

POUGHKEEPSIE

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Dept. 546 - Bldg. 702
October 10, 1957

MEMO TO: Dr. W. Buchholz

SUBJECT: Input-Output Typewriter

REF: . Your memo of October 4, 1957

Inherent in the present design of the 625 Typewriter is the ability to print 88 different characters from input signals. The characters are arranged in two matrices of 44 characters each on opposite sides of the print head. Selection of one of the 44 characters within each matrix is controlled by six magnets which control rotation and tilt of the print head. Selection of one of the two matrices is controlled by a seventh or shift magnet. Because of mechanical design limitations the shift operation requires a separate typewriter cycle. Shift and print cannot be performed in the same cycle.

The six-bit code presently used by the 625 is one which is related to the mechanical linkages used to provide rotation and tilt of the print head. This code is not compatible with any computer code. To change the typewriter so that it can operate directly from one of the six-bit (or eight-bit) computer codes would require extensive redesign, and it might not be possible at all within the present typewriter configuration.

Because of code incompatibility, the required separate shift cycle, and the necessity to separate characters to be printed from control characters, it will be necessary to provide for translation and decoding from all computer codes to the typewriter code. Therefore, there would be no advantage to changing the typewriter to operate from eight bits rather than six. However, it should be noted that the ability to print all of the 88 characters is present without redesign.

The question of half-line spacing for subscripts and superscripts will be referred to ET Engineering.

LMB:vjh


L. M. Borden

cc: Messrs. G. A. Blaauw, F. P. Brooks, J. D. Calvert, S. G. Campbell, E. F. Codd, E. W. Coffin, S. W. Dunwell, J. C. Gibson, R. A. Gregory, H. G. Jones, H. G. Kolsky, H. C. Montgomery, P. N. Stoughton, D. W. Sweeney, H. K. Wild, W. D. Winger