

ProTools

By



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To Access the ProData Tools Main Menu:

Have PROTOOLS in your library list

From a Command Line, type *menu protocols* and press Enter

This menu will appear

```
PROTOOLS                               ProData Tools Main Menu                               5/15/02
                                                                                               09:11:42

Select one of the following:

      General System Tasks                                Programmer Productivity

01. Calculator
02. File Based Menu System
03. Send eMail Message
04. Send User Break Message
05. View PC Document On AS/400
06. Work With Group Jobs
07. Zip/UnZip Stream File(s)

21. Nest CL Program
22. Execute CL Source Member
23. Display Member
24. Sort Physical File
25. Save/Restore Library List
26. Save/Restore Local Data Area
27. Scan Message File
28. Program/File Cross Reference

31. User Index Service Program
32. Create MI Program (MI Compiler)
33. Interrupt Job (see doc in source)

Selection or command
===>

F3=Exit      F4=Prompt      F5=Refresh      F12=Previous

MA  b                               MW                               21/007
```

To see the commands behind the options:

Have PROTOOLS in your library list

From a Command Line, type *chgmenu protocols* and press Enter

This screen will appear

```
PROTOOLS                               Title Of Menu                               5/15/02
                               ProData Tools Main Menu                               09:15:15

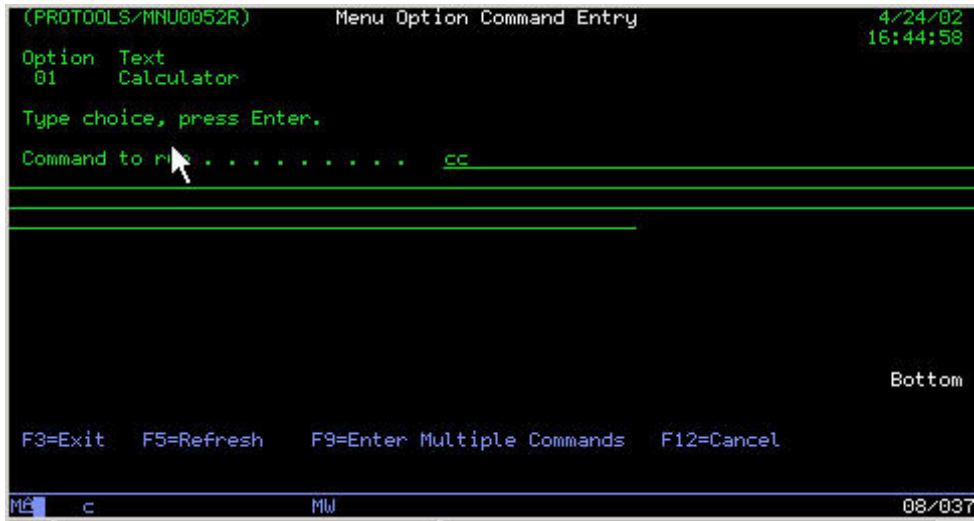
Select one of the following:

      Option Heading                                Option Heading
      | General System Tasks                        | Programmer Productivity
      |-----|                                     |-----|
1 | 1 | Calculator                                21 | 21 | Nest CL Program
2 | 2 | File Based Menu System                    22 | 22 | Execute CL Source Member
3 | 3 | Send eMail Message                        23 | 23 | Display Member
4 | 4 | Send User Break Message                    24 | 24 | Sort Physical File
5 | 5 | View PC Document On AS/400                25 | 25 | Save/Restore Library List
6 | 6 | Work With Group Jobs                      26 | 26 | Save/Restore Local Data Area
7 | 7 | Zip/UnZip Stream File(s)                  27 | 27 | Scan Message File
      |-----|                                     28 | 28 | Program/File Cross Reference
      |-----|                                     31 | 31 | User Index Service Program
      |-----|                                     32 | 32 | Create MI Program (MI Compiler)
      |-----|                                     33 | 33 | Interrupt Job (see doc in source)
      |-----|                                     More...

F3=Exit  F4=Enter Command(s)  F5=Refresh  F9=Edit Authorization  F12=Previous

MA  b                               MW                               05/002
```

Position the cursor on any line with an option and press F4
For example, position the cursor on “Calculator” and press F4
This screen will appear

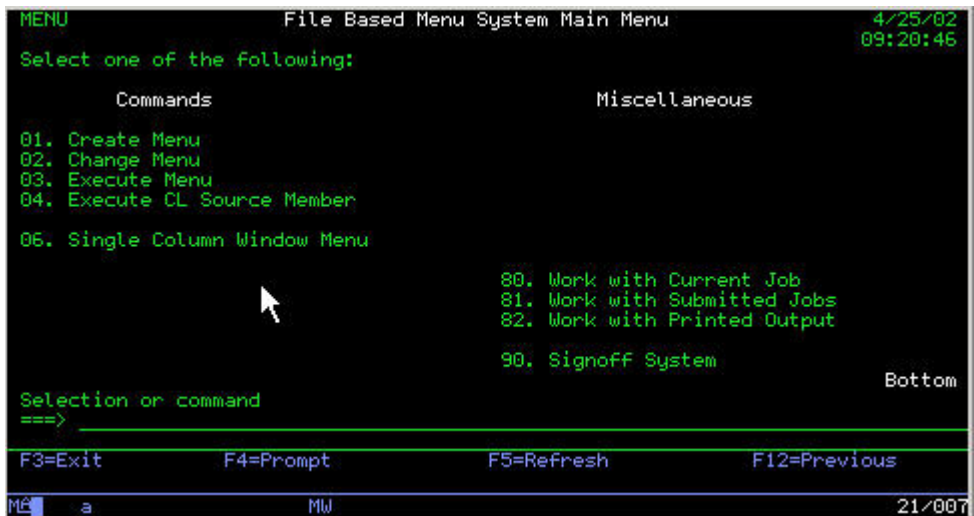


CC is the command used to call the calculator.

File Based Menu System

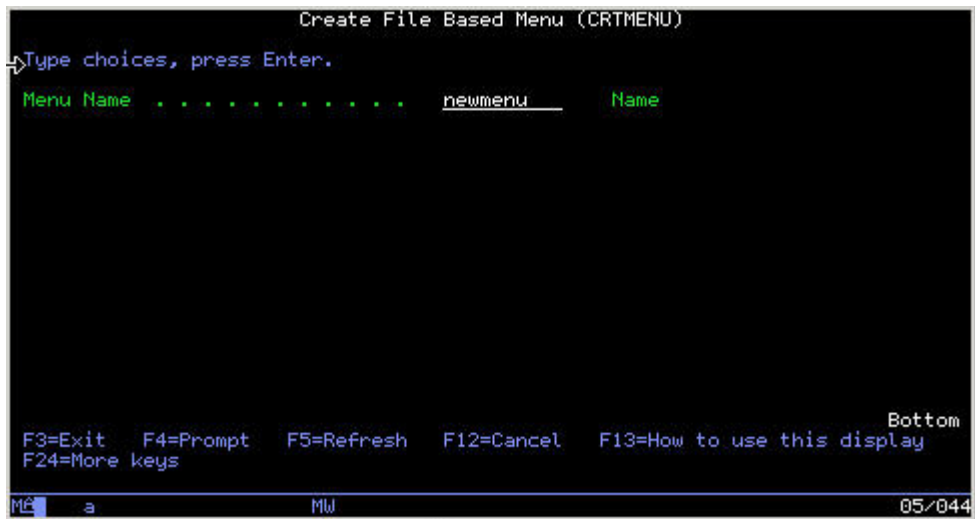
This is the easiest to use menu system ever written. It is file based, meaning all the menu options are stored in a physical file of your choice. Nothing to compile, nothing to go wrong.

