

MEMORANDUM

TO: TX-0 Computer Users
 FROM: E. W. Pughe, Jr.
 SUBJECT: NEW ORDERS - LLR - SLR
 DATE: July 2, 1959

Two additional orders, "Load Live Register" and "Store Live Register", have been added to the TX-0 Computer. Their descriptions are given on the attached sheet.

These orders are intended to make it easier to read information into and out of the computer via the live register. Another important use is for entering and leaving subroutines as shown in the following example. The intent is to leave the main program, go to a subroutine, and at the end of the subroutine to transfer back to the next instruction in the main program.

MAIN PROGRAM	SUBROUTINE
...	
...	
cla	s, slr e
add q	...
n, llr n+2	...
tra s	...
n+2, tra n+3	s, 0 becomes tra n+3
n+3, sto q	
...	
...	

Signed

Earle W. Pughe, Jr.
 Earle W. Pughe, Jr.

EWPj/dbh
 Att.

cc: Ad Hoc Committee on Experimental Computation

Professors Reintjes, Brown, Shannon, Fano, Rosenblith,
 Arden, Fletcher, Susskind, and Mr. W. Clark

Description of LLR and SLR

IR ₀	IR ₁	IR ₂	IR ₃	Code	Description
0	0	1	0	slr x	Store the contents of the <u>Live Register</u> into register x leaving the contents of the live register unchanged. The previous contents of register x are destroyed.
0	1	1	0	llr x	Load the contents of register x into the <u>Live Register</u> leaving the contents of register x unchanged. The previous contents of the live register are destroyed.