



Tactical Support Equipment
www.tserecon.com

Technical Surveillance Operator Training Course

The Technical Surveillance Operator Training Course – Basic (TSOTC) provides students with an overall understanding of basic technical surveillance electronics and advanced concealment development; covert audio collection; comprehensive theory & knowledge of CCTV equipment, digital still cameras, terminology, power computations, lens selection computations, troubleshooting procedures, analog & digital video capture, concealable camera wiring construction, techniques for concealing cameras & technical force protection surveys. Additionally, the students learn how to manipulate collected images with software and marking techniques for incorporation into a mission package. Students receive instruction in the use of urban cover and the surveillance mission planning process, as well as construction and employment of different types of mobile observation posts, pros & cons of each type, concealment techniques, and TTPs for operational use. Students also learn basic electronic tracking principles for Hostile Force Tagging, Tracking, and Locating (HFTTL) & Friendly Force TTL operations, including TTPs for installation, operation, & use. Finally, the students learn covert entry techniques for defeating different types of locks, including vehicular locks, using commercial and improvised tools, and bypass methods to defeat locks. TSOTC – Basic is designed to take the student from the “crawl to walk” in urban covert surveillance and the use of surveillance equipment. Students leave the course with a very good overall knowledge of the equipment and the proper expertise needed to operate in the real world.

1. Objective: Learn the fundamentals of basic field electronics and apply them to technical surveillance; incorporate the design, construction and implementation of advanced concealment devices; learn the fundamentals of covert audio, video, surveillance photography, and mobile observation posts. This includes CCTV and digital photography equipment, terminology, power, lens selection, troubleshooting, video capture, installation techniques post processing, and technical force protection surveys. Learn the fundamentals and practice proven TTPs for TTL, and surreptitious entry.



2. 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, multimeter use, constructing power supplies, field expedient concealment devices, and concealment through mold-making, as well as audio vehicle concealments, body wires, fixed structure installations and monitoring/recording, analog & digital video capturing, photography, troubleshooting, conducting surveys, wiring, power, concealable camera applications & lens selection, hasty & deliberate installations, basic field craft, HFTTL & Friendly Force TTL equipment programming, installation, and tracking techniques, defeating warded, disk, & pin tumbler locks, vehicle & structure locks, planning and conducting surveillance missions utilizing techniques taught in class. The instructor also insures that the class understands key terminology, as it is used repeatedly in the classroom and during the practical exercises.

3. Prerequisites: Students of the TSOTC – Basic need to have no specific knowledge in order to attend the course. Mission planning experience is helpful, but not necessary to attend or complete the

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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.

4. 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:



Student mapping & planning computers, mapping software, digital maps, CCTV equipment, vehicles, connectors, tools, radio, systems, student practical exercise supplies & sites. **In the event the students want to train on their unit specific digital cameras (to include digital SLR cameras), CCTV equipment, or recording equipment as well as their unit specific TTL kit(s), the students will need to bring that equipment to the course.**

5. 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 CCTV systems & terminology. Next the presentation familiarize the students with common equipment used, lens computations, power computations, video capture, force protection surveys, camera wiring, and examples for concealing cameras. Also included are: an overview of basic digital photography theory, camera hardware, and techniques for use in a surveillance environment. The course then proceeds to types and uses of mobile observation posts. Finally the instruction flows to instructor guided demonstrations & individual practical exercises.
6. Student activities: Student activities are geared toward a 25-day block of instruction.

Week 1: Focus is on electrical flow, current and power calculations, electrical components and soldering techniques, soldering practical exercises, clay-up molding techniques, alginate, and pouring techniques. Students also learn pin-up molding, integrating electrical circuits with molded devices, basic rotary casting, concealment painting, and putty molding. Students are required to color/texture match their concealments to the environment. The last day ends with a week overview and question and answer session.

Week 2: Focuses on basic audio and video theory instruction detailing an overview of audio modulation, microphones, solid-state recorders, and CCTV equipment. Students receive hands-on training with analog and digital RF audio collection equipment, a variety of CCTV equipment currently used, & a lens selection class & practical exercise. CCTV equipment pile tests & troubleshooting tests are conducted. A vehicle orientation as applied to audio/video collection is conducted, and proper installation techniques exercised. Analog and digital video capture into a



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computer is learned, followed by a digital image manipulation class. Students are required to complete a variety of practical exercises demonstrating their comprehension. A board camera and cop wire project requiring students to build a covert camera system and integrate it into some type of concealment device is conducted, as well as an overview on covert vehicular camera installs. Students are required to complete fixed structure installations as well as a body-worn rigging exercise. 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.

Week 3: Begins with instruction detailing a basic digital photography overview & camera hands-on exercises with both consumer grade and professional grade digital cameras. Field and range testing with the camera systems is conducted, as well as an image marking class. Students also learn how to construct an urban hide site. The week then progresses to mission planning, surveillance techniques, and cover classes followed by an urban surveillance mission at a fixed site. Students receive a class on enhancing images for integration into intelligence products, with various practical exercises to demonstrate their proficiency. The last day ends with a week overview and question and answer session.

Week 4: Starts with an HFTTL & Friendly Force TTL overview, basic use of mapping software with GPS navigation, beacon installation techniques, equipment programming, tracking vehicle preparation, and GPS data recovery and processing. Students conduct exercises including a covert beacon installation mission, tracking exercise, long distance live tracking, and lost tracking exercises. 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.



Week 5: Focuses on instruction in locks and tool basics, warded locks, disk locks, padlocks, pin tumbler locks, and bypass techniques with commercial tools. Students progress to vehicle entry with both commercial and expedient tools, hotel lock bypasses, and construct their own improvised tools. Students exercise their ability to locate and gain access to a vehicle without damage in a daylight semi-permissive environment. The final day consists of the students planning and executing a non-permissive building entry mission during nighttime hours. Once inside, the students will be required to gain entry into other areas and conduct sensitive site exploitation (SSE) of the premises. The last day ends with a course critique and question and answer session.

7. Contact: Director of Training, Mark Conneway at (910) 425-7232 or 3360, or training@tserecon.com.

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