To access this menu, with Protools in the library list, type *menu* on the command line.

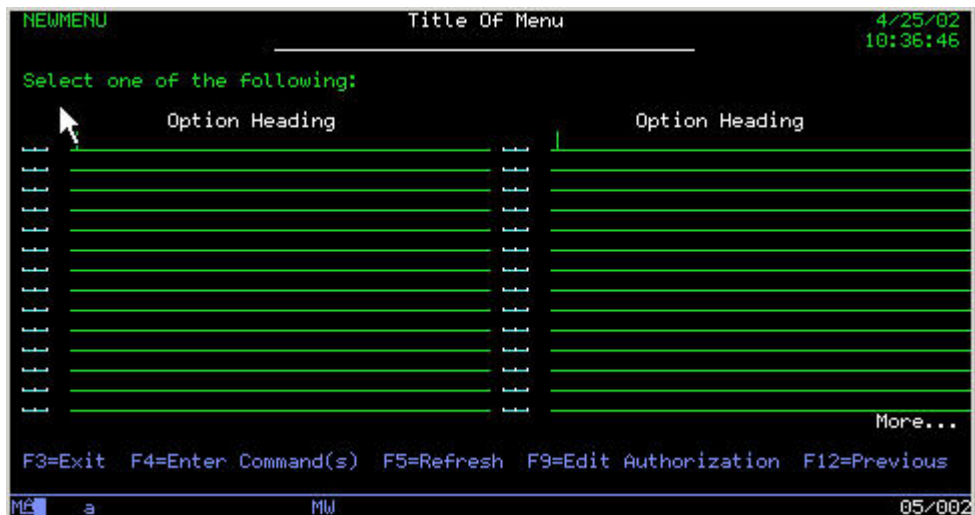


From this menu you can easily perform all the functions necessary to create and maintain all your menus.

Option 1 - Create Menu - Brings up the screen below



Fill in the name of the new menu and Press Enter



To create a menu, just follow these steps.

Key in Title of Menu.

Type Column Headings. Put a “| ” in the first position of any line that you want to be a column heading. They will not show on the completed menu.

Key an option number in a two position field and the name of the option in the following field.

Position the cursor on any line with an option and press F4.

Enter the command to be processed on the ensuing screen and press Enter.

Repeat the above steps until the menu is completed.

Press F3 when finished and the menu is ready to use.

Use option 3 on the File Based Menu to test, or call separately.

In addition, authority can be added to each option. Position the cursor on an option and Press F9 to edit option authority.

Option 2 - Change Menu - Brings up a screen to enter an existing menu. Follow the above steps to change the menu.

Option 3 - Execute Menu - Brings up a screen to enter a menu name. A Menu may also be accessed with the command *menu*, followed by an existing menu name.

Option 4 - Execute CL Source Member - This option is on the FBM System Menu because it is part of the FBM System. This is the way Multiple Commands are executed when pressing an F9 from the “Menu Option Command Entry” Screen. When F9 is pressed, a member is dynamically created in QMNUCL and the command EXECLSRC *LIBL/QMNUCL MBR??????? is built, which is then executed when the menu option is selected.

Option 6 - Executes a menu in single column mode.

Options 80,81,82,90 - Self explanatory.

EMAIL from Green Screen and Batch

We use this little utility a lot. It has a hundred uses. And just like the title implies, you can use it interactively or from a batch program. Just fill in the parameters on the command, and like magic, the email will be sent. Neat!!!

The command....

The screenshot shows a green screen interface for the 'Send eMail Message (SNDEMAIL)' utility. The title is at the top center. Below it, the instruction 'Type choices, press Enter.' is displayed. The form consists of several labeled input fields, each followed by a series of dots and a horizontal line for text entry. The labels are: 'e-Mail Address of Sender.', 'Name of Sender.', 'e-Mail Address of Recipient.', 'Name of Recipient.', 'Subject', 'Message', and 'Attachments'. Below the 'Attachments' field is a line with '+ for more values'. At the bottom of the screen, there is a row of function key definitions: 'F3=Exit', 'F4=Prompt', 'F5=Refresh', 'F12=Cancel', and 'F13=How to use this display'. The word 'Bottom' is positioned to the right of these keys. The very bottom of the screen shows a status bar with 'MP' on the left, 'a' in the middle, and '05/037' on the right.

ZIP/UNZIP FILES

ZIP (Zip Stream File) The ZIP tool is a compression tool that combines multiple files into a single JAR archive file. JAR is a general-purpose archiving and compression tool, based on ZIP and the ZLIB compression format.

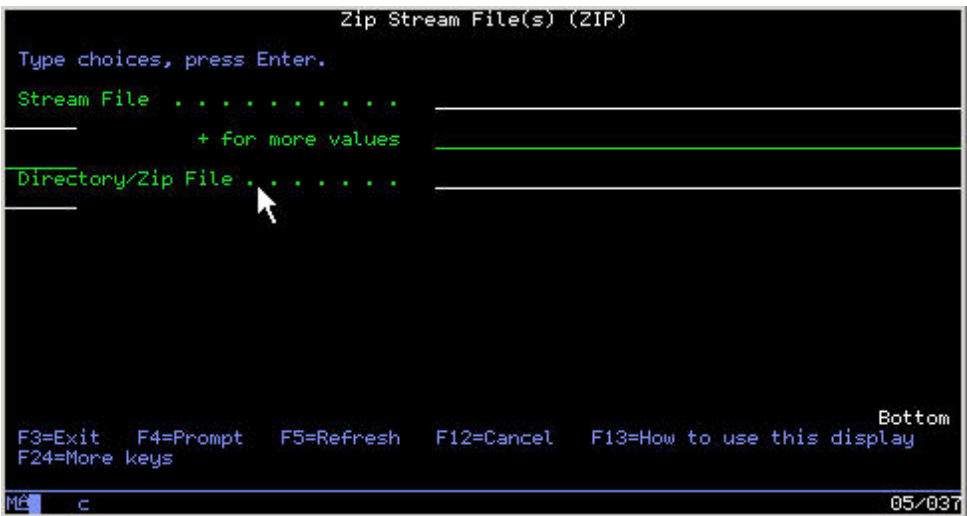
Zip Stream File(s) Command



Parameters	Type	Description
Stream Files(s)	Char(256) 10x	Contains the name and path of the stream files you wish to include in Zipped file. This a 256 character field. Allowing 10 entries.
Zipped Files	Char(256)	Contains the name and path of the Zipped file.

