

Special Apple 1 Enclosure

The purpose of this Apple 1 enclosure is to provide the ability to keep the Apple 1 and ACI in an enclosure in a standard bank 10 inch Safe Deposit Box and be able to take the enclosed Apple 1 home and connect to the Keyboard, Power Supply AV Display and ACI recording device without touching the Apple 1 or ACI in the enclosure. The enclosure should be small enough to easily fit directly into a 10 in. wide Safe Deposit Box without disturbing the Apple 1 or ACI. The challenge is that the Apple 1 board is 9 by 15 1/4 inches and the box opening is not large enough to tip the enclosure so the Apple 1 enclosure has to be inserted flat leaving only 1 inch of clearance from the Apple 1 board to the side of the box. The final enclosure is 9 3/4 inch wide.

Figure 1 shows the Apple 1 in the enclosure operating with a typical configuration of AV Display and Tape Player. Figure 2 is a top view of the enclosure and Figure 3 is a bottom view. On the bottom there is a display of all original parts that have been replaced to repair or modify the board. The board is configured with 32K of DRAM.



Figure 1 Computer System

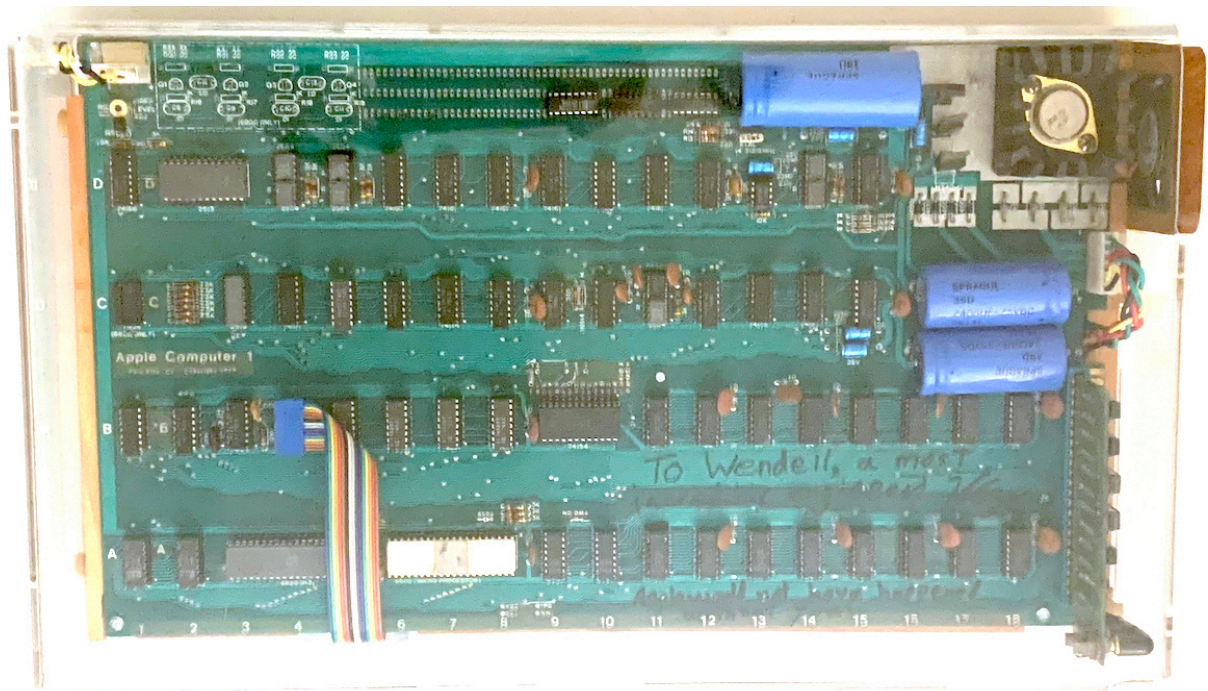


Figure 2 Enclosure Top View

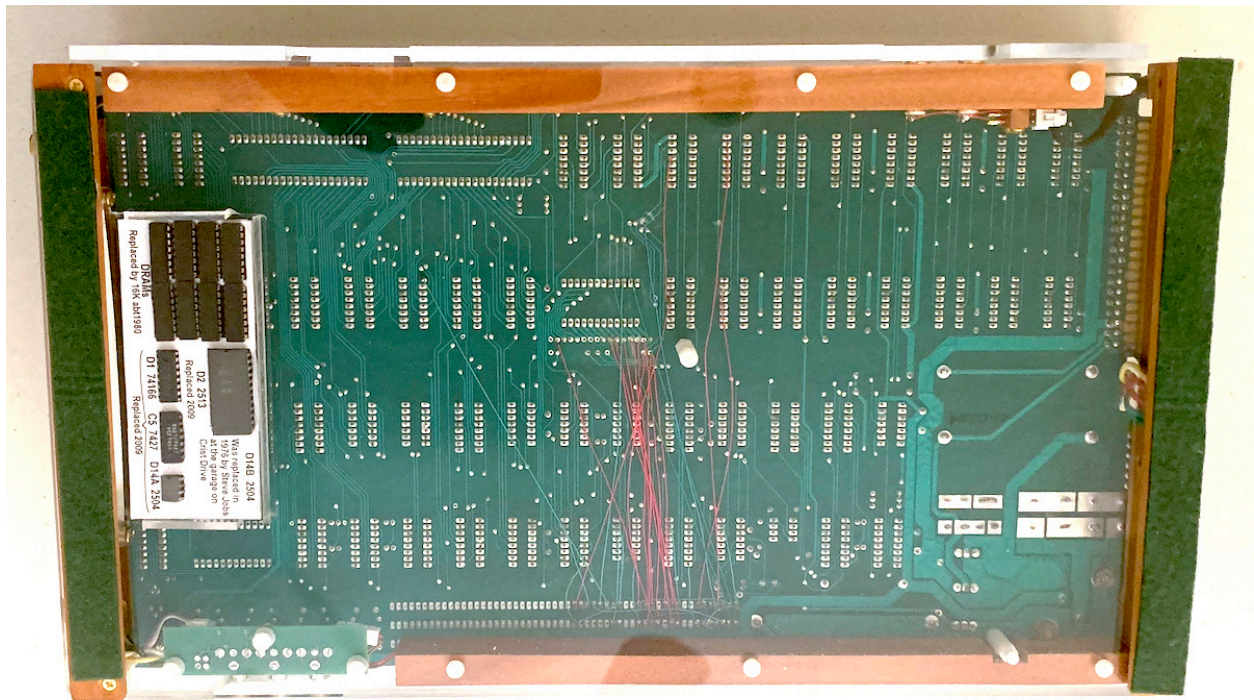


Figure 3 Enclosure Bottom View

Figure 4 is a Front View of the enclosure showing the isolated connection for the ACI and a 20 pin IDC Connector to connect the Apple 1 Audio Daughter Board from the Keyboard, the connectors are then split with the Keyboard going to the Apple 1 board and the Audio cable routed to the AV plugs in the back. Figure 5 shows a side view that shows the Power cable

extension that allows the power unit to be plugged into the enclosure chassis so that the board is not touched. Figure 6 shows the AV connection to the display. A small board connects to J2 on the Apple 1 to provide the video and connects to the Audio cable from the keyboard. It also provides a 12 volt connection for a low noise fan.

