



**SPORTident**  
Make the most of your sport!

.....  
From warm-up exercises to complete sport lessons  
.....

# **SCHOOL AND TRAINING SET**

.....  
*A new way of teaching physical education*  
.....





[www.sportident.com](http://www.sportident.com)

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## Orienteering Sport Education

SPORTident in Orienteering Sport



## *Give them action and they'll enjoy exercise.*

Create an exciting obstacle course, turn on a timing device and let your pupils measure their own time. That's how easy it is to motivate the whole class. At the same time your effort for preparation and evaluation of teaching is reduced. You only have a supervisory role and there are no more timing expenses for each pupil. The effectiveness of the lessons increases, because every pupil takes his time for himself. Several pupils can finish exercises at the same time.

.....

The success of SPORTident is based on the principle of giving the pupils instant feedback about their activities. They can see their improvement there and what better motivation is there for exercise? It can be a simple game or a more serious competition. Pupils must feel they can compete on their own terms and whether it is a game or competition, it must be as far as possible. SPORTident is all about timing and providing instant results. It can be used individually or by teams, at every age, at one or more locations, indoor or outside. You can create your own courses and a game can quickly turn into a competition.



***SPORTident is simple, fair and guaranteed to be fun.***



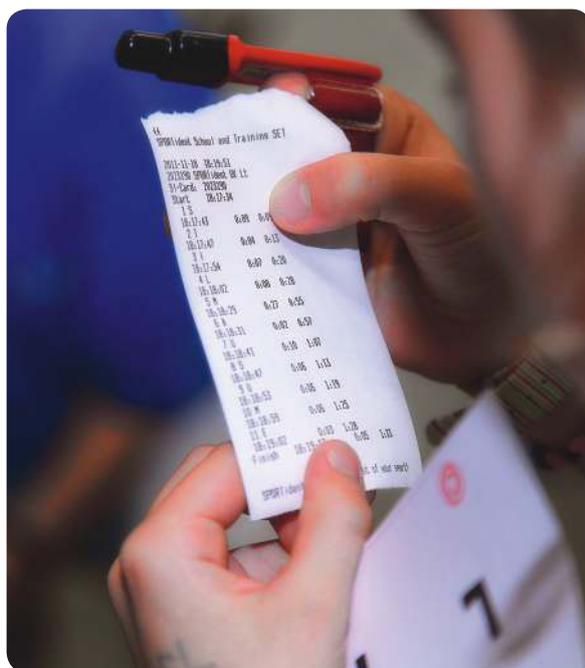
*The control stations can be placed anywhere, in any weather and any place.*

