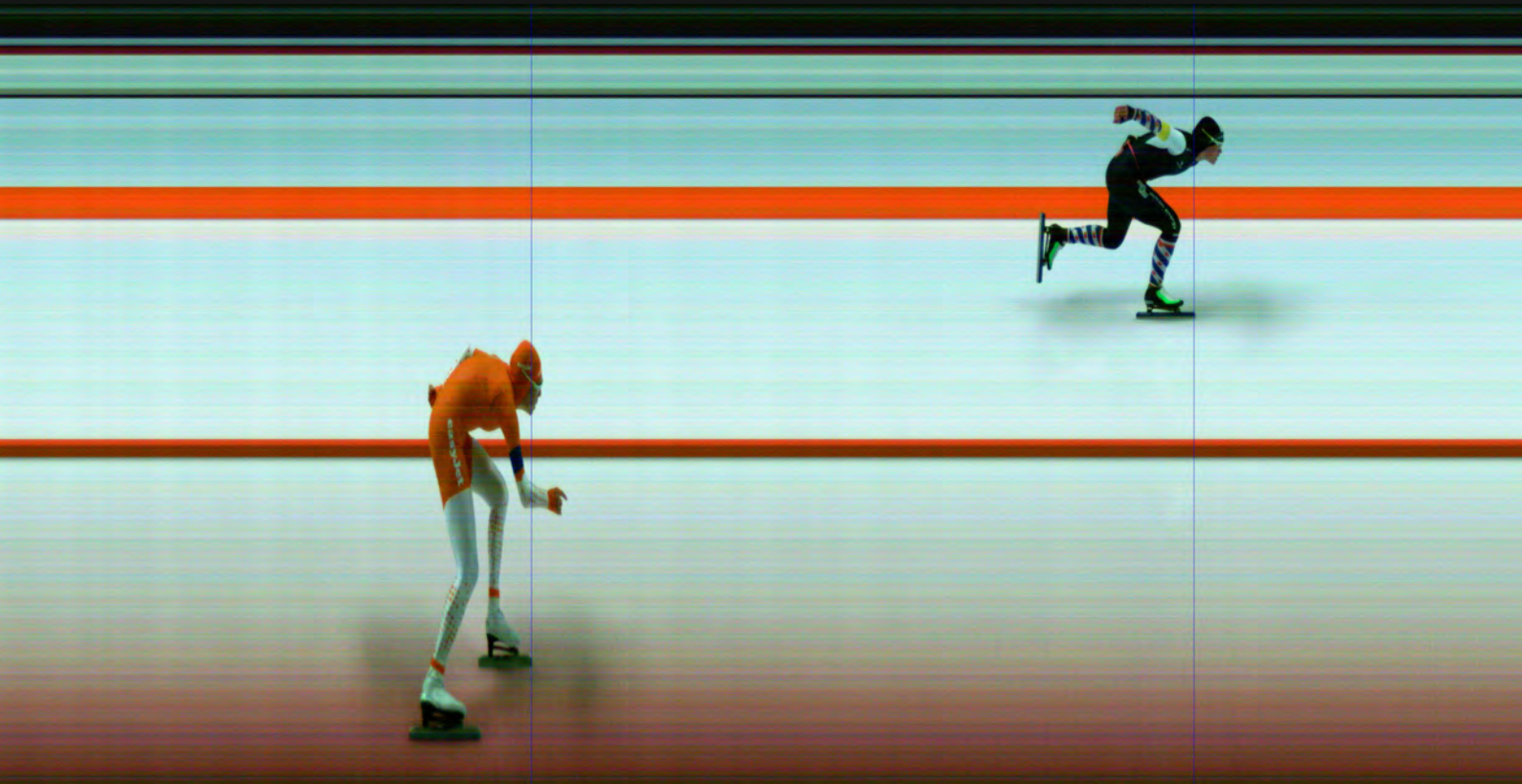


ALGE

TIMING



THE SPORTS TIMING EXPERTS

Speed Skating
Short Track
Inline Speed Skating



SPEED SKATING

Timing System with Radio

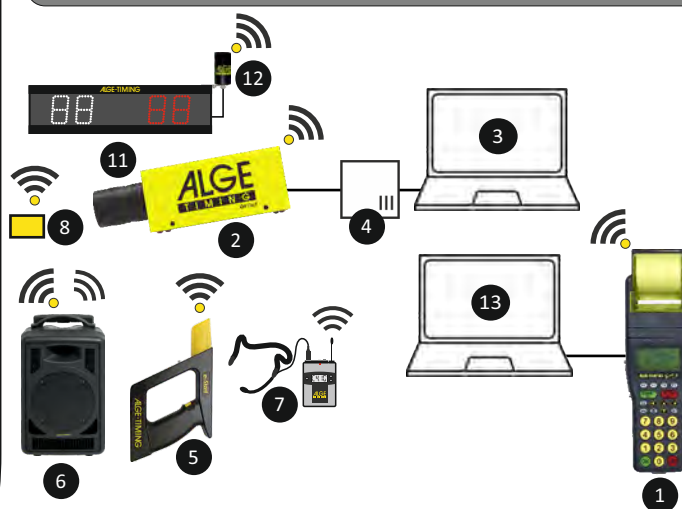
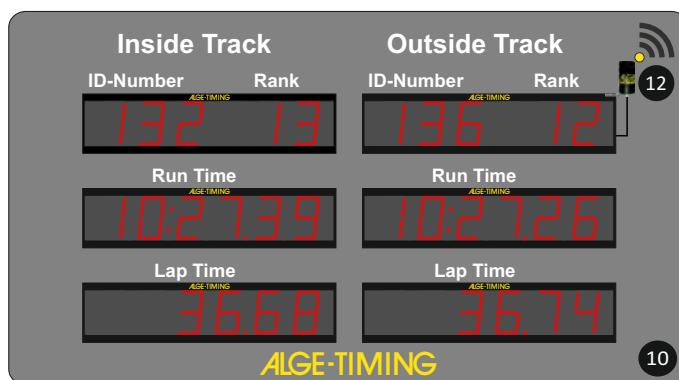
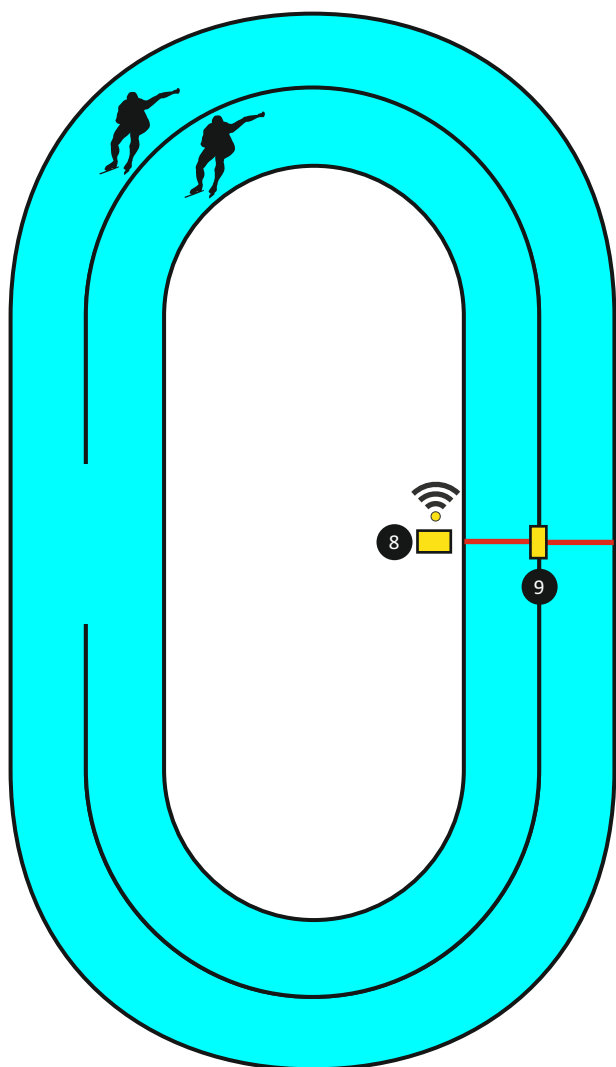
Timing for speed skating is quite complicated, as the two participants in a race change the course each lap (inner curve-outer curve). To ensure the easiest timing operation, we recommend the Timy3 as a timing device in combination with a timing and result software on the PC. The Timy3 registers all timing impulses and forwards them to the PC software for further processing. The handling of the timing is controlled on the timing software of the PC.

The photocells used for speed skating have special floor holders that are placed flat on the ice. You need a photocell PR1a or PR1aW for each lane with a double-sided reflector in the middle.

As backup system we recommend the photo finish OPTIc3. A picture of each runner is recorded when passing the finish. If both racers reach the finish at the same time, the winner will be evaluated on the photo finish picture.

The timing PC calculates the data for the competitors and outputs them to the display boards, among other things.

The sketch shows a speed skating system with the innovative WTN radio system (Wireless Timing Network). The electronic startgun e-Start W, the speaker system BANG2 and the photocells are connected by radio to the timing devices Timy3 and OPTIc3.



