
Basic Guide line for The Sportident system

SI-stations BSF7-8, Master stations BSM7, SI-Config version 1.4.1, 2006-10-24

SPORT  *ident*

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This guide line

General

This guide book is useful for both beginners and more experienced users of the Sportident system.

Our ambition is that together with the online help information in the software it will be easy to use Sportident.

Knowledge

You should know how to use a PC and Windows to be able to understand this guide line.

More information

On our site www.sportident.se you will find more information about the system.

System requirements

The software SI-Config is mainly used for the new generation of stations (BSx7-8). It is recommended to use SI-Manager instead if you are using older stations (BSx3-6)

The operation system must be Windows 2000 or Windows XP.

A minimum resolution of SVGA (800x600) is recommended.

What is the Sportident system?

The Sportident system is a timing system that from the beginning was made for Orienteering. Since the system is highly flexible and robust it works fine for other sports and applications as well.

The new generation stations are small, with light weight and water-resistant. They are always on, and therefore they are perfect for outdoor activities. Example of activities:

- control of presents, the other end of the running track
- record the time at different split times
- records start and finish time
- read out data /result directly to PC or to a battery driven thermal printer
- send data wireless to other locations to provide online split times

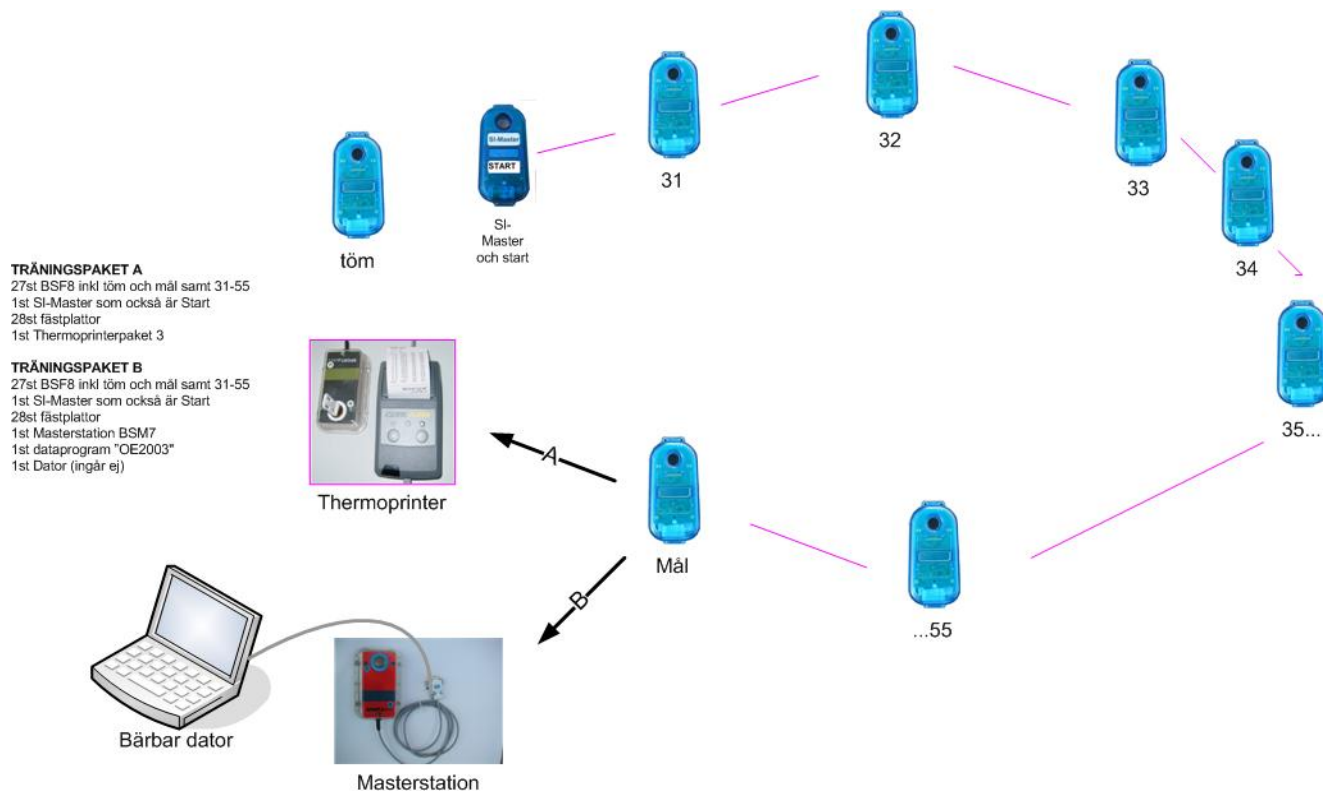
Example of activities where it is used today:

