

Documentation for ProSel-8 (PROgram SElector) version 4.0

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The ProSel-8 utilities that have close counterparts in ProSel-16 are only slightly mentioned here with references to the 16 bit documentation.

INSTALLING PROSEL

ProSel can be installed on hard disk, 800k disks and /RAM volumes with little effort. If you use 800k disks, you may want to install ProSel on all disks that have application files. This can be done by simply copying the files PROSEL.SYSTEM and PROSEL from one disk to another after the first installation. The INSTALL.PROSEL program installs a number of other utilities and you may not want these on some disks. You can decide about this later. For now, just follow these directions:

It will be assumed that the disk to receive ProSel has been ProDOS formatted. (Eg., that hard disk installation has been done.)

1. Turn on the computer. Boot the supplied disk called /PROSEL.
2. Select item #1 from the menu "Install new ProSel system". You will be asked for the name of the receiving volume. You can just press RETURN to accept the default name shown. Please note that installation will not make any irreversible changes.
3. If no errors occur you will be sent directly to the ProSel menu.
4. If the install program encounters an error you will be told what you must do to correct it.

This will establish the files PROSEL.SYSTEM, PROSEL, and BASIC.SYSTEM on your root directory. If you do not want BASIC.SYSTEM there you can delete it later, but I suggest you leave it there until you are familiar with the operation of ProSel. It will also create the subdirectory UTIL and install most of the utilities in it.

ProSel comes with several application specifications already set up. These items are supplied to demonstrate the system. You will probably want to change them all later.

GETTING STARTED (Simplified instructions)

One of the first things you will want to do is to enter new items into the "desktop". There are several ways to do this, but the one recommended to beginners is the one that uses the "external editor". That editor works only with the 80 column version of ProSel, so this discussion assumes that is the one you installed.

1. After installation and when you are "in" ProSel, look on the screen for the item "ProSel editor". Use the arrow keys or the mouse to highlight that item. Then press RETURN or the mouse button.
2. The disk should then read the PROSEL.ED file and run it. You should see a screen that is similar to the ProSel screen but which has the text "PROSEL EDITOR" at the bottom.

<For the remainder of the instructions for the external editor, see the ProSel-16 Editor docs.>

APPLICATION SPECIFICATIONS AND PATHNAME CONVENTIONS

If you have accessed the manual mode in the external editor, you have noted that a ProSel "application specification" consists of four items:

A screen title:

This can be anything, and may have very little connection to the name of the application. It may also contain some "command characters" which tell ProSel to do special things when showing the title on the screen.

A prefix:

This indicates the directory (folder) which will be open when the program is run. Usually you would set this to the directory containing the application program. For example, for Appleworks on a disk called /HARD1/, it might be /HARD1/APPLEWORKS or ?APPLEWORKS which means the same thing to ProSel.

An application name:

This is the pathname of the program. It can be either a FULL pathname (which means it begins with a /) and the volume name (eg., /HARD1/APPLEWORKS/APLWORKS.SYSTEM), or a PARTIAL pathname (meaning it does NOT start with a / or ?) and will be ADDED to the prefix to form a FULL pathname. For example, it could be APLWORKS if the prefix is given as /HARD1/APPLEWORKS (or as ?APPLEWORKS).

A startup:

A "startup" is an instruction to the program. It might be a path to some file you want opened, or, in the case of the application BASIC.SYSTEM, it would be the name of the BASIC program (BAS or BIN or TXT filetype) you want run immediately. Except for BASIC.SYSTEM and programs whose documentation indicate they use a startup, this item can be ignored and left blank.

Besides the usual ProDOS filename syntax, ProSel supports some abbreviations that not only save space in its list, but ease use of ProSel on multiple volumes. The most important abbreviation, and one I recommend using almost always, is the use of the question mark character. If a question mark appears in any of the three items PREFIX, APPLICATION NAME, or STARTUP, then it is interpreted as the volume name INCLUDING the slash on BOTH ends. Thus, on a volume called /HARD1,

? = /HARD1/ and

?UTIL = /HARD1/UTIL

A second space saver is the use of the right bracket (the Applesoft prompt character) as shorthand for BASIC.SYSTEM. This abbreviation does NOT include a slash on either side.

THE INTERNAL EDITOR

There are actually two editors available for ProSel: First, the external editor, described briefly in the last section, and in more detail later. That is a separate program you RUN from ProSel. Second, there is an internal editor which is not as powerful but is sometimes convenient to use.

When you boot you will be sent immediately to application select mode. You can press the ESCAPE key to go to the EDIT menu to edit items in the list, add items to it, delete items, and save the modified PROSEL file.

The internal editor provides the following options. The EDIT, ADD, and DELETE options are recursive and you have to press the ESC key to return to the menu.

QUIT: This exits the editor and sends you to application select mode.

EDIT: This prints the list of the application programs in the selector. You are expected to use the arrow keys (or mouse) to highlight one to edit and then press RETURN (or the mouse button). (Pressing ESC will send you back to the menu.) After you select, the editor will print the existing title of the application (what ordinarily appears on the screen). You should modify this according to your wishes. (Such titles must not exceed 23 characters. They may contain spaces.) Then the prefix belonging to the application appears and you must modify this. Finally, the same is done with the application pathname and the optional startup. If you don't wish to change one of these, trace over it with the right arrow key.

DELETE: This prints the selection list. Highlight the one to be deleted and press RTN (or the mouse button). Use ESCAPE if you entered delete mode by mistake.

ADD: This will be ignored if there are already 54 applications (48 for the 40-column version) listed. The ADD command will request a title, then a prefix, then the pathname of the application, and finally an optional STARTUP program. Two examples are:

```
Screen title:  Appleworks
Prefix:       ?APPLEWORKS
Pathname:    APLWORKS.SYSTEM
Startup:     (empty)
```

```
Screen title:  MYSTART hello
Prefix:       ?PROGRAMS
Pathname:    BASIC.SYSTEM
Startup:     MYSTART
```

The latter example will cause BASIC.SYSTEM to execute the MYSTART program directly instead of running the usual STARTUP program. If the Startup line had been left blank then the program named STARTUP would be executed as usual.

If the "pathname" is just the single character "/" then selecting this application will result in the directory corresponding to the prefix being read. Then the SYS files in that directory are displayed and you can use the mouse (or arrows) to select one of those to be executed.

Pressing ESC at this point will read the original list back in.