- 1 Timing Device Timy3 WP
- 2 Photo Finish OPTIc3
- 3 PC for Photo Finish
- 4 Power over Ethernet PoE
- 5 Radio Startgun e-Start W
- 6 Speaker System BANG2
- 7 Headset BANG-HS
- 8 Photocell PR1aW with Holder ICE-FH1
- 9 Reflector ICE-REF1 with Holder ICE-FH1
- 10 Display Board D-LINE (time, lap time, ID, rank)
- 11 Lap Counter D-LC-SS25-2x2-BAT-O
- 12 Radiomodule WTN-DB
- 13 PC for Timing and Results

SPEED SKATING

Timing System with Cable

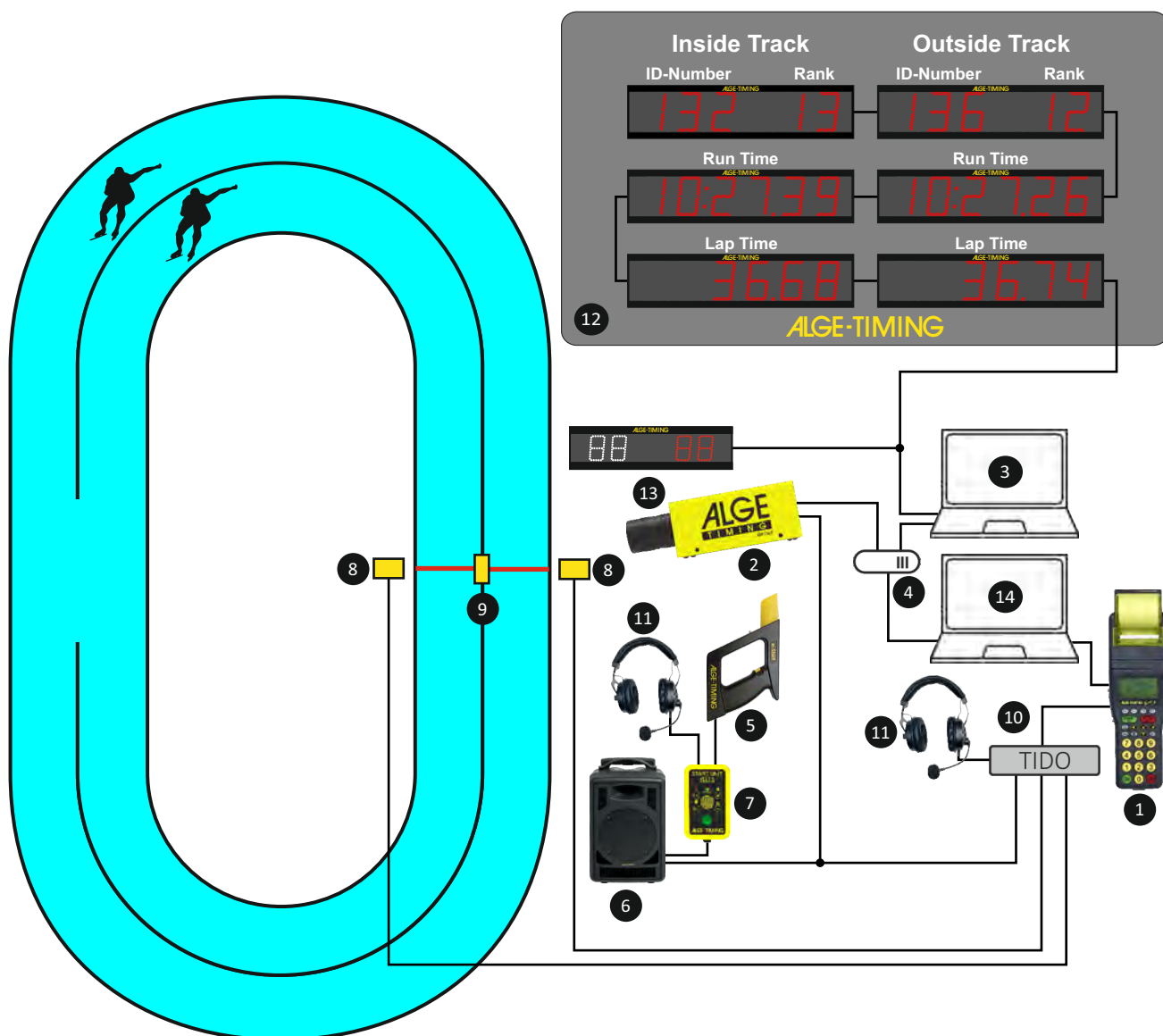


The timing system works with cables. The electronic startgun e-Start is connected to the loudspeaker system BANG2 via the Start Unit SU3. When triggering the startgun the speaker system BANG2 makes a start tone and the timing devices are started.

The starter and timing operator has a headset HS3-2 which allows direct communication. The starter can also use it to give commands to the participants at the start via the BANG2 loudspeaker system.

The high-precision timing device Timy3 WP is connected to the two finish photocells PR1a. All impulses are saved as the time of day and forwarded to the PC for timing, from where the timing is operated and, e.g., the display boards are controlled.

We recommend the photo finish OPTIc3 as backup system. A picture is recorded of each runner crossing the finish line. If both runners reach the finish at the same time, the winner will be evaluated on the photo finish picture. The photo finish is also necessary for team pursuit. There the time of the 3rd member of a team that crosses the finish line is measured.



- 1 Timing Device Timy3 WP
- 6 Speaker System BANG2
- 11 Headset HS3-2
- 2 Photo Finish OPTIc3
- 7 Start Unit SU3
- 12 Display Board D-LINE (time, lap time, ID, rank)
- 3 PC for Photo Finish
- 8 Photocell Pr1a with Holder ICE-FH1
- 13 Lap Counter D-LC-SS25-2x2-BAT-O
- 4 Switch with PoE
- 9 Reflector ICE-REF1 with Holder ICE-FH1
- 14 PC for Timing and Results
- 5 elect. Startgun e-Start
- 10 Timy-Dockingstation TIDO

SHORT TRACK - INLINE SPEED SKATING

Timing System with Radio

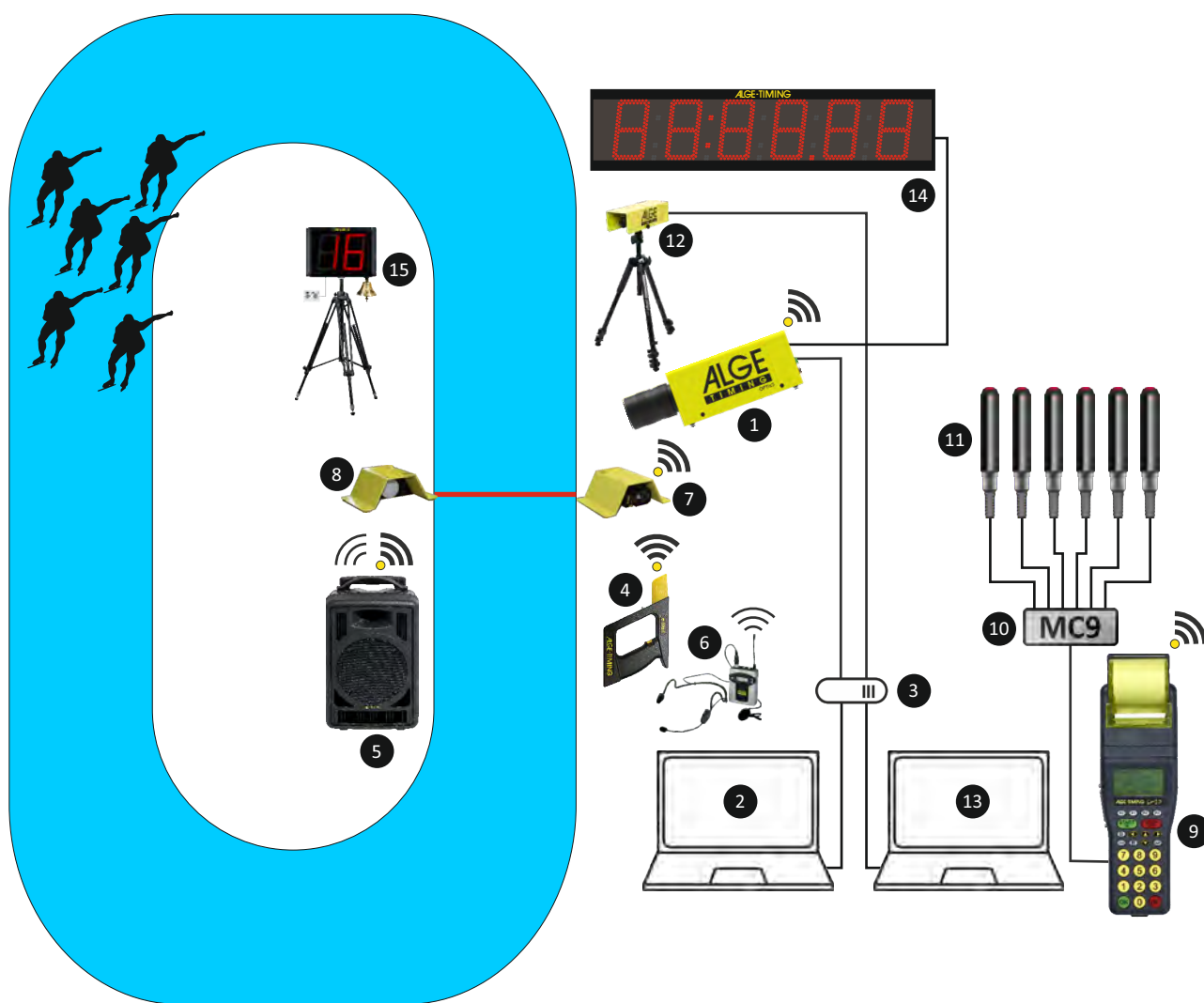
This timing system can be used for short track or inline skating (oval track). The electronic startgun e-Start W, the speaker system BANG2 and the photocells are connected by radio to the timing devices.

We recommend two independent systems for timing. The main system is the photo finish OPTIc3. It records the finishes and the rank as well as the exact time can be taken from the photo. The recording is controlled by a photocell and / or motion detection.

