

ALGE-TIMING

# Photo Finish OPTIc3



## Important Information

### General

Before using your **ALGE-TIMING** device read the complete manual carefully. It is part of the device and contains important information about installation, safety and its intended use. This manual cannot cover all conceivable applications. For further information or in case of problems that are mentioned not at all or not sufficiently detailed, please contact your **ALGE-TIMING** representative. You can find contact details on our homepage [www.alge-timing.com](http://www.alge-timing.com)

### Safety

Apart from the information of this manual all general safety and accident prevention regulations of the legislator must be considered.

The device must only be used by trained persons. The setting-up and installation must only be executed according to the manufacturer's data.

### Intended Use

The device must only be used for its intended applications. Technical modifications and any misuse are prohibited because of the risks involved! **ALGE-TIMING** is not liable for damages that are caused by improper use or incorrect operation.

### Power supply

The stated voltage on the type plate must correspond to voltage of the power source. Check all connections and plugs before usage. Damaged connection wires must be replaced immediately by an authorized electrician. The device must only be connected to an electric supply that has been installed by an electrician according to IEC 60364-1. Never touch the mains plug with wet hands! Never touch live parts!

### Cleaning

Please clean the outside of the device only with a smooth cloth. Detergents can cause damage. Never submerge in water, never open or clean with wet cloth. The cleaning must not be carried out by hose or high-pressure (risk of short circuits or other damage).

### Liability Limitations

All technical information, data and information for installation and operation correspond to the latest status at time of printing and are made in all conscience considering our past experience and knowledge. Information, pictures and description do not entitle to base any claims. The manufacturer is not liable for damage due to failure to observe the manual, improper use, incorrect repairs, technical modifications, use of unauthorized spare parts. Translations are made in all conscience. We assume no liability for translation mistakes, even if the translation is carried out by us or on our behalf.

### Disposal

If a label is placed on the device showing a crossed-out dustbin on wheels (see drawing), the European directive 2002/96/EG applies for this device.

Please get informed about the applicable regulations for separate collection of electrical and electronical waste in your country and do not dispose of the old devices as household waste. Correct disposal of old equipment protects the environment and humans against negative consequences!



### Operating ranges and interferences

The **ALGE** WTN operates in 2.4 GHz frequency band, the same as WLAN. This is also used by other services. The operating range as well as the operation may be disturbed by devices working at the same or neighbouring frequencies.

### Copyright by **ALGE-TIMING** GmbH

All rights reserved. Any duplication, either in full or in part, requires the prior written consent of the copyright holder.

# Declaration of Conformity

We declare that the following products comply with the requirements of the listed standards.

We, **ALGE-TIMING GmbH**  
**Rotkreuzstrasse 39**  
**A-6890 Lustenau**

declare under our sole responsibility, that the photo finish camera of the type:

## **OPTIc3 and OPTIc3-PRO**

is in conformity with the following standard(s) or other normative documents(s):

Safety: EN 60950-1:2006 + A11:2009

EMC: EN55022:2006+A1:2007  
EN55024:1998+A1:2001+A2:2003  
EN61000 3-2:2006 + A1:2009 + A2:2009  
EN61000 3-3:2008

**Additional Information:**








The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC, also the EMC Directive 2004/108EG and accordingly carries the CE-marking.

Lustenau, 10.02.2017

**ALGE-TIMING GmbH**



Albert Vetter  
(General Manager)

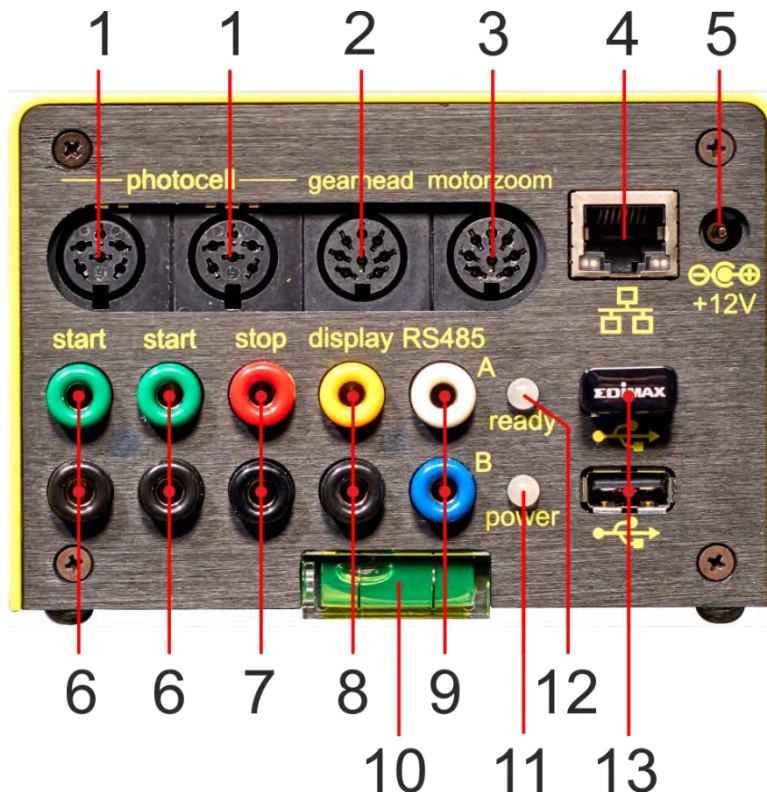
### Table of Contents

<b>1</b>	<b>Introduction.....</b>	<b>8</b>
1.1	<i>OPTIc3 Models</i> .....	8
1.1.1	<i>OPTIc3 – System Components</i> .....	8
1.1.2	<i>OPTIc3-PRO – System Components</i> .....	9
1.2	<i>Requirements for PC (Desktop or Notebook)</i> .....	9
1.3	<i>Accessories</i> .....	9
1.4	<i>Function</i> .....	10
<b>2</b>	<b>Layout of the Software OPTIc3NET .....</b>	<b>11</b>
<b>3</b>	<b>Select Language of OPTIc3.NET Software.....</b>	<b>12</b>
<b>4</b>	<b>Connection of Camera(s).....</b>	<b>13</b>
4.1	<i>Adjust the Amount of Used Cameras</i> .....	13
4.2	<i>Network connection</i> .....	13
4.2.1	<i>OPTIc3 IP Configurator</i> .....	14
4.3	<i>Camera connected to Ethernet with POE+ Power Supply</i> .....	14
4.4	<i>Camera connected via Ethernet with external supply</i> .....	15
4.5	<i>Camera communication by Wi-Fi</i> .....	15
4.6	<i>Connection of two or more Cameras</i> .....	16
4.7	<i>Power Supply of the OPTIc3</i> .....	16
<b>5</b>	<b>Camera Position .....</b>	<b>17</b>
5.1	<i>Lens Angle</i> .....	18
5.2	<i>Focusing the Camera</i> .....	19
5.2.1	<i>Adjustment of Focus (Aperture)</i> .....	19
5.2.2	<i>Scan Rate</i> .....	19
5.3	<i>Camera Alignment on Finish Line</i> .....	21
5.4	<i>Camera Adjustment from a Device with Wi-Fi</i> .....	24
<b>6</b>	<b>Photo Finish for Different Sports.....</b>	<b>25</b>
6.1	<i>Selection of Type of Sport</i> .....	25
6.1.1	<i>General</i> .....	25
6.1.2	<i>Track and Field with Anemometer</i> .....	25
6.1.3	<i>Track and Field without Anemometer</i> .....	25
6.1.4	<i>Horse Race</i> .....	25
6.1.5	<i>Dog Race</i> .....	26
6.1.6	<i>Rowing / Canoe</i> .....	26
6.1.7	<i>Cycling</i> .....	26
6.2	<i>Sports with Individual Starts</i> .....	26
6.3	<i>Track and Field (Athletics)</i> .....	26
6.3.1	<i>Zero Control for Track and Field (Start Control)</i> .....	28
6.3.2	<i>Evaluation for Track and Field</i> .....	28
6.4	<i>Horse Races</i> .....	29
6.5	<i>Dog Races</i> .....	29
6.6	<i>Rowing or Canoe</i> .....	29
6.7	<i>Cycling Races</i> .....	29
<b>7</b>	<b>Camera Settings .....</b>	<b>31</b>
7.1	<i>Setting the Camera</i> .....	31
7.2	<i>Remote Control Camera Adjustment</i>  .....	32
7.3	<i>Recording and Picture Adjustments</i>  .....	33
7.4	<i>WTN Radio Adjustments</i>  (OPTIc3-PRO).....	34
7.5	<i>Voice Communication - VoIP</i>  (OPTIc3-PRO).....	34
7.6	<i>Picture Quality Adjustments</i>  .....	35
7.7	<i>Image Adjustment</i> .....	36
7.7.1	<i>2-D Preview</i>  .....	36
7.7.2	<i>Image Adjustment with manual Lens</i> .....	38
7.7.3	<i>Image Adjustment with a Motor Zoom Lens</i> .....	38
7.7.4	<i>Brightness Adjustment</i> .....	39
7.7.5	<i>eXtremLuX (L) (OPTIc3-PRO)</i> .....	39
7.7.6	<i>Scan Rate Doubling (OPTIc3-PRO)</i> .....	40
7.8	<i>Synchronization</i>  .....	40
<b>8</b>	<b>Software OPTIc3.NET .....</b>	<b>42</b>
8.1	<i>Icon List</i> .....	42
8.2	<i>Footer</i> .....	43
8.3	<i>Menus of the Software</i> .....	44
8.3.1	<i>Menu &lt;File&gt;</i> .....	44
8.3.2	<i>Menu &lt;TIMING&gt;</i> .....	45
8.3.3	<i>Menu &lt;Setup&gt;</i> .....	46











8.3.4	Menu <Connection>.....	51
8.3.5	Menu <Sport>.....	52
8.3.6	Menu <Show>.....	52
8.3.7	Menu <Help>.....	54
<b>9</b>	<b>Evaluation Windows.....</b>	<b>55</b>
9.1	View 1.....	55
9.2	View 2.....	57
9.3	Overview.....	57
<b>10</b>	<b>Timing (Timing Window).....</b>	<b>58</b>
10.1	Tool Bar of the Timing Window:.....	61
10.2	Start Impulse from an External Timing Device.....	63
10.2.1	Start Time Transmission from TED2 (Data Transmission).....	63
10.2.2	Start Time from Mobile Timing MT1.....	64
10.2.3	Start Time for Timy3.....	64
10.3	Photo Finish Recording.....	65
10.3.1	Manual Recording  or .....	65
10.3.2	Manual Recording in Timing Window.....	65
10.3.3	Push Button Recording.....	65
10.3.4	Sensor Recording (Photocell).....	65
10.3.5	Motion Detection <b>REC</b> (OPTIc3-PRO).....	66
<b>11</b>	<b>Evaluation of Races.....</b>	<b>67</b>
11.1	Time Window.....	67
11.2	Manual Evaluation.....	68
11.3	Lane Evaluation.....	68
11.4	BIB Evaluation.....	69
11.5	Three different lines in the photo finish picture.....	69
11.5.1	Time Cursor.....	70
11.5.2	Result Lines.....	70
11.5.3	Time Jump Markers.....	70
<b>12</b>	<b>Heat List.....</b>	<b>71</b>
12.1	Field Selector .....	72
12.2	Class Mode .....	73
12.2.1	Start Time of a Class .....	74
12.3	Insert Row(s) .....	75
12.4	Delete .....	75
12.5	Import an Excel list .....	75
12.6	Export Excel list .....	77
12.7	Import List Layout .....	77
12.8	Export List Layout .....	77
12.9	Export Selected Result Lists .....	77
12.10	Export Result List .....	77
12.11	Transponder Times Integration .....	77
12.12	Transponder Impulse Selection .....	77
12.13	Video Wall – Sponsors .....	78
12.14	Video Wall – Lists .....	78
<b>13</b>	<b>Meet Browser.....</b>	<b>79</b>
13.1	Enter Race Structure manually.....	80
13.2	Import Race Structure.....	81
<b>14</b>	<b>Post-Processing.....</b>	<b>82</b>
14.1	Color – Black & White .....	82
14.2	Brightness / Contrast / Gamma .....	82
14.3	Cut – Delete Image Parts .....	82
14.4	Insert Parts of Event Picture in a Heat .....	83
14.5	Export of Images.....	84
14.5.1	Export of a marked Image.....	84
14.5.2	Export of a marked Image in 16:9-Format.....	85
14.5.3	Image Export of a View.....	85

<b>15</b>	<b>Data Exchange Settings.....</b>	<b>86</b>
15.1	<i>AlgeDisplayOutput .....</i>	87
15.2	<i>OPTIc3-XML-Dataformat .....</i>	88
15.2.1	Settings for Data Exchange with SELTEC TAF3 .....	89
15.2.2	Adjustments for the Timing Client of SELTEC TAF3.....	91
15.2.3	Execute Heats.....	93
15.3	<i>Data Format of Finish Lynx.....</i>	95
<b>16</b>	<b>Import and Export of Meets and Heats.....</b>	<b>97</b>
16.1	<i>Import and Export Meet.....</i>	97
16.1.1	Export Meet.....	97
16.1.2	Import Meet.....	98
16.2	<i>Import and Export of Heat.....</i>	98
16.2.1	Export Heat.....	98
16.2.2	Import Heat.....	98
<b>17</b>	<b>Integration of IDCam .....</b>	<b>99</b>
17.1	<i>Adjustment of the IDCam.....</i>	100
17.1.1	OPTIc3-Camera and IDCam at the same PC.....	100
17.1.2	OPTIc3 Camera and IDCam at different PCs .....	100
17.1.3	Offset between photo finish and IDCam .....	100
17.2	<i>Integration of the IDCam at the same PC .....</i>	101
17.3	<i>Commands in the OPTIc3 to Control the IDCam .....</i>	101
<b>18</b>	<b>Integration of the Anemometer Windspeed WS2.....</b>	<b>102</b>
<b>19</b>	<b>Connection to StartJudge SJ2 .....</b>	<b>104</b>
<b>20</b>	<b>Integration of a Video Wall .....</b>	<b>105</b>
20.1	<i>Settings to control a video screen .....</i>	107
<b>21</b>	<b>Integration of a Timing or Transponder System .....</b>	<b>108</b>
21.1	<i>Adjustment of Interface  .....</i>	108
21.1.1	Race Result .....	109
21.1.2	Mylaps .....	110
21.2	<i>Transponder Mapping  .....</i>	111
21.3	<i>Excel file to import the transponder mapping:.....</i>	111
21.4	<i>Adjustments in the Transponder Mode .....</i>	112
21.4.1	Settings.....	112
21.4.2	Timing Mode .....	112
21.4.3	Simultane Transponder Impulse.....	112
21.4.4	Additional.....	112
21.5	<i>Recording Using Data from External Devices.....</i>	113
<b>22</b>	<b>Technical Data .....</b>	<b>114</b>
22.1	<i>Connections.....</i>	114
22.2	<i>Display Board Interface "display board".....</i>	115
22.2.1	Display Board RS232 Interface .....	115
22.2.2	Display Board RS484 Interface .....	115
22.2.3	Data Format.....	116
22.3	<i>Minimum Requirements PC (Desktop or Notebook) .....</i>	116
<b>23</b>	<b>Update of the OPTIc3 System .....</b>	<b>117</b>
23.1	<i>PC-Software OPTIc3.NET .....</i>	117
23.2	<i>Camera Firmware .....</i>	118
<b>24</b>	<b>Accessories for Photo Finish.....</b>	<b>120</b>
24.1	<i>Network Cables and Cable Reels .....</i>	120
24.2	<i>Lenses for the OPTIc3.....</i>	120
24.3	<i>Tripod and Gear Head .....</i>	121
24.4	<i>Further Accessories .....</i>	121
<b>25</b>	<b>Tips and Tricks .....</b>	<b>122</b>
25.1	<i>ATL Einstellungen (SELTEC vorkonfiguriert).....</i>	122



- 1.....photocell socket (2 x)
- 2.....gear head socket
- 3.....motor zoom socket
- 4.....RJ45 socket (Ethernet)
- 5.....input for external power supply (10.6 to 13.4 VDC)
- 6.....banana socket – start impulse (2 x)
- 7.....banana socket – finish impulse
- 8.....banana socket – data output for display board (RS232)
- 9.....banana socket – data output for display board (RS485)
- 10.... spirit level
- 11.... LED (power)
- 12.... LED (ready)
- 13.... USB socket (2 x)

**Key-Commands:**

-  .....[F1] ..... opens the manual of the OPTIc3 (Acrobat Reader must be installed)
-  .....[F5] .....  ..... manual start impulse with keyboard
-  .....[F6] .....  ..... manual intermediate impulse with keyboard (time stops, no recording)
-  .....[F7] .....  ..... manual stop impulse with keyboard (time stops, picture is recorded)
-  .....[F8] ..... manual recording (at any time possible, also if no race is open)

# 1 Introduction

This manual can also be opened directly in the OPTIc3.NET-software (pdf-file) by pressing the key <F1> or in the menu <HELP> (F1 Open the user manual).

The camera is a new generation of the successful **ALGE-TIMING** photo finish series OPTI. It fulfils the highest expectations and is at the same time very user friendly. The OPITc3 can be upgraded with various features and allows scan rates between 3,000, and 30,000 frames per second (fps).

With its 2D CMOS sensor, the camera can be adjusted in 2D video mode (up to 100 fps (frames per second)) and later switch to scan mode for photo finish. The extremely light sensitive sensor and the innovative technology by **ALGE-TIMING** allow fantastic picture quality even at very bad light conditions.

The OPITc3 camera can easily be connected with a PC over Ethernet or Wi-Fi. The CAT5e cable transfers picture data from camera to PC in GBit velocity.

## 1.1 OPTIc3 Models

Two different OPTIc3 camera models are available:


- OPTIc3 is the basic photo finish system with many possible upgrade features.
- OPTIc3-PRO is the photo finish system including mostly all upgrade features.

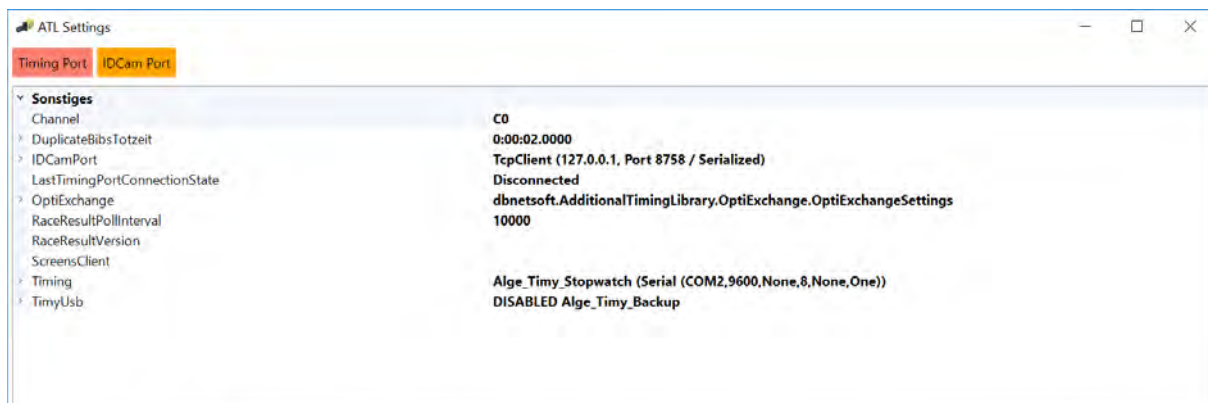
### 1.1.1 OPTIc3 – System Components

- photo finish camera OPTIc3 (without lens)
- **ALGE-TIMING** USB flash drive with OPTIc3.NET software and manual
- Power over Ethernet POE+ (power supply for camera)
- Wi-Fi USB flash drive (for wireless use of camera)
- RJ45 Ethernet cable, CAT5 cable with 10 m
- RJ45 Ethernet cable, CAT5 cable with 3 m

#### 1.1.1.1 Upgrade Features for OPTIc3

You can acquire many useful additional features for the OPTIc3. Almost all of these features are integrated in the OPTIc3-PRO.

The active upgrade features can be shown by clicking on  (third icon in the upper left corner "Atl Settings"). Now the "ATL Settings" are opened and the active extensions are shown below.



Attached USB keys or cameras:  
 20171001010140F -> None  
 00-13-95-15-9F-03 -> HiRes, LinescanRate8000, LinescanRate15000, LineDoubling, WirelessTimingNetwork, VoiceOverlip, MotionDetection, Transponder, Motorzoom, ExtremeLux, HighSpeedVideo

- O3-HiRes:** OPTIc3 upgrade for higher vertical resolution from 1360 to 2016 pixel
- O3-LS8:** OPTIc3 upgrade for scan rate from 3000 to 8000 lines per second
- O3-LS15:** OPTIc3 upgrade for scan rate from 8000 to 15000 lines per second
- O3-LD:** OPTIc3 upgrade for line doubling
- O3-EL:** OPTIc3 upgrade for light blasting (eXtremLuX)
- O3-WTN:** OPTIc3 upgrade for integrated WTN (Wireless Timing Network)
- O3-VoiP:** OPTIc3 upgrade for communication per Voice over IP with starter
- O3-MD:** OPTIc3 upgrade for motion detection (automatic recording)
- O3-MZ:** OPTIc3 upgrade for motor zoom (controlling of focus, iris and zoom)
- O3-HSV:** OPTIc3 upgrade for high-speed video (100 frames per second)
- O3-TSP:** OPTIc3 upgrade for recording and evaluation with transponder systems
- O3-2EVAL:** OPTIc3 upgrade for recording and evaluation on different PCs

### 1.1.2 OPTIc3-PRO – System Components

- photo finish camera OPTIc3 (without lens)
- **ALGE-TIMING** USB flash drive with OPTIc3.NET software and manual
- Power over Ethernet POE+ (power supply for camera)
- Wi-Fi USB flash drive (for wireless use of camera)
- RJ45 Ethernet cable, CAT5 cable with 10 m
- RJ45 Ethernet cable, CAT5 cable with 3 m
- transport case for OPTIc3 system KL-OPTIc3
- upgrade O3-LS8, O3-LS15 and O3-LD (for maximum scan rate of 30,000 fps)
- upgrade O3-HiRes (high resolution with 2016 vertical pixels)
- upgrade O3-El (eXtremLuX - various technologies to improve the picture at bad light conditions)
- upgrade O3-WTN (**ALGE-TIMING** Wireless Timing Network)
- upgrade O3-VoIP (Voice over Ethernet communication from PC with starter)
- upgrade O3-MD (motion detection - automatic recording)
- upgrade O3-HSV (high-speed 2-D recording at 100 fps with IDCam-software)

## 1.2 Requirements for PC (Desktop or Notebook)

<b>Operating System:</b>	Windows 10 or 11
<b>Processor:</b>	Intel Core i5 (similar or better)
<b>Hard Disk:</b>	minimum 256 GB hard disk (recommended SSD)
<b>Memory:</b>	minimum 4 GB RAM
<b>Monitor Resolution:</b>	minimum full HD (1920 x 1080)
<b>Interfaces:</b>	Gigabit Ethernet and/or Wi-Fi

## 1.3 Accessories

We can offer several additional, sport specific products for the all OPTIc3 models. Please contact your **ALGE-TIMING** dealer for further details.

- camera tripods, lenses, cables, gear heads etc. (see 24 Accessories for Photo Finish)
- Please refer to our website [www.alge-timing.com](http://www.alge-timing.com) for further accessories and devices in combination with OPTIc3.

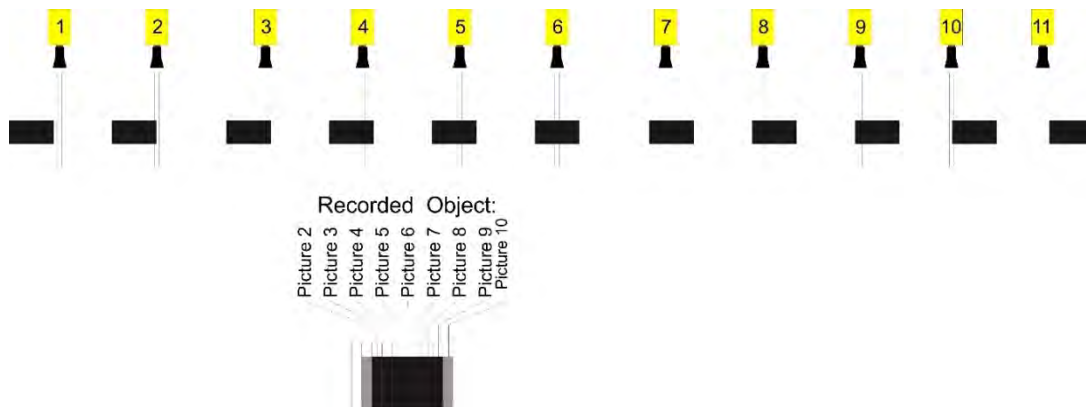
When assembling the camera, please note that the fastening screw on the underside must not be longer than 10mm, otherwise the camera will be damaged.



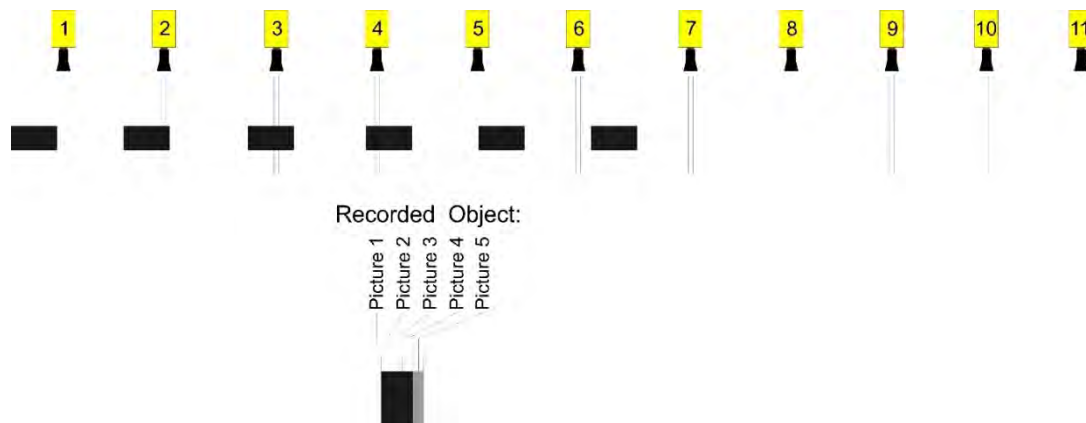
### 1.4 Function

The photo finish camera has a CMOS area scan sensor as used e.g. for photo cameras. The 2D picture is only used to adjust the finish line. In the photo finish recording mode it records one vertical line per picture. The recording speed for this vertical line is up to 3,000 fps (OPTIc3) and 15,000 fps (OPTIc3-PRO). Each line is stored on the hard disk of the PC. When an object moves over the finish line (e.g. an athlete) and you combine the recorded times, you receive a picture that includes the time in horizontal direction, i.e. each vertical line is allocated to a time.

The following example shows how a picture is recorded. If you use a scan rate of 1/1000 seconds it means that the finish line is scanned 1000 times per second. Each of these pictures records a small piece of the object. If the speed is adjusted correctly, it shows the object in the right size.



The next example shows the same object, but now crossing the finish line with a higher speed. The object is always shown in longitudinal direction according to time (depending on scan rate and speed). It is clearly visible that the object is in front of the camera for a shorter period of time and therefore less often pictured. As a result, the object appears shortened in the picture.



Part of the OPTIc3 is an electronic image processing system. The recorded picture is stored on the hard disk of the PC and can be printed at the printer connected to the PC at any time.

## 2 Layout of the Software OPTIc3NET

The layout of the software is completely adjustable. You can dock-in or dock-out windows as you want. You can store your favourite layout(s) so that it takes just a click to go back to it.

The main windows are:

- overview picture – photo finish picture in a small scale (overview)
- view 1 – e.g. evaluation picture or camera 1
- view 2 – e.g. zoom picture or camera 2
- camera preview – shows the current camera picture
- meet browser – shows the event structure (meet, session, event and heat)
- impulse log – list that shows all timing impulses in chronological order
- heat list – result list of the heat with adjustable fields

The screenshot shows the OPTIc3NET software interface with several windows and components labeled with red arrows:

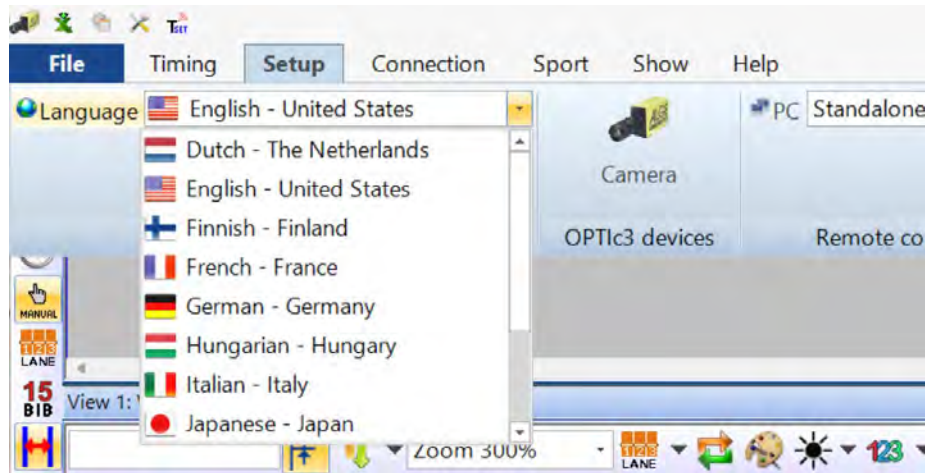
- Menu Bar:** Located at the top left, containing options like File, Timing, Connection, Sport, and Help.
- Meeting Register:** Located at the top left, showing event details like 'Lussemburg' and 'Espirits-Juniors-Masters'.
- Icon Bar:** Located at the top left, containing various icons for navigation and settings.
- Overview:** A wide horizontal strip at the top showing a photo finish of cyclists.
- View1:** A zoomed-in view of the photo finish.
- View2:** A zoomed-in view of the photo finish.
- Time Window:** A window showing a digital clock reading '2:16:36.9'.
- Impulse Log:** A window showing a list of timing impulses.
- Camera dialog:** A window on the left side with settings for camera, recording, and motor zoom.
- Footer:** Located at the bottom, showing '1/3000' and '10:36:28'.
- Timing:** A window in the center showing a photo finish of two cyclists.
- Camera Preview:** A window showing a close-up of a bicycle wheel.
- Meet Browser:** A window on the right side showing a tree view of the event structure.
- Heat List:** A window on the right side showing a table of race results.



### 3 Select Language of OPTIc3.NET Software

It is possible to select the language of the software at any time after the installation. The language can be changed during running software (no re-start necessary).

- Click on <Setup>.
- Click on the down arrow next to <Language>.
- Double click on the language you want to use.





At present, it is possible to select the following languages:

- Chinese
- Dutch
- English
- Finnish
- French
- German
- Hungarian
- Italian
- Japanese
- Norwegian
- Russian
- Spanish
- Swedish

#### Attention:

The language selection is always shown in English, so that it is also readable for everybody if e.g. Japanese is selected

If your language is not integrated in the software it is possible to translate it yourself. You can load the language files by clicking on the button  at the very top. Press now the right mouse button of the file "OPTIc3Net\_English-United-States.xls" and select <Open with> and <Excel>. It now shows the English translation file in an Excel sheet. Rename this file e.g. with the language that you translate. Translate the text in the column "text in translated language" of all the spreadsheets of this Excel file. Save the changed file. After finishing the translation, you can load this file with the button  at the very top.

If you send this translated file to **ALGE-TIMING** ([office@alge-timing.com](mailto:office@alge-timing.com)), we will integrate the new language in the standard installation so it is also available when installing the software anew after an update.

### 4 Connection of Camera(s)

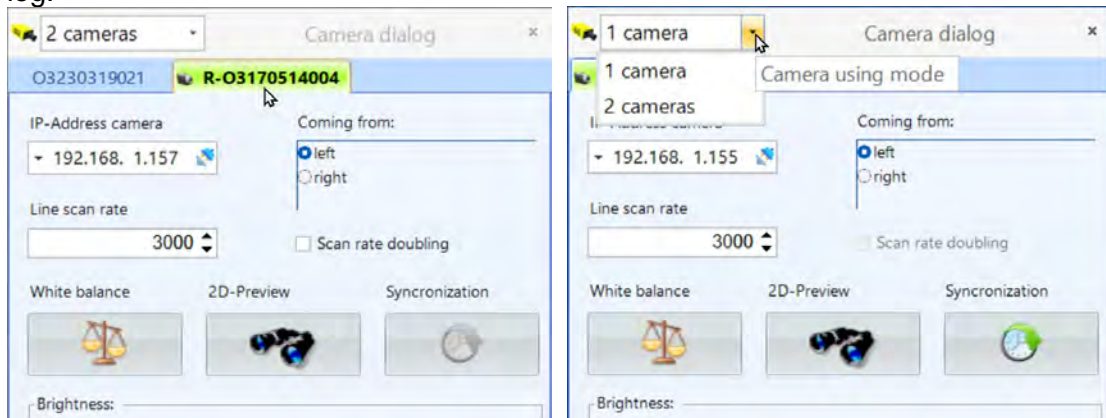
Please make sure the following three conditions are fulfilled in order to successfully connect the camera to a PC:

- setup of the camera must fit to your network configuration
- connection by Ethernet or Wi-Fi must work OK
- power supply of the camera must be OK

#### 4.1 Adjust the Amount of Used Cameras

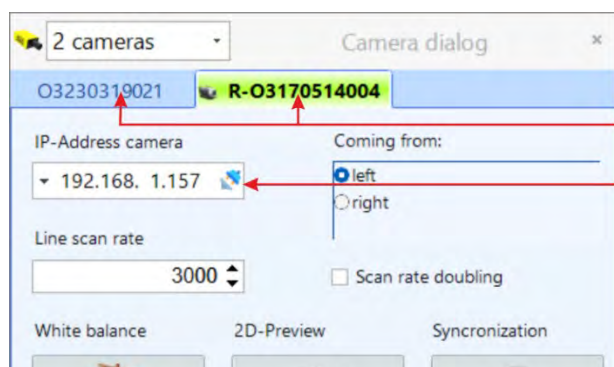
One camera is usually used for the OPTIc3. If you want to record a photo finish from both sides to finish line, then the "2 Camera" mode must be selected as described.

- Click on the camera icon to open the <Camera dialog>.
- Click in the Kamera dialog in left upper corner on <1 camera> and select to <2 cameras>. The camera name(s) are always shown in the second line of the Camera dialog.

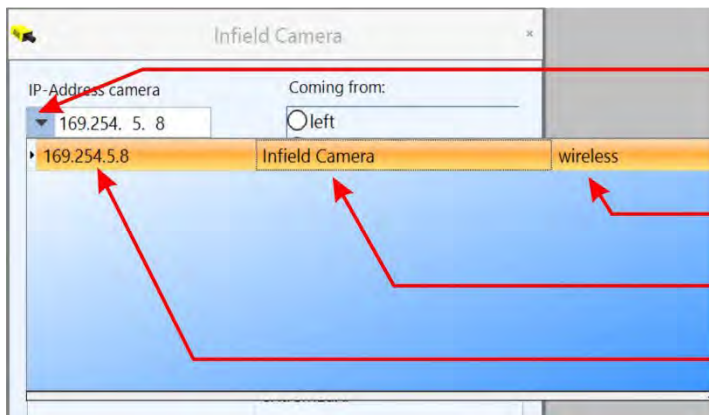


#### 4.2 Network connection

The OPTIc3 camera is connected by Ethernet or WiFi to a PC. The camera has a pre-adjusted DHCP-network setup. Make sure that the camera setup is suitable to your network setup; otherwise the camera will not be found and visible in your network. In case you have to change the network setup of the camera use the separate software "OPTIc3 IP Configurator" further described below.



camera name (standard ALGE-TIMING configuration is O3 and the serial number  
 Here you see the IP address of the camera. You can change it in a separate software called "OPTIc3 IP Configurator" that is also installed with the OPTIc3.



Click on the arrow to open the camera(s) information. It shows all cameras in the network.

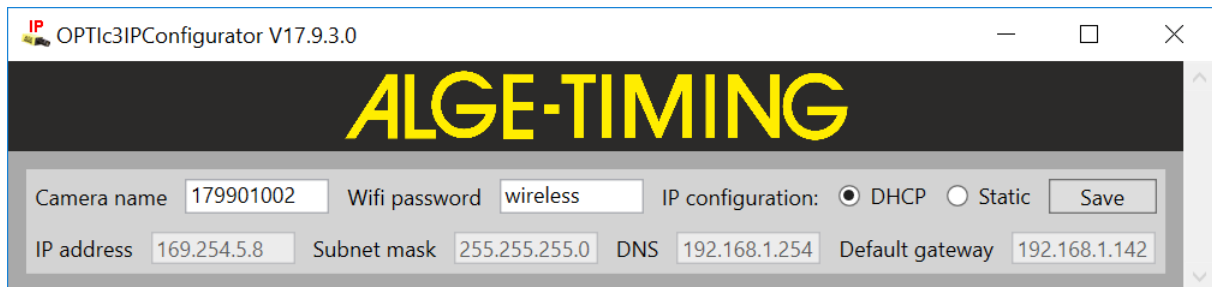
Password for wireless access (you can change it here).

Camera name (you can change it here).

IP address of the camera

## 4.2.1 OPTIc3 IP Configurator

The pre-adjusted DHCP setup for the network connection can be adapted to your requirements with separate software called „OPTIc3 IP Configurator“. This software is automatically installed on your PC with the installation of OPTIc3NET.



**Camera name:** Serial number of the camera is used as standard camera name. You can change the camera name in the “Camera settings”.

**Wi-Fi password:** The standard password for a Wi-Fi connection is “wireless”. You can change the password in the “Camera settings”.

**IP configuration:** The standard is DHCP. You can change it also to Static.

**IP adjustments:** Change IP address, subnet mask, DNS and default gateway meeting your requirements.

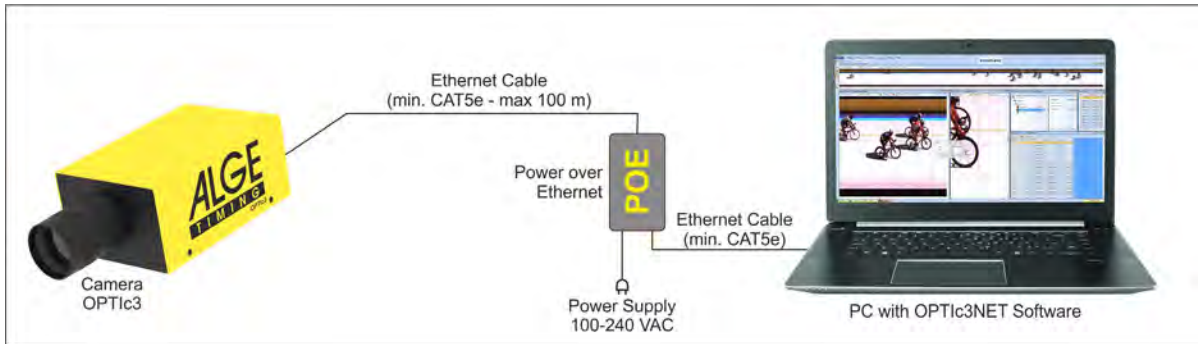
### 4.2.1.1 How do I find the IP address of the OPTIc3 camera?

If a fixed IP address is set for the camera (static) and the camera is used in a new network, the "OPTIc3 IP Configurator" will not find the camera because it may not fit the new network.

For changing the IP address, you have to connect the camera via Wi-Fi and disconnect the network cable. The "OPTIc3 IP Configurator" should now find the camera and you can change the IP address.

## 4.3 Camera connected to Ethernet with POE+ Power Supply

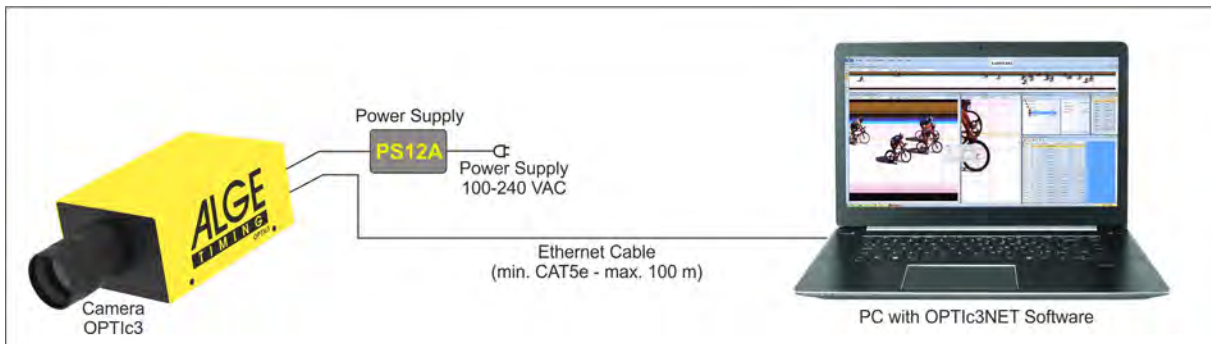
The OPTIc3 is connected by Ethernet cable with the PC. The power is supplied by POE+ (Power Over Ethernet). PC (with a short Ethernet cable (e.g. 3 m)), OPTIc3 (with a long Ethernet cable - power out) and mains (100 – 240 VAC) are connected to the POE+. The maximum cable length of the Ethernet cable is 100 m.



**Attention:** We recommend connecting the POE+ to a UPS (uninterruptible power supply).

#### 4.4 Camera connected via Ethernet with external supply

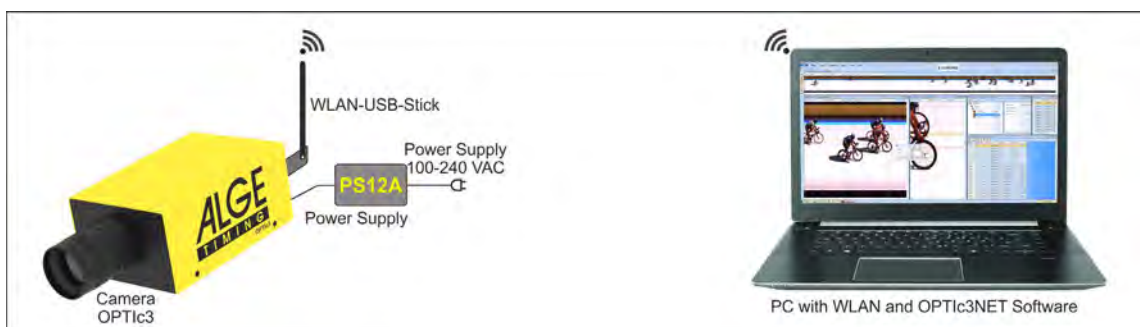
The OPTIc3 is connected with the Ethernet cable at the PC. The power is supplied from a separate power supply PS12A. Maximum cable length of the Ethernet cable is 100 m. Longer distances are possible if you have a switch between two Ethernet cables.



**Attention:** We recommend connecting the POE+ to a UPS (uninterruptible power supply).

#### 4.5 Camera communication by Wi-Fi

The OPTIc3 can communicate by Wi-Fi with the PC. This means cable between camera and PC is not necessary. In order to work with Wi-Fi, you must make sure to have a solid Wi-Fi connection. The camera needs a USB-Wi-Fi flash drive (USB-WIFI). In order to supply the camera with power you need a power supply (e.g. a PS12A).



- Start the OPTIc3 and wait until "ready" LED is green and "power" LED flashes green.
- Search for WLAN of camera on the OPTIc3-PC (In factory settings the network is called O3 plus 9-digit serial number (for example, O3179901002).).
- Log in to OPTIc3 WLAN of the camera.
- Enter password of WLAN (factory setting: **wireless**) and connect.



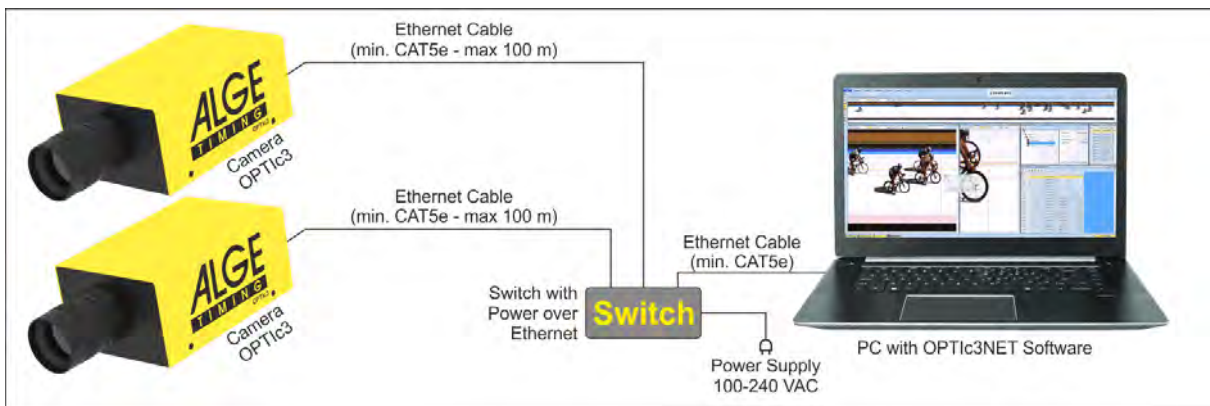
### 4.6 Connection of two or more Cameras

It is possible to connect several cameras in a network with one PC. For some sports this is necessary since they have two different finish lines (e.g. track and field indoor with 60 m track and 200 m track), horse racing (with sand and grass track), and track cycling (for sprint and pursuit).

It also possible to record two cameras at the same time (one camera on each side of the finish line).

In the OPTIc3.NET software you select the camera you want to use for recording. Each camera can be named (e.g. Cam1-Infield, Cam2-Stage). You can input and edit the camera name in the camera dialog.