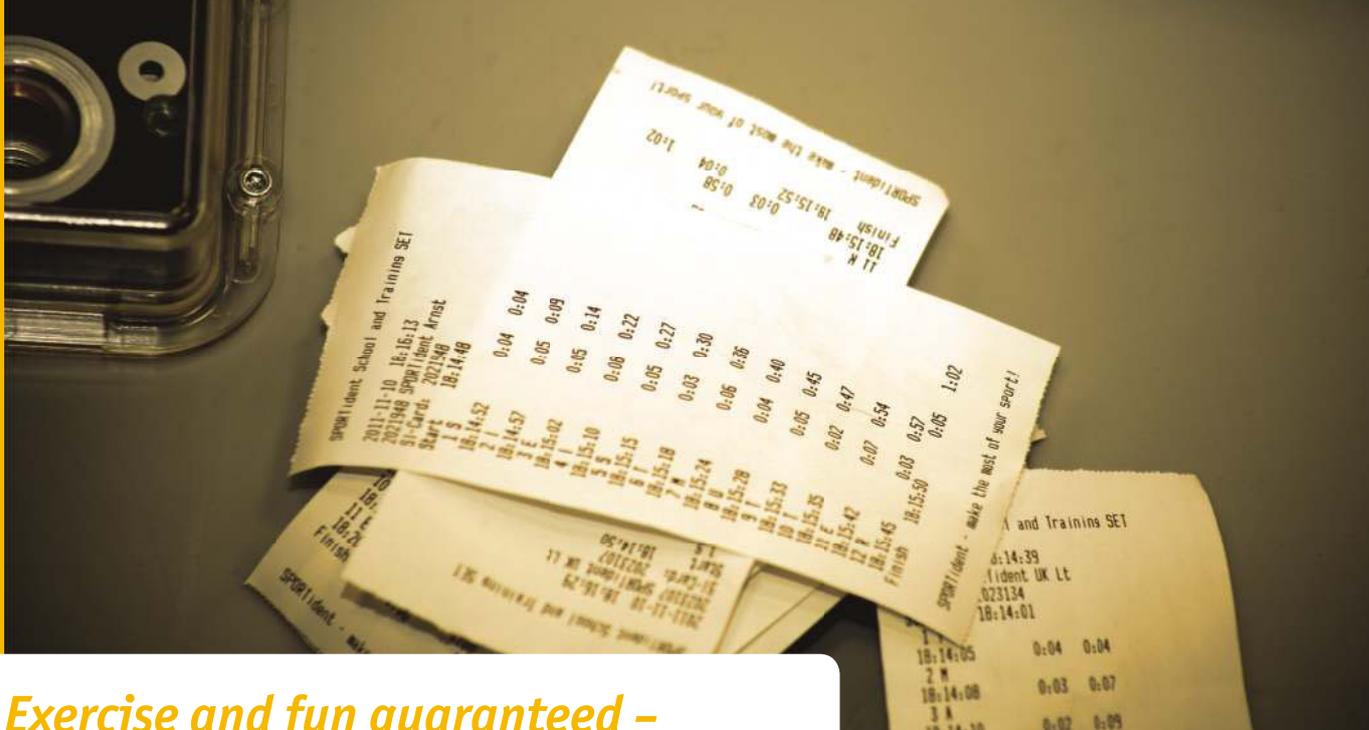


Each SPORTident Station records the time when the SI-Card (finger stick) is dipped in the hole. A memory chip in the SI-Card stores information about each station visited. The process of identification is indicated visually and acoustically.

It is easy to dip the SI-Card from any angle. SPORTident equipment is very robust and will cope with rough treatment. It is also waterproof, which makes it suitable both for use in the playground or in the gym.

A quick evaluation is no problem, because all data are saved in the SI-Card. Directly after the exercise each pupil will get a printout with his or her results. Now the pupils are able to compare their results. This promotes competition and everyone wants to improve.





## Exercise and fun guaranteed – The use of SPORTident at school

The SPORTident School and Training Set is a fully featured configuration of SI-Cards, SI-Stations and a thermal-printer. It enables the immediate usage of the SPORTident-System without a PC.

SPORTident stands for timing, identification and the immediate availability of results. The pupils check their performance for themselves and will then be motivated to improve it.

### Relevant remarks on all SPORTident exercises

Every time before start daily sport lessons SYNCHRONIZE time in all stations:

- The clock-modules of the SPORTident control stations should be synchronized with the SPORTident TimeMaster (see page 20) before starting the exercise, because the time differences between the control points are small and therefore a higher time synchronisation is necessary.

### As a sports teacher, you can even determine the usage scenario:

- Let the students run individually or in teams.
- Use the School and Training Set outdoors or in the sports hall.
- You create your own routes and a game can quickly turn into a competition.

The age of your pupils defines the level of the exercises. Your experience and your teaching approach determine the activity. The pupils practise in particular the following core competencies:

- **concentration**
- **orientation sense**
- **speed**
- **reactivity**

- Using SPORTident cards for each exercise remember the order:

### **CLEAR – START – 31,32...49 – FINISH - PRINTOUT-OUT**

Each pupil clears his or her SI-Card for themselves before each start. Start and finish times of the exercise and during each sprint-race are done by the pupil automatically. For the evaluation a paper-printout will be produced by the SPORTident Printout-Set.

See detailed instructions on page 15

– HOW DOES IT WORK

*On the following pages you will find exercises  
and various forms of games*



## Japan Test – Exercise

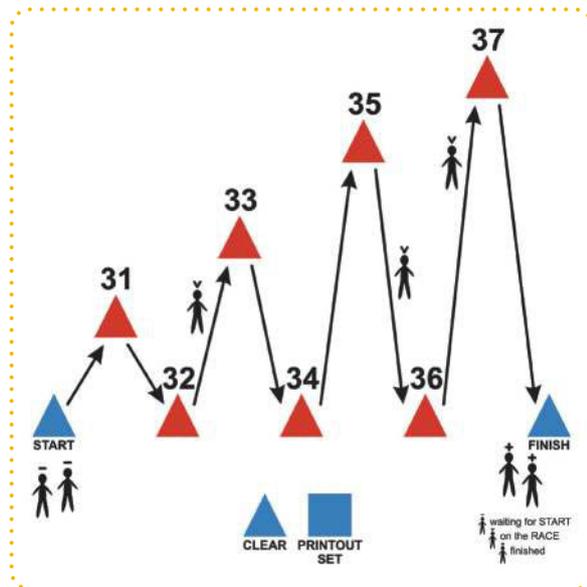
The aim of this exercise is to check the sprint- and coordination abilities. With the use of SPORTident the demands on the power of concentration and the abilities are increased.

### Preparation:

The SI-Stations 1-7 are placed on the ground according to the drawing and suitably fixed (e.g. with adhesive tape).

