



iDirect Government Remote Operator Commissioning Course (iROCC) Syllabus

iROCC Course Syllabus – Jan 2015

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iDirect Government Remote Operator Commissioning Course (iROCC)

The iDirect Government Remote Operator Commissioning Course (iROCC) is intended for Single Channel Radio Operators, Network Administrators, Multi-Channel Satellite Tactical and Fixed Operator personnel who are responsible for the operation, maintenance and management of select iDirect satellite communications products.

The course provides each learner with the basic skills necessary to operate, maintain and manage their assigned components within a typical iDirect satellite network. In addition, the course will provide each individual with the basic knowledge and understanding required to install and utilize the iDirect suite of applications associated with their daily job functions.

Presented in a clear and technical manner, this course provides a combination of lecture, demonstrations, practical exercises/hands on, module reviews, and a final examination that will give each learner a comprehensive overview of Network Operations from the iDirect perspective. In addition to the Learner Instructional Manual handouts are provided, as required, to supplement existing course material and provide additional up-to-date details on currently released software and hardware, as well as changes in important processes affecting the basic remote operation.

NOTE: *This course does not replace the iDirect Operation and Maintenance Course.*

Prerequisite Learner Skills

A fundamental understanding of VSAT technology and normal eye-hand coordination for hardware assembly is desired. Basic software installation is also desired since each learner will be required to install the iVantage suite of applications, specifically iSite, on their laptop. An elementary user level knowledge of Linux is also desired for this course.

While the theoretical knowledge and skills mentioned above are not required to attend this course, they are highly recommended for each learner to receive maximum benefit from the 3-day training course.

Learner Outcomes

Upon completion of this course, each learner will be able to:

1. Install the applicable applications from the iDirect suite.
2. Load image packages, BSP packages, and options files using iSite to the Remote.
3. Perform emergency recovery procedure on iDirect remotes.
4. Perform basic routine maintenance on their iDirect remotes utilizing principles acquired during the lecture and hands-on portions of this course.
5. Understand the overall architecture of the iDirect system
6. Understand the acquisition process of the iDirect remote.
7. Perform basic troubleshooting of iDirect remotes and identify escalation protocol to solve more complex issues.
8. Understand how to access information by utilizing the TAC web page.



Each learner will receive additional information, knowledge and skills as a result of interaction with the other learners in the training session as well as interaction with the instructor and/or other iDirect Government employees.

Course Goal and Objectives

The preparation of this training material is focused, in its intent, to prepare each learner with the basic ability to perform essential job functions when they return to their company or organization. The instructor will conduct a question and answer sessions to alleviate any concerns or questions during a review of each module.

At the end of the three-day training session, a final written exam, which is open-book, may be administered covering the topics presented during the training session. The final examination may cover information not presented in the training session but is included in the training manual. **Please be aware that information presented by the instructor as well as information in the training guide may be included on the final examination.**

Upon successful completion of all course requirements (practical and written), the individual will receive a certificate of course completion and will be certified to perform basic configuration, operation, and maintenance on networks using iDirect equipment.

This course is comprised of eight learning modules, which are summarized below.

Module 1 - Satellite Components & Theory

- *Geosynchronous Earth Orbit (GEO)*
- *Terminology – Propagation Delay*
- *Frame Start Delay (FSD)*
- *The Satellite – Major Components*
- *Terminology: Downstream and Upstream*
- *Typical Satellite Foot Print*
- *Terminology – Signal Polarization*
- *Terminology – Frequencies Supported*
- *Carrier Types*
- *Doppler Effect*

Module 2 – Site Basics

- *Introduction to iSite*
- *How to connect to the remote*
- *Hands-on exercise – how to connect and log in, packages download, and managing options file*

Module 3 – The iDirect process from the Remote's Point of View

- *Hub-side vs. Remote-side equipment*
- *Steps for a remote to enter a TDMA network – Rx lock, timeplan, ACQ bursts, full-acquisition.*



Module 4 – Downlink Configurator

- *Introduction to Downlink Configurator*
- *Downloading and installing Downlink Configurator*
- *Steps to build an options file using Downlink Configurator*
- *Verifying the options file*

Module 5 – Network Operation, Acquisition, and Troubleshooting

- *Network troubleshooting tools*
- *Troubleshooting Downstream acquisition*
- *Troubleshooting Upstream acquisition*

Module 6 – TRANSEC remote

- *Identifying a TRANSEC options file*
- *Preparing and configuring a TRANSEC remote*
- *Acquisition of a TRANSEC remote*
- *Permanently decommissioning a TRANSEC remote*

Hands-on, Demonstrations, and Exercises

Hands-on, demonstrations and exercises are interspersed throughout the entire iROCC training course. Each learner will have the opportunity to display knowledge and skills obtained through the lecture and demonstrations performed by the instructor. At the completion of each demonstration and exercises the learner should be able to perform the task with minimal instructor assists.

Course Critique, Certificate Presentation

Following the completion of the class, the course final exam will be given and reviewed. Course critiques will be distributed and collected after completion for review by iDirect Government management. Course completion certificates will be provided to each learner who has completed all assigned phases of instruction.

Daily Course Activities

Installation Operation & Maintenance Training Course	Day One	Day Two	Day Three
0830 – 0920	Administrative and Module 1: Satellite Component & Theory.	Module 2: iSite Basics Hands-on	Module 5 – Network Operation, Acquisition, and Troubleshooting Hands-on
0930 – 1020	Module 1: satellite Component & Theory.	Module 3 – The iDirect process from the Remote’s Point of View	Module 6 – TRANSEC remote
1030 – 1120	Module 1: satellite Component & Theory.	Module 3 – The iDirect process from the Remote’s Point of View	Module 6 – TRANSEC remote Hands-on
1130 – 1200	Module 2: iSite Basics	Module 4 – Downlink Configurator	Module 6 – TRANSEC remote Hands-on
1200 – 1300	Lunch	Lunch	Lunch
1300 – 1350	Module 2: iSite Basics Hands-on	Module 4 – Downlink Configurator Hands-on	Final Review and Q&A
1400 – 1450	Module 2: iSite Basics Hands-on	Module 5 – Network Operation, Acquisition, and Troubleshooting	Course Analysis, Critique, Certification Presentation
1500 – 1550	Module 2: iSite Basics Hands-on	Module 5 – Network Operation, Acquisition, and Troubleshooting Hands-on	
1600 – 1630	Review and Q&A	Review and Q&A	

Note: The daily course schedule may change depending on the class size and other circumstances.