **Esc** key. The system will ask if you want to terminate, type the appropriate response.

New Definition Location

Thoroughbred WORD printer tables are converted to Dictionary-IV printer tables and can be accessed by using the Printer Maintenance Utility.

When accessing the new Dictionary-IV printer table, if the library that was converted does not exist in Dictionary-IV, the system will prompt:

Creating new Library, enter Title:

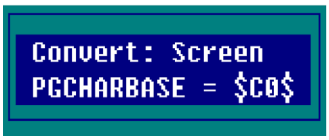
Type the library description. You will now be able to access the printer table.

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Convert Screen Graphic Characters

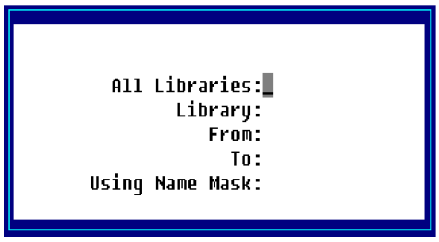
This utility converts the graphics characters of a window screen definition based on the current value of the Portable Graphic Character Base (PGCHARBASE) in the current IPL file.

Select **Convert Screen Graphic Characters** from the Windows Conversion Utilities Menu. The system prompts:



NOTE: $C0$ referenced above is the current value from the active IPLINPUT file.

Enter the following information:



All Libraries
Select one of the following:

Y Convert Screens in all libraries.

N Convert Screens in the selected libraries.

Library
Type the 2 alphanumeric character library name you wish to select. Press **F2** for a lookup in this field.

From
Type up to 6 alphanumeric characters for the first Screen file in the range of files to be converted. The system defaults to **First**. Press **F2** for a lookup in this field.

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To
Type up to 6 alphanumeric characters for the last screen file in the range of files to be converted. The system defaults to **Last**. Press **F2** for a lookup in this field.

Using Name Mask
Type the name mask you wish to use in selecting the screen files to convert. You may use a ? or @ for non-matching characters. The ? must be placed in the proper search position (AB?08?). The @ designates non-matching characters from the @ to the end of the file name (AB@).

The system defaults to **None**.

The system prompts:

Selections correct?

Select one of the following:

Y The information is correct, continue with conversion.

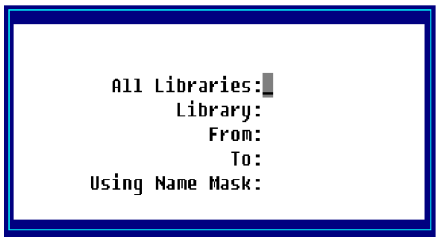
N The information is not correct, make corrections or exit.

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Convert Screens Into Window Format

Converts standard Dictionary-IV Screens into Thoroughbred Windows format.

Select **Convert Screens Into Window Format** from the Window Conversion Utilities Menu. The system prompts:



Enter the following information:

All Libraries
Select one of the following:

Y Convert Screens in all libraries.

N Convert Screens in the selected libraries.

Library
Type the 2 alphanumeric character library name you wish to select. Press **F2** for a lookup in this field.

From
Type up to 6 alphanumeric characters for the first Screen file in the range of files to be converted. The system defaults to **First**. Press **F2** for a lookup in this field.

To
Type up to 6 alphanumeric characters for the last Screen file in the range of files to be converted. The system defaults to **Last**. Press **F2** for a lookup in this field.

Using Name Mask
Type the name mask you wish to use in selecting the Screen files to convert. You may use a ? or @ for non-matching characters. The ? must be placed in the proper search position (AB?08?). The @ designates non-matching characters from the @ to the end of the file name (AB@).

The system defaults to **None**.

The system prompts:

Selections correct?

Select one of the following:

Y The information is correct, continue with conversion.

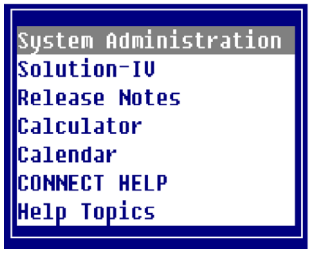
N The information is not correct, make corrections or exit.

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Desk Services / Hotkey Menu

From any Dictionary-IV menu press **Ctrl-P**.

The system displays the following pop-up menu:



The hotkey menu that appears is controlled by the Hotkey Menu field in the operator code.

You may select the following options:

System Administration
Displays the System Administration options. For more information see the specific option name in this section.

Solution-IV
Allows you to access Solution-IV from any menu by pressing **Ctrl-P** and selecting **Solution-IV**.

Calculator
Displays a working calculator. You can use the following keys:

F1 View number from calculator tape.

Enter Select highlighted number from tape. Print total on tape and clear total.

F4 Terminate view and do not select number.

F2 Print hard copy of calculator tape.

F3 Set precision (**Left**/**Right Arrow** keys change precision).

F4 End calculator.

+ Add.

- Subtract.

***** Multiply.

/ Divide.

Enter Total.

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Calendar
Displays a calendar. You can use the following keys:

Left Arrow Displays the previous month.

Right Arrow Displays the next month.

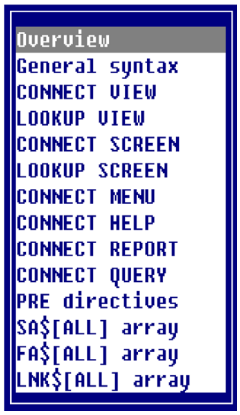
Down Arrow Displays the previous year.

Up Arrow Displays the next year.

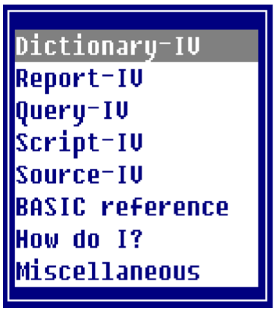
Home Displays the current month and year.

Press **F1** to toggle between the calendar body and the calendar heading. When the cursor is on the calendar body the arrow keys move from day to day.

CONNECT HELP
Displays a selection window for help with the CONNECT directive. You can select from the following list:



Help Topics
Displays a selection window for Dictionary-IV help. You may select from the following list:



After making your selection, the system displays the help text. You may select a topic by pressing **Enter**. Press **F8** to find a help topic by typing a KEYWORD and pressing **Enter**. Press **F10** to go to a specified topic.

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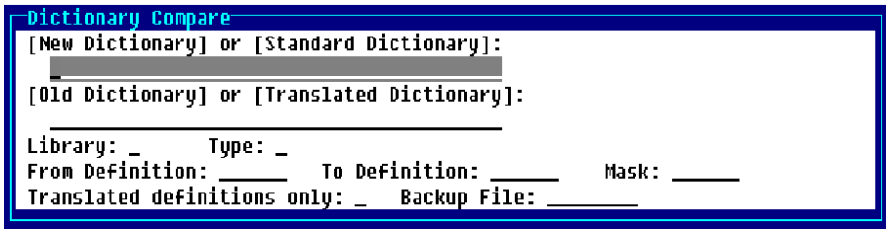
Dictionary Compare

This utility can be used in one of two ways:

- Compare a new dictionary with an old dictionary.
- Compare a standard TSI dictionary with a translated dictionary.

Select **Dictionary Compare** from the Dictionary-IV Utilities Menu. The system displays the following screen:

Dictionary Compare



Compare new dictionary with an old dictionary
This will compare the dictionary of a new release with that of a previous release. This will report definitions that have been changed or added in the new release. It will compare only the English version of each definition.

NOTE: It is not necessary for the new dictionary to be installed. For more information, see the on-line help for Dictionary Names.

Compare standard dictionary with a translated dictionary
This will report definitions with language codes other than English. For those definition types that are not supported by the Multi-Language feature, any definition in the translated dictionary that is not identical to the same definition in the standard dictionary, will be assumed to be translated. Currently the Multi-Language feature supports the following definition types: Formats, Screens, Views, Messages, Window Help, Reports, and Queries.

A 'bk' file will be created with the translated definitions. This allows translated definitions to be readily identified and restored into another dictionary.

Library
From this field you can press **Enter** for a list of library names. The system displays a toggle menu allowing you to toggle Yes or No to select the libraries to compare. Once selections are made you must select **<Execute>**.

Type
From this field you can press **Enter** for a list of definition types. The system displays a toggle menu allowing you to toggle Yes or No to select the definitions to compare. You can use the toggle all option to select Yes or No for all definitions. Once selections are made you must select **<Execute>.**

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From Definition
Enter a six-character definition name. Press **F2** for a view of definitions. If a definition name is not specified the default is **First**.

To Definition
Enter a six-character definition name. Press **F2** for a view of definitions. If a definition name is not specified the default is **Last**.

NOTE: When comparing more than one library or definition type, the definition name will not be validated. Any definition name equal to or greater than the From Definition value will be included. Any definition name equal to or less than the To Definition name will be included in the compare.

Mask
This allows you to specify a matching mask when selecting definitions. Enter characters to be matched to and a **?** for non-matching characters. Enter a **@** for non-matching characters from that position in the name through the last character in the definition name. If a name mask is not specified the default is **None**.

Example:

?B?D?? Will select any definition where the second character is B and the fourth character is D.

AB@ Will select any definition where the first two characters are AB.

Translated definitions only
Select one of the following:

Y Reports definitions with language codes other than English. For those definition types that are not supported by the Multi-Language feature, any definition in the translated Dictionary that is not identical to the same definition in the standard Dictionary, will be assumed to be translated. Currently the Multi-Language feature supports the following definition types: Formats, Screens, Views, Messages, Window Help, Reports, and Queries.

N Compares the dictionary of a new release with that of a previous release. This will report definitions that have been added in the new release and definitions, which have changed in the new release. It will compare only the English version of each definition.

A 'bk' file will be created with the translated definitions. This allows translated definitions to be readily identified and restored to another dictionary.

Backup File
If you answered **Y** to Translated definitions only a backup file will be created with the translated definitions. Enter the name of the backup file in this field. The system will skip this field if you answer **N** to Translated definitions only.

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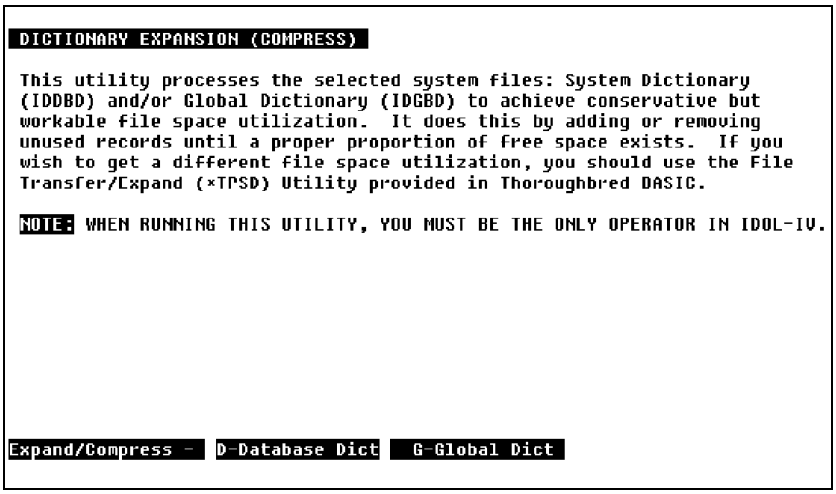
Dictionary Expansion

This utility expands or compresses the Global and System dictionaries. It optimizes your use of disk storage space.

NOTE: Be sure that you are the only operator in Dictionary-IV.

Select **Dictionary Expansion** from the Dictionary-IV Utilities Menu. The system displays the following:

Dictionary Expansion/Compression



D-Database Dict
Select this option to expand the space allocated for the database dictionary (IDDBD).

G-Global Dict
Select this option to expand the space allocated for the global dictionary (IDGBD).

Once you select the processing option, the utility proceeds automatically to completion.

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Dictionary Report

This utility provides a report on the content and organization of the System Dictionary file (IDDBD).

This is a protected utility. If security is active, access to this utility is restricted to those individuals with knowledge of the system password.

NOTE: Be sure that you are the only operator in Dictionary-IV.

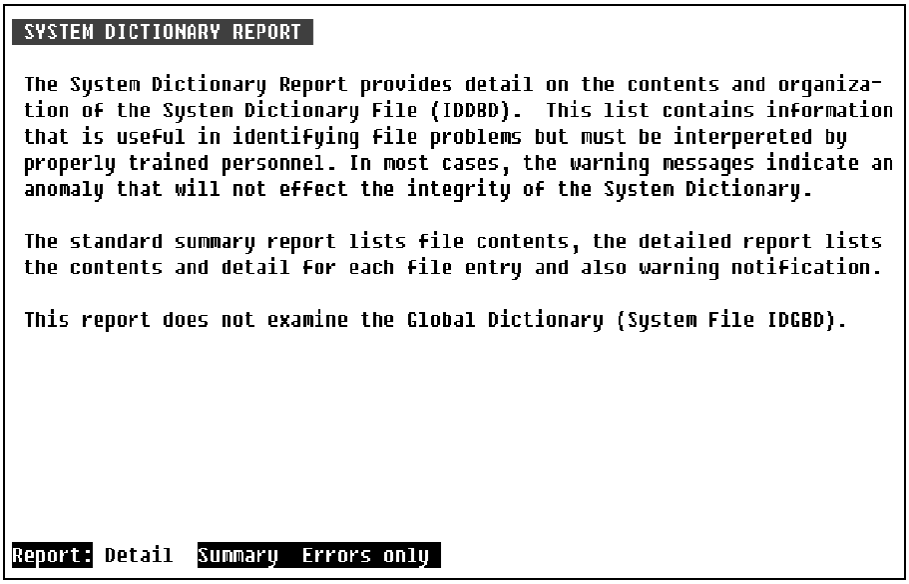
NOTE: This report should not be printed without proper authorization. See your system administrator for more information.

Select **Dictionary Report** from the Dictionary-IV Utilities Menu. The system prompts:

Select Printer (LP): LP_____

Type the name of the printer you wish to use and press **Enter**. If security is active, you will need to enter the system password in order to proceed. The system displays the following:

System Dictionary Report



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A description of the System File Report displays and the system prompts:

Report: Detail Summary Errors only

Detail:
Contains full detail, all components appear on the report. Also lists error notification. The detail report can produce a very large output.

Summary:
Lists a summary of file contents. Each definition header appears on the report. The summary report can also produce large output.

Errors only:
Lists only those definitions that contain possible error conditions.

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Dictionary Update

This utility updates the contents of the System Dictionary file (IDDBD). These lists maintain Library, Format, Screen, View, Link, Menu, Message, Help Script, Query names, and Report names. This utility has an option to process bad records.

This utility should be used if libraries or other elements that you have created do not appear in the listings and cannot be located or accessed. This utility can also be used in conjunction with the System Dictionary Report to resolve these problems.

NOTE: This utility should be run immediately after upgrading Dictionary-IV.

NOTE: All dictionary definition dates have been converted to date type 8 for Y2K readiness. Existing dictionary definitions can be converted by running the Dictionary Update Utility after the installation process has been completed.

Select **Dictionary Update** from the Dictionary-IV Utilities Menu. The system prompts:

Cleanup dictionary definitions?

Select one of the following:

Y Removes bad records. Bad records are defined as detail records that do not have an associated header record or detail records that do not match header records. The system moves to the next prompt.

N Does not remove bad records. Skips next prompt.

The system prompts:

Approve before cleanup of definitions?

Select one of the following:

Y Allows you to select the records to remove.

N Removal of all bad records is automatic.

The system prompts:

Is the displayed information correct?

Select one of the following:

Y Approves the entries.

N Allows you to change the information.

You will be asked to select the printer if more than one is configured.

Select Printer (LP): LP_____

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Type the name of the printer you wish to use and press **Enter**.

During the dictionary update processing, if a bad record is found, the library name, definition name, and definition type displays on the screen under the heading Questionable records in dictionary. If you select approval of the deletion, the system prompts:

Are you sure you want to delete?

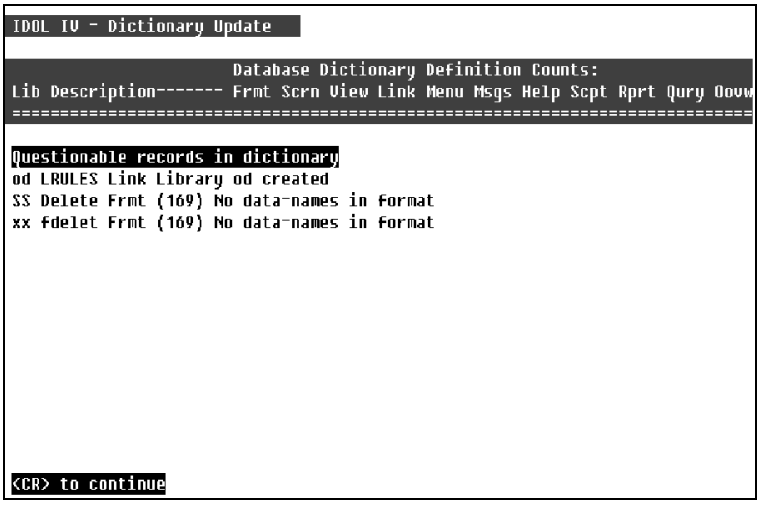
Select one of the following:

Y Deletes bad records.

N Does not delete bad records.

When the update is complete, the system displays a report similar to the following:

Dictionary Update Report - Sample



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Dictionary Update Messages	
Message: Meaning: Action	ALL- "Cannot determine format of last changed date." Last Changed Date may not be in MMDDYY format. Check date in definition header; save definition to update date.
Message: Meaning: Action:	Libr - "Library 'xx' created" Update has created the library's fields. Edit the library's Name, Owner, and Password in Library Maintenance.
Message: Action:	Libr - "Error creating library 'xx'" Create the library in Library Maintenance.
Message: Meaning: Action:	Link - "Sort file name exists but no sorts defined. Link contains a sort file name without sort definitions. Edit link - Either: Add sort definitions or Remove sort file name from link header.
Message: Meaning: Action:	Link - "Sorts exist without sort file name" Contains sort definitions and the sort file name is blank. Edit link - Either: Remove sort definitions or add sort file name to link header.
Message: Action:	Link - "Sorts exist but must be rebuilt" Edit link and rebuild sorts.
Message: Meaning: Action:	Frmt - "Bad characters in format name" ! " # $ % & ' ( )*+, -. / : ; < = > ? @ { } | ~ not valid in format names. Rename format to a name containing A-Z, a-z, and 0-9.
Message: Meaning: Action:	Frmt - "Bad characters in data-name 'name'" ! " # $ % & ' ( )*+ , . / : ; < = > ? @ { } | ~ not valid in data-names. Edit format and change the name of the specified data-name.
Message: Meaning: Action:	Frmt "(169) No data-names in format" A format header exists which contains no data-names (detail). Delete format header.
Message: Meaning: Action:	Frmt - "(ERR) data-name" The fixed length attributes of the specified data-name contain an invalid value. (See the ERR table below for a listing of error codes.) Edit format - check data name's attributes, especially the Length, Entry Type, Numeric Type, Padding and Date attributes. Also check the data-name's Default Values attribute.
Message: Meaning: Action:	Frmt - "(ERR) 'format data-name' - ATR Option: 'x'" (See the ERR and ATR tables below for a listing of error codes.) Data-name variable length attribute caused format error. Edit format – check data-name's attribute in table
Message: Meaning: Action:	"Operator code contains a bad language code" The operator's language could not be verified. Make sure that the operator's language code is enabled or change the operator's language code.
Message: Meaning: Action:	"?'x' Unknown dictionary prefix" An unrecognized prefix value was found in the dictionary. Manually remove the invalid record from IDDBD.

