



**National Qualifications
Internal Assessment Report 2012**

Electronics and Instrumentation

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

National Courses

C119 Intermediate 1 Applied Practical Electronics

General comments

All centres have a clear and accurate understanding of the requirements of the national standards. Centres are more consistent than in previous sessions with regard to the general 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.

Course Arrangements, Unit specifications, instruments of assessment and exemplification materials

All centres are familiar with the current necessary documentation required to deliver this award effectively. Some centres use the cycle lights project whereas others use the traffic light controller project. One centre uses both.

Evidence Requirements

All centres demonstrate a clear understanding of the Evidence Requirements for the Course. Although more consistent than in previous sessions, there are still some differences in the general accepted standards of required evidence, in particular practical evidence. The biggest variable, as stated above, is the accepted standard of practical work, from circuit layout to soldering then eventual testing.

Administration of assessments

Most assessment decisions were found to be accurate, with suitable internal verification. Adjustments were made where necessary. In some instances assessors and Internal Verifiers had changed during the session due to staff changes.

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. However, most decisions were found to be accurate when explored during the external verification process, and adjustments were made where necessary.

Areas of good practice

As with last session, 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, providing details on assessment decisions for the marks awarded.

- ◆ Internal verification is extremely thorough, well presented and easy to follow.
- ◆ Good use of grids and checklists to randomly select candidates for cross-marking throughout the Course.
- ◆ The good use of plastic standoffs to hold circuit boards slightly above mounting board was noted.
- ◆ Transistor sockets have been used, allowing easy replacement and recycling of components.
- ◆ A commercial labelling system has been used, giving the projects a more professional finish.
- ◆ A very high standard of soldering is expected of candidates. This shows in the quality of soldering onto the board connector pins and in the odd repairs where pupils have neatly rerouted tracks on the top of the board.
- ◆ Some written responses were very detailed and extensive.
- ◆ New technology is being employed whereby candidates can view their circuits through a camera linked to a computer and smartboard. The view can be expanded to show any faults and the results can be linked to other software such as word processing.
- ◆ Candidates are encouraged to carry out all activities in a safe manner and provide a reasonably high standard of work.

Specific areas for improvement

As with last session, the following areas for improvement were noted in certain centres and 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 to show why and where marks were or were not awarded.
- ◆ Candidates should be encouraged to repair incorrect track cuts by rerouting the circuit on top of the board to maintain orthogonal layout and a flat surface underneath.
- ◆ The use of available strip-board grids to enable candidates to provide neater circuit layouts should be encouraged.
- ◆ The labeling of switches and other components, particularly in the traffic lights project, is desirable.