

ALGE

TIMING



THE SPORTS
TIMING EXPERTS

Catalog

ALGE-TIMING

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COMPANY PROFILE



Years of experience, continuous research and development have made ALGE-TIMING an internationally successful company in the field of electronic sports timing.

Founded in 1946, the family business is run by a third generation and has specialized in sports timing since the 1970s. Today, ALGE-TIMING employs around 20 people, six of whom are constantly involved in the development of new products.

ALGE-TIMING covers the complete range of time measuring products and display systems. From the small association, to municipalities, to stadium designers or timing professionals, all customers receive competent advice and the entire product range from a single source.

ALGE-TIMING is now represented in over 40 countries, where the timing systems are distributed through an international network of independent sales partners.





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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 shock-proof 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

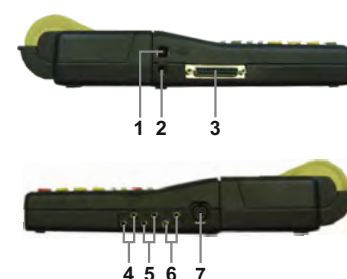


Timy3 Software

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
- 4- 1 x pair of banana sockets- scoreboard
 - 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

WTN-Training Set

The WTN-Training set combines the highest precision with reliability and ease of use. The system for timing in training includes a timer, two photocells with reflectors including four tripods. In the robust plastic case, the WTN-Training set can be safely and comfortably transported to the next workout.

The wireless WTN-Training set communicates via the Wireless

Timing Network (the time-measuring radio network developed by ALGE-TIMING), which ensures reliable radio transmission of impulses and data. It guarantees the highest possible timing accuracy. In case of a radio interference it can transmit the data later in the event of radio interference. The timing device then corrects the time to that of the original impulse.



Timy3 W



Timy3 WP



Photocell PR1aW



Advantages of the WTN-Training Set

- new, intuitive system that works with radio
- simple, easy and fast setup of the complete system
- compact measurements proven ALGE-TIMING robustness
- simple systems operation
- timing device Timy3 has a lot of software applications
- highest timing precision by temperature compensated quartz (measuring of 1/10,000 seconds)
- fully featured timing device that can be used for the timing of races as well
- measuring of speed in km/h, m/s or mph possible
- timing device has an USB-interface for easy transfer of training data to a PC
- photocell with integrated radio
- up to 5 different timing channels are adjustable at photocell
- possibility to add additional photocells or other impulse devices
- complete system is battery powered and works about 35 hours
- 15 different radio channels are adjustable
- system is made to be used outdoor
- stable case with foam insert for easy and safe transport

TIMING DEVICES

WTN-Training Set



Two different sets are available

The main difference between the two sets is that the WTN-Set 1 has no printer integrated in the timing device. The WTN-Set 2 has a timing device with integrated printer.

WTN-Set 1 includes

- 1 x timing device Timy3 W including alkaline battery
- 2 x photocell PR1aW
- 2 x reflector Ref-L
- 4 x tripod TRI-S5
- 1 x case for complete set

WTN-Set 2 includes

- 1 x timing device Timy3 WP including rechargeable battery set and charger
- 2 x photocell PR1aW
- 2 x reflector Ref-L
- 4 x tripod TRI-S5
- 1 x case for complete set



Example of the setup of the WTN-Training Set 2

- 1 Timy3 WP
- 2 Photocell PR1aW
- 3 Reflector Ref-L
- 4 Tripod TRI-S5



case KL-WTN-SET to transport and store the entire system, including tripods



TIMING DEVICES

Mobile Timing MT1

The future of timekeeping has begun with the Mobile Time MT1 timing device. The limits are being redefined!

Forget kilometer-long cables and problems with the range of the radio system. With the MT1, the measuring points can be as far apart as you want.

The accuracy of the GPS synchronization enables multiple MT1 timing devices to be used for timing at different locations (e.g. one MT1 for the start and one MT1 for the finish). That means a time measurement without annoying cable connections. Large distances between start and finish are possible without any effort.

The MT1 has an internal cellular data modem with a built-in SIM card. This SIM card supports practically every provider around the world. No matter if you make an event or training in another country. You can manage it!

The server is configured by the timekeeper before the race or training and thus the track position is assigned to each MT1. The incoming times are processed in the server and the results are displayed live on the Internet. This means that anyone with internet access can follow the race or training on their mobile phone, tablet or PC.

Up to two pulse devices can be used on the MT1 to be connected (e.g. startgates, photocells, manual buttons, etc.).

An internal GPS module ensures the precise synchronization of the time of day. The temperature-compensated quartz is automatically adjusted during operation. This balances out temperature changes and aging of the quartz.

It is also possible to synchronize other timing devices through an impulse. The MT1 can also be used offline. The times can then be transmitted to the PC via the USB interface.

alge-results.com Plattform

The timing data are transferred from the MT1 to the alge-results.com server and saved there. The spectators can follow the results live at any time. The timekeeper can check the results on the same website and make any necessary corrections and settings.



Extensive settings are possible. For example, a race cannot be held publicly. The displayed participant data can also be configured. It is also possible to upload special evaluations as a document. The data is stored in a European data center in accordance with GDPR.



Advantages of the Mobile Timing MT1

- Highly accurate, temperature-compensated crystal oscillator with additional constant recalibration via GPS
- Integrated GPS receiver for high-precision synchronization
- Integrated cellular data modem with built-in SIM card
- Data transfer with worldwide roaming
- No commitment to a specific cellular provider. Any available cellular network can be used
- Two timing channels (e.g. for speed measurement)
- USB socket for data transfer to a PC or for charging the MT1
- Keyboard for entering the start number
- Memo function for entering the start number at a later date when the finish line is tight
- Storage space for up to 7000 times
- Built-in Li-Ion battery guarantees operation for up to 24 hours
- Identification by adjustable name
- Super light, small and handy
- High-precision synchronization output for other timing devices

TIMING DEVICES

Mobile Timing MT1



The MT1 timing system

You can register as a timekeeper for free on the alge-results.com platform. There you can create competitions, manage participants and their devices. Timekeeping is also managed here.

When creating a competition, you decide whether the participants register online for their competition on alge-results.com or whether the registration is carried out by the timer.

The timing setup can be adjusted for each competition. There you assign the corresponding function to the respective device and timing channel.

With the help of a PC program (Time.NET Connector), the participant data and times can be transferred to the PC and imported into the evaluation software.

So-called "timing points (TP)" are necessary for data transfer and the creation of competitions. 2000 such timing points are included with the purchase of each device.

Timing Points Packages

Timing Points Package Bronze: 5,000 TP

Timing Points Package Silver: 10,000 TP

Timing Points Package Gold: 20,000 TP

ALGE-RESULTS

5. Int. Steinbock Berg Klein Slalom 2020, SAMSTAG

OVERVIEW COMPETITORS HEATS LIVE

1. Rennen 2. Rennen 3. Rennen 4. Rennen Total

Live

Start Number	First Name	Last Name	Nation	Fahrzeug	Klasse	Run Time	Diff / Speed	Rank
19	Roger	Schneidmann	CH	Mitsubishi Evo J Spec	RCU			
265	Michael	Zelinger	CH	Ford Escort	Hi K2	22.11	+13.83	
265	Michael	Zelinger	CH	Ford Escort	Hi K2	55.04	+22.93	

Ranking

Rank	Start Number	First Name	Last Name	Nation	Fahrzeug	Klasse	Section 1 Time	Run Time	Diff	Total Time
348	Alexander	Hauser	IT	Golf 7 Syncro G40	Hi Y	3.06	35.10			3:26.61
44	Dietmar	Heider	CH	BMW X3M	F+3000	6.24	38.33	+3.23		3:22.39
42	Marcel	Schöbel	CH	Ford Focus RS	F+3000	5.04	38.64	+3.54		3:13.67
4	Fabian	Rüegg	CH	Subaru Impreza	F+3000	6.48	41.95	+5.85		3:25.86

MT1 Time.NET Connector

Start Number	First Name	Last Name	Gender	Date of Birth	Nation	Club	Team
1	Jiri	STRACHOVA	Male	1991	CZE	Prag	
2	Pierre	FERRABEND	Male	2001	SLO	Bern	
3	Stig	BORSSÉN	Male	1993	SWE	Stockholm	
4	Leonardo	MELLE	Male	1997	ITA	Rom	
5	David	GESLOT	Male	2000	FRA	Lyon	
7	Peter	KIRCHGASSER	Male	1998	AUT	Kitzbühel	
9	Klaus	GISIN	Male	1996	SLO	St. Moritz	
10	Milton	MOLTZAN	Male	1989	USA	Aspen	
11	Manuel	BARROZ	Male	1999	FRA	Grenoble	
15	Paolo	CURTONE	Male	1995	ITA	Grosden	

MT1 Time.NET Connector

The PC software "MT1 Time.NET Connector" enables competitor lists (e.g. from Excel) to be loaded onto the server. The timing impulses can be taken over directly into the ALGE-TIMING evaluation program TimeNET2 or other evaluation software.

The times can also be downloaded afterwards from the time alge-results-server. An export of the data to an Excel sheet is also possible.

Which Mobile Network is Used?

Conventional solutions are tied to a specific cellular provider. External cellular networks are therefore not available. However, if this network is not available, no data can be transmitted. This can be particularly problematic in border regions. The SIM card built into the MT1 is not dependent on a specific cellular network. This uses worldwide roaming. Consequently every available mobile network can be used. This means operational reliability even in particularly remote or poorly developed regions.



TIMING DEVICES

Mobile Timing MT1

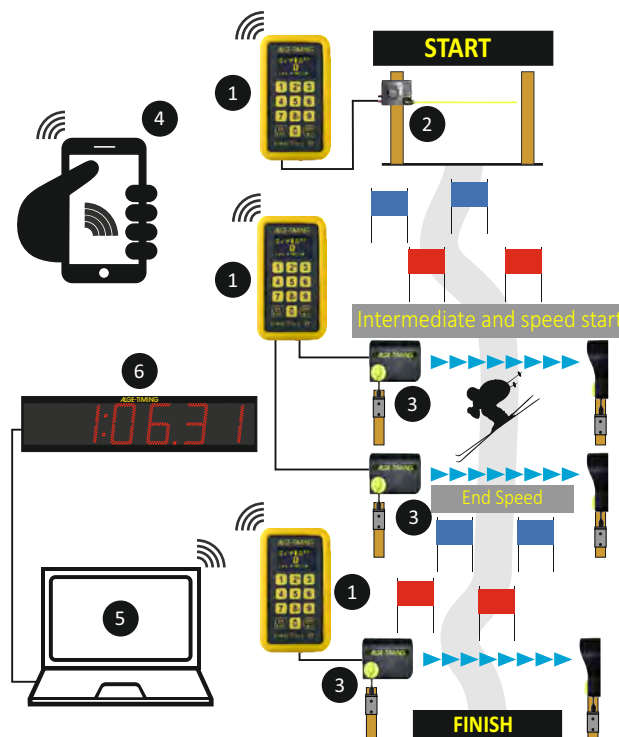
Alpine Skiing or Downhill

This system can be used for training and racing. It can be also used for MTB Downhill, uphill races, white water canoe etc.

The start number is entered for MT1 at the start. You do not need to enter the start number for the other MT1s.

Invalid impulses can be automatically eliminated by defining permissible time windows.

Since every MT1 has two timing channels, for example, speed measurement can be carried out with just one device. Several runs are created for ski training. If a participant has already completed a run, the new result will be written into the next run. Any number of passes can be measured.



1 Mobile Timing MT1

2 Startgate STSn1A or photocell

3 Photocell with reflector

4 Mobile device for Live Results

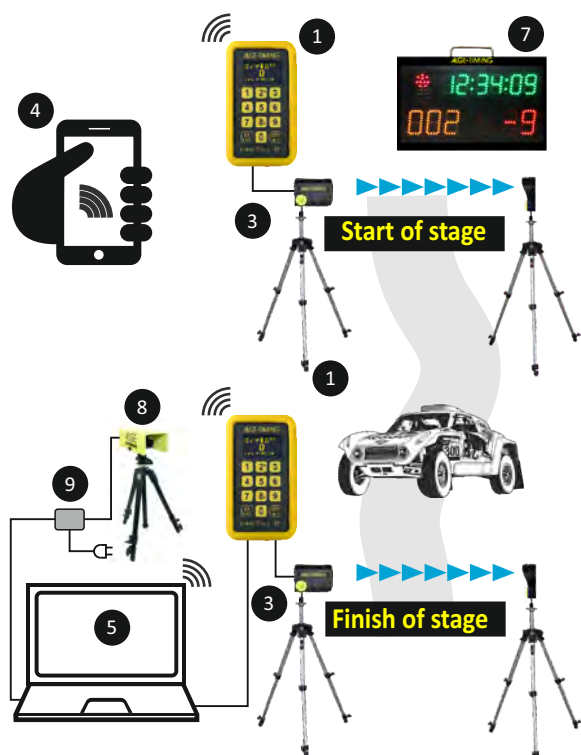
5 PC for timing

6 Display Board D-LINE

7 Startclock ASC3

8 IDCam

9 Power over Ethernet PoE



Rally or Uphill races

In stage races, the transfer of the start and finish times to the timing location is usually a problem because of the great distances. With the MT1 this problem is a thing of the past. The start and finish times of all stages are collected and evaluated on the alge-results.com platform.

Enter the start number for at a separate Mt1 for start and finish. These devices are assigned to the stage in the competition settings. Further MT1 devices can be assigned to the next stage. Once a stage has been completed, the devices used there can be used for the next stage. Any number of people can follow the results live on the Internet.

To display a start interval, we recommend using an ASC3 start clock. An IDCam can optionally be used for target monitoring.






The same structure can also be used for other sports such as white water canoeing, road bike races, orienteering runs, natural track tobogganing, soap box races or similar sports.

TIMING DEVICES

Mobile Timing MT1



The MT1 has a high-contrast display with which the most important functions are always in view.

-  GPS satellite reception
-  Cellular reception
-  USB Connection
-  Battery charge level
-  Charging process
-  GPS synchronization



One device - many functions

- Standard mode with an extra large display for the start number
- Scroll mode: all times at a glance
- Memo mode: Subsequent entry of the start number after crossing the finish line
- Synchronization output: With the high-precision pulse output, you can synchronize other devices to an exact time.
- USB mode: The times can also be transferred to the evaluation via the USB interface.

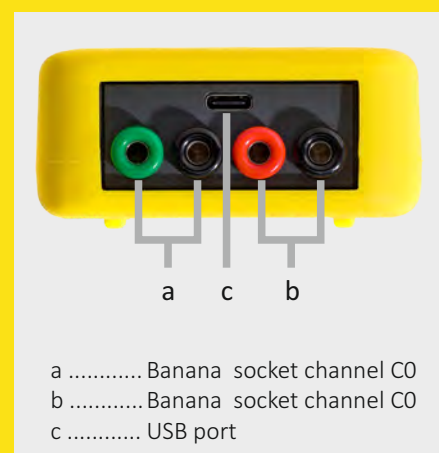
Scope of delivery for one MT1 device

- 1 Mobile Timing MT1
- 1 charging device
- 1 USB-C cable
- 2.000 Timing Points



Technical data

Measuring range:	23 hours 59 minutes, 59,9999 Seconds
Time reference:	self-calibrating TCXO crystal
Measurement accuracy:	1/100.000 Seconds
operating temperature:	-20°C to +65°C.
Electronics:	Integrated GPS receiver and integrated cellular modem without external antennas
Memory:	7,000 times with start numbers, times are permanently saved.
Display:	OLED, 37 x 20 mm, resolution 128 x 64 Pixel
Synchronization:	external, GPS or GSM
Operation:	Splash-proof membrane keyboard with 12 keys
Timing channels:	2 channels with banana sockets
Power supply:	internal: Li-Ion battery, external via USB-C
Operation time (battery):	24 hours at + 25°C with one Impulse per minute 14 hours at - 20°C with one Impulse per minute
Charging time1:	app. 2,5 hours at + 25°C.
Roaming:	world wide, not Provider depended
Housing:	Splash-proof plastic housing with removable, shock-absorbing silicone cover
Dimensions:	74 x 34 x 22 mm
Weight:	235 g





START DEVICES

Startclock ASC3

The Startclock ASC3 is an important device for the professional handling of the start. It is equipped with the latest LED technology and provides accurate start information for the participants and start judge. The ASC3 is optimally readable a

daytime or night. The battery-driven Startclock ASC3 is used for various sports like alpine skiing, cross-country skiing, biathlon, rally etc.

Facts about Startclock ASC3

- LED technology
- shows the time of day (hours, min. and sec.), green LEDs
- figure height of time of day digits is 55 mm
- shows the bib (ID-number), yellow LEDs
- figure height for bib digits is 70 mm
- shows the countdown in minutes and seconds, red LEDs
- figure height of countdown digits is 70 mm
- start light with red, yellow and green LED cluster
- integrated speaker with volume regulation
- RS232 interface to connect a PC or printer (parameters of ASC3 can be adjusted by computer)
- integrated rechargeable lead battery for operation independent from mains supply
- two internal push buttons to set parameters of ASC3
- start input (banana socket)

- sync. input or countdown start (banana socket)
- potential free impulse output (banana socket)
- output for external speaker (4- 8 Ω)
- start list can be loaded to ASC3
- external power supply (12-16 VDC or 85- 264 VAC)
- LED to control battery condition and charging
- flash memory allows update
- remote control ASC3-RC with 10 m cable length to operate the Startclock ASC3
- controlling software for PC



Technical Data

Unit of Measurement:	1/1,000 second
Measuring range:	23 hours, 59 minutes, 59.9999 seconds
Accuracy:	+/- 0.3 ppm (+/- 0.001 s/h)
Time base:	temperature compensated real time clock
Display:	extra bright LEDs for outdoor use, brightness adjustable 8-digit LED display, height 55 mm, for time of day 3-digit LED display, height 70 mm, for bib (ID-number) 3-digit LED display, digit height 70 mm, for countdown Start light with red, yellow and green LED cluster, each 35 mm diameter
Temperature range:	-25 °C to +65 °C
Power supply:	integrated power pack (rechargeable battery (12 VDC, 12 Ah) and charger or external battery (12- 16 VDC) or mains (85- 264 VAC)
Operating time:	about 20 hours from internal battery at 30 seconds intervals and 20 °C
Case:	anodized aluminum with cover and suspension brackets, 3/8" thread for tripod (tripod not included)
Dimensions:	L x H x D = 445 x 280 x 115 mm (without suspension brackets and handle)
Weight:	8.4 kg



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





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 activated 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.

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)



- 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~)

START DEVICES

Speaker System BANG2

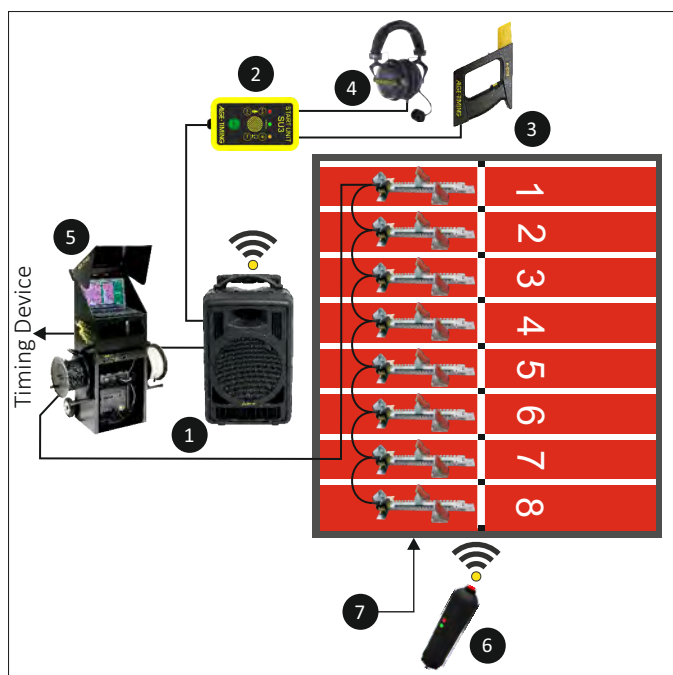


- | | |
|------------|-------------|
| 1 BANG2 | 3 e-Start W |
| 2 Timy3 WP | 4 BANG-HS |

The start system BANG2 is ideal to combine with existing ALGE-TIMING devices. It is possible to use one or more BANG2 speakers in a start system. Attached we will show two setup possibilities:

The upper picture to the left shows a BANG2 connected by radio with the electronic start impulse device e-Start W. The e-Start W replaces a traditional startgun. If you trigger it, the start impulse is transmitted by radio to the BANG2 and it outputs the start sound. At the same time the start impulse is transmitted to the timing device (e.g. Timy3 WP). The starter can give oral commands (e.g. ready, take your marks) to the competitors using the wireless headset BANG-HS.

The start system BANG2 can also be implemented into an athletic false start system (see lower picture to the left). When the impulse device e-Start is triggered the BANG2 and the speakers of the false start system StartJudge SJ2 output the start sound. If the starter triggers the e-Start again within 5 seconds the speakers release a false start sound. With the radio push button WTN-PB the recaller can activate a false start signal as well.



- | | |
|------------------|-----------------------------------|
| 1 BANG2 | 5 Start Judge Sj2 |
| 2 Start Unit SU3 | 6 False Start Push Button WTN-PB |
| 3 e-Start | 7 Starting Block with Sensor SJS2 |
| 4 Headset HS3-2 | |

Technical Data:

Output Power:	80 W _{max} / 50 W _{RMS}
Speaker System:	bass (20 cm / 8") tweeter(2.5 cm / 1")
Frequency Range:	20 – 20,000 Hz
Mic-Input:	6 mV
Line-Input:	800 mV
Timing Input/Output:	2 x LTW-socket (7-pin, male) 1 x banana socket (green / black)
Equalizer, Bass:	±15 dB/100 Hz
Equalizer, Treble:	±10 dB/10 kHz
Power Supply:	Mains: 100-240 V~/50- 60 Hz/2 A Battery: 2 x 12 V/5.2 Ah (built in)
Operating Temperature:	0°C to +40°C
Measurements:	305 x 510 x 265 mm (L x H x W)
Weight:	12,5 kg
Radio Module WTN for Timing:	
Transmitting Frequency:	2.4 GHz band 16 adjustable teams
Transmitting Power:	10 mW
Range:	approx. 300 m (line of sight)

Receiver for headset BANG-HS:

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



START DEVICES

Speaker System BANG2

BANG2 Accessory



BANG-HS

Headset to speak over the BANG2



BANG-TRI

Tripod for BANG2 with an adjustable height between 107 and 157 cm



BANG2-BAG

Splashproof protective bag for BANG2 with a sound transparent front



BANG-SPK

Passive Horn Speaker to connect at the BANG2 (connect up to 8 BANG SPK)



FLASH XL

Start flash (LED with integrated batteries) e.g. for hearing impaired athletes



e-Start

start impulse trigger (replaces start gun for starter) with integrated flash light for cable connection to BANG2 and timing system



e-Start W

start impulse transmitter (replaces start gun for starter) with integrated flash light for radio connection WTN with the BANG2 and timing system



Start Unit Su3

Amplifier for communication headset



Headset H3-2

Headset to communicate with timing operator and to give oral commands. Usable with SU3 and BANG2



Start Microphone SM8

The start microphone generates an electrical impulse from the shot of a starting gun





START DEVICES

Start Microphone SM8

The start microphone SM8 is used in all sports that are started with a start gun, such as in athletics, triathlon, cycling, speed skating, short track or cross-country skiing.

The SM8 start microphone is mounted on a start gun. The report (sound of detonation) of the start gun triggers an electrical impulse in the start microphone SM8 and starts the timing device.

The SM8 start microphone is connected to the SV4/SM speech amplifier, from which a two-wire cable with banana plug leads to the timing device. In addition, a headset can be connected to the SV4/SM 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.



Start Microphone SM8



- 1 Start Microphone SM8
- 2 Startgun (not from ALGE-TIMING)
- 3 Speech Amplifier SV4/SM
- 4 Headset HS3-2



START DEVICES

Startgate STSn



The startgate is used mainly at the start for individual start, e.g. alpine skiing, cross country skiing, snowboarding, etc., and is installed at the start between two poles so that the competitor can only leave the start when he moves the startwand of the startgate.

In order to fix the startgate to the post, a chain support is attached, i.e. the chain attached to the startgate is placed around the post and then tightened on a locking screw with a toggle.



Connection of the Startgate STSnM2S

There are different types of startgates

STSnM1S: manual reset, 1 contact, integrated amplifier

STSnM2S: manual reset, 2 contacts, integrated amplifier (FIS homologated Startgate: STSnM2S)

STSnA1S: automatic reset, 1 contact, integrated amplifier

STSnA1: automatic reset, 1 contact, without amplifier

Startwand STSn-S

A new startgate is supplied with a screwable startwand plus a spare one.

Startwand STSn-FSTAB

Alternatively, it is possible to acquire a startwand with integrated spring for more protection of the startwand. This startwand is recommended for Selftimer startgates.

Contacts

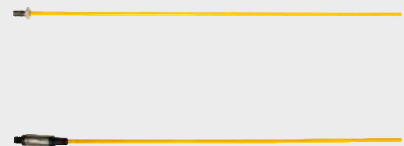
There are models with one or two contacts (banana sockets) to which the start cable can be connected. Each contact has its own microswitch in the startgate. For FIS races, separate lines are required for A and B timing devices, so you need at least two contacts in the startgate.

Integrated Speech Amplifier

There are startgates with integrated amplifier, in which one can connect a headset and talk with the timing operator via the two-wire start line.

Startwand Reset

The startwand can be reset manually or automatically. Automatic startgates are used mainly for training and selftimers. Startgates used for races have a manual reset, i.e., after the start, they remain open until the starter closes them before the next start.



Start Poles with Starting Plates SSP

The start poles are driven into the snow. Afterwards, the startgates are attached to them. The starting plates are placed in front of the poles. They have an antislip surface so each starter has the same kick-off condition.





START DEVICES

Start Door SSD1

The FIS homologated Start Door SSD1 is made for universal use. It can be used for parallel applications (alpine skiing and snowboarding), cross competitions (snowboarding and free-style) and team events (alpine or snowboard). The Start Door SSD1 works absolutely reliable at all weather conditions, and is easy to set-up. For transport, it can be folded up and transported conveniently in a compact form.

A battery built into the SSD1-PS control unit guarantees an independent use from mains. The doors are opened electrically. It is possible to open all start doors together or time-delayed. For cross competitions one can mechanically connect the opening flaps of the individual starting doors. The FIS-homologated Start Door SSD1 has a modular design.

A wide range of accessories is available.



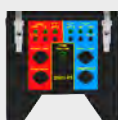
Accessories

- control unit SSD1-PS
- controller Timy3 W (delayed control)
- push button 023-02
- startbeep STB1
- start light D-SL85-5RG+G (single-sided)
- start light D-SL85-5RG+G-DS (double-sided)
- headset HS3-2
- speech amplifier SV4-S



1 Start Door SSD1

FIS homologated start door for parallel events and cross events



2 Controller SSD1-PS

controller for start door with built in rechargeable battery



3 Start Light D-SL85-3xR-G or D-SL85-3xR-G-DS

single- or double-sided start light for parallel races controlled by the SSD1-PS



4 Startbeep STB1

acoustic start countdown device to handle the start



5 Push Button 023-02

rugged and water-resistant push button to trigger the start impulse with 2 m cable length connected to the controller SSD1-PS



6 Headset HS3-2

for the timing communication



7 Speech Amplifier SV4-S

for plugging in at the start-finish line and connecting the headset



8 Multi Channel MC9

docking station with 9 channels for Timy3



9 Timy3 WP

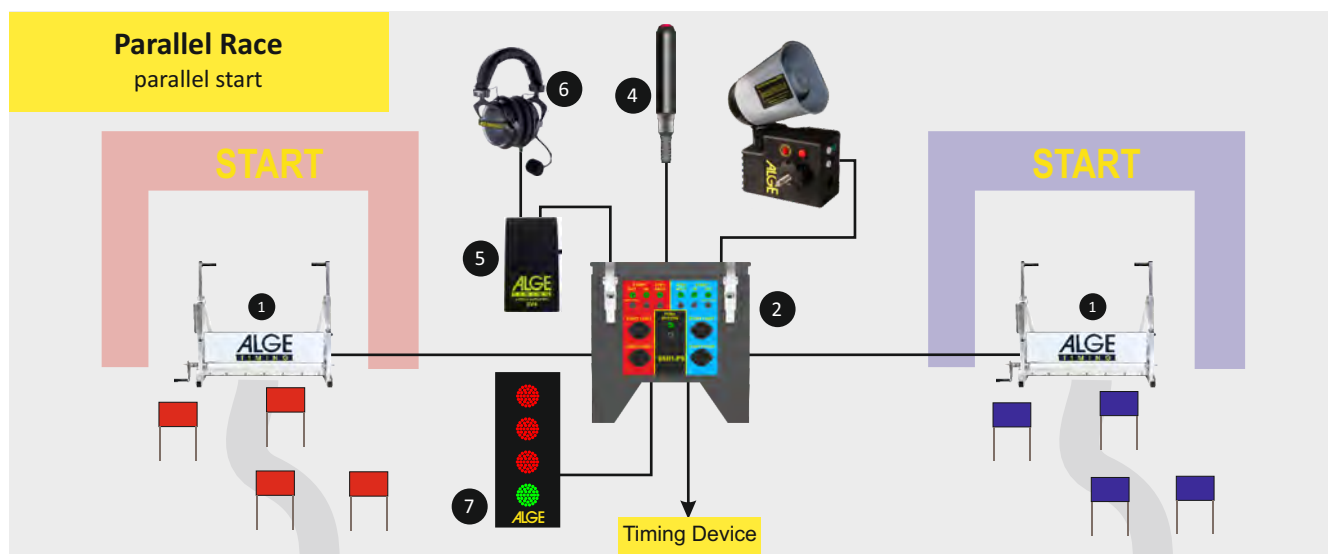
compact timing device with the highest precision, display, keypad, printer and universal timing software. It controls the parallel start if one gate opens with delay.

