PROBE/GS

USERS MANUAL

VERSION 1.3

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                        INTRODUCTION

PROBE/GS, the PROfessional Block Editor, was designed
exclusively for the Apple II/GS computer running PRODOS 16.

Written in native 65816 machine code, and utilizing
PRODOS 16, it releases the full power of your Apple II/GS.

This block editor was written due to need, not greed.
You will find that it has an easy-to-use structure and a
command set that reflects the operation you wish to perform.
(ie. To read a block, you would press the 'R' key.)

WHY A BLOCK EDITOR?

Although the Apple II/GS can use a variety of
input/output devices, the device that will be used the most
is the 3.5" disk drive. This drive uses 3.5" diskettes
(surprise!) as opposed to the more familiar 5¼" diskettes.
Along with the new drive and disk size comes the need for
a utility to examine, or PROBE, the information stored on
that disk. PROBE/GS is that utility!

I hope you will enjoy using PROBE/GS as much as I enjoyed
writing it.

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                        SYSTEM REQUIREMENTS

PROBE/GS runs on the Apple II/GS computer with the
following:

        o   256K RAM (or more)

        o   One 3.5" diskette drive (or more)

        o   Version 2.0 ROM chips (or higher)

        o   Imagewriter II printer connected to the II/GS
            serial port (optional)

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                    GETTING STARTED

To start the program, insert the PROBE/GS disk into 3.5"
drive 1 and turn on the machine. When the program is finished
loading, remove the program disk and insert the disk you
wish to examine in drive 1.

NOTE: THIS PROGRAM ALLOWS YOU TO ALTER DATA ON THE DISK.
IF DONE IMPROPERLY YOU COULD RENDER THE DISK UNUSABLE!
ALWAYS PROBE A COPY, NEVER THE ORIGINAL DISK. KPW SOFTWARE
IS IN NO WAY RESPONSIBLE TO DAMAGE CAUSED BY PROBE/GS.

Press 'RETURN' when the disk you wish to probe is in drive 1
and you will be taken to the Hex Display Screen.

NOTE: When you wish to probe a different disk use the
'V'olume command from the Hex Display Screen and follow the
prompts. NEVER SWITCH DISKS WITHOUT USING THE 'V'OLUME
COMMAND UNLESS THE PROGRAM INSTRUCTS YOU TO DO SO.

HEX DISPLAY SCREEN

This screen shows the hexadecimal values for all 512 bytes of the current block. The current volume name and block number are displayed at the top of the screen. This is the screen you will be returned to after any other command has been processed.

The Hex Display Screen has offsets into the block running over the top and left side of the screen. Use these off- sets to cross-reference to the actual values you wish to see.

The menu of commands available to you are displayed at the bottom of the screen. Use the 'H'elp option to show additional information about the various PROBE/GS commands.

A feature not shown on the menu bar is the use of the <- and -> arrow keys. By pressing these keys when you are in the Hex Display Screen will read the previous or next block respectively.

All of the other options available to you at this point ap- pear on the menu bar.

If you wish to send the contents of this screen to the printer press the 'P' key.

ASCII DISPLAY SCREEN

Pressing the 'A' key at the Hex Display Screen will take
you to the Ascii Display Screen.

This screen shows the Ascii representation of the current
block in memory. As with the Hex Display Screen, offsets
into the block run along the top and left side of the screen.

Some values are not printable Ascii characters. These values
have been replaced with a '-' symbol to designate that the
character is unprintable but a value does exist for that
offset. The value for a '-' character still prints as a '-'.
On this screen there is no way to tell the difference bet-
ween an actual '-' and a '-' that prints in place of an un-
printable value.

If you wish to send the contents of this screen to the
printer press the 'P' key.

When you wish to exit this screen and return to the Hex
Display Screen press either the 'SPACE' bar or the 'ESC'
key.

CHECK DISK FUNCTION

Pressing 'C' from the Hex Display Screen takes you to the
Check Disk function. This function allows you to check a
disk for bad blocks.

When prompted, insert the disk you wish to check in Drive 1
and press 'RETURN'. Press 'ESC' to abort the Disk Check
function.

When a bad block is found, the block number is displayed
and you are given a choice of stopping or continuing the
check.

When the disk check is completed you are prompted to insert
the disk you wish to continue probing. Press 'RETURN'
after any disk switching is completed.

NOTE: You may wish to check a disk that you are not cur-
rently probing. To do so, switch the disks when prompted.
This is a case where you do not have to use the 'V'olume
command when switching disks.

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                        DISASSEMBLER

Pressing 'D' from the Hex Display Screen takes you to the
disassembler. In this mode you are shown assembly language
mnemonics for the values in the current block.

The screen shows the offset into the block on the left edge
of the screen. Next to this offset is the hexadecimal values
and finally the assembly language mnemonic for those values.

There are several keys that allow you to move through the dis-
assembly of the block. These keys are:

       T = Takes you to the Top of the block (offset=@).

       P = Prints the current screen to the printer.

       + = Increment the offset at the top of the screen by 1.

       - = Decrement the offset at the top of the screen by 1.

'ESC' = Return to the Hex Display Screen.

'any other key' = Advance the disassembly to the next instru-
                  ction.

