

# Physical Science Laboratory (PSL)

# TATE New Mexico State University

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## Electronic Manufacturing Capabilities

## Design

PSL's Electronic Shop is responsible for the continued development, testing, and trouble shooting of electronic products and systems for a variety of uses, including ground, mobile, airborne, and space flight. Capabilities include:

- Fabrication of off-the shelf circuit boards
- Fabrication of custom designs and data acquisition systems for:
  - Rockets, Missiles, Projectiles, and Satellites
  - Fixed and Mobile Communications Systems
  - Electronic Warfare Systems
  - Surveillance, Tracking and Location Aid (GPS for example)

Designs can be submitted as

- Electronic Files
  - -Altium, OrCad, or pdf
- Hard Copy Schematics and hand wiring diagrams

### **Fabrication**

PSL's Electronic Shop can fabricate simple electronic products to entire data collection systems. Shop Processes include:

- Soldering
- Wiring Etching
- Conformal Coating

## **Testing & Inspections**

PSL's Electronic Shop performs various acceptance tests to insure each system functions properly, within specifications and parameters

Each electronic product built goes through quality assurance inspections throughout the process:

- Electrical Inspection
- Full System Inspection
- Limited Environmental Testing to include: Vibration, Thermal Cycling, etc.
- Complete Final Inspection

## Experience

Experienced in manufacturing inspection, trouble shooting, and repair of electronics on or offsite. The Electronics Shop's primary function is to support the TM Shop and its customers with:

- Custom fabrication of bare PWB AWD assembles performed
- Assembly of custom chassis including PWB's, Power Supply, Front/Rear Panels, and the Connection Wiring
- Custom harnessing of power/data collection systems for airborne and rocket sub systems and systems