If the "startup" is just the single character "]" and the pathname is a valid path pointing to the BASIC.SYSTEM file, then selecting this application will result in the directory corresponding to the prefix being read. Then the BAS files and BIN files will be displayed and you can select one of these. In this case, the file selected will be a "startup" program for BASIC.SYSTEM. The BAS files will be shown in upper case and the BIN files in lower case. (Remember that not all BIN files are executable programs, and ProSel will have no knowledge of this if you select such a program.) Note that the prefix does not have to correspond to a directory containing the BASIC.SYSTEM file, as long as the pathname is a full pathname telling ProSel where to find the BASIC.SYSTEM file.

The prefix must be a valid full pathname of a directory file and the application file must be of SYS or S16 type or it will be ignored. The editor, however, will have no knowledge of this. The startup file may be of any type supported by the application. For example, BASIC.SYSTEM will support any file for which the "-" syntax is acceptable. MERLIN-PRO supports most of its utilities such as UTIL/ED.16, UTIL/XREF, and SOURCEROR/OBJ.

There is only so much space (about 2300 bytes) for the file list. If adding an entry, or editing to make one longer, causes overflow of this space then the addition will be deleted automatically. With modest lengths of names this should not happen. If it should, you can edit some of the titles to make them shorter. The internal editor places added or edited items in alphabetical order.

Control characters are allowed in screen titles (supported by the external editor) except in the 40-column version. This can be used to make "headers" with inverse or mousetext characters. You must avoid control characters that move the cursor, except backspace (control-H). If a title starts with control-@ then it will be shown in inverse.

Exit the add mode with the ESC key. Some hardware intercepts the ESC character, so I provided that TAB (control-I) also exits from ADD mode in the 80 column version.

SAVE: This saves the PROSEL file, as you have changed it, under the title /XXX/PROSEL where XXX stands for the name of the volume in which ProSel finds itself. CAUTION: Both PROSEL.SYSTEM and PROSEL must be in the main directory. Other files can be anywhere. You should not lock the file PROSEL or else the save will not work. Note that the SAVE command never creates the file, it only overwrites an existing one. It cannot be used to transfer that file to another disk.

USING PROSEL

ProSel comes up when you boot and when you "quit" from an application. For example, the BYE command in BASIC.SYSTEM does this.

When you quit, the PROSEL file is read in from disk and the list of application programs is displayed on the screen. You should use the mouse (or the arrow keys if you don't have a mouse) to highlight the application you want executed and press the mouse button or RETURN.

If you get an "Invalid pathname" error when trying to go to an application, it probably means that the prefix or pathname specification has incorrect syntax. Go to the editor and check it.

When you quit from an application program and the PROSEL file list comes up on the screen, you can elect to go to the ProSel editor to modify the list. To do this, type the ESC key. When you quit from the editor you will go directly to the modified list of application programs and can select one to run. If you have not used the editor's save command then the changes made will be for this time only. If you find yourself in the editor by accident, just select the quit command and you will be sent back to the application selection mode.

It is possible to have BASIC.SYSTEM on one directory and have it boot a startup program in a second directory. The following application specification is an example of this:

```
Screen title:  MYPROGRAM
Prefix:       ?
Pathname:     BASIC.SYSTEM
Startup:      /VOL2/MYPROGRAM
```

Then BASIC.SYSTEM will be loaded from MYVOL and will run MYPROGRAM in the volume VOL2. In this way you need not have a copy of BASIC.SYSTEM in both volumes.

ADDITIONAL CAPABILITIES

If, in "Select" mode, you press a key "1" or "2" then the volume directory from drive 1 or 2, respectively, of the currently logged slot will be read and the list of SYS files from that directory displayed. You can select one of these to run or press ESC to go back to the regular application list. If you press a key "3" to "7" followed by "1" or "2" then that slot and drive will be selected. Thus, for example, if you press "6" and then "1" the disk in slot 6, drive 1 will be read and its list of SYS

files displayed for selection. For those having drives in slots 1 or 2, the keys "8" and "9" are translated to slots 1 and 2. Besides the SYS files, the subdirectories are listed in lower case, and you can select one of those to read that subdirectory.

An alphabetic key pressed in select mode will move the cursor to the next item beginning with that character. If there is none the cursor will return to the first item on the screen.

If the ProSel list has been on the screen for about 5 minutes with no activity then it will blank the screen. Any keypress will bring it back. The time delay can be adjusted by running the INSTALL.REVISN program. At the screen blank, ProSel also parks the heads on the hard drive, if you have one.

REMARK

If you download revisions from one of the major information services, you will need a password. The password is "machinations". This does not apply to ProSel-16.

USING PROSEL ON MULTIPLE VOLUMES

This is addressed mainly to those who use ProSel on 800K drives. It may be desirable for you to have different versions of ProSel on several different disks. ProSel is small enough so that it does not use up much valuable space to do this, making this option quite viable. All you have to remember to do when you change disks is to type "51" (assuming the disk is in slot 5, drive 1) with the new disk in the drive and select PROSEL.SYSTEM from the list of files. This is not necessary unless you need the application list on the replacement disk right away. ProSel will renew itself automatically from the new disk. Instead of the "51" you could have an item in your lists called Reboot ProSel (for example) that would have the single character "?" as prefix and "PROSEL.SYSTEM" as pathname. For this provision to work correctly you must use the "?" syntax throughout your application list for the volume name.

On most 800K disks you would want only a minimal configuration of ProSel rather than a full installation. The minimal configuration consists of the files PROSEL.SYSTEM and PROSEL in the main directory. Nothing else is required, but it is recommended that the external editor (file PROSEL.ED) also be put on the disk. Note that there is no PROSEL file on the 5.25" ProSel disks. Instead, the file

PROSEL.80 should be copied to the 3.5" disk and RENAMED to PROSEL.
(You can use Cat Doctor to do this.)

THE AUTO-BOOT FEATURE

Ordinarily ProSel is designed to be the boot program and after a boot you have to select the first application by hand. It has also been designed, however, to support auto-booting of another application after establishing itself in the "quit code". This can be used for totally hands off rebooting of an application after a power downage. There are many ways of doing this, but I will explain the main one. This is to put your boot application name in the "STARTUP" position inside the PROSEL.SYSTEM file. The "STARTUP" position is at byte 7 of the file (this is at location \$2006 when the file is loaded to address \$2000). This follows a JMP and two bytes \$EE (the startup signature) and a byte \$40 (the maximum startup length). The startup (now 0) must be a length byte followed by the pathname. If the pathname is not a full pathname then PROSEL.SYSTEM will automatically append the volume name to it - this is the recommended way because it ensures portability. Note that if PROSEL.SYSTEM fails to find this file or there is some problem loading it, then it will be ignored and you will be sent to the ProSel application listing.