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ERR and ATR Codes for Format Messages			
ERR	**Description**	**ATR**	**Description**
161	Undefined Format Name	8	Audit
163	Undefined Data Name	9	Post-Process
165	Invalid Occurrence	10	Message
166	String/Numeric Mis-match of Data Name	11	Default Values
167	Invalid Value for Data Name	12	Valid Entries
168	Undefined Data Dictionary	13	Delete Record
169	Format Corruption Detected	14	Security
		15	Pre-Process
		18	Occurrence

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Generate Help Topics

This option allows you to generate the help topics files. This must be done to be able to use the on-line Help Topics option.

Select **Generate Help Topics** from the System Administration options.

The system displays the following:



These are the system dictionary library names. If you press **Enter**, the system generates help topics for all the listed libraries. You may use standard editing keys to add and remove libraries from the listing. You can add up to 13 library names separated by commas.

NOTE: To display help topics press **Ctrl-P** and select **Help Topics**.

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Generate Printer Table

This option allows you to generate the Thoroughbred Basic Printer Table from the list of printers configured for Dictionary-IV.

Select **Generate Printer Table** from the System Administration options. The system prompts:

Generate printer tables?

Select one of the following:

Y Generates the printer tables.

N Does not generate the printer tables.

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Generate Sample Files

This option allows you to generate sample files for definitions. This is used to restore the Dictionary-IV demo data files to their original state.

Following is a list of the regenerated files:

UTCUST	Q4DEPT	8DCUST
UTREP	Q4EMPLOY	8DINVEN
UTOPENAR		8DSLSRP
UTPAYHIS		8DSALDT
UTSALHSH		
UTSALHSD		
UTSALCD		

Select **Generate Sample Files** from the System Administration options. The system prompts:

Are you sure?

The system will display sample file names as they are created.

Select one of the following:

Y Generates the sample files.

N Does not generate the sample files.

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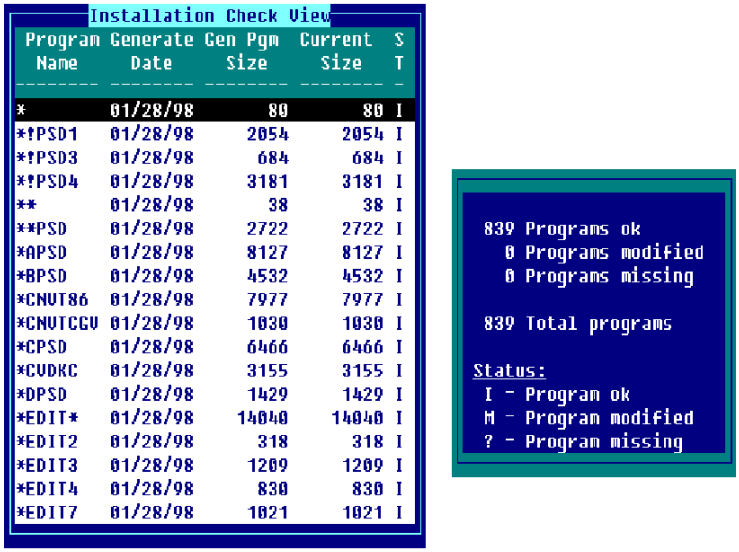
Installation Check

The utility automatically searches all enabled disk directories in the environment and attempts to locate and verify the integrity of all Dictionary-IV programs. If Dictionary-IV is not operating properly, it is necessary to verify that all programs are present and intact. Such problems may cause operational difficulties.

Be sure that all disk directories (or only those that are applicable) are initialized. This is done through Thoroughbred Basic. For more information, see the Thoroughbred Basic Utilities Manual.

Select **Installation Check** from the Dictionary-IV Utilities Menu. When selected, the utility proceeds automatically to completion without any further operator input. When complete, the system displays a screen similar to the following:

Installation Check



You can use the **Up/Down Arrow** keys to view the status of a particular program.

Values in the status field are as follows:

I Present and intact

M Present but modified

? Missing

If programs are missing you will need to re-install the software to replace the programs. When modified programs are detected, you should re-install the software only if unresolved operational problems have been encountered.

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Installation Information

This utility has a number of functions:

- Maintain/display name of installation site.
- Maintain/display default master menu and exit program.
- Enable/disable function keys.
- Enable/disable global menu functions.
- Enable/disable field edit clear.
- Define text field save Format.
- Define whether or not color maps will be saved.
- Enter a menu timeout value.
- Enable/disable operator statistics.
- Enable/disable link/view object library.

This is a protected utility. If security is active, access to this utility is restricted to those individuals with knowledge of the system password.

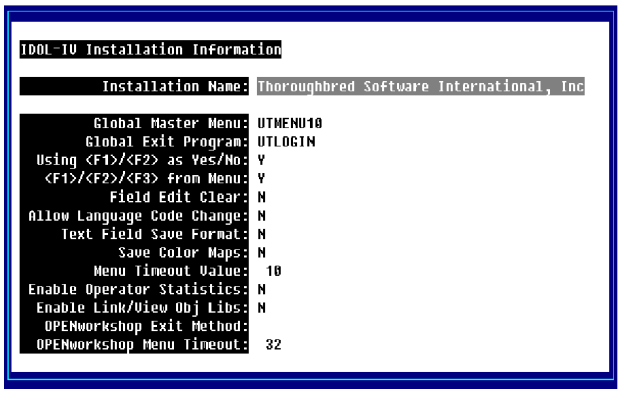
Default specifications allow you to select the master menu to be displayed after an operator logs on and to specify the program to run when the operator exits. If no values are specified, the system uses the Dictionary-IV lead-in menu (UTMENU10) and the Thoroughbred Basic Utilities Menu Program (UTLOGIN) for defaults.

Defaults can also be set for an operator (by Operator Code) and have precedence over values in the Installation Information.

Select **Installation Information** from the Dictionary-IV Utilities Menu or from the System Administration options. The system displays the following:

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Installation Information



NOTE: Selecting this option locks all users out of the system. Make sure everyone logs off before you edit the installation record.

Installation Name
Type up to 40 alphanumeric characters for the name of the installation site and press **Enter**.

Global Master Menu
Type the name of the menu to display when the operator logs on and press **Enter**. If this value is set in Operator Information, the Operator Information value overrides this menu name. The default is **UTMENU10.**

Global Exit Program
Type the Basic program to execute when the operator exits Dictionary-IV. If this value is set in Operator Information, the Operator Information value overrides this program name. The default is the Dictionary-IV Login program (**UTLOGIN**).

Using <F1>/<F2>/ as Yes/No:
Enables the **F1** key for a Yes response and the **F2** key for a No response in Yes/No fields.

Select one of the following:

Y Enables the **F1** and **F2** keys in Yes/No fields.

N The **F1** and **F2** keys are ignored in Yes/No fields.

This flag will enable the **F1** and **F2** keys for Yes/No response. Select **Y** at this field and **F1** can be used in Dictionary-IV to answer Yes to a prompt and **F2** can be used to answer No.

<F1>/<F2>/<F3> from Menu
Select one of the following:

Y Enables **F1**, **F2**, and **F3** at the menus.

N Does not enable **F1**, **F2**, and **F3** at the menus.

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Field Edit Clear
Allows non-edit keys to clear an entire field when you begin typing in that field.

Select one of the following:

Y For all data input, the entire field clears when the first keystroke is not a field editing key (Character Insert, Character Delete, etc.).

N Does not clear the field. You must type over existing data.

Allow Language Code Change
This option allows you to specify whether or not **F7** is available from a menu to change the current Operator Language Code. This value can also be set for an Operator Code (and has precedence over the value in Installation Information).

Y **F7** allows the operator to temporarily change their language code.

N **F7** is not available from a menu to change the current operator language code.

NOTE: The language code is reset each time the operator logs into Dictionary-IV.

Text Field Save Format
This allows you to define the format in which text fields are to be saved when edited. The new format is not compatible with Thoroughbred Basic Level 7 and T/OS systems. Select one of the following:

O (Old) Saves the text field in the old format (compatible with Basic Level 7 and T/OS Systems). Text fields previously saved in the new format will be loaded, edited, and saved in the old format; video attributes and/or colors will be lost.

N (New) Saves the text field in the new windows format (TSI Window Text). Text fields previously saved in the old format will be loaded, edited, and saved in the new format, allowing video attributes and/or colors to be embedded in the text.

NOTE: Saving the text field in the old format saves text only. All graphics, colors, and video attributes will not be saved.

Save Color Maps
This allows you to define whether or not color will be saved for window type screens and help. Select one of the following:

Y The color for window type screens and help will be saved.

N The color for window type screens and help will not be saved.

Menu Timeout Value
Enter a value from 0 to 255 for the number of minutes before a Dictionary-IV menu will timeout and return to the Operator Code message. Enter **0** for no timeout.

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Enable Operator Statistics
Select one of the following:

Y Maintain operator statistics.

N Do not maintain operator statistics.

NOTE: Changes made to the Installation Information require that you log off to activate the changes.

Enable Link/View Obj Libs
This field indicates whether or not to use object libraries to store link and view definitions to enhance system performance.

Y Enable use of libraries.

N Disable use of libraries.

OPENworkshop Exit Method
This value is used to designate the method that is to be called when an OPENworkshop menu times out. This value can also be set for an Operator Code (and has precedence over the value in Installation Information). If no value is set in either the install information or the operator record, no time out will occur for menus.

OPENworkshop Menu Timeout
This value ranging from 0 to 255 defines the amount of time that will elapse before an OPENworkshop menu will timeout and call the defined exit method. The value specified is in minutes. This value can be set for an Operator Code (and has precedence over the value in Installation Information). If no value is set in either the install information or the operator record, no time out will occur for menus. To disable the timeout feature if desired, specify 0.

The system prompts:

Save Changes?

Select one of the following:

Yes Update record

No Do not Update record

<F4> Make Corrections

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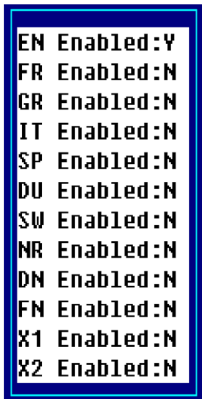
Language Code Parameters

This option allows you to enable and disable language codes for the system.

NOTE: If you are an international site, you may require this feature. Read the Multiple Spoken Language section in this manual before enabling this option.

NOTE: Before a Language can be enabled you MUST convert TSI Libraries.

Select **Language Code Parameters** from the System Administration options. The system displays the following:



English
French
German
Italian
Spanish
Dutch
Swedish
Norwegian
Danish
Finnish
User defined
User defined

Select the language code you wish to enable and type **Y**. Select the language code you wish to disable and type **N**.

Press **F4** and the system prompts:

Is the displayed information correct?

Y To save the changes.

N To correct the entries.

F4 To exit.

For more information see the Multi-Language section in this document.

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Mail System

This utility allows you to send internal mail messages to all operators or individual operators.

To access the internal mail system type **MS** and press **Enter** at any Dictionary-IV menu.

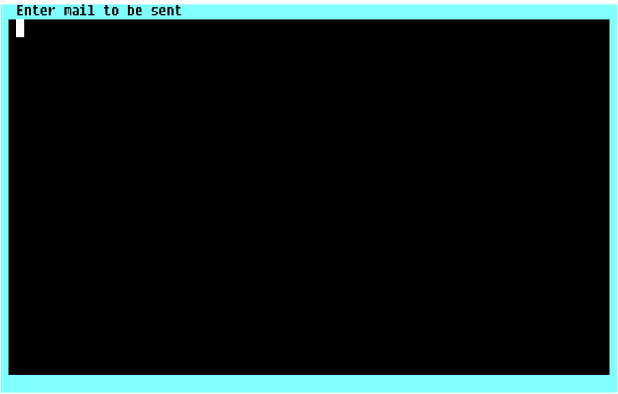
The system displays a listing of all operators defined in System Administration. For more information see Operator Information in this section.

To send:
You may select all operators or individual operators.

- To select all operators highlight **All Users** and press the **Space Bar**.
- To select one operator highlight the operator name and press the **Space Bar**.
- To select more than one operator highlight the first operator name, press the **Space Bar**, highlight the next operator name and press the **Space Bar**.

Once you have made your selections press **F4** and a text window displays. You may use your standard text editing keys. Type your message and press **F4**.

Mail System



The system prompts:

Mail will be sent to these users. Is this correct?

The operator names display in a window. If it is not correct type **N** and the system returns to the text window. If it is correct type **Y** and the system prompts:

Mail has been processed/updated, <CR> to continue.

To receive:
The mail displays the next time the operator logs in to Dictionary-IV. At login the system prompts:

<CR>-continue, (D)elete mail, (H)ard copy mail, Up cursor - start over:

Make your selection and the normal login procedure continues.

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Multi-Tasking Information

This utility has a number of functions:

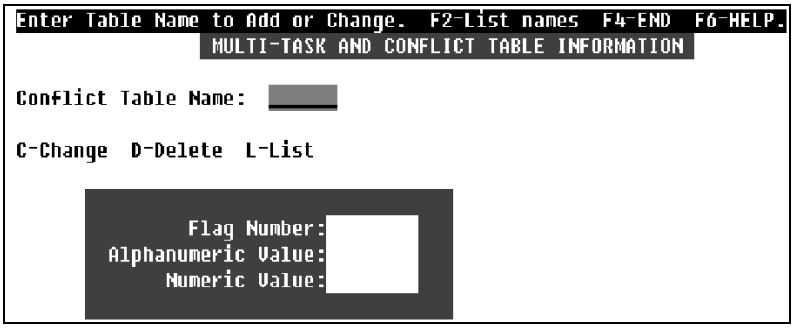
- Create and Initialize a Conflict Table
  A conflict table must be created in this utility before it can be used for conflict processing. (For more information see the Conflict Processing Section in the Menu section of the Dictionary-IV Developer Guide.) When the table is created, default values can be specified for the numeric and alphanumeric flags in the table.

- Change, List, or Delete an Existing Conflict Table
  These functions allow debugging of a conflict table. The Change mode allows you to change the values for any flag in the table. This can be useful to initialize flags to starting values or to reset the flags if a user manages to exit a selection without updating the necessary conflict flags. The List function displays the table of 120 numeric and 120 alphanumeric flags, and the Delete function removes the entire table from the system.

This is a protected utility. If security is active, access to this utility is restricted to those individuals with knowledge of the system password.

Select **Multi-tasking Information** from the Dictionary-IV Utilities Menu. The system displays the following screen:

Multi-Tasking Information



Conflict Table Name
Type from 1 to 6 alphanumeric characters for the Table Name (library conventions do not apply). Press **Enter**. To display existing conflict table names, press **F2**.

If you enter a new table name, you must verify the action. The system prompts:

Conflict Table does not exist. Create new table?

When you create a new table, you must specify an alphanumeric and a numeric value that are used to initialize all the flags in the table.

The system prompts:

All Flags will be initialized to value entered.
(<RETURN>=00 or 0)

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Select one of the following:

Y To create a new table.

N The system positions the cursor at the next field.

If you enter an existing table name, you must then select the type of maintenance to perform:

C-Change Type an alphanumeric or numeric value for a given flag number and press **Enter**. The values must meet the requirements described above.

To exit Change mode, press **F4** or the **Up Arrow** key at the Flag Number field. If any changes were made to the table, the system prompts:

Save Changes to Conflict Table?

D-Delete The Delete option requires that you verify the delete before the table is removed. The system prompts:

Delete Entire Conflict Table?

L-List The List option displays on the screen a list of values in the table.

Flag Number
Enter the flag number from 1 to 120 for either flag type.

Alphanumeric Value
The alphanumeric value can be a single character (e.g., A), in which case it is taken as an ASCII character; otherwise, if two characters are entered, it is taken as a hexadecimal value (e.g., 41); the default is **00.**

Numeric Value
The numeric value must be between 0 and 255; the default is **0**.

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Operator Information, Dictionary-IV Utilities

This utility has the following functions.

- Maintain Operator Code, Password, and Name. Operator Codes are used to gain access to Dictionary-IV through the login procedure. It is recommended that each operator have their own operator code and that this code be used whenever they log into the system. A default operator code of **TSI** is installed with the system and should not be deleted. For added security, a password may be added to it.

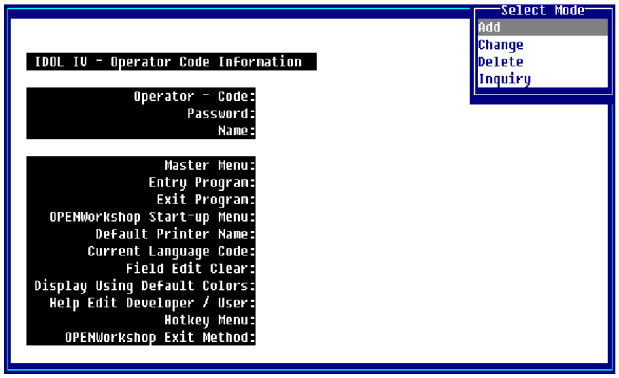
- Both operator codes and optional passwords can be from 1 to 3 characters in length and any characters (upper or lowercase or numbers) may be used. Operator name is general and optional information. Listings of operator codes and associated data are available with the Operator Listing utility.

- Maintain Default Master Menu, Entry/Exit Programs, and Default Printer. These fields allow you to specify the menu to be displayed after an operator logs in and the program to run when the operator exits. You can also specify a program to be executed when the operator code is entered, but the program must RUN "ID" when it is terminated.

- A default printer name can be specified. Whenever the system prompts for a printer, the default printer is used as the first printer name in the printer line. Pressing **Enter** selects this printer. The master menu and exit program defaults can also be specified for Installation Information, but those set for an Operator Code have precedence.

