VSAT Installation Course

Introduction

Although it isn't difficult to install VSAT systems, it does need to be done professionally and carefully in order to maximize the performance of the systems and to ensure that we do not interfere with other communications systems.

DRASTIC runs training courses for installers on a regular basis, covering the Global VSAT Forum (www.gvf.org) syllabus, which is recognized across the industry, with additional material relating to the iDirect modem equipment which we use.

Courses are generally 4-5 days long and include a mix of theory and practical, hands on work. Course dates will be posted on the DRASTIC website, or email us at info@drasticom.org

In Pictures…

The course includes a thorough background in theory

Assembling a non-penetrating mount for a 1.2 meter antenna.
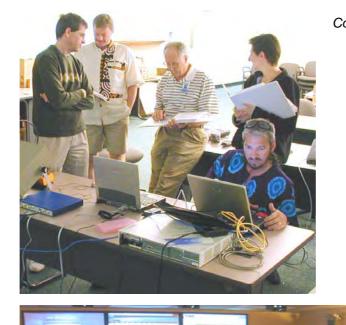
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Fitting the reflector to the mount.

Assembling the outside electronics.

Examining the characteristics of the receive signal using a spectrum analyzer.

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Configuring the iDirect modem

Visiting our Network Operations Center

Visiting our Network Operations Center

Curriculum

Part 1: Satellite Communication Basics

1. What is a communications satellite and how does it work?
2. The ground or earth station
3. Satellite transmission systems
4. Advantages of satellite communications
5. Disadvantages of satellite communications
6. What can we do with communications satellites?
7. Indispensable basics 1: Measurement units
8. Indispensable basics 2: Bandwidth
9. Earth station antennas
10. Signal Polarization
11. Typical antenna feed construction
12. Down converters LNA / LNB / LNC
13. The radio unit or transceiver
14. Modulation
15. Scrabbling
16. Encryption and conditional access
17. Simplified description of the satellite modem
18. Digital modulation encoding (channel coding)
19. Indispensable basics 3: Bit Error Ratio and Eb/No
20. DVB—Digital Video Broadcasting
21. Clocking
22. Elements affecting link quality and communications systems performance
23. Orbital effects in communications systems performance

Part 2: VSAT Technology Basics

24. Preparing for a VSAT Installation
25. Site Survey
26. Typical VSAT Installation
27. Data interfaces
28. Inter Facility Link (IFL) cables
29. Powering of a VSAT Unit
30. Satellite Link Analyses
31. Test Equipment
32. Typical VSAT Link testing
33. Satellite access and E/S verification
34. Grounding and Lightning Protection
35. Preventative maintenance

Part 3: Commissioning iDirect systems

36. iDirect netmodem basics
37. Configuring iDirect netmodem
38. Antenna pointing using iSight
39. Working with the NOC to commission the system
40. Troubleshooting

For more information about DRASTIC see www.drasticom.org or email us at info@drasticom.org