



Core Skills for VSAT Installers

GVF 510 Edition 2

Endorsed by



GVF TRAINING AND CERTIFICATION PROGRAM

GVF's award-winning program, endorsed by WBU-ISOG, encompasses operation, installation, and maintenance of VSAT, marine, and mobile/SNG satellite terminals, in addition to general satcom theory. GVF training is a key part of **interference prevention**.

GLOBAL ACCESS

Students learn, practice, and demonstrate their knowledge and skills with online, interactive, simulator-driven training modules developed by SatProf, Inc. Courses are self-paced and available 24/7.

Hands-on skills testing and supplementary classroom sessions are supported by GVF Examiners and Regional Training Centers located in every major region of the world.

INTEGRATED TRAINING

The GVF curriculum can be integrated with your organization's own online and classroom training on a custom portal provided by GVF, to serve your staff and customers.

WHY CERTIFICATION?

Certification demonstrates and documents your commitment to peers, employers, customers, and competitors that you use industry - endorsed best practices. It will give you and your company a competitive advantage.

Certificate holders may appear in the *Certification Database* on the GVF training website.

FOR MORE INFORMATION AND TO REGISTER

www.gvf.org/training
gvfsupport@satprof.com

TRAINING CONTENT AND SERVICES BY

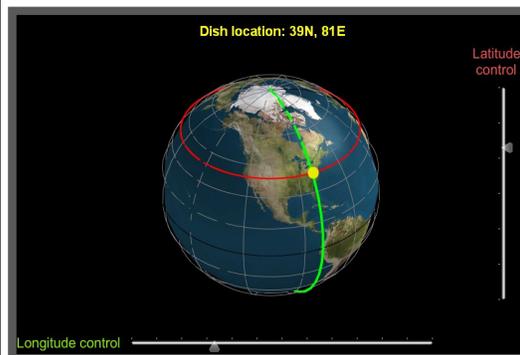
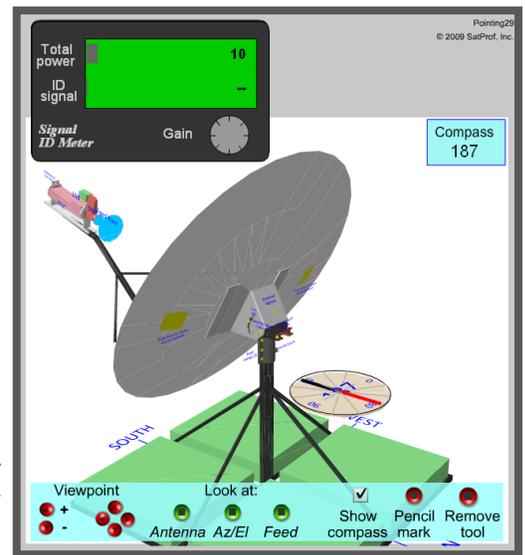


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Improper installation technique is a major cause of interference, which degrades satellite transponder performance for all users. Developed in coordination with major satellite operators, GVF 510 teaches technicians the correct way to point an antenna, align cross pol, attach connectors, and decommission terminals – four leading causes of avoidable interference.

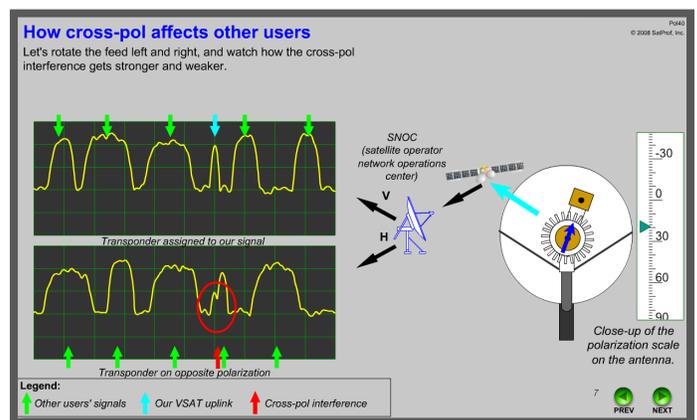
As the first step towards GVF Satcom Professional Certification, GVF 510 teaches and **evaluates** the core skills that **all** VSAT field technicians **must have** – regardless of the type of equipment they install.

