

ELECTRONICS TECHNICIAN 3**Nature of Work**

Under limited supervision, performs advanced level electronic and telecommunications work necessary for the installation, maintenance and repair of electronic and electrical highway illumination, traffic control, traffic signal and traffic counting devices, electronic office, emergency equipment, or radio transmitting equipment of the Division of Highways and other State agencies. Performs in a lead worker or team leader role in project assignment requiring multiple staff. Travel may be required. May be required to be on-call. Performs related work as required.

Distinguishing Characteristics

This classification is distinguished from the Electronics Technician 2 classification by the limited supervision received and performs at an advanced level and/or performs as a lead worker or team leader on projects requiring multiple staff.

Examples of Work

Leads the work of other Electronic Technicians on a project or assignment basis.

Inspects traffic signal and highway lighting systems or other electronic/electrical equipment using various diagnostic equipment and meters to determine malfunctions.

Repairs malfunctions of traffic signal and highway lighting systems with hand tools and volt meters using a bucket truck in the field.

Inspects, repairs, and maintains two-way base, portable and mobile radio stations/systems; communication towers; video recording systems; radar; sirens; lighting systems; or other electronic equipment using various diagnostic devices and meters.

Sets frequency range, configures and programs two-way radio equipment.

Services and repairs computer processing traffic signal and control equipment using an oscilloscope, a logic probe, and electronic test panel, and various meters.

Isolates malfunctions of office equipment such as electronic calculators, computer lights, video and tape units, or sound systems using diagnostic devices, oscilloscopes, digital volt meters, and circuit boards.

Installs new or repaired electronic or telecommunication equipment; such as, traffic signal and highway lighting systems; two-way base, portable, and mobile radio stations/systems; communication towers; video recording systems; radar; sirens; lighting systems according to manufacturer's specifications.

ELECTRONICS TECHNICIAN 3 (CONT'D)**Examples of Work (cont'd)**

- Assembles electronic equipment and electrical panel in the shop according to manufacturer's drawings and diagrams using various hand tools and test equipment.
- Tests new, rebuilt, or repaired equipment in the shop with an electronic test panel prior to installation to ensure working order.
- Assists in the maintenance of high voltage highway lighting distribution centers through the use of high voltage testing and safety equipment.
- Assists cities and municipalities with the installation and maintenance of traffic control signals and highway lighting systems.
- Determines priorities of repairs and emergencies when notified of the malfunctions.

Knowledge, Skills and Abilities

- Knowledge of the principles of electronics and electricity.
- Knowledge of the safety practices for working with electricity and electronic circuits.
- Knowledge of the applicable manufacturer's manuals and specifications.
- Knowledge of the analog and digital circuits.
- Knowledge of the standard safety practices of the Division of Highways and other State agencies.
- Ability to read and interpret electrical drawings and circuit diagrams.
- Ability to use electronic and electrical test equipment.
- Ability to disassemble and assemble electronic equipment.
- Ability to analyze equipment malfunctions, determine the parts needed and the length of time for the repairs.
- Ability to keep routine records.
- Ability to safely work at high heights.
- Ability to maintain effective working relationships.

Minimum Qualifications

TRAINING: Graduation from a standard four-year high school or the equivalent.

EXPERIENCE: Four years of full-time or equivalent part-time paid employment in electronics repair including two years in the repair of highway lighting or traffic control systems or electronic office equipment or land mobile radio/microwave equipment repair.

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ELECTRONICS TECHNICIAN 3 (CONT'D)

Minimum Qualifications (cont'd)

SUBSTITUTION: Successful completion of an approved vocational school program in electronics of at least 1080 clock hours or an Associate Degree in Electronics or Electronics Engineering Technology from an accredited college or university may be substituted for one year of the required general experience.

SPECIAL REQUIREMENT: A general FCC license may be required after hire. Possession of a valid driver's license.

Established: 10/21/93
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