

Radio Teacher Technician Test Subelement T7 Notes

These notes cover the information needed to answer the questions on Subelement T7 of the Amateur Radio Technician Test. They can be used by instructors as a reference to make sure that all of the information in this subelement is addressed in class.

Subelement T7 covers field operations, radio direction finding, radio control, contests, special event stations, Satellite operations and operating protocols.

Field Operations:

When operating a hand-held transceiver away from home take one or more fully charged spare battery packs. Use an external antenna instead of the rubber-duck antenna to make the signal from a hand-held radio stronger when operating in the field.

One item that you do not need for field operations is a 1500 watt output linear amplifier. An amplifier of that size takes a lot of power and is not needed for regional communications.

As stated in another subelement, a combination headset and microphone would be a good thing to have when operating from a location that includes lots of crowd noise.

Radio Direction Finding:

Radio direction finding is used to locate transmitters, RF noise, interference and jamming. Radio direction finding can be used to find lost and downed airplanes, lost hikers and boats in distress. A directional antenna is most useful for hidden transmitter hunting.

Contesting and Special Event Stations:

Contesting is a popular operating activity that involves contacting as many stations as possible during a specified period of time. Usually the contesters exchange information such as signal reports, station location or grid locator. A grid locator is a letter-number designator assigned to a geographic location.

A special event station is a temporary station that operates in conjunction with an activity of special significance.

Radio Controlled Models:

The maximum power allowed when transmitting telecommand signals to radio controlled models is 1 watt. A label indicating the licensee's call sign and address must be affixed to the transmitter when sending commands to a radio control model using amateur frequencies.

Satellite Operations:

AMSAT is the name of the group that coordinates the building and launching of the largest number of amateur radio satellites.

Any amateur whose license allows them to transmit on the satellite uplink frequency can use amateur satellites. Always use the minimum amount of power needed to complete the contact when using an amateur satellite. If you use too much power other stations will not be able to use the satellite. Using satellites you can talk to amateur radio operators in other countries.

A satellite beacon contains information about a satellite. The beacon can contain its systems status and current operating modes.

Use a satellite tracking program to determine when you can try to access an amateur satellite. You must have line of sight to work the satellite.

The initials LEO tell you that the satellite is in a Low Earth Orbit.

Any amateur with a Technician or higher class license can make contact with an astronaut on the International Space Station using amateur radio frequencies.

Doppler shift is a change in signal frequency caused by the satellite's motion through space relative to your position.

The satellite sub-band is a portion of a band where satellite operations are permitted. The satellite sub-band on 70-CM is 435 to 438 MHz.

The Technicians Question Pool release 2 and Rules for Amateur Radio, Part 97 are the source documents of these notes. This information is available to the public.

If you have any questions, comments or corrections please post a message at <http://groups.google.com/group/RadioTeacher>