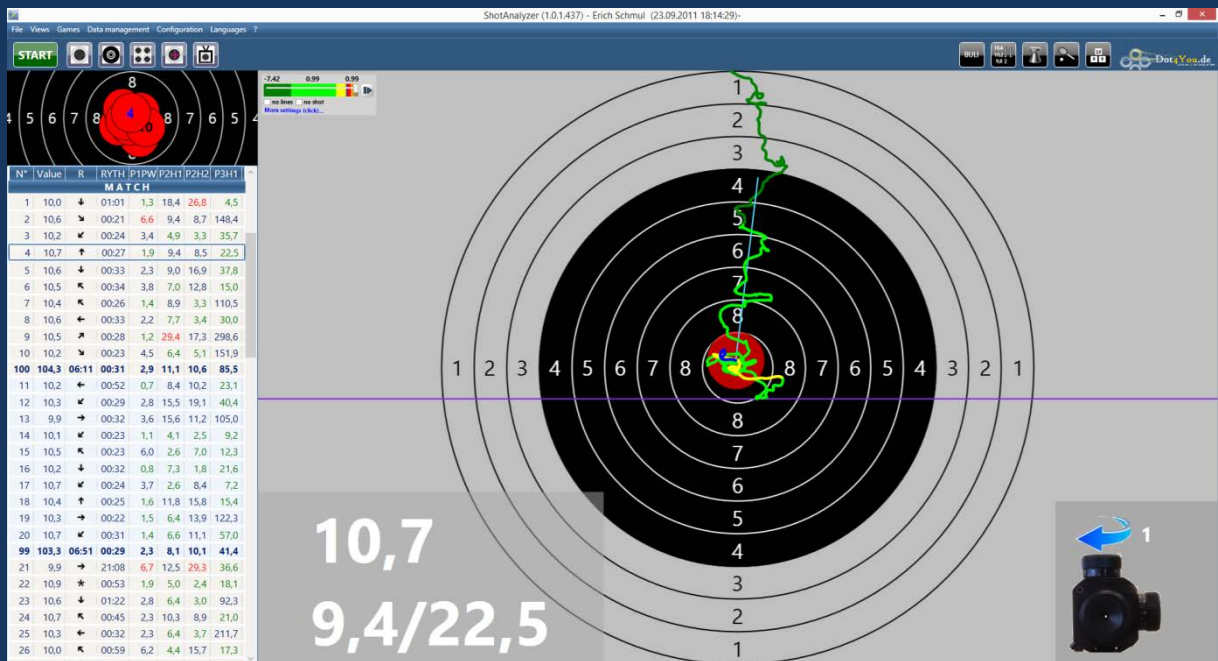


# ShotAnalyzer



# ShotAnalyzer

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## Content

ShotAnalyzer with Scatt and the Häring target system .....	3
ShotAnalyzer with Scatt and the Meyton target system .....	5
ShotAnalyzer with Scatt and the Disag target system.....	7
ShotAnalyzer with Scatt and the SIUS target system .....	12
Prerequisites:.....	12
Hardware.....	12
SIUSData .....	12
LON dongle (Hardware connecting the computer and the target system) .....	13
Enabling the port .....	13
Start ShotAnalyzer with Scatt.....	13
Configuration .....	16
Analysis .....	16
Phase values and their meanings.....	17
Display .....	18
Additional information in the target view .....	18
Line configuration .....	19
General.....	20
Main window .....	21
Menu and toolbar .....	21
File .....	21
Views .....	22
Games .....	22
Data management.....	22
Configuration.....	23
Languages .....	23
Info (?).....	23
Toolbar .....	24
Group images and hit values .....	24
Target view .....	25
Shooter view.....	27
Group images .....	28
Extension of the hold area .....	29
Games .....	30
Pyramid .....	30

# ShotAnalyzer

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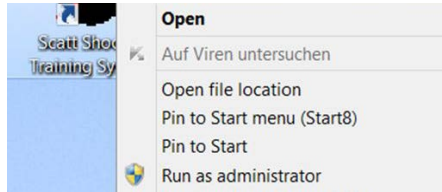
Tennis.....	32
Stay above.....	34
Decimal.....	36
Bundesliga simulator.....	38
Shooter management.....	41
Installation .....	43
Registration .....	45
Where do I get the serial number? .....	45
Where do I find the serial number? .....	46
I have a serial number, what do I do with it? .....	46

# ShotAnalyzer

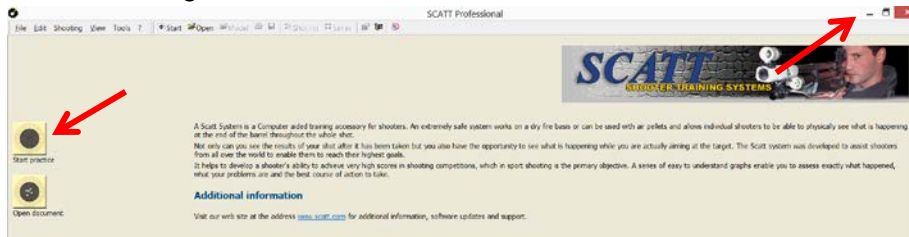
## ShotAnalyzer with Scatt and the Häring target system

1. Start the Scatt software.

**Note:** Start Scatt as administrator. Click on the Scatt icon with the right mouse button and choose "run as administrator".

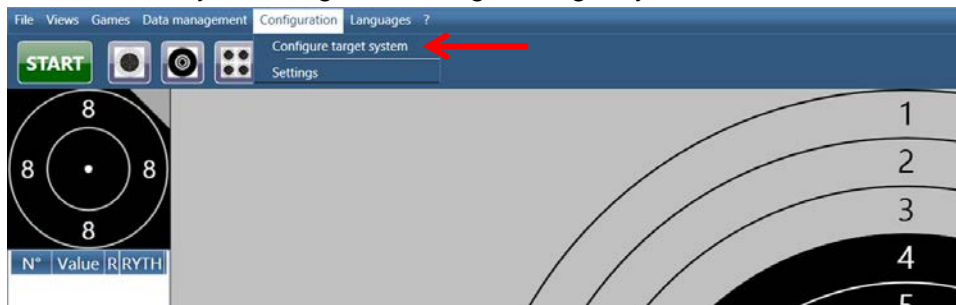


2. Start a training session and minimize the Scatt software

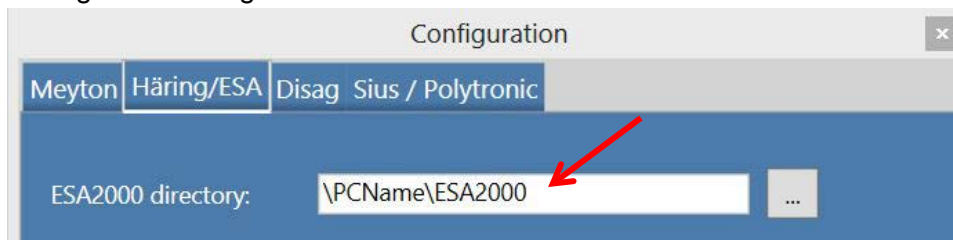


**Note:** Please make a practice shot (dry firing) to make sure that Scatt is recording the shot correctly.

3. Start ShotAnalyzer and go to "Configure target system"



4. Configure the firing lane



Please choose the corresponding computer for the lane and select the "ESA2000" directory (Häring installation directory).

**Important:** You need to share the "ESA2000" directory in the network. Make sure that "Everyone" has the read and write permission for this directory! Please ask one of your administrators who are responsible for your system.

# ShotAnalyzer

## 5. Start recording of the shot



Click on „**START**“ or press the "F5" key

## 6. Configure recording of the shot

### 6.1 Choose the desired shooter.

(To create a shooter, look at chapter Shooter management)

### 6.2 Choose the desired discipline (e.g. air rifle).

### 6.3 Decide if you want to record with or without Scatt data.

Explanation:

- without Scatt

\* **No data from Scatt** is read

\* You do not to run Scatt!

- with Scatt

\* **Data from Scatt** are read

\* You need to run Scatt!

- Do not record the point of aim

\* Only the value of the hit recorded by the Scatt software is read.

\* You need to run Scatt!

### 6.4 Choose the electronic target system

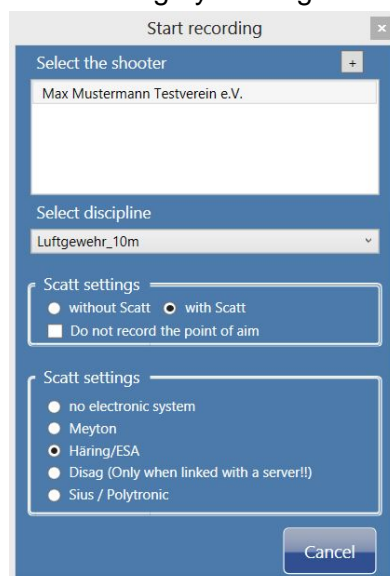
Click on **Häring/ESA**.

Notes:

"No electronic target system" means that only the data recorded by Scatt is shown.

For this option, "with Scatt" has to be selected!

### 6.5 Start the recording by clicking on "**START**" or by pressing the "F5" key

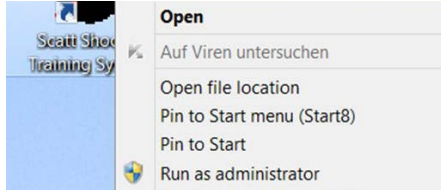


# ShotAnalyzer

## ShotAnalyzer with Scatt and the Meyton target system

1. Start the Scatt software.

**Note:** Start Scatt as administrator. Click on the Scatt icon with the right mouse button and choose "run as administrator".

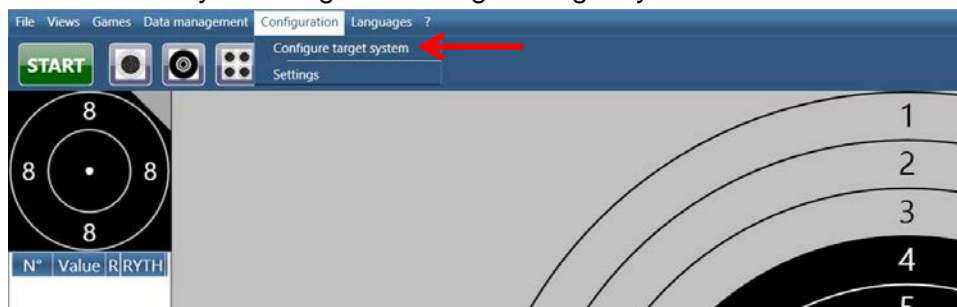


2. Start a training session and minimize the Scatt software

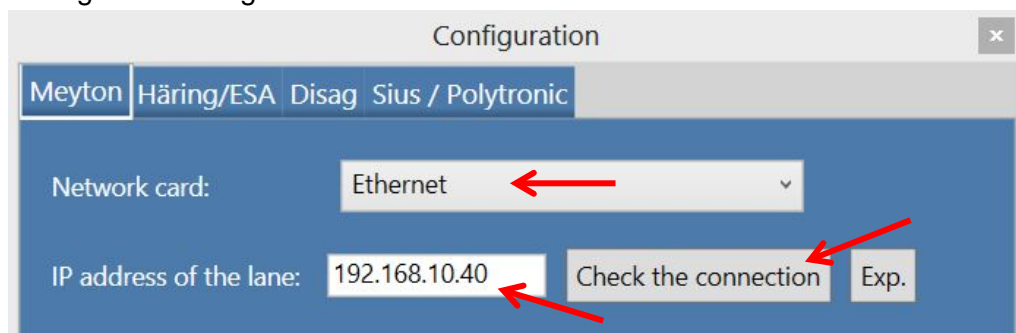


**Note:** Please make a practice shot (dry firing) to make sure that Scatt is recording the shot correctly.

3. Start ShotAnalyzer and go to "Configure target system"



4. Configure the firing lane



- 4.1 Please select the network card.
- 4.2 Please enter the IP address of the lane from which you want to receive the value of the hit.
- 4.3 Click on "Check the connection" to check if the connection to the indicated lane can be established. Checking the connection takes max. 20 sec.

# ShotAnalyzer

## 5. Start recording of the shot



Click on „**START**“ or press the "F5" key

## 6. Configure recording of the shot

### 6.1 Choose the desired shooter.

(To create a shooter, look at chapter [Shooter management](#))

### 6.2 Choose the desired discipline (e.g. air rifle).

### 6.3 Decide if you want to record with or without Scatt data.

Explanation:

- without Scatt

- \* **No data from Scatt** is read

- \* You do not to run Scatt!

- with Scatt

- \* **Data from Scatt** is read

- \* You need to run Scatt!

- Do not record the point of aim

- \* Only the value of the hit recorded by the Scatt software is read.

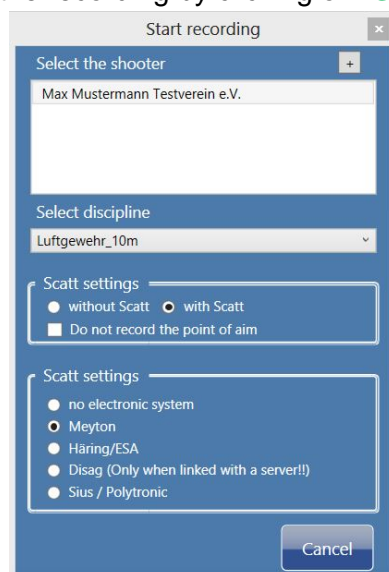
- \* You need to run Scatt!

### 6.4 Choose the electronic target system

Select **Meyton**.

**Note:** "No electronic target system" means that only the data recorded by Scatt is shown. For this option, "with Scatt" has to be selected!

### 6.5 Start the recording by clicking on "**START**" or by pressing the "F5" key



# ShotAnalyzer

## ShotAnalyzer with Scatt and the Disag target system

You need the software "DISAG OpticScore-Server". This software is free!!!

URL to Disag: <http://www.disag.de/produkte/opticscore/server/>

### Prerequisites

This part describes which settings you have to make in order for ShotAnalyzer to receive the real value of the hit. You only have to make these settings once!!

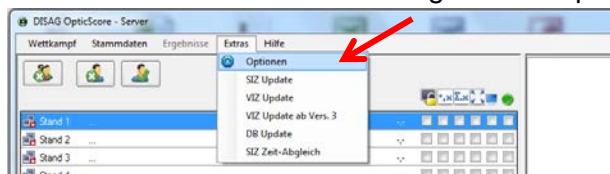
### Disag software

If you do not have a server with "DISAG OpticScore-Server", install the software on the computer on which ShotAnalyzer will be running.

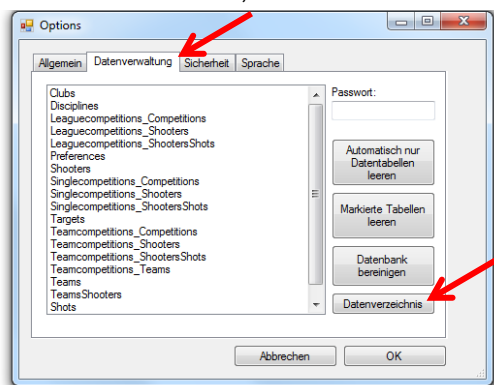
**Note:** Please note that in this case the computer has to get the IP address "192.168.0.101" so the target system Disag can send the data to this PC!!!! Please ask your administrator on how you can set the IP address.

