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TECHNICAL BULLETIN

1-5-87

UPGRADE OF JFD-COCO CONTROLLER FOR COCO 3 OPERATION

The JFD-COCO, our original disk controller for the Tandy Color Computer can be easily upgraded for full Color Computer 3 compatibility. The SY6591 disk controller chip requires synchronization with the clock signal in the Color Computer. Our original design used the "E" clock signal on pin 6 of the cartridge connector. When this signal is used on the COCO 3, data arrives at the disk controller too early, causing I/O errors. This is remedied by substituting the "Q" clock signal from pin 6 of the cartridge connector.

Described below is the modification required to reroute the clock signal to the proper pin of the FDC.

NOTE: You are the best judge of your ability to perform the following modification to your disk controller. Read thru these instructions completely at least twice. If you feel it is beyond your capability, J&M Systems will modify your controller for \$5 plus shipping. J&M Systems is not responsible for damage you might cause to your controller or computer when performing this modification.

Required Materials and Tools:

Low power soldering iron Solder sucker 3/64" Allen wrench 2" wire wrap wire Rosin core solder Phillips screwdriver

- Step 1 () Begin the modification by removing the 4 3/64" hex screws from the sides of the controller. Remove the controller top. Now locate 4 phillips screws which hold the controller circuit to the case bottom. Remove these screws and the circuit board. Set the screws and case halves aside.
- Step 2 () Refer to the accompanying diagram of the controller to complete the following steps. Locate the 40 pin card edge connector on the disk controller. This is the connector directly adjacent to the DOS rom and SY6591 controller chips. Note that odd numbered pins 1 thru 39 are on the component side of the board and even numbered pins 2 thru 40 are on the solder side of the board.

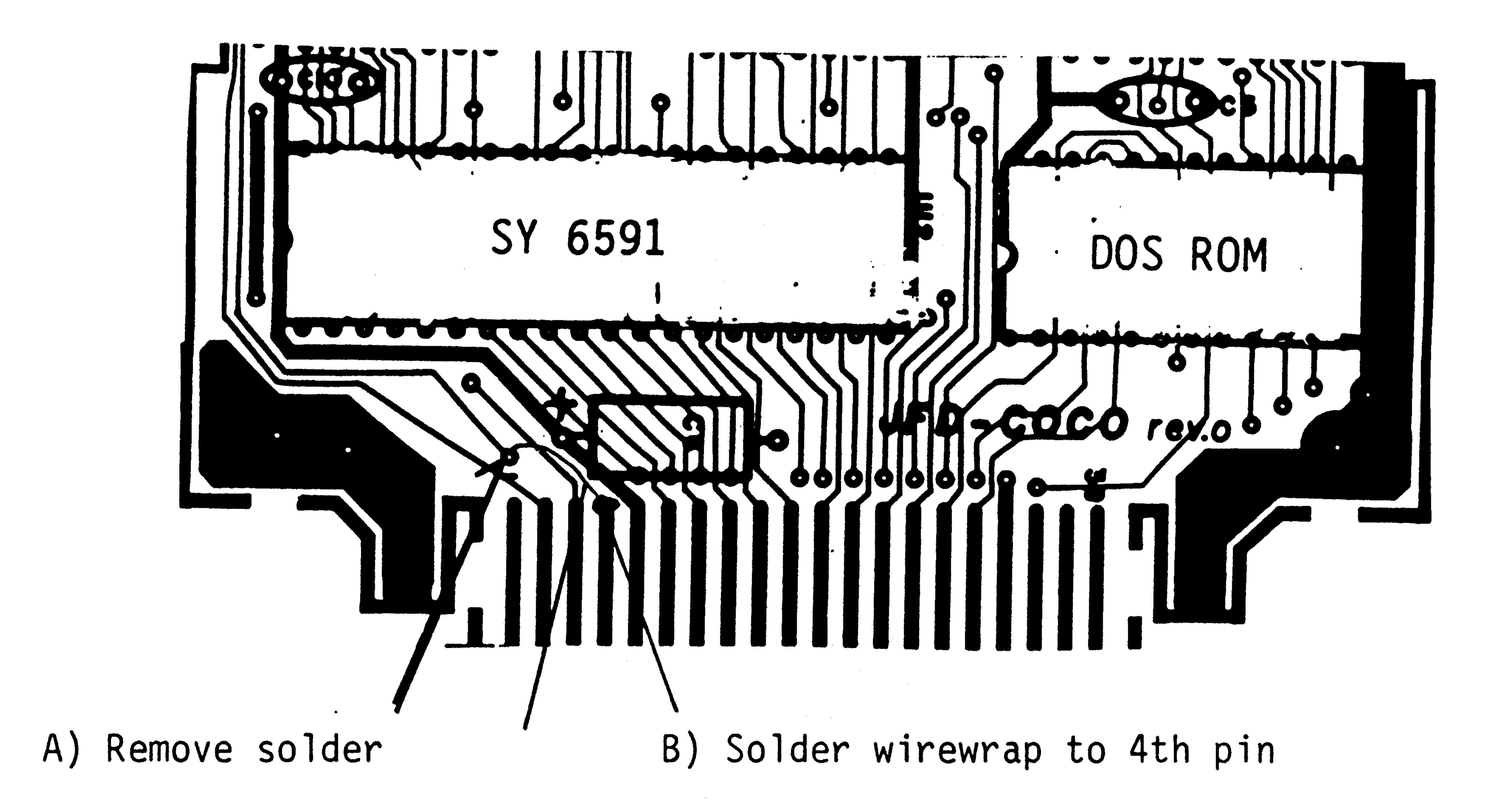
- Step 3 ()

 Locate the feed-thru located next to pin 1. Remove the solder from this hole so that a piece of wire wrap will pass thru it. Use a good solder sucker and a low power soldering iron. (Diagram reference A.)
- Step 4 ()

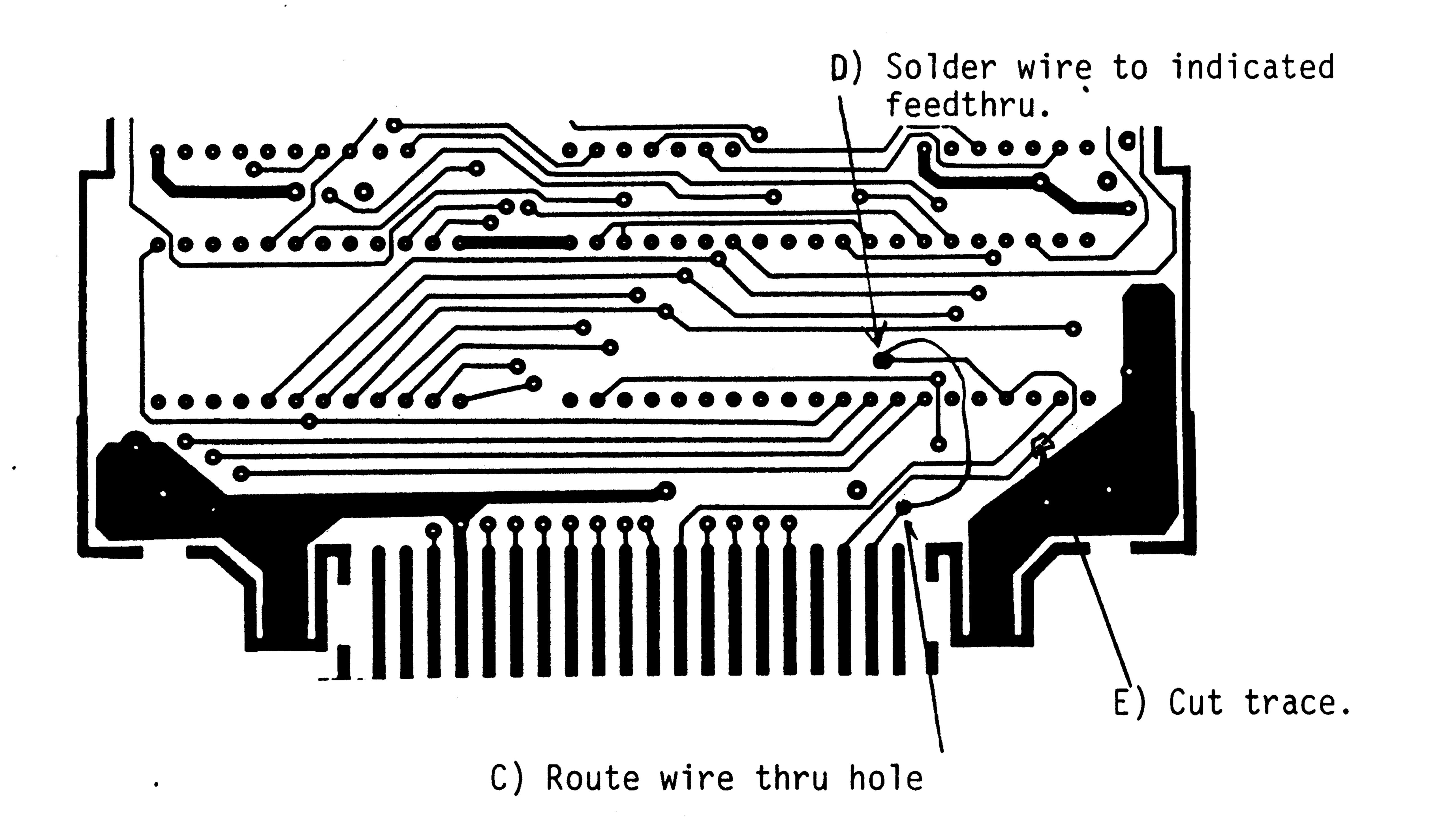
 Use a drop of solder and tack one end of the wire wrap to pin 7 of the card edge connector. This is the fourth pin from pin 1 on the component side of the board. Solder the wire to the gold pin as close to the controller side of the connector as you can get it. (Diagram reference B.)
- Step 5 () Feed the wirewrap thru the hole you opened in step 3. (Diagram reference C.)
- Step 6 () Flip the board over so you can work on the solder side of the board. Locate the feedthru point labeled "D" in the diagram. Solder the other end of the wirewrap to this point. (Diagram reference D.)
- Step 7 ()

 Locate the trace on the board labeled "E" in the solder side diagram. This will be the trace leading from pin 6 of the edge card connector. Using an Xacto knife, cut completely thru the trace at the indicated point. (Diagram reference E.)
- Step 8 () Go back and check all of your connections. Look for solder shorts.
- Step 9 () Place the board back in the case bottom and replace the 4 phillips screws. Replace the case top and its 4 hex screws.
- Step 10 () Install the controller in your system and test by formatting a disk and performing file I/O on it.

Component Side



C) Route wire thru hole



Solder side