**Example:** Two cameras OPTIc3 are connected with Ethernet through a Switch with integrated POE+.



### 4.7 Power Supply of the OPTIc3

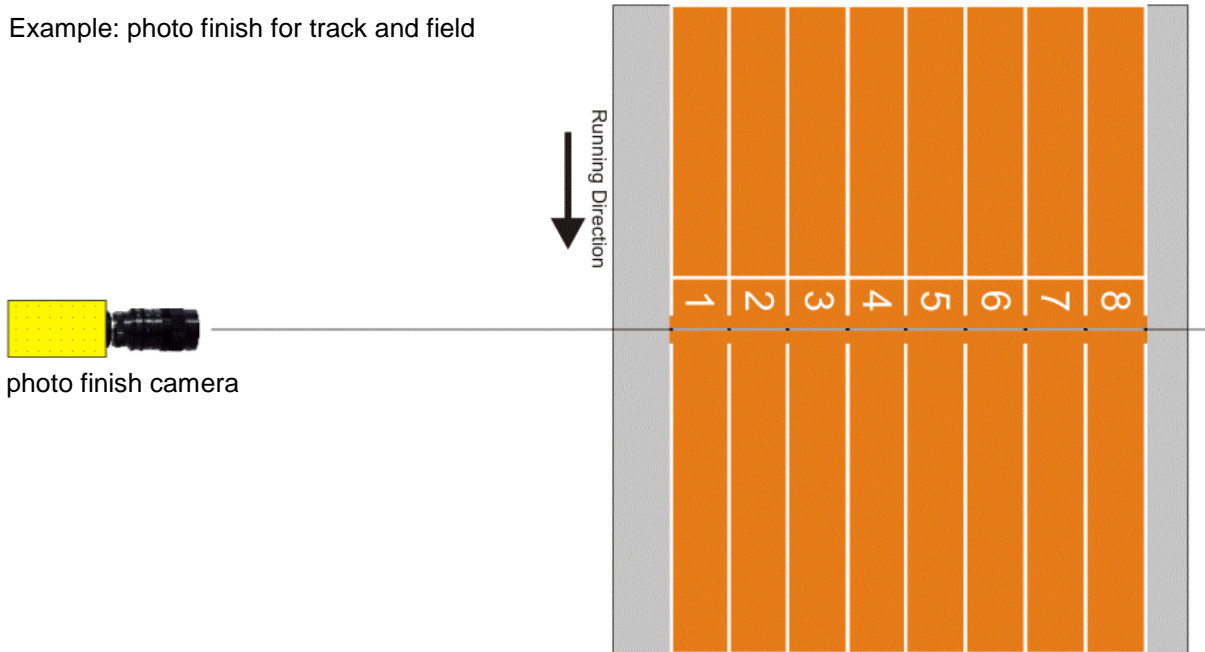
The OPTIc3 camera needs a power supply. There are two possible power supply solutions:

- power supply by using the POE+ (Power over Ethernet) adapter  
Please make sure to use the adapter supplied by **ALGE-TIMING**. Not every POE works, it needs to be POE+.
- power supply with 12 V (e.g. 12 V battery or power supply PS12A)

## 5 Camera Position

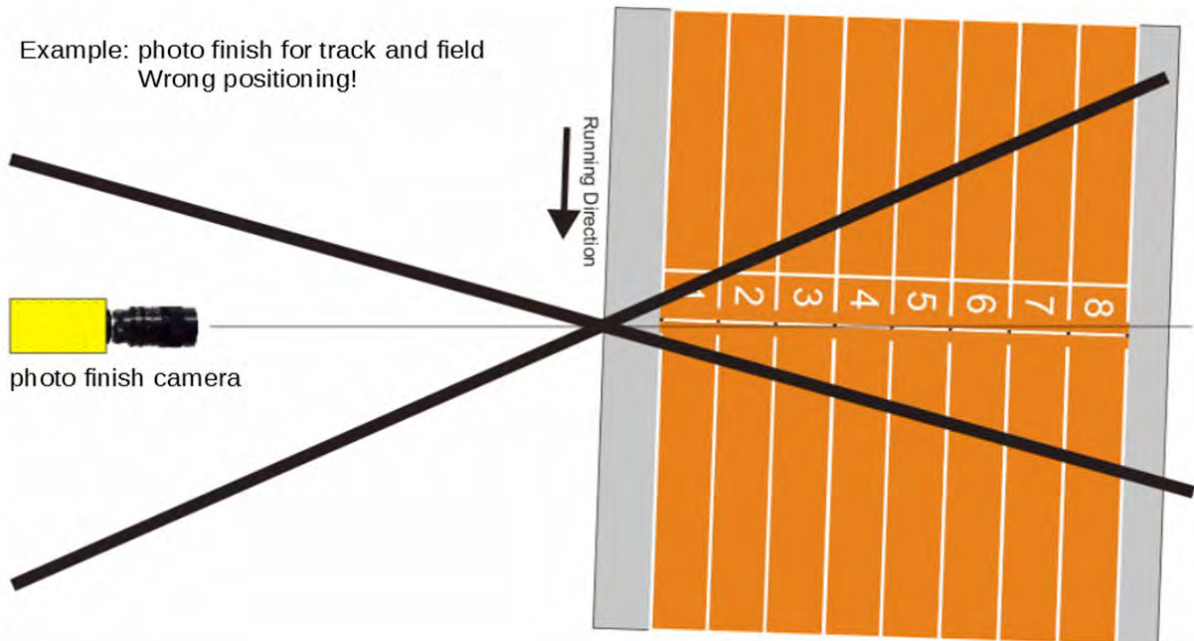
The camera of the photo finish system must be set exactly on a straight line with the finish line. Depending on the sport discipline it needs a different angle to the finish line (see 5.1 Lens Angle).

Example: photo finish for track and field



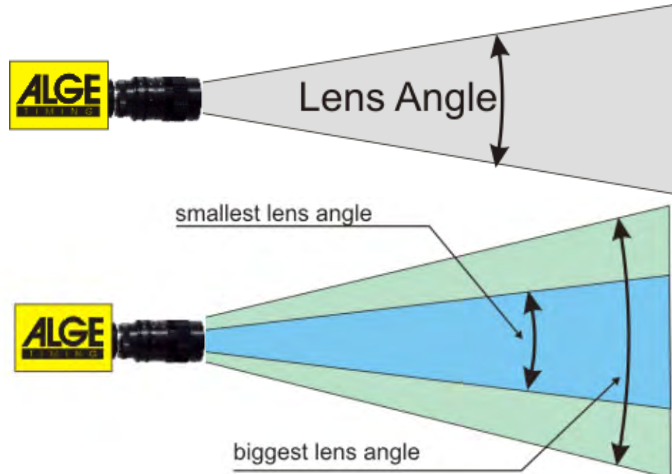
The picture above shows the camera straight to the finish line. This is the correct way to set the camera.

The picture below shows the camera not straight to the finish line. In such a way it is not possible to take correct pictures!

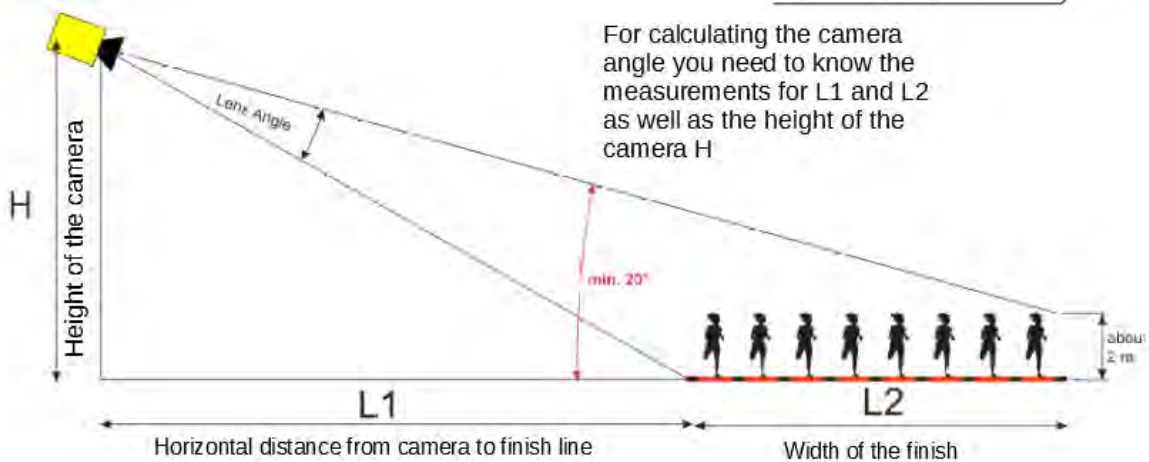


### 5.1 Lens Angle

The lens angle is the recording angle of the camera lens in vertical direction.



To select the right lens for the camera the lens angle is most important. A zoom lens has a variable lens angle, a fix lens has not.



The below table states the angles covered by the C-mount lenses available with ALGE-TIMING. Attention, the angles for the camera with 1360 vertical pixels differ from those for the camera with 2016 vertical pixels.

OPTIc3	1360 Pixel	
MZ48C	min. 8.6°	max. 47.5°
MZ75C and Z75	min. 5.7°	max. 30°
MZ160R*	min. 1,4°	max. 11,7°
L8C	about 47°	
L8.5*	about 49°	
MZ75C and Z75 with Xx2	min. 2.8°	max. 15°
MZ75C and Z75 with Xx1.5	min. 3.8°	max. 20°
OPTIc3-Pro	2016 Pixel	
MZ75C und Z75	min. 8.3°	max. 43°
MZ160R*	min. 1.9°	max. 17°
L8C	about 82°	
L8.5*	about 85°	
MZ75C und Z75 mit Xx2	min. 4.2°	max. 21°
MZ75C und Z75 mit Xx1.5	min. 5.5°	max. 31°

\* Models that are not available anymore!

When adjusting the camera, it is very important that the camera is horizontally levelled. You can use the spirit level integrated in the camera for this.



## 5.2 Focusing the Camera

An important factor for good quality photo finish images is to focus the camera. Only a good adjustment of the aperture (focus) guarantees good pictures. Additionally, it is important that you select the correct scan rate.

### 5.2.1 Adjustment of Focus (Aperture)

Adjust the aperture with the first (front) ring of the lens (for manual lenses). If you have a motorized zoom execute the adjustment from the OPTIc3.NET software on the PC (see 7.7.3 Image Adjustment with a Motor Zoom Lens).

Adjust the zoom so that you see the required finish area on the monitor. Look at the middle part of the finish line. The more details you see at this part of the picture the better is the adjustment.



### 5.2.2 Scan Rate

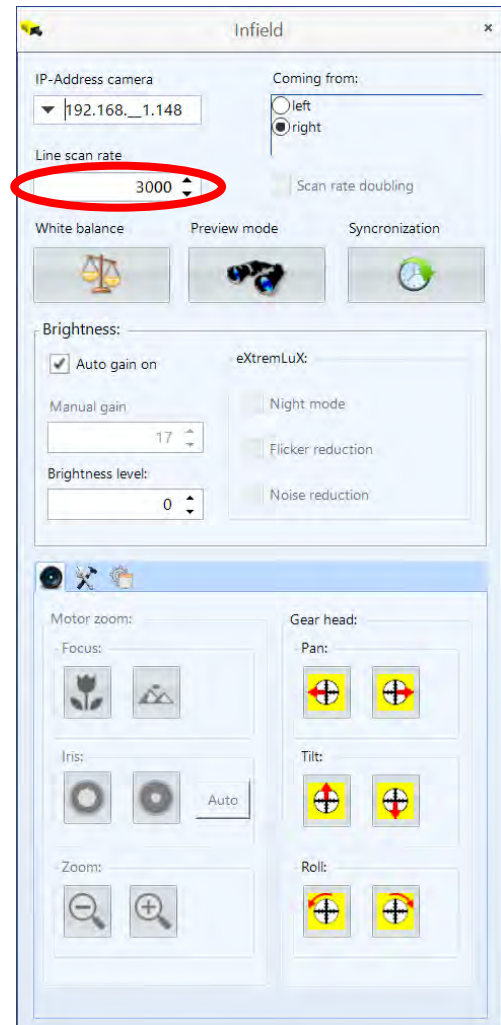
The finish line is scanned by the photo finish camera between 100 and 15,000 (30,000 with line rate doubling) fps (frames per second). The adjustable scan rate depends on the speed of the object you want to record and on the distance between camera and recorded object.

The scan rate must be adjusted differently for the OPTIc3 (vertical resolution 1360 pixel) and the OPTIc3-PRO (vertical resolution 2016 pixel).

#### OPTIc3:

As reference value for the scan rate for different sports at a full vertical camera resolution of 1360 pixel, refer to below stated table (please note that the given values may vary extremely, if one of the above given parameter does not apply, values stated in lines per second).

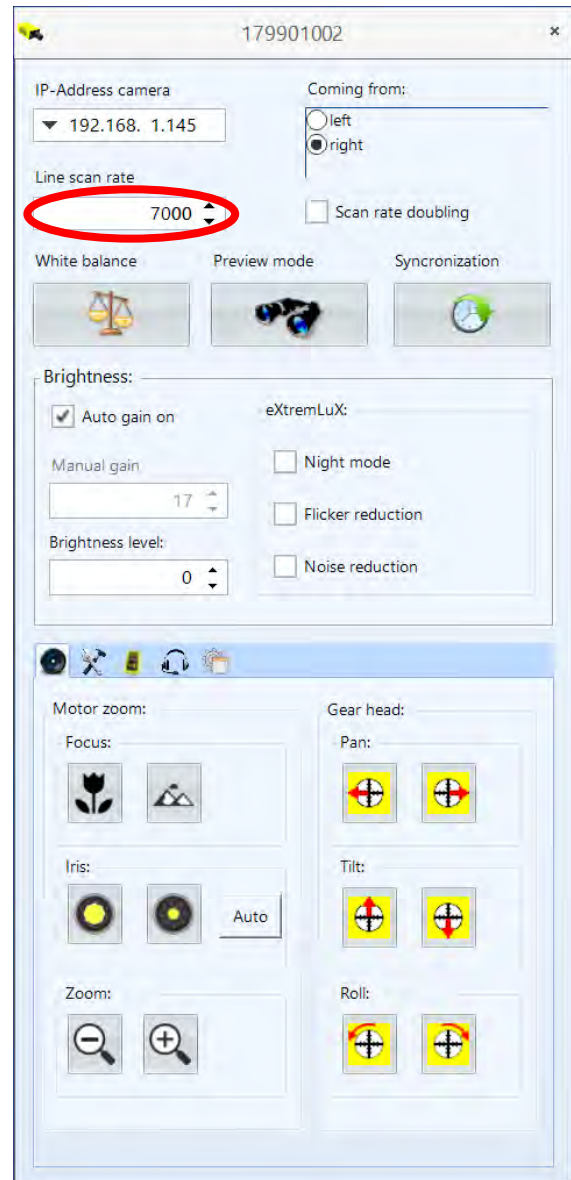
- track and field: 1200 to 1800
- horse racing – gallop: 1000 to 3000
- horse racing – trotting: 1000 to 2000
- rowing: 100 to 300
- cycling – street: 2000 to 3000
- cycling – track: 2000 to 3000
- greyhound: 1000 to 2500
- short track: 1000 to 2500
- cross country skiing: 1000 to 2500
- biathlon: 1000 to 2500
- ski cross: 2000 to 3000
- boarder cross: 2000 to 3000
- ski alpine: 2000 to 3000



### OPTIc3-PRO:

As reference value for the scan rate for different sports at a full vertical camera resolution of 2016 pixel, refer to below stated table (please note that the given values may vary extremely, if one of the above given parameter does not apply, values stated in lines per second).

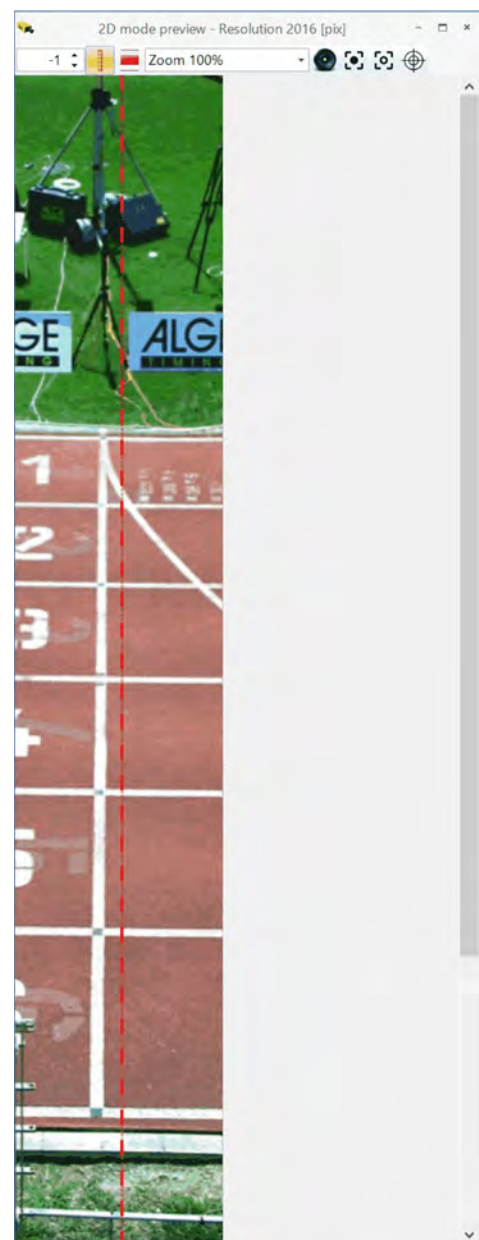
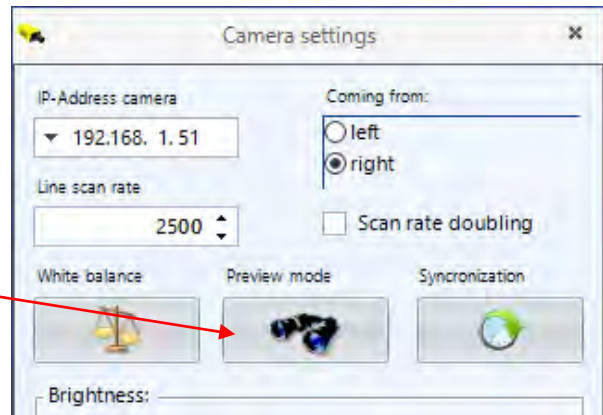
- track and field: 2200 to 3500
- horse racing – gallop: 2000 to 6000
- horse racing – trotting: 2000 to 4000
- rowing: 200 to 500
- cycling – street: 4000 to 7000
- cycling – track: 5000 to 7000
- greyhound: 2000 to 3000
- short track: 2000 to 5000
- cross country skiing: 2000 to 5000
- biathlon: 2000 to 5000
- ski cross: 4000 to 7000
- boarder cross: 4000 to 7000
- ski alpine: 4000 to 7000



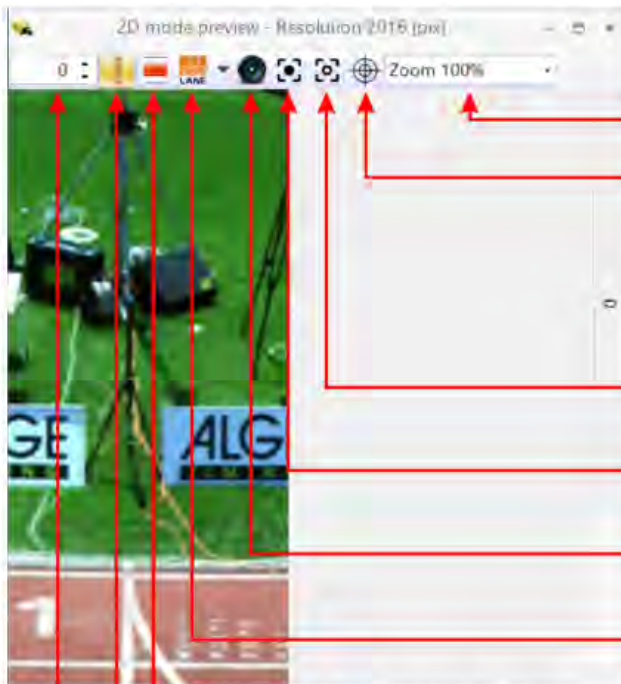
## 5.3 Camera Alignment on Finish Line

The OPTIc3 camera can be adjusted in a 2-D mode. When you switch to the 2-D mode you have a video picture that allows making adjustments like focus, zoom and brightness easy. Further, it is ideal to align the camera to the finish line.

- Click on “Preview mode”.
- You now see a picture as shown below.
- Adjust the brightness.
- Adjust the focus. If you have a motor zoom you can use the autofocus button.
- Move the camera to the section that you need for the photo finish (finish line) with your gear head.
- Adjust the zoom.
- Use the gear head to align the finish line (the red line in the picture to the left must be placed correctly to the finish line. The red line is the pixel array that you record in photo finish mode to scan the finish line.





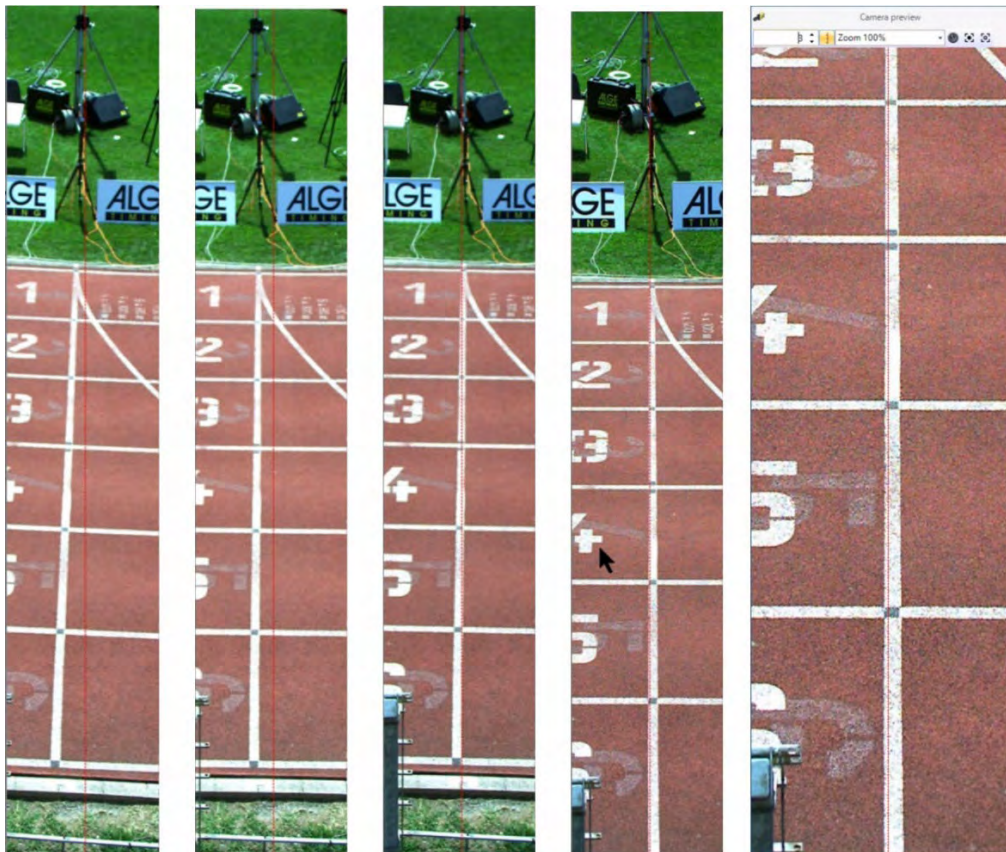


- Zoom:**  
Select a zoom factor between 50 and 400 %.
- Manual focus at mouse click position:**  
A value gives feedback on how good the picture is focussed. Click on the icon and on the area that you want to have focussed best. A box stating a value appears. Adjust the focus in such a way that this value is as high as possible. The area of the box should be clearly shaped so that the system can check the focus.
- Fast autofocus at mouse click position:**  
Autofocus on the area of the mouse click; the autofocus has to be pre-adjusted.
- Full autofocus at mouse click position:**  
Autofocus on area of the mouse click
- Full frame autofocus:**  
Autofocus on the full picture
- Lane adjustment for lane evaluation:**  
Adjust lanes as described in ch. 11.3

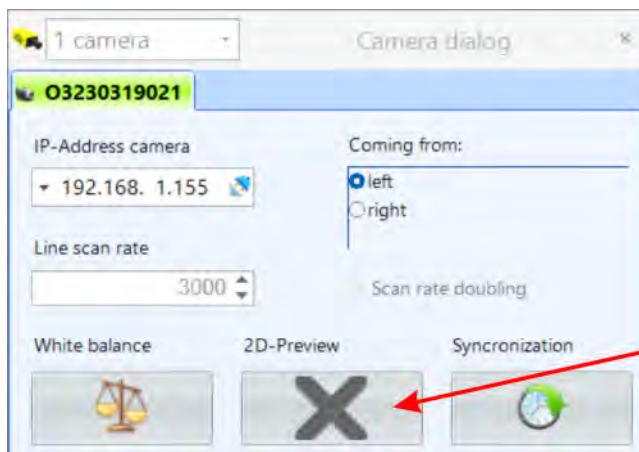
**Motion detection range lines:**  
This function is only available when the upgrade for motion detection recording O3-MD is activated. You can adjust the active field for motion detection.

**Scan line:**  
Show or hide the pixel array (line) that records the picture in scan mode (red line). This red line must be aligned to the finish line.

**Move scan line:**  
Move the scan line to the left (minus) or to the right. Zero is the middle of the picture.

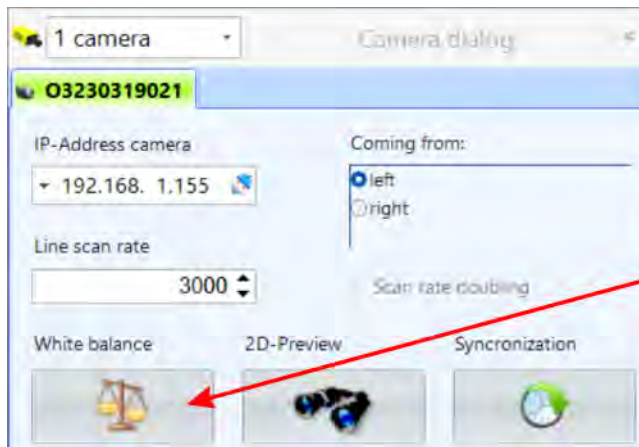


The red line on the picture above is what you want you will record. Therefore, position the red line exactly at position of the finish line that you want to record.



for exiting the 2-D adjustment click here

The <Preview mode> disappears and in <Cam preview> the scan mode preview appears. An automatic white balance is executed.



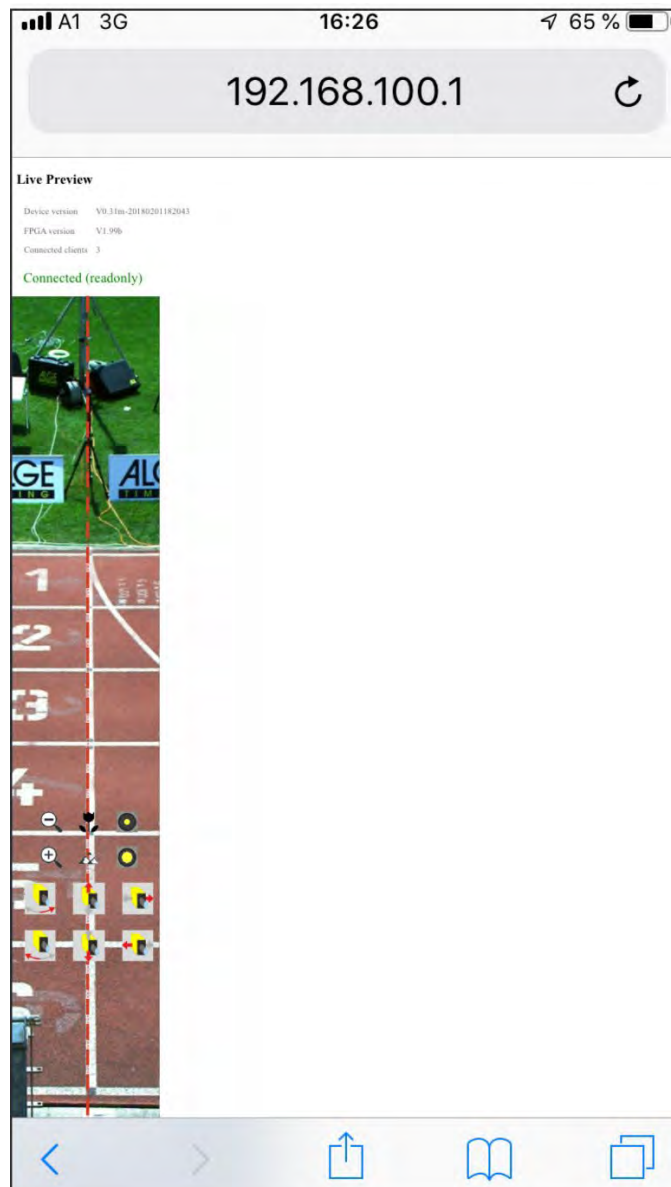
When the light conditions change during the OPTIc3 operation or when the colors in the picture do not look natural, you should adjust the white balance.

## 5.4 Camera Adjustment from a Device with Wi-Fi

It is possible to view the live camera image via a mobile phone, tablet, PC or other Wi-Fi device. To do this, the supplied Wi-Fi thumb drive must be connected to one of the two USB sockets of the OPTIc3.



- Start the OPTIc3 and wait until the "ready" LED is green and the "power" LED flashes green.
- Go in the camera settings in the OPTIc3.NET software of the PC that the OPTIc3 is connected to. Start the 2-D mode in the camera settings, so you can easily adjust the camera from the wireless device.
- Search for Wi-Fi connection of the camera in the Wi-Fi device (in the factory settings the network is called O3 plus 9-digit serial number (for example, O3179901002)).
- Log in to OPTIc3 Wi-Fi of the camera.
- Enter password of Wi-Fi (factory setting: **wireless**) and connect.
- Open the browser in the Wi-Fi device.
- The following IP address must be entered in the input box: 192.168.100.1
- The camera image is now displayed in the browser.



Example of a picture in the browser of a cell phone

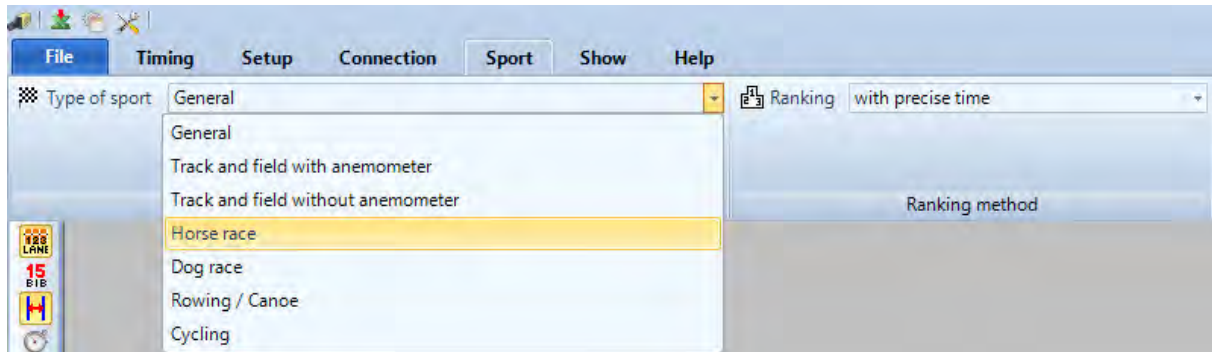


## 6 Photo Finish for Different Sports

It is possible to use the photo finish OPTIc3 for almost all sports. The software OPTIc3NET allows you to measure the start, finish and run time.

### 6.1 Selection of Type of Sport

The software OPTIc3NET has integrated the most common sports that use photo finish. If you select the sport, sport specific adjustments open or rules that are specific for this sport are included (e.g. for athletics the time calculation works differently from any other sport).



- Click on <Sport>
- Open the drop-down menu with different sports with click on the arrow at the right side of <Type of sport>
- Click on the sport that you want to use. If it does not show your sport, select <General>

#### 6.1.1 General

Use for sports that are not listed below. It is adjusted for general use (standard).

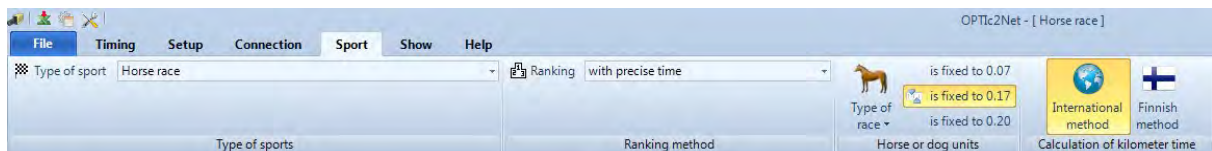
#### 6.1.2 Track and Field with Anemometer

Set this mode for track and field when using an ALGE-TIMING anemometer WS2. If you select the correct distance for each heat the wind measurement is executed automatically. When selecting track and field, it also executes the time calculation according to IAAF rules (rounding the time always up to the next 1/100<sup>th</sup>).

#### 6.1.3 Track and Field without Anemometer

Set this mode for track and field when not using an ALGE-TIMING anemometer WS2. The time calculation is carried out according to IAAF rules (always rounding up to the next 1/100<sup>th</sup>).

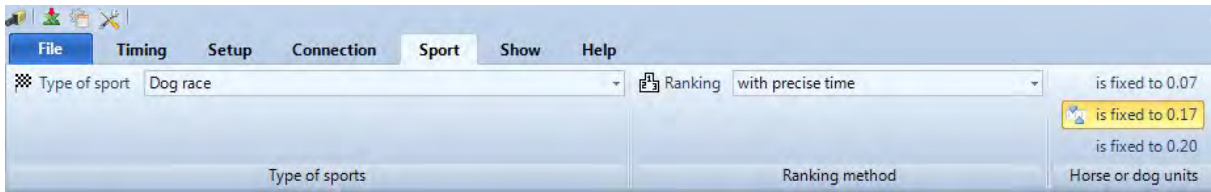
#### 6.1.4 Horse Race



You have several parameters that you can adjust to obtain the country specific results that you need. In many countries, there are different values used for the results (e.g. depending on the country a horse length is defined with 0.17 s or 0.2 s).



### 6.1.5 Dog Race



For dog races, the unit should be “is fixed to 0.07”.

### 6.1.6 Rowing / Canoe

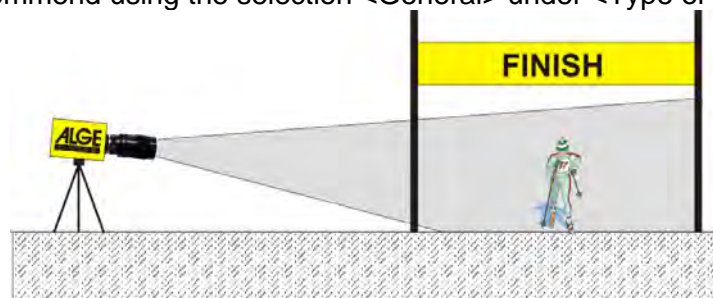
You have several parameters you can select for this sport.

### 6.1.7 Cycling

You have several parameters you can select for this sport.

## 6.2 Sports with Individual Starts

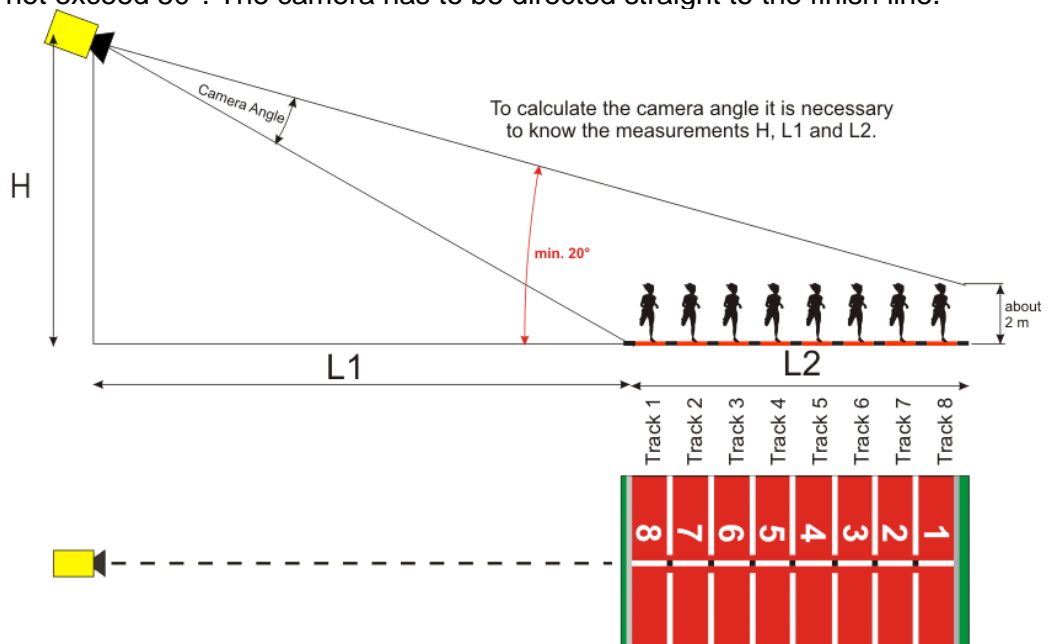
The camera can be directed straight to the finish line, as the athletes cannot be occluded by each other. We recommend using the selection <General> under <Type of sport>.



## 6.3 Track and Field (Athletics)

We recommend using <Track and field with anemometer> or <Track and field without anemometer> under <Type of sport>.

For track and field, you should have an angle of the camera to the outside lane of a minimum of 20°. If you have a smaller angle it is possible that athletes occlude each other. The maximum angle should not exceed 50°. The camera has to be directed straight to the finish line.





If you use the OPTIc3 with a **Tripod STATIV6** with a height of 3.66 m for the camera, you should use a wide-angle lens for a track with 8 lanes. Otherwise, you do not cover all 8 lanes or you are too far away and have a very flat angle with the runners not being captured completely.

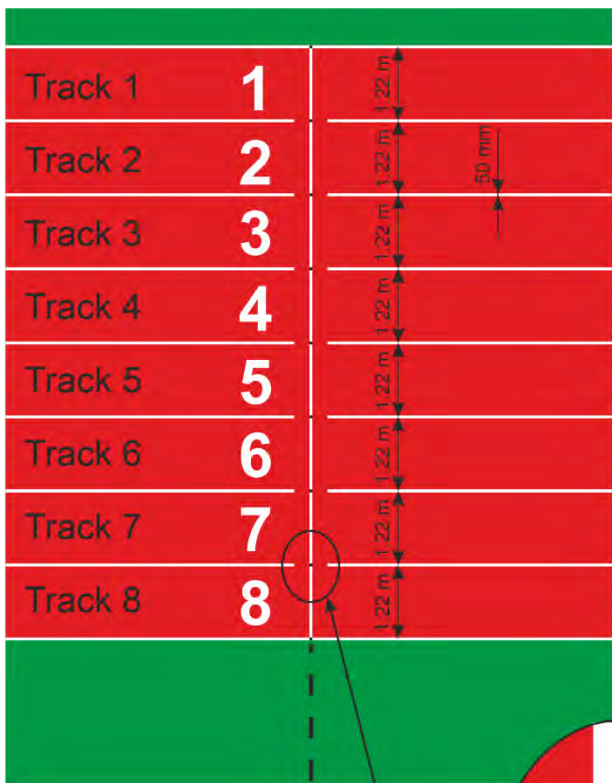
**Wide Angle Lens L8C (8 mm)**

*Stadium with 6 Tracks:*

Tripod about 1.5 m from the nearest track

*Stadium with 8 Tracks:*

Tripod about 1.7 m from the nearest track

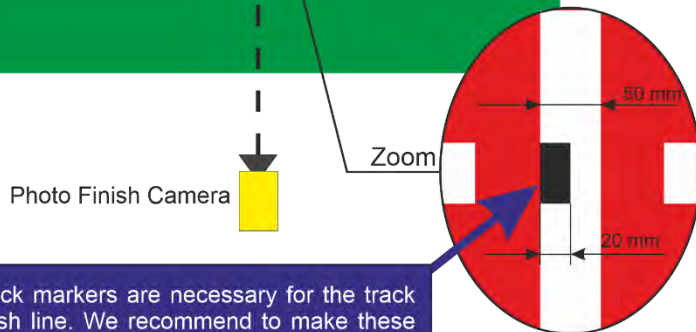


**Finish Line of Athletics Track**

The finish line must be painted in white on the track. At the point where the track markings cross each other on the finish line you must have a black marker (see drawing). This marker is necessary so that the monitor shows the lanes white and the lane markers black (if picture set on black and white mode)

If the track and markers are shown inversely on the photo finish picture, the camera was not aligned correct to the finish line.

You have to make the exact adjustment using the 2D-option of the camera. Afterward you must check the adjustment in the preview of the photo finish picture.



Black markers are necessary for the track finish line. We recommend to make these over a fregment of the finish line (20 mm - at the beginning of the line seen from the running direction). This helps adjusting the photo finish camera more precisely to the finish line.

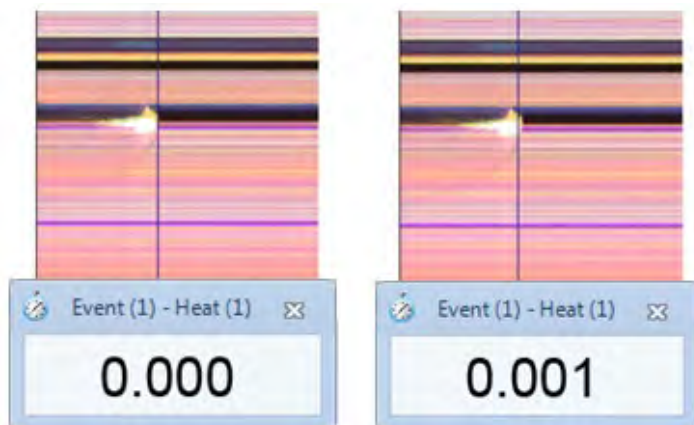
### 6.3.1 Zero Control for Track and Field (Start Control)

You can record the flame of the start gun fired on the start line (or flash of the e-Start). With this test, the referee can check the synchronization between time and picture recording. This mode also records the start sequence.

- Load the prepared "Heat" in the "Timing" container by double click in the meet browser.
- Click on the button <Activate test start on C1>
- Now the next start will be recorded
- Click on <Timing> and select the precision on 1/1000<sup>th</sup> or 1/10000<sup>th</sup>
- Prepare the start gun or e-Start as for a normal race at the finish line
- Lay the start gun or e-Start on the finish line and put something dark (e.g. black paper) under the start gun or e-Start (where the smoke comes out of the barrel or the e-Start flashes to get a better contrast)
- Fire start gun or e-Start
- The start shot or flash is automatically recorded and shown in the picture on the screen.

At the start of the flame in the picture the time must show 0.000.

If you move the time cursor inside the flame you must see that the time increases (e.g. 0.001

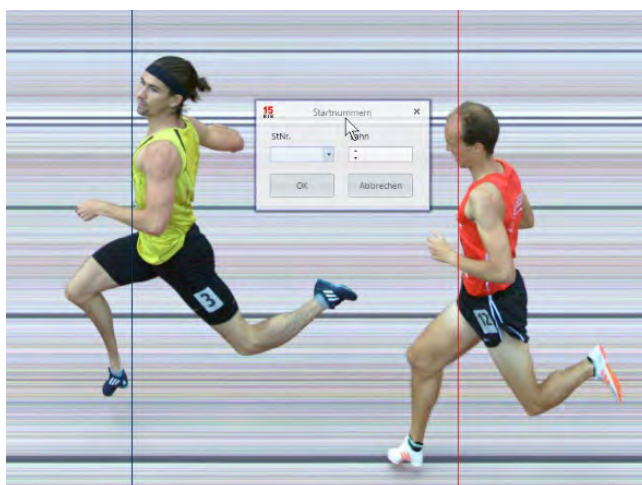


Changing between black and white and coloured picture with

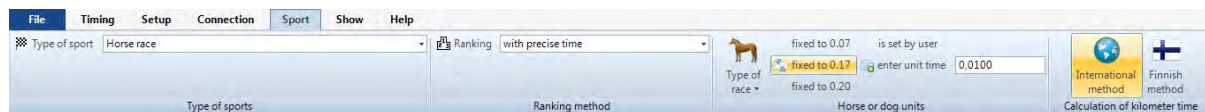
### 6.3.2 Evaluation for Track and Field

If you select track and field the group function is not available. If you receive results with BIB-evaluation , it is possible to input the bib or the lane number.

This function is helpful for long-distance races and if the athletes have the track number on their sides. In most cases the bib number is not readable, but the track number on the side is.



## 6.4 Horse Races



It is essential to select <Horse Race> under <Type of sport>. Please read the description for track and field. For horse races, no painted finish line exists, but there might be a mirror that should be focused on.

As the picture of a photo finish camera always shows the same pixels, focusing without finish line is difficult. We recommend the following trick:

- Set the camera using the sight in front of the finish line
- Activate the race mode and record
- Move the camera slowly in running direction over the finish line (e.g. move the gear head with constant speed in horizontal direction)
- A normal (deformed) picture of the finish area is originated
- Print that part of the picture that shows the finish line
- End the race and start the test mode
- Move the camera until the pixels show a similar pattern as in the area of the finish line in the printed picture.
- If a mirror is installed, test if the mirror is also captured by the camera when someone moves across the finish line.

For horse races, it is possible to adjust different sport specific adjustments for the evaluation (e.g. horse units or kilometre time).

## 6.5 Dog Races

We recommend selecting <Dog Race> under <Type of sport>. Please read the description for track and field. For dog races, no painted finish line exists. Read the above section of horse races and adjust the camera as described.

## 6.6 Rowing or Canoe

We recommend selecting <Rowing / Canoe> under <Type of sport>. Please follow the instructions for track and field and horse racing. For rowing and canoeing you have no finish line and the buoys are often not fixed exactly on the finish line. If possible, have the buoys adjusted so they are exactly on the finish line. This facilitates adjustment and evaluation a lot (lane identification).

Usually, a finish line is situated on the opposite shore on which the photo finish camera is focused. If the camera is aligned with this line it can be swivelled vertically until all lanes are displayed.

## 6.7 Cycling Races

We recommend selecting <Cycling> under <Type of sport>. Please read the instruction of track and field and horse races.