### Sharing the directory

1. Start "DISAG OpticScore-Server"
2. Select "Extras" in the menu and go on to "Optionen".

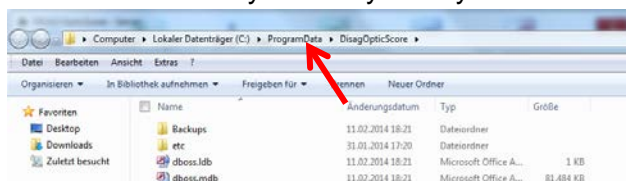


3. In the next window, select "Datenverwaltung" and click on "Datenverzeichnis".



4. In the following window (Explorer), go **ONE** level up in the directory. You now see the folder "DisagOpticScore".

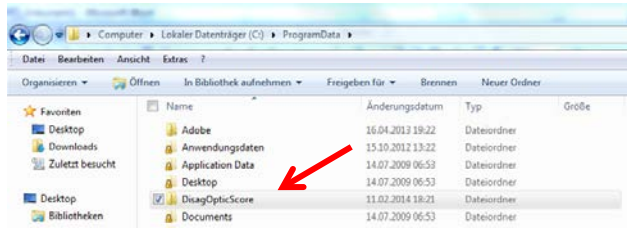
**Note:** The directory can vary widely between XP and Windows 8!



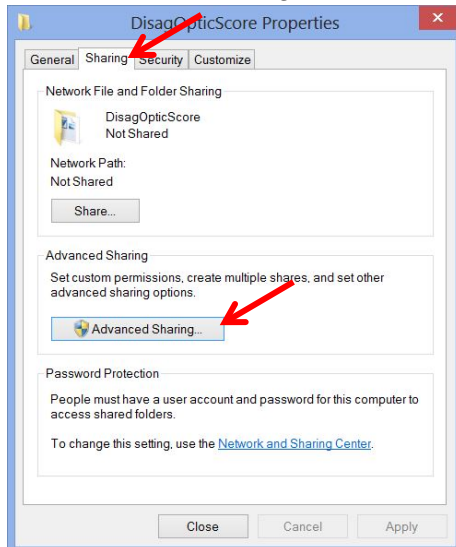


# ShotAnalyzer

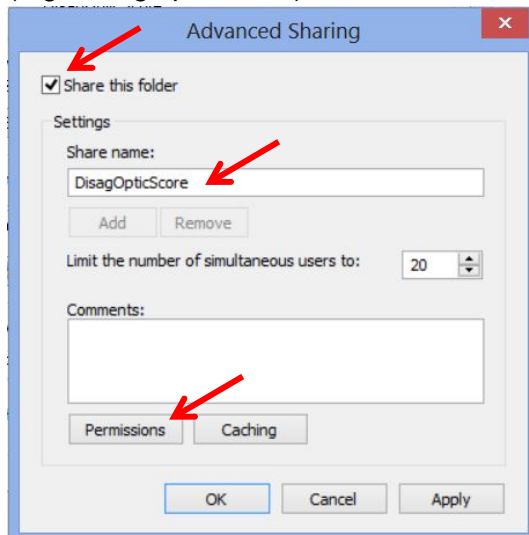
## 5. Share the folder in the network.



Click on "DisagOpticScore" with the right mouse button and select "Properties" in the menu. In the following window, select "Sharing" and then click on "Advanced sharing".



In the next window, click "Share this folder" and enter a name in the field "Share name" (e.g. DisagOpticScore). Then click on "Permissions".



Select Users or Groups

Select this object type:

Users, Groups, or Built-in security principals

Object Types...

From this location:

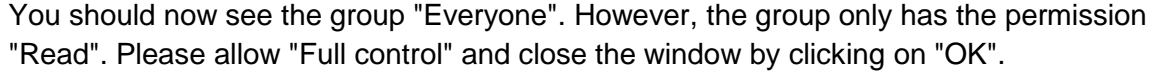
DELL-NOTEBOOK

Locations...

Enter the object names to select (examples):

Check Names

Advanced... OK Cancel



Permissions for DisagOpticScore

Share Permissions

Group or user names:

Jeder

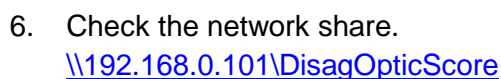
Add... Remove

Permissions for Jeder

	Allow	Deny
Full Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Change	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>

[Learn about access control and permissions](#)

OK Cancel Apply



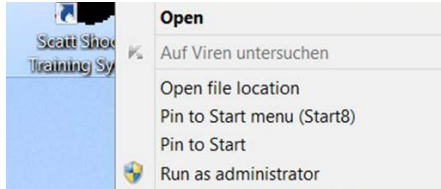
6. Check the network share.  
<\\192.168.0.101\DisagOpticScore>

# ShotAnalyzer

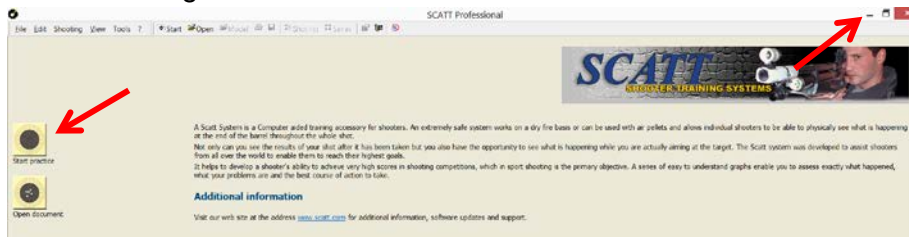
## Start ShotAnalyzer with Scatt

1. Start the Scatt software

**Note:** Start Scatt as administrator. Click on the Scatt icon with the right mouse button and choose "run as administrator".

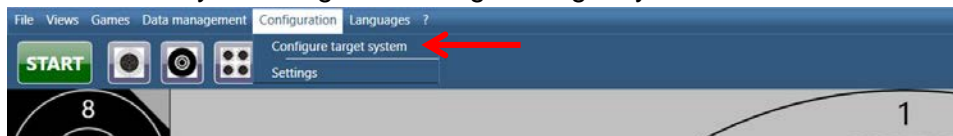


2. Start a training session and minimize the Scatt software

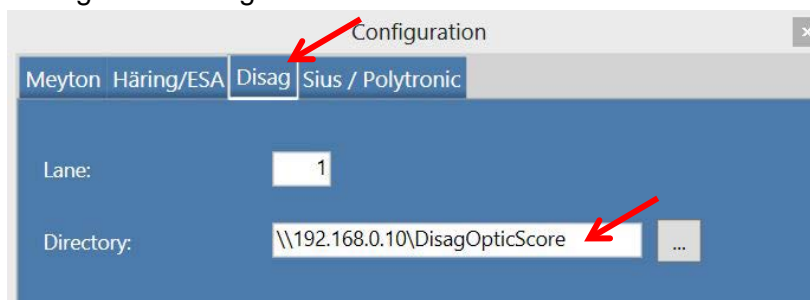


**Note:** Please make a practice shot (dry firing) to make sure that Scatt is recording the shot correctly. Furthermore, Scatt requires a calibration shot in order to work properly.

3. Start ShotAnalyzer and go to "Configure target system"



4. Configure the firing lane

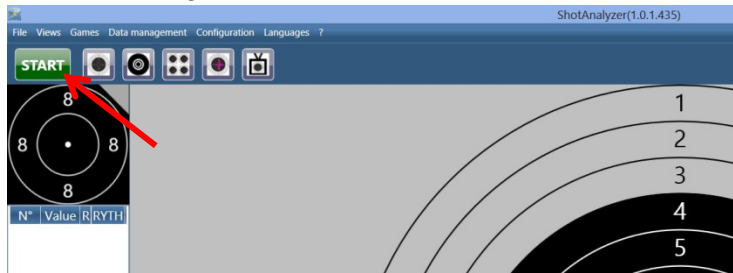


4.1 Enter the number of the lane.

4.2 Please select the Disag server (Standard: 192.168.0.101) and the shared folder DisagOpticScore.

# ShotAnalyzer

## 5. Start recording of the shot



Click on „**START**“ or press the "F5" key

## 6. Configure recording of the shot

### 6.1 Choose the desired shooter.

(To create a shooter, look at chapter [Shooter management](#))

### 6.2 Choose the desired discipline (e.g. air rifle).

### 6.3 Decide if you want to record with or without Scatt data.

Explanation:

- without Scatt

- \* **No data from Scatt** is read

- \* You do not to run Scatt!

- with Scatt

- \* **Data from Scatt** is read

- \* You need to run Scatt!

- Do not record the point of aim

- \* Only the value of the hit recorded by the Scatt software is read.

- \* You need to run Scatt!

### 6.4 Choose the electronic target system

Select **Disag**.

### 6.5 Start the recording by clicking on "**START**" or by pressing the "F5" key

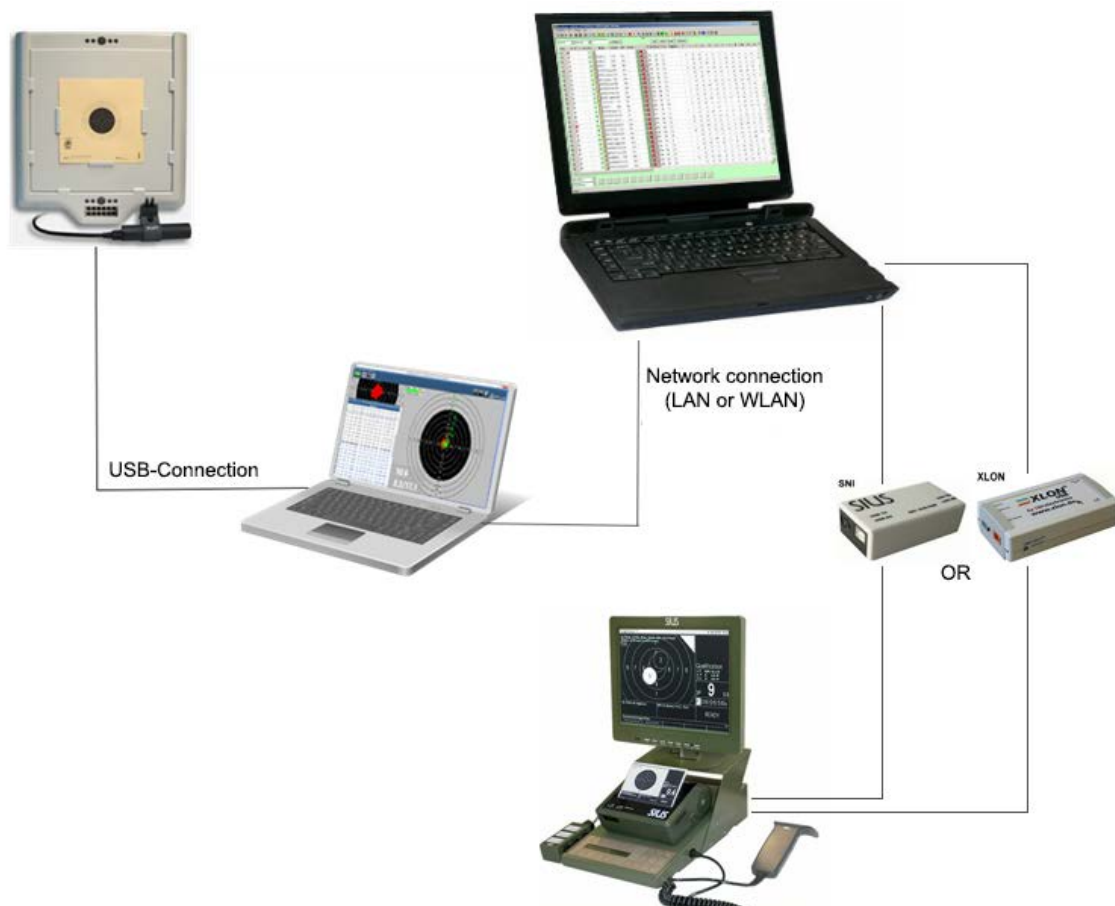
# ShotAnalyzer

## ShotAnalyzer with Scatt and the SIUS target system

### Prerequisites:

This part describes which settings you have to make in order for ShotAnalyzer to receive the real value of the hit. You only have to make these settings once!!

### Hardware



### SIUSData

You need the software SiusData.

URL to SiusData: [http://sius.com/de/04.03\\_Produnkte\\_Software\\_SIUSDATA.html](http://sius.com/de/04.03_Produnkte_Software_SIUSDATA.html)

**Note:** SIUSData can only work with control units! (See picture below.)



(Printer is not necessary!)

If you do not have a server with SIUSData, install the software on the computer on which ShotAnalyzer will be running.

# ShotAnalyzer

## LON dongle (Hardware connecting the computer and the target system)

Install the necessary driver on your computer.

URL to LON dongle: [http://sius.com/de/04.08\\_Produnkte\\_Software\\_LONTreiber.html](http://sius.com/de/04.08_Produnkte_Software_LONTreiber.html)

Connect the LON dongle to the system. Then connect the dongle via USB wire with your computer. The dongle should now be recognized and the lamps should only glow in BLUE!!!

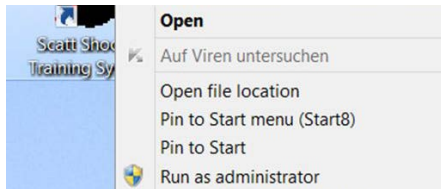
## Enabling the port

If you have a server, make sure that the Port 4000 for incoming and outgoing TCP connections is enabled on your computer. You can make these settings in the firewall that is installed on your computer. Please ask your administrator.

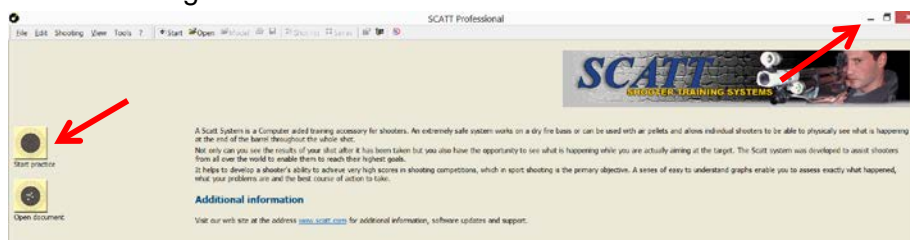
## Start ShotAnalyzer with Scatt

1. Start the Scatt software

**Note:** Start Scatt as administrator. Click on the Scatt icon with the right mouse button and choose "run as administrator".