START DEVICES

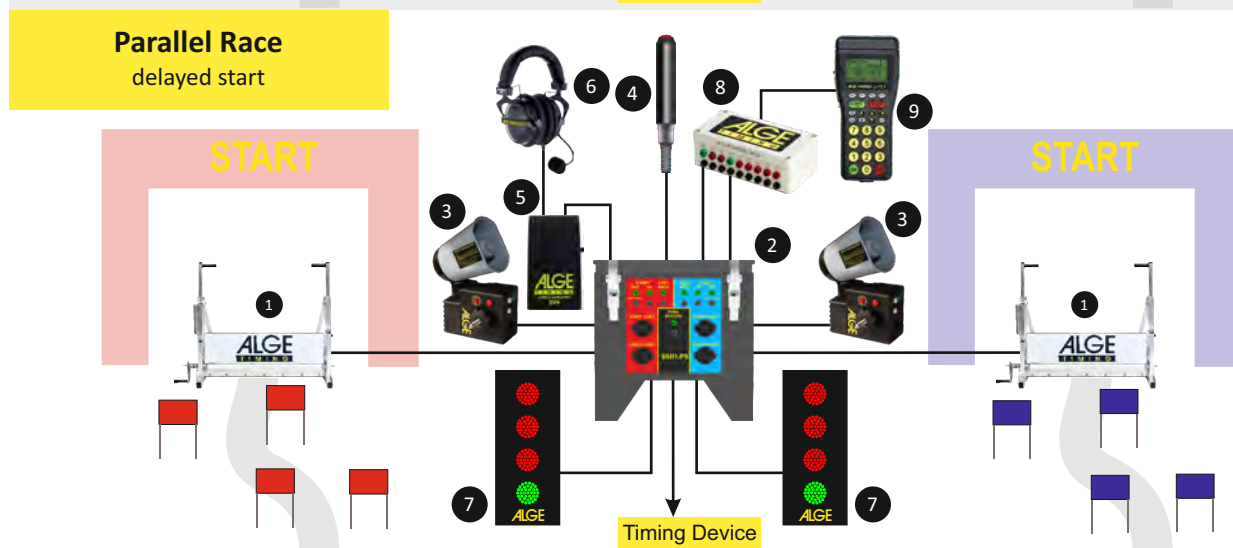
Start Door SDD1



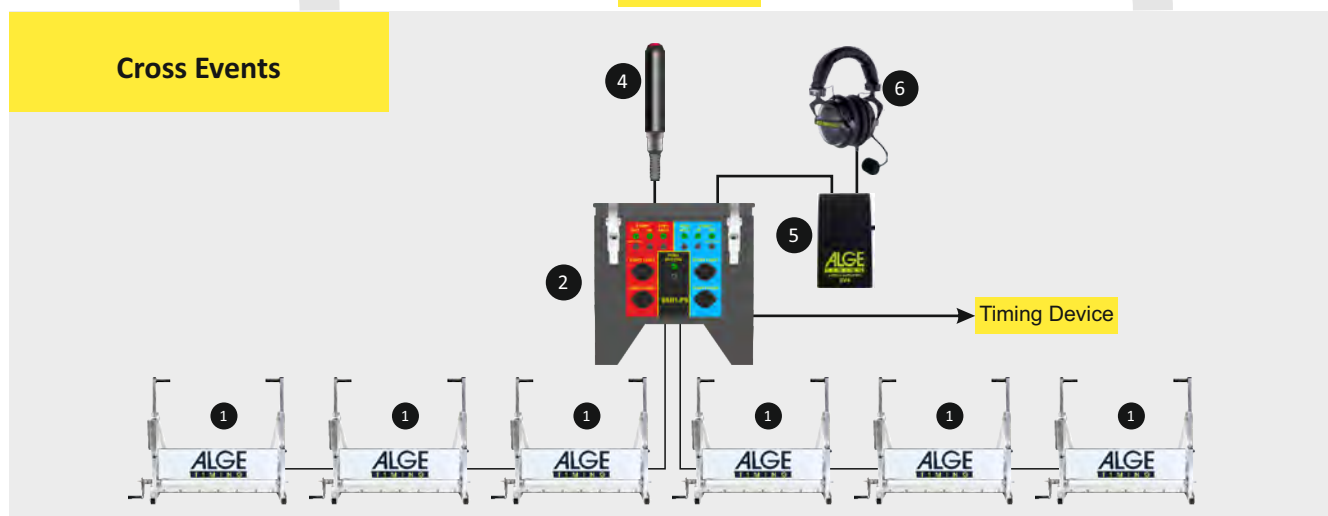
Parallel Race parallel start



Parallel Race delayed start



Cross Events



- | | | |
|----------------------------|--------------------------|-----------------------------|
| 1 Start Door SSD1 | 4 Push Button 023-02 | 7 Start Light D-SL105-3xR-G |
| 2 Distribution Box SSD1-PS | 5 Speech Amplifier SV4-S | 8 Multichannel Mc9 |
| 3 Startbeep STB1 | 6 Headset HS3-2 | 9 Timy3 W |



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





Photocell Sets

Reflection Photocell PR1a-R

Reflection photocell with mounting bracket BBG and 10 m cable 001-10
Scope of delivery: 1 x PR1a, 1 x PR1a-REF, 2 x BBG, 1 x 001-10

Reflection Photocell PR1a-RT

Reflection photocell with tripod TRI128 and 30 m cable 001-30
Scope of delivery: 1 x PR1aW, 1 x PR1a-REF, 2 x TRI128, 1 x 001-30

Through-Beam Photocell PR1a-d

Consists of separate transmitter and receiver. The photocell beam is directed from transmitter direct to receiver (distance over 100 m possible);
Scope of delivery: 2 x PR1a, 2 x BBG, 1 x 001-10 (10 m)

Through-Beam Photocell PR1a-dT

Same as the PR1a-d through-beam photocell, but without the BBG mounting bracket and with tripods and 30 m long photocell stop cable.
Scope of delivery: 2 x PR1a, 2 x TRI128, 1 x 001-30 (30 m)

Radio Reflection Photocell PR1aW-R (like PR1a-R, but with radio)

Scope of delivery: 1 x PR1aW, 1 x PR1a-REF, 2 x BBG

Radio Reflection Photocell PR1aW-RT (like PR1a-RT, but with radio)

Scope of delivery: 1 x PR1aW, 1 x PR1a, 2 x TRI128

Radio Through-Beam Photocell PR1aW-dT (like PR1a-dT, but with radio)

Scope of delivery: 1 x PR1aW, 1 x PR1a, 2 x TRI128



Photocell PR1a



Radio Photocell 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)





IMPULSE DEVICES

Photocell RLS3c

The RLS3c Triple Photocell

The triple photocell has a range of 2 to 15 m and consists of three photocells, which are built into one housing. It is equipped with a complete transceiver unit, a reflector, 2 tri-pods and a 30 m cable.



Switchable between the following functions:

Photocell area:

Application for athletics; only if all three photocells are triggered an impulse will be generated. This prevents the triggering by arms or legs and the unofficial time of the photocell time corresponds with the "official winner's time". This photocell should be used when the time is shown on a display board.

Single photocells:

All three photocells operate independently, i.e. if one of the three photocells is triggered, an impulse is generated (e.g. for canine sports agility).



Technical Data

Range:	5 to 15 m (distances under 5 m on request)
Output:	NPN transistor, open collector, active low
Impulse length:	20 to 1400 ms can be set
Dimensions:	200 x 370 x 120 mm
Weight:	2 kg (RLS3c with reflector)



Photocell Accessory:



Reflector PR1a-REF

standard reflector for photocells PR1a and PR1aW



Reflector REF-L

simple reflector for photocell PR1a and PR1W



Reflector REF3

standard reflector for photocell RLS3



Reflector REF-C

reflector for photocells with long distances



Mounting Bracket BBG

chain holder for fixing the photocell or reflector to posts



Mounting Bracket B-S1

screw-on mounting bracket for mounting the photocell or the reflector



Mounting Bracket B-P40

Mounting bracket that can be mounted on poles with a diameter of up to 40 mm using screws, in order to mount the photocell or the reflector.



Tripod TRI128

professional tripod with a max. height of 1.2 m to mount the photocell or reflector



Tripod TRI-S5

simple tripod with max. height of 106,5 cm



Case KL-PR1a

for the photocell and reflector including tripods TRI128



Case KS-PR1

for photocells PR1a and PR1aW and other accessories



Case KL-RLS3

for the photocell RLS3c with tripod TRI128



Cables for Photocells

start cable with power supply: 002-01, 002-10, 002-30
stop cable with power supply: 001-01, 001-10, 001-30
Banana cable: 000-01, 000-02, 000-05, 000-10



Synchronization Cable 163-5

to synchronize two photocells PR1a and /or PR1aW



Photocell PR1a



Radio Photocell PR1aW





IMPULSE DEVICES

Accessories

Contact Mat CM40x30 and CM60x43

The contact mats CM40x30 and CM60x43 are impulse devices for timing. It is possible to measure landing or take off on the mat (e.g. the time difference between both).

The contact mats have a normally open contact, i.e. when stepping on it an impulse is triggered. If the jump impulse should be measured, an impulse inverter or a timing device with adjustable impulse input signal (e.g. Timy3) is required. The contact mat is made from plastic and adhered to an aluminum mat. Their dimensions are 400 x 300 mm or 600 x 430 mm. The complete mat is active except for the edges of about 10 mm.



Technical Data:

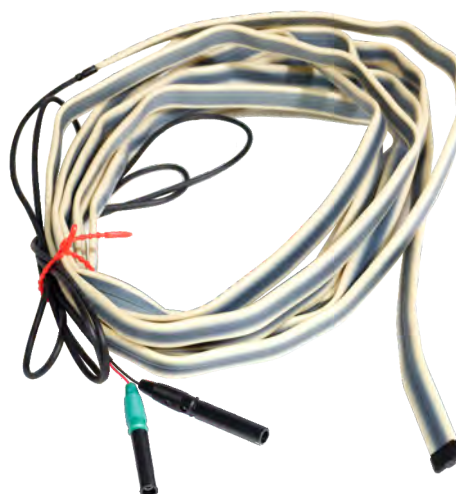
Contact:	closing contact on stepping on the mat- opening contact at jump off
Connector:	banana plug (red and black) with 3 m cable
Dimensions:	CM40x30: plastic mat: 400 x 300 mm- about 7.5 mm thick aluminum plate: 440 x 340 mm- 3 mm thick CM60x43: plastic mat: 600 x 430 mm – about 7.5 mm thick aluminum plate: 640 x 470 mm – 3 mm thick
Plastic Mat:	black PVC with 1.6mm support and approx. 4 mm surface, glued to an aluminum plate (3 mm with 4 mounting holes)
Voltage:	switch contact area for max. 24 V and 150 mA
Protection class:	IP65
Temperature:	-20 °C to +50 °C



Tape Switch ATS

The tape switch triggers a timing impulse when someone passes over it. For example, if a cyclist passes over the tape switch, the timing device is started or stopped. The tape switch has a closing contact. It has banana plugs with connecting sleeves at the cable. It is available in different lengths:

- tape switch ATS3: 3 m tape switch
 - tape switch ATS6: 6 m tape switch
 - tape switch ATS7: 7 m tape switch
 - tape switch ATS9: 9 m tape switch
- Other tape switch lengths on request.



Potential-free Impulse Transformer 029

The adapter 029 is connected to the ALGE-TIMING timing device. It is possible to connect an impulse device (e.g. photocell). You can alternatively use this input contact as NOC or NCC. It is ideal to connect impulse devices from other companies. The adapter 029 is powered by an internal 9 V battery.



IMPULSE DEVICES

Accessories



Manual Push Button 023-XX

The manual push button for start and stop impulses is available in two models: with 2 m cable length as 023-02 or with 10 m cable length as 023-10, each with banana plugs.



FLASH XL

The starting flash light FLASH XL is an optical start device that can additionally be used with acoustic starting devices such as a start gun. It is mainly used for running or swimming competitions. The FLASH XL is triggered by an external impulse generator, for example via a start gun or a manual push button. If another impulse occurs within five seconds, it will show 5 flashes as false start signal.

The FLASH XL has 80 LEDs (light-emitting diodes), which are installed in a plastic housing. These LEDs are extra bright so that the flash is visible even in sunlight. There are different connection sockets for the start impulse. The power is supplied by internal batteries (4 x AA) or directly from the timing device.



Start-stop Switch 300-01

With the start-stop switch you can set whether you allow the start impulse, finish impulse, start and finish impulse, or no impulse for the timing device. The device also has a manual start and finish button.





CABLES & ADAPTERS

AGE-TIMING devices can be equipped with a wide range of suitable accessories, which are used to support the functions and considerably extend the range of applications.



Headset HS3-2

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



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



Speech Amplifier SV4/SM

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



Multichannel MC9

Channel expansion for the Timy3 with 9 pairs of banana jacks (impulse channel 0, 1, 2, 3, 4, 5, 6, 7 and 8) and RS232/RS485 socket



Timy Docking Station TIDO

Extension for the Timy3 with integrated speech amplifier and the following connections:

- 4 x DIN sockets for photocells
- 1 x multi-port socket
- 2 x DIN socket for Rs232
- 1 x DIN socket for the headset
- 9 x pairs of banana sockets (impulse channel 0, 1, 2, 3, 4, 5, 6, 7 and 8)



GPS Receiver GPS-A

GPS receiver for precise synchronization of the timing devices (e.g. for the Timy3 or the ASC3 Startclock)



Adapter USB RS232I

The USB-RS232I is an adapter which takes care of optimal isolation between the timing device and the PC. It is used when disturbing noise is heard in the speech connection, when a PC is connected. In addition, the adapter allows a timing device with RS232 interface to connect to a USB interface of the PC.



Adapter USB-WTN

The USB-WTN is an universal adapter with mini-USB cable, which acts as interface converter for many ALGE-TIMING devices. Originally, the adapter was developed in order to connect the WTN radio system to the PC via a USB cable



Printer P5

The P5 is a fast and quiet thermal printer with a wide temperature range (-20 °C to +50 °C). It is available with different plugs, e.g. for TimeManager, Timy3 W or Startclock ASC3. The power is supplied by the timing device or the PS12A.



Power Supply PS12

The range includes various mains chargers, suitable for every timing devices, for example:

- PS12 power supply with DIN plug
- PS12A power supply with DC plug



Cables

a wide selection of cables for different use in various lengths is available for ALGE- TIMING devices



Cable Reels

Various cable reels with different cable lengths are available for the ALGE-TIMING devices, for example for the start line or data cable for display boards with two-wire steel cable (extra strong military quality).

- KT150: 150 m field telephone line
- KT300: 300 m field telephone line
- KT500: 500 m field telephone line



Tripods

Tripods of various heights and with different load carrying capacities

- tripod TRIMAN: professional tripod for camera, max. height 2.4 m, max. load 12 kg
- tripod TRI-PRO: professional tripod for camera, max. height 2.67 m, max. load 20 kg
- tripod STATIV6: professional tripod for camera, max. height 3.66 m, max. load 34 kg
- tripod TRI128: professional tripod, max. height 132 cm, max. load 5 kg
- tripod TRI-S5: simple tripod, max. height 106 cm



Case KL

The case KL is used for transporting timing devices and accessories. The interior life of the cases can be equipped with many different foam inserts.



Timing Backpack ATBP

The ATBP is a high-quality backpack with special compartments for storing the timing accessories. It is ideal to transport the equipment, for example, on the ski slope. It has a well padded back section and straps.



Carrying Bag for Display Boards

Carrying Bags for GAZ5 and D-LINE display boards

- carrying Bag GTT15: for display boards with a digit height of 15 cm and a 6-digit housing
- carrying bag GTT25: for display boards with a digit height of 25 cm and 6-digit housing



RADIO DEVICES

Teledata TED400

The ALGE-TIMING Teledata TED technology makes radio transmission absolutely safe. The start and stop impulses are converted by the radio transmitter TED-TX into a data packet, supplemented with a security code and sent to the radio receiver TED-RX. After checking the safety code, the receiver provides the impulse with a precise and reproducible delay of 0.1 seconds to the timing device.

The Safety Package of the Radio System ALGE-TIMING Teledata TED

A special software in the TED-RX receiver sorts out incorrect protocols and by this, avoids false im-pulses. The radio range is up to five Kilometers. It is possible to set up as many as 16 different addresses. A system cannot receive impulses from a differently addressed system, for example, if different TED systems are used in the same area.

The Teledata TED400 guarantees data transmission with high security. The data are transmitted with a security code from the transmitter TED-TX to the receiver TED-RX, which supplies the data packet to the receiver device. In addition, the last data record is always stored in the transmitter TED-TX.

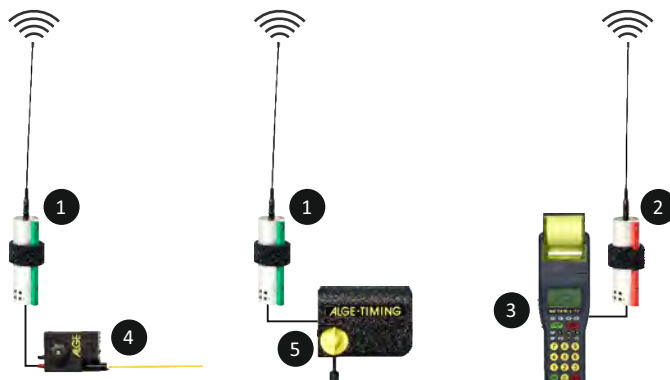
Impulse Transmission

A timing impulse is transmitted wireless from an impulse device (e.g. photocell) by the TED-TX to the TED-RX that is connected to the timing device.



ALGE Impulse Devices

- startgate STSn
- photocell PR1a
- photocell RLS3c
- start microphone SM8
- speaker System BANG2
- startclock ASC3
- startbeep STB1
- tape switch ATS
- touchpad TP
- manual push button
- closing contact



ALGE impulse receiver

- Timy3
- TdC8001
- Photo Finish OPTIc3
- Startclock ASC3

The Standard Version

The standard version of the TED-RX can receive two different timing channels.

Data Transmission

Each data string from an ALGE-TIMING timing device is transferred once.

Each 1/10 of a second, one data string can be sent:

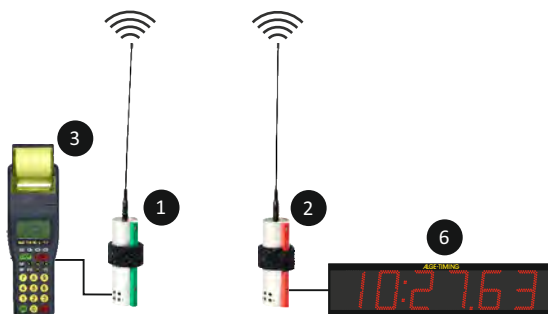
- from the timer to the display board
- from the timer to the printer

Free Data Transmission

Any kind data format can be transferred. A data set is sent every 1/10 second.

Fields of Application:

- timing device to PC
- PC to PC
- PC to display board



1 Teledata TED-TX400

2 Teledata TED-RX400

3 Timing Device Timy3

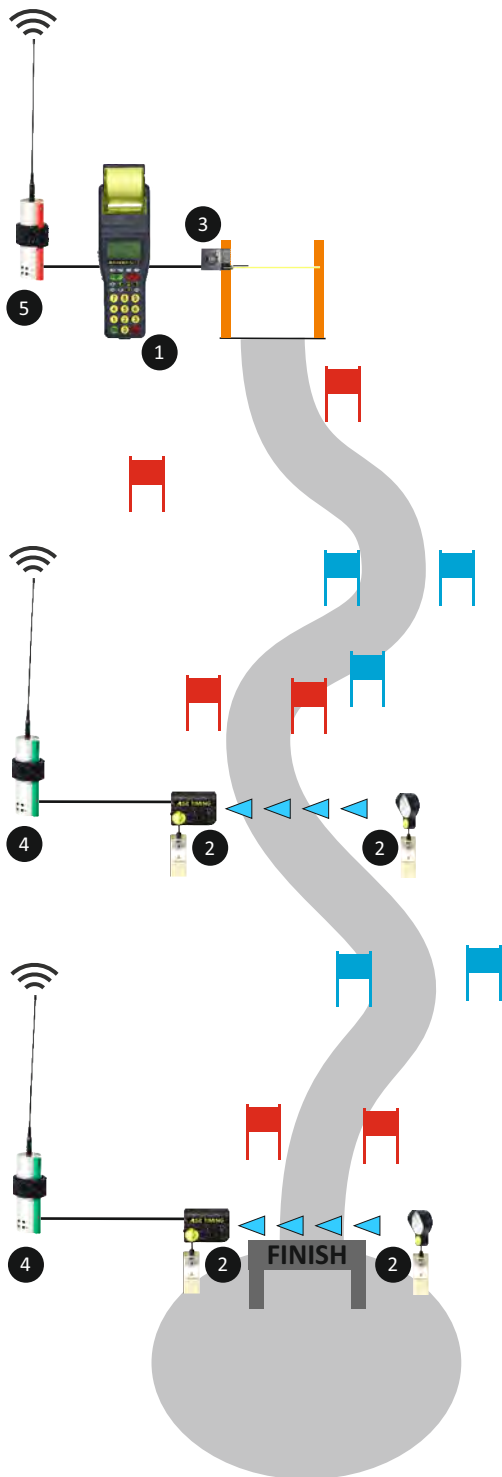
4 Impulse Device e.g. STSn

5 Impulse Device e.g. PR1a

5 Displaz Board D-LINE

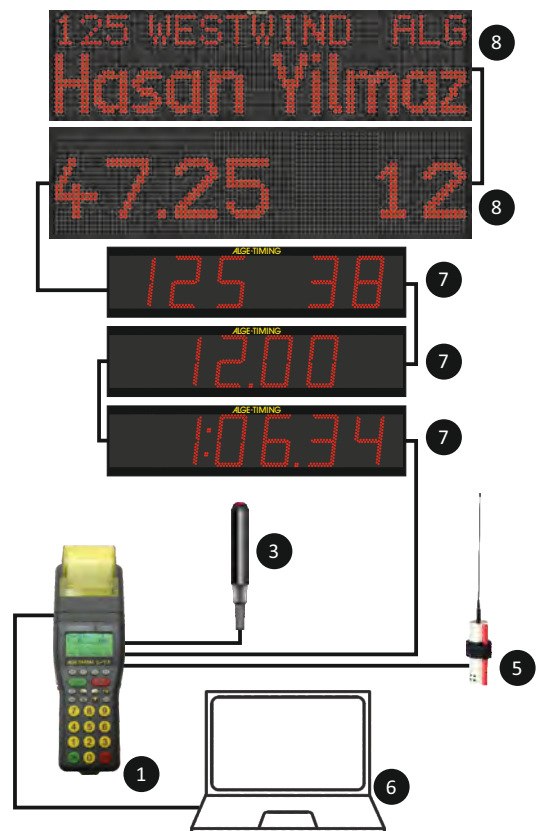
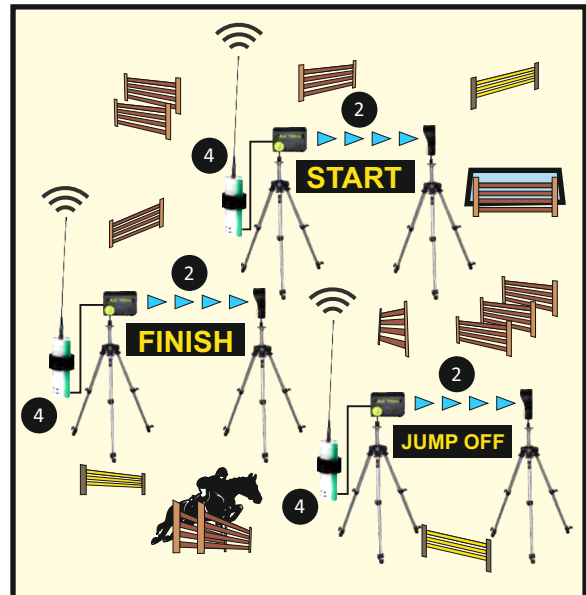


Trainings System for Alpine Skiing



- 1 Timy3 WP
- 2 Photocell PR1a-R
- 3 Startgate STSnA1
- 4 TED-TX400
- 5 TED-RX400

Timing System for Equestrian Show Jumping



- 1 Timy3 WP
- 2 Photocell PR1a-R
- 3 Push Button 023-02
- 4 TED-TX400
- 5 TED-RX400
- 6 PC for Timing
- 7 Display Board D-LINE
- 8 Display Board D-RTNM



RADIO DEVICES

Teledata TED400



Technical Data - Teledata TED-TX and Teledata TED-RX

Transmission performance: 400 mW

Range: up to approx. 5 km

Frequency: 433.800 MHz (standard frequency)
alternatively, upon request: 434.650 MHz, 433.200 MHz, 433.650 MHz

Interfaces: TED-TX400: RS232 (input)
TED-RX400: RS232 (output)

Power consumption: TED-TX400: 270 hours at one impulse per minute
TED-RX400: 54 hours at one impulse per minute

Antenna: short, robust, flexible, BNC connector

Connection: compatible with all ALGE-TIMING products and almost all other products
· banana socket for data and start impulses
· DIN socket with connection for start, stop impulse, data and external power supply

Input signal: closing contact, active low, at least 10 ms

Output signal: transistor, open collector, active low, 100 ms

LED: for battery indication (TED-TX and TED-RX), additionally for field strength display in the TED-RX

Loudspeakers: in the TED-RX for field strength information and for interference indication, warning tone for weak batteries

Power supply: internal: 6 x AA alkaline batteries or 6 x AA NiMH rechargeable batteries
external: charger PS12 or timing device

Operating temperature: -20 °C to +50 °C

Dimensions: 198 x 72 x 72 mm (without antenna)

Fastening: velcro fastening for mounting on a pole, thread for tripod

Accessories: · case with foam insert
· bracket for mounting with photocell and tripod or mounting bracket
· different cables

Attention:

The laws for radio systems are very different worldwide. Please check the local laws before commissioning a radio system. Depending on the country, such a radio system may be prohibited or subject to registration.

RADIO DEVICES

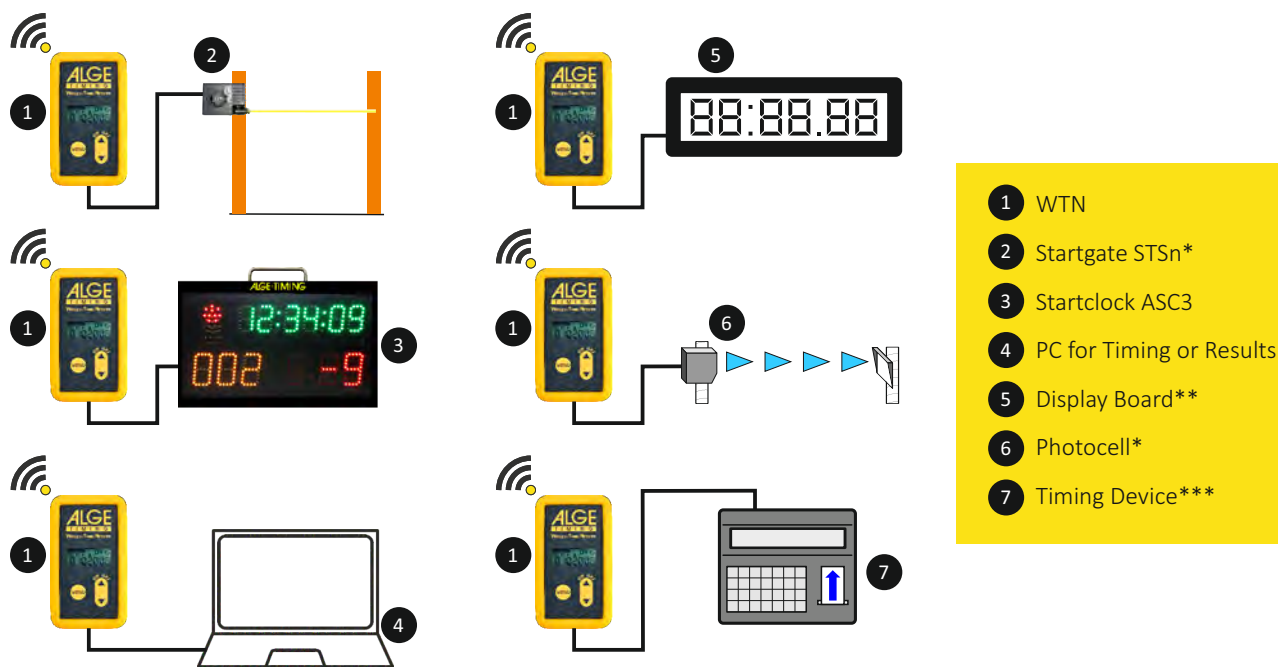
Wireless Timing Network WTN



The “Wireless Timing Network WTN” is a radio network for timing, in which different timing devices communicate with each other via radio, in the 2.4 GHz band. The constant dialogue of the devices ensures a high degree of security, i.e. if a device can no longer be found in the network, this is reported immediately.

The WTN allows for a wireless communication of the timing device with peripheral devices such as photocells, display boards or the evaluation PC. The photocell, for example, sends the impulse by radio to the timing device, which transmits the data by radio to the display board and to the PC with evaluation software.

Examples for the use of the Wireless Timing Network WTN



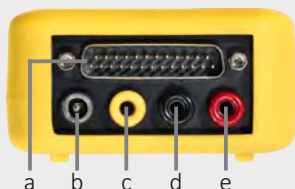
* the WTN is usable for most devices from other producers

** the WTN is usable for some models from other producers; for ALGE-TIMING display boards the WTN-DB is recommended

*** the WTN is usable for most models of other producers; for ALGE-TIMING timers the WTN is in most cases built in

Technical Data of the WTN:

Frequency:	2.4 GHz band (15 adjustable teams)
Transmission performance:	10 mW - 100 mW (adjustable)
Time measuring channels:	5 different time measuring channels, adjustable C0 (start), C1 (finish), C2, C3, C4
Range:	approx. 350 m with clear view, each WTN device serves as a repeater (possible range extension)
Display board interface:	RS232 interface, 2,400 to 19,200 baud, yellow/black banana sockets
Rs232 interface:	RS232 interface- 2,400 to 115,200 baud via multi-port connector
Battery:	3 x AA battery (alkaline or NiMH rechargeable battery)
Housing:	plastic housing with elastic yellow rubber jacket to protect the unit in all weather conditions



- a - ALGE-TIMING Multiport
- b - DC power supply (PS12A)
- c - banana socket yellow: output or input for D-LINE or GAZ data
- d - banana socket black: ground
- e - banana socket red: timing channel (input)



RADIO DEVICES

Wireless Timing Network WTN

The bidirectional radio network WTN replaces the cables for the timing with 15 adjustable teams, in the 2.4 GHz band. All devices communicate with each other in the same network and simultaneously transmit data and impulses during indoor and outdoor use.

The universal genius WTN can be connected to almost any timing device, impulse device or display board from ALGE-TIMING. Perfectly suited even for data transfer to a PC.

This variety of applications is supported by a LCD display with keyboard for setting the required application purpose, the universal connections (timing channels, RS232, RS485) and internal batteries.

During development of this unique wireless timing network ALGE-TIMING paid particular attention to ease of use, reliability and robust design.

Timy3 with integrated Wireless Timing Network WTN



The integrated radio modem WTN makes it possible to connect the Timy3 by radio with all devices of the WTN series in a network. For example, one can receive start impulses, intermediate time- and finish impulses, control a display board, and send data to a PC with an evaluation program.

Photocell PR1aW



The PR1aW has an integrated WTN radio module. The impulse can be transmitted by radio and it is compatible with the complete WTN series. If required, the PR1aW can also be connected to the timing device via cable.

Wireless Timing Network manual push button WTN-PB



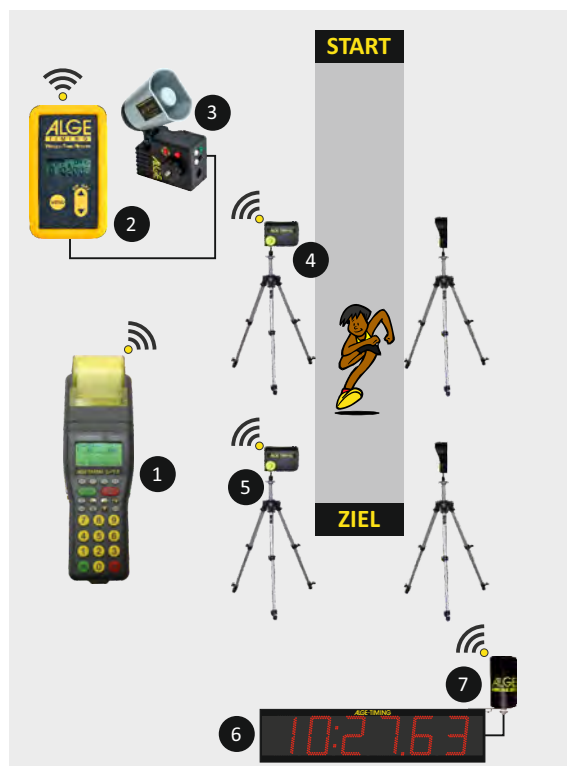
The WTN-PB is a manual push button with integrated WTN module. The team and the time measuring channel are adjustable.

Time channels: C0 (start), C1 (finish), C2, C3 or C4
LED: 2 x LED for status display
Power supply: internal C-battery (approx. 50 h)

Wireless Timing Network WTN-DB for Display Boards



The WTN-DB receives the data from the display panel from the WTN network and transmits it via the serial interface. The power supply and data transmission takes place through the display panel via the 4-pin Amphenol connector.



- 1 Timing Device Timy3 WP
- 2 Wireless Timing Network WTN
- 3 Startbeep STB1 for Start
- 4 Photocell PR1aW for Intermediate Time
- 5 Photocell PR1aW for Finish
- 6 Display Board D-LINE
- 7 Data Receiver for Display Board WTN-DB

Area of use:

- impulse transmission
- timing during show jumping
- training in the stadium or in the hall
- display board control for D-LINE or GAZ
- data transfer to PC

Accessories:

- holder with Velcro strip SPB1
- cable 280-03: to the Timy or TdC8001 (25-pin D-Sub)
- cable 283-02: to the PC (25-pin to 9-pin D-Sub)
- cable 284-02: to the display board (25-pin D-Sub on Amphenol- 4-pin)

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 perfect 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 9- 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.

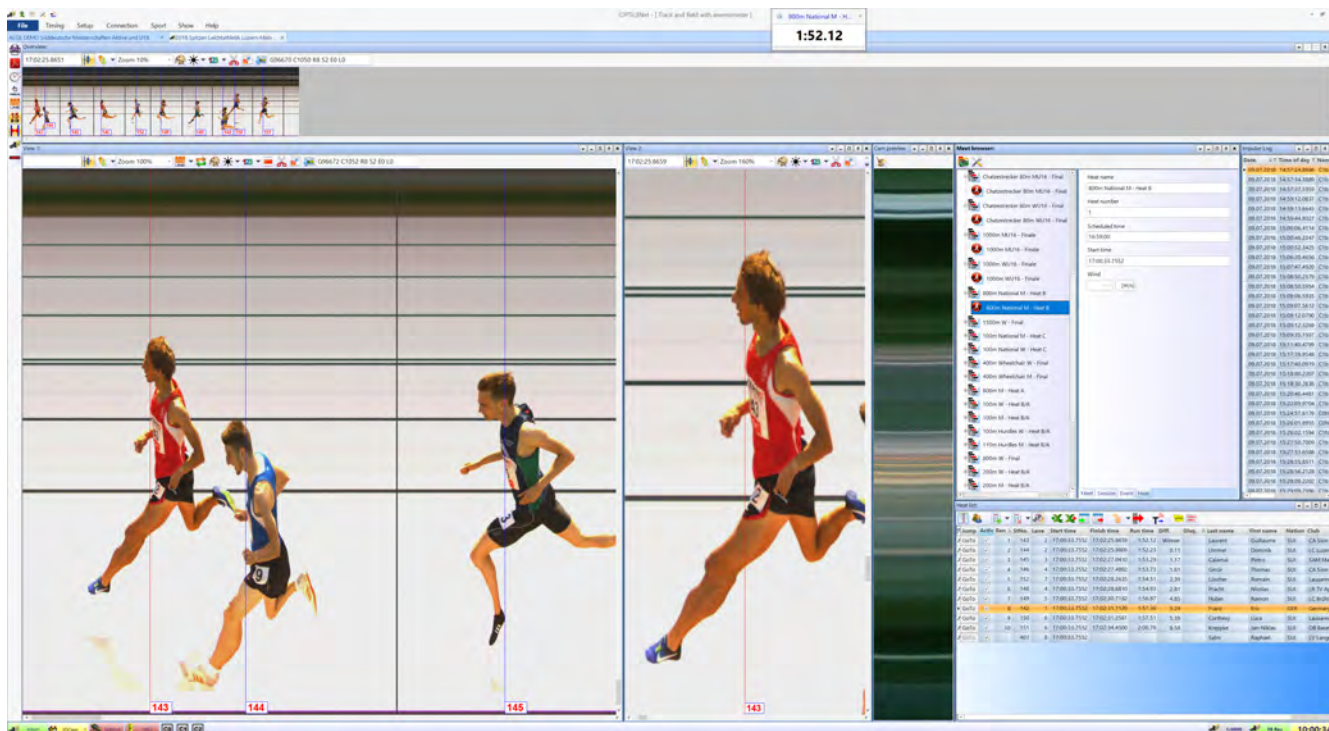
PC Software

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



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

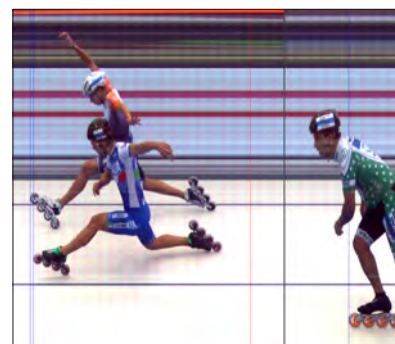
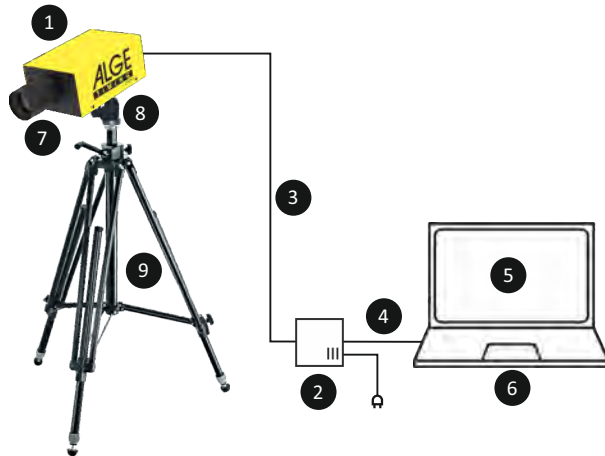


PHOTO FINISH

OPTIc3



Setup of the Photo Finish OPTIc3



- 1 Photo Finish Camera OPTIc3*
 - 2 Power over Ethernet PoE*
 - 3 Ethernet Cable with 10 m (K-RJ45G10)*
 - 4 Ethernet Cable with 3 m (K-RJ45G3)*
 - 5 OPTIc3NET-Software for Windows (7, 8, 10)*
 - 6 PC to operate the OPTIc3**
 - 7 Lens for OPTIc3***
 - 8 Gearhead 410 or 410-E3**
 - 9 Tripod for OPTIc3-Camera***
- * included in basic package
 ** make sure that the PC is according to the specifications of ALGE-TIMING
 *** accessory for the photo finish OPTIc3

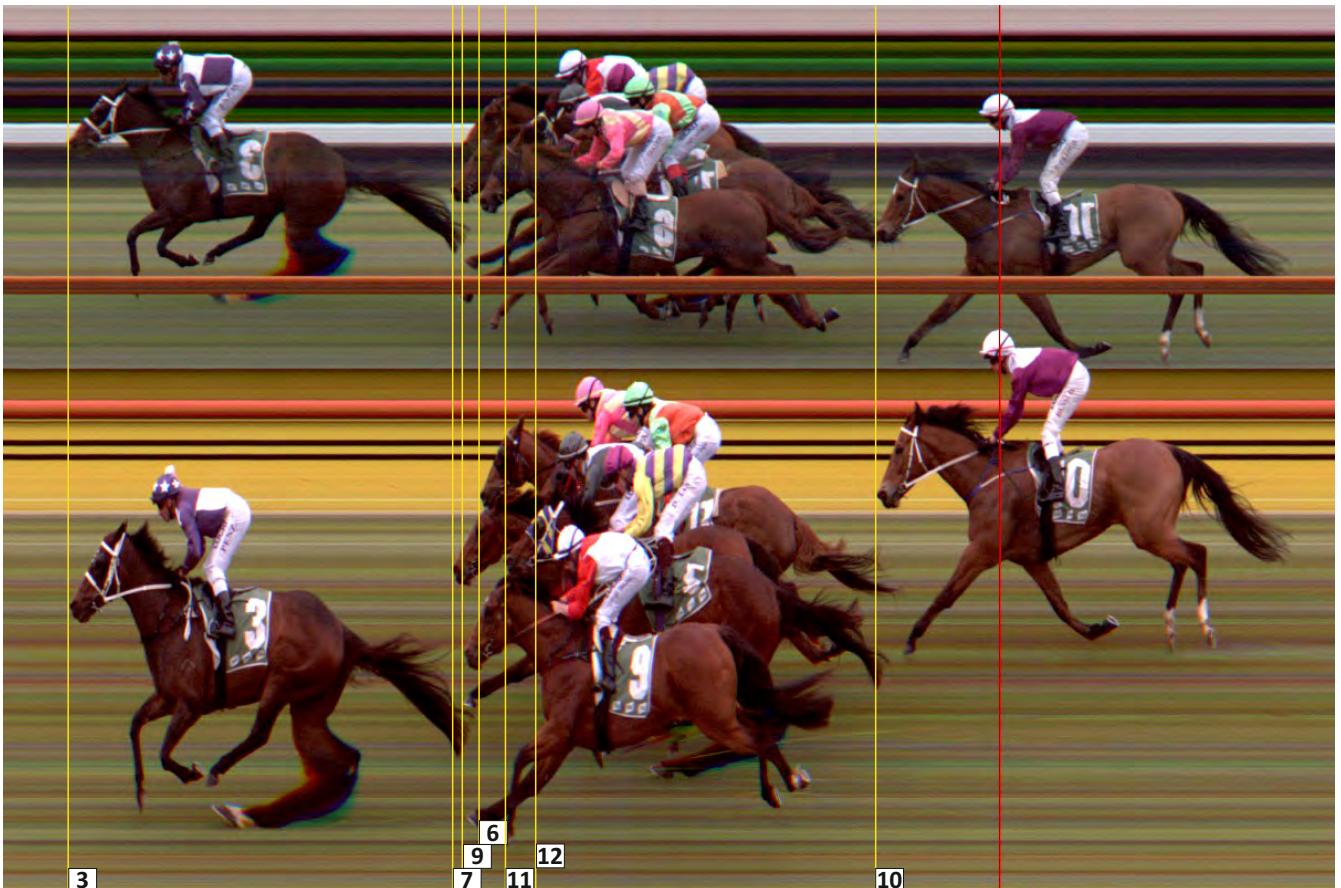
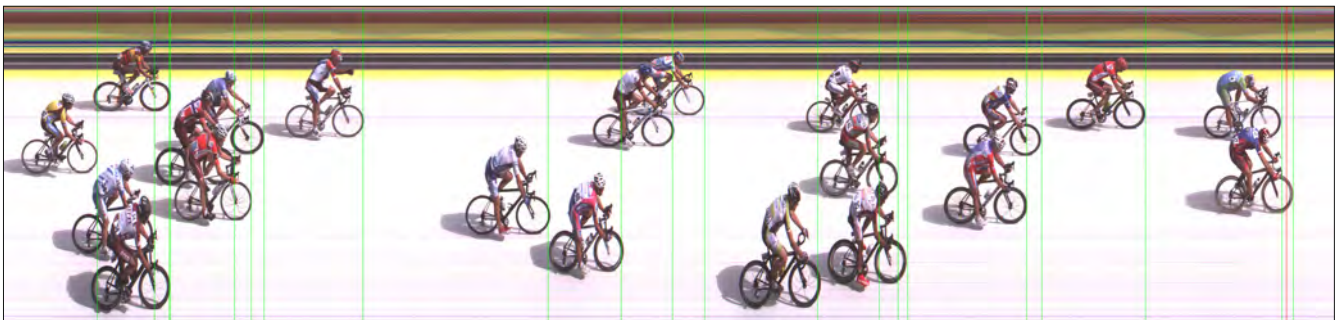




PHOTO FINISH

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:

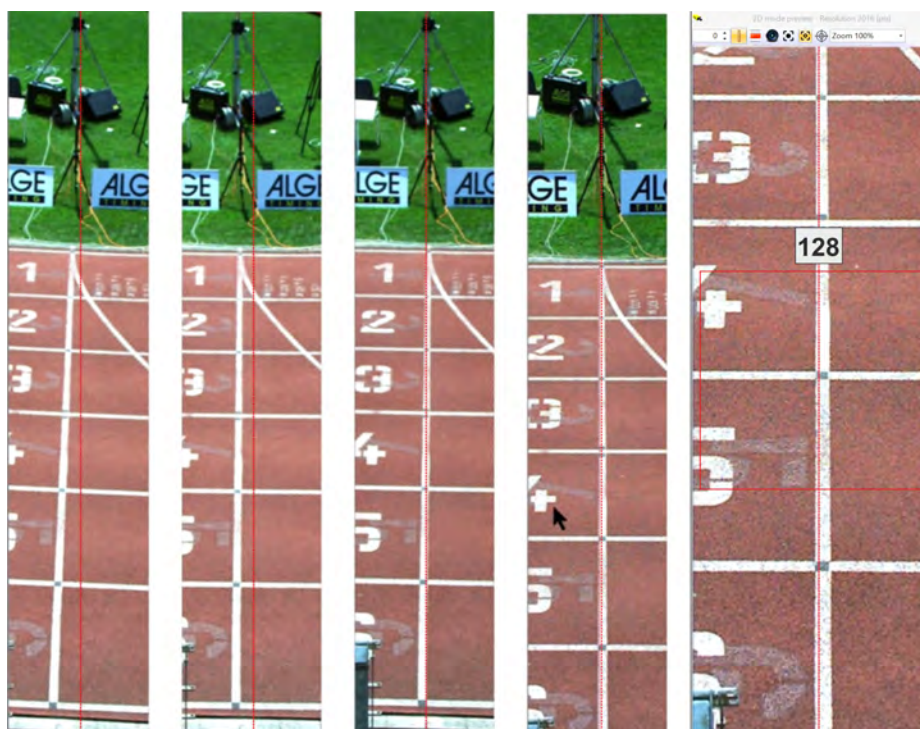
“a picture is worth a thousand words”.



Easy camera setting in 2D mode

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

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



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:

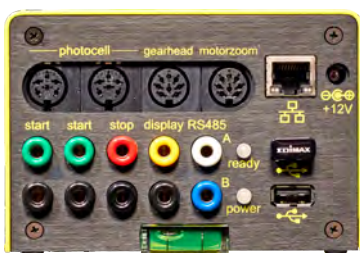
- Swimming
- Air Race
- Drone Racing
- Crashed Ice
- Timber Sports

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	
Transputer Integration:	optional	
Power Supply:	Ethernet with PoE+ power supply PS12A (9- 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)

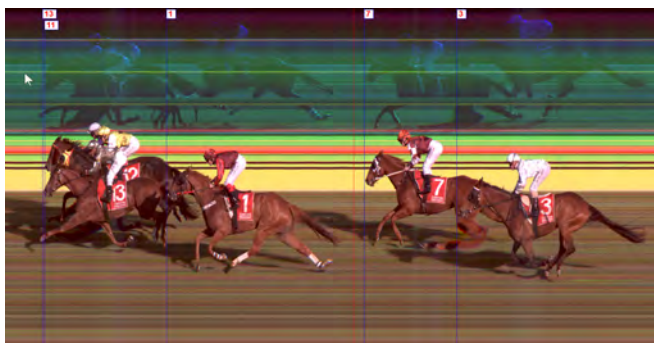




PHOTO FINISH

OPTic3 Accessories

Example of a Result List Printed by the OPTic3:



Spitzen Leichtathletik LUZERN
Sportfaszination im Weltformat.

Results List

Spitzenleichtathletik Luzern 2018
Luzern
800m National M - Heat B 800m National M - Heat B

Date: 09.07.2018
Start time: 16:59:00

Location: Allmend Distance: 800 m
Organizer: Spitzenleichtathletik Luzern Actual start time: 17:00:33
Session name: 2018-07-09
Number: 1.0.1



Rank	StNo.	Lane	Name	Nation	Club	Run time	Diff.
1	143	2	LAURENT Guillaume	SUI	CA Sion	1:52.12	Winner
2	144	2	UMMEL Dominik	SUI	LC Luzern	1:52.23	0.11
3	145	3	CALAMAI Pietro	SUI	SAM Massagno	1:53.29	1.17
4	146	4	GMÜR Thomas	SUI	CA Sion	1:53.73	1.61
5	152	7	LÜSCHER Romain	SUI	Lausanne-Sports Athlétisme	1:54.51	2.39
6	148	4	PRACHT Nicolas	SUI	LR TV Appenzell	1:54.93	2.81
7	149	5	HUBER Ramon	SUI	LC Brühl St.Gallen	1:56.97	4.85
8	142	1	FRANZ Eric	GER	Germany	1:57.36	5.24
9	150	6	CORTHÉSY Luca	SUI	Lausanne-Sports Athlétisme	1:57.51	5.39
10	151	6	KREPPKE Jan-Niklas	SUI	OB Basel	2:00.70	8.58

Photofinish: ALGE-TIMING OPTic3
Software: ALGE-TIMING OPTic3.NET

2020-11-19 / 10:46

ALGE-TIMING

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Timing: ALGE-TIMING
<http://www.alge-timing.com>







PHOTO FINISH

OPTIc3 Accessories



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 $\frac{3}{8}$ " , 12.5- 75 mm / F1.2



Motor Zoom MZ75C

control of focus, zoom and brightness
from the PC
C-Mount $\frac{3}{8}$ " , 12.5 – 75 mm / F1.2



Motor Zoom MZ48C

control of focus, zoom and brightness
from the PC
C-Mount $\frac{1}{2}$ " , 8- 48 mm / F1,2



Motor Zoom MZ160G

control of focus, zoom and brightness
from the PC
C-Mount $\frac{3}{8}$ " , 16 – 160 mm / F1.8



Wide-Angle Lens L8C

C-Mount $\frac{3}{8}$ " , 8 mm / F1.4



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

standard tripod TRIMAN with a
maximum height of 2.4 m

Tripod TRI-PRO

tripod TRI-PRO 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+)



Battery Backup BB1

battery power supply for camera (integrated
12 VDC battery with mains adapter)



Radial Polarizing Filter PF55

(on request) polarization filter to attenuate
reflections (e.g. from water)





MONITORING OF THE FINISH LINE

IDCam

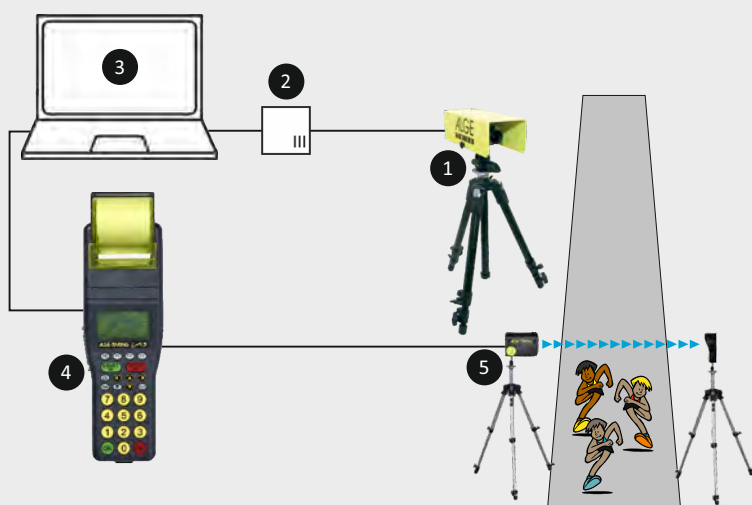
The IDCam is a reliable and simple way to monitor the finish line. When an athlete crosses the finish line a series of high resolution pictures is taken and stored on the PC with the time of the day for each image.

The IDCam can be connected to an ALGE-TIMING timing device. The photocell at the finish line starts the recording of the images by the IDCam. The images are automatically sorted with the correct ID-number if the number is entered in the timing device in advance.

The recorded images help determine the arrival order of the athletes at the finish line, correct the missing finish line arrivals and add the bib numbers, which can be read from the pictures.

Setup Example of the IDCam with a Timy3 WP:

IDCam with 20 m long Ethernet cable (can be up to 100 m long) with power supply POE. Connect the POE to the PC using a 3 m Ethernet cable. Connect the ALGE-TIMING timing device to the PC via RS232 or USB cable.



Setup:

Connect the IDCam by Ethernet cable (included 20 m cable, possible up to 100 m) with power supply POE. From here connect a timing device from ALGE-TIMING by RS 232 or USB.

The IDCam is the ideal addition to any ALGE-TIMING timing devices.

Technical Data:

Number of images: up to 30 frames per second
Picture resolution: 2,592 x 1,944 pixel (5 MP)
Connections: camera IDCam to PC: Ethernet CAT5 cable up to 100 m
length timing device with PC: RS232 or USB
Recording time: endless, depending on the capacity of the PC's hard disk
PC operating system: Windows 7, 8, 10
Power supply: POE: 90- 280 VAC



Supported Timers:

- TdC8001 and TdC8000
- Timy3, Timy2 and Timy
- Timer S4
- Photo Finish OPTIc2 and OPTIc3
- High-Speed Camera OPTIc3 (2D mode)
- manual recording via PC keyboard

Scope of Delivery:

- 5 Megapixel Network Camera
- zoom lens 4- 8 mm for camera
- 3 m CAT5 cable K-RJ45G03
- 20 m CAT5 cable K-RJ45G20
- POE Power supply
- PC Software



Optional Accessories:

- weather Protection WP-IDCam
- tripod TRI128 or TRIMAN
- ball joint 482
- cable reel KT-RJ45G90



MONITORING OF THE FINISH LINE

IDCam



Example of cooperation between IDCam and Photo Finish

The IDCam is the ideal complementary device to the photo finish OPTIc3, because it controls the finish line recording, and

helps determine the bib numbers, from the finish line arrivals, in case these were not readable in the photo finish picture.

Cycling - Cooperation Between IDCam and OPTIc3

The example of a cycling finish arrival shows that together with IDCam and ALGE-TIMING photo finish OPTIc3, you have the ideal tool for evaluating the finish quickly and independently of the finish arrival judge.

The IDCam can be controlled via the OPTIc3.NET software running on the same PC as the photo finish software OPTIc3.NET, but it can also be installed on another PC on the same network.

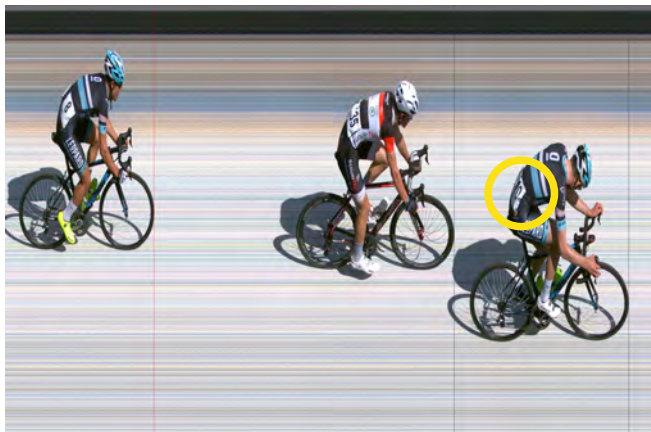


Photo Finish OPTIc3 image



IDCam image

Athletics - Cooperation Between IDCam and Photo Finish OPTIc3

The same cooperation between IDCam and OPTIc3, is the ideal tool for evaluating the finish arrival in athletics.

ID-number 180 and side number 6 is not readable on the photo finish picture, but in the picture of the ID-Cam the ID-number 180 and side number 6 is clear visible (see image below).

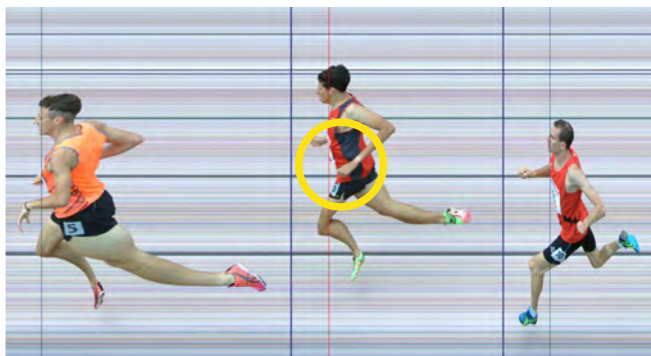


Photo Finish OPTIc3 image



IDCam image



DISPLAY BOARD

GAZ5

With the GAZ5 display board, it is possible to read numeric data even in the distance and in direct sunlight. The ALGE-TIMING display boards with 15 or 25 cm high digits are robust and also proven for outdoor use.



The new generation GAZ5 is characterized by the following features and advantages

- direct control by all ALGE-TIMING timing devices via a two-wire data cable or radio
- manual entry with the terminal ALGE-Timing Timy3 (e.g. points or ratings)
- counting system in conjunction with ALGE timing Timy3 (e.g. person counting via turnstile)
- universal use due to the control via RS232 or RS485 interface (e.g. from the PC as an electronic scale)
- The display board can be used during charging (model with rechargeable battery).
- switch for three different display configurations in timing:
 - start number and rank
 - minutes, seconds, hundredths of a second
 - hours, minutes, seconds
- selector switch for addressing and special functions
- Two displays can be combined to show bib number, rank, and time.
- Up to 10 lines can be linked together to a ranking board.
- Integrated electronic clock enables autonomous use as a daytime or stopwatch.
- countdown clock to the display of game times (entry of the game time and time-out with the push button)
- optimal readability even in direct sunlight
- long life due to the use of bistable seven segment displays in a robust coated aluminum housing with plexiglass front
- best operational safety, thanks to CMOS technology and quality of ALGE-TIMING
- low power consumption: energy is needed only at the moment of the information exchange
- there are three variants of the power supply:
 - with 11 to 20 V DC voltage (e.g. car battery)
 - from power mains with integrated power supply PS5
 - internal battery (or mains) with integrated power-pack PP5



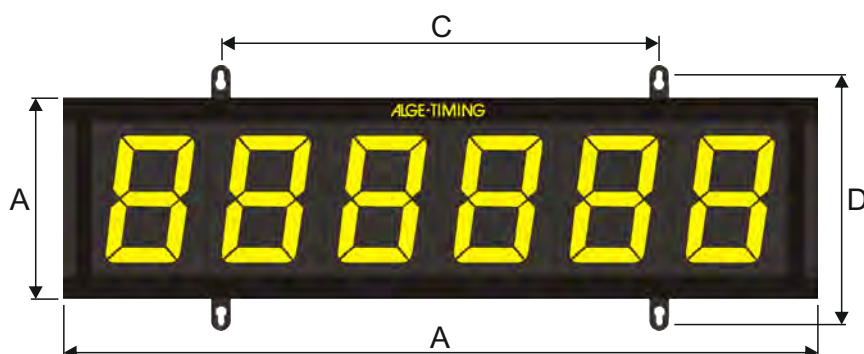
DISPLAY BOARD

GAZ5

00:00:00

Technical Data:

Electronics:	μ-processor technology in CMOS technology with watchdog
Digit:	bistable seven segment displays, yellow on black ground (best reading contrast), low power consumption, great operating safety
Housing:	aluminum housing, plastic-coated (black) with a pane of plexiglass, suitable for outdoor use, 4 hanging loops
Interface:	RS232 and Rs485
Temperature range:	-25 °C to +50 °C
Power supply:	<ul style="list-style-type: none"> · direct supply: 11 to 20 V DC/2.5 A · power supply PS5: integrated power supply, 90 - 132 VAC and 187 - 264 VAC/50 Hz or 60 Hz · power-pack PP5: integrated rechargeable battery (NiMh battery) with mains charger, 90 - 132 VAC and 187 - 264 VAC/50 Hz or 60 Hz, charging time: approx. 14 hours



Standard Models	Weight	A	B	C	D	Depth	max. Reading Distance*	Operating Time**
GAZ5 515	12 kg	290 mm	956 mm	556 mm	352 mm	100 mm	75 m	60 h
GAZ5 615	13 kg	290 mm	956 mm	556 mm	352 mm	100 mm	75 m	60 h
GAZ5 525	21 kg	393 mm	1,493 mm	1,093 mm	455 mm	100 mm	125 m	20 h
GAZ5 625	22 kg	393 mm	1,493 mm	1,093 mm	455 mm	100 mm	125 m	20 h
GAZ5 545	45 kg	664 mm	2,090 mm	2,090 mm	726 mm	120 mm	225 m	11 h
GAZ5 645	48 kg	664 mm	2,090 mm	2,090 mm	726 mm	120 mm	225 m	11 h

Standard configuration- other configurations available upon request

* max. reading distance according to DIN 1450

** operating duration: operation of the clock in second mode (power-pack PP5 at 20°C)

Example of the Order Code:

GAZ5 645 PP5

- power supply (e.g. PP5 or PS5)
 - PP5 power-pack (integrated mains charger and rechargeable battery)
 - PS5 power supply (built-in power supply)
- digit heights
- number of digits
- display board type





DISPLAY BOARD

D-LINE

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.

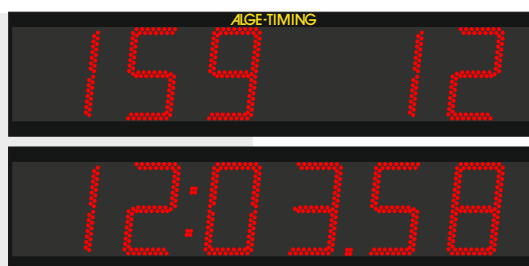
The integrated clock can be used in stopwatch or countdown mode and show the exact time of day. If the D-LINE is equipped with DCF, GPS and/or temperature sensor, the temperature can be displayed in addition to the exact time of day, even if no timing device is connected. The outdoor models differ from 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.



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

Display boards can display the following numeric data:

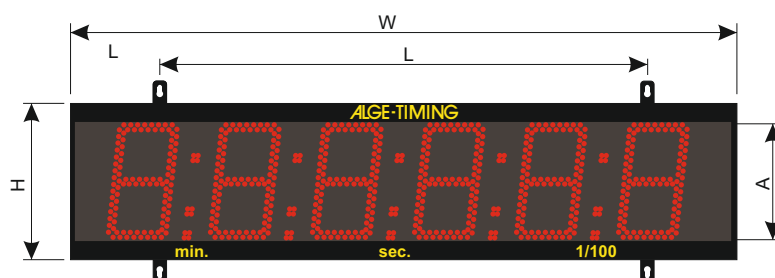
times
bib numbers
rank
speed
widths
heights
remarks
points
weights
prices
temperatures
departure times
stock Quotes
etc.

DISPLAY BOARD

D-LINE

00:00:00

	Amount of Digits	Figure Height [A]	Height [H]	Width [W]	Depth	Hanging Loops Spacing [L]	Weight	Power Consumption	max. Reading Distance
Indoor Models									
D-LINE57-I-6-E0	6	57 mm	130 mm	500 mm	60 mm	200 mm	2 kg	13 W	28 m
D-LINE100-I-6-E0	6	100 mm	180 mm	800 mm	60 mm	500 mm	4 kg	13 W	50 m
Outdoor Models									
D-LINE80-O-6-E0	6	80 mm	150 mm	600 mm	60 mm	300 mm	3 kg	13 W	40 m
D-LINE150-O-6-E0	6	150 mm	250 mm	956 mm	60 mm	556 mm	6 kg	14 W	75 m
D-LINE250-O-6-E0	6	250 mm	350 mm	1,493 mm	60 mm	1,093 mm	11 kg	34 W	125 m
D-LINE450-O-6-E0	6	450 mm	600 mm	2,490 mm	80 mm	2,090 mm	28 kg	88 W	225 m
D-LINE600-O-6-E0	6	600 mm	800 mm	3,400 mm	70 mm	3,000 mm	44 kg	133 W	300 m
D-LINE800-O-6-E0	6	800 mm	1,000 mm	4,800 mm	70 mm	4,400 mm	86 kg	180 W	400 m
D-LINE1000-O-6-E0	6	1,000 mm	1,400 mm	5,700 mm	70 mm	5,300 mm	144 kg	270 W	500 m
D-LINE1500-O-6-E0	6	1,500 mm	2,000 mm	8,500 mm	70 mm	8,100 mm	290 kg	510 W	750 m

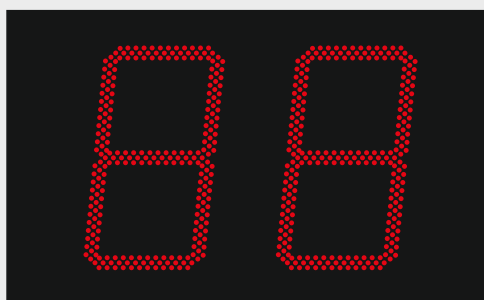


Possible Digit Heights

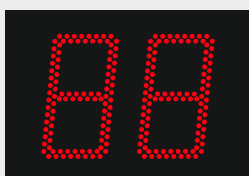
Indoor: 57 mm
100 mm

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

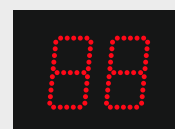
Other configurations than indicated above are possible on request.



