- 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 4000. 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: 2 days.

The course objective is for participants to gain a wider understanding of GunLink 2000 architecture and gain practical experience of essential software issues relevant to general survey operation. Troubleshooting techniques required by System Instrumentation Engineers, Shift Leaders and Senior Observers are explored through 50% practical work and 50% lectures.

This is a hands-on course aimed at operators of the GunLink 2000 system. It is a combination of the essentials required for hardware maintenance of the GunLink 2000 system together with a full understanding of the GunLink operation software. It covers, in review form, a substantial part of the material from the GunLink operator's course but is intended to follow on from that course and is therefore pitched at an advanced level.

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 TCU backplane

- Test a navigation interface and confirm system timing

- Replace and configure a GPS internal receiver

- Troubleshoot a Gun Control Unit (GCU) Chassis and backplane

- Interpret Far Field Signature Data

- Install GunLink software and complete a network installation of a Remote and Host Computer

- Replace an ATX Power Supply on a GCU

- Configure a Timing Control Unit (TCU) backplane for external interfaces

- Complete an installation of a GunLink system to a mock gun array

- Understand the functionality of the fundamental components of the acquisition software, display

- Create Database Backups and understand the process of contract archiving

- Apply software updates and patches and update firmware as necessary

SEAMAP U.K. TRAINING

GUNLINK 2000 - ADVANCED ENGINEERING TRAINING COURSE

Attendees must have attended the GunLink Operator's Course prior to taking part in this Advanced Engineering Course. The essential basic understanding of display, configure and GunLink Web will be assumed and the topics reviewed in a series of question and answer modules. Students should also have some intermediate understanding of basic electronic circuitry and control principles.

The course is 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.

The course agenda detailed to the right 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 the Gun Controller.

Students are provided with a set of course notes as well as stationery for making their own notes. No previous knowledge of the system is required. 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. **Review of 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 GL2K and GL4K
   - 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
   - System Timing

4. **Timing Control Unit**
   - Input / Output Jumper Settings, Line Drivers programs and controlling them
   - Replacing PSU
   - Replacing Backplane
   - Swapping transducer Cards from a GCU

5. **GPS Receiver**
   - Configuring and testing

6. **GCU Chassis**
   - COMMS Signals, Ethernet Traffic, 24V, 12V, 5V, 3.3V Rails
   - Replacing an ATX Power Supply
   - Replacing a Mains Input Filter
   - Replacing a Front Panel Assembly
   - Replacing a Front Panel Switch

7. **Maintenance and Reports**

8. **Far Field Signature Synthesis Interpretation**
   - Superposition Principle
   - Real-World Application

9. **Troubleshooting**
   - Tasks for various software components
   - Hardware related troubleshooting
   - Seeking further support