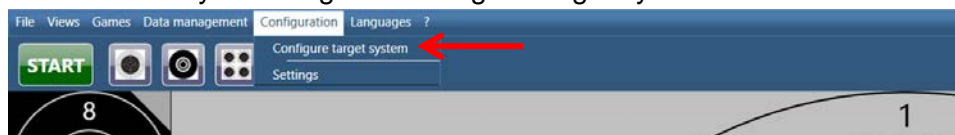


2. Start a training session and minimize the Scatt software

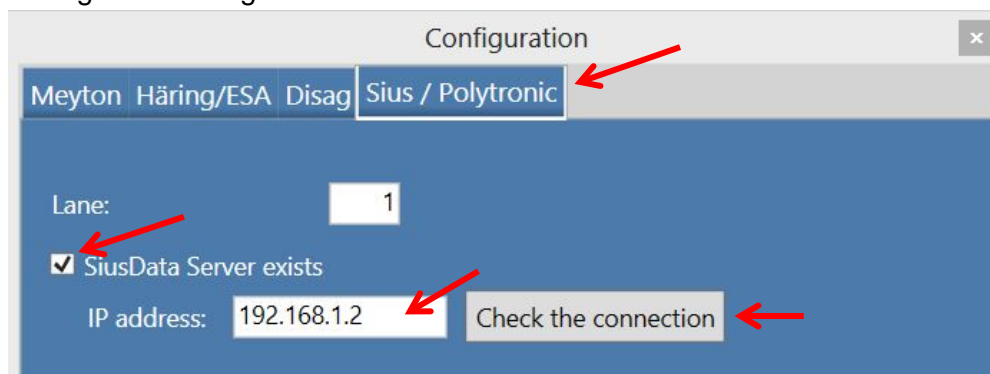


**Note:** Please make a practice shot (dry firing) to make sure that Scatt is recording the shot correctly.

3. Start ShotAnalyzer and go to "Configure target system"



4. Configure the firing lane



# ShotAnalyzer

---

- 4.1 Enter the number of the lane.
- 4.2 Check "SiusData server exists" if SiusData runs on another computer. Enter the IP address of the SiusData computer.
- 4.3 Click on "Check the connection" to check if the connection to the SiusData computer can be established.
5. Start recording of the shot



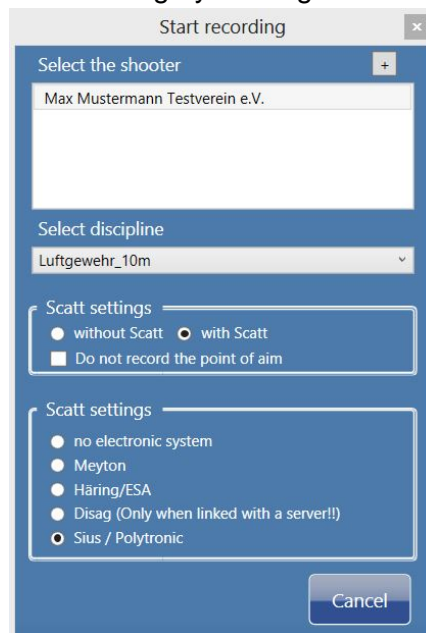
Click on „**START**“ or press the "F5" key

6. Configure recording of the shot
  - 6.1 Choose the desired shooter.  
(To create a shooter, look at chapter [Shooter management](#))
  - 6.2 Choose the desired discipline (e.g. air rifle).
  - 6.3 Decide if you want to record with or without Scatt data.  
Explanation:
    - without Scatt
      - \* **No data from Scatt** is read
      - \* You do not need to run Scatt!
    - with Scatt
      - \* **Data from Scatt** is read
      - \* You need to run Scatt!
    - Do not record the point of aim
      - \* Only the value of the hit recorded by the Scatt software is read.
      - \* You need to run Scatt!
  - 6.4 Choose the electronic target system  
Select **Sius**.  
**Note:** "No electronic target system" means that only the data recorded by Scatt is shown. For this option, "with Scatt" has to be selected!

# ShotAnalyzer

---

6.5 Start the recording by clicking on "**START**" or by pressing the "F5" key



The screenshot shows a 'Start recording' dialog box with a blue header and a white body. The dialog contains the following elements:

- Select the shooter:** A text input field containing 'Max Mustermann Testverein e.V.' with a '+' button to its right.
- Select discipline:** A dropdown menu showing 'Luftgewehr\_10m' with a downward arrow.
- Scatt settings:** A section with two radio buttons: 'without Scatt' (selected) and 'with Scatt'. Below them is a checkbox labeled 'Do not record the point of aim'.
- Scatt settings:** A section with five radio buttons: 'no electronic system', 'Meyton', 'Häring/ESA', 'Disag (Only when linked with a server!!)', and 'Sius / Polytronic' (selected).
- Cancel:** A button at the bottom right.



# ShotAnalyzer

## Configuration

The configuration is split in the following 3 tabs: Analysis, Display and General.

### Analysis

The screenshot shows a 'Configuration' dialog box with three tabs: 'Analysis', 'Display', and 'General'. The 'Analysis' tab is selected. It contains three sections of checkboxes for configuration:

- 1. phase (approach - entering the target until reaching the 8-point zone)**
  - ☐ (P1GS) speed
  - ☐ (P1AW) approach angle
  - ☐ (P1PW) pendulum value
- 2. phase (aiming)**
  - ☐ (P2GS) stability of hold speed
  - ☒ (P2H1) hold area 1s before the shot
  - ☐ (P2H2) hold area 200ms before the shot
  - ☐ (P2SD) distance between the center of the shot and hold area
  - ☐ ((P2DW) lowest point
- 3. phase (follow-through)**
  - ☒ (P3H1) follow-through area between 0.3 s to 1 s after the shot
  - ☐ (P3SD) distance between shot and the center of the follow-through area

Below these sections is a **General values** section:

- ☒ time between 2 shots
- ☒ Highlight good and bad values

At the bottom right are 'Save' and 'Cancel' buttons.

ShotAnalyzer divides the analysis in 3 phases: Approach, Aiming and Follow-through. In all the 3 phases there are values being calculated that can be displayed in the table on the left side of the main window. In the Analysis tab, you can decide which values are to be shown in the table. Please select the desired values. Confirm your selection by clicking on "Save".

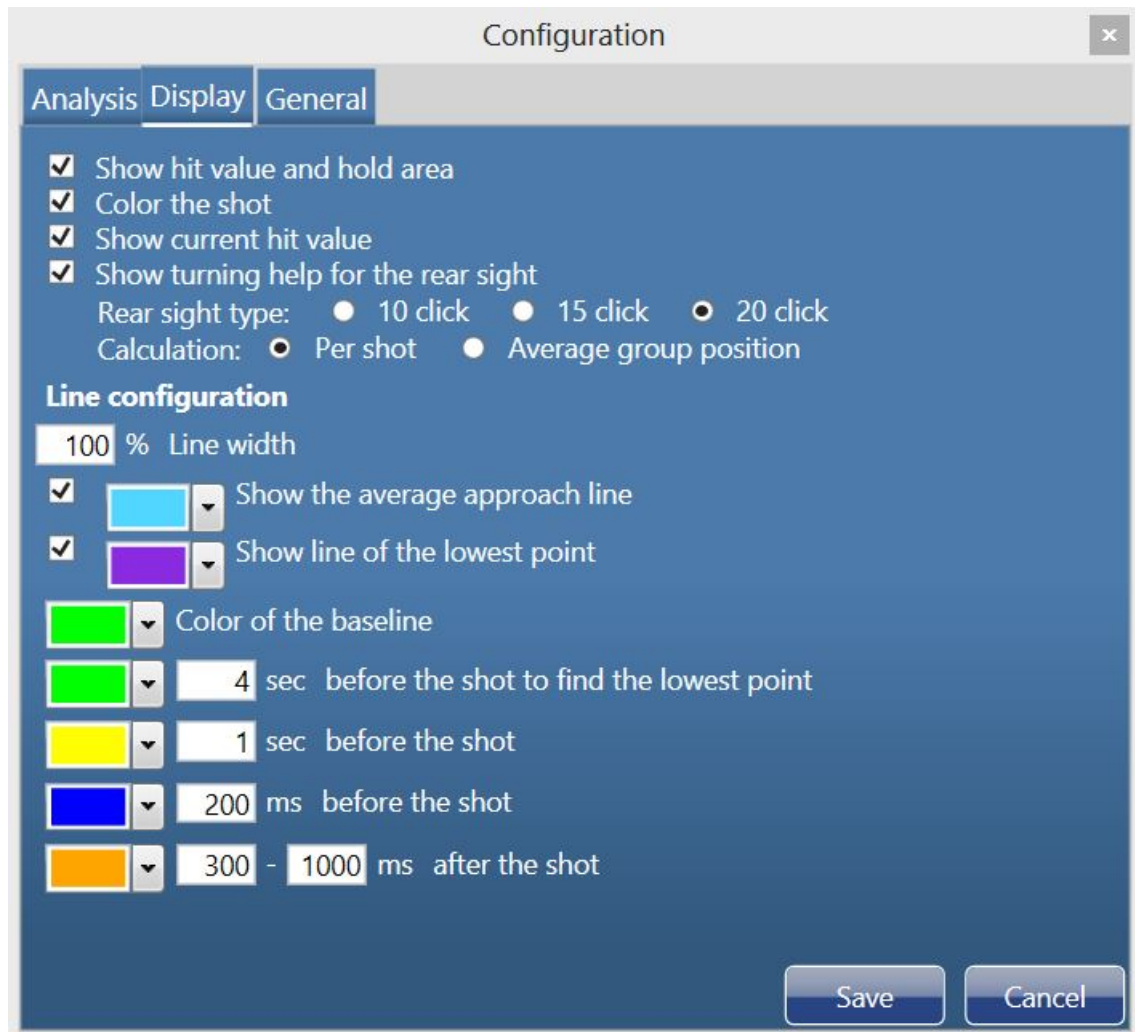
# ShotAnalyzer

## Phase values and their meanings

Phase	Abbr.	Short text	Meaning
1	P1GS	Speed	<ul style="list-style-type: none"><li>Mean speed from the point of entering the target until reaching the 8-point zone</li><li>Should be as steady as possible.</li></ul>
1	P1AW	Approach angle	<ul style="list-style-type: none"><li>Mean angle of entering the center of the target.</li><li>Should be as small and as steady as possible.</li></ul>
1	P1PW	Pendulum value	<ul style="list-style-type: none"><li>Mean distance between measuring point and the approach line.</li><li>Should be as small as possible.</li></ul>
2	P2GS	Hold speed	<ul style="list-style-type: none"><li>Mean speed between the point of entering the 8-point zone and the shot</li><li>Should be as small and as steady as possible.</li></ul>
2	P2H1	Hold area 1s before the shot	<ul style="list-style-type: none"><li>Hold area 1 second before the shot is fired</li><li>Should be as small as possible.</li></ul>
2	P2H2	Hold area 200ms before the shot	<ul style="list-style-type: none"><li>Hold area 200 milliseconds before the shot is fired</li><li>Should be as small as possible.</li></ul>
2	P2DS	Distance shot - center of the hold area	<ul style="list-style-type: none"><li>Distance between the center of the shot and the hold area P2H1</li><li>Should be as small as possible.</li></ul>
2	P2DW	Lowest point	<ul style="list-style-type: none"><li>Lowest point of measuring 4 seconds before the shot is fired</li><li>Should be as close as possible to the horizontal line of the target.</li></ul>
3	P3H1	Follow-through area 0.3s to 1s after the shot	<ul style="list-style-type: none"><li>Follow-through area between 0.3 and 1 second after the shot is fired</li><li>Should be as small as possible.</li><li>+0.3 sec is chosen because the jump of the rifle should not be taken into account.</li></ul>
3	P3DS	Distance shot - center of the follow-through area	<ul style="list-style-type: none"><li>Distance between the center of the shot and the center of P3H1</li><li>Should be as small as possible.</li></ul>
-	-	Time distance between 2 shots	<ul style="list-style-type: none"><li>If the calculation is made with Scatt data, this means that the distance in time between the last measured value of the previous hit and the first measured value of the most recent hit is calculated.</li><li>If the calculation is made without Scatt data, this means that the distance in time between the last shot and the most recent shot is calculated.</li></ul>
-	-	Highlight good and bad values	<ul style="list-style-type: none"><li>The first 20% are highlighted in green, the last 20% in red.</li></ul>

# ShotAnalyzer

## Display



In the Display tab you can show or hide additional information in the target view and set the colors and time periods of the separate phases of the aiming line.

### Additional information in the target view

Show value of the hit and hold areas	In the bottom left corner, the values P2H1, P3H1 and the value of the hit (in decimals).
Color the shot.	The shot is shown in color. 10 = red; 9 = yellow; <=8 = blue
Current shot	When playing the aiming process, the current shot (if the shooter had given the shot at this point) is displayed.
Turning help	In the bottom right corner, a rear sight is shown which depicts the necessary clicks and the direction of turning in order to zero the shots. You can define how many clicks your rear sight needs to get from a 10.0 right to a 10.0 left. Mostly, the manufacturer indicates how many clicks are needed (10 click or 20 click). The clicks and the turning direction are calculated either from the current hit or the location of the group. You can determine which one is used for the calculation.

# ShotAnalyzer

---

## Line configuration

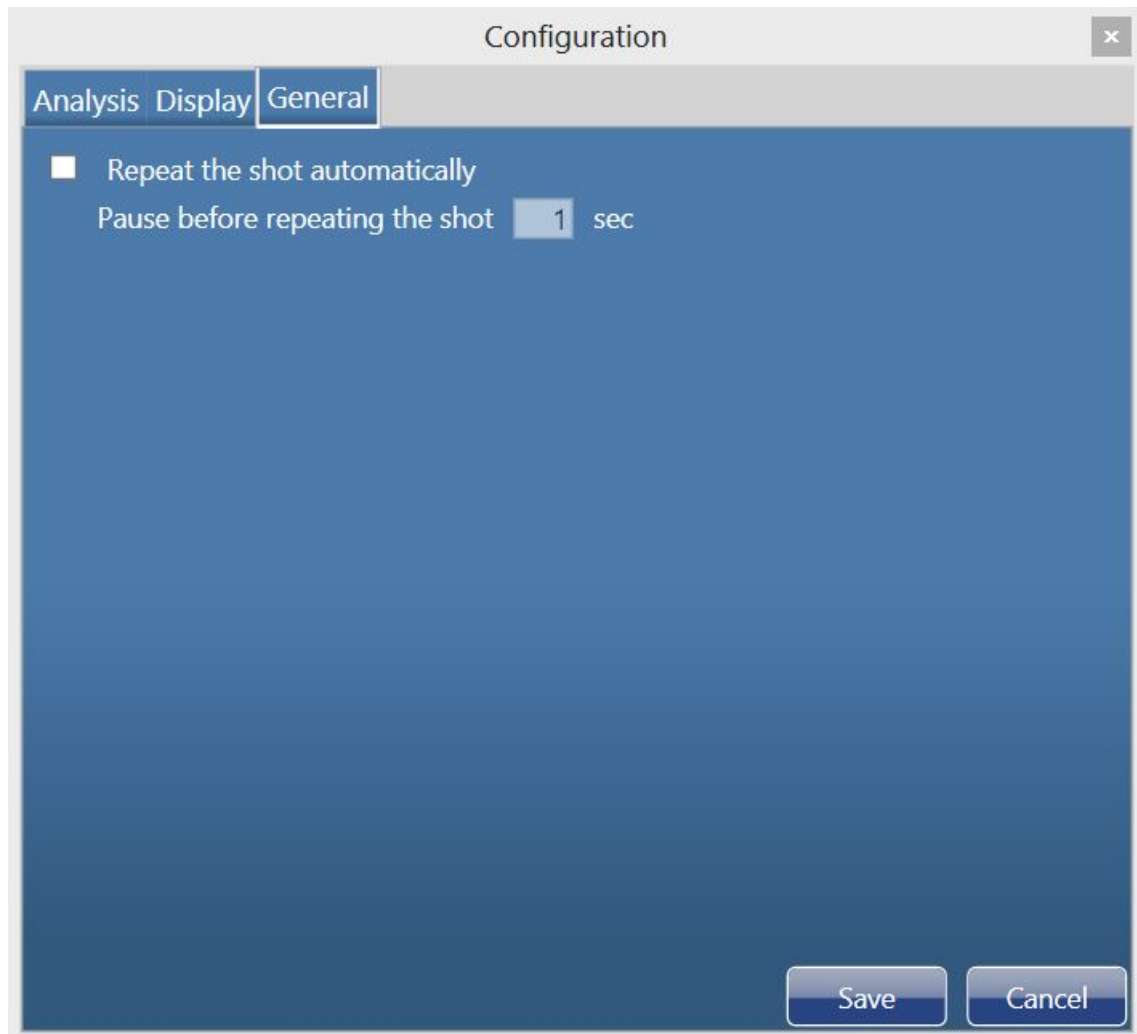
Line width	Define how wide the line is. Range (1-600)
Mean line	You can show or hide the approach line and define its color.
Line of the lowest point	You can show or hide the line of the lowest point (ca. 4 sec before the shot) and define its color.
Color of the baseline	Define the color of the baseline.
Time range for finding the lowest point	You can define the time range (before the shot) for which the position of the lowest point is calculated. At this point, the line of the lowest point is drawn. <b>Default: 4 sec</b>
Time range for calculating the value P2H1	You can set the time range (before the shot) that is needed to calculate the value P2H1 (hold area) as well as the color of the line. <b>Default: 1 sec, yellow</b>
Time range for calculating the value P2H2	You can set the time range (before the shot) that is needed to calculate the value P2H2 (small hold area) as well as the color of the line. <b>Default: 200ms, blue</b>
Time range for calculating the value P3H1	You can set the time range (after the shot) that is needed to calculate the value P3H1 (follow-through area) as well as the color of the line. <b>Default: Range between 300ms and 10000ms, brown</b>

