



Solid State Interlocking – Data Link Instrumentation and Testing

Aim

This course is intended for staff who will be required to perform complex health checking and fault diagnosis upon the trackside data links of UK style Solid State Interlocking Systems (SSI).

Key Features

- The course benefits from significant practical time on a working SSI interlocking at our training centre.
- The skills are equally relevant to the next-generation Westlock and Smartlock products.
- The course includes assessments to demonstrate underpinning knowledge and practical skills.
- The course also includes relevant Instrumentation Engineering issues in accordance with Network Rail Standard “Use of Monitoring and Test Equipment”
- Hazards associated with the connection of test equipment

Course Outcomes

On successful completion of this course, the delegate will be able to:

- Use the Production Telegram Error Rate Test Set (PTERTS)
- Use a digital storage oscilloscope
- Use a data link interrogator
- Demonstrate an understanding of the risks and limitations associated with the connection of instrumentation
- Perform short duration attended tests and temporary unattended monitoring
- Connect equipment correctly and safely
- Assess likely effects upon the circuits under test, to make non-intrusive measurements
- Demonstrate an understanding of instrumentation power supplies and fusing
- Assess existing equipment and systems before starting
- Perform a data link amplitude and symmetry survey
- Diagnose data link health based upon voltage and waveforms obtained

Assessment and Certification

Achievement of the Course Outcomes will be assessed by a practical and theory assessment.

The delegate’s achievement of the Course Outcomes will be confirmed by a certificate which will be forwarded to the nominated client contact following the course.

Pre-Requisites

A well prepared delegate is expected to be familiar with SSI interlocking and trackside equipment maintenance. The delegate should also have a good understanding of electrical theory.

Practical Information

Duration: 5 Days

Location: This course can be run at our Derby training centre, or on your premises (subject to equipment availability)

Maximum number of delegates: 6

This course is produced and run by Signet Solutions.

For further information contact us:

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Course Progressions

We offer many signalling technical courses, and it can be difficult to work out what's best for your needs. The following table will assist you.

*Development Courses in green text

These courses typically form the backbone of a career development path, and are usually taken in the order shown. *Available on an "open" basis, in which you can take individual places from our regular timetable.*

*Supplementary Courses in blue text

These courses provide supplementary knowledge about a specific technology or process. They can generally be taken on an "as needed" basis, without any particular order. *Available on a "private" basis, in which you sponsor the delivery of a full course. This works better for four or more delegates.*

This is just a quick guide – please consult our individual course specifications for more detailed information. Please ask us if you have any queries.

| Signal Maintenance & Signal Installation | Signal Design | Signal Works Testing |
|--|---|---|
| Introduction to Signalling/ Basic Signalling 1 & 2 | Basic Signalling Technology Intermediate Signalling Technology Layouts Intermediate Signalling Technology Control Tables Advanced Signaling Technology | Introduction to Signalling/ Basic 1 & 2 Mod 5 - Test Assistant Mod 3c - Verification Tester Mod 3BL - Functional Tester Mod 4 - Functional Tester Mod 2 - Principles Tester Mod 1 - Tester in Charge |
| SMTH - Signalling Maintenance Testing Handbook Appreciation Route Relay Interlocking - Maintenance Interlocking Design Clamp Lock Installation Clamp Lock Maintenance Cable Jointing Supplementary Back Drives + Stretcher Bars EISS Electrical Installation Skills Electrical Principles Style 63 Points Installation Style 63 Points Maintenance Westpac MK111A Maintenance + Faulting HW100 Points Maintenance EBI Track 200/T121 Track Circuits Fault Finding Techniques Mechanical Signalling | Route Relay Interlocking Route Relay Western Region E10k Circuitry Correlation Westpac MK11A - Design Location Design Project Level Crossing Design SSI Appreciation SSI Control Tables SSI Data Appreciation SSI Data Preparation Route Relay Interlocking - Mod 3BI Westpac MK11A - Testing | |