- orienteering, ski-orienteering, car-orienteering
- multisport
- extrem marathon
- running relays
- horse driving
- triathlon
- running
- fox hunting
- sports in school (special software is available)
- physical training in sports clubs (special software is available)

Basic configuration of the system

This configuration is recommended to start with the first time you use the system. This gives you Start and Finish and a number of split times. You can choose to get the result to the PC via a Master station or on a paper using the Thermal printer.

The competitor have got a finger chip on his finger, we call this the SI-card. Every time the runner punch with his SI-card the time and the location (number and operation mode of the station) is stored in the SI-card.



Explanation to the picture

Type	Operating mode
Clear (Tøm)	Clear the SI-card before the activity from old data.
SI-Master and Start	Both time synchronisation of all stations and then used for start punch.
31,32,33...	"Checkpoints" or split times with different numbers
Finish (Mål)	Finish punch, to record the finish time
Master station	To be able to read the data in the SI-card to the PC and to change the number and operation mode in the SI-stations.
Thermal printer	Prints the result without and PC. The result is always finish time – start time

SI-card

The SI-card consists of a RFID-chip, a plastic "finger" and an elastic band. The chip is shock and water resistant and have a very long life time. Via radio waves the chip gets power using induction, then it is possible to read and right to the chip. The data transmission is very safe since no physical contact is needed between the SI-card and th SI-station. Neither water, snow, is or dirt can stop the transmission.



As soon as the SI-card is inserted into the hole of the SI-station the number and time in the station is written into the SI-card. This is called to "punsch".



SI-station BSF7 and BSF8

There is two different SI-stations available, BSF7 and BSF8. The difference between these are the size. BSF7 has got a double sized battery as BSF8 and is more than double in size. Otherwise they are identical.

SI-station:

- is a RFID reader/writer that can read/write all types of SI-cards.
- Is powered by a lithium battery with many Years of lifetime.
- Can be programmed with numbers between 1 and 1023.

Important! Most of the PC-software for orienteering and the SI-card 5 can only read numbers between 31-255.

- Have got a real time clock that is automatically synchronized using the SI-Master or the PC.
- Are automatically activated when punching
- Turns into sleep mode (power saving mode) when it is not used.
- Time, operating mode, battery etc. is shown on the display.

Read more about the SI-station on <http://www.sportident.se/english/Basenheter.aspx>

Master station BSM7 and BSM7-USB

The Master stationen is actually a SI-station with RS232 or USB connection.

This is used mainly for:

- Changing the number and operating mode in the SI-station
- Reading the data in the SI-card to PC software.
- Reading the data in the SI-card and automatically via "autosend" transmit the information to a transmitter for online results.



Besides this the Master station has the same operating mode as the SI-stations.

Special stations

Except the SI-station and the Master station there are some special stations available:

- Printer station, BS7-P. Read-out station that is connected to a battery driven Thermal printer. BSP7 has its own drivers for the printer and calculates the result itself.
- Sprinter station, BS7-S. Special station with input for trigger (photocell). Can be connected to photocell and id of the SI-card is automatically assigned to the time.
- SI-Master, station similar to BSF8, that also have the operating mode to synchronize the clock in all stations with its own clock.

Software SI-config - installation

The software SI-config is used to change the operating mode and/or the number in the SI-stations.