Confirm your configurations by clicking on "Save".

# ShotAnalyzer

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## General

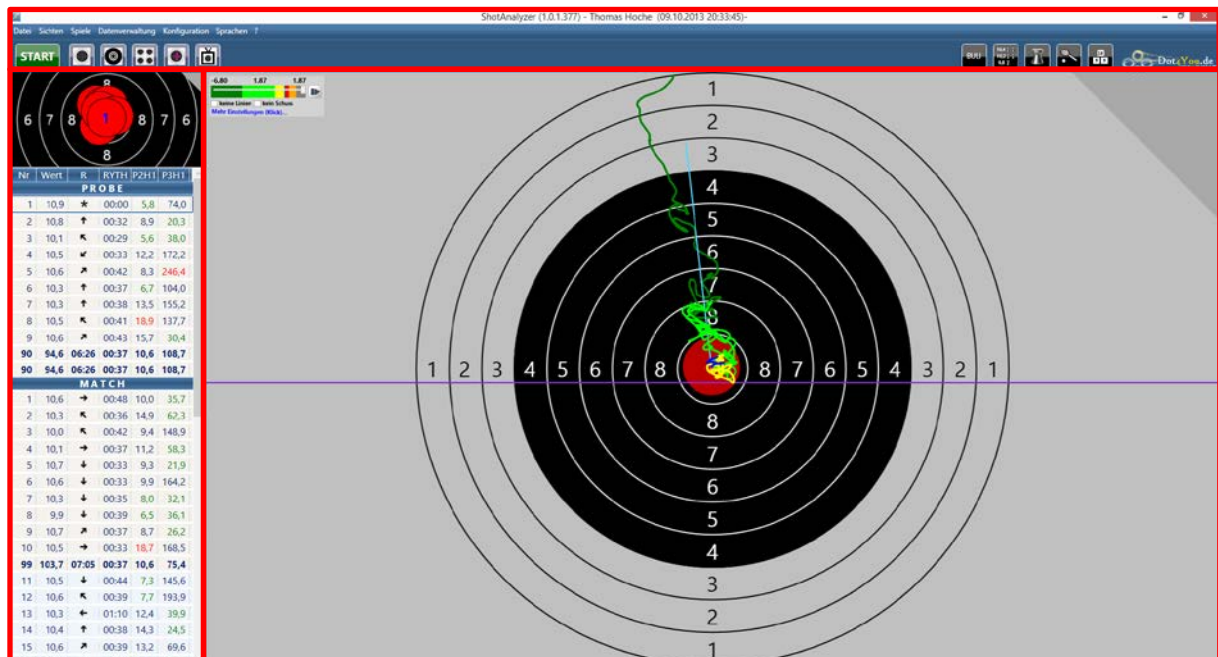


You can activate or deactivate the automatic replay of the shot that has been recorded. Additionally, you can define the delay with which the shot is played. (Time between the last measuring point of the current shot and replaying the shot)

Confirm your settings by clicking on "Save".

# ShotAnalyzer

## Main window



The main window is divided in the following areas

- Menu and toolbar
- Group images and hit values
- Target, shooter view and games

## Menu and toolbar

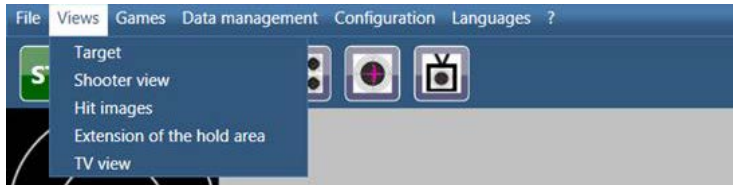
### File



Open file...	Supported file types: *.dps and *.scatt
Save	Saves the values currently recorded
Export	All data is exported as XML. You can open XML files with Excel for example and process the data further.
Export as BuLi file	Saves the recording as *.buli file
Print preview	Shows how a printout would look.
Print	The file is sent to the standard printer of the system.
Exit	ShotAnalyzer is closed.

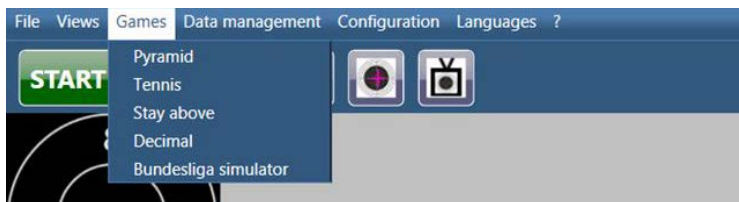
# ShotAnalyzer

## Views



Target	Shows the <a href="#">target of the discipline</a> , e.g. air-rifle target
Shooter view	Shows <a href="#">what the shooter sees</a> when he or she looks through the sight.
Group images	Displays all series as <a href="#">group images</a> .
Extension of the hold area	Displays the systematic aiming error.
TV view	Display for beamers

## Games



Pyramid	Shows the game „ <a href="#">Pyramid</a> “
Tennis	Shows the game „ <a href="#">Tennis</a> “
Stay above	Shows the game „ <a href="#">Stay above</a> “
Decimal	Shows the game „ <a href="#">Decimal</a> “
Bundesliga simulator	Shows the game „ <a href="#">Bundesliga simulator</a> “

## Data management

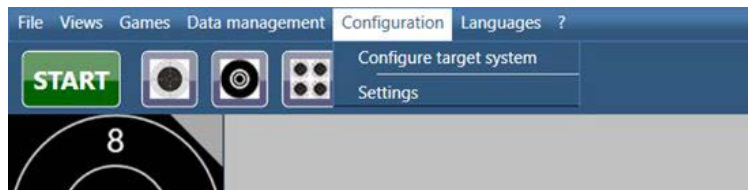


Shooter management	Opens the <a href="#">shooter management</a>
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# ShotAnalyzer

## Configuration



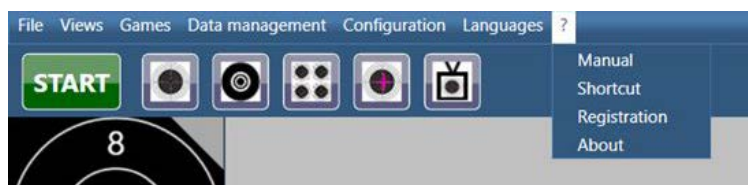
Configure target system	Opens the configuration of the electronic target system Read more in chapters: <a href="#">ShotAnalyzer with Scatt and the target system Meyton</a> <a href="#">ShotAnalyzer with Scatt and the target system Häring</a> <a href="#">ShotAnalyzer with Scatt and the target system Disag</a>
Settings	Opens the configuration Read more in chapters: <a href="#">Analysis</a> <a href="#">Display</a> <a href="#">General</a>

## Languages



Set your preferred language.

## Info (?)



Manual	Opens the ShotAnalyzer manual
Shortcuts	Opens a window in which the 4 most important key functions are described.
Registration	Opens the registration window
About	Opens the info window



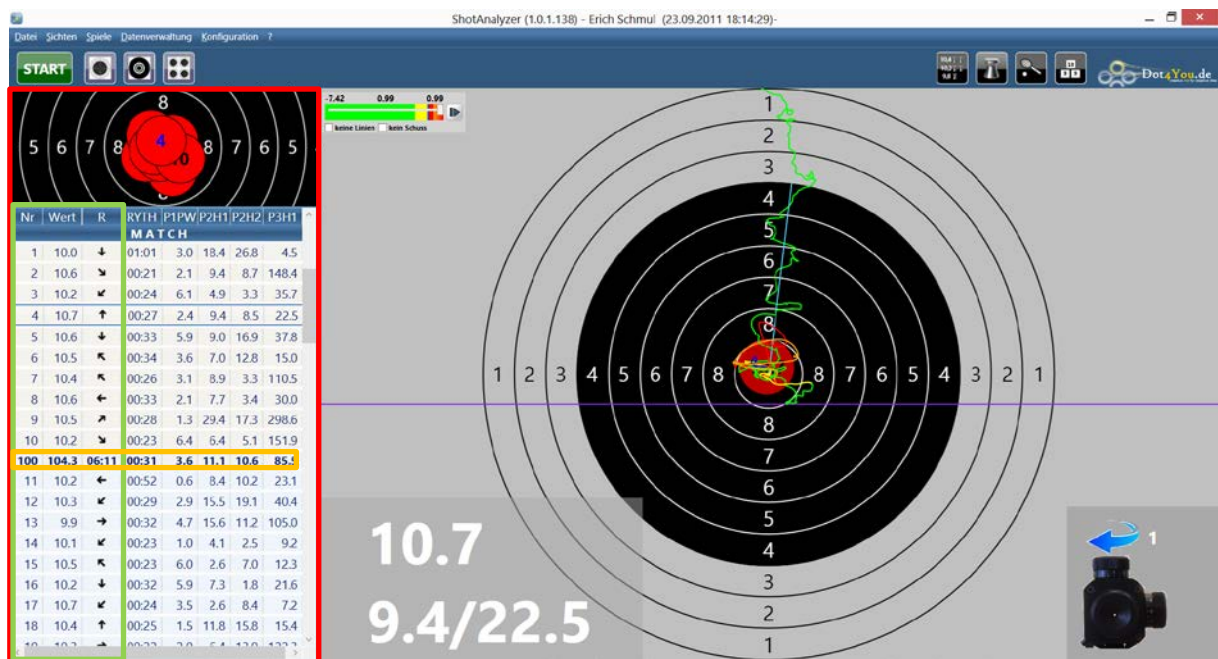
# ShotAnalyzer

## Toolbar



1	Opens the recording window
2	Shows the <a href="#">target of the discipline</a>
3	Shows the <a href="#">shooter view</a>
4	Shows the <a href="#">group images</a>
5	Shows the <a href="#">extension of the hold area</a>
6	Shows the beamer view
7	Starts the game "Bundesliga simulator"
8	Starts the game „ <a href="#">Decimal</a> “
9	Starts the game „ <a href="#">Stay above</a> “
10	Starts the game „ <a href="#">Tennis</a> “
11	Starts the game „ <a href="#">Pyramid</a> “

## Group images and hit values



The group image is shown above the table with the hit values. In this picture, all shots of one series (max. 10 shots per series) are displayed. The currently selected shot is always shown on top. Every shot is attributed a number. The zoom adjusts automatically according to the size of the group so all hits are visible at any time.

The table consists of a fixed (marked in light green) and a dynamic area. The fixed area shows the number of the shot, the value of the hit in decimals and the direction. You can set the dynamic area to show the values you want (see Configuration=>[Analysis](#)) Selecting a shot changes the group so that the currently selected shot is shown on top. Additionally, the display in the target or in the shooter view is updated. When selecting a sum line (marked in orange), all shot of the series are displayed on the target (see chapter [Target](#)).

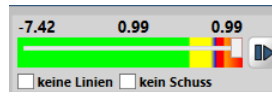
### Target view


- a. Light green: Aiming process
  - b. Dark green: Lowest point 4 sec before the shot is fired => line of the lowest point
  - c. Yellow: 1 sec before the shot => hold area (P2H1)
  - d. Blue: 200 ms before the shot => small hold area (P2H2)
  - e. Red: Aiming after the shot
  - f. Brown: 0.3 to 1 sec after the shot => follow-through area (P3H1)
4. **Median approach line** (light blue): Median line calculated from all values obtained between entering the 4-point zone and reaching the 8-point zone.
  5. **Line of the lowest point** (purple): Lowest point before the shot is fired. This point is calculated for a specified time range. (**Default: 4 sec** before the shot)
  6. **Replaying** the recording aiming process. Please click the intended button or press the spacebar. The aiming process is played. In the Display tab of the configuration

# ShotAnalyzer

menu, you can choose the colors of the line. The time intervals can also be set freely. Please read the chapter [Line configuration](#).