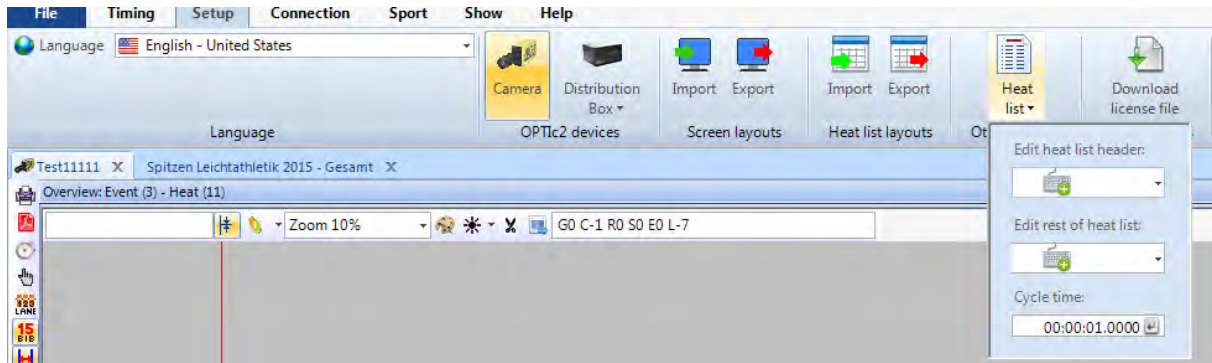
The time in result lists for street cycling has to be shown in a special. The cyclists are listed in a group with a group time but ranked according to arrival order. The OPTIc3.NET software allows doing this automatically.

When you evaluate each rider, the run times are written in the column "Run Times". If you activate the column <Time (Cycle)> another column appears with the times that are important for cycling (including group times). You can input the gap for the group time by clicking on the menu <Setup>, then <Heat list setting> and then input the gap for the <Cycle Time>. With this gap, you set the time difference for the group. A rider that has more delay to the previous



finisher than the gap in this field receives a new time, if he is within this gap time he is listed in the same group of riders.

The factory setup for the Cycle Time (gap) is 1 second.



Example of a printed result list for cycling:

## Results list

### Cycling Festival Balau Women Elite

Date: 29.08.2014  
Start time: 12:54:55

Location:	Balau Stadtplatz	Distance:	245000
Organizer:	RC Balau	Actual start time:	13:37:50
Session name:	Road Race		
Number:	0.1.1		

Rank	Sl.Nr.	Name	Nation	Zeit	Geschw.	Disq.
1	285	COHEN Susan	GBR	31:36.4483	37,97 [km/h]	
2	289	BELL Tracy	GBR	---	37,96 [km/h]	
3	282	JOHNSON Kimberly	USA	---	37,96 [km/h]	
4	288	MÜLLER Renate	GER	---	37,95 [km/h]	
5	292	LAKES Anne	GBR	---	37,94 [km/h]	
6	287	MILLER Catherine	GBR	---	37,94 [km/h]	
7	284	ANDERSON Marion	NOR	---	37,94 [km/h]	
8	290	HRUBESCH Christine	GER	---	37,93 [km/h]	
9	283	KÖNIG Brigitte	GER	2.9627	37,91 [km/h]	
10	316	FRANZ Maria	GER	5:49.3730	32,06 [km/h]	
11	319	SCHLEPPER Elizabeth	AUS	---	32,06 [km/h]	
12	313	LAHM Doris	GER	---	32,05 [km/h]	
13	314	DICKENSON Tracy	USA	---	32,05 [km/h]	
14	360	PROIST Gisel	FRA	---	32,05 [km/h]	
15	364	MOSEER Erika	AUT	---	32,05 [km/h]	
16	371	VAN BYTON Sarah	BEL	---	32,05 [km/h]	
17	365	PIDGEON Frederica	AUS	---	32,05 [km/h]	
18	374	CATTANEO Francesca	ITA	---	32,05 [km/h]	
19	367	HÖLLER Julia	AUT	---	32,04 [km/h]	
20	373	TOZZI Roberta	ITA	---	32,04 [km/h]	
21	359	LIZARAZU Fabienne	FRA	---	32,04 [km/h]	
22	361	LATO Nathalia	POL	---	32,04 [km/h]	
23	372	RAMON Blanca	ESP	---	32,04 [km/h]	
24	356	BALLE Aendera	BEL	6:01.3197	31,89 [km/h]	
25	281	BELMONDO Jutta	BEL	---	31,89 [km/h]	
26	312	VAN BASTEN Andrea	NED	---	31,89 [km/h]	
27	362	VÖLLER Henriette	GER	---	31,88 [km/h]	
28	291	FLAVRE Martine	FRA	9:49.0547	28,97 [km/h]	
29	311	JASON Maria	GER	10:29.2455	28,51 [km/h]	
30	361	HEINRICH Brunhilde	GER	18:37.8894	24,88 [km/h]	
31	370	MIGRET Paula	FRA	---	24,87 [km/h]	
	369	COLIN Susan	RSA			DNF
	198	SAVAGE Paula	CAN			DISQ
	205	SZABO Susanna	POL			DNF
	0	LAST NAME First name	Nation			
	363	DELGADO Anne	ESP			DNS
	353	MACNEELY Patricia	IRL			DNF

Cominique: #176 and #198 disqualified because of rule 282

Timing: ALGE-TIMING OPTIc2  
Data: ALGE-TIMING OPTIc2.NET  
2014-12-06 / 11:07  
Page 1 / 1

Otherwise please follow the instructions for track and field and horse racing.

## 7 Camera Settings

### 7.1 Setting the Camera

#### A Camera Name(s):

You can give or change the name of the camera. Factory setting is camera serial number.

#### B IP-Address of camera:

The camera has an IP-address. In factory setting the IP-address is assigned automatically.

#### C Coming from:

In order to have a correct horizontal picture direction you need to adjust the direction from which the competitors pass the camera (seen from the camera).

#### D Scan rate:

The photo finish scans the finish line. Set how many lines per second you want scanned (settings between 100 and 30,000 fps, depending on model).

#### E Scan rate doubling (OPTIc3-PRO):

If you activate this feature the scan rate doubles by interpolating a line between two actual lines. This feature helps using the camera at bad light conditions.

#### F White balance:

For correct colors the white balance has to be executed. It works best if you have a white background.

#### G 2-D-Preview:

With activated 2-D-preview mode a two-dimensional picture is shown. This mode is used to adjust the camera.

#### H Synchronization:

This function allows you to adjust the time of day of the camera. It is possible to synchronize the camera with other timing devices.

#### I Auto gain on:

This function automatically adjusts the brightness. The brightness adjustments are executed with the iris when using a motor zoom, and digitally with a manual lens.

#### J Brightness:

If you do not use the <Auto gain> you can adjust the brightness digitally here.

#### K Brightness level:

Adjust the picture brightness that it fits your use (adjustment level from -10 to +10).

#### L eXtremLuX (OPTIc3-PRO):

This function is used at bad light conditions to increase the picture quality.

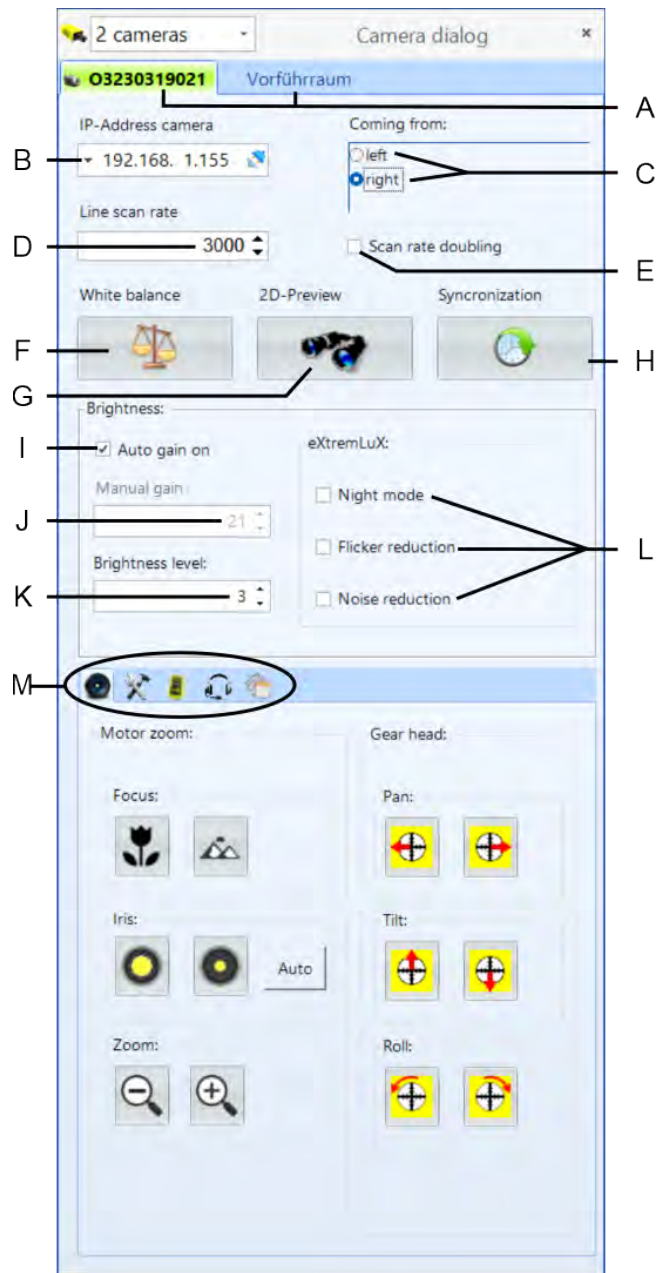
*Night mode:* increases the brightness by picture processing in the camera (picture quality slightly decreases)

*Flicker reduction:* filters the dark and bright vertical stripes of artificial light (alternating current light)

*Noise reduction:* filters the noise in a picture at bad light conditions

#### M Camera Menu (some functions are only available for OPTIc3-PRO):

In this menu you can carry out various camera adjustments (see below).



### 7.2 Remote Control Camera Adjustment

If you have an ALGE-TIMING motor zoom and/or electronic gear head you can execute all camera adjustments directly from your OPTIc3.NET software on the PC.

Please note that the adjustment of each function works very slowly (smooth adjustment) at the beginning and speeds up the longer you click on the button.

#### Motor zoom MZ75C or MZ160R:

The adjustment with motor zoom only works with an ALGE-TIMING motor zoom. Identical third-party motor zooms need a purchasable software update from ALGE-TIMING.

**a Focus:**

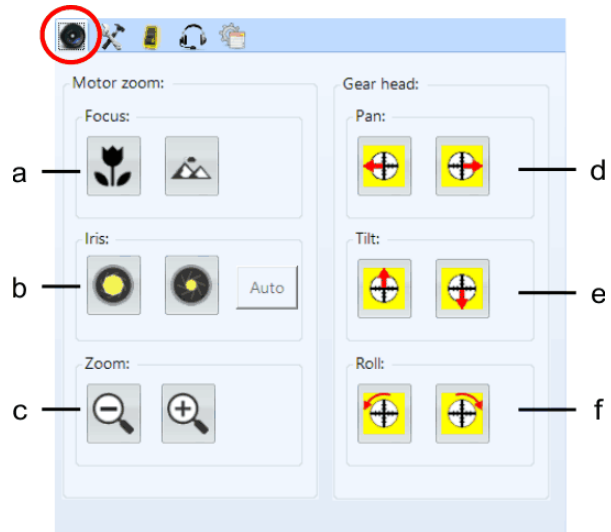
- <near>: best focus for objects near to the camera
- <far>: best focus for objects far from the camera

**b Iris:**

- <bright>: opens the iris to brighten up the picture
- <dark>: closes the iris to darken the picture
- <Auto>: If <Auto> is activated, it automatically adjusts the iris, when <Auto gain on> is activated.

**c Zoom:**

- <small>: zoom out of the picture (wide angle)
- <large>: zoom into the picture to enlarge objects



#### Electronic Gear Head 410-E3:

The electronic gear head is advantageous if the camera is far away from the PC or very difficult to reach (e.g. fixed under the roof). Please note that the motor of the gear head always starts very slowly. The longer you keep the button pressed the faster the motor moves.

**d Pan:**

- <left>: camera moves to the left
- <right>: camera moves to the right

**e Tilt:**

- <up>: camera moves up
- <down>: camera moves down

**f Roll:**

- <left>: camera rolls to the left
- <right>: camera rolls to the right



### 7.3 Recording and Picture Adjustments

For the best recording and picture results you can execute the following adjustments:

**g Recording lines:**

It is possible to adjust the recorded lines before and after triggering when using a photocell. This adjustment is very important for many sports in order to obtain a picture of the whole competitor. You can adjust the recording lines before and after between 0 and 2000 pixel.

Recording lines <before> recommendation for most sports: 140 pixels

Recording lines <after> recommendation for most sports: 100 pixels

**h Other settings:**

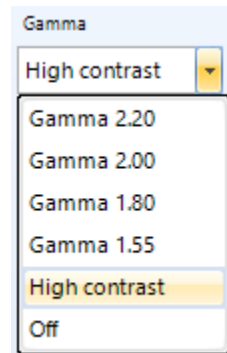
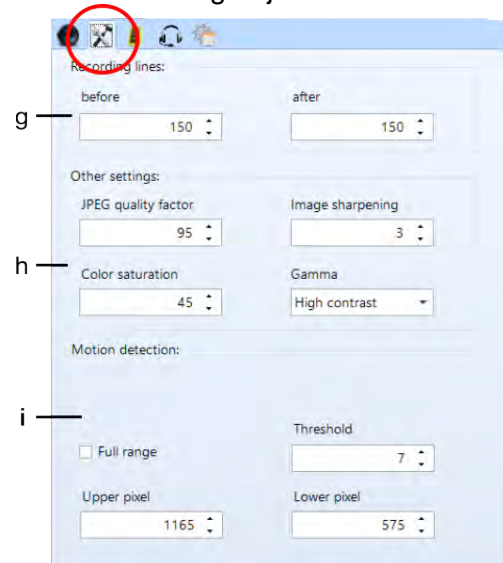
You can set parameters that influence the picture quality.

<JPEG quality factor>: Set the compression ratio of the picture. With 85 % you obtain very good picture quality. The lower the compression, the lesser storage is needed and the lower the picture quality.

<Color saturation>: Adjust the colour intensity so that the colours look natural.

<Image sharpening>: You can sharpen the image. Factor '3' usually gets the best results. Depending on the situation another value might be better.

<Gamma>: In case of difficult light conditions (e.g. sun shining directly into the camera), adjusting gamma can improve the picture quality. Adjustments as shown in the picture to the left are possible. In difficult situations the setting "High contrast" obtains best results.



**i Motion detection (OPTIc3-PRO):**

With the motion detection you can automatically record images. The recording is started by pixel changes. For the best possible recording result, you can set the sensitivity (threshold) and the pixel range.

*Threshold (sensitivity):* Adjustable from 0 to 15

The higher the value, the less sensitive the motion detection reacts. Normally with 7 you have a setting that is ideal for most weather- and light conditions.

*Pixel Range:*

Often you do not want to use the lower or upper pixels, since in this part of the picture often unwanted movements are detected (e.g. spectators or flags that move). The counting of pixels of the camera sensor starts with pixel 1 at the bottom and ends with pixel 2016 (OPTIc3-PRO) or 1360 (OPTIc3) at the top.

**OPTIc3-PRO:**

<Full range> (1 – 2016): all pixels are used for motion detection

<Upper pixel> (<2016): enter top pixel for motion detection

<Lower pixel (>1): enter bottom pixel motion detection

**OPTIc3 with Motion Detection (option):**

<Full range> (1 – 1360): all pixels are used for motion detection

<Upper pixel> (<1360): enter top pixel for motion detection

<Lower pixel (>1): enter bottom pixel for motion detection

**7.4 WTN Radio Adjustments**  (OPTIc3-PRO)

The OPTIc3-PRO camera has a built in WTN radio system. WTN is a wireless timing network created by ALGE-TIMING with which you can receive start or finish impulses or control display boards. More information about the WTN functions are described in the WTN manual.

**k..... WTN on:**

Activate WTN to use the integrated radio system.

**k1.... Team:**

All team member must have set the same team.

**k2.... Power**

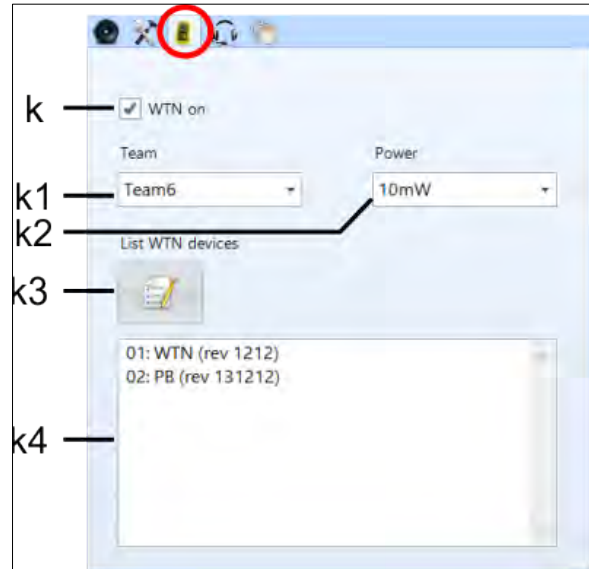
The radio power can be adjusted between 10 and 100 mW. In the EU only 10 mW are allowed. Please check if you are allowed to use higher power in your country before using it.

**k3.... New WTN List:**

Renews the list of WTN devices that are connected to the OPTIc3.

**k4.... WTN-Device List:**

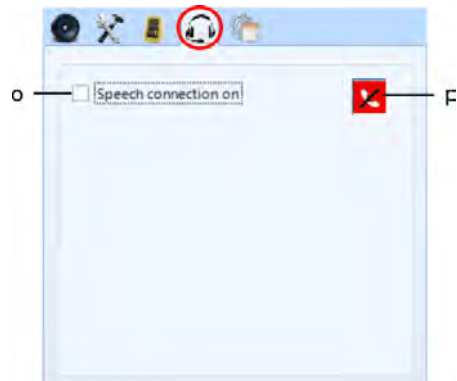
Shows all WTN devices connected in the adjusted TEAM to the OPTIc3.



**7.5 Voice Communication - VoIP**  (OPTIc3-PRO)

You can use the PC for communication with the starter or other timing assistants. Connect the speech amplifier SV4-S or Start Unit SU3 and headset HS3-2 with the starting line. You can then use a VoIP connection to communicate with the PC user. For this, you either use PC loudspeaker and microphone or a connected headset.

- o Phone on:** activate for VoIP communication
- p Adjustments:** If you click on this button further settings appear. If you have a VoIP connection the button turns green.



- q Call mode:** connect or test
- r Make call:** start speech connection
- s End call:** stop speech connection
- t Status message:** communication information

## 7.6 Picture Quality Adjustments

These are advanced adjustments to improve the picture quality of the photo finish.

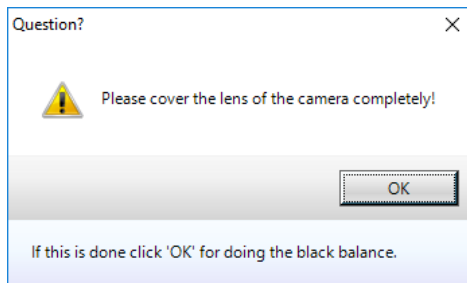
### u Black Reference:

Normally you do not have to execute a "Black reference". In case your picture shows black background stripes, the <Black reference> has to be carried out.

Click on the button black reference



The following window appears:



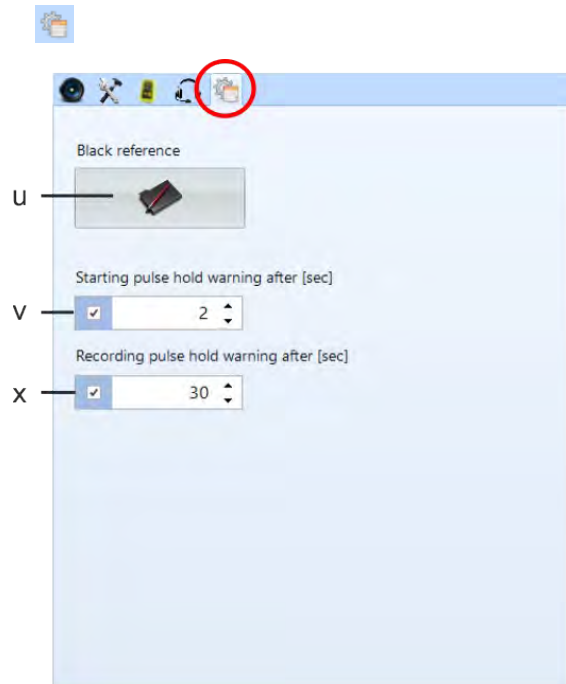
Now put the lens cover on the lens so that the camera sees 100 % black and click on <OK>. The black level is now new adjusted.

### v Starting Pulse Hold Warning:

You can adjust how long a start impulse might take, before a warning appears.  
Factory adjustment: 2 s

### w Recording Pulse Hold Warning:


You can adjust how long a continuous recording might take, before a warning appears.  
Factory adjustment: 30 s



### 7.7 Image Adjustment

The camera is a line scan camera, which means it takes pictures by scanning the finish line not by taking a normal complete picture. But this camera also has a 2-D mode for easy adjustment of the camera.

#### 7.7.1 2-D Preview

In the camera settings, you change with the button  to the 2-D preview mode. The 2-D picture opens in its own window and thus allows easy adjusting.



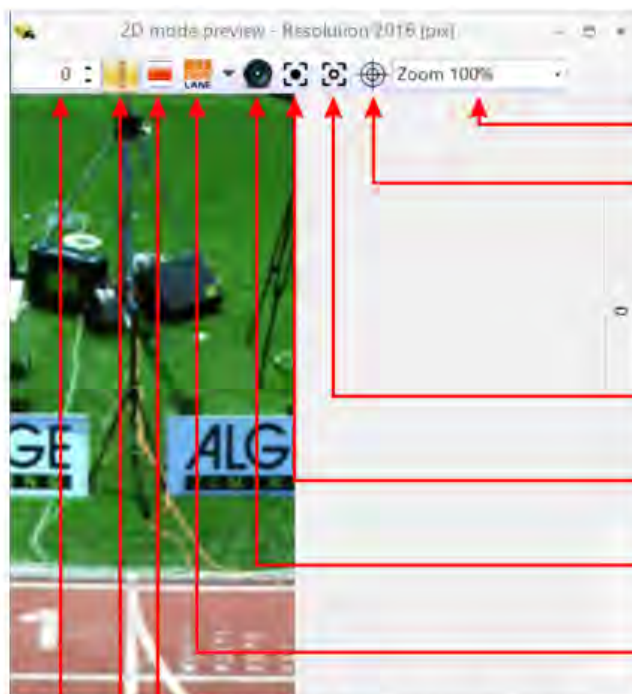
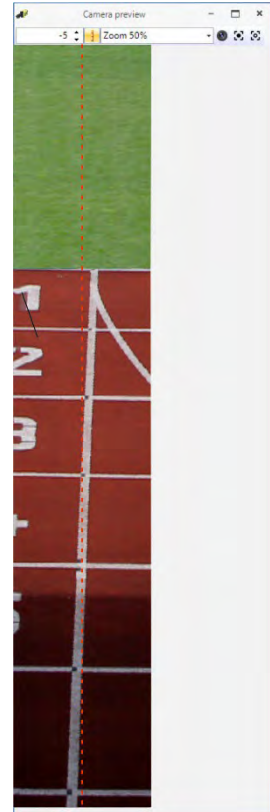
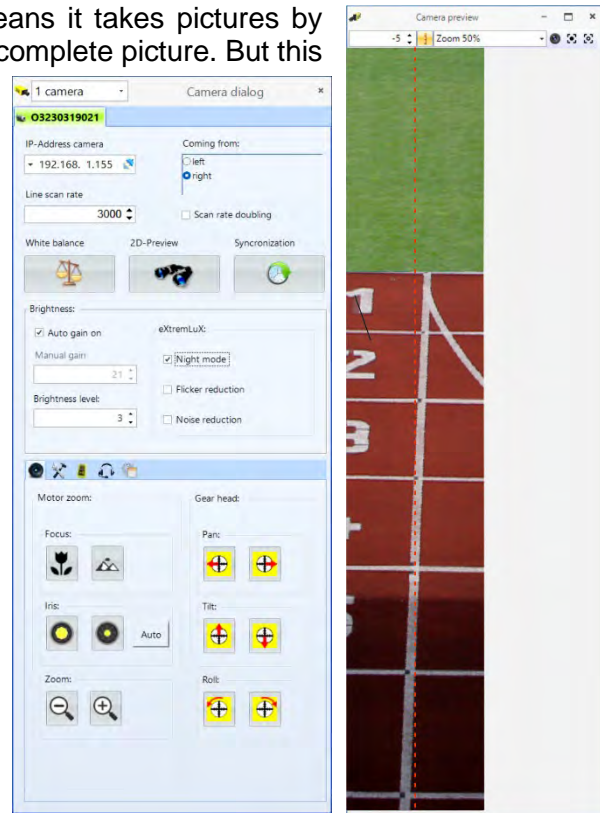
start 2-D preview



close 2-D preview

#### Settings in preview mode:

The OPTIc3 can be adjusted very comfortable and easily. The most comfortable and easiest is using a motor zoom and motor gearhead. You can execute all settings directly at the PC. Some of the below functions are only possible with a motor zoom (e.g. autofocus).



#### Zoom:

Select a zoom factor between 50 and 400 %.

#### Manual focus at mouse click position:

A value gives feedback on how good the picture is focussed. Click on the icon and on the area that you want to have focussed best. A box stating a value appears. Adjust the focus in such a way that this value is as high as possible. The area of the box should be clearly shaped so that the system can check the focus.

#### Fast autofocus at mouse click position:

Autofocus on the area of the mouse click; the autofocus has to be pre-adjusted.

#### Full autofocus at mouse click position:

Autofocus on area of the mouse click

#### Full frame autofocus:

Autofocus on the full picture

#### Lane adjustment for lane evaluation:

Adjust lanes as described in ch. 11.3

#### Motion detection range lines:

This function is only available when the upgrade for motion detection recording O3-MD is activated. You can adjust the active field for motion detection.

#### Scan line:

Show or hide the pixel array (line) that records the picture in scan mode (red line). This red line must be aligned to the finish line.

#### Move scan line:

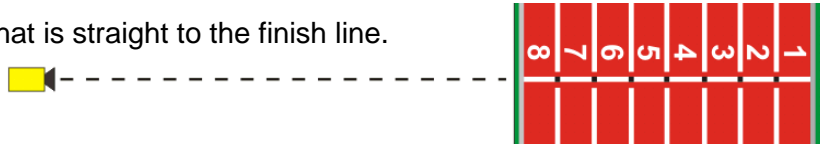
Move the scan line to the left (minus) or to the right. Zero is the middle of the picture.



### 7.7.1.1 Aligning the Scan Line to the Finish Line

The pixel array used for the scan line function of the OPTIc3 must be aligned to the finish line. This setting also must be executed in the 2-D preview.

- Adjust the camera that is straight to the finish line.



- Use the gear head to adjust the camera that the spirit level on the backside of the camera is levelled.



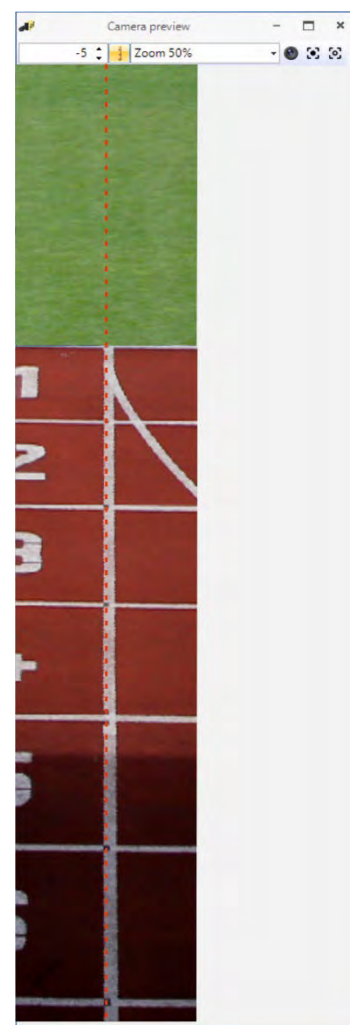
The spirit level must be positioned exactly between both markers.



Picture before levelling the camera using the spirit level








Picture after levelling the camera vertically. Use the line shifting or gearhead to move the scan line to the correct place.




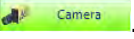


Camera is adjusted correctly to finish line

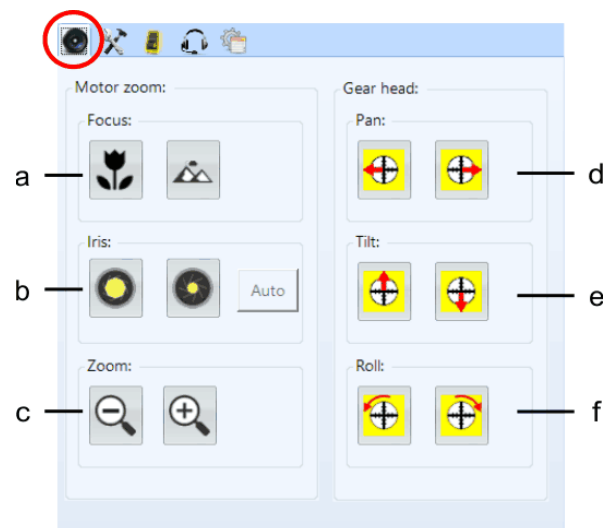
### 7.7.2 Image Adjustment with manual Lens



1. Connect OPTIc3 camera to PC.
2. Connect external devices for start and finish.
3. Check if the camera has power supply (LED „power“ must blink green).
4. Start OPTIc3.NET software on PC.
5. Check if the camera icon in the left lower corner is green (). If it is green, the camera is connected and works.
6. The preview picture <Cam preview> shows the live camera scan picture.
7. Open the camera settings window by clicking on .
8. Adjust scan rate (D). This setting depends on velocity, distance and zoom factor.
9. Click on the button  (2-D preview). The window of 2-D picture of the camera appears. You can execute the ideal adjustments here.
10. Depending on the brightness of the picture set the brightness of the lens (turn the lens ring “brightness”).
11. Adjust the zoom at the lens (turn lens ring “zoom”).
12. Adjust the focus at the lens (turn lens ring “focus”).
13. Adjust the camera to the finish line as described above.
14. Adjust camera that it scans the finish line including all passing participants.
15. Click on the button  to exit the 2-D preview.
16. Check the brightness and maybe readjust it.
17. The camera automatically executes a white balance  exiting the 2-D preview.



### 7.7.3 Image Adjustment with a Motor Zoom Lens

1. Connect OPTIc3 camera to PC.
2. Connect external devices for start and finish.
3. Check if the camera has power supply (LED „power“ must blink green).
4. Start OPTIc3.NET software on PC.
5. Check if the camera icon in the left lower corner is green (). If it is green, the camera is connected and works.
6. The preview picture <Cam preview> shows the live camera scan picture.
7. Open the camera settings window by clicking on .
8. Adjust scan rate (D). This setting depends on velocity, distance and zoom factor.
9. Click on the button  (2-D preview). The window of 2-D picture of the camera appears. You can execute the ideal adjustments here.
10. Click on  <Electric Camera Adjustment> to adjust with the motor zoom via PC focus, iris and zoom.
11. Make sure that <Auto gain on> (I) is activated.
12. Also activate the iris control on <Auto> (b)



13. Adjust the zoom of the lens (c).
14. Adjust the focus with the focus buttons (a) or as described before with auto focus.
15. Adjust the camera to the finish line as described above.
16. Click on the button  to exit the 2-D preview.
17. Check the brightness and maybe readjust it.
18. The camera automatically executes a white balance  exiting the 2-D preview.

## 7.7.4 Brightness Adjustment

There are different ways to adjust the brightness. It is important to read this section carefully to understand how to optimize using the brightness function. The easiest way to adjust the brightness of the camera is with the iris of the lens. Please note that the quality of the image is best when the iris is as closed as possible (best depth of field).

All other adjustments for brightness are executed in the menu camera settings.

### 7.7.4.1 Brightness of OPTIc3 Camera

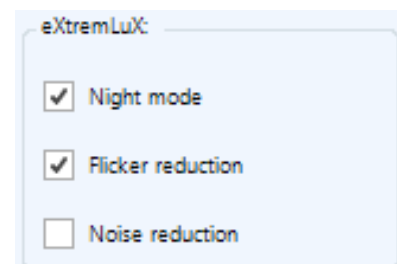
- manual adjustment with iris of lens
- automatic adjustment with <Auto gain on> (I)
- If you activate <Auto gain on> (I) and <Auto> (b) of the iris you can use the motor zoom to automatically control the iris.

### 7.7.4.2 Brightness of OPTIc3-PRO Camera

- manual adjustment with iris of lens
- automatic adjustment with <Auto gain> (I)
- If you activate <Auto gain on> (I) and <Auto> (b) of the iris you can use the motor zoom to automatically control the iris.
- <eXtremLuX> provides additional options to improve the brightness.
- scan rate doubling (see below)

### 7.7.5 eXtremLuX (L) (OPTIc3-PRO)

eXtremLuX helps improving the picture quality at bad light conditions. This function is also available as upgrade for the OPTIc3.



#### 7.7.5.1 Night mode (OPTIc3-PRO)

<Night mode> brightens up the picture by about 50 % using a special technology. The picture quality slightly decreases when <Night mode> is activated.

#### 7.7.5.2 Flicker Reduction (OPTIc3-PRO)

Artificial light with alternating current has dark and bright phases. The human eye is too slow to notice these changing light conditions since it happens 100 times per second. The photo finish camera scans the finish line much faster and the dark and bright phases are shown. In order to obtain constant brightness and better picture quality this function reduces the flickering.

#### 7.7.5.3 Noise Reduction (OPTIc3-PRO)

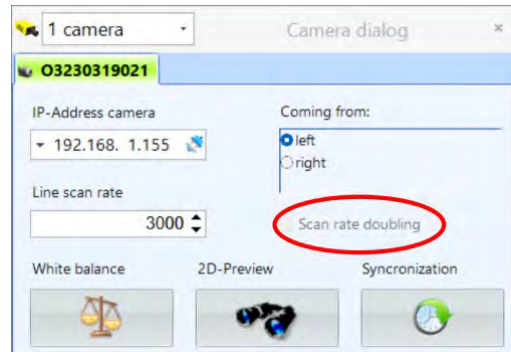
The <Noise Reduction> reduces the increased noise in case of bad light conditions.

### 7.7.6 Scan Rate Doubling (OPTIc3-PRO)

If you activate this feature the scan rate doubles by interpolating a line between two actual lines. This feature helps using the camera at dark conditions or doubling the scan rates.

With bad light conditions this function brightens the picture, as the actual scan rate is reduced by half and thus doubles the exposure time of each line scan.

When activating <Scan Rate Doubling> with the check mark, the value in the box line scan rate automatically doubles.

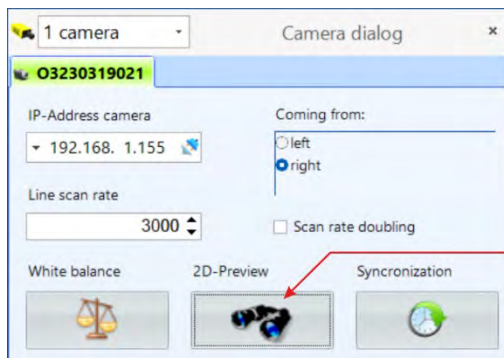


**Example:** You need to scan the finish line with 3000 fps. When you activate the <Scan Rate Doubling> it shows 6000 fps without the brightness decreasing. Switch back to 3000 fps and the picture will be much brighter.

### 7.8 Synchronization

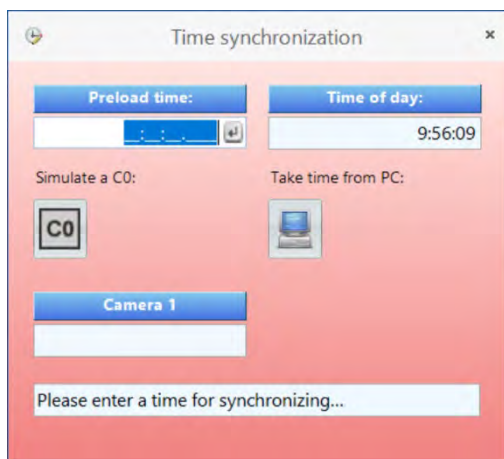
The OPTIc3 camera should always be used with exact time of day. Every start and stop signal is stored with the time of day to calculate the actual run time. Thus, it is possible to afterwards allocate a missed start time out of the log file to the start.

If you start the OPTIc3 it automatically takes over the time from the PC (PC time). This is okay if you only work with one timing device. As soon as you use more than one timing device you have to synchronize these timing devices to the same time of day (e.g. when using two OPTIc3 and a Timy3).



Open the camera settings for synchronization.

Click here to execute the synchronization of the OPTIc3 with other timing devices.

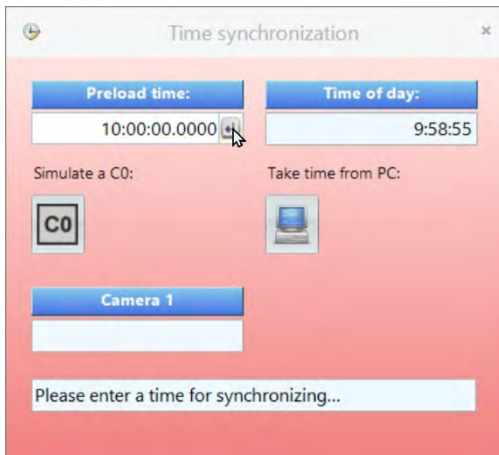



For the synchronization of several ALGE-TIMING devices you have to connect the start channel C0 of all devices parallel.

In case you have two active cameras connected it will show both cameras and synchronize both.

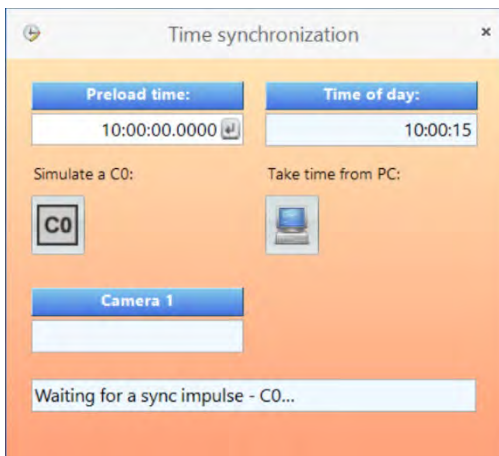
Input the time of day. This time is the time you start the device(s). Therefore, input a time one or two minutes in the future, so you can finish all preparations.






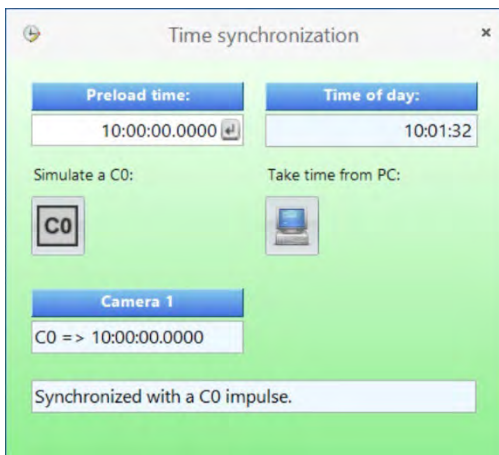
Confirm the time of day <ENTER> on the PC keyboard or click on .

Input the same time of day in the other devices you want to synchronize.




As soon as you confirm the entered time of day the colour changes from red to orange. This means the OPTIc3 is now ready to receive the synchronization impulse.



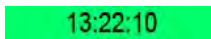
The synchronization impulse can be triggered internally by clicking on icon  or external with an impulse on channel C0.



When the synchronization is successful the background colour of the window changes to green. After a few seconds, it shows the new time of day.

With click on icon  (Take time from PC) the camera takes over the time of day from the PC.

In the footer of the OPTI3NET software it shows the status of the synchronization:

-  background yellow: time synchronized automatically from PC system
-  background red: time set for external sync impulse
-  background green: time is externally synchronized

## 8 Software OPTIc3.NET

The software for the OPTIc3.NET runs with Windows 10 and 11 on x64 Platform.

If you record with the OPTIc3.NET software you should close all other programs. They could block tasks, processor power or use the hard disk. This could reduce the stability and recording time of the OPTIc3 system.



















If the OPTIc3 PC is not operated in a network, we also recommend closing the antivirus software. Make sure that at least such software does not start an automatic check of the hard disk during the photo finish operation.

The OPTIc3.NET is designed in Windows standard look and tries to follow the rules for Windows programming. This facilitates the operation for Windows experienced users.

Many of the most important functions of OPTIc3.NET are integrated in the menu bar.



### 8.1 Icon List

		<b>Print:</b> printing of lists and pictures
		<b>Print only result list:</b> prints the result list as pre-adjusted
		<b>Time Window:</b> opens the time window (timing dialog)
		<b>Manual evaluation:</b> manual evaluation of the race
		<b>Lane evaluation:</b> evaluation of the race by lanes
		<b>ID evaluation:</b> evaluation of the race by start number
		<b>Picture selection:</b> picture of current heat or compete event
		<b>Camera settings:</b> opens the window with the camera adjustments
		<b>Display Board:</b> shows running time or time of day

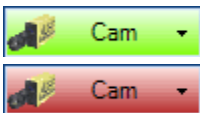
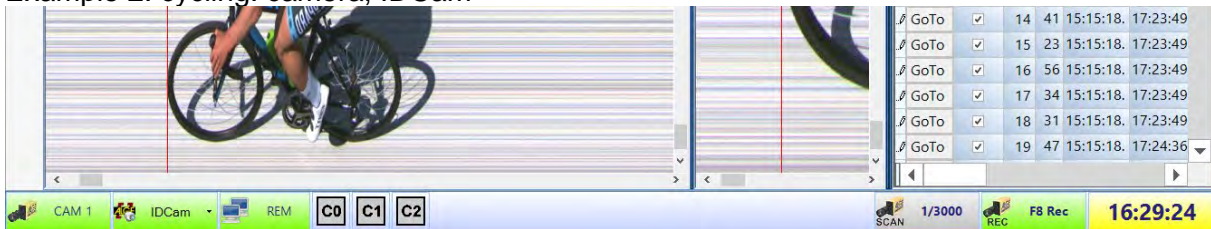
## 8.2 Footer

The footer is a status bar that shows the connected devices of the system and some basic information.

Example 1: track and field: camera, Windspeed WS2



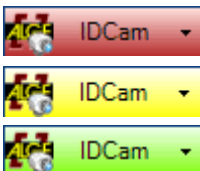
Example 2: cycling: camera, IDCam



### OPTIc3 Camera

This icon is green when a camera is connected and active. In the field it shows the camera name. If you have two active cameras it shows this field for each camera.

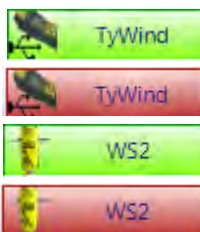
If the icon is red, there is no communication between PC and camera. Please reset the network properly. Click on this icon to open the camera settings.



### IDCam

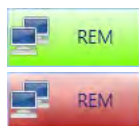
This icon is red if no IDCam is connected. It is yellow if the connection with the IDCam is activated but communication is not successful. It is green if the communication with the IDCam software works.

Click on this icon to open a drop-down menu for IDCam settings.



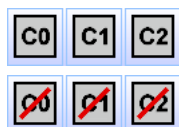
### WS2 and TyWind

These symbols are only shown if you select the sport „Track and Field with anemometer“. If you connect the anemometer Windspeed WS2 with the controller Timy both icons must be green. If both are red (TyWind and WS2) the USB connection between Timy and OPTIc3NET-PC does not work (maybe you have started another program that reads the Timy e.g. the IDCam). If you have no connection between Timy and WS2 the icon WS2 is red.



### PC-Selection

It is possible to work on one PC (recording and evaluation), or on two PCs. In the latter case, the master is responsible for the recording and evaluation (recording PC), the second for the evaluation only (results PC).



### Timing Channels:

All possible timing channels of the system are shown. When using a camera, C0 (start), C1 (finish), and C2 (intermediate) are shown. If you click again on this icon it reactivates the channel.



**Scan Rate:**

The adjusted scan rate is shown. It is possible to adjust the scan rate in the camera dialogue.



**F8 Rec**

Clicking on this icon, start the recording of a picture (it does not matter if the camera is ready for a heat or not, the recording will be in the meeting picture). The recording continues for as long as you press on this icon. During the recording, the icon changes from green to red. The icon is gray if no camera is connected (no recording is possible).



**Time of Day:**

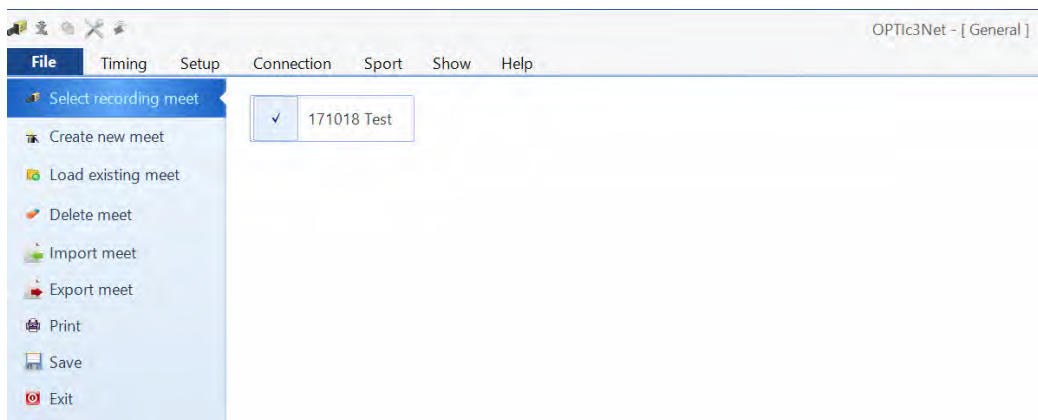
It is possible to synchronize the OPTIc3 camera externally with the accurate time of day or with another timing device. Without synchronization the camera takes over the time of the PC. Synchronizing is described under point 8.3.2 Menu <TIMING>.

