



Australian Government

Assessment Requirements for UEEEC0067 Troubleshoot basic amplifier circuits

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant risk identification, assessment, reporting and control requirements
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements
- applying sustainable energy principles and practices
- isolating circuits/machines/systems
- coordinating work with relevant person/s
- determining live testing/measurement requirements
- dealing effectively with unplanned events
- identifying and accessing materials, tools, apparatus and testing devices
- accurately taking measurements and calculating parameters
- applying methodical problem-solving techniques
- providing justification for the solutions to problems
- providing solutions to amplifier circuit problems
- using of engineering terms and formulae
- calculating of gain bandwidth product
- calculating of gain and frequency response
- using engineering formulas for calculating gain and bandwidth
- using and verifying operation of an operational amplifier.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- amplifier terminal characteristics
- basic amplifier principles, including:
 - amplifier types
 - gain bandwidth product

- decibels, engineering terms and formulae
- calculation of gain and frequency response
- measurement of gain and frequency response
- amplifier configurations - inverting, non-inverting; differential; comparator and summing; need for, and effects of, positive and negative feedback in an amplifier circuit
- practical amplifiers
- negative feedback
- relevant manufacturer specifications
- relevant job safety assessments or risk mitigation processes
- relevant standards, codes and regulations
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to troubleshooting basic amplifiers
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>