



COMPUTER TEAM LEADER'S HANDBOOK

Appendix 3 – Programming the SI boxes

First of all, start **SIManager** and enter the basic information about the event.

1. Connect an SI reader station (aka "master control box") to the computer via the serial-to-USB cable.
2. Start **SIManager**.
3. Click on **Event** in the menu bar and then on **New** in the drop-down menu. This opens the **Create a new event** window.
4. Enter the same name, date and zero time as you used when you set up the event in OE2003.

Note: It is important that the same zero time is used in both SIManager and OE2003. See step 3 in Appendix 2. The zero time should be before any of the SI boxes are programmed to wake up. For example, if the first helper's start is at 10:00 then a suitable zero time would be 09:00:00.

5. Click on **OK** to close the **Create a new event** window.

Next, get ready to program the SI boxes.

6. Click on **SI stations** in the menu bar, then on **Prepare** in the drop-down menu, and then on **Competition mode**. This opens the **Prepare SI stations - Competition mode** window. A small window also pops up to ask you to check the PC clock.
7. Check the PC clock. You can do this by double clicking on the time in the bottom right hand corner of the desktop.

Make sure that both the date and time are correct. The PC time will be downloaded to the SI boxes and they will use that calibration to determine when to wake up and when to switch off again.

8. Once you have checked the PC clock, click on **OK** to close the small pop-up window.
9. Check that **Master** is selected.

If **Directly** is selected then SIManager will read from the memory of the reader station rather than the SI boxes.

10. Insert an inductive coupling stick into the hole in the reader station.

11. Use the magnet to wake up the reader station.

Important note: Whenever you use the magnet to wake up any SI box, check how many times the box beeps and flashes. The normal wake-up signal consists of two beeps. If the box beeps and flashes sixteen times then its battery is running low and should be replaced.

12. Use the magnet to wake up an SI box.

Remember to check how many times it beeps and flashes.

13. Place the SI box on top of the reader station so that the inductive coupling stick fits into the hole in the SI box.

Prepare SI stations - Competition mode

Protocol Settings Help Close

SI Station

Ser.-No.	CPU No.	Date	Hardware	Software	Memory
33533	33533	19/06/2002	BSF6	406	16 K

Ordinary station

Real time clock RF module External time trigger

Batteries

Date: 10/12/2003 Current: 82% New batteries

Cap.: 2400 mAh Afterw.: 82%

Parameters

Full mode **Quick mode**

	To be written		Current contents	
Current time	04/03/2005	15:48:51	04/03/2005	00:01:57
Power on time	13/02/2005	09:45:00	13/02/2005	09:45:00
Turn off time	13/02/2005	13:00:00	13/02/2005	14:45:00
Working time	03:15:00		05:00:00	

Task: Start Control

Code no.: 1 111

PC connection/Autosend:

Status: Finished

Activate station immediately: Mode: Competition

Master: Master

Write Read Turn off

Time check Signals

Green indicator light

14. Click on **Read**. The **SI station status** indicator in the bottom right hand corner of the window should turn violet and the progress bar along the bottom of the window should lengthen from left to right as the SI box memory is read. Once the read operation is complete the **SI station status** indicator should turn green.

If the read operation doesn't work then:

- Check that the reader station is awake.
- Check the port settings. To do this, go to the main **SPORTident Manager** window, click on **Settings** in the menu bar and then on **Serial port** in the drop-down menu. The port settings on my computer are port =1, baud rate = 4800, data bits = 8, parity = none, stop bits = 1 and protocol = none.

15. Check that **Real time clock** is checked.

16. Select **Quick mode**.

IMPORTANT NOTE: Make sure that you select **Quick mode** unless you are intending to re-number SI boxes and/or allocate them to different duties. Unfortunately, SIManager defaults to Full mode. If you forget to select Quick mode then you may find that you have accidentally re-numbered SI boxes and you may also have changed them from, for example, controls to Finish stations.

See later in this appendix for notes on when and how to use Full mode.