### Start:

The pupils start one by one and run the way as shown in the illustration. The evaluation of the split times gives information on the specific training condition by evaluation of the drop in performance during the exercise. With the comparison of the run times a competition-like evaluation is possible.





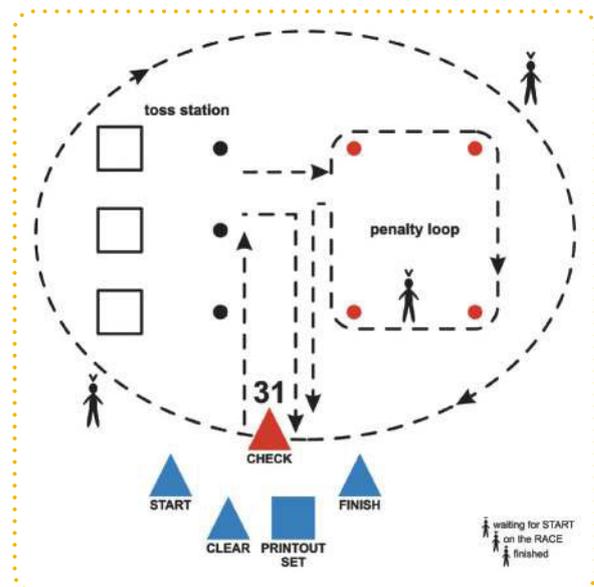
## Biathlon – Exercise

### Start:

On a defined length of run (sprint or stamina route) the pupils have to complete a toss exercise at the end of each lap, e.g. throw a ball / shuttlecock in a hutch, strike an object, etc. If one failed, the pupil must run a penalty loop. When the person starts a new lap, he / she has to take a split time at the SI-Stations.

### Remark:

This kind of biathlon can be organised as a single run or a relay race. On sunny days it is also a perfect outdoor exercise.





## Relay Race – Exercise

### Preparation:

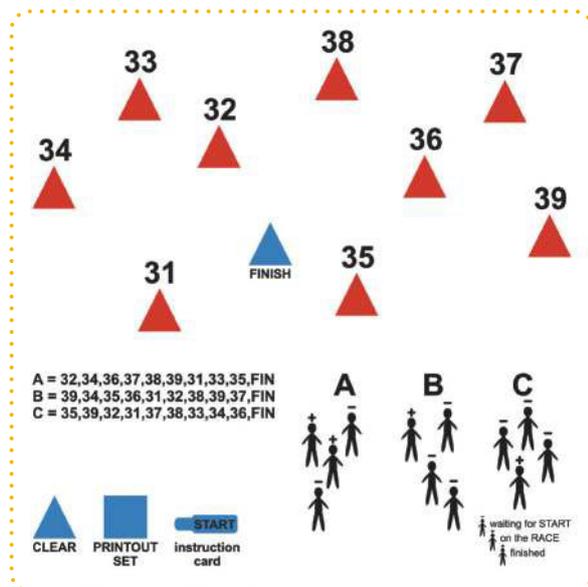
Mark SI-Stations with some numbers or words. Then divide the pupils in 3-4 teams. Each team gets a different sequence of numbers or different section of words, which they have to find in exact order (for instance: 32, 34, 36, 37, 38, 39, 31, 33, 35). Prepare printed material for each team before PE class.

### Start:

One team member from each group starts with a SI-Card. After a mass start the pupils have to find their first station (in our case station 32). The next team member starts with the SI-Card and tries to find the following number or word. The person who finds the last station number (in our case number 35) runs to the FINISH-station to finish the game. With a look on the printout sheet the teacher is able to assess whether all SI-Stations were found in the correct order.

### Remark:

No one knows in what sequence stations are situated in gym. The pupils can discuss within their team where which station numbers or words are located, which number or word they have seen and make a strategy for the best collection.





## Build a Word – Exercise

### Preparation:

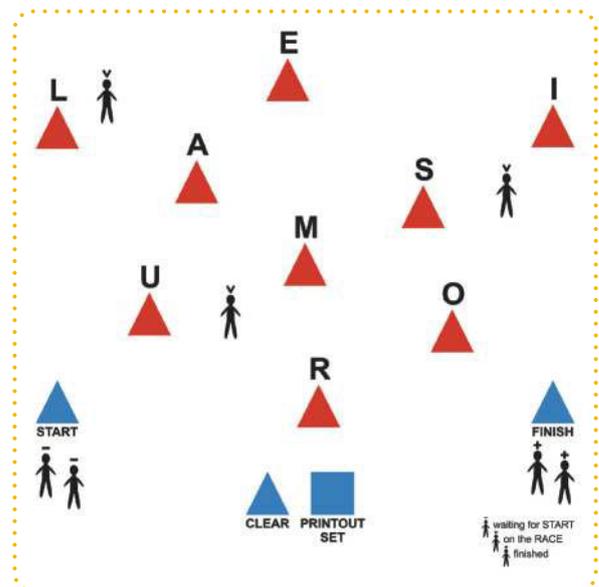
Stick several letters on SI-Stations. Using software SI-Print, install a printout layout in Print-out station (see page 18)

### Start:

Depending on the level of difficulty the pupils have to make up words out of (minimum) 3 / 4 / 5 etc. letters. At the beginning of the game the teacher predefines the number of words, which are supposed to be made up. The individual printout sheet shows after the game, whether all words were spelled correctly.

