SPORTident BSx7/8 firmware 656 release notes

Contents

Overview

SPORTident has released a new firmware version 656 for the following devices

- **BSF7**: SPORTident control station series 7
- **BSF8**: SPORTident control station series 8
- **BSM7**: SPORTident main station series 7
- **BSM8**: SPORTident USB main station series 8
- **BS7-P**: SPORTident printer station series 7
- **BS7-S**: SPORTident sprint station series 7
- **BSF8 Master:** SPORTident control station master series 8

Update to the latest firmware version is supported for every listed device above running firmware version 500 or later. We recommend to update all of your SPORTident devices to the latest firmware.

The new firmware version is available through the firmware update feature of SPORTident Config+ application. We recommend to use the latest available version of Config+ available at www.sportident.com.

To use BSM7 and BSM8 USB stations on your computer, you need to install a USB device driver. SPORTident supplies a driver for Windows operating systems (Windows 2000 up to Windows 10). It is included in the setup of Config+ or can be downloaded in the software download section at www.sportident.com.
Linux users can use the generic CP2102 device driver that ships with their distribution. Mac users can use the Silicon Labs driver for CP2102 that is available at www.silabs.com.
Be aware that SPORTident does not provide support for Linux and Mac operating systems.

Changes in the firmware 656 since version 649

Firmware version 656 introduces performance and stability improvements and fixes known issues. No new features have been added since firmware 649.

Improvements

- Optimized power consumption, enhanced battery consumption counter accuracy
- Improved SIAC battery test display message:
  - Station will show “WARN” (warning) for voltages ≤ 2,71 Volts
  - Station will show “FAIL” (failure) for voltages ≤ 2,44 Volts
- Field detection improved for waking up the station from sleep mode

Fixed issues

- Fixed SIAC readout in legacy protocol mode

Changes in the firmware 649 since version 623

Firmware version 649 introduces performance and stability improvements and fixes known issues. No new features have been added since firmware 623.

Improvements

- A clear station now always clears a SI-Card6 completely, ignoring the setting "Card 6 with 192 punches" to prevent problems with incompletely cleared cards
- Printout station now always sets "Autosend" setting and disables "Legacy protocol" setting
- Voltage is not shown anymore for USB stations when connected to a computer
- Faster clearing of the SIAC
- Battery voltage is now measured after firmware boot
- Reading and writing a SIAC with a readout station is more stable and faster
- Improved robustness of backup memory writing routine
- Improved checking of default values when programming wrong values for beacon mode settings
- Improved master-slave communication of stations with coupling stick

Fixed issues

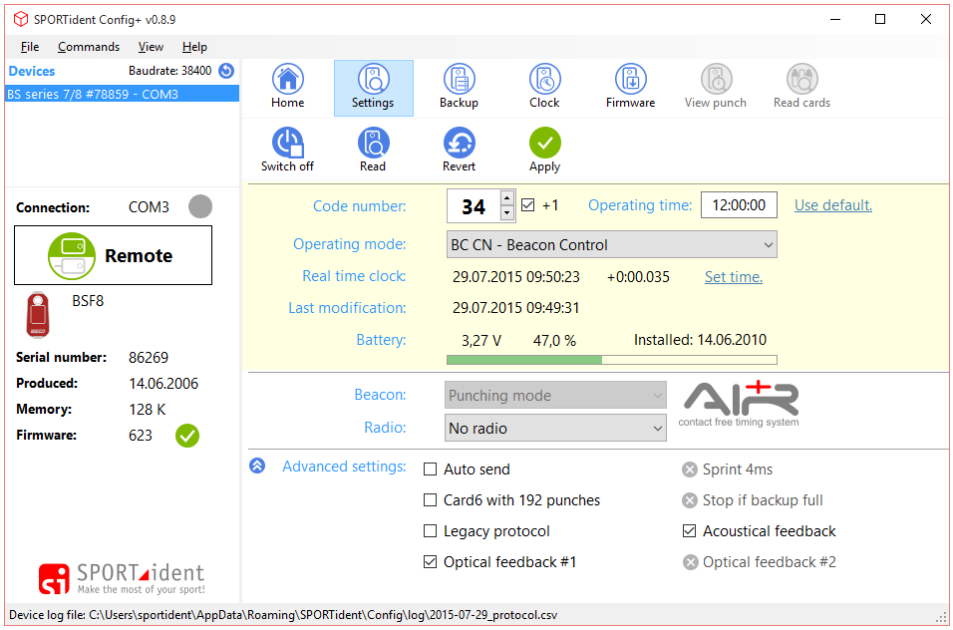
- Fixed incomplete initialization of BS8-SRR in some cases
- Fixed battery measurement bug showing wrong values ("1.6… V")
- Fixed crash of SIAC battery test station when beeping and showing "LOW" value
- Fixed printing on printers with low battery
- Fixed beacon not being sent when a full card is punching and remaining in the station
- Fixed wrong baudrate initialization of BSM7-USB when USB is connected

