SICK

S 3000

Data Recorder

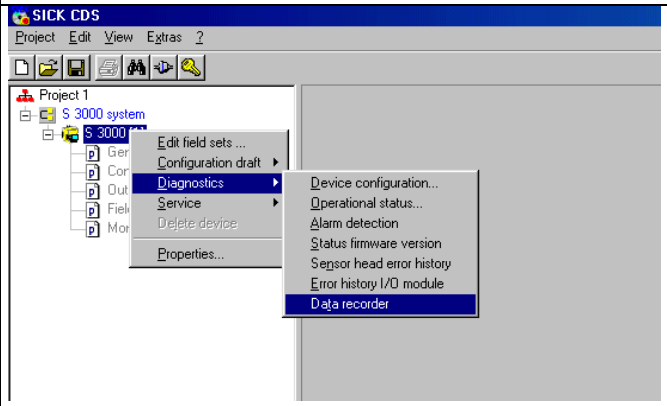
In general, the Data Recorder provides two operations:

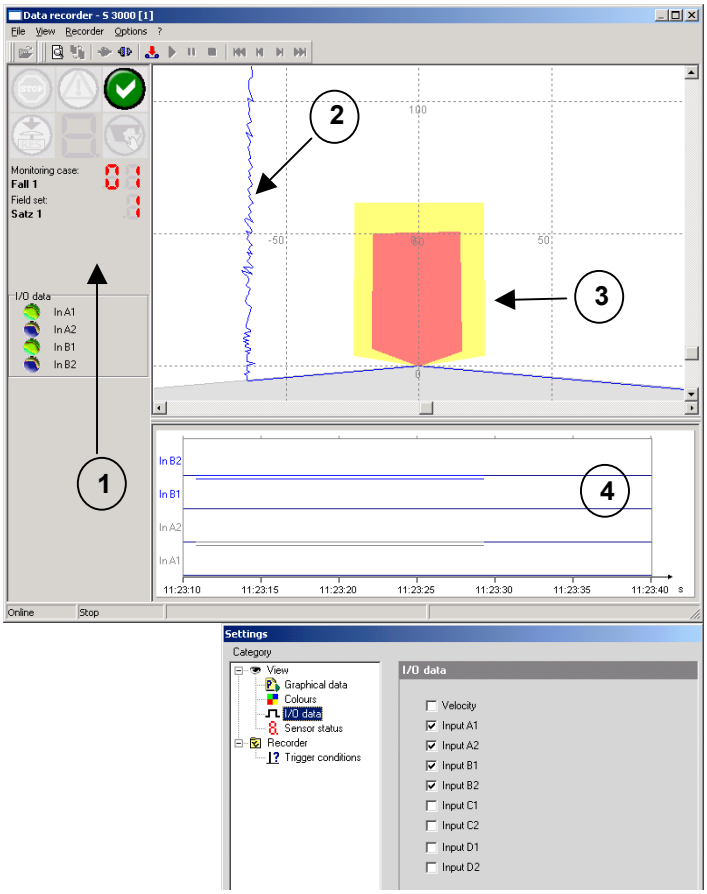
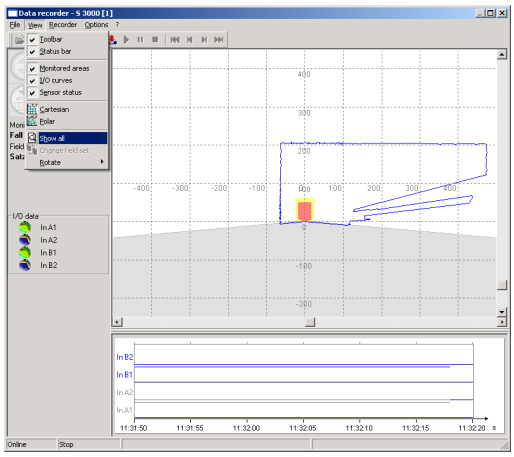
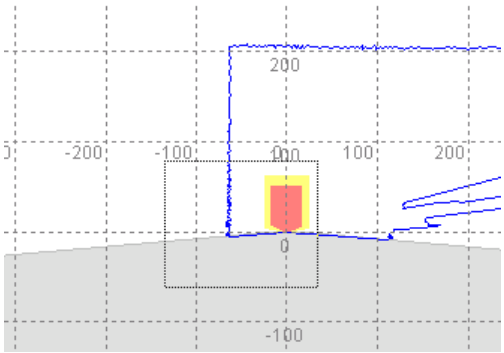
1. **Online monitoring of actual situations**
2. **Recording of situations with or without trigger events**