For example, suppose you want the program MY.BOOT to run automatically after booting ProSel. Then assuming MY.BOOT is on the main directory, put the byte 07 (the length of this name) at \$2006 and then follow this with the hex bytes representing "MY.BOOT", preferably in "positive ascii". Probably the easiest way to make this patch is with the BLOCK.WARDEN program: Select BLOCK.WARDEN from ProSel. If needed, use the C command to change slot and drive to that with the PROSEL.SYSTEM file to be patched. Type the F command and type PROSEL.SYSTEM as the file to be followed. This will present the first (and only) block of the file. Type E to go to the editor. Type the right arrow 6 times. This should bring up a box asking for the "startup" name. Just type this name (e.g., BASIC.SYSTEM) and press RETURN. This leaves you in edit mode. Then type ESC to get out of edit mode and into R/W mode. Type the W write command, then RETURN to accept the block shown. Type Y to accept the write. Finally, type Q and then Y to quit BLOCK.WARDEN.

THE EXTERNAL PROSEL EDITOR

The program PROSEL.ED is a sophisticated editor which you can run

from ProSel to edit application specifications instead of using the more limited internal editor. This editor will let you order the entries as you wish and to group them, unlike the internal editor that automatically puts them in alphabetical order.

When the editor is run from ProSel it will read the present application list and show it on the screen in a similar format to that in ProSel. You can move the cursor with the arrow keys. To rearrange the names, place the cursor on the one you want to move, hold down the Open Apple key while moving the name with the arrow keys. Note that moving a name one position swaps it with the one it is moved onto. Thus it is easiest to move it down to an empty area before trying to move it to another column.

To edit an entry, place the cursor on the one to edit and press RTN. This brings up another editing screen which shows the entire application specification. Use the Arrow keys to move the cursor, the TAB key to toggle insert mode, and ESC when done. The RTN key has the same effect here as a down arrow, namely it moves to the next item, or to the first if you are on the startup path.

To enter a new specification just "edit" an empty line. This will allow you to use the "automatic" file specification generator described earlier.

If an "application" title begins with a character less than 64 in ascii then ProSel will ignore it. Thus you can put titles of groups of applications on the screen by using a space followed by the title of the group (eg., " WORD PROCESSORS").

If the title begins with a ^@ then it will be shown in inverse video on the ProSel screen, and the cursor will skip over it. The cursor will also skip over titles beginning with a character less than 64 in ascii. (Eg., space and control characters and empty titles.) The mouse, however, may stop on such entries.

When you quit from the editor (ESC key) you will be asked if you want to save the changes. Use the P option to do that.

The recommended application specification for PROSEL.ED itself is:

```
Screen title:  Prosel editor
Prefix:       ?
Application:  UTIL/PROSEL.ED (or wherever it is)
Startup:     PROSEL
```

The startup is not needed, but is recommended. It is how the editor knows where to get the PROSEL file. You can use a full pathname for the startup to edit PROSEL files on another volume.

You can use inverse text and Mousetext in screen titles as follows.

First note that to insert a control character that otherwise would be taken as a command by the editor, you type the ^0 key (this means the control-0 key and not the two keys ^ and 0), and then the control character you want to insert.

To make an entire title show up in inverse text, just put in the ^@ character at the beginning of the title.

To turn on inverse for just a portion of a title, insert a ^O at the point you want inverse to start, and ^N where it should end.

To use mousetext, turn mousetext on by the sequence ^[^0 (note that ^[is the ESC key). To turn it back off use ^X^N.

Mousetext characters are given by the regular keys @, A, B, C, ..., Z, [, \,], ^, and _. Note these are uppercase, and that lowercase characters do not work when in mousetext mode.

There are other control characters that give commands to ProSel. These are discussed in the "screen demo" and the "screens" can be examined concerning their use, and also the use of mousetext in general. Here is a brief summary of the command characters:

^B: If this is in any screen title, then ProSel will not display the text usually at the bottom of the screen.

^A^N: This sequence in a screen title defeats inverse that is normally shown when the cursor is on that item. Another ^A turns it back on for the remainder of that title.

^C: This character in any screen title defeats use of the number keys and ESC key while that screen is showing.

MISC. UTILITIES

FIND.FILE ... (please see ProSel-16 documentation).

In the ProSel-8 version of FIND.FILE you should tell the program the location of your BASIC.SYSTEM file. This is done by specifying the full pathname of the BASIC.SYSTEM file as the startup of FIND.FILE. The simplest way to do this is through the ProSel-8 specification of FIND.FILE. When a BASIC program is run from FIND.FILE, the prefix will be set to the directory containing the program. This directory does not have to contain BASIC.SYSTEM.

RUNNING DOS 3.3 PROGRAMS DIRECTLY FROM PROSEL

This section relates to hard disks having a DOS 3.3 partition (and NOT for a DOS.MASTER partition). Ignore this section if you have a ProDOS only hard disk.

The short program DOS.HEADER is a DOS 3.3 "header" that is to be appended onto the start of an image of the DOS 3.3 in your DOS partition. (Note that this may not work with some hardware.) Here is how it should be done:

Copy the file DOS.HEADER to wherever you want it on your hard disk. Go to the DOS 3.3 partition. Go to the monitor by CALL -151. Type:

```
2100<9D00.BFFFFM <RTN>
```

Then type BSAVE DOS,A\$2100,L\$2300.

(DO NOT just BSAVE DOS at its standard address; internal flags are set during a BSAVE that will cause such a copy not to be "clean". This is why the monitor move is used first.)

Next use CONVERT or similar utility to move this file "DOS" to the ProDOS partition. Put it in the directory holding DOS.HEADER and set the prefix to that directory. (You may have to use FID to copy the file onto a DOS 3.3 floppy first.)

From ProDOS BASIC, type:

```
BLOAD DOS,A$2100
BLOAD DOS.HEADER
CREATE DOS.3.3,TSYS
BSAVE DOS.3.3,TSYS,A$2000,L$2400
```

That's it. Now to run any BASIC DOS 3.3 program directly from ProSel you just have to give an appropriate application specification for the program. Let us suppose that you have put the file DOS.3.3 in the ProDOS subdirectory MISC, for example. Suppose you want to run a program called MYPROGRAM in Volume 5 of the DOS 3.3 partition. Then this specification will do it:

```
Screen title: Myprogram
Prefix: ?MISC
Application: DOS.3.3
Startup: MYPROGRAM;5
```

Note the semicolon. The ProSel editor will not permit commas but

will take semicolons, so I established this syntax for specifying the volume with the program you want to run. Similarly, you cannot use a space in a STARTUP name, so I provided that the slash "/" be converted to a space by the header. The volume number defaults to 1. A "B" or "T" after the volume number will specify a binary or exec file as the file type of the HELLO program.