The photo finish system also controls the display board. The finish arrival camera IDCam will help the operator to read the numbers of the competitors.

The Timy3 WP is a backup system in which each participant is stopped with a separate push button.

Different models of the lap counter D-LCCB can be used.



- | | | |
|------------------------------|--|--------------------------------|
| 1 Fotofinish OPTIc3 | 6 Funkmikrofon BANG-HS | 11 Handtaster 023-02 (6 Stück) |
| 2 PC für Fotofinish | 7 Lichtschranke PR1aW mit Halter ICE-FH1 | 12 Einlaufkamera IDCam |
| 3 Power over Ethernet PoE | 8 Reflektor ICE-REF1 mit Halter ICE-FH1 | 13 PC für IDCam |
| 4 Funkstartpistole e-Start W | 9 Zeitmessgerät Timy3 WP | 14 Anzeigetafel D-LINE (Time) |
| 5 Lautsprechersystem BANG2 | 10 Multichannel MC9 | 15 Rundenzähler D-LCCB |

SHORT TRACK - INLINE SPEED SKATING

Timing System with Cable



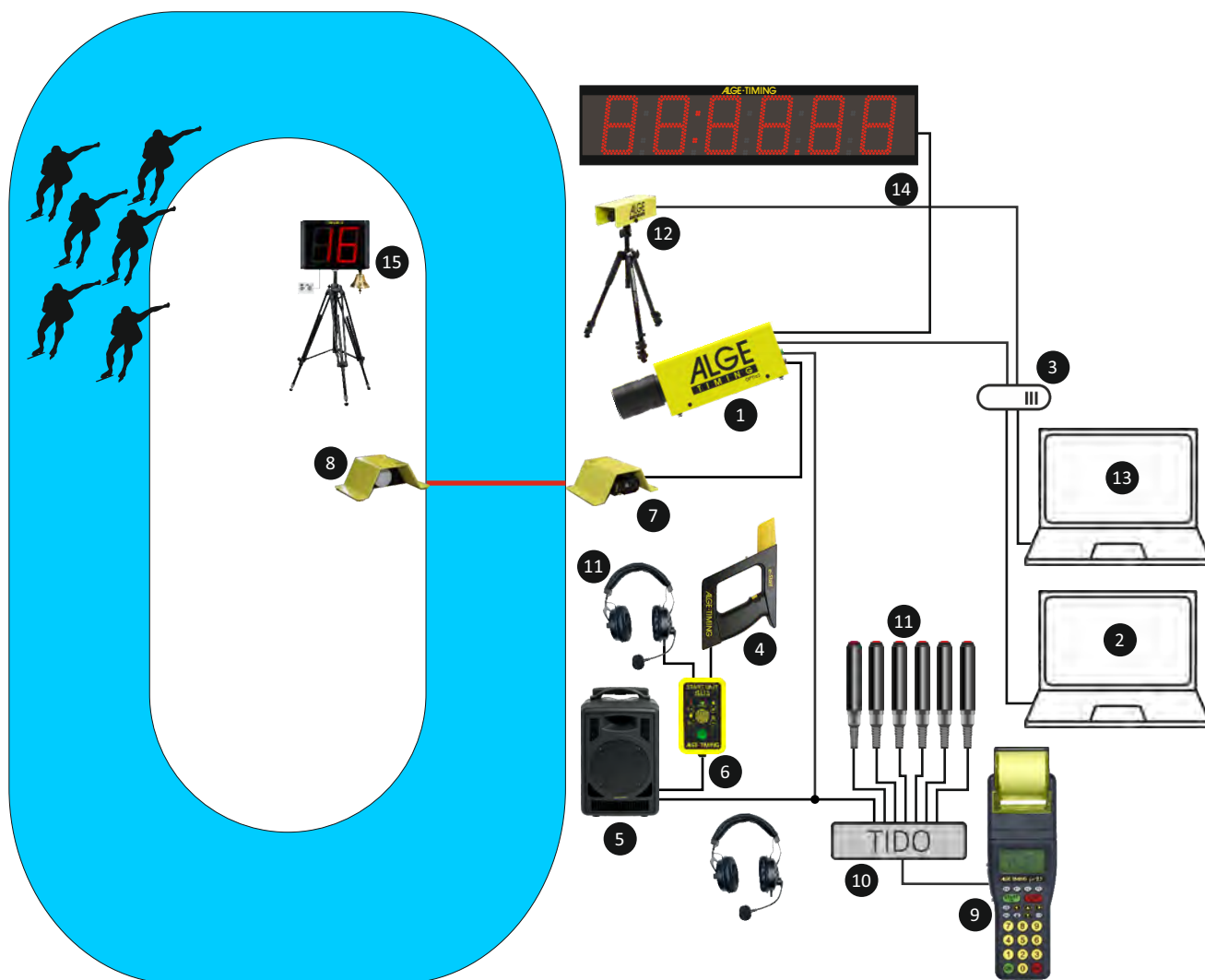
This timing system can be used for short track or inline skating (oval track). It works cables for all timing impulses. The electronic startgun e-Start is connected to the loudspeaker system BANG2 via the Start Unit SU3. When triggering the startgun the speaker system BANG2 makes a start tone and the timing devices are started.

The starter and timing operator has a headset HS3-2 which allows direct communication. The starter can also use it to give commands to the participants at the start via the BANG2 loud-speaker system.

We recommend two independent systems for timing. The main system is the photo finish OPTIc3. It records the finishes and the rank as well as the exact time can be taken from the photo. The recording is controlled by a photocell and / or motion detection. The photo finish system also controls the display board. The finish arrival camera IDCam will help the operator to read the numbers of the competitors.

The Timy3 WP is a backup system in which each participant is stopped with a separate push button.

Different models of the lap counter D-LCCB can be used.



- | | | |
|------------------------|--|----------------------------------|
| 1 Photo Finish OPTIc3 | 6 Start Unit SU2 | 11 Push Button 023-02 (6 pieces) |
| 2 PC for Photo Finish | 7 Photocell PR1aW with Holder ICE-FH1 | 12 Finish Arrival Camera IDCam |
| 3 Switch with PoE | 8 Reflector ICE-REF1 with Holder ICE-FH1 | 13 PC for IDCam |
| 4 Startgun e-Start | 9 Timing Device Timy3 WP | 14 Display Board D-LINE (Zeit) |
| 5 Speaker System BANG2 | 10 Timy Docking Station TIDO | 15 Lap Counter D-LCCB |



TIMING DEVICES

Timy3

The ALGE-TIMING Timy3 is a compact timing device with unique high-quality technology. The Timy3 impresses with an ergonomic design and absolute reliability, thanks to its robust design.

Despite its handy dimensions, the Timy3 has a large and easy-to-use silicone keypad, which can be used in any weather conditions, even with gloves on. The printer is integrated into the Timy3 WP and logs times of the entire competition. The Timy3 has an internal wireless modem of the WTN Wireless Timing Network series.

The Timy3 can be connected via radio to all devices of the WTN series, and, for example, can receive start impulses, intermediate times and finish impulses, control a display board and send data to a PC with result software. The low power consumption allows it to be used even in cold weather with internal batteries independent from mains.

The Timy3 is equipped with all necessary interfaces for communication with external devices, a USB interface, an interface for a display board, an RS232 and an RS485 interface.



Display

The Timy3 has a monochrome LCD graphic display with 128 x 64 pixels and backlight. With this, displaying up to 8 lines of text is possible. Different character sizes, and also graphic symbols for easier operation, can be displayed. The display has an extended temperature range for use in extreme weather conditions (up to 20°C).

Keypad

Despite its compact dimensions, the Timy3 has a large and easy-to-use silicone keypad, with 26 keys. Even with gloves on, an easy use is ensured.

Accuracy

The Timy3 works on a time of day basis and records it with an accuracy of 1/10,000 seconds. That means that calculated net times of a precision of 1/1,000 seconds are exactly calculated. Highest accuracy at any temperature is guaranteed by a temperature-compensated quartz.

Printer

The Timy3 WP has an integrated thermal printer. This quiet and extremely fast printer allows easy and simple paper change. The transport roller is connected to the paper cover and saves the tedious threading of the paper.

Memory

Approximately 30,000 times can be stored with the corresponding bib and timing channels. The software is stored in a flash memory. Updates of the software are available free of charge, via the Internet.

Casing

Particular emphasis was placed on ergonomics and stability. The aim of the development was to bring a timer with all the advantages of modern technology into a handy and shockproof casing. The Timy3 is suitable both as a handheld timing device and as a table device.

Connections

Regarding the wide range of possible connections with external devices, the Timy3 offers unequalled opportunities in its class and size. For example it is possible to connect several devices by the RS485 interface to work as a network.

Radio Network - Wireless Timing Network WTN

An integrated WTN module allows to communicate with all devices of the WTN series (WTN wireless radio, WTN-PB wireless push button, PR1aW photocell, WTN-DB and Windspeed WTN-WS scoreboard).

Software

There is a great number of programs for the Timy3. The device is able to cover the entire spectrum for time measurement starting from a hand timer up to the main timer at major events.

