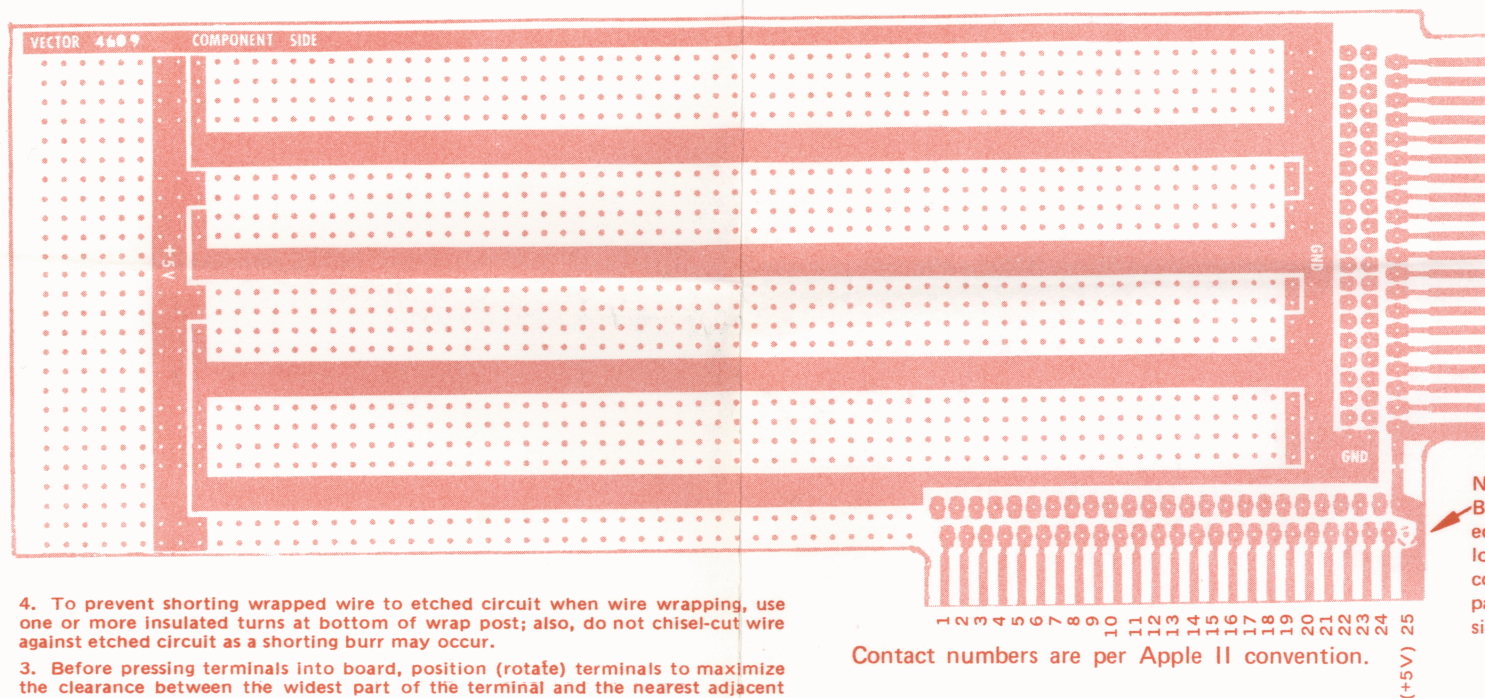


4609 PLUGBORD
component side layout paper
 for APPLE II* PET COMMODORE† WITH EXPANDAMEM‡
 and SUPERKIM‡



Vector DIP PLUGBORD
 pattern .042" dia. x 0.1" spaced
 holes. LA24-P1 layout paper.

Floating pads indicate
 location of connector
 contact pads on opposite
 side of board.



4. To prevent shorting wrapped wire to etched circuit when wire wrapping, use one or more insulated turns at bottom of wrap post; also, do not chisel-cut wire against etched circuit as a shorting burr may occur.