SCAVENGE

This little program SCAVENGE, when executed, will look at all disk devices on line and remove from the ProDOS queue any that do not contain ProDOS disks. The purpose of this is to avoid access of empty drives by programs that poll all devices. If it does not find any drives to remove then it rebuilds the queue. Thus if you run this a second time it will reenable all disk drives.

QUEUEP

QUEUEP (Queue for Prosel - pronounced KEWPIE) is an automatic program queue, allowing hands off sequencing and scheduling of programs. Since most users are not expected to have a need for this, it is not installed by the installation program. To install it, use CAT.DOCTOR to copy the files QUEUEP and QUEUEP.SYSTEM to your main directory.

In appearance, it is very similar to ProSel itself. It also accepts all the ProSel syntax for application specifications. The only difference is that the applications are run in sequence as they appear on the screen. (The sequence goes down the first column then the second column, etc.)

EXPECTATIONS OF SCHEDULED PROGRAMS

A program that is run from QUEUEP is on its own as far as its own operation is concerned. Thus, for automatic scheduling, the programs must execute the QUIT command to ProDOS automatically upon completion. If the program expects user input then it cannot be done hands off. The program must quit before QUEUEP can take over to run the next program.

WHERE TO PUT IT

Since the program works in a very similar manner to ProSel, it must be put in the main volume directory. You must also put its booter program QUEUEP.SYSTEM there, but usually you would not put this before PROSEL.SYSTEM unless you want it to be the boot

program.

EDITING THE APPLICATION LIST

To edit the list, you just have to select PROSEL.ED from ProSel with a STARTUP specification of QUEUEP, instead of ProSel. Then use the editor just as you would edit a ProSel listing. Thus, for example, use this specification in ProSel to run the editor to edit QUEUEP:

```
Screen title:  Queue editor
Prefix:       ?
Application:  UTIL/PROSEL.ED
Startup:     QUEUEP
```

SCHEDULING

If the STARTUP of an application (in the QUEUEP listing) is just a regular startup specification, or is empty, then the application will be executed immediately when its turn comes.

If the STARTUP has a time in the 24 hour format as in

```
FILENAME:22:30
```

or just

```
:22:30
```

then this application will be run at 22:30 (10:30 PM). Note that if the last application did not quit before 22:31 then this one will wait till the next day!

If the STARTUP has a time in the format

```
FILENAME>00:05 or just >00:05
```

then the program will be executed 0 hours and 5 minutes after the previous program quits. In other words, the ":" designates an absolute time and the ">" designates a relative time.

If the STARTUP (including time, if any) ends with a backslash "\" then any disk error will print its error message, sound a buzzer and wait forever for a keypress. If it does not have this character any error will sound the buzzer for about a minute and then go on to the next application. On a keypress, the next program will be up in the queue. Thus, to prevent its execution it should not be an immediately executed program (it should have a time) so that you can override the queue with the ESC key, or you should keep the closed apple pressed when doing this.

Times on the screen are in 12 hour format but, internally, they are in 24 hour format.

KEYBOARD COMMANDS

After about 5 minutes, the screen will blank to prevent burn in of the monitor. Any key hit at that time will bring the screen back. If the screen is not blank then the right arrow or down arrow keys will skip the presently scheduled application (shown in inverse) and go to the next. If the ESC key is hit, it will go directly to the last application. If the RTN key is hit, it will execute the presently scheduled application immediately. The up or left arrows go back to the previous application.

If the open apple key is held down while an arrow key is pressed then the execution time for the currently selected application is adjusted. (This is temporary. If you move between application specifications with the arrow keys, and open apple not down, then the execution time will be reset.) This feature allows changing the time for the next application without going into the editor. Note that if you pass through the current time while changing the next run time, the selected application will run immediately. You can press the closed apple key (also) to prevent that. Pressing the closed Apple key prevents a program in the queue from running at that particular time, allowing one to pass through the list without the possibility of accidentally having a program execute when this is not desired.

SUGGESTIONS

It is suggested that the last application execute PROSEL.SYSTEM.

For example, use this specification as the last one:

```
Screen title:  Prosel
Prefix:       ?
Application:  PROSEL.SYSTEM
Startup:     :09:00 (or empty, etc)
```

If you use QUEUEP.SYSTEM instead of PROSEL.SYSTEM in this specification then the whole process recycles. (You would have to cold boot in this case unless one of the programs lets you execute PROSEL.SYSTEM.)

You could have several queues in one listing if, for example, you end each of them with an entry running ProSel. Running ProSel cancels the queue.

CACHE

CAUTION: At this time the Cache programs are incompatible with Softswitch from Roger Wagner Publ., and MUST NOT be used at the same time as that utility!

The ProCACHE program is a disk cache which uses an area of a large RAM volume to cache data from a hard disk or a 3-1/2" disk to speed disk access. The program will ask what device you wish cached, the default being the device the program was run from. It then asks for the slot and drive of the RAM volume. The default is variable according to what the program finds in your machine. If the program determines that the RAM volume is suitable then it locks out a range of blocks on that volume for use by the cache. It will then monitor blocks read from the cached volume (eg., the hard disk) and place frequently used ones in the ram cache. This can enhance disk operations by a substantial amount. It is compatible with PRODOS 1.1.1 and later but does not work with earlier versions.

The ram volume used must have sufficient CONTIGUOUS room, in excess of 262 blocks, or it will give the error message "Not enough room on the ram volume". The ram volume must also have a name that starts with "RAM". This is used as a safety test to make sure you are not trying to use a volume that is not appropriate to the program. Names like "RAM" or "RAM5" are acceptable. If this is not the case the program will give the error message "Ram volume not found".

The operation of the program is transparent to the user. The program tries to determine potential problems but this cannot be 100% reliable. You must avoid programs which are likely to disable the ram volume or overwrite it with disregard for what is in it. For example you must not copy a disk to the ram volume or restore a file to it, while the ram cache is in effect. With a Ramworks type memory card you must not use the "use extra memory" option in the Volume copy program. To do those things, you must reboot first. Just executing the PRODOS file is sufficient for this. If the RAM driver is rerun then the program attempts to find the space it was using before and tries to use it again. If this is not successful then it may eat up more space from the RAM volume.

The program uses the disk name to determine whether the cached disk has been changed. You should not switch disks with a disk of the same name. To do that, reboot. In case of a large volume (a hard disk with at least 4MB) this check is not made PROVIDED the name of the volume is HARD1. This provides for more efficiency

on such volumes. If your hard disk is not named HARD1, you can rename it or use Block Warden to change this default in the CACHE file. It is after the pair of \$FFs following the startup name and begins with a length byte. You MUST NOT do this with removable media.