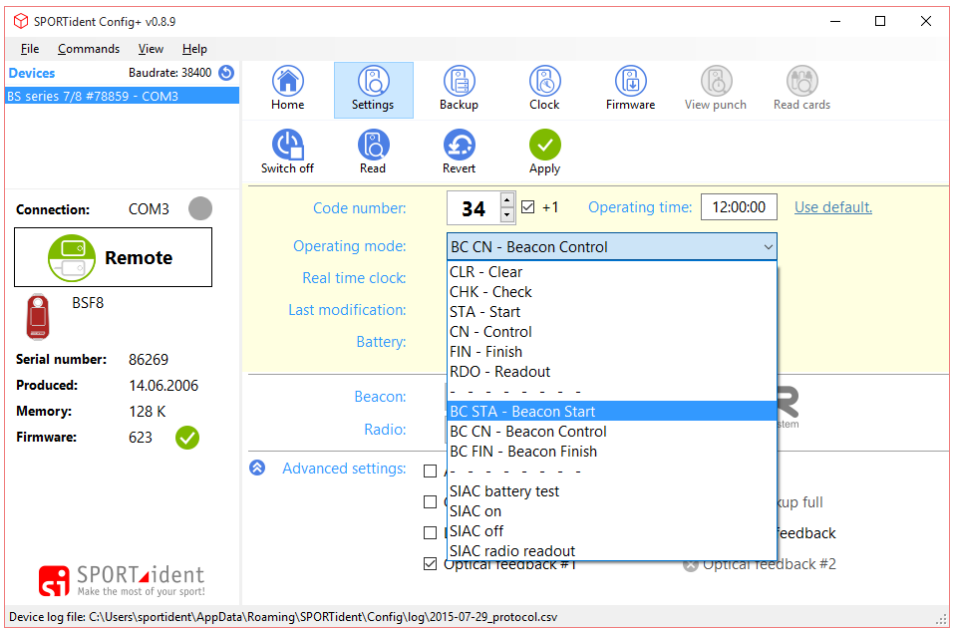
Changes in the firmware 623 since version 580

Introduction of beacon operating modes for BSx7/8 to work together with SIAC

The SPORTident classic equipment grows in the Air+ direction. The new beacon operating modes allow all BSx7/8 stations to operate in a **mixed mode**. Punching all classic SPORTident Cards is still possible (**direct punching**) while the new SPORTident ActiveCard will be able to record the control point at a range of 60 cm above and 30 cm around the station (**remote punching**).

The new operating modes are possible to be configured with **SPORTident Config+** and will be enabled for all BSx7/8 stations running firmware 618 and later.





Beacon modes are available with the operating modes **Start (BC Start)**, **Finish (BC Finish)** and **Control (BC Control)**.

The beacon operating modes offer more **settings parameters** to be configured. The parameters and its meanings are the same as for BS11 devices. **Punching mode** is required for these operating modes and cannot be changed.

Stations running in beacon operating mode **must be activated** using a **direct punch**. Service/Off stick **does NOT enable** the beacon field of the station but switches to service mode/standby only. The device will have about **ten times** the **battery consumption** as in non beacon mode when it is active. A **BSF8** with a brand new battery will operate about **1 500 hours** before the battery is dead, a **BSF7** about **double** the time.