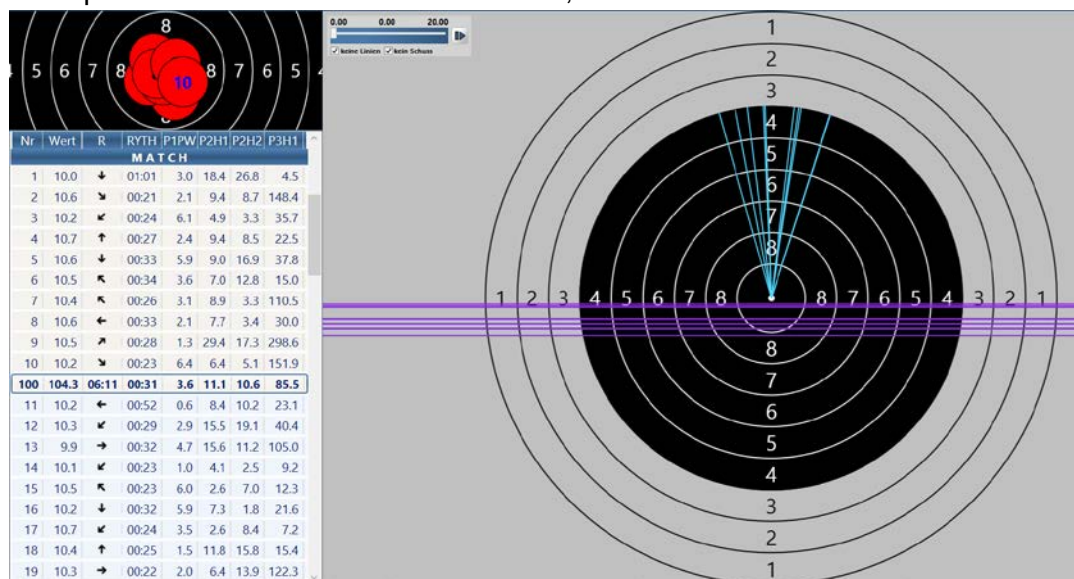
Explanation:



- The colors (from light green to red) depict the time intervals of the aiming-process line.
- In the top left corner, the time is shown which it took the shooter to aim before firing the shot.
- In the top right corner, the time is shown which the shooter stayed on the target after having fired the shot or until the recording is automatically finished. (Default: 1 sec after the shot).
- On the top in the middle, the current time into the recording is shown.
- By pressing the button , you can start or stop the video.
- No shot means that the hit is hidden.
- No line means that the aiming-process line is hidden. The median approach line (light blue) and the line of the lowest point (purple) stay visible.

This is very useful when you are replaying several shots.

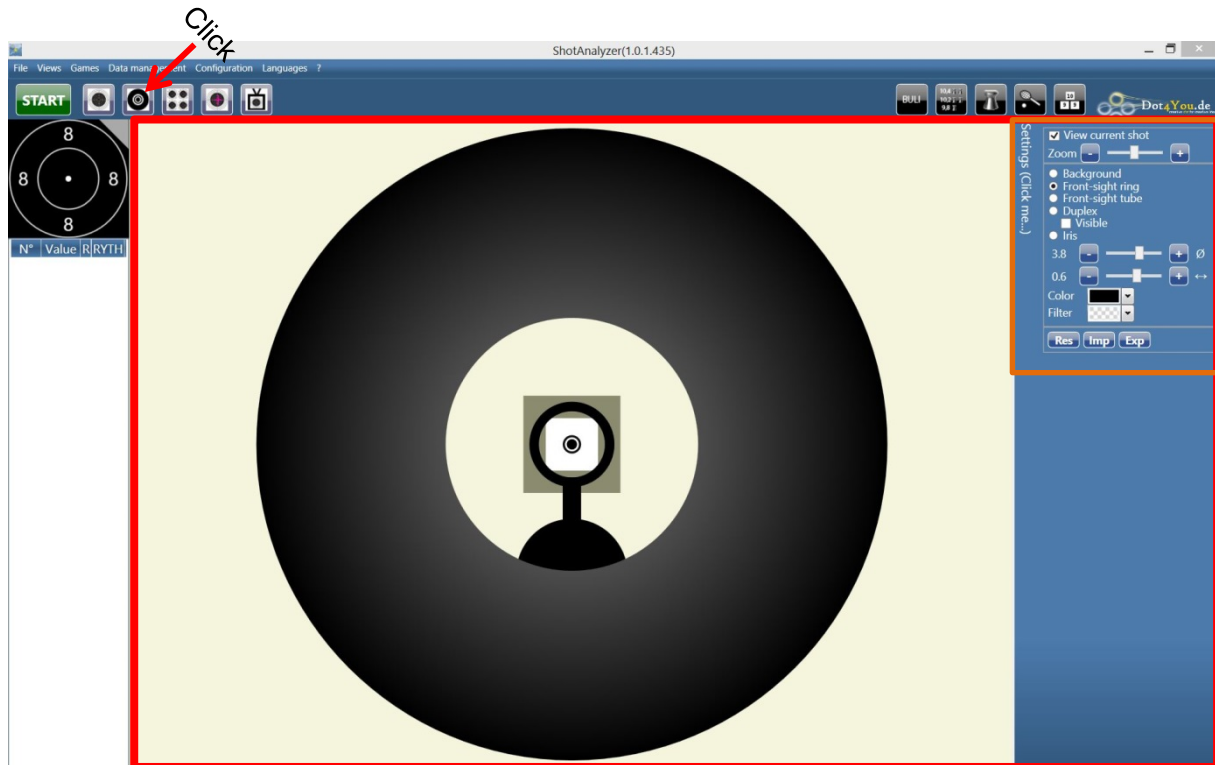
Example: No line and No shot are checked, sum line selected



You can see clearly that the shooter has a small corridor between 11 and 1 o'clock. You can also see that the shooter shows no sign of lowering the point of aim in the last 4 seconds before the shot.

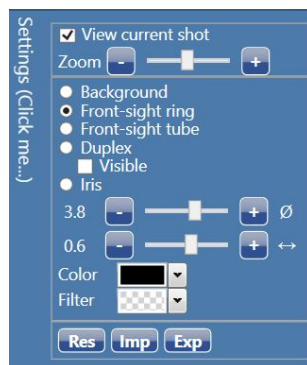
# ShotAnalyzer

## Shooter view



This tool gives the shooter and the coach feedback on how the shooter perceives the aiming process. Each component, e.g. size and width of the front-sight ring, color filter or background color, can be set separately. The aiming process can then be played with the settings made in the shooter view.

### Possible settings:



- **Show moment of the shot:** During the replay of the process, the shot is shown on the target at the moment of firing.
- **Zoom:** Zooms in on the display
- **Front-sight ring:** Diameter, width, color of the ring
- **Front-sight tube:** Diameter, width and color
- **Duplex:** Diameter, width, color of the ring and the filter
- **Iris:** Diameter, width, color of the iris and the filter
- **Background:** Background color, color of the frame and the target

### Important:

As long as you see the settings, you cannot play the aiming process!!

You can leave the configuration mode by clicking on "Settings (click me...)". By clicking the same button, you can enter the configuration mode.



# ShotAnalyzer

## Group images

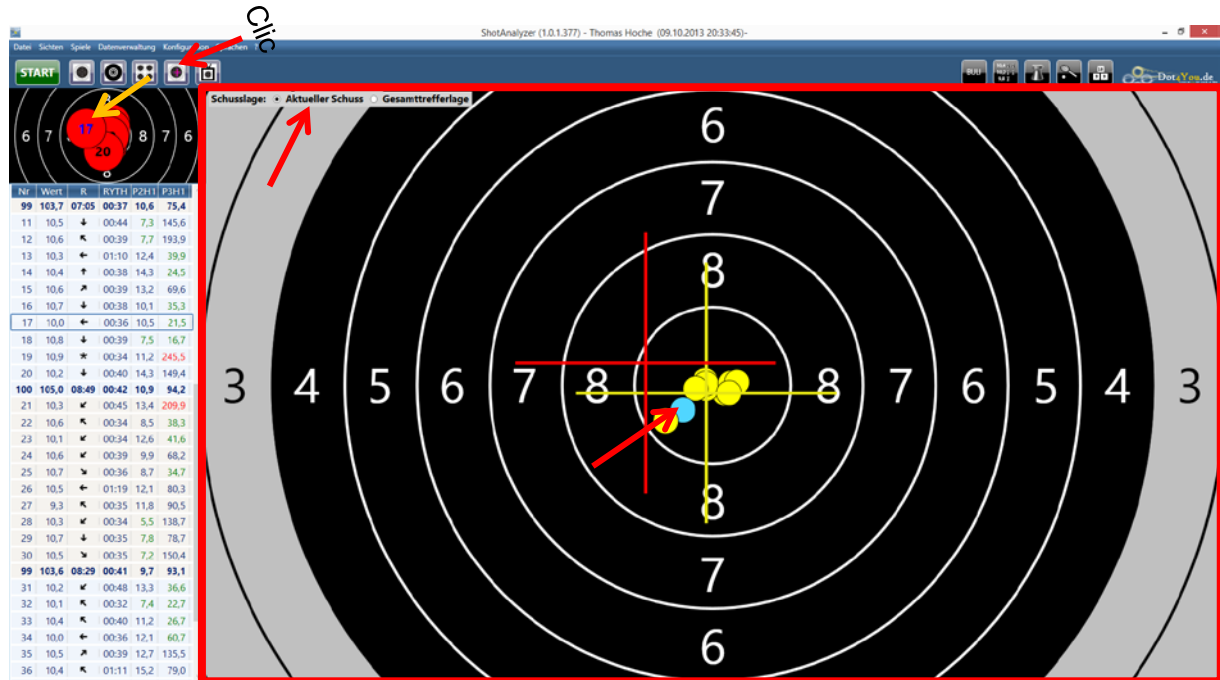


In this view, you can look at complete 10 series as group images.

It always starts with the practice shots. The practice mode can be identified by the grey triangle in the top right corner of the target. The number of each series is found above the target. At the end, the overall group of all hits is displayed.

# ShotAnalyzer

## Extension of the hold area



The extension of the hold area should visualize the "systematic aiming error" made by the shooter. For this visualization, the midpoint of the area is projected onto the target (yellow dots). Additionally, the overall midpoint is calculated from all midpoints (yellow cross). It is easily recognizable where the shooter is aiming most often. Additionally, the position (red cross) of either the current hit or of the whole group is shown. The shooter can therefore see how big the distance is between the group of the midpoint of P2H1 and the actual hit point (yellow cross and red cross).

Brief explanation of the picture:

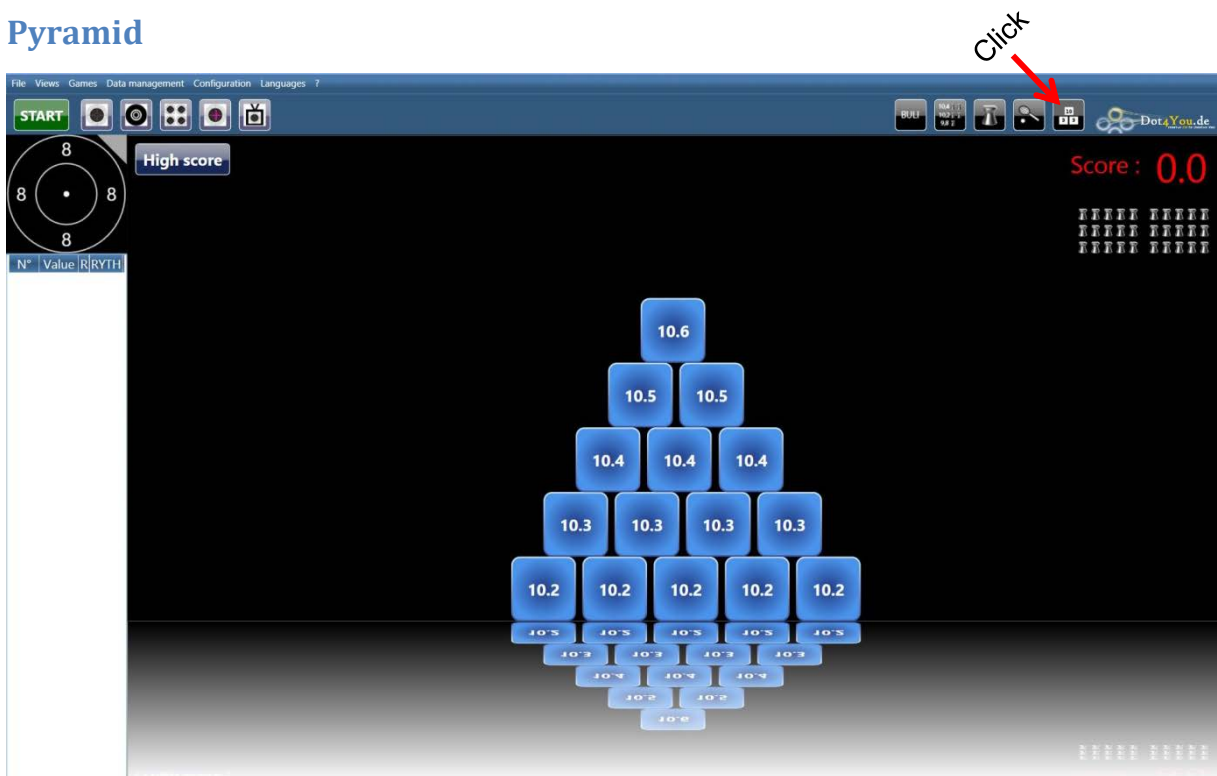
The light blue dot is the midpoint of P2H1 of the currently selected hit. In the following picture, you can see very well why the light blue dot lies close to the ten.



# ShotAnalyzer

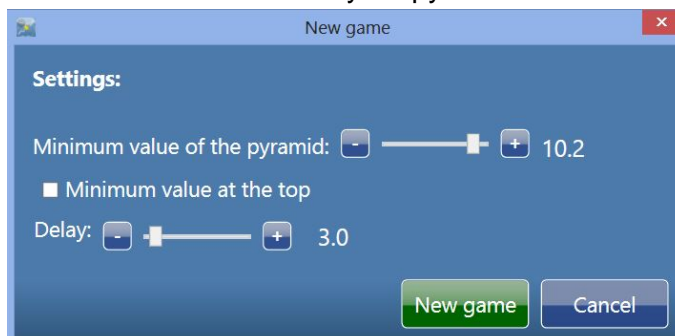
## Games

### Pyramid



#### Start the pyramid game:

1. Click on the icon in the toolbar (red arrow).
2. Enter the lowest value for your pyramid and confirm by clicking on "New game".

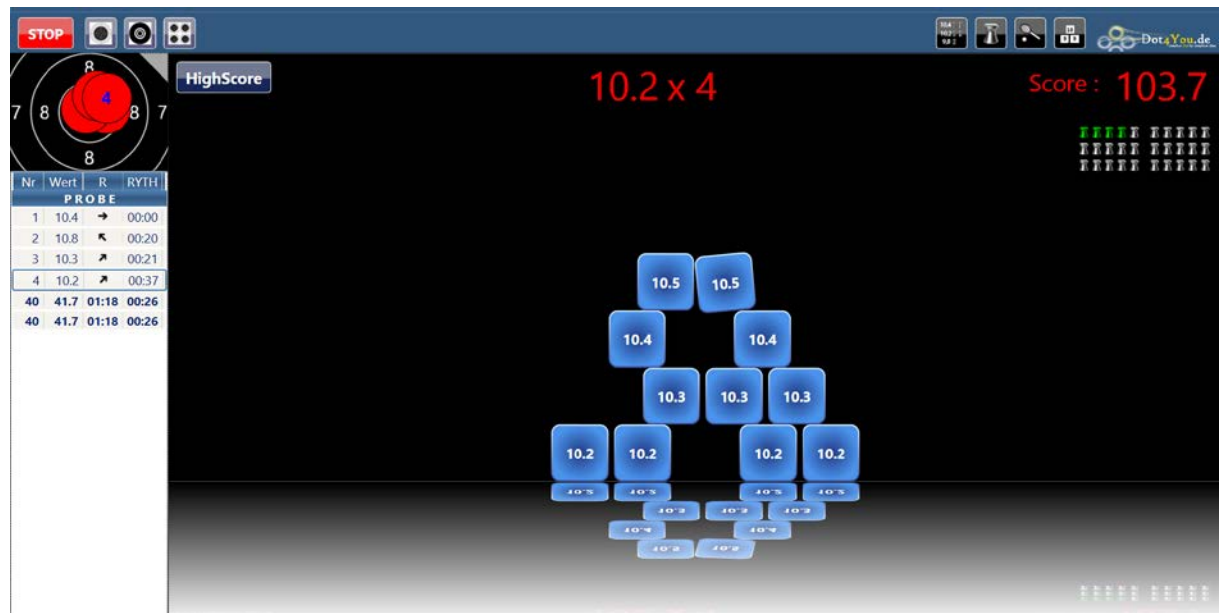


If you check "Minimum value at the top", the pyramid is built in inverse order. If the minimum value is 10.2, the row at the bottom will contain the scores 10.6 and the stone at top will be 10.2.