- background yellow:   synchronized automatically from PC system
- background red:     set for external sync impulse
- background green:   externally synchronized

## 8.3 Menus of the Software

The OPTIc3 software has sub menus as is usual for Windows software.

### 8.3.1 Menu <File>



The menu <File> includes tools to open, save, print, etc.

**Select recording meet**

All open files in the OPTIc3NET program are shown and you can select in which meeting you would like to record races. Only one meeting can be used for recording purposes.

The meeting that is selected for recording shows the following symbol:

**Create new meet**

Before you start to work with OPTIc3NET you need to create a new meeting. A meeting can be a single race or a series of competitions (e.g. meeting over several days). In this meet all the data of the meeting is stored. The meeting is split in four sections (Meet, Session, Events, and Heats).

Example:	Meet:	Spring-Meeting
	Session:	Day 1
	Event:	100 m Qualification
	Heat:	Heat1



### Load existing meet



If you want to continue working in an existing meet (e.g. next day's sessions) you have to open this meet. This also applies if you want to see results of this meet (e.g. after a protest when you are already in another meet).

### Delete Meet



It is possible to delete meets. When deleting a meet, you lose all information about this meet including all recorded images.

### Import Meet or heat



It is possible to import a meet or heat that was recorded on another PC with the OPTIc3NET software.

### Export Meet



It is possible to export a meet (including all images) so you can import it on another PC.

### Print



You can print lists for the race (heat). The list can e.g. be a start list, bib list or result list. Each list can have integrated pictures.

### Save



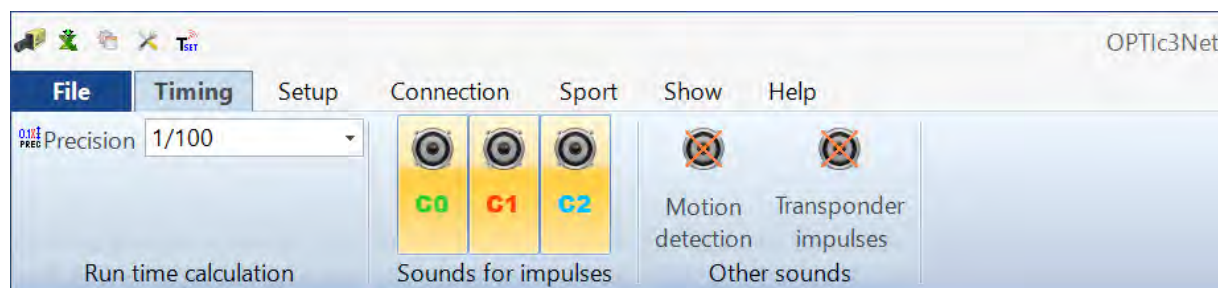
Save the currently open meet.

### Exit



Exit the OPTIc3NET software.

## 8.3.2 Menu <TIMING>

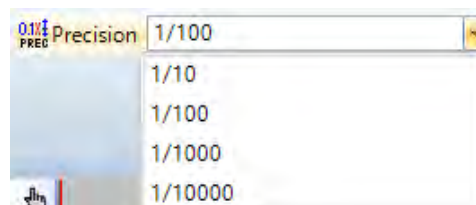


Open the menu <Timing> to adjust the precision of the timing that is used for the calculated run time and the sound for channel impulses. Additionally, you can select if the PC loudspeaker outputs a tone for impulses.

### 8.3.2.1 Run time calculation - Precision:



Select the precision for calculating the run time between (see picture on the right):



The run time is calculated from the start time and finish time. For this calculation always the highest precision with 1/10,000 seconds is used. After calculating the run time it is converted to the adjusted precision.

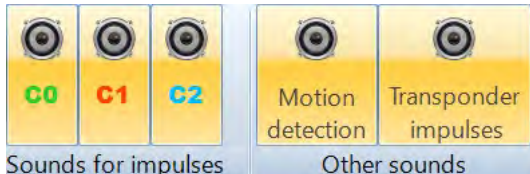
### 8.3.2.2 Sounds for Impulses:

The PC loudspeaker can output the sound for each timing impulse. Click on the corresponding speaker symbol to switch on or off the sound. The volume of the impulse tone can be adjusted via the volume at the PC.

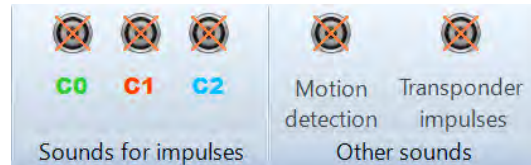
The following recording and timing impulses can create a sound:

- C0.....start channel
- C1.....finish channel
- C2.....intermediate time channel
- motion detection
- transponder impulse

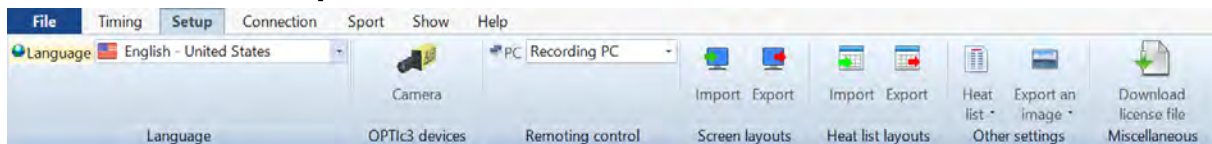
All sounds are on:



All sounds are off:



### 8.3.3 Menu <Setup>



You can adjust several settings for software and hardware in the menu <Setup>.

#### 8.3.3.1 Language

Select the language of the software and printed lists.

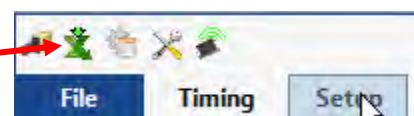


At the moment, you can select the following languages:

- |             |             |
|-------------|-------------|
| • Dutch     | • Italian   |
| • English   | • Japanese  |
| • French    | • Russian   |
| • Finnish   | • Norwegian |
| • German    | • Spanish   |
| • Hungarian | • Swedish   |

The language selection menu is always in English.

If your language is not translated yet you can do it yourself. Open the Excel file „OPTIc3Net\_English-United-States.xls“ by clicking on the Excel icon shown to the left and rename the file (e.g. if you translate to Serbian: „OPTIc3Net\_Serbien-Serbia.xls“). Now replace the text in the gray field with the text in your language.



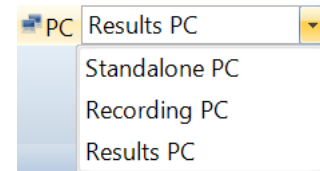
Please note that the Excel file has many pages (on the bottom in Excel). You have to translate all of them. If you send us the translated Excel file to [office@alge-timing.com](mailto:office@alge-timing.com), we will integrate the new language in the next release of the OPTIc3NET.

### 8.3.3.2 OPTIc3 devices

Settings of the OPTIc3 camera  (see 7.1 Setting the Camera)

### 8.3.3.3 Remote Control (OPTIc3-PRO – O3-2EVAL)

This optional function is only active with the OPTIc3-PRO or after purchasing the O3-2EVAL license. With this license, the OPTIc3 can be used on two PCs at the same time.



### 8.3.3.4 Single Station Operation

The standard application is "Recording PC". The entire controlling and evaluation of the OPTIc3 is executed on one PC (included in all OPTIc3).

### 8.3.3.5 Two Station Operation

With the OPTIc3-PRO or for an additional charge, it is possible to work with two PCs.

#### 8.3.3.5.1 Recording PC

The complete range of functions runs on this PC, thus the OPTIc3 camera is controlled from this PC.

#### 8.3.3.5.2 PC Evaluation

Only a limited number of functions run on this PC: view pictures (e.g. for referees) or evaluation (if the evaluation should be particularly quick, one person can take care of the recording and a second one can evaluate it).

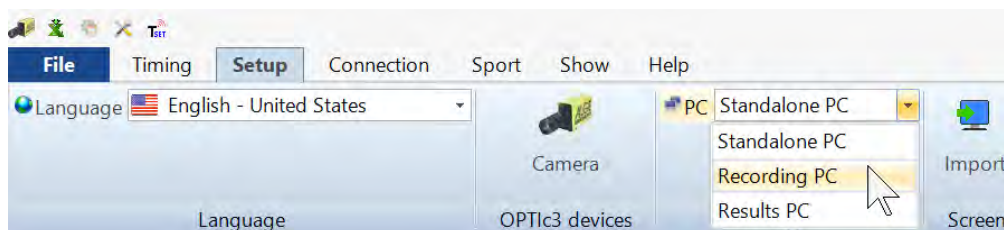
#### 8.3.3.5.3 Connection of Two Station Operation

For two station operation, the photo finish work is carried out on two different PCs that are connected in the network. The recording PC has full rights for all OPTIc3 actions. On the evaluation PC you can evaluate at the same time or just check the pictures.

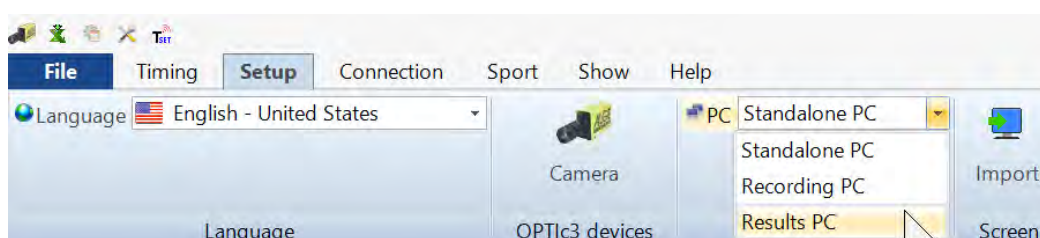
The images or results data are sent from the recording PC via network to the evaluation PC. If you evaluate on the evaluation PC, this data is sent to the recording PC. Therefore, the evaluation status is always the same on both PCs.

#### Connect the PCs via Network:

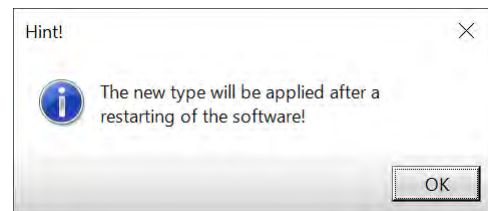
- Both PCs must have installed the same version of the OPTIc3 software.
- Start both PCs and execute the OPTIc3 software.
- The PC that controls the camera must be set in the menu „Setup“ as „Recording PC“.

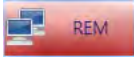



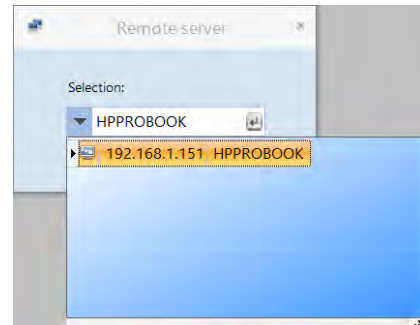
- Set the second PC in the menu "Setup" on "Results PC".




- After changing the PC settings in the OPTIc3 software it is necessary to restart the OPTIc3 software.



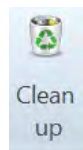
- The following icon is shown in red in the footer on both PCs: 
- If the OPTIc3 software is running on both PCs, the evaluation PC must automatically find the recording PC in the network. The PC name and IP address can be shown.
- Click on the "Enter" button  for establishing the connection.



- The following icon is displayed in green in the footer on both PCs when the connection between both PC works: 
- The Two Station Operation is now ready.

### Cleaning Up on the Evaluation PC:

It might happen that the evaluation PC has to load a large quantity of data via the network. If transmission errors happen and the race is not displayed correctly on the evaluation PC, the race can be retransmitted by clicking the "Clean up" icon.



### 8.3.3.6 Screen Layout



The layout of the screen is completely adjustable. You can dock-in or dock-out windows as you like. You can store your favorite layout(s) so that it takes just a click to return to it.

#### Import a screen layout



It is possible to load the default layout or one created by the user.

#### Export a screen layout



It is possible to store the present layout of the screen.

### 8.3.3.7 List Layout (Heat List)



The layout of a heat list is completely adjustable (see 12 Heat List).

#### Import a list layout



It is possible to load the default layout of a heat list or one created by the user.

#### Export a list layout



It is possible to store the current layout of the heat list.

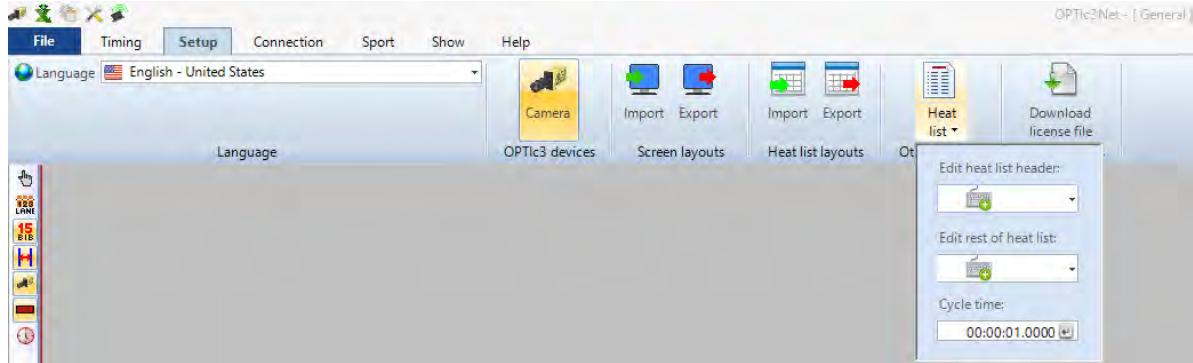


### 8.3.3.8 Other Settings

#### Heat List Setting

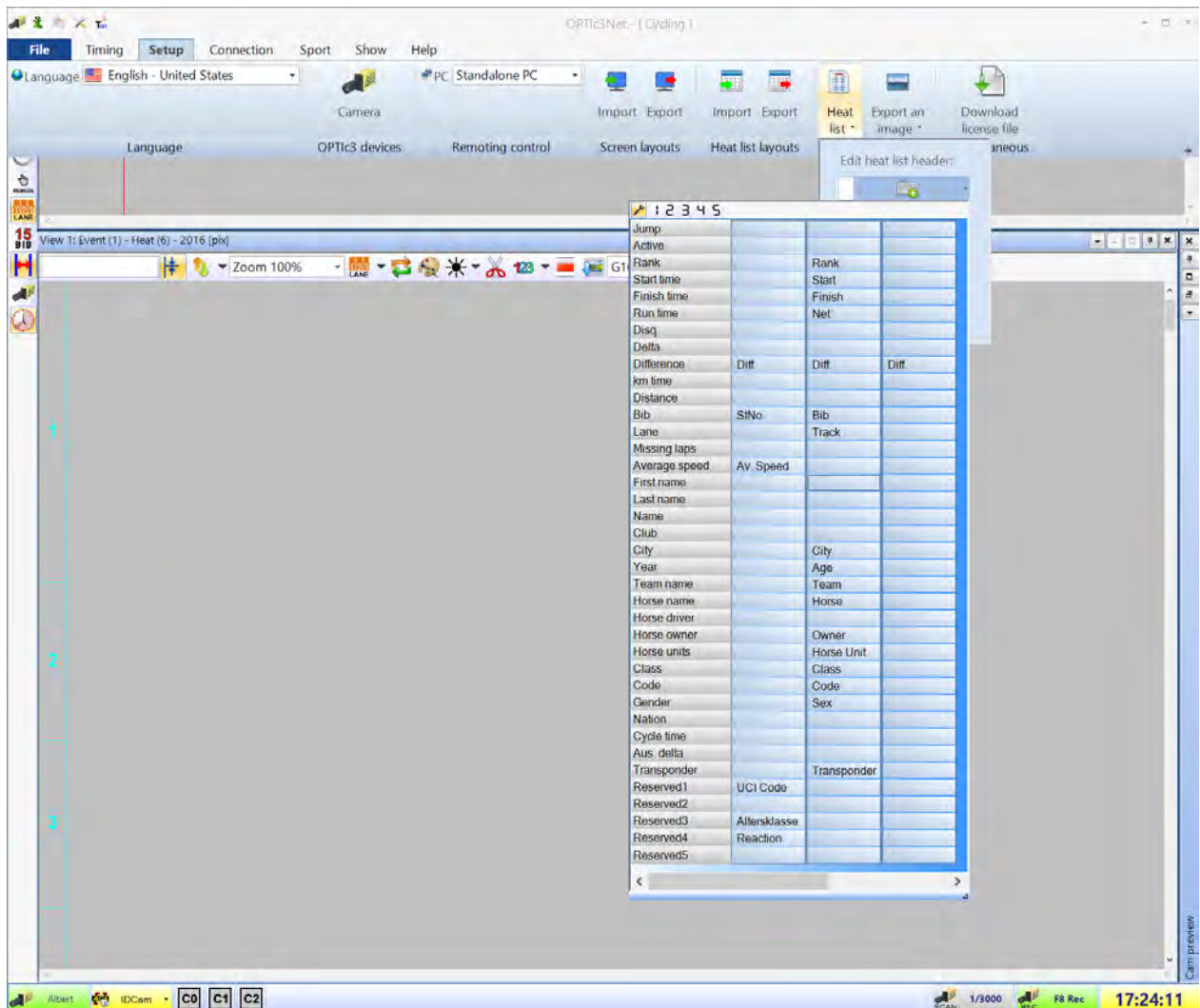


Make adjustments for the heat list in this menu.



#### Edit Heat List Header

You can setup if you want to use the factory setting for the headers of the heat list and printed lists in the chosen language (🔧 = Factory Setup = Original Names) or if you want to have your own header text (1 = Alias Names 1 or 2 = Alias Names 2). If you select 1 to 5 header fields with text from here are used. Header fields without text are taken from the factory setup of the selected language.





Factory Setup: The factory setup of the chosen language is used.

1 2 3 4 5

List headers 1 - 5: Enter the test for the list headers. Fields with text are used; fields that have no text are taken from factory setup of chosen language

**Edit heat list texts (Disqualifications)**

In the heat list field <Disq.> (Disqualification) you can open a list with different disqualification reasons (🔧 = Factory Setup). As different sports use varying reasons, you can enter the appropriate ones in five possible lists. If you enter the texts in lists 1 to 4, these texts are used. List 5 (marked with red arrow) is used for interface output. Fields without text use the factory setup text.

🔧 1 2 3 4 5					
DNS	DNS				
DNF	DNF				
DISQ	DSQ				
checkout	abgemeldet				
surrender	DNF				
disq. red					
disq. blue					
disq. red agh					
pass goal					
gallop goal					
fall					
driverless					
spare 1					
spare 2					
spare 3					
spare 4					
spare 5					

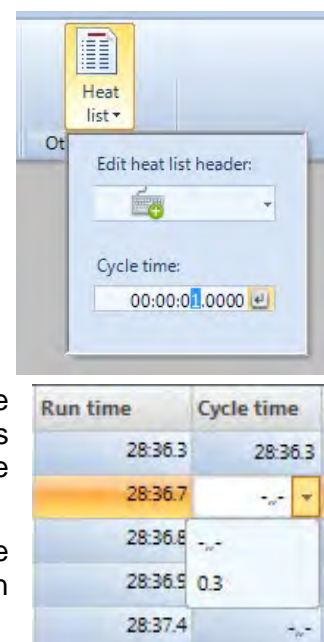
**Cycle Time**

The result list for street cycling has to show the time in a special way. The cyclists are listed in a group with a group time, but the ranking is by arrival order. The OPTIc3.NET software can execute this automatically.

When you evaluate the time for each cyclist the run times are stated in the column "Run Times". If you also activate the column <Time (Cycle)>, a column appears stating the times that are important for cycling (including group times). Input the gap for the group time by clicking on the menu <Setup>, <Heat list setting> and then enter the gap for the <Cycle Time>. With this gap you set the time difference for the group. In case a cyclist has more delay to the previous finisher than the gap in this field he receives a new time. If he is within this gap time he is listed in the same group of cyclists.

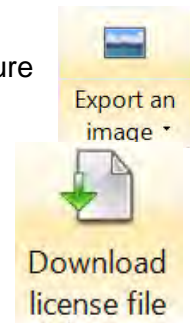
It is possible to switch each cycle time between the gap and the symbol for same time by clicking on the arrow behind each time in the column.

The factory setup for the Cycle Time (gap) is one second.



### 8.3.3.9 Export an Image

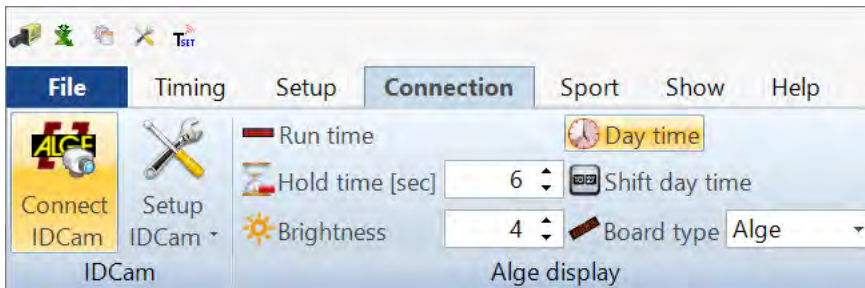
This function is available on request and allows making adjustments for the picture export.



### 8.3.3.10 Download License File

If you use an OPTIc3 and buy a software upgrade (e.g. eXtrem LuX) you have to update the license file in order to use the new function.

## 8.3.4 Menu <Connection>



### 8.3.4.1 IDCam

See point 17 Integration of IDCam.

### 8.3.4.2 ALGE-TIMING Display Board

to activate different modes of the ALGE-TIMING display board (D-LINE or GAZ)

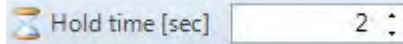
#### Run time

The running time of the active race is shown on the display board. Further adjustments are possible in the time window.

#### Time of Day

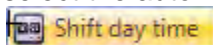
The display board shows the time of day (hours and seconds).

#### Hold time



You can adjust in seconds how long the stopped time is shown on the display board after a finish impulse (if you select the automatic mode in the time window).

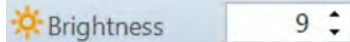
#### Shift day time



to adjust the time of day format on the display board

This function must be activated to show the time of day correctly on a 6-digit display board.

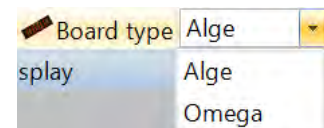
#### Brightness




to adjust the brightness of a D-LINE display board  
The value ranges from 0 (dark) to 9 (bright).

#### Board type

You can switch the output protocol for display boards between ALGE-TIMING and OMEGA protocol  
(Factory setting: ALGE)

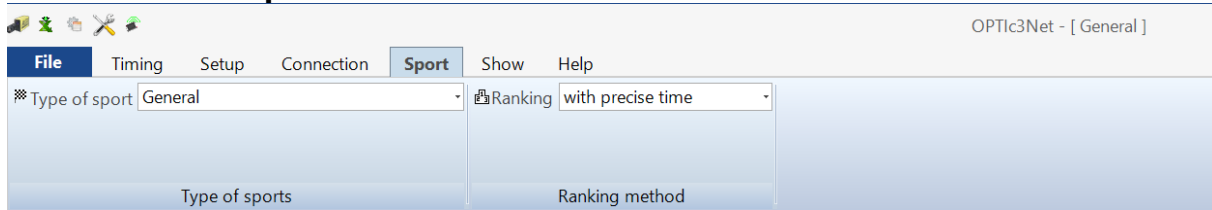


### Two Display Boards connected:

It is possible to connect two display boards to the OPTIc3. The first display board (address 0) will show the running time until a stop impulse comes. The time stops now. The second display board (address 2) shows only in the standard mode  (see paragraph 0 when the first display is stopped the running time).

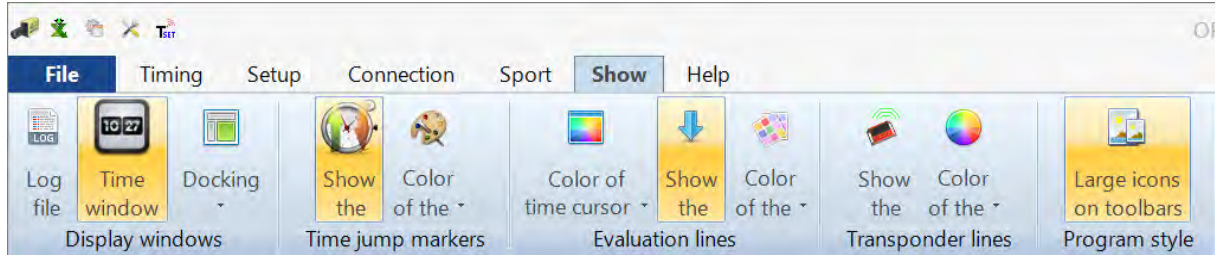


### 8.3.5 Menu <Sport>



See 6.1 Selection of Type of Sport.

### 8.3.6 Menu <Show>



#### Display Windows

##### Log File



If you activate the <Show message dialog> a log-file that records everything that happens to the system is shown. This file is very important for ALGE-TIMING in case of problems.

##### Time Window

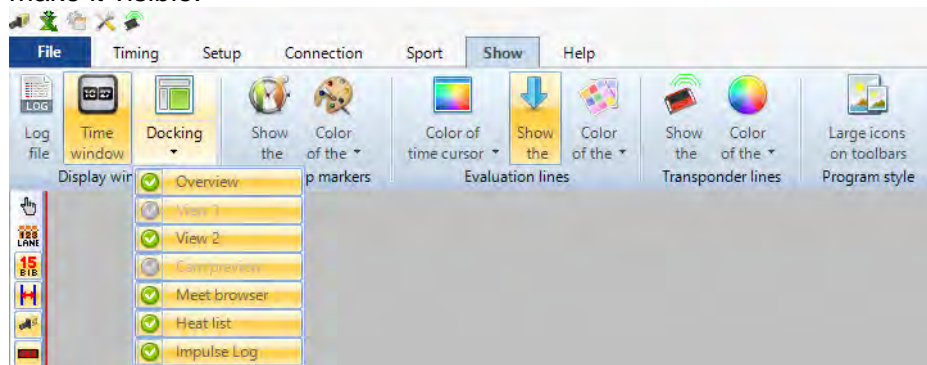


A window opens that shows the net time of a race (marked with the evaluation line).

##### Docking



In case a window of the OPTIc3NET software vanishes, it is possible to retrieve it by clicking on <Docking>. If  is shown next to the docking window, the window is shown on the screen. If this sign is not shown, the docking window is not visible. Click on the docking window to make it visible.





### Time jump markers

#### Show



If the camera does not continuously record a picture and parts are missing as no competitor passed at this time. A <Time Jump Marker> can make this visible on the screen.



Picture with <Time Jump Markers>

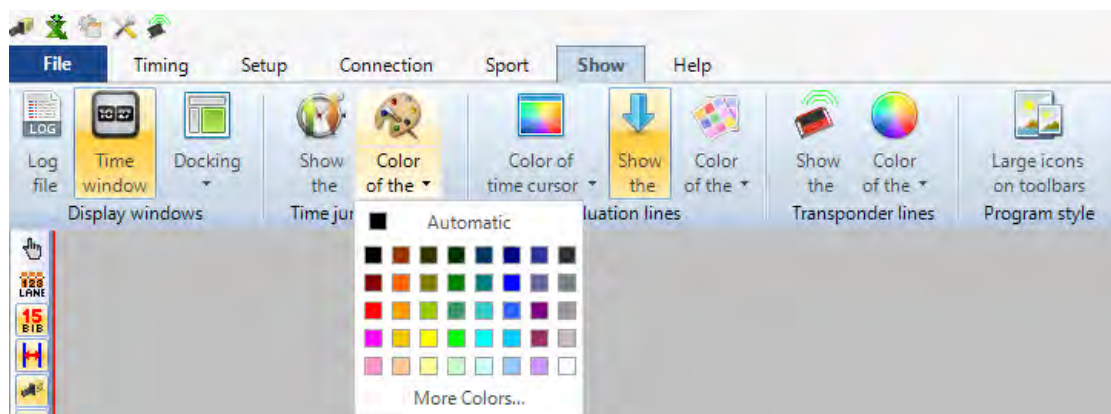


Picture without <Time Jump Markers>

#### Set Color



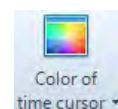
You can select the colour of the <Time Jump Marker>.



### Evaluation Lines and Colours:

#### Colour of Time Cursor:

You can adjust the colour of the <Time Cursor>. The <Time Cursor> is the line that shows the time in the picture.



#### Result Line - on/off:

You can switch on and off the <Result Line> (line in the picture for every time allocated to a competitor).



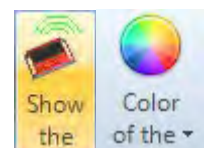
#### Colour of Result Line:

You can adjust the colour of the <Result Line>.



### Transponder Lines:

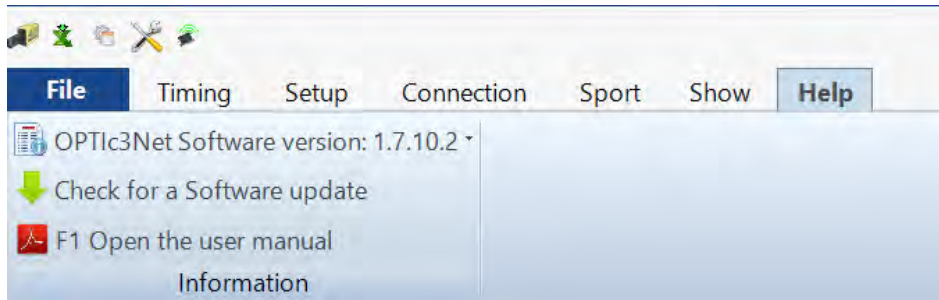
You can show the transponder times in the photo finish but additional software is necessary for this. You can buy this software from **ALGE-TIMING**. You can adjust the colour of the lines in the picture.



### Large Icons on Toolbars:

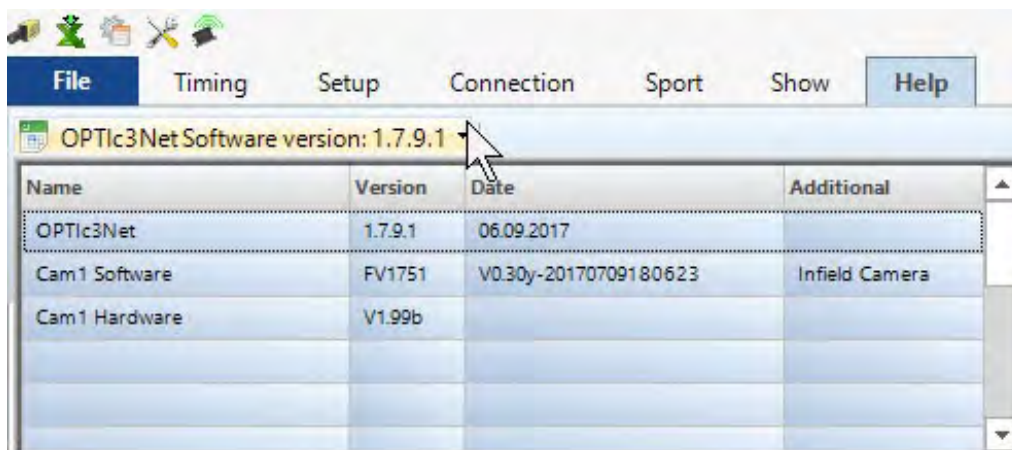
You can adjust the size of the icons. When using a very high monitor resolution (e.g. UHD) you might want to switch to the big icons that are better visible.

### 8.3.7 Menu <Help>



In the menu <Help> you can see the current version number of the software. You can open the OPTIc3 manual as pdf-file. The key <F1> also opens the manual.

If you click on the arrow behind the software version a table opens that shows all the information about the software and hardware of the system.

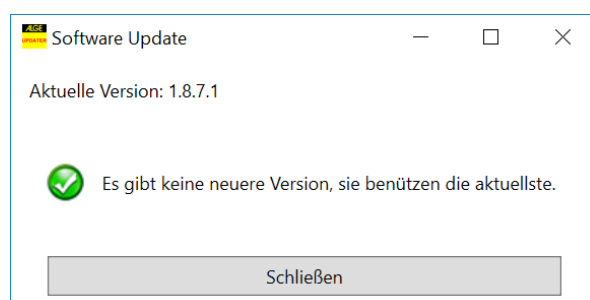


If you have problems with the system please always check the software version. If it does not show the “Cam1 Software” version and the “Cam1 Hardware” version there might be a problem with the network connection.

#### OPTIc3.NET Update:

Always use the latest software of the OPTIc3. **ALGE-TIMING** constantly works on the software and improves the PC software OPTIc3.NET or firmware of the camera.

It is possible to check for OPTIc3.NET software updates, if your PC has an internet connection. You can update PC software and camera firmware directly through the OPTIc3.NET software.



## 9 Evaluation Windows

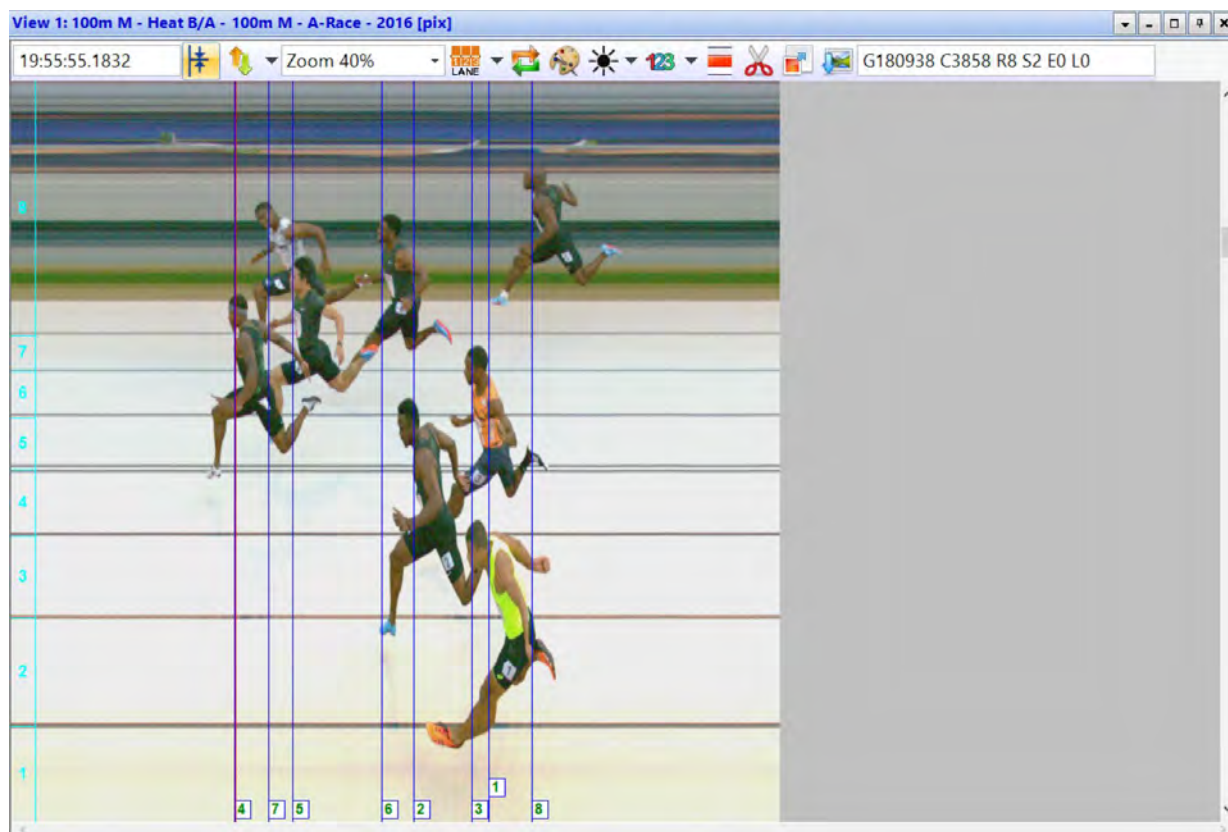
The software OPTIc3.NET allows you to see the photo finish picture in three different windows. Window <View 1> is the main picture in which you make the evaluation. Window <View 2> can be used e.g. as zoom window, where you see the part of the picture that you evaluate in a bigger scale. Window <Overview> is used to show long recordings on a small scale to have a good overview of the total picture.

All three pictures are linked with each other. If you double click in one picture, the others show the same picture in the adjusted scale.

### 9.1 View 1

This is the main picture that you must use for evaluation. You can adjust the zoom scale that is ideal for you. Please note that if you use a zoom scale below 100 % you are not able to adjust the time cursor with the highest precision. Therefore, it would be good to have view 2 on a zoom scale of 100 % or more and to check the time cursor in view 2 as well.

If two active cameras are used (from either side of the finish line) then it shows the first camera in this window. This camera is the main camera in this case.



In the header of <View 1> you see the <event name>, <heat name> and <vertical resolution>

#### Top status line:

19:55:55.1832

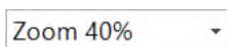
time of day of the position of the <Time Cursor>



Centring Function: If you double click in another “evaluation window”, the position of the mouse is used as centre for the picture shown in <View 1>.



You can input the offset for the Y-Position (vertical) (e.g. if you click on the lane so that it shows the chest of the athlete in the zoom window).



Drop down menu to adjust the zoom factor of <View 1>. It is also possible to zoom in and out with the scroll wheel of the mouse.



menu to setup the lanes (see 11.3 Lane Evaluation).



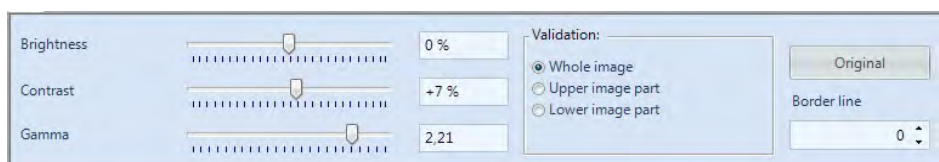
If you activate this icon the latest recording is always shown immediately. This function is used if the photo finish system is used as backup without evaluating a picture unless certain reasons occur (e.g. protest).



If you click on it the picture is shown in black and white, click on for coloured view.



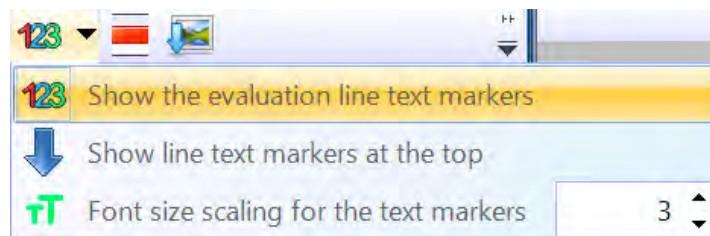
If you click on you can adjust the brightness, contrast and gamma of the recorded picture. These adjustments apply to all evaluation windows.



If you click on <Whole image> the adjustments are carried out for the complete picture. It is possible to adjust only the upper or lower part of the picture. This is necessary, if e.g. half of the picture is in the shadow, the other half in the sun. In order to adjust this you have to enter the <Border line>. This is the border pixel of your picture. The lowest pixel is 1, the highest 1360. If you set e.g. 680 it is the exact middle of the picture. Now you select <Upper image part> for adjusting the upper picture part, or <Lower image part> for editing the lower picture part.

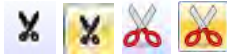





If this function is activated, the ID-number (for bib evaluation) or the lane number (for lane evaluation) is shown on the screen. In the pull-down menu you can set whether it is shown on the top or bottom of the picture, as well as the font size.



You can set the active range for the motion detection recording. This function is only available, if motion detection O3-MD is activated (see 10.3.5 Motion Detection (OPTIc3-PRO).





Cut Picture: If you click on  you can cut parts of the picture. When you select cutting, the icon changes to  and shows that cutting is active. Click now in the picture, keep the left mouse button pressed, and move the mouse. The marked part is cut by pressing the right mouse button and click left on  Cut away this image selection .  
Cutting is only effected in current race. The image is still visible in the overview of the meet.



A part of the current image can be marked and exported as a picture (jpg, bmp). The image size is displayed in the centre of the marker (it displays as well when the ratio is 4: 3 or 16: 9).




The current picture in <View 1> is exported.

## 9.2 View 2

In view 2 the same picture of the recorded image is shown as in view 1 but you can adjust a different zoom factor (e.g. zoom factor to see a part of the picture with a higher resolution). It is not possible to evaluate a race in view 2.

If two active cameras are used (from either side of the finish line) then it shows the second camera in this window. This camera is the backup camera in this case.

## 9.3 Overview

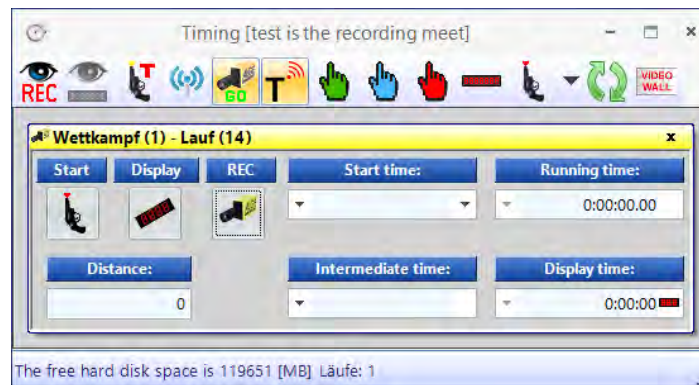
In overview you can zoom in up to 5 % of the original picture. It is used as overview for races with long recording time. When adjusting a finish line, we recommend to control the adjustment by switching on black/white .

If two active cameras are used (from either side of the finish line) then it shows the pictures of the first camera (main camera) in this window.

## 10 Timing (Timing Window)

Before you start a race, you should start the timing window of the heat you want to start and for which you want to execute the timing. It is possible to start several heats in the timing window (e.g. for rowing events).

- Before you start a race, you need to establish a race structure in the meet browser (see 13 Meet Browser).
- Double click on the heat that you want to open in the meet browser.
- The timing window appears showing the selected heat.
- If the bar of a heat in the timing window is yellow (see below), it means that the picture of this heat is shown in the overview window, and in windows view1 and view2. Otherwise, the bar is light blue.



### Start

When you click on this button it changes to another icon. Each icon has a different function.



Start is ready: The starter can start this heat at any time.




Start is blocked: If you receive a start impulse the time does not start.



Race is started.



False start triggering (Reset the race so another start is possible.): This icon is only shown if you move the mouse over the icon .



### Display

With this function you select the display board. If more than one started heat is active in the <Timing> window you have to select which time of the two heats you want to show on the display board. If only one heat is active, you can delete the display board by clicking on this icon.



Display board (GAZ or D-LINE) is active for this heat. In the field <Display time> the time is shown like it is shown on the ALGE-TIMING display board.






Display board (GAZ or D-LINE) is inactive for this race. If no other race is running the display is blank.



### REC (Record Photo Finish)

It is possible to allocate more than one heat to the recording focus (this means you can record photo finish pictures of different heats at the same time).

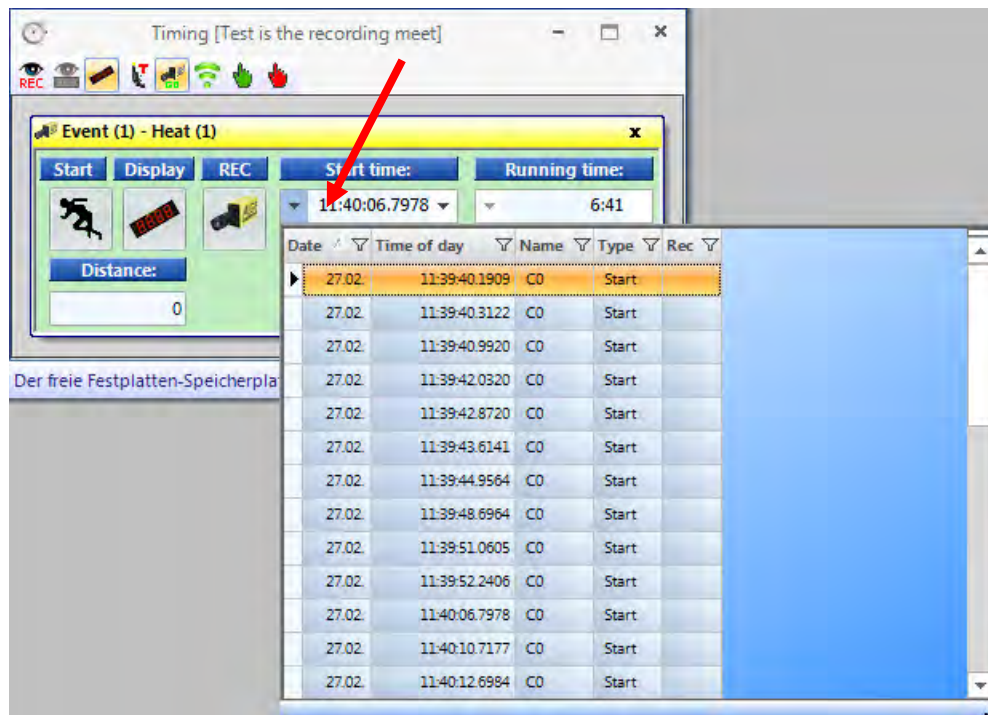
- When the button shows , the camera records as soon as it gets a recording impulse (photo cell, push button, F8-key, motion detection).
- If it changes to  it is recording (this button is shown as long as the recording goes on).
- When the button shows , the camera does not record at all.



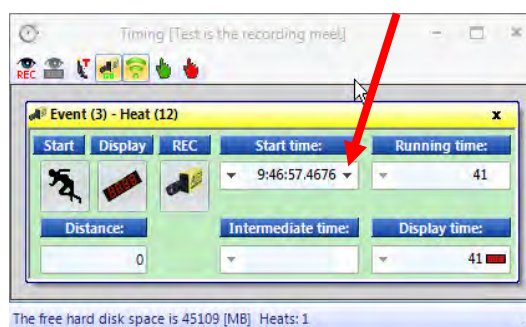
## Start time

In this field the start time of the heat is shown.

When you press on the left arrow the list of start impulses opens. In case you missed a start impulse or if you have to correct the start impulse you can select the correct start impulse in this list. Double click the selected start time and confirm with <YES> to import the new start time.



When you press the right arrow, you can enter a manual start time.



## Running time

In this field the running time of the heat is shown. The time never stops if you have a start impulse.