Zip Stream File(s) Command The UNZIP tool is a decompression tool that extracts multiple files from a single JAR archive file. JAR is a general-purpose archiving and compression tool, based on ZIP and the ZLIB compression format.

UnZip Stream File(s) Command



Parameters	Type	Description
Zipped Stream Files(s)	Char(256)	Contains the name and path of the Zipped stream file. This is a 256 character field.
UnZip To Directory Name	Char(256)	Contains the Path or Directory where you wish the UnZipped files to reside. This is a 256 character field.

Program File Cross Reference

Do you need to know where all the files/data areas in your system are used? This utility will show you this information for an individual program, a group of programs or all the programs in a library.

The command

```
Files/Programs Cross Reference (PGMXREF)
Type choices, press Enter.
Program . . . . . _____ Name, generic*, *ALL
Library . . . . . _____ *LIBL Name, *LIBL, *CURLIB...

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

The results

5/01/02	FILES/PROGRAMS	CROSS REFERENCE	PAGE	8
OBJECT	LIBRARY	PROGRAM	LIBRARY	USAGE
GLLSMM03	LCLIBOBJ	GL0050	LCLIBOBJ	UPDATE/ADD
		GL2005	LCLIBOBJ	INPUT
		GL2005LC	LCLIBOBJ	INPUT
GLLSMM05	LCLIBOBJ	GL3000	LCLIBOBJ	UPDATE
		GL3001	LCLIBOBJ	UPDATE/ADD
		GL3002	LCLIBOBJ	UPDATE/ADD
GLLSMM06		GLC2007P	LCLIBOBJ	NOT SPECIFIED
		GLC2008P	LCLIBOBJ	NOT SPECIFIED
		GLC2050P	LCLIBOBJ	NOT SPECIFIED
		GLC5006P	LCLIBOBJ	NOT SPECIFIED
		GL0005	LCLIBOBJ	INPUT
		GL0010	LCLIBOBJ	UPDATE
		GL0012	LCLIBOBJ	UPDATE

INTERRUPT JOB

This nifty little utility uses the System request function to break into an interactive job. Why would you want to do this you say? What if you are calling a command/program and it bombs. Wouldn't you like to put it in debug mode right there? Now you can do it.

Just hit the System Request key, or Shift/Esc on your PC. Type in **5 QCMD I** and Enter. This will bring up the command entry screen and you can enter your debug command and your break points.

You will find many uses for this utility. It allows you to execute any program or command using the System Request function.

Nest CL SOURCE

```

Nest CL Program (NESTCLP)

Type choices, press Enter.

Member name . . . . . █ Name
File name . . . . . █ Name
Library name . . . . . *LIBL Name, *LIBL
Output . . . . . *PRINT *PRINT, *OUTFILE
  
```

Nest CL Program prints a listing of the CL source program with the nesting statements shown on the left of the spooled output.

You may also put the listing to an output file.

```

Display Spooled File
File . . . . . : QSYSPRT Page/Line 2/36
Control . . . . : Columns 1 - 78
Find . . . . .

*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
B001 █ IF (&CHTSUM *NE ' ') DO
001 CHGYAR &INFO ('CALL GLC1003')
B002 IF (&CHTSUM *EQ '1') DO
002 CHGYAR &SUMCHT '1'
002 CHGDTAARA *LDA &SUMCHT
002 SBMJOB JOB(CHTSUM) OUTQ(&PRINTER) RQSD
E002 ENDDO
B002 IF (&CHTSUM *EQ '2') DO
002 CHGYAR &SUMCHT '2'
002 CHGDTAARA *LDA &SUMCHT
002 SBMJOB JOB(CHTSUM) OUTQ(&PRINTER) RQSD
E002 ENDDO
B002 IF (&CHTSUM *EQ '3') DO
002 CHGYAR &SUMCHT '3'
002 CHGDTAARA *LDA &SUMCHT
002 SBMJOB JOB(CHTSUM) OUTQ(&PRINTER) RQSD
More...
  
```

Work with Group Jobs

```

(PROTOOLS/WRKGRPJOB) Work with Group Job

Active group job . : INITIAL
Text . . . . . : Initial Group Job

Type option, press Enter.
  1=Transfer to group job  4=End group job

Opt  -----Suspended Group Jobs-----
Group Job Text
  
```

Group jobs allow you to run up to 16 distinct interactive jobs in one session; While requiring you to sign on only once. Only one group job is active at a time, the rest are suspended.

The WRKGRPJOB provides a user friendly interface for

- Starting Group Jobs
- Listing Group Jobs That Area Suspended.
- Transferring to another group job.
- Ending a suspended group job.

The WRKGRPJOB can be included as part of a set attention program to allow easy access to the command. You would have the ability to interrupt/suspend the current job, start a new group job, do the task at hand, then return to your interrupted/suspended job.

Calculator

How many times have you needed a calculator and didn't have one handy? This utility will solve that problem. You can add, subtract, multiply, divide, add a percentage to the total, total, clear the total, and post a sub-total to the tape. It will also print the tape.

you can even edit the tape and the total will be refigured. To edit the tape, position the cursor on the amount to be changed, change the amount and press "Enter". The Total will be refigured.

You can call this calculator from the command line or put in on everyone's menu. If you use the Interrupt Job tool, just hit the System Request key, or Shift/Esc on your PC. Type in **5 C I** and Enter. This will bring up the calculator for your immediate use.

Help is always available on the calculator by pressing F1.

Scan Message File

The message files we use in our programs are wonderful, but can sometimes be difficult to maintain. With this handy tool, you can scan and filter your message files. You can look for specified phrases, words, or partial words within the text of the message. It also allows you to update the message descriptions.

The command

```
Scan Message File (SCNMSGF)

Type choices, press Enter.

Find 'string' . . . . .

Lower Range of message Id's . . *FIRST      Name, *FIRST
Upper Range of message Id's . . *LAST      Name, *LAST
Message file name . . . . . QCPFMSG      Name
Library name . . . . . *LIBL      Name, *LIBL

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

Bottom
MA b 05/037
```

Execute CL SOURCE

Allows a programmer/operator the ability to Create/Run a Job Stream or a series of CL commands. This is also used in the Menu System to allow multiple commands to be executed.

The command

```
Execute CL Source (EXECLSRC)

Type choices, press Enter.

File name . . . . .
Library name . . . . . *LIBL
Member name . . . . . *FIRST

Name
Name, *LIBL
Name, *FIRST

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

Bottom
MA b 05/037
```

Sort File

The command prompts the user with the selection of fields from the designated file. The user can select the fields and order (descending or ascending) for the sort they are performing. We have used this sort quite a bit, during development, to perform analysis over a data base.

The command

```
Sort DB2/400 Physical File (SORT)

Type choices, press Enter.

