Division 6 - Lincoln Laboratory
Massachusetts Institute of Technology
Lexington 73, Massachusetts

SUBJECT: TRANSISTOR CIRCUITS FOR DRIVING COINCIDENT CURRENT MEMORIES

To: Memory Section, R. R. Everett

From: Kenneth H. Olsen

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Approved: DRB
David R. Brown

Abstract: Transistors can be made to pass large currents as needed in magnetic memories by turning off the currents while the transistors are being switched.

Some transistors have the very useful property of being able to pass large currents with only very low voltage drops across the transistor - and therefore, only low power dissipation. Although at the present time the allowed dissipation of fast transistors is small compared to the peak power needed to drive a large coincident-current memory, we may be able to drive memories, if we are careful to pass the large currents only when there is very low voltage across the transistor.

Figure 1 schematicly shows four transistors driving four coordinate lines of a memory. We first turn on the selected transistor with current from the selection switch. Then we pulse the vacuum tube current source and pass current through the selected memory line and the "on" transistor. Because this transistor is "on", it drops little voltage and so dissipates low power. After the current source is turned off the selection switch can be changed and a different transistor selected.

Signed: Kenneth H. Olsen
Kenneth H. Olsen

KHO/dg

Attachment: Drawing A-61619

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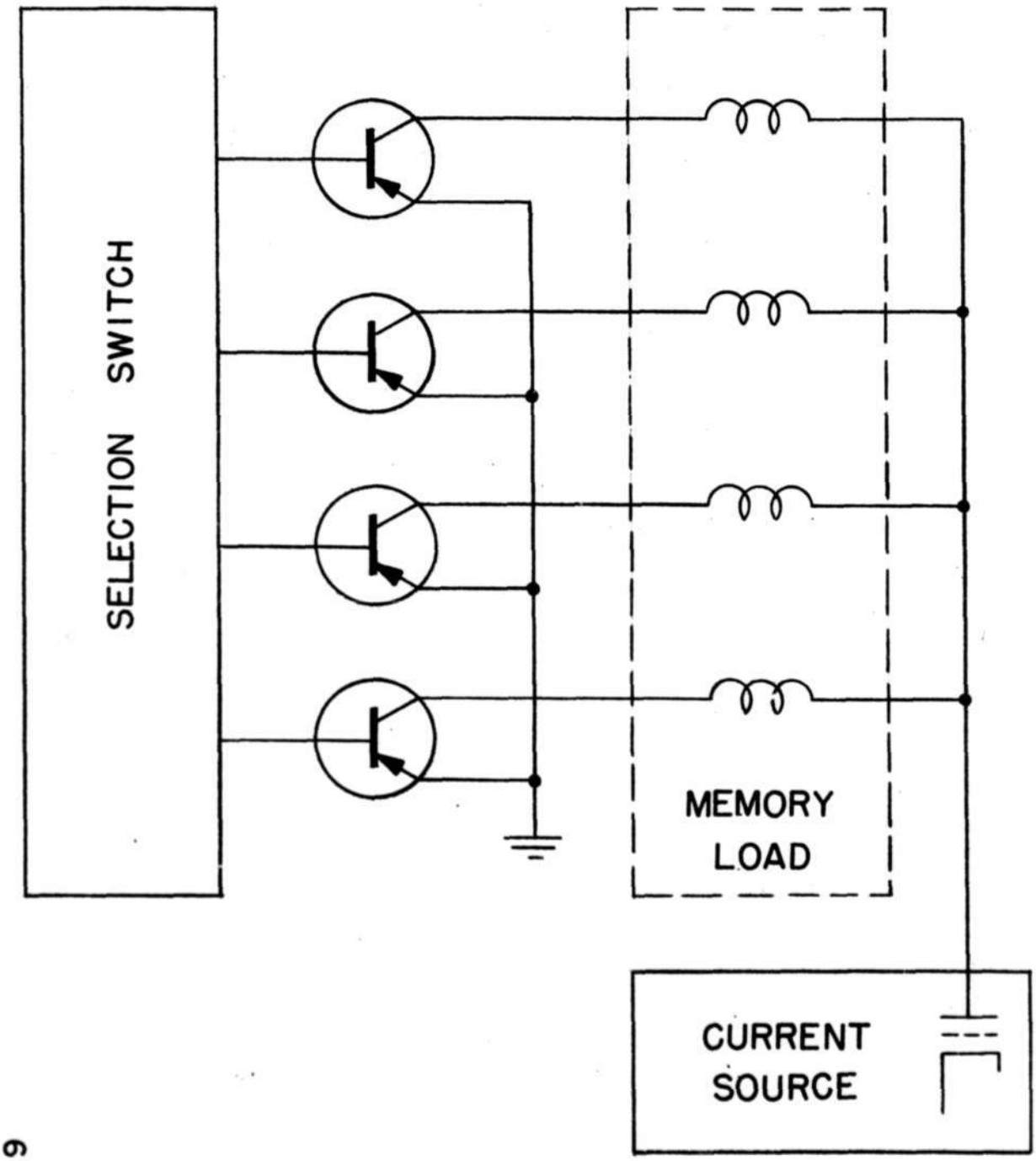

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TRANSISTOR MEMORY DRIVER