3. Before pressing terminals into board, position (rotate) terminals to maximize the clearance between the widest part of the terminal and the nearest adjacent conductor.

2. Where tin-coated circuitry exists, a small percentage of the holes may have solder blockage. This is usually a light "skin" easily penetrated by component leads. In some cases, a soldering iron may be required.

1. Intended for use in non-hostile environments up to 200 volts RMS or 300 volts DC.

NOTES:

Contact numbers are per Apple II convention.

NOTE:
 Broken circle above
 edge contacts indicates
 location of actual
 connector contact
 pads on opposite
 side of board.

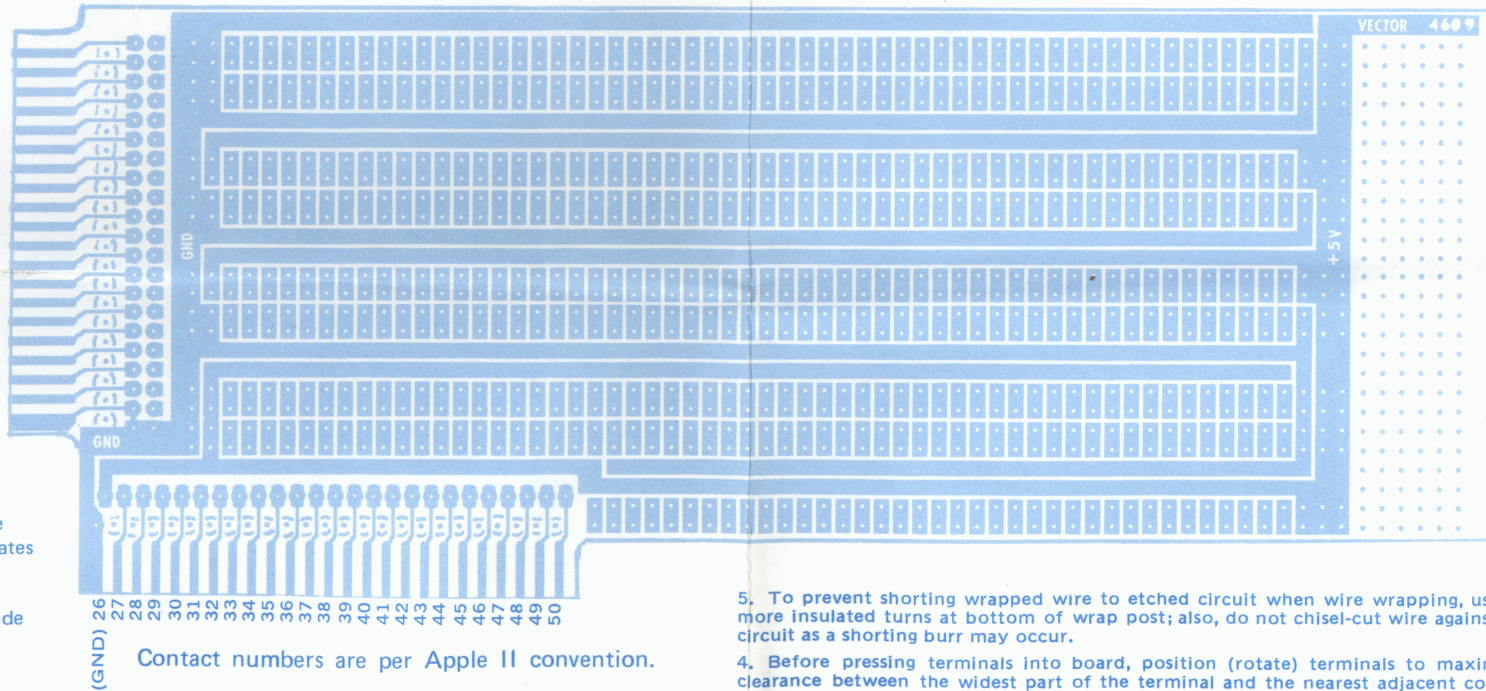
VECTOR ELECTRONIC COMPANY, INC., 12460 Gladstone Avenue, Sylmar, CA 91342
 Phone (213) 365-9661, twx (910) 496-1539

4609 PLUGBORD
wiring side layout paper

for APPLE II* , PET COMMODORE† WITH EXPANDAMEM‡
and SUPERKIM‡



Vector DIP Plugbord
pattern .042" dia. x 0.1"
spaced holes. LA24-P2
layout paper.



