

Terrence Willocks

Broadcast Engineer Co-op

Stratford, NJ - Email me on Indeed: [indeed.com/r/Terrence-Willocks/5d4a532b52984de1](https://www.indeed.com/r/Terrence-Willocks/5d4a532b52984de1)

WORK EXPERIENCE

Broadcast Engineer Co-op

Clear Channel - Philadelphia, PA - April 2013 to September 2013

Responsibilities:

- Conducted inspections, troubleshooting, repair, and modifications of broadcast booths, modulators, transmission lines, Radio Broadcast Data System, Arbitron, Emergency Alert System, microwave links, transmitters, antennas, FM and AM transmission towers, and other broadcast equipment for all Philadelphia market Clear Channel radio stations (5 FM and 1 AM)
- Performed upgrade and modification of backup FM transmitter for another PA Clear Channel market
- Troubleshot and repaired 21 computer monitors; saved Clear Channel Philadelphia \$2K
- Created training manuals on power supply troubleshooting/repair for proceeding co-op broadcast engineers

Ground Radar Systems Craftsman

United States Air Force, Worldwide - McGuire AFB, NJ - October 2001 to February 2009

Lead repairs and preventive maintenance inspections on assigned air traffic control (ATC) systems valued at \$23M. Ensured tactical AN/MPN-25 Precision Approach Radar (PAR) system is readily available for deployments. Maintained Digital Airport Surveillance Radar (DASR) & Standard Terminal Automation Replacement System (STARS). Used test equipment, technical data, and schematic diagrams to troubleshoot, repair, and perform preventive maintenance.

- o Performed 625 inspections on three ATC systems--essential to 43K tower/105K RAPCON sorties/year
- o Contained DASR oil leak; safeguarded 10 techs/\$2M antenna--mitigated \$100K+ environmental clean-up cost
- o Troubleshot antenna tilt down fault on PAR; removed and replaced broken relay--system operational in <1 hour
- o Rebuilt Radiation Hazard program; provided in-depth briefing/instructional video--resolved training deficit for 10 personnel
- o Led repair of PAR reference reflectors; identified/replaced cable assembly--saved AF \$20K+ in replacement part
- o Removed/replaced defective radar display; performed six complex alignments--ATC ops restored <45 minutes

Osan AB, ROK

- Inspected, troubleshot, repaired, and modified more than \$13 million in Air Traffic Control and Weather Radar systems supporting combat flying missions of the Eighth Army, Air Component Command, Seventh Air Force, 51st Fighter Wing, and Republic of Korea Air Forces. Systems include the AN/GPN-12 Airport Surveillance Radar (ASR), AN/TPX-42(V)10 Beacon Interrogator, AN/GPA-134 Digital Mapper, Digital Bright Radar Indicator Tower Equipment (DBRITE), WSR-88D Next Generation Radar (NEXRAD), Programmable Indicator Processor and Radar Approach Control. Documented maintenance actions and supply requisitions utilizing the Integrated Maintenance Data System. Supported Air Traffic Standard Evaluation Teams and Special Maintenance Teams.
- o Selflessly worked 14-hour shift repairing secondary radar system--combined two bad transmitters to make one good--reinstated aircraft identification capability

- o Replaced defective ASR motor; done in 3 vs 6 hours allotted per technical order--99.8% uptime rate-- 2.8% over AF average
- o Directed DBRITE certification at US Army Garrison Humphreys--revived controllers' visual reference display
- o Engineered ASR fault circuit; notified personnel of loss of primary power--allowed response before outage
- o Taught 19 base-wide CPR classes; trained 93 Airmen--certified 8 instructors--provided critical life- saving skills

Tinker AFB, OK

- Monitored the status of \$282 million in deployable group assets on a 24-hour basis by receiving, processing, and relaying information on personnel, equipment, convoys, and deployable teams. Maintained a database of 824 personnel used to prepare in-depth reports on operations tempo and deployment trends. Received and distributed over 3,000 messages to more than 100 customers annually. Prepared daily summary report containing availability status of assigned personnel and their movements worldwide in support of Air Force and Joint Chiefs of Staff contingency operations. Served as command and control focal point and initiated response for all unit recalls, severe weather warnings, natural or man-made disasters, and accidents.
- o Precisely tracked 570 group personnel deployed worldwide in support of Air Expeditionary Force, Operation IRAQI FREEDOM, Joint Task Force (JTF) KATRINA, and Global War On Terror for over 7 months
- Accurately tracked 110 vehicles, 230 personnel, \$200M worth of communications equipment for JTF KATRINA
- o Singularly responsible for improvement of information flow to commanders--redesigned Daily Summary format and Recall Roster program; allowed information to be fluently transmitted to inform all key personnel
- Assisted in the installation, maintenance, and recovery of air traffic control (ATC) radar facilities valued in excess of \$12 million in support of Air Combat Command exercises, interim mission support, and emergency mission support deployments for Department of Defense and Joint Chiefs of Staff taskings. Assisted in the performance and documentation of corrective maintenance, preventative maintenance inspections and modifications on the AN/TPN-24 Airport Surveillance Radar (ASR), AN/TPN-25 Precision Approach Radar (PAR), OK/235, OK/236 Operations Shelters (OPS), and ancillary equipment such as the AN/TPX-42 Secondary Radar (IFF), and AN/GPA-134 Video Mapper.
- o Created computer program to calculate center-of-balance for rolling stock increments
- o Maintained an impressive 96% grade average during training at technical school; received the Distinguished Graduate Award
- o Achieved 91% on Career Development Course end of course exam
- o Volunteered over 24 hours at the base Volunteer Income Tax Assistance office; prepared 15 federal and 8 state tax returns for Team Tinker members
- o Led team of 5 Airmen in inventorying \$2.9M of Mobility Readiness Spares Packages returning from Operation IRAQI FREEDOM--identified parts for reconstitution--ensured equipment availability for future deployments

EDUCATION

Bachelor of Science in Electrical Engineering

Drexel University

March 2015

Associate in Applied Science in Electronic Systems Technology

Community College of the AF

May 2006

ADDITIONAL INFORMATION

SKILLS

- LabVIEW
- Excellent verbal and written communication • Pro/Engineer
- Critical thinker, organized, efficient, and • MATLAB/Simulink thorough • Maple
- Effectively manages rapidly changing situations • AutoCAD
- Maintains and demonstrates high standards of • PSpice professional ethics • Cadence Virtuoso
- Follows policy and procedure • Java
- Knowledgeable and sensitive to cultural diversity • C++
- Microsoft Office
- High-Reliability Soldering