



Handbook

for small and medium
outdoor sport events

INTRODUCTION

SPORTident – universal timing and identification system!

Due to its robustness, flexibility and usability, it is possible to apply the SPORTident system for almost every kind of leisure and adventure sports like orienteering, mountain biking, trail, triathlon, walking and many other multi sport events.

SPORTident has its roots in orienteering sport with a history of more than 15 years. It is used in more than 50 countries in four continents. There are dozens of events supported by SPORTident every week. SPORTident is one of the world's leading identification system in orienteering sports. The SPORTident system is designed to help organizers in managing the timekeeping of an event by themselves and to reduce work load. In addition SPORTident offers comprehensive support in preparation, execution and evaluation of events.

This document gives an overview -
for event organisers about the SPORTident basic time keeping system and how to handle SIAC equipment.













V1.03 - 01.03.2013.

For more information contact SPORTident GmbH:

www.sportident.com
support@sportident.com
SPORTident GmbH, Markt 14
D-99310 Arnstadt
Phone number: +49-3628-78300

Table of contents

Abbreviations of Product names	4
1. System description	5
1.1. Basic System approach	5
1.2. SPORTident extensions	7
2. SPORTident Timing equipment	8
2.1. Hardware	8
2.2. Software	12
3. SPORTident unique event flow	13
3.1. SPORTident event flow	13
3.2. SIAC event flow	14
Questions and answers	15

Picture	Abbreviation	Complete product name
	SIAC	SPORTident Active Card
	"Service/OFF"	Instruction Card "Service/OFF"
	"START"	Instruction Card "Start"
	"PRINT RESULTS"	Instruction Card "Print results"
	"CLEAR BACKUP"	Instruction Card "Clear backup"
	BSF8 - DB	Base Station Field 8 (Display Bottom), SPORTident control station
	BSM8 - D-USB	BSM8 -D-USB "indoor", SPORTident main station with USB c cable
	BS11 - BS	Base station 11- Beacon small, SPORTident control station
	BS11 - BL	Base station 11- Beacon large, SPORTident control station
	BSM7-D-USB	BSM7 -D-USB "indoor", SPORTident main station with USB cable
	BSM7-D-RS232	BSM7 -D-RS232 "outdoor", SPORTident main station with RS232 cable
	BS7 - PT	BS7 – PT, SPORTident printout station

1.1. Basic System approach

The SPORTident system is based on the SPORTident Card - an extended data memory stick. Data of passed control points during a race are stored in the SI-Card and evaluated at the end of the race using one of the evaluation programs, which are designed for SPORTident equipment. For small and medium events it is recommended to use SIME software.

When using SPORTident, it is easy and comfortable to produce extended data records with a large number of split times. This rich set of data is the base for a wide range of evaluation possibilities - making sport even more exciting. As one of the key features SPORTident produces an individual sheet of paper with results just after the runner has passed the finish line.

The SPORTident Card is available in different colours for housings and with different features. Data exchange at check points is done at small sized SPORTident stations. SPORTident stations are working autonomously without battery change for several years.

This handbook is made for the SPORTident Active Card (SIAC) and the AIR+ system, which is new a punching system especially designed for adventure and outdoor sports. The system works almost like the ordinary SPORTident system, except SIAC can be used in active mode as well as in passive mode.

The SIAC basically is used together with Beacon stations, which give time records from a distance up to 4m and this is the so called "Active mode". In "Passive mode" the SIAC works together with BSF7 or BSF8 stations and time is recorded in the SIAC with a direct punch in station. It is possible to combine BS11 stations with BSF7 or BSF8 stations and use both modes of the SIAC in one event.

SIAC is compatible with existing SPORTident time keeping system for orienteering:

- SIAC system works with all software which is designed for SPORTident system, like SI – config for station configuration and SIME – software for small and medium event evaluation.
- SPORTident Active Cards can be read out with usual BSM7 or BSM8 stations

SPORTident has defined its unique event flow, which can help organiser to understand the size of event and which equipment should be used. (Table 1)

Table 1
SPORTident unique event flow

event model	typ. max. number of participants	evaluation characteristics	evaluation hardware/software	done by
<ul style="list-style-type: none"> every event model 	1.500	<ul style="list-style-type: none"> special ranking and evaluations online presentation data export extended label, result lists course check 	<ul style="list-style-type: none"> SPORTident software modules special evaluation software several laptops several printers network-structure 	external staff approved by SPORTident
<ul style="list-style-type: none"> all standard races event series 	1.000	<ul style="list-style-type: none"> data export course check extended label, result lists 	<ul style="list-style-type: none"> event software SPORTident software modules several laptops several printers network-structure 	experienced organiser
<ul style="list-style-type: none"> standard race 	300	<ul style="list-style-type: none"> course check simple and extended result lists simple label 	mobile solution <ul style="list-style-type: none"> SIME 1 laptop label printer optional result printer 	organiser
<ul style="list-style-type: none"> training sport games corporate activities 	100	<ul style="list-style-type: none"> no course check simple ranking by courses simple label 	mobile solution <ul style="list-style-type: none"> SPORTident printout set 	trainer organiser



1.2.SPORTident extensions




There are more extensions provided by SPORTident, which can be used by an experienced organiser:



- **Live data:**
With additional equipment live data can be produced. Identification at control points takes 4 places directly or on-the-fly in a proximity range. SPORTident is strong to support any number of control points required.
Live data automatically shows the ranking of the competitors during event.
- **SPORTident SRR-Kit:**
The SPORTident SRR-Kit enables quick and easy usage of SPORTident wireless data transmission over distances up to 8 metres. The radios are working in the licence-free 2.4 GHz radio-band and can be used worldwide.
The kit consists of 2 SPORTident-Stations BSF8-SRR and 1 USB radio dongle SRR-D1.
These components build a star network with the SRR-D1 working as data collector.
Up to eight devices can be linked to one node configured device. Additional SRR provides reliability on other frequencies. It is compatible with all other SPORTident devices.
- **Combination of BSF8 and BS11 stations:**
As already mentioned, SIAC system is fully compatible with other SPORTident systems.
Now organizers can also combine contact punching stations (passive - BSF8) with non – contact punching stations (active - BS11). With this system it is easier to set up more attractive sport events, combining orienteering exercises, biking, running, swimming and other sports.




If you are interested to learn more, contact SPORTident or have a look at our website!



2.SPORTident Timing equipment

2.1.Hardware

	SPORTident Active Card 	SI-Instruction Cards 
Description	Non – contact timekeeping and identification system, which is compatible with existing SPORTident equipment.	SI-service cards are used for working with BSF8 stations. Service cards are used, when result sheets are created with direct printout.
Switch on/off	SIAC is switched on with a help of BSF8 CHECK station and switched off with BS11 station, which is configured as FINISH station	Not needed
Setting up/ handling	<p>SIAC is carried by competitor during event fixed to the finger, wrist, arm, bicycle, car etc.</p>  <ul style="list-style-type: none"> ● It is also possible to attach SIAC to the bib number. ● SIAC's memory has to be cleared with BSF8 CLEAR station just before the event ● SIAC has to be switched on with BSF8 CHECK station ● SIAC have to be outside of the Beacon stations active field at least for 8 seconds to get a new punch. ● To read out the split times and finish times, SIAC tip has to be inserted in BSF7 read stations hole 	<ul style="list-style-type: none"> ● Start card is used together with the Printout station for mass starts. Card has to be inserted into the printout station to set common starting time. ● Service/OFF card is used to switch on/off all the stations. ● Print results card is used together with printout station to print out complete result list for the last exercise ● Clear backup card is used to clear the printout stations backup memory before next event
Configuration/ SI-Config	Not needed	Not needed
Technical information	<ul style="list-style-type: none"> ● Saving 128 records for control points passed ● additional records for "CLEAR", "CHECK", "START" and "FINISH" ● internal memory for owners data ● optical and acoustical signals indicate successful punching process ● low power consumption ● supporting different punching modes 	Not needed
Charging	SIAC battery life is 3 to 4 years, depending on usage, not rechargeable	Not needed

	BSF8 - DB 	BS11 - BS 
Description	<ul style="list-style-type: none"> ● Stations can be used as CLEAR, CHECK, CONTROL, START and FINISH stations ● CLEAR station is used to clear SIAC's memory ● CHECK station is used to switch on SIAC ● CONTROL station is used as a control point in the event distance ● START station can be used to get individual start time for each SIAC ● FINISH station can be used to get finish time and switch off SIAC 	Used as non-contact punching stations for identification at start, finish and checkpoints for outdoor and adventure sports
Switch on/off	Stations automatically switch from Stand-by Mode to Active Mode when the first SIAC is inserted. This is the best way, how to wake up stations before the event. It is also possible to activate BSF8 with SERVICE/OFF card. It is used to switch BSF8 in service mode. If stations are in service mode, they "go to sleep" after 10 minutes. BSF8 stations in service mode are often used for tests.	To switch on/off BS11-BS the magnet has to be hold to „I/O" marked area
Setting up/ handling	It depends on the environment, how to set up the stations in the distance. It is possible to use special SPORTident stations holder.	<ul style="list-style-type: none"> ● Bs11-BS stations should be secured according to the environment and event course. Make sure that there are no metal objects near the Beacon stations, as it could interference stations. Minimal distance between stations should be at least twice their working ● By using SI-Config, organiser has to choose, which mode – Timing or Punching, will be used in competition. At the finish it is recommended to use Timing mode. ● Before event organiser should check the batteries and recharge if necessary by connecting station with USB cable to laptop or by using USB charger. ● BS11 – BS can be used as BC – CONTROL for taking split times, as BC – START for taking start time and as BC – FINISH for taking finish time
Configuration/ SI-Config	Station settings can be changed by using software SI-Config. It is possible to configure BSF8 as START, FINISH or CONTROL station	<ul style="list-style-type: none"> ● If configuration with software SI-config is necessary, station BS11 – BS has to be connected to a laptop with USB cable ● With a help of SI-Config it is possible to configure also Timing or Punching working modes. ● It is possible to check battery status in Software SI-Config ● Station can be configured as BC – FINISH, BC – CONTROL or BC – START station.
Technical information	<ul style="list-style-type: none"> ● Backup memory - maximum number of punches is 21802; ● Working in temperature from -20°C to +50°C 	<ul style="list-style-type: none"> ● Working distance – up to 60cm ● Possible to use in Timing or Punching mode ● Working time without charging up to 4 days ● Maximum passing speed allowed is 40 km/h Time accuracy is 0.1 second
Charging	BSF8 battery life is 3 to 5 years, depending on usage, not rechargeable	To charge BS11 – BS, USB charger can be used or it has to be connected to computer with USB cable

	BS11 – BL 	BSM7–D-USB Readout station 	BS7 – PT 
Description	Used as non-contact punching stations for identification at the start, finish and checkpoints for outdoor and adventure sports	Station is used for reading SIAC data records of split times and finish time at the end of competition.	Used for printing results at the finish together with Thermal printer
Switch on/off	To switch on/off BS11 – BL station, the button on the back side if the station has to be pressed	Station is switched on, when it is connected to computer.	Switched on when the first SIAC is inserted or with Service/OFF Card.
Setting up/ handling	<p>Bs11 – BL stations should be secured according to the environment and event course. Make sure that there are no metal objects near the Beacon stations, as it could interference stations.</p> <p>Minimal distance between stations should be at least twice their working distance!</p> <p>By using SI-Config, organiser has to choose, which mode – Timing or Punching, will be used in competition. At the finish it is recommended to use Timing mode.</p> <p>Before an event organiser should check the batteries and recharge if necessary by connecting station with USB cable to laptop or by using USB charger.</p> <p>Bs11 – BL can be used as BC – CONTROL for taking split times, as BC – START for taking start time and as BC – Finish for taking finish time</p>	Read-in SIAC data into PC. Readout station is connected with computer and software SIME is used for SIAC data evaluation	Quick and customized data evaluation. Printout station is connected directly with printer. For data summary, Service Card – PRINT results has to be used.
Configuration/ SI-Config	<p>If configuration with software SI-config is necessary, station BSF11 – BS has to be connected to laptop with USB cable</p> <p>With a help of SI-Config it is possible to configure also Timing or Punching working modes.</p> <p>It is possible to check battery status in software SI-Config</p> <p>Station can be configured as BC – FINISH, BC – CONTROL or BC – START station</p>	Stations settings can be changed for reading results.	Possible to configure layout for printed results
Technical information	<ul style="list-style-type: none"> • Working distance – up to 3m • Possible to use in Timing or Punching mode • Working time without charging up to 4 days • Maximum passing speed allowed is 40 km/h • Time exactness is 0.1 second 	Backup memory - maximum number of punches is 21802; Working in temperature from -20°C to +50°C	Not needed
Charging			Battery life is 3 to 5 years, depending on usage, not rechargeable

	Laptop	Thermal printer
Description	Used for events, where the number of participants is more than 100, needed for event evaluation.	Thermal printer is used for printing results at the finish. There are two types of printers. First is used together with BS7 – P station and the second is used together with BSM7-USB readout station.
Switch on/off	Depending on the model of the laptop	Switched on by pressing the  button on the printer
Setting up/ handling	Used together with BSF7 – USB and BSM7 Print. Software SIME and SI – Config has to be installed on it. It is necessary to make sure, that all the drivers for printer and license files for SIME software are installed on the laptop. License files are provided by SPORTident. 	If data is evaluated with direct printout, then Thermal printer has to be connected directly with BS7 – P station. If data is evaluated with SIME, then the Thermal printer has to be connected with a laptop and BSM7 – USB readout station.
Configuration/ SI-Config	Is used together with SI-Config to synchronize times on the stations	Not needed
Technical information	Depending on the model of the laptop	Not needed
Charging	Not needed	Special charging is not needed

2.2. Software

	SI-Config	SIME
Description	Software, which is used to synchronise times in all stations - BS11 – BL, BS11 – BS and BSF8 just before timing event. Possible to reconfigure station working modes if necessary.	Easy to handle SPORTident event software, read SIAC, course control, fast split time printouts, result list. SIME will also create result file for web browser and organizer will be able to upload it to the internet.
Download	It is possible to download SI – Config from SPORTident website together with all necessary drivers	It is possible to download SIME from SPORTident website. License file will be provided by SPORTident.
HELP	For detailed information, how to use SI-Config, software HELP file can be used	For detailed information, how to use SIME, software HELP file can be used

3. SPORTident unique event flow

3.1.SPORTident event flow

The second part of SPORTident unique event flow consists of detailed information of event organizing. All needed information and steps, that have to be completed for successful event, are included. Table 2 shows, how to handle event with different kind of SPORTident equipment