### Variation:

Before the event different letters are assigned to the numbers of the SI-Stations with the PC software SI-Print, so the game conforms to all age groups. Another way is to make up words in a foreign language.



## Obstacle Race – Exercise

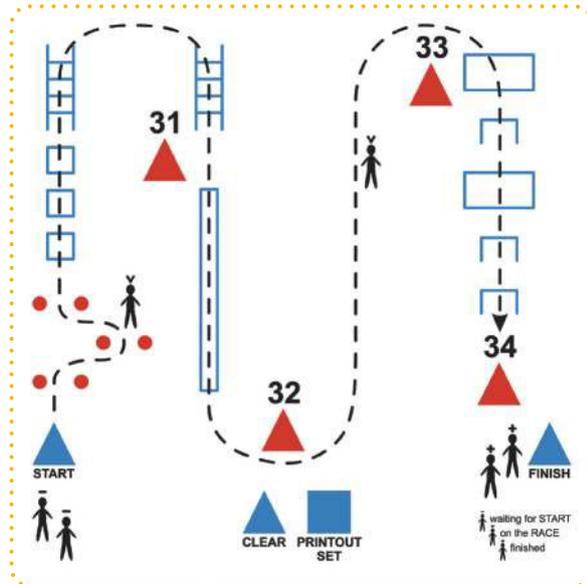
The exercise supports the development of agility as well as coordination abilities.

### Preparation:

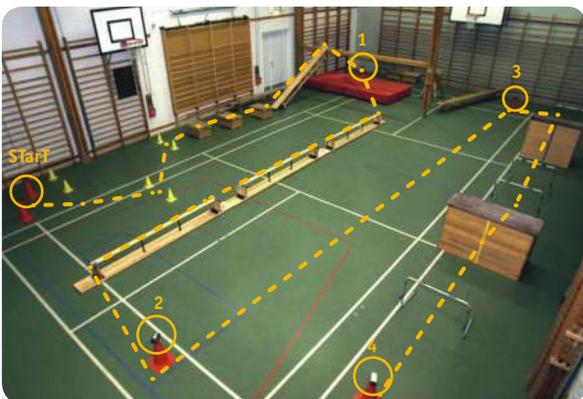
Use all resources in the sports hall, on the sports field and in the schoolyard as obstacles and create your own route or as shown in the picture. Then define appropriate places for the control stations where the pupils will take split times.

### Start:

The pupils start one by one with a time difference of 10 seconds between each starter. After punching the FINISH Station the pupils print out their individual results, run another round and compare their second result with the first one.



Who improves the most in the second round?



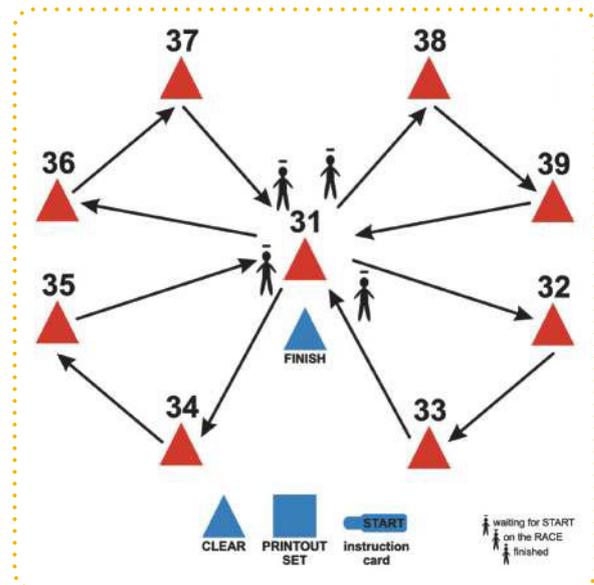


## Butterfly Run – Exercise

The butterfly run can be excellent starting with four pupils at the same time. Thereby every person starts at a different loop and completes all loops one by one. The pupils run clockwise trying to catch each other.