File name . . . . . > GLPENTRY
Library name . . . . . > LCLIBOBJ
Sort field name . . . . . GLLVL3
Order . . . . . + for more values
ASC
GLLVL2
ASC

Name
Name, *LIBL
Name, *LIBL
ASC, DESC

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

Bottom
MA c MW 05/037
```

Fill in the physical file name and library and press Enter to bring up the following screen.

```
Sort Physical File
Select Fields For Sort Order
5/02/02
08:51:40
File . . . . . GLPENTRY
Library . . . . . LCLIBOBJ
Type sequence numbers (1-999) to select columns, press Enter.
Order: A=Ascending, D=Descending
Seq Order Field Description Type Length Dec
--- --
GLLVL3 LEVEL3 P 3 0
GLLVL2 LEVEL2 P 3 0
GLLVL1 LEVEL1 P 3 0
ACTTYP B/S OR P&L A 1
SEQ# SEQ CTL # P 5 0
ACCT# GL ACT# P 5 0
SUB# SUBACT P 3 0
JESRCE SOURCE A 2
ENTRY# ENTRY# A 6
TEXT# TEXT# P 9 0
More...
F1=Help F3=Exit F5=Refresh F12=Cancel
(C)Copyright ProData Computer Services, Inc. 2002
```

Press Enter twice, and the command will appear with the sort fields showing. Verify that the fields are correct and press Enter.

```
Sort DB2/400 Physical File (SORT)
Type choices, press Enter.
File name . . . . . Name
Library name . . . . . *LIBL Name, *LIBL
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
Bottom
F24=More keys
MC c MW 05/037
```

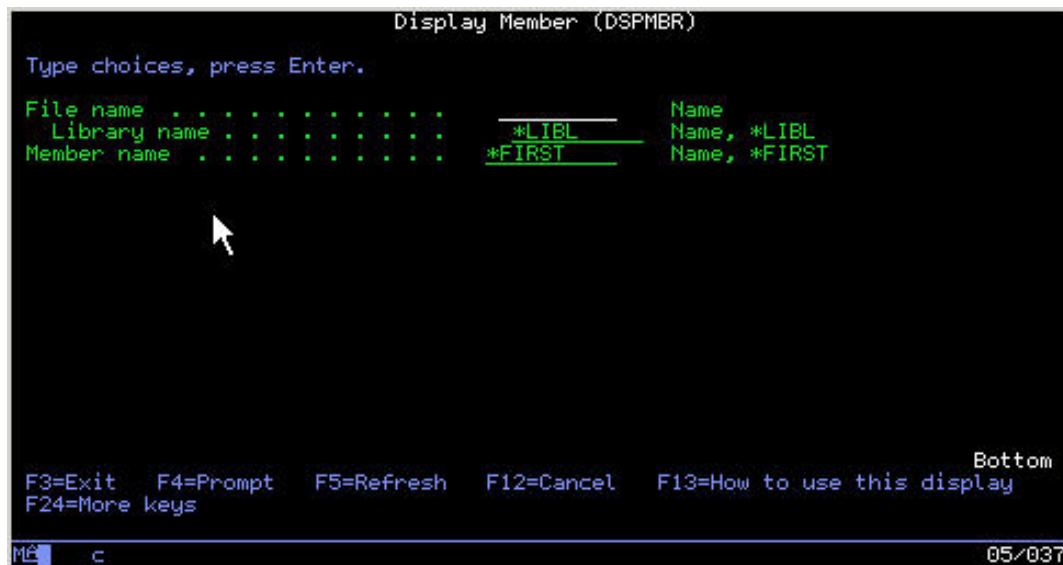
The command will create a logical in QTEMP in the order requested, and use that logical to re-organize the physical file in the requested sequence. This utility is not intended for use in a production environment. It also is prudent not to use this utility to sort large files interactively.

Create MI Program

The create MI program command compiles an MI source member into a program. You may never need to create MI programs. But we include it here in the tool box in case you needed/wanted to make a change to a program in ProTools.

Display Member

Display Member displays source members on machines that don't have IBM's Application Development Toolkit. The source member attributes are displayed similar to SEU.



Please review the display of USRIDXCPY (member) in QPROSRC (source file) in PROTOOLS (library). (User Index Prototypes Copy Book).



Save / Restore Library List

This is actually two commands as seen below.

```
SAVRSTLIBL      Save/Restore Library List      5/28/02
                                                    14:10:21
Select one of the following:

    01. Save Library List
    02. Restore Library List

                                                    Bottom

F3=Exit   F5=Refresh   F12=Previous
Selection
==> _____
```

There are no parameters. Just invoke the command (SAVLIBL) to save the current library list, and then when that library list is to be restored, just invoke the restore (RSTLIBL) current library list command.

Save / Restore Local Data Area

This is actually 2 commands as seen below

```
SAVRSTLIBL      Save/Restore Library List      5/28/02
                                                    14:10:21
Select one of the following:

