

COMMUNICATIONS DURING CRISIS – 2 Day Training Course

“Alternative Radio & Data Communications – When Everything Fails”

SCOPE & PURPOSE

Government agencies, Crisis Management Teams and First Responders have become increasingly dependent on technology solutions to provide communications in the event of an incident, emergency or disaster. The risk of a complete outage of cellular and trunked radio communications systems, including mobile phone and trunked digital communication networks, is becoming more widely acknowledged. The risk of such an outage, due to severe, or extreme, weather or electrical power net failure would potentially leave municipalities and first responders without the means to communicate and co-ordinate an efficient emergency response.

This course is designed to educate participants on the basic theory of radio transmission and the alternative equipment, transmission modes and configuration to operate effective emergency communications when everything else fails.

Day 1:

Radio Transmission Protocols & Theory

- Technical Basics
- Frequency Allocations
- Transmitters and Receivers
- Modes of Transmission
- Feeders and Antennas
- Propagation
- Safety

Day 2:

Alternative Radio Communication Hardware

- Commercial HF, VHF and UHF Radio Transceivers
- Military HF, VHF and UHF Radio Transceivers
- QRP HF, VHF and UHF Radio Transceivers
- Frequency Selective Repeaters
- Genesis HF, VHF and UHF Radio Transceivers
- Data Transmission & Speech Encryption / Encoder hardware

Alternative Radio Communications Operating Techniques & Procedure

Operating Techniques, Practices and Procedures

Day 2:**Assessment & Exam:**

The course leads to a final assessment and practical examination where participants will be tested on all sections in practical and theory. On successful completion of the examination, a certificate will be issued as a 'Pass', 'Credit' or 'Distinction' – as appropriate.

Notes to the Syllabus:

1. In the syllabus above 2 different levels of comprehension:
 - **Recall** indicates the need to remember a fact and apply it fairly directly to a question or situation. A thorough understanding of why the fact is so and the full range of circumstances in which it is applicable is not required, but questions will expect a basic understanding.
 - **Understand** indicates the need for a more detailed knowledge of the subject, understanding why the point is correct and the range of circumstances in which it is relevant and applicable.
2. Assessment consists of practical exercises shown in sections 1, 2 and 3 of this syllabus, which must be completed before sitting the examination. At the time of writing the exam consists of 25 multiple-choice questions each with 4 possible answers only one of which is correct.

The practical element of the assessment and examination is divided into 2 sections; a) technical ability to operate the equipment and b) operating procedure.

No marks are deducted for wrong answers. The pass mark is 18 questions correctly answered (72%) and all questions carry equal marks.
3. Requests for examinations should be made in the first instance to the Institute of Swedish Safety & Security (ISSS®) e-mail training@iss.se who will be able to provide course dates, application forms and any other further information.
4. The examination will be based on the simplified version of the frequency spectrum and band plans shown in this syllabus. New syllabuses and guides will be issued periodically and will show the date from which they will become valid. Notice will always be given but it is incumbent on students and tutors to confirm that they are working to the current version.

“The most important element of any emergency communications system is that it works.

If it doesn't work, nothing else matters”