If you will **solely** use SPORTident ActiveCard (remote punching) you need to be aware that the **operating time** counter is **not reset** when a SIAC passes by. Therefore you are required to set the operating time **long enough** to end after your event. A setting of **12 hours** minimum is **recommended**. Afterwards you are recommended to **turn off** your stations with the **Service/Off** stick to save battery life.

Introduction of SIAC special functions operating modes

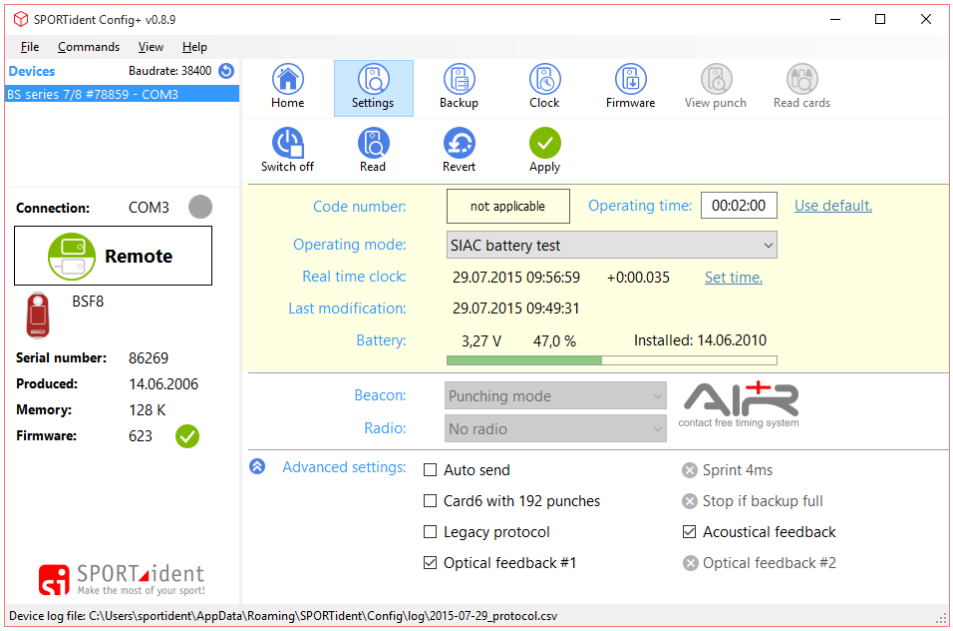
The SPORTident BSx7/8 can be programmed in various operating modes to integrate with the SPORTident Air+ system.

The following new **operating modes** are available:

- **SIAC Battery test** – Measures the battery of the punched SIAC and indicates its status by beeping/blinking and displaying its voltage. Critical battery voltage is indicated by no beeping/blinking and the display caption "FAIL". The backup memory of the station additionally contains the battery voltage of all checked SIACs. Backup memory can be read with Config+.
- **SIAC on** – Actives the beacon interface of the SIAC to enable remote punching, does not modify the card memory, also the card does not need to be cleared.
- **SIAC off** – Deactivates the beacon interface of the SIAC to disable remote punching, does not modify the card memory.
- **SIAC radio readout** – Instructs the SIAC to send its memory via SRR (short range radio) to the next available receiver device (SRR Dongle or SI GSMDN), does not modify the card memory, beacon interface of the card does not need to be activated.

SPORTident BSx7/8 stations that are configured as one of the SIAC special functions operating modes do not perform any other action/mode (like control, start …).

The new operating modes are possible to be configured with **SPORTident Config+** and will be enabled for all BSx7/8 stations running firmware 618 and later. Be aware that the code number setting is not available for these operating modes.



Introduction of start clock feature

The SPORTident BSx7/8 offers a new feature build in the latest firmware:
A **start clock** feature can be activated on all BSx7/8 station that are configured in **start operating mode**.