17. Check the date and time beside **Current time** under **To be written**.

Since you've just checked the PC clock these should be correct, but it's worth double checking.

18. Enter the desired **Power on** date and time and the **Turn off** date and time.

19. Double check the **Power on** and **Turn off** dates and times.

Judging by my experience, once you've finished programming all the SI boxes you'll suddenly think "Did I put in the right date? What happens if I got the date wrong and none of the SI boxes wake up for the event?" Double checking the dates and times now will reassure you.

20. Click on **Write**. The **SI station status** indicator should turn violet and the progress bar should indicate the progress of the write operation.

21. Once the write operation is complete, quickly run through the following checks:

- If the "afterwards" battery drain is more than 90% then consider changing the battery in the SI box, even if it didn't beep 16 times when you woke it up.
- Is the **Working time** correct?
- Is the **Task** correct?
- Is the **Code no.** correct?
- Is the **Status** shown as **Prepared**?

22. Remove the SI box from the reader station and put it in the "programmed boxes" area.

Note: Keep the programmed SI boxes separate from the ones waiting to be programmed. You really don't want to get them mixed up!

Now get your SI box programming production line working.

23. Use the magnet to wake up the next batch of SI boxes.
Remember to check the number of beeps and flashes as each box wakes up, and to set aside any that need new batteries. See later in this Appendix for instructions on replacing batteries.
24. Put the next SI box on to the reader station.
25. Click on **Write**.
26. Once the write operation is finished, check the predicted "afterwards" battery drain, the task, the code no. and the status.
27. Take the SI box off the reader station and put it in the "programmed boxes" area.

Once all the SI boxes have been programmed:-

28. Use the "purple dibber" to switch off the reader station.
29. Close the **Prepare SI stations - Competition mode** window.
30. Close the **SPORTident Manager** window.
31. Pack up the SI boxes to give to the Planner.

At this point you'll suddenly question whether you put in the right **Power on** and **Turn off** dates and times. Aren't you glad that you double checked?

Replacing the battery in an SI box

1. Use an Allen key to undo the four bolts that hold the two parts of the transparent case together.
Note: Be careful not to lose the nuts.
2. Prise apart the two parts of the case.
As the case comes apart, note the position of the two seals.
3. Note how the old battery fits into the case and how the connection is made.
4. Disconnect the old battery from the SI box and remove the battery.
Note: Keep the old batteries separate from the new ones. You really don't want to get them mixed up!
5. Connect the new battery to the SI box and fit the battery into place.

6. Check the two seals.
If necessary, remove the old seal and replace it with a new one from the tin box. This should only be necessary on rare occasions.
7. Put the case back together, checking that the seals are correctly seated.
8. Use an Allen key to do up the four bolts that hold the case together.
9. Wake up the SI box and place it over the inductive coupling stick on the reader station.
10. Click on **New batteries** in the **Prepare SI stations - Competition mode** window. This opens the **New batteries window**.
11. Check that:
 - The battery capacity is set at 2400 mAh.
 - The consumption is set at 0%.
 - **New date** is selected.
12. Click on **OK** to close the **New batteries** window.
Remember to program the SI box!

Full Mode programming

When SIManager is used in **Quick mode**, each SI box retains its code number and task.

When SIManager is used in **Full mode**, the code number and task specified in the left hand side of the **Prepare SI stations** window are written to the SI box, overwriting what was already there.

In most cases it is important to select **Quick mode**, because you do not want to change the SI boxes' code numbers and tasks. You just want to program them to wake up at a certain time and then switch off again after the appropriate interval.

However, there may be occasions when you do need to change an SI box's code number and/or task. For example, if the Planner has used a given control number and the relevant SI box is missing or has failed then you will need to re-programme another SI box to act as that control.

Important note: If you change an SI box's code number or task then always re-label the box immediately. It is important that the label on each box reflects its code number or task.

If you are programming more than one SI box in Full mode, then be aware that the code number in the left hand side of the **Prepare SI stations** window increments by one each time you write to an SI box.