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DECUS NO.	12-57
TITLE	SPY+ - MODIFIED MAGSPY
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SOURCE LANGUAGE	LAP6-DIAL

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Abstract

SPY+ is a modified version of MAGSPY (DEC-12-USZA). It incorporates the added features of DECUS-12-21 (by Lawrence Moss), as well as the following features: (i) it can handle tapes marked with 1600_8 blocks; (ii) upon reaching the end of the tape it will stop moving the window, rather than go to the other end of the tape; (iii) it is controlled from the TTY rather than from the sense switches; and (iv) the waveform display may be scaled by means of knob 0.

Hardware Requirements

PDP-12A

Storage Requirements

The binary of SPY+ itself resides in the first 6 pages of segment 2. In addition, the binary of QANDA+* occupies the first 4 pages of segment 3, and segment 1 is used for data storage.

Usage

SPY+ starts at location 04020, in LINC mode. It first asks for the block number and unit number with the following QANDA+ display:

> DATA BEGINS AT BLOCK ____
>   OF UNIT _

To return to LAP6-DIAL, type Cntrl/D. Otherwise, type in the block number and unit number for the data to be displayed (leading zeroes not required) and type line-feed. The data will now be displayed as a waveform, with the velocity of the window controlled by knob 4 (as in MAGSPY) and the scaling controlled by knob 0 (see description of Waveform mode below).

At any time during data display, the following characters will be accepted from the TTY:

Cntrl/D--Return control to LAP6-DIAL.

Carriage-return--Return to the initial display requesting block and unit numbers.

W--Data on tape are interpreted as vertical coördinates for a point display, 512 points being displayed at one time. Before display, the data are multiplied by a number between 0 (extreme counter-clockwise on knob 0) and 1 (extreme clockwise).

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* QANDA+ has been submitted to DECUS separately. (DECUS NO. 12-56)

A--Data on tape are interpreted as 6-bit ASCII codes packed 2 to a word. Character size is the last one requested (see F and H modes below).

O--The octal contents of each word on tape are displayed, along with the addresses. Character size is the same as it is in A mode.

F--Characters for A and O modes are full-size.

H--Characters for A and O modes are half-size.

Note that the sense switches have no action in SPY+.

With this programme it is practical to display right to the ends of the tape, since the window will not try to move past either block 0 or block 1577_8. The window will still be free to move in the other direction. Note that in A or O mode, it is not possible to display quite to the upper end of the tape.

Restrictions

SPY+ is intended for use with 1600-block tapes. It will work with shorter tapes except when trying to view the upper end of the tape.

In A or O mode, only the first part of BN 1576, and none of BN 1577, can be displayed. In W mode, however, the entire tape can be displayed.

If either A or O mode is used without first specifying the character size, the characters will be half-size but the vertical spacing will be as for the full-size characters. This does not cause any problems, and the desired character size may be chosen at any time.

Acknowledgement

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