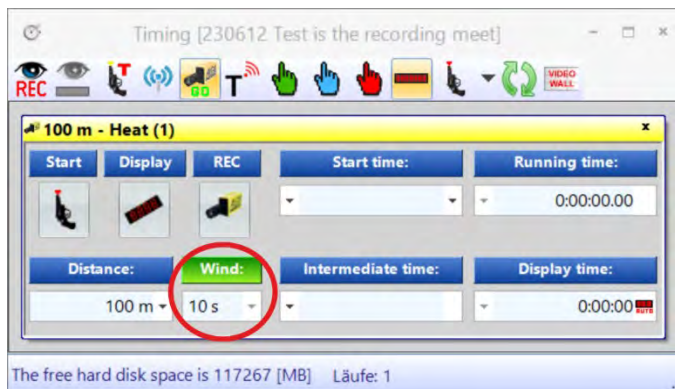
## Distance

You can enter the distance in meters in this field. This is important for some calculations (e.g. average speed).

If you use the sport setup “**Track and Field with Anemometer**” the measuring method for the wind measurement will be preselected with the distance. Alternative you can afterwards change the measuring method manually.

### Wind

It shows the wind only in the sport “Track and Field with anemometer”.



That the measurement from the OPTIc3 works it is important that the anemometer is connected to the Timy and the Timy is connected by USB-cable with the PC of the OPTIc3.

More information you will find in the chapter “Integration of the Anemometer Wind-speed WS2”.

### Intermediate time

It shows the intermediate time (channel C2) for the duration of the adjusted <Hold Time>. The intermediate time will not cause a camera recording.

### Display time

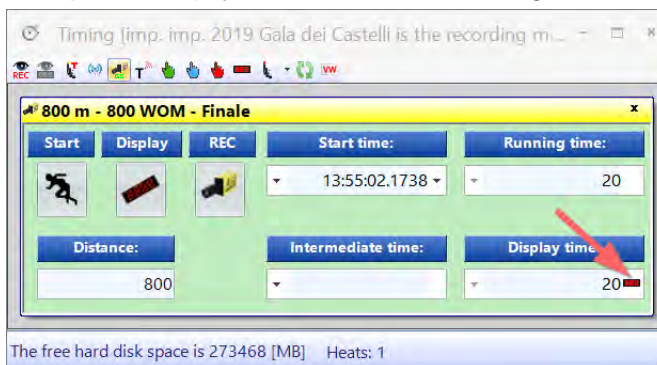
The time also shown on the display board is output here (if you selected the running time and not the time of day in the tool bar).

You can adjust three different modes:

#### Standard:



The display board stops after a stop impulse. The blue bar that shows <Display time> changes its colour to red. If you click on this red bar the time on the display board starts to run again.



#### Automatic:



The display board stops after a stop impulse for the duration of the <Hold time> (adjustable in Menu <Connection>). The blue bar that shows <Display time> changes its colour to red. If you click on this red bar the time on the display board starts to run again.

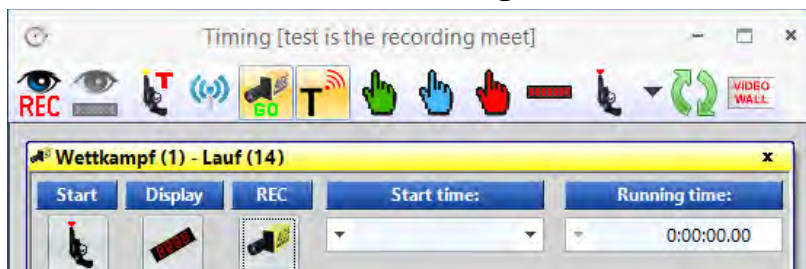
#### Continuous:



The display board does not stop after a stop impulse. It shows a continuous running time. This is useful e.g. for cycling or long distance running races.



## 10.1 Tool Bar of the Timing Window:



### Motion Detection



When you activate the <Motion Recording> it automatically records a photo finish when the picture is changing. More information in chapter 10.2.5 Motion Detection.

### Motion Detection to Display Board



When you activate the <Motion Detection to Display Board> the time of the display board stops with impulses of the motion detection. This function is only possible if <Motion Detection > is activated.


### Test Start (C0)




When you activate <Teststart> in a heat the start is recorded. For track and field events according to IAAF rules it is mandatory to execute a test start before the meeting to prove that the timing device starts exactly at zero. You can find further information under point 5.3.1 Zero Control for Track and Field (Start Control).

### Startimpulse from TED





If the start pulse comes via an external radio system (e.g. Teledata TED), you must activate . Thus, an error correction for the radio transmission of 0.1 s is performed internally.

*Attention:* If the internal radio "WTN" is used in the OPTIc3 you do not have to activate . The error correction is done automatically from the OPTIc3 system.

### Activate Recording when Loading Heat



When the icon  is shown, the recording is activated when loading a new heat in the empty timing window. When the icon  is shown the recording is deactivated, when loading a new heat in the empty timing window.

### Transponder



If you activate the transponder (extra software from ALGE-TIMING necessary), the recording is also effected by transponder. This function is only available with the O3-TSP upgrade.

### Manual Start Impulse [F5]



triggers a manual start impulse

### Manual Intermediate Time Impulse [F6]



triggers manual intermediate time impulse

### Manual Stop Impulse [F7]



triggers a manual stop impulse

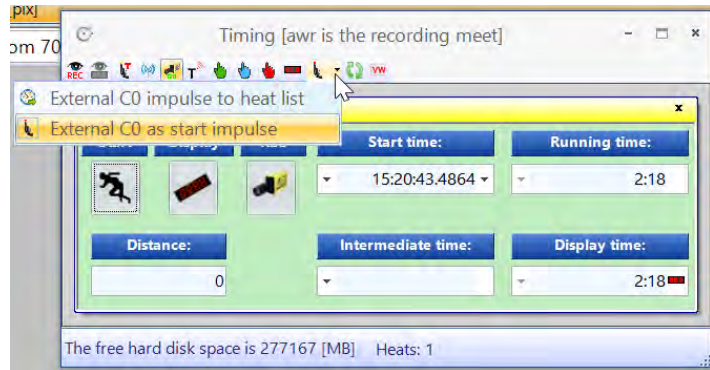
### Winner Time on D-LINE



If you press this button after finishing and evaluating the race, the official winning time is shown on the display board (D-LINE or GAZ). The displayed time is the evaluated winning time from the photo finish.

### External C0 Impulse

It is possible to receive the start from an external timing device by transmitting a time stamp (time of day) instead of a timing impulse. The time stamp can be transmitted from a timing device of ALGE-TIMING (e.g. Timy or MT1). The timing device must be configured correctly in the "ATL settings" (third icon on left).



Such external time stamps from a timing device can be received as start time for one ID-number (single start race) or as mass start impulse (the open race is started).

### Mass Start



You can use an external timing device and transmit the start time as time of day to the OPTIc3. All active races with an open start will be started (the ID-number is ignored).

### Single Start



You can use an external timing device and transmit the start time with ID-number to start a racer of the OPTIc3. The start time goes to the racer with the identical ID-number in the active race. Active race is the one that is open and has the display board focus (🖱️).

### Automatic Loading of Next Heat

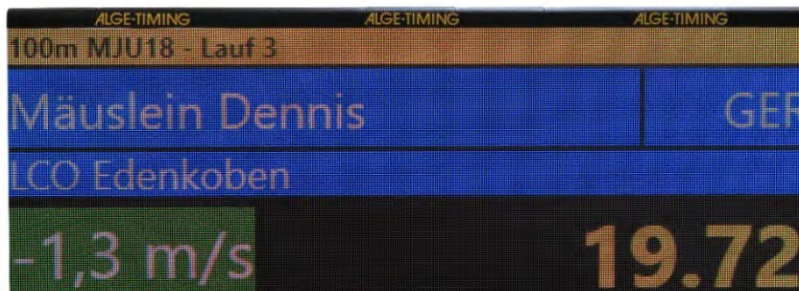


If the button (🌐) is active and you finish a race in the time window, the next race of the event overview is automatically loaded that has not yet taken pictures.

### Live Data to Video Wall



This function is only active if you activate the video wall function "ScreensClient". If you press this button the video wall shows the live data (running time).



## 10.2 Start Impulse from an External Timing Device

The OPTIc3 can read the start time from some timing devices. This is an advantage when there is a long distance between start and finish. This allows you to send the start times to the OPTIc3, e.g. by radio (TED2) or mobile data (MT1). It is important that the devices are synchronized with one another.

### 10.2.1 Start Time Transmission from TED2 (Data Transmission)

The TED2 can transmit the start time for a mass start or a single start to the OPTIc3. Switch between mass start and individual start with the icon . In the case of a single start, you have to enter the start number of the starter in the TED2-TX. The TED2-RX is connected to the OPTIc3 with a USB cable.

In the ATL settings (third icon in the upper left corner) the settings marked in red must be made so that the OPTIc3 can receive from the TED2-RX.

ATL Settings

Timing Port **IDCam Port** Timetronics Windspeed MyLaps X2

- ▼ **Sonstiges**
  - Channel **C0**
  - > DuplicateBibsTotzeit **0:00:02.0000**
  - > IDCamPort **TcpClient (127.0.0.1, Port 8758 / Binary serialized)**
  - > MyLapsX2 **dbnetsoft.AdditionalTimingLibrary.MyLapsX2AtlSetti**
  - > OptiExchange
  - RaceResultIgnoreStoredPassings **True**
  - RaceResultVersion
  - > TimetronicWindspeed
- ▼ **Timing** **Alge\_Mt1 @ Serial (COM6,38400,None,8,None,One)**
  - > Broadcast Client **Broadcast-Port 10001, Port 4445**
  - > Broadcast Server **Port 10002, Brodcast-Host 255.255.255.255, Brodcast-**
  - Description
  - Device **Alge\_Mt1**
  - Enabled **True**
  - Encoding **UTF8**
  - Layer **Serial**
  - > Line Beginnings **Int32[] Array**
  - > Line Ends **Int32[] Array**
  - ▼ **Serial** **COM6,38400,None,8,None,One**
    - Baudrate **38400**
    - Databits **8**
    - Handshake **None**
    - Hardware Handshake **True**
    - Parity **None**
    - Port **COM6**
    - Stopbits **One**
    - Serialization **None**
  - > TCP Client **Port 4448**
  - > TCP Server **Port 4445**
  - > UDP Receiver **All,Port 4444**
  - > UDP Sender **:4444**
- ▼ **TimyUsb** **Alge\_Timy\_Backup**
  - Enabled **True**
  - Program **Alge\_Timy\_Backup**

Attached USB keys or cameras:  
00-13-95-15-9F-03 -> HiRes, LinescanRate8000, LinescanRate15000, LineDoubling, WirelessTimi

After the settings on the left are done, the "Timing Port" must have a green background. If it is not green, then you have to activate the "Timing Port".

ATL Settings

Timing Port **IDCam Port** Timetronics Windspeed

- ▼ **Sonstiges**
  - Channel
  - > Duplicate
  - > IDCamPo
  - > MyLapsX2
  - > OptiExchange

Context Menu:

- Connect
- Disconnect
- Port Settings
- Port Information



### 10.2.2 Start Time from Mobile Timing MT1

To read the time stamp of a MT1 start impulse you need an internet connection of your OPTIc3-PC. You have to start the program “MT1 Time.Net Connector” and make sure that you receive the MT1 start impulses (CO) there.

In the ATL settings (third icon on top from the left) the red marked adjustments must be made that start times sent from the MT1 will be registered by the OPTIc3.

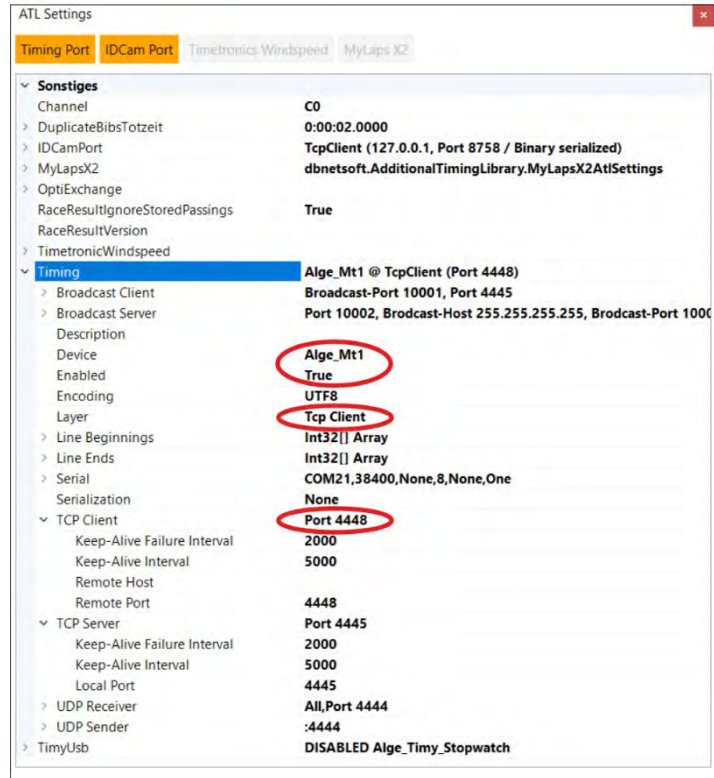
Once these adjustments are done, you will receive the start time stamps of the MT1 in the OPTIc3.

#### Mass Start for a Race:

When selecting in the timing window it will start a race.

#### Single Start for Racers:

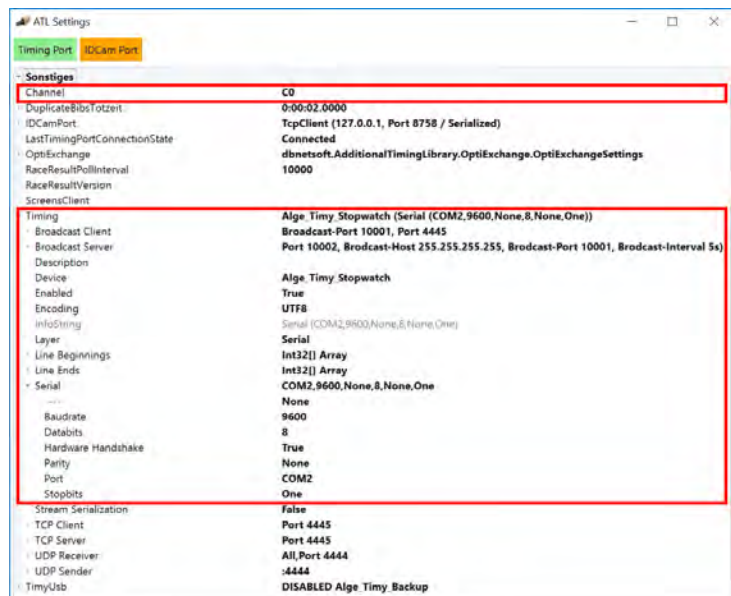
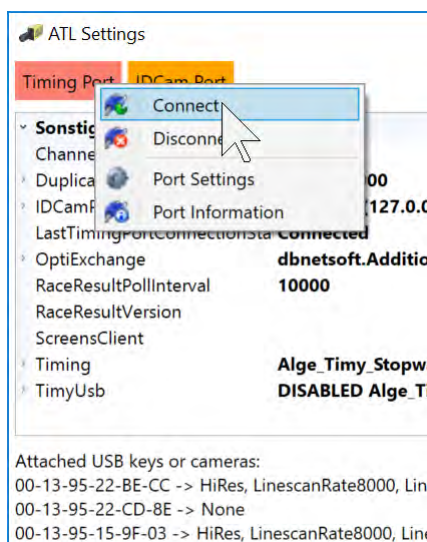
When you select in the timing window it will give the racer with the transmitted ID-number from the MT1 a start time in the active race.



### 10.2.3 Start Time for Timy3

You must adjust the “PORT” to the actually used COM-Port (in this example COM2).

To activate the RS232 interface, click “Timing Port” with the right mouse button and then “Connect”.



When the interface is “connected” it must turn to green. Now you can check the interface by clicking on “Port Information”.

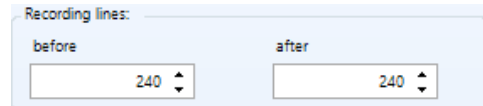


### 10.3 Photo Finish Recording

There are several possibilities to do the photo finish recording. It can be done manually by pressing the key <F8>, by clicking with the mouse on , with manual push button, a sensor (e.g. photocell) or motion detection .

#### Recording lines:

It is possible to adjust the recorded lines before and after the trigger impulse. This adjustment is very important for many sports to obtain a picture of the whole competitor. The adjustment is made in the "Camera dialog".





Recording lines:  
before: 240  
after: 240

- <lines before> recommendation for most sports: 140 pixels
- <lines after> recommendation for most sports: 100 pixels

#### 10.3.1 Manual Recording or

This recording always works even if no heat is opened in the timing window.


#### No timing window is open:

Press <F8> on the keyboard of the PC for recording the picture to the total picture of the meeting. To evaluate such a picture, open the heat that you need in the timing window. Click on  (pictures of this heat). The icon changes to  (pictures of the complete meeting). It is now possible to evaluate the time of your heat.

#### A timing window is open:

The picture of the heat that is open in the timing window is recorded.

### 10.3.2 Manual Recording in Timing Window

You can record manually in the timing window. The recording is done by clicking on the icon  with the mouse. The recording lasts as long as the left mouse button is clicked on this icon.

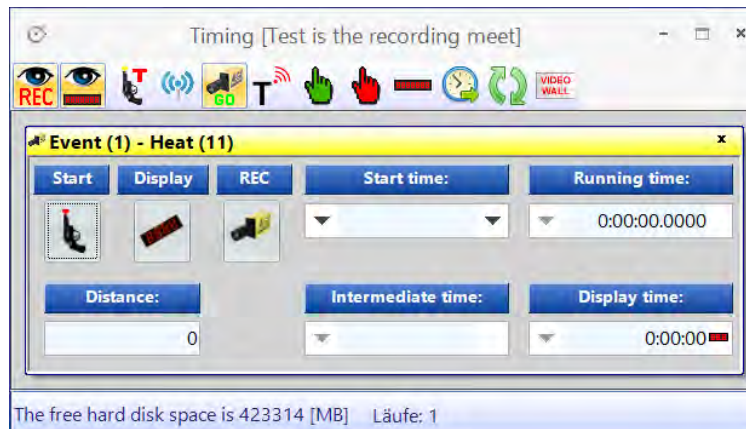
### 10.3.3 Push Button Recording

It is possible to connect a push button at the camera (red/black banana socket - stop) or distribution box OCD2 (red/black banana socket – C1-A) for manual recording.

### 10.3.4 Sensor Recording (Photocell)


It is possible to connect a photocell at the camera (red/black banana socket – stop or DIN-plug) or distribution box OCD2 (red/black banana socket – C1-A or DIN plug). The photocell is set up at the finish line so each competitor passing the finish also triggers the photocell. The advantage of the photocell is that you have automatic recording of pictures with an ideal recording duration and you have an accurate finish time on the display board.


### 10.3.5 Motion Detection (OPTIc3-PRO)



This feature is only available with the upgrade O3-MD for motion detection or the OPTIc3-PRO.

The motion detection works with changes of the picture. The camera compares the pixels from pixel line to pixel line. As soon as it detects changes in the pixels it starts to record.

In the camera dialog under Config (see 7.3 Recording and Picture Adjustments ) you can adjust the pixels of the camera for the motion detection. This is very important for a good result, since there is often movement in the background that you do not want to use for your recording (e.g. flags, moving spectators). The camera has vertically 1360 pixels (OPTIc3) or 2060 pixels (OPTIc3-PRO).

When using the motion detection, it is possible to select if you want to stop the impulse time at the display board or if the display board ignores impulses from the motion detection. To output it on the display board, click the button .



#### Activate Motion Detection:

Activate the motion detection in the timing window.




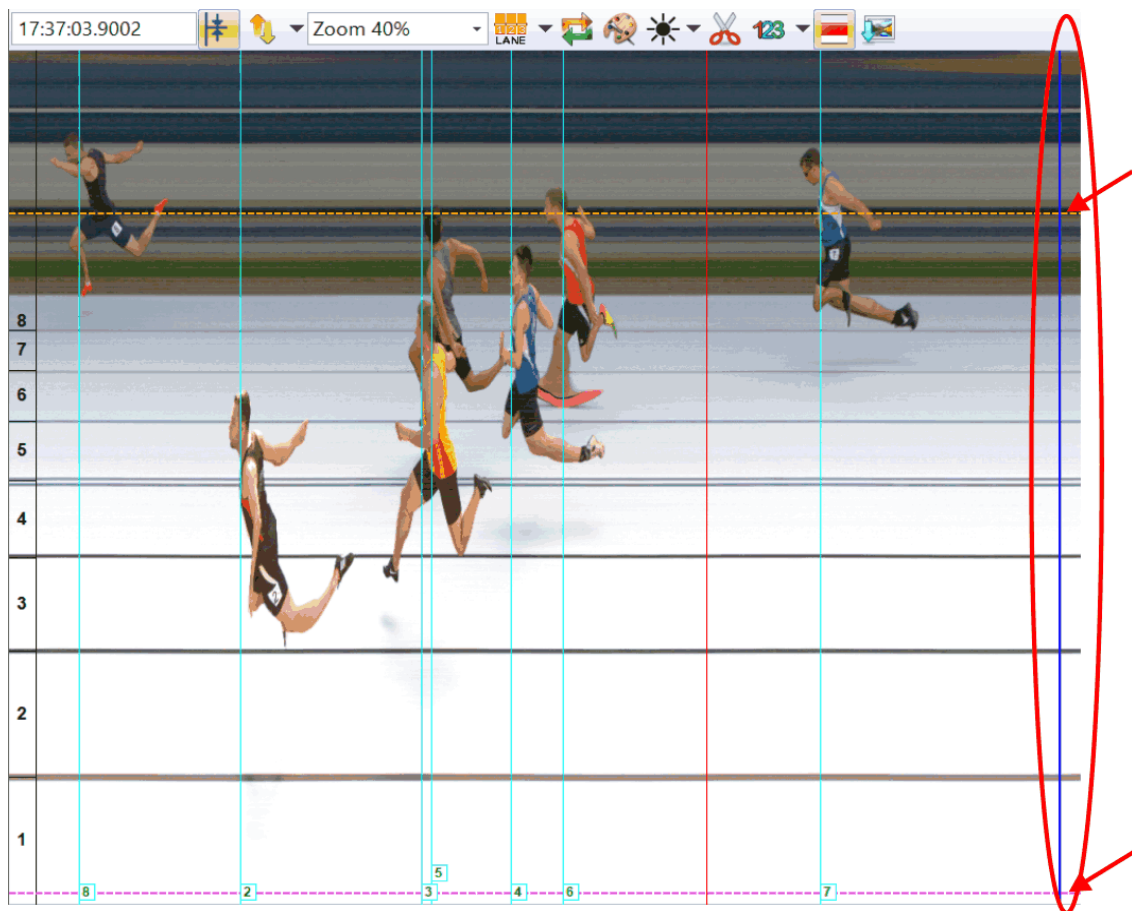
The motion detection is on but no time is stopped on the display board via motion detection. This function is often selected, when motion detection is used in combination with "recording of impulses". In this case, the display board is stopped only by the impulse (e.g. photocell).



The „Motion detection“  and „Motion detection impulse to display board“  is activated. When the motion detection is triggered the recording starts and the time stops on the display board.

#### Adjust the image area for motion detection:



If you click on the icon  in view 1, a blue line is displayed at the end of the picture (it is marked in the picture below with a red oval). In addition, two dashed horizontal lines are displayed (marked with red arrows). The area between the two horizontal lines is the active pixels used for motion detection. The horizontal lines can be moved up and down with the mouse in the area to the right of the blue line (see red arrows).



## 11 Evaluation of Races


The photo finish picture is not a normal picture. The camera scans the finish line. The scan rate is adjustable. Each scan (each real pixel in horizontal direction) has a different time. If you scan e.g. with 1000 lanes per second each pixel has a difference of 1/1000 seconds. For an exact evaluation you should use the scan factor of 100 %. If you scan out of a picture you do not have the complete accuracy.


If a finish picture is shown on the monitor you press the left mouse button and move the mouse over the screen. Together with the mouse cursor the finish line moves. The time is shown in the time window.


With key  you can move the finish line pixel by pixel to the left, with  to the right. With function "system" and "color of time line" you can change the colour of the finish line so that it has a good contrast in the picture.

### 11.1 Time Window

A freely movable time window is automatically shown. This window only shows the time of the evaluation (not the running time). To evaluate picture, three different modes are possible:

Use the **Manual Evaluation**  if you want to transfer the time to any individual competitor in the competitor list (normally not used).

Use the **Lane Evaluation**  if every competitor has his own lane (e. g. for sprint races in track and field, rowing, and canoeing).


Use the **Bib Evaluation**  if you can read (or have registered) each start number of the finish arrival (e. g. long distance races of athletics, cycling, horse races)



### 11.2 Manual Evaluation





You select the manual evaluation by clicking with the mouse on  in the icon bar.

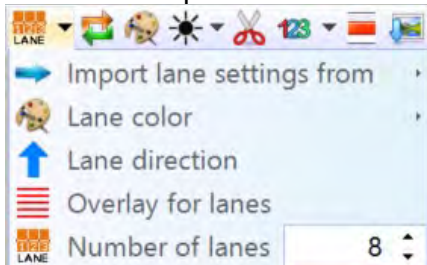
Mark the competitor in the heat list that you want to evaluate by clicking on . The field of the competitor is marked in orange. Press the left mouse button and move the time line to the competitor who you want to evaluate. As soon as you press the right mouse button the time is transferred to the marked competitor.




### 11.3 Lane Evaluation

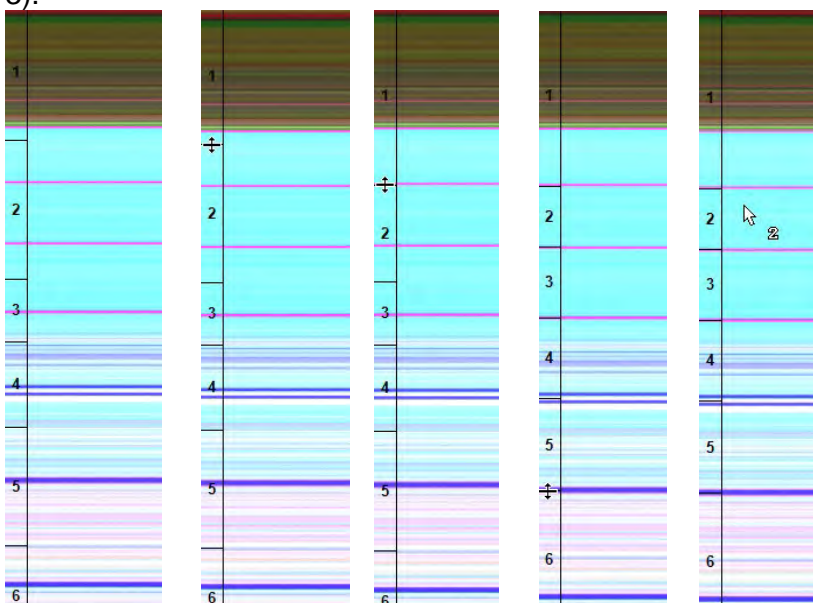



If each competitor runs in fixed lanes (e. g. sprint races in track and field) the easiest way is to use lane identification for the evaluation.

- Adjust the camera so you can see all lanes you need for the race (leave enough space on the top for the complete picture of competitor).
- Select the lane evaluation by clicking on  in the icon bar.
- Click on the top icon bar of "View 1" on .






- Adjust the <Number of lanes> you need. In <View 1> the lanes are shown on the left side of the picture (picture 1).
- Select the <Lane direction>  (lane 1 is on top or bottom of the picture).
- Select a good visible colour by pressing .
- Move the mouse on a lane marker until  is shown (picture 2).
- Press the left mouse button and move the line marker to the required position (picture 3).



- Repeat the same for all lanes (picture 4)
- Now the lane number  is shown (e.g. lane 2) next to the mouse cursor when evaluating the time.



After you set the lanes the configuration will be used for all heats that have no recording. Heats that have already recorded pictures will keep the old previous configuration.

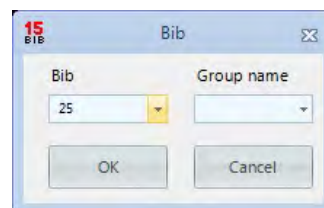
-  The lane number is green if it does not yet have a time.
-  The lane number is red if it already has a time.
-  The lane number is blue if this lane is unoccupied.

### 11.4 BIB Evaluation

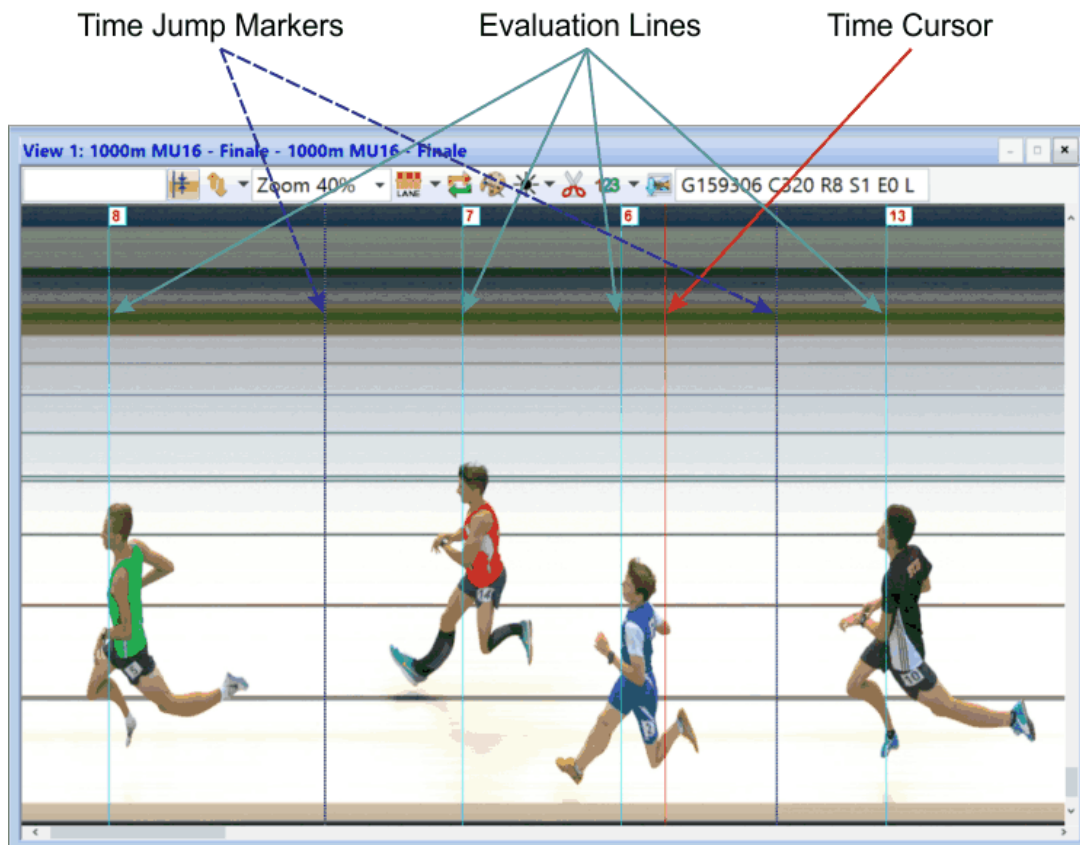
**15**  
**BIB**

Make the evaluation with bib numbers (ID-number) for events with a mass arrival at the finish. In this evaluation each competitor needs a bib number that is well visible.

- Move the <Time Cursor> to the correct position for the competitor to be evaluated.
- Press the right mouse button.
- Enter the bib number.
- If you use the group mode you can also enter the group (not possible for track and field).
- When using track and field, you can also enter the lane number instead of the bib number.

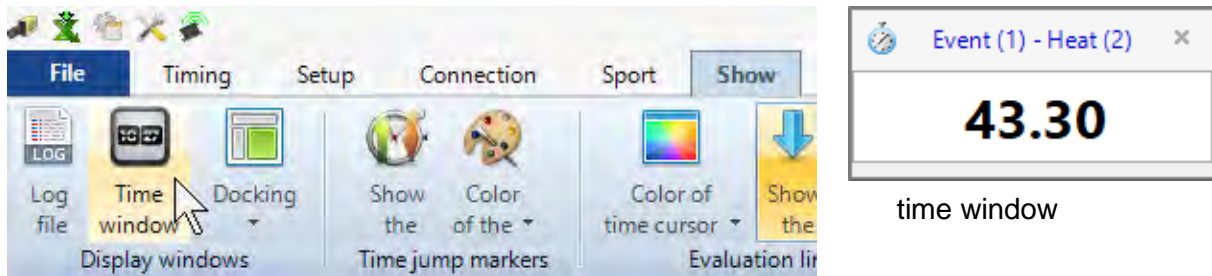


### 11.5 Three different lines in the photo finish picture



### 11.5.1 Time Cursor

This line shows the time (net time and time of day). When you move it over the picture horizontally, the time in the time window changes. The colour of the time cursor is adjustable in the menu <Show>.

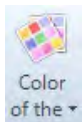


### 11.5.2 Result Lines

This result lines show the evaluated lines in the picture for each competitor. You can switch it on or off and adjust the colours.



If this button is orange the result lines are shown.



Click on this button to adjust the colours of the result lines.

### 11.5.3 Time Jump Markers

The “Time Jump Markers” show that there is a time jump in the picture. If you record with motion detection or with a photocell it only records sequences when a competitor goes through the finish. Between these sequences parts of the picture is missing. It is possible to show such picture jumps (time jumps) with the time jump markers.



Picture with <Time Jump Markers>



## 12 Heat List

Heat list: 1000m MU16 - Finale - 1000m MU16 - Finale

Jump	Active	Rank	StNr.	Lane	Start time	Finish time	Run time	Diff.	Disq.	Last name	First name	Nati
GoTo	<input checked="" type="checkbox"/>	11	1	8	16:40:53.3321	16:43:48.3469	2:55.02	14.91		Antener	Gian-Andre	SUI
GoTo	<input checked="" type="checkbox"/>	5	2	11	16:40:53.3321	16:43:43.2387	2:49.91	9.80		Cajoux	Thierry	SUI
GoTo	<input checked="" type="checkbox"/>	12	3	3	16:40:53.3321	16:43:52.6129	2:59.29	19.18		Dubois	Loic	SUI
GoTo	<input type="checkbox"/>		4	4	16:40:53.3321				DNS	Dupré	Arnaud	SUI
GoTo	<input checked="" type="checkbox"/>	7	5	12	16:40:53.3321	16:43:43.5342	2:50.21	10.10		Günter	Gaël	SUI
GoTo	<input checked="" type="checkbox"/>	3	6	2	16:40:53.3321	16:43:34.4363	2:41.11	1.00		Hofer	Jonathan	SUI
GoTo	<input checked="" type="checkbox"/>	2	7	14	16:40:53.3321	16:43:34.2421	2:40.91	0.80		Kerber	Navid	SUI
GoTo	<input checked="" type="checkbox"/>	1	8	5	16:40:53.3321	16:43:33.4359	2:40.11		Sieger	Kolly	Xavier	SUI
GoTo	<input checked="" type="checkbox"/>	9	9	1	16:40:53.3321	16:43:45.5922	2:52.27	12.16		Lazzeri	Giona	SUI
GoTo	<input checked="" type="checkbox"/>	10	10	7	16:40:53.3321	16:43:46.9039	2:53.58	13.47		Marti	Mickael	SUI
GoTo	<input checked="" type="checkbox"/>	6	11	6	16:40:53.3321	16:43:43.3042	2:49.98	9.87		Matos	Miguel	SUI
GoTo	<input checked="" type="checkbox"/>	13	12	9	16:40:53.3321	16:43:54.0413	3:00.71	20.60		Schärer	Pascal	SUI
GoTo	<input checked="" type="checkbox"/>	4	13	10	16:40:53.3321	16:43:41.3658	2:48.04	7.93		Wipfli	Ramon	SUI
GoTo	<input checked="" type="checkbox"/>	8	14	13	16:40:53.3321	16:43:44.9330	2:51.61	11.50		Witteveen	Max	SUI

The heat list is a flexible list that combines competitor data and results for each heat. Its layout is very flexible to give the operator possibilities to configure this list up to his wishes. The heat list can have headers different from those of the printed list (start list, result list). It is possible to sort each column by clicking on the column. In this way you can e.g. sort by bib or rank very easily.

**Attention:**

It is possible to change the order of the headers by drag and drop.

## 12.1 Field Selector

If you click on this icon the field selector for the heat list opens. In the <Field Selector> you can activate different headers for the list. You can edit the text shown (see 8.3.3.7 List Layout (Heat List)



Field selector ✕

- Active
- Aus. delta
- Average speed
- Bib
- City
- Class
- Club
- Code
- Cycle time
- Delta
- Difference
- Disq.
- Distance
- Finish time
- First name
- Gender
- Horse driver
- Horse name
- Horse owner
- Horse units
- Jump
- km time
- Lane
- Last name
- Missing laps
- Nation
- Rank
- Reaction time
- Reserved1
- Reserved2
- Reserved3
- Reserved5
- Run time
- Start time
- Team name
- Transponder
- Year

**Active:** to activate or deactivate a competitor or lane (e.g. for empty lanes)

**Aus. delta:** special calculated time behind for Australian horse racing

**Average speed:** average speed in the race  
This only works if you enter a distance for the event.

**Bib:** bib number (ID-number) of competitor

**City:** city of competitor

**Class:** class of competitor (e.g. used for ranking list)

**Club:** club of competitor

**Code:** code of competitor (often there is a code from federations)

**Cycle time:** for cycling (run time for winner, difference for others, with group time)

**Delta:** time behind the competitor on the rank before

**Difference:** time behind compared to winner

**Disq.:** disqualification of competitor  
You can select different reasons for the disqualification (e.g. DNS (did not start), DNF (did not finish), DISQ. (disqualification), etc.). If you want to change a competitor from a disqualified status to an active status you have to check him in the field <Activate>.

**Distance:** for races where not every competitor has the same distance  
If you have the same distance for all competitors you enter it in <Event>.

**Finish time:** shows finish time after evaluation of competitor

**Horse driver:** jockey of the horse or driver of the sulky

**First name:** first name of competitor

**Gender:** gender (sex) of competitor

**Horse driver:** name of the jockey

**Horse name:** name of the horse

**Horse owner:** owner of the horse

**Horse units:** distance between horses in finish (e.g. nose, neck, heat, length, etc.)

**Jump:** If you have a run time for a competitor and you click on the <Jump> the picture with the time line shows this competitor.

**km time:** special calculated time for horse racing

**Lane:** for events that use lanes (e.g. track and field)

**Last name:** last name of competitor

**Missing laps:** for events that have laps  
For the ranking, first the competitors that have no missing laps are calculated and ranked with the time, then the competitors with one missing lap, etc.

**Nation:** nation of competitor

**Rank:** rank of competitor

**Reaction time:** imported from Start Judge SJ2

**Reserve:** five reserve fields are available for your own use of text.

**Run time:** shows the calculated run time (calculation from start time and finish time).

**Start time:** start time of the competitor



**Team name:** team name of competitor

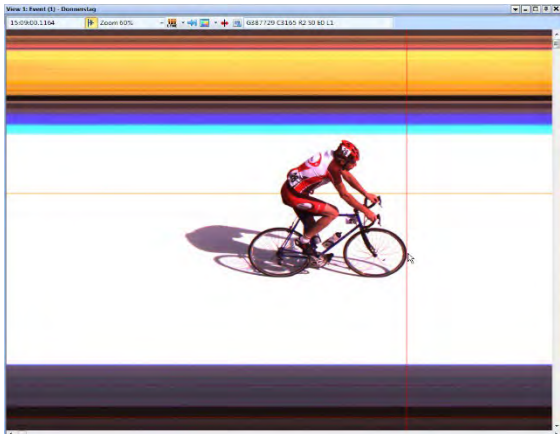
**Transponder:** time imported from Transponder

**Year:** year of birth of competitor

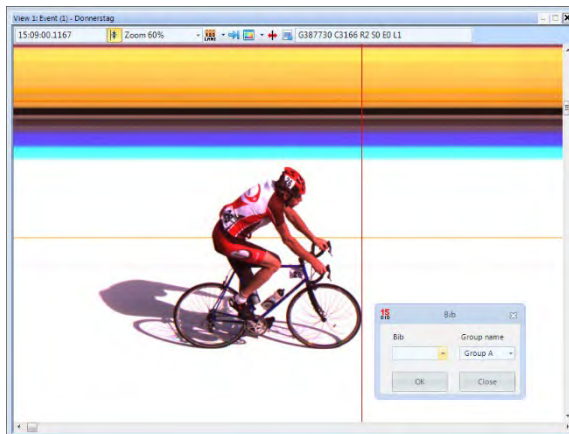


## 12.2 Class Mode

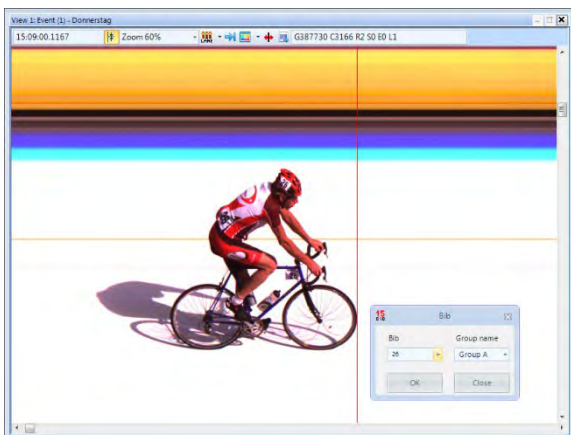
If you click on , the heat list is shown sorted by class names. Of course, it is necessary to enter a class mode and bib and group with the evaluation (use <Bib evaluation> ). In the class mode you can use the same bib numbers in each class. The class mode is not available if you select <Track and field with anemometer> and <Track and field without anemometer>.



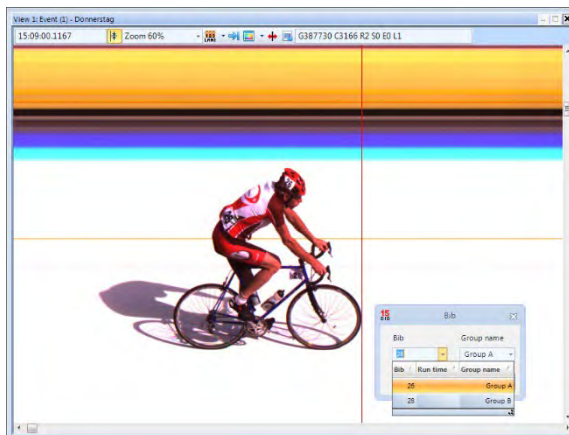
Move the <Time Cursor> to the right position



Press the right mouse button for bib evaluation

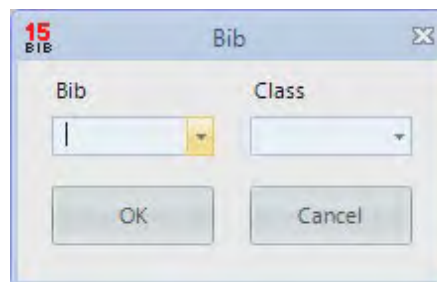


Input the bib (ID number)



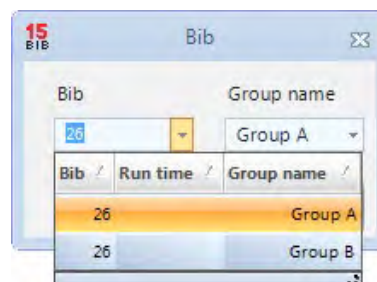
Click on arrow next to bib number and select group

When you open the window bib evaluation, the group that you selected before is always shown. When clicking on the arrow in the <Group name> field, all possible groups are shown.



If you input a bib, automatically the correct class is allocated in case this bib is only in one class.

If you have the same bib in different groups you can see the bib in all groups here. This speeds up the evaluation if you are not sure about the group of the competitor.



Heat list: Event (1) - Heat (6)

Group name : A (11 items)

Jump	Active	Rank	Bib	First name	Last name	Club	Nation	Start time	Finish time	Run time	Disq.	Delta
GoTo	<input checked="" type="checkbox"/>	2	1	Sebastian	Bormann	LKT	GER	16:51:00.0628	8:13:10.172	2:13:10.172		0.1157
GoTo	<input checked="" type="checkbox"/>	1	2	Ben	Richardson	UCD	IRE	16:51:00.0628	8:13:10.057	2:13:10.057		Winner
GoTo	<input type="checkbox"/>		3	John	Murray	LWM	IRE	16:51:00.0628			DNF	
GoTo	<input checked="" type="checkbox"/>	3	4	Nikita	Pustrikan	KAZ	KAZ	16:51:00.0628	8:13:10.276	2:13:10.276		0.2197
GoTo	<input checked="" type="checkbox"/>	5	5	Navuti	Boonratana	THA	THA	16:51:00.0628	8:13:10.586	2:13:10.586		0.5297
GoTo	<input checked="" type="checkbox"/>	7	6	Murat	Almansoori	UAE	UAE	16:51:00.0628	8:13:10.878	2:13:10.878		0.8213
GoTo	<input checked="" type="checkbox"/>	6	7	Dmitriy	Lozovoy	UZB	UZB	16:51:00.0628	8:13:10.745	2:13:10.745		0.6880
GoTo	<input checked="" type="checkbox"/>	4	8	Ole	Andersson	NOR	NOR	16:51:00.0628	8:13:10.496	2:13:10.496		0.4393
GoTo	<input checked="" type="checkbox"/>	9	9	Pankaj	Singh	IND	IND	16:51:00.0628	8:13:11.672	2:13:11.672		1.6157
GoTo	<input checked="" type="checkbox"/>	10	10	Jaskirat	N Lokesh	KYN	IND	16:51:00.0628	8:13:11.879	2:13:11.879		1.8224
GoTo	<input checked="" type="checkbox"/>	8	11	Ian	Collis	UCD	IRE	16:51:00.0628	8:13:11.505	2:13:11.505		1.4487

Group name : B (11 items)

Jump	Active	Rank	Bib	First name	Last name	Club	Nation	Start time	Finish time	Run time	Disq.	Delta
GoTo	<input checked="" type="checkbox"/>	9	21	Robert	Deckert	LKT	GER	16:51:00.0628	8:13:12.683	2:13:12.683		2.2184
GoTo	<input checked="" type="checkbox"/>	1	22	Pat	O' Conluain	UCD	IRE	16:51:00.0628	8:13:10.465	2:13:10.465		Winner
GoTo	<input checked="" type="checkbox"/>	2	23	Brian	Clifford	LWM	IRE	16:51:00.0628	8:13:10.651	2:13:10.651		0.1863
GoTo	<input checked="" type="checkbox"/>	3	24	Dmitriy	Gaineyev	KAZ	KAZ	16:51:00.0628	8:13:11.090	2:13:11.090		0.6253
GoTo	<input checked="" type="checkbox"/>	5	25	Thurakit	Liphongyu	THA	THA	16:51:00.0628	8:13:11.413	2:13:11.413		0.9484
GoTo	<input type="checkbox"/>		26	Mansoor	Albaloooshi	UAE	UAE	16:51:00.0628			DNF	
GoTo	<input checked="" type="checkbox"/>	4	27	Nikolai	Golovin	UZB	UZB	16:51:00.0628	8:13:11.312	2:13:11.312		0.8477
GoTo	<input checked="" type="checkbox"/>	6	28	Christian	Amundson	NOR	NOR	16:51:00.0628	8:13:12.001	2:13:12.001		1.5360
GoTo	<input checked="" type="checkbox"/>	8	29	Amresh	Kumar	IND	IND	16:51:00.0628	8:13:12.480	2:13:12.480		2.0157
GoTo	<input checked="" type="checkbox"/>	7	30	Rahul	Naveen	KYN	IND	16:51:00.0628	8:13:12.174	2:13:12.174		1.7090
GoTo	<input checked="" type="checkbox"/>	10	31	Williams	Parker Barrick	UCD	IRE	16:51:00.0628	8:13:12.771	2:13:12.771		2.3064

## 12.2.1 Start Time of a Class

It is possible that each group starts at a different time. Therefore, it is important that you can import a start time for the complete group. To import the start time for the complete class you must first switch to the class mode with .