3. Start the recording by clicking on "START" or pressing the F5 key.  
**Note:** You don't have to click on "STOP" when the game is over. You can restart this game or start another game without problems. However, it is important that you start the recording of the shot.

# ShotAnalyzer

## Rules:



1. When the shooter scores one of the values on the pyramid stones, one of the stones with this value is removed randomly and the pellet is marked in green.
2. When the shooter scores a value that is lower than the minimum value, no pyramid stone is removed and the pellet is marked in red.
3. When the shooter scores a value that is higher than the highest value of the remaining stones, the stone with the highest value is removed and the pellet is marked in green.  
For example in this picture, if the shooter hit a 10.7 next, one of the two stones with 10.5 would be removed.
4. You have a maximum of 30 shots to remove all the stones.

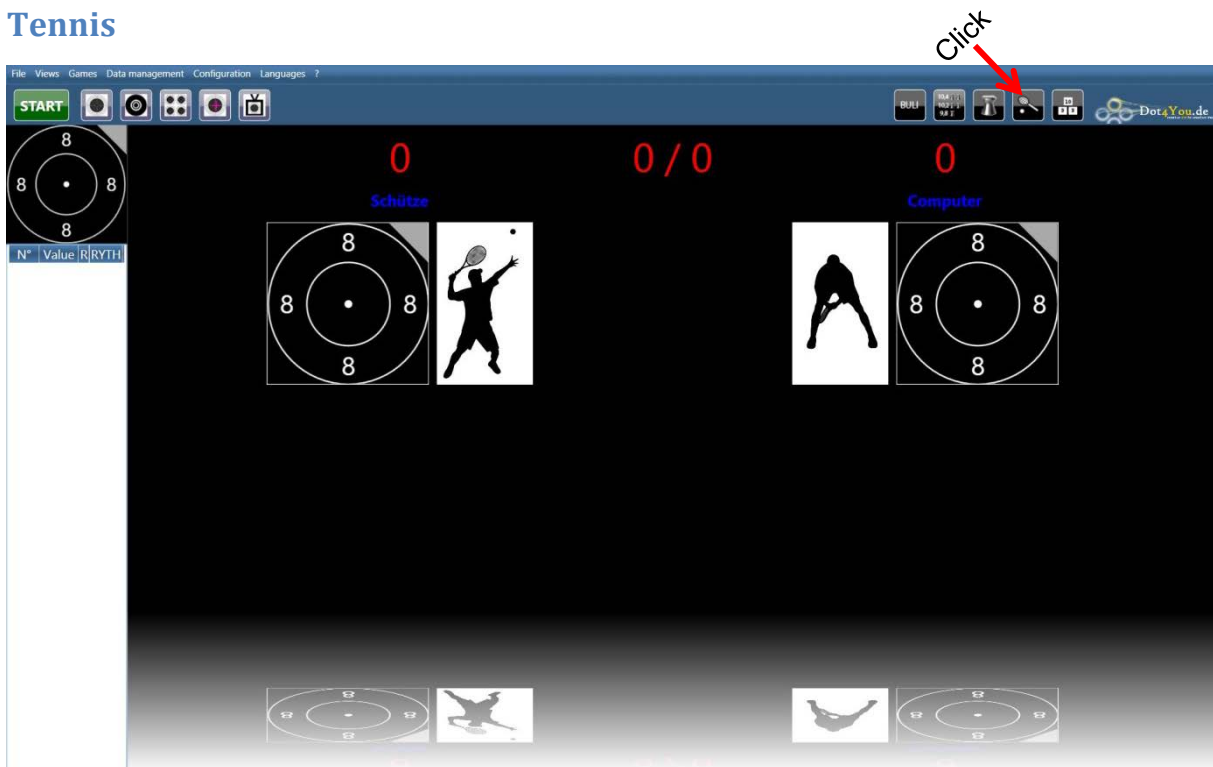
## High score:

There is not only one high score but several: For every possible minimum value, the high score is saved. It is also taken into account whether the pyramid was built in inverse order (highest value at the bottom). This way, everyone can improve the high score step by step according to their performance level.



# ShotAnalyzer

## Tennis



### Start the tennis game:

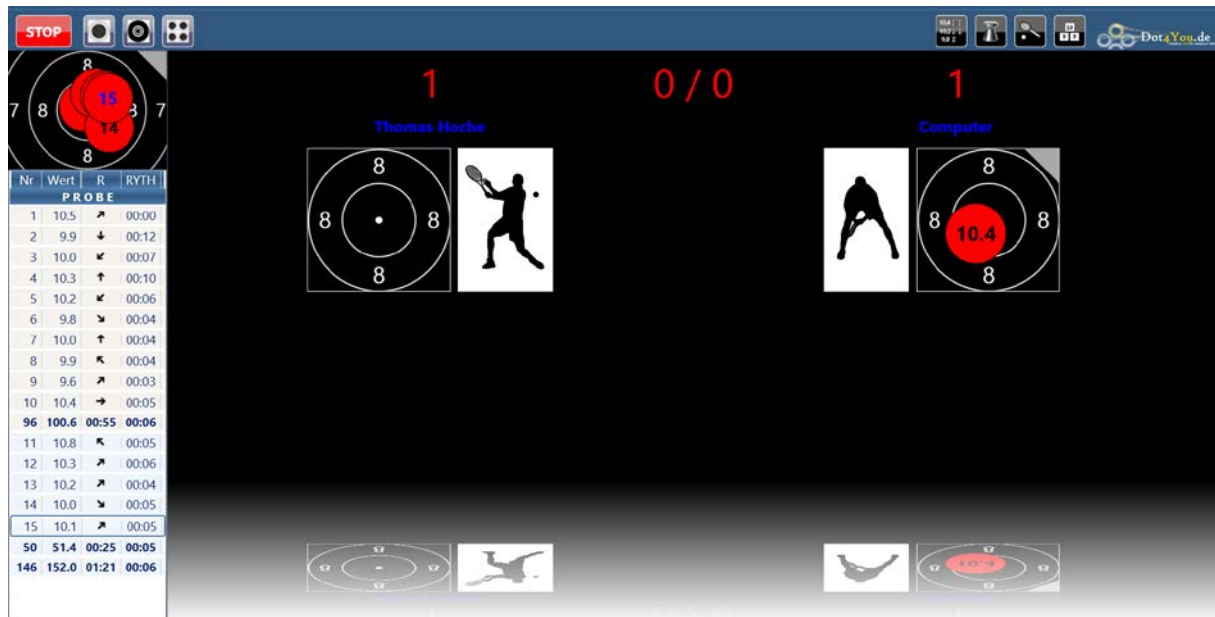
1. Click on the icon in the toolbar (red arrow).
2. Sets to be won: Number of sets that have to be won to win the game.  
Competitor strength: How strong should the computer be?  
Competitor's shot delay: Time delay with which the computer can make its shot after your shot has been recorded. With this option you have enough time to finish your shooting process in a controlled way. Follow-through will not be neglected!



3. Start the recording by clicking on "START" or pressing the F5 key.  
**Note:** You don't have to click on "STOP" when the game is over. You can restart this game or start another game without problems. However, it is important that you start the recording of the shot.

# ShotAnalyzer

## Rules:

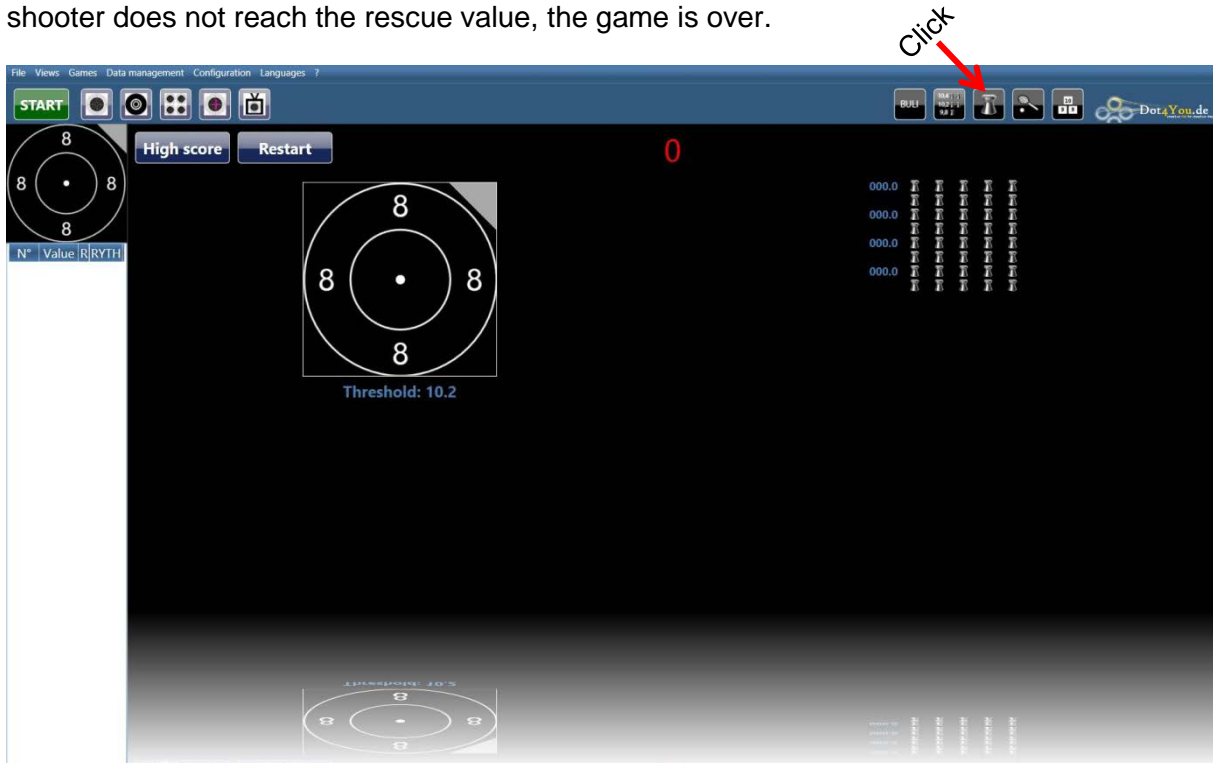


1. In the first set, the shooter always serves. After the set, it is the computer's turn, and so on.
2. To return the ball, you have to score the same or a higher value. Example: The shooter has a 10.2. The computer now needs a 10.2 or higher to return the ball. If it scores less than 10.2, the shooter wins a point.
3. It is counted like in tennis. (15, 30, 40)  
A set is won when one of the players has 40 points and the opponent has less than 40. If both have 40 points, you keep playing until one is 2 points ahead.  
We count like in tennis:  
Advantage <<Name of the player>> => advantage for <<Name of the player>>  
Deuce => tie  
There is also a tie-break when the score is 2:2 (won sets) with the setting of 3 sets to be won.
4. The one who reaches the required number of sets to be won first wins the game.

# ShotAnalyzer

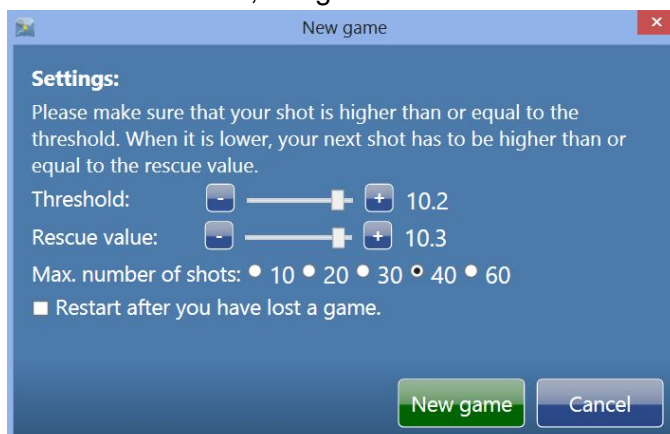
## Stay above

In this game, the shooter is challenged to stay above a threshold value that is set beforehand. If he or she does not make the threshold, the next hit has to be above the rescue value set beforehand. The rescue value should be 0.1 above the threshold. If the shooter does not reach the rescue value, the game is over.



### Start the Stay above game:

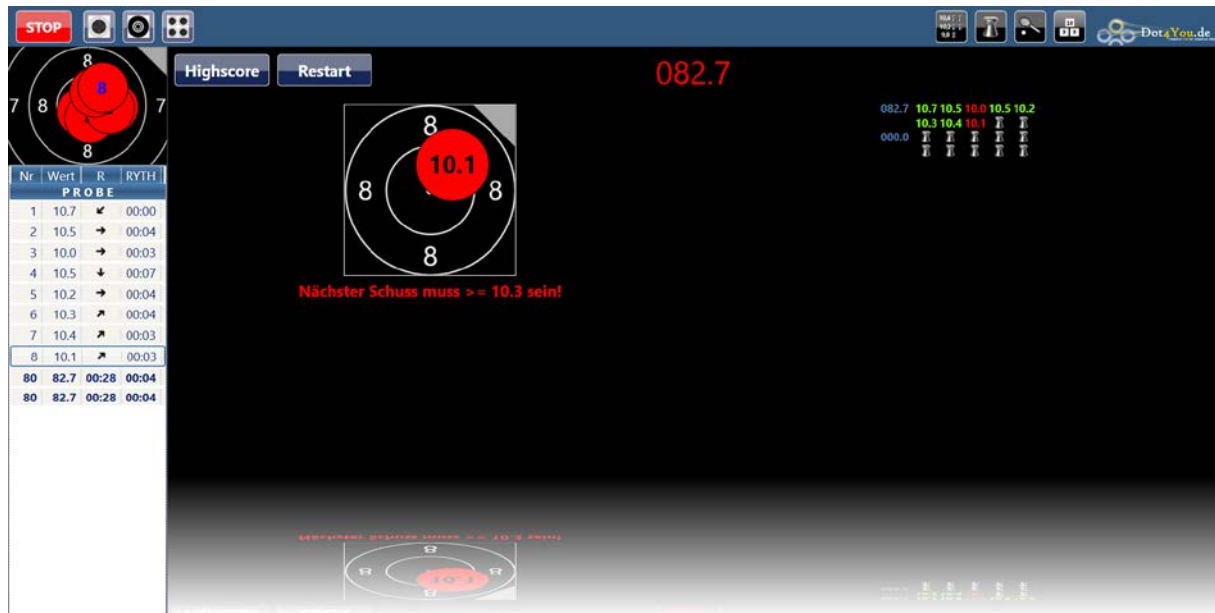
1. Click on the icon in the toolbar (red arrow).
2. Threshold: Set the threshold value below which you do not want to fall.  
Rescue value: The rescue value should be at least 0.1 above the threshold.  
Max. number of shots: Select the maximum number of shots.  
Auto start: If you do not make the rescue value and the maximum number of shots cannot be reached, the game is restarted automatically with the last settings.