TIMING DEVICES

Timy3

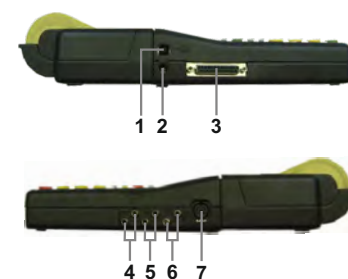


Timy3 Software

Backup:	timing device to measure time of day (e.g. backup or reference timer for PC)
Stopwatch:	universal timing program which is able to time more than one run (net time/total time)
TrackTimer:	timing for events which have lanes (e.g. athletics and swimming)
LapTimer:	timing program with split and sequential time
PC-Timer:	professional timer (time of day) to work with a PC
Timeout:	timing program with timeout function (e.g. show jumping)
Dual Timer:	timing program with two courses, either with simultaneous or separate start
Parallel-Diff:	timing program for parallel slalom
TV Timer:	simple timing program to control a display board or TV time insert
Speed Climbing:	timing program for speed climbing
Training Light:	universal training software with intermediate times and one racer on course
Training REF:	training software with intermediate times and more than one racer on course
Swim Trainer:	training program for swimming
Speed:	speed measurement in km/h, m/s, or mph
Commander:	terminal to control ALGE-TIMING display boards
Terminal:	terminals for judges (e.g. ski jumping, figure skating, diving, artistic swimming)
CycleStart:	start control, lap counting and backup timing for pursuit cycling
Track & Field:	to measure the windspeed for athletics with a connected anemometer WS2 and to control a concentration clock
Jumping:	training program for jumping exercises
Start-Liner:	to control the ASC3 for cross country and Nordic combination
Voting:	judge terminal for artistic swimming and diving



Timy3 W timing device without printer



Connections:

- 1- 1 x USB
- 2- 1 x power supply 8- 22 VDC
- 3- 1 x D-Sub 25-pin
 - 9 time measuring channels
 - RS232 (PC connection)
 - display board
 - RS485 (network)
 - power supply (8- 24 VDC in/out)
- 5- 1 x pair of banana sockets- start input
- 6- 1 x pair of banana sockets- finish input
- 7- 1 x DIN socket for photocell

Technical Data

Crystal frequency:	TCXO, +/-1 ppm (+/-0.00036 s/h)	Power supply:	internal: NiMH power pack 7.2 V/2 Ah or 6 x AA alkaline (only for Timy3 W) external: power supply PS12A, 12 V battery or 8- 22 VDC
Time resolution:	1/10,000 s	Power consumption:	without printer about 100 hours with printer about 47 hours
Timing:	9 timing channels, external extension possible	Charging time:	approx. 14 hours
Program memory:	flash memory with 16 Mbit	Printer:	graphic thermal printer, max. 5 lines per second
Data memory:	RAM with 4 Mbit (about 30,000 times)	Temperature range:	-20°C to +60°C
Display:	monochrome LCD graphic display with backlight, 128 x 64 pixels, extended temperature range	Measurements:	Timy3 W: 204 x 91 x 50 mm Timy3 WP: 307 x 91 x 65 mm
Keypad:	silicone keypad, 26 keys	Weight (no battery):	Timy3 W: 450 g Timy3 WP: 650 g (without battery & paper)
Radio module WTN:	built-in 2.4 GHz radio, 15 adjustable frequencies and power output from 10 to 100 mW, 5 timing channels, for distances up to 350 m		





TIMING DEVICES

Photo Finish OPTIc3

The photo finish system OPTIc3 takes over the technical market leadership. It has a recording rate of up to 30,000 frames per second (fps) and up to 2,016 vertical pixels. This makes it the per-fect timing device for any sport that relies on good photo finish images and accurate results.

Features such as 2-D images, autofocus, automatic iris adjustment, etc. make the system easy to use. The VoIP allows communication with the starter, and the timekeeper communicates without headset via microphone and speaker of the PC.



Technical Facts:

vertical resolution:	up to 2,016 pixels
scan rate (fps):	up to 30,000 frames per second
recording time:	unlimited, depends on PC hardware
timing:	temperature compensated quartz oscillator TCXO, +/-0.06 ppm at 25 °C (0.0002 s/h)
power supply:	PoE+ or 10.6- 13.4 VDC
temperature range:	-20 °C to +50 °C

Standard network

It is a simple way to connect almost every PC via Ethernet or WLAN.

Automatic Iris Adjustment

With the motor zoom of ALGE-TIMING you can access functions such as autofocus and automatic iris adjustment.

Live View

The camera image can be viewed via WiFi on a mobile phone or tablet. This allows to adjust the lens of an OPTIc3 camera that is

placed far away from a PC and has no motor zoom in an easy, fast and precise way.

2-D Image Adjustment

With the new 2-D image adjustment (maximum 2,016 x 360 pixels), you can accurately align the camera on the finish line in a very short time.

High-Speed Camera with 2-D Images

With 2-D mode with 100 Hz (100 fps) and full-screen mode, the OPTIc3-PRO is ideal for sports such as swimming and rowing.

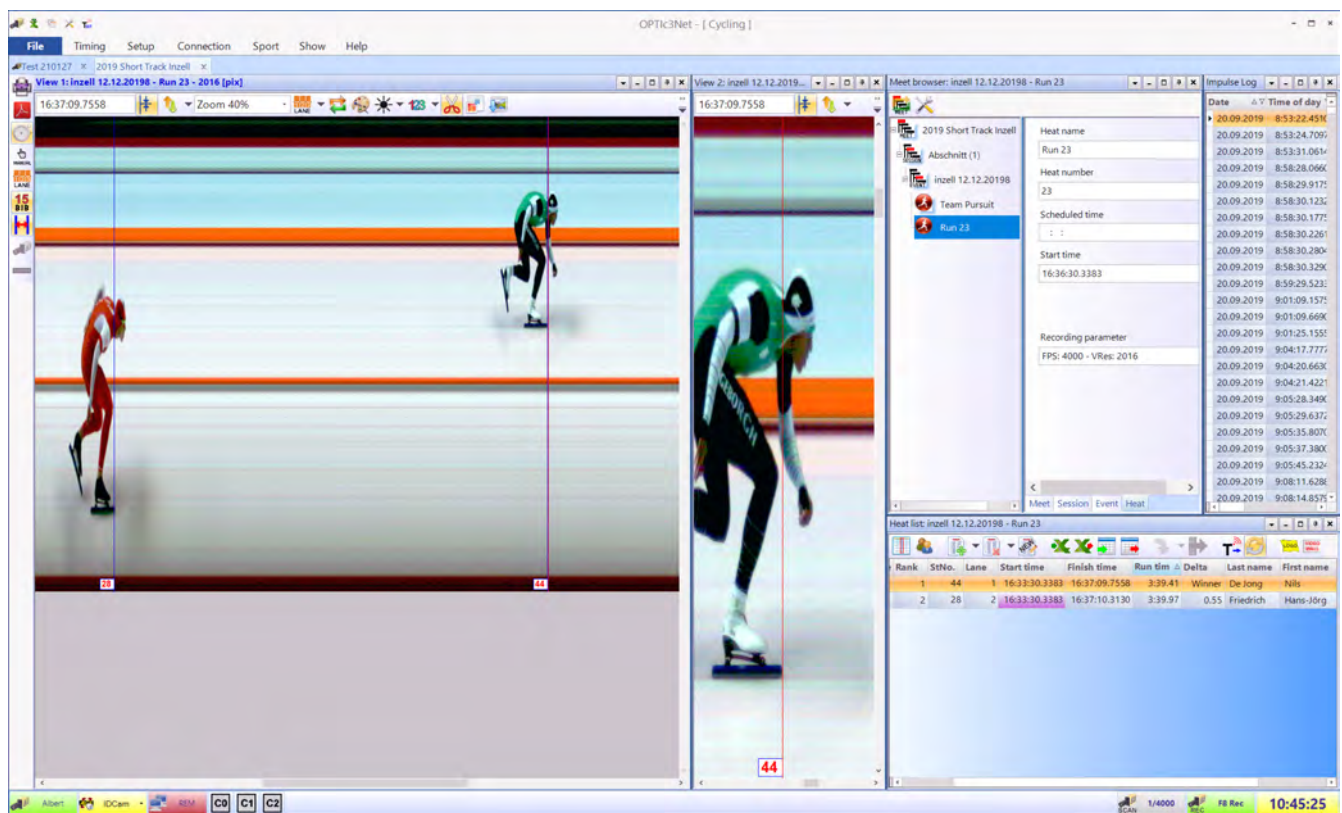
Since the OPTIc3 has a built-in timing device, exactly synchronized 100 frames per second can be guaranteed.

PC Software

The modern, powerful evaluation software for the OPTIc3 enables quick and easy results. It is also possible to record on one PC and execute the evaluation on another. Following operating systems are supported: Windows 7, Windows 8.x, Windows 10, Windows 11 (x86 or x64)

TIMING DEVICES

Photo Finish OPTIc3



The photo finish system OPTIc3 is available in two versions

OPTIc3 Basic System

- photo finish system for the small budget
- recording: up to 3,000 fps
- resolution: 1,360 pixel vertical resolution
- 2-D image preview to set and adjust the camera
- free updates of the OPTIc3NET software
- an upgrade with all features des OPTIc3-PRO is possible

OPTIc3-PRO

The professional photo finish system that leaves nothing to be desired. The following features are integrated:

- high-speed recording: up to 30,000 fps
- high resolution: 2,016 pixels vertical resolution (48 % more than OPTIc2)
- 2-D image preview to set and adjust the camera
- eXtremLuX: various technologies for image improvement under bad light conditions
- motion detection: automatic recording with motion detection
- integrated WTN: wireless impulse and data transmission
- high-speed camera: It is possible to record 100 frames per second in the 2-D mode with a resolution of 1,024 x 768 or 360 x 2,016 pixels. The proven IDCam software is available for this function.
- VoIP: voice over IP enables communication with the starter without the PC operator having to use a headset
- recording on a PC, evaluation or photo finish control by judges possible on a second PC
- free updates of the OPTIc3NET software

