

Memorandum M-1957

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Digital Computer Laboratory
Massachusetts Institute of Technology
Cambridge, Massachusetts

Subject: PROCEDURE FOR PREPARING AND STRIPPING WIRES FOR MTC
MEMORY PLANES

To: N. H. Taylor

From: E. A. Guditz

Date: April 6, 1953

Abstract: The stripping of formex insulated wires used in memory plane construction has been greatly speeded up by a method which permits them to be stripped in bundles of 150 wires rather than singly.

The coordinate driving wires for the MTC 32 x 32 memory planes are cut to length and stripped of formex insulation by the following procedure:

1. Obtain a smooth board of approximate dimensions 18 1/2 " x 4" x 1/4".
2. Wrap 75 turns of General Electric #32 quadruple-formex-covered wire lengthwise around the board. (Figure 1a)
3. Slip a leader wire (#20 buss) underneath the turns at one end of the board and twist tightly leaving a length of at least 12". (Figure 1b) Cut the wires at the other end of the board.
4. Pass the leader through an 8" length of 1/4" diameter plastic tubing. Pull the wires through the tubing leaving equal lengths of wire protruding from each end. (Figure 1c)
5. Wrap a 2" length of 3/4" wide Scotch electrical tape (No. 33) around the wire at each end of the plastic tubing so that the tape overlaps the tubing and extends 5/8" beyond the tubing making as tight a bundle of the wires as possible. (Figure 1d) Cut the wires four inches beyond the outer edge of the tape.
6. Apply the clamp (Figure 1f) to one end of the wires so that the outer edge of the Scotch electrical tape protrudes about 1/16" beyond the edge of the clamp. (Figure 1e)

The wires are now ready for stripping.

7. Fill a 25 mm x 150 mm test tube with X-Var stripper to within 3/4" of the top.

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Insert the clamped end of the wires into the X-Var stripper and rest the clamp on the rim of the test tube. Pour more X-Var stripper into the test tube so that it is filled to within 1/8" of the top.

8. Using a pointed instrument, separate the wires close to the tape to insure that they are completely exposed to the X-Var stripper. This action should be continued until the wires are visibly cleaned of insulation, usually about five minutes.

9. Remove the wires from the test tube. Wipe the X-Var from the wires with a cloth until the wires are dry. Remove the clamp and place it on the other end of the wires in proper position for stripping that end.

10. Put some alcohol in a wide mouthed jar. Insert the stripped ends of the wire into the alcohol. Remove the wires and wipe dry. Repeat several times. Remove the tape and with a stiff-bristled brush clean off the remaining bits of insulation which the cloth failed to remove. This should be done with the wires immersed in the alcohol. After drying, the process is repeated on the other ends.

J. Piro, the originator of this process, is able to strip both ends of 150 wires in one hour. An MTC memory plane requires 128 wires for the coordinate driving lines.

Signed E. A. Guditz
E. Guditz

Signed W. N. Papian
W. N. Papian

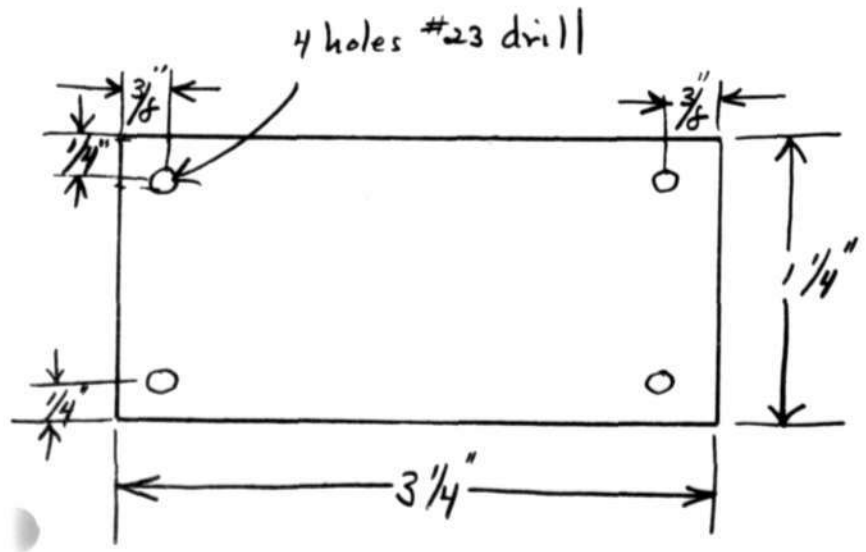
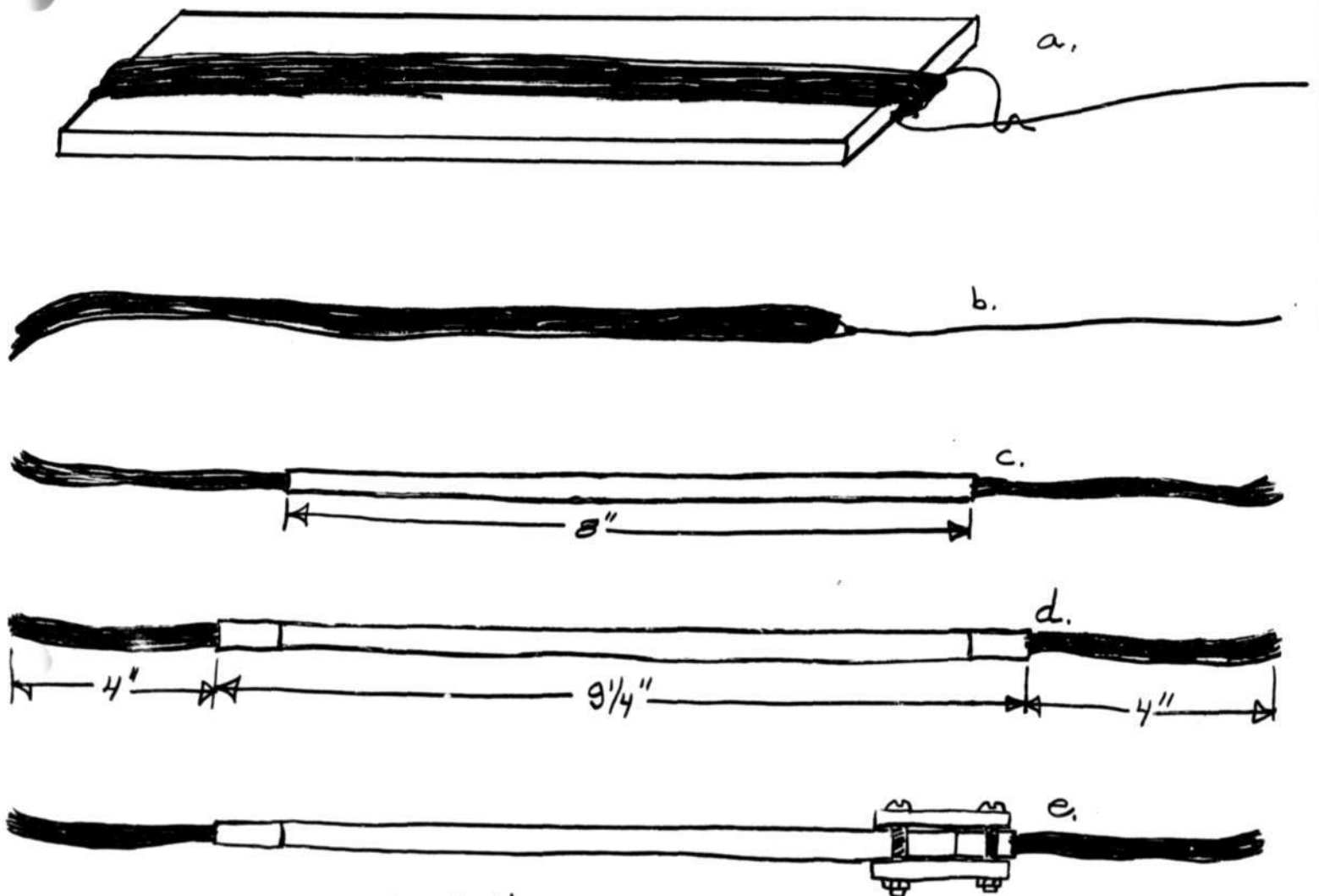
Approved N. H. Taylor
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EAG:jmm

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Attached: Figure 1

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f.
Clamp
1/8" bakelite
(make two)

Fig. 1