3. Start the recording by clicking on "START" or pressing the F5 key.

# ShotAnalyzer

## Rules:



1. When the shooter makes a **hit** that is **>= the threshold**, the pellet symbol is replaced with the score and **marked in green**.
2. When the shooter makes a **hit** that is **under the threshold**, the pellet symbol is replaced with the score and **marked in red**.
3. When the previous **hit** is under the threshold and the current hit is **>= the rescue value**, the pellet symbol is replaced with the score and **marked in green**.
4. The **game is finished** when the previous **hit is under the threshold** and the current **hit is under the rescue value**.
5. The **game is finished** when the **maximum number of shots is reached**.

## High score:

There is not only one high score: The high score is saved for every combination of threshold and rescue value and number of shots. This way, everyone can improve the high score step by step according to their performance level.

## Hint:

With this game, you can practice the new decimal scoring that is used internationally. You get a feeling for the new counting mode because you have the decimal sum of a series at one glance.

What settings do I have to make?

**Example: 40 Schuss** in decimal scoring and you want to attain **412.0**.

## Settings

Threshold: 10.3 (Calculation:  $412.0 / 4 = 10.3$ )

Rescue value: 8.0 (set it very low so you can really beat it!)

Max. number of shots: 40

# ShotAnalyzer

## Decimal

This game gives the shooter a new perspective on how to train for the new decimal scoring. With the full ring scoring every shooter can tell immediately if a result is good or bad. Furthermore, the approximate score of the series can be calculated very quickly. With decimal scoring, this is harder to do.

The game is based on the fact that you can attain a result with various combinations of values. This means that ShotAnalyzer calculates a random mix of hits that forms the overall result.

**An example:** With **40 shots** the overall result of **412.0** should be reached.

The software calculates a random combination that could be as follows:

10.6 => hit 4 times

10.5 => hit 4 times

10.4 => hit 20 times

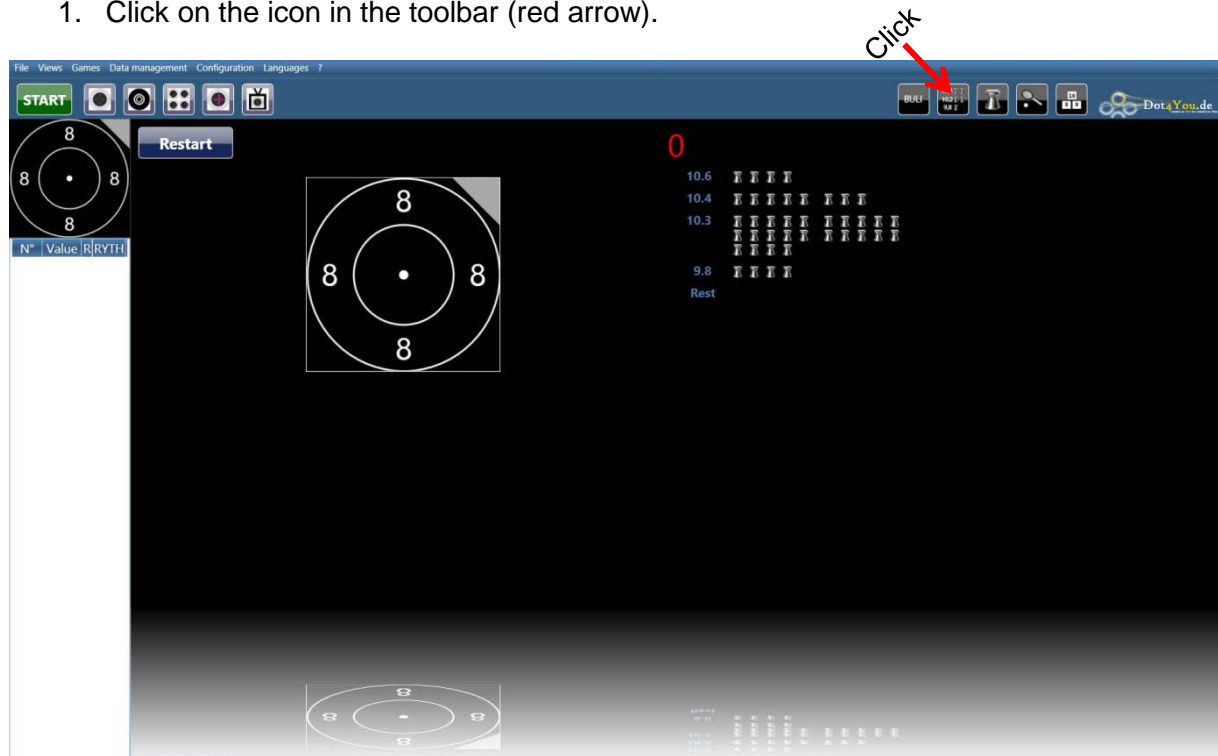
10.1 => hit 8 times

9.7 => hit 4 times

Now, the shooter only has to concentrate on hitting the individual scores as many times as indicated. If the shooter succeeds, he or she can be sure to have attained the 412.0 or maybe to have beaten it. The psychological trick is that the shooter does not think from series to series but can count every hit as a success. The shooter does not get obsessed with the thought of having to attain a 103.0 in every series. You will see quickly that emotional stress is lifting. This method helps some shooters in competitions (Subject: Problems after the practice shots when starting the program).

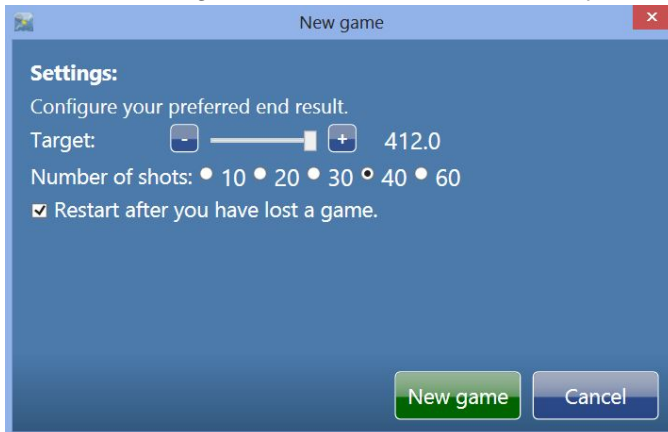
### Start the Decimal game:

1. Click on the icon in the toolbar (red arrow).



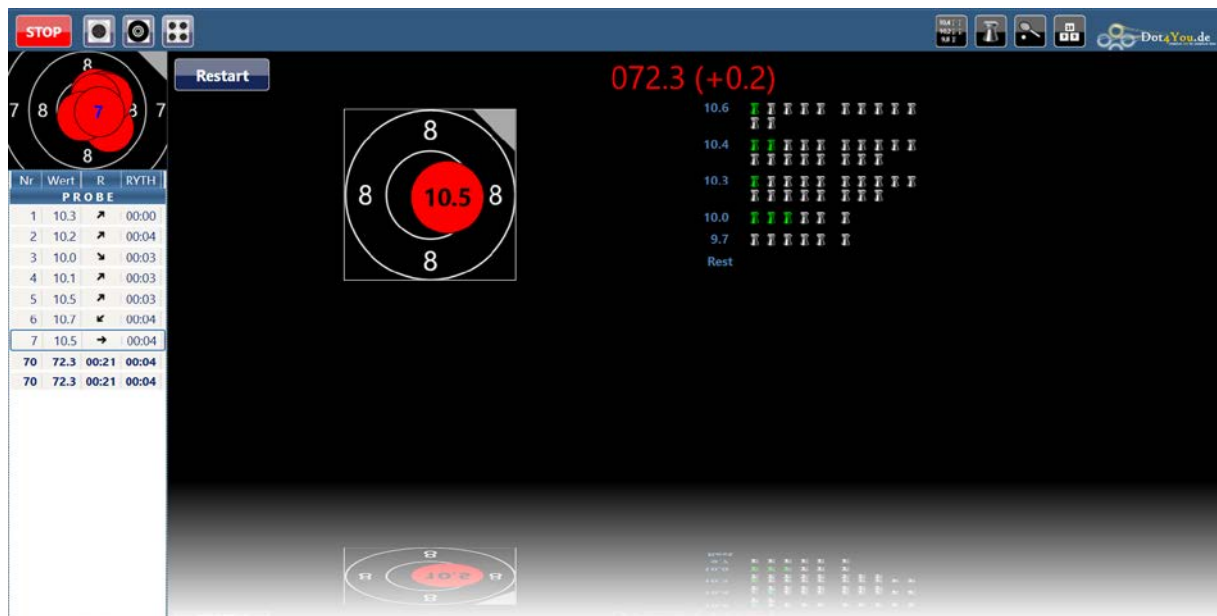
# ShotAnalyzer

2. Aim: Set the preferred end result.  
Number of shots: Select the number of shots.  
Auto start: When the number of shots is reached and the result has not been attained or beaten, the game is restarted automatically with the last settings.



3. Start the recording by clicking on "START" or pressing the F5 key.

## Rules:



1. A **pellet is marked in green** when the shooter hits a value that is  $\geq$  than one of the indicated values.
2. A **pellet marked in red** is shown under **Rest** when the hit cannot be allocated to one of the indicated values.
3. If the shooter hits a higher score than needed, e.g. a 10.8, a pellet of the highest possible value is marked in green. In the picture above: A pellet of 10.6 would be marked in green if the shooter had hit a 10.8.
4. The game is finished when the set number of shots is reached.

## Note:

The current result is shown in the top area. The current difference to the set result is indicated in brackets (if the shooter continued to hit the scores he or she is currently hitting). In the picture above, the shooter would attain a 412.2 with a set result of 412.0.

# ShotAnalyzer

## Bundesliga simulator



This game offers the shooter the opportunity to compete against an opponent who shot a real competition program in the past. The shooter is kept in suspense since he or she does not know in advance how many points the opponent attained and how long it took him or her to finish the program. This way, a competitive atmosphere is created.

The opponent data is loaded via an encrypted file. The individual shots are played in the time intervals in which they were fired during the match. The encrypted files (\*.buli) can be downloaded from [www.dot4you.de](http://www.dot4you.de). These files contain real Bundesliga matches.

You also have the possibility to create your own \*.buli files. This way, you can shoot a "tele-match". You send for example a buli file to your friend and do not tell him or her the result. The other person can now load this file into the Bundesliga simulator and compete against you. And so it goes back and forth.

# ShotAnalyzer

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## Start the Bundesliga simulator game:

1. Click on the icon in the toolbar (red arrow).
2. Sights: Set the time in which the practice shots have to be shot (Standard: 15 min).  
Match: Set the time in which the match has to be shot (Standard: 50 min).  
File: Select a \*.buli file.  
You can download buli files from [www.Dot4You.de](http://www.Dot4You.de) or you export recorded data (Scatt data also possible) as \*.buli files.



3. Start the recording by clicking on "START" or pressing the F5 key.



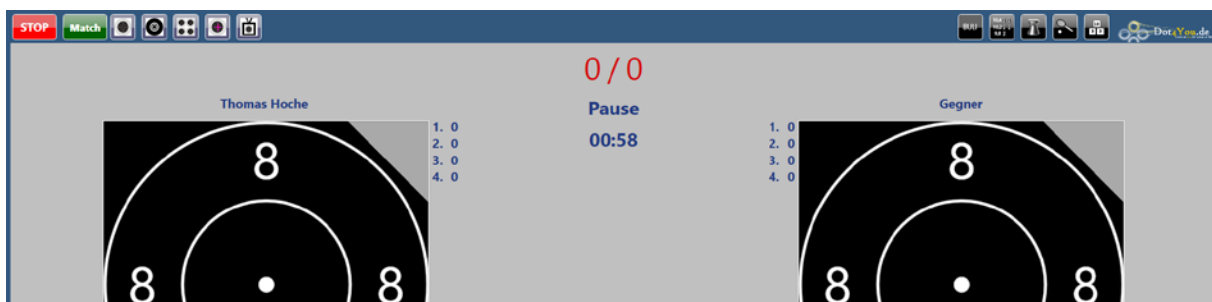
# ShotAnalyzer

## Rules:

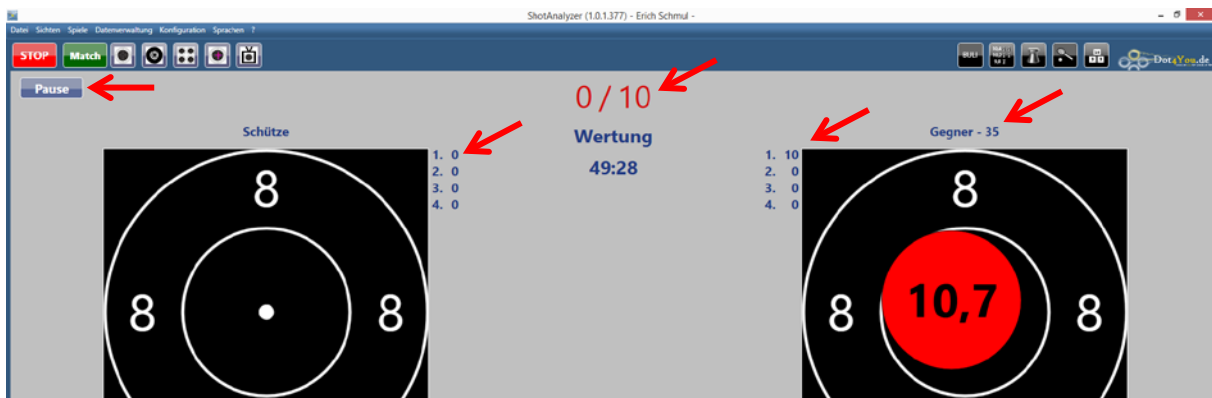


Click on "Start" => Time for practice shots begins.

Click on "Skip" => Practice shots are skipped.



When the time for the practice shots is finished or if you have skipped it, a pause of 1 minute is made. This pause simulates the changing of the control target. After this pause, the time for the match starts automatically.



Click on "Pause" => Interrupts the game, display changes to "Start".

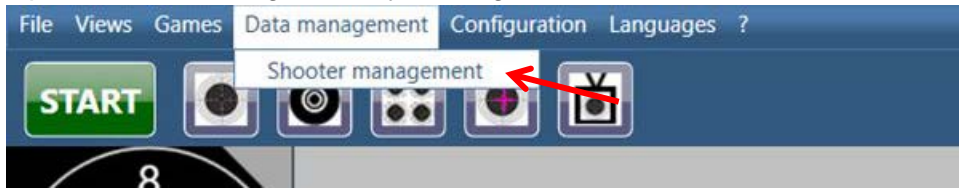
By clicking on "Start" you can continue with the match.

Beside the targets, the individual series are shown. The digit behind "Opponent" indicates when the next shot will be fired.

