

CAREER GUIDE FOR BROADCAST TECHNICIAN

SOC Code: 27-4012

Pay Band(s): 3,4 and ([Salary Structure](#))

Standard Occupational Description: Set up, operate, and maintain the electronic equipment used to transmit radio and television programs. Control audio equipment to regulate volume level and quality of sound during radio and television broadcasts. Operate radio transmitter to broadcast radio and television programs.

Broadcast Technician positions in the Commonwealth are assigned to the following Roles in the [Electronics Career Group](#):

[Electronics Technician I](#)

[Electronics Technician II](#)

[Electronics Technician III](#)

While Broadcast Technicians within the Commonwealth are all located within the Electronics Career Group, individuals may want to pursue other opportunities within the Commonwealth depending upon individual training, education, knowledge, skills, abilities, and interests.

Other Career Group(s) that may be of interest are:

[Media and Production](#)

[Equipment Service and Repair](#)

[Computer Operations](#)

[Training and Instruction](#)

SKILLS, KNOWLEDGE, ABILITIES AND TASKS

(Technical and Functional Expertise)

Skills

Note: *The technical and functional skills listed below are based on general occupational qualifications for Broadcast Technicians commonly recognized by most employers. Typically, you will not be required to have all of the skills listed to be a successful performer. Recruitment and selection standards for an individual state job must be based on the specific knowledge, skills, and abilities for that job as indicated in the job announcement and job description in the Employee Work Profile.*

1. Controlling operations of equipment or systems.
2. Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
3. Adjusting actions in relation to others' actions.
4. Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
5. Teaching others how to do something.
6. Watching gauges, dials, or other indicators to make sure a machine is working properly.
7. Understanding written sentences and paragraphs in work related documents.
8. Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
9. Talking to others to convey information effectively.

10. Determining causes of operating errors and deciding what to do about it.

Knowledge

Note: The technical and functional knowledge statements listed below are based on general occupational qualifications for Broadcast Technicians commonly recognized by most employers. Typically, you will not be required to have all of the knowledge listed to be a successful performer. Recruitment and selection standards for an individual state job must be based on the specific knowledge, skills, and abilities for that job as indicated in the job announcement and job description in the Employee Work Profile.

The Knowledge of:

1. Transmission, broadcasting, switching, control, and operation of telecommunications systems.
2. Media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media.
3. Circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
4. Principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
5. Machines and tools, including their designs, uses, repair, and maintenance.

Abilities

Note: The technical and functional abilities listed below are based on general occupational qualifications for Broadcast Technicians commonly recognized by most employers. Typically, you will not be required to have all of the abilities listed to be a successful performer. Recruitment and selection standards for an individual state job must be based on the specific knowledge, skills, and abilities for that job as indicated in the job announcement and job description in the Employee Work Profile.

The Ability to:

1. Read and understand information and ideas presented in writing.
2. Communicate information and ideas in writing so others will understand.
3. Arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
4. Listen to and understand information and ideas presented through spoken words and sentences.
5. Quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
6. Communicate information and ideas in speaking so others will understand.
7. Shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).
8. See details at close range (within a few feet of the observer).
9. Quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
10. Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

Tasks

Note: The following is a list of sample tasks typically performed by Broadcast Technicians. Employees in this occupation will not necessarily perform all of the tasks listed.

Tasks

1. Align antennae with receiving dishes in order to obtain the clearest signal for transmission of broadcasts from field locations.
2. Control audio equipment in order to regulate the volume and sound quality during radio and television broadcasts.
3. Monitor strength, clarity, and reliability of incoming and outgoing signals, and adjust equipment as necessary to maintain quality broadcasts.
4. Observe monitors and converse with station personnel in order to determine audio and video levels and to ascertain that programs are airing.
5. Preview scheduled programs to ensure that signals are functioning and programs are ready for transmission.
6. Regulate the fidelity, brightness, and contrast of video transmissions, using video console control panels.
7. Report equipment problems, and ensure that repairs are made; make emergency repairs to equipment when necessary and possible.
8. Schedule programming, and/or read television programming logs in order to determine which programs are to be recorded or aired.
9. Select sources from which programming will be received, or through which programming will be transmitted.
10. Set up and operate portable field transmission equipment outside the studio.

INTERESTED?

Like people, occupations have traits or characteristics. These characteristics give important clues about the nature of the work and work environment, and give you an opportunity to match your own personal interests to a specific occupation. When you choose a job in an occupation that matches your own interests you have taken an important step in planning a successful and rewarding career.

The occupation of Broadcast Technician has the **Realistic** and **Artistic** characteristics as described below:

Realistic — Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.

Artistic — Artistic occupations frequently involve working with forms, designs and patterns. They often require self-expression and the work can be done without following a clear set of rules.

LICENSURE, REGISTRATION, OR CERTIFICATION REQUIREMENTS

Generally this is not required for Broadcast Technician positions in state government.

The Federal Communications Commission no longer requires the licensing of broadcast technicians, as the Telecommunications Act of 1996 eliminated this licensing requirement. Certification by the Society of Broadcast Engineers (SBE) is a mark of competence and experience. The certificate is issued to experienced technicians who pass an examination. Many broadcast facilities require SBE certification for employment in their engineering maintenance departments.

Certification may enhance professional growth and career progression.

