SportIdent touch free events – Advice for officials with some additional notes

A summary of a brief presentation to the EMOA Planners & Controllers meeting on Saturday 4th March 2017 with some additional notes. Advice was current at that date.

This document is not intended to replace the Sportident guides that are shown in the documentation section of these notes.

Contents

Terminology and Acronyms

Config+ - a program used to programme an SI box including the control number, working time and mode.

SIAC - a touch free dibber (in the number range 8 000 001 – 8 999 999)

Working time, the time a control box stays active after the last direct punch (also referred to as operating time and active time or stay active time)

Direct punching - the term used by SportIdent for the action of inserting a dibber into the hole of a control box (Referred to as contact punching by some authorities)

Beacon – the mode a box is programmed with to make it accept touch free dibbing, can be BCN (Beacon Control) BST Beacon Start, and BFN Beacon Finish.

Important advice -read at least this please

- SIACs must be turned on before use, this done by direct dibbing a CHECK box, once in active mode the tip of an SIAC will occasionally flash a dim green LED light. Make sure that the green light ceases to flash after punching the finish box. Then do not approach a control or the finish before starting.

- If you are using a Beacon start, locate the START control box well away from the start line (at least 5m) so that a competitor cannot accidentally start their timing early by getting too close to the Beacon Start box. Consider using a direct punching start instead.

- It is recommended to use a punching finish for two reasons. Most importantly, direct punching ensures that a record is kept in the finish box that can be queried for the safety check of finishers. Beacon Mode controls do not receive or store any data from a touch free 'dib'. Secondly a BFN will turn off the touch free mode of the SIAC, so a competitor passing this box during the course may have the dibber turned off. Using punching mode will avoid this possibility. If BFN is used then there should be a separate safety check.

Dibbing the Check Station didn't switch on the SIAC <Note from SportIdent>

We have seen this issue about once in every 1000 card uses and our manufacturer is looking into the issue. A simple but not ideal solution is for you to leave the SIAC in the CHECK station for

a little bit longer. At the major events such as JK and Scottish 6 Days, orienteers will dip in a CLEAR/CHECK and then a few minutes later they will dip in a second CHECK station located in the -1 pen. This will eliminate the problem of SIACs not switched on.

SIAC dibber life

The manufacturers estimate of battery life is four years of normal use. SportIdent have indicated that that will replace the batteries in SIACs and have suggested a cost of around £10. This is unlike type 11 dibbers that have a non replaceable battery and revert to the equivalent of type 10's. SIACs that have failed batteries also will operate as a type 10 dibber. We have noticed several battery failures which require the dibber returning to the manufacturers in Germany often with a delay in return.

It is recommended that an SIAC is only used at events using touch free technology and that your old dibber, or a hire card is used for traditional punching events, so extending the life of your SIAC. Note that the guarantee does not cover the battery and that the warranty for SIACs is two years as against 5 years for most other dibbers.

Battery check

A) SIAC dibbers can be checked using a SI box in SIAC check mode, the display reads "FAIL" if the battery is too low. The dibber can still be used in punching mode. The battery check in the Config+ program does not appear to be implemented.

B) Control boxes can be checked by dibbing with the 'SERVICE OFF" dibber. The LCD display cycles between various readings including the current battery voltage shown as BATXXX such as BAT334, When it drops below 3.15V (315), time is nearing for a battery replacement. The next display CAPXXX is an estimated percentage and is not reliable. There is also a battery voltage and percentage indicator in Config+, these are not as accurate as dibbing with the SERVICE OFF dibber.

Beacon Start (BST)

Make sure that there are no spare SI boxes in the start area or that the planner does not wander in with a spare box as that could be accidentally air-dibbed by those in the start lane meaning that, as their dibber is not clear, the start would not work.

Make sure that the BST is placed well away from the start line, or an early unintentional start may happen, avoid the possibility of this by considering a direct punching start for lower level events.

Working Time

Working time is the time a control box stays active after the last direct punch. If a control box is not active (sometimes referred to as not woken up or asleep) then an SIAC will only work by direct dibbing. Controls will be need to be made active (woken up) before the first runner arrives at the control, which is standard practice for most serious competitions. However a standard dib will reset the start of the working time.

If the event is hybrid, that is a mix of SIAC and direct punching, then the working time will be continually reset, but at a pure SIAC event, the working time must run from the time of the last check punch, often the controller at say 7.30am to the time of the last runner passing many hours later. In the future this may become more important as direct dibbing becomes less common.

If the BCN mode boxes are set to have a very long working time then it is recommended that all boxes are turned off after collection in order to prolong battery life. This is achieved by using the purple SERVICE OFF dibber. Note that this will also turn on boxes that have passed the end of their working time window. The display must be check to see that the box is off (the LCD display will be blank). Note that a START box and an SI Master box have additional modes and may need to be SERVICE OFFed more than once to cycle the display to reach an off state.

Multiple dibbing

If there is a queue at a control, it is possible to air dib simultaneously as runner is direct dibbing. In fact several people can air dib at this time, all SIACs will gather the necessary data. This happens because the SIAC listens for signals from a control box, they do not transmit data back to the control.

Timed out sections

Where there is a timed out part of the course, such as a road crossing. It is obviously important to have the entry and exit control boxes synchronised as some runners like to take their full allowance to recover or to study the next few legs in detail. This synchronisation can be done without a computer using a SI Master box set to any syncing mode (Time master, Extended master or Standard master). This should be done no sooner that two days before the event as the clocks will drift.

It is also important for a runner to get to the exit box of the timed out section without delay as there may be a queue, or it may be further than indicated. Any waiting time is done near the control, but be careful not to get to within a metre of the box until ready to go as you may air punch without realising and be loosing time.

Beacon Finish (BFN)

It is recommended to use a punching finish for two reasons. Most importantly, direct punching ensures that a record is kept in the finish box so that it can be queried for the safety check of finishers. Boxes in any Beacon Mode do not receive or store any data from a touch free dib.

Secondly a Beacon Finish will turn off the touch free mode of the SIAC, so a competitor passing this box during their course may have the SIAC dibber accidentally turned off. Using punching mode will avoid this possibility.

Should you decide on having a beacon finish then there should be a separate safety check.

If a direct punching finish is used with the rest of the controls in beacon mode, the finish sign on the stake should warn the runners that the box must be dibbed.

Control positioning and securing

Controls must be situated so that the act of dibbing is fair to those using contactless or direct technologies. Controls on the ‘wrong side’ of uncrossable boundaries must only be dibbable from the correct side. This goes further that being just out of range but also must take account of stakes being pulled closer using any materials used to secure them near to the boundary.

Controls the other side of crossable objects should be located such that there is not a significant advantage using contactless punching. Example include up steep slopes, over fences, within thickets, over large logs, or within a depression.

Securing SI boxes is often by wiring through the hole used to insert a dibber. This impedes dibbing for the modern fat ended dibbers and should be avoided as SIACs and Comcards (compasses with built in dibbers) are not affected.

BOF Rules

Covered in section 7 of appendix A (Event Systems). No specific rules concerning use of contactless punching technologies (but see the advice from a British Orienteering committee below

Turning off SIAC

Once put into active mode (by direct punching a CHECK box) the SIAC remains active until dibbed at a FINISH box (by either direct punching or air punching) or dibbed in a box that has been programmed in SIAC OFF mode. To conserve battery life for an SIAC dibber it is recommended that they are powered down by punching a finish box. This is particularly pertinent for those that retire from the course without visiting the finish.

Undocumented features

CLEAR box

An issue that arose with the introduction of the first active dibber type, type 11 with a flashing tip (numbered 9.000.001 - 9.999.999) was that while the dibber was active (tip flashing) a further punch could not be recorded. This caused issues at the CLEAR and CHECK where traditionally the boxes are adjacent. It is possible to reduce the duration of the flashing of the dibber but that reduces effectiveness in normal usage. This can be sorted by programming the CLEAR box as code 1 which suppresses the response on the dibber (type 11's and SIACs) so that a CHECK dib is successful.

Battery reset

For those that do their own servicing of SI boxes you will need to reconfigure your Config+ installation. After installing Config+ right click on the Config+ icon and goto Properties. On the Target field, append—service. Then click Apply. When you open Config+ you will see an additional menu at the top - Service. This new menu item allows resetting of both box and SIAC batteries

SI Master (BSF8 Master)

The SI master box is used to synchronise the time in all boxes by duplicating its internal time to any box by using the TIMEMASTER mode, this mode synchronises time only. There is better mode called SERVICEMASTER that adds clearing and copying the working time from the SI Master box to the box being updated. Beware if you have different working times in some boxes (many clubs use very low working times in CLEAR, CHECK and Start boxes to prolong battery life). A further undocumented mode was introduced called STANDARDMASTER, the only hint about this mode is on a http://sportident.ca/ that suggests it will restore the configuration of the device being sync'd if this configuration has been backed up in advance with Config+ (from firmware 618 circa Feb 2015). This does not appear to be implemented yet.

START box

There is a mode that puts the start into a Clock mode by dibbing the box with the ‘SERVICE OFF’ purple dibber (shows STACLK on the start box LCD display). The start box now beeps a countdown at minute intervals. The start box will continue to operate as a Start or Beacon Start as normal. This might have a non trivial effect on the battery life of the start box.

SIAC Off

SIAC dibbers will revert to standby mode after an undocumented time of inactivity, believed to be around twelve hours. A control box can be programmed as ‘SIAC OFF’ which is useful to have at the download.

Links to documentation

https://www.sportident.com/documents/information_technical/SI_system_AIRplus/SIAC_Handbook.pdf
https://www.sportident.com/documents/information_technical/SI_system_AIRplus/sportident_airplus_information_for_athletes.pdf
https://www.sportident.com/documents/information_technical/SI_system_AIRplus/sportident_airplus_information_for_organisers.pdf
https://www.sportident.com/documents/information_technical/SI_system_AIRplus/SPORTident-AIR+_Configuration-notes_en.pdf
Bof Rules (if link gets broken go via ‘Event Officials’ in the top menu)
https://www.britishorienteering.org.uk/images/uploaded/downloads/Rules%20of%20Orienteering%20Effective%202016v3-5%20(2).pdf

Google Drive with all SportIdent documents and this document: -
https://drive.google.com/drive/folders/0By3oPjtrUseIfkJQSS1Tci1ZUXBEdXlheHFaWUp6eEc0WlA4LWQ0SXNTWnNsS09jRHNnYjA?usp=sharing

Set of printable control notices to coach those new to touch-free: -
https://drive.google.com/open?id=0By3oPjtrUseIR2VpT1Y0YTJ1ODA

IOF statement on mixing contactless punching with contact punching

Posted on March 23, 2016

With the latest contactless punching control stations (both Emit and SPORTident), a successful punch can be obtained at a small distance using a contactless card. But they can also be punched in the “traditional” fashion using a contact card. For most competitors, contactless punching will save a second or two per control compared with contact punching.

The relevant IOF Commissions (FootO, SkiO, MTBO, IT and Rules) have recently discussed whether any rule changes are needed. In particular, they discussed whether competitors should be allowed to use their contact cards in an event using contactless punching.

They decided that no rule changes are needed at present. They feel that it is obvious that at an event using contactless punching, contactless cards must be available on loan (if necessary for a small fee) for all those who do not have their own contactless card. However, those competitors who wish to use their contact card, perhaps because they feel more confident punching that way, should be allowed to do so.

Events & Competition Committee discuss the use of ‘touch-free’ and ‘contact’ electronic punches in competition.

Posted on March 14, 2016

Event and Competitions Committee wish to advise organisers and competitors that they consider fair competition can only be provided by the use of either of, but not both touch-free or contact electronic punches in the same competition class. All those competing directly against one another should do so in a way that does not confer an unfair advantage on one group. Touch-free punching may allow the user to punch several seconds quicker per control than someone using a contact punch. The accumulated benefit over a whole course becomes significant.

This advice is in no way intended to restrict the introduction of new technology. Touch-free punching has been successfully used at many events over several years. However, all competitors in those events have used the same type of punching equipment. New technologies and potential developments allow the possibility of using either touch-free or contact punching in an event and consequently an unfair competition may result.

Consequently, Events & Competitions Committee recommend that organisers should ensure that all those in a competition class use either contact or touch-free punches; they should not allow a mixture of punching types in the same competition class.

Extract from “Tips for Controllers – How to control SportIdent”

(https://www.britishorienteering.org.uk/images/uploaded/downloads/SportIdent%20Advice%20for%20Event%20Advisers%20and%20Controllers%20February%202016.pdf)

SPORTident Air+

So far there is limited experience of using SPORTident Air+. In FootO, it is particularly intended for use in urban Sprint Relays where a whole group may arrive at a control together and there may be little space to place multiple punching units.

It is very important to check that

a) all control units are correctly programmed and have sufficient battery life (BSF7/8) or are charged up (BS11)
b) all competitor SIAC1 cards have sufficient battery life for the race. They must all be put into the special SIAC Battery Test unit which gives a warning signal if the SIAC1 battery is low.
c) all competitors check their SIAC1 because that turns the card on
d) there is no chance for runners to go near the finish during their run, because passing the finish turns the card off
e) the control placements are suitable, for example there should be no chance to punch from the wrong side of an uncrossable fence
f) the control units have been turned on by being punched directly (BSF7/8) or using a magnet (BS11)
g) the Stay Active time is sufficient for the whole duration of the event. Allow at least an hour extra!
h) the controls are operating correctly – it should be possible to record a punch from a distance of about 50 cm.

Consideration will be given to splitting up and adding to this document to form separate guides for controllers, planner organisers, runners and equipment keepers.

Comments and updates would be gratefully received at ashbymapping@gmail.com

Last updated by Peter Hornsby on 13th March 2017