If the program sees that the RAM volume it is using has been disconnected then it aborts with a SYSTEM DEATH message reading INSERT SYSTEM DISK AND RESTART - ERR 0F because this is a condition from which it cannot recover. Unfortunately Appleworks (at least some versions) is misbehaved and disconnects all disk devices in slot 3 and that will produce this error when using some ram drivers, such as the one with ProSel. You can patch your Appleworks to fix this bug as follows: Get into Block.Warden, set the prefix to the directory containing your Appleworks files, type F to follow and specify APLWORKS.SYSTEM. Type E to go to edit mode. Type ^S to search. Type \$29 70 C9 30. It should stop with the cursor on the 29 of such a string. Move the cursor to the 70 and type F3 to change the 70 to F3. Move the cursor to the 30 and type B3 to change the 30 to B3. Type ESC to go to R/W mode. Type W to write, then RTN to accept the block shown and Y to accept the write. That is it.

The program will substantially impair 5-1/4" floppy disk access so, if you intend to do much of that, you should reboot. This is due to a large added overhead when accessing floppies and this is unavoidable. The only alternative would be disabling floppy access altogether as earlier versions of CACHE did. The program cannot be used to cache floppy drives and attempting to do so will yield an error message.

You can automate the device selection in the program by putting the four keys for the cached slot/drive and RAM slot/drive after a semicolon following the STARTUP name (if any). An M represents the RETURN key to accept the default. This specification will be ignored if it does not have exactly four characters. For example the startup ";MMMM" accepts all the defaults, and ";7152" acts as if you pressed this sequence of keys when the slot and drive particulars are requested. The startup file itself (if any) will be run following completion of the CACHE setup instead of quitting back to ProSel if a startup name is given. (I do not generally recommend use of a startup with this program.) For example, if the startup specification (in ProSel or in the file itself) is

NEXT.PROGRAM;7152

then CACHE will select slot 7 drive 1 for the cached volume, slot 5 drive 2 for the ram volume and then run the program called NEXT.PROGRAM. The specification

;7152

will select those volumes but exit back to ProSel when the cache is set up. The cache setup is very fast and if you use this automated provision you will just see the menu flash on the screen momentarily.

The program CACHE.XL is an alternative version of CACHE which uses twice as much ram area for caching but disables the 5-1/4" floppy drives (reboot or rerun PRODOS to access them). Generally I think the regular CACHE is to be preferred but if you find too much reloading of files then you might use CACHE.XL instead.

PROSEL.CYCLER and SCREENS

This program lets you keep several different copies of the ProSel file (and the application list it contains). To set this up:

1. Put the PROSEL.CYCLER anywhere on the disk, if not already there. (Install puts it in the UTIL directory.)
2. Use CAT.DOCTOR to copy the file PROSEL (or PROSEL.80, etc., from /PROSEL) to some temporary directory, and then rename it PROSEL.2.
3. Copy PROSEL.2 to the main directory.
4. If you want another copy, rename PROSEL.2 in the temporary directory to PROSEL.3 and copy that to the main directory.
5. Continue, if desired, up to PROSEL.9.
6. Note that this leaves no PROSEL.1; that is what the current PROSEL file will become if you switch to another copy.
7. Make an application in ProSel which points to the cycler. For example, if the cycler is in the directory UTIL then use

```
Screen title:  Prosel Cycler
Prefix:       ?
Application:  UTIL/PROSEL.CYCLER
Startup:      (none)
```

8. When this is saved, select this item from ProSel. This will bring up the second copy of ProSel.
9. Go to step 7 for this copy of prosel, and continue until you return to the original copy of prosel.
10. Delete the temporary copy of prosel (see step 2).

Note that the external or internal ProSel editor will always edit the copy of ProSel that is active at that time.

If you hit the Open Apple key when executing the cycler, you will get a menu showing all options and can select the version

of ProSel you want to go to next, instead of cycling through all versions. This is convenient if you use more than 3 or 4 versions. There is a small editor CYCLER.EDITOR that can be used to change the names shown on the screen in this menu mode of the cycler, and it also lets you reverse the meaning of the Open Apple key, so that the menu becomes the default, and lets you select 40 or 80 column mode for the cycler display.

If you call the cycler from ProSel with a specification in the menu giving a STARTUP name consisting of a digit (1-9) then the cycler will bypass the menu and will bring up the version of the PROSEL file corresponding to this digit. For this to work, you must use the CYCLER.EDITOR to make the MENU mode the default.

ProSel also supports extra "screens". See the ProSel-16 docs for usage information.

BACKUP, RESTORE and RECOVER

These programs are designed to do one thing, provide fast full volume backups for hard disks using ProDOS, and do it extremely well.

Note that the FILES BACKUP and RESTORE are the ProSel-8 backup utilities. The ProSel-16 incremental backup/restore is accessed from the ProSel-16 "main menu" (press ESC at the screen).

BACKUP

This program is used to back up a hard disk volume onto floppies. It will work with 5-1/4 inch floppies, 3-1/2 inch floppies, and in fact with any ProDOS formatted disk media at all. (The program does require the backup media to have less than 4096 blocks. This is to guard against accidental "backup" TO the hard disk.)

The backup disks must be ProDOS formatted before using the program, UNLESS the drive is an Apple 3.5 (NOT Unidisk 3.5) in which case an unformatted disk will be automatically formatted with a 2:1 "interleave". It is most efficient to give them volume names BACKUP.001, BACKUP.002, etc. If the disks you use do not have these names, you will be asked if you want to destroy the existing volume, and the program will rename the backup disk if you agree to this.

The backup program will use both drives alternately for the floppies unless you specify only one is to be used (see below).

When you enter the program, you specify the Original slot and drive which should be that of the hard disk volume you wish to backup. Later the program will read the volume name and display it (here shown as /MYVOL). You also specify the destination slot and

drive. The drive is the first one used by the program for the floppy, but unless you use the single drive option (below) the drives will alternate. Finally you are asked if you want to use two drives for the backup disks (default = Yes).

The backup procedure will start as soon as you answer this question. The first backup disk should be in the specified drive. While this first drive is being operated, insert the second disk in the alternate drive. When the first disk is done and the second is being used, insert the third and so on. The total number of disks that are going to be used is shown after "Number needed".

If the disk you have inserted is not named properly (BACKUP.xxx) then the process will stop and you will be asked if you want to destroy that volume. You can choose to abort the backup process by hitting "N" at this time. If you have inserted the wrong disk, replace it and hit "Y". The disk will be renamed and the backup process will then continue. Note that "destination drive" shows the drive currently expecting the backup disk and the "BACKUP.xxx" name shown is that of the volume expected.

