



Retro Tech Restoration

Vintage Electronics Repair

Computer Inspection and Testing Report

Completed by: David Nowak

Date: April 8, 2025

Item: Altair 8800

Customer Notes

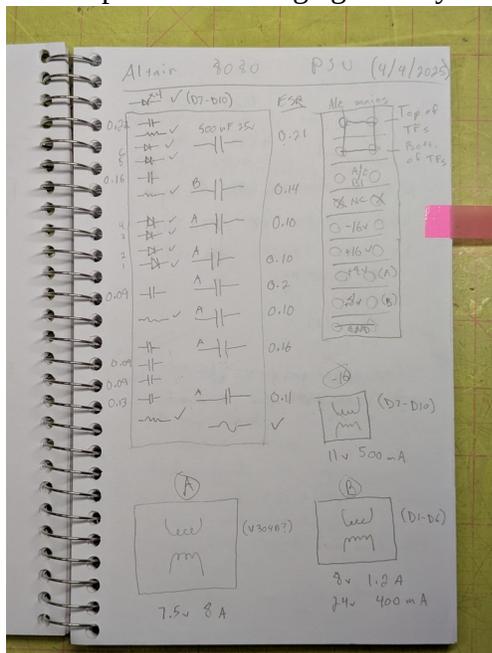
- Customer requests inspection, testing and evaluation of an Altair 8800. Have recommended that only minimal changes be made—swapping the broken input switch with an AUX switch and replacing only dead LEDs.

Visual Inspection

- External:** Excellent physical condition. Case and frame straight and without dents. Very minimal staining, scratches and peeling paint. No visible rust or corrosion. One missing lower case screw noted. Handmade RF adapter noted screwed to rear of case with coax cable directly attached to internal Dazzler card.
- Internal:** Triple linear transformer power supply noted. CPU card, dual card Dazzler and 4k SRAM cards noted. No visible damaged noted.

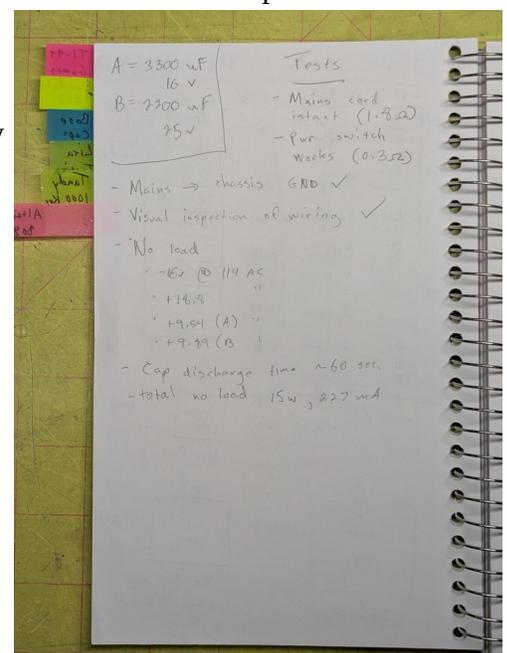
Electrical Testing

- All interconnect wiring from power supply and backplane to front panel continuity tested and intact.
- PSU:** Mains cable tested good. Power switch tested good. Mains cable properly grounded to chassis. All passive components (capacitors, resistors, diodes) tested good. All power capacitors were less than 0.3 ohms ESR. Correct wiring to and from terminal block verified. Initial PSU power on voltage gradually increased from 0v to 120v to test for transformer opens or shorts and capacitor leakage.



