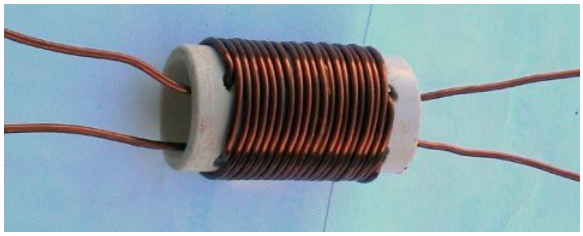
TSE®
Tactical Support Equipment
www.tserecon.com

HF Communication and Antenna Construction

The HF Communication and Antenna Construction Course provides students with an overall understanding of basic communications electronics and field repair as well as modification of communications systems; power computations; troubleshooting procedures; and techniques for field expedient antenna design and fabrication. Students leave the course with a very good overall knowledge of the equipment and the proper expertise needed to construct field antennas, and repair cables and connectors in an austere environment.

Objective: Learn the fundamentals of basic field electronics and apply them to tactical communications; incorporate the design, construction and implementation of field expedient antennas into difficult communications environments using commercially available components and test equipment.



Lesson Assessment: Daily classroom instruction, hands-on assessments & practical exercises are given to demonstrate a mastery of that day's objective. Each day of class includes hands-on demonstrations by the instructor. When the instructor is confident that the objective of the demonstration is understood, the class conducts practical exercises to test their comprehension of the task. These practical exercises include basic bench & field soldering, antenna analyzer use, field expedient antenna design, and antenna deployment for communications reliability. The instructor also insures that the class understands key terminology, as it is used repeatedly in the classroom and during the practical exercises.

Prerequisites: Students of the HF Communication and Antenna Construction Course need to have some experience operating Army fielded radios in order to attend and complete the course. **Enrollment is restricted to individuals who are employed as law enforcement agents, investigators, or officers; members of the U.S. military; non-contract employees of the Department of Defense, Department of Homeland Security, and U.S. intelligence agencies.** Students need a willingness to learn and an attitude that fosters a good learning environment for all parties involved.

Materials: Students need note taking materials and cell phones. As the majority of learning is dependent upon having the necessary materials TSE, Inc. will provide the following equipment: connectors, tools, student practical exercise supplies & sites. **In the event the students want to train on their unit specific equipment, the students will need to bring that equipment to the course, to include any military issued radios desired for use during the practical exercise phase.**

Instruction: The instruction given by TSE, Inc. is paramount to the student's successful understanding of the course objectives. A power point presentation is used as a teaching and lecture tool. This presentation progresses in a logical manner starting with an overview of HF communication theory and terminology. Next the presentation familiarizes the students with common equipment used, radio wave propagation and antenna design. Finally the instruction flows to instructor guided demonstrations & individual practical exercises.

Tactical Support Equipment Inc.
4039 Barefoot Road
Fayetteville, NC 28306
www.tserecon.com

For More Information
Contact training@tserecon.com

Phone: 800.889.4030
Phone: 910.425.3360
Fax: 910.425.3361

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Student activities: Student activities are geared toward a 5-day block of instruction.

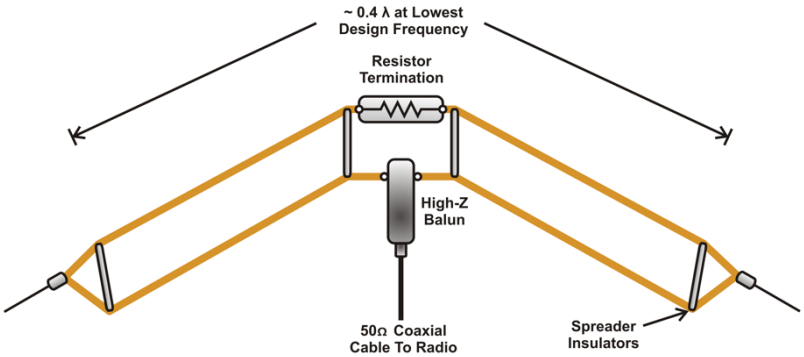
Day 1: Begins with basic radio wave propagation and theory of antenna design and construction.

Day 2: Commences with instruction in antenna system design and field expedient antenna construction techniques. Students are required to construct a variety of antennas for HF communication and test their antennas in the local environment.

Day 3: Consists of instruction on the Harris HF160 radio setup and programming for HF voice and data operations.

Day 4: Continues with the HF160 radio including the CPA, crypto generation, and 3rd generation HF communications (to include wide-band operations).

Day 5: The final day consists of a communications exercise using the HF160 radio and the student made antennas. Rural, suburban, and urban communications planning and site selection criteria are exercised. The last day ends with a week overview and question and answer session. Each day's tasks demonstrate that the students have learned all the objectives of the course so far.



Terminated Folded Dipole Antenna (T2FD or TFD)
Inverted-V Configuration

Contact Tactical Support Equipment, Inc. for pricing and availability. **TSE, Inc. must have a minimum number of students in order to conduct the course.**

Contact: For questions concerning registration, training, and location please contact the Director of Training, Mark Conneway at (910) 425-7232 or 3360, or via email at training@tserecon.com.

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