Digit with 450 mm figure height (outdoor)



Digit with 250 mm figure height (outdoor)



Digit with 150 mm figure height (outdoor)



Digit with 80 mm figure height (outdoor)



Digit with 80 mm figure height (outdoor)



Digit with 57 mm figure height (indoor)

Example of the Order Code:

D-LINE150-O-6-E0

additional spaces between the digits
number of digits, here 6 digits
I = indoor model, O = outdoor model
figure height in mm
product name





DISPLAY BOARD

LED Matrix D-RTNM

The D-RTNM is a universal, one-color display board 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

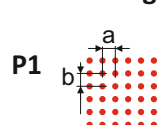
readable even in direct sunlight. If it is used at night or on rainy days in difficult light conditions, the brightness can be adjusted in 100 levels.

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.

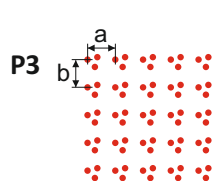


- matrix display board with red LEDs
- models with 1, 3, 4 or 7 LEDs per pixel
- models for outdoor and indoor use
- standard models with a resolution of 16 or 24 pixels in height and 96 or 160 pixels in length
- universal with Ethernet, RS485 and RS232 interface
- internal memory of 4 MB for storing 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

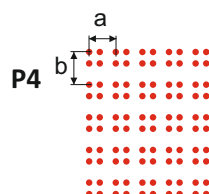
Pixel Arrangements:



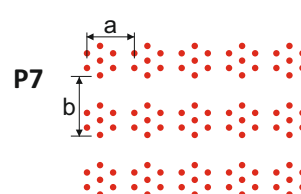
$a + b = 10.0 \text{ mm}$
 $a + b = 15.0 \text{ mm}$
 $a + b = 20.0 \text{ mm}$



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



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



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



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

LED Matrix D-RTNM

00:00

Some Examples of D-RTNM-Configurations:

Model	LED per Pixel	Vertical Pixels	Horizontal Pixels	Vertical Pixel Pitch	Horizontal Pixel Pitch	Length	Height	Depth	Application
D-RTNM-P1V3-16x96-RO	1	16	96	15 mm	15 mm	1,480 mm	280 mm	100 mm	Outdoor
D-RTNM-P1V4-16x96-RO	1	16	96	20 mm	20 mm	1,960 mm	360 mm	100 mm	Outdoor
D-RTNM-P1V4-24x96-RO	1	24	96	20 mm	20 mm	1,960 mm	520 mm	100 mm	Outdoor
D-RTNM-P3-16x96-RO	3	16	96	21.6 mm	21.6 mm	2,300 mm	400 mm	100 mm	Outdoor



Example of the Order Code:

D-RTNM-P1V3-16x96-RO

- I = Indoor, O = Outdoor
- R = Red LED (other colours on request)
- number of horizontal pixels
- number of vertical pixels
- pixels with 1 LED (alternative: 3, 4 or 7 LEDs)
 - P1-pixel with 1 LED, H/V pitch 10 mm
 - P1-V2-pixel with 1 LED, H/V pitch 10/15 mm
 - P1-V3-pixel with 1 LED, H/V pitch 15 mm
 - P1-V4-pixel with 1 LED, H/V pitch 20 mm
 - P1-V5-pixel with 1 LED, H/V pitch 15/20 mm
 - P3- pixel with 3 LEDs, H/V pitch 21.6/21.6mm
 - P4- pixel with 4 LEDs, H/V pitch 20.7/25.4mm
 - P7- pixel with 7 LEDs, H/V pitch 36.8/46.4mm
- product name





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.

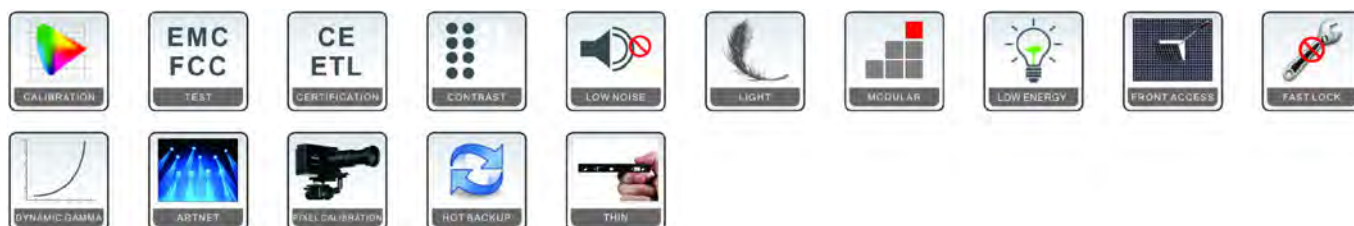
Due to the quick-release fasteners it is possible to build up the entire video wall in a few minutes.



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.

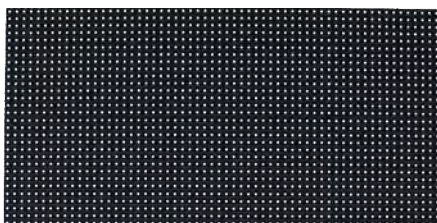
Pixel pitch from 10 mm to 26.7 mm.



DISPLAY BOARD

Video Wall

00:00:00



Honeycomb Structure Module

The module is a new type of composite back shell with excellent features, such as high intensity, low cost and outstanding heat dissipation. The module structure is simple and three-dimensional, and both sides of the bottom shell have reinforcing ribs.

Modules

Slim and compact modules for permanent installations and rental systems are offered. Both have the same measurements.

Setup

The modules are then locked with toggle clamps for quick assembly without tools.

Hanging Model

Optionally, there are special hanging beams for the modules with which you can hang up to 20 modules.

Flight Cases

Specially developed flight cases (optional) guarantee safe transport and protected storage of the modules.

Wiring of the Mobile Modules

A simple wiring between the modules with high-quality connectors ensures maximum reliability. Only two cables for the power supply and signal line must be connected from module to module.

Power Supply Hot Backup

The power supply is an essential component of a video wall and has direct influence on visibility. ALGE-TIMING uses a backup function for the power supply to avoid breakdowns of parts of the video signal due to defective power supply units. The modules are equipped with two power supplies. If one of them fails, the second power supply takes over and powers the module. A fault indication with LEDs indicates a defective power supply to the user. If the dynamic load is less than half the total power consumption of the module, the images will usually be displayed on the video wall. Otherwise, the brightness of the screen is automatically reduced by half.

Signal Hot Backup System

The signal hot backup system improves the reliability of a video signal. If automatic error detection is activated, data can be fed in from two sides. If a line fails, the other line takes over within milliseconds.

Maintenance

The modules are modular and maintenance is easy to carry out.





DISPLAY BOARD

Video Wall

The specifications for LED video walls vary widely, depending on the application. Here is an overview of the most important data:

Pixels

A pixel is the smallest unit on a video wall and consists of one or more LED.

Pixel Pitch

The pixel pitch is measured from the centre of each pixel to the centre of the next pixel. Attention: There is a physical pixel pitch and a pixel spacing that can be achieved by pixel sharing. It is always important to compare the physical pixel spacing, since the image quality is practically determined only by that.

Pixel Size

The filling level is responsible for the fact that the image does not lose sharpness at longer distances. The larger the single pixel compared to the pixel pitch, the better the fill level of the display board.

LED / Pixel

Depending on the design, one pixel consists of one or more LEDs. Especially for video ads, it is important to find the right balance of the colours. For this reason, four red, two green and two blue LEDs are used, for example, at a pixel spacing of 28 mm.

Resolution

The resolution is the sum of the physical pixels on the display board. The higher the resolution, the better the image quality.

Pixel Sharing or Virtual Resolution

In pixel sharing, individual LEDs are used by adjacent pixels to form virtual pixels. If a display board supports pixel sharing, its virtual resolution is four times as high as the physical. However, the image quality at the same physical resolution is much better.

Luminosity

The luminosity is expressed in cd/m^2 or in Nit. Especially for full-colour systems, there are different ways to specify the brightness. If all three basic colours with the highest intensity, for example, reach a luminosity of $7,000 \text{ cd/m}^2$, the same brightness is present, but after white balance, is then in-



dicated as $5,000 \text{ cd/m}^2$. Accordingly, these two data are technically similar but misleading for the customer. For different display boards, a different brightness is required for outdoor applications.

Single colour $3,000 \text{ cd/m}^2$

Full colour $5,000 \text{ cd/m}^2$, white balance

Viewing Angle

This information is specified differently. Both the maximum viewing angle at which the display board darkens, as well as the angle at which the scoreboard still has 50 % of the nominal brightness (Half Centre Brightness), are indicated. It is important to ensure that the viewing angle for the comparison of different video walls is also taken into account with the same specifications.

Refresh Rate

The higher the refresh rate, the better the quality of the display board.

Static or Multiplexing Driving

The control of a video wall should be done statically. This can be checked with any digital camera. If the picture flickers in the view-finder, the control is multiplexed. If a TV camera is now shooting the display, the picture also flickers in the TV. Static control is technically much more complex and expensive, but also increases the life of the LEDs enormously.

Outdoor

The LEDs are cast with a special potting

compound with a disc. High quality products are only shed, each disc reflects.

Single Colour

The display can only show one colour. There are, however, still very big differences between the different video walls. In our systems, a colour can also be divided into 256 or 4,096 brightness levels. Such a system can be used to display pictures or movies as on a black-and-white TV.

Video Display

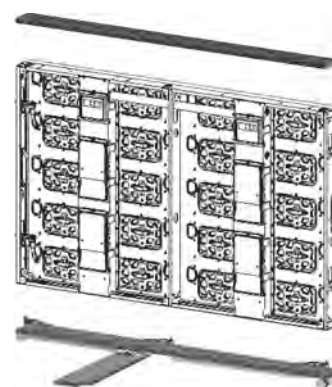
One pixel consists of three different coloured LEDs, red, green and blue. If these three colours are mixed, depending on the system, up to 10.73 trillion colours are obtained, the standard is 16.7 million, with ALGE-TIMING products with 68.719 million colours.



DISPLAY BOARD

Video Wall

00:00:00





DISPLAY BOARD

Lap Counter D-LC

The lap counter D-LC is available in different versions with two or three digits, which are 150 or 250 mm high. One has a choice of models with one, two or three sides. The lap counter is equipped with an integrated power-pack consisting of battery and charger, tripod, external operating consol and, if desired, a bell.

Operating Modes of the Lap Counter

Countdown Laps

The lap counter starts counting from a preset number of rounds towards zero, and then returns to the preset value.

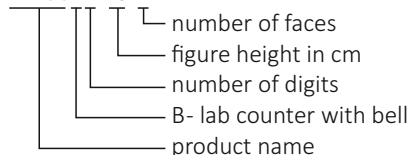
Count up Laps

The number is counted up with each round being added to the number.

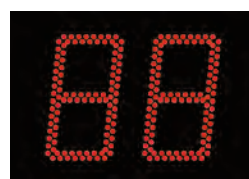
Model	Digit height	max. Reading Distance	Number of Digits	Number of Faces	Bell
D-LCC2-15-1	15	75	2	1	no
D-LCC2-15-2	15	75	2	2	no
D-LCC2-15-3	15	75	2	3	no
D-LCC2-25-1	25	125	2	1	no
D-LCC2-25-2	25	125	2	2	no
D-LCC2-25-3	25	125	2	3	no
D-LCC3-15-1	15	75	3	1	no
D-LCC3-15-2	15	75	3	2	no
D-LCC3-15-3	15	75	3	3	no
D-LCC3-25-1	25	125	3	1	no
D-LCC3-25-2	25	125	3	2	no
D-LCC3-25-3	25	125	3	3	no
D-LCCB2-15-1	15	75	2	1	yes
D-LCCB2-15-2	15	75	2	2	yes
D-LCCB2-15-3	15	75	2	3	yes
D-LCCB2-25-1	25	125	2	1	yes
D-LCCB2-25-2	25	125	2	2	yes
D-LCCB2-25-3	25	125	2	3	yes
D-LCCB2-15-1	15	75	3	1	yes
D-LCCB2-15-2	15	75	3	2	yes
D-LCCB2-15-3	15	75	3	3	yes
D-LCCB2-25-1	25	125	3	1	yes
D-LCCB2-25-2	25	125	3	2	yes
D-LCCB2-25-3	25	125	3	3	yes

Example of the Order Code:

D-LCCB2-25-2

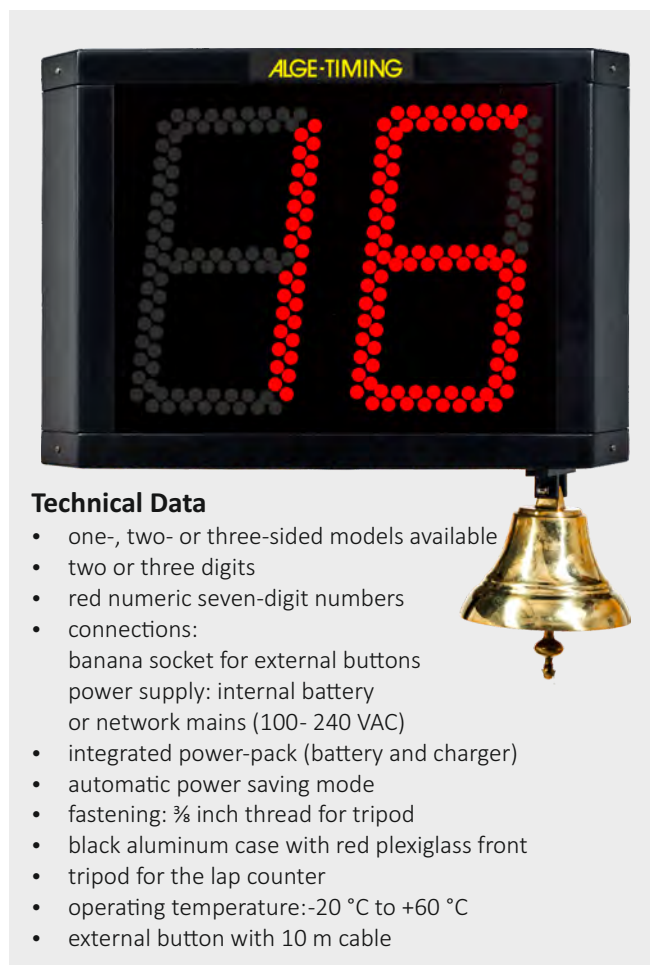


Lap Counter D-LCC2-15
digit height: 15 cm



Lap Counter D-LCC2-25
digit height: 25 cm

For outdoor use, a robust aluminum housing was been developed for the lap counters, in which the extra bright, red LEDs are easily readable, even in direct sunlight.



Technical Data

- one-, two- or three-sided models available
- two or three digits
- red numeric seven-digit numbers
- connections:
banana socket for external buttons
- power supply: internal battery or network mains (100- 240 VAC)
- integrated power-pack (battery and charger)
- automatic power saving mode
- fastening: 3/8 inch thread for tripod
- black aluminum case with red plexiglass front
- tripod for the lap counter
- operating temperature: -20 °C to +60 °C
- external button with 10 m cable



DISPLAY BOARD

Time Temperature Display Board D-SAT

00:00

The D-SAT series of the multi-functional display board is equipped with a precise and elegant time display and can be used very flexibly, thanks to extra bright LED digits.

- models with 57 and 100 mm digit height for indoor applications
- models with 80, 150, 250, 300, 450, 600, 800, 1,000 or 1,500 mm digits can also be used for outdoor applications.
- 4 or 6 digits (alternatively other configurations e.g. with extra temperature field)
- standard colour for the digits: red (options: yellow, green, blue or white)
- in- or outdoor models (readable in direct sunlight)
- display of time, date and optional temperature or relative humidity
- 12 or 24 hour display format
- up to 64 alarm times (optional), relay contact 1A
- time setting with a key attached to the housing or via external synchronization with DCF, GPS, Ethernet
- precise time due to internal real-time clock, after power outages or network interruptions no time settings necessary; accuracy of ± 4 minutes per year at 25°C
- automatic brightness control for outdoor use (option)
- automatic time changeover (summer time- winter time)
- network of several clocks with a master clock and auxiliary clocks
- with an average life of 100,000 hours, LED displays are durable and reliable.
- robust, black-coated aluminum housing for wall mounting with one-sided models, and ceiling mounting with double-sided models; optionally, also available with different colour or other attachment
- 100 to 240 VAC 50/60 Hz



The clocks can communicate via RS485 or Ethernet. A digital clock is the master clock and controls all the auxiliary clocks. The master clock is synchronized via GPS, DCF, Internet or a PC.

The main clock can use one of the display boards of the system, or a control box, or a rack control box.

You can combine display boards for in-door and outdoor use.

Options

- GPS-GPS time synchronization
- ETH-Ethernet-LAN-time synchronization
- DCF-radio-time synchronization
- A- alarm output (up to 64 alarm times)
- T- temperature sensor
- RH- relative humidity sensor
- LS- light sensor for brightness control

Model	Digit height	max. Reading Distance	Dimensions (4 Digit)	Dimensions (6 Digit)	Depth SS/DS
D-SAT57	57 mm	28 m	400 x 130 mm	500 x 130 mm	60 / 110
D-SAT80	80 mm	40 m	450 x 150 mm	600 x 150 mm	60 / 110
D-SAT100	100	50 m	650 x 180 mm	750 x 180 mm	60 / 110
D-SAT150	150 mm	75 m	730 x 250 mm	960 x 250 mm	60 / 110
D-SAT250	250 mm	125 m	1100 x 350 mm	1500 x 350 mm	60 / 110
D-SAT300	300 mm	150 m	1300 x 400 mm	1850 x 400 mm	60 / 110
D-SAT450	450 mm	225 m	1900 x 600 mm	2490 x 600 mm	80 / 110
D-SAT600	600 mm	300 m	2490 x 800 mm	3400 x 800 mm	70 / 110
D-SAT800	800 mm	400 m	3300 x 1000 mm	4800 x 1000 mm	70 / 110
D-SAT1000	1000 mm	500 m	3900 x 1400 mm	5700 x 1400 mm	70 / 110
D-SAT1500	1500 mm	750 m	5800 x 2000 mm	8500 x 2000 mm	70 / 110



Example of the Order Code:

D-SAT250-6-SS-I-M-T-GPS-A

- A = alarm
- GPS- or DCF time synchronisation
- T = temperature sensor
- M = master unit
- I = indoor model; O = outdoor model
- amount of digits
- SS = single sided display; DS = double sided display
- figure height
- product name





ATHLETICS



START



The various equipment required in athletics begins with simple training systems for the timing with photocells and goes up to the photo finish system, which is used in bigger events. For this purpose, there are all kinds of accessories, such as wind

gauges and lap counters, concentration clocks, distance measuring devices (theodolites) and various display systems from ALGE-TIMING.



Stadium Cabling

For the timing in stadiums, ALGE-TIMING offers cabling for fixed as well as for mobile installations.

Depending on the local circumstances, the ideal solution can be chosen.



Fixed Installation

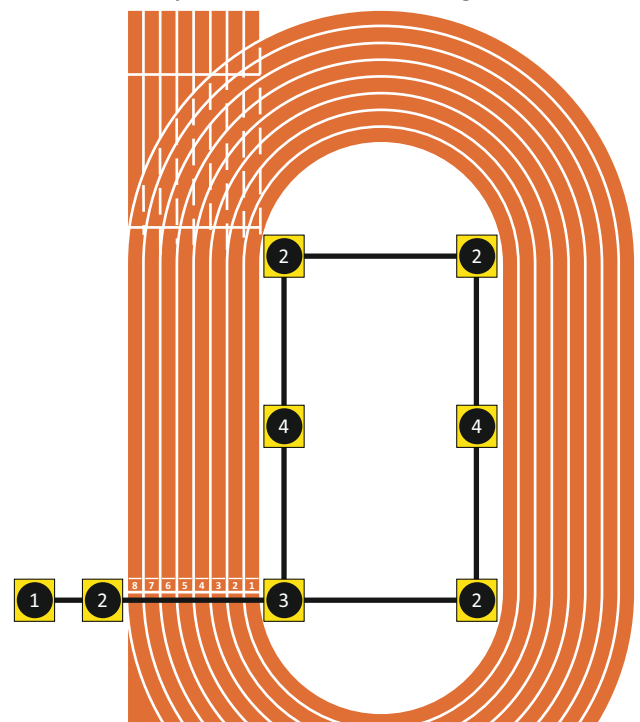
The cables are installed permanently and a distributor is fixed into cable manholes. This cabling has the advantage that it can be used any time without effort.



Mobile Installation

The cables are on cable reels and the distributors are integrated in the cable reel. A cable reel can be connected to another one and thus there is no problem to build an infrastructure for the timing in the complete stadium. The mobile stadium installation is employed if the timing is used in different stadiums or if due to a high groundwater level the manholes in the stadium are continuously flooded.

Example for a Fix Stadium Cabling



Example for a Fix Stadium Cabling

- | | |
|---|---|
| 1 Track Box TB2 F in finish house with Ethernet | 3 Track Box TB2 A-D-RJ in manhole with Ethernet |
| 2 Track Box TB2 A-D in manhole | 4 Track Box TB W in manhole for wind |

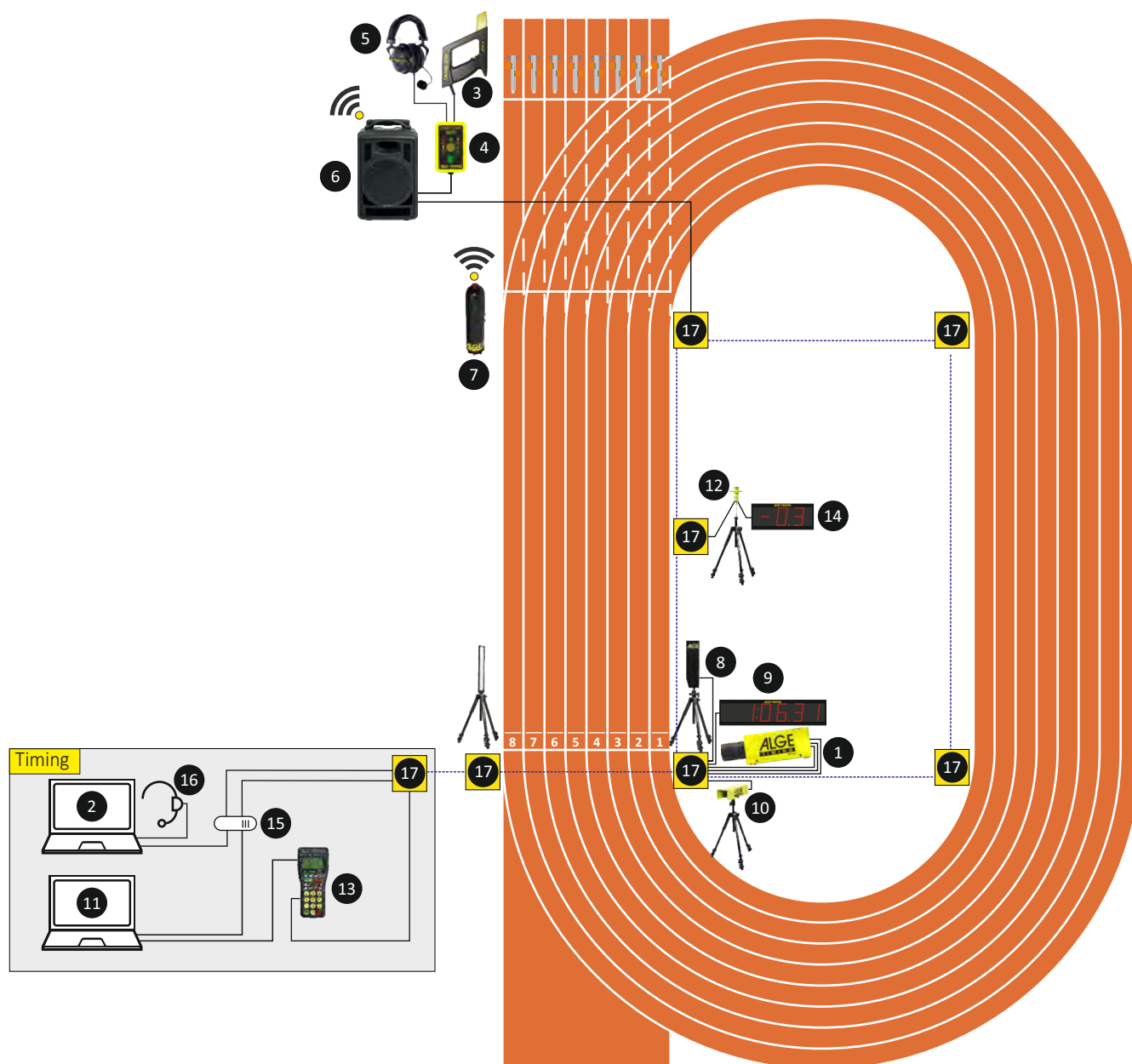


ATHLETICS

Simple Timing System

No matter how large the track & field event, ALGE-TIMING can provide the complete equipment for its execution. The system below is the basic photo finish system for track competitions in the stadium. The system contains a photo finish camera OPTIc3 and a photocell for the finish. The start is signaled by an electronic start gun and a loud speaker.

The starter can communicate with the timing room through the headset. The wind gauge is positioned at the 50 metre mark next to the sprint track. The wind gauge terminal Timy3 W is connected to the photo finish PC so that measuring the wind is controlled automatically by the photo finish. The unofficial win-ning time is shown on the display board at the finish.



- 1 Photo Finish OPTIc3
- 2 Notebook for OPTIc3
- 3 Electronic Start Device e-Start
- 4 Start Unit SU3
- 5 Headset HS3-2
- 6 Speaker System BANG2

- 7 False Start Trigger WTN-PB
- 8 Photocell RLS3c
- 9 Display Board D-LINE (Time)
- 10 Finish Arrival Camera IDCam
- 11 Notebook for IDCam
- 12 Anemometer WS2

- 13 Controller Timy3 W
- 14 Display Board D-LINE (Wind)
- 15 Switch (with PoE for Timing)
- 16 PC-Headset
- 17 Stadium Cabling

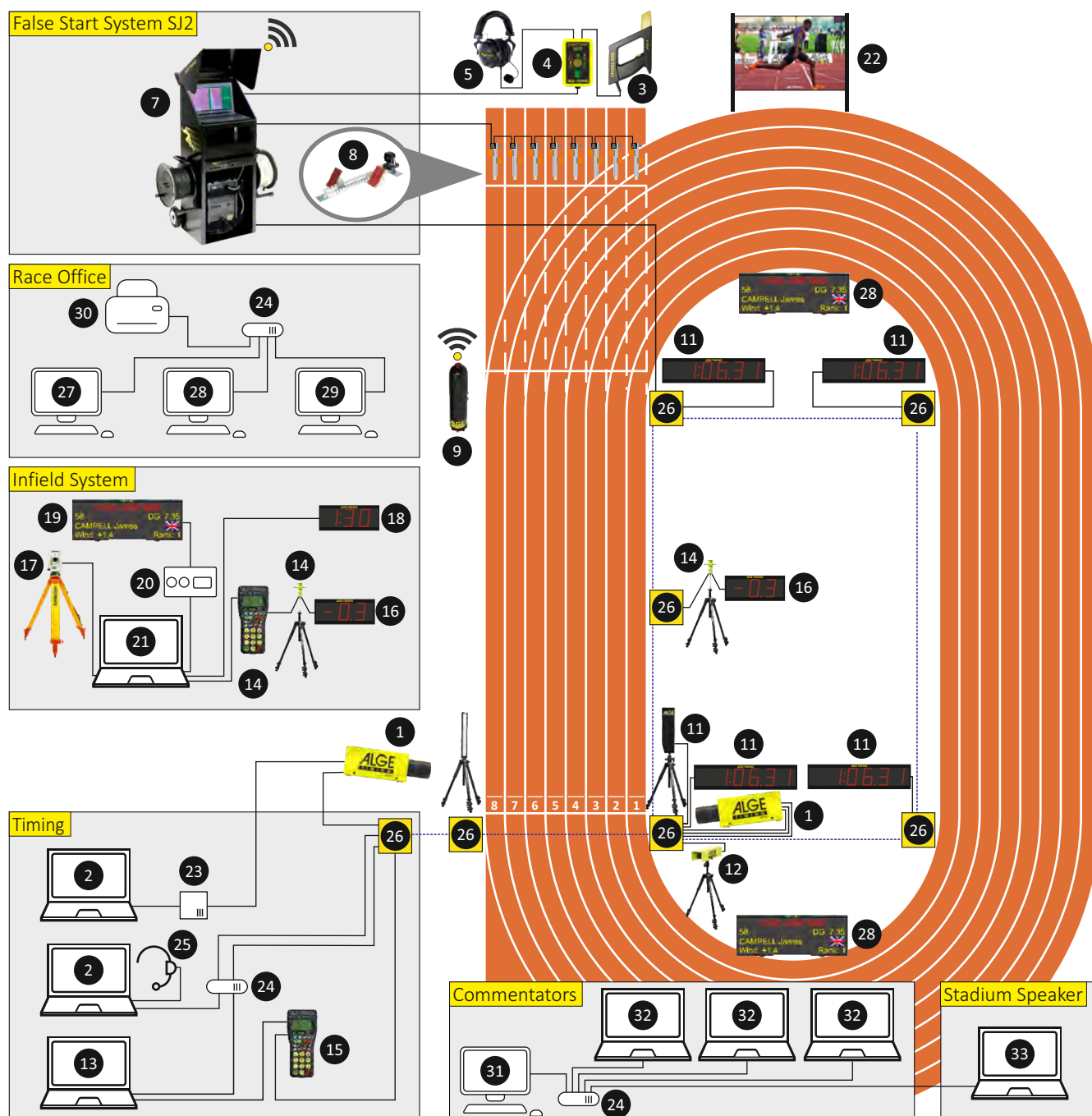
ATHLETICS

Complete System for Athletics Events



A complete athletic track with a corresponding timing system and all necessary devices for the infield events can be seen in the sketch below. Depending on the amount of

parallel happening infield events this equipment might be used double or even more time.





ATHLETICS

Start Judge SJ2

The Start Judge SJ2 is a false start system for athletics to monitor the start of running competitions up to 400 m. It consists of the Start Judge transport cart SJT2 with integrated controller and battery. The transport cart can store the complete system.

The sensors SJS2 are mounted on each starting block. The integrated loud speaker system enables the starter to give commands to the athletes. The start tone (simulated start shot) is released through the speaker integrated in the start sensor and the BANG2. By this, all runners can hear the start tone at the same time. With a radio push button WTN-PB one can move around and still trigger a false start at any time.