If the program does not recognize the backup disk as a ProDOS disk or if there is no disk in the drive then the process will pause and you will be asked to "Reinsert/replace backup disk". Possibly the disk was not well centered. Try it again, or try a replacement disk and type C for continue. The escape key aborts the backup process.

If the program is unable to read some block from the hard disk or is unable to write a block to the backup disk, it will retry four times and then inform you of the problem. The block that is causing the problem is shown at the bottom of the screen in inverse. You can choose to ignore this error and continue the backup process. (Make a note of the problem block if you do this. That block will not be transferred correctly.) If the problem is a write error, then you should abort the process by hitting the ESC key and do it over, possibly with some other backup disks. Don't take a chance on faulty media.

To insure maximum reliability we recommend formatting the backup disks on the same drive to be used by the backup program. Ordinarily this means formatting odd numbered disks on drive 1 and even numbered ones on drive 2. The program will automatically format unformatted disks if they are in an Apple 3.5 drive (not a Unidisk 3.5). Please note that it takes a few seconds for the program to recognize this condition, so be patient - actually it is the ROM firmware that is slow here, so there is not much that can be done about it.

There are several user modifiable parameters such as original and destination slots. You should run the MODIFY.BACKUP program (a BASIC

program) to change these defaults.

One of the parameters for BACKUP is to clear the "backup bits" of files. Ordinarily you should NOT use this option. It is designed to be used by people who ALSO use another backup program to do daily incremental backups, while using ProSel's faster backup to do weekly full volume backups. If you only use the ProSel backup then the backup bits are of no concern to you.

Another parameter is whether you want BACKUP to do a verify after writing each backup disk. Ordinarily, I don't think this is worth the extra time it takes. However, if you do use it, and a read error occurs during a verify of a backup disk, then you will be given the option of replacing that disk with a good disk and continuing the backup process.

When the BACKUP/RESTORE programs are expecting you to insert a disk and IF that drive is an Apple 3.5 (NOT Unidisk 3.5) then the backup or restore will restart automatically as soon as the disk is inserted and you do not have to press the C(ontinue) key as you would with other backup media. Please note that if the disk is not formatted then it will take a few seconds before formatting of the backup disk starts. (Also note that formatting is supported ONLY for Apple 3.5 drives, NOT for Unidisk 3.5's or 5.25 floppies.)

RESTORE

This program is used to restore the hard disk volume to its condition when the backup was made. CAUTION: Any additions since the backup will be lost. The primary purpose of RESTORE is recovery from a disaster that has destroyed the hard disk volume. (If the hard disk needs reformatting, do that before using RESTORE.) Obviously you should have a copy of the RESTORE program on a floppy disk.

When you enter the program you specify the original slot and drive, which is the slot/drive of the backup floppies and defaults to slot 6, drive 1. The destination slot/drive is that of the hard disk. You MUST specify the correct slot and drive for the hard disk. On the Sider hard disk, drive 1 corresponds to the volume /HARD1 and drive 2 to /HARD2. If you backup from drive 1 (HARD1) and then try to restore to drive 2 (HARD2), you will get an error message reading "Incorrect volume size/name". If the volume size is correct (see below) then you will see the expected volume name on the screen after "Destination slot" (here it would be /HARD1). If you still want to backup to that volume, you will have to exit the program, rename the destination volume and rerun RESTORE. This is a safety feature to prevent accidentally overwriting the wrong volume.

The RESTORE program demands the backup disks to have the correct names. If one comes along with the wrong name, the program will pause and ask you to insert the correct disk. (For this type of error the C[ontinue] key and R[etry] key are equivalent.) The disk name "BACKUP.xxx" is displayed after "Original slot" and the active drive is shown after "Original drive". When you change that disk and press C or R the program will look at the replaced disk and make sure it is now correct. (If not, you get the message again.) Hitting ESC at this time will abort the restoration process and will leave your hard disk with incorrect data. You can, of course, rerun RESTORE from floppy and try again.

You must restore to a volume of the same size as the one backed up. The program will not accept a different size. If you have to reformat the hard disk, make sure you create the same size volume. If you want to change volume sizes, you will have to use another backup utility to do it. This is a consequence of the way this program works and is partly responsible for its speed. [The current version will allow restoration to a larger volume (you are asked if it is ok) as long as the number of "bit map blocks" is the same and the old and new numbers of blocks are both multiples of eight. A new "bit map block" is needed for every 2MB of disk space, so this allows a moderate increase in the size of the volume. If you use RESTORE on a /RAM volume you must be sure to use the same RAM driver for restoration as for the backup, and an increase in volume size will work only for the driver supplied and for the Ramworks and Checkmate RAM drivers.]

If a read or write error occurs while attempting a restore, you will have the option of continuing, retrying or aborting. Selecting "retry" will attempt to read or write the problem block again. (You might try reinserting the disk before hitting the "R" key.) The continue option will skip the problem block (which will leave the destination block with incorrect data). If it is a read error, you should note the number shown in inverse under the beginning of "Restoring block" at the bottom of the screen. This is the block on the hard disk which will have incorrect information written to it. This block will contain the message "BAD RESTORE" written into the first few bytes. In a pinch you may be able to fix this block by hand. The block on the backup disk that could not be read is shown in inverse under "Source block" at the bottom of the screen.

BACKING UP AND RESTORING TO AND FROM A FILE

The programs also have the ability to backup a volume to a FILE on a large disk device. This is intended for saving the contents

of a /RAM disk. [Note that other methods to use BACKUP to do this are discussed elsewhere.] To get into this mode, just type a 0 for the destination slot in BACKUP or for the source slot in RESTORE. You will then be prompted for pathname of the file to be used. If the file exists (of the proper file type - which is \$F6) then it will be overwritten unless it is locked. If it does not exist, it will be created. Note that the entire file must be contained on the destination volume.

If you get into this mode by mistake, type ESC at the pathname prompt.

This ability can be made into an application selectable from ProSel by making application specifications with BACKUP and RESTORE as the applications and the file to be used as the backup file as the "startup". In the case of BACKUP, you also have to give the name of the volume to be backed up to the MODIFY.BACKUP program. If done correctly, then selecting these applications will automatically (no further user input) backup/restore the ram disk to/from the file.

AUTOMATIC BOOTING AND LOADING OF A RAM VOLUME FROM A FILE

Provision has been made for a totally hands off loading of a RAM volume upon boot. This takes a little careful work to set up, but once done, it is automatic and it is very fast.