    01. Save Library List
    02. Restore Library List

                                                    Bottom

F3=Exit   F5=Refresh   F12=Previous
Selection
==> _____
```

There are no parameters. Just invoke the command (SAVLDA) to save the Local Data Area, and then when that Local Data Area is to be restored, just invoke the restore (RSTLDA) Local Data Area command.

Send User Break Message

This command sends a break message, but with a difference. It sends a message based on user profile instead of workstation.



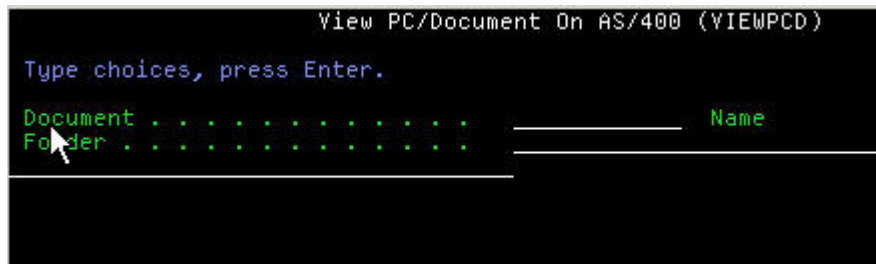
View PC Document

The VIEWPCD is a command that allows the ability to View PC Documents stored in the QDLS Folder.

Key in the command as follows: viewpcd doc flr **doc=Document:** Specifies the name of the PC document that is copied. The name of the document has the following format: **filename.extension**

The filename can be from 1 to 8 characters, and the extension can be from 1 to 3 characters. The extension is not required. This is a required parameter.

flr=Folder: Specifies the name of a folder containing the PC document that is copied. This parameter can also specify the name of a folder path in the form: folder1/folder2/folder3/.../folder The path name can be up to 63 characters in length. This is a required parameter.



User Index Service Program

Create, Delete and Maintain User Indexes with ease. Use our service program to process user indexes. Provided is the User Index Service Program, The Procedures Copy Book, and an Example Program you can compile and execute.

The Following is a list of the procedures we have included in the service program.

- Create User Index
- Retrieve User Index Attributes
- Add User Index Entry
- Retrieve User Index Entry
- Remove User Index Entry
- Delete User Index



ProTools Documentation

All the utilities listed are placed on the menu so that you can easily test them, and learn how to use them. For V4R2 and above.

File Based Menu System - Utilize a file based menu system that allows the creation and maintenance of menus. Access to menu options can be authorized by User or Group profile.

Send E-Mail Message - Send Internet mail messages from green screens. This AS/400 command can be executed from a command line, submitted to batch or executed from a batch or interactive program.

Zip/UnZip Files - Zip and UnZip Stream Files. Zip/Compress files which then can be opened using PKZIP or JAR. UnZip or uncompress files that have been zipped or compressed using PKZIP or JAR.

Program File Cross Reference - Do you need to know all the programs that are using a certain file. This utility shows them all.

Interrupt Job - Uses the system request function to break into interactive jobs and display the command entry screen.

Nest CL - Nest CL conditional statements.

Work With Group Jobs - Start/Stop and Manage Group Jobs. No longer do you have to log on to multiple devices and sessions. Use WRKGRPJOB and start, end and manage Group Jobs with this easy to use utility.

Calculator - Use our Calculator/Adding Machine with an editable tape. Performs adding machine type functions and recalculates the results when you EDIT the TAPE. Print your results for a permanent copy.

Scan Message File - Scan and filter messages containing specified phrases, words or partial words.

Execute CL Source Member - Execute a CL source member without compilation. Create CL source members of multiple commands and job streams you desire to run, Then execute EXECLSRC to run them.

Sort File - Quickly sort a file. Prompting allows you to select the fields and the order for the resulting sort.

Create MI Program - Compiles source members written in MI.

Display Member - Display source members on machines without IBM's Application Development Toolkit.

Save/Restore Library List - Save your Library List into memory. Then restore the saved library list at any later point.

Save/Restore Local Data Area - Save your Local Data Area into memory. Then restore the saved Local Data Area at any later point.

Send User Break Message - Issue the USRBRKMSG command and a break message will be sent to each device the user profile is signed on to.

View PC Document - View PC text documents in a folder on your AS/400 green screen.

User Index Service Program - Create, delete and maintain User Indexes with ease. Use our service program to process user indexes. An example program is provided to show you how to use the USRIDX service program.

To Access the ProData Tools Main Menu:

Have PROTOOLS in your library list. From a Command Line, type menu protocols and press Enter
This menu will appear:

```
PROTOOLS                               ProData Tools Main Menu                               5/15/02
                                                                                               09:11:42

Select one of the following:

      General System Tasks                                Programmer Productivity

01. Calculator
02. File Based Menu System
03. Send eMail Message
04. Send User Break Message
05. View PC Document On AS/400
06. Work With Group Jobs
07. Zip/UnZip Stream File(s)

21. Nest CL Program
22. Execute CL Source Member
23. Display Member
24. Sort Physical File
25. Save/Restore Library List
26. Save/Restore Local Data Area
27. Scan Message File
28. Program/File Cross Reference

31. User Index Service Program
32. Create MI Program (MI Compiler)
33. Interrupt Job (see doc in source)
                                                                                               Bottom

Selection or command
===>

F3=Exit      F4=Prompt      F5=Refresh      F12=Previous

MA  b                               MW                               21/007
```

To see the commands behind the options:

Have PROTOOLS in your library list. From a Command Line, type **chgmenu protocols** and press Enter. This screen will appear:

```
PROTOOLS                               Title Of Menu                               5/15/02
                               ProData Tools Main Menu                               09:15:15

Select one of the following:

      Option Heading                                Option Heading
      | General System Tasks                        | Programmer Productivity
      |-----|                                     |-----|
1 | 1 Calculator                                     | 21 Nest CL Program
2 | 2 File Based Menu System                       | 22 Execute CL Source Member
3 | 3 Send eMail Message                           | 23 Display Member
4 | 4 Send User Break Message                       | 24 Sort Physical File
5 | 5 View PC Document On AS/400                   | 25 Save/Restore Library List
6 | 6 Work With Group Jobs                         | 26 Save/Restore Local Data Area
7 | 7 Zip/UnZip Stream File(s)                     | 27 Scan Message File
      |-----|                                     | 28 Program/File Cross Reference
      |-----|                                     | 31 User Index Service Program
      |-----|                                     | 32 Create MI Program (MI Compiler)
      |-----|                                     | 33 Interrupt Job (see doc in source)
      |-----|                                     | More...

F3=Exit  F4=Enter Command(s)  F5=Refresh  F9=Edit Authorization  F12=Previous

MA  b                               MW                               05/002
```

Position the cursor on any line with an option and press F4. For example, position the cursor on "Calculator" and press F4.

The following screen will appear:

```
(PROTOOLS/MNU0052R)      Menu Option Command Entry      4/24/02
                                                                16:44:58

Option  Text
01      Calculator

Type choice, press Enter.
Command to run . . . . . CC

                                                                Bottom

F3=Exit   F5=Refresh   F9=Enter Multiple Commands   F12=Cancel

ME  c      MW      08/037
```

CC is the command used to call the calculator.

File Based Menu System

This is the easiest to use menu system ever written. It is file based, meaning all the menu options are stored in a physical file of your choice. Nothing to compile, nothing to go wrong.

To access this menu, with Protools in the library list, type **menu** on the command line. From this menu you can easily perform all the functions necessary to create and maintain all your menus.

Option 1 - Create Menu - Brings up the screen below

```
MENU      File Based Menu System Main Menu      4/25/02
                                                                09:20:46

Select one of the following:

      Commands                                Miscellaneous

01. Create Menu
02. Change Menu
03. Execute Menu
04. Execute CL Source Member
06. Single Column Window Menu

                                                                80. Work with Current Job
                                                                81. Work with Submitted Jobs
                                                                82. Work with Printed Output
                                                                90. Signoff System