Cable Version SJ2-C:

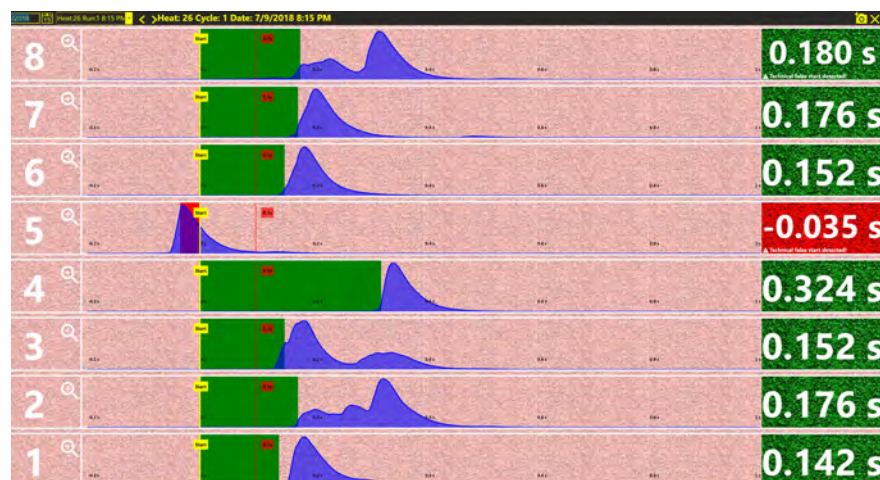
This system requires a cable (KT313-30) from the Start Judge transport cart to the first sensor SJS2 (first starting block). The sensors of the further lanes are one after another connected with cables 139-12. With the Start Unit SU3 and the connected e-Start and HS3-2, the starter can communicate with the timing room or give starting commands.

Radio Version SJ2-W:

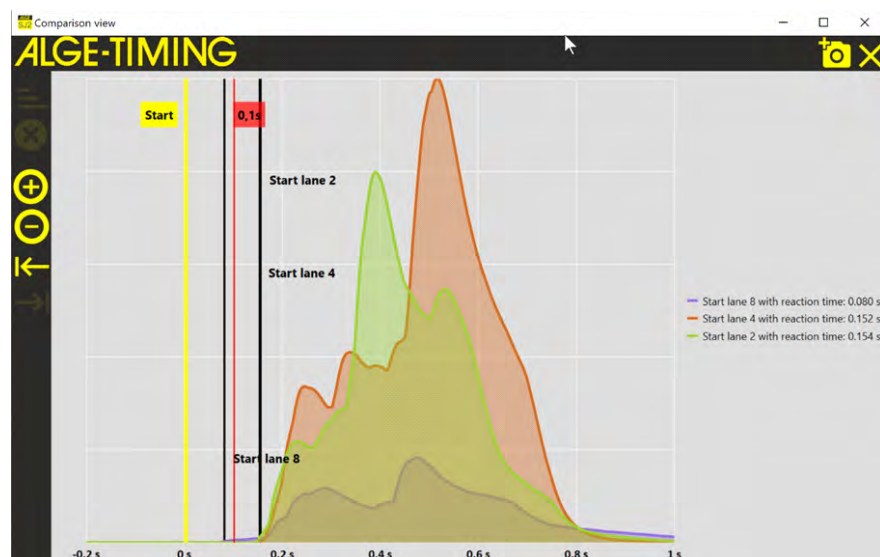
This system is wireless, i. e. all components communicate via radio. For this radio communication, the ALGE-TIMING WTN radio system is used. Oral commands for the athletes are made through the headset BANG-HS and released via the BANG2. Also the start signal is send by radio to the timing system.



The SJ2 false start system does not require any operation during the start process. The measurements are made automatically. Each start sensor collects the start data and transmits them to the Notebook in the Start Judge Cart, which is connected via a USB cable.



The starting curves of all participants (lanes) are visible on the screen of the Notebook. The picture on the left shows a typical take-off process in which track 5 caused a false start. All other tracks had a valid start.



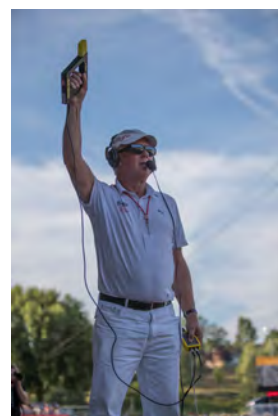
It is possible to display the star-graphs of selected runners (lanes) enlarged and on top of each other.

ATHLETICS

Start Judge Sj2

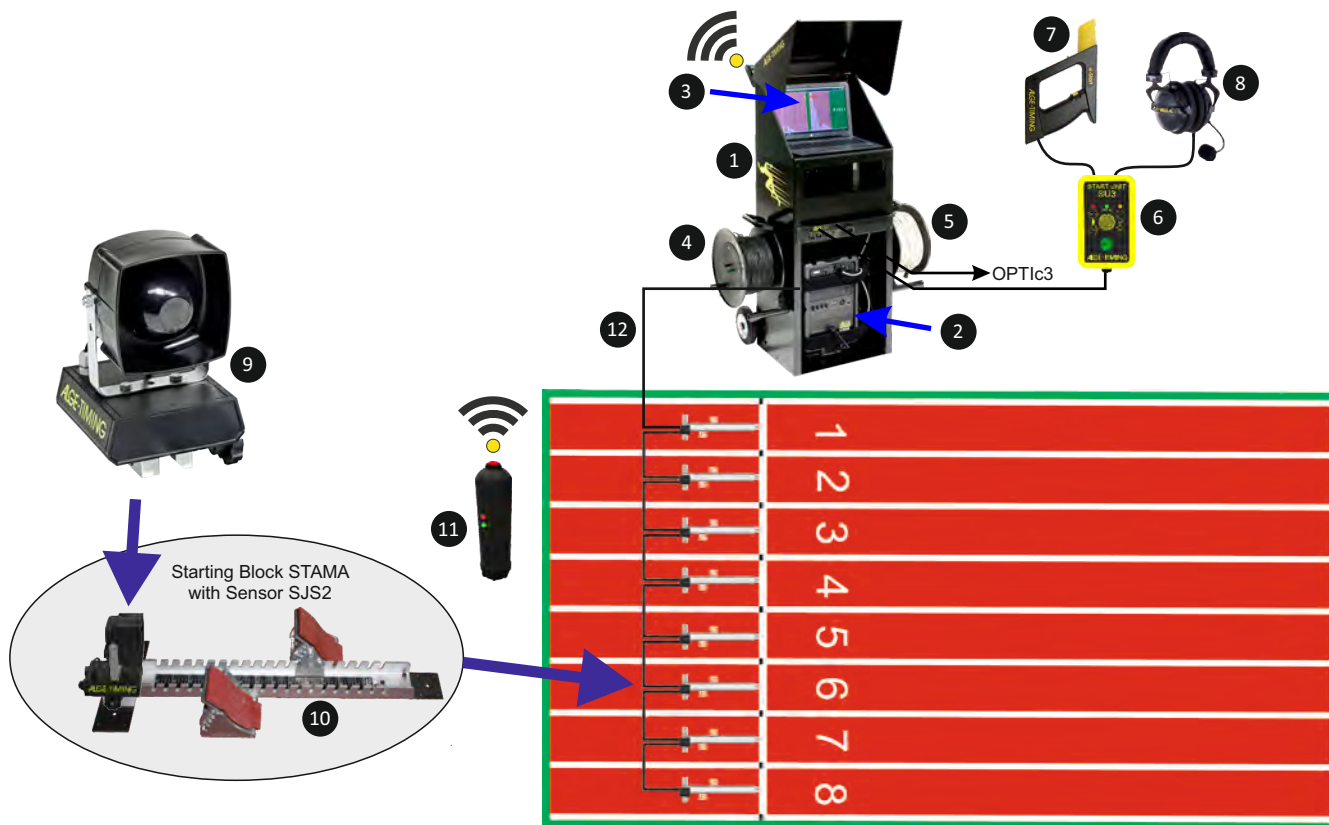


The False Start System Start Judge Sj2 is certificated by the „World Athletics“ (former IAAF).

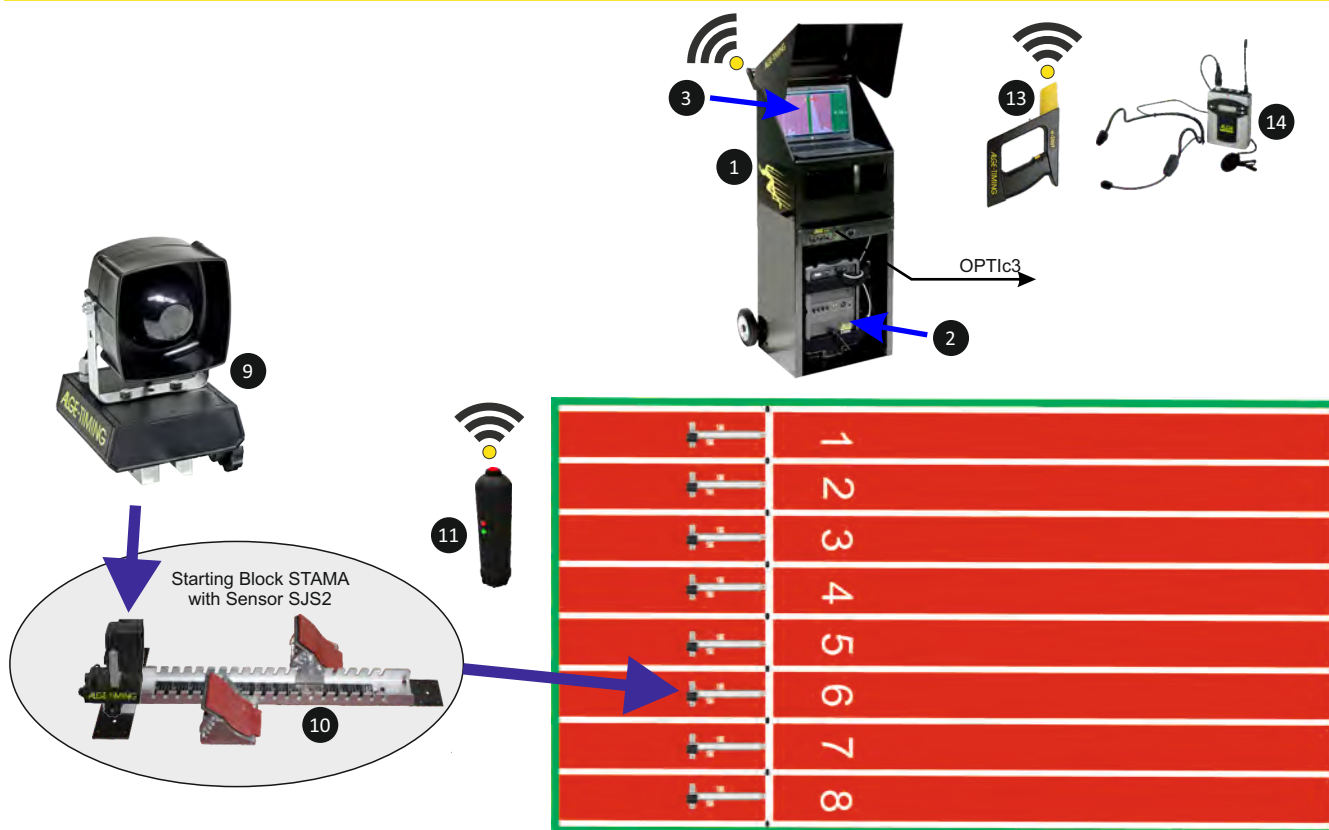




Cable Version SJ2-C



Radio Version SJ2-W





The Start Judge Cart SJ2 has a holder to insert a parasol to protect the operator and devices from sun and rain.



The false start sensor SJS2 is ready to work with cable or by radio (Wireless Timing Network).



The BANG2 is a amplifier and speaker. It is used to output the start sound, false start sound and as well to give oral start commands to the competitors.



- 1 **Start Judge Cart SJ2**
with built in controller and backup battery



- 2 **Loud Speaker System BANG2**
80 W loud speaker system and amplifier in one casing, integrated in the Start Judge Cart SJ2



- 3 **Notebook for Start Judge**
with the Start Judge SJ2 software to operate the system



- 4 **Cable Reel KT150H ***
with 2-pole connection cable (150 m) to timing



- 5 **Cable Reel KT313-30 ***
with connection cable (30 m) between Start Judge and false start sensor SJS2 of the next lane



- 6 **Start Unit SU3 ***
start device with integrated speech amplifier



- 7 **Electronic Start Device e-Start ***
for triggering the start signal with integrated flash light and connection cable for the Start Unit SU3



- 8 **Headset HS3-2 ***
for the communication between starter and timing room or start commands to the athletes through the loud speaker system BANG2



- 9 **Start Judge Sensor SJS2**
sensor for each lane, mounted at the starting blocks



- 10 **Starting Block STAMA**
World Athletics certified starting block for each lane



- 11 **Radio Push Button WTN-PB**
for triggering a false start by the starter assistant



- 12 **Cable 199-20** serves as connection from Start Judge cart to Start Unit SU3



- 13 **Electronic Start Device e-Start W ****
for triggering the start signal with integrated flash light, battery and radio system WTN



- 14 **Radio Microphone BANG-HS ****
head band with radio microphone for communication through the BANG

* only for cable version

** only for radio version



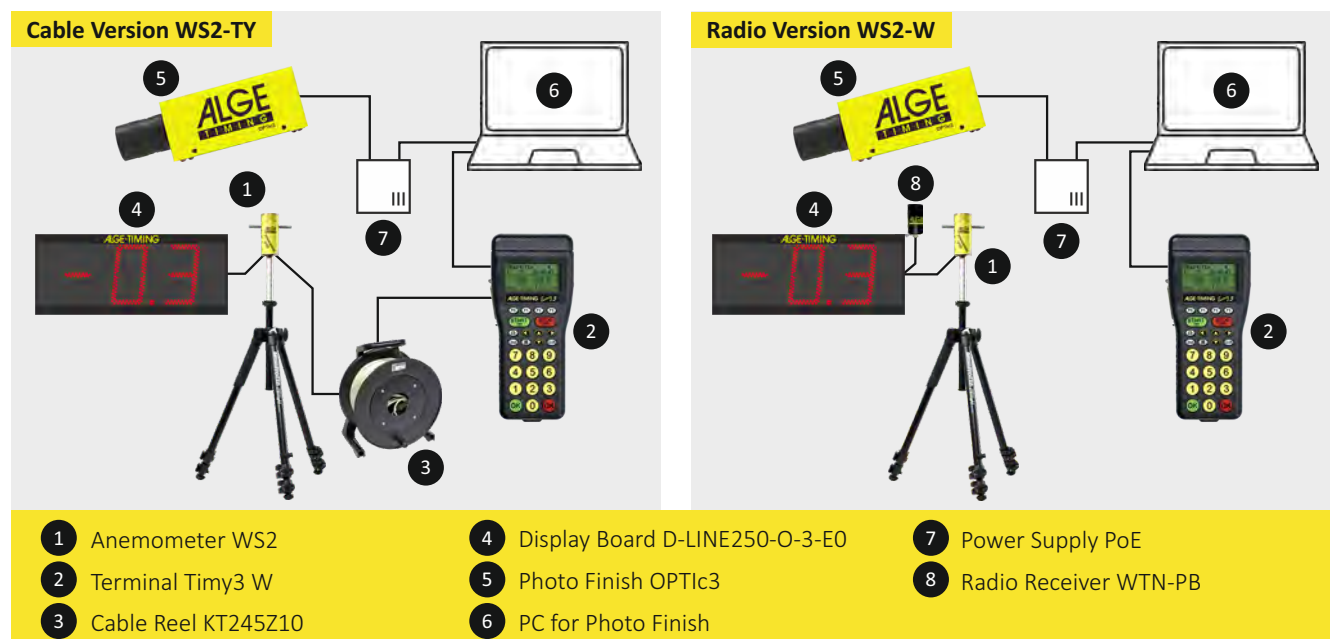
ATHLETICS

Windspeed WS2 & Distance Measuring Device DMD-Arc5

Windspeed WS2

The ALGE-TIMING Windspeed WS2 works with a calorimetric mass flow sensor, which allows fast and accurate wind measurement. It is used to measure the windspeed during running and long jump events.

The WS2 does not need any re-calibration since no mechanical parts are used. The components retain their characteristics over the entire service life, and there are no disturbances caused by humidity or temperature fluctuations.



Anemometer Windspeed WS2-TY (cable):

- Anemometer WS2
- Terminal Timy3 W
- Tripod TRI128
- Tripod-Adapter Z-040701-0
- Cable Reel KT245Z10 (100 m cable length)
- Cable 246-02

Anemometer Windspeed WS2-W (radio)

- Anemometer WS2
- Terminal Timy3 W
- Tripod TRI128
- Tripod-Adapter Z-040701-0
- Radio Receiver WTN-WS

Distance Measuring Device DMD-Arc5

Precise and user-friendly total station for measuring width and height in athletics with a large graphic display, alphanumeric keyboard and exchangeable battery. The width measuring device with „two axis compensation“ is set to a prism to calculate the distance. On the PC, software supplied by ALGE-TIMING e.g. the actual throw range is calculated. Alternatively, the ALGE distance measuring device is read in by various „Meet Management Systems“. The total station has an interface to transmit the measured distances or heights to a PC.



Software is available for the following disciplines:

- | | |
|------------------|---------------|
| • discus | • long jump |
| • shot put | • triple jump |
| • hammer through | • high jump |
| • javelin | • pole vault |



ALGÉ-TIMING offers a large range of display boards. They differ not only in size but also in their technology. For a track & field event, display boards of the most different applications are required.



Display Board Time (e. g. D-LINE250-O-6-E0)

The running time and run time of the winner is shown. Mostly, it is a numerical display board with 6 red LED figures. Their heights of 15, 25 or 45 cm are well established (on request other figure heights are available).



Display Board Wind (e. g. D-LINE150-O-3-E0)

The wind velocity is shown. Mostly, it is a numerical display board with 3 red LED figures. Their heights of 15 or 25 cm are well established (on request other figure heights are available).



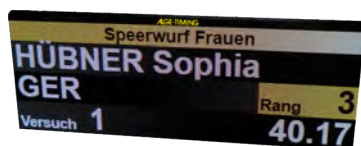
Lap Counter

The number of laps is shown. Generally, it is a numerical display board with 2 red LED figures per side. There are one-sided, two-sided and three-sided displays. The figure heights of 15 or 25 cm are well established.



Concentration Clock (e. g. D-LINE150-O-3-E0 with Timy3 W)

The elapsing time is shown that an athlete has for the try with technical disciplines. The countdown can easily be adjusted with the terminal Timy3 during each competition. It is a numerical display board with 3 red LED figures. The figure heights of 15 or 25 cm are well established.



Infield Display Board

For the selection of the correct infield display board, mainly the field of view of the spectators is of importance. The display board must not block the view. ALGÉ-TIMING has a large variety of different infield display versions with red LED matrix displays or complete full colour video walls.

The best flexibility is reached with single display boards that are placed double or three-sided. In this case, the display boards can for example also be used for advertising purposes with graphics and animations.

As an option for infield display boards, a turntable cart for one- or two-sided display boards is available.

For controlling the infield display board, a PC with the MeetManager software is connected to the network. The software can also read data from other devices, e. g. distance measuring device or wind gauge.

Startlist: 400m HÜ Lauf 1			
1	53 Illing Nancy	LCA Umdasch Amstetten	GER
2	106 Breitenfellner Judith	ULC Linz Oberbank	AUT
3	69 Willhuber Viktoria	LTU Graz	AUT
4	143 Pressler Lena	UNION St. Pölten	AUT
5	42 Grubisic Thea	KSV alutechnik	AUT
6	110 Wiesmayr Lisa	ULC Linz Oberbank	AUT
7	114 Leger Pauline	ULC Riverside Mödling	AUT
8	102 Posch Lisa	TS Bregenz-Vorkloster	AUT

Video Wall

ALGÉ-TIMING can offer video walls of all sizes with different resolutions for stadiums. Together with evaluation software, start lists, result lists or live TV broadcasts can be shown.



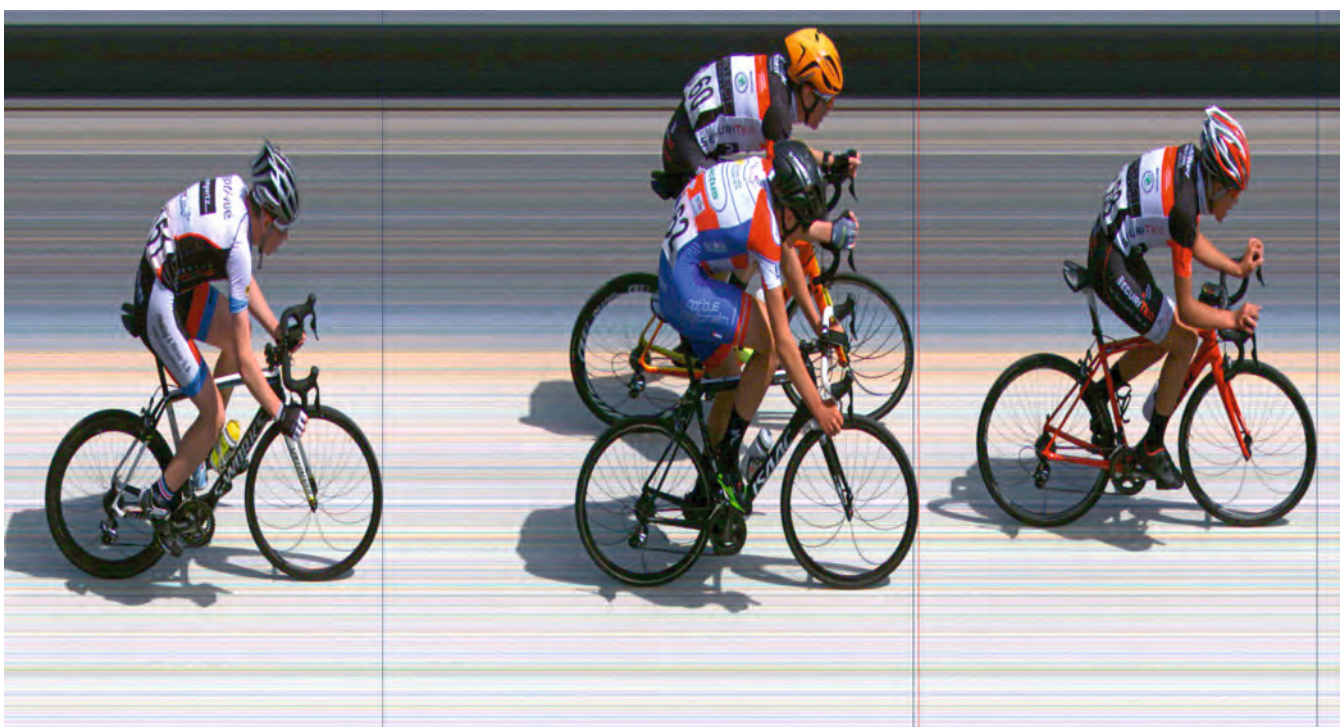
CYCLING





With timing at cycling events, ALGE-TIMING has a long tradition and is very much appreciated by customers, from simple club to professional events. ALGE-TIMING timing devices are used worldwide for countless events in road race, track cycling or mountain biking.

The photo finish OPTic3 is the ideal device for determining the winner in almost every cycling event. For track events, devices specially developed for this purpose are available, for example, the CycleStart or the start machine ST-BSM1. ALGE-TIMING has a wide range of timing devices and accessories for mountain biking which makes it much easier to pull off an event.





CYCLING - ROAD

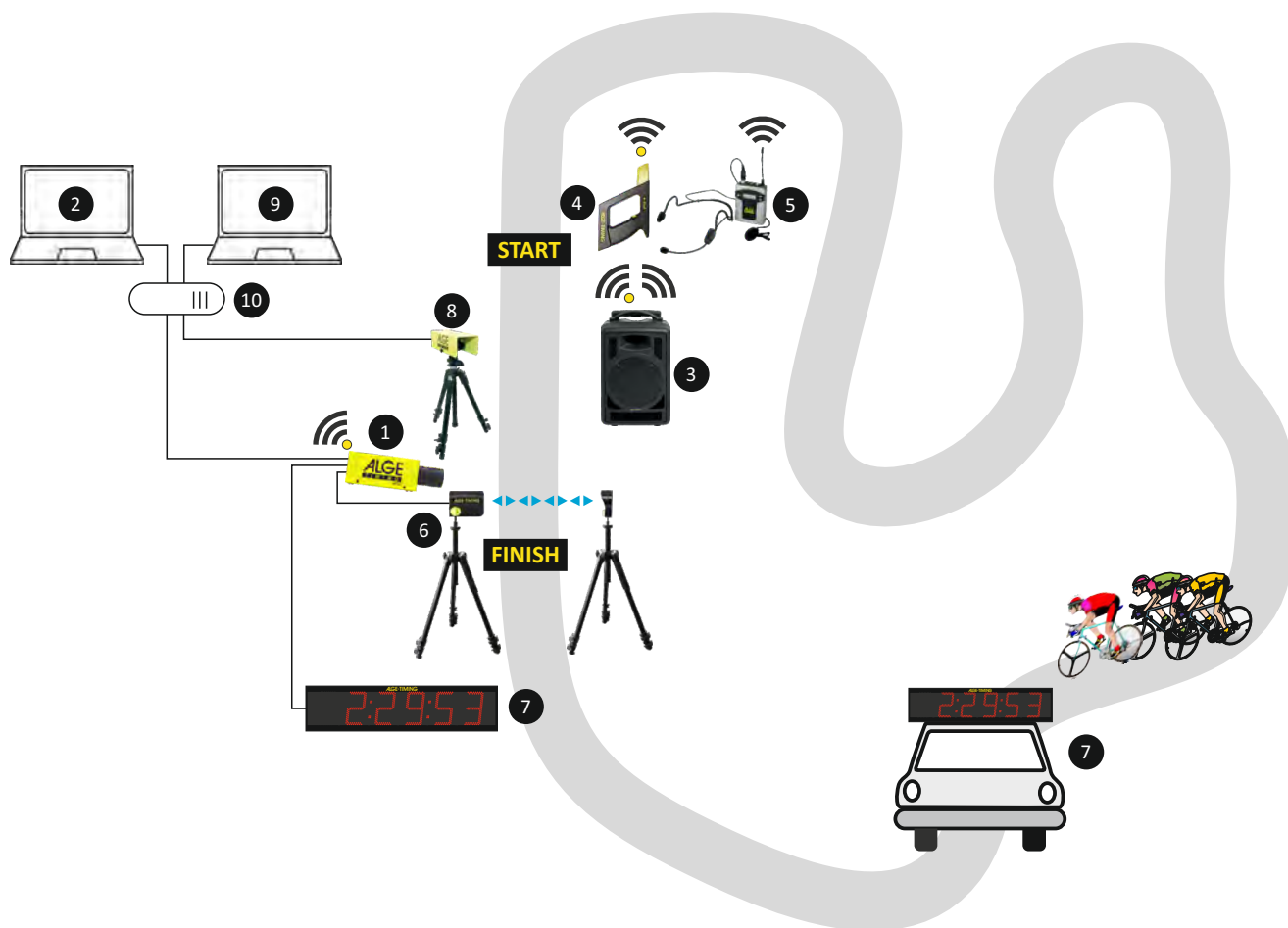
Road Races

At a road or stage race, for example, the start is triggered with the electronic start gun and a lap counter determines the number of laps at the finish line.

The display board D-LINE is mounted at the roof of the support vehicle in order to make the results visible for viewers and participants. Two display boards, which can be seen from the front and from the rear, are even more effective.

At the finish line, a photocell stops the time and controls the recording of the photo finish and the IDCam. A display board with the run time and one with the time difference can be attached to the finish traverse.

If the start is only a few hundred metres from the finish, one can set up a voice connection between start and finish. In the case of stage races where the finish is separated by many kilometres from the start, the photo finish system can be synchronized separately via a timing device, such as the Timy3.



- 1 Photo Finish OPTic3
- 2 PC for Photo Finish
- 3 Speaker BANG2
- 4 Start Trigger e-Start W

- 5 Headset BANG-HS
- 6 Photocell PR1a-RT
- 7 Display Board D-LINE
- 8 Finish Recording IDCam

- 9 PC for IDCam
- 10 Switch with PoE

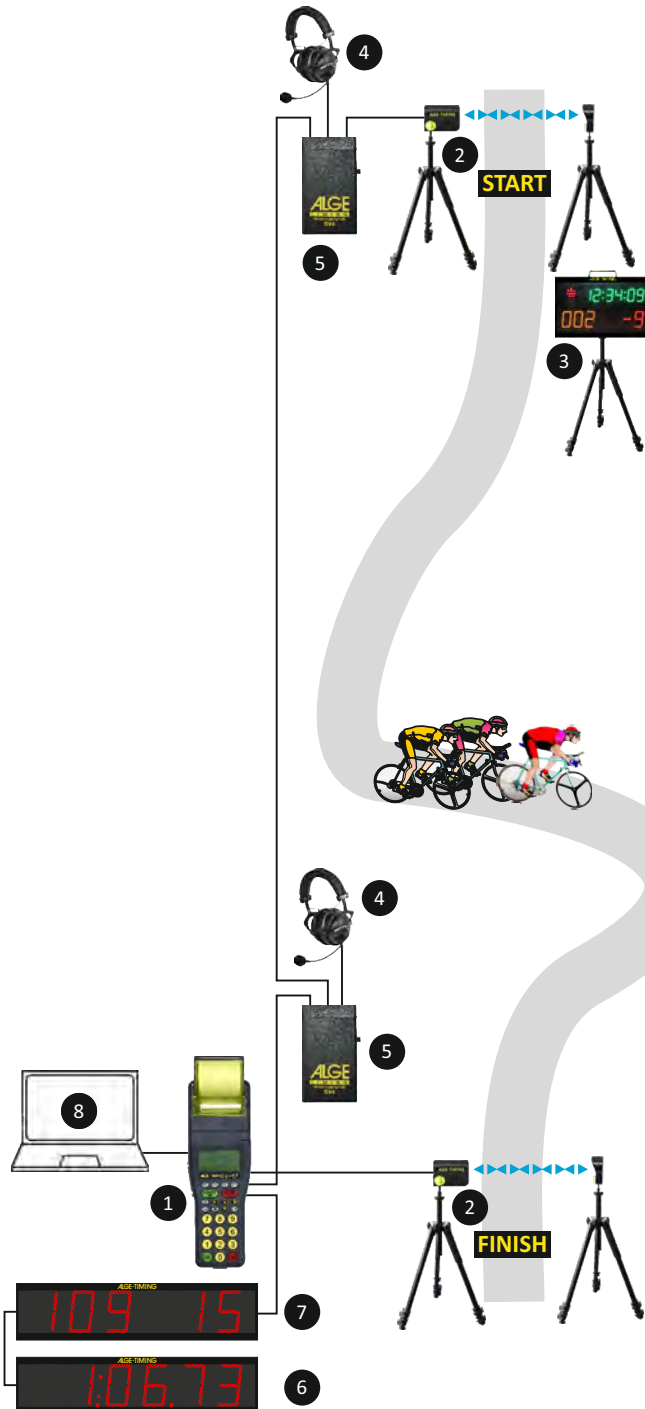
CYCLING - ROAD

Time Trail



The Startclock ASC3 belongs to the accessories in timed races as it helps to regulate the start sequence: The time is effectively started by a tape switch at the start, measured by the timing device Timy3 PE and stopped in the finish by a photocell.

When the start is near the finish, starter and timing operator can communicate with a headset. A finish arrival announcer can tell the bib number of the arriving cyclists to the timing operator.



- | | | |
|--------------------------|-------------------------------|-------------------------------------|
| 1 Timing Device Timy3 WP | 4 Headset HS3-2 | 7 Display Board D-LINE (bib & rank) |
| 2 Photocell PR1a-RT | 5 Speech Amplifier SV4-S | 8 PC for Result Service |
| 3 Startclock ASC3 | 6 Display Board D-LINE (time) | |



CYCLING - TRACK CYCLING

General

ALGE-TIMING can offer the complete technical equipment for carrying out track cycling events may they be large or small. This ranges from simple training systems to complete systems for major events.

All accessories are also available e.g. starting machines, starting display boards with countdown and cabling solutions.