These are the steps to follow:

1. Install ProSel on the bootup disk.
2. Use BLOCK.WARDEN to place a STARTUP name in PROSEL.SYSTEM. If you have the Apple memory card then put in UTIL/RESTORE, and skip step 3. Otherwise put in UTIL/RAM.DRV and use CAT.DOCTOR to copy RAM.DRV to the directory UTIL on your bootup disk.
3. [Skip if you have an Apple memory card or clone like Ramfactor.] Use the CONFIG.RAMDRV program to place a STARTUP name of UTIL/RESTORE in the RAM.DRV program.
4. Use MODIFY.BACKUP to specify the name of the FILE to be restored to the RAM volume in the STARTUP position of RESTORE. You might call such a file RAMFILE for example, or MISC/RAMFILE if it is in the subdirectory MISC.
5. If you want RESTORE to run some SYS program (eg. BASIC.SYSTEM) instead of returning directly to ProSel after loading the RAM

volume, then use MODIFY.BACKUP to place the name of the desired SYS program in the RESTORE program. [Even if this is done, it will be ignored if there is no specification in the STARTUP position (item 4). This makes it possible to use the startup specification in ProSel to run this version of BACKUP while still being able to use the same copy of BACKUP (with nothing in the startup position) for its primary purpose of backing up a hard disk.]

6. Load the files you want into the RAM volume and use BACKUP to backup the volume to the file you named in step 4.

If you have followed this procedure correctly then the next time you boot, the RAM volume should be loaded automatically from the file you created. If not, then you missed some detail. Check the names you have given for various files and make sure the files are really where they will be looked for. This provision will just ignore file specifications if the files are not found. There may be no error messages.

Remember that these instructions apply to loading the /RAM volume from a FILE on a hard disk or 800K disk. To load the /RAM volume from floppies requires a different procedure which was described in the section "USING PROSEL ON A /RAM VOLUME".

AUTOMATIC BACKUP OF A RAM VOLUME

BACKUP can also be instructed to automatically backup a RAM volume to a file and then (optionally) run another application such as PARK.HEADS. Thus a single selection from ProSel can automatically backup your RAM volume, and then park the heads of the hard disk.

To force this mode, the file name of the backup file should be placed in the startup position. [It is best to let ProSel do this via an application specification. That way BACKUP can be used in other ways without making a completely separate version. If the startup position is empty then the rest of the operation described here will be ignored by the BACKUP program.]

Then the program name to be run after BACKUP is finished should be placed in the BACKUP program by selecting that option when running MODIFY.BACKUP.

Then the volume name of the volume to be backed up (eg, /RAM) must be specified when running MODIFY.BACKUP, or this mode will be IGNORED.

USING BACKUP DISKS IN SLOT 5 AND SLOT 2

As set up, the Backup/Restore programs alternate backup disks in a specified slot and both drives 1 and 2. However, the programs are designed in such a way that you can, instead, have it (for example) alternate between slot 5, drive 1 and slot 2, drive 1 (a common configuration for 3.5" disks on a GS). To enable this, just run the MODIFY.BACKUP program to modify both BACKUP and RESTORE. Tell the program the first backup disk location (eg., slot 5, drive 1) and the second (eg., slot 2, drive 1). Use the same slot/drive for both if you want single drive operation without having to answer the drive question when running BACKUP or RESTORE.

RAM.DRIVE.GS

RAM.DRV.GS is a ram driver for the Apple IIgs which can supplant or supplement /RAM5. If you hold down the option key when running it then it will REMOVE itself. Caution: everything that was in /RAM will be lost forever. It is twice as fast as /RAM5.

If you hold down the open Apple key when running RAM.DRV.GS then it will present a configuration menu. You can resize the ram drive to have any size that is a multiple of 64K, up to 2048K. This does not check how much memory you have available, so be reasonable. (When the driver is run it will abort with a memory manager error if it cannot get enough memory.) Then you can select the slot and drive to map the driver to (default 3,1). When you have specified these parameters, it will resave itself. (Don't lock the file or this will not work.)

RAM.DRV.GS works with ProDOS-8 only. If you run a P16 program then the driver will release its memory to the system. CAUTION: this means that anything in /RAM will be lost forever.

The strengths of this alternative to /RAM5 are also its weaknesses. For example, the driver is easily discarded so that you can run P8 programs which require much expansion memory, such as COPY.GS and Beach.Comber.32. This also means, however, that it is easy to lose data in the ram volume. Care must be exercised.

RECOVER

This is a utility that allows you to recover a file from the

backup disks created by the BACKUP program. This can be very useful if you should ever be in a position where your hard disk is down and files on it inaccessible.

To use this you must have two working disks one of which must be of the type used for making the backups. One of these drives will be used for reading the backup disks and the other will be used to write the recovered file.

The program will ask for the slot and drive that you will use for the backup disks.

It then asks for the pathname of the file you want to recover. This name MUST NOT include the volume name. Thus if you should want to recover /HARD1/MYDIR/MYPROG, what you type here must be MYDIR/MYPROG.

Then you must specify the FULL pathname of the filename you want the recovered data written to. If the file already exists you will be asked if it should be deleted. If you answer YES and the file is locked then the program will abort.

Next you will be asked to insert BACKUP.001 and press a key. It may ask for many more of the backup disks. Be prepared for a lot of swapping if the file is large or high up in the hard disk.

If the operation is successful the program will ask if you want to retrieve another file. If recovery is not successful then some error message will also appear.

RECOVER cannot be used to recover files from the file created by the "backup to a file" option.

DOC for COPY (only COPY.GS is on ProSel-16 disks)

This is a volume copy program for ProDOS disks which features:

1. It is fast, especially on partially full disks.
2. It tries hard to read and write and allows skipping over errors.
3. It can be used to copy one hard disk volume to another of the same (or slightly larger) size.
4. It allows single drive or dual drive copies.
5. It will use the extra memory in a ram card when doing a single drive copy (unless you tell it not to do so). In all likelihood it will take only one pass even for 800K disks if you have a large ram card. Even if you do not have such a card the program will use most of the extra 64K in a //e or //c.
6. If only one pass is required then you have the option of copying to subsequent disks without reading again from the original.

You are asked for slot and drive for the original and duplicate disks. These will be used for all subsequent copies, so you don't have to keep repeating these specifications. The program checks to see if these correspond to mounted devices and, if not, returns to the start. The program then checks to see if the duplicate volume has the same number of blocks and gives an error message if not. (Thus you can copy only between the same type devices. It is impossible to accidentally copy from a floppy to a hard disk.)

COPY displays the names of the original and the duplicate and you are asked if you really want to destroy the latter. If not, it will quit. If so the copy will proceed. The creation dates of both disks are also displayed unless no clock was present when the volumes were formatted. The block currently being read or written is displayed at the bottom of the screen in inverse. Only blocks listed as used in the bit map are copied.