Select **Operator Information** from the Dictionary-IV Utilities menu. The system displays the following:

Operator Information – Dictionary-IV Utilities



You must select a mode from the pop-up menu. The following modes are available from the Operator Information menu:

Add
This mode allows you to add a record to the file.

If you try to add a record that already exists, the system switches to the change mode. When data entry is complete the system prompts:

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Add this record? Yes-Add record No-Do not add record
<F4> Make corrections.

Select one of the following:

Y Adds the record.

N Does not add the record.

F4 Returns to the record. You may make corrections.

Change
This mode allows you to edit a record in the file.

The change mode functions as the add mode except the change mode does not switch to the add mode if a record does not exist.

The system prompts:

Key specified not on file, <CR> to continue.

You can select the next record by pressing the **Down Arrow** key at the last key field on the screen. You can select the previous record by pressing the **Up Arrow** key at the first key field on the screen.

When the changes are complete the system prompts:

Save Changes? Yes-Update record No-Do not update record
<F4>Make Corrections.

Select one of the following:

Y Adds the record.

N Does not add the record.

F4 Returns to the record. You may make corrections.

Delete
This mode allows you to delete a record from the file.

Type the key to the record (unique identifier) and press **Enter**. If the system finds the record, the system prompts:

Delete record?

Select one of the following:

Y Deletes the record from the file.

N Does not delete the record, but allows you to continue selecting records to delete.

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While in delete mode, you can select the next record for deletion by pressing the **Up Arrow** key or the previous record by pressing the **Down Arrow** key.

Inquiry
You can enter the key of an existing record to display, or you can select the next record by pressing the **Down Arrow** key, or the previous record by pressing the **Up Arrow** key.

Operator Code
Type from 1 to 3 alphanumeric characters for the operator code and press **Enter**. This is the code that must be entered at login.

Password
Type from 1 to 3 alphanumeric characters for the password to be associated with this operator code and press **Enter**. When the system requests this operator code, the system will also request this password. This is an optional field.

Name
Type from 1 to 30 alphanumeric characters for the operator name and press **Enter**. This is an optional field.

Master Menu
Define the menu to display at login. The default is the Dictionary-IV Control Menu (**UTMENU10**).

Entry Program
Define the program to execute for this operator at login. It may be a standard Basic program or a Dictionary-IV script.

NOTE: The entry program can be used to set up certain information when the operator logs on to Dictionary-IV.

For example, you may specify the program UTPCSTM in the Entry Program field. When this operator code is entered, a screen displays allowing you to change some of the Dictionary-IV internal flags for certain features. These flags are only changed in memory and do not affect the current settings in Installation Information or the Operator Code Information records.

The entry program must RUN"ID" when it is terminated.

Exit Program
Define the program to execute at logoff. The default is the login program (**UTLOGIN**).

OPENworkshop Start-Up Menu
This field defines the starting menu that will be displayed when OPENworkshop is executed. The default menu name is **OOM0**.

Default Printer Name
Type the printer name (LP, P1,P2, etc.) to define the default printer.

Current Language Code
Type the 2 character valid language code. Press **F6** for a list of valid language codes. You can only select a language code that has been enabled by System Administration.

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For more information see the Multi-Language section of this document.

Field Edit Clear
Select one of the following:

Y For all data input, the entire field clears when the first keystroke is not a field editing key (character insert, character delete, etc.).

N The field is not cleared.

This allows you to automatically clear a data input field when the first keystroke is a character and not a field editing key.

Display Using Default Colors
Select one of the following:

Y Uses the default colors from the Windows Configurator.

N Use the colors saved with definitions

No matter what colors are defined and saved with a particular definition, each user can define their own colors.

Help Edit Developer/User
Select one of the following:

D When the requested on-line help does not exist in the current language, you will be given the option to define it "on the fly."

U When the requested on-line help does not exist in the current language, the help displays in an alternate language. If the help is not defined in any of the enabled languages, an error message displays.

For more information see the Multi-Language section of this document.

Hotkey Menu
Allows you to specify the hotkey menu to display when you press **Ctrl-P** at any Dictionary-IV prompt.

A hotkey menu is a Dictionary-IV pop-up menu, which is a .MN. type of window help.

For more information see Help Definition in the Dictionary-IV Developer Guide

An example is the standard Dictionary-IV hotkey menu IDMU10.

There are several considerations to keep in mind when defining a hotkey menu:

- A standard pop-up menu allows you to define a selection value to be returned to the calling program. Since a hotkey menu is invoked by and processed by Dictionary-IV, any returned selection values not supported by the Dictionary-IV hotkey processing are ignored.

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- The hotkey menu does support a calculator and calendar function. To add the calculator function, add a menu selection line with a return value of 1. To add the calendar function, add a menu selection line with a return value of 2.

- Hotkey menus support CONNECT MENU, CONNECT HELP, CONNECT VIEW, CONNECT SCREEN, CONNECT REPORT, CONNECT QUERY.

NOTE: Changes to the operator code information require that you logoff to activate the changes.

NOTE: For additional information on CONNECT, select the option CONNECT HELP from the standard Dictionary-IV hotkey menu.

For more information see the Dictionary-IV User Guide and the Dictionary-IV Developer Guide.

OPENworkshop Exit Method

This value is used to designate the method that is to be called when an OPENworkshop menu times out. This value can also be set for an Operator Code (and has precedence over the value in Installation Information). If no value is set in either the Installation Information or the operator record, no time out will occur from the menus.

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Operator Code Information, System Administration

This option allows you to change the parameters of the current operator codes.

This option allows you to change the parameters of the current operator codes.

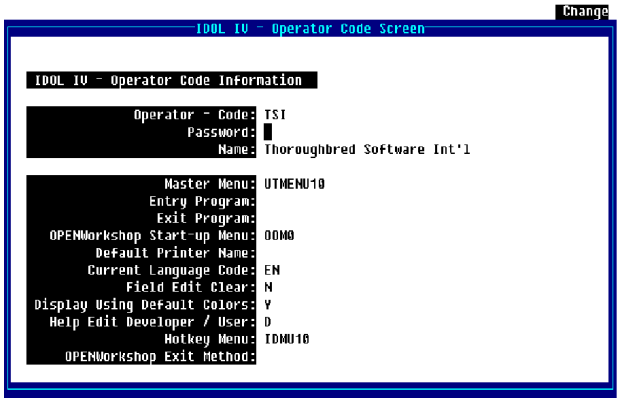
This is a protected utility. If security is active, access to this utility is restricted to those individuals with knowledge of the system password.

- Maintain Default Master Menu, Entry/Exit Programs, and Printer. These fields allow you to specify the menu to be displayed after an operator logs in and the program to run when the operator exits. You can also specify a program to be executed when the operator code is entered, but the program must RUN"ID" when it is terminated.

- A default printer name can be specified. Whenever the system prompts for a printer, the default printer is used as the first printer name in the printer line, so that pressing **Enter** selects the default. The master menu and exit program defaults can also be specified for Installation Information, but those set for an Operator Code have precedence.

Select **Operator Code Information** from the System Administration options. The system displays the following screen:

Operator Code Information - System Administration



You may edit the following information:

Operator Master Menu
Type a 3 to 8 alphanumeric character menu name and press **Enter**. This is the menu the system displays at login for this operator. This value overrides the value defined in Installation Information. For more information see Installation Information in the Utilities Reference section of this document.

Operator Entry Program
Type a 3 to 8 alphanumeric character program name and press **Enter**. This is the program the system executes at logoff for this operator. This value overrides the value defined in Installation Information. For more information see Installation Information in the Utilities Reference section of this document.

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Operator Exit Program
Define the program to execute at logoff. The default is the login program (**UTLOGIN**).

OPENworkshop Start-Up Menu
This field defines the starting menu that will be displayed when OPENworkshop is executed. The default menu name is OOM0.

Default Printer Name
Type the default printer name for this operator and press **Enter**. It is the printer this operator uses most.

Current Language Code
Press **Enter** until you display the language you want to use. You can only select a language code that has been enabled by System Administration.

Field Edit Clear
Select one of the following:

Y When the first keystroke is not a field editing key, the entire field clears.

N Does not clear the field. You must type over and delete current data.

Display Using Default Colors
Select one of the following:

Y Uses the default colors from the Window Configurator.

N Uses the colors saved with definitions.

Help Edit Developer/User
Press the **Enter** key until you display the status flag you want to use while processing on-line help.

Developer When the requested on-line help does not exist in the current language, you will be given the option to define it "on the fly."

User When the requested on-line help does not exist in the current language, the help displays in an alternate language. If the help is not defined in any of the enabled languages, an error message displays.

Hotkey Menu
Allows you to specify the hotkey menu to display when you press **Ctrl-P** at any Dictionary-IV prompt.

A hotkey menu is a Dictionary-IV pop-up menu, which is a .MN. type of window help. For more information see Help Definition in the Dictionary-IV Developer Guide.

An example is the standard Dictionary-IV hotkey menu IDMU10.

There are several considerations to keep in mind when defining a hotkey menu:

- A standard pop-up menu allows you to define a selection value to be returned to the calling program. Since a hotkey menu is invoked by and processed by Dictionary-IV, any returned selection values not supported by the Dictionary-IV hotkey processing are ignored.

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- The hotkey menu does support a calculator and calendar function. To add the calculator function, add a menu selection line with a return value of 1. To add the calendar function, add a menu selection line with a return value of 2.

- Hotkey menus support CONNECT MENU, CONNECT HELP, CONNECT VIEW, CONNECT SCREEN, CONNECT REPORT, CONNECT QUERY.

NOTE: Changes to the operator code information require that you logoff to activate the changes.

OPENworkshop Exit Method

This value is used to designate the method that is to be called when an OPENworkshop menu times out. This value can also be set for an Operator Code (and has precedence over the value in Installation Information). If no value is set in either the install information or the operator record, no time out will occur for menus.

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Operator Listing

This utility displays or prints a listing of operators and operator information (see the Operator Information Utility).

This is a protected utility. If security is active, access to this utility is allowed only to those individuals with knowledge of the system password.

Select **Operator Listing** from the Dictionary-IV Utilities Menu. If security is active, you will need to enter the system password in order to list the operator codes and passwords.

The system prompts:

Do you want a printed copy?

Select one of the following:

Y Prints a copy of the listing.

N Displays the listing on the screen.

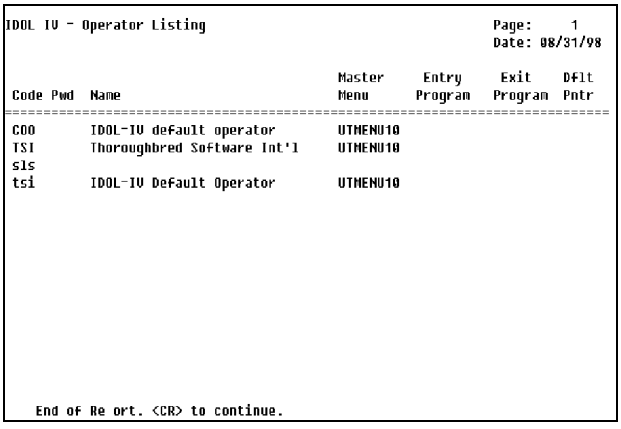
If you select a printed output, you will also be asked to select the printer if there is more than one configured.

Select Printer (LP): LP_____

Type the name of the printer you wish to use and press **Enter**. The utility proceeds automatically.

The system prints a report similar to the following:

Sample Operator Listing



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Operator Stats Report

This option traces menu activity for all operators. The report is sorted by date and time. Statistics are recorded when you select **Y** at the Operator Statistics field in Installation Information.

Select **Operator Stats Report** from the System Administration options.

When you select this option, the system prompts:

Do you want a printed copy?

Select one of the following:

Y Prints a copy of the report.

N Displays the report on the screen.

If you select a printed output, you will also be asked to select the printer if there is more than one configured.

Select Printer (LP): LP_____

If the statistics database does not exist, the system prompts:

Cannot locate file IDDSTAT.

The system automatically creates the database when recording begins.

The system prompts:

Merge Error Log Information?

Select one of the following:

Y Views error log information with the operator statistics.

N Views only operator statistics.

The system prints a report similar to the following:

Operator Stats Report

```
11/14/95 10:58 AM                          IDOL-IV Operator Statistics Report                                    Page:1
                                        Thoroughbred Software International,Inc.

                                                                                                                                
                  Opr Tr       File              Menu/
Date      Time    Cde ID Login Suff Source       Program  Entry     Description
======== ======== === == ===== ==== ============ ======== ========= ================================================================
11/13/95 18:49:58 ISI IH has       Exit IDUL-IV UILUGU
11/13/95 18:48:49 SLS TN sls       IDOL-IV Menu UTMENU10 2         CONNECT METHOD UTSETUP
11/13/95 18:48:40     TN sls       Oper Login           SLS
11/13/95 18:27:30 DMD Te dmd   DEM IDOL-IV Menu DAMENU10 /*        Prog: '*'
11/13/95 17:54:06 ISI IH has       IDUL-IV Menu UTMENU10 2         CONNECT METHOD UTSETUP
11/13/95 17:12:29 MGC T2 mgc   TY  IDOL-IV Menu UTMENU10 TS        Source-IW
```


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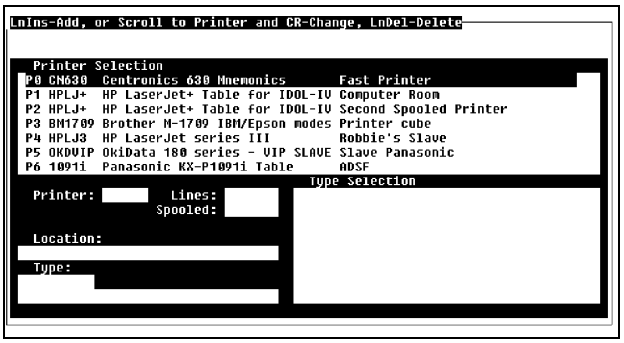
Printer Assignment

This utility is used to assign defined printer tables to specific printer codes. The assigned codes will be displayed in the select printer prompt whenever you select to print and the appropriate printer table will be accessed.

NOTE: You must define a printer table with the Printer Maintenance utility before using it in the Printer Assignment utility.

Select **Printer Assignment** from the Dictionary-IV Utilities Menu or System Administration options. The system displays the following screen:

Printer Assignment



The Printer Assignment screen consists of three options:

- Add Printer Assignment
- Change Printer Assignment
- Delete Printer Assignment

Add Printer

To assign a printer table to a new printer code, press the **Line Insert** key. The cursor is positioned at the Printer field.

Printer
Type a 2-character alphanumeric printer code (e.g., P1, P2, LP, etc.) and press **Enter**. The cursor moves to the Lines field.

Lines
Type up to 3 numeric characters for the number of lines to print (e.g., 8 1/2 x 11 paper = 66 lines) and press **Enter**. Now the cursor is on the Location field.

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Spooled
Select one of the following:

Y Printer output to be sent to a print spooler.

N Printer output not to be sent to a print spooler.

Location
Type up to 30 alphanumeric characters for the printer location and press **Enter**. The cursor moves to the Type Selection window.

Type Selection
Scroll through the printer tables and press **Enter** to make a selection. The printer table name and description are displayed in the Type Selection field and the new printer assignment is added.

Change Printer

Scroll to the printer name that you wish to change and press **Enter**. The printer table and location information are displayed in the assignment fields.

Scroll to the printer table that you wish to use and press **Enter**. The new table type and description is displayed and the cursor is located at the Location field.

Type a new location if necessary and press **Enter** to save changes.

Delete Printer

Scroll to the printer name that you wish to delete and press the **Line Delete** key. The selected printer information is displayed in the assignment fields and the system prompts:

Delete this printer?

Select one of the following:

Y Deletes the printer.

N Leaves the printer defined.

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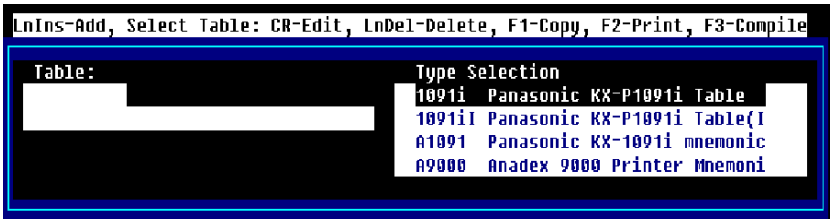
Printer Table Maintenance

This utility is used to define and maintain printer tables for your system. Printer tables can be created, copied, and edited. The Printer Assignment Utility can be used to assign these tables to specific printer codes.

Printer tables define mnemonics, which are used to communicate certain functions or operations to the printer. Your printer must support all the capabilities that you use in the table (e.g., fonts, compressed pitch, alternate character sets, etc.). Refer to the printer manual for this information.

Select **Printer Table Maintenance** from the Dictionary-IV Utilities Menu or from the System Administration options. The system displays the following screen:

Printer Table Maintenance



The following keys are available in Printer Table Maintenance:

Line Insert Add a printer table.

Enter Edit a printer table.

Line Delete Delete a printer table.

F1 Copy a printer table.

F2 Print the table list.

F3 Compile the printer table.

Select **Line Insert** (to add), **Enter** (to change), **Line Delete** (to delete) a printer table.

Add Printer Table

Press the **Line Insert** key to add a new table. The cursor is positioned at the Table window.

Table
Type up to 6 alphanumeric characters for the Table Name and press **Enter**.

Description
Type up to 40 alphanumeric characters for the description and press **Enter**. The cursor moves to the printer mnemonics editor. Add printer table commands as needed.

Press **F4** to save and exit the definition.

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Change Printer Table

Use the **Up Arrow** and **Down Arrow** keys to scroll through the printer selections and press **Enter** to select a table to be changed.

Description
Change the 40 alphanumeric character description.

Printer Mnemonics
From the description press **Enter** to edit the printer mnemonics.

NOTE: A good example of a well-documented printer table is the HP LaserJet series II table installed with your Dictionary-IV software.

The following keys are active in the printer table definition:

- **Character/Line Insert** keys
- **Character/Line Delete** keys
- **Tab/Back Tab** keys
- **Page Up/Page Down** keys
- **Home**

The Home key provides progressive movement depending on where the cursor is located: first column, top line of window, first line of text, or end of text.

Each printer command is defined in the following manner:

command-name command-sequence comments

Command Name
The command name is a 2 to 6 character identification for the control sequence being defined. This entry must begin in column one of the first definition line.

Command Sequence
A command sequence may consist of any combination of Thoroughbred Basic printer mnemonics, hexadecimal, numeric or character constants, internal variables, or other command sequences.