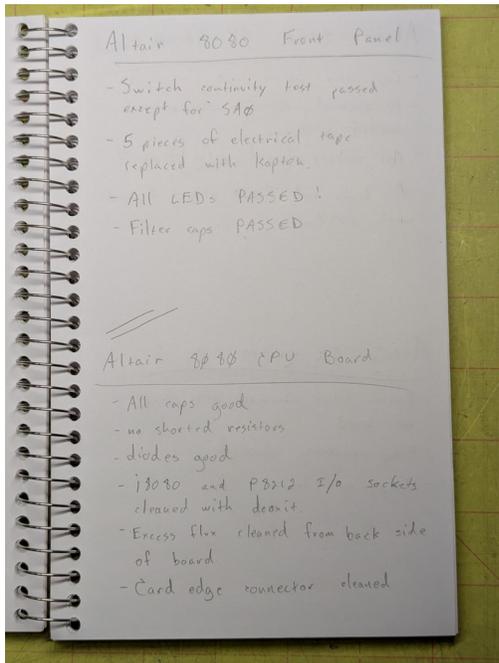
All voltage rails powered up and maintained a steady correct voltage.

- Backplane:** S-100 backplane bus continuity and power up test passed.
- Front Panel:** All front panel LEDs and switches

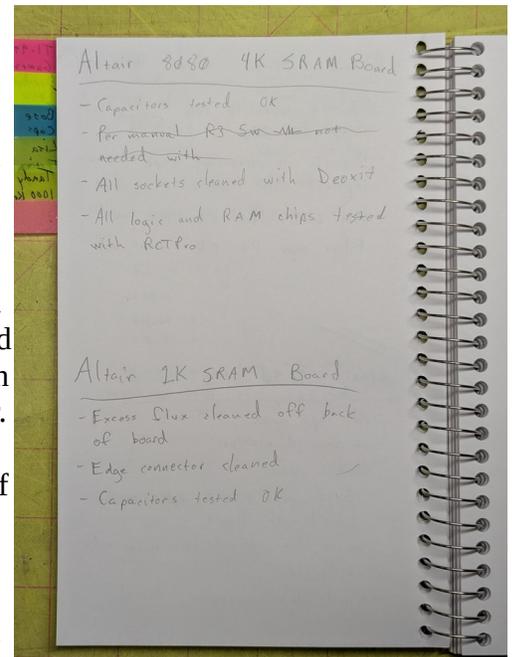


(except switch SA0) passed testing. SA0 switch rebuilt and reinstalled. All front panel switches cleaned with Deoxit.

- **CPU Card:** Visually intact and undamaged. All simple passive components (power regulators cannot be tested without removing them from the PCB) tested good. CPU and P8212 I/O chip sockets cleaned with deoxit. Excess solder flux cleaned from back of card. Card edge connector cleaned.



- **1k SRAM Card/4k SRAM Card:** Simple passive components tested good. All chip sockets cleaned with Deoxit. All socketed logic and SRAM chips tested independently with an RCT Pro Tester. Excess solder flux cleaned off back of cards.
- **Dazzler Cards:** Simple passive components tested good. Excess



solder flux cleaned off back of cards. Individual logic chip testing not indicated.

System Testing

- Independent full system power-on tests with the CPU card alone, CPU/4k SRAM cards and CPU/4k SRAM/Dazzler cards all successful.
- CPU logic, memory access, LEDs and front panel switches confirmed functional with various small test programs entered using front panel switches. Unable to fully test I/O and software interrupts due to hardware and software limitations.
- Dazzler output tested and calibrated using factory Cromemco manual instructions. All Dazzler tests (low/high resolution tests, output frequency tuning, red/green/blue color saturation adjustments) passed.

Final Notes

- This Altair 8800 and all it's included cards appear to be clean and fully functional to the extent of my ability to test them.
- A moderate amount of solder flux from the original owner's assembly of the cards was cleaned off, since aging flux residue can potentially cause shorts.
- Several small, dried up pieces of electrical tape noted on the front panel PCB were replaced with heat resistant, electrically neutral Kapton tape. Two larger visible pieces of electrical tape on the ends of the front panel name badge may be removed at the owner's discretion for a cleaner look.
- No other physical, electrical or mechanical notes or changes are recommended at this time.