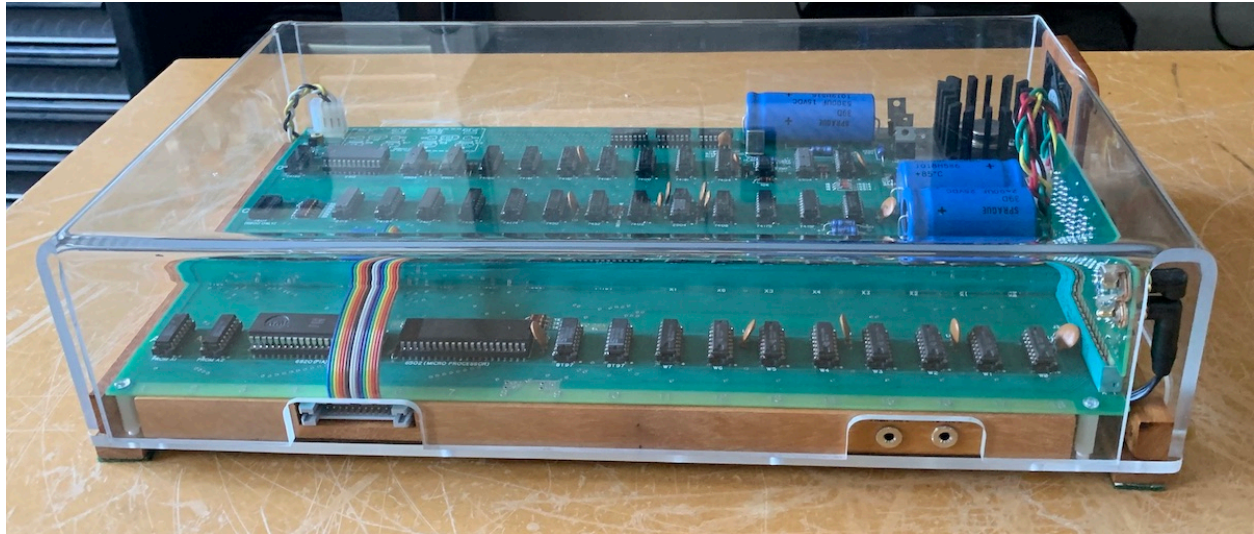


Figure 4 Front View

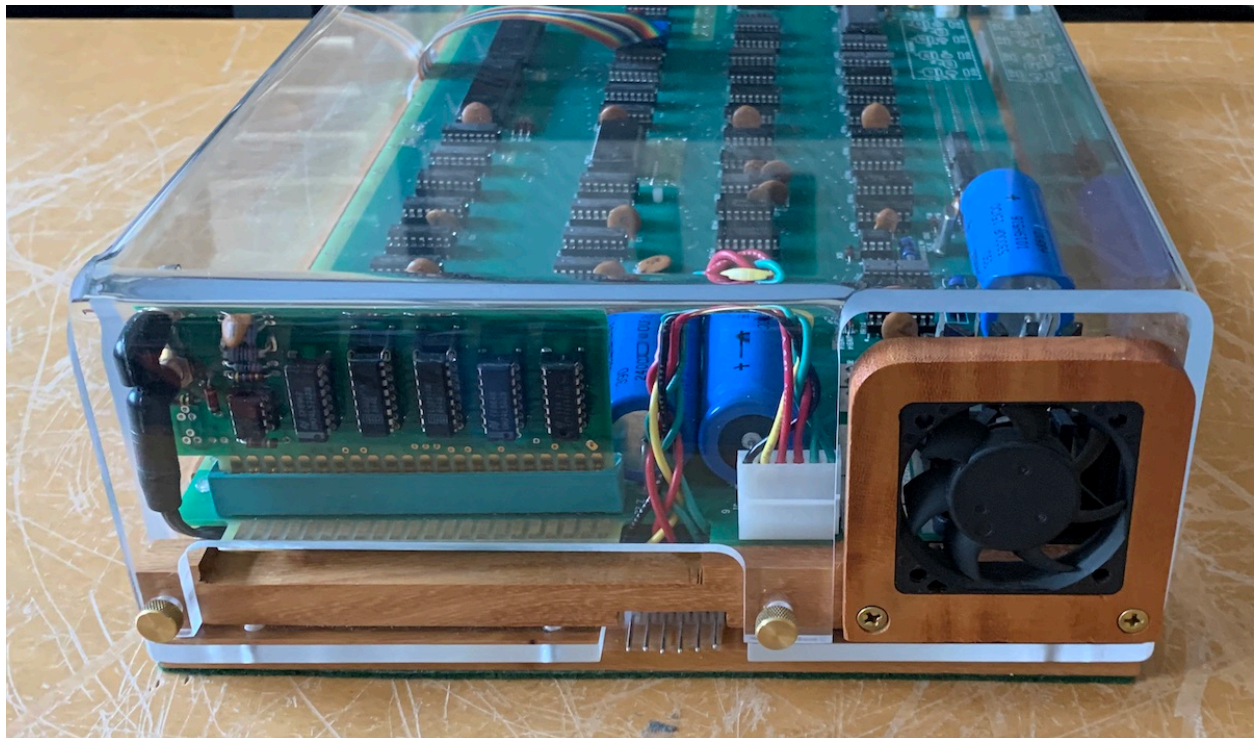


Figure 5 Side View

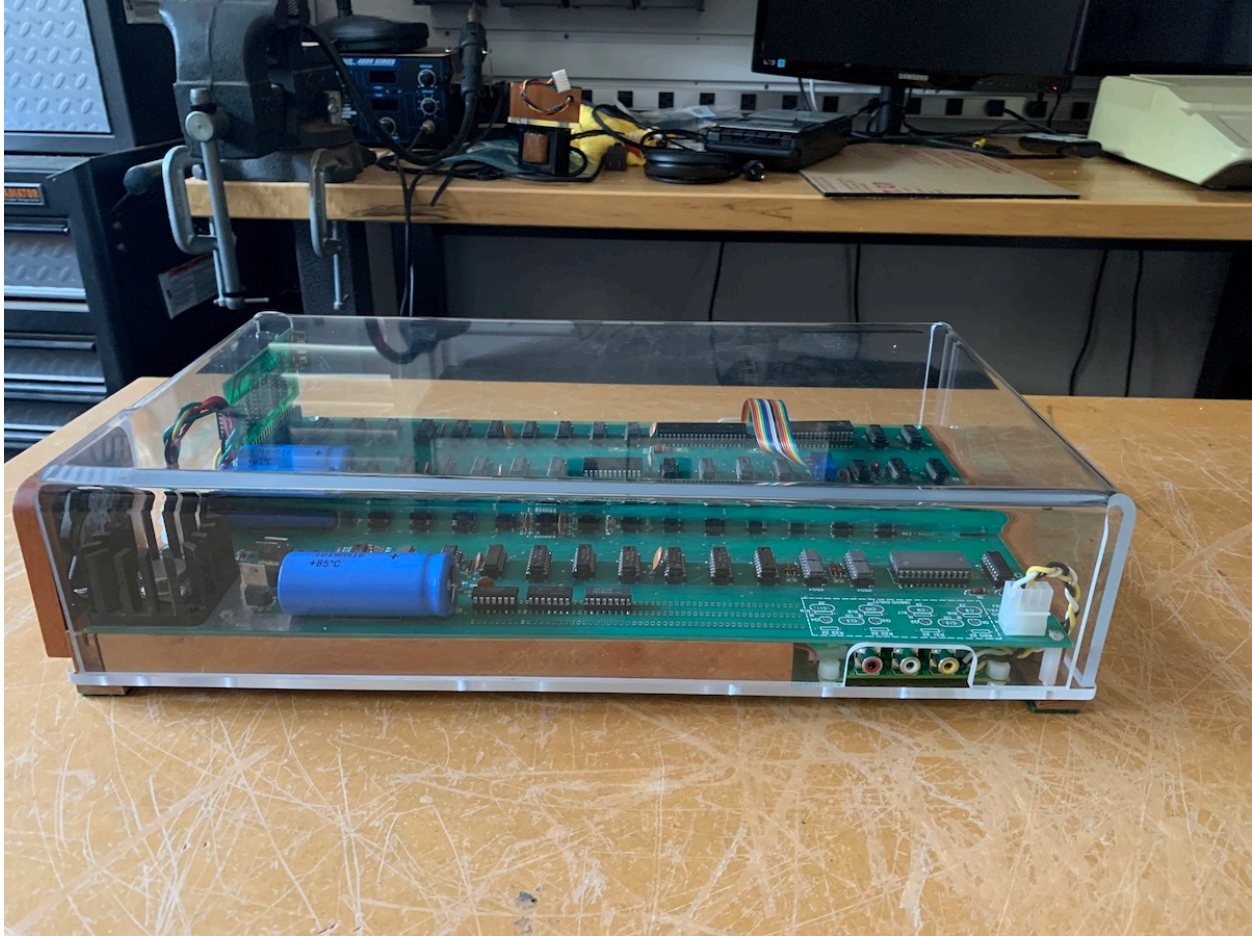


Figure 6 Back View

Figure 7 shows the connection of the Keyboard to the enclosure chassis. The ACI connections plug in through 2 way splitters to the A1 Audio Daughter board. The 20 pin flat cable carrying the Keyboard connector and Audio connector goes to the chassis where it is split.

Figures 8, 9, and 10 show the typical connections from the Keyboard, ACI, AV Out and Power Supply to the enclosure chassis, note that there is no external connection directly to the Apple 1 or ACI board, thus they are never disturbed.