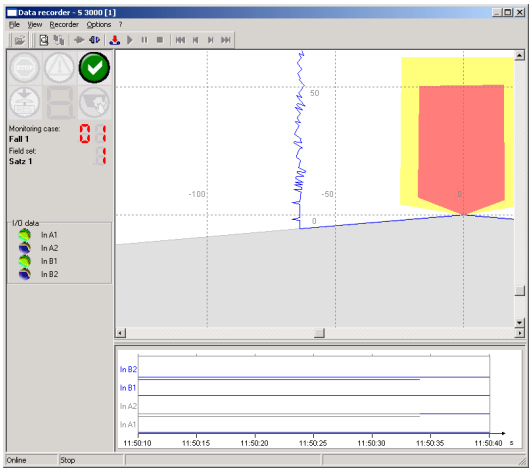
1. Monitoring actual situations online

To monitor the actual situation, CDS must have the configuration of the S3000 stand alone or S3000 master/slave combination opened.
This is automatically the case after downloading a new or modified configuration
or by receiving the systems´s configuration into the already started CDS.
For both cases, the scanner or the scanner combination has to be presented in blue letters in the project tree of CDS.

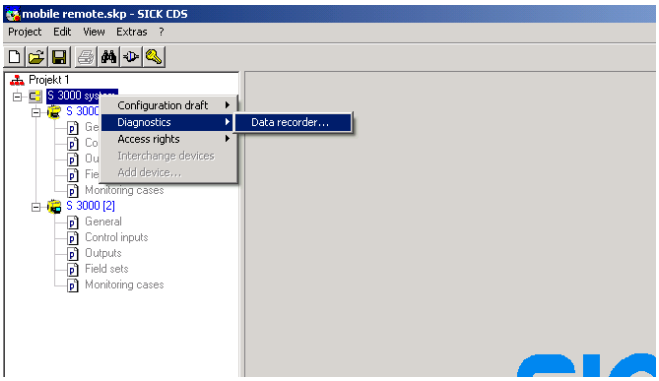
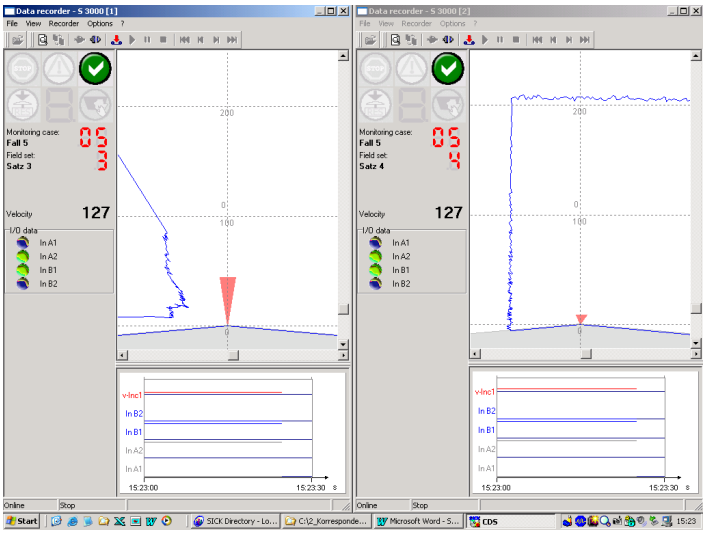
Stand alone:

Step Nr.		
1		Open the data recorder by right mouse click on the S3000 and select ***Diagnostics – Data recorder***