Any numeric value alone will be interpreted as a numeric constant.

Any value enclosed in quotation marks will be interpreted as a character constant.

Any value enclosed by either dollar signs or matching brackets will be interpreted as a hexadecimal constant.

A command sequence, when used in another command sequence definition will be preceded by an ampersand (&). The definition of a command sequence must appear before any reference to that command is made.

A command continuation line must have a colon (:) in column one.

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Comments
An asterisk (*) or exclamation mark (!) indicates descriptive information and is ignored by the printer.

NOTE: If you place an * or ! in the first column, a space must precede the comment.

The following are some examples of printer table definitions:

```
RESET       'ES',"E"                    !Reset (This will cause any unprinted data to
                                        !print and the page to be ejected) setting page length
                                        !ES',"&166P" will also feed any unprinted data
CLOSE       &RESET
            :   'ES',"&10o1x"           !portrait, one copy, letter size
            :       "2e6d62F",          !top margin 2, 6 lpi, text !length 62
            :   'ES',"9",               !clear horizontal margins
            :   'ES',"&A01",            !left margin zero
            :   'ES',"&d@",             !underline off
            :   'ES',"(10U",            !pc8 symbol set
            :   'ES',"(s0p0s0b3T",      !fixed point upright normal courier
            :   'ES',"(s10.00h12.00V"   !10 pitch 12 point
OPEN        &CLOSE                      !Same as close defaults
CW10        'ES',"(s10H"                !10 characters per inch
CW12        'ES',"(s12H"                !12 characters per inch
CW17        'ES',"(s17H"                !17 characters per inch
ULON        'ES',"&dD"                  !Underline on
ULOFF       'ES',"&d@"                  !Underline off
```

The following explains controlling the font, character height and width when slave printing to a GDI printer. This requires a True Type Outline font.

Set the font name:

```
'ES',$46xx$,"Font Name" - xx = binary length of "Font Name"
 Max font name length = 31
```


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```
Set the character width and height:

'ES',$57xx$ - xx = $0A$ to $FF$ sets the default width.
'ES',$48xx$ - xx = $0A$ to $FF$ sets the default height.
```

For printers using 600 DPI:

```
'ES',$573C$ sets 10 CPI ($3C$ = 60)
'ES',$4864$ sets 6 LPI ($64$ = 100)
```

These are intended to be used before any data is printed. However, they may be set at any time. A 'PB' mnemonic is recommended to ensure complete sequences are sent to the driver. Some usage affects other settings. Example - setting character width will affect sequences referring to the characters, such as set left margin.

The following are example modifications to the STNDRD printer table:

Add the following to the OPEN:

```
'ES',$460B$,"Courier New",
`ES',$573C$,                ! 10 cpi (600/60) (3C) 60 pts
'ES',$4864$                 ! 6 lpi (600/100) (64)
```

Add or modify the following CW and LI values (assuming a 600 dpi printer):

```
CW10       'ES',$573C$      ! 10 cpi  (600/60)   60 pts
CW12       'ES',$5732$      ! 12 cpi  (600/50)   50 pts
CW17       'ES',$5723$      ! 17 cpi  (600/35)   35 pts
CW6        'ES',$5764$      ! 6 cpi   (600/100) 100 pts
CW8        'ES',$574B$      ! 8 cpi   (600/75)   75 pts

LI6        'ES',$4864$      ! 6 lpi   (600/100)  100 pts
LI8        'ES',$484B$      ! 8 lpi   (600/75)    75 pts
LI4        'ES',$4896$      ! 4 lpi   (600/150)  150 pts
```

The DSD() function can be used to retrieve the current settings. This information is only available for Spool Type 3 printers after an OPEN has been executed.

```
21,2  16 bit unsigned binary Horizontal Resolution
23,2  16 bit unsigned binary Vertical Resolution
25,2  16 bit unsigned binary Character Width
27,2  16 bit unsigned binary Character Height
29    up to 31 characters Font Face Name
```

When you have finished editing press **F4** to save and exit the definition. The system prompts:

Save text?

Select one of the following:

Y Saves changes.

N Exits without saving changes.

The system returns you to the Type Selection window.

NOTE: To use a table after changes have been made, it must be regenerated. Use Generate Printer Tables to resave the table.

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Delete Printer Table

Scroll to the table that you wish to delete and press the **Line Delete** key. The system displays the selected printer table and prompts:

Delete this Table?

Select one of the following:

Y Deletes the table.

N Cancels the delete operation.

Print Printer Table

Scroll to the table that you wish to print and press **F2**. The printer selection is displayed and the system prompts:

Select Printer (LP): LP_____

Type the name of the printer you wish to use and press **Enter**.

Copy Printer Table

Scroll to the table that you wish to copy and press **F1**. The printer selection is displayed and the system prompts:

Enter Name for new Table_____

Type up to 6 alphanumeric characters for the new table name and press **Enter**.

NOTE: The following printer mnemonics (command names) must be defined for a printer table that is used to print Report-IV definitions:

CW10	Character width approximately 10 per inch
CW12	Character width approximately 12 per inch
CW17	Character width approximately 17 per inch

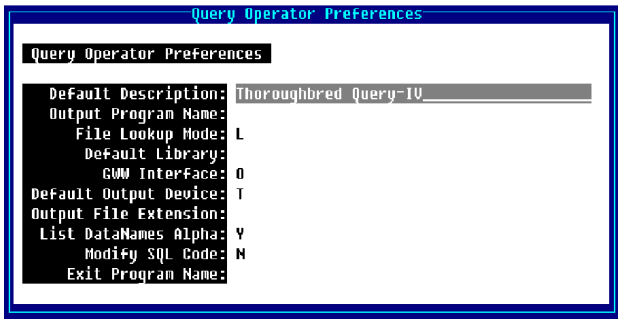
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Query-IV Parameters

This option allows you to define Query-IV parameters.

Select **Query-IV Parameters** from the System Administration options.

Query-IV Parameters



You may enter the following information:

Default Description
Type up to 30 alphanumeric characters for the description and press **Enter**. This heading displays when the output is to a printer or the EQL Heading is on. For more information see the Query-IV Reference Manual.

Output Program Name
Type the 3 to 8 alphanumeric character program name. This is the program to be executed when the query output is directed to a file. It will be executed prior to printing any detail to the file.

You can use it to manipulate detail into a specific file format. The output program should be a public script that receives two variables. The first is a numeric containing the output channel. The second is a string containing the detail record.

File Lookup Mode
Allows access to Dictionary definitions through Links or Schemas. When in the Link mode you have access to all links. When in the Schema mode you only have access to defined schemas.

Links Displays only Links (single files) when you select **1-Files (Links)**. When you request data element names, the system displays data element names for links.

Schemas Displays only Schemas (predefined databases) when you select **1-Files (Links)**. When you request data element names, the system displays data element names for schemas.

For more information about Schemas see the Query-IV Reference Manual.

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Default Library
Type the 2 alphanumeric character library name to be used as a default for Link name selection. Press **Enter**. Once Links are selected, the last Link name will be used as a pointer. This option is only applicable for creating new queries. If no name is specified, Query-IV will start with the first non-numeric library.

GWW Interface
If GWW has not been started this field will be set to N/A.

Default Output Device
Press **Enter** to select File, Printer, or Terminal as the default output device for your queries.

If you select printer, Query-IV will prompt you for a printer each time you execute.

If you select file, Query-IV will output the results to a file. The name of the file will be the same as your query with an optional extension. This extension comes from the Output File Extensions field.

Output File Extension
Type up to 3 alphanumeric characters for the extension to be added to the default output device file name. Press **Enter**. This field is not needed if you select Printer or Terminal for the Default Output Device.

If no extension exists, your operator code will be used.

List Data Names Alpha
Press **Enter** to select **Yes** or **No**. Yes lists the data element names in alphabetical order. No lists the data elements in physical file order.

Modify SQL Code
Press **Enter** to select **Yes** or **No**. Yes allows you to modify SQL code.

If you select **Yes**, Query-IV will pass the current SQL request to a public script. Here you can make any modifications that are necessary prior to syntax checking and execution.

When this option is used, Query-IV will execute:

```
RUN PUBLIC "Q4WHERE",Q0$
```

Q0$ contains the current SQL request.

Exit Program Name
Type up to 8 alphanumeric characters for the name of the program to execute when exiting Query-IV. Press **Enter**. To return to a Dictionary-IV menu, use the program name ID. To return to the operating system enter the value: **[SYSTEM].**

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Rebuild Link Sorts

This utility invokes a menu that will allow you to:

- Rebuild sorts for a library or range of links.
- Display the Sort Rebuild Log.
- Print the Sort Rebuild Log Report.

Select **Rebuild Link Sorts** from the Supplemental Utilities Menu. The system displays the following pop-up menu:



Rebuild Link Sorts

This option rebuilds sorts for a range of links within a library using a mask. You may also specify a list of FILE-SUFFIX values to be processed.

This option rebuilds sorts for a range of links within a library using a mask. You may also specify a list of FILE-SUFFIX values to be processed.

The system displays the following:



All Libraries?
Select one of the following:

Y Rebuilds sorts for all libraries. The cursor is positioned at the File Suffix field.

N Positions the cursor at the Library field.

The default is **N**.

Library:
Type the 2 alphanumeric character library name or press **F2** for a lookup of library names.

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From Link:
Type up to 6 alphanumeric characters for the first Link to be processed. Press **Enter** for the first Link in the library.

To Link:
Type up to 6 alphanumeric characters for the last Link to be processed. Press **Enter** for the last Link in the library.

Link Mask:
Type the optional Link Mask. Press **Enter** to select **None**.

File-Suffix:
Type the optional list of FILE-SUFFIX values to process. Separate multiple entries with a comma. For example: DEM,TSI,ABC.

Log Progress:
Select one of the following:

Y All Links processed are recorded in the log file.

N The log file is not used.

E A log entry is made only when errors occur during processing.

The system defaults to **Y**.

The system prompts:

Continue?

Select one of the following:

Y Rebuilds the sorts as defined. If you selected **Y** or **E** in the Log Progress field, the system displays the Rebuild Log or the Error Log.

N Does not rebuild the sorts. You may make corrections or press **F4** to exit.

Display Rebuild Log

This option displays the Sort Rebuild Log on the terminal. Process start and end times and all user-supplied options display.

Each line contains the results for each link processed. The time values are accurate to within nine seconds.

Sort Rebuild Report

This option prints a hard copy of the Rebuild Log.

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Rebuild Log Messages

To properly use the Sort Rebuild Log, the status code for each link should be carefully reviewed.

Many status messages are not significant. Links often exist in an application, which either has no sorts or requires script programming to access the data file.

In some cases however, the Sort Rebuild Log exposes links using old or deleted formats or data files.

Following is a list of Rebuild Log Messages:

These messages indicate conditions, which may require little or no intervention.	
Message: Meaning: Action:	No sorts to rebuild The link does not contain any sort definitions. There are no sorts to rebuild. None.
Message: Meaning: Action:	Data file not found The requested link refers to a data file which does not exist or is not available with the current directory configuration. Check that all required directories are accessible. Depending on the application, no action may be necessary.
Message: Meaning: Action:	Can't lock file The link's data and/or sort file is currently in use. Determine where the file is in use; rebuild sorts when the file is available.
Message: Meaning: Action:	Operator access/Terminal access Operator/Terminal access to the specified link was denied. Check the operator code/terminal ID code that attempted to access the link. Check the Operator/Terminal Access Code fields in the link header.
Message: Meaning: Action:	Terminated by user The sort rebuild process has been stopped by the operator. None.
These messages indicate conditions where the link's sorts cannot be rebuilt because of missing or unusable definitions or files. The response is to first identify the missing or unusable definition or file. Next, determine if that definition name or file name is correct. If the name is correct, determine why it does not exist before attempting to create the definition or file.	
Message: Meaning: Action:	Link not found The requested link does not exist. Check that the requested link name is correct. If the name is correct, you may need to create the link definition.
Message: Meaning: Action:	Format not found The requested link uses a format definition that does not exist. Check that the name in the link's format field is correct.
Message: Meaning: Action:	Text file not found The text field file specified in the link cannot be found. Check the text field file in the link header.
Message: Meaning: Action:	Format corrupt The requested link refers to a format definition, which contains an internal conflict. Run the Dictionary Update utility to obtain a detailed analysis of this problem.
These messages indicate conditions where the link's sorts cannot be rebuilt due to a definition or file size or type mismatch.	
Message: Meaning: Action:	Link type mismatch The link's file type does not match the data file type. Check the Link File Type and Data File fields in the link header.
Message: Meaning:	Can't rebuild type U The link's File Type field is U (a text file). Sorts cannot be rebuilt for these links.

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Action:	None.
Message: Meaning: Action:	File size mismatch There is a record size and/or key size conflict between the link format and the sizes used to define the data file. Check the length and key indicator of all fields in the format. Also check that the data file is correctly defined. It may be necessary to expand the file size parameters.
Message: Meaning: Action:	File not a data file The link's data file is a program, serial, text, or system file. Check that the link's Data File name is correct.
Message: Meaning: Action:	Key file not valid The link's sort (key) file is not a valid sort of file. Check that the link's Sort File name is correct.
Message: Meaning: Action:	Text file invalid The file in the link's Text File field is not a valid text field file. Check that the link's Text File field is correct. Also check the size and type of the link's text field file.

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Remove Help

This utility can be used to remove the Dictionary-IV non-window help documentation from the System Dictionary File (IDDBD). Versions 8.3 and above, use the new window style help. Since the old style is no longer used you may delete it from your system.

NOTE: Only the help in the ID, 4G, and UT libraries is removed.

Removing Dictionary-IV help documentation may prove useful or necessary if you are running out of storage space on your hard disk.

In order to ensure proper operation of this utility, you should ensure that all operators have logged off Dictionary-IV.

If you plan to restore help later or keep a copy of the help for reference, you should verify that you have a proper backup.

Select **Remove Help (Dictionary-IV)** from the Dictionary-IV Utilities Menu. The system prompts:

Do you want to remove the Dictionary-IV HELP?

Select one of the following:

Y Positions the cursor at the next prompt.

N Exits the option.

Are you sure you want to remove the HELP?

Select one of the following:

Y The system removes the Dictionary-IV help files.

N Returns to the previous prompt.

After completion, you may wish to run the System File Expansion Utility. This will compact the system file and use less disk space.

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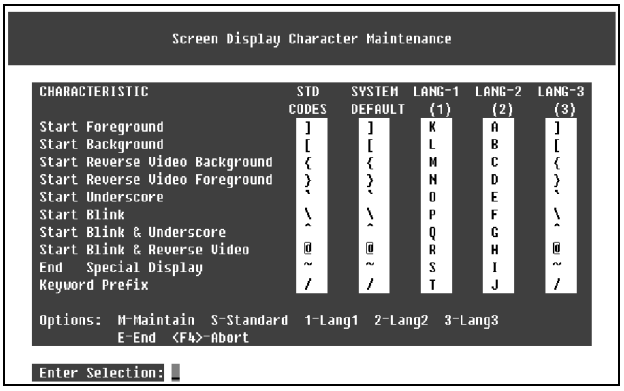
Screen Characters

This utility allows you to configure screen display codes to be used as the system default, and three alternate sets, which are primarily used for implementing keyboards in foreign languages. This is valid for non-windowed screens.

Press **F12** in Screen Maintenance to select a set of screen display codes from the sets created in this utility.

Select **Screen Characters** from the Dictionary-IV Utilities Menu. The system displays the following screen:

Screen Characters



Five columns are displayed:

- Standard Codes
- System Default
- Language 1
- Language 2
- Language 3

Column 1 displays the standard codes (the way the product is shipped). Column 2 lists the system default codes. Columns 3 through 5 provide three alternate sets (languages) of screen display characters.

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Use the following selections to maintain the character sets:

M Allows maintenance of the System Default column.

S Copies Standard Codes into the System Default column.

1 Swaps System Default codes with Language 1 codes.

2 Swaps System Default codes with Language 2 codes.

3 Swaps System Default codes with Language 3 codes.

E Ends the utility and saves any changes.

F4 Aborts the utility; does not save changes.

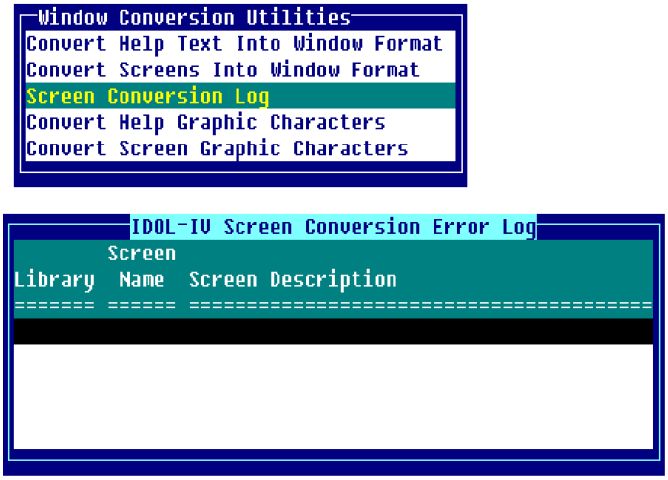
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Screen Conversion Error Log

This utility will present a view of the Screen Conversion Log. This log will contain the screen names of those screens that were not converted.

Select **Screen Conversion Log** from the Windows Conversion Utilities. The system displays the Dictionary-IV Screen Conversion Error Log:

Screen Conversion Error Log



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Security

This utility controls the activation and deactivation of access restrictions in Dictionary-IV (except for operator log on). Access restrictions are adhered to when security is active and ignored when security is inactive. The data element security features defined in a format are not affected by the system security status.

Security is activated and deactivated through the use of a system password. Dictionary-IV is initially installed without a system password, indicating that security is inactive. In its inactive state none of the security features listed below are operational. To activate security and make these features operational, you need to create a system password with this utility.

- Library passwords will restrict maintenance access to Format, Screen, View, Link, Menu, Message, Help, Script, and Report components.
- Link passwords will restrict access to the database (Thoroughbred Basic File) specified in the link.
- Menu passwords will restrict display of the menu.
- Menu selection passwords will restrict execution of the menu selection.
- Operator code and terminal access restrictions may be specified for Menus and Links.
- Passwords of any type are not displayed or printed with active security unless the system password is known.
- Access to Audit File Information, Operator Code, Operator Listing, Installation Information, Multi-Tasking Information, and System File Report is restricted.

NOTE: The system activates (or deactivates) all access restrictions by password, operator code, and terminal code currently in the system.

Select **Security** from the Dictionary-IV Utilities Menu. If security is presently active, the system prompts:

Enter the current System Password:

Deactivate Security
If you wish to deactivate security or change the system password, type the current system password and press **Enter**. If the password is incorrect, the system displays an error message:

Passwords do not match. Security Status not changed.
Return to continue.

If you have forgotten or cannot establish what the system password is, you will need to contact your dealer for the steps necessary to determine the system password.

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Activate Security
If security is presently inactive or you have entered the current system password (as directed above), the system prompts:

Enter a new System Password:

If you wish to deactivate security, press **Enter**.

If you wish to activate security, type a valid system password and press **Enter**. System passwords may be from 1 to 3 characters long and consist of any character sequence. Both uppercase and lowercase, special characters or numbers, or any combination of these is allowed.

If you enter a system password, you will be asked to retype it to verify that it is correct:

Retype System Password:

If you do establish a system password, make sure that you take appropriate steps to securely record this password. It cannot be retrieved without technical help from your dealer.

Once security has been activated or deactivated, the system displays one of the following messages:

Security is active, RETURN to continue.

Security is not active, RETURN to continue.

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Set Developer/User

This option sets the internal flag that defines the operator as a developer or user, enabling and disabling certain system functions.

Once development is complete, this access should be disabled.

Select **Set Developer/User** from the System Administration options the system displays the following:



Selecting **LOCAL** options will only apply to the current user. Selecting **GLOBAL** options will update a system control parameter that will apply to all users the next time they log in.

If Developer Mode is selected the following function keys are available:

F1 Edit Screens, Menus, and Help.

F8 Move Screens, Menus, and Help.

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Set System Date/Time

This utility can be used to set the date and/or time that is maintained for the system. This date and time information is referred to as system date and system time (Thoroughbred Basic Variables DAY and TIME).

NOTE: The date format is set in the IPLINPUT file. For more information see the Thoroughbred Basic Customization and Tuning Guide.

On software operating under Microsoft Windows, setting these variables affects all Basic users.

On software running under the UNIX or Linux operating systems, these variables are only set for the terminal on which you are running. For example, terminal 1 can have a different system date and time than terminal 2 within the Basic environment.

In addition to setting the system date, there is an option to specify a terminal date. Terminal date is only applicable within Dictionary-IV (or software with terminal date implementation) and does not affect the system date. Terminal date is set equal to system date when you log off or log on to Dictionary-IV or when set equal using this utility.

Select **Set System Date/Time** from the Dictionary-IV Utilities Menu. The system prompts:

Enter System Date (MMDDYY):

Specifies the present date format established for Dictionary-IV. Type the correct date in the format established and press **Enter**. To insert the present system date value press **Enter**.

Enter time (HHMMSS):

Type the time in the format shown and press **Enter**. For example, 4:30 PM would be entered as 1630 (computers maintain a 24-hour based time). Minutes and seconds are optional and do not need to be entered. Pressing **Enter** will utilize the present system time value.

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System Error Report

This utility produces a printed or displayed list of system errors that have been recorded during operation of Dictionary-IV. It also displays errors occurred while executing scripts. System errors are recognized by the display of a message on the top line of the screen:

System Error: Pgm-XXXXXX Ln-#### Err-## RETURN=Retry E=End

Pgm is the Thoroughbred Basic Program in which the error occurred.

Ln is the program line at which the error occurred.

Err is the Thoroughbred Basic error condition.

Information on the program and line number in which the error occurred is displayed along with the Thoroughbred Basic error code.

Select **System Error Report** from the Dictionary-IV Utilities Menu. The system prompts:

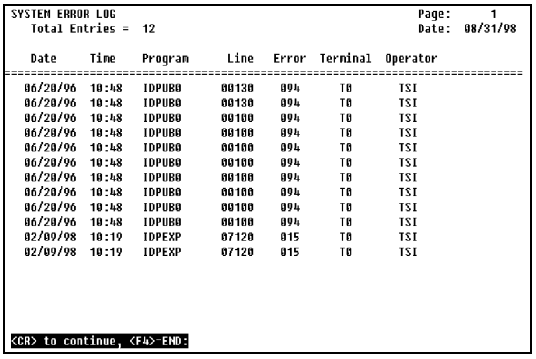
Do you want a printed copy?

If you select a printed output, you will also be asked to select the printer if there is more than one configured.

Select Printer (LP): LP_____

Type the name of the printer you wish to use and press **Enter**. The utility proceeds automatically. The system displays a report similar to following:

System Error Report



NOTE: The error log has been enhanced to provide the developer with the ability to capture a 'snapshot' of the system whenever a runtime error occurs. All information available through the debugger is captured into a log file that may be viewed or reported at a later time. The Error Log selection can be found on the Utility Menu Selection from the OPENworkshop startup menu.

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The error log is a record of the last 100 system errors and contains the content of the system error message along with the date and time that the error occurred. After recording 100 errors, the log is recycled.

This utility can be used to verify recurring errors and can be used by the support staff to isolate and identify problems.

NOTE: For a listing of error codes see the Thoroughbred Basic Developer Guide.

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System Security

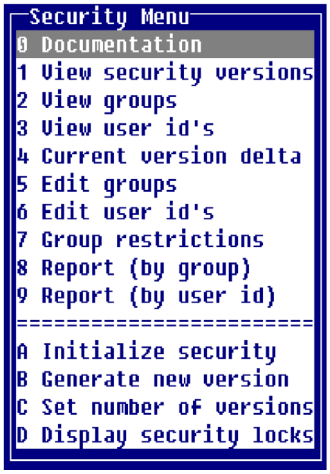
The Dictionary-IV security system was designed to be a logical layer of security that exists on top of an operating systems security, specifically UNIX. However, accommodations have been made to allow Dictionary-IV's logical security layer to function with other operating systems. Following are the primary features:

- Group level access to Menus and selections from Menus.
- Group level access to data file Links.
- Group level access to fields within a data file.