The full 3-D interactive antenna simulator, with operating meter and compass, teaches accurate antenna pointing and evaluates real-world find-and-point skills.



Students explore fundamental concepts such as latitude, longitude, and orbit position with interactive, 3D experimenters.

Interactive real-time cross-pol simulation allows field technicians to practice their feed pol alignment skills and to see for the first time what NOC technicians see.



SUMMARY: Core skills required by all fixed VSAT installers for accurate antenna alignment and prevention of major sources of uplink interference. *Second edition: enhanced simulators, revised cross-pol technique, new materials covering cross-pol and line of sight, and updated and enhanced Quick Reference Sheet.*

CERTIFICATION: Students who pass this course and the GVF Basic Hands On Skills Test will receive the GVF Basic Satcom Professional Certification. This course is also required as a pre-requisite for the GVF Advanced Satcom Professional certification and all GVF Satcom Professional Specialist certifications.

CONTENTS:

1. Course introduction, including review of GVF Certification requirements and aspects of interference prevention.
2. VSAT Hardware, with a review of the key components found in all satellite terminals.
3. Cables and connectors, including animated instruction on cable preparation and crimp and compression connector attachment and simulator skills test.
4. Selecting a site, including 3-D interactive animations of latitude, longitude, and satellite orbits, and interactive 3-D line of sight simulator.
5. Polarization theory, with 3-D animation of polarization angles and interactive exercises in pre-setting feed rotation.
6. Building the terminal and finding the satellite, with tutorials in technique for rapidly finding the correct satellite, and practice on a full 3-D interactive VSAT antenna simulator with working signal meter.
7. Accurate pointing, including tutorials and 3-D simulator practice of the beam balance method for preventing adjacent satellite interference, and a start-to-finish simulator for practice and skills test.
8. Cross-pol alignment and activation, including calculating uplink IF frequencies and working with the satellite access center to perform a cross-pol alignment. Includes interactive cross-pol lineup exercise and skills test.
9. Decommissioning and equipment faults, including the key steps for preventing accidental interference from a deactivated terminal.

AUDIENCE: All installers, field technicians, and engineers who may be responsible for activating any type of VSAT terminal.

DURATION: Approximately 200 pages, requiring 5-15 hours study.

DELIVERY: Animated & interactive HTML/Flash, self-paced, on-line format. Requires Internet access while studying the course material. High speed access is preferred but is NOT required. Student's computer must have a current browser and the current version of the Adobe Flash player (free) installed.

LANGUAGES: English, Spanish, Portuguese, and French are integrated throughout the course. Students may switch instantly between languages on any learning page, simulator, or exam.

LEARNING OBJECTIVES

Understand why an improper VSAT installation can cause interference in the satellite. Assemble a basic VSAT. Correctly attach an F connector on an RG-6 cable. Understand latitude, longitude, satellite position, azimuth, elevation, pol angle. Aim the antenna towards the approximate satellite position based on local lat, long, and satellite long. Preset feed pol angle. Find the correct satellite using a typical meter. Point a small antenna accurately enough to minimize adjacent satellite interference. Adjust feed pol angle for best cross pol using uplink test in coordination with the satellite access center. Correctly decommission a VSAT to prevent it from making interference.

TESTS: Each lesson contains a mandatory quiz and simulator-based skills assessments. All pages must be viewed and all quizzes and simulator tests must be passed in order to satisfactorily complete the course.

REFERENCE MATERIALS INCLUDED: GVF Quick Reference Sheet for satellite field technicians; extensive glossary.



www.gvf.org

GVF is the global association of the satellite communications industry. GVF is an independent, non-partisan and non-profit organization with 200+ members from every major region of the world.



www.satprof.com

SatProf administers GVF's training program, using simulator-based training to enable more than 8000 students worldwide to develop practical and interference-mitigating VSAT skills.