2		The window of the data recorder appears. **1** = display area shows for quick reference the indicator symbols used on the scanner. Below the symbols, the actual monitoring case and the actual field set number is shown (speed of an AGV optional if used) **2** = Contour line of the scanner (online). This line shows the scanner´s 2 dimensional reading and represents the ambient contour. Changes appear if the scanner runs with i.e. a moving AGV or if the ambient changes when people approach. **3** = The actual safety field (red) and warning field (yellow) according to the active monitoring case (see 1) **4** = Actual state of control inputs <u>Note:</u> If not all areas are displayed, select in the menue bar ***Options – Settings*** and mark the desired display options in category ***I/O data***.
3	 	For a view of the entire scanned area, select via menue bar ***View – Show all*** For a closer view, hold right mouse click at any position in the graphics and draw the desired area as shown.

4		After releasing the mouse click, the selected area appears enlarged.

Scanner System (2 scanners as master/slave)

1		For Scanner systems, open the data recorder via right mouse click on S3000 System and select ***Diagnostics – Data recorder...*** Note: Individual presentation of each scanner is still possible, see stand-alone procedure.
2		The data recorder shows 2 windows, related to both connected scanners. Each window has its own settings, the handling is as in stand-alone operation.

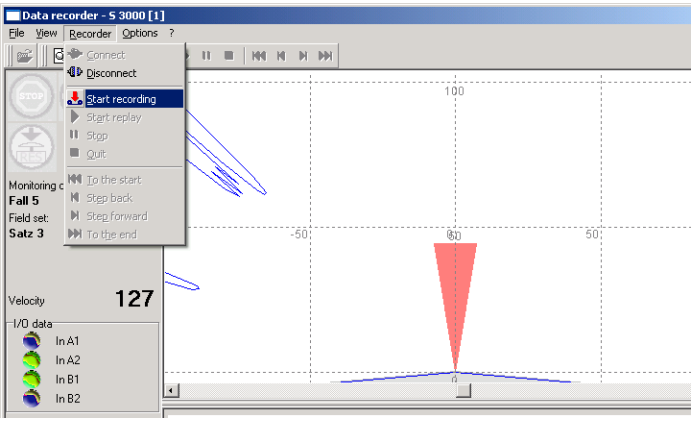
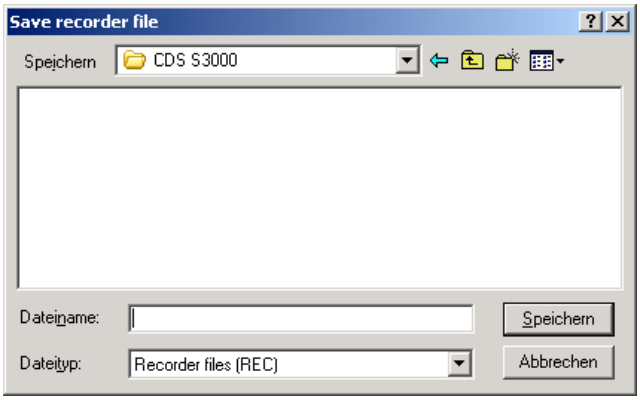
2. Recording of situations with or without trigger events