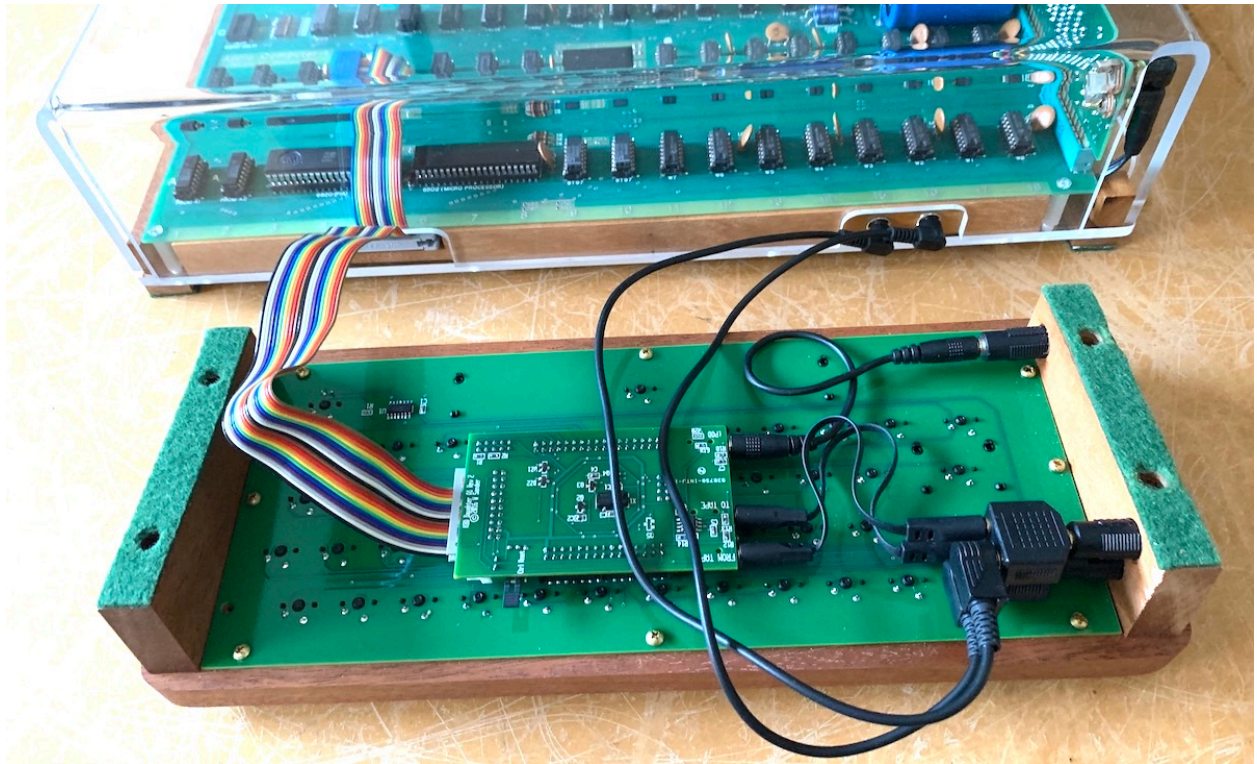


Figure 7 Keyboard and Audio Connection



Figure 8 Keyboard Connected

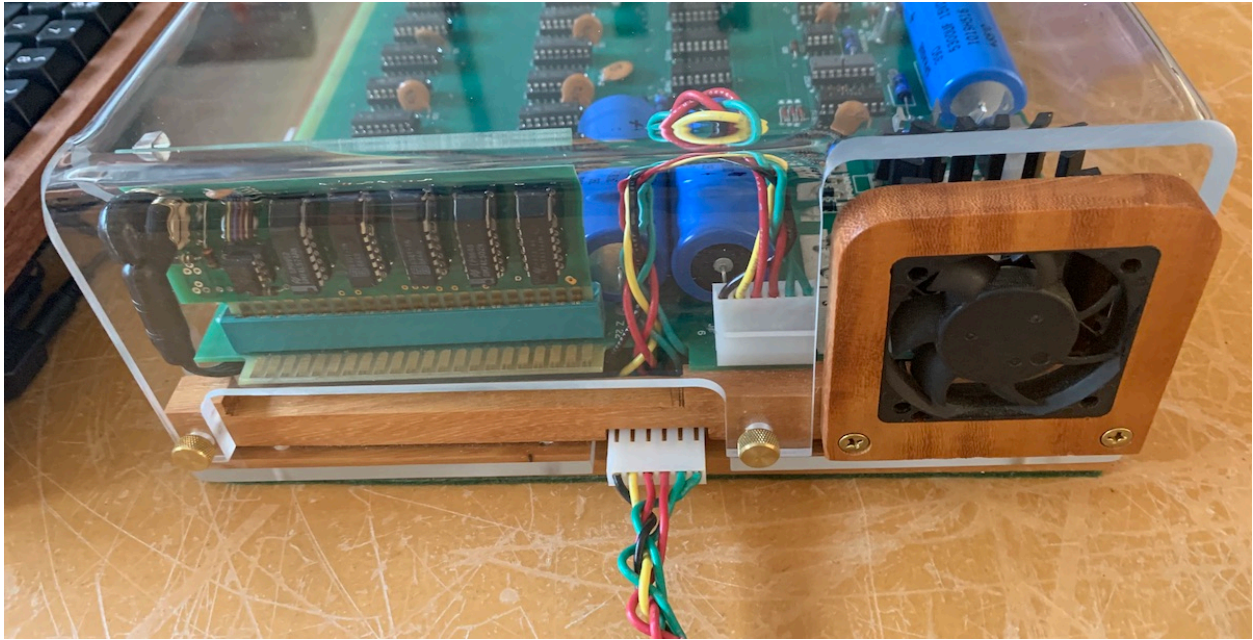


Figure 9 Power Connection

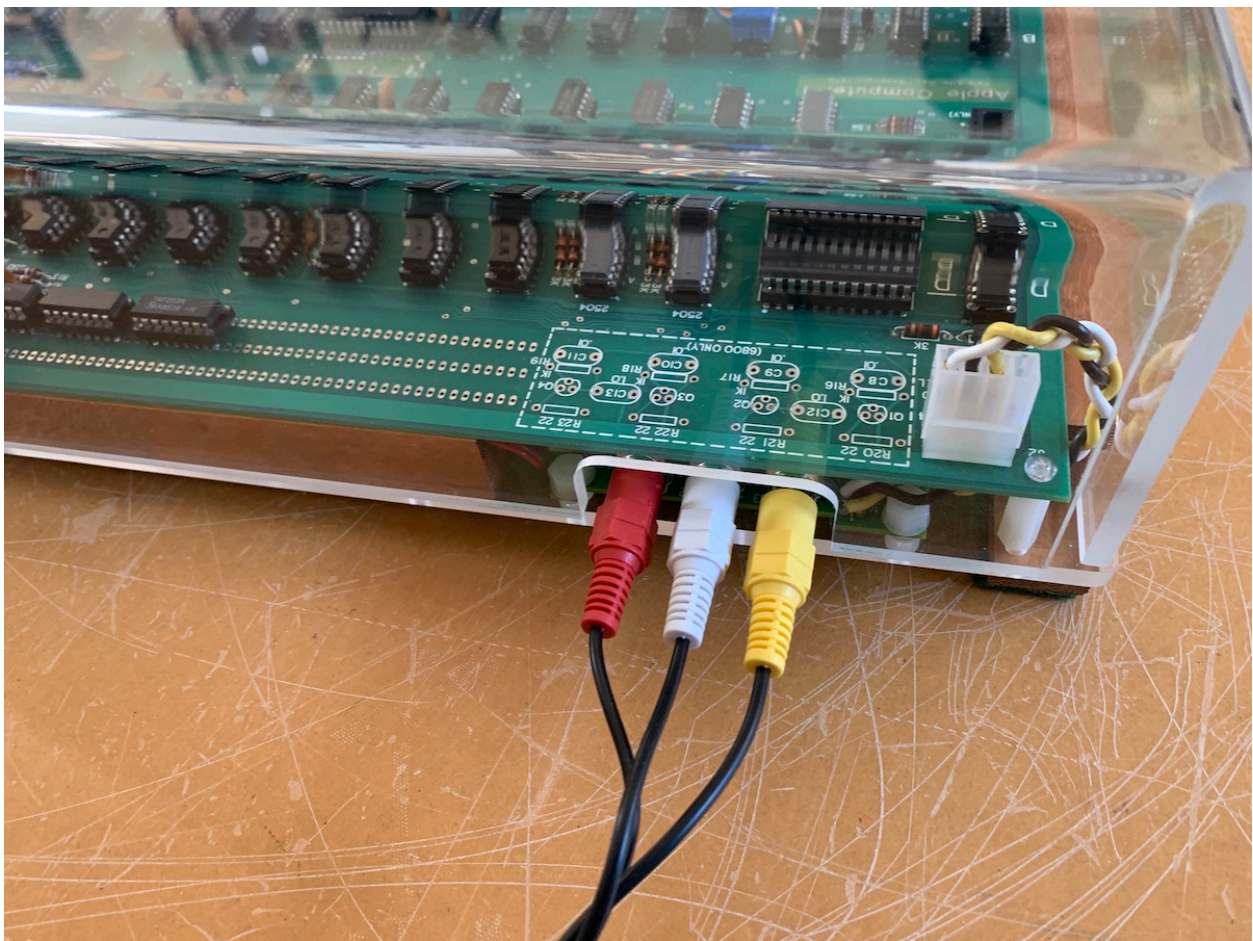


Figure 10 AV Connection

Figure 11, 12 and 13 show views of the enclosure chassis with the board removed to show how the wiring harness is routed. The wires run in grooves in the hardwood frame and are covered by the circuit board so they are not visible. You can see that the audio cable is routed back to the AV board and there is a cable from the AV board to the fan. The Power cable is a short jumper from the Apple 1 board to an external connector. The external connector is the same as J1 on the Apple 1 board so the mating Power Supply connector can connect to the Chassis or J1. The ACI cable is a short cable that can be removed to allow for moving the ACI to and expansion board.

