

Kane Villanueva

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SUMMARY

Electronic Technician with more than eight years supporting aerospace and defense hardware through prototype fabrication, PCB assembly, fine pitch rework, repair, testing, modification, and documentation. Hands on work covers **surface mount** and through hole assemblies, J lead devices, 0402 components, BGA rework, flex circuits, electromechanical hardware, cabinets, chassis, and avionics interfaces. Applies IPC 7711, **IPC A 610, J STD 001**, ESD controls, schematics, wiring diagrams, process routings, engineering drawings, and formal checkout procedures. Military electronics training supports disciplined maintenance and aircraft armament system troubleshooting. Technical data collection, SPC analysis, self inspection, and corrective action records help engineering teams make sound decisions. U.S. citizen eligible for a **Secret security clearance**, prepared to contribute reliable bench expertise within an on site mission focused production environment.

EXPERIENCE

Senior Electronic Technician

June 2023 - Present

Sonoran Defense Electronics

Tucson, AZ

Leads bench level assembly, modification, repair, prototype checkout, and technical documentation for complex defense hardware. Converts engineering direction into repeatable builds and inspection ready deliverables.

- Translated engineering drawings and **process routings** into repeatable **prototype** builds for defense system development.
- Performed microscope assisted BGA rework and 0402 replacement under **IPC 7711** and ESD controls.
- Diagnosed PCB faults from schematics, measurements, and test observations, documenting corrective actions for engineering review.
- Repaired **flex circuits** and **electromechanical** assemblies before self inspection and formal acceptance activities.
- Collected SPC data and organized recurring workmanship findings for process review and corrective action.
- Prepared redline drawings, sketches, **test** notes, and calculations supporting prototype validation and controlled production.

Electronic Technician II

March 2021 - May 2023

Desert Sky Avionics Services

Mesa, AZ

Maintained avionics assemblies and electromechanical equipment supporting military aircraft armament system interfaces. Combined fault isolation, component repair, installation, checkout, and traceable maintenance records.

- Troubleshoot avionics interfaces with **wiring diagrams** and fault isolation procedures, returning assemblies to testable condition.
- Repaired circuit cards through component replacement, trace inspection, connector restoration, and controlled solder rework.
- Conducted functional **checkout** against engineering specifications, escalating nonconforming conditions with supporting **technical data**.
- Installed **cabinets, chassis**, cable assemblies, and modules, verifying fit, continuity, and configuration before acceptance.
- Protected sensitive components through ESD safe storage, magnification aids, and documented preparation methods.
- Compiled maintenance histories, test results, diagrams, and **repair** records for engineering review and recurring fault analysis.

Electronic Technician

July 2018 - February 2021

Copper State Aerospace Technologies

Phoenix, AZ

Built prototype circuit cards, cable interfaces, and electromechanical subassemblies for aerospace development programs. Supported engineer directed troubleshooting, **modification**, testing, documentation, and early process analysis.

- Assembled prototype circuit cards from **schematics, layouts**, bills of material, and engineering instructions.
- Performed **fine pitch** soldering and **through hole** assembly with ESD controls and controlled board cleaning.
- Troubleshoot analog and digital faults using bench equipment, signal tracing, and component condition checks.
- Reworked PCBs through component removal, replacement, solder restoration, and binocular microscope inspection.
- Recorded test readings and production observations in worksheets supporting engineering analysis and **SPC** tracking.
- Prepared wiring updates and repair notes that helped technicians reproduce prototype modifications during later builds.

Electronics Maintenance Technician

June 2016 - June 2018

U.S. Military Electronics Maintenance Unit

San Diego, CA

Completed formal **military electronics** training while maintaining communications and aircraft support equipment. Performed supervised repair, fault isolation, installation, checkout, safety compliance, and maintenance documentation.

- Applied circuit fundamentals, **component identification**, soldering, and test practices to **communications** equipment.
- Performed scheduled maintenance and fault isolation using technical manuals, wiring diagrams, and checkout procedures.
- Repaired circuit cards and electromechanical hardware through component replacement, connector service, and wiring repair.
- Used **ESD** controls, safety equipment, **cleaning compounds**, and magnification aids during sensitive bench work.

- Documented equipment condition, troubleshooting steps, maintenance actions, and final test status for quality review.
- Supported cabinet and chassis installation, gaining practical experience with interfaces, **drawings**, and configuration discipline.

PROJECTS

Avionics Interface Restoration 📅 2023

Partnered with engineering and quality contacts on a focused avionics restoration effort. Fault isolation, connector repair, wiring verification, and checkout records returned complex interfaces to inspection ready status.

Prototype Circuit Card Rework 📅 2021

Worked alongside technicians and engineers on prototype card modifications requiring fine pitch soldering, BGA rework, microscope inspection, and clear technical notes for later builds.

LEADERSHIP & AWARDS

- Recognized for dependable prototype rework and clear corrective action records during defense hardware development.
- Selected for trusted aircraft armament system maintenance work after completing formal military electronics training.
- Built peer confidence through practical troubleshooting support and consistent inspection ready workmanship.

EDUCATION

Associate of Applied Science in Electronics Technology

2016

Pima Community College GPA: 3.5

Tucson, AZ

Coursework: *Circuit analysis, electronic assembly, digital systems, technical mathematics*

CERTIFICATIONS

- IPC 7711/7721 Rework, Modification and Repair Specialist 📅 2025
- IPC J STD 001 Certified Specialist 📅 2024
- IPC A 610 Certified IPC Specialist 📅 2024
- Military Electronics Technical School 📅 2016

TECHNICAL SKILLS

- **PCB Assembly:** Surface mount, through hole, flex circuits
- **Soldering and Rework:** IPC 7711, J lead devices, BGA packages
- **Workmanship Standards:** IPC A 610, J STD 001, solder inspection
- **Electronics Testing:** Functional checkout, fault isolation, component measurements
- **Engineering Documents:** Schematics, wiring diagrams, layouts
- **Production Documentation:** Process routings, planning documents, written instructions
- **Technical Data:** SPC, test records, maintenance histories
- **Avionics Systems:** Aircraft armament systems, communications equipment, avionics interfaces
- **Assembly Hardware:** Cabinets, chassis, consoles
- **Inspection Equipment:** Binocular microscopes, magnification lenses, bench test equipment
- **Safety and Handling:** ESD controls, personal safety equipment, cleaning compounds

SKILLS

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|------------------------|---------------------------|-------------------------|----------------------------|
| • PCB rework | • Circuit testing | • Process routings | • Electromechanical repair |
| • Fine pitch soldering | • Avionics repair | • Wiring diagrams | • Fault isolation |
| • BGA rework | • Component handling | • Prototype fabrication | • Engineering drawings |
| • ESD precautions | • Technical documentation | • SPC analysis | |

PROFESSIONAL AFFILIATIONS

- IPC professional community participant, following current workmanship and rework practices.
- Aerospace and defense electronics practitioner, connected with technicians focused on reliable hardware support.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST