

**Educational Communications Board**  
**81202 – Broadcast Engineer (Northwest Region)**  
**Media Telecommunications Technician - Senior**

**Position Summary**

The position provides construction, maintenance and repair support for a wide range of predominately high-power Radio Frequency electronic equipment and systems for the ECB including DTV, Broadcast Interconnect, EAS, AMBER, FM, State/Federal All Hazards Radio, satellite downlink systems, and Wisconsin Public Radio facilities. This position operates independently, must demonstrate leadership and advanced technical expertise in analysis, design, and modification of content distribution systems, media interconnect systems, and associated RF analog and digital program delivery and transmission monitoring equipment. Occasional Standby or On-call status and overnight work may be required.

This position reports to the Regional Technical Manager. Work is performed under general supervision.

**Goals and Worker Activities**

**40% A. Broadcast Systems Maintenance, Test, and Repair**

1. Independently plan and perform routine and preventive maintenance on all equipment and systems. Perform emergency repairs on all equipment.
2. Test components of malfunctioning transmission and delivery systems to diagnose impairments using test equipment such as: oscilloscopes, spectrum analyzers, time domain reflectometers, multi-meters, etc.
3. Disassemble and repair equipment, including equipment with potentially lethal voltages and dangerous moving machinery and are only performed with a safety observer present.
4. Plan and perform an intensive preventive and routine maintenance program to assure that all components of the delivery system are in proper operating condition and provide a uniform level of performance. This includes routinely checking equipment to note trends for early diagnosis of impairments.
5. Observe and maintain knowledge of applicable safety standards, rules and guidelines recommended or required by: FAA, FCC, OSHA, DWD, Wisconsin State Employees Union, and equipment manufacturers. Work with potentially dangerous or energized equipment for testing and maintenance procedures will only be performed with a safety observer present.
6. Supervise outside contractors and vendors in the construction, repair and maintenance of all equipment and systems, including towers.

**25% B. Monitors, Reports, and Documents Systems Status**

1. Monitors and operates remote control systems for outage and impaired conditions. Responds to impairment scenarios immediately based on priority. Promptly reports and updates outage and impaired conditions in the proper discrepancy systems.
2. Assures all systems are technically compliant as required by the FCC and FAA.
3. Perform duties and assume responsibility of the Chief Operator or Alternate Chief Operator as assigned by supervisor and/or ECB leadership.
4. Monitor and operate delivery system equipment to include: FM, DTV, BIC, EAS, All Hazards Radio, FM and/or TV translators, radio STL & ICR, TV STL & ICR.

**15% C. Plan, perform and contract routine and preventive maintenance and services for all regional sites, facilities, grounds and systems.**

1. Plan for contract maintenance on building physical systems such as HVAC, plumbing, and electrical; site specific telecommunications wiring systems; telephones and computer networking equipment; cable television wiring.
2. Plan, schedule and contract for janitorial, snow removal and grounds keeping services. Assist in services and contract for emergency services as required
3. Perform or contract for emergency repairs for buildings, grounds, and systems.

**10% D. Modification and Installation of Equipment**

1. Designs, constructs, modify, and install delivery system and ancillary equipment.
2. Purchases and plans for purchases of delivery system equipment.
3. Supervises outside contractors and vendors in the modification and installation of all equipment and systems.

**10% E. Miscellaneous**

1. Assure high degree of site cleanliness.
2. Prepare records and reports.
3. Update system drawings and maintenance documentation.
4. Coordinate maintenance and repair on assigned state vehicle
5. Provide training and support to other Media Telecommunications Technicians

6. Performs other duties and activities as required.

### **Knowledge, Skills and Abilities Required**

1. Extensive knowledge of high-power Radio Frequency (RF) systems
2. Extensive knowledge of Technologies related to broadcasting, including those related to distribution, transmission and remote control of television and radio distribution networks
3. Extensive knowledge of Analog and digital electronic systems
4. Extensive knowledge of IT and Networking systems
5. Ability to work from and interpret diagrams, and electrical prints
6. Extensive knowledge of Safety and security best practices as applied to broadcast facilities
7. Extensive knowledge of Tower structural and tower worker safety standards
8. Extensive knowledge of FCC and FAA rules and regulations
9. Considerable Knowledge of NEC and NFPA rules and regulations
10. Ability to provide effective, clear and accurate written and verbal communications
11. Ability to work in a team environment and exercise effective leadership skills
12. Ability to maintain effective working relationships with other professionals internal and external to the organization
13. Knowledge encompassing complex personal computer applications including databases, spreadsheets, word processing, presentation and e-mail
14. Knowledge of STAR/PeopleSoft
15. Ability to prioritize competing tasks and objectives
16. Ability to work on multiple tasks simultaneously and independently
17. Ability to perform complicated tasks under time pressure
18. Ability to pay extreme attention to detail

### **Special Requirements**

- This position requires a variable, non-traditional work schedule including some nights and weekends.
- A valid Wisconsin driver's license, or the ability to obtain one's own timely transportation throughout the workday, is required.
- Must be capable of lifting objects up to 35 lbs. without assistance