### Variation:

1. Making the task more effective and interesting there can be some extra exercises at each control point - 10 push-ups, 20 jumps, 20 squats etc.
2. One can stick questions on the SI-Stations and the answers must be written down by every pupil.





## Calculation Run – Exercise

### Preparation:

Equip as many SI-Stations as you wish with mathematical terms.

### Start:

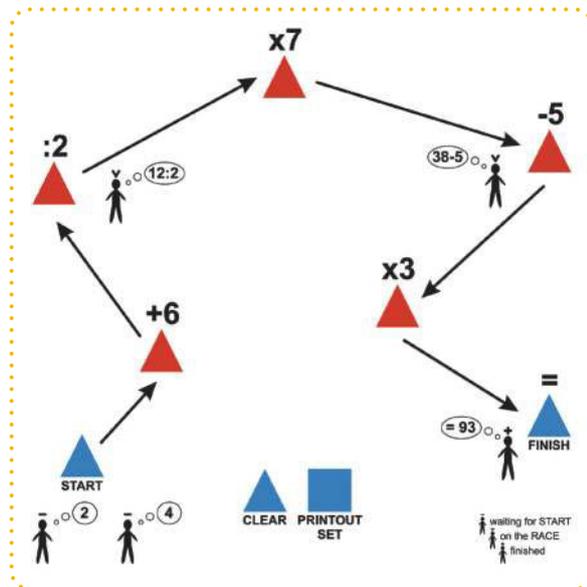
The pupils set off one after the other. The teacher gives each pupil a number to start with (for instance 4). Then the pupil runs the given route as quickly as possible and has to calculate the solution as a new part of the formula is presented at each SI-Station.

In our case:  $4 + 6 : 2 \times 7 - 5 \times 3 = 90$

The exercise is finished when the pupil takes the last time at the FINISH station. He/she has to give the result immediately to the teacher.

Not the fastest person will win the game, but the one with the best combination of running and calculating.

**Variation:** The pupils have to bear in mind that multiplicative operations (multiplication and division) take precedence over additive operations (addition and subtraction).





## Rainbow Sprint – Exercise

### Preparation:

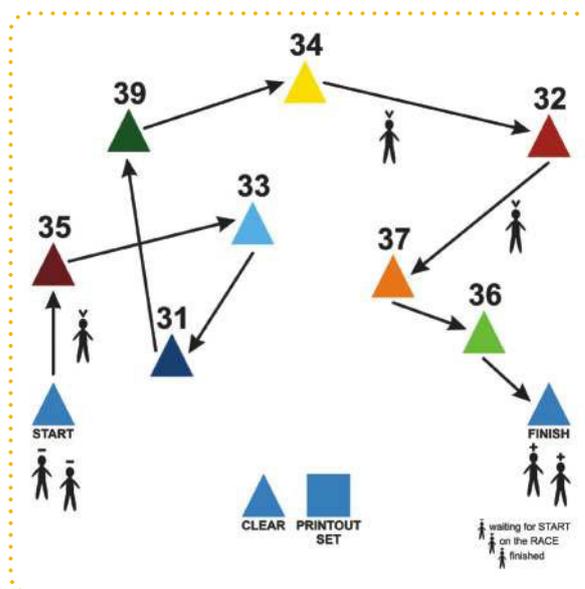
The SI-Stations are randomly placed in any order in the gym or in the outdoor area. Then papers in different colours or with different letters/numbers are stuck on the stations. Next let the pupils run the course once to get to know the SI-Station locations and their symbols.

### Start:

The teacher gives a sequence of colours/numbers/letters to the pupils which they have to complete in order as fast as they can. The pupils start one after the other.

### Variation:

- change the position of the control stations or their symbols
- increase or decrease the number of control stations
- change the sequence of symbols





## Components and user manual Service page. How does it work?



### 1. Set up all stations:

- lay out all stations in order: clear-start-31-32-33...40-finish
- make sample race passing all SI-Stations with any SI-Card
- put SI-Card into Stations hole and wait for acoustic beep - punch is saved!



### 2. Set up Printout-Set:

- connect the Printout station with the printer
- start up the printer (- on/off button)
- test printout by using the Printout station
- check the correct order of the SI-Stations numbers
- the punching times have to increase permanently



### 3. Synchronize the time:

- Synchronize the time in all SI-Stations (including the Printout Station) using SI-Master (see page 20)

### 4. Clear all SI-Cards

## Use the instruction cards to configurate all steps

START



- Use this card together with the Printout station for mass start exercises
- While saying out loud "START" put the instruction card into the Printout station to fix a common starting time
- Do not use SI START-Station when the instruction card START is in use

SERVICE OFF



- Use this card to switch OFF all stations after usage
- Use this card to configurate SI MASTER station (see page 20)

PRINT RESULTS



- Use this card together with the printout station to print out the complete result list of your previous exercise
- Do not forget to clear the backup memory before the next exercise!