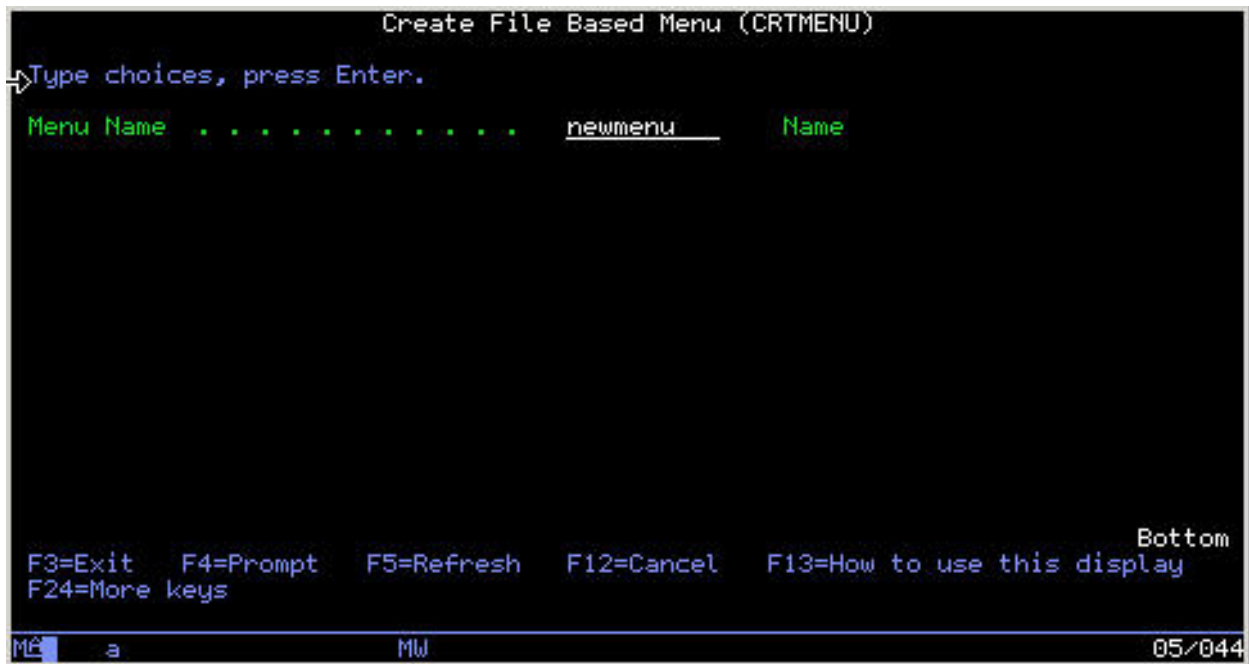
                                                                Bottom

Selection or command
==>

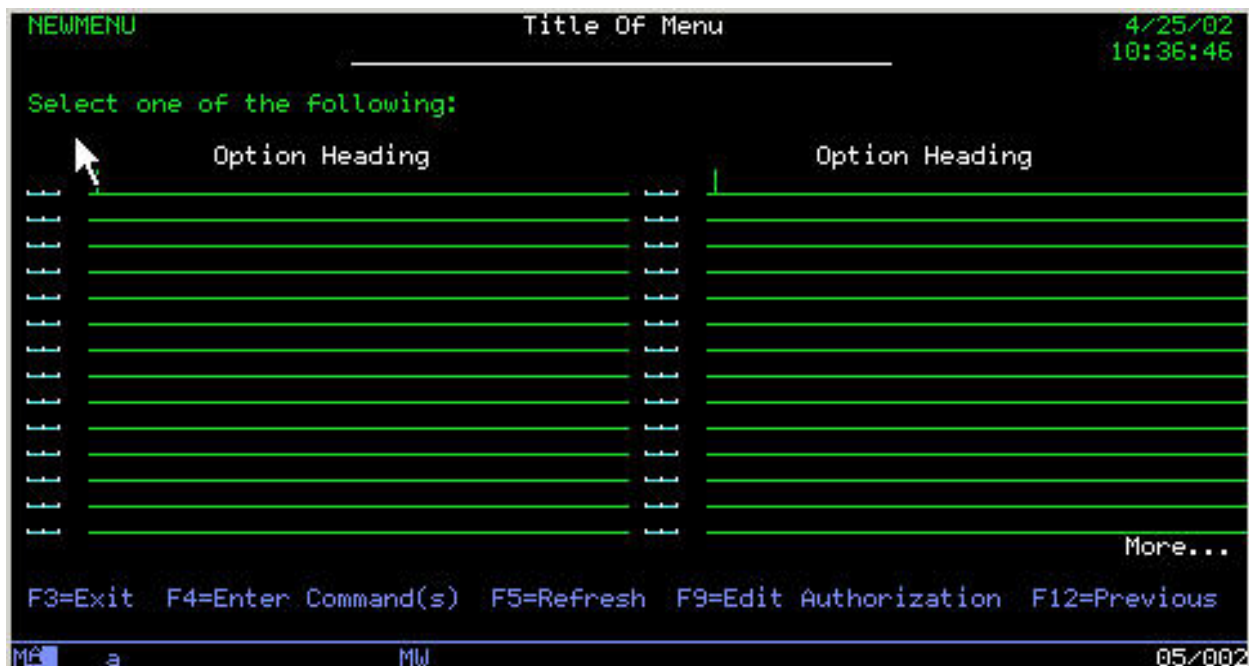
F3=Exit   F4=Prompt   F5=Refresh   F12=Previous

ME  a      MW      21/007
```

Fill in the name of the new menu and Press Enter



To create a menu, just follow these steps.



- Key in Title of Menu
- Type Column Headings. Put a “|” in the first position of any line that you want to be a column heading. They will not show on the completed menu.
- Key an option number in a two position field and the name of the option in the following field. Position the cursor on any line with an option and press F4.
- Enter the command to be processed on the ensuing screen and press Enter. Repeat the above steps until the menu is completed.
- Press F3 when finished and the menu is ready to use.
- Use option 3 on the File Based Menu to test, or call separately.

In addition, authority can be added to each option. Position the cursor on an option and Press F9 to edit option authority.

Option 2 - Change Menu - Brings up a screen to enter an existing menu. Follow the above steps to change the menu.

Option 3 - Execute Menu - Brings up a screen to enter a menu name. A Menu may also be accessed with the command menu, followed by an existing menu name.

Option 4 - Execute CL Source Member - This option is on the FBM System Menu because it is part of the FBM System. This is the way Multiple Commands are executed when pressing an F9 from the Menu Option Command Entry Screen. When F9 is pressed, a member is dynamically created in QMNUCL and the command EXECLSRC.

*LIBL/QMNUCL MBR??????? is built, which is then executed when the menu option is selected.

Option 6 - Executes a menu in single column mode.

Options 80,81,82,90 - Self explanatory.

EMAIL from Green Screen and Batch

We use this little utility a lot. It has a hundred uses. And just like the title implies, you can use it interactively or from a batch program. Just fill in the parameters on the command, and like magic, the email will be sent.

The command....