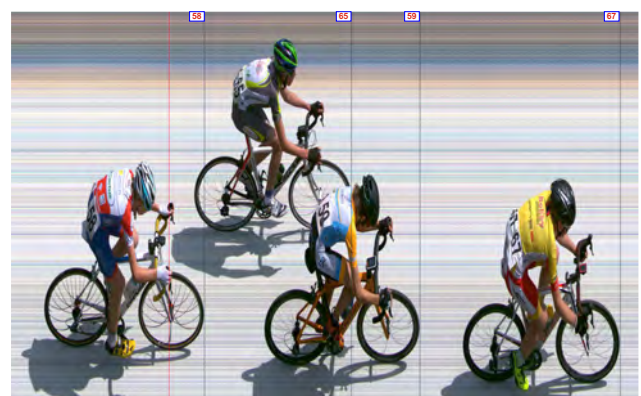
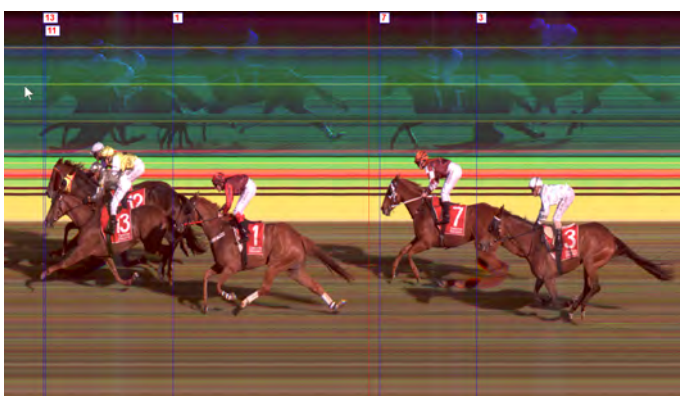
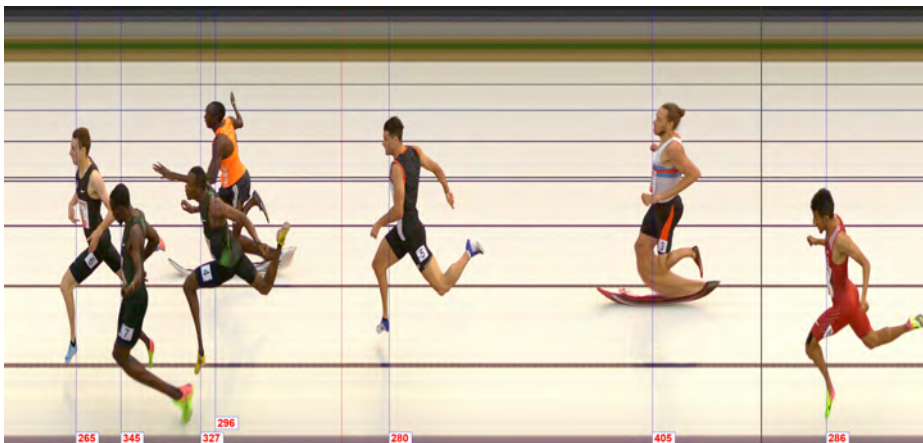
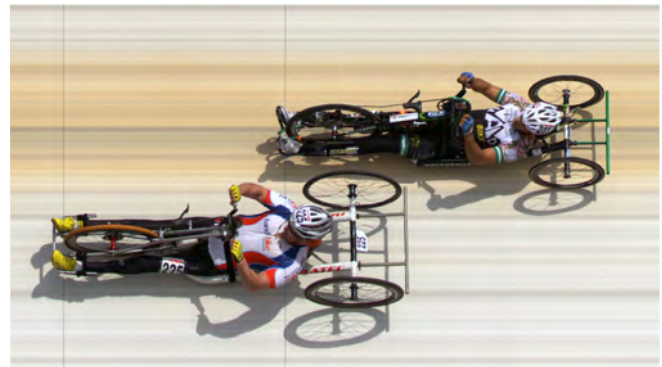


TIMING DEVICES

Photo Finish OPTIc3

The OPTIc3 is used for sports where several participants reach the finish at the same time. In addition, the OPTIc3 is the ideal device to monitor the finish arrival. When discussing a

result, the picture of the OPTIc3 shows the proof. Here the saying is true "a picture is worth a thousand words".



Sports:

- Track and Field
- Cycling
- Horse Racing
- Motorsport
- Rowing
- Canoe
- Dragonboat
- Inline Skating
- Snowboard
- Ski Cross

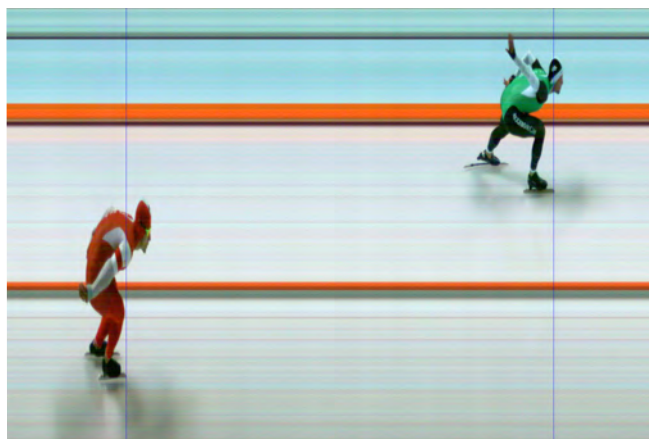
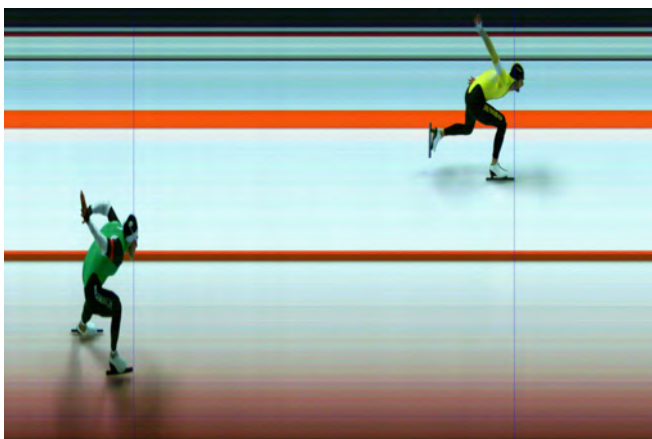
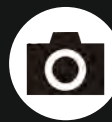
- Alpine Skiing
- Cross Country Skiing
- Biathlon
- Short Track
- Speed Skating

Special Solutions:

- Swimming
- Air Race
- Drone Racing
- Crashed Ice
- Timber Sports

TIMING DEVICES

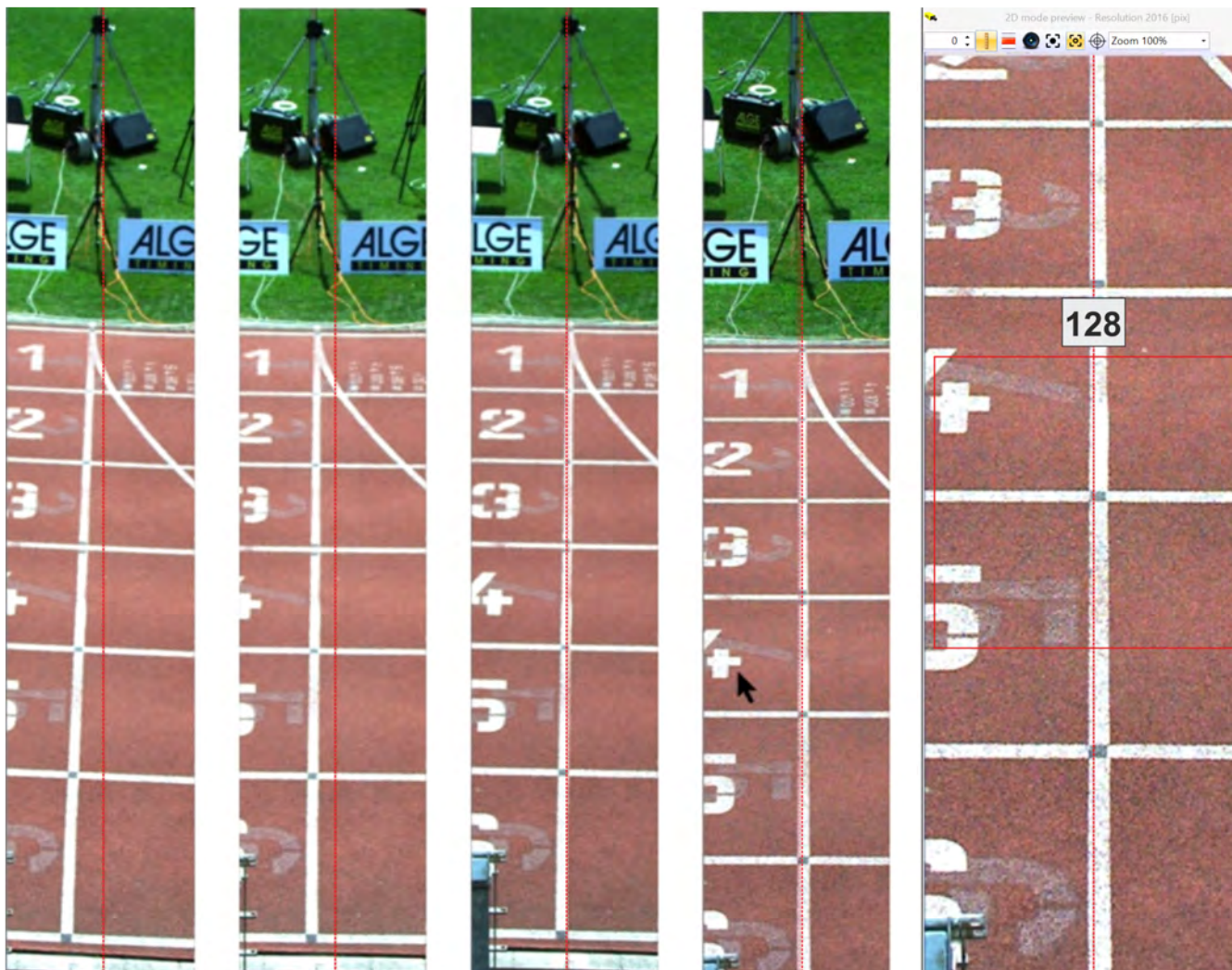
Photo Finish OPTIc3



Easy camera setting in 2-D mode

The OPTIc3 camera is switchable to a 2-D preview video image mode. This video preview displays a live 2-D image of the camera on the PC monitor. A vertical red line overlays the 2-D preview image.

