



Tech Info Library

Applesoft: Internal program storage format

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Security: Everyone

Applesoft: Internal program storage format

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Applesoft programs are stored one line at a time starting at memory location \$801 and ascending in order by line number. Each line is stored in this format:

```

                                $8xx
00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E

00 0D 08 0A 00 97 3A BA 22 48 49 22 00 00 00
E  LINK  LINE #  H  :  P  "  H  I  "  E  LINK
O                               O  R                               O
L                               M  I                               L
                               E  N
                               T

```

The first two bytes are pointers to the absolute address of the beginning of the next line. The first byte is the least significant.

The next two bytes are integers representing the line number of that line. Again, the first byte is the least significant.

The next byte, a token, stands for the first Applesoft keyword. When the lines starts with "A = 1", the variable name (in ASCII) is first. The remaining command consists of keywords and symbols reduced to one byte tokens and unmodified ASCII text.

A list of Applesoft's tokens appears on page 121 of the Applesoft Reference manual.

The subsequent bytes are either "\$00"s signifying the end of this line, or "\$3A"s, indicating multi-statement lines, followed by a "\$00.

If the link field for a line is 00 00, then Applesoft considers it the last line in the program while running or listing. The SAVE command uses a different pointer for the end of the program. \$AF,B0 normally points to the high byte in the line number of the line beyond the last line.

Apple Tech Notes

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