- Drill down views of user id's and groups that quickly show user's within group and groups which a user is part.
- Prior versions of security that show the delta from one version to the next.
- Reports showing group to user and user to group association.
- Initialize and regeneration of logical security layer from user id and group files after modifications.

This option allows you to enable and disable certain Dictionary-IV functions.

Select **System Security** from the System Administration options. The system displays the Security Menu:

System Security



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Creating security tables

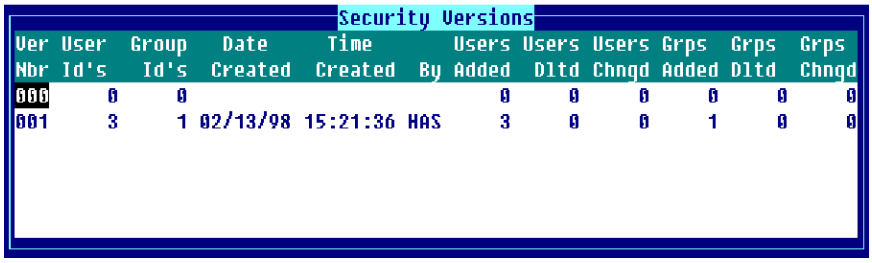
After initial installation, Dictionary-IV does not have the security system enabled. To enable security, you must:

- Select option A: Initialize security. This option removes any Dictionary-IV security files.
- Select option B: Generate new version. This option creates a new set of security tables and populates them with data taken from /etc/passwd and /etc/group.
- Select option C: Set number of versions. This option controls the amount of history of changes to the security permissions that is maintained by Dictionary-IV.
- Ensure the system user ID and group files reflect the desired user/group relationships for the installation. Option 5 and 6 (Edit groups and Edit user IDs) can be used to establish desired relationships in the operating system tables. If not, edit user IDs and groups to the required values, then use option B again to create a new security version. Option B can be used as many times as needed to generate new security versions.

NOTE: If you are using a UNIX operating system, you must have root permissions to modify the group or user ID file.

Reviewing security permissions

Select option **1** from the security menu to view security versions.



This view allows the administrator to review the changes made between versions, and the current access permissions for groups and the members of those groups.

Group restrictions

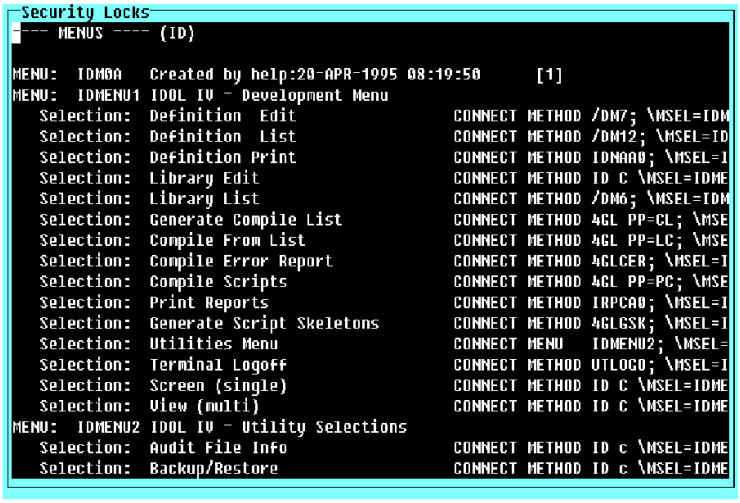
Data element name access permissions can be further qualified by using the Group Restrictions option from the security menu.

Displaying security locks

The security locks that have been defined by the developer for an application can be displayed and reviewed using option D from the security menu. Enter a list of one or more libraries to be reported.

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This listing shows all security group statements that have been applied to Menus, Links, and data element names in the selected libraries:



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Terminal Configurator

Select **Terminal Configurator** from the Dictionary-IV Utilities Menu or **Terminal Configurator** from the System Administration options. The system displays the following:



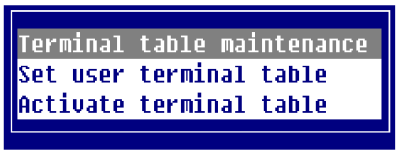
Select one of the following:

TCONFIGW This file holds windowed terminal tables.

TCONFIG8 This file holds non-windowed terminal tables.

NOTE: Dictionary-IV requires the use of TCONFIGW based on the IPLINPUT settings.

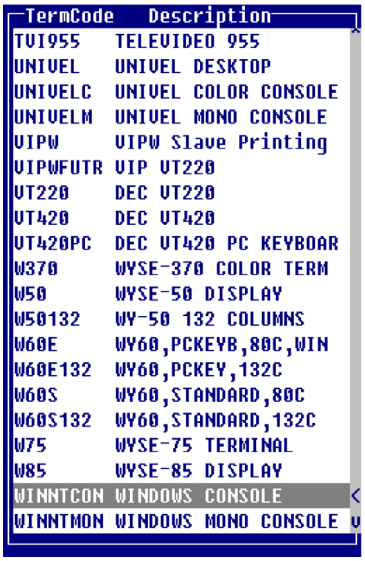
The system prompts:



Terminal Table Maintenance

This option allows you to edit the terminal table listing. A view appears with the names and descriptions of all terminal tables in the chosen TCONFIG file (TCONFIGW or TCONFIG8).

Terminal Configuration - Terminal Table Maintenance



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Keys available in this view:

Enter To change or copy this table.

Line Insert To add a new table.

Line Delete To delete this table.

The following function keys are available in add, change, and copy modes:

F1 Split Line

F2 Join Line

F3 Basic Help

F4 End/Save

F6 On-line Help

F7 Special Functions

F8 Search/Replace

F9 Expand Window

F10 Goto

F12 Copy

F13 Cut/Paste

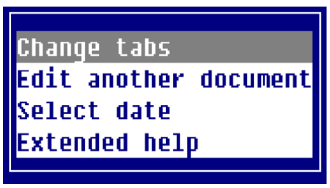
F14 Undo

F15 Character/Graphic Mode

F16 Print

For more information see the Text Editor section in the Dictionary-IV User Guide.

To assist with your editing of terminal tables, the system provides Special Functions. Press **F7** and the system displays the following pop-up menu:



Change tabs
Any character, except a period or space will cause a tab stop.

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Edit another document
Enter the name of a file (full path), Dictionary-IV help name (llhhhhhh), or a Source-IV source name (.llll.ssssssss).

NOTE: If you enter a Source-IV source name, the editor changes. The function keys behave differently. For more information see the Source-IV Reference Manual.

If the file or document is found, the contents will be displayed and you may continue editing.

Document Names

- llddddddd specifies a Dictionary-IV help definition in library ll.
- .llll.ddddddddd specifies a Source-IV document in library llll.

Files

- /usr/lib/doc1 specifies a UNIX text file doc1 in the UNIX directory /usr/lib.
- \TBSC\DOC1 specifies a Microsoft Windows text file DOC1 in the Microsoft Windows directory \TBSC.
- D:\TBSC\DOC1 specifies a Microsoft Windows text file DOC1 in the Microsoft Windows directory D:\TBSC.

Cut/paste blocks

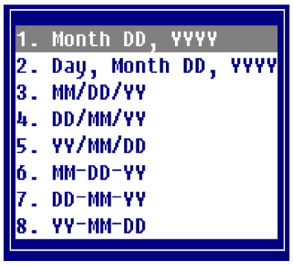
- / > specifies a view of cut text blocks. From this view cut text blocks can be selected, deleted, or edited.
- / >3 specifies cut text block 3.
- / > C specifies that all saved cut text blocks are to be cleared. This option along with the cut text block view delete option, should be used to minimize the number of cut text blocks loaded in memory.

Document Lookup

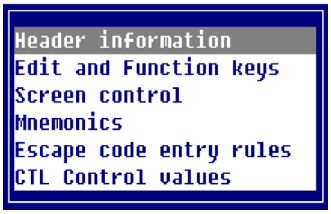
- **F2** displays Dictionary-IV help definitions for all libraries.
- ll **F2** displays Dictionary-IV help definitions in library ll.
- .**F2** displays Source-IV libraries.
- .ll. **F2** displays Source-IV documents in library ll.

Select date
Allows the current date to be placed in the text line at the cursor position. If the date does not fit on the line, the date will be moved left of the cursor until the date fits. Any text located on the line will be replaced with the date. Various date format options are allowed and can be custom tailored to the users need. The formats are displayed in the following pop-up menu:

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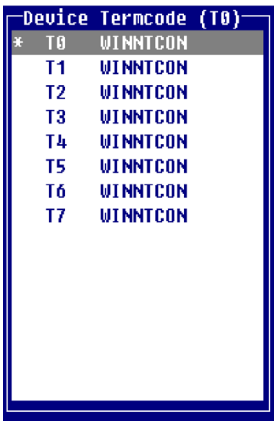
Extended Help
This option provides detailed information on how to create and maintain terminal tables. The following pop-up menu displays:



Set User Terminal Table

This option allows you to change, add, or delete a terminal table assignment. A view appears with all the devices and assigned terminal tables. These assignments will be used when the Dictionary-IV run time is executed.

Terminal Configuration - Set User Terminal Table



Select a Device/Terminal name and press:

Enter To change Device/Terminal name.

Insert To add a Device/Terminal name.

Delete To delete a Device/Terminal name.

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Device Name is a two-character terminal ID code. The first character must be in the set A, B, E, F, H, I, J, K, M, T, U, V, W, X, Y, Z. The second character must be in the set 0-9, A-Z, and a-z.

Table Name is 8 characters in length. The name entered will be the name of the table loaded for the device when Thoroughbred Basic is executed. Press **F2** to lookup terminal table names.

When maintenance is complete press **F4** and the system prompts:

Save?

Select one of the following:

Y Saves the changes.

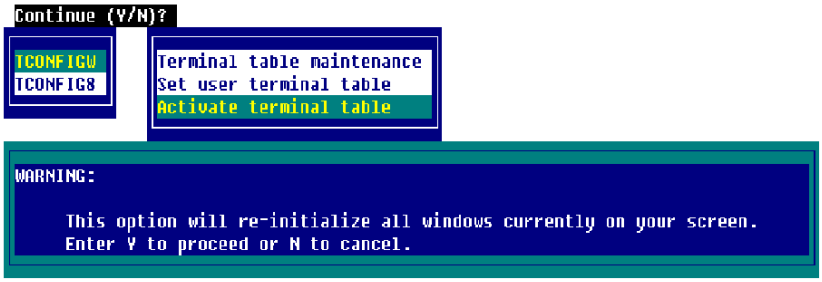
N Cancels the changes.

F4 Terminates maintenance.

Activate Terminal Table

This option allows you to select a new terminal table that is to be used for communication with your terminal for the current Dictionary-IV run time session. To permanently assign a new terminal table use the Set user terminal table option described above.

Select this option and the system prompts:



Press **F4** to return to the menu.

This option will re-initialize all windows currently on your screen.

Y To proceed.

N To cancel.

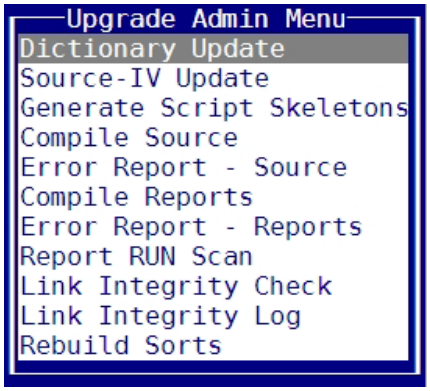
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Upgrade Administration

After the merge of an upgrade the user is taken to the Upgrade Administration menu. The upgrade can be done at installation or at another time.

From the OPENworkshop menu (**RUN "OO"**) Select Utilities and then select System Administration to access the Upgrade Administration option.

From the Dictionary-IV menu (**RUN "ID"**), select System Administration to access the Upgrade Administration option.



Dictionary Update
For more information see Dictionary Update in this manual.

Source-IV Update
Upgrade your Source-IV files.

Generate Script Skeletons
Recompile all of your existing scripts.

Compile Source
Recompile all your existing source files

Error Report – Source
Displays the view of source compile errors that were encountered during the last compile.

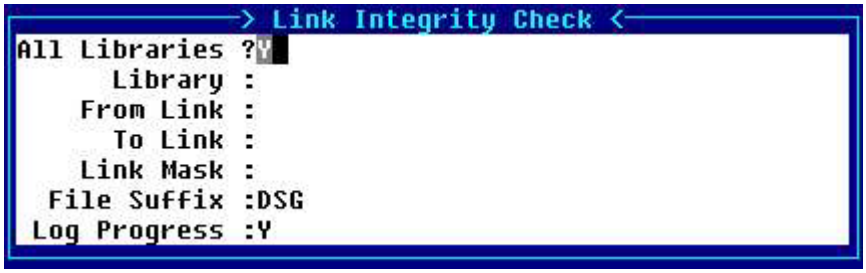
Compile Reports
Recompile all of your existing reports.

Error Report – Reports
Displays the view of report compile errors that were encountered during the last compile.

Report RUN Scan
Scans Report-IV definitions for all instances of RUN program_name. This utility is intended to help the transition from older Report-IV definitions where the RUN command was support to OPENworkshop where RUN is no longer supported. Please refer to the current Report-IV Reference manual for details.

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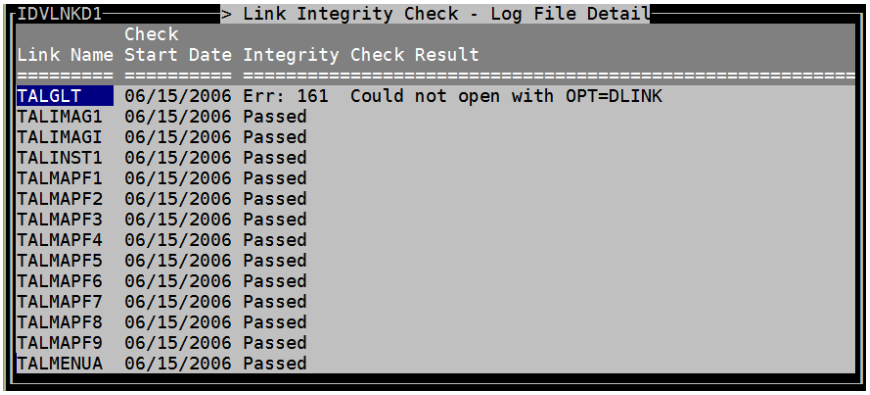
Link Integrity Check
This must be run as part of the upgrade process (in addition to the Rebuild Sorts option below). This utility will perform various integrity checks and correct some anomalies in the Link header.



For the Links you want to check, select all libraries, a single library, and a range of Links with or without a mask, with or without a file suffix. Select Y to log the progress. Once the check is completed you can view the Link Integrity Log.

The Link Integrity Check reports all Dictionary-IV ("I") file types that are not auto-expanding files (0 number of records). This helps identify files that could be converted to the auto-expanding types.

Link Integrity Log
View the results of the Link Integrity Check.



All Dictionary-IV and OPENworkshop Links will be skipped. Any problem with the integrity of a link will appear under the Results column.

Rebuild Sorts
Rebuilds all Link Sorts.

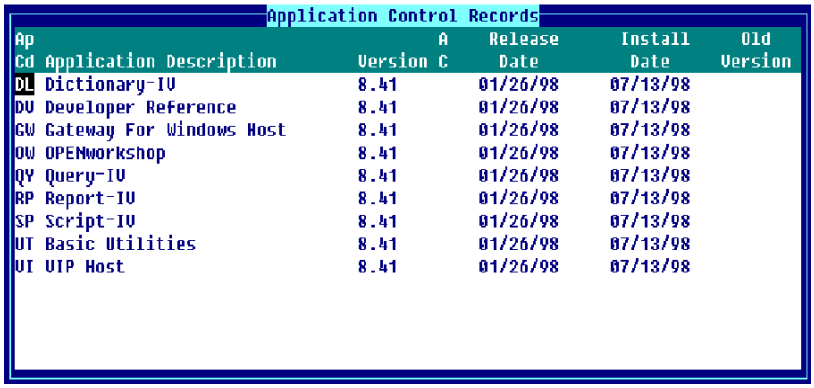
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Version Manager

This option provides version and installation date information for the Dictionary-IV products on your system. It is a display window.

Select **Version Manager** from the System Administration options.

Version Manager



The following fields display:

Ap Cd
Displays the Application Code of the Dictionary-IV products installed on your system.

Application Description
Displays the description of the Dictionary-IV products installed on your system.

Version
Displays the product version number. For Dictionary-IV to work properly, this version number should be the same for all products.

Release Date
Displays the date the installed products were released.

Install Date
Displays the date the products were installed.

Old Version
Displays the old version of the products being upgraded.

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Window Configurator

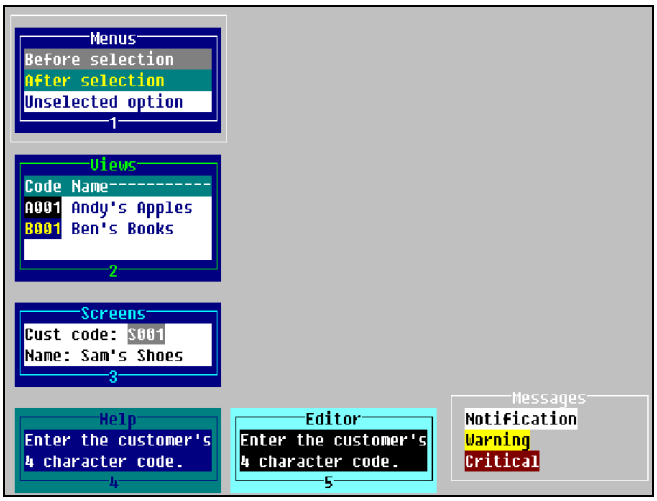
This option allows you to set up window characteristics for all window types created by Dictionary-IV. You can configure the following types of windows: Menus, Views, Screens, Help, and Editor.

The configurator for these five types of windows controls the presentation of all parts of Dictionary-IV. The following chart details the Dictionary-IV components controlled by each window type:

Menus	Views	Screens	Help	Editor
Dictionary-IV Menus	PRINT VIEW	PRINT SCREEN	PRINT HELP	Text Fields
CONNECT MENU	CONNECT VIEW	CONNECT SCREEN	CONNECT HELP	Help Editing
8MENU	8VIEWF	PRINT/INPUT SCREEN	8HELP	Screen & Report Formula Editing
8VIEWT		8PRINT/8INPUT		Source-IV

Select **Window Configurator** from the System Administration options. The system displays the following screen:

Window Configurator



NOTE: Please note changes cannot be made to messages.

The following chart outlines the major options available.

Window Parameters	Description
Window attributes	Foreground, Background, Reverse Video, Blink, and Underscore
Window/Border Colors	16 Foreground and Background colors
Border Parameters	Border type, Border/Select attributes, Paint mode
Special Window Areas	Lightbars, View headings, Field entry

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Terms Used in the Window Configurator

The following terms are used in describing the window configuration procedure:

after selection
This color/attribute combination is used after a Menu or View selection has been made (press **Enter** or **F4** in a pop-up menu) to re-print the lightbar.

This color/attribute combination is also known as the background lightbar. It is used in Menus and Views.

background lightbar
After a selection has been made, the lightbar is re-printed using the background lightbar's color and attribute settings. The background lightbar indicates which option or field was selected before the Menu or View processed the selection or was exited.

before selection
This color/attribute combination is used by the lightbar before a selection is made. When a selection has been made, the lightbar is re-printed using the after selection (or background lightbar color and attribute settings).

This color/attribute combination is also known as the lightbar. It is used in menus and views.

border
The border area refers to the area of the window's border.

field entry
Whenever data for an individual field is entered, the field is edited using the field entry color and attribute settings. The field entry settings are used when editing fields in screen entry, editing data fields in views, and editing Dictionary-IV menu option entries.

headings
View headings are column labels used in data views. View rows used as headings print using the heading color and attribute settings.

lightbar
Before a Menu or View selection is made, the lightbar color and attribute settings are used to highlight the current option. The lightbar appears when scrolling through menu options or when moving between fields in a view. Once a selection is made or **F4** is pressed to exit the view or menu, the lightbar is re-printed using the background lightbar's colors and attributes.

deselected option
The color/attribute combination is used to display all menu options not currently highlighted by the lightbar. It is the same as the menu window color/attribute.

window
The window area refers to the area within the window border. Color/attribute settings affect the text, which appears inside the window.

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Using the Window Configurator

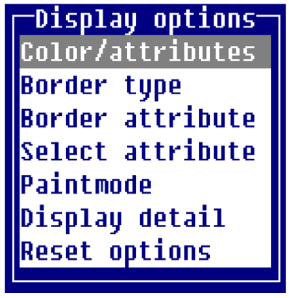
Select the type of window to configure, to do so you may:

- Use the arrow keys to highlight the desired window type then press **Enter**.
- Type the number 1 through 5 corresponding to the number in the border of the desired window type.

Press **F4** to exit the window configurator. If changes have been made, the system prompts:

Save changes?

The system displays the following pop-up menu:



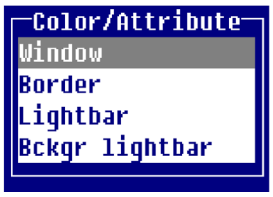
Select one of the following:

Color/attributes
The color indicates which colors are to be used in the area being configured. There are 16 different colors. They are selected for both the foreground (text) and background (area not printed) of each character position. In this context, the words foreground and background refer to the part of each character position either printed or not printed, instead of a video display attribute.

The attribute controls the type of video display to be used in the area being configured. There are 16 different attributes representing all combinations of foreground, background, reverse video, underscore, and blink.

For more information see the Text Editor section in the Dictionary-IV User Guide.

The system displays a menu of configurable areas for this window type. The following options appear for Menus:

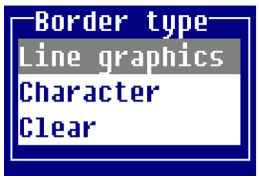


Colors and display attributes can be maintained for each of these areas. (For more information see the Menu, View, Screen, Help, or Editor window options sections following.)

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Border type
The border type indicates the contents of the window's border. The window border is the box-shaped region, which surrounds the window.

The system displays the following pop-up menu:



The valid border types are:

Line graphics solid line graphics in the window border.

Character user-selected characters in the window border.

Clear solid window border.

Border attribute
The border attribute controls which video display attributes will be used to create the window's border. Any combination of attributes can be selected.

The system displays the following toggle menu:



Select attribute
The select attribute controls which video display attributes will be used to display the window's border when the window is selected. To disable the select attribute, deselect all attributes in the select attribute menu. Any combination of attributes can be selected.

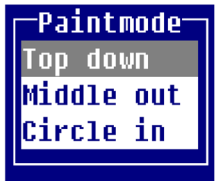
The system displays the following toggle menu:



Paint mode
The Paint mode indicates how the window is to be created and deleted.

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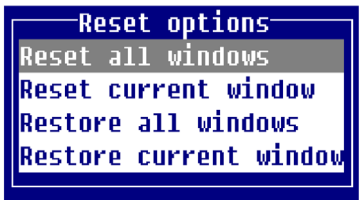
The system displays the following pop-up menu:



Display detail
This option displays all color, attributes, and parameters used by the current window type.

Reset options
The reset options are used to reset or restore the configuration of the current window or all windows to an initial state.

