

JOB TITLE: Radio Equipment Specialist  
EMPLOYEE:

DOT #: 823.281-014  
CLAIM #



**King County**

## **KING COUNTY ON SITE JOB ANALYSIS**

**JOB TITLE** Radio Equipment Specialist

**JOB CLASSIFICATION** Radio Equipment Specialist

**DOT TITLE** Radio-Communications Mechanician

**DOT NUMBER** 823.281-014

**DEPARTMENT** Transportation

**DIVISION** Transit, Power and Facilities

**# OF POSITIONS IN THE DEPARTMENT WITH THIS JOB TITLE** 8

**JOB STATUS**

Full Time, Career Service.

**ADDRESS OF WORKSITE**

2255 4<sup>th</sup> Ave So.  
M.S. PDS-TR-0100  
Seattle, WA 98134

**CONTACT'S NAME** Corey Traylor

**CONTACT'S PHONE** (206) 263-4601

**EMPLOYER JOB TITLE** Supervisor of Power Distribution/Radio Maintenance

**DATE COMPLETED** 5/15/02

**DATE REVISED** 6/4/09

**VRC NAME** Jeff Casem

**WORK HOURS** 8 or 10 hours per day, 40 hours per week in one of three shifts. Sunday through Wednesday 6:30 am to 5:00 pm, Wednesday through Saturday 6:30 am to 5:00 pm, or Monday through Friday 7:30 am to 4:00pm.

**OVERTIME**

Optional and occurs 8-10 hours per week.  
Fair Labor Standards Act Non-Exempt (hourly).

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### **JOB DESCRIPTION**

Repairs, maintains and installs fixed and mobile electronic communication equipment including closed circuit television (CCTV) and SCADA supervisory control data acquisition.

### **ESSENTIAL ABILITIES FOR ALL KING COUNTY JOB CLASSIFICATIONS**

1. Ability to demonstrate predictable, reliable, and timely attendance.
2. Ability to follow written and verbal directions and to complete assigned tasks on schedule.
3. Ability to read, write & communicate in English and understand basic math.
4. Ability to learn from directions, observations, and mistakes, and apply procedures using good judgement.
5. Ability to work independently or part of a team; ability to interact appropriately with others.
6. Ability to work with supervision, receiving instructions/feedback, coaching/counseling and/or action/discipline.

### **JOB SPECIFIC REQUIREMENTS**

3 years of experience maintaining repairing and installing electronic land mobile radios. Must possess a current FCC license. Associates degree in electronics or the equivalent of education and experience. Working knowledge of the principles of electrical and electronics theory; tools, materials, and procedures used in the operations, maintenance, troubleshooting, servicing and repair of communications equipment.

### **ESSENTIAL FUNCTIONS Listed in order of importance**

1. Supports the Data Radio and Automatic Vehicle Locator/Monitoring System.
2. Installs, repairs and removes mobile radio equipment on coaches and non revenue vehicles.
3. Installs, maintains, troubleshoots and repairs electronic communications systems and mobile electronic communications which includes consoles and electronics, fiber optics, Closed Circuit Television (CCTV), simulcast radio systems, satellite receiver systems, base stations, antenna combiners, insulator cavities, transmission lines, antenna and microwave MUX equipment.
4. Calibrates equipment to FCC standards and manufactures specifications.
5. Interprets schematics, wiring diagrams, and technical manuals.
6. Performs work on fixed radio and portable two-way radio equipment.

### **TOOLS, MACHINES, EQUIPMENT, PRODUCTS, AND SERVICES USED**

Radios, CCTV, SCADA, drills, soldering iron, communication service monitors, electronics testing equipment, hand tools, computer, laptop computer, ladder, telephone, cellular telephone, fax machine, copy machine, plotter machine, service manuals, wires, cables, cart, radio microphone, tool box, County van and magnifying glass.

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### **PHYSICAL DEMANDS AS JOB IS TYPICALLY PERFORMED**

Continuously = occurs 66-100% of the time

Frequently = occurs 33-66% of the time

Occasionally = occurs 1-33% of the time

Rare = may occur less than 1% of the time

Never = does not ever occur (such demands are not listed)

#### **This job is classified as**

Light by DOT but medium in this particular position.

#### **Standing**

Continuously on flat carpet, concrete, wood, gravel/rock and uneven surfaces for up to 2.5 hours at a time for up to 8 hours total in a work shift. Most commonly occurs while operating electronic testing equipment, installing connectors on radios, and performing on-site work. Employee may also alternate sitting and standing when performing bench work.

#### **Walking**

Frequently on flat carpet, concrete, wood, gravel/rock and uneven surfaces for distances of up to ¼ mile for up to 20 minutes at a time for up to 4.5 hours total in a work shift. Most commonly occurs while performing on-site work at bus yards and radio towers. On a rare occasion the employee may need to hike up to 1 mile to a mountain site perform repairs or maintenance.

#### **Sitting**

Continuously on a stool with back support, automobile seat or office chair for up to 2.5 hours at a time for up to 8 hours total in a work shift. Most commonly occurs while driving to various work sites in King County as well as performing bench and computer work. Employee may alternate sitting and standing when performing bench work.