```
Send eMail Message (SNDEMAIL)

Type choices, press Enter.

e-Mail Address of Sender. . . .
Name of Sender. . . . .
e-Mail Address of Recipient. . .
Name of Recipient. . . . .
Subject . . . . .
Message . . . . .
Attachments . . . . .
+ for more values

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

Bottom

ML a MW 05/037
```

ZIP/UNZIP FILES

ZIP (Zip Stream File) The ZIP tool is a compression tool that combines multiple files into a single JAR archive file. JAR is a general-purpose archiving and compression tool, based on ZIP and the ZLIB compression format.

Zip Stream File(s) Command



Parameters	Type	Description
Stream Files(s)	Char(256) 10x	Contains the name and path of the stream files you wish to include in Zipped file. This a 256 character field. Allowing 10 entries.
Zipped Files	Char(256)	Contains the name and path of the Zipped file.

Zip Stream File(s) Command The UNZIP tool is a decompression tool that extracts multiple files from a single JAR archive file. JAR is a general-purpose archiving and compression tool, based on ZIP and the ZLIB compression format.

UnZip Stream File(s) Command



Parameters	Type	Description
Zipped Stream Files(s)	Char(256)	Contains the name and path of the Zipped stream file. This is a 256 character field.
UnZip To Directory Name	Char(256)	Contains the Path or Directory where you wish the UnZipped files to reside. This is a 256 character field.

Program File Cross Reference

Do you need to know where all the files/data areas in your system are used? This utility will show you this information for an individual program, a group of programs or all the programs in a library.

The command:

```

Files/Programs Cross Reference (PGMXREF)

Type choices, press Enter.

Program . . . . . _____ Name, generic*, *ALL
Library . . . . . _____ *LIBL Name, *LIBL, *CURLIB...

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

```

The results:

5/01/02	FILES/PROGRAMS	CROSS REFERENCE	PAGE	8
OBJECT	LIBRARY	PROGRAM	LIBRARY	USAGE
-----	-----	-----	-----	-----
GLLSMM03	LCLIBOBJ	GL0050	LCLIBOBJ	UPDATE/ADD
		GL2005	LCLIBOBJ	INPUT
		GL2005LC	LCLIBOBJ	INPUT
GLLSMM05	LCLIBOBJ	GL3000	LCLIBOBJ	UPDATE
		GL3001	LCLIBOBJ	UPDATE/ADD
		GL3002	LCLIBOBJ	UPDATE/ADD
GLLSMM06		GLC2007P	LCLIBOBJ	NOT SPECIFIED
		GLC2008P	LCLIBOBJ	NOT SPECIFIED
		GLC2050P	LCLIBOBJ	NOT SPECIFIED
		GLC5006P	LCLIBOBJ	NOT SPECIFIED
		GL0005	LCLIBOBJ	INPUT
		GL0010	LCLIBOBJ	UPDATE
		GL0012	LCLIBOBJ	UPDATE

INTERRUPT JOB

This nifty little utility uses the System request function to break into an interactive job. Why would you want to do this you say? What if you are calling a command/program and it bombs. Wouldn't you like

to put it in debug mode right there? Now you can do it.

Just hit the System Request key, or Shift/Esc on your PC. Type in **5 QCMD I** and Enter. This will bring up the command entry screen and you can enter your debug command and your break points.

You will find many uses for this utility. It allows you to execute any program or command using the System Request function.

Nest CL SOURCE

```
Nest CL Program (NESTCLP)

Type choices, press Enter.

Member name . . . . .
File name . . . . .
Library name . . . . .
Output . . . . .

Name
Name
Name, *LIBL
*PRINT, *OUTFILE
```

Nest CL Program prints a listing of the CL source program with the nesting statements shown on the left of the spooled output. You may also put the listing to an output file.

```
Display Spooled File

File . . . . . : QSYSPRT                      Page/Line  2/36
Control . . . . :                               Columns  1 - 78
Find . . . . . :

*...+...1...+...2...+...3...+...4...+...5...+...6...+...7...+...
B001  IF (&CHTSUM *NE ' ') DO
001      CHGVAR &INFO ('CALL GLC1003')
B002  IF (&CHTSUM *EQ '1') DO
002      CHGVAR &SUMCHT '1'
002      CHGDTAARA *LDA &SUMCHT
002      SBMJOB JOB(CHTSUM) OUTQ(&PRINTER) RQSD
E002      ENDDO
B002  IF (&CHTSUM *EQ '2') DO
002      CHGVAR &SUMCHT '2'
002      CHGDTAARA *LDA &SUMCHT
002      SBMJOB JOB(CHTSUM) OUTQ(&PRINTER) RQSD
E002      ENDDO
B002  IF (&CHTSUM *EQ '3') DO
002      CHGVAR &SUMCHT '3'
002      CHGDTAARA *LDA &SUMCHT
002      SBMJOB JOB(CHTSUM) OUTQ(&PRINTER) RQSD
More...
```

Work with Group Jobs

```
(PROTOOLS/WRKGRPJOB)      Work with Group Job

Active group job . : INITIAL
Text . . . . . : Initial Group Job

Type option, press Enter.
  1=Transfer to group job  4=End group job

-----Suspended Group Jobs-----
Opt  Group Job  Text
```

Group jobs allow you to run up to 16 distinct interactive jobs in one session; While requiring you to sign on only once. Only one group job is active at a time, the rest are suspended.

The WRKGRPJOB provides a user friendly interface for:

- Starting Group Jobs
- Listing Group Jobs That Area Suspended
- Transferring to another group job
- Ending a suspended group job

The WRKGRPJOB can be included as part of a set attention program to allow easy access to the command. You would have the ability to interrupt/suspend the current job, start a new group job, do the task at hand, then return to your interrupted/suspended job.

Calculator

How many times have you needed a calculator and didn't have one handy? This utility will solve that problem. You can add, subtract, multiply, divide, add a percentage to the total, total, clear the total, and post a sub-total to the tape. It will also print the tape.

You can even edit the tape and the total will be refigured. To edit the tape, position the cursor on the amount to be changed, change the amount and press "Enter". The Total will be refigured.

You can call this calculator from the command line or put in on everyone's menu. If you use the Interrupt Job tool, just hit the System Request key, or Shift/Esc on your PC. Type in **5 C I** and Enter. This will bring up the calculator for your immediate use.

Help is always available on the calculator by pressing F1.

Scan Message File

The message files we use in our programs are wonderful, but can sometimes be difficult to maintain. With this handy tool, you can scan and filter your message files. You can look for specified phrases, words, or partial words within the text of the message. It also allows you to update the message descriptions.

The command

```
Scan Message File (SCNMSGF)

Type choices, press Enter.

Find 'string' . . . . .

Lower Range of message Id's . . *FIRST      Name, *FIRST
Upper Range of message Id's . . *LAST       Name, *LAST
Message file name . . . . . QCPFMSG      Name
Library name . . . . . *LIBL           Name, *LIBL

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

Bottom

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```

Execute CL SOURCE

Allows a programmer/operator the ability to Create/Run a Job Stream or a series of CL commands. This is also used in the Menu System to allow multiple commands to be executed.

The command

```
Execute CL Source (EXECLSRC)

Type choices, press Enter.

File name . . . . .
Library name . . . . . *LIBL
Member name . . . . . *FIRST

Name
Name, *LIBL
Name, *FIRST

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

Bottom
MA b 05/037
```

Sort File

The command prompts the user with the selection of fields from the designated file. The user can select the fields and order (descending or ascending) for the sort they are performing. We have used this sort quite a bit, during development, to perform analysis over a data base.