The software is packet in a zip file. It is free to use. Download it here under Software:

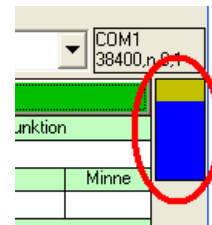
<http://www.sportident.se/english/Basenheter.aspx>

- 1) Unzip and run **SI-configsetup.exe**. Follow the instructions given.

Choose the correct serial port (COM)

The software detects automatically the installed serial ports. If you are using a Master station with USB or an adapter between USB and serial port connect this before you execute the software. The USB Master also requires a special driver (<http://www.sportident.se/english/Order.aspx?id=110>) (BSM7 USB driver, <http://www.sportident.se/english/GetFile.aspx?id=209>) The station can use both 4800 and 38400 bits per second.

- Start SI-Config
- Program settings / Serial Port
- Choose the right port in the list.
- Choose com port speed. **Important! If the Master station should be used as online station perhaps it must have the speed 4800 to work with some sw.**
- Press OK. If the port is not ok you will get a message.
- Check the connection by selecting program settings / **direct** and press Read. Each time you read or write the bar should move down to indicate the process.



Change read/write speed

If the station should be used as an online control perhaps it must use the speed 4800. Check the instructions for the software used. To change the speed, do like this:

- Connect the Master station to the PC
- Choose commands / set xxx Bits per second
- Check which speed is used

How to change number and operating mode in the station

To be able to change the operating mode and number in the SI-station it has to be programmed using SI-config and a Master station. A coupling stick makes the connection better between the Master station and the SI-station. First connect the Master station to the PC.

Program BSF7

Note! If the Master station is aBSM7-USB a special driver has to be installed first.



During the programming phase the BSF7 station should be placed upside down on top of the Master station with the inductive stick through the both holes.

After making the right settings, press Write



Program BSF8

Use a smaller coupling stick for the BSF8 stations.



Put the station (both BSF7 and BSF8) in "service mode" to make the power field stronger and make it easier to program the station.

This is done by punching one time with the lilac OFF card the display is off. SERVICE will shortly be shown in the display.

The BSF8 station should be placed as shown in the picture on top of the station with the stick through both holes.



When the correct settings are done, press Write.



Software SI-config

The main window has mainly 4 different parts:

(direct): Read / Write the Master-station or Read/Write the SI-station (Remote)

(in green): Information from a station that is read or written.

(in red) what is going to be programmed to the station.

(in blue): battery info.

You can choose between Standard view and Expert view. In Standard view you can only change some standard settings.