#### **Climbing stairs**

Occasionally for up to 2 minutes at a time while climbing up to 4 flights at time for up to 16 minutes total in a work shift. Most commonly occurs while navigating through various King County facilities.

#### **Climbing**

Occasionally on a ladder to heights of up to 10 feet for up to 5 minutes at a time and up to 30 minutes total in a work shift. Most commonly occurs while maintaining or repairing electronic equipment in high locations. On a rare occasion the employee may need to climb up to 300 feet for up to 10 minutes at a time and up to 30 minutes total in a shift when maintaining or repairing electronic equipment on a radio tower.

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### **Balancing**

Occasionally on a ladder at heights of up to 6 feet for up to 30 minutes at a time for up to 1 hour total in a work shift. Most commonly occurs while maintaining or repairing electronic equipment in high locations. On a rare occasion the employee may need to balance on a radio tower ladder at heights of up to 300 feet for up to 1 hour at a time and up to 3 hours total in a shift when maintaining or repairing electronic equipment on a radio tower. The employee wears a climbing harness when working on radio towers but balance is still needed due to strong winds.

### **Bending/Stooping**

Frequently on flat carpet, concrete, wood, gravel/rock and uneven surfaces for up to 30 minutes at a time for up to 3 hours total in a work shift. Most commonly occurs while performing radio installations in low locations as well as in busses and automobiles.

### **Kneeling**

Occasionally on flat carpet, concrete, wood, gravel/rock and uneven surfaces for up to 1 hour at a time for up to 2.5 hours total in a work shift. Most commonly occurs while repairing, installing and maintaining electronic equipment in small, awkward and low places. The employee may be able to alternate kneeling with crouching.

### **Crouching**

Occasionally on flat carpet, concrete, wood, gravel/rock and uneven surfaces for up to 1 hour at a time for up to 2.5 hours total in a work shift. Most commonly occurs while repairing, installing and maintaining electronic equipment in small, awkward and low places. The employee may be able to alternate crouching with kneeling.

### **Operating Controls with Feet**

Frequently for 1.5 hours at a time for up to 3 hours total in a work shift while driving a County vehicle with an automatic transmission.

### **Reaching above shoulder height**

Occasionally for up to 10 minutes at a time for up to 30 minutes total in a work shift while installing, repairing and maintaining electronic equipment that may be in an overhead location. The Radio Equipment Specialist may also reach above the shoulder while wiring plugs on to the ends of cables and attaching cables to electronic equipment.

### **Reaching at waist to shoulder height**

Continuously for up to 1.5 hours at a time for up to 7.5 hours total in a work shift while installing, repairing and maintaining electronic equipment as well as driving and performing bench work.

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**Reaching at knee to waist height**

Occasionally for up to 15 minutes at a time for up to 1 hour total in a work shift while using electronic testing equipment as well installing and wiring cables.

**Reaching at floor to knee height**

Occasionally for up to 15 minutes at a time for up to 1 hour total in a work shift while repairing, installing and maintaining electronic equipment in small, awkward and low places.

**Lifting 1-10 pounds**

Occasionally for up to 15 seconds at a time for up to 20 minutes total in a work shift. Most commonly occurs with weights of 3-7 pounds while manipulating portable radios, hand tools, radio control heads, drill, laptop computer, spools of cable, service manuals and electronic testing equipment.

**Carrying 1-10- pounds**

Occasionally for distances of up to 50 feet for up to 1 minute at a time and up to 15 minutes total in a work shift. Most commonly occurs with weights of 3-7 pounds while transporting tools, test equipment and radio equipment boxes to and from a cart, County vehicle and work site.

**Lifting 11-20 pounds**

Rare for up to 5 seconds at a time for up to 30 seconds total in a work shift. Most commonly occurs with weights of 11-15 pounds while moving radios, electronic testing equipment and toolboxes. The weight of toolboxes can vary greatly depending on size and amount of tools.

**Carrying 11-20 pounds**

Occasionally for distances of up to 50 feet for up to 1.5 minutes at a time and up to 10 minutes total in a work shift. Most commonly occurs with weights of 11-15 pounds while transporting tools, toolboxes and radios to and from County vehicles.

**Lifting 21-50 pounds**

Rare for up to 5 seconds at a time for up to 30 seconds total in a work shift. Most commonly occurs with weights of 45 pounds while moving boxes of wire/cable, toolboxes and electronic testing equipment.

**Carrying 21-50 pounds**

Rare for distances of up to 10 feet for up to 20 seconds at a time and up to 2 minutes total in a work shift. Most commonly occurs with weights of 45 pounds while transporting boxes of wire/cable, toolboxes and electronic testing equipment.

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**Pushing and Pulling**

Occasionally for distances of up to 150 feet for up to 5 minutes at a time with a force of up to 30 pounds and up to 30 minutes total in a work shift. Most commonly occurs while pushing a cart between a work van and a work site.

**Handling**

Frequently for up to 1.5 hours at a time for up to 4.5 hours total in a work shift while driving as well as using hand tools, radio microphones, electronic testing equipment, and tool boxes.

