

COMPUTER SYSTEMS LABORATORY

WASHINGTON UNIVERSITY

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TAPESPY

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Abstract

This program displays the contents of tape as characters or in graphical form. Adjacent tape blocks may be viewed by adjusting knob zero, to control both the speed and direction of the scan. On the Spear Micro-LINC 300, the program uses buffered tape instructions for continuous display. As a convenience, an abbreviated set of operating instructions can be displayed by pressing START 20. A flowchart, listings and additional program notes on TAPESPY are contained in LINC Document No. 59.

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Acknowledgements

TAPESPY is an adaptation and correction of a program named MAGSPY which was obtained in binary form from a representative of Digital Equipment Corporation at a demonstration of the PDP-12. The preliminary literature on the PDP-12 also mentions MAGSPY.

Program Documentation

A flowchart, listings and additional program notes on TAPESPY are contained in LINC Document No. 59.

This program displays the contents of tape as characters or in graphical form. Adjacent tape blocks may be viewed by adjusting knob zero, to control both the speed and direction of the scan. On the Spear Micro-LINC 300, the program uses buffered tape instructions for continuous display. As a convenience, an abbreviated set of operating instructions can be displayed by pressing START 20.

For display of operating instructions, press START 20. The instructions appear in a sequence of three frames. Hit EOL to view the next frame. The third frame indicates the symbols displayed by TAPESPY for character codes not normally displayed in LAP6.

To use the program TAPESPY press START 400. The following will appear on the scope:

```
DISPLAY DATA STARTING  
BLOCK ???   UNIT ?  
TYPE "L" FOR LAP6
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Type in three octal numbers for the block number, then EOL, then one octal number (0, 1, 4, or 5) for the unit number, then EOL to start the scanning display. At any time: del will delete the last entry or partial entry, "L" will cause a return to LAP6. All other keys are ignored. An invalid unit is ignored. If there is no tape mounted on the unit specified, its hub may spin. Push STOP, then press START 400 again.

Knob zero controls the speed and direction of motion of the tape scan. The full clockwise position causes the scan to proceed at a maximum rate toward block number zero. The scan stops at the ends of the tape (000 and 777).

Sense Switch 1 controls the mode of display. If it is down, two blocks (512 points) are displayed in graphical format, the horizontal coordinate representing position on the tape, the vertical coordinate corresponding to the number stored at that tape location. The unit and block number are displayed near the top of the scope. The vertical can be scaled down (magnitude divided by 2^n where $0 \leq n \leq 7$) depending on the three leftmost of the left switches.

If Sense Switch 1 is up, the display is in character format by lines. Block boundaries are indicated by a horizontal line above the line of the boundary, with a short vertical line at the exact boundary.

Sense Switch 2 can be raised to slow down the scan rate. This is particularly useful for character display.

At any time during the display, hitting "L" will cause a LAP6 return. Any other key will provide the block number request display.