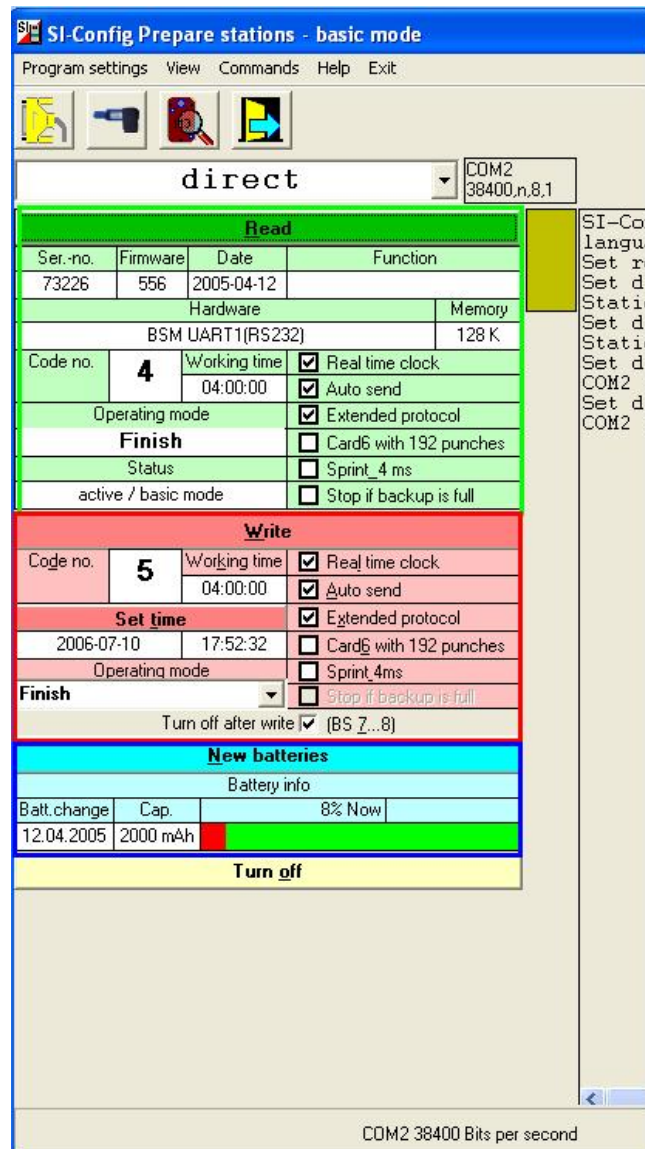
Direct / Remote

By changing this switch you control if the Master station should be read / written (direct) or if the SI-station remotely via the Master station should be read / written (remote).

Information (green)

In this section information from the station is shown either when you choose read or as a record after you has programmed a station.

- Read – press here to read the station. The following is shown:
- The serial no. of the station
- The installed firmware
- Date of production
- Function (not in use)
- Type of hardware
- Memory size
- Code number
- Working time before the sleep mode is activated
- Operating mode – what mode the station is programmed to.



- Status
- More settings (choose view / Expert view):
 - Real time clock – shows that the station has got a 24h clock with time of day. (only information)
 - Autosend – checked means that the Master station (only) will send the punch through the cable to a PC or a radio transmitter.
 - Extended protocol – checked means that more information is send in autosend mode. Note that the software receiving this must support the extended mode.
 - Card6 with 192 punches. – checked means that a special SI-card 6 will be able to store up to 192 punches. This is possible from firmware 5.52. Also the Master station must have this setting.
 - Sprint 4ms – checked means that the SI-station will write the time down to 4ms resolution instead of seconds. **Note that the receiving software must support this.**
 - Stop if backup is full – checked means that the station in operating mode "Read SI-cards" with autosend will turn off when the backup memory is full. This means that the backup memory will not overwrite old information as it is normally.

Change operating mode (Write)

Make the settings to be written into the station.

- Write – press here to write either to the Master station (direct) or to the SI-station (remote) **Note! Make sure that the setting direct / remote is correctly set.**
- Code no. – 1-1023, **Note! Most of the software for orienteering and the SI-card 5 can only use 31-255.**
- Active time – the time that the station should be active (display on) until the station should go into sleep mode. When the station is in sleep mode it will take app. 1 second to activate the station simply by punching with a normal SI-card. Every time there is an action (punch) the timer will be reset to zero again.
- Set time – The date and time shown here is the PC time. Make sure that the PC time is set to official time before adjusting the time in the station. Each time you change the operating mode the time is automatically adjusted to the PC time. **Note! Make sure to have the right time (official) in the PC before changing the operating mode or setting the time in the station. Otherwise the times in the result will be wrong.**
- Operating mode – choose the operating mode to write into the next station.
 - (show all modes) – means that not all modes are listed in the drop down list. Choose this to show all modes. Some modes can only be programmed into special stations (*)
 - Control – generates split time or checkpoint in the SI-card.
 - Start – start station that makes a start time in the card.
 - Finish – finish station
 - Read SI-cards – this mode is needed when you want to read the information in the SI-cards.