This line represents the recording line in the line scan mode (competition mode). It allows an easy alignment and setup of the photofinish camera to the finish line. With the autofocus function, the focus can also be adjusted in the 2-D image.





TIMING DEVICES

Photo Finish OPTIc3

The photo finish system OPTIc3 can be extended as desired with practical accessories or equipped for specific requirements of sport events. In addition to the standard

accessories, there are also unique special solutions that can be customized.



Zoom Lens Z75
manual zoom lens
C-Mount 3/8", 12.5- 75 mm / F1.2



Motor Zoom MZ75C
control of focus, zoom and brightness from the PC
C-Mount 3/8", 12.5 – 75 mm / F1.2



Motor Zoom MZ48C
control of focus, zoom and brightness from the PC
C-Mount 1/2", 8- 48 mm / F1,2



Wide-Angle Lens L8C
C-Mount 3/8", 8 mm / F1.4



C-Mount Focal Length Converter Lx1.5
converts the focal length of a lens for 1.5 times



C-Mount Focal Length Converter Lx2
Doubles the focal length of a lens



Gearhead 410
three-dimensional, mechanical gearhead for a precise adjustment of the camera to the finish line



Gearhead 410-E3
three-dimensional, electrical gearhead for a precise three-dimensional adjustment of the camera to the finish line directly from the PC (no further cabling necessary)



Tripod STATIV6
tripod with a maximum height of 3.66 m

Tripod TRIMAN
tripod with a maximum height of 2.4 m

Tripod TRI-PRO
tripod with a maximum height of 2.67 m



Weather Protection Cover WPC3-75
for OPTIc3 camera with the lenses Z75, MZ75C, MZ48C and L8C



Carrying Case KL-OPTIc3
case with foam insert to transport and store an OPTIc3 system safely



Ethernet Cable K-RJ45G03
CAT6 patch cable with 3 m



Ethernet Cable K-RJ45G10
CAT6 patch cable with 10 m



Ethernet Cable K-RJ45G20
CAT6 patch cable with 20 m



Cable Reel KT-RJ45G90
cable reel with 90 m CAT6 Ethernet cable for the OPTIc3 (with this cable, the POE can also feed the camera)



Power over Ethernet PoE
power supply for the OPTIc3 camera via Ethernet cable (POE is included with the OPTIc3 camera- power supply 90- 240 VDC)



Gigabit-SWITCH PoE+
with 8 RJ45 sockets and integrated Power over Ethernet (PoE+)



Power Bank PS-KP
Universal device that feeds almost all ALGE-products, the lithium battery has a capacity of 18 Ah, and a 12 VDC and 2 USB outputs

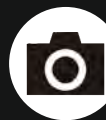


Radial Polarizing Filter PF55
(on request) polarization filter to attenuate reflection (e.g. from water)

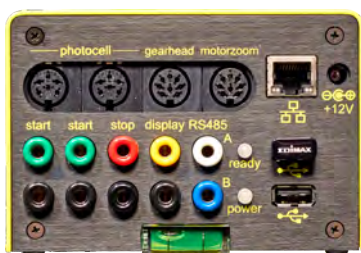


TIMING DEVICES

Photo Finish OPTIc3

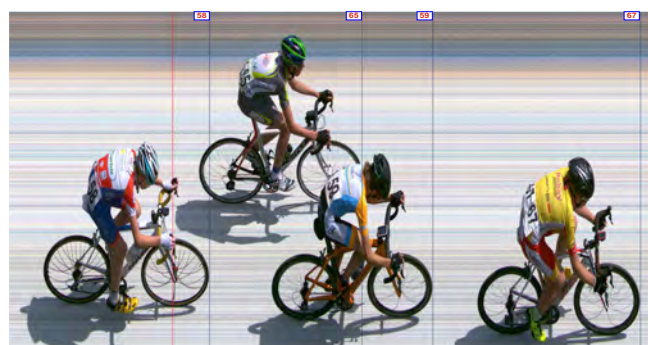
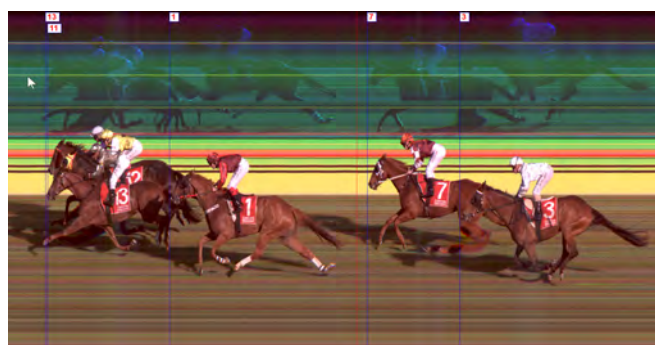


Technical Data	OPTIc3	OPTIc3-PRO
Pixel (vertical):	1360 pixel	2016 pixel
Recording Speed (fps):	100 - 3,000 fps	100 - 30,000 fps
Voice over IP (VoIP):	optional	yes
Light Amplification eXtremLux:	optional	yes
Line Doubling:	optional	yes
Wireless Timing Network:	optional	yes
High Speed Video (100 pictures per second)	optional	yes
Sensor Type:	CMOS	
Time Base:	temperature compensated quartz oscillator TCXO: +/- 0.006 ppm at 25 °C (0.0002 s/h)	
PC Connection:	Gigabit Ethernet / WLAN	
Lens Mount:	C-Mount / F-Mount with adapter	
Distance Camera to PC:	CAT6 cable: up to 100 m Fibre Optic: up to 2000 m (with converter)	
Connection for Electronic Gear Head:	yes	
Option for ALGE-TIMING Motor Zoom:	yes	
Remote Control for Zoom:	yes (for ALGE-TIMING motor zoom)	
Remote Control for Iris:	yes (for ALGE-TIMING motor zoom)	
Remote Control for Focus:	yes (for ALGE-TIMING motor zoom)	
Autofocus:	yes (for ALGE-TIMING motor zoom)	
Automatic Brightness Adjustment:	yes (for ALGE-TIMING motor zoom)	
White Balance:	automatic and PC software	
Gamma Adjustment:	PC software	
Recording Time:	unlimited, depending on the PC hardware	
Recording Speed Adjustment (fps):	software (adjustable at any time)	
Timing Impulse Inputs:	3 (start, intermediate time, finish)	
Connection for Display Board:	RS232 / RS485 / Ethernet	
USB Interface:	2	
Recording and Evaluation:	possible on 2 different PC	
Transponder Integration:	optional	
Power Supply:	Ethernet with PoE+ power supply PS12A (10.6- 13.4 VDC)	
Tripod Thread:	3/8 inch	
Operating Temperature:	-20 to 50 °C	
Measurements (excluding lens):	180 x 120 x 80 mm (L x W x H)	
Weight (excluding lens):	1.5 kg	



Connections

- | | |
|---|---------------------------------|
| 2 x start input (banana socket) | 1 x motor zoom |
| 1 x finish input (banana socket) | 1 x gear head |
| 2 x DIN socket (3 input channels) | 2 x USB (e. g. for WLAN) |
| 1 x display board RS232 (banana socket) | 1 x RJ45 (Gigabit Ethernet) |
| 1 x display board RS485 (banana socket) | 1 x power supply (9 – 13.4 VDC) |





START DEVICES

Speaker System BANG2

The electronic start system BANG2 allows a simple, unproblematic start. It consists of a transportable amplifier speaker box (active speaker with 80 W_{max}). The timing system gets the start impulse from the BANG. When the BANG2 is triggered a start sound (imitated gunshot) is activated. If the BANG2 is triggered a second time within 5 seconds, a false start sound is generated.

The starter can use the BANG2 for oral commands for the athletes using the ALGE-TIMING communication system or a radio microphone BANG-HS.

The start sound is triggered by a push button (closing contact). If a flash is needed for disabled competitors or to have a more precise manual timing, a start trigger e-Start or FLASH-XL can be used. The electronic startgun e-Start has an integrated flash.