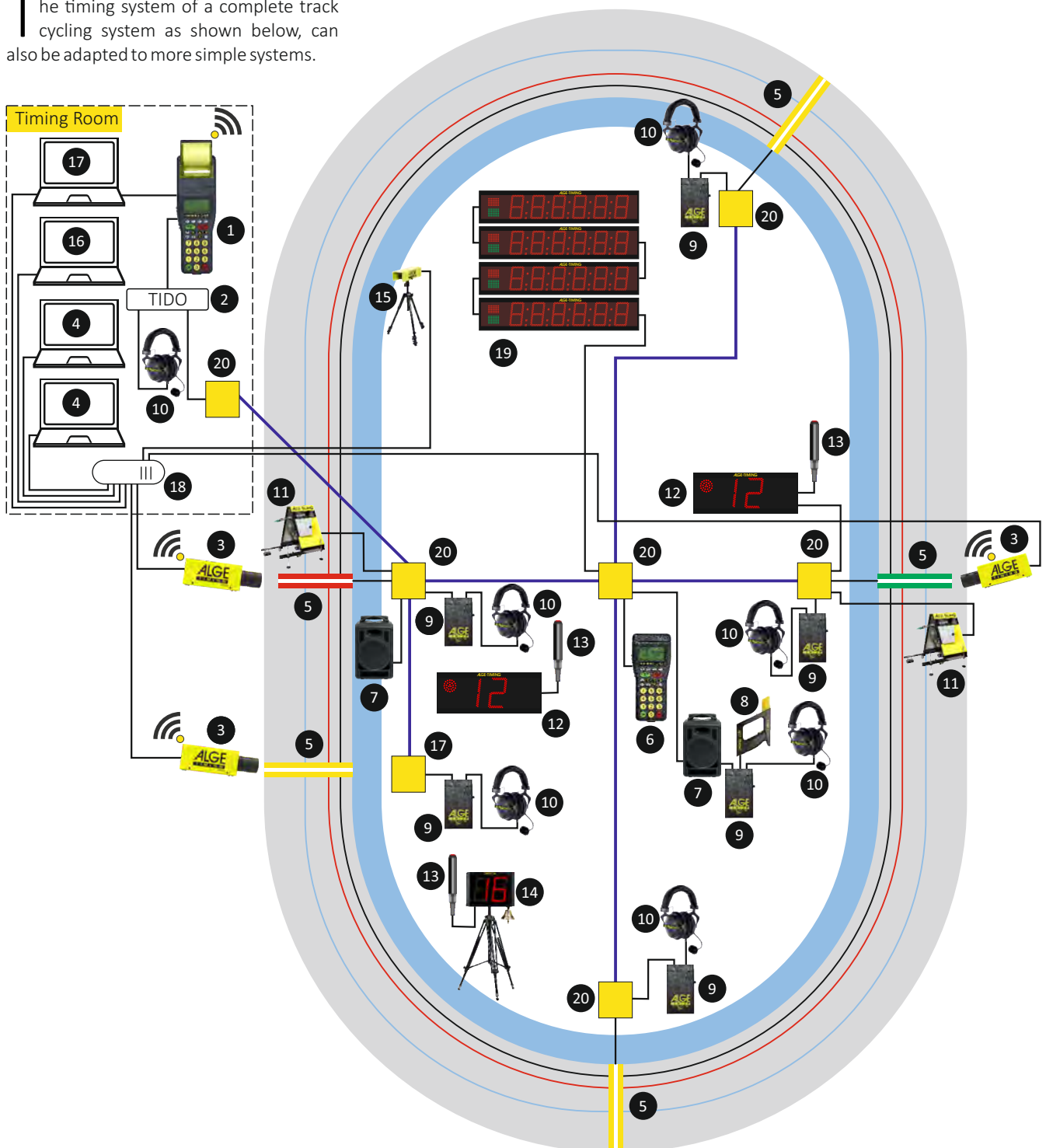


CYCLING - TRACK CYCLING

Timing System



The timing system of a complete track cycling system as shown below, can also be adapted to more simple systems.



- | | | |
|--------------------------------------|--|--------------------------------------|
| 1 Timing Device Timy3 WP | 8 Electronic Start Gun e-Start | 15 Identification Camera IDCam |
| 2 Docking Station TIDO for Timy3 | 9 Speech Amplifier SV4-S | 16 PC for IDCam |
| 3 Photo Finish OPTIc3 | 10 Headset HS3-2 | 17 PC for Timing |
| 4 PC for Photo Finish | 11 Cycling Starting Machine ST-BSM1 | 18 Switch with PoE+ |
| 5 Tape Switch ATS (different length) | 12 Cycle Start Display D-LINE250-3-RG-SP | 19 Display Board D-LINE250-I-6-E0-RG |
| 6 Start Controller Timy3 W | 13 Push Button 023-02 | 20 Fix or Mobile Cabling for Stadium |
| 7 Speaker BANG2 | 14 Lap Counter D-LC | |

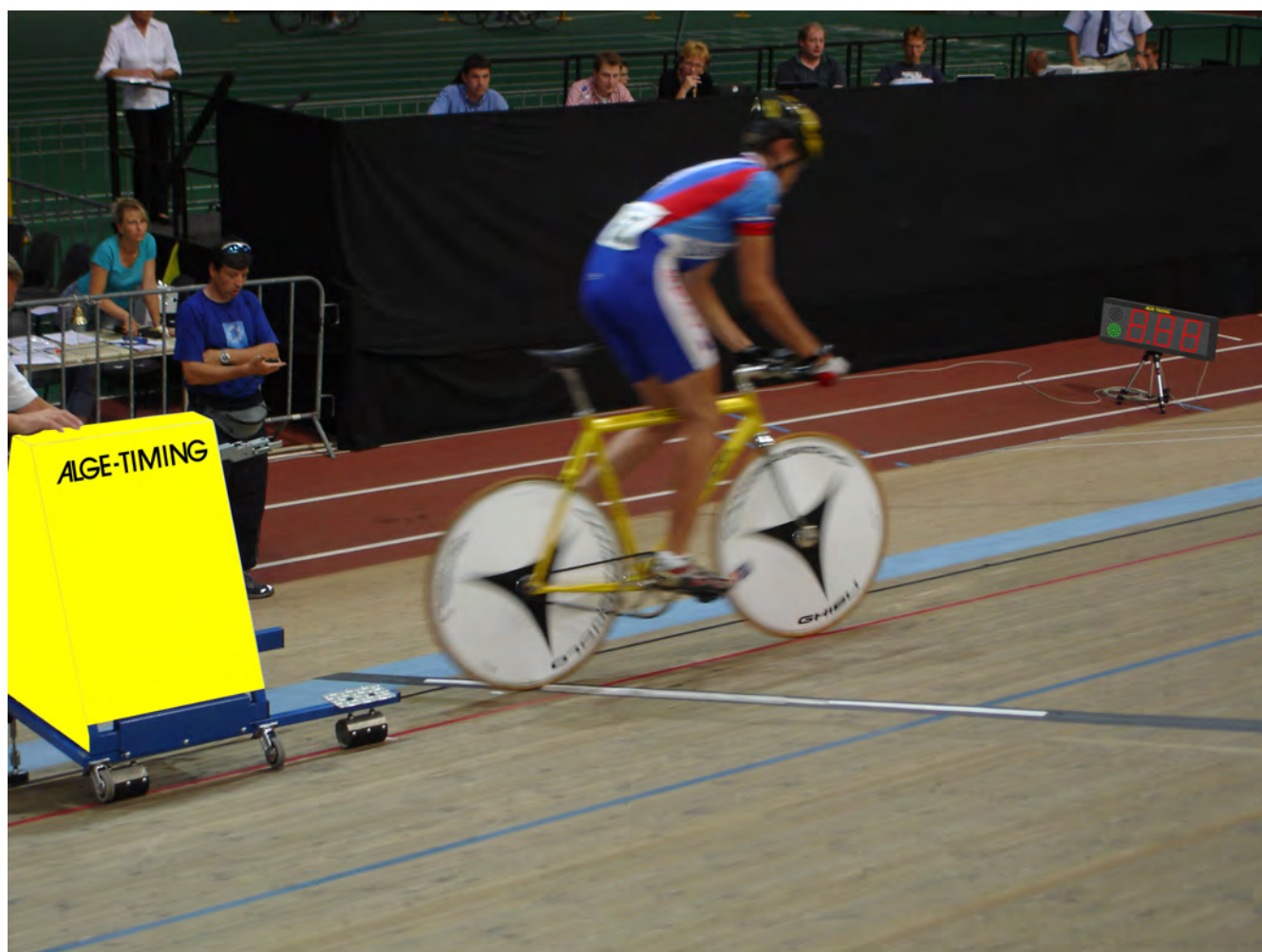


CYCLING - TRACK CYCLING

CycleStart

The CycleStart is a multi-purpose system specially developed for track cycling, which can be used at the start of all competitions with electronic countdown (e.g. pursuit). The loudspeaker integrated in the display board emits the interval and start sound.

It includes all adapters for the cabling of the system. ALGE-TIMING offers fix or flexible cabling options that can be ordered as needed.



Mobile System - CycleStart CS-M

- 2 x CycleStart display board CS-DB
- 2 x tripod TRI128
- control unit Timy3 W
- power supply PS12A
- 2 x manual push button 023-02 for the lap counter
- distributor central VELO-M-B
- distributor red VELO-M-A
- distributor green VELO-M-C
- distributor sprint VELO-M-D
- distributor start 200 m VELO-M-E
- distributor timing VELO-M-F
- distributor split time 100 m VELO-M-G

Permanent System - CycleStart CS-P

- 2 x CycleStart display board CS-DB
- 2 x tripod TRI128
- control unit Timy3 W
- 2 x push button 023-02 for the lap counter
- distributor central with integrated charger VELO-P-B
- distributor red VELO-P-A
- distributor green VELO-P-C
- distributor sprint VELO-P-D
- distributor start 200 m VELO-P-E
- distributor timing VELO-P-F
- distributor split time 100 m VELO-P-G

The CycleStart CS-P does not include any cables.



Display Board D-LINE250-3-RG-SP

Three red LED digits show the countdown or laps. A red/green traffic light switches from red to green. When the cyclist is allowed to start, or indicates the cyclist for lap counting. A built-in loudspeaker shows the countdown. The digits have a digit height of 25 cm, the max. reading distance is 125 m.



Control Unit Timy3 W

control unit for display board (countdown function and lap counter), as well as manual timing device



e.g. distributor VELO-M-A



e.g. distributor VELO-P-C

Distribution Boxes

The distribution boxes are installed in the stadium so that the timing devices can always be connected nearby. There is a fix wi-red and a mobile installation system.



CYCLING - TRACK CYCLING

Track Cycling Startmachine ST-BSM1

The ST-BSM1 start machine is particularly suitable for the start of pursuit races, as it releases the saddle bar holder of the cyclist on the impulse of the start device and simultaneously starts the timing system.

It is a variably adjustable pneumatic device with air compressor, which meets the most demanding requirements.

- start output (banana sockets)
- start input (banana sockets)
- connection for pressurized air compressor
- display instrument for pressurized air
- close button for the rear brake
- open button for the rear brake
- close button for the saddle holder
- open button for the saddle holder
- button for wheel support
- two operating switches
- brake for rear wheel
- brake for saddle
- wheel support for rear wheel (prevents slipping)
- internal 12V lead acid rechargeable battery
- adjustable inclination (angle of inclination)



CYCLING - TRACK CYCLING

Track Cycling Startmachine ST-BSM1



control elements



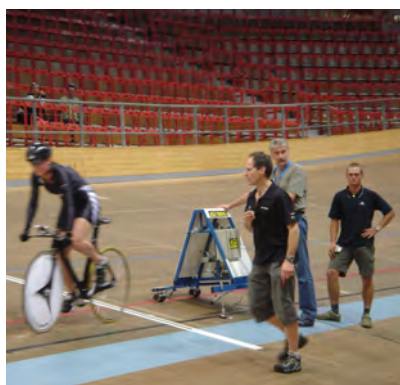
saddle bar holder



pneumatic compressor



bicycle is held on the saddle and the rear wheel, as well as supported by the rear wheel





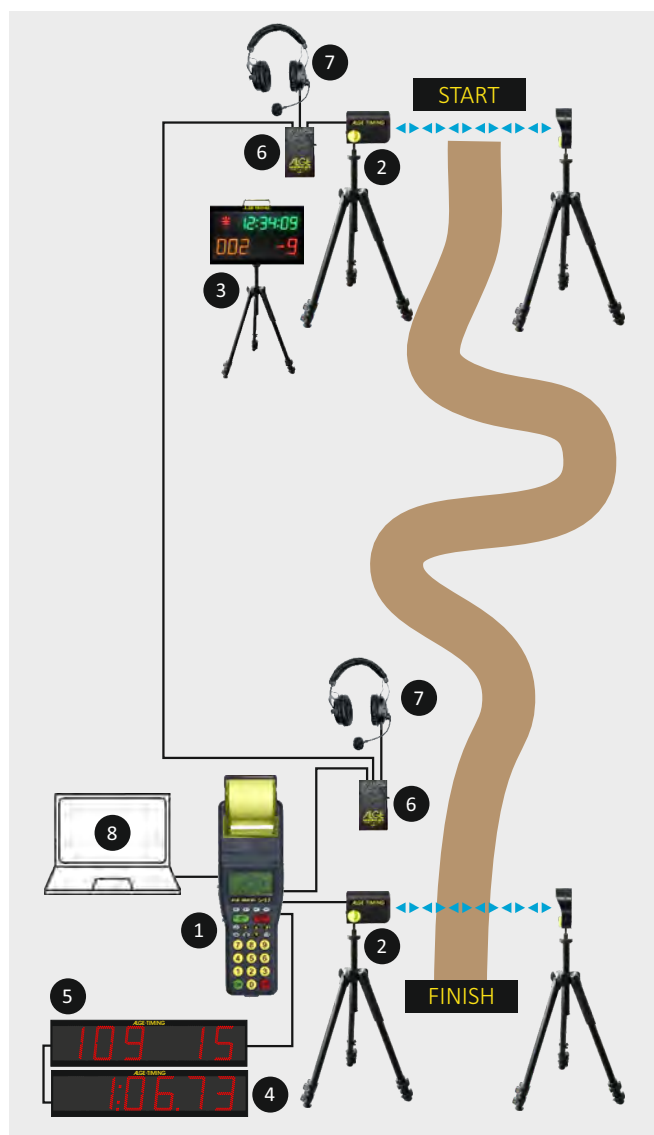
CYCLING - MOUNTAIN BIKE

Downhill

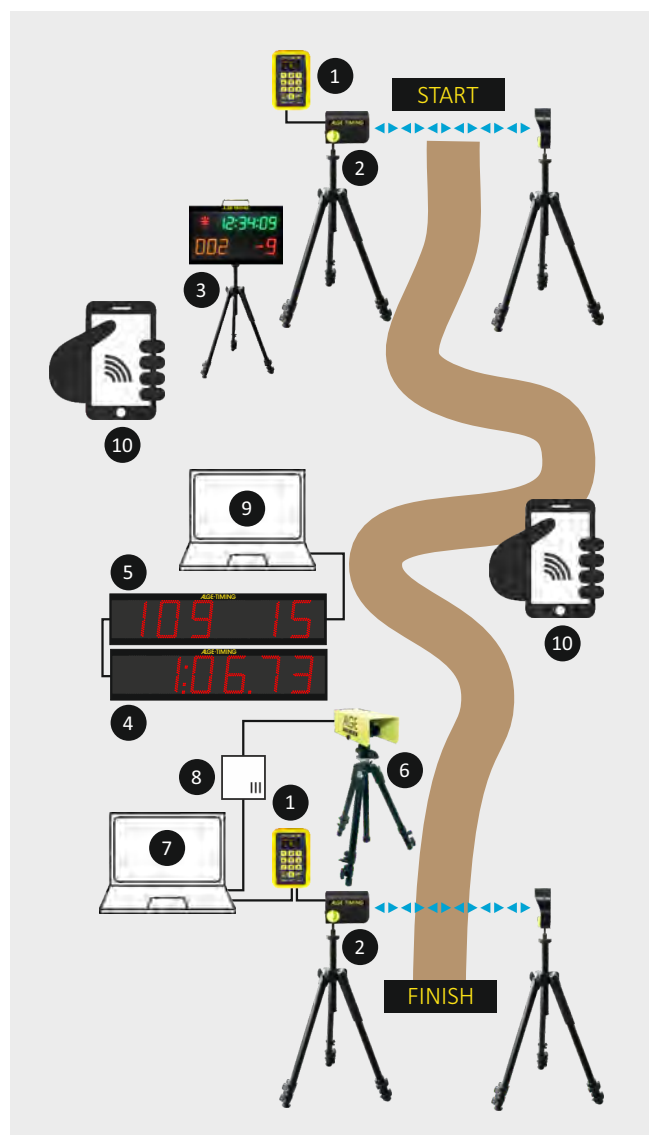
At downhill, the start can be carried out using a Startclock ASC3 and a photocell. A speech amplifier SV4-S with headset is recommended for communication with the timing operator.

In the finish, a photocell stops the time at the timing device Timy3 and simultaneously controls the display board.

Alternative we offer a system that needs no cable connection between start and finish. The timing device MT1 with integrated cellular data transmission sends the timing data to a internet server and everybody can see the timing results live in the internet (mobile phones, tablets, PC).



- 1 Timing Device Timy3 WP
- 2 Photocell PR1a-RT
- 3 Startclock ASC3
- 4 Display Board D-LINE (time)
- 5 Display Board D-LINE (bib + rank)
- 6 Speech Amplifier SV4-S
- 7 Headset HS3-2
- 8 PC for Result Service



- 1 Mobil Timing MT1
- 2 Photocell PR1a-RT
- 3 Startclock ASC3
- 4 Display Board D-LINE (time)
- 5 Display Board D-LINE (bib + rank)
- 6 Finish Recording IDCam
- 7 PC for IDCam
- 8 Power over Ethernet PoE
- 9 PC for Timing Operation and Display Output
- 10 Mobile Phone / Tablet / PC for LiveTiming

CYCLING - MOUNTAIN BIKE

Cross Country and Speed



Mountainbike - Cross Country

The race is started with the electronic startgun e-Start. The lap counter counts the laps at the finish line. A display board shows the running time that is measured by the timing device Timy3 WP.

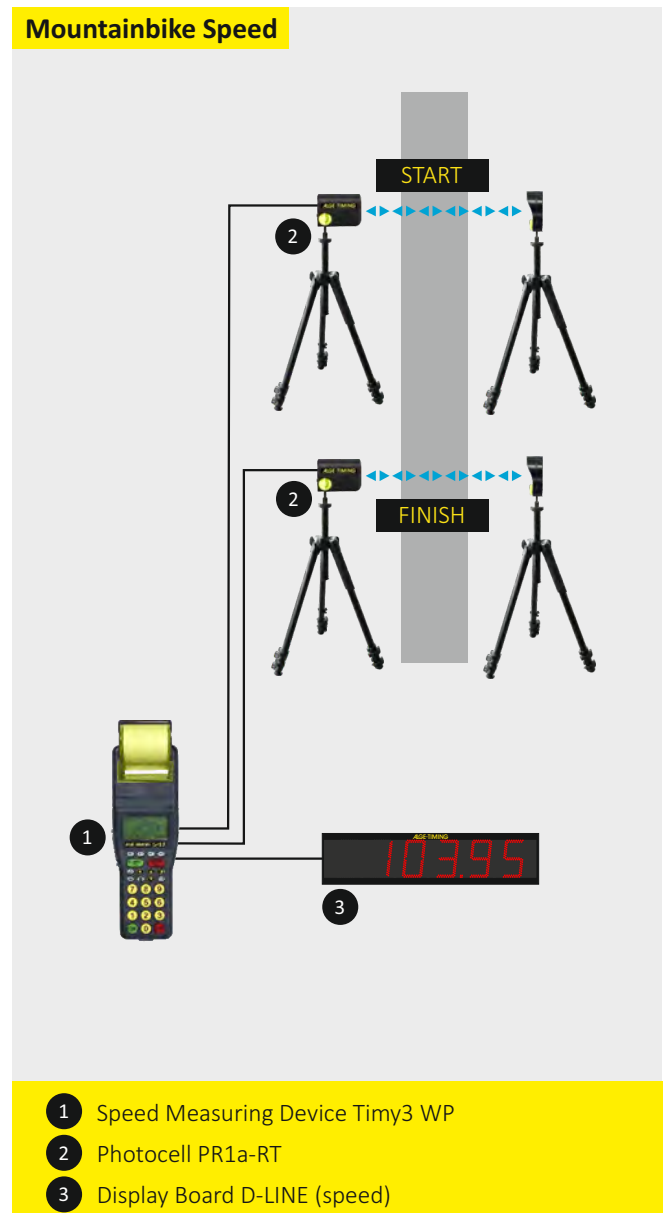
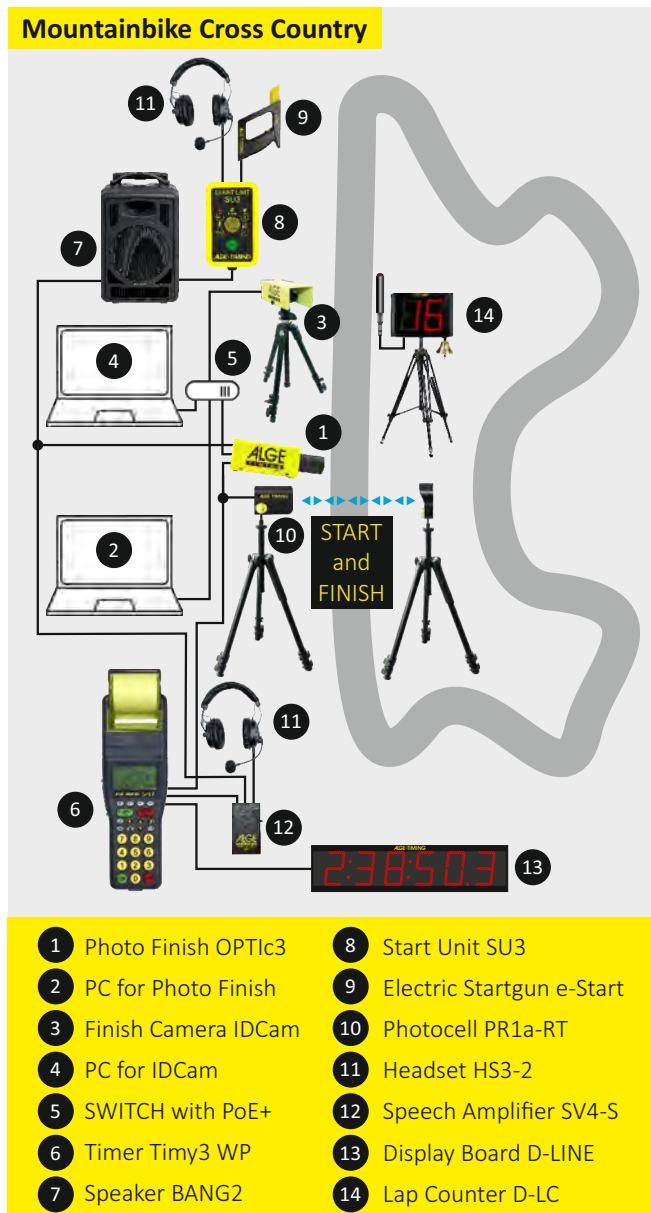
In case of close finish arrivals or to check the laps the photo finish system OPTIc3 and the finish arrival camera IDCam records every movement at the finish line.

The photocell stops the time at the finish and triggers the photo finish recording and IDCam recording.

Mountainbike - Speed

The timing device Timy3 WP measures the time between two photocells PR1a-RT with a fixed distance and calculates the speed (speed = distance divided by time).

The display board shows the speed.





EQUESTRIAN

Timing systems are used in equestrian sports at events of all levels. For many years, ALGE-TIMING has been one of the world's leading manufacturers of timing systems certified by the FEI (International Equestrian Federation).

The new wireless system WTN (Wireless Timing Network) once again made a leap forward, since the systems without cable connections can be set up faster and is extremely reliable.



FEI certified

At the international events of the Fédération Equestre Internationale (FEI), only certified timing systems are permitted. For this reason, all devices that ALGE-TIMING offers for equestrian are FEI certified.

EQUESTRIAN

Simple Show Jumping Timing System

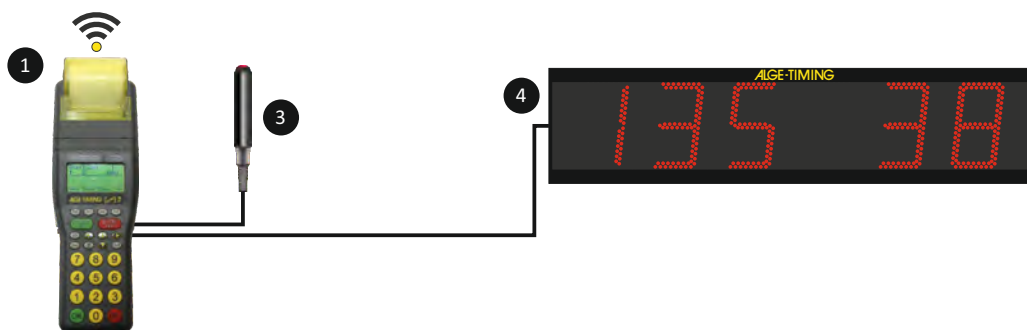


Various timing systems are suitable to handle show jumping tournaments, which are adapted to the individual circumstances for tournaments of different levels.

The system below is the simplest electronic timing system. It allows to do the timing but not the points. The radio system Wireless Timing Network WTN is built into the timing device

Timy3 WP and photocell PR1aW. This allows to set up the timing system fast and easy.

The D-LINE display boards is to the Timy3 and shows the time. The push button allows to stop the time in case of a barrier drop (time-out).



1 Timy3 WP

2 Photocell PR1aW-RT

3 Push Button 023-02

4 Display Board D-LINE (time)



EQUESTRIAN

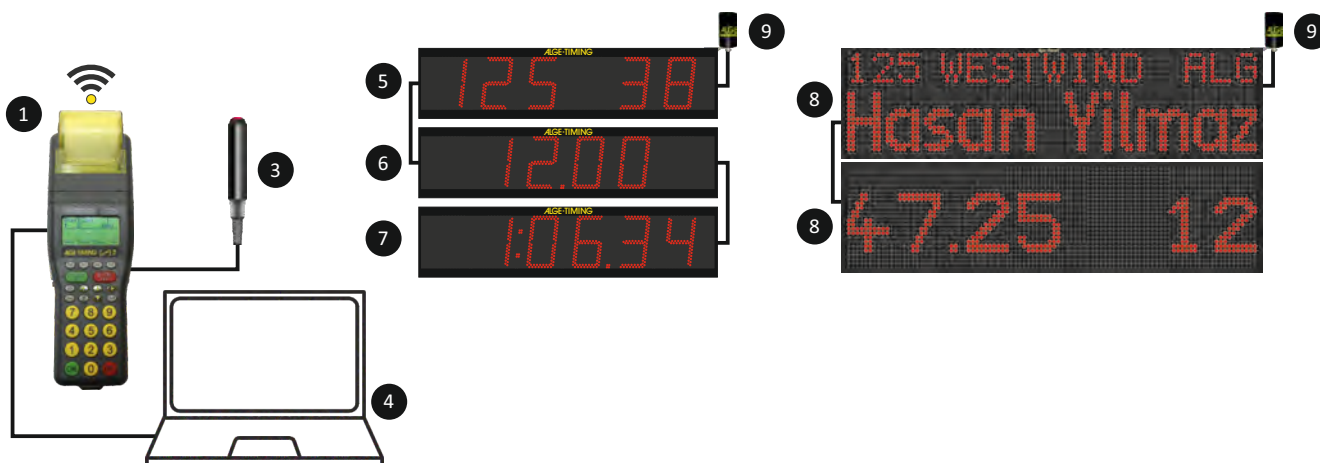
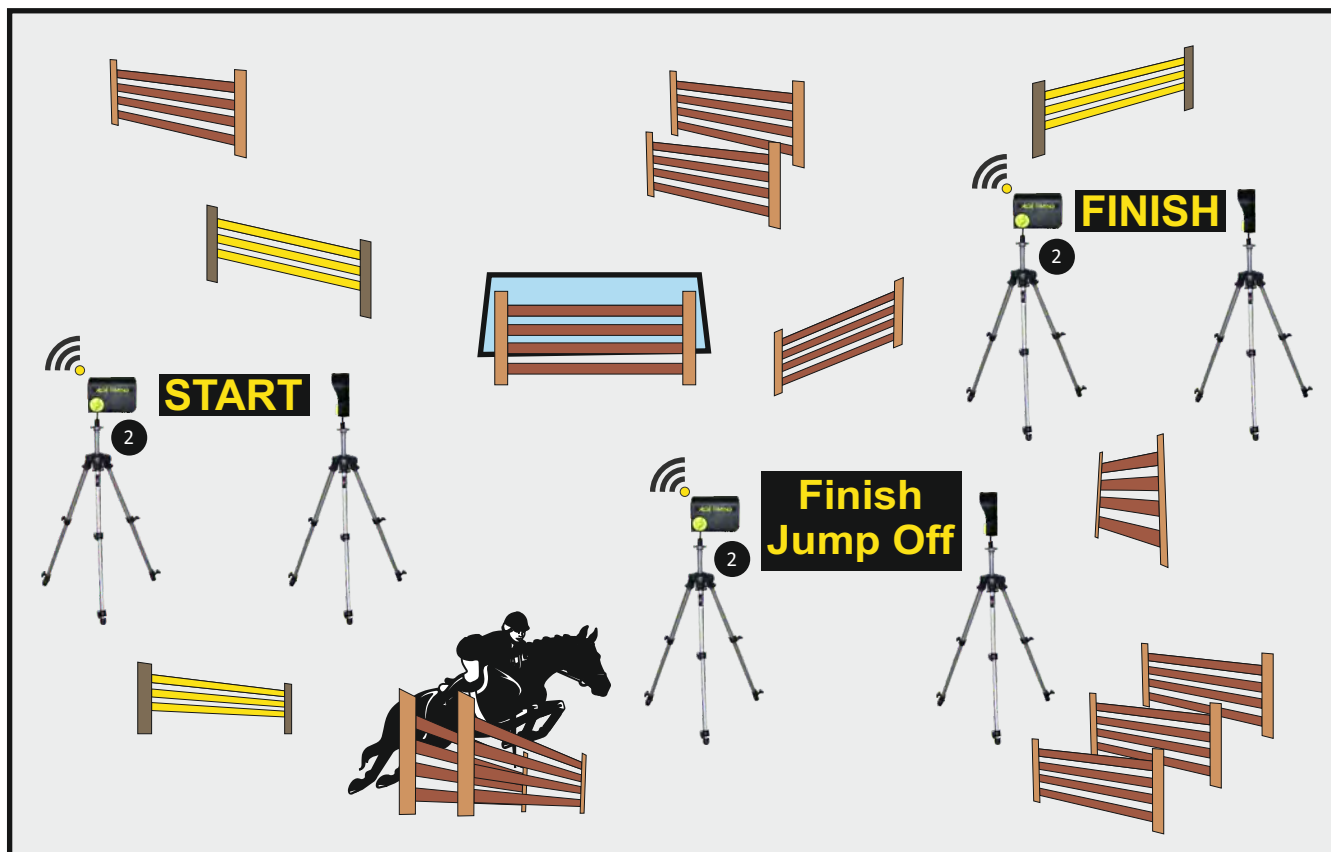
Advanced Show Jumping Timing System

The system below is an advanced electronic timing system. The radio system Wireless Timing Network WTN is built into the timing device Timy3 WP and photocell PR1aW. This allows to set up the timing system fast and easy.