**Operating Controls with Hands**

Frequently for 1.5 hours at a time for up to 4 hours total in a work shift while driving a County vehicle with an automatic transmission and using the computer mouse.

**Fingering**

Continuously for up to 2 minutes at a time for up to 6.5 hours total in a work shift while soldering, using electronic testing equipment, manipulating wires, typing, and clicking the computer mouse.

**Feeling**

Rare for up to 5 seconds at a time for up to 1 minute total in a work shift while checking for excessive heat or vibration on components to identify mechanical failures such as fan malfunction.

**Talking**

Occasionally for up to 1 minute at a time for up to 15 minutes total in a work shift while using a radio or telephone as well as conversing with co-workers and superiors.

**Hearing**

Frequently for up to 1.5 hours at a time for up to 4 hours total in a work shift. Most commonly occurs while conversing with co-workers and superiors, listening for mechanical failure of equipment, driving, aligning/testing radio equipment, and listening for hazards when working at sites with moving vehicles such as a bus yard.

**Tasting/Smelling**

Continuously for up to 2.5 hours at a time for up to 9 hours total in a work shift while smelling for equipment failure, burning components and fire hazards.

**Near acuity—clarity of vision at 20 inches or less**

Frequently for up to 15 minutes at a time for up to 5.5 hours total in a work shift while soldering, performing computer duties, reading manuals, working on small electronic devices, and reading documents.

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**Far acuity—clarity of vision at 20 feet or more**

Frequently for 1.5 hours at a time for up to 3.5 hours total in a work shift while driving a County vehicle and inspecting equipment on site or on coaches.

**Depth perception—three dimensional vision**

Continuously for up to 1.5 hours at a time for up to 6.5 hours total in a work shift while driving and soldering as well as repairing, installing and maintaining electronic equipment.

**Visual accommodation—Adjustment of lens of eye to bring an object into sharp focus**

Occasionally for 1 minute at a time for up to 30 minutes total in a work shift while soldering, repairing, installing and maintaining small electronic components. A magnifying glass is available when working on small components.

**Color vision—ability to identify and distinguish colors**

Rare for up to 5 seconds at a time for up to 1 minute total in a work shift while identifying color coded wires and components.

**Field of vision—observing an area that can be seen up and down or right or left while eyes are fixed on a given point**

Frequently for 1.5 hours at a time for up to 3 hours total in a work shift while driving a County vehicle.

**Night vision--seeing after sundown with minimal or no supplemental light sources**

Occasionally for up to 1.5 hours at a time for up to 3 hours total in a work shift while driving at night when on call.

**TEMPERAMENTS**

Directing, controlling, or planning activities of others: Occasionally

Performing repetitive or short-cycle work: Frequently

Influencing people in their opinions, attitudes, and judgements: Rare

Performing a variety of duties: Continuously

Expressing personal feelings: Occasionally

Working alone or apart in physical isolation from others: Frequently

Working effectively under stress: Frequently

Working under specific instructions: Frequently

Working with others: Frequently

Making judgements and decisions: Frequently

**ENVIRONMENTAL FACTORS**

Work is performed at various King County facilities and settings with a wide range of exposures. Radio Equipment Specialist can work in locations from bus yards, busses, automobiles, radio towers and mountain settings. The noise level is quiet to moderately loud.

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**Workers are exposed to**

Outside weather: Frequently  
Extreme cold: Occasionally  
Extreme heat: Occasionally  
Wet: Occasionally  
Humidity/dampness: Occasionally  
Fumes: Occasionally  
Odors: Occasionally  
Dusts: Occasionally  
Mists: Occasionally  
Gases: Rare  
Moving mechanical parts: Frequently  
Vibration: Frequently  
Working in high, exposed places  
Radiation: Occasionally  
Toxic or caustic chemicals: Occasionally

**POTENTIAL MODIFICATIONS TO JOB**

Ergonomic stool to provide additional back support and comfort when performing bench work.

Adjust workstation height to promote the option of sitting or standing while performing bench work.

\_\_\_\_\_  
Signature & title of evaluator

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature & title of contact

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature & title of employee

\_\_\_\_\_  
Date

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**HEALTH CARE PROVIDER SECTION**  
Check all that apply

The employee is released to perform the described duties without restrictions on performance or work hours.

The employee is released to perform the described duties on a reduced schedule. The recommended schedule is:

\_\_\_\_\_  
\_\_\_\_\_  
 Temporary until \_\_\_\_\_  Permanent as of \_\_\_\_\_

The employee is released to perform the described job with the following modifications:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
 Temporary until \_\_\_\_\_  Permanent as of \_\_\_\_\_

The employee is not released to perform the described duties due to the following job functions:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
 Temporary until \_\_\_\_\_  Permanent effective \_\_\_\_\_

The employee is unable to work in any capacity.  
A release to work is:  anticipated by \_\_\_\_\_  Not expected

The limitations are due to the following objective medical findings:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Printed or typed name and phone number of Health Care Provider

\_\_\_\_\_  
Signature of Health Care Provider

\_\_\_\_\_  
Date