CLEAR BACKUP



- Use this card to clear the Printout stations backup memory before each exercise for ability to print out a correct latest result list!



## SPORTident SCHOOL and Training Set



### 1. Introduction

The SPORTident School and Training Set is a fully featured configuration of SI-Cards, SI-Stations and a thermal-printer. It enables the immediate usage of the SPORTident-System without a PC.

This instruction describes the handling of the SPORTident-System for use at training activities and for sport lessons. Besides the priority use for orienteering, there exists a multitude of further possibilities where a person-related timing at several control points is necessary.

However, on principle the single working steps are valid for all variants of using the SPORTident-System. The SPORTident devices as part of the School and Training Set are completely compatible with the whole SPORTident-System. More information about the different system parts are given in the specific product release notes as referred to in appendix A.2.

### 2. Preparation for use

To use the SPORTident Device-Set no special preparation steps are required.

If SPORTident Control cards 6/8/9/pCard/tCard are used, there is the possibility to initialize these SICards runner-specifically. This can be done favourably by the competitor before the training or before the real event. If an SI-Card is not initialised runner-specifically, the competitor will be registered on the base of the SI-Card-number.

### 3. Operation

The SPORTident-Stations are always on and typically in Stand-by Mode. They are fully activated with the first SPORTident-Card inserted into a station - Auto-on. For usage the following order in the SPORTident-Stations has to be kept:

- ▶ Station "Clear": The data from the previous usage of the SI-Card will be cleared, duration: SI-Card6/8/9pCard/tCard – 2 sec
- ▶ Station "Start": With the punch in the "Start" station the competition-time starts. If the SI-Card is not cleared correctly, no start-signal will be emitted.
- ▶ Control stations: With the punch into the control station the control number of the station and the time is stored on the SI-Card.
- ▶ Station "Finish": With the finish-punch the competition-time ends.



For the evaluation of the data stored on the SI-Cards there are different possibilities:

- ▶ **direct printout using the SPORTident Printout-Set.**  
The Printout-Set is part of the package. The whole configuration is battery driven and no PC is needed. The Printout-Set features with the possibility to download a user specific print layout into the station. This supports quick and customized data evaluation.

- ▶ **read-in of the SI-Card data into a PC**  
The content of the SI-Cards can be read into a PC for further evaluation. The Printout station can be used for this purpose but must be configured into "Read SI-Cards"-mode by using PC-software SI-Config.

SPORTident-Stations fall back into Stand-by Mode automatically according to the adjusted active time.

#### 4. Maintenance

The SPORTident-Cards do not require any maintenance besides the described initialising of SI-Card6/8/9/pCard and tCard.

Also the SPORTident-Station feature with nearly no service needs. All the important settings are visible at stations service display. Important is the adjustment of the stations internal clocks using the "SI-Master" station. In the set this station is combined also with function "Clear".

Extended service is possible by using PC software SI-Config. Possible steps are:

- ▶ adjustment of the active time
- ▶ definition of different operating functions, e.g. station coding

#### 5. PC software

The SPORTident School and Training Set is delivered with a set of PC software to setup and manage the system. There is also a license for basic event software "SIME". The license key is delivered on request and attached to the Printout stations device number.

#### Appendix

##### A.1. Software

- ▶ SI-Config: synchronizing of time in stations; reconfiguration of stations if required
- ▶ SI-Print: loading of customer-specific print-layouts into the Printout station BS7-P
- ▶ SI-Boot: firmware-upgrade of stations
- ▶ SI-Personal: personalize SI-Cards
- ▶ SIME: easy to handle competition software, read in of SI-Cards, course control, fast split time printouts, result list

The software is available at the SPORTident website [www.sportident.com](http://www.sportident.com).

##### A.2. Related documents

- product release notes: ▶ SPORTident Control station BSF8 ▶ SI-Master ▶ SI-Printout-Set
- application notes: ▶ BS7\_8\_products ▶ Inductive\_coupling\_SI46\_78

The papers are available at the SPORTident website [www.sportident.com](http://www.sportident.com).



## SPORTident Printout Set

### Basic features

The SPORTident Printout-Set is a complete and compact evaluation tool kit to read out and print data stored in SPORTident-Cards. It consists of the SPORTident Printout station and a thermal-printer. Using the Printout-Set the data records stored in SPORTident-Cards can be computed and printed out. Standard features of the printout are control points code number, punching time, lap times, and total running time.