The system displays the following pop-up menu:



Reset all	Resets the configuration of all window types to the last saved settings.
Reset current	Resets the configuration of the current window type to the last saved settings.
Restore all	Restores the configuration of all windows to the system default values.
Restore current	Restores the configuration of the current window type to the system default values.

Menu Window Options

Colors and display attributes can be maintained for 4 areas of the menu window.

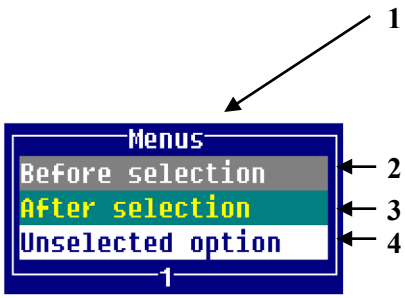
1 Menu window border.

2 Lightbar used before a menu selection has been made.

3 Background lightbar appears after a selection is made.

4 Menu window text area.

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Lightbar
At any time only one lightbar appears in the menu or view. Both lightbars appear in the sample windows for window configuration purposes.

If the lightbar display attribute matches the window display attribute, the cursor is displayed instead of the lightbar on monochrome terminals.

View Window Options

Colors and display attributes may be maintained for 5 parts of the view window.

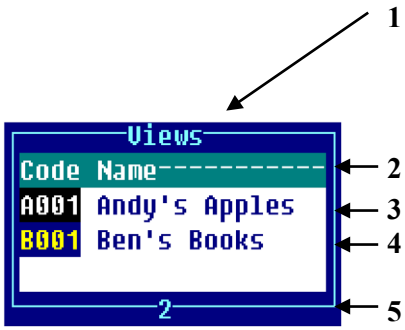
1 View window border.

2 Lightbar used before a view selection has been made.

3 Background lightbar appears once a selection is made.

4 Headings.

5 View window text area (data records).



Lightbar
At any time only one lightbar appears in the menu or view. Both lightbars appear in the sample windows for window configuration purposes. If the lightbar display attribute matches the window display attribute, the cursor is displayed instead of the lightbar on monochrome terminals.

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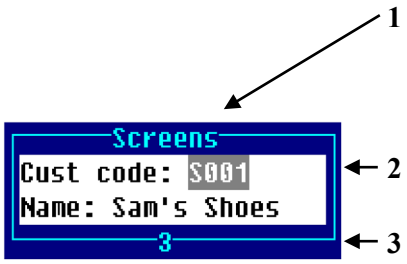
Screen Window Options

Colors and display attributes may be maintained for 3 parts of the screen window.

1 Screen window border.

2 Screen window text area.

3 Field entry parameters.



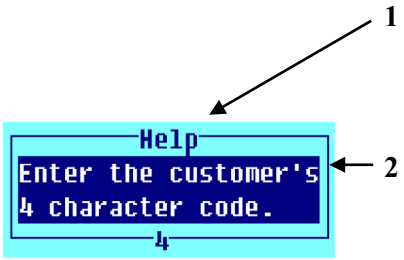
The field entry color and attributes are used in menus, views, and screens.

Help Window Options

Colors and display attributes may be maintained for 2 parts of the help window.

1 Help window border.

2 Help window text area.



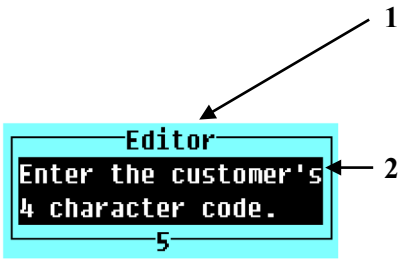
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Editor Window Options

Color and display attributes may be maintained for 2 parts of the editor window.

1 Editor window border.

2 Editor window text area.



Messages Window

The Messages window is for reference only. Messages always use either white (notification), yellow (warning), or red (critical):



For information on setting message colors see the Messages section of the Dictionary-IV Developer Guide.

Important Notes

- Window configurations are saved by operator code.
- The combination of display attribute and color may produce unexpected results on color terminals or monitors, which do not support background intensity. In this case, Thoroughbred Basic will use a different color to simulate background intensity.
- Specific colors and attributes may be embedded in Screens and Help text. In this case the system will use the Display Using Default Colors indicator in Operator Information to determine whether to use the colors and attributes stored in the text, or use the Window Configuration colors and attributes.
- On monochrome terminals, if the lightbar display attribute (Menus or Views) matches the window attribute, the result causes the lightbar to be invisible. When this occurs, the cursor is turned on for reference. The cursor is not turned on for color terminals.

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MULTI-LANGUAGE

This feature allows you to create an application with a user interface in multiple spoken languages that is independent of the 3GL and 4GL application programs.

This is done by defining language versions of your Format definitions (data element descriptions), Screen text, View headings, Message text, windowed on-line Help, Queries, and reports along with defining a language code for each Dictionary-IV operator.

It is the language code associated with the operator code that controls which language version of a definition is presented.

NOTE: For those customers who will never run in any language but EN (English), there is absolutely no impact on your application or on the Dictionary-IV development environment. Any additional processing, relative to language selections, will only be done when it is determined that the current installation is a Multi-Language environment.

Example:

PRINT SCREEN reads the Screen definition with the language code that matches the language code of the operator. An operator running with a language code of EN sees the English version of the screen, an operator running with a language code of FR sees the French version of the screen.

If the definition does not exist in the current language, the system searches the dictionary for that definition in any one of the enabled languages. This search starts with the English language code continues through all enabled language codes until the definition is found. This is referred to as the first found version of the definition.

Installing a New Release and Upgrading

TSI products contain only the English definitions. Therefore, if you have made modifications to any of the TSI definitions, these will be lost when you perform an upgrade. Any definition with a language code other than English will not be replaced.

The Dictionary Compare utility will help you to identify which English TSI definitions have been changed in the new release and which have been added.

This utility can be used in one of two ways:

- Compare the dictionary of a new release to that of a previous release. This identifies which definitions have changed or have been added. Since TSI distributes English only, this compares only the English definitions.

- Compare a translated dictionary with a standard TSI dictionary to identify definitions with language codes other than English. This can be used to easily identify which definitions have been translated. In addition, a bk file is created containing the translated definitions so that these definitions can easily be restored to another dictionary.

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You can use the dictionary Backup/Restore utility to create a backup (bk) file of all the TSI definitions that you have translated. For more information see the Utilities Reference section in this manual.

However, after you restore these definitions, you must make any changes to the definitions that have been made in the new release.

In some cases, you might choose to simply re-translate some definitions.

NOTE: This utility can compare an installed data dictionary and a dictionary bk file, two installed data dictionaries, and a distribution file and an installed dictionary.

PGCHARBASE Conversion Utility

The Dictionary-IV product is shipped using the default pgcharbase (portable graphics character base) setting of $C0$. For more information see the Thoroughbred Basic Reference Manual.

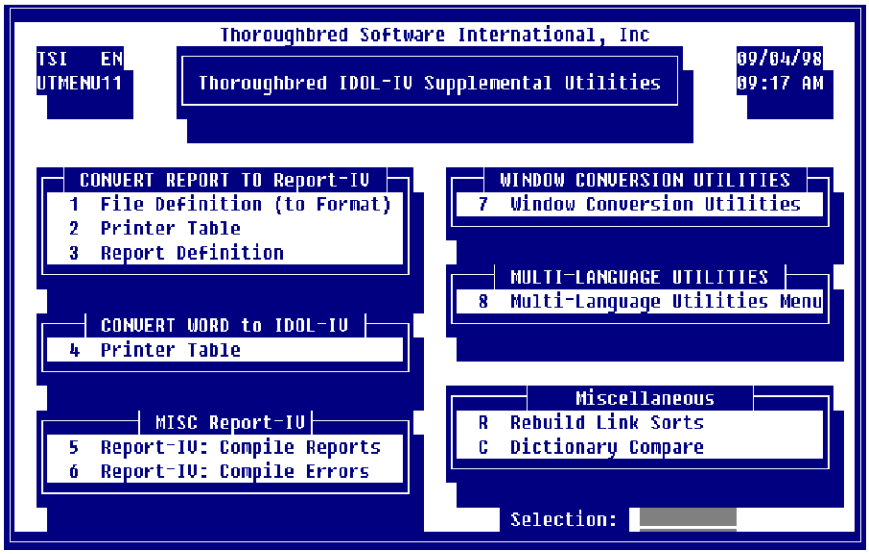
If you install Dictionary-IV over a release where the PRM PGCHARBASE is not $C0$, you may experience some problems with the display of the Dictionary-IV screens, menus, and on-line help. You must convert the PGCHARBASE of the new Dictionary-IV definitions.

Verify your IPLINPUT file. It should contain PRM DONTCHECKTEXT. This will make the screens, menus and on-line help more readable.

It should contain the PRM PGCHARBASE value into which the Dictionary-IV definitions are to be converted.

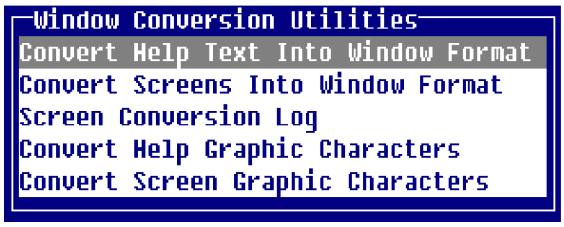
From the Supplemental Utilities menu select **Window Conversion Utilities**.

Supplemental Utilities Menu



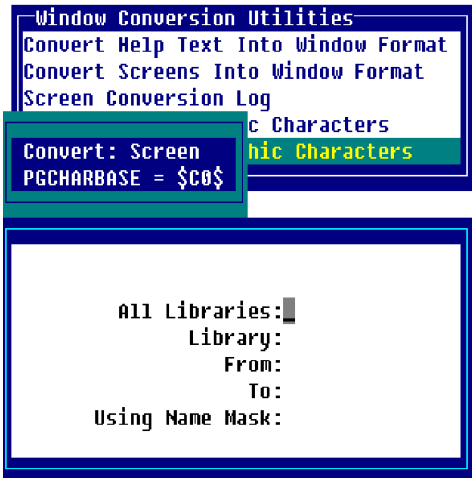
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Windows Conversion Utilities Menu



Select **Convert Screen Graphic Characters** and convert all TSI libraries.

Convert Screen Graphic Characters



Remove PRM DONTCHECKTEXT if appropriate.

NOTE: This utility will take approximately 30 minutes to convert all of the TSI on-line help and screen definitions.

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Set-up

To use the Multi-Language feature you must complete the following set-up.

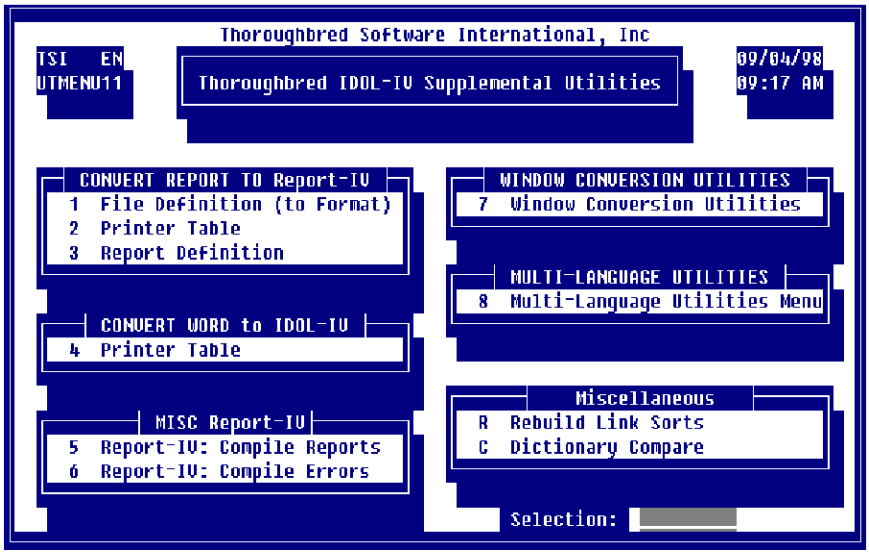
Converting TSI Libraries

Before you can select or enable another language code, you must first copy all of the TSI libraries to all the languages that you intend to enable.

NOTE: This must be done prior to selecting any language code but EN.

From the Dictionary-IV Supplemental Utilities Menu select the **Multi-Language Utilities Menu**.

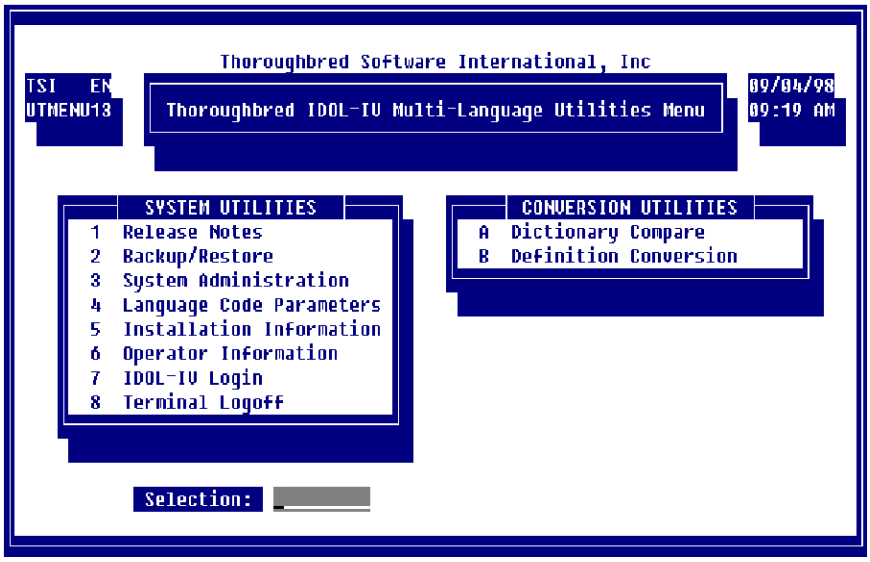
Dictionary-IV Supplemental Utilities Menu



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The system displays the following:

Multi-Language Utility Menu - Definition Conversion



From here, select **Definition Conversion**, this will copy a library of definitions from one language to another. There is on-line help available by pressing **F6**.

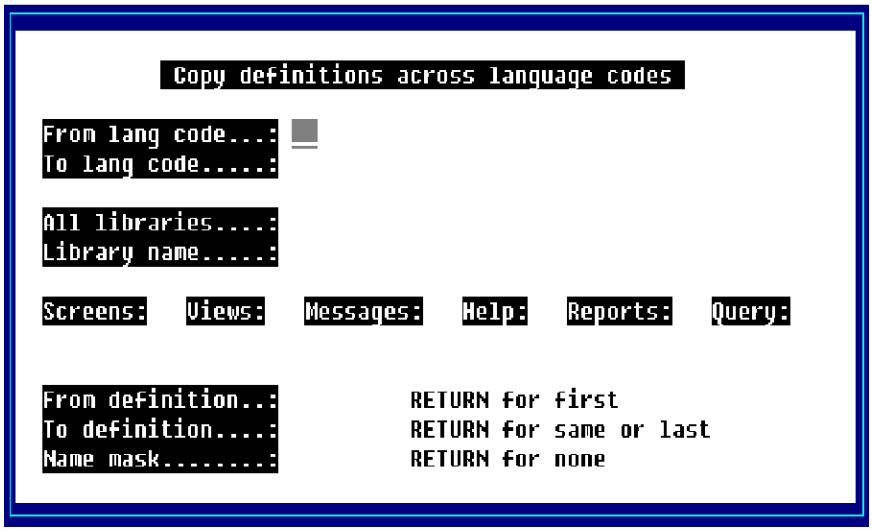
The TSI libraries that must be converted are:

4G 4GL Example Library
8D 8.n On-line Help
8U Thoroughbred UNIX Shell
ID Dictionary-IV Library
OO OPENworkshop
OE OPENworkshop Examples
Q4 Query-IV Library
UT Utilities Library

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The system displays the following:

Copying Definitions to a Different Language



Enter the following information:

From lang code
Type the two-character language code and press **Enter**. This is the language code to be copied.

To lang code
Type the two-character language code and press **Enter**. This is the language code to receive the copies.

All libraries
Select one of the following:

Y Converts selected definitions for all libraries. The system goes to the Screens field.

N Converts selected definitions for only the library you select. The system goes to the Library name field.

Library name
Type the two-character library name and press **Enter**.

Screens
Select one of the following:

Y Converts all Screens in the selected libraries

N Does not convert Screens.

You must select **Y** for one of these definition types (Screens, Views, Messages, Help, Reports, or Queries).

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Views
Select one of the following:

Y Converts all Views in the selected libraries.

N Does not convert Views.

You must select **Y** for one of these definition types (Screens, Views, Messages, Help, Reports, or Queries).

Messages
Select one of the following:

Y Converts all Messages in the selected libraries.

N Does not convert Messages.

You must select **Y** for one of these definition types (Screens, Views, Messages, Help, Reports, or Queries).

Help
Select one of the following:

Y Converts all Help in the selected libraries.

N Does not convert Help.

You must select **Y** for one of these definition types (Screens, Views, Messages, Help, Reports, or Queries).

Report
Select one of the following:

Y Converts all Reports in the selected libraries.

N Does not convert Reports.

You must select **Y** for one of these definition types (Screens, Views, Messages, Help, Reports, or Queries).

Query
Select one of the following:

Y Converts all Queries in the selected libraries.

N Does not convert Queries.

You must select **Y** for one of these definition types (Screens, Views, Messages, Help, Reports, or Queries).

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From definition
Type the one to six character definition and press **Enter**. This is the first definition in the range. Press **Enter** for the first.

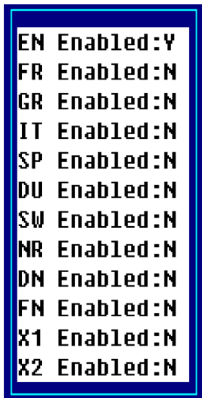
To definition
Type the one to six character definition and press **Enter**. This is the last definition in the range. If you select First in the previous field, press **Enter** again to select the last definition. If you typed a definition in the previous field, press **Enter** again to select the same definition.

Name mask
Type the masking you want the system to perform to select the definition names.

Enabling/Disabling Language Codes

Dictionary-IV supports twelve language codes. The default language code for each operator is English. A language code must be enabled in Language Code Parameters before it can be selected. To prevent an operator from selecting a language that has not yet been translated, language codes can be disabled. From the System Administration options, select **Language Code Parameters**.

Language Code Parameters



For information about how to make your selections see the Introduction of the Dictionary-IV User Guide.

Once a language code has been disabled, that language code cannot be selected. One exception is the dictionary Backup/Restore utility, where it is more logical to allow the selection of any language code, regardless of the enabled/disabled status.

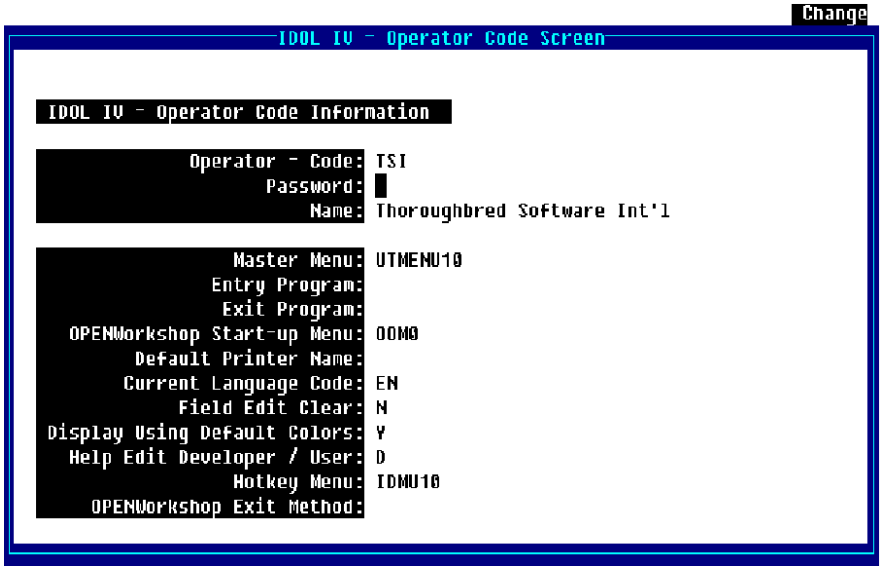
A list of all enabled language codes is maintained in the data dictionary. This allows the Dictionary-IV product to determine if an environment is Multi-Language or not. If any language code but English (EN) is enabled, an installation is determined to be a Multi-Language environment.

Operator Code Parameters

The operator language code is maintained by the **Operator Code Information** selection available from the System Administration options.

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Operator Code Information - Current Language Code



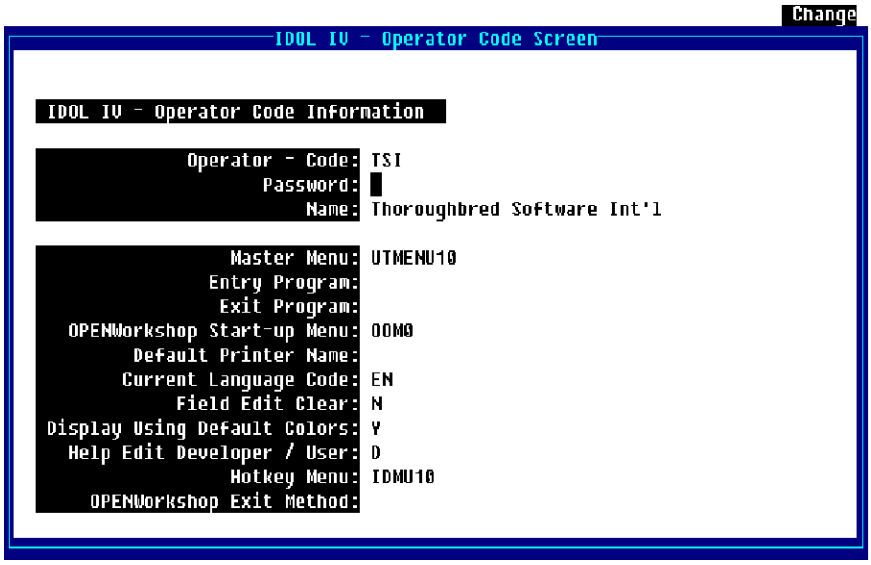
Remember you will not be allowed to select a language that has not yet been enabled. For a list of language codes press **F6** on the **Current Language Code** field. For more information about selecting and saving this information see the Introduction of the Dictionary-IV User Guide.

Help Edit Developer/User

Fundamental to on-line help, is the ability to define a new help module as you work. The user must be defined as a developer. For more information about developer/user see the Utilities Reference section of this document.

The Help Edit Developer/User parameter allows you to control how on-line help will be processed when the help definition does not exist in the current language. Select **Operator Code Information** and the system displays:

Help Edit Developer/User



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If an operator code is defined as a **Help Edit Developer** and the on-line help definition does not exist in the current language, the developer will have the ability to define the on-line help.

If an operator code is defined as a **Help Edit User** and the on-line help definition does not exist in the current language, the system will present the first found language version of the Help definition.

Specifying Multi-Language Definitions

This cannot be done until all the TSI libraries have been converted to all the languages you will be enabling. For more information see the Utilities Reference section in this document.

This section presents the exceptions to Definition Maintenance for Multi-Language applications. For information about elements of Multi-Language applications that are common to Definition Maintenance see the Formats section of the Dictionary-IV Developer Guide.

Formats

Dictionary-IV supports Multi-Language data element descriptions. For each data element, a data element description can be entered for the various language codes. Whenever a view of data elements is presented, the current language data descriptions will be displayed. When entering formulas, you must still enter the data element name, not the Multi-Language data name description.

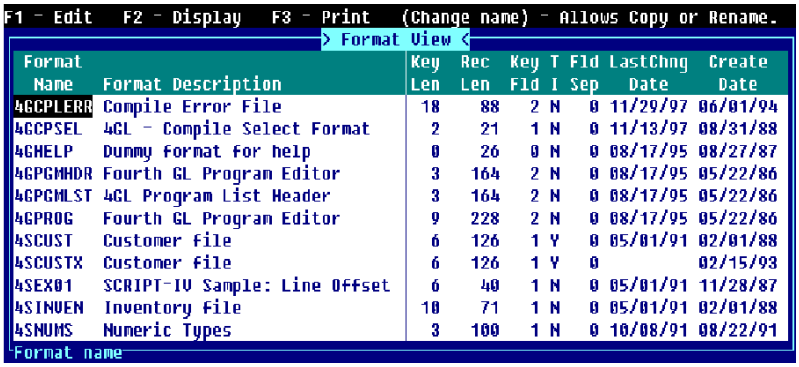
Select **1-Edit** from the Dictionary-IV Development Menu or press **F1** from any Dictionary-IV menu. The system displays the following:



Select **1-Formats**. The system displays the following view:

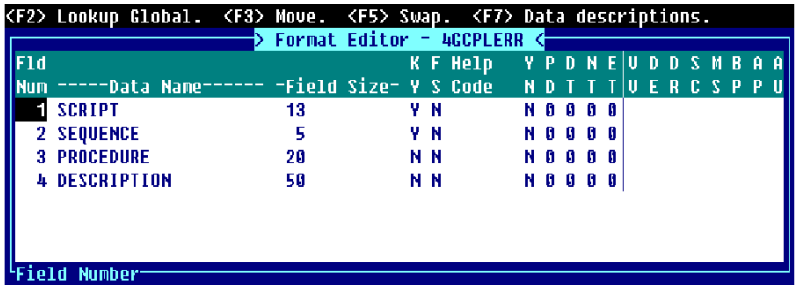
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Format View



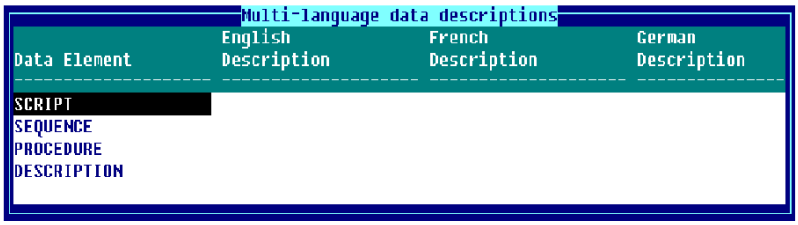
Press **F1** to edit the Format. The system displays the following:

Format Editor



Press **F7** to display a View similar to the following:

Multi-Language Data Descriptions



From the view above you can enter a description for each Data Name or press **F1** to generate default English Data Descriptions based on the Data Name. When displaying the Data Name view, the descriptions display in the current language. These descriptions can be up to 20 characters and can contain special characters (such as spaces) not supported in Data Names.

This invokes a view that allows you to enter data element descriptions for up to twelve languages. To view the languages that do not appear in the window use the **Tab** and **Back Tab** keys. When entering data element descriptions, you must enter a description for all data elements in a specific language.

Maintenance of the Data Descriptions is done using an OPENworkshop view. This allows you to delete and arrange the columns in a convenient format. The view size and location may be changed. Rows cannot be deleted or added.

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For more information, see CONNECT VIEW in the Dictionary-IV User Guide.

Multi-Language Valid Values

The Valid Entries list in Format definition must contain all valid values for all possible languages. The translation capabilities of the Valid Entries lists can be used to translate that list to a set of constants.

For example, assume you have a list of payment term codes, which English might be C,0,3,6,9 for Current, 0 days, 30 days, 60 days and 90 days. This same list in FR would be A,0,3,6,9. The Valid Entries list would be 0,C,A,0,3,6,9:C,C,0,3,6,9.

It is recommended that Yes/No fields not be used in a Multi-Language environment, instead Valid Value Lists should be used. A Valid Value List defined for an English and Dutch environment that replaces a Yes/No field would be: 0,Y,J,N:Y,Y,N.

For more information on valid values, see the Formats in the Dictionary-IV Developer Guide.