- Clear (keep start no.)*, a mode not used anymore where a start number (not the serial number) is written to the SI-card and not cleared. This is not used so often anymore!
 - Clear (completely) – the mode to clear the SI-card before the activity. It is not possible to punch in the Start station if the SI-card is not cleared.
 - Check – mode that checks if the SI-card is cleared or not. This mode is also built in the Start station.
 - Printer station* - the mode that the special Printer station should be programmed to.
 - Start with time trigger (photocell)* - special mode for the Sprinter station that can connect a photocell.
 - Finish with time trigger (photocell)* - special mode for the Sprinter station that can connect a photocell.
 - Print + SMS* - special mode only for Print + GSM station
- More settings (View / Expert view)
 - Real time clock – the station has got a 24h clock with time of day. (only information)
 - Autosend – checked means that the Master station (only) will send the punch through the cable to a PC or a radio transmitter.
 - Extended protocol – checked means that more information is send in autosend mode. Note that the software receiving this must support the extended mode.
 - Card6 with 192 punches. – checked means that a special SI-card 6 will be able to store up to 192 punches. This is possible from firmware 5.52. Also the Master station must have this setting.
 - Sprint 4ms – checked means that the SI-station will write the time down to 4ms resolution instead of seconds. **Note that the receiving software must support this.**
 - Stop if backup is full – checked means that the station in operating mode "Read SI-cards" with autosend will turn off when the backup memory is full. This means that the backup memory will not overwrite old information as it is normally.
 - Turn off after write BS 7..8 – means that the SI-station will go into sleep mode after programming it.

Set time

Each SI-station has its own real time clock. This is always running, even in sleep mode. To get correct times it is important that all clocks are synchronized with each other. When writing to the station the time is automatically set using the PC time as a reference.

Therefore it is very important that you check the PC time before you start to write to the SI-station.

The date and time of the PC is shown.

Press "Set time" to synchronize a SI-station.

Confirm that the time will be adjusted.

It is also possible to set a different time to the SI-station by pressing the small clock  .

New batteries

In this section the battery info for each station read or just programmed is shown.

Batt change – the date when the battery was changed.

Cap. – the capacity of the battery

The bar shows how many % that is used (in red) and how much that is not used (in green). Above the same in %.

When the battery voltage is 3.00 volt or less it has to be changed. At 2.60 voltages the station turns off. Only persons authorized by Sportident have the right to change the battery.

Example of operating modes

Operating mode: control number 31, active for 2 hours:

Write			
Code no.	31	Working time	<input checked="" type="checkbox"/> Real time clock
		02:00:00	<input checked="" type="checkbox"/> Auto send
Set time			<input checked="" type="checkbox"/> Extended protocol
2006-07-10		17:54:48	<input type="checkbox"/> Card6 with 192 punches
Operating mode			<input type="checkbox"/> Sprint 4ms
Control			<input type="checkbox"/> Stop if backup is full
Turn off after write			<input checked="" type="checkbox"/> (BS Z...8)

Operating mode: Read SI-cards:

Write			
Code no.	1	Working time	<input checked="" type="checkbox"/> Real time clock
		02:00:00	<input type="checkbox"/> Auto send
Set time			<input type="checkbox"/> Extended protocol
2006-07-10		17:55:22	<input type="checkbox"/> Card6 with 192 punches
Operating mode			<input type="checkbox"/> Sprint 4ms
Read SI cards			<input type="checkbox"/> Stop if backup is full
Turn off after write			<input checked="" type="checkbox"/> (BS Z...8)

Operating mode Master station as a online control 100 with auto send:

Write			
Code no.	100	Working time	<input checked="" type="checkbox"/> Real time clock
		02:00:00	<input checked="" type="checkbox"/> Auto send
Set time			<input type="checkbox"/> Extended protocol
2006-07-10		17:56:07	<input type="checkbox"/> Card6 with 192 punches
Operating mode			<input type="checkbox"/> Sprint 4ms
Control			<input type="checkbox"/> Stop if backup is full
Turn off after write			<input checked="" type="checkbox"/> (BS Z...8)

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Read a SI-card

SI-config has a function to read the information in a SI-card.

Note: Only 20 punches will be shown in the default configuration.

- Connect a Master station in "Read SI-card" mode.
- Go to Commands /Read SI-card.

A new window appears.

- Insert the SI-card into the hole of the SI-station and wait until it is read. Normally this takes 2-3 seconds.

Add more columns to view SI-cards with more than 20 punches.

- Go to Program settings / Add columns
- Add ...No and ...Time to the right to increase the number of punches.
- Save when ready
- First time you will be asked to save the layout.

Have fun using the Sportident system!