# ShotAnalyzer

## Shooter management

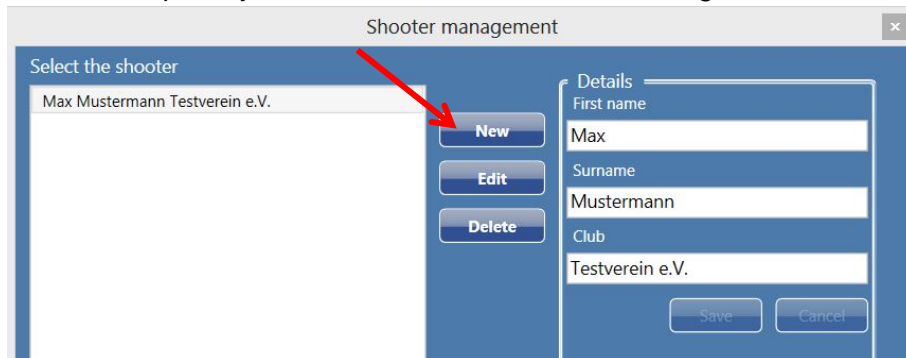
1. Open shooter management by clicking the button in the menu "data management"



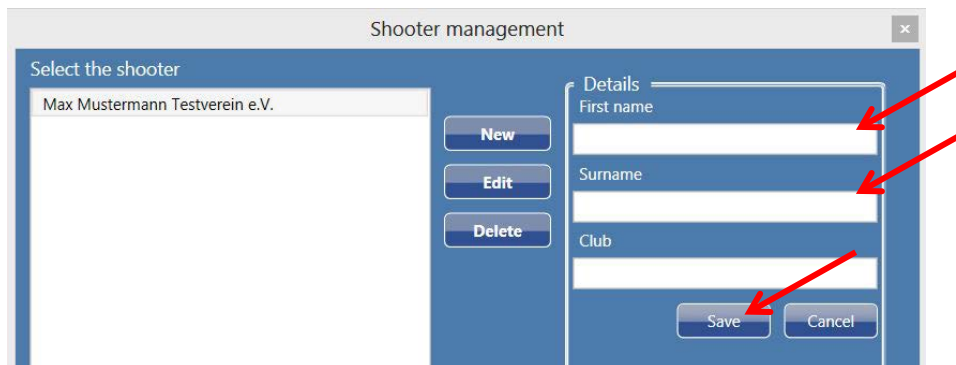
or



2. click on the plus symbol in the window "Start recording"



Click on "New" to create a new shooter.

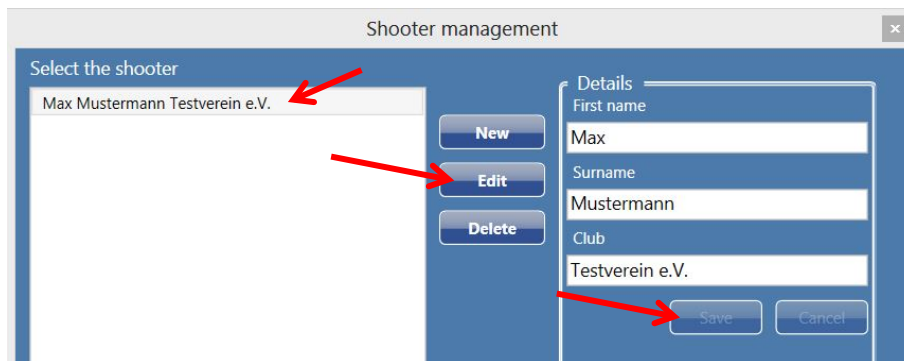


Enter the name in the fields. If you want to, you can also enter the name of the club. Confirm your data by clicking on "Save".

The shooter has now been added.

# ShotAnalyzer

## 3. Edit the shooter

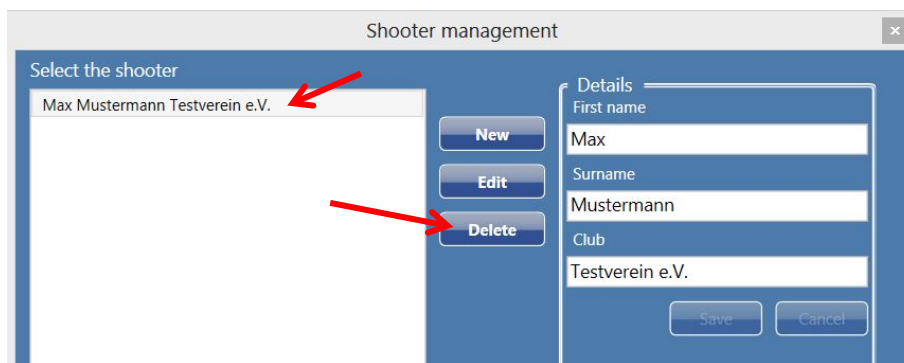


The screenshot shows the 'Shooter management' window. On the left, under 'Select the shooter', the entry 'Max Mustermann Testverein e.V.' is selected, indicated by a red arrow. In the center, there are three buttons: 'New', 'Edit', and 'Delete'. The 'Edit' button is highlighted with a red arrow. On the right, the 'Details' section shows the shooter's information: First name 'Max', Surname 'Mustermann', and Club 'Testverein e.V.'. The 'Save' button at the bottom right of the details section is also highlighted with a red arrow.

Select the shooter you want to edit.

Click on "Edit" and change the information in the section "Details". Confirm the changes by clicking on "Save".

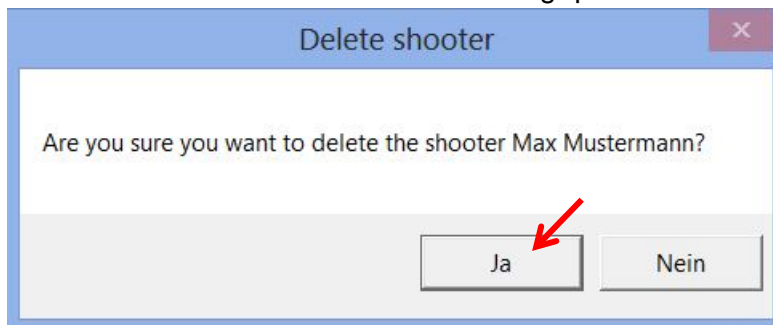
## 4. Delete the shooter



This screenshot is identical to the one above, showing the 'Shooter management' window. In this step, the 'Delete' button in the center is highlighted with a red arrow, indicating the action to be taken.

Select the shooter you want to delete.

Click on "Delete" and answer the following question with "Yes".



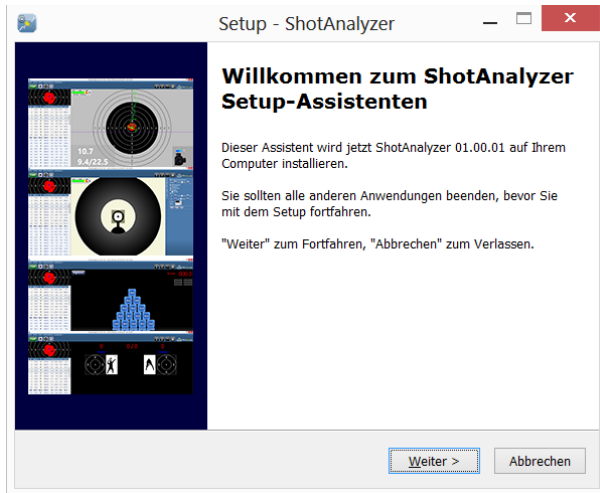
The screenshot shows a dialog box titled 'Delete shooter'. It contains the question 'Are you sure you want to delete the shooter Max Mustermann?'. At the bottom, there are two buttons: 'Ja' (Yes) and 'Nein' (No). The 'Ja' button is highlighted with a red arrow, indicating the correct response to confirm deletion.

The shooter has now been deleted!

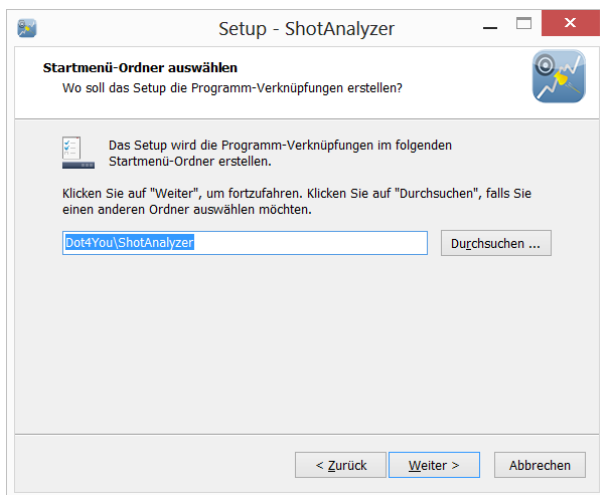
# ShotAnalyzer

## Installation

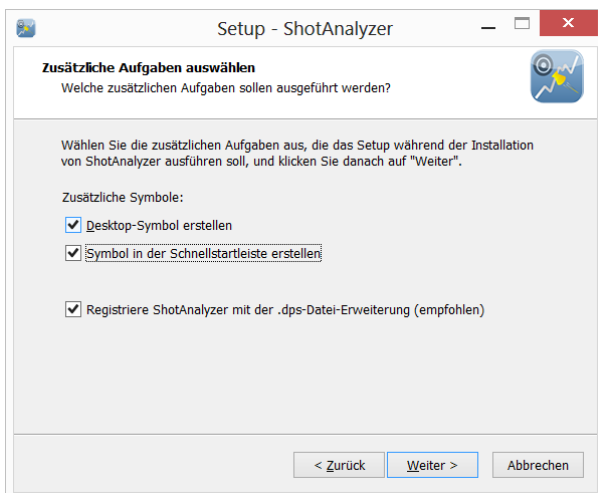
Start the setup and follow the instructions. The setup steps in pictures:



Click on "Next".



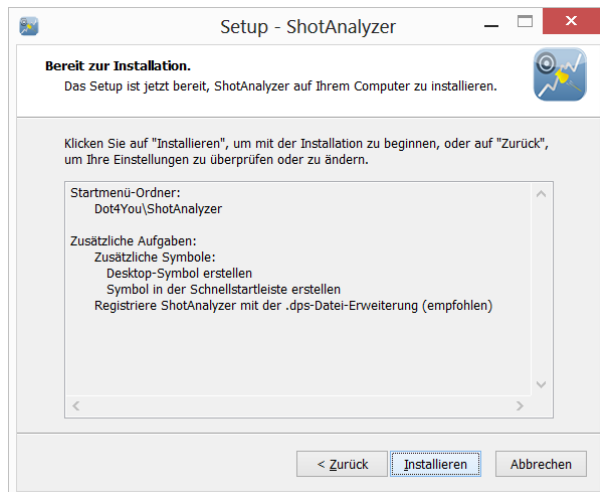
Click on "Next".



Note: "Register ShotAnalyzer with the .dps-file extension means that ShotAnalyzer starts automatically when you double-click on such a file (\*.dps).

Click on "Next".

# ShotAnalyzer



Click on "Install".



Click on "Finish".

ShotAnalyzer was installed successfully on your computer.

# ShotAnalyzer

## Registration

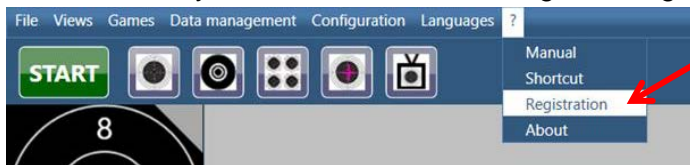
In this chapter, some questions about the registration are answered.

### Where do I get the serial number?

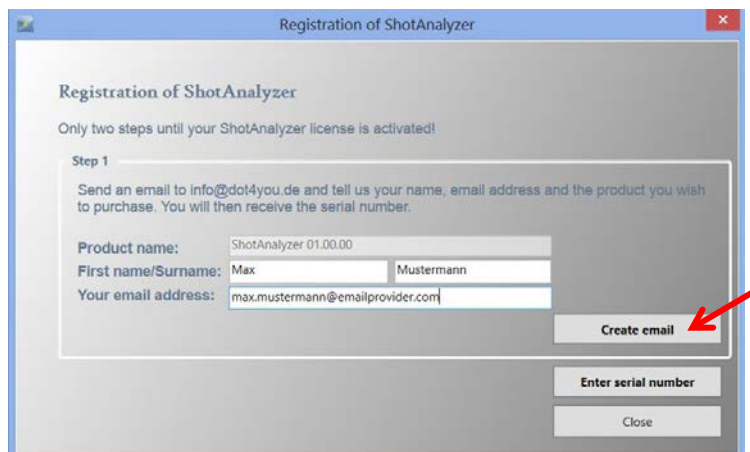
There are several possibilities to ask for a serial number. You can contact us through the contact form on our website [www.dot4you.de](http://www.dot4you.de) or you let ShotAnalyzer create an email that you can send via your email account.

Create an email with ShotAnalyzer:

1. Start ShotAnalyzer and, in the menu "?", go to "Registration"



2. Enter your name and email address in the pop-up window and continue by clicking on "Create email".



3. Don't forget to indicate your mailing address in the email so that the bill can be sent to you!
4. Send the email.



# ShotAnalyzer

## Where do I find the serial number?

The serial number is printed on the bill that you will receive from us.

## I have a serial number, what do I do with it?

You have received the serial number with your bill and you want to activate ShotAnalyzer. Proceed as follows:

1. Start ShotAnalyzer and, in the menu "?", go to "Registration"



2. Enter your name and email address in the pop-up window, if you haven't done so before. Then click on "Enter serial number".

A screenshot of the 'Registration of ShotAnalyzer' dialog box, Step 1. The title bar says 'Registration of ShotAnalyzer'. The main text says 'Only two steps until your ShotAnalyzer license is activated!'. Below this, it says 'Step 1' and 'Send an email to info@dot4you.de and tell us your name, email address and the product you wish to purchase. You will then receive the serial number.' There are three input fields: 'Product name:' with 'ShotAnalyzer 01.00.00', 'First name/Surname:' with 'Max Mustermann', and 'Your email address:' with 'max.mustermann@emailprovider.com'. There are three buttons: 'Create email', 'Enter serial number' (highlighted with a red arrow), and 'Close'.

3. Enter all the required information and the serial number in the pop-up window. Make sure that you are connected to the internet before you click on "Online activation"! ShotAnalyzer will now activate the registered serial number and you will be able to use ShotAnalyzer.

A screenshot of the 'Registration of ShotAnalyzer' dialog box, Step 2. The title bar says 'Registration of ShotAnalyzer'. The main text says 'Enter your data and the serial number you received and send it'. There are several input fields: 'Product name:' (ShotAnalyzer 01.00.00), 'Serial number:\*', 'Activation code:', 'Firm/Club:', 'Form of address:\*' (Herr/Frau), 'First name:\*', 'Surname:\*', 'Street/House number:\*', 'Zip code/city:\*', 'Country:\*', 'Email address:\*', and 'Phone number:'. There are two buttons: 'Online activation' (highlighted with a red arrow) and 'Offline activation'. At the bottom, there is a 'Close' button and a logo for 'Dot4You.de'.

**Note:** The serial number will only be activated when the payment has arrived!