For information on certification, contact the Society of Broadcast Engineers at the web site: <http://www.sbe.org>

The State Council of Higher Education lists two Virginia educational institutions offering programs in electronics and communications engineering technician: Norfolk State University and World College.

EDUCATIONAL, TRAINING, AND LEARNING OPPORTUNITIES

The Department of labor provides the following information:

Broadcast technicians set up, operate, and maintain equipment that regulates the signal strength, clarity, and range of sounds and colors of radio or television broadcasts. They also operate control panels to select the source of the material. Technicians may switch from one camera or studio to another, from film to live programming, or from network to local programming.

The best way to prepare for a broadcast and sound engineering technician job is to obtain technical school (civilian or military), community college, or college training in electronics, computer networking, or broadcast technology.

Beginners learn skills on the job from experienced technicians and supervisors. They often begin their careers in small stations and, once experienced, move on to larger ones. Large stations usually hire only technicians with experience. Many employers pay tuition and expenses for courses or seminars to help technicians keep abreast of developments in the field.

Broadcast and sound engineering technicians and radio operators must have manual dexterity and an aptitude for working with electrical, electronic, and mechanical systems and equipment. Experienced technicians can become supervisory technicians or chief engineers. A college degree in engineering is needed in order to become chief engineer at a large television station.

COMMONWEALTH COMPETENCIES

Competencies are a set of identified behaviors, knowledge, skills, and abilities that directly and positively impact the success of employees and the organization. Competencies can be observed and measured. When consistently demonstrated, competencies make employees particularly effective in their work. Competencies help lay out a road map to career success. You can use the Commonwealth Competencies to help improve your individual performance by adopting behaviors that make high performing employees successful in their jobs. In this way, you can use the Commonwealth Competencies for your further professional development.

The Commonwealth Competencies are:

- 1. Technical and Functional Expertise
- 2. Understanding the Business
- 3. Achieving Results
- 4. Serving the Customer
- 5. Teamwork
- 6. Interpersonal and Communication Skills
- 7. Leadership and Personal Effectiveness

The above competencies may be applied to employees throughout the Commonwealth of Virginia. They can be rank-ordered by agencies and hiring managers to represent the needs of a specific job. The rank ordering will change depending upon the occupation, an organization's priorities, the actual job requirements, and the supervisor's preferences.

Career success is both about what you do (applying your technical knowledge, skills, and ability) and how you do it (the consistent behaviors you demonstrate and choose to use) while interacting and communicating with others. Hopefully, by studying the Commonwealth competencies, identifying your developmental opportunities, and working to refine your own competence, you can take charge of your career!

For additional information about the **Commonwealth Competencies** go to: http://jobs.state.va.us/cc_planningctr.htm. For the competencies, we first list the competencies and then define each. Finally, we list competency indicators; to describe what successful performance looks like.

COMMONWEALTH CAREER PATH

Career opportunities in the Commonwealth are not limited to moving “up” to the next highest role and pay band, changing positions, or to becoming a supervisor. That’s because most roles describe a broad group of occupationally related positions that perform a range of work that requires increased knowledge and skills. For that reason, Commonwealth roles describe the career paths within the same or higher-level role for the same or different Career Group. The broad salary range and the Commonwealth’s pay practices provide flexibility in recognizing career development and advancement. ([Salary Structure](#))

For example: **Broadcast Technician**

PAY BAND	PRACTITIONER ROLES
3	Electronics Technician I
4	Electronics Technician
5	Electronics Technician

PAY BAND	MANAGER ROLES
5	Electronics Manager

Sample Career Path

Electronics Technician I

The Electronic Technician I role provides career tracks for broadcast technicians performing electronic installation, service, and repair duties ranging from entry-level to journey-level. Responsibilities include installing, repairing, servicing, adjusting, calibrating, fine-tuning, and testing devices, circuitry and components on electronic and electronic communications equipment operating primarily on the basis of electric or electronic principles.

Electronics Technician II

The Electronic Technician II role provides career tracks for broadcast technicians who perform duties ranging from advanced level and highly skilled to supervisory level. Technicians are responsible for functioning with a high-degree of independence in the repair, installation, and service of a wide variety (e.g. receivers, broadcasting, transmitters, radar sets, traffic control devices and satellite dishes) of electronic and electromechanical components and circuitry; or responsible for providing technical leadership and oversight of technicians in planning, scheduling and inspecting the work of others.

Electronics Technician III

The Electronic Technician III role provides career tracks for broadcasting technicians who perform duties at the expert level developing creative solutions. Responsibilities include the design of television, radio, and broadcasting systems (e.g. production rooms, studios, transmitter and translator plants, satellite earth stations, and relay stations) and/or provide technical leadership and oversight for the repair, installation and service in support of statewide network or facility operations.

Electronics Manager

The Electronics Manager role provides career tracks for managers responsible for the design, installation, modification, and repair services of a wide-variety of electrical, electronic and electromechanical communications equipment and components or an entire system. Employees provide oversight to project management and implementation schedules.

ADDITIONAL OCCUPATIONAL INFORMATION CAN BE FOUND AT:

O*NET (Occupational Information Network)

http://online.onetcenter.org/gen_search_page

Virginia Employment Commission

<http://www.alex.vec.state.va.us/>

Career One Stop

<http://www.careeronestop.org/>

Virginia Career Resource Network

<http://www.vacrn.net/>

National Association of Broadcasters

<http://www.nab.org>