The use of the '+' and '-' keys has been added to allow the
increment or decrement of I byte from the value of the offset
at the top of the screen. This feature is included because
there is an assembly language mnemonic for all 256 possible
values in a byte, and the correct starting point for a dis-
assembly may not be at the top of the screen at all times.

NOTE: Remember that not all data on a disk is meant to be
disassembled. If what you are disassembling does not seem to
make sense, and you have tried adjusting the offset with the
'+' and '-' keys, then you are probably looking at data tables
or just "disk garbage" such as directory files etc.

                        EDITING A BLOCK

Pressing the 'E' key from the Hex Display Screen will place
an inverse block over the value at offset 0. This inverse
block, or cursor, can be moved around the screen by using the
arrow keys.

When over a value you wish to change, press the 'H' key. This
will change the inverse block cursor to a blinking underline
cursor. At this point you can enter hexadecimal values that
will take the place of the old values. When you are finished
entering values press the 'ESC' key. This will change the
cursor back to the inverse block and you can continue to move
about the screen with the arrow keys.

When finished altering the values, press the 'ESC' key once
more and the inverse block will disappear and you will once
again be allowed to enter menu bar options.

NOTE: Changing values on the screen does not change the values
on the disk. If you wish to save the changes you made, use the
'W'rite block command to write the modified block back onto the
disk.

READING A BLOCK

Pressing the 'R' key from the Hex Display Screen gives you a
prompt to enter the block number you wish to read.

Pressing the 'ESC' key at the 'Enter the block number to read'
prompt will abort the operation.

Enter the hexadecimal value of the block you wish to read
(0 - 6FE) and press 'RETURN'. This will replace the block cur-
rently in memory with the block that you told the program to
read.

When the read is completed you are returned to the Hex Display
Screen.

NOTE: Remember that you can read the previous or next block
into memory, at the Hex Display Screen, by using the <- and
-> arrow keys.

WRITING A BLOCK

Pressing the 'W' key from the Hex Display Screen gives you a
prompt that asks if you want to write the current block to
the 'S'ame or a 'D'ifferent block.

If you press 'ESC' the action is aborted and you are returned
to the Hex Display Screen. The block is NOT written to the
disk.

If you press the 'S' key the block is written back onto the
disk at the same location that it was read in from.

If you press the 'D' key you are prompted to enter the block
number that you wish to write the block in memory to. Enter
the hexadecimal block number (0 - 6FE) you wish to write the
block to, and press 'RETURN'.

When the operation is complete you are returned to the Hex
Display Screen.

                    SEARCHING A DISK

Pressing the 'S' key at the Hex Display Screen will take you
to the Search Disk Function. This function allows you to
search a disk for a sequence of Ascii or Hexadecimal char-
acters.

You are first asked what you want to search for. Possible
responses are 'A' for Ascii characters, or 'H' for Hexadecimal
values.

If you do not wish to search for anything, press the 'ESC'
key and you will be returned to the Hex Display Screen.

If you entered 'A', you will be asked to enter the Ascii
characters you wish to search for. If you entered 'H', you will
be asked to enter the string of hexadecimal values you wish
to search for.

The 'DELETE' key will backspace one value. The 'ESC' key
will take you back to the Hex Display Screen. The 'RETURN'
key will start the search, and any other key will be accepted
as part of the search string.

When you are finished entering the search criteria and have
pressed the 'RETURN' key, the screen will clear and will start
searching for the entered values. The block number that the
program is currently searching is displayed.

If you wish to cancel the search, press the 'ESC' key and you
will be returned to the Hex Display Screen.

When a match is found, you will be shown the block number and
offset that the search string was found. You may 'C'ontinue
the search, or 'S'top the search. Press 'C' or 'S' to indicate
your choice.

When the search function is complete you will be returned to
the Hex Display Screen.

VOLUME FUNCTION

Pressing 'V' from the Hex Display Screen gives you a prompt
to enter the new disk you wish to probe and press 'RETURN'.

If you do not wish to probe a different disk, press the 'ESC'
key.

If you do wish to probe a different disk, eject the current
disk and insert the new disk in Drive I. When finished
switching disks, press the 'RETURN' key.

NOTE: YOU MUST USE THIS FUNCTION WHENEVER YOU WISH TO PROBE
A DIFFERENT DISK. NEVER SWITCH DISKS WITHOUT USING THE
'V'OLUME FUNCTION UNLESS THE PROGRAM INSTRUCTS YOU TO DO SO.

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                        HELP FUNCTION

By pressing 'H' or '?' keys from the Hex Display Screen you
will be taken to the Help Display Screen.

This screen summarizes the functions available to you from
the Hex Display Screen, and shows the keys you need to press
to perform those functions.

Pressing any key will return you to the Hex Display Screen.

QUIT FUNCTION

Pressing the 'Q' key from the Hex Display Screen will allow you
to quit PROBE/GS. You are asked if you really want to quit.
If you respond with 'Y', the program forces a PRODOS 16 Quit
call.

Use this function only when you wish to exit PROBE/GS.

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                    AUTHOR CORRESPONDENCE

As a registered purchaser of PROBE/GS you are entitled to
correspond with Kyle Wadsten, the author of the program.

You are encouraged to send us your problems, questions, or
comments about what you would like to see in future releases
of PROBE/GS. In this way, KPW Software can keep up-to-date
with the users needs in this ever changing world of computer
software.

Thank you for your support.

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