



U.PROTECT

Utility Interface Module
for the PROTECT Processor

USER'S GUIDE

POINT  **AUTOMATED SOFTWARE PRODUCTS**

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I. U.PROTECT

U.PROTECT is used to collectively load program text files and protect them so that the source code cannot be listed. U.PROTECT, written in Business Basic under IRIS, is a Utility Interface Module which facilitates the use of the PROTECT processor by creating a job stream.

U.PROTECT builds a work file consisting of the names of program source text files that the user designates to be loaded and protected. File lists accumulated in this temporary storage area are displayed on the screen for review and selection. By editing these sorted lists, the user makes a final determination of files to be processed, then initiates the protect function. The specified files are collectively loaded and then protected by the PROTECT processor.

II. USING U.PROTECT

To invoke U.PROTECT from SCOPE, enter "U.PROTECT". If U.PROTECT is not on logical unit zero or the user's assigned logical unit, enter "nn/U.PROTECT", where nn = the logical unit on which the U.PROTECT program is resident. The terminal then displays a screen similar to the one shown below.

```
PORT NUMBER: 12      FILE PROTECT FACILITY      U.PROTECT V.R MM/DD/YY

FILE(S) PREFIX: _____
LOGICAL UNIT:  _

COMMENT: ENTER A QUESTION MARK (?) AT ANY TIME FOR HELP
COMMAND:
MESSAGE:
```

The top line of the screen shows port number, program name, version, revision and release date. File selection criteria fields occupy the middle portion of the screen. Three lines at the bottom of the screen are for system/user interaction. The COMMENT line provides system prompts to the user. The COMMAND line is for user command input, and the MESSAGE line displays error messages from the system.

There are two help modules for the U.PROTECT program. The user may access the first help module by entering "?" in the first keyable position of any field. It explains the various options that are permissible in response to the requested parameters.

While entering file selection criteria, an 'escape' aborts the current entry field and returns the cursor to the previous field for changes. An 'escape' at the first field aborts the U.PROTECT program and returns the user to SCOPE.

The file prefix selection field allows the user to specify the beginning characters of the file names to be designated for processing. This is particularly helpful when naming conventions have been used to categorize a group of files that the user now wants to load and protect. If the file prefix entry is omitted (by pressing 'return'), all source text files on the specified logical unit are selected.

DESCRIPTION	INPUT
14. You do not want to protect file numbers 5, 6, and 24. Erase them from the screen.	5,6,24 (CR)
15. Erase file numbers 13 through 20 from the screen.	13-20 (CR)
16. Erase file numbers 12 and 36 from the screen.	12-36 (CR)
17. Restart the review of the current page. The screen will be displayed as it was before any erasures.	R (CR)
18. Erase file numbers 3 through 35.	3-35 (CR)
19. Page forward to the rest of the file.	P (CR)
20. Erase all files on this page.	A (CR)
21. Restart the review of the current page.	R (CR)
22. Erase file numbers 2 through 4 from the screen.	2-4 (CR)
23. Wrap to the beginning of the file. Note that all remaining file names have been relisted and renumbered.	W (CR)
24. Protect all files listed on the screen. Note the response as each file is processed.	E (CR)
25. The system asks if you wish to protect more files. Answer "N" for no. You will then be returned to SCOPE.	N (CR)

To check to see that the files were protected, try to list one of the protected files. The system should respond with an ERROR #12, "PROGRAM IS LIST/COPY PROTECTED".

As a result of this walk-through, you have built 40 source text files, and loaded/protected four of them as Basic program files. To avoid confusion in other User's Guides, use the Utility Interface Module U.KILL to delete all 44 files.

Read the comments that appear in the "DESCRIPTION" column. Then enter the information exactly as it appears in the "INPUT" column. Note the result of each entry and proceed to the next step. (CR) indicates that the 'return' or 'enter' key should be depressed. (ESC) indicates that the 'escape' key (CTRL D) should be used.

DESCRIPTION	INPUT
1. Run U.PROTECT.	U.PROTECT (CR)
2. You want more information on the file prefix entry. Invoke and read the help summary.	? (CR)
3. Return to the file prefix entry field.	(CR)
4. Specify that you want to select files with the prefix "XY".	XY (CR)
5. Return to the previous field and change the entry to specify files whose names begin with the characters "T.XYZ".	(ESC) T.XYZ (CR)
6. Specify your assigned logical unit by a default from the logical unit entry field.	(CR)
7. The file selection criteria are correct. The system will now perform a LIBR using the specified criteria to begin building the work file.	Y (CR)
8. The screen now displays the files you specified with the selection criteria. Invoke the help facility and read the screen modification commands.	? (CR)
9. Return to the list of files.	(CR)
10. Page forward to review the rest of the list. Note that numbered lists on each begin at one.	P (CR)
11. Page forward again. The system responds by saying you are at the end of the file.	P (CR)
12. Wrap to the beginning of the work file. All of the files have now been reviewed.	W (CR)
13. You do not want to protect file number 10. Erase it from the screen.	10 (CR)

