

Ref:	NR/L2/CTM/012/055
Issue:	1
Date:	03 September 2011
Compliance date:	02 June 2012

NR/L2/CTM/012/055 Competence & Training in Signal Engineering

SIG 55: G110 Tester/Lead tester

1. Purpose.

The purpose of this competence standard is to define the competence requirements for persons required to undertake the duties of G110 tester and lead tester.

2. Scope.

This competence standard covers the role of persons undertaking G110 testing to demonstrate that the appropriate design, installation and testing specifications are met and that assets are fit to be returned to service.

The level and extent of responsibility includes their own safety and that of others who might be affected by their work. The person shall be expected to refer to others for authorisation when required, be responsible for the implementation of the instructions and shall work within set procedures and specifications. The person is responsible for the quality of their completed work.

This competence standard shall be used to assess the competence of people undertaking G110 testing of signalling equipment, and for assessing lead testers.

3. Competence standard.

This competence standard comprises four elements.

Element 1: Prepare to undertake testing of signalling systems and equipment.

Element 2: Undertake tests/checks to confirm compliance with the design and specifications.

Element 3: Determine the status of the tested signalling systems and equipment.

Element 4: Lead G110 testing activities involving multiple test teams.

To prove competence in this unit, the person shall demonstrate their ability to complete G110 testing in accordance with instructions. The person shall have to show they can follow recording, reporting and escalation procedures.

4. Competence prerequisites

Competence requires to be held for the system/equipment under test by the G110 tester, either in a maintenance/faulting or installation capacity.

A G110 tester candidate requires to hold competence as an SMTH tester, including SFI Level 1 testing, **or** have experience in an role where they have demonstrated an equality of competence in signal works testing or works delivery, and must be selected for this particular testing role by their line manager through the use of an appropriate selection process.

A G110 lead tester additionally requires to be selected for the role, and be assessed against the requirements of this standard.

Copyright Network Rail

Ref:	NR/L2/CTM/012/055
Issue:	1
Date:	03 September 2011
Compliance date:	02 June 2012

5. Assessment.

5.1 Initial Assessment

Evidence shall be used from initial G110 Tester training and mentoring assessments to determine the competence level of the candidate, from the candidate undertaking G110 Tester activities

5.2 Re-assessment

Competence shall be re-assessed as a minimum every 2 years. G110 Testers shall additionally undergo assessment periodically in order to retain their competence. Employers can have their own additional assessment processes, and shall arrange for suitable surveillance of G110 Testing

5.3 Knowledge evidence that is common to the whole unit.

candidates shall have knowledge and understanding of:

- a) health and safety legislation, regulations and safe working practices and procedures;
- b) what the site access procedures are for different locations, and when they are required;
- c) how to interpret information to identify the location of safe access points;
- d) test reporting documentation and procedures;
- e) reporting lines and procedures;
- f) analysis methods and techniques;
- g) lines and methods of effective communication;
- h) which communication methods/protocols are applicable and how to demonstrate that colleagues understand which is required;
- i) engineering specifications for products and assets;
- j) test reporting documentation and procedures.

Ref:	NR/L2/CTM/012/055
Issue:	1
Date:	03 September 2011
Compliance date:	02 June 2012

Sig 55_Unit: G110 Tester/Lead Tester

Element 1: Prepare to undertake G110 testing of signalling systems and equipment

Performance statements.

Candidates shall be able to

- accurately determine the scope of the work to be carried out;
- confirm that the personnel nominated for the testing activity are available and authorised to undertake the tasks;
- confirm that all tools and test equipment to be used are available, appropriate for the work, serviceable and suitable for the working conditions;
- confirm that all documentation required for the work is available, accessible and a current issue;
- accurately establish the location of the task;
- confirm work locations are accessed safely, within any agreed timescales and in accordance with the site access procedures;
- obtain sufficient documentation for reporting and recording the work to be undertaken in compliance with organisational requirements;
- deal effectively with any deficiencies and the non-availability of documentation, tools, test equipment or other resources in accordance with organisational procedures;
- identify the necessary safety requirements and take relevant action to confirm the safety of themselves, others and railway operations.

Scope of competence.

- Locations include:
 - external (e.g. trackside);
 - confined spaces;
 - areas to which the public have access;
 - elevated structures;
 - internal (e.g. signal box, equipment room, etc).
- Scope of work includes:
 - SMTH Testing;
 - G110 Non-Conceptual Testing;
 - G110 Emergency Testing.
- The test equipment includes that used for:
 - measurement;
 - interrogation.
- Documentation includes:
 - test schedules;
 - test plan lists;
 - test plans;
 - design diagrams;
 - equipment specifications;
 - certificate of conformity (where appropriate);
 - records of previously completed testing (where appropriate);
 - industry procedures.

Knowledge statements.

Candidates shall have knowledge and understanding of;

- health and safety legislation, regulations and safe working practices and procedures;
- what the site access procedures are for different locations, and when they are required;
- how to interpret information to identify the location of safe access points;
- how to define the limits of testing to confirm operational equipment is not affected;
- how to confirm that any previous testing has been completed;
- where to obtain the information required to determine the nature of the work and how to identify the scope of the work;
- how to confirm that supporting personnel are competent and authorised;
- which documents contain references to the types of test equipment required;
- what methods are used to recognise that the types of test equipment are authorised and serviceable;
- how to confirm that a document is current and authorised;
- which engineering drawings, diagrams, specifications, schedules, reports and technical manuals/instructions contain information relevant to the work;
- what recording documentation is required;
- what tools and test equipment are required for the work;
- what the procedures are for dealing with deficiencies and any lack of tools, test equipment or documentation;
- how to control the issue and use of test equipment.

Performance evidence requirements.

Performance evidence shall be collected by observation in the workplace or during training, of the person completing all relevant testing procedures in respect of performance statements: a - i, and for all items applicable in scope statements 1 - 4.