If a read or write error occurs the program retries four times. If still unable to do the read or write, the program will tell you the error and ask if you want to continue or not. If not it will exit through Quit. If you want to continue anyway (and try to fix the bad block by other means) you should make a note of the block on which the error occurred and then type C for continue.

When the copy is done you will be asked if you want to do another copy. The same original and destination drives are used.

If the volume is /HARD1, /HARD2, etc, the copy will be named /COPY1, /COPY2, etc., and vice-versa. This prevents duplication of volume names when using one Sider to back up another.

The program allows copying a volume to one of a larger size, provided that has been formatted. One reason for this is to allow copying of an 800k disk using the Apple memory card, by first copying to the RAM disk and then to another (formatted) 800k disk. For this to work you must have 1 Meg in the Apple memory card. You are asked if you really want to do this. You are also asked (if the program determines that the situation is one it can handle) whether you want the size increased to the size of the destination disk. You would want this if you are copying a floppy to a 3.5" disk, but not if you are copying a floppy to the Apple memory card with a view to copying that back out to other floppies. If you do not select this option then the destination volume will have the same size as the original. You should reformat the /RAM drive (turn the computer off and on) after using it to copy disks in this way.

COPY.GS looks for free memory and uses whatever it can find. It displays the amount of memory it has found before the copy

process begins. COPY.GS also has a "mass copy" feature in which it will read a disk to memory and copy it out to alternating drives without prompting. The drives used default to source S5,D1 and destination S2,D1 alternating with S5,D1. To change these defaults you use a "startup" consisting of a semicolon, slot/drive of source, slot/drive of the first destination and slot/drive of the second destination. For example ;515152 gives source S5,D1, and destinations S5,D1 and S5,D2. (In cases where the first destination is the same as the source, the program starts writing to the SECOND destination.) If both destinations are the same, mass copy mode will be defeated. In COPY.GS (only), if the destination disk needs formatting and it is a 3.5" disk, then you will be asked for an "interleave" value between 1 and 9. This will come up with the cursor on the recommended default of 2:1 if the drive is a Apple 3.5 and 4:1 if it is a Unidrive 3.5. Ordinarily you should just press RETURN to accept that default, but you may wish to experiment with other values. In mass copy mode, this question is asked only for the first format.

INFO.DESK ... (please see ProSel-16 documentation).

CONFIGURATION OF THE PROSEL-8 INFO.DESK

The program has been designed so that certain parameters are easy to modify. Most people will have no reason to attempt this. The configuration area starts at relative byte 3 in the file. The first part of the data area consists of three segments of 16 bytes each. These three segments are used by output to, respectively, a printer, a disk file, and the 80-column screen. The 16 bytes in each segment have this meaning (byte addresses are given for the first, printer, table with present contents shown):

\$03: 01	Slot number for output (0 for disk file)
\$04: 3C (dec. 60)	Number of lines/page
\$05: 50 (dec. 80)	Line length
\$06: DF ("_")	Fill character after file names
\$07: F8 ("x")	Used block indicator in bit map
\$08: AE (".")	Free block indicator in bit map
\$09: 7F	Mask for file output (use FF for neg ascii)
\$0A: 00 00 00 00 00	Printer (etc) init string, 7 bytes maximum,
00 00 00	null terminated.
\$12: 05	Left margin

If the number of lines per page parameter is zero then the headers (except the first one) will not be printed. This is mainly useful for the print to disk option.

Following the three tables (at byte \$33) is a table of the file types used by the catalog. The format of an entry is the type

name in negative ascii followed by the type itself, for example, "BIN",06. Towards the end of the list (currently at byte \$87) there are repeated designations "NON",00. Any or all of these may be changed to provide a recognized name for any file type. If a file type is not in the list it is printed in its hex form.

If you choose the option to output the data to a disk file the file will be placed in the directory to which the prefix was set upon entry. (You can use ProSel to set this to any directory to which you wish to have the file sent.) The file name used when the Catalog option (#1) is in effect is "CAT." followed by the volume name. (If this is longer than 15 characters then it is truncated.) If this file already exists it will be overwritten unless it is locked. If it is locked the program will abort. Similarly, for the options 2-5 the file name is "LOC.", "BLK.", "BIT.", or "TRE." followed by the volume name.

CAT.DOCTOR ... (please see ProSel-16 Utilities docs).

<<< User modifications to CAT.DOCTOR >>>

Starting at the fourth byte of the CAT.DOCTOR file there are some configurable flags and data. The fourth byte is a \$02 and is the a time delay for the name blinking that occurs during prompting. The next two bytes are \$00 and are the bell flag default and the prompt flag default. To change either of these, use only \$87. The next byte \$01 is the printer slot. This is followed by the number of characters per line and the number of lines per page for the printer in the type function. Next is a flag (currently \$E5 which, if changed to \$65, will cause a catalog line to be printed as a header of typed files. The 5 nibble is the left margin for TYPE (defeated by holding down open apple) and the \$20 bit defeats word wrap if cleared (or hold down closed apple at the printer question). The next byte is \$60 which is the device number of the default for the format function.

After this is a list of file types in negative ascii followed by the type in hex. The list ends with a number of ascii "NON"s followed by zero bytes. These can be replaced by file type names and the types, and the program will automatically use these when displaying these types.

BLOCK WARDEN ... (please see ProSel-16 Zap documentation).

BEACH COMBER ... (please see ProSel-16 Optimizer docs)

MISTER.FIXIT ... (please see ProSel-16 Volume repair docs)

MISTER FIXIT can be automated by putting the desired key sequence after a semicolon in the startup position of the MR.FIXIT file.

NOTICE

ProSel-16, ProSel-8 and all their support and utility programs are copyrighted (c) 1985-1989 by Glen Bredon. All rights reserved.

ProSel-16, ProSel-8 and their support programs are not "shareware".

The source listings of these programs run to over 60,000 lines of code and fill binders over six inches thick. If you want to support the great effort that goes into creation of such a software package, you will respect my right to a fair return on such a major project. It is fine to show the programs to others, but to give them away is illegal and immoral.

The price of the ProSel-16 package is currently \$60 postpaid in USA and Canada, (foreign postage and handling \$5). Updates of ProSel-16 for current ProSel-16 owners are \$10. Updates to ProSel-16 for current owners of ProSel-8 is \$20 first time.

The price of ProSel-8 alone is currently \$40 and updates are \$10.

These prices are subject to change without notice.

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I am often away during the summer months (June 1 - Sept. 1) and processing of orders may experience considerable delay at that time.

Other software:

ProCMD (a set of added ProDOS BASIC added commands).....\$25.
DOS.Master (puts DOS 3.3 volumes on hard disk and 3.5 disk)...\$25.
Apple.Rx (software virus detector/protector).....\$25.

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