- 1cable connection for BANG to timing devices
- 2receiver for wireless headset BANG-HS
- 3display for device adjustment
- 4operator keyboard for device adjustments
- 5Wireless Timing Network WTN
- 6Amplifier for Speaker (connection and adjustments)
- 7On/Off switch
- 8Power supply for mains (100-240 V~)



- | | |
|------------|-------------|
| 1 BANG2 | 3 e-Start W |
| 2 Timy3 WP | 4 BANG-HS |

Advantages of the Start System BANG2

- Start system is always ready, no reloading of a gun necessary.
- No starting problems due to unloaded startguns or bad blanks.
- No costs for expensive blanks.
- There is no cleaning of guns necessary after the end of a race day.
- No legal problems with the use of the start system (in many countries a gun license is necessary for a startgun).
- No problems to transport the start system (in many countries the gun and ammunition must be transported in separate vehicles).
- When using the "StartUnit3", it is possible to communicate with the time keeper and to make announcements over the speakers of the start system (e.g. StartJudge SJ) and the BANG2.
- The BANG2 works with cable or radio (WTN)

Technical Data:

<i>Output Power:</i>	80 W _{max} / 50 W _{RMS}
<i>Speaker System:</i>	bass (20 cm / 8") tweeter(2.5 cm / 1")
<i>Frequency Range:</i>	20 – 20,000 Hz
<i>Mic-Input:</i>	6 mV
<i>Line-Input:</i>	800 mV
<i>Timing Input/Output:</i>	2 x LTW-socket (7-pin, male) 1 x banana socket (green / black)
<i>Equalizer, Bass:</i>	±15 dB/100 Hz
<i>Equalizer, Treble:</i>	±10 dB/10 kHz
<i>Power Supply:</i>	Mains: 100-240 V~/50- 60 Hz/2 A Battery: 2 x 12 V/5.2 Ah (built in)
<i>Operating Temperature:</i>	0°C to +40°C
<i>Measurements:</i>	305 x 510 x 265 mm (L x H x W)
<i>Weight:</i>	12,5 kg

Radio Module WTN for Timing:

<i>Transmitting Frequency:</i>	2.4 GHz band 16 adjustable teams
<i>Transmitting Power:</i>	10 mW
<i>Range:</i>	approx. 300 m (line of sight)

Receiver for headset BANG-HS:

<i>Receiver Module:</i>	PLL multifrequency receiver
<i>Carrier Frequency:</i>	863- 865 Mhz divided in 16 frequencies
<i>Operating Range:</i>	about 30 m (line of sight)

START DEVICES

Electronic Start Gun e-Start & e-Start W



The electronic starting device combines absolute precision and synchronization of start signal, flashlight and start tone, and replaces traditional start guns. With this device, problems by transporting weapons have become history.

The electronic start gun is connected directly to ALGE-TIMING devices, such as the BANG loudspeaker system or the Start Judge SJ2 system. It has a push button that triggers the flash and start impulse that are passed on to the other components of the system.

The e-Start is connected by cable; the e-Start W is the radio system.



Start gun e-Start



Start gun e-Start W

Facts about the electronic Start Gun e-Start/e-Start W

- fair starting conditions for all starters
- best visibility through a flash for start and/or false start
- no additional costs for cartridges
- no problems with the start due to defective ammunition or unloaded gun
- no weapon certificate required
- no problems with transport or with customs authorities

Technical Specifications

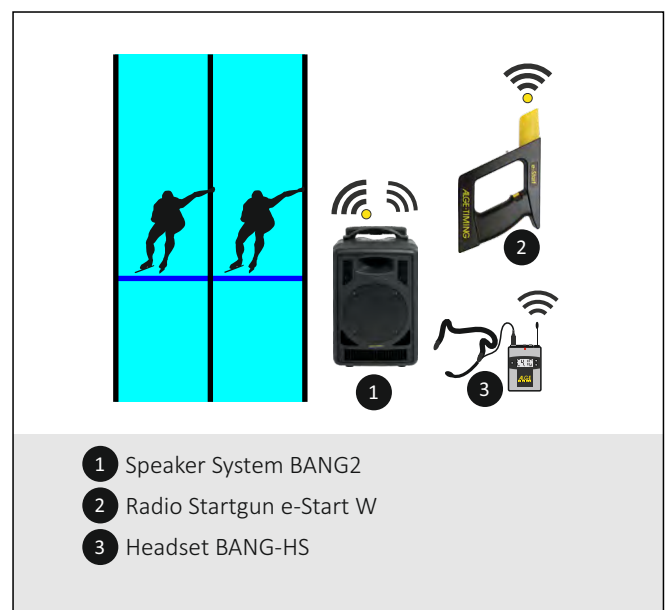
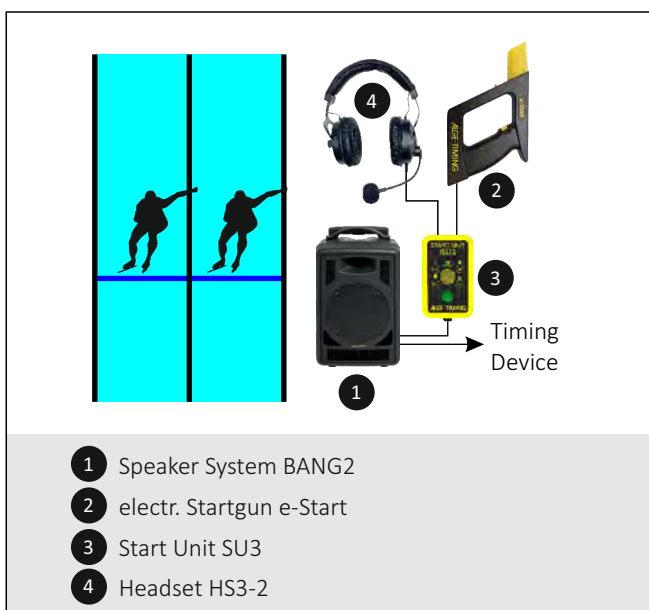
Flash: 4 x LED (Ultra Bright Power LED)
Operating temperature: -20 °C to +45 °C
Dimensions: 265 x 150 x 35 mm

e-Start Specifications

Weight: approx. 0.3 kg
Connector: 2 m long connection cable with DIN plug

e-Start W Specifications

Weight: approx. 0.5 kg
Connection: via integrated WTN radio module
Transmission frequency: 2.4 GHz band, 15 adjustable teams
Battery: Li-Ion battery 3.6 V/10.4 Wh (fixed installed)
Charging time: approx. 4 hours (charging temperature 0 °C to 45 °C)
Operating time: approx. 45 hours at 22 °C and one impulse per minute





START DEVICES

Startmicrophone SM9 and Accessory

Startmicrophone SM9

The start microphone SM9 is used in sports that are started with a start gun, such as in athletics, triathlon, cycling, speed skating, short track or cross-country skiing.

The SM9 start microphone is mounted on a start gun. The sound of the detonation of the start gun triggers an electrical impulse in the start microphone SM9 and starts the timing device.

The SM9 start microphone is connected to the speech amplifier, from which a two-wire cable with banana plugs leads to the timing device. In addition, a headset can be connected to the speech amplifier, which allows direct communication between starter and timing operator. The same two-wire cable is used for the voice connection as for the start impulse.



- 1 Startmicrophon SM9
- 2 Startgun (not from ALGE)
- 3 Speech Amplifier SV5-BT
- 4 Headset HS-BT1



Start Microphone SM9



Start Unit SU3

Amplifier for e.g. BANG2 with start button, volume adjustment and socket for the a headset and startgun (e.g. e-Start)



Speech Amplifier

Speech Amplifier SV5-BT

Bluetooth speech amplifier to pair Bluetooth headsets or earphones with volume and microphone control.



Speech Amplifier SV4-S

With two connections for two-core connection wire (banana plugs), connection for headset, volume control and switch and/or push button for microphone

Headsets



Headset HS-BT1

Bluetooth headset with double-sided earphones and built in microphone. It works in combination with speech amplifier SV5-BT.



Headset HS4-2

Headset with double-sided earphones and one microphone; recommended for out-door and/or for high surrounding sound level



Headset HS4-1

Headset with single-sided earphones and one microphone; recommended for out-door and/or for high surrounding sound level



FLASH XL

The starting flash light FLASH XL is an optical start device that can be used with acoustic starting devices such as a start gun. It is triggered by an external impulse. If another impulse occurs within five seconds, it will show 5 flashes as false start signal.

START DEVICES

Startbeep STB1



The Startbeep STB1 is a universal, start acoustic device. Due to its sturdy construction, the STB1 is very simple and user-friendly to operate.

Startbeep STB1

- Nine fixed programmed start intervals can be selected with a switch: 10, 15, 20, 30, 40, 45, 60, 90, and 150 seconds.
- A freely programmable start interval can be selected between 6 and 99:59 minutes with step switch.
- special program for the 3-second countdown in speed climbing
- countdown start by internal or external push button
- countdown with or without standby signal (ten seconds before start)
- In the horn mode, the Startbeep can be used as a start gun replacement, triggered by an internal or external push button.
- It can be synchronized with other timing devices.
- start output, potential-free closed contact (e.g. for triggering a timing device)



Technical Data

Electronics:	μP-controlled in CMOS
Working temperature:	-25°C to +45°C
Power supply:	9 V Alkaline battery or external power supply
Connections:	potential-free closing contact for synchronizing or triggering of a timing device <ul style="list-style-type: none">· external push button· external power supply· on/off switch· internal push button
Sound converter:	horn loudspeaker, swivelling
Housing:	polyamide, glass fiber reinforced (impact resistant)
Fastening:	chain fastening e.g. for mounting on a post
Weight:	1 kg
Dimensions:	132 x 205 x 88 mm
Operating duration:	up to 80 hours





IMPULSE DEVICES

Photocell PR1a and PR1aW

The photocell PR1a is a masterpiece of precision and can be used universally as a reflection photocell, as a transmitter photocell or a receiver photocell.

The photocell emits a modulated light beam in the infrared range, which is monitored by the receiver for interruptions. If the receiver detects an interrupt, it triggers an impulse. If both, the transmitter and receiver are in the same housing, it is called a reflection photocell. The infrared beam is directed from the transmitter to a reflector. The reflector functions like a mirror and reflects the infrared beam back to the receiver. Should longer distances be necessary, one can use a photocell as transmitter, and another as a receiver photocell.