### 12.2.1.1 Import a Start Time from the Impulse Log for a Class

- Grab with the mouse in the log list the start time that you want to import.
- Release the start time over the field [Start Time] (next to the mouse it must now show (+)).

### 12.2.1.2 Input a Start Time for a Class

- Click with the right mouse button on the field [Start Time].




Heat list: Women - Elite

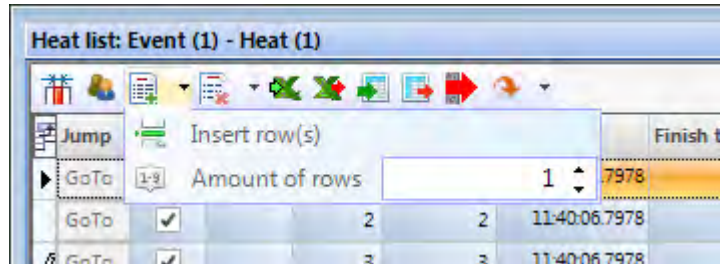
Class : (39 items)

Jump	Activ	Ran	Bib	Start time	Finish time	Run time	Cycle time	Difference	Disq.	Average s	Last name	First na	Nation	Tran
GoTo	<input checked="" type="checkbox"/>	1	1	13:52:00.0	14:23:12.393	31:12.393	31:12.393	Sieger		38.45 [k]				
GoTo	<input checked="" type="checkbox"/>	2	2	13:52:00.0	14:23:12.610	31:12.610	--	0.2173		38.45 [k]				
GoTo	<input checked="" type="checkbox"/>	3	285	13:52:00.0	14:23:36.448	31:36.448	24.0550	24.0550		37.97 [k]	Cohen	Susan	GBR	
GoTo	<input checked="" type="checkbox"/>	4	289	13:52:00.0	14:23:36.846	31:36.846	--	24.4529		37.96 [k]	Bell	Tracy	GBR	
GoTo	<input checked="" type="checkbox"/>	5	282	13:52:00.0	14:23:36.940	31:36.940	--	24.5471		37.96 [k]	Johnson	Kimberl	USA	
GoTo	<input checked="" type="checkbox"/>	6	288	13:52:00.0	14:23:37.110	31:37.110	--	24.7167		37.95 [k]	Müller	Renate	GER	
GoTo	<input checked="" type="checkbox"/>	7	292	13:52:00.0	14:23:37.552	31:37.552	--	25.1591		37.94 [k]	Lakes	Anne	GBR	
GoTo	<input checked="" type="checkbox"/>	8	287	13:52:00.0	14:23:37.748	31:37.748	--	25.3547		37.94 [k]	Miller	Catheri	GBR	
GoTo	<input checked="" type="checkbox"/>	9	284	13:52:00.0	14:23:37.766	31:37.766	--	25.3736		37.94 [k]	Anderson	Marion	NOR	
GoTo	<input checked="" type="checkbox"/>	10	290	13:52:00.0	14:23:38.288	31:38.288	--	25.8953		37.93 [k]	Hrubesch	Christin	GER	










### 12.3 Insert Row(s)

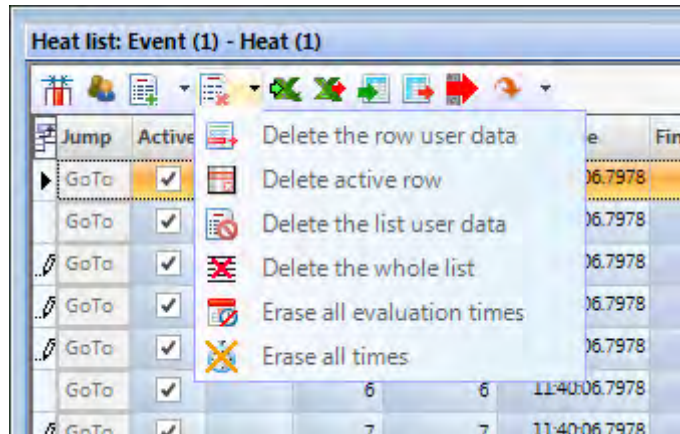
If you click on the icon  <Insert> a dropdown menu opens (see right). If you click <Insert row(s)>  the number of rows (lines) are inserted that you adjust in <Amount of rows> .



### 12.4 Delete

If you click on the icon  <Delete> a dropdown menu opens. You can choose as follows:

-  Delete the row user data
-  Delete active row
-  Delete the list user data
-  Delete the whole list
-  Erase all evaluation times
-  Erase all times

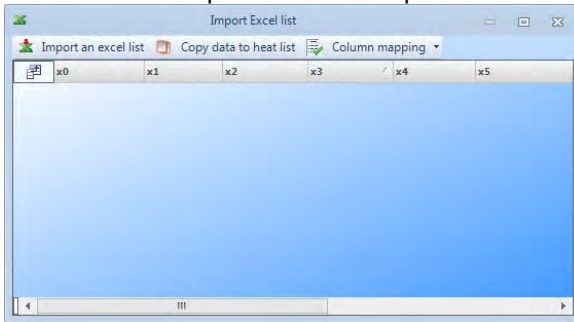


### 12.5 Import an Excel list

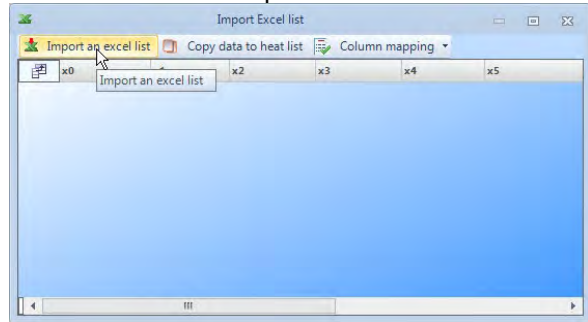
You can import an Excel list into the OPTIc3.NET heat list. The Excel list must have the ending .xls (Excel 97-2003 file) and include all data of a competitor lane by lane. Headers are not necessary.

	A	B	C	D	E	F	G	H	I
1	1	Sebastian	Bormann	LKT	GER				
2	2	Ben	Richardson	UCD	IRE				
3	3	John	Murray	LWM	IRE				
4	4	Nikita	Pustrikan	KAZ	KAZ				
5	5	Navuti	Boonratanathanakorn	THA	THA				
6	6	Murat	Almansoori	UAE	UAE				
7	7	Dmitriy	Lozovoy	UZB	UZB				
8	8	Ole	Andersson	NOR	NOR				
9	9	Pankaj	Singh	IND	IND				
10	10	Jaskirat	N Lokesh	KYN	IND				
11	11	Ian	Collis	UCD	IRE				
12	21	Robert	Deckert	LKT	GER				
13	22	Pat	O' Conluain	UCD	IRE				
14	23	Brian	Clifford	LWM	IRE				
15	24	Dmitriy	Gaineyev	KAZ	KAZ				
16	25	Thurakit	Liphongyu	THA	THA				
17	26	Mansoor	Albalooshi	UAE	UAE				
18	27	Nikolai	Golovin	UZB	UZB				
19	28	Christian	Amundson	NOR	NOR				
20	29	Amresh	Kumar	IND	IND				
21	30	Rahul	Naveen	KYN	IND				
22	31	Williams	Parker Barrick	UCD	IRE				

Click on to open the Excel import window.



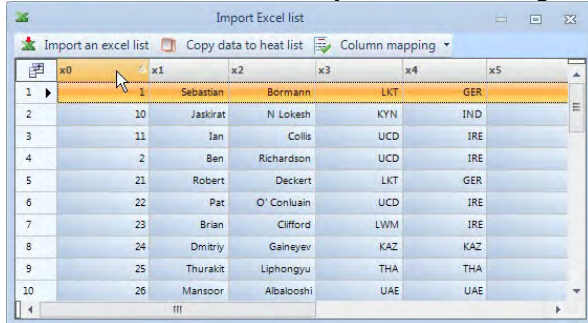
Click on <Import an Excel list>.



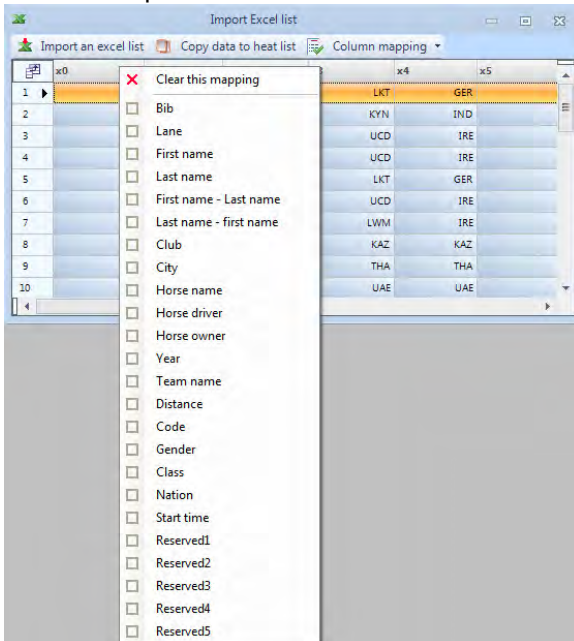
Select the file that you want to import.  
The imported list is shown.



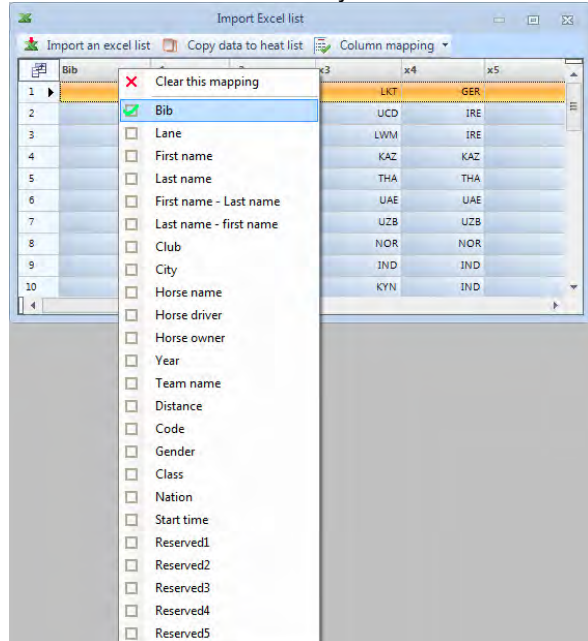
Select the headers by clicking with the right mouse button on the header that you want to change.



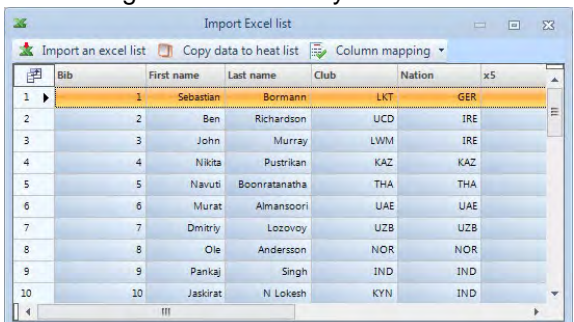
The possible headers are shown.



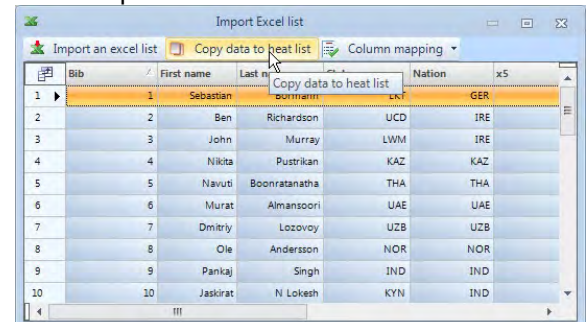
Click on the header that you want to show.



Change all headers as you need them.



Click on <Copy data to heat list> to import list in OPTIc3.NET software.





## 12.6 Export Excel list

- Click on to export the heat list to Excel.
- Select where you want to store it on your PC and the file name.

To adjust the export, you have to click on the icon in the meet browser.

## 12.7 Import List Layout

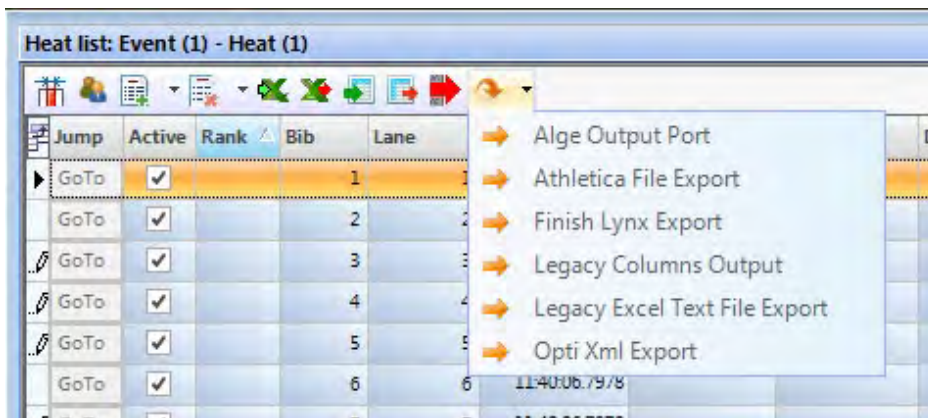
In the heat list you can select many different columns. You can then sort according to your requirements with drag and drop. You can also import list layouts from previous events.

## 12.8 Export List Layout

Take your time to prepare the header for the heat list. You can later export the layout in order to import it to other events.

## 12.9 Export Selected Result Lists

You can select, which export you want to execute.



## 12.10 Export Result List

There are certain ways to export a result list. You can export as text file, XML file or via RS232 interface. If you click on all active exports are activated.

To adjust the export, click on in the header of the software.

## 12.11 Transponder Times Integration

This function is only active if you have the O3-TSP transponder upgrade.

If you click on , all transponder times, which do not yet have valid times, are integrated as official times.


## 12.12 Transponder Impulse Selection

This function is only active if you have the O3-TSP transponder upgrade.


When working with transponders, it often happens that the same transponder is read several times. With this function you can do the following adjustment:

- First impulse of transponder of a bib is used.
- Last impulse of transponder of a bib is used.

**12.13 Video Wall – Sponsors** 

This function is only active if you activated the video wall function “ScreensClient”.  
When the button  is clicked, the prepared ads are on the video wall browser displays.

**12.14 Video Wall – Lists** 

This function is only active if you activated the video wall function “ScreensClient”.  
When  is clicked the start list or result list of the current heat is shown on the video wall.



## 13 Meet Browser

The meet browser is an essential part of the software. You can determine the race structure and enter important information about meeting, session, event and heat.

As soon as you <Create a new meet> you are asked to enter the <Meet name>. The meet name is used to store your meet. In case you want to use different names for storing and printing, you can enter a name in the second field <Meet name printed>. This name is used only for printing. If the field <Meet name printed> stays blank, the meet name is also used for printouts.

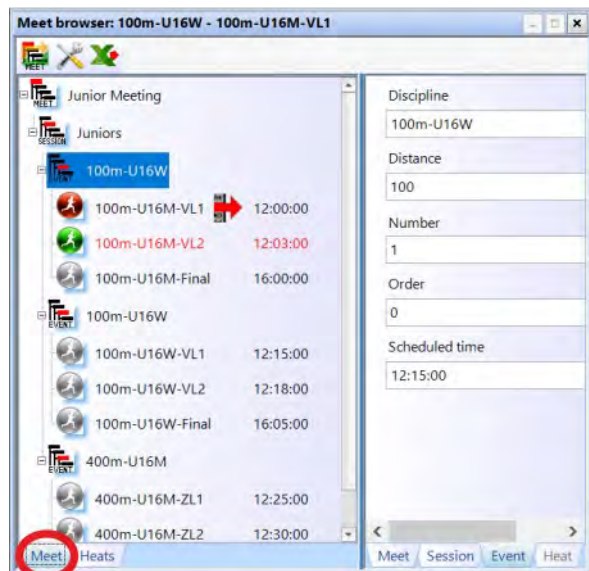
You can also enter other information for the meeting that is also printed. Moreover, it is important that you select the correct type of sport, as the OPTIc3.NET software has sport specific settings.

As soon as you create a new meet, a default meet browser is configured for this meeting.

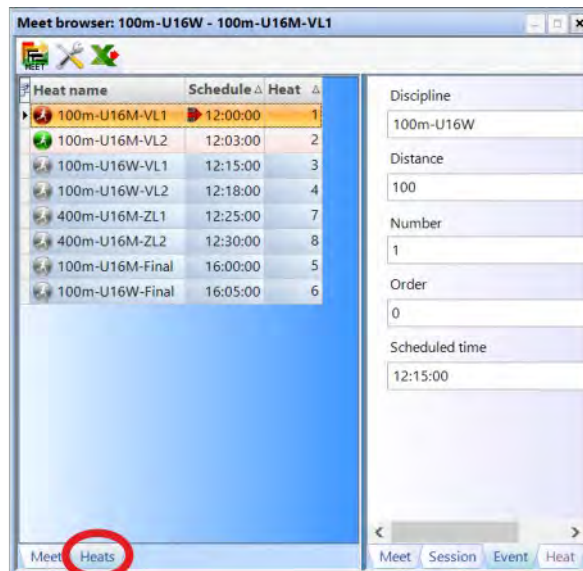
In most cases the photo finish system is used with a sport specific evaluation program that can provide the data to OPTIc3.NET. In this case you can import the complete race structure from this program.

The meet browser can be displayed in two different ways:

- **Meet structure:** The meet structure with Meet, Session, Event and Heat. This structure is used when the racing data is not taken over by an evaluation program.
- **Heat structure:** The heats are arranged according to planned start times. This structure can only be used if each run has a planned start time. The view is ideal to use for events that have been imported from another evaluation software.



Meet Structure



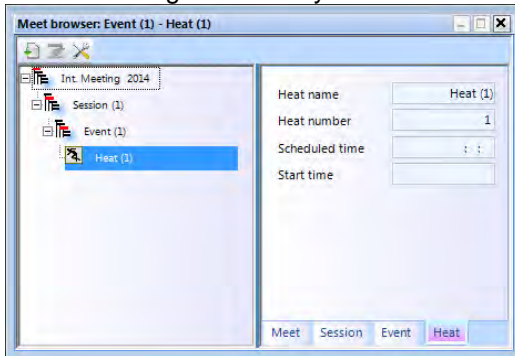
Heat Structure



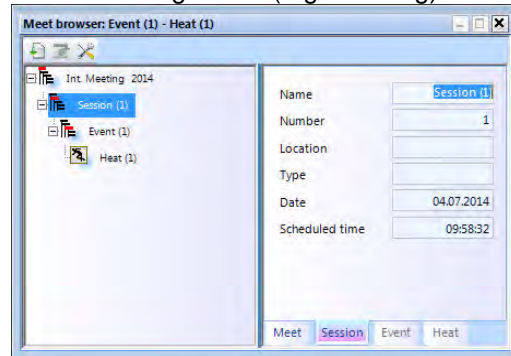
### 13.1 Enter Race Structure manually

If you have to build your own race structure you have to follow the steps as below:

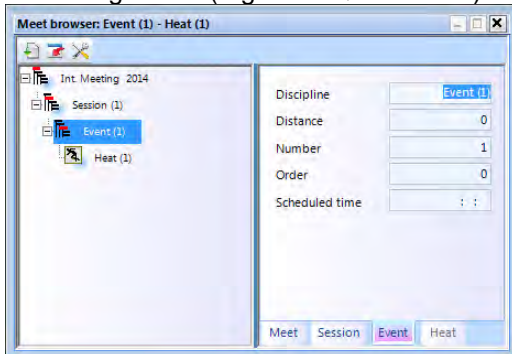
The default meet browser automatically shows the meeting name that you created.



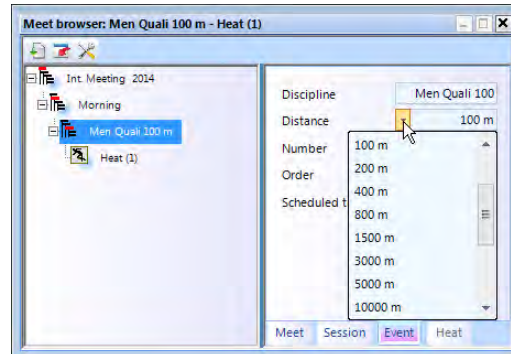
Click on session and input the session name on the right side (e.g. morning)



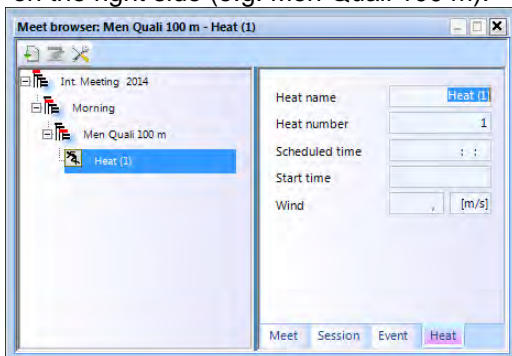
Click on event and input the event name on the right side (e.g. Men Quali 100 m).



For track and field events you have to select the distance for the automatic use of the anemometer.

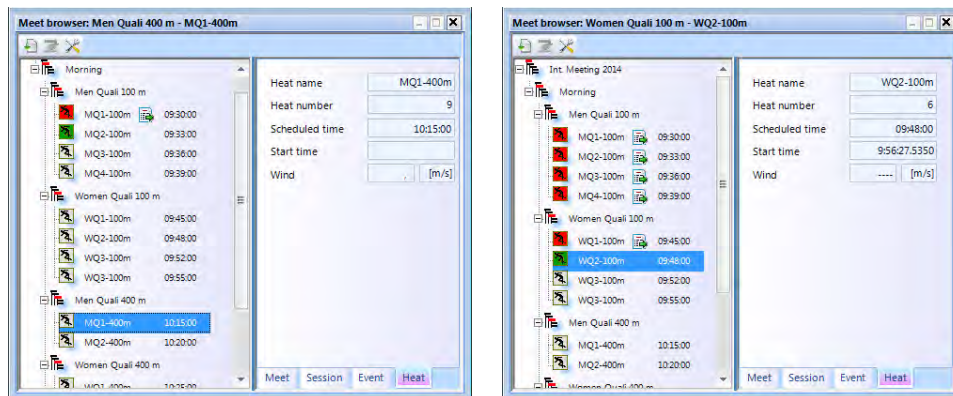


Click on heat and input the heat name on the right side (e.g. Men Quali 100 m).

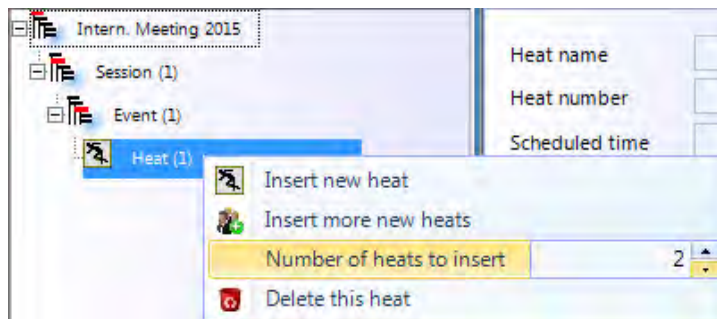


- If you want to insert additional sessions click with right mouse button on <Session(1)> of the race structure. A drop-down menu opens. Click on <Insert new session>.
- If you want to insert additional events click with right mouse button on <Event> of the race structure. A drop-down menu opens. Click on <Insert new event>.
- If you want to insert additional heats click with right mouse button on <Heat> of the race structure. A pull-down menu opens. Click on <Insert new heat>.






- It is also possible to insert several heats at once. Move the mouse to the heat under which you want to add new heats and click with the right mouse button. A drop-down menu opens. Adjust the number of heats to be inserted and click on <Insert more new heats>.

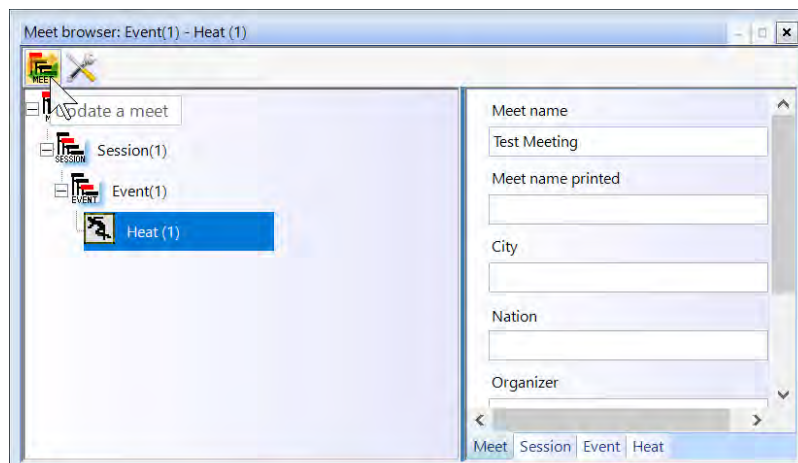


## 13.2 Import Race Structure

You can import and export heats or the entire race structure from different meet management software. The following software exchange formats are supported:

- Seltec Track & Field 3
- Seltec Track & Field
- Athletica
- Cosa
- Finish Lynx

With Seltec Track & Field 3 you can e.g. take over and write back the entire data structure for a competition via OptiXmlImport and OptiXmlExport. If you click on the icon  in the upper left corner, a window opens in which you can load the OptiXmlImport file or update the data structure during the race.




## 14 Post-Processing

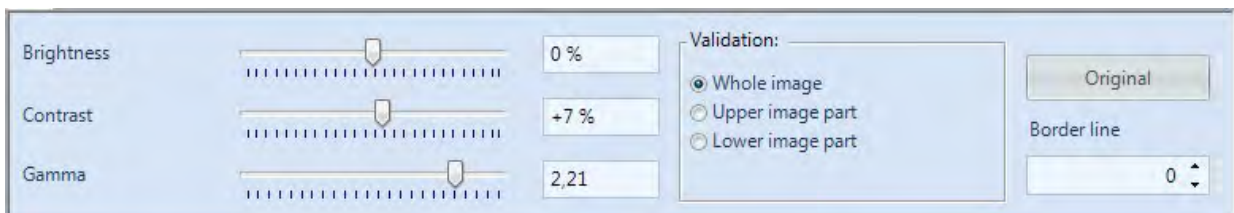
You have the possibility to improve the images after recording. Especially changes to brightness, contrast and gamma can result in considerably improved picture quality. Irrelevant pictures can be deleted from a heat. In case pictures are taken in the wrong heat or without allocation to any heat, you can copy them from the overview to the correct heat.

### 14.1 Color – Black & White

If you click on  the picture is shown in black and white; for colour click again on .



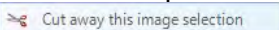
### 14.2 Brightness / Contrast / Gamma

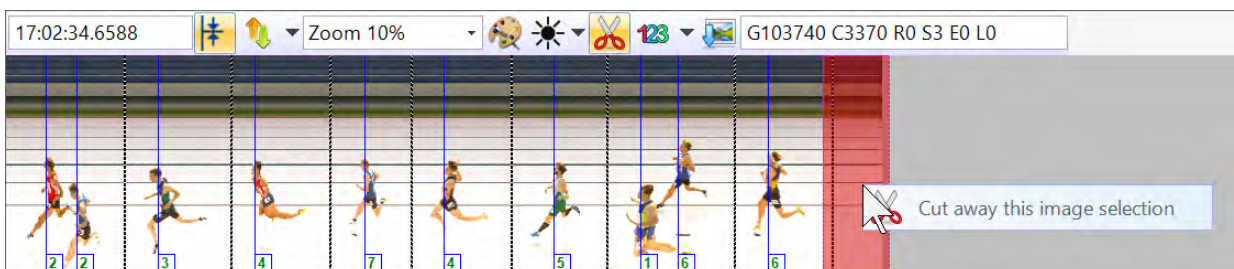
Click on  for adjusting brightness, contrast and gamma of the recorded picture. These adjustments apply to all evaluation windows.



For detailed description see 9.1 View 1, Page 55.



### 14.3 Cut – Delete Image Parts

Cut Picture: Click on  to cut parts of the picture (e.g. recorded objects that do not belong to the race). When you select cutting, the icon changes to  and shows that cutting is active. Click in the picture, keep the left mouse button pressed and move the mouse. Part of the picture is now marked red. You cut this part by clicking the right mouse button.  appears. Click with the left mouse button on it.

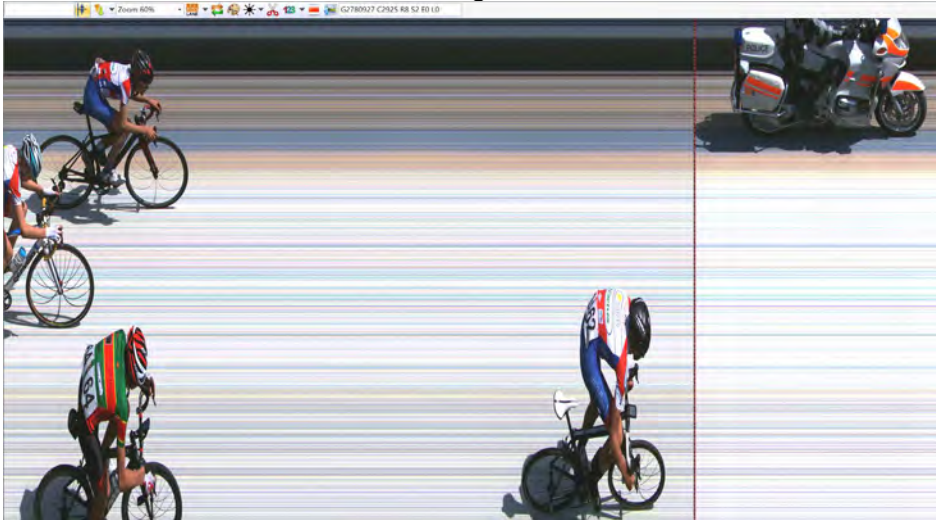





Cutting is always executed in the heat window. The picture that you cut remains in the overall picture of the meet.

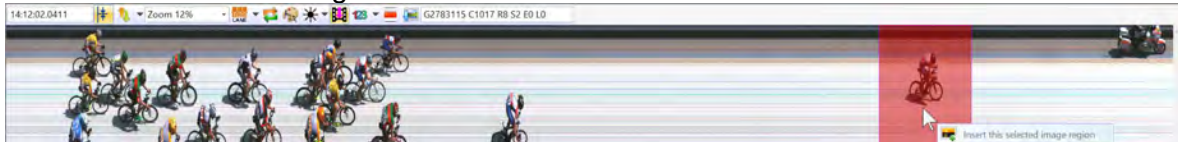
## 14.4 Insert Parts of Event Picture in a Heat


All pictures taken by the OPTIc3 are saved in an overview picture of the event. If you click on  this icon changes to . Now the overview picture is displayed. If you have participants in the wrong heat, they are not visible in the run in which you are evaluating. Images that were taken with the emergency function F1 are also not visible in the run. If you want to import missing images into a run, proceed as follows:

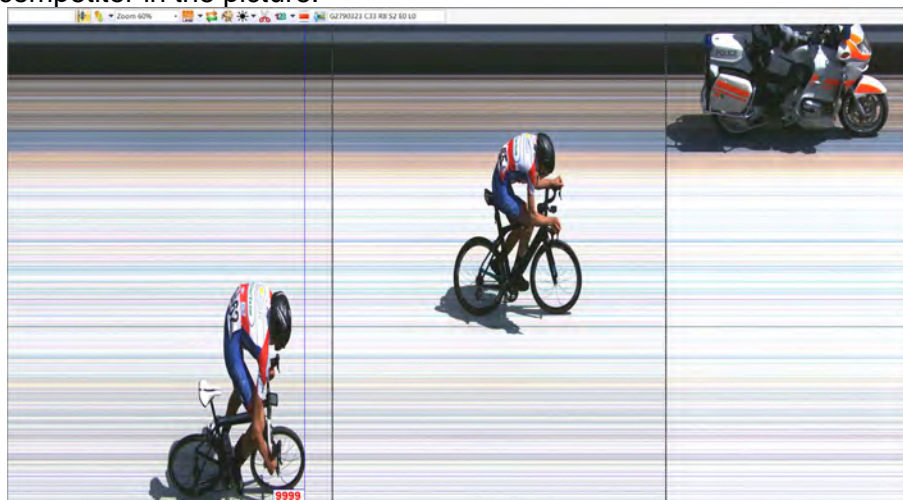
- In the picture of this heat the winner is missing.



- Click on  on the left sidebar, so that it changes to . The picture of the whole competition is shown (all heats).
- Click on  to mark part of the picture with the mouse in red. Click the right mouse button to insert the selected image into the active run.



- Switch back to the picture of the heat ( must show), you can find and evaluate the missing competitor in the picture.

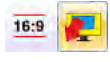


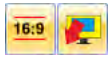


## 14.5 Export of Images

It is possible to export photo finish images as jpg-files or bmp-files. Such exported images can then be used e.g. to show a photo finish picture in the TV). The images can be exported from the three image windows (overview, view 1 and view 2).




 .....Export a part of the picture

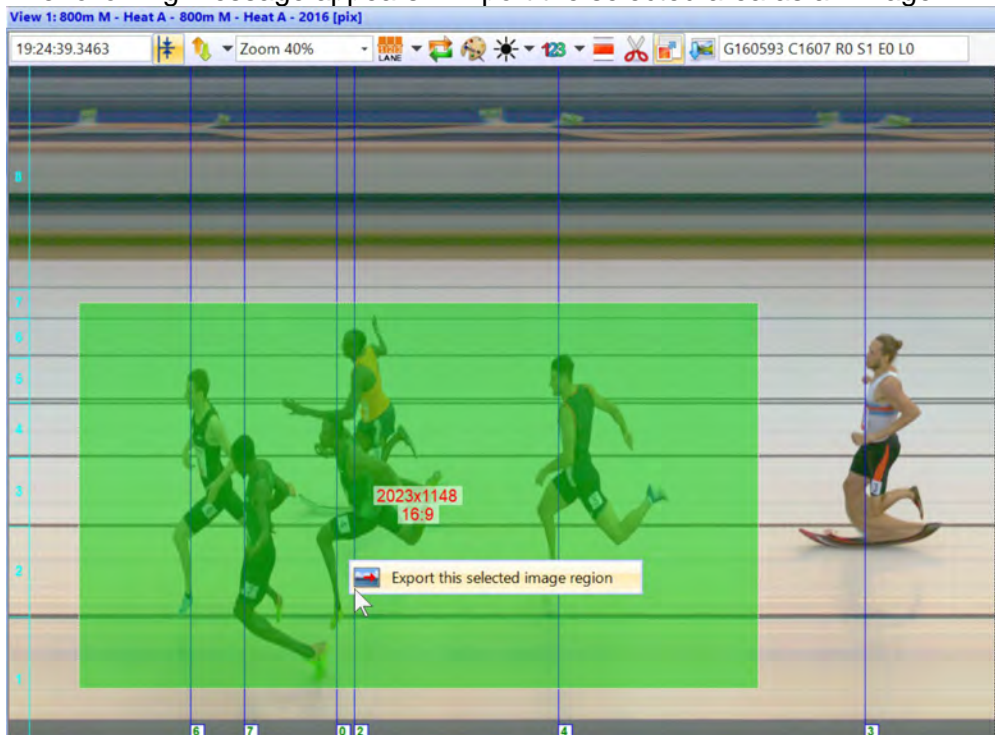
 .....Export a part of the picture in the format of 16:9

 .....Export the complete picture that you see in the window

### 14.5.1 Export of a marked Image



- Click on the icon 
- Place the mouse on a corner of the desired image section
- Hold down the left mouse button and move to the diagonal corner of the image section
- The marked area is shown in transparent green
- The pixels of the image section are displayed in the center of the selected area
- If the image section is in the ratio 4: 3 or 16: 9, this is also displayed
- Release the left mouse button
- Move the mouse into the green area and click the right mouse button
- The following message appears: "Export the selected area as an image"



- Move the mouse into this field and press the left mouse button
- A window opens in which the folder and name for the image is selected




### 14.5.2 Export of a marked Image in 16:9-Format



- Click on the icon  and then on  to export an image in 16:9 format.
- Place the mouse on a corner of the desired image section
- Hold down the left mouse button and move to the diagonal corner of the image section
- The marked area is shown in transparent green
- The pixels of the image section are displayed in the center of the selected area
- Release the left mouse button
- Move the mouse into the green area and click the right mouse button
- The following message appears: "Export the selected area as an image"
- Move the mouse into this field and press the left mouse button
- A window opens in which the folder and name for the image is selected

### 14.5.3 Image Export of a View

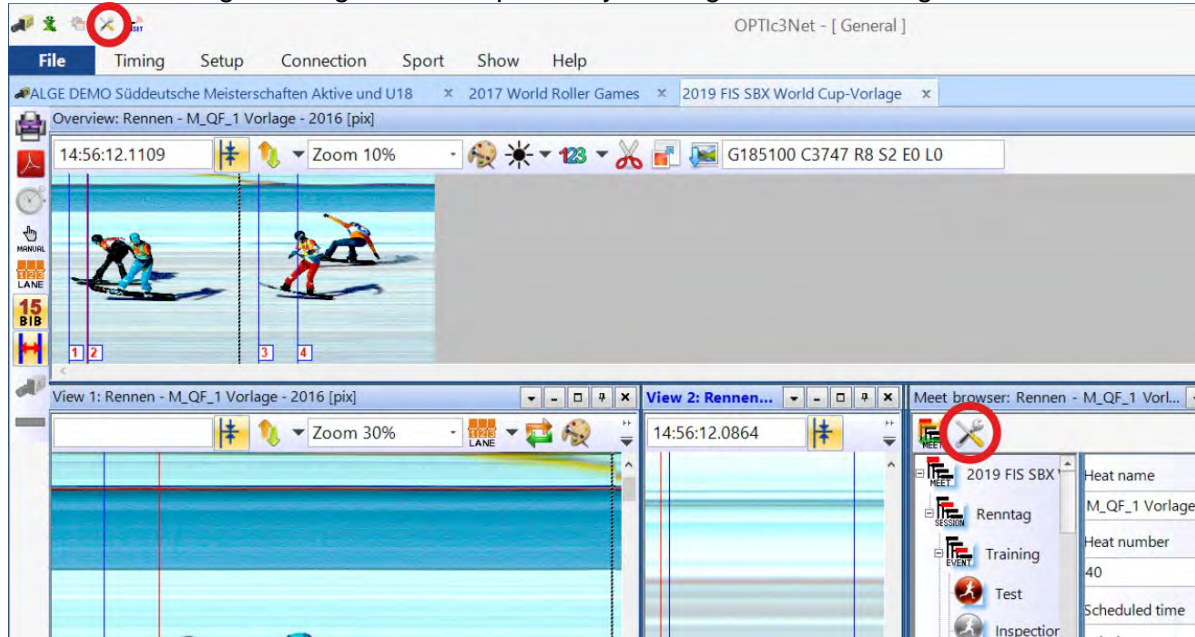


- Click on 
- Move the mouse into the picture (view) and click the right mouse button
- A window opens in which the folder and storage name for the picture is selected

## 15 Data Exchange Settings

The data from a complete Meet or heat can be transferred between OPTIc3 and other Meet Management programs in various ways. The settings for the data exchange has to be done in the "ATL Exchange Settings".

The "ATL Exchange Settings" can be opened by clicking on the following icon:



### ATL Exchange Settings

Alge Output **Alge Versatile Output** Display Legacy Columns NSW Harness Scoreboard NSW Harness Startlist Scoreboard Videowall Infosystem XML Socket

Category	Setting Name	Value
▼ Sonstiges		
>	AlgeDisplayOutput	dbnetsoft.AdditionalTimingLibrary.OptiExchange.AlgeDisplayOutputSettings
>	AlgeOutputPort	Disabled
>	AlgeVersatileExchangeProtocolOutput	dbnetsoft.AdditionalTimingLibrary.OptiExchange.AlgeVersatileExchangeOutputSettings
>	AthleticaFileExport	Disabled
>	EnableLogging	True
>	FinishLynxExport	Disabled
>	FinishLynxImport	
>	HttpExchange	dbnetsoft.AdditionalTimingLibrary.OptiExchange.HttpExchangeSettings
>	ImportMostRecentDirectory	C:\Users\Public\Documents\OPTIc3NET\OPTI-Exchange
>	Infosystem	Disabled
>	LegacyColumnsOutput	Disabled
>	LegacyExcelTextFileExport	Disabled
>	LegacyRaceFilesImport	
>	NSWHarnessScoreboardOutput	Disabled
>	NSWHarnessStartlistScoreboardOutput	Disabled
>	OptiXmlExport	Enabled
>	OptiXmlImport	
>	OptiXmlSocket	dbnetsoft.AdditionalTimingLibrary.OptiExchange.OptiXmlSocketSettings
>	ScreensClient	Enabled, dbnetsoft.AdditionalTimingLibrary.OptiExchange.OptiScreensClientSettings

## 15.1 AlgeDisplayOutput

You can control numeric and alphanumeric displays with this interface  
By adding Ports you can send this data through several interfaces as shown below.

AlgeDisplayOutput	dbnetsoft.AdditionalTimingLibrary.OptiExchange.AlgeDisplayOutputSettings
Ports	AlgeDisplayOutputPortSettings[] Array
[0]	Enabled, TAF3-Livetime - TcpServer (Port 4445)
Broadcast Client	Broadcast-Port 10001, Port 4445
Broadcast Server	Port 10002, Brodcast-Host 255.255.255.255, Brodcast-Port 10001, Brodcast-Interval 5s)
Description	TAF3-Livetime
Enabled	True
Encoding	UTF8
Layer	Tcp Server
Line Beginnings	Int32[] Array
Line Ends	Int32[] Array
Mode	Runtime
Model	DLine
SendClock	False
SendHeatAndEventId	True
Serial	COM1,2400,None,8,None,One
Serialization	None
ShiftMode	ShiftTwoDigitsRight
ShowWinnerTimeWhenAvailable	False
TCP Client	Port 4445
TCP Server	Port 4445
UDP Receiver	All,Port 4444
UDP Sender	:4444

Unter Ports kann eine neue Schnittstelle hinzugefügt werden.

Member:

0	Enabled, TAF3-TCP4445 - TcpSen
1	Enabled, Clock, RS232-Display - S

Enabled, Clock, RS232-Display - Serial (COM1,2400,None,8,None,One)-Eigenschaften:

<b>Broadcast</b>	
Broadcast Client	Broadcast-Port 10001, Port 4445
Broadcast Server	Port 10002, Brodcast-Host 255.255.255.255, Brodcast-Po
<b>Enhanced</b>	
Mode	Runtime
Model	DLine
SendClock	True
SendHeatAndEventId	True
ShiftMode	NoShift
ShowWinnerTimeWhenAvailable	True
<b>General</b>	
Description	RS232-Display
Enabled	True
Encoding	UTF8
Layer	Serial
Line Beginnings	Serial
Line Ends	Tcp Client
Serialization	Tcp Server
<b>Serial</b>	
Serial	Udp Sender
TCP	Udp Receiver
UDP	Broadcast Server
UDP Receiver	Broadcast Client
UDP Sender	All,Port 4444
	:4444

Adjust the interface and its settings as required.

## 15.2 OPTIc3-XML-Dataformat

The standard data exchange for the OPTIc3 is via XML. This data format makes it very easy to import and export racing data from another program (e.g. with SELTEC Track and Field 3 (TAF3)).

Important: enable the OptiXmlExport:  
The import of XML-Files is always active.