The command

```
Sort DB2/400 Physical File (SORT)

Type choices, press Enter.

File name . . . . . > GLPENTRY
Library name . . . . . > LCLIBOBJ
Sort field name . . . . . GLLVL3
Order . . . . . ASC
+ for more values GLLVL2
ASC

Name
Name, *LIBL
Name
ASC, DESC

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

Bottom
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```

Fill in the physical file name and library and press Enter to bring up the following screen.

```
Sort Physical File
Select Fields For Sort Order
5/02/02
08:51:40

File . . . . . GLPENTRY
Library . . . . . LCLIBOBJ

Type sequence numbers (1-999) to select columns, press Enter.
Order: A=Ascending, D=Descending

Seq Order  Field      Description      Type  Length  Dec
---
  -      GLLVL3     LEVEL3          P      3      0
  -      GLLVL2     LEVEL2          P      3      0
  -      GLLVL1     LEVEL1          P      3      0
  -      ACTTYP     B/S OR P&L      A      1      0
  -      SEQ#       SEQ CTL #       P      5      0
  -      ACCT#      GL ACT#         P      5      0
  -      SUB#       SUBACT          P      3      0
  -      JESRCE     SOURCE          A      2      0
  -      ENTRY#    ENTRY#          A      6      0
  -      TEXT#     TEXT#           P      9      0
More...

F1=Help  F3=Exit  F5=Refresh  F12=Cancel

(C)Copyright ProData Computer Services, Inc. 2002
```

Press Enter twice, and the command will appear with the sort fields showing. Verify that the fields are correct and press Enter.

```
Sort DB2/400 Physical File (SORT)

Type choices, press Enter.

File name . . . . .      Name
Library name . . . . . *LIBL  Name, *LIBL

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

Bottom

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```

The command will create a logical in QTEMP in the order requested, and use that logical to re-organize the physical file in the requested sequence. This utility is not intended for use in a production environment. It also is prudent not to use this utility to sort large files interactively.

Create MI Program

The create MI program command compiles an MI source member into a program. You may never need to create MI programs. But we include it here in the tool box in case you needed/wanted to make a change to a program in ProTools.

Display Member

Display Member displays source members on machines that don't have IBM's Application Development Toolkit. The source member attributes are displayed similar to SEU.

```
Display Member (DSPMBR)

Type choices, press Enter.

File name .....
Library name ..... *LIBL
Member name ..... *FIRST

Name
Name, *LIBL
Name, *FIRST

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

Bottom
05/037
```

Please review the display of USRIDXCPY (member) in QPROSRC (source file) in PROTOOLS (library). (User Index Prototypes Copy Book).

```
Display Member (DSPMBR)
ProTools Display Member
PROTOOLS/QPROSRC(USRIDXCPY)

*-----*
*
* System Name...: User Index Service Program
* Program Name...: USRIDXCPY
* Program Type...: /COPY
* Description...: User Index Service Program ProtoTypes Copy Book
* Creation Date.: 04/28/2000
*
* (C)Copyright ProData Computer Services, Inc. 2002
*-----*
*          Creation Command
*-----*
*          (((((( N o t   A p p l i c a b l e ) ) ) ) ) )
*-----*
*          Modification Journal
*-----*

F1=Help  F3=Exit  F5=Refresh  F8=Print  F12=Cancel  F19=Left  F20=Right
Already at top of area.
(C)Copyright ProData Computer Services, Inc. 2002

04/004
```

Save / Restore Library List

This is actually two commands as seen below. There are no parameters. Just invoke the command (SAVLIBL) to save the current library list, and then when that library list is to be restored, just invoke the restore (RSTLIBL) current library list command.

```
SAVRSTLIBL      Save/Restore Library List      5/28/02
                                                    14:10:21

Select one of the following:

    01. Save Library List
    02. Restore Library List

                                                    Bottom

F3=Exit   F5=Refresh   F12=Previous
Selection
==> ____
```

Save / Restore Local Data Area

This is actually 2 commands as seen below. There are no parameters. Just invoke the command (SAVLDA) to save the Local Data Area, and then when that Local Data Area is to be restored, just invoke the restore (RSTLDA) Local Data Area command.

```
SAVRSTLIBL      Save/Restore Library List      5/28/02
                                                    14:10:21

Select one of the following:

    01. Save Library List
    02. Restore Library List

                                                    Bottom

F3=Exit   F5=Refresh   F12=Previous
Selection
==> ____
```

Send User Break Message

This command sends a break message, but with a difference. It sends a message based on user profile instead of workstation.

```
Send User Break Message (USBRBKMSG)

Type choices, press Enter.

Message text . . . . .

To user profile . . . . . * _____ Name, *, *ALL
```

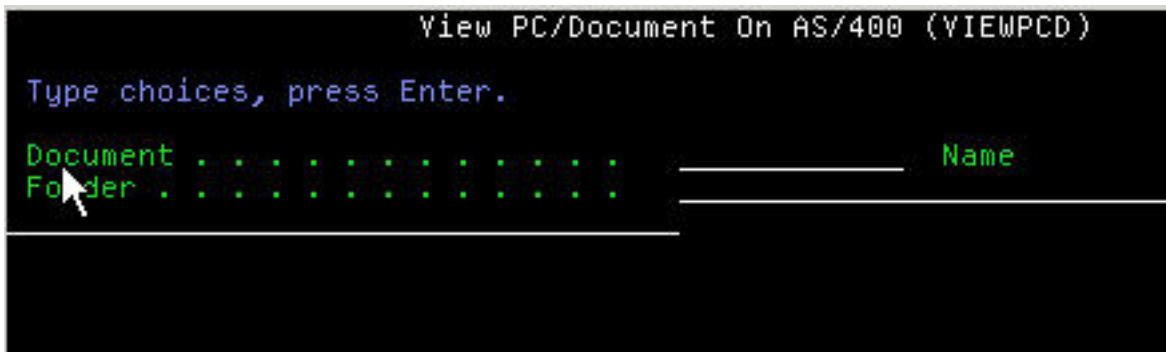

View PC Document

The VIEWPCD is a command that allows the ability to View PC Documents stored in the QDLS Folder.

Key in the command as follows: viewpcd doc flr **doc=Document**: Specifies the name of the PC document that is copied. The name of the document has the following format: **filename.extension**

The filename can be from 1 to 8 characters, and the extension can be from 1 to 3 characters. The extension is not required. This is a required parameter.

flr=Folder: Specifies the name of a folder containing the PC document that is copied. This parameter can also specify the name of a folder path in the form: folder1/folder2/folder3/.../folder The path name can be up to 63 characters in length. This is a required parameter.



User Index Service Program

Create, Delete and Maintain User Indexes with ease. Use our service program to process user indexes. Provided is the User Index Service Program, The Procedures Copy Book, and an Example Program you can compile and execute.



The Following is a list of the procedures we have included in the service program.

- Create User Index
- Retrieve User Index Attributes
- Add User Index Entry
- Retrieve User Index Entry
- Remove User Index Entry
- Delete User Index