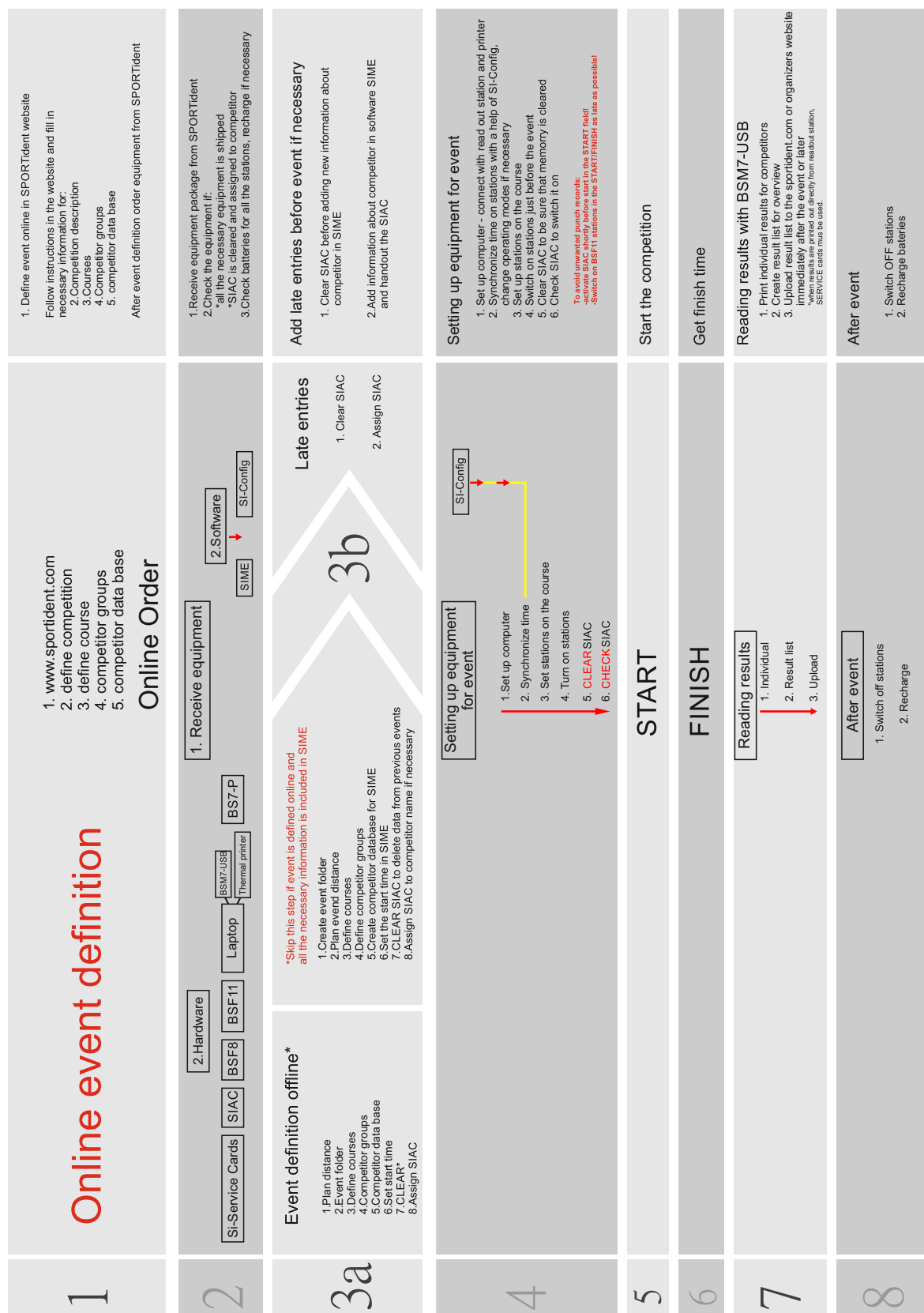
Table 2

competitors SI-Card	what	when where	who	ident mode	use
CLEAR	remove data from previous events	any time before start	competitor or organiser	direct	any SI-station BS 7/8/11 in CLEAR-mode
CHECK	control clear status activate SIAC counting of participants	shortly before start start garden	organiser		any SI-station BS 7/8/11 in CHECK-mode
START	start	start time start point start line	competitor organiser	any SI-Card	any SI-station BS 7/8/11 in START-modes
CONTROL	control		competitor	any SI-station	any SI-station BS 7/8/11 in CONTROL-modes
FINISH	finish	finish time finish point finish line	competitor organiser		any SI-station BS 7/8/11 in FINISH-modes
READOUT	read out data from chip for evaluation	any time after finish	organiser		SI-station BSM 7 in READOUT-mode

SPORTident unique event flow

3.2. SIAC event flow

Graphic shows summarized information about SIAC usage in event.



Questions and answers

1. What are the main features of the SIAC?

SIAC is non – contact punching system, which is used in different kinds of outdoor sports. SIAC can be combined together with other SPORTident equipment, because of its two parts – passive part and active part. In passive part the SIAC receives time records through direct contact with a station (like in orienteering), while in active part the time record can be received from a distance up to 3m. For non-contact punches Beacon stations have to be used.

2. Where can I find more information about SIAC and SPORTident?

For more information about the products and features visit our website (www.sportident.com). To see our events visit our youtube channel (<http://www.youtube.com/user/sportidentrun>) and for latest news about the company follow us on facebook (<http://www.facebook.com/sportident>)

3. What are the operating modes for Beacon stations?

BC CONTROL – For Beacon control you can use both types of Beacon stations – BS11-BL and BS11-BS.
BC START – For Beacon start you can use both types of Beacon stations – BS11-BL and BS11-BS.
BC FINISH – For Beacon finish you can use both types of Beacon stations – BS11-BL and BS11-BS.

4. What is Beacon mode?

BS11-BS and BS11-BL Beacon mode - no data is recorded in the stations backup memory; the working time of each station must be set exactly before the event. After the defined working time is over, the station switches OFF automatically.

5. Why it is so important to CLEAR and CHECK SIAC before the event?

With a CLEAR station SIAC memory is cleared from previous event data, while with CHECK station SIAC is switched on. CHECK activates SIAC for about 20 hours. This time is resetted with each direct or proximity punch. SIAC indicates active state with a slowly blinking green LED. SIAC is deactivated by a FINISH or BC_FINISH record.

- If SIAC is not cleared, it will not be possible to switch it on.
- If SIAC is not turned on, it will not be possible to get any time records in the distance.

6. What SPORTident equipment can be used together with SIAC?

Basically SIAC is used together with non-contact punching stations BS11 – BS and BS11 – BL, but SIAC is fully compatible with other SPORTident equipment and can be used also together with BSF7/8 stations for contact punching.

7. How BS11 stations are powered?

BS11 stations are different from BSx7/8 stations and have rechargeable batteries, which can be charged by USB charger or when connected to the computer.