ATL Exchange Settings

Alge Output: Alge Versatile Output Display Legacy Columns: NSW Harness Scoreboard

NSW Harness Startlist Scoreboard Videowall Infosystem XML Socket

▼ **Sonstiges**

- > AlgeDisplayOutput dbnetsoft.AdditionalTimingLibrary.OptiExchange.AlgeDisplayOutput
- > AlgeOutputPort Disabled
- > AlgeVersatileExchangeProtocolOutput dbnetsoft.AdditionalTimingLibrary.OptiExchange.AlgeVersatileExchar
- > AthleticaFileExport Disabled
- EnableLogging True
- > FinishLynxExport Disabled
- > FinishLynxImport
- > HttpExchange dbnetsoft.AdditionalTimingLibrary.OptiExchange.HttpExchangeSettin
- ImportMostRecentDirectory C:\Users\Public\Documents\OPTIc3NET\OPTI-Exchange
- > Infosystem Disabled
- > LegacyColumnsOutput Disabled
- > LegacyExcelTextFileExport Disabled
- > LegacyRaceFilesImport
- > NSWHarnessScoreboardOutput Disabled
- > NSWHarnessStartlistScoreboardOutput Disabled
- ▼ **OptiXmlExport** Enabled
- AutomaticExportDirectory
- DefaultFilename Heat {name} {nr}
- Enabled True
- MostRecentDirectory C:\Users\Public\Documents\OPTIc3NET\OPTI-Exchange
- > OptiXmlImport
- > OptiXmlSocket dbnetsoft.AdditionalTimingLibrary.OptiExchange.OptiXmlSocketSetti
- > ScreensClient Enabled, dbnetsoft.AdditionalTimingLibrary.OptiExchange.OptiScree



## 15.2.1 Settings for Data Exchange with SELTEC TAF3

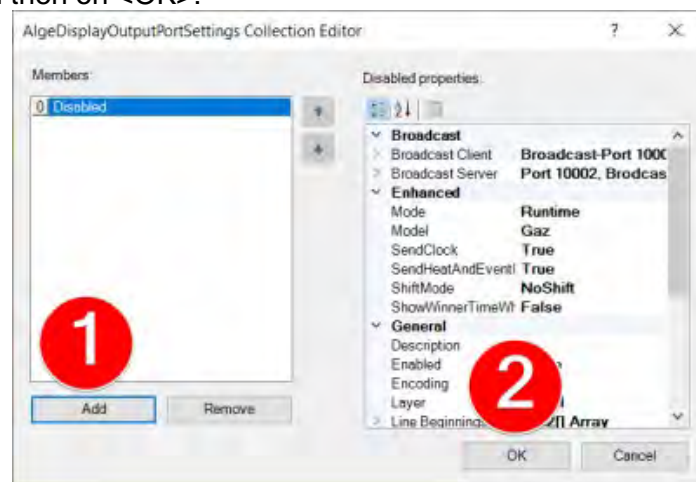
### 15.2.1.1 Adjustment for OPTIc3

#### 15.2.1.1.1 *ALGEDisplayOutput Livetime – Running Time*

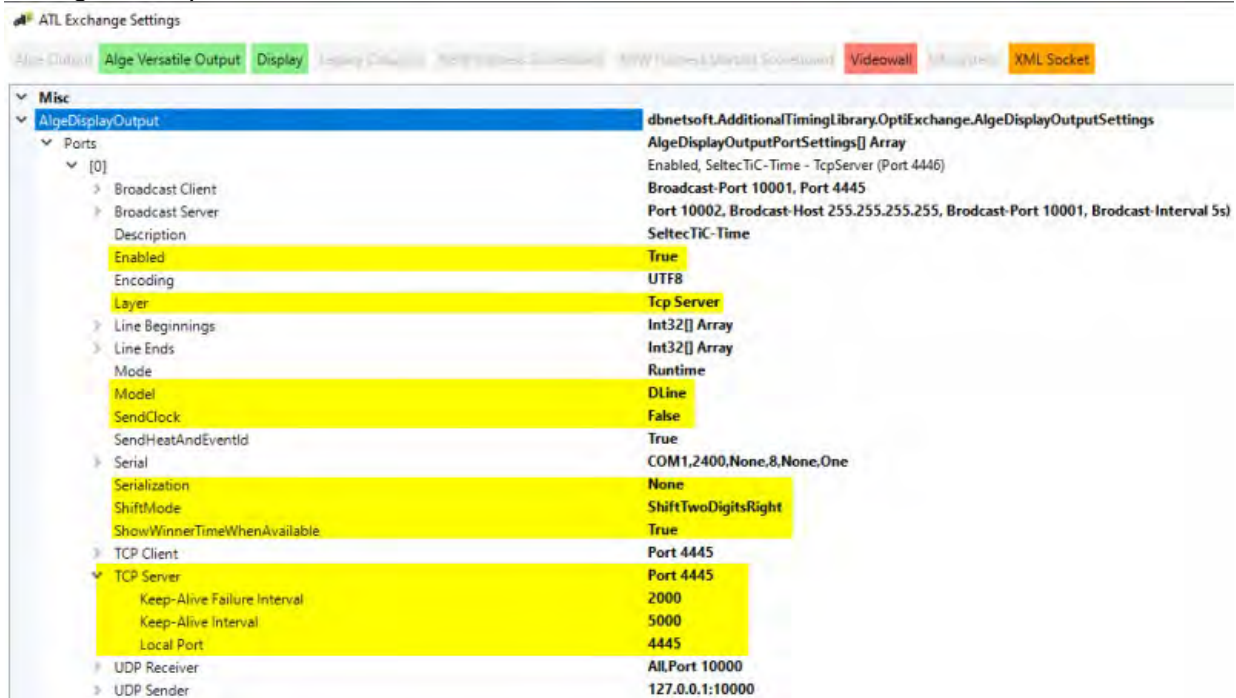
Make a new port



Click on <Add> and then on <OK>:



Configure the port:



### 15.2.1.1.2 *AlgeVersatileExchangeProtocolOutput* – Live Results

For the „Local Port“ you must adjust another port as for „AlgeDisplayOutput“. This port settings must be identical as at the SELTEC Timing Client.

The yellow highlighted items have to be adjusted as shown.  
The red one must fit to the adjustments in the SELTEC Timing-Client!

ATL Exchange Settings

Alge Output | **Alge Versatile Output** | Display | Legacy Columns | NSW Harness Scoreboard | NSW Harness Startlist Scoreboard | Videowall | Infosystem

XML Socket

▼ Sonstiges	
▶ AlgeDisplayOutput	dbnetsoft.AdditionalTimingLibrary.OptiExchange.AlgeDisplayOutputSettings
▶ AlgeOutputPort	Disabled
▼ <b>AlgeVersatileExchangeProtocolOutput</b>	dbnetsoft.AdditionalTimingLibrary.OptiExchange.AlgeVersatileExchangeOutputSettings
▼ Ports	AlgeVersatileExchangeOutputPortSettings[] Array
▼ [0]	Enabled, TAF3-LIVE - TcpServer (Port 4446)
▶ Broadcast Client	Broadcast-Port 10001, Port 4445
▶ Broadcast Server	Port 10002, Broadcast-Host 255.255.255.255, Broadcast-Port 10001, Broadcast-Interval 5s)
Description	TAF3-LIVE
Enabled	True
Encoding	UTF8
<b>Layer</b>	<b>Tcp Server</b>
▶ Line Beginnings	Int32[] Array
▶ Line Ends	Int32[] Array
▶ Serial	COMx,9600,None,8,None,One
<b>Serialization</b>	<b>None</b>
▶ TCP Client	Port 4445
▼ TCP Server	Port 4446
Keep-Alive Failure Interval	2000
Keep-Alive Interval	5000
<b>Local Port</b>	<b>4446</b>
▶ UDP Receiver	All,Port 4444
▶ UDP Sender	:4444
SendResultListOnHeatDataChanged	True

### ALGE XML – Exchange of Meeting Structure on a Database:

Make sure that the „FinishLynxExport“ is not active.

▼ FinishLynxExport	Disabled
AustralianGreyhoundMapping	False
BackupExportFolder	
<b>Enabled</b>	<b>False</b>

Activate the XML-Export:

▼ OptiXmlExport	Enabled
DefaultFilename	Heat (name) (nr)
<b>Enabled</b>	<b>True</b>
MostRecentDirectory	C:\Users\timelk\Downloads\TAF_Test

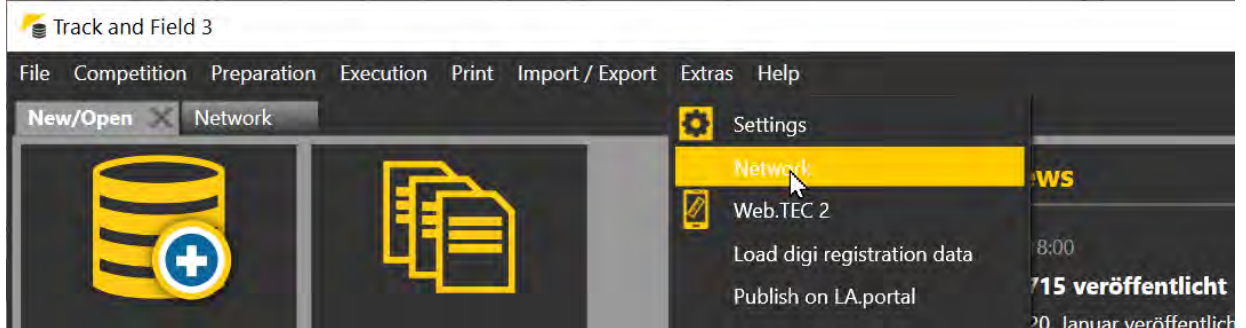
### Precision of OPTIc3

The precision must be set to 1/100th in the menu <Timing>.

## 15.2.2 Adjustments for the Timing Client of SELTEC TAF3

Open SELTEC Track and Field 3 (TAF3 – main software) and the SELTEC Timing Client.

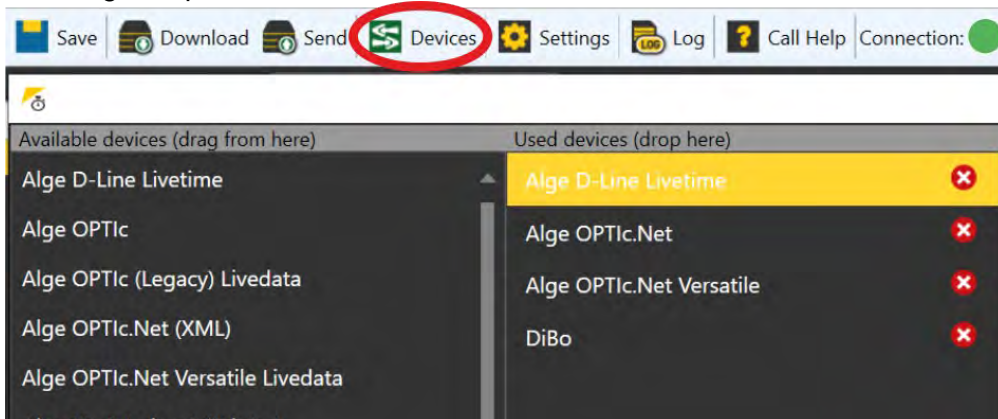
- Open an event in TAF3 and click on <Extras> and <Network>



- Click on that you have access with the Timing Client to the main software.
- A windows will open at the Timing Client and you have to click on and input any name for this event (whatever you want).

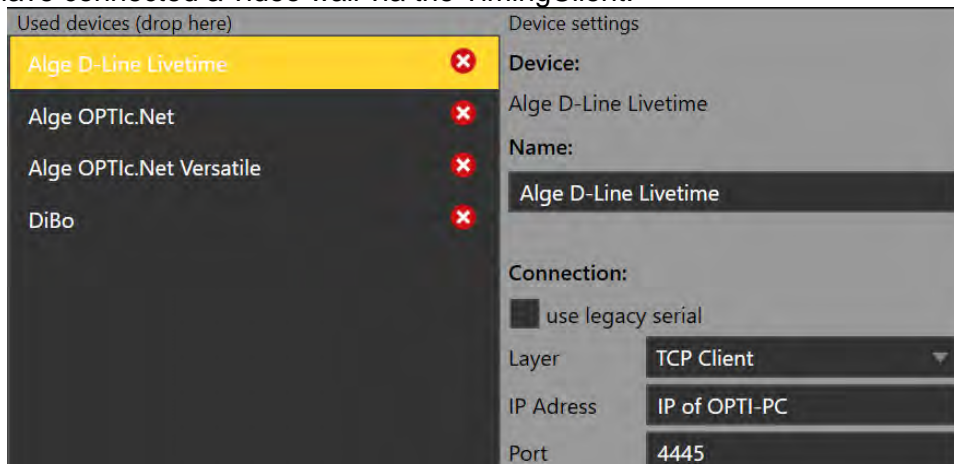
### Open the Device Manager:

Mit „Drag&Drop“ können Sie die Geräte von Links in die Mitte ziehen.



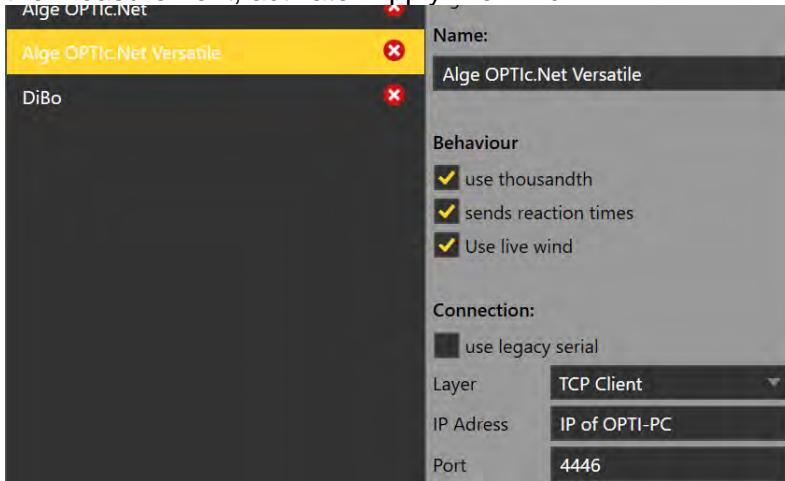
### Alge D-Line Livetime –Running Time

The connection of the running time is only necessary if you record intermediate times and / or have connected a video wall via the TimingClient.



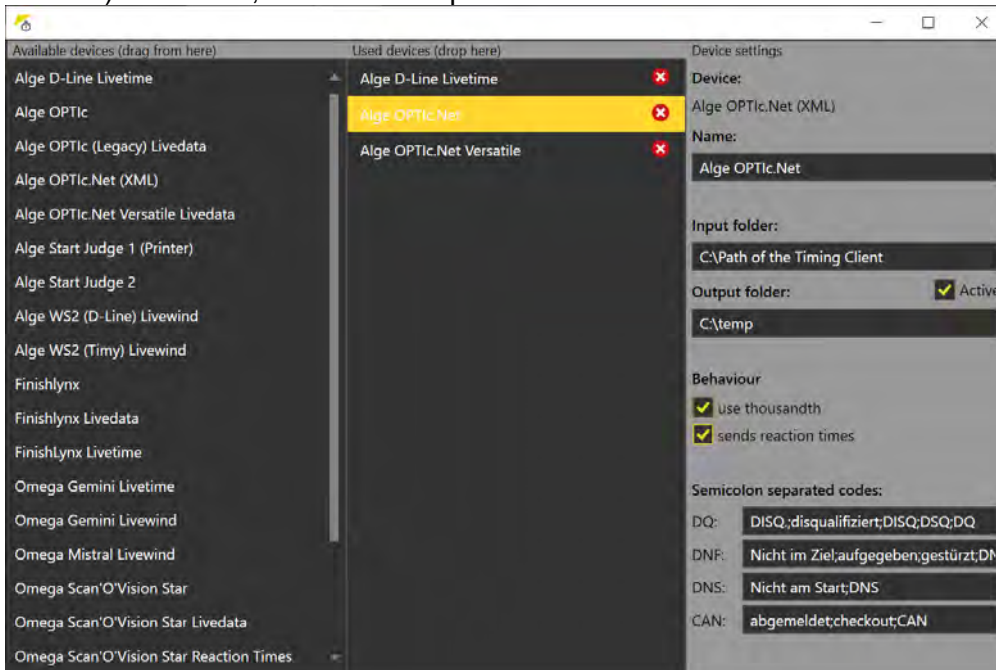
### Alge Versatile – Liveresults, Wind and StartJudge2

Select a different port for the port than for the D-LINE. Around  $4445 + 1 = 4446$ . If desired, activate "accept thousandths" or "send reaction times". In order to receive the wind directly after the measurement, activate "Apply live wind".

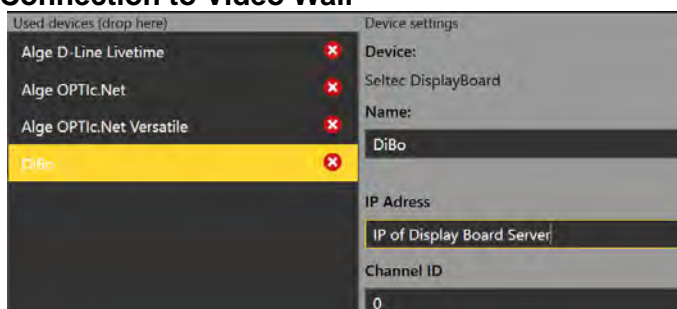


### ALGE XML – Exchange of the Meeting Structure

With these files the competition structure for timing is sent. The files must be located in the network on a shared folder that is accessible to both computers (SELTEC Timing Client and OPTIc3). If desired, activate "accept thousandths" or "send reaction times".

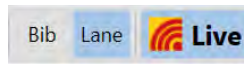
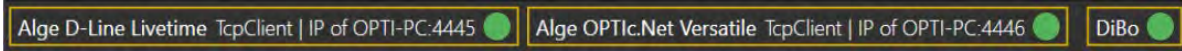


### Connection to Video Wall



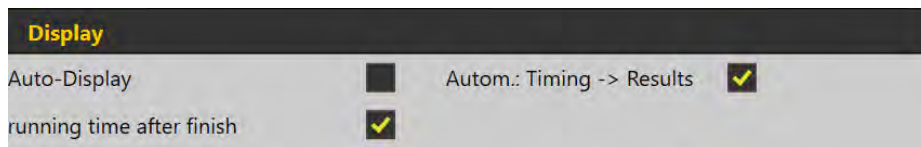
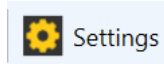


All connections are now set and the window can be closed. If the connections are active (only after the settings in OPTI) and configured correctly, the connection indicators are green at the bottom left.



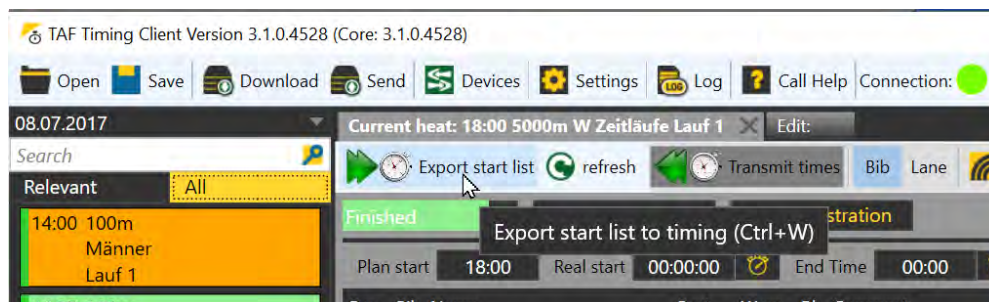
The live button activates the live transfer. If a live evaluation (possibly with relays) is not desired, it can be paused here.

### Adjustments of the Video Wall – Recommendation for Live Production



### 15.2.3 Execute Heats

Export the start lists to the exchange folder. All lists with the status "Official start list" are exported.



Before the start of the competition, the competition structure must be imported into OPTIc3 by loading the meeting file exported by the timing client. All competition parameters are then taken over from Seltec TAF3.



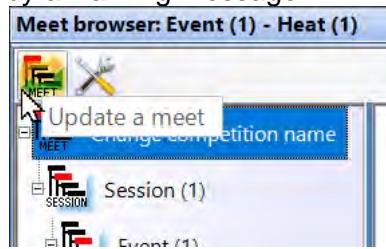
This also applies to the competition name. If this is unfavorable for the ALGE video wall, it can still be adjusted in OPTIc3.

Meet name

Meet name printed

City

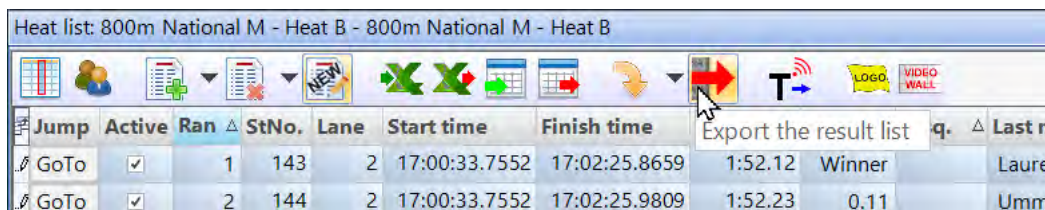
During the competition this file must be used for updates by clicking on "Update a meet" . Incorrect operation is prevented by a warning message.



Zum Start des Rennens muss im Timing Client der passende Lauf geöffnet und auf „In Bearbeitung“ gesetzt sein.



During the evaluation of the photo finish each time is transferred live to the list in the Timing Client. In order to get possible special status (e.g. DNF), the red export arrow must be clicked in the OPTIc3 software when the evaluation is finished. This button triggers all currently activated export types (RS232 and file). To be on the safe side, the results list is also output as .heatresultxml.



The status must now be set to "Finished" in the Timing Client. If this has happened in all heats of a competition, this competition is automatically set to "official" and removed from the list of relevant competitions.



The Seltec video board is controlled in the Timing Client via the tab "Live Timing"



### 15.3 Data Format of Finish Lynx

If you use a program that supports the Lynx data format (e.g. Hy-Tek), you have to make the following settings in the "ATL Exchange Settings":

▼ <b>FinishLynxExport</b>	<b>Enabled</b>
AustralianGreyhoundMapping	<b>False</b>
BackupExportFolder	
Enabled	<b>True</b>
ExportFilenameFormat	<b>{filename}</b>
ExportTimeOfDayInsteadOfNettime	<b>False</b>
FiccMapping	<b>False</b>
HorseRacingAustraliaMapping	<b>False</b>
MostRecentDirectory	C:\Users\alber\OneDrive\Desktop
▼ <b>FinishLynxImport</b>	
AustralianGreyhoundMapping	<b>False</b>
HorseRacingAustraliaMapping	<b>False</b>
IgnoreMeetName	<b>False</b>
ImportAllHeatsIfContainsSingleRoundOnly	<b>False</b>
ImportStandardFinishLynxHeatNumberFormat	<b>True</b>
MapRoundIdsToEvents	<b>True</b>
MostRecentDirectory	

The following settings must be made for the Hy-Tek Meet Manager:



Check the directory when exporting the schedule and the start lists! You have to send the results from OPTIX.NET to the same directory.

Update Start Lists

SESSION LIST				
	Day	Start Time	Session #	Session Title
▶	All		All	All Events
	1	15:00 PM	1	Reuniunea 1
	2	10:00 AM	2	Reuniunea 2

**Select Session From Above List**

Activate update of start lists

Number of heats/flights to insert in schedule for Un-Seeded Events :

**Team Names**

Full Team Name     Team Abbreviation  
 Short Team Name     Alternate Team Abbreviation

Shared Location for FinishLynx Data - d:\Data\Hy-Tek\TrackField\exchange

Change Data Location

OK    Cancel



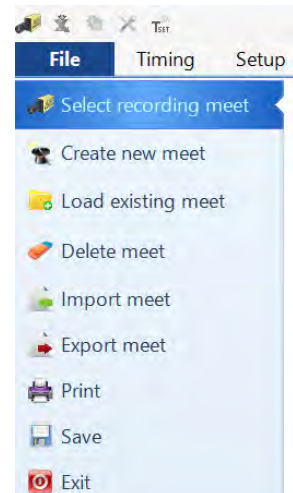
## 16 Import and Export of Meets and Heats

You can import or export entire meets or individual runs in the OPTIc.3NET program. This is important in order to transfer the data from one PC to another.

### 16.1 Import and Export Meet

In the <File> menu it is possible to import or export “Meets”.

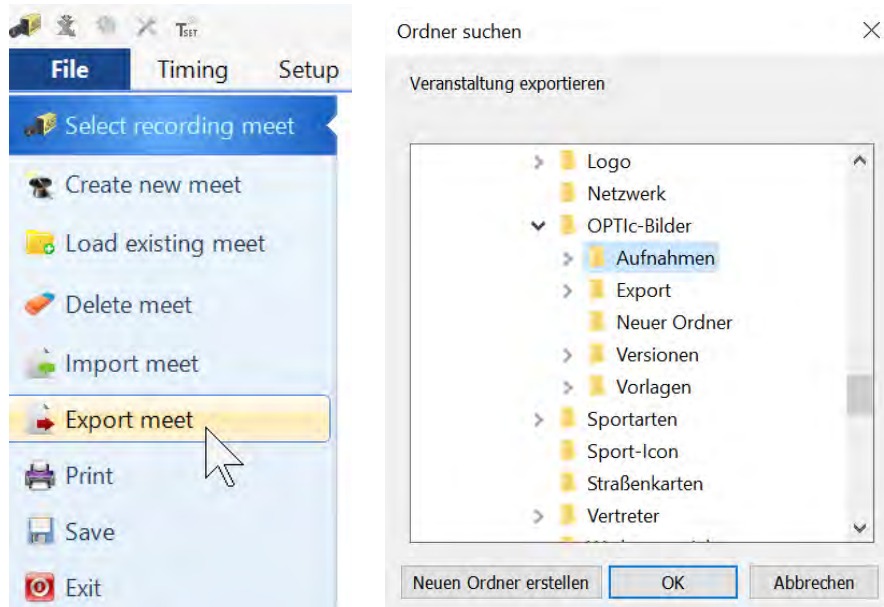
This is used to copy an event from one PC to another. An imported “Meet” can be used just like a self-created meet (you can select it as a <recording meet> and, e.g. create additional heats or take a photo finish picture).



#### 16.1.1 Export Meet

When exporting a meet, all data from the event including all image material is exported. You have to specify where the data is saved (e.g. mobile hard drive).

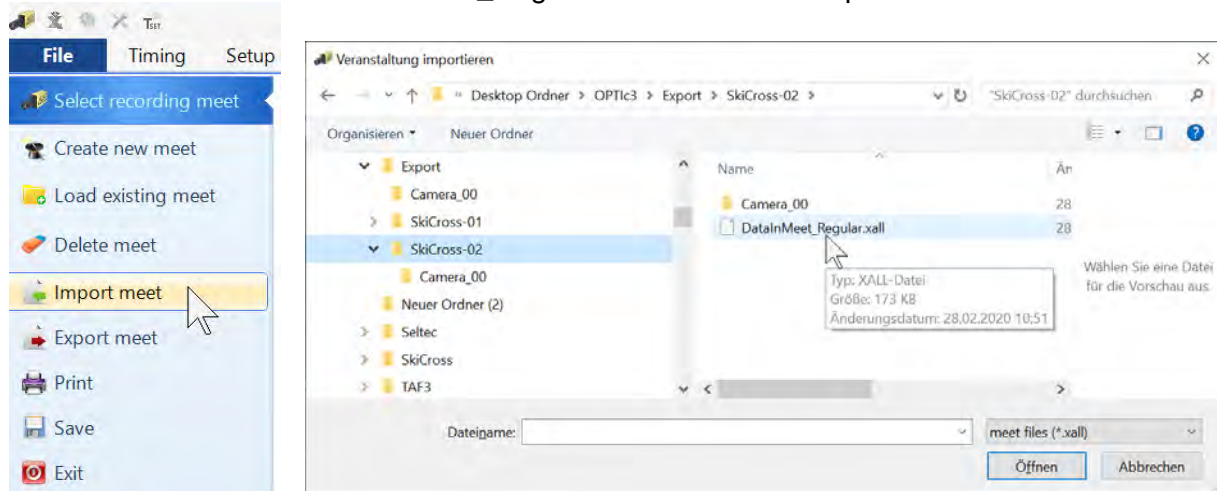
- Click in the menu on <File>
- Click on <Export meet>
- Select medium and select or create folder where to save the data of the event



## 16.1.2 Import Meet

When importing from a meet, all data from this event including the images are imported. You can only import meets that were previously exported with the OPTIc3.NET software. If an imported meet is loaded, it can be used like a self-created meet, i.e. you can select it as <recording meet>.

- Click on menu <File>
- Click on <Import meet/heat>
- Select the folder from where you want to import the meet
- double-click the file "DataInMeet\_Regular.xall" to start the import



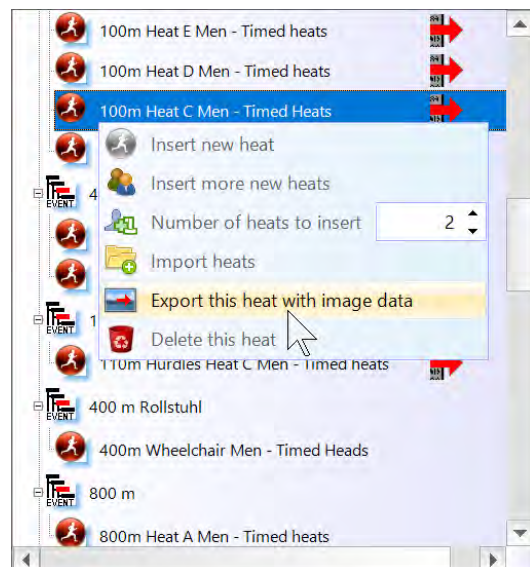
## 16.2 Import and Export of Heat

If you want to export a heat to another PC (e.g. if a runner has set a record), the best method is to use the function <Export this heat with image data> and <Import heats>.

### 16.2.1 Export Heat

When exporting a heat, all data from this heat is exported including the images. When exporting, you have to specify where the data is to be saved (e.g. mobile hard drive).

- Click with right mouse button on the heat in the heat-list that you want to export.
- A drop-down menu opens - click on <Export this heat with image data>.
- Choose in the Explorer window where you want to save the data.



### 16.2.2 Import Heat

When importing a heat, all data from this heat including images is imported. Only a heat that was previously exported with the OPTIc3.NET software can be imported. An imported heat cannot be selected as a <recording meet>. You can import the heat the same way as the the import of an event (see 16.1.2 Import Meet).

## 17 Integration of IDCam

The IDCam is a webcam controlled by the timing. It records the finish arrival. So you can read the ID number of each athlete for a fast and efficient result. With the IDCam the operator of the photo finish system does not depend on the written finish protocol and can start to evaluate the result immediately after the finish arrival.

The OPTIc3.NET software allows you to integrate the ALGE-TIMING IDCam. This has the advantage that the recording of the IDCam is also controlled by the OPTIc3.NET software and that the picture of the IDCam moves synchronously with the photo finish picture.



### 17.1 Adjustment of the IDCam

The IDCam can work on the same PC (fast PC and a very fast hard disk required) or on a second PC that is connected with the PC of the OPTIc3 by Ethernet.

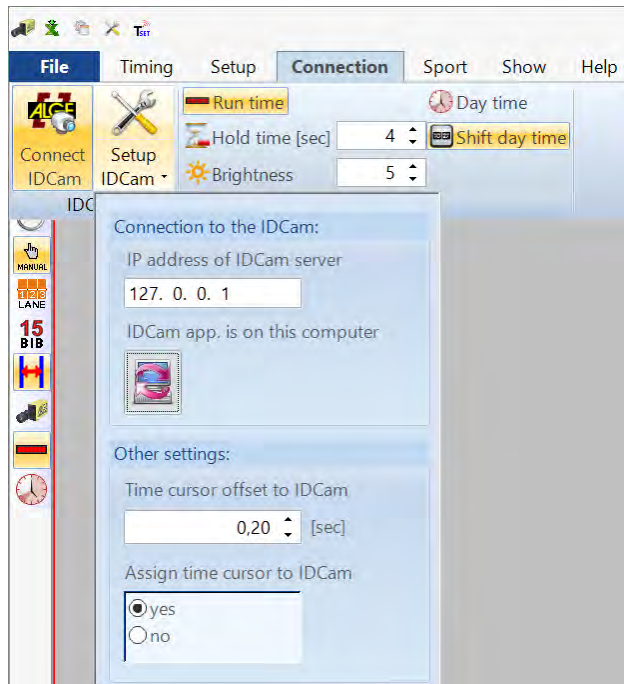


To adjust the IDCam Ethernet connections adjust as follows:

- Click on <Connection>
- Click on <Setup IDCam>
- 

#### 17.1.1 OPTIc3-Camera and IDCam at the same PC

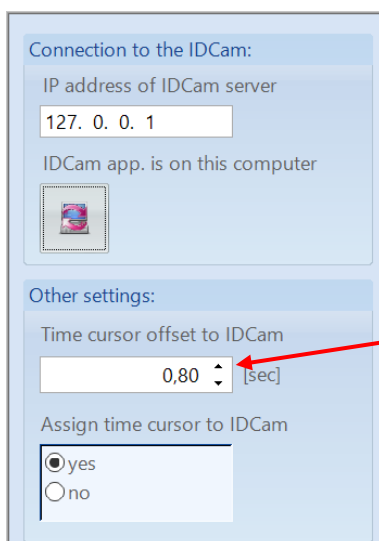
The IP-address **must** be set on: **127.0.01**. This is adjusted if you click on the icon <IDCam app. is on this computer>.



#### 17.1.2 OPTIc3 Camera and IDCam at different PCs

- Input the IP address of the IDCam's PC.

#### 17.1.3 Offset between photo finish and IDCam



In most cases the ID numbers of the athletes are not optimally readable at the finish line, but some meters before. Therefore, it is of advantage to adjust a suitable offset time between IDCam and photo finish. This shows you the best picture of the IDCam when you evaluate an athlete.

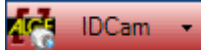
**Enter the „offset time“ that is best suitable for your use!**



### 17.2 Integration of the IDCam at the same PC

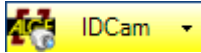
- Start the OPTIc3.NET software.
- Make sure that the photo finish camera OPTIc3 works. You must see the picture of the camera.
- Start the IDCam software.
- Make sure that the IDCam works. You must see the picture of the camera on the monitor.
- Click in the menu on <System>.
- Click on <Connect IDCam>

*IDCam not connected:*



Icon in the footer has a red background.

*Connection with IDCam activated but no connection yet:*



Icon in the footer has a yellow background.

*IDCam connected:*



Icon in the footer has a green background.

### 17.3 Commands in the OPTIc3 to Control the IDCam

double click in the OPTIc3 picture ..... load the associated picture

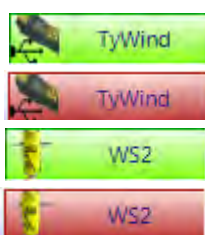
- ..... shift IDCam picture to the left
- ..... shift IDCam picture to the right
- ..... shift IDCam picture to the top
- ..... shift IDCam picture to the bottom
- ..... zoom in IDCam picture
- ..... zoom out IDCam picture
- ..... next IDCam picture
- ..... previous IDCam picture

## 18 Integration of the Anemometer Windspeed WS2

During outdoor athletics events, the wind is measured at sprint races. A tailwind has a positive sign, a headwind a negative. A maximum tailwind of +2.0 m/s. This means that a result with a tailwind of +2.1 is not valid for a record (e.g. world record).

If the sport <Track and field with anemometer> is set in the OPTIc3 software, then it is necessary to correctly enter the running distance. If these are entered correct in the “Meet” of the “Meet browser”, the Alge-Timing Windspeed WS2 can be controlled directly from the OPTIc3.

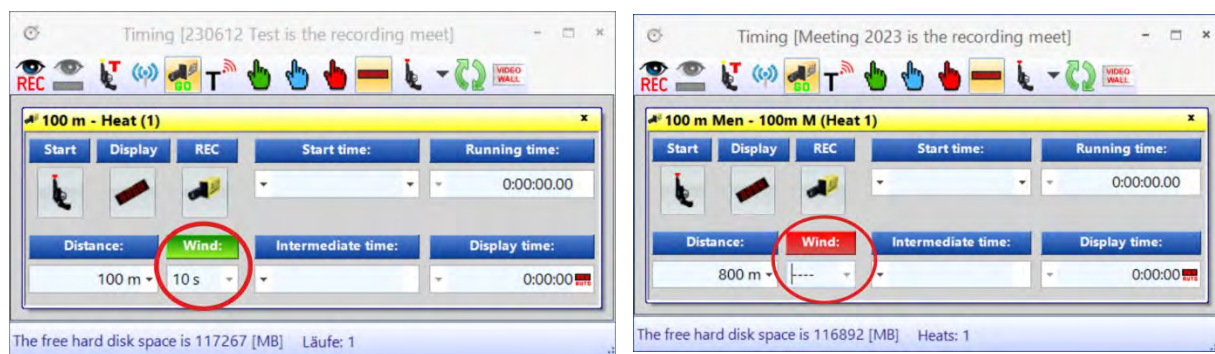
In order for the wind measurement from Optic3 to work, the wind measuring device must be connected to the Timy and the Timy is connected to the PC using a USB cable.



### WS2 and TyWind

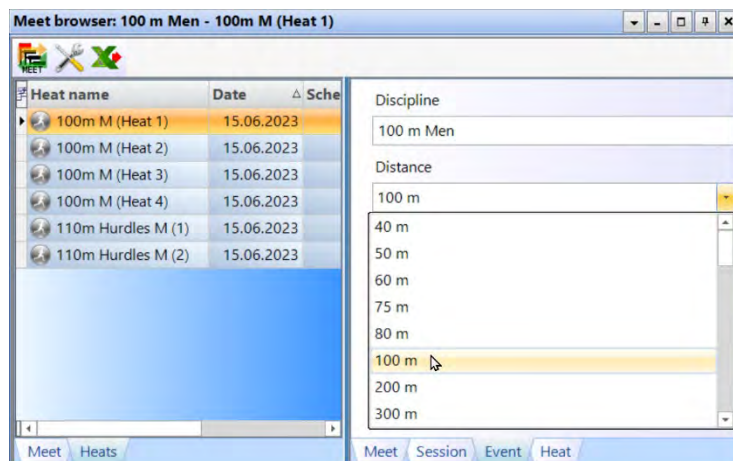
These symbols are only shown if you select the sport „Track and Field with anemometer“. If you connect the anemometer Windspeed WS2 with the controller Timy both icons must be green. If both are red (TyWind and WS2) the USB connection between Timy and OPTIc3NET-PC does not work (maybe you have started another program that reads the Timy e.g. the IDCam). If you have no connection between Timy and WS2 the icon WS2 is red.

In the timing window, the wind is displayed green for sprint races (a wind measurement is required). For long distance races the wind is marked red since no measurement is carried out.



### Automatic wind measurement from Optic3:

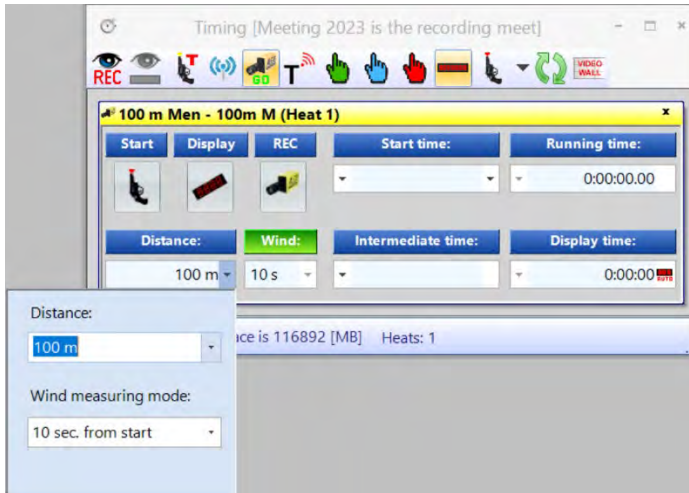
If you enter the distance correctly in the “Meet browser” for the “Event” or be taken over by meet management software (e.g. Seltec TAF3), the wind measurement is automatically carried out with the correct measurement method and the windspeed is transferred to the OPTIc3 program.



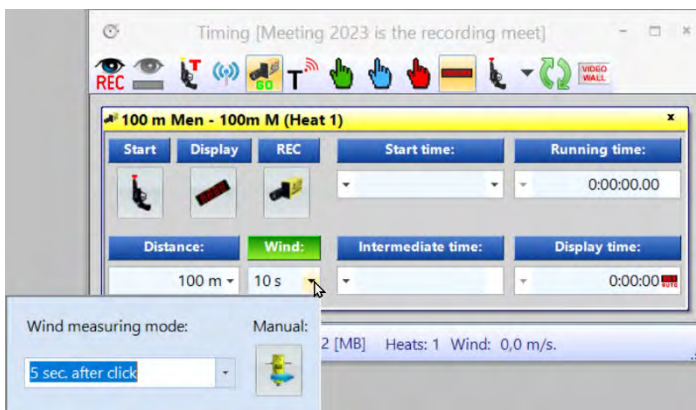
If the data is taken from a compatible meet management software, the correct distance should be entered in the tab (Event) (in this case it is 100 m).

Is no distance or a wrong distance for the Event or Heat registered, than you have to correct this in the pull down menu.

**Manual Windmeasurement from the OPTIc3:**



If no or incorrect distance is entered, then you can enter or correct them in the timing window before the start.



In addition, a wind measurement can also be started manually from the OPTIc3 software. You click on the arrow at the wind and select the wind measuring method and then click on the wind measurement icon.

## 19 Connection to StartJudge SJ2

This only has to be done if a false start system StartJudge SJ2 is used and the data are to be transferred from the false start system to the OPTIc3. Enter the IP of the PC of the StartJudge SJ2 under “Remote Port” as follows.

ATL Exchange Settings

Alge Output
Alge Versatile Output
Display
Legacy Columns
NSW Harness Scoreboard
NSW Harness Startlist Scoreboard
Videowall
Infosystem
XML Socket

<ul style="list-style-type: none"> <li>▼ <b>Sonstiges</b></li> <li>&gt; AlgeDisplayOutput</li> <li>&gt; AlgeOutputPort</li> <li>&gt; AlgeVersatileExchangeProtocolOutput</li> <li>&gt; AthleticaFileExport</li> <li>&gt; EnableLogging</li> <li>&gt; FinishLynxExport</li> <li>&gt; FinishLynxImport</li> <li>&gt; HttpExchange</li> <li>&gt; ImportMostRecentDirectory</li> <li>&gt; Infosystem</li> <li>&gt; LegacyColumnsOutput</li> <li>&gt; LegacyExcelTextFileExport</li> <li>&gt; LegacyRaceFilesImport</li> <li>&gt; NSWHarnessScoreboardOutput</li> <li>&gt; NSWHarnessStartlistScoreboardOutput</li> <li>&gt; OptiXmlExport</li> <li>&gt; OptiXmlImport</li> <li>▼ OptiXmlSocket</li> <li>    ▼ Ports</li> <li>        ▼ [0]</li> <li>            &gt; Broadcast Client</li> <li>            &gt; Broadcast Server</li> <li>            Description</li> <li>            Enabled</li> <li>            Encoding</li> <li>            Layer</li> <li>            &gt; Line Beginnings</li> <li>            &gt; Line Ends</li> <li>            &gt; Serial</li> <li>            Serialization</li> <li>            ▼ TCP Client</li> <li>                Keep-Alive Failure Interval</li> <li>                Keep-Alive Interval</li> <li>                Remote Host</li> <li>                Remote Port</li> <li>            &gt; TCP Server</li> <li>            &gt; UDP Receiver</li> <li>            &gt; UDP Sender</li> <li>            SendResultlistOnHeatDataChanged</li> <li>            SendStartlistOnHeatChange</li> <li>&gt; ScreensClient</li> </ul>	<ul style="list-style-type: none"> <li>dbnetsoft.AdditionalTimingLibrary.OptiExchange.AlgeDisplayOutputSettings</li> <li>Enabled, Serial (COMx,9600,None,8,None,One)</li> <li>dbnetsoft.AdditionalTimingLibrary.OptiExchange.AlgeVersatileExchangeOutputSettings</li> <li>Disabled</li> <li>False</li> <li>Enabled</li> <li>dbnetsoft.AdditionalTimingLibrary.OptiExchange.HttpExchangeSettings</li> <li>T:\</li> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Disabled</li> <li>Enabled</li> <li>dbnetsoft.AdditionalTimingLibrary.OptiExchange.OptiXmlSocketSettings</li> <li>OptiXmlSocketPortSettings[] Array</li> <li>SJ2 Connection - TcpClient (127.0.0.1, Port 1111)</li> <li>Broadcast-Port 10001, Port 4445</li> <li>Port 10002, Broadcast-Host 255.255.255.255, Broadcast-Port 10001, Broadcast-Interval 5s</li> <li>SJ2 Connection</li> <li>True</li> <li>UTF8</li> <li>Tcp Client</li> <li>Int32[] Array</li> <li>Int32[] Array</li> <li>COM1,38400,None,8,None,One</li> <li>None</li> <li>127.0.0.1, Port 1111</li> <li>2000</li> <li>5000</li> <li>127.0.0.1</li> <li>1111</li> <li>Port 4532</li> <li>All,Port 4444</li> <li>:4444</li> <li>False</li> <li>True</li> <li>Enabled, dbnetsoft.AdditionalTimingLibrary.OptiExchange.OptiScreensClientSettings</li> </ul>
---	--

Check if the connection is OK?



To apply all settings, please restart the software.



## 20 Integration of a Video Wall

The OPTIc3 can output the data of heats to a video wall. AL-GE-TIMING has optimally configured solutions of video walls that will show the results more or less automatically. The following can be displayed:

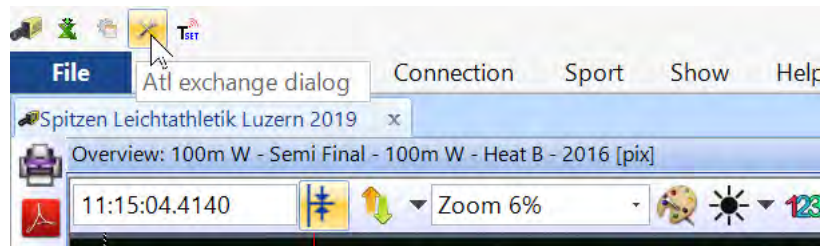
- start list for a run
- running time
- ranking list for a run
- advertising

The software "Screens" from ALGE-TIMING is required to operate the video wall. The settings for the video wall are made in the ATL Exchange Settings .