Photocell PR1a

- impulse accuracy 1/10,000 s
- variety of types:
 - reflection photocell
 - through-beam photocell for long distances
- wide photocell range: over 150 m possible
- variable power supply of the photocell:
 - battery operation
 - power supply from the ALGE-TIMING timing device
 - external power supply from 4 to 18 VDC
- battery status indication with LED (green, yellow, red)
- indicates photocell status with LED (green, yellow, red)
- synchronization of two photocells (main and backup), in order to avoid interference
- setting of the delay time (approx. 20 ms to 2 s/factory setting = 20 ms)
- very long operating time



Photocells PR1aW

The PR1aW photocell has an integrated radio module (2.4 GHz), in addition to all characteristics of the PR1a. The impulse transmission can be carried out by radio and is compatible with the WTN series. 15 different radio-teams and 5 different impulse channels can be set. If required, the PR1aW can also be connected to a timing device via cable.

Additional Functions

- integrated radio module for wireless impulse-transmission
- impulse transmission also possible by cable
- up to 38 hours of operating time with battery



IMPULSE DEVICES

Photocell PR1a and PR1aW



Technical Data

Range:	0.5 to over 25 meters (with reflector) 0 to over 150 meters (transmitter and receiver)
Impulse length:	20 to 2,000 ms can be set
Output:	NPN transistor, open collector, active low
Dimensions:	approx. 118 x 87 x 44mm
Weight:	approx. 0.3 kg
Operating time:	approx. 77 hours (PR1a) approx. 38 hours (PR1aW)



Photocell PR1a

reflection photocell with transmitter and receiver in one case with integrated socket joint
additional you need the holder ICE-FH1



Reflector ICE-Ref1

reflector for photocell to mount into holder ICE-FH1



Photocell Holder for Speed Skating ICE-FH1

holder for photocell and reflector to place the them on the ice





DISPLAY BOARD

D-LINE & Lap Counter D-LCSS

The Multifunctional LED Display Board

The ALGE-TIMING D-LINE can universally be used. It is a numeric LED display board, directly controlled by ALGE-TIMING timing devices. Via RS232 interface data from other devices can also be displayed.

The integrated clock can be used in stopwatch or countdown mode and show the exact time of day. If the D-LINE is equipped with DCF, GPS and/or temperature sensor, the temperature can be displayed in addition to the exact time of day, even if no timing device is connected. The outdoor models differ from the indoor models mainly by much brighter LEDs. This ensures perfect readability even at direct sunlight. The standard display boards have six digits, other configurations are available.

Compared to other display systems (electromagnetic display boards), the D-LINE is more cost-efficient and weighs less. With its brightness, it sets itself apart especially when placed in dark areas.

ID-Number Rank



Run Time



Lap Time



Possible Extensions:

- DCF radio receiver
- GPS radio receiver
- temperature sensor (max. two sensors)
- humidity sensor
- Ethernet connection (for time synchronization via Ethernet)



Technical Data

- LED seven-segment digits with three dots between digits
- internal clock
- internal push button
- RS232 and RS485 interface
- connections:
 - banana socket for data (Rs232)
 - banana socket for data (Rs485)
 - banana socket for external manual push button
- Aamphenol socket (four-pin) for data or power supply (12 VDC)
- integrated power supply (100- 240 VAC, 50- 60 Hz)
- fastening:
 - 4 hangers
 - 3/4" thread for tripod
- black aluminum case with red front plexiglass
- operating temperature: -20°C to +60°C

Possible Digit Heights

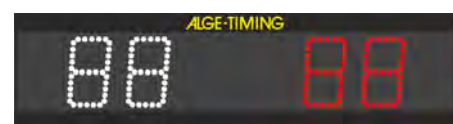
Indoor:	57 mm
	100 mm
Outdoor:	80 mm
	150 mm
	250 mm
	450 mm
	600 mm
	800 mm
	1,000 mm
	1,500 mm

Lap Counter D-LC-SS15-2x2-BAT

The lap counter for speed skating has for the inside track white LED-numbers and for the outside track red LED-numbers. It has a built in battery and charger for independet use of mains.

D-LC-SS15-2x2-BAT: figure heitht 15 cm, 956 x 250 x 60 mm
D-LC-SS25-2x2-BAT: figure heitht 25 cm, 1490 x 350 x 60 mm

For Quat-Start there is additional a lap counter with yellow and blue numbers available.



Inside Track

Outside Track

DISPLAY BOARD

LED-Matrix D-RTNM



The D-RTNM is a universal, one-color scoreboard that is used to show information or advertising during timing. Even animated movies can be played on the D-RTNM. The display board is controlled online or by retrieving the data previously stored in the internal memory.

The lightweight, rugged aluminum housing allows easy transportation of the scoreboard. The outdoor version is easily

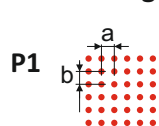
readable even in direct sunlight. If it is used at night or on rainy days in difficult light conditions, the brightness can be adjusted in 100 levels.

The D-RTNM is controlled non-multiplexed. This increases the life of the LED, increases the brightness, and prevents the display from flickering during TV transmission.

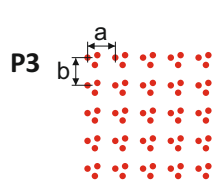


- matrix display board with red LEDs
- models with 1, 3, 4 or 7 LEDs per pixel
- models for outdoor and indoor use
- standard models with a resolution of 16 or 24 pixels in height and 96 or 160 pixels in length
- universal with Ethernet, RS485 and RS232 interface
- internal memory of 4 MB for storing images, logos, animations or participant lists; control from internal memory possible
- possibility to control the display board directly from the terminal of the ALGE-TIMING multisport score board
- possibility to control the bib number, time (also running time) and the rank directly from an ALGE-TIMING timing device; additionally, display of competitor data (e.g. name) from internal memory possible
- adjustment of brightness in 100 steps
- the non-multiplexed control of the LEDs ensures a longer service life and better brightness.
- integrated power supply (100 to 240 VAC)
- sturdy aluminum housing with red plexiglass front

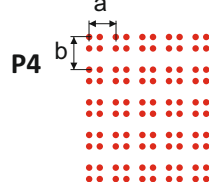
Pixel Arrangements:



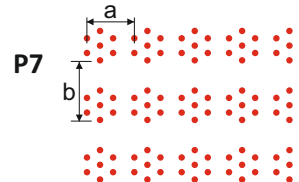
$a + b = 10.0 \text{ mm}$
 $a + b = 15.0 \text{ mm}$
 $a + b = 20.0 \text{ mm}$



$a = 21.6 \text{ mm}$
 $b = 21.6 \text{ mm}$



$a = 20.7 \text{ mm}$
 $b = 25.4 \text{ mm}$



$a = 36.8 \text{ mm}$
 $b = 46.4 \text{ mm}$



Options

- customer-specific pixel resolutions
- small marginal widths to assemble several D-RTNMs
- special models with 7 LEDs per pixel
- various LED colours (yellow, green, blue or white)
- connection for temperature sensor
- connection for DCF or GPS synchronization (exact time signal)



DISPLAY BOARD

Video Wall

Video walls are used for sports events in stadiums, as stage displays at music events, trade fairs, fashion shows or for advertising. The size of video walls varies from one pixel pitch from 1.42 mm to 26.7 mm, and each version can be delivered individually with video curtains or LED curtains or curved video walls for building facades. Video walls are available as perimeter display with soft top cushion and foot stand.

A video wall consists of individual modules that are assembled in any order. Depending on the model, maintenance is performed on the front or rear.

Due to the quick-release fasteners it is possible to build up the entire video wall in a few minutes.



Model CH-LITE II (Indoor Display Board)

Modular design with SMD LEDs (3 in 1 SMD LEDs) and very light modules (approx. 18 kg). The modules have the dimensions of 768 mm x 768 mm or 576 mm x 384 mm and are very slim with 92 mm. There are models that allow maintenance from the front rear. A quick-release system allows a quick setup. The power consumption is low. For the small modules, it can be up to 150 W; and for the large ones, up to 300 W. This makes it ideal for mobile use (e.g. for renting it out).

Pixel pitch from 1.33 mm to 16 mm.



Model CH-EIII (Outdoor Display Board)

Modular design with SMD LEDs (3 in 1 SMD LEDs) and very light modules (approx. 20 kg). The module dimensions are 768 mm x 768 mm. The modules have a depth of 120 mm. Maintenance is carried out from the front. A quick-release system allows for rapid assembly. This makes it ideal for mobile use (e.g. for renting it out).

The combination of a specially developed mask and a lens plate with ball lens on the top of each pixel greatly reduces the reflection of sunlight and ensures the best contrast ratio. In addition, the lenses protect against being hit, for example, by balls.

The model with 120 x 120 pixels and a pixel pitch of 6,4 mm is suitable for 3 modules as a flexible display board, in combination with a timing device. We optionally offer a flight case for safe transport as well as stand and rubber protection for LED advertising boards.

Pixel pitch from 6.4 mm to 16 mm.



Model CH-EII (Outdoor Display Board)

Modular design with separate LEDs for each colour of a pixel (red, green, blue). A standard module has the dimensions of 1,280 mm (H) x 640 mm (L) x 122 mm (T). There are models for which maintenance is possible on the front or rear. A quick-lock system ensures a quick setup. Larger blocks can also be supplied for fixed installations.

Pixel pitch from 10 mm to 26.7 mm.





ALGE-TIMING
Rotkreuzstrasse 39
6890 Lustenau, Austria
<https://alge-timing.com>

