Norm Bachman III

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Professional Summary

Field Service Engineer with 25+ years of hands-on experience in industrial automation, controls, electronics, IT systems, and advanced technical troubleshooting. Experienced in nationwide field service, installation, startup, commissioning, PLC/HMI programming, legacy control-system modernization, VFD and motion-control upgrades, robotic-cell integration, and custom machine support. Proven ability to diagnose complex electrical, controls, hardware, software, communications, and mechanical issues while improving reliability, throughput, safety, and uptime in demanding field and production environments. Skilled in technical documentation, customer training, remote support, and collaboration across engineering and production teams.

Technical Skills

- **Industrial Automation & Controls:** Allen-Bradley PLC-5, SLC 500, CompactLogix, ControlLogix, GuardLogix, RSLogix 5, RSLogix 500, Studio 5000, ladder logic, PLC programming, controls troubleshooting, machine sequencing, system integration
- **HMI & Visualization:** PanelView Plus, FactoryTalk View Studio, FactoryTalk Linx, HMI programming, tag integration, alarm and diagnostic development, operator-interface troubleshooting
- **Robotics & Motion Control:** Yaskawa Motoman GP25 six-axis robots, robot job programming and modification, motion-path optimization, PLC-to-robot handshaking, cycle-time analysis, VFDs, servo systems, SEW-Eurodrive drives, motors, gearboxes, and positioning systems

- **Commissioning & Field Service:** Installation, startup, commissioning, FAT/SAT support, I/O checkout, field wiring verification, preventive maintenance, inspections, equipment upgrades, emergency support, customer training, and service documentation
- **Programming & Web Technologies:** C, C++, C#, JavaScript, HTML, HTML5, CSS; website development, software and embedded-system troubleshooting
- **Advanced Troubleshooting:** Electrical, controls, hardware, software, communications, pneumatic, and mechanical fault isolation; root-cause analysis; intermittent issue resolution; component-level electronic troubleshooting and repair
- **Industrial Networks & Communications:** EtherNet/IP, EtherCAT, Modbus TCP, PROFIBUS, INTERBUS, TCP/IP, UDP/IP, industrial fieldbus protocols, LAN/WAN, VLANs, DNS, DHCP, Wi-Fi, RF communications, and remote access
- **Software, Computing & Technical Support:** Windows and Linux systems, embedded systems, computer hardware and software troubleshooting, network administration, remote diagnostics, technical documentation, and customer support
- **Machine Performance & Continuous Improvement:** Cycle-time reduction, throughput optimization, reject reduction, downtime reduction, machine-flow analysis, safety-interlock troubleshooting, process improvement, and spare-parts planning
- **Additional Capabilities:** Low-voltage and three-phase electrical systems, motor controls, sensors, safety systems, LOTO, control panels, mechanical and electrical assembly, equipment fit-up, alignment, welding, and millwright-style support

Professional Experience

Field Service, Columbia PSI (2025 – 2026)

- Provided regional and nationwide on-site and remote field service for automated packaging and palletizing systems, including installation, startup, commissioning, troubleshooting, preventive maintenance, inspections, upgrades, spare-parts support, and service reporting.

- Supported the startup and commissioning of a cutting-edge R&D-designed cantilever-hoist palletizer, troubleshooting and debugging electrical hardware, PLC software, controls, safety systems, field devices, and machine sequencing.
- Troubleshot, integrated, debugged, and reprogrammed a three-packer robotic bag-loading cell utilizing a six-axis Yaskawa Motoman GP25 robot, including robot motion, PLC handshaking, pneumatic interlocks, packer sequencing, and collision-clearance requirements.
- Analyzed and optimized robot paths, movement types, acceleration, position transitions, and cell timing to sustain approximately ten bags per minute while identifying controlled improvements to achieve eleven to twelve bags per minute with minimal rejects and downtime.
- Modernized a custom dual-line box-erector control system by integrating legacy Allen-Bradley PLC-5 logic into a CompactLogix platform using Studio 5000, FactoryTalk View Studio, and PanelView Plus, and supported integration with two ControlLogix-based palletizers and downstream equipment.
- Performed PLC and HMI troubleshooting and modifications involving PLC-5, SLC 500, CompactLogix, ControlLogix, and GuardLogix systems, along with SEW-Eurodrive and Allen-Bradley VFD, motor, encoder, gearbox, and automatic-control upgrades.
- Performed I/O checkout, sensor replacement and adjustment, field-wiring verification, safety-interlock troubleshooting, FAT/SAT support, customer training, documentation, and light mechanical installation while collaborating with engineering, production, and service teams to improve machine reliability and performance.