NOTE:
Broken circle above
edge contacts indicates
location of actual
connector contact
pads on opposite side
of board.

Contact numbers are per Apple II convention.

5. To prevent shorting wrapped wire to etched circuit when wire wrapping, use one or more insulated turns at bottom of wrap post; also, do not chisel-cut wire against etched circuit as a shorting burr may occur.
4. Before pressing terminals into board, position (rotate) terminals to maximize the clearance between the widest part of the terminal and the nearest adjacent conductor.
3. Where tin-coated circuitry exists, a small percentage of the holes may have solder blockage. This is usually a light "skin" easily penetrated by component leads. In some cases, a soldering iron may be required.
2. Intended for use in non-hostile environments up to 200 volts RMS or 300 volts DC.
1. Broken circle above edge contacts indicates location of actual connector contact pads on opposite side of board.

NOTES:

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phone (213) 365-9661, twx (910) 496-1539

THIS BOARD IS INTENDED FOR EITHER "SOLDER-UP" WIRING OR WIRE WRAPPING. VERIFY ADEQUATE CLEARANCE BETWEEN BOARDS FOR WRAP POST LENGTH.

4609 INSTRUCTIONS

Read entire page before using board.

1. Connecting DIP socket solder leads to bus (fig. 1A):

- a. Leads must be .130" long minimum (use Vector, Texas Instruments or equivalent DIP socket).
- b. Hold DIP socket against board while bending lead flat against bus.
- c. Hold solder iron tip on both lead and bus until hot enough to melt solder. Apply a good amount of solder, then shift iron to lead only, to draw solder towards the lead, and then lift iron. CAUTION: Inspect each joint with magnifier, to verify adequate solder bond to lead.

2. Connecting DIP socket wrap post to bus (figure 1B):

- a. Tack solder post to pad.
- b. Wrap bare or stripped wire on post with enough bare end to overlap bus. Cut off excess length, and solder.
- c. Or install and solder wrap-terminals (T44, T68, fig. 3) in holes in end of bus and run wrap-wire busing.

3. Mounting and wire wrapping large components: See self-explanatory figure 2A and 2B.

4. Connecting buses from component to wiring side:

Solder the decoupling capacitor leads to buses on both sides of board, or add a thru-wire and solder it to buses on both sides of board.

5. Connector pin markings: A numeral 1 is etched on the component side at pin 1 of the 25/50 connector, and every fifth pin has a mark for easy counting by fives per the Apple II pin designations. The 20/40 connector is unmarked.

6. Connecting to pads of edge-connector fingers:

- a. Put stripped wire end thru pad hole and solder wire to pad. Terminate other end of wire to desired point by soldering or wire wrapping.
- b. Or install Vector T46-4-9 wrap post terminals (figure 3) in pad holes and solder to pad with good amount of solder. Then use normal wire wrapping methods.

7. Decoupling capacitors: It is usually desirable to decouple voltage buses with a 0.1 microfarad capacitor to ground on the board near the power input pin; also to install a 0.1 microfarad capacitor near each integrated circuit (or set of two to four integrated circuits) between ground and plus five volts; also any plus and minus 12 volt supplies are usually decoupled with .01 microfarad capacitors. CAUTION: do not use high value electrolytic decoupling capacitors as they may interfere with switching power supplies as used in Apple II. For specific directions the user is referred to his microcomputer and integrated circuit handbooks.

8. Mounting and connecting decoupling capacitors between DIPs: Put capacitor leads through same line of holes on 0.3" span and bend, clip and solder leads to power and ground buses per figure 4.

9. For your interest, page 20 of April 1979 BYTE publication has an article on interfacing the Apple II using 8080 family devices.

HOW TO CONNECT DIP LEADS TO BUSES

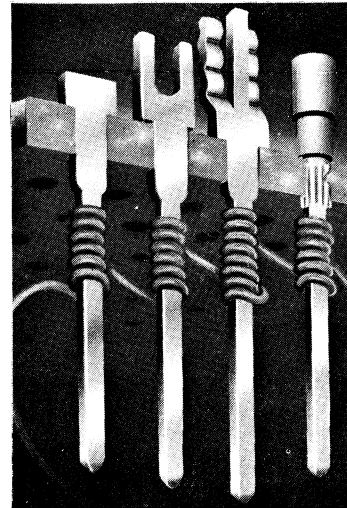
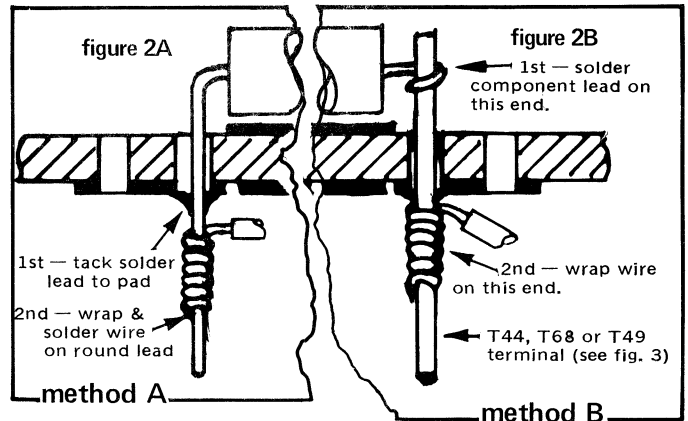
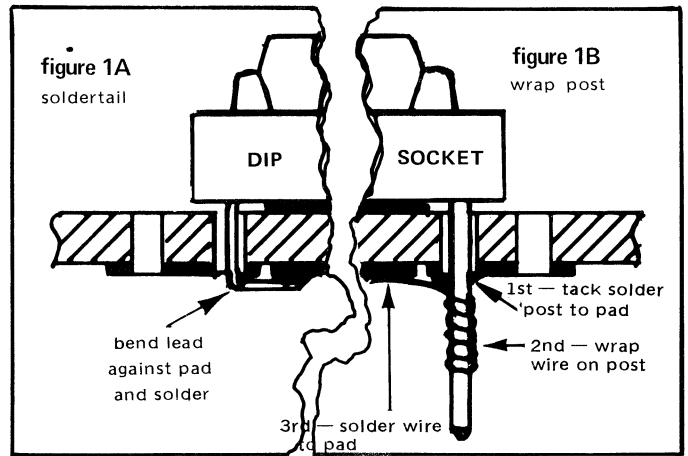


FIGURE 3
 T68 accepts leads to .032" dia. max.
 T49 accepts leads to .040" dia. max.
 R32 accepts leads from .017" to .021" dia.
 ALL PUSH INTO VECTOR .042" dia. holes and have .025" square wrap posts.

T46-4-9 T68 T49 R32

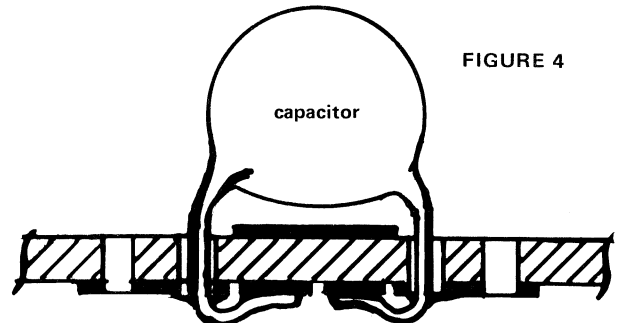


FIGURE 4