Applesoft: Internal program storage format

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Revised:        11/7/84
Security:       Everyone
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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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