V. COMMAND SUMMARY

Syntax	Command Function
A	A - 'All' erases all file names on the current screen. None of the files erased from the screen will be protected.
E	E - 'Execute' initiates the protect function by invoking the PROTECT processor. U.PROTECT transfers to the PROTECT processor all file names that were left on the screen after the last pass through the work file. The files will then be processed in turn.
P	P - 'Page' stores for later protecting the file names left on the screen, and then displays the next 36 selected filenames (if present).
R	R - 'Restart' re-displays the current screen as it was before any erasures. Filenames previously erased from the screen may then be left on the screen for processing.
W	W - 'Wrap' stores the file names left on the screen for subsequent processing, and restarts the selection process with the first 36 remaining file names.
nn	nn - 'nn' (where nn = the number of a file name) erases file name 'nn' from the screen. Files erased from the screen will not be protected. Two numbers separated by a hyphen erase the corresponding range of files. Several numbers may be entered at once if they are separated by commas and/or spaces (for example, "5,9,12-14 33 35,2" erases file numbers 5, 9, 12, 13, 14, 33, 35 and 2).

VI. NOTES

The logical unit selection enables the user to specify the logical unit from which to select the specified files. In the event of a default from this entry field, the user's logical unit is assumed.

If the user defaults from both file selection parameters, all program text files on the user's assigned logical unit are selected.

After the user has responded to both of the requested parameters with a valid entry (or default), the terminal displays a system prompt asking if all of the entries are correct. An "N" returns the user to the selection criteria to change one or both of the parameters. A "Y" causes the system to begin the file selection. The terminal displays a "DO NOT DISTURB" message while file initialization is in progress.

Note that files are not actually loaded and protected until the user has reviewed or modified the list of selected files.

Once initialization is complete, the system displays sorted lists of the specified files in groups of 36. If the 'escape' key is depressed at any time after the first file list is displayed, the U.PROTECT program will be aborted and the user will be returned to SCOPE.

After the first list of files has been displayed, the user may access the second help module. This help module aids in a final determination of the files to be protected. Commands shown in the help module are used to modify the list of files before execution of the protect function. Files that remain on the screen after review and modification are processed when the 'execute' command is performed.

The user should examine all pages (i.e., groups of 36 files) of the selected files prior to entering the 'execute' command in U.PROTECT. U.PROTECT only processes files from those lists that the user has reviewed. After the 'execute' command is entered, the terminal displays "PROTECT", or any other appropriate message, as each file is processed in turn.

When the last file has been processed, the system asks if the user wants to protect any more files. A "Y" returns the user to the first screen to initiate another session, while an "N" terminates the U.PROTECT program and returns the user to SCOPE.

The following is a walk-through of various U.PROTECT procedures. It is intended to familiarize the first-time user with the U.PROTECT program. In order to utilize this self-teach package, a number of program source text files must be built. To establish the necessary files, enter and run the following Basic program.

```
10 IF ERR 0 STOP
20 DIM AS(40)
30 FOR Z=1 TO 40
40 LET AS="<00>T.XYZTEST00:"
50 LET AS(14,15)=Z USING "##"
60 IF Z<10 LET AS(14,14)="-0"
70 BUILD #1,+AS
80 PRINT #1;"10 PRINT '"AS(5,15)'"
90 CLOSE #1
100 NEXT Z
110 END
```

You have now established 40 source text files (T.XYZTEST01 through T.XYZTEST40) on your assigned logical unit. These files are used in the walk-through to demonstrate the capabilities of U.PROTECT.

III. THE HELP FACILITY

There are two help summaries in the U.PROTECT program. The help facility may be invoked in U.PROTECT by entering "?", causing the appropriate help module to be displayed on the screen.

The first help summary guides the user through a selection of file parameters. It explains each parameter, gives the result of an omitted entry (default), and offers an illustrative example of a completed set of selection criteria.

The second help summary contains a detailed explanation of the screen modification commands. This screen aids in the final determination of those files to be loaded and protected.

To exit either help module press 'return'. The user is returned to the point where the help facility was invoked.

IV. CONCEPTS

PROTECTION

U.PROTECT is a front end (utility interface module) for the PROTECT processor. It provides an efficient means of protecting program source code by initiating a job stream for the PROTECT processor.

Protected program source code should not be confused with the protection code that may be manipulated by the CHANGE processor. Source code processed by the PROTECT processor is scrambled so that it cannot be listed by any user, regardless of privilege level.

Note that U.PROTECT processes only those files that have been reviewed by the user after initialization. Files listed on pages that the user does not review in the latest pass are not protected when the 'execute' command is performed.

FILES

U.PROTECT uses two temporary storage areas (work files) to accumulate lists of specified file names for processing. The lists in one storage area are modified by the user and written to the other storage area for subsequent changes.

Each user has exclusive access to a unique pair of files. This is insured by incorporating the port number into the work file names (represented by "nnn" below). The U.PROTECT work files are:

File Name	Description
EDITSV@nnn	Edit protect file -- Used as the output file from the LIBR function of the selection criteria entry, and as the input file during the first work file screen modification.
EDITWKAnnn	Edit work file "A" -- Used as output file for the first work file screen modification, and as the input scratch file for every even-numbered pass through the file.