



- We run courses to meet customer demand and are happy to attempt to accommodate any date convenient to your crews. To check whether a course date is available please email: seamapsales@mind-technology.com
- Our courses require a minimum of 4 delegates and a maximum of 6. If you have less than the required quota, we can advertise the dates to other companies to make up the full delegate requirement.
- Seamap also offers a GunLink Operators Course, a BuoyLink Operators Course, plus an Advanced Engineering Training Course for GunLink 2000. Full details are available by emailing seamapsales@mind-technology.com
- Seamap must be in receipt of a purchase order to guarantee places. Seamap (UK) Ltd. reserves the right to cancel courses if attendance is too low. To avoid disappointment, please book early as demand for places is high.



Course Venue

Seamap's on-site training facility in Shepton Mallet, Somerset, in the South West of England. Duration: 3 days.

The course is a combination of the essentials required for hardware maintenance of the GunLink 4000 system, together with a full understanding of the GunLink 4000 operation software. Content explores troubleshooting techniques required by both Observers and Mechanics and consists of approximately 50% practical work and 50% lectures.

The course is designed for users who have attended the GunLink Operator's Course or have a working knowledge of the software from field experience. The essential basic understanding of display, configure and GunLink Web will be assumed but the topics reviewed in a series of question and answer modules.

Teaching is conveyed through a combination of lecturing with the use of a projector and flipchart, software driven examples, and hands-on experimentation. We will aim to provide 1 dual-screen workstation for each pair of students, who will take it in turn to operate the various software applications.

Upon completing this course, participants will be able to:

- Describe the key hardware elements and how they interact with the rest of the equipment
- Identify faults on the system and describe their probable cause
- Suggest the best possible response for resolving problems
- Replace a complete Gun Firing and Sensor Module (GFSM)
- Install software on a computer and then set it up as a Host, Spare or Remote machine
- Replace the Gun Firing Module from a GFSM
- Replace a Gun Plate Module from a GFSM
- Replace a Termination Electronics Module (TEM)
- Replace component boards inside a TEM
- Replace an Umbilical Power Supply Unit Controller board (UPSUC)
- Understand the functionality of the fundamental components of the acquisition software, Display
- Create database backups and understand the process of contract archiving
- Update the software and firmware
- Interpret Far Field Signature Data

GUNLINK 4000 - ADVANCED ENGINEERING TRAINING COURSE

The course agenda contained on this brochure is an outline of the material covered. Please note that actual content may change as we like to adapt the course to suit the personnel, their specific requests and their company's use of GunLink. The GunLink course expands the user's knowledge to the GunLink's true capabilities which are far beyond just controlling the source.

Students are provided with a set of course notes as well as stationery for making their own notes. Delegates are not required to bring anything to the course. Students will all receive certificates on completion of the course. These will be handed out at the end of the course or posted to your company's head office shortly after course completion.

All accommodation and travel to and from the course is the responsibility of the delegate. The course runs from 09:00 until 17:30 each day. To ensure course content isn't missed we do ask that you book any return flights with a departure time of no earlier than 20:00 on the last day of the course.

Refreshments are provided during the breaks, and water is provided throughout the course. Lunch is provided on both days. If delegates have particular dietary requirements, special requirements, allergies or are registered disabled then please email seamapsales@mind-technology.com with details at least 5 working days in advance of the course start date. All information will be treated in the strictest of confidence. All UK enclosed public places, including training rooms, are non smoking. We therefore ask delegates to respect this at all times during their stay.

Course Agenda:

1. Introduction to the GunLink System

- Key features
- Key components and their organisation
- Hardware Architecture
- Software architecture
- Analogue to digital conversion

2. Configure Software for Digital Source Controllers

- Differences between GL4K and GL2K
- Building a configuration by example
- GunLink Web maintenance of configurations
- Swapping guns in GunLink Web
- Swapping solenoids in GunLink Web

3. Data Acquisition

- GunLink panel applet
- Display software
- Navigation header interface

4. Timing Control Unit (TCU)

- Input / output jumper settings, line drivers programs and controlling them.
- Replacing Power Supply Unit (PSU)
- Replacing backplane

5. UPSUC and External Power Supplies

- Front panel controls and menus
- Fault conditions
- Replacing boards

6. Deck Lead Breakout Module (DLBM)

- Front panel indicators
- How to test a functional LED
- Fault-finding on the DLBM

7. Winch Reel Interface Module

- Installation
- Replacing Media Converters

8. TEM

- Components and interfacing
- Board replacement
- Umbilical Termination Module
- Differences in TEM design
- Disassembly and assembly
- How to swap a TEM

9. Array Connections

- Power and telemetry lines
- Drop cables
- 16-Way cable connections

10. GFSM

- Module description and variants
- Bus architecture
- Fault finding
- Replacement
- Repair options

11. Maintenance and Reports

12. Far Field Signature Synthesis Interpretation

- Superposition principle
- Real-World application

13. Troubleshooting Q&A session

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