Part of the set is the SPORTident Printout station BS7-P. Compared with earlier versions the device offers a number of advantages and new features. Most important are:

- ▶ The station automatically switches on when a card is inserted "Auto-on". The thermal-printer MCP 7830 must be switched on by pressing the button marked with the label 
- ▶ The Printout station can store a user defined printout layout by using PC software SI-Print. So application specific printouts are possible. This offers the usage of the Printout-Set in a wide range of applications in different sports.
- ▶ The Printout station features an easy evaluation printout. SI-Cards read in are automatically sorted into different categories and ranked according to their running time.

The backup memory size of the Printout station is enhanced.

### Printout layout configuration

In the user definable printout layout the header- and foot lines can be edited. It is of special importance that SI-Stations code numbers can be replaced by ordinary text strings. PC software SI-Print serves as interface program to define the print layout and to download the information into the Printout station.

The size of the text can be modified by different commands.

Command	Function
%W0	thin
%W1	thick



```
Schulsperrint
Goethe-Schule
-----
2011-01-11 16:26:06
SportCard SPORTident
SI-Card: 2011025
Start
1 S 16:26:26 0:00 0:00
2 P 16:26:41 0:15 0:15
3 D 16:26:55 0:14 0:29
4 R 16:27:11 0:16 0:45
5 T 16:27:26 0:15 1:00
Finish
-----
service and support:
www.sportident.com
SPORTident - System
```

```
Orienteer ins
The sport for the thinking runner
2010-05-28 11:26:57
SMB077 SPORTident
SI-Card: SMB077
Start 16:26:57
1 11 16:26:24 0:02 0:02
2 22 16:26:37 0:03 0:05
3 33 16:26:29 0:02 0:07
4 44 16:26:32 0:03 0:10
5 55 16:26:34 0:02 0:12
6 66 16:26:37 0:03 0:15
7 77 16:26:38 0:02 0:17
8 88 16:26:41 0:03 0:18
9 99 16:26:44 0:03 0:21
10 00 16:26:47 0:03 0:25
Finish 16:26:40 0:02 0:27
-----
service and support:
www.sportident.com
SPORTident - System
```

```
Orienteer ins
The sport for the thinking runner
2010-05-28 15:05:24
Results
-----
Course 1
1 1234567 SPORTident 00:00:27
2 1234567 SPORTident 00:00:24
3 2002555 SPORTident 00:00:26
-----
Course 2
1 5600777 SPORTident 00:00:27
2 6007255 SPORTident 00:00:54
-----
service and support:
www.sportident.com
SPORTident - System
```



### Instruction cards

- ▶ **Service/Off:** The Printout station switches into Service Mode for 10 minutes. Switches off the Printout station as well as all other stations.
- ▶ **Start:** A "start" - punch in the Printout station initiates a common start time (mass start) for all SI-Cards read-in afterwards. However if there is a start punch in the SI-Card too, this punch will be used for time computation instead. After the event the mass start time must be cleared with the instruction card "Clear backup".
- ▶ **Print results:** The Printout stations ranks all SI-Cards read in according to their total running time. Sorting into different courses is done automatically based on the evaluations of the first six punches in the SI-Card.
- ▶ **Clear backup:** Printout stations backup memory is cleared and the Clear backup card clear the mass start time after finishing the event.

### Subsequent evaluation

SI-Card data stored in the Printout station can be transmitted to the PC for further evaluation. For that purpose the Printout station has to be connected to a serial interface of the PC by using the attached adapter cable (zero-modem-cable). For evaluation the software SIME is recommended. With the command "Readout backup" the SI-Card data records will readout from the backup memory and a result list in html-format will be created.

## Adjustments and maintenance

### The Printout station

The SPORTident Printout station BS7-P is nearly free of service needs. Real time clock adjustment and reprogramming have to be done by using PC software SI-Config. For correct time computing it is important that Printout stations real time clock is synchronized according to the other SI-Stations clocks.

### Thermal-printer MCP 7830

The thermal-printer MCP 7830 is configured to operate with the SPORTident Printout station. Details of the programming process are described in the printers manual. For the printer only paper authorised by the manufacturer should be used. Non standardised paper can lead to a higher wear out of the print-head, shorter life-time and loss of guarantee.

**Note:** While connecting the data-cable "RJ12 – D9" into the printer a clear click must be audible!

### Charging of thermal-printer MCP 7830

#### - Important information

- ▶ To charge the printer batteries use only the specified power supply units MPS160 (standard).
- ▶ Charging is automatically activated when the external PSU is connected with the printer. The charging process is indicated by a blinking green LED and the completion of the charging process is indicated if the green LED is off. It is permissible to leave the printer permanently connected to the PSU to trickle charge the batteries.
- ▶ The printers battery can be recharged more than 100 times. But with ongoing the lifetime of the battery capacity will become smaller. With a new battery 250 typical printout sheets (about 25 meters) can be printed.
- ▶ For replacement use only the Ni-MH standard rechargeable AA cells. It is strongly forbidden to use Alkaline or other primary cells!