8. How do I know, when the charging process is completed?

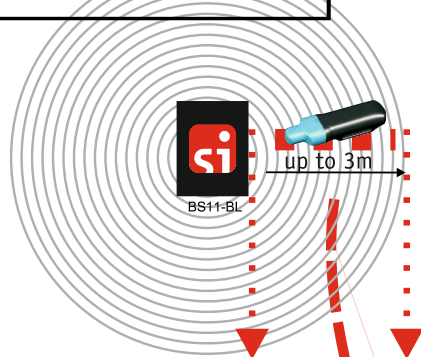
Ongoing charging process is indicated by:

- Beacon station batteries are charging when the red light is blinking.
- Beacon station batteries are fully charged when the green light is on.

9. How can I create and upload result list for the internet?

If you use software SIME for event evaluation, then it is possible to create result list, which is possible to upload to SPORTident and organisers' website. Detailed information about creating result list can be found in SIME help file.

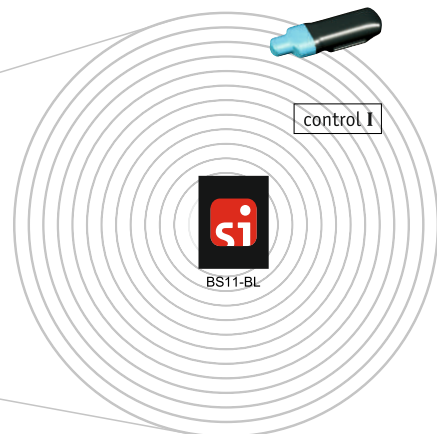
BC-START



10. What is timing mode?

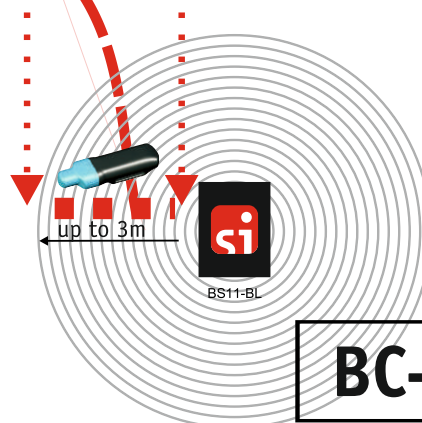
In Timing mode, the punching time of the SIAC will be recorded at the maximal field strength. This method enables exact timing at START, FINISH or at every CONTROL point. A short feedback signal indicates timing process.

BC-Control I



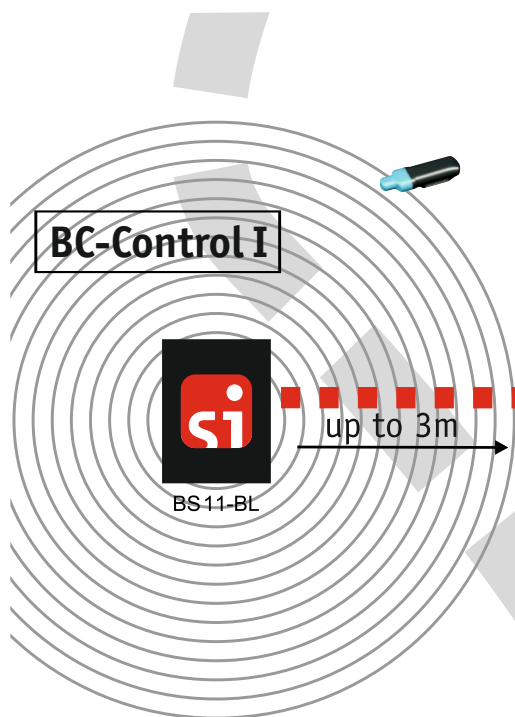
In Timing mode
SIAC records time
when the signal is
strongest.

BC-Control II



BC-FINISH

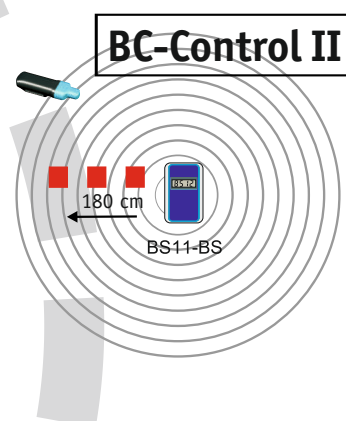
(it acts like a
virtual start / finish line)



11. What is punching mode?

In Punching mode time is recorded, when SIAC enters stations active field. SIAC's feedback signals stay active as long as SIAC stays in stations active area.

In Punching mode SIAC records time immediately when entering stations active area.



ADVICE : When configuring BS11 stations timing or punching mode can be selected by setting a flag in SI-config. It is recommended that the BC-FINISH station as well as the BC - START station are always used in Timing mode.

Appendix

a) SIME manual