Senior Field Engineer, Nortech Parking Systems LLC (2023 – 2025)

- Region-wide remote and on-site parking system automation, remote management, installation, and support.
- Computer / network / microcontroller / fieldbus / low-voltage / fiber.
- Vehicle gates & loops, card access, long range fobs, LPR systems, proximity sensors, RF remote control.
- POS systems, payment terminals, printers, scanners, QR codes.
- Troubleshooting, repair, maintenance, parts, consumables.

Field Service Engineer & QC Manager, Strategic Materials Inc (2017 – 2023)

- Provided nationwide remote and on-site technical support for mission-critical computer, network, and automation systems, specializing in a wide array of brands such as ABB, Allen-Bradley, EtherCAT, Modbus, INTERBUS, Siemens PROFIBUS, and Schneider Electric.
- Installed, configured, and maintained complex embedded systems and automation hardware/software solutions across multiple vendors, ensuring operational excellence.
- Spearheaded efforts to leverage technology and business process expertise to enhance system efficiency, quality, throughput, and uptime.
- Collaborated with cross-functional teams to design and implement cost-effective technical solutions for challenging problems, effectively minimizing scope creep and downtime.
- Created and maintained comprehensive technical documentation, including but not limited to network configurations, device calibrations, and maintenance requirements.
- Managed global spare parts inventory, focusing on maximizing system uptime and redundancy while minimizing costs and operational risks.

Maintenance Engineer & Fleet Manager, Digital Media Group LLC (2012 – 2017)

- Managed a large fleet of over 30 special-purpose and 20 company vehicles, including troubleshooting and 24/7 recovery and support.
- Performed hands-on technical repairs and upgrades, including engine and transmission rebuilds, to improve efficiency and uptime.
- Ensured continuity in facility operations through regular maintenance.
- Maintained vehicle logs, tracking systems, and spare parts inventory contributing to organizational efficiency.

Custom Solutions Engineer, North Brighton Computer (2010 – 2012)

- Provided specialized computer and laptop repair services for both hardware and software issues.
- Managed network troubleshooting and administration for a variety of client types.
- Conducted component-level electronic repairs for complex systems.
- Delivered custom website and graphic design services, staying current with industry technologies.

Special Projects Manager, Promo Products LLC (2005 – 2010)

- Worked on custom machine setups involving PLC reverse engineering and reprogramming.
- Managed special projects in collaboration with external vendors for issue resolution.
- Improved and expanded production processes through reverse engineering.
- Led graphic design and website management for promotional advertising.

Machine Setup/Repair Technician, Nortech System Inc (2003 – 2005)

- Contributed to the manufacturing of industrial wire and cable assemblies.
- Provided setup, repair, and operational training on production machines.
- Continually improved efficiency and quality through process revisions.
- Completed specialized training in soldering, wire harnessing, and machine repair.

Network System Specialist, BTS Unlimited LLC (2002 – 2003)

- Implemented and maintained computer hardware, software, and network infrastructures.
- Played a key role in the business's expansion into an internet service provider.
- Managed multi-city internet provider network, including server setup and maintenance.
- Responsible for network security and bandwidth management.

Education & Certifications

- 25+ Years of Advanced Relevant Technical Field Experience
- TSA Transportation Worker Identification Credential (TWIC)
- Federal Amateur Extra Class License
- MN Power Limited / Low Voltage Experience
- CompTIA A+ Professional Certification
- Microsoft MCDST Professional Certification
- Nortech Surface Mount Solder Certified
- Minnesota General Educational Development (GED) Credential

Additional Information

- 25 years of relevant engineering and IT experience.
- Willingness to travel up to 75% of the time.
- Exceptional multitasking and organizational skills.
- Effective communication and customer service acumen.
- Comfortable working in challenging environments.

Online Presence

- **LinkedIn:** Visit my LinkedIn Profile as an IT / Automation / Field Engineer and discover my broad range of skills and field experience.
- **Portfolio:** Visit Norm3.com for examples of my work, hobbies, and project history, or to contact me.
- **QRZ:** Visit my QRZ Amateur Radio Profile if you're also interested in radios, field operations, mathematics, or electronics.

For the most recent version of this resume, please visit:
https://www.norm3.com/resume/field-engineer/