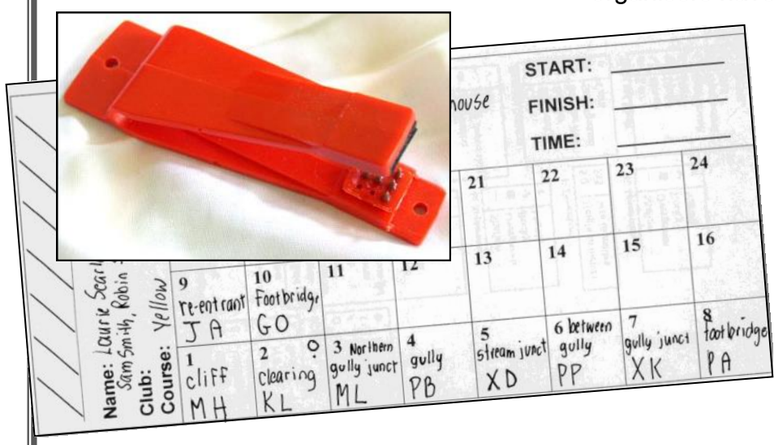
Know your sport: Electronic Timing - Emit and SI

There are three obvious questions which need to be answered when someone completes an orienteering event:

- how long did you take?
- did you find all the controls? and
- did you get them in the right order?

For a fair competition, for the first question the organisers have to ensure accurate timing. For the second and third there has to be a system allowing the competitor to demonstrate that they did actually reach the controls in the correct order.



The original system was to have clocks at the start and finish with competitors times being written down as they finish. The total time was then calculated by subtraction - not always accurately!

Proving that a control had been visited was by the use of a control card which had to be punched at each control. Pin punches were used to perforate the card with different shapes. Courses had to be designed to avoid the risk that competitors would take the controls our of order. If necessary, there was the option of having a manned control to check everyone's card (often manned controls were threatened but not actually implemented).

Now though we have electronic systems which do all this - and much more! There are though two competing types of system, **Emit** and **SI**.

Emit

The Emit system was adopted by the South Central region (including BKO) when electronic systems were being introduced. It is therefore the most common one locally.

Competitors carry a 'brikke' which is inserted into the matching Emit control unit. A small light on the control unit flashes to show that the time has been recorded. Some versions of the Emit brikke have a display which allows the competitor to see the time taken and, on contacting the control, the display changes which is another way of confirming that the time has been logged.

An advantage of the Emit system is that there is a 'back-up' card inserted into the back of the brikke which allows a pin on the control unit to provide a mark independent of the electronic system to prove that the control was reached. Many competitors don't bother to press the brikke fully onto the unit to get this mark. The main disadvantage of the Emit system is that the brikke contains a battery and this has a limited life - possibly 5 years but they have been known to fail before that (particularly the ones with the display).

As shown in the picture, the brikke has to be inserted into the control in a fixed direction—this is not liked by many people. There are different versions of Emit which are designed to avoid this issue but then you loose the advantage of the back-up card and pin marks *(see other box).*

The SportIdent (SI) System

The alternative system is SI. The unit carried by the competitor (known as a 'dibber') is smaller and usually carried on a finger. The time is recorded by inserting the dibber into a circular hole on the SI control unit. This gives a visual flash from the control unit but in addition there is an audible 'bleep' - can be useful if another competitor gets to the control and you haven't actually seen it!

Unlike the Emit system, the SI system has no back-up card. You will sometimes see an old style punch which you should use if the control unit does not respond. It also doesn't have any option of a visual display of your time.

Advantages of the SI dibber are that it does not contain a battery (just the memory device) so does not fail (or not as frequently) and, being round, it does not matter how you approach the unit to insert the dibber.

Which is best?

There is endless discussion about which system is best! There are frequent postings on the main discussion forum on the internet ('Nopesport') in which this question is debated. Some of the main points have already been mentioned. There are though additional technical arguments.

Emit brikkes are cleared of all previous data when you use the unit at the start. For SI you have to remember to use a separate 'clear' unit near the start.

Also, for SI, each control unit contains a clock so each unit has to be synchronised regularly as they tend to drift by a few seconds each week. Another issue is that the control units tend to go into a sleep mode when not in use and so the first competitor may find that an SI unit takes slightly longer to operate if they are the first to reach a control (this can be avoided if the planner or controller inserts a dibber into the unit when checking the controls prior to the event).

There are also different issues with the IT systems associated with the two types. But that is another story …

Most parts of the UK adopted the SI system when the two systems came out about 10 years ago. This means that most regular orienteers have purchased their own SI dibber but many fewer have their own Emit brikke. Thus when a major event is held in the SCOA region, we have to provide large numbers of Emit brikkes to competitors coming from other regions.

For more information, see the websites:

- Emit: http://www.emit-uk.com/
- SI: http://www.sportident.co.uk/

The Emit site has some short videos which would be useful for newcomers to see how to use the brikke and the control units.

Emit Touch Free

The club has a set of touch free Emit controls which are often used at our Summer urban events *(as shown here).* There is also now a updated Emit system available which uses a new style of urban control and which operates when the competitor is close to the control.