



RF/MICROWAVE ENGINEER

Classified Range: 50

Board Approved: 01/10/08 P. 1|3

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job; however, any additional duties will be reasonably related to this class.*

SUMMARY DESCRIPTION

Under general supervision, performs specialized technical duties involving the design, installation, operation, maintenance, and modification of KVCR FM and TV transmitters, translators, microwave systems, satellite up/down links, and other related Radio Frequency (RF) systems; performs related duties as required.

REPRESENTATIVE DUTIES

The following duties are typical for this classification.

1. Perform a variety of complex engineering task to design and develop RF/Microwave systems, including maintaining the district's radio and television equipment, high power transmitters, receivers, microwave systems, satellite system, and related RF equipment.
2. Maintain and upgrade satellite communications and broadcast infrastructure, including antennas and all RF components
3. Perform maintenance, installations and removals, and alignment of radio and television antenna systems on broadcast towers.
4. Monitor and maintain equipment in conformance with FCC rules and regulations.
5. Evaluate and make recommendations regarding the purchase of new equipment and materials; maintain inventory of equipment and parts.
6. Participate in the set-up and operation of remote broadcasting equipment.
7. Maintain records relating to equipment purchase, maintenance, proof of performance, and FCC compliance.
8. Prepare and maintain reports as necessary.
9. Perform other related duties as assigned.

MINIMUM QUALIFICATIONS

The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.

Knowledge of:

- Electronic communication design
- Uses, operation, and capabilities of radio and television equipment and test equipment



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- Electronic communication equipment / repair methods
- Rules and regulations of the Federal Communications Commission as applied to radio and television operations
- Safety practices of work involving high electrical voltage
- Computers using DOS or Windows based operating systems
- Knowledge and/or familiarity with OSHA tower safety regulations

Ability to:

- Design, install, setup, operate, and maintain a variety of electronic communications equipment
- Operate and repair the district's radio and television transmitter and microwave systems
- Maintain reports and records
- Follow written and oral directions
- Establish and maintain cooperative working relationship

Education and Experience Guidelines

Education/Training:

- Completion of a Bachelor's degree in electronics course work, including electronic system design, high voltage systems, digital systems, microprocessors and computers, transmitters and receivers, and antenna systems.

Experience:

- Five (5) years experience on high power (30 kw minimum) UHF, liquid cooled, television transmitters, including two (2) years experience on FM radio transmitters (2 kw minimum)
- Three (3) years experience climbing and working on self-supported broadcast towers
- Two (2) years experience working with broadcast microwave systems.

License or Certificates:

- Must possess FCC General Radiotelephone Operators License or an SBE equivalent.

SPECIAL REQUIREMENTS

- Possession of a General Class Radio Telephone Operator's License issued by the Federal Communications Commission or an SBE equivalent and ability to obtain a valid California Driver's License.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

Environment: Work is performed primarily in a standard office setting; occasionally travel from site to site.



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Physical: Primary functions require sufficient physical ability and mobility to work in an office setting; to stand or sit for prolonged periods of time; to occasionally stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull light to moderate amounts of weight; to operate office equipment requiring repetitive hand movement and fine coordination including use of a computer keyboard; and to verbally communicate to exchange information.

Incumbents must be able to perform light manual work requiring finger dexterity and involving contact with high electrical voltage power equipment; lifting requirements of 50 pounds. Duties will require work to be performed at various remote transmission sites. Must be able to climb tower of 200 feet or more. May be asked to drive a district vehicle.

Vision: See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; and to operate assigned equipment.

Hearing: Hear in the normal audio range with or without correction.