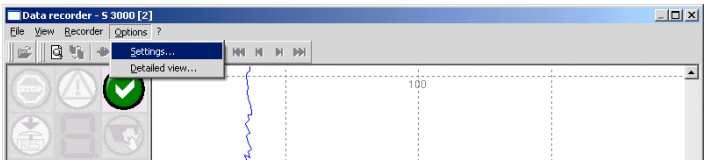
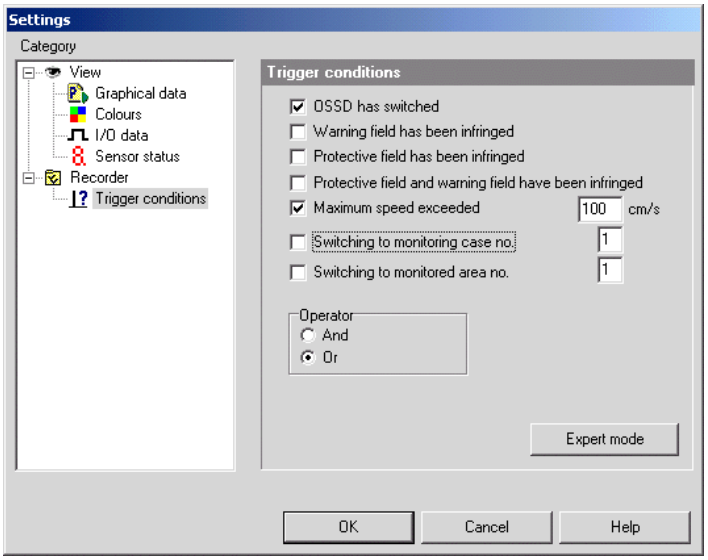
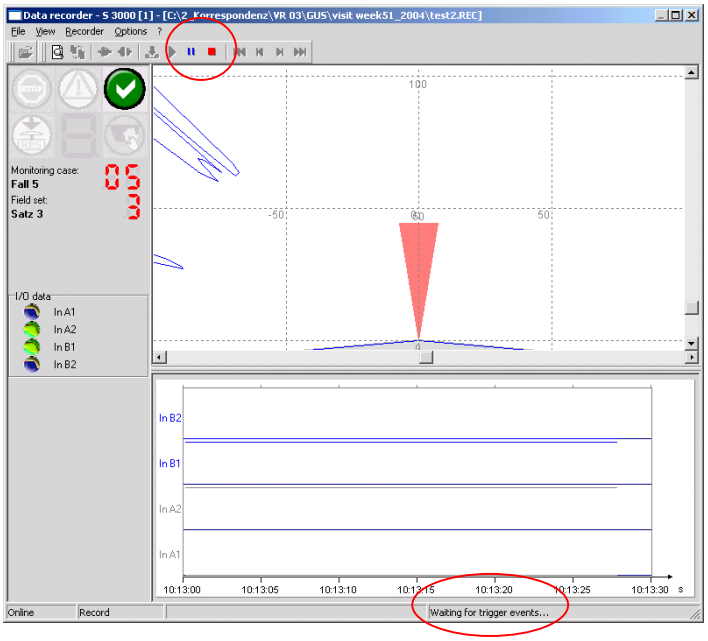
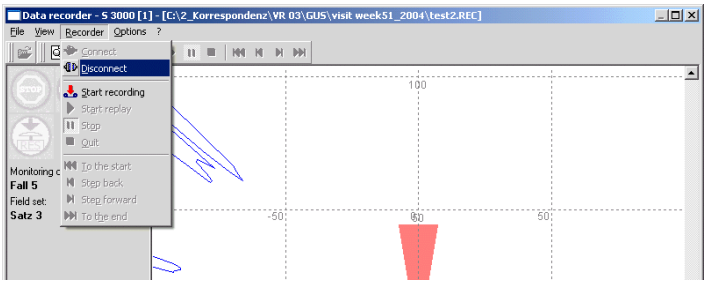
For service reasons or trouble shooting, the data recorder provides a recording function.
The recording may run permanently or starts recording at pre-defined events happen in operation (trigger events).
All data are memorized on the HDD of the computer, resulting files are:
*data.**rec***
and
*data.**idx*** (builts itself in the same directory as *.rec file (directory selected by user)
To replay the recording offline, both **.**rec*** and **.**idx***, as well as the entire **.**skp*** project file is necessary.

