



Ground Electronics Theory & Testing Training

(ION Part Number: 1019-010011)

Course Information

Course Description:

Students study and learn the theory of operation of Ground Electronics hardware, such as, the SVSM (VectorSeis Receiver), A- (Analog) and D- (Digital) Units, BBU (Battery Booster Unit), and XLU (Cross-Line Unit). This training includes familiarization and hands-on exercises with the RTS (Remote Test Station) to conduct extensive test on the ground electronics hardware. Use of the TIU (Tester Interface Unit) shall be emphasized during the testing process. Students will identify the different types of test cables, set-up power supplies, layout test configurations, and perform software update procedures for the SVSM, A-Units and D-Units, BBU , XLU, and self-testing the TIU. Students will launch test sequences required on each hardware layout option and read displayed results or retrieve results of previously run tests.

Prerequisites:

An understanding and familiarity with personal computers and seismic data acquisition/collection methods. Three years experience in troubleshooting and repairing digital data equipment. Associates degree in electronics or equivalent work experience is preferred.

Course Fee: \$2500.00 per person (see [Terms and Conditions](#))

Facility: Stafford, TX USA

Duration: 5 days

Scheduling: Please send request to training@iongeo.com



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**ION Geophysical Corporation
Land Imaging Systems
Training Group**

Daily Modules for Ground Electronics Theory & Testing Training

Day One

1. Introduction to Ground Electronics hardware
2. Theory of Operation of the following:
 - SVSM (VectorSeis Receiver)
 - A- (Analog) and D- (Digital) Units

Day Two

1. Theory of Operation of the following:
 - A-Units and D-Units... continuation
 - BBU - Battery Booster Unit
 - XLU – Cross Line Unit

Day Three

1. Familiarization of the RTS (Remote Test Station) hardware, cabling, and functional block diagram
 - PC - Personal Computer
 - TIU - Test Interface Unit
 - Power Supplies – 12VDC and 48VDC
 - UPS – Uninterruptible Power Supply
 - Test Cables
2. Operation of the RTS

Day Four

1. Layout & Testing procedure, updates, and test results analyses
 - A-Unit
 - D-Unit and SVSM
 - BBU - Battery Booster Unit
 - XLU - Cross Line Unit



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Day Five

1. Hands-on using RTS
2. Course Summary and Q&A
3. Final Exam
4. Course Evaluation



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1.1 Training

1.1.1 Definitions

1.1.1.1 One (1) “training day” means eight (8) hours of instruction time per student, including breaks.

1.1.1.2 One “unit” of training is equal to five (5) training days.

1.1.2 Terms and Conditions

1.1.2.1 The purchase of one (1) unit of training is equal to five (5) days of training for one (1) individual.

1.1.2.2 Training units may be used after delivery of the system to Buyer, but will expire one (1) year after system delivery.

1.1.2.3 Class size will be limited to a maximum of eight (8) students and require a minimum of four (4) students unless otherwise agreed to in writing by Buyer and Seller.

1.1.2.4 The training location will be agreed to by Buyer and Seller. The training location is required to, at all times, meet reasonable health and safety conditions. If, in the instructor’s opinion, a location selected by the Buyer at any time fails to satisfy the above conditions, the instructor may postpone the class until such time that the location satisfies the above conditions.

1.1.2.5 The Buyer will be responsible for all travel related expenses (including but not limited to airfare, lodging, meals, and local transportation) of their personnel attending training at any ION facility unless agreed to in writing by Buyer and Seller.

1.1.2.6 If Buyer requests that training be made available at Buyer’s site, Buyer will be responsible for travel and lodging expenses for the Seller’s instructor. Buyer will also be responsible for portal-to-portal charges and wage expenses for Seller’s instructor if travel is required outside of the standard ION workday and workweek.

1.1.2.7 Seller’s training classes delivered at the Buyer’s site will be performed at such times to conform to the standard ION workday and workweek unless agreed to in writing by Buyer and Seller. Buyer will be responsible for wage expenses for Seller’s instructor if training is required outside of the standard ION workday and workweek.



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- 1.1.2.8 Training will be conducted in English. If a translator is required, the Buyer will be responsible for providing, at Buyer's expense, a translator for the duration of the training.
- 1.1.2.9 If buyer requests documentation in any language other than English, the Buyer will be responsible for all costs associated with the translation of said documentation.
- 1.1.2.10 Additional training days may be purchased from ION. The current price per training day as of 07/01/07 is \$500.00. This price is subject to change without prior notification.
- 1.1.2.11 Buyer has the right to cancel any confirmed class or attendance of any prior registered student up to ten (10) business days prior to class start date with no charge to Buyer. If Buyer cancels the confirmed class or attendance of any registered student within ten (10) days prior to class start date, Buyer will pay 50% of the standard course cost per seat cancelled in cash.
- 1.1.2.12 Seller has the right to cancel any confirmed class up to ten (10) business days prior to class start date with no charge to Seller. If Seller cancels a confirmed class within ten (10) business days or misses the confirmed class date, Seller will deliver the subsequent class at 50% of the standard course cost to Buyer. If Seller is forced to cancel a confirmed class for reasons outside of Seller's control, such as weather, acts of terrorism, labor disputes, emergencies, fire, laws or regulations, or other reasons, Seller may cancel any confirmed class at any time at no charge to Seller.