The feature can be **activated** with the **Service/Off** stick. When you punch a station in standby mode with your Service/Off stick, it will **cycle** between the following modes:

1. **Service mode** (Display "**SERVMO**")
   Displays the most important settings,
   switches back to standby mode after 5 minutes
2. **Start clock** (Display "**STACLK**")
   Displays toggles between device time and "STACLK" and
   stays in this mode according to the operating time
3. **Standby mode** (Display off)

When the device is in start clock mode, it starts **beeping** 4 seconds before every **full minute**: **beep beep beep beep beeeeep**. The **start** operating mode is **still available** when a SPORTident Card is punched but it is not recommended to use it when start clock feature is active as participants could mix up the confirm signal of the card with the start clock signal. The battery consumption of the device is a bit higher than usual as every beep and blink consumes a bit more power.

When the start clock feature is enabled in the device, it disregards the optical/acoustical feedback settings and always beeps/blinks.

Extended functionality for BSF8 Master station

The functionality of the BSF8 Master (SI-Master) station has been **enhanced**. When you punch a station in standby mode with your **Service/Off** stick, it will **cycle** between the following modes:

1. **Service mode** (Display "**SERVMO**")
   Displays the most important settings,
   switches back to standby mode after 5 minutes
2. **Time master** (Display "**TIMEMA**")
   The station will sync and set the time of every touched station
3. **Extended master** (Display "**EXT MA**")
   The station will set operating time, sync and set the time and clear backup memory of every touched station
4. **Standard master** (Display "**STD MA**")
   New feature: Will sync and set the time and restore the standard configuration of every touched station that has been set up in advance using SPORTident Config+
5. **Start clock** (Display "**STACLK**")
   Only available if the device is programmed in start operating mode,
   see start clock feature description
6. **Standby mode** (Display off)

Miscellanous improvements and fixes

Additional improvements and fixes to the firmware:

- **Changes since firmware 614:**
  Compared to firmware 614, we have improved handling of SI-Card5 and changed some additional details.

- **Changes since firmware 618:**
  - Improvements:
    - clearing of SI-Card5 is faster (below 7 seconds)
    - readout of SI-Card5 is more reliable and faster
  - Fixed issues:
    - fixed a clock issue when the station woke up from standby
    - fixed erroneous beacon pulse after readout
    - fixed blocking of serial connection (BS7-P) after incomplete readout and printout of cards
    - fixed faulty (too short) beep after beep instruction (0xF8)
    - fixed page overflow issue when writing punch records to backup memory in non extended protocol mode
    - fixed an issue when reading cards to the backup with BSF7/8

- **SI-Master station: Extended master mode**
  The operating time is set to a value of 12 hours, if the touched station is programmed in one of the beacon operating modes and the current value is less than 12 hours. Higher values are disregarded.

- **fCard handling**
  If a SPORTident fCard is punched on a station that has the extended protocol flag disabled, the device will automatically enable the extended protocol flag because this is required for fCard to work.

- **Remote time setting with PC software**
  When a remote station time is set via PC software, the master station will set its own time to the time delivered by the PC software and afterwards will set the time of the remote station itself. This ensures a higher accuracy of time setting as the PC software does not need to compensate the round trip time from the PC interface via coupling interface into the remote station.

- **SI-Card 6 handling**
  The general performance of SI-Card 6 handling has been improved and made more secure.

- **Service mode display enhanced**
  The service mode now displays the following information (cycling every 3 seconds)

"SERVMO"	- indicates service mode active, station will switch to standby mode after 5 minutes
[TIME]	- displays the current time of the device
[MODE]	- displays the operating mode and code number (if applicable)
OFFxyz	- display the operating time in minutes
SWxyz	- displays the current firmware version
PC xyz	- displays the number of punch records in the backup memory
BATxyz	- displays the last measured battery voltage or "BAT " if no battery voltage has been measured
CAPxyz	- displays the battery consumption in percent

Known issues

We are aware that the current firmware still contains an issue that might lead to loss of punch data in SI-Card6. The reason is a corruption in the internal memory structures of the SI-Card6 that lead to existing data being overwritten by new punches.This problem occurs in very rare conditions (less than 1 out of 100 000 punches). We have introduced countermeasures during the last firmware version to make this problem even less likely.

In case this problem occurs at an event, we recommend disproving the apparent mispunch by reading the backup memory of the relevant field stations that are missing on the SI-Card.