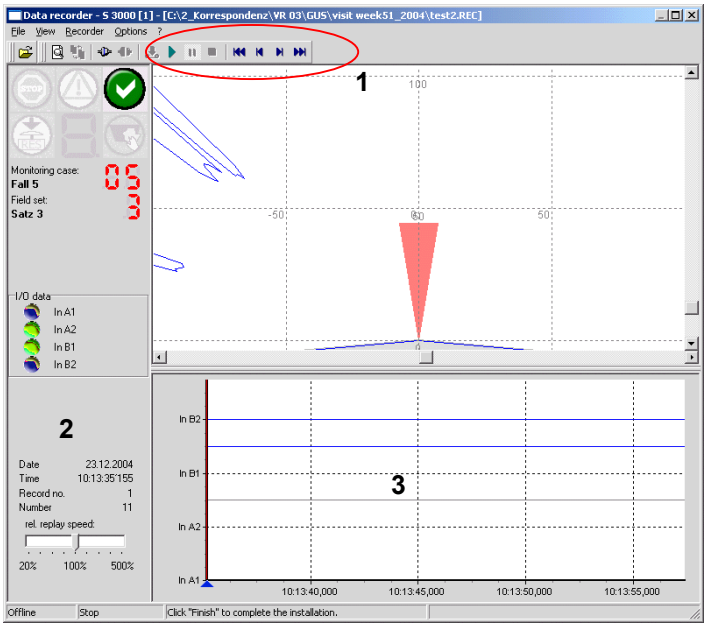
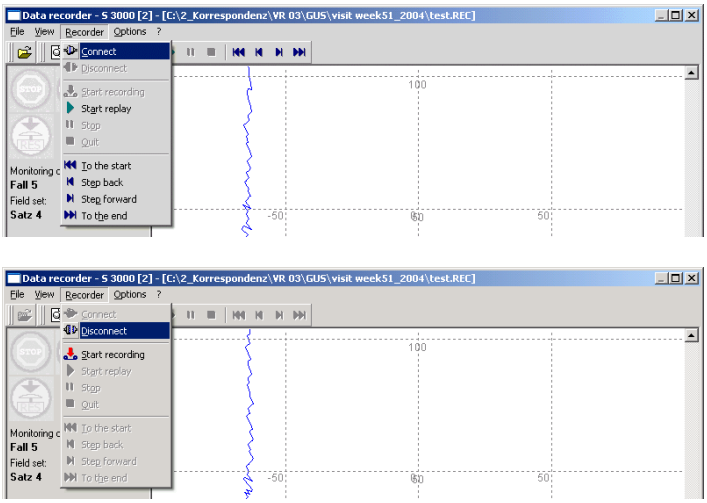
A permanent recording without trigger events is recommended, if the operation should be memorized for a shorter time only.

For ongoing recordings, even for hours or over night, the trigger conditions (events) should be used. Using trigger events means, the recording and HDD entry only happens, if the pre-selected event actually happens (i.e. OSSD switches, changing monitoring case, speed overrun etc.).
For each event, the recorder takes 10 data blocks, 4 blocks before the event actually happens and 6 blocks after the event happened. This gives an overview of the total scenery.

In S3000 Sytems with 2 scanners, the recording works for each scanner individually only. Both scanners will not be recorded simultaniously. For recordings, one has to start the recorder as in stand-alone applications.

1		**Open data recorder**. To start recording, select in the menue bar ***Recorder – Start recording*** or use short cut button.
2		Enter a name for the ***rec*** file and select directory to save it (the *idx* file as mentioned above creates itself in the same directory).

3		Select in menue bar ***Options – Settings*** for access to the trigger conditions.
4		Select ***Trigger conditions*** in the presented window (left in categories) Mark the ***checkbox*** of the desired trigger conditions. Combinations are possible by using the Operator ***And / Or***
5		The data recorder presents the scenery online and shows in the status bar *Waiting for trigger events* and operating buttons ***Stop*** ***Quit*** Whenever an event happens, the recorder memorizes the data blocks onto the HDD. Press ***Quit*** at any time when the recording should be finished.
6		Once the recorder was quit, select ***Disconnect*** in the menue bar. This switches the recorder in an offline mode to present the recorded data.

7		The window provides new options: **1** = Buttons to operate the recording (similar to a tape recorder) The data could be run in steps with the buttons ***step forwards*** or ***step backwards*** Use ***play*** button for permanent run. **2** = Shows the date and time of recording. For better view, the ***replay speed*** can be adjusted (for permanent operation) **3** = Time bar of the recording with input states and allocation to real time.
8		At any time, an already memorized *rec* file can be opened. (Be sure that the allocated *idx* file is in the same directory and the actual configuration is loaded in CDS).
9		Use ***Connect*** or ***Disconnect*** to switch between online and offline mode. New recordings could be started in online mode (*connect*). Replay rec files could be done in offline mode (*disconnec*t). The relevant buttons appear active again. <u>Close Data recorder at any time.</u>