The timing device Timy3 transmits the time of day of any timing impulse to the PC with the software ALGE-SJ-T. This software operates the complete timing. On the PC it is possible to set a max.

clear round time and to input points for barrier dropping. If the rider has time penalty points it adds it automatically.

It is possible to add different display boards. For CSI3 events you need at least a D-LINE display board (with time) and a D-RTNM display board to show the name of the rider. For CSI4 events there are at least two D-RTNM necessary.



- | | | |
|----------------------|---|-------------------------------|
| 1 Timy3 WP | 4 PC with Software ALGE-SJ-T | 7 Display Board D-LINE (time) |
| 2 Photocell PR1aW-RT | 5 Display Board D-LINE (ID-number and rank) | 8 Matix Display Board D-RTNM |
| 3 Push Button 023-02 | 6 Display Board D-LINE (points) | 9 Radio Receiver WTN-DB |

EQUESTRIAN

Professional Show Jumping Timing System

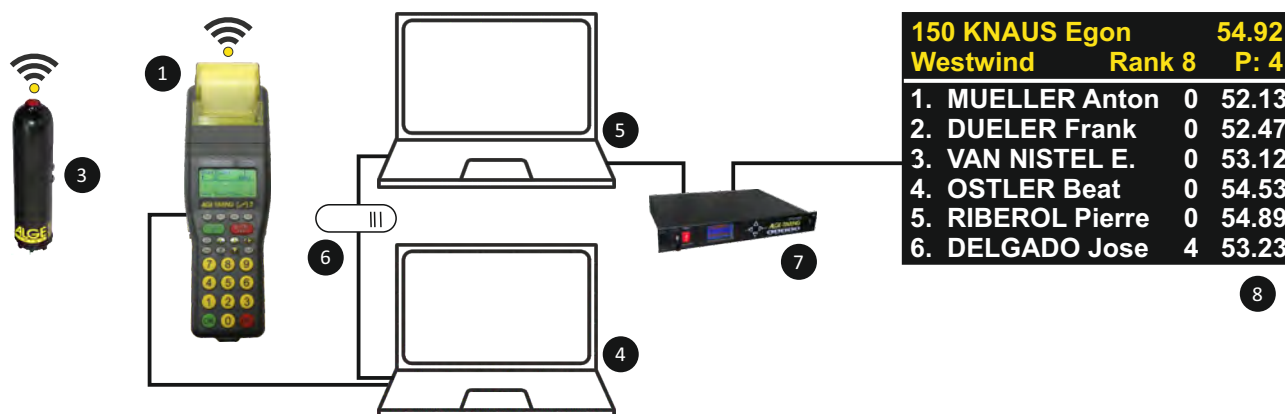
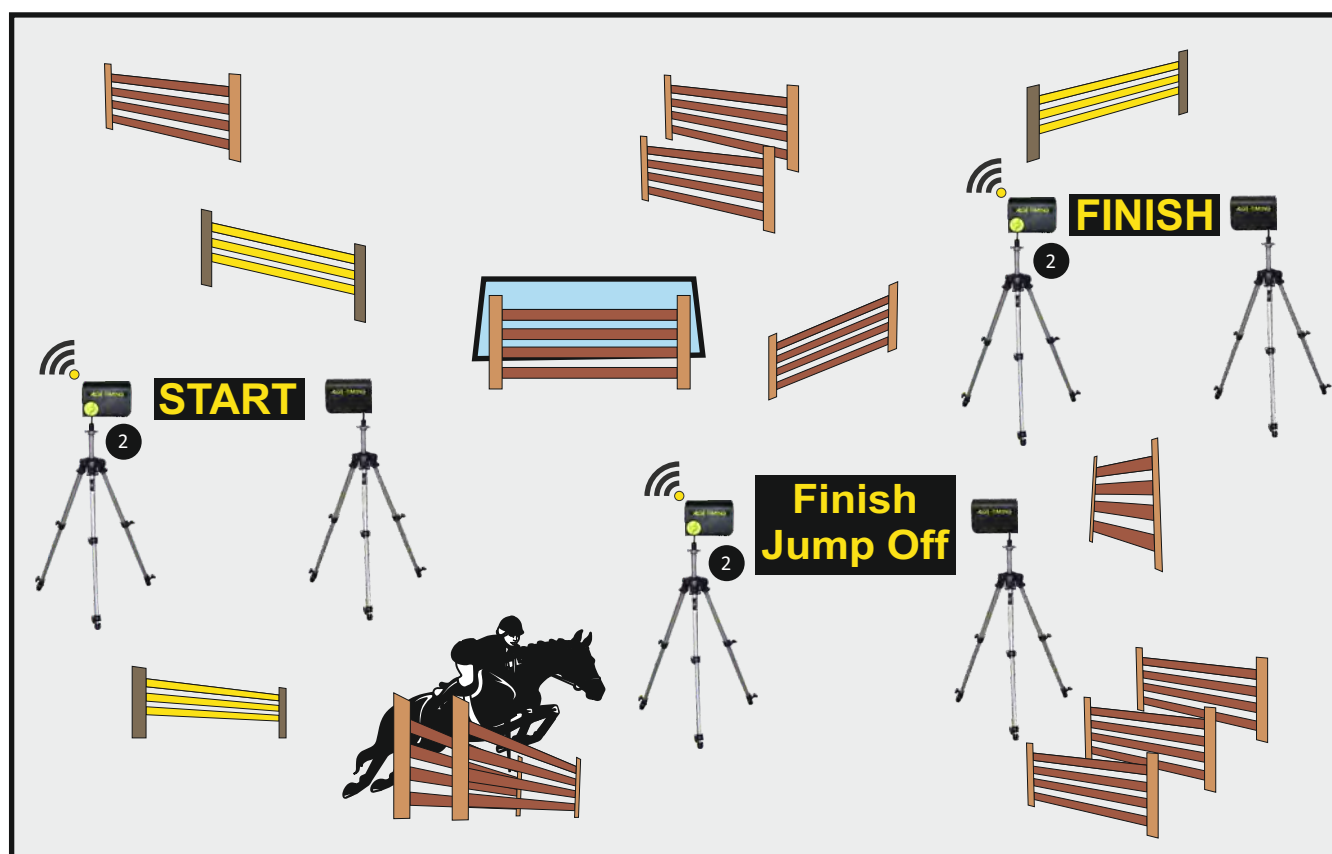


The system below includes the same timing components as the system on the previous page, but it has photocells with transmitter and receiver which allows to set them up to cover a distance of more than 100 m. This makes it more flexible to set up the photocells. The radio system Wireless Timing Network WTN is built into the timing device Timy3 WP and photocell PR1aW.

The timing device Timy3 transmits the time of day of any timing impulse to the PC with the software ALGE-SJ-T. This software

operates the complete timing. On the PC it is possible to set a max. clear round time and to input points for barrier dropping. If the rider has time penalty points it adds it automatically.

The display solution in this example is a video wall. A video wall is accepted as display board for any level of competition. I can show the start list, ranking list, actual rider time and points and as well commercials or videos.



- | | | |
|----------------------------|--------------------------------|-------------------------|
| 1 Timy3 WP | 4 PC with Software ALGE-SJ-T | 7 Video Wall Controller |
| 2 Photocell PR1aW-dT | 5 PC to Control the Video Wall | 8 Video Wall |
| 3 Radio Push Button WTN-PB | 6 SWITCH | |



Timy3 WP

Compact, timing device with the highest precision, which is ideally suited for working with a PC with evaluation software because it is equipped with a USB interface, an integrated protocol printer and an integrated wireless module WTN.



Photocell PR1a-RT

photocell with combined transmitter-receiver unit and reflector, for distances up to approx. 25 m, with the integrated WTN wireless module and tripod TRI128.



Photocell PR1a-dT

photocell with transmitter and receiver for long distances of up to 100 m, with integrated WTN wireless module and Tripod TRI128.



WTN-PB Wireless Push Button

The judge can use this radio push button to control the time-out. With the integrated WTN it is independent of cables and he can move freely.



Push Button 023-02

alternative with cable to trigger the time-outs



Radio Receiver WTN-DB

radio receiver for display boards such as D-LINE or GAZ5 with integrated WTN

Display Board D-LINE

The D-LINE is a seven-segment LED display board that can display the time, points, ID-numbers, and the rank, with digit heights of 15, 25, 45, 60 or 100 cm.



Display Board D-RTNM

The D-RTNM is a matrix display with red LEDs in various sizes for displaying the name of the rider, horse, advertising, graphics, animations or a running text.



Video Wall

Different video walls are available in all sizes, and with different pixel pitch are available upon request.

Software for Show Jumping and Carriage Driving

ALGE-SJ-T

This PC-software (freeware) for the timing at show jumping and carriage driving. It works perfect with timing devices from ALGE-TIMING like Timy or TdC8001. The complete timing operation is done on the PC. Penalty points are keyed in at the PC. The software includes all common classes for show jumping. Display boards can be controlled direct from this software form the PC.

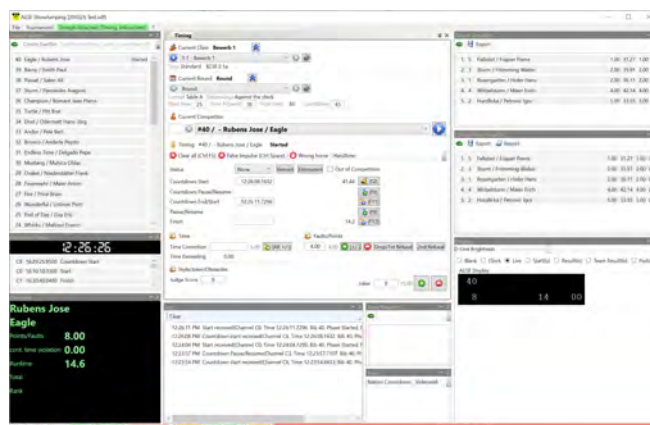
Additional to the freeware ALGE-SJ-T we offer modules that you can integrate to extend the functions of the software.

EQU-EXP

Possibility to import and export data of competitors, horses and results. It allows to print start lists and result lists.

EQU-LIVE

Additional to the above software ALGE-SJ-T and EQU-EXP it is possible with this software module to show the results on an info display (e.g. for the announcer). A local data server is necessary.



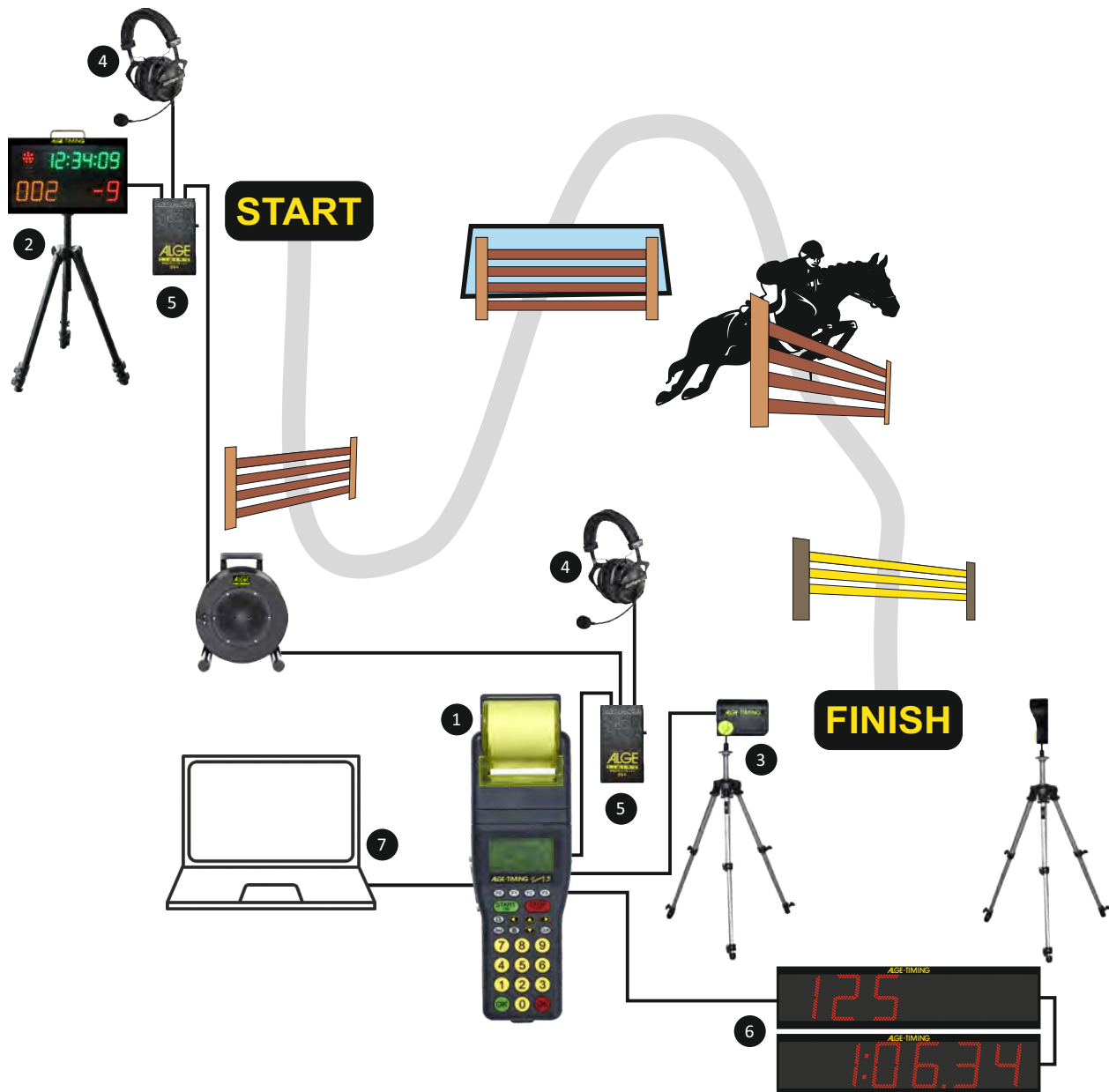
EQU-INET

Yearly licence for webhosting of results (EQU-LIVE is required). Additional you need to get a "one-time" installation for the webhosting (EQU-INET-INST).



Likewise, for endurance competitions the timing device Timy3 is perfect. We recommend the Startclock ASC3 for an orderly and exact starting procedure. If start and finish are close to one another, the timer can keep contact with the starter by headset.

In case of short starting intervals it is advantageous installing a further headset about 200 m before the finish in order to announce the horses about to finish.



- | | | |
|---------------------|--------------------------|----------------------------------|
| 1 Timy3 WP | 4 Headset HS3-2 | 7 PC for Results (e.g. TimeNet2) |
| 2 Startclock ASC3 | 5 Speech Amplifier SV4-S | |
| 3 Photocell PR1a-dT | 6 Display Board D-LINE | |



HORSE RACING

Horse race courses may have one or more tracks. When using only one OPTic3 photo finish camera, it must be aligned to the according finish line used. It is also possible to use one camera

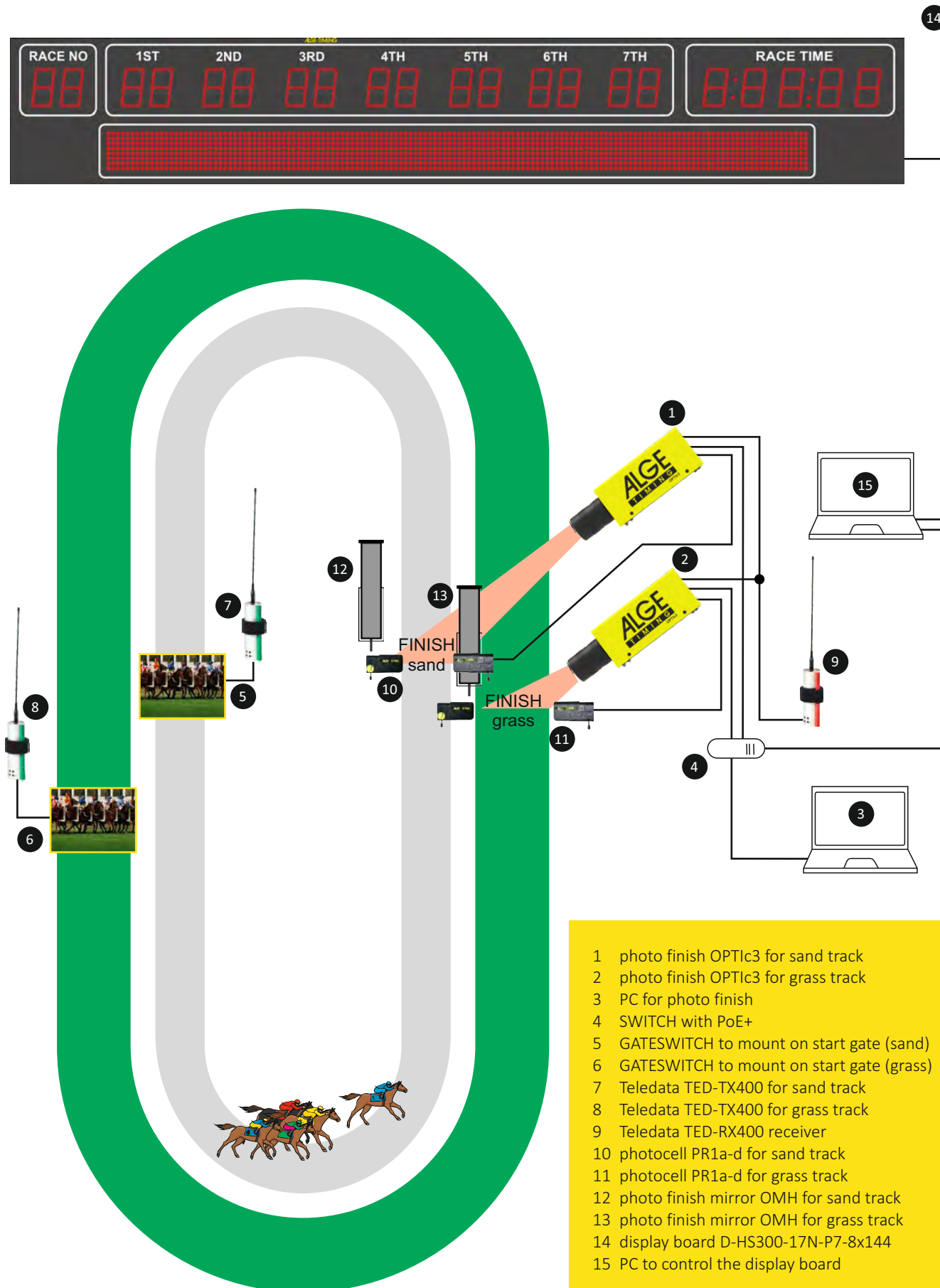
per finish line. In addition, the tracks can be equipped with photo-cells, radio transmission, display boards and video screens.



pictures from OPTic3 gallop



pictures from OPTic3 trotting





HORSE RACING

Accessories

Photocell PR1a-d

photocell with transmitter and receiver for long distances (up to 100 m)

Photocell Housing PB4

to protect the photocell from dirt, dust and weather influences

Heated Photocell Housing PB4H

An integrated heater protects the photocell from misting and icing. The integrated power supply feeds the photocell.

GATESWITCH

The GATESWITCH is a switch that you mount on the start gate so that it triggers the switch when the gate opens. The GATESWITCH is connected to the Telesignal TED-TX400 which sends an start impulse by radio to the photo finish device OPTIc3.

Radio Teledata TED400

for wireless transmission of the start signal to the timing device.

This allows the start from any point of the horse track (distances up to 4.5 km with a clear view).

Mirror for Photo Finish OMH

Through the mirror, you can see the opposite side on the photo finish, which gives the decisive result in the evaluation of hidden horses.

OMH: mirror without heating

OMH-H: mirror with heater for racing at cold temperatures



Photocell PR1a-d



Photocell Housing PB4 or PB4H



GATESWITCH



Teledata TED-400



Mirror OMH or OMH-H

HORSE RACING

Display Boards



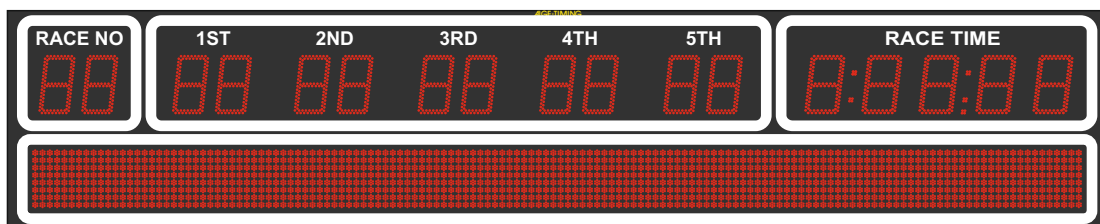
Just as unique as any horse racing course, are the display boards that are used: The models shown below are globally installed solutions that convince with simplicity and clarity. However, individual special solutions with full-matrix video screens are also very popular for horse racing.



Display Board D-HS300-17N-P7-8x144:

with interface for ALGE-TIMING timing devices
Control via PC software or ALGE-TIMING console with PC keyboard including control console for "steward room".
Interfaces: RS485, RS232 and Ethernet
Digit height: 300 mm

1st Line: with 17 numeric digits (digit height = 300 mm) to display the race number (2 digits), horse number of the first 5 places (2 digits) and time (5 digits for minutes, seconds and 1/100)
2nd Line: with a full matrix of 8 x 144 pixels (at least 25 characters), each pixel consists of 7 extra bright red LEDs, animated texts can be displayed (e.g., scrolling)

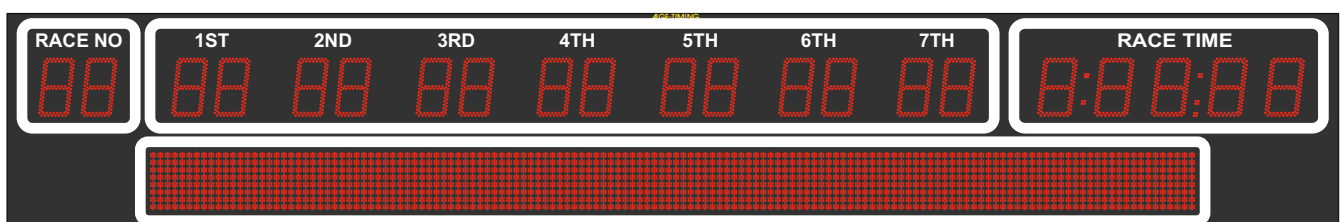


control console
for display board

Display Board D-HS300-21N-P7-8x144:

with interface for ALGE-TIMING timing devices
Control via PC software or ALGE-TIMING console with PC keyboard including control console for "steward room".
Interfaces: RS485, RS232 and Ethernet
Digit height: 300 mm

1st Line: with 21 numeric digits (digit height = 300 mm) to display the race number (2 digits), horse number of the first 7 places (2 digits) and time (5 digits for minutes, seconds and 1/100)
2nd Line: with a full matrix of 8 x 144 pixels (at least 25 characters), each pixel consists of 7 extra bright red LEDs, animated texts can be displayed (e.g. scrolling)





SWIMMING

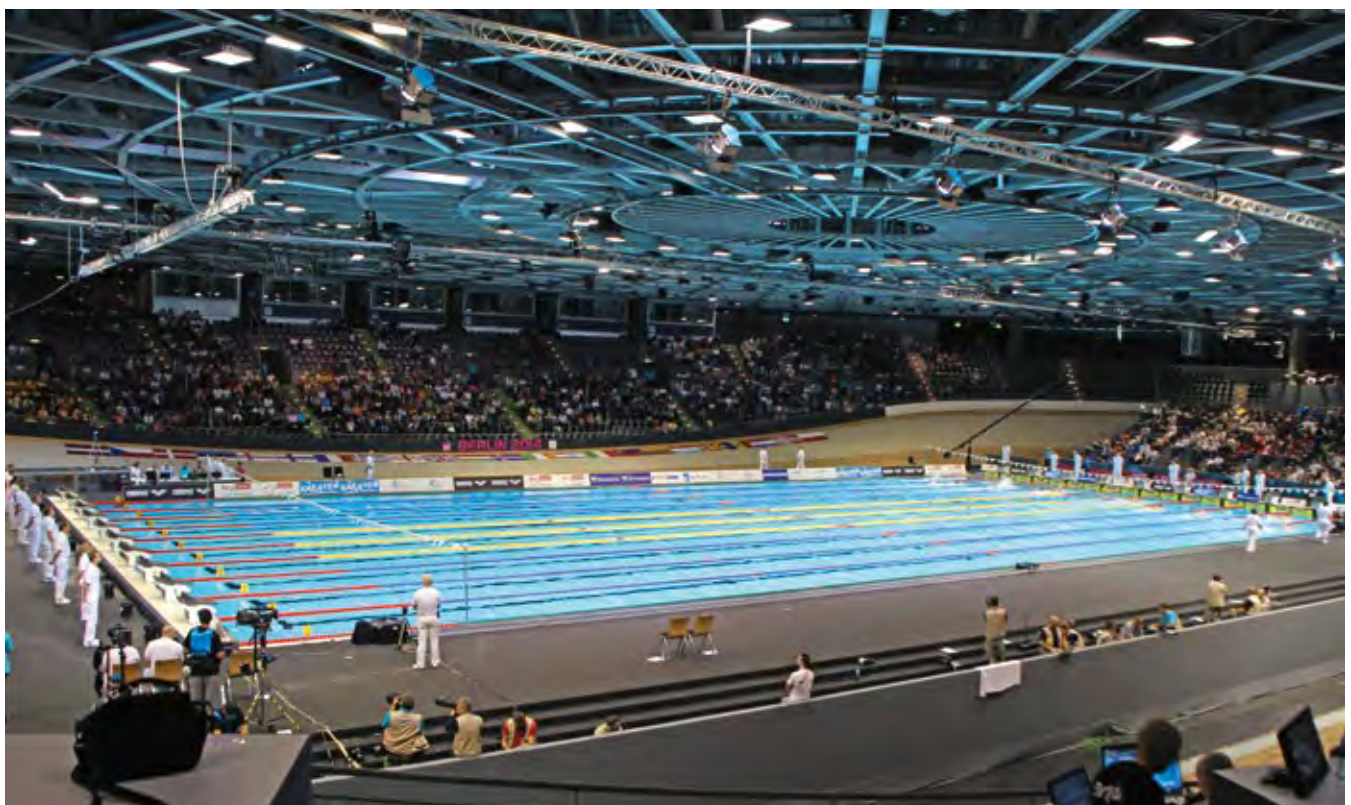


SWIMMING



Based on years of experience in timing for different sports, ALGE-TIMING has developed exclusive solutions for timing at swimming competitions. Thanks to the robust construction

and the processing of high-quality materials, ALGE-TIMING guarantees reliable results and an above-average life span of the system.



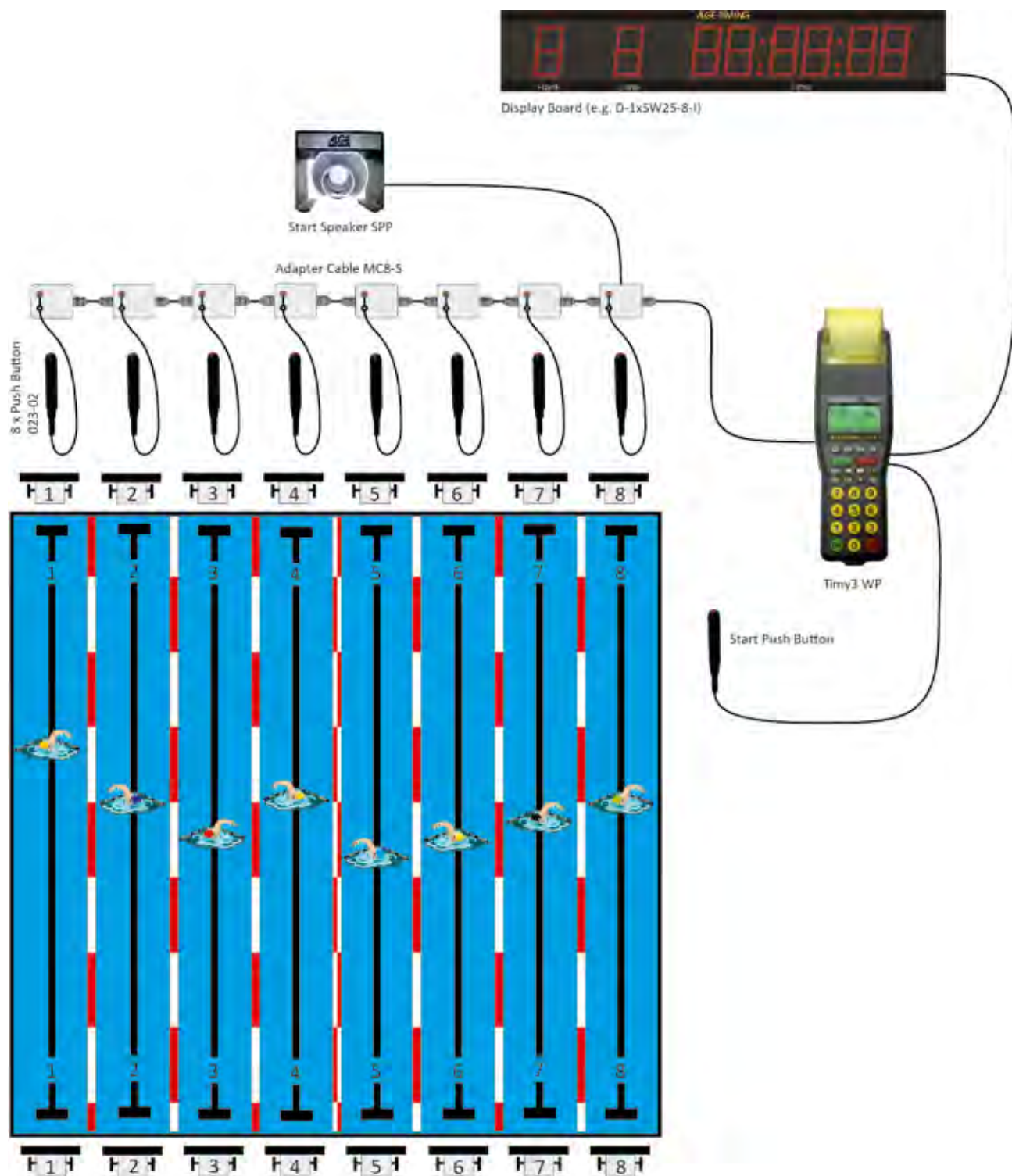


SWIMMING

Semi-Automatic Timing System

A semi-automatic timing system uses manual finish push buttons for each lane. The result of the timing, as well as the ranking of the participants, can be determined in real time and is printed on the spot.

The manual push button is connected via a special cable MC8-SWIM. The start signal is given, for example, via the loudspeaker SPP and the results can be tracked via various display boards connected to the Timy3 WP.