Settings:

**Yellow:** General Settings as required!

**Green:** These settings you can adjust depending to your needs.

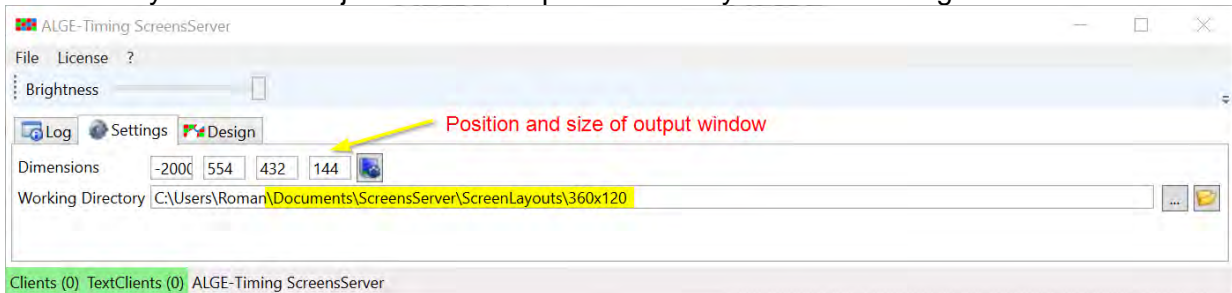


> OptiXmlImport		
> OptiXmlSocket		
> ScreensClient	<b>dbnetsoft.AdditionalTimingLibrary.OptiExchange.OptiXmlSocketSettings</b>	
ClockLayout	<b>Enabled, dbnetsoft.AdditionalTimingLibrary.OptiExchange.OptiScreensClientSettings</b>	
Enabled	<b>True</b>	
LiveLayout	<b>Opti\Live.xml</b>	
LiveLongDistanceLayout	<b>Opti\LiveLong.xml</b>	
LongDistanceSwitchLiveLayoutMeters	<b>800</b>	
Ports	<b>CommunicationSettings[] Array</b>	
> [0]	Screens-Local - TcpClient (localhost, Port 6610 / Binary serialized)	
< [1]	Screens-Extern - TcpClient (192.168.1.165, Port 6610 / Binary serialized)	
> Broadcast Client	<b>Broadcast-Port 10001, Port 4445</b>	
> Broadcast Server	<b>Port 10002, Broadcast-Host 255.255.255.255, Broadcast-Port 10001, Broadcast-Interval 5s</b>	
Description	<b>Screens-Extern</b>	
Enabled	<b>True</b>	
Encoding	<b>UTF8</b>	
Layer	<b>Tcp Client</b>	
> Line Beginnings	<b>Int32[] Array</b>	
> Line Ends	<b>Int32[] Array</b>	
> Serial	<b>COM1,38400,None,8,None,One</b>	
Serialization	<b>Binary</b>	
TCP Client	<b>192.168.1.165, Port 6610</b>	
Keep-Alive Failure Interval	<b>2000</b>	
Keep-Alive Interval	<b>5000</b>	
Remote Host	<b>192.168.1.165</b>	<b>IP-Adress from Screen-Server Computer</b>
Remote Port	<b>6610</b>	
TCP Server	<b>Port 4445</b>	
UDP Receiver	<b>All,Port 4444</b>	
UDP Sender	<b>:4444</b>	
ResultlistLayout	<b>Opti\Resultlist4-Int.xml</b>	
ShowLiveLayoutOnStart	<b>True</b>	
ShowPreviousResultlistOnEmptyRecordingHeat	<b>True</b>	
ShowResultlistOnSendResults	<b>True</b>	
>ShowStartlistOnHeatChange	<b>True</b>	
SponsorsLayout	<b>Sponsors.xml</b>	
SponsorsPath	<b>..\..\Sponsor</b>	
StartlistLayout	<b>Opti\Startlist4-Int.xml</b>	
UpdateResultlistWhenHeatChanges	<b>True</b>	
WindThreshold	<b>2</b>	

If you use more Screen-Server Computers you have to add as many Ports here as computers you are using!

IP-Adress from Screen-Server Computer

The settings in the ATL menu are made for an ALGE-TIMING video wall with a ration of 3x1. All the layouts for this are automatically installed with the Screens program. In screens you have to adjust the correct path for the layouts as following.



Start list for a heat (scrolls pages)

100m Hurdles W - Final A			
1	310	Jones Tia	USA
2	240	Dutkiewicz Pamela	GER
3	309	Amusan Tobi	NGR
4	418	Chadwick Payton	USA

Run time display before the start

100m Hurdles W - Final A	
	<b>0.00</b>

Running time after the start

100m Hurdles W - Final A	
	<b>0.4</b>

Sprint: unofficial winners time and wind (wind green – allowed wind conditions)

100m M - Heat A	
<b>0,8 m/s</b>	<b>10.54</b>

Sprint: unofficial winners time and wind (wind red – to much backwind)

100m M - Heat A	
<b>4,0 m/s</b>	<b>10.58</b>

Sprint: official winners time with winner and wind (wind red – to much backwind)

100m M - Heat A	
Campell Mike	JAM
Assert Track Club	
<b>4,8 m/s</b>	<b>10.72</b>

Long Distances: left side running time (white), right side inofficial winners time (yellow)

1500m W - Final	
<b>4:07.4</b>	<b>4:06.64</b>

Long Distances: left side running time (white), right side official winners time and winner

1500m W - Final	
Berger Yvonne	SUI
STV Willisau	
<b>5:29.9</b>	<b>4:06.71</b>

Ranking list for a heat (scrolls pages)

100m M - Heat A			
1	Sumba Akani	RSA	11.35
2	Campell Mike	JAM	11.41
3	Edaman Kemar	CAY	11.42
4	English Andrew	USA	11.56

Advertising



## 20.1 Settings to control a video screen

- ClockLayout active layout for clock  
Standard: Clock.xml
  - Enabled to activate the screen control  
Standard: False If you use a video screen adjust here: True
  - LiveLayout active layout for running time (sprint races)  
Standard: OPTI\Live.xml
  - LiveLongDistanceLayout active layout for running time (long distance races)  
Standard: LiveLong.xml
  - LongDistanceSwitchLiveLayoutMeters switching distance for long distance layout
  - Ports per Screen-Server Computer you need one port
    - Broadcast Client no function
    - Broadcast Sever no function
    - Description simple description, free text
    - Enabled set here on true
    - Encoding set to UTF8
    - Layer set to Tcp Client
    - Line Beginnings set to Int32[] Array
    - Line Ends set to Int32[] Array
    - Serial no function
    - Serialization set to Binary
    - TCP Client shows the adjusted IP-address and the port
      - Keep-Alive Failure Interval 2000
      - Keep-Alive Interval 5000
      - Remote Host IP-address from screen server computer
      - Remote Port 6610
    - TCP Server no function
    - UDP Server no function
  - UDP Sender no function
  - ResultlistLayout active layout for results  
Standard: OPTI\Resultlist4-Int.xml
  - ShowLiveLayoutOnStart automatic layout change after a start impulse  
True or False
  - ShowPreviousResultlistOnEmptyRecordingHeat False
  - ShowResultlistOnSendResults automatic layout change when sending results
  - ShowStartlistOnHeatChange automatic layout change when loading a heat into the start dialog
- SponsorPath path for the sponsor logos on the screen server computer  
If you use more screen server computers you have to copy these sponsors logos on any computer into the same path!
- StarlistLayout active layout for start list  
Standard: OPTI\Startlist4-Int.xml
  - UpdateResultlistWhenHeatChanges If you set her eon true the result list is live actualized when you are still evaluating
  - WindTreshold no function  
Standard: 2

## 21 Integration of a Timing or Transponder System

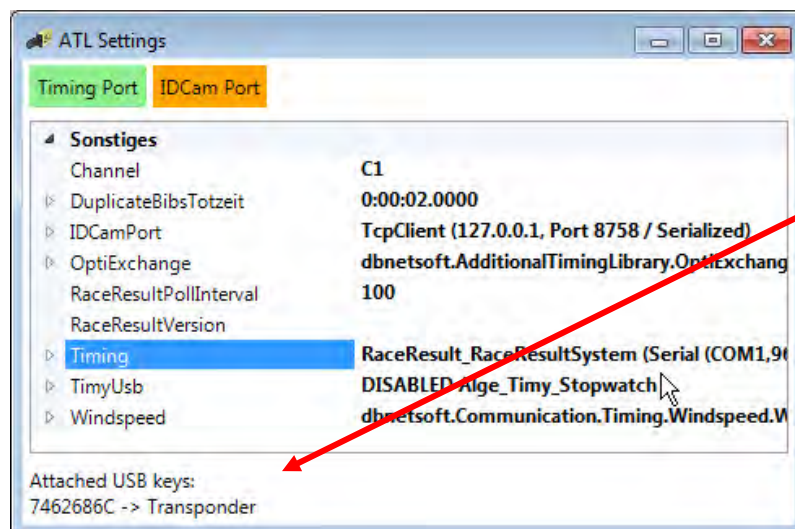
ALGE-TIMING offers upgrade software to integrate timing devices or transponder systems into the OPTIc3.NET software. You can obtain this upgrade together with your OPTIc3.

### List of Devices that can be used together with the OPTIc3.NET software:

- ALGE-TIMING – Timer S3
- ALGE-TIMING – Timer S4
- ALGE-TIMING – Timy (Timy, Timy2 or Timy3)
- ALGE-TIMING – TdC4000
- ALGE-TIMING – TdC8000 / TdC8001
- ALGE-TIMING – Selftimer SF3
- Dbnetsoft – Serial Handshake
- Dbnetsoft - Transponder Manager
- Digitech – Master
- My Laps – Orbits
- My Laps – P3 Protocol
- My Laps – Toolkit Tcplp Explorer
- Race Result – Race Result System
- TAG Heuer CP540
- TAG Heuer Chronolec Decoder

### 21.1 Adjustment of Interface

Click on to open the menu for setting up the interface for external devices.



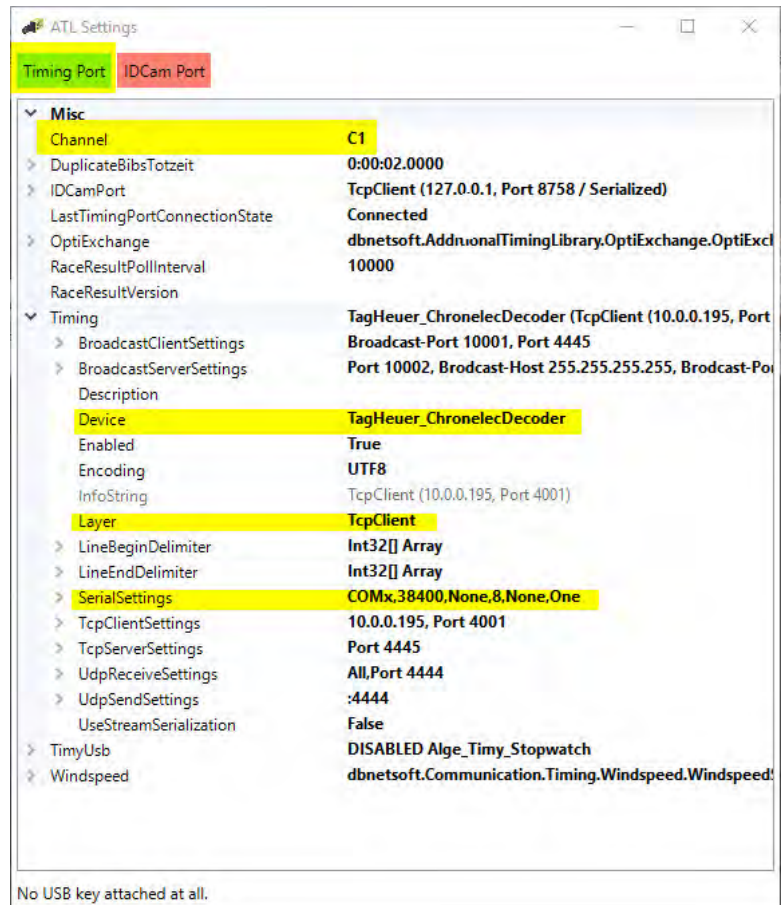
With a valid upgrade (flash drive or licence file O3-TSP) the following text is shown:  
*Attached USB keys:  
XXXXXXXX -> Transponder*

Without a valid upgrade, the following text appears:  
*No USB key attached at all.*  
In this case the transponder function is not active.

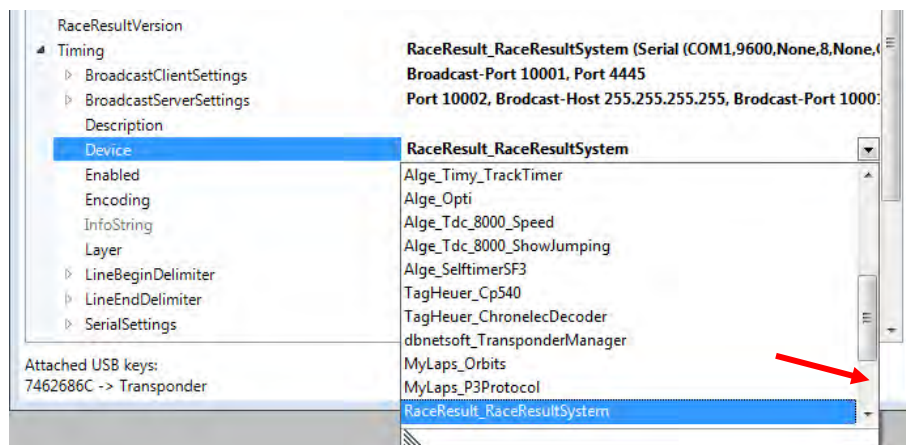


### Adjust the correct system at <Timing Port>:

- channel for recording
  - STA or BOX for Chronolec/Tag Heuer
  - C1 for others
- Click on the arrow left of <Timing>.
- Click on <Device> (it is four lines below <Timing>).
- On the right, click  to open a drop-down menu.
- Select from the list the device you use to read data (e.g. transponder system).



- Adjust <Layer> as follows
  - serial for Chronolec (19200 Baud, LineEnds 13)
  - TcpClient for others



### 21.1.1 Race Result

Device: RaceResult\_RaceResultSystem  
 TCP Client: IP address from Reader + Port 3601  
 Line End Delimiter: 13+10  
 +restart program

## 21.1.2 Mylaps

### Device: MyLaps Orbits

*connected via network:*

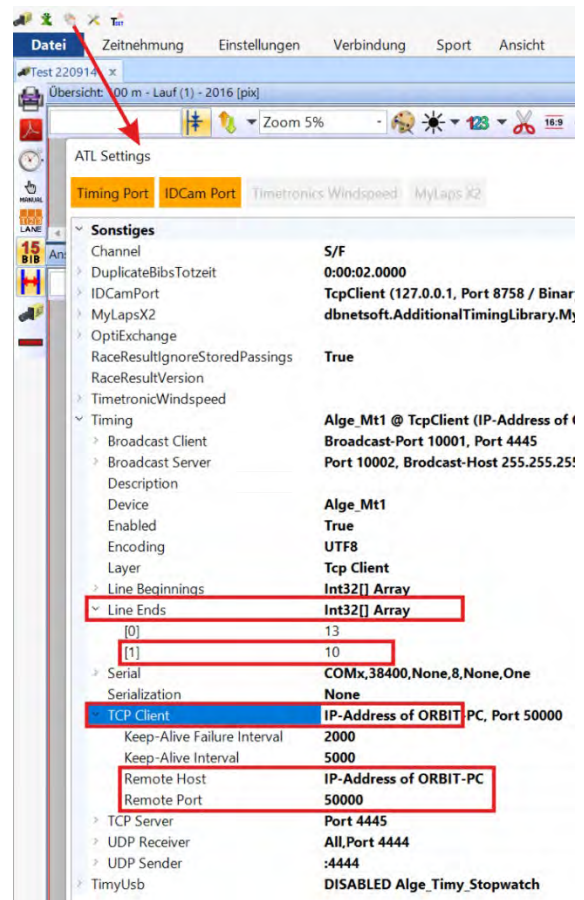
TCP Client: IP Address of PC + Port 50000

You must activate the output of display on the computer.

*connected via RS232 interface with 9600/n/8/1*

connection on serial port of computer

You must activate the output of display on the computer.



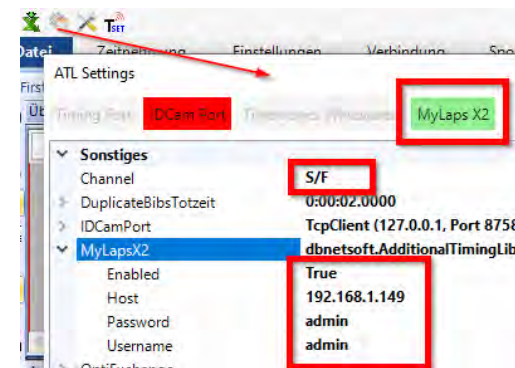
### Device: MyLaps X2

Channel: Enter the name of the loop that is used. Standard: S/F

Enabled: must be set to „True“

Host: enter IP-address of the X2 server


Password/Username: input password and username of decoder; standard settings: admin/admin

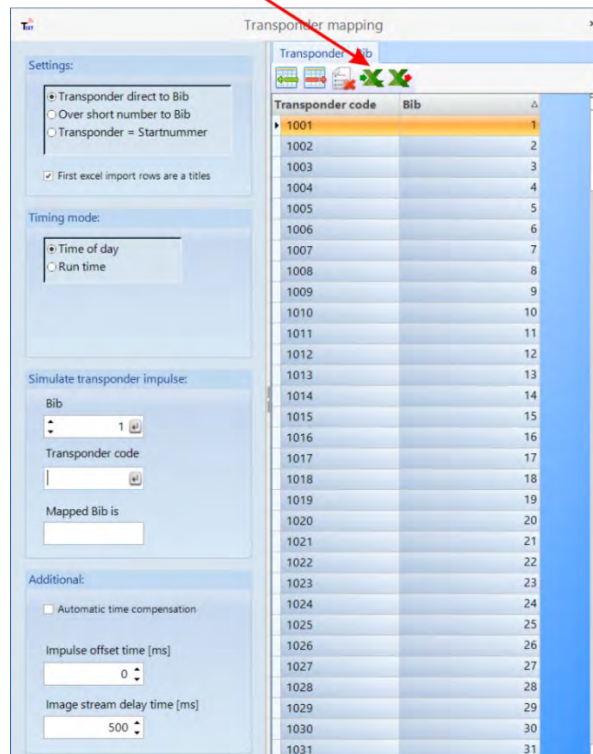


After changing the settings, restart the OPTIc3.NET software. If the MyLaps X2 panel is green, the connection to the X2 Server is established. Otherwise, it will show orange and red. If the panel is grey it is disabled.

## 21.2 Transponder Mapping

The transponder mapping is necessary to match the transponder ID with the competitor ID (bib). Each transponder has a unique ID-code. This ID-code must be matched in the transponder mapping with the bib of a competitor that carries this transponder.


The transponder mapping table can be integrated into the OPTIc3.NET software by reading an Excel table. To start the import, click on .



## 21.3 Excel file to import the transponder mapping:

	A	B
1	1001	1
2	1002	2
3	1003	3
4	1004	4
5	1005	5
6	1006	6
7	1007	7

The first row shows the transponder ID and the second row the bib. No header is needed.

You can also export the transponder mapping to Excel by clicking on .

## 21.4 Adjustments in the Transponder Mode

### 21.4.1 Settings

The following ID data can be transferred from the transponder to the bib (ID-number) of the OPTIc3:

- Transponder list: according to the list, the transponder number is converted into a bib
- Via short number: the transponder short number is converted into the bib according to the list
- Transponder number = Bib: The transponder number is the same as the bib of the OPTIc3

### 21.4.2 Timing Mode

It must be set, whether the transponder system transmits with times of day or run times.

### 21.4.3 Simultane Transponder Impulse

To test the transponder function, the transponder transmission can be simulated here.

### 21.4.4 Additional

When using a transponder system in parallel with the OPTIc3, it is important that the times of both systems are synchronized with each other.

The following can be set for smooth use of the transponder system:

#### Automatic time compensation:

Automatic time compensation can be set for systems that are not synchronized. This should be avoided if possible (use synchronized systems).

#### Impulse offset time [ms]:

If the times from the transponder system always have approximately the same time offset to the times evaluated by the OPTIc3, then this time offset should be entered here. The time offset can arise, for example, from the fact that the data from the transponder system arrive delayed via an interface in the OPTIc3.

#### Image stream delay time [ms]:

If the data from the transponder system arrives at the OPTIc3 with a delay, the time must be set, that all transponder impulses always arrives before the image of the OPTIc3 is output. Transponder data that arrive after the image output are lost in the OPTIc3 system. If there is no transponder impulse and "no: impulse timeout" is entered in the channel list under REC, then the image delay time is too short.

Settings:

- Transponder direct to Bib
- Over short number to Bib
- Transponder = Startnummer

First excel import rows are a titles

Timing mode:

- Time of day
- Run time

Simulate transponder impulse:

Bib:

Transponder code:

Mapped Bib is:

Additional:

Automatic time compensation

Impulse offset time [ms]:

Image stream delay time [ms]:




29.04.2021	10:15:59.990	Bib	external	no: impulse timeout	1074	10:16:09.9276
------------	--------------	-----	----------	---------------------	------	---------------

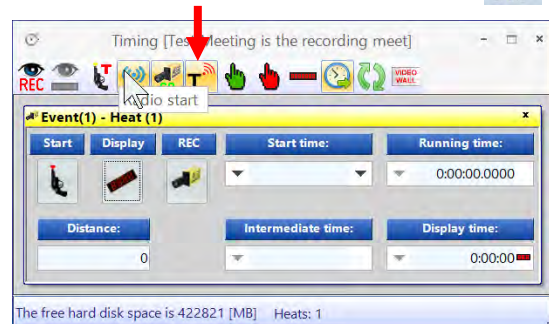
The image delay time should also not be set too long. Otherwise you have to wait for the adjusted "Image Stream Delay Time" time until an image is shown to the screen.



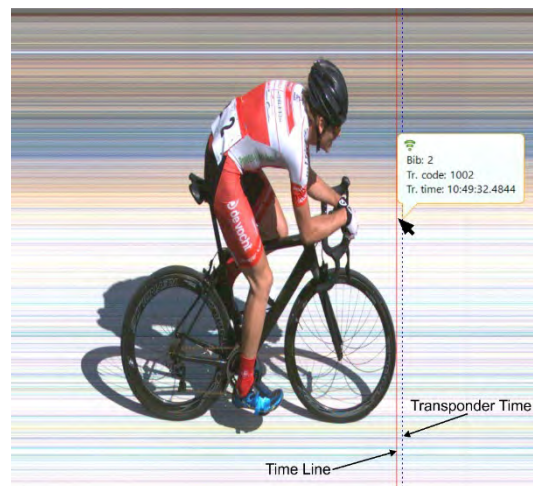
## 21.5 Recording Using Data from External Devices

If you use external devices with the OPTIc3.NET as described before (e.g. transponder systems), you can activate the camera recording through these devices. For each data string a vertical dashed time line is created in the photo finish picture and the transponder time of the associated bib is integrated in the heat list.

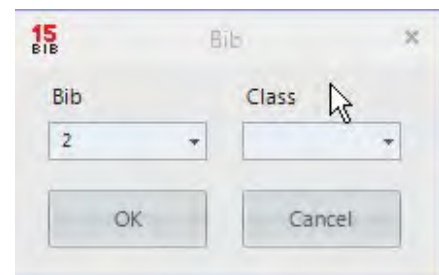
- In the menu bar, click on <Show> and <Show the (Transponder Line)> to display the transponder lines in the photo finish picture. This function is active when the icon is orange. 
- If you click on <Colour of (Transponder Line)> you can select the colour of the transponder line. 
- **Activate Transponder Recording:**  
You activate the transponder recording (recording from external devices) by clicking on  in the timing dialog.





- If you move the time line in the photo finish picture close to the dashed transponder line bib and the transponder time are displayed.





- If bib and position of the transponder line are OK, click the right mouse button and select OK to change transponder time to official race time of the photo finish.



- **Transponder Times Integration**   
This function is only active if you have the O3-TSP transponder upgrade. Click on the button to take over all transponder times that do not yet have valid times as official times.

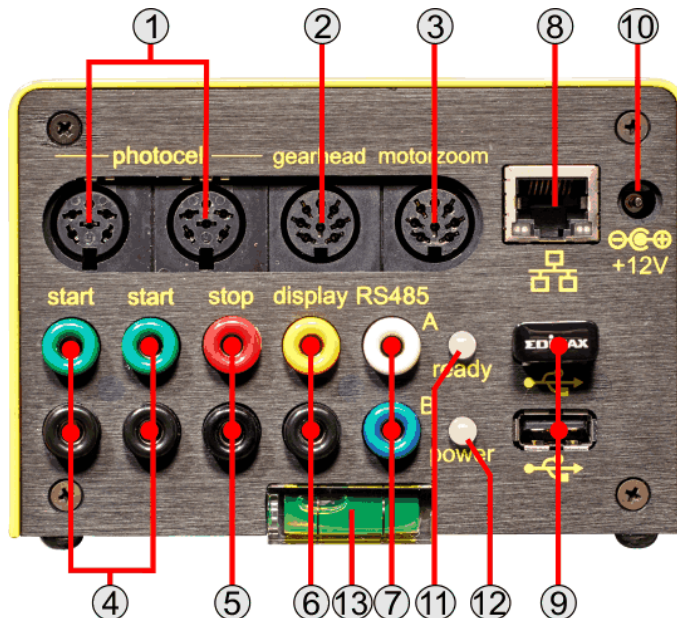
- **Transponder Impulse Selection**   
This function is only active if you have the O3-TSP transponder upgrade. When working with transponders, it often happens that the same transponder is read several times. With this function you can adjust as follows:

-  take first impulse of transponder of a bib
-  take last impulse of transponder of a bib

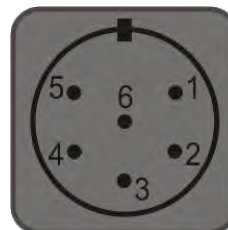
## 22 Technical Data

<b>Measuring Range:</b>	23 hours, 59 minutes, 59.9999 seconds
<b>Quartz Frequency:</b>	TCXO 20,000 MHz (temperature compensated quartz oscillator)
<b>Frequency Deviation:</b>	temperature: +/- 2.5 ppm at -10 °C to 70 °C (+/-0.009 sec/h) ageing: +/- 1 ppm per year frequency adjustment: +/- 0.1 ppm at 25 °C
<b>Power Supply:</b>	POE+ or 10,6 to 13.4 VDC
<b>Temperature Range:</b>	-20 °C to 50 °C (32 °F to 122 °F)
<b>Recording of Pictures:</b>	on hard disk of PC
<b>Storing the Races:</b>	internal or external hard disk mass storage devices (recordable CD/DVD, memory flash drive, etc.)
<b>Input Impulse:</b>	input resistance 10 kOhm against +5 V resolution with <1 V (falling flank) hysteresis about 2 V
<b>Output 5 VDC stabilized:</b>	total max. 120 mA
<b>Operation:</b>	PC keyboard and mouse
<b>Measurements (Camera):</b>	180 x 120 x 82 mm / 7.09 x 4.72 x 3.23 in (excluding lens)
<b>Weight (Camera):</b>	1.4 kg / 3.9 lbs (excluding lens)

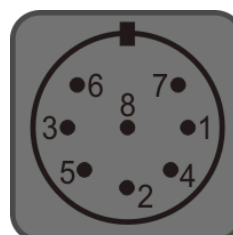
### 22.1 Connections



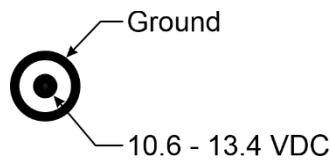
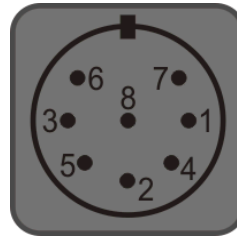
- 1 ..... DIN-socket for photocell (2x)  
 Pin 1 ..... input channel 0 (start)  
 Pin 2 ..... input channel 1 (stop)  
 Pin 3 ..... common ground  
 Pin 4 ..... input external supply (10.6 – 13.4 VDC)  
 Pin 5 ..... output +5 VDC stabilized  
 Pin 6 ..... input channel 2 (intermediate time)



- 2 ..... gear head  
 pin 1 ..... empty  
 pin 2 ..... empty  
 pin 3 ..... roll (-)  
 pin 4 ..... pan (+)  
 pin 5 ..... tilt (+)  
 pin 6 ..... pan (-)  
 pin 7 ..... roll (+)  
 pin 8 ..... tilt (-)



- 3..... motor zoom
  - pin 1..... empty
  - pin 2..... empty
  - pin 3..... zoom in
  - pin 4..... iris close
  - pin 5..... focus near
  - pin 6..... iris open
  - pin 7..... zoom out
  - pin 8..... focus far
- 4 ..... start input (banana socket) (2x)
  - green ..... input channel 0 (start)
  - black ..... ground
- 5     finish input (banana socket)
  - red ..... input channel 1 (finish)
  - black ..... ground
- 6..... display board output – RS232 (banana socket)
  - yellow ..... output data
  - black ..... ground
- 7..... display board output – RS485 (banana socket)
  - white ..... A
  - blue..... B
- 8..... Ethernet (RJ45 jack) with Gigabit
- 9..... USB socket (2 x USB2.0)
- 10..... power supply (10.6 – 13.4 VDC)
- 11..... LED (ready)
- 12..... LED (power)
- 13..... spirit level



## 22.2 Display Board Interface "display board"

Transfer Format:     1 start bit, 8 data bit, no parity bit, 1 stop bit  
 Transfer Speed:     2,400 Baud  
 Transfer Protocol:    ASCII

### 22.2.1 Display Board RS232 Interface

RS232 Interface (output only)

**Standard Adjustment:**

- 1 start bit, 8 data bit, 1 stop bit, no parity bit
- 2400 baud
- Data are in ASCII format



### 22.2.2 Display Board RS484 Interface

RS485 Interface (output only)

**Standard Adjustment:**

- 1 start bit, 8 data bit, 1 stop bit, no parity bit
- 2400 baud
- Data are in ASCII format







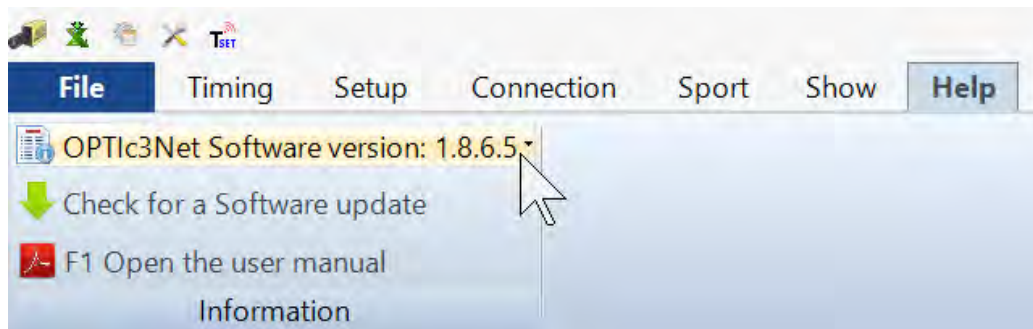
## 23 Update of the OPTIc3 System

The OPTIc3 system consists of the camera with firmware and the PC software (OPTIc3.NET). Both should always be kept up to date in order to benefit from optimal performance.

ALGE-TIMING offers its customers a free update service. Please use this service to download innovations and solve known problems in the software.

The software and firmware currently used can be shown in the menu <Help>.

- Click on <Help>.
- Click on <OPTIc3NET Software Version>.



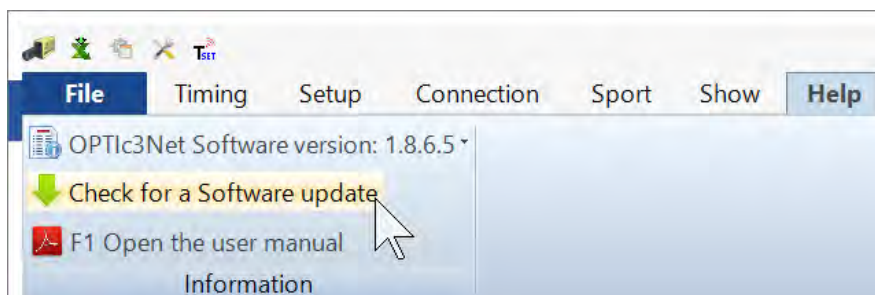
- The first line shows the software, line 2 and 3 the firmware of the camera.

Name	Version	Date	Additional
OPTIc3Net	1.8.6.5	20.06.2018	
Cam1 Software	FV1872	V0.31m-20180201182043	AV179901002
Cam1 Hardware	V1.99b		

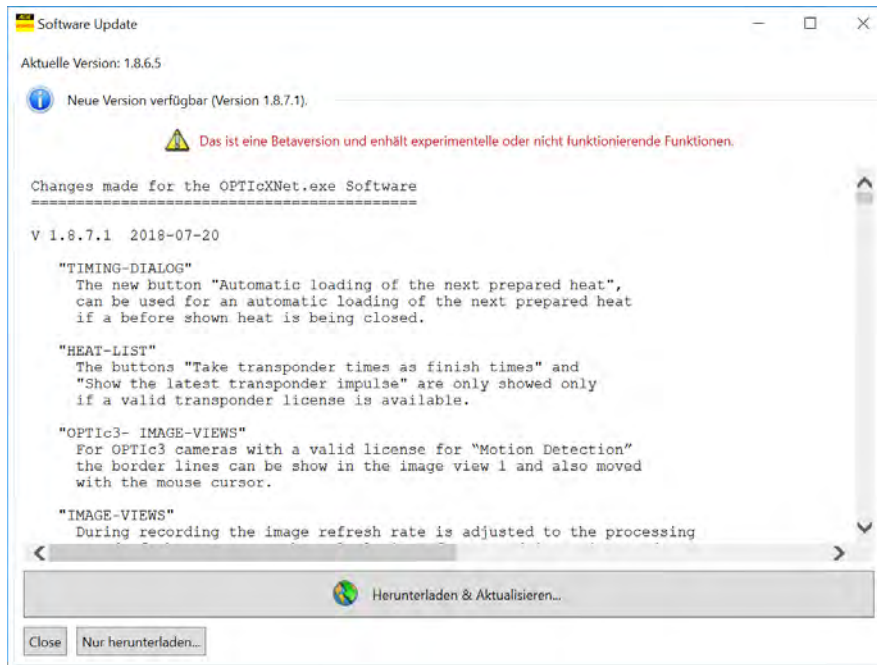
### 23.1 PC-Software OPTIc3.NET

The PC software is constantly being developed and improved by ALGE-TIMING. Therefore, we always advise to install the latest software. When the OPTIc3 software starts and has an internet connection, the system automatically checks for the latest software. If you do not use the latest software, an update is automatically suggested.

You can search directly in the OPTIc3.NET for a newer software version.



Sometimes there is also a "beta version" that you can download. A beta version is untested software and we recommend using it only when you carry out tests with OPTIc3. Do not use a beta version for races.



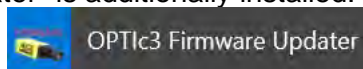
You can download the latest software on the **ALGE-TIMING** website:

**ALGE-TIMING** website: <https://www.alge-timing.com/>

direct download link: <https://alge-timing.com/alge/download/software/OPTIc3NETSetup.exe>

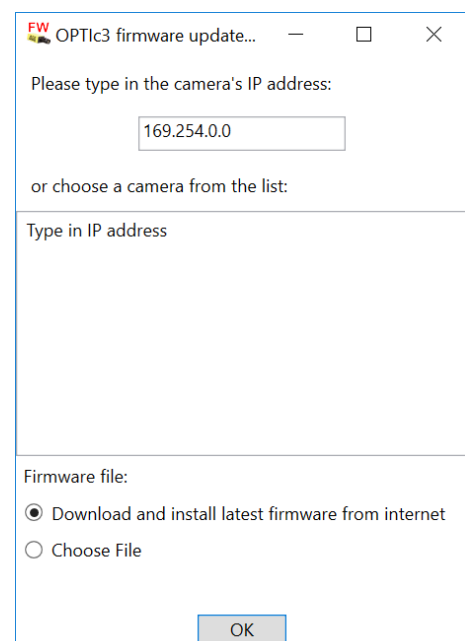
## 23.2 Camera Firmware

During the installation of the OPTIc3 the program "OPTIc3 Firmware Updater" is additionally installed.

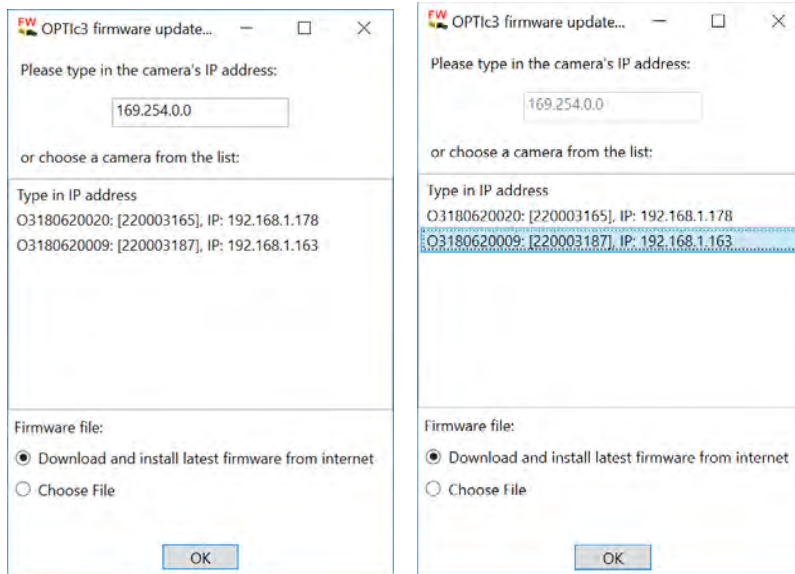


This software is required for updating the OPTIc3 firmware. You should always use the latest firmware, otherwise the software may not fit the hardware (functions of the software are not supported properly or are not implemented in the hardware).

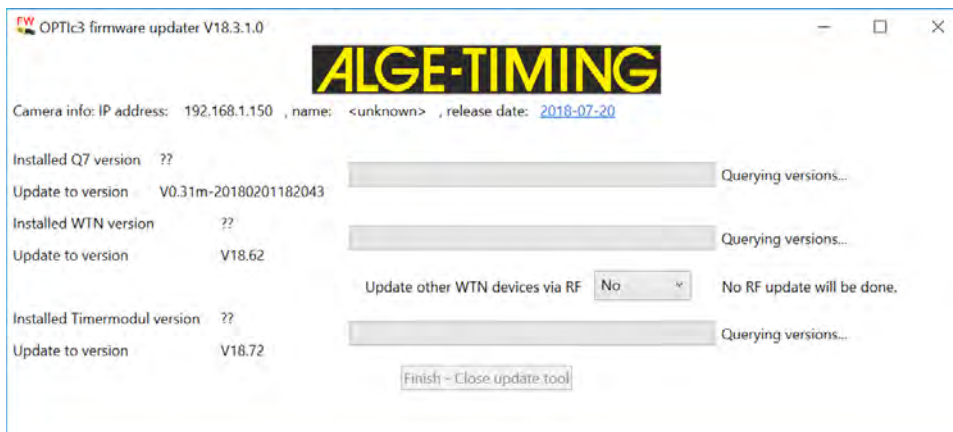
- Close OPTIc3 software.
- Start „OPTIc3 Firmware Updater“.
- The following window on the right appears.



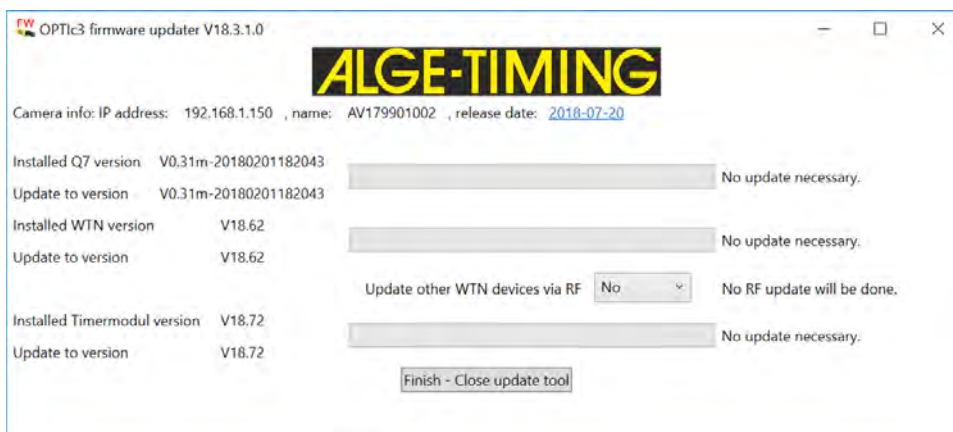
- If the OPTIc3 camera is found, it is displayed after a few seconds. If several cameras are connected, all are displayed. If no camera is found, you have to enter the IP address of the camera.



- Click on the camera for updating.
- Start update by clicking on the „OK“ button.
- There are several internal firmware parts. The program checks which firmware parts have to be updated and initiates the update.



- After termination of the update, the camera restarts automatically.
- If no update is necessary the following is displayed:



## 24 Accessories for Photo Finish

### 24.1 Network Cables and Cable Reels

We can offer different patch cables and cable reels for the OPTIc3.

Patch cable with 3 m	K-RJ45G03
Patch cable with 10 m	K-RJ45G10
Patch cable with 20 m	K-RJ45G20
Cable reel with 90 m patch cable	KT-RJ45G90



### 24.2 Lenses for the OPTIc3

The OPTIc3 includes no lens as each sport has different requirements. ALGE-TIMING offers different lenses ideally suited to the camera.

#### Universal Lens Z75:

- manual zoom lens
- very light sensitive
- 12.5 to 75 mm, F1.2
- usable for most sports



#### Motor Zoom Lens MZ75C:

- motorized zoom lens
- operated with OPTIc3 PC software
- very light sensitive
- 12.5 to 75 mm, F1.2
- usable for most sports
- recommended if camera is not easily reachable



#### Motor Zoom Lens MZ160G:

- motorized zoom lens
- operated from OPTIc3 PC software
- light sensitive
- 16 to 160 mm, F1.8
- used in big stadiums if the finish line is far away



#### Motor Zoom Lens MZ48C:

- motorized zoom lens
- operated with OPTIc3 PC software
- light sensitive
- used for OPTIc3 with 1360 vertical pixel (not usable with 2016 pixel)
- 8 to 48 mm, F1.2



#### Wide Angle Lens L8C:

- very light sensitive
- used if the camera is very close to the finish line
- 8 mm, F1.4





### 24.3 Tripod and Gear Head



**Tripod STATIV6:**  
very stable and high tripod with a max. height of 3.66 m

**Clamp with 3/8" Thread CLAMP3/8:**  
clamp to mount gear head with camera on a bar



**Tripod TRIMAN:**  
professional tripod (max. height 2.27 m or 89.4 in)



**Gear Head 410:**  
manual gear head to adjust the camera easily to the finish line; three-dimensional adjustment of the camera

**Electronic Gear Head 410-E3:**  
electrical gear head to adjust the camera; three-dimensional adjustment of the camera, controlled from the software of the OPTIc3; ideal for camera out of reach of the operator



### 24.4 Further Accessories

**Weather Protection Cover WPC3-75**  
for OPTIc3 camera with the lenses Z75, MZ75C or L8.5



**Transport Case KL-OPTIc3**  
with foam insert for protective storage and transportation of OPTIc3 system



**Power over Ethernet POE**  
to supply the OPTIc3 camera via the Ethernet with power



**Gigabit Switch POE**  
with 8 connectors (RJ45 sockets) and integrated power over Ethernet.

**Battery Backup BB1**  
power supply for camera (integrated 12 VDC battery with power supply)

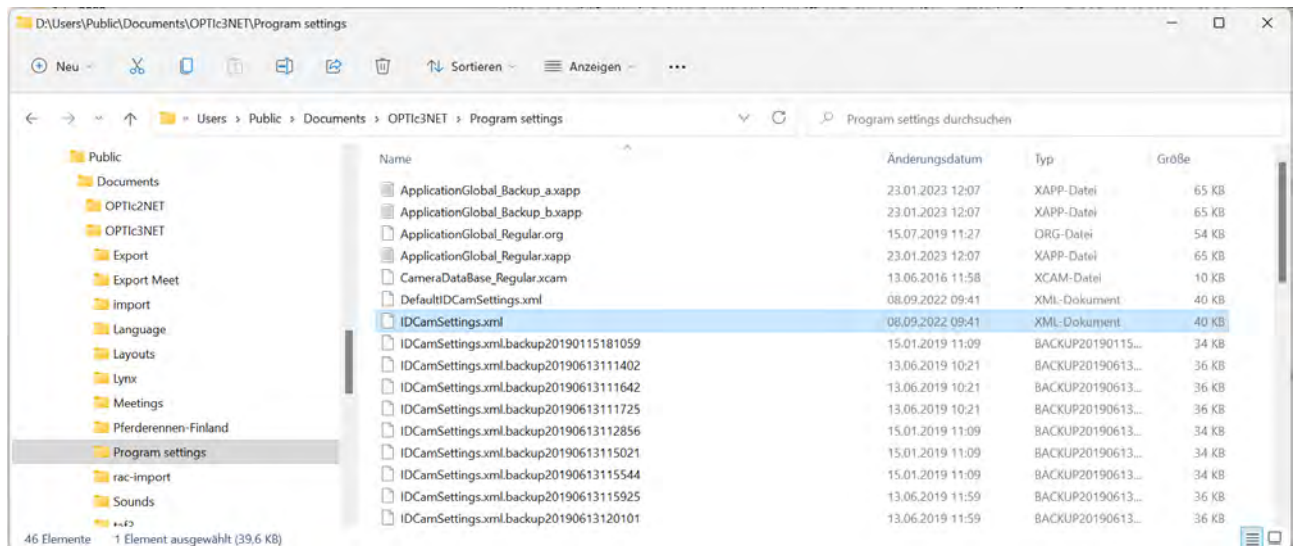


**Radial Polarization Filter PF55**  
to weaken bright back light (e.g. from water); this model is suitable for the lens Z75 or MZ75C

## 25 Tips and Tricks

### 25.1 ATL Settings (SELTEC pre configured)

ICCamSetting.xml löschen, dann wir **DefaultIDCamSettings.xml**. Mit dieser Einstellung sind alle wichtigen Grundeinstellungen vorkonfiguriert (z.B. für die Auswertung mit SELTEC TAF3).





Subject to errors and misprints.

**ALGE-TIMING GmbH**

Rotkreuzstraße 39

A-6890 Lustenau

Austria

Tel: +43-5577-85966

Fax: +43-5577-85966-4

[office@alge-timing.com](mailto:office@alge-timing.com)[www.alge-timing.com](http://www.alge-timing.com)