Multi-Language Messages

Messages in the message dictionary are supported in a Multi-Language environment as long as your format references a Message dictionary.

Delete and Copy Definitions by Language
When the option to delete or copy a definition is selected and it is determined that the installation is a Multi-Language environment, a language selector menu will be displayed. You can then select one or more of the enabled language codes.

If a disabled language is selected a message will be displayed indicating that this menu item has been disabled.

Yes/No
The prompt/constant message #1 in all message dictionaries is used to process Yes/No fields in format definitions and all Yes/No Messages.

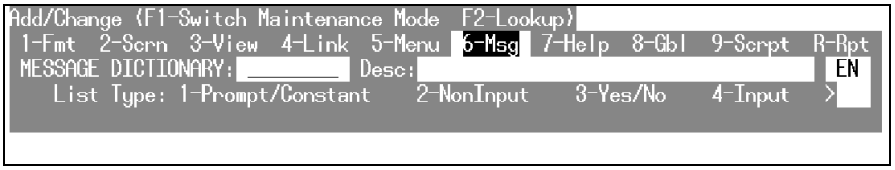
The first two characters of the Message text are used to validate the input of a Yes/No message or a Yes/No field. The remaining text is used as part of the Yes/No Message text. By translating prompt/constant message #1, all the Yes/No message processing and Yes/No field processing will be done in the current language.

For example, define the French version of prompt constant message #1 as ON (Oui/Non)?. When the current language is French, all Yes/No message input and Yes/No field input will be validated against an O or N.

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Input Messages
Input messages allow for Valid Entry lists that can contain translation values. This allows you to define an input message in multiple languages but with a common value to be returned by the message processor.

Message Definition



Other Class Definitions

This section describes Multi-Language exceptions for the following: Library, Screen, View, Messages, On-line Help, Report, and Query definition.

Class definition name
If you enter a definition name that does not exist in the current language, Dictionary-IV Multi-Language treats the name as a new definition.

For more information see the Dictionary-IV Developer Guide.

Delete and copy maintenance
All class definitions display the current language code in a box in the upper right corner. Press **F1** to select the maintenance mode.

Select the class definition to copy. The system displays a menu of all enabled language code options. You may select or deselect from those languages only. You cannot select a disabled language.

You may then copy the class definition using the normal procedure described in the Dictionary-IV Developer Guide.

Library maintenance does not provide a box showing the current language. You may however copy or delete classes from a library using the same procedure described above.

For more information see the Dictionary-IV Developer Guide.

Backup/restore
The backup/restore utility displays a menu of all enabled language code options. You may select or deselect from any of these languages.

In this case, however, you may also select from the disabled languages. There may be existing files that are in a disabled language that must be backed up or restored

For more information, see the Dictionary-IV Developer Guide.

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IDOL TO DICTIONARY-IV CONVERSION

The information in this section should be used only by experienced developers who are familiar with the original Thoroughbred IDOL.

If you are converting an IDOL-based application to Dictionary-IV, the application will need modifications to run properly. To aid in the conversion, Dictionary-IV provides several functions that convert IDOL definitions into Dictionary-IV components. Both IDOL and Dictionary-IV must be installed on the system doing the conversion.

The following IDOL components can be converted using the IDOL to Dictionary-IV Conversion Functions:

- Record Layouts for File Maintenance or Data Entry
- Selector Screens
- File Maintenance Screens
- Data Entry Screens
- Menus
- Help

This document offers specific conversion information for each type of IDOL definition.

The conversion functions are available in Dictionary-IV Definition Maintenance.

Record Layouts

To convert an IDOL record layout, from any Dictionary-IV menu type **/IDNFM0** and create a new format. But before you enter any data elements in the format, press **F11** at the data element field select IDOL Conversion.

The system prompts for the type of record layout to be converted:

(F)ile Maint Screen or (D)ata Entry Screen

Type **F** or **D** to select the type of record layout and press **Enter**. The system prompts:

Enter IDOL File Name or Number:

Type an IDOL file name or the file number (1-999) and press **Enter.** The system reads the IDOL record layout and reformats the data into the Dictionary-IV format.

Repeat this procedure for each record layout to be converted.

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Screens

To convert an IDOL selector, file maintenance, or data entry screen layout, from any Dictionary-IV menu type **/IDNSC0** and create a new non-windowed screen. But before you design the screen, press **F11** to select IDOL to Dictionary-IV Conversion. The system prompts:

(S)elector Screen, (F)ile Maint Screen or (D)ata Entry Screen:

Type **S**, **F**, or **D** and press **Enter** to select the type of screen to be converted.

The system then asks for the screen you want to convert. Depending upon the type selected, one of the following prompts will appear:

Enter IDOL Selector Number:

Type a Dictionary-IV selector number from 1-99 and press **Enter**.

Enter IDOL File Name or Number:

Type a Dictionary-IV file name or the file number from 1-999 and press **Enter**.

Enter IDOL Data Entry Screen Number:

Type a Dictionary-IV data entry screen number from 1-199 and press **Enter**.

The system reads the Dictionary-IV definition and reformats the data into the Dictionary-IV screen. Note that the file maintenance and data entry screens contain data element definitions, whereas the selector screen needs a menu input definition (use format IDMENUIN for the menu input definition).

Menus

To convert an IDOL selector, from any Dictionary-IV menu type **/IDNMN0** and create a new menu. But before you enter any menu selections in the menu, press **F11** to select IDOL to Dictionary-IV Conversion. You are asked to enter the IDOL selector number:

Enter IDOL Selector Number:

Type the IDOL selector number to be converted and press **Enter**. The system reads the IDOL selector and reformats the data into the Dictionary-IV menu.

Help

To convert IDOL help text, from any Dictionary-IV menu type **/IDNHP0**. But before you enter a help module name, press **F11** at the Help Name field to select IDOL to Dictionary-IV Conversion. The system prompts:

(C)onvert IDOL Documentation or (R)emove Display Flag:

Type **C** or **R** and press **Enter** to select the correct function.

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When IDOL help modules are converted, a flag is set that tells Dictionary-IV that this help module came from IDOL and that it should be displayed the same way that IDOL displays it.

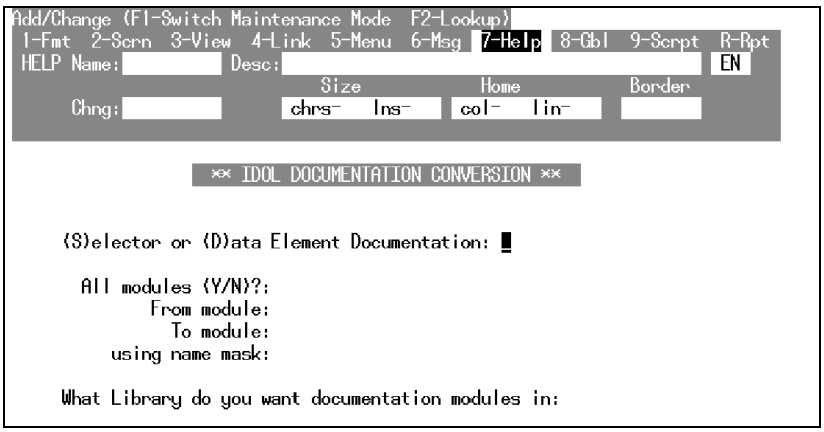
The Convert IDOL Documentation (C) option allows you to retain the IDOL display settings so that when help is requested, it will be displayed the same way that IDOL displays it.

The Remove IDOL Display Flag (R) option allows you to turn off the standard IDOL help display method.

If you wish to display these help modules like all other Dictionary-IV help (with window borders), the Remove IDOL Display Flag option will allow you to do this. This removes the IDOL display flag so that when help is requested, it is displayed with the standard Dictionary-IV window border.

The IDOL Documentation Conversion screen is then displayed:

Screen to Convert IDOL Documentation to Dictionary-IV Help



The system prompts for the help modules to be converted:

(S)elector or (D)ata Element Documentation:
Selector help refers to Menus, and data element documentation refers to file maintenance Screens. Type **S** or **D** and press **Enter** to make your selection. The system then prompts for the module(s) to be converted:

All modules?:
Select **Y** to convert all of the IDOL help modules. If **Y** is selected, no further options are available.

From module:
To module:
When selecting a range of definitions, use the following specifications:

Pressing **Enter** indicates first or last name definition. If a "from definition" name is entered, pressing **Enter** at the to definition field enters the same name.

Module name lets you start or end at that definition.

Part of a definition name may be used if appropriate.

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using name mask:
A name mask allows you to select definitions without specifying each individual name. If you do not wish to use a mask, bypass this prompt by pressing **Enter**.

A mask sets up a matching test. If a definition name matches the mask, then it is selected. If no match is made, it is bypassed.

A mask contains match and passing characters. The characters in a definition name must match all of the match-characters (the same character and position) for it to be selected. The pass character (?) is used to indicate that no match in this position is needed.

Mask	Action	Definition Names
A?	selects	AB Ac A1
	avoids	aB cA 11

Is the Displayed Information Correct?

Y Starts the procedure with the displayed information.

N Allows you to respecify the displayed information.

If you are converting IDOL documentation, the system prompts:

What Library do you want documentation modules in:

Type the 2-character ID of the library where you want the help modules stored and press **Enter**.

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SECURITY OVERVIEW

Introduction

This section provides an overview of the security features in Dictionary-IV. The specific information on each feature can be found by referring to the Utilities Reference section or the Dictionary-IV Developer Guide.

The security in Dictionary-IV is quite comprehensive and is, as most features are in Dictionary-IV, capable of being customized for your specific needs. To function, some of these features require that the System Security be active (refer to the System Security utility).

Dictionary-IV provides security in the following areas, restricting:

- Use of the Dictionary-IV application development capabilities.
- Access to and manipulation of the System Dictionary definitions.
- Access to and manipulation of data in Database Maintenance.
- Access to and use of the Dictionary-IV system.
- Use of sensitive Dictionary-IV utilities.

Dictionary-IV Development Capabilities

The term development capabilities refers to the Dictionary-IV features that can be used to develop an application, specifically, Dictionary-IV Definition Maintenance of the System Dictionary, where a definition can be changed, renamed, copied, deleted, etc.

The developer may wish to restrict these capabilities to protect against unauthorized modification or enhancements of the application.

Libraries

Application development can also be restricted through library security. (Refer to the Library Maintenance section of the Creating Dictionary-IV Files section of this manual.) For example, by putting a password on the AR library (Accounts Receivable), you can lock out access to all definitions in that library without affecting the operation of the application. System Security must be active.

Definitions

Application development on individual definitions in the system dictionary can be restricted through definition security. For example, by putting a password on a script, you can lock out access to this script. Definition security is available for links, menus, reports, scripts, and views.

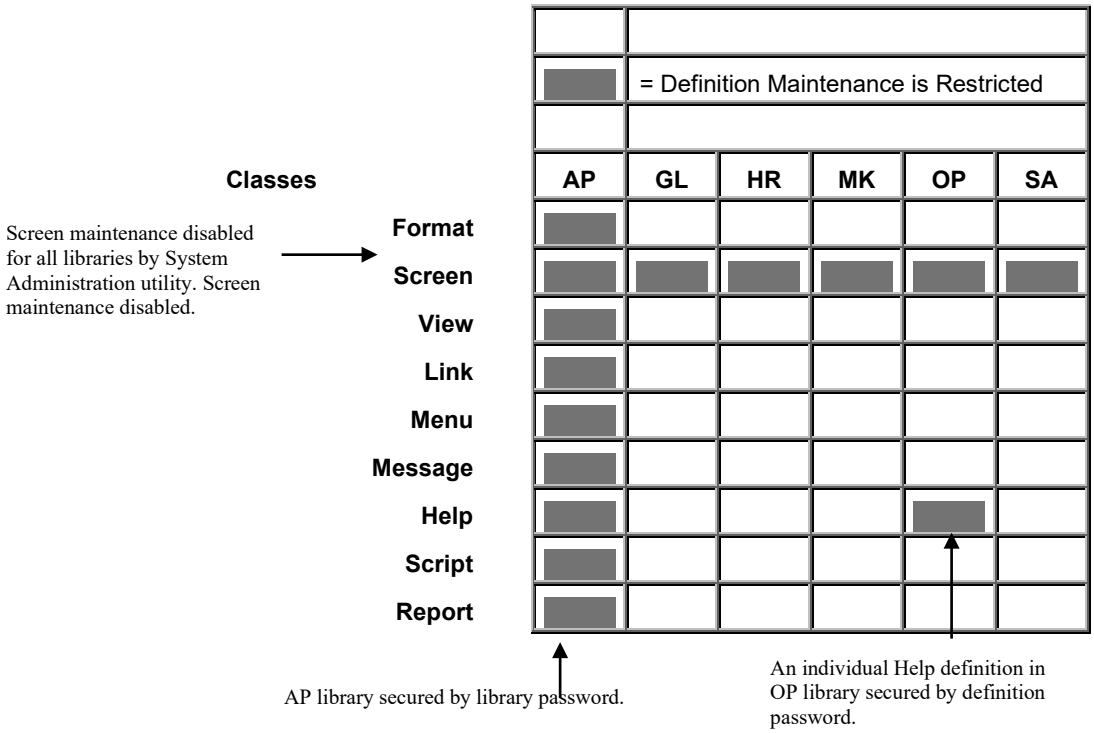
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This is covered in more detail in the next section, because definition security affects not only application development but also application operation and use.

Menus

It is also possible to remove Dictionary-IV application development capabilities from a system by restricting the menus that are used to access these capabilities. You can password the Dictionary-IV menus and menu options, you can change the Dictionary-IV menu screens and on-line help to hide options, or you can separate the Dictionary-IV menu system from your application. In most cases this type of protection is not necessary because the security features already described can accomplish much of the same purpose.

Development Security for Classes, Libraries, and Definitions



Application Operation and Use

The term application operation and use refers to the features of Dictionary-IV application that an end-user interacts with. For example, making a selection from a menu, running a report, and performing data entry.

The developer may wish to restrict these capabilities to protect against unauthorized use of an application feature, or to prevent unauthorized modification or enhancements of a feature. In many cases, this security serves a double purpose of restricting use and development.

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Definitions

Use of individual definitions in the system dictionary can be restricted through definition security. For example, by putting a password on a menu, only people with knowledge of the password can display the menu to selecting options.

Definition security affects both application development and use. For example, if the menu has a password, only people with knowledge of the password can perform definition maintenance on the menu.

Definition security is available for menus, reports, scripts, links, and views. System Security must be active.

Menus
The menu password is required before the menu is displayed, or in definition maintenance. Menu selection passwords are required before the menu selection is executed.

Reports
The report password is required before the report can be executed (or in definition maintenance).

Scripts
The script password is required before the script can be compiled (or in definition maintenance).

Links and Views
The security for links and views largely affects Dictionary-IV database maintenance, and is covered in the following section on database maintenance.

Dictionary-IV Database Maintenance

Dictionary-IV Database Maintenance provides security within the following class definitions.

Links

The link password is required before the link can be used in Dictionary-IV database maintenance (or in definition maintenance). The link provides file-level security. This applies to any screen or view that uses a password link in database maintenance. System Security must be active.

Links also provide the capability to keep an audit trail of database maintenance activity on a file. The auditing function does not require System Security to be active.

Views

The view password is required before the view can be used in Dictionary-IV database maintenance (or in definition maintenance). This is in addition to the link password. System Security must be active.

Each view also has the capability to prevent database maintenance using that view, by locking out data entry to all key fields and/or all data fields in the file. This does not require System Security to be active.

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Formats

Formats provide additional security capabilities in database maintenance. This includes field-level security, which covers adding, deleting, or changing data in a field. Field-level security provides data display and password options as well. Record deletion control is another level of security specified in the format. Formats also provide the capability to keep an audit trail of database maintenance activity on specified fields in a file. These features do not require System Security to be active.

Access to the Dictionary-IV System

Access to the Dictionary-IV system is required by developers to create an application, as well as end-users that run applications that use the Dictionary-IV menu system.

Access to Dictionary-IV is controlled by the Operator Login Screen, where you must type in a valid operator code to obtain entry to Dictionary-IV. The operator codes can have a password (see the utility on Operator Information). Using this utility, you can also specify a start-up and exit menu for each operator as well as a start-up program. (You may specify a security program that you developed as the start-up program.) These features do not require System Security to be active.

As described previously, the menu system provides another source that controls access to Dictionary-IV or any application developed using the Dictionary-IV menu system, because the menu system can be customized. The menu system also provides two additional safety features. Menu selection conflict processing provides an additional level of menu controls. Automatic operator logoff from any menu results from a period of inactivity, and helps to protect unattended terminals.

Protected Dictionary-IV Utilities

Some Dictionary-IV utilities may access sensitive information for system administration. Only people with knowledge of the system password can execute these utilities. System Security must be active.

The following Dictionary-IV utilities require the system password:

- Security
- Audit File Information
- Dictionary Report
- Multi-tasking Information
- Operator Listing with Passwords

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Passwords

Passwords are not displayed when entered.

To change or remove a password when system security is active, you must be able to enter the password. If you do not know the password, turn security off before you attempt to remove the password. A password can be removed by entering three spaces (or Line Clear) followed by pressing **Enter**.

You can obtain a listing of passwords using the appropriate listing utility, for example, operator listing, library list, or definition list. If security is active, you are required to enter the system password to obtain the password listing.

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