SWIMMING

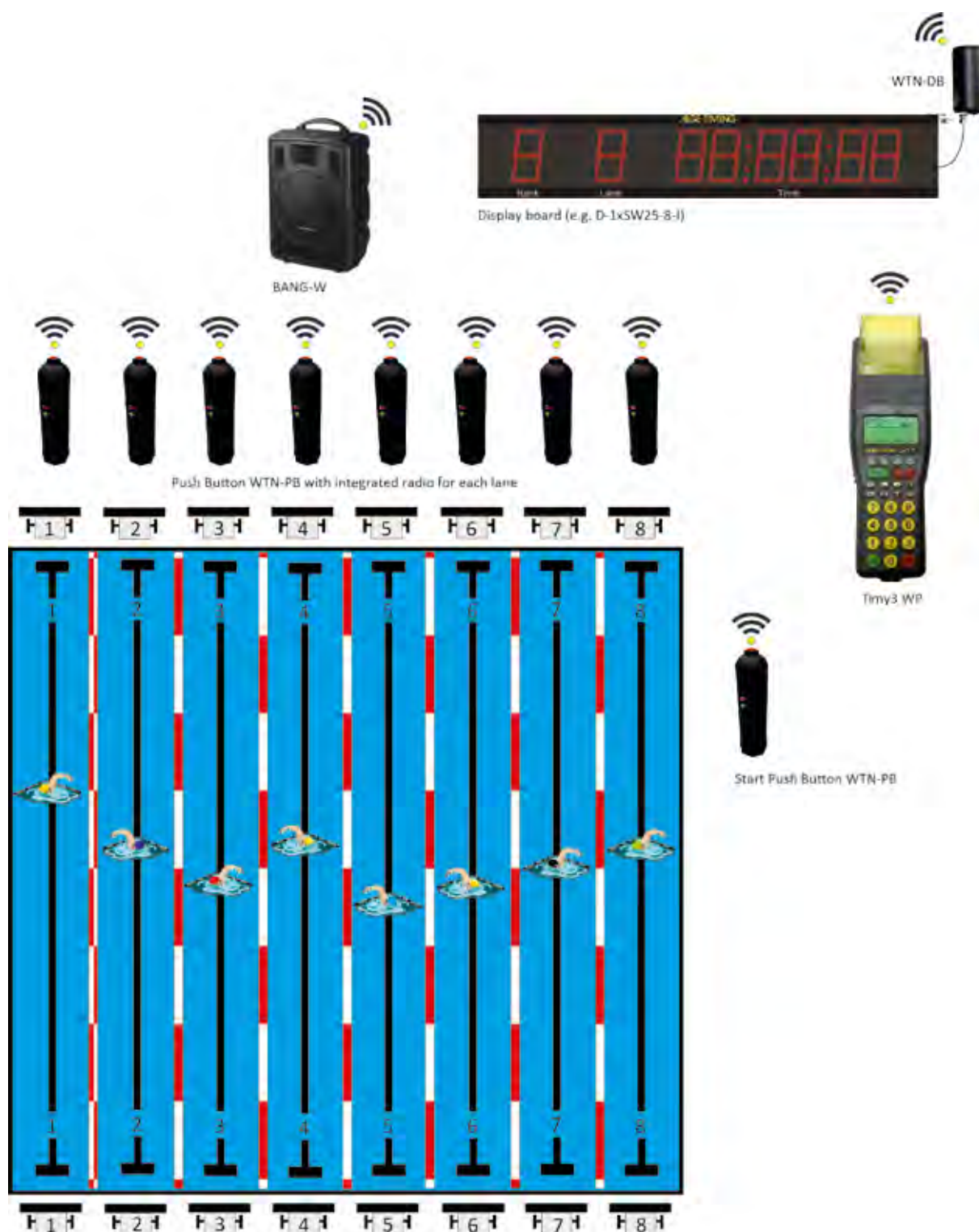
Semi-Automatic Timing System with Radio



New in the swimming sport is the WTN radio system, which is very successful in other sports. ALGE-TIMING offers a semi automatic radio system in which every lane has a radio push button WTN-PB with a separate timing channel.

timing for up to eight lanes. Several display boards can be connected to the Timy3 WP at the same time. The ranking list is created immediately and printed on the spot, when the swimmers arrive at the finish.

The WTN-PB manual push buttons are equipped with the ALGE-TIMING Wireless Timing Network, which allows a wireless





The fully automatic time measuring system can be easily extended for big events.

In addition, the new OPTIc3 provides a very valuable video backup system with 100 pictures per second.



SWIMMING

Automatic Timing System



SwimTime with TimeManager TM-SWIM

New technologies make timing easy.

The TM-SWIM has been developed especially for the extreme requirements of swimming. The TM-SWIM is the first timing device for swimming that has a USB interface to meet the requirements of modern PCs. It has an integrated audio amplifier as well as backup batteries and combines know-how, state-of-the-art electronics and the sturdy design by ALGE-TIMING.

All timing functions are executed and stored directly in TM-SWIM. The PC is only needed to capture a competition in the system and is then used to visualize and control the TimeManager. The TM-SWIM runs the race fully automatically and sends the times simultaneously to the PC software SwimTime, so that the user can follow the competition on the clearly organized user interface.



Facts of the Timing System ALGE SwimTime

- PC-based timing system
- USB Interface
- user-friendly control
- possibility to control a maximum of 16 lanes on both sides
- optical and acoustic control over all lanes
- connection possibilities for 1 touchpad, 3 manual push buttons and 1 relay-start-pad per lane (5 independent timing channels per lane and side)
- integrated battery backup also works without a PC for 4 hours regardless of the network
- integrated loudspeaker system
- possibility of talking between the starter and the timing operator with headsets
- false start warning on the monitor
- warnings if the time difference between the touchpad and the manual impulse is too big
- warning for unregistered touches
- reliable and robust touchpad
- collection of statistical data such as: Reaction time, block-off time, pressure duration on the starting block and touchpad
- conformity: FINA, SSCH, AAU, NCAA and LEN

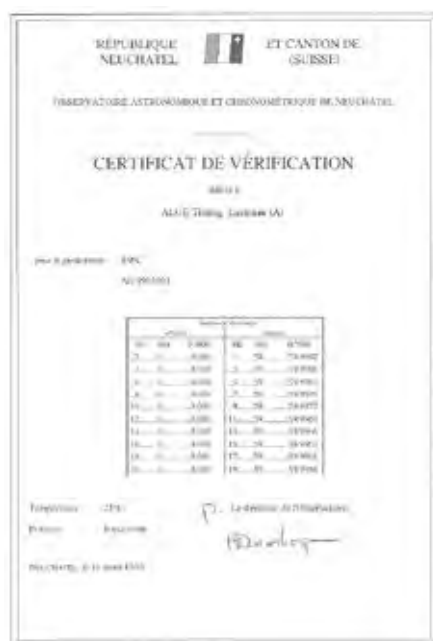


SWIMMING

Automatic Timing System

Technical Data

Range of measurement:	23 hours, 59 minutes, 59.9999 seconds
Time reference:	TCXO 10,000 MHz (temperature-compensated quartz oscillator)
Accuracy:	TCXO, +/- 0.1 ppm (+/- 0.00036 s/h)
Temperature range:	-25 °C to +50 °C
Power supply:	internal: 12 V gel cell battery external: 100 - 240 VAC, 50/60 Hz, optional 12 - 18 VDC
Interfaces:	USB interface for PC or video RS232 interface for PC or video 2 x RS232 interface for protocol printer 2 x RS232 interface for display board RS485 for display board
Other connections:	2 x timing bus for start and turn side 2 x speaker active 2 x SU3 (start unit)/FLASH XL start (banana socket) audio line in audio line out
Controller:	microphone headset audio in total volume



SWIM Terminal SWT3

A swim terminal is required for each lane and side. All SWT3 are identical and have no internal numbering. When switched on, the TM-SWIM automatically determines how many lanes are connected to the system and numbers them, according to the specifications.



Each swim terminal has five independent channels:

- 1 x touchpad
- 3 x push button
- 1 x relay-start-pad

Protocol Printer P5-8

Online log of all impulses

- competition number and run number
- name of the heat
- times (start, start block, touchpad, manual push-button)
- times outside a run are printed in the time of day format
- printing speed: 5 lines per second





SwimTime with TimeManager TM-SWIM

PC Software

The ALGE-TIMING PC software SwimTime manages all times and has optimal interfaces to the most common evaluation software in swimming. By dividing the software into timing and evaluation programs (Meet Management software) one can measure the time on one PC, while using one or more other PCs to take care

of the tasks of the organizational work in the race office, e.g. run scheduling, printing lists, etc.

SwimTime is compatible with all current Microsoft Windows versions (Windows XP, Vista, Windows 7, Windows 8 or Windows 10).

Time Measuring Program

The screenshot shows the SwimTime software interface with the following components labeled:

- menu bar
- competition selection
- participant data
- blocking time of the start side
- track number
- status bar
- lap time
- total time
- manual time
- stops
- blocking time for the reverse side
- lane with waiting swimmer (not started yet)
- free lane



The timing software works with neatly organized, animated symbols. This simplifies the operation.

- adapted for easy cooperation with evaluation software
- optical representation
- easiest operation
- free software updates
- battery backups
- easy understandable protocols
- expandable up to 16 lanes
- participant data can also be seen at the timing software
- many helpful control functions





SWIMMING

Automatic Timing System Components



TimeManager TM-SWIM

The high-tech device TM-SWIM collects and stores all Flash ROM data. It has galvanically isolated interfaces, acoustic part and synchronous input and output.



SWIM Terminal SWT3

The terminals are connected by a cable. A terminating plug SWT-END must be used at the last terminal. There is no fixed numbering! Includes connections for 1 TP1890/2400 touchpad, 3 separate manual push buttons 023-02 and 1 starting block or 1 relay-start-pad.



Start Unit SU3

with integrated microphone and on/off switch for the microphone, volume control and start button



Speakers SPA and SPP

integrated gel-cell battery and speech amplifier. A SPA also controls an SPP.



LED Display Boards

are available in various technologies as a numeric seven-segment or matrix scoreboard.



Touchpad TP1890/2400

The touchpad is one of the main components in the timing system. The quality of this component determines the success of the entire system. The closed design of the touchpad (frame with backside of stainless steel 1.4404) offers maximum protection and reliability. The touchpad are available in various sizes:

- TP2400: 2,400 x 906 x 9.5mm
- TP1890: 1,890 x 906 x 9.5mm

Custom sizes are available upon request.



Manual Push Button 023-02

stable, water-proof construction, cable length 2 m.



Starting Block SO5

The SO5, made of plastic, is characterized by a modern design and an adjustable foot rest (chromium-reinforced).



Relay-Start-Pad SWR7

The solution for existing starting panels. Mobile use on most starting blocks without drilling or other mechanic changes.

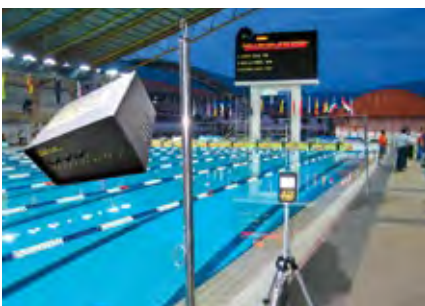
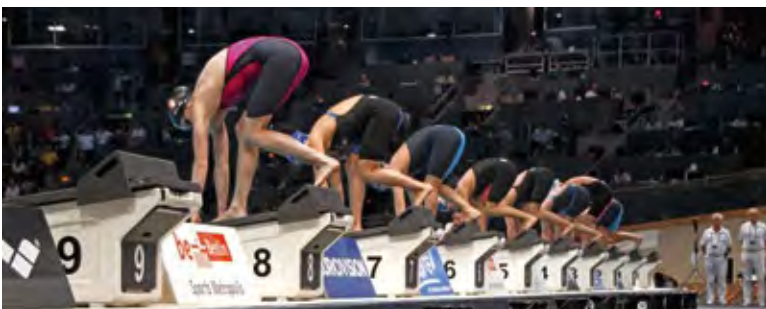
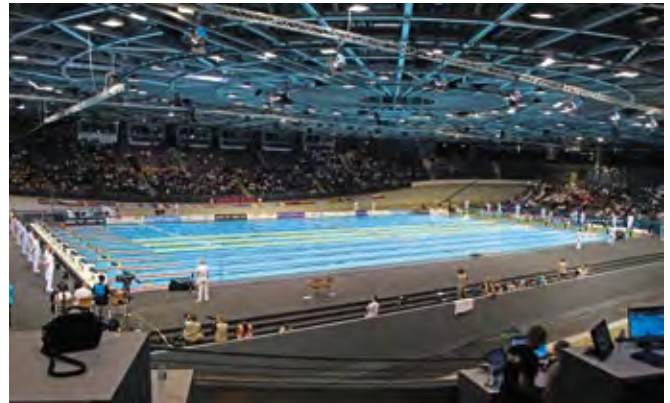


Backstroke Start Aid BSA

for a perfect start when backstroke swimming. The ALGE-TIMING BSA fits all starting blocks.

All components are compliant with the rules of FINA, SSCH, AAU, NCAA and LEN.

SWIMMING





SWIMMING

Touchpad TP2400 / TP1800 / TP980

The touchpad TP is one of the key components for a successful swimming timing system. The closed construction of the stainless steel frame makes it rugged and protects the integrated tape switches. The stainless steel is of best quality and made for the use in swimming pools where you have aggressive chlorine water.

Four tape switches that cover the touchpad over the full length make sure that wherever the swimmers touch, the touchpad is sensitive for timing impulses at any spot.

The innovative and patented touchpad models have a surface with lamellas and an exemplary grip for the swimmers. Many experiments and tests were made with different materials to reach this goal. A lamella designed by ALGE-TIMING and produced for ALGE-TIMING with a special injection molding machine has small bumps to guarantee the optimal grip.

Furthermore, each touchpad has hundreds of small holes that allow the water to float through it. For the swimmer, this

means fair water flow conditions in overflow swimming pools for all lanes.

By using new materials and a stainless steel case with holes the complete touchpad is about 30% lighter than previous touchpads produced by ALGE-TIMING.



All the benefits at a glance:

- special anti-slip surface for optimum grip
- four tape switches for consistent sensitivity
- no false timing due to water splash or waves
- patented water flow during the competition for fair conditions
- stainless steel housing 1,404
- robust construction
- easy banana plug connection with the timing system
- compatibility with most timing systems (NO contact)
- three standard models (TP2400, TP1890, TP980)
- customer-specific dimensions available upon request
- special transport trolley for storing up to 12 touchpad



SWIMMING

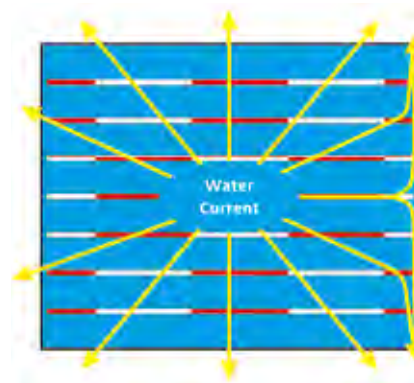
Touchpad TP2400 / TP1800 / TP980



A stainless steel back plate protects the touchpad against damage (high-quality stainless steel quality for use in swimming pools).

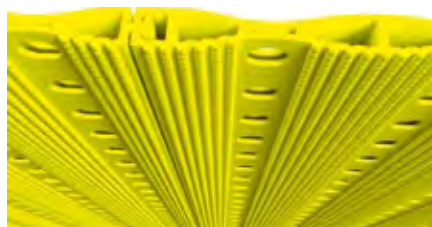
The secret of the incomparable grip are the specially designed lamellas from ALGE-TIMING. They have a rough surface with thousands of very small bumps.

Unlike other touchpad, the water flows through the ALGE-TIMING touchpad and guarantees optimal flow conditions in overflow basins. Other touchpad block the water flow at the ends and cause cross flows. With the patented construction of the ALGE-TIMING touchpad, fair conditions prevail for all participating athletes.



The water flow with the new ALGE-TIMING touchpad is shown on the left side of the sketch.

The right side shows the water flow with the touchpad closed.



Touchpad Models

TP2400 for swimming pools with a lane width of 2.5 m

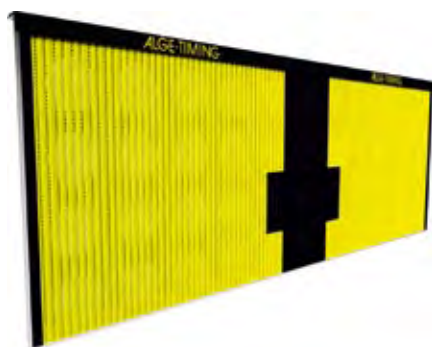
stainless steel housing with steel 1.4404 and PVC slats 2,400 x 906 mm, max. 9.5 mm thick in active area, 19 kg

TP1890 for swimming pool with a lane width of 2 m

stainless steel housing with steel 1.4404 and PVC slats 1,890 x 906 mm, max. 9.5 mm thick in active area, 14 kg

TP980 for training

stainless steel housing with steel 1.4404 and PVC lamellas 980 x 906 mm, max. 9.5 mm thick in active area, 8 kg





SWIMMING

Starting Block

The ALGE-TIMING starting block SO5 is made of easy-care plastic and has an integrated fault starting plate as well as an adjustable foot rest.

With the SO5, it can be checked whether the swimmer is jumping too early in a competition. In conjunction with the latest SWT3, it is even possible to measure the jump duration time.



Starting Block SO5

The SO5 is made of plastic (polyethylene) and supplies relay exchange times, block-off times and reaction times. The adjustable foot rest can be engaged by the swimmer in 6 positions, thus enabling an optimal step start. For public operation, the foot rest can be removed. The SO5 is designed for continuous use in indoor and outdoor swimming pools.

New: improved surface for optimum grip

Technical Data

Measuring system:	integrated sensor for reaction time and jump duration
Foot rest:	6-stage adjustable, removable without tools
Made of:	plastic, chrome-steel reinforced
Dimensions:	740 x 560 x 400 mm
Weight:	24 kg
Conformity:	FINA, SSCH, AAU, NCAA and LEN rules



Relay-Take Off Sensor SWR7

The SWR7 is made of high-quality stainless steel 1.4404 and provides relay exchange times, block-off times and reaction times. The SWR6 must be adapted to the existing start base and fastened with screws to the base. On the model SWR7M, a tensioning strap can be used instead of the screws. The particularly slip-resistant surface developed by ALGE-TIMING is indestructible and does not change its properties even after many years. The adjustable foot rest can be adjusted easily by the swimmers.

Technical Data

Measuring system:	integrated sensor for timing
Made of:	stainless steel 1.4404, surface treated
Dimensions:	740 x 560 x 40 mm
Weight:	26 kg
Conformity:	FINA, SSCH, AAU, NCAA and LEN rules





A LGE-TIMING developed, especially for training and swimming, a program for the Timy3 with special timing functions for two training lanes.

The following measured values are available:

Single Training

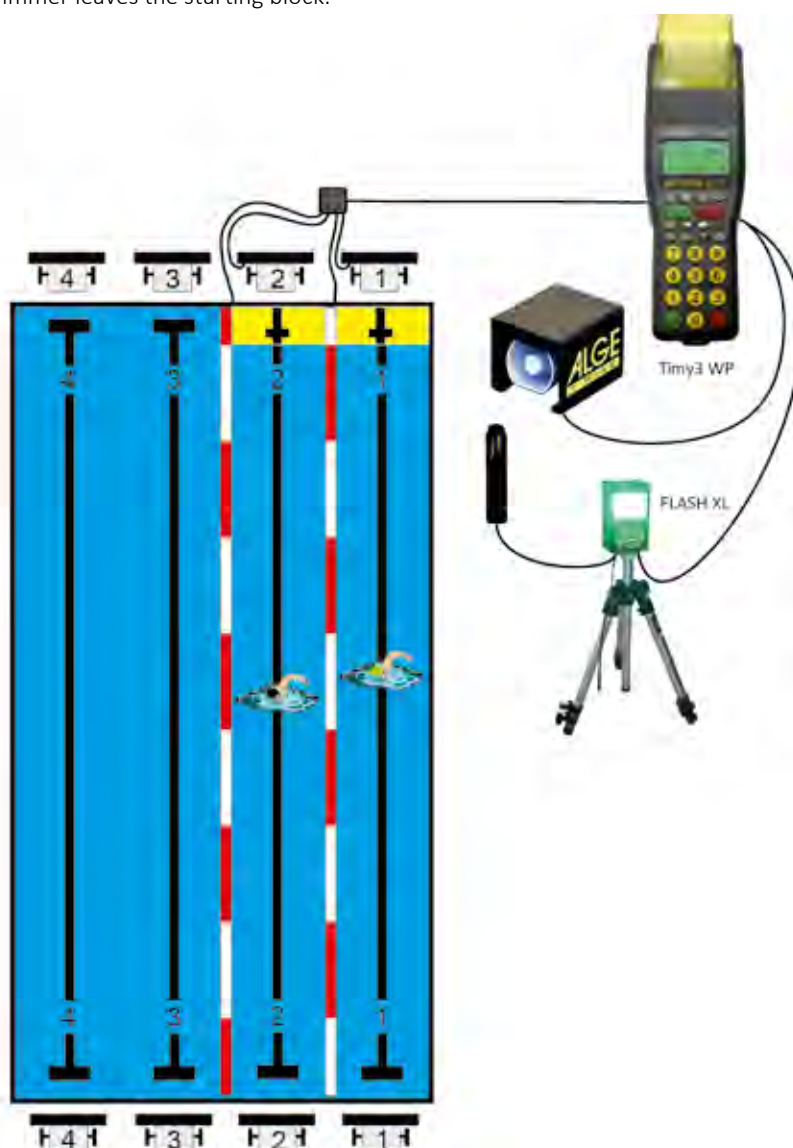
Reaction time: time after which the swimmer pressure is applied to the starting block
 Pressure time: duration of the jump-off phase
 Block-Off Time: time after which the swimmer leaves the starting block
 Touch 1: first stop
 Turning time: time elapsed from stop to leaving the touchpad
 Touch 2: etc.

During the Relay Training

Reaction time: time after which the swimmer pressure is applied to the starting block
 Block-Off Time: time after which the swimmer leaves the starting block.
 Touch 1: first stop
 Reaction time: time after which the swimmer pressure is applied to the starting block
 Block-Off Time: time after which the swimmer leaves the starting block.
 Touch 2: etc.

ID:	1/1
Freestyle	
T:02 Touches	
START EXT	
15:42:04.380	
L1 SB+0.17 0.45 +0.62	
L2 SB+0.13 0.56 +0.69	
L2 TP 001 27.35	
L2 TP Turn Time 0.86	
L1 TP 001 28.17	
L1 TP Turn Time 0.64	
L2 TP 002 1:00.14	
L1 TP 002 1:00.45	

ID:	2/1
Freestyle Relay	
T:04 Touches	
START EXT	
15:42:04.380	
L1 SB+0.25 0.40 +0.65	
L2 SB+0.28 0.44 +0.72	
L2 TP 001 27.35	
L2 SB-0.25 0.30 +0.05	
L1 TP 001 28.17	
L1 SB-0.15 0.25 +0.10	





SWIMMING

Display Boards

ALGE-TIMING has the right display options for every application, which can be adapted to individual requirements, ranging from classic seven-segment display boards to video walls.

Numerical LED Display Systems

The seven-segment LED display boards are ideal for indoor and outdoor use.

LED Full Color Display Systems and Full Matrix Systems

ALGE-TIMING can offer LED large-area display systems and video walls designed for use in sports facilities (see video wall - LED-Matrix).

Seven Segment LED Display Board

The D-SWxxx series display boards are specially designed for indoor and outdoor applications. The timing is controlled by the TimeManager TM-SWIM, Timy3 or the multi-port console D-CKN. All LED display boards from ALGE-TIMING are equipped with extra bright LEDs with a lifetime of over 100,000 hours. The display boards are available with a height of 57 mm up to 600 mm.

Digits for indoor display systems: 57, 100, 150, and 250 mm

Digits for outdoor display systems: 80, 150, 250, 450 and 600 mm

D-SWxx-8- (IO)

One-line display to indicate rank, lane and time. The results of all swimmers can be displayed alternately. The optional water polo console can be used to display game time and goals (0 to 9).

D-xxxSWxx-7 (8) - (IO)

It is possible to display the time for each lane. Thus, there are multi-line display boards with different configurations that are individually selectable. With the optionally available water polo console, the game time, goals and penalties are displayed on the scoreboard.

D-SWxx-5- (IO)

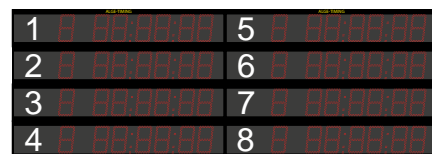
This additional display provides the spectators with a complete overview of the competition. It displays both the event name and the heat number. This option can be directly integrated into any display.



seven-segment LED Scoreboard



example: D-SW25-8-0



example: D-2x4xSW25-8-0



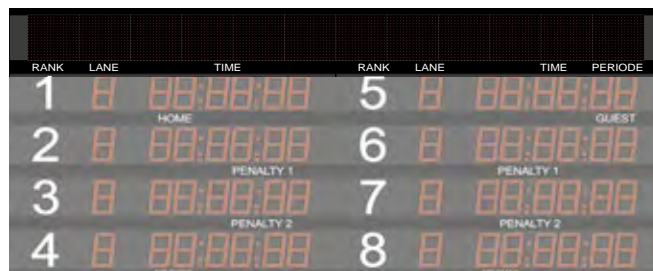
SWIMMING

Display Boards



D-RTNMxx-x- (IO) Info Display Systems

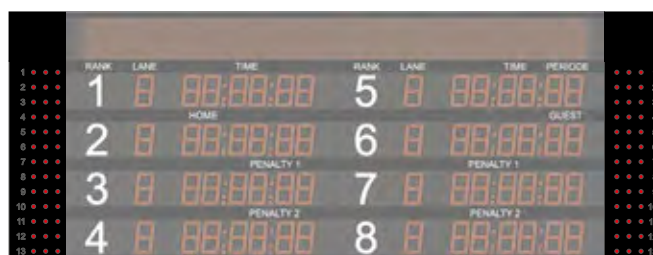
The D-RTNM full matrix display systems offer incredible display possibilities. In addition to the event name, heat number and the name of the swimmers, this board can also be used for advertising purposes: Graphic animations and scrolling texts can be called up at any time by a mouse click.



Personal Fouls for Water Polo

D-WPF10- (IO) (for D-4xSW10-x)

- LED diameter: 10 mm
- LED cluster diameter: 10 mm
- number of LEDs per point: 1
- dimensions: 350 x 900 x 70 mm per side
- weight: 6.5 kg per side



D-WPF15- (IO) (for D-4xSW15-x)

- LED diameter: 5 mm
- LED cluster diameter: 20 mm
- number of LEDs per point: 5
- dimensions: 400 x 1,100 x 70 mm per side
- weight: 10 kg each side

D-WPF25- (IO) (for D-4xSW25-x)

- LED diameter: 5 mm
- LED cluster diameter: 35 mm
- number of LEDs per point: 10
- dimensions: 500 x 1,400 x 70 mm per side
- weight: 15 kg per side

The above display boards are available as indoor and outdoor versions.



SWIMMING

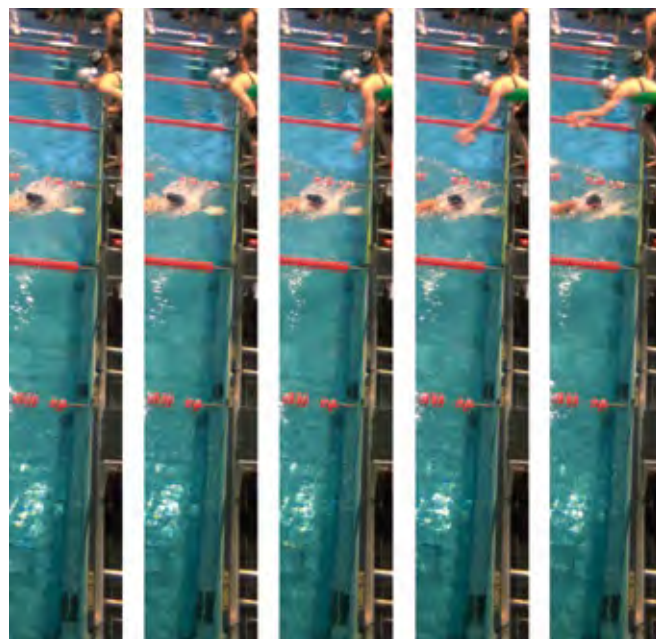
OPTIc3 Video Backup

The photo finish system OPTIc3 from ALGE-TIMING can capture all movements in the start-finish area in 2-D mode with 100 images per second. These recording is an independent backup for the timing, or it may serve as evidence in case of a

protest. This can be very helpful, especially with relay. The images are stored on the hard disk of a PC and can be evaluated quickly and clearly with the IDCam software. A camera can record up to 4 tracks.



Picture frequency: 100 frames per second
Picture resolution: 360 x 2,016 or 1,024 x 768 pixels
Admission: endless, depending on the hard disk capacity of the PC
Synchronization: The system can be synchronized with the TimeManager.



SWIMMING

Open Water



For open water competitions, a combination of several small touchpad and an IDCam is suitable, which creates several high-resolution images including the time of the day, on which the start numbers of the swimmers are easily recognizable.



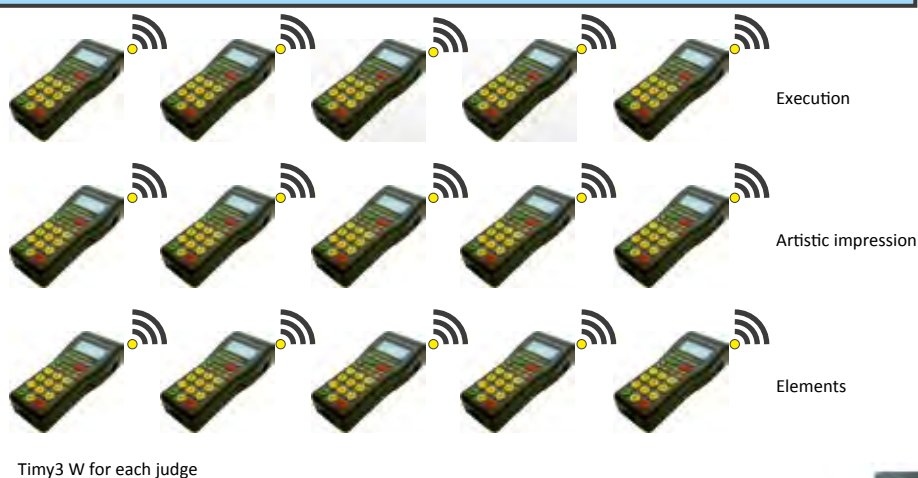
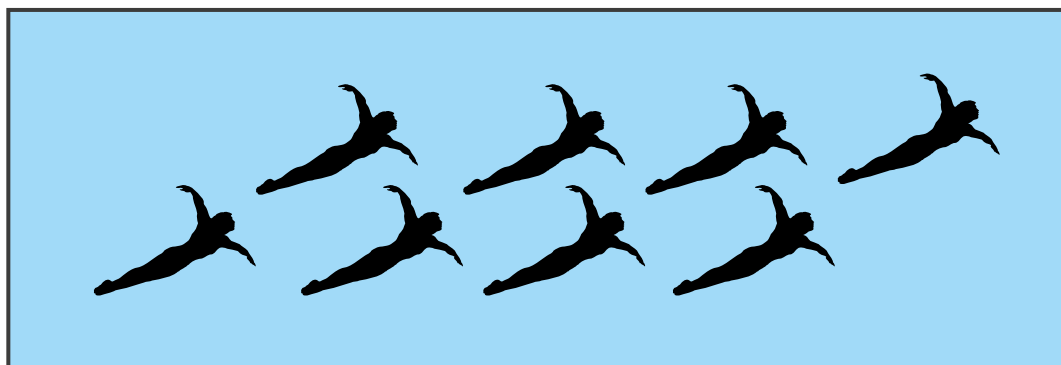


ARTISTIC SWIMMING

In artistic swimming, the use of ALGE-TIMING's unique Wireless Timing Network ensures secure data transmission and allows easy setup of the system.

The evaluation software complies with the requirements of the FINA and can control video walls and numerical displays of ALGE-TIMING.







Artistic swimming TEAM TECHNICAL ROUTINE			
	RUSSIA	RUS	1
Vlada CHIGIREVA		Execution28.9000 Impression28.5000 Elements35.5268 92.9268	
Mikhaela KALANCHA			
Svetlana KOLESNICHENKO			
Lilia NIZAMOVA			
Elena PROKOFYEVA			
Alla SHISHKINA			
Maria SHUROCHKINA			
Gelena TOPILINA			

