



**National Qualifications 2011  
Internal Assessment Report  
Applied Practical Electronics**

**Intermediate 1**

The purpose of this report is to provide feedback to centres on verification in National Qualifications in this subject.

# National Courses

## Titles/levels of National Courses verified

C119 Applied Practical Electronics (Intermediate 1)

### General comments

All centres have a clear and accurate understanding of the requirements of the national standard.

All centres are familiar with all necessary documentation required to deliver this qualification effectively. Some centres use the Cycle Lights project whereas others use the Traffic Light Controller project. One centre uses both.

All centres demonstrated a clear understanding of the Evidence Requirements for the Course. However, there are some differences in the generally accepted standard of required evidence, both written and practical. The biggest variable is the accepted standard of practical work from circuit layout, to soldering then eventual testing.

All assessment decisions were found to be accurate with suitable internal verification. However, there were clear differences in the amount of detail given by assessors and Internal Verifiers for external verification. Not all centres were able to provide clear, written detail with regard to assessment decisions but all decisions were found to be accurate when explored during the external verification process.

### Areas of good practice/areas for improvement

The following areas of good practice were identified in certain centres and should raise standards if implemented in all centres, where possible and applicable:

- ◆ Excellent notes were available with details on assessment decisions for the marks awarded.
- ◆ Internal verification was extremely thorough, well presented and easy to follow.
- ◆ Good use of grids and checklists throughout the Course helped with selecting candidates randomly for cross-marking.
- ◆ The good use of plastic standoffs to hold circuit boards slightly above mounting board was noted.
- ◆ Transistor sockets were used to allow easy replacement and recycling of components.
- ◆ A commercial labelling system was used to give projects a more professional finish.
- ◆ A very high standard of soldering was expected of candidates. This showed in the quality of soldering onto the board connector pins and in the odd repairs where pupils have neatly re-routed tracks on the top of the board.
- ◆ Some written responses were very detailed and extensive.
- ◆ Candidates were able to view their circuits through a camera linked to a computer and smartboard. The view could be expanded to show any faults and the results linked to other software such as a word processor.

- ◆ Candidates were encouraged to carry out all activities in a safe manner and provide a reasonably high standard of work.
- ◆ Very good use was made of tie-straps to emphasise the orthogonal layout of the wiring.

### **Specific areas for improvement**

The following areas for improvement were noted in certain centres and are highlighted here in order to raise awareness where applicable.

- ◆ Although projects were generally marked to a very high standard, in some instances, more detail in the comments sheet would be useful when comparing marks from different candidates.
- ◆ Candidates should be encouraged to repair incorrect track cuts by re-routing the circuit on top of the board to maintain orthogonal layout and a flat surface underneath.
- ◆ The use of available strip-board grids should be encouraged to enable candidates to provide neater circuit layouts.
- ◆ The labelling of switches and other components, particularly in the Traffic Lights project, is desirable.