## SPORTident BS8 SI-Master

SPORTident BS8 SI-Master is an extended SPORTident Control station. It works and can be configured as any other SPORT-ident-Station.

In addition two new service modes are implemented:

- ▶ TimeMaster
- ▶ ExtendedMaster

In operating mode "TimeMaster" the station transmits its clock time to any other SPORTident-Station inductive coupled to the SI-Master. So a set of SPORTident-Stations can be synchronised very quickly. In this mode the SI-Master works together also with older SPORTident-Stations from series 3, 4 and 6.

Also in "ExtendedMaster" mode the SI-Master transmits its clock time to any other SPORTident-Station. Additionally SI-Master clears the backup memory of the slaved station and transmits its own active time to any other unit. The ExtendedMaster functionality only can be applied to SI-Stations of series 7 and 8.

The different service modes are activated by using the Service/OFF-Card. Here is the following order:

- |                   |        |
|-------------------|--------|
| 1. Service        | SERVMO |
| 2. TimeMaster     | TIMEMA |
| 3. ExtendedMaster | EXTMA  |
| 4. OFF            |        |

Each action by an ordinary SI-Card immediately activates stations base mode. For the inductive coupling process a coupling stick should be used.

An acoustical/optical feedback signal indicates the completion of the synchronization process.



### Specifications:

Internal power supply	1 x Lithium ½ AA cell non rechargeable
Battery capacity	1000 mAh
Battery life time	3-5 years
Battery exchange	By SPORTident GmbH and authorised SPORTident dealers
Operating range	- 20°C + 50°C
International protection class	IP 64 (DIN EN 60529) Protection against penetration of dust Protection against splashed water from all directions
Dimensions	101mm x 51mm x 19mm
Weight	62 g
Accuracy at normal temperature	+/- 20 seconds a month
Switch on time	< 1 second (standard)
Backup memory	Maximum number of punches: 21802 maximum number of SI-cards data records: 1022

# School and Training Set Components

	Article number	Units	Basic components
	10200 (SI-Card8) 10300 (SI-Card9)	20	<b>SPORTident Control cards</b> SI-Card8 or SI Card9
	14021	1	<b>SPORTident Printout-Set MCP 7830</b> 1 SPORTident Printout station BS7-P 1 thermal-printer MCPK 7830242 1 data-cable "RJ12 - D9" 1 RS232-cable "zero-modem" 1 power supply unit, MPS161with EU, UK, and US plug, 1 Set SPORTident Instruction cards "Service/OFF", "Start", "Print results" and "Clear backup" 5 rolls thermal-paper 57,5 mm, 25 m 1 printer-manual 1 transport box (340*275*83mm <sup>3</sup> )
	11110 (red)	12	<b>SPORTident Control stations</b> BSF8-DB red or blue Configuration: 1 x Start and 1 x Finish 10 controls "31-40"
	11111 (blue)	1	
	12000	1	<b>SPORTident Master station</b> BS8-DT – SI-Master Configuration: Clear
	30420	1	<b>Coupling stick for BS7/8</b>
	30110	1	<b>Transport case, blue</b> (394 x 294 x 106 mm <sup>3</sup> ) with insert
	19999	1	<b>SPORTident brochure, overview with SI exercises</b> and operating instructions SPORTident System-Software (CD), (SI-Config, SI-Print, SI-Boot, SI-Personal)
<b>Expendable items</b>			
	23111		thermal-paper 57,5 mm, 25 m  Supplements (not included)
	30800		SPORTident-RS232-USB-Converter ! necessary to connect Printout station BS7-P to computer to be able use SI Software
	30230		Mounting holders "plate" for BS8, incl. fixing material (2 units: nut, bolt, washer) ! necessary to fix stations on pylons or other handling material



## Orienteering sport education in your *SCHOOL* - with *SPORTident*!

Did you know that first SPORTident equipment was developed exactly for orienteering sport?

Orienteering is a sport that requires the use of map and compass in a competitive event. It combines physical exercise with an intellectual challenge. Competitors have to make decisions quickly while under stress. Planning a route and finding checkpoints makes this sport fun in addition to sharpening map-reading skills.



Navigation is obviously easier to learn by using a map in a familiar environment. Students can practice map reading, first in the classroom, and then later in the school grounds. This enables them to see more easily the relationship between the symbolic abstraction of the map and their own familiar environment. This active learning process combines fun activities with serious navigation skills. Orienteering is a rewarding option for both sports lessons and afternoon activities.

**Use the SPORTident School and Training Set as timing and identification system to make the most of all orienteering activities in your school.**



***For more information contact SPORTident GmbH***

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