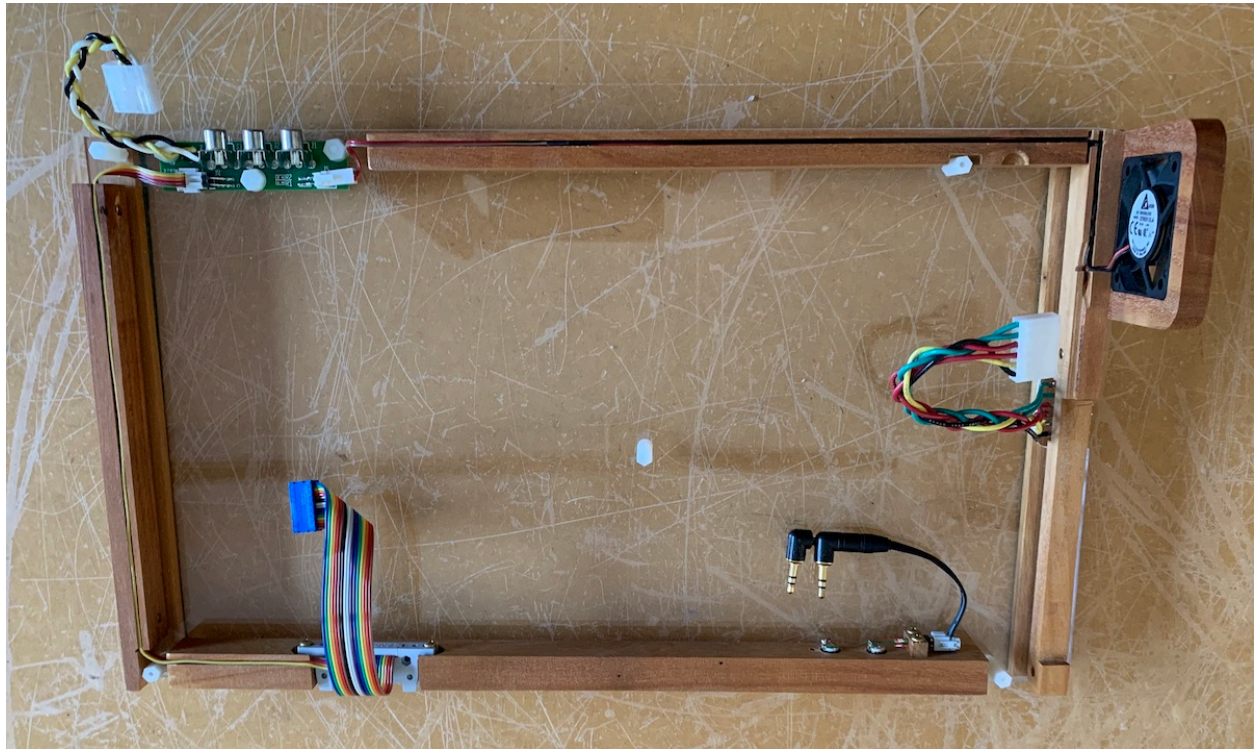


Figure 11 Chassis Wiring



Figure 12 AV Board Wiring

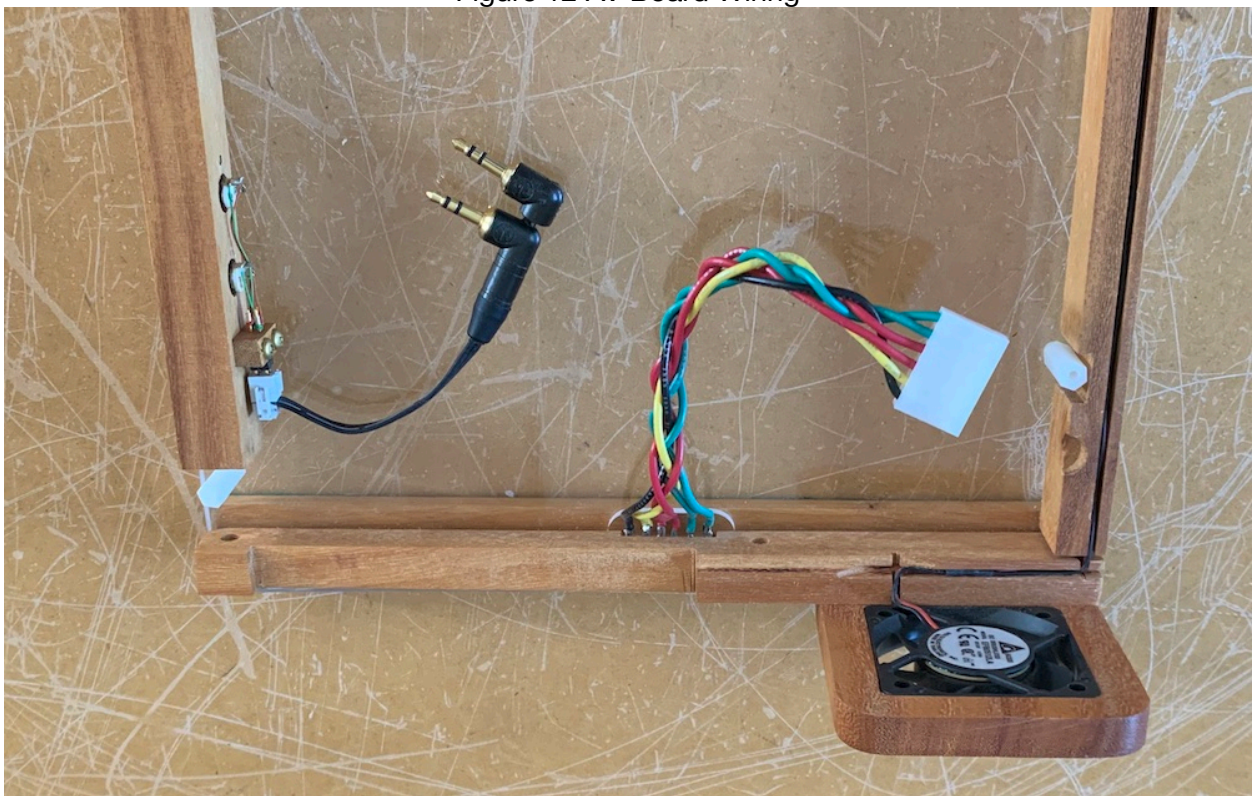


Figure 13 Power and ACI Wiring

We now have the fully protected Apple 1 that can be put in your Safe Deposit Box but the story would not be complete without an antistatic foam lined Pelican case as shown in Figure 14 to carry your Apple 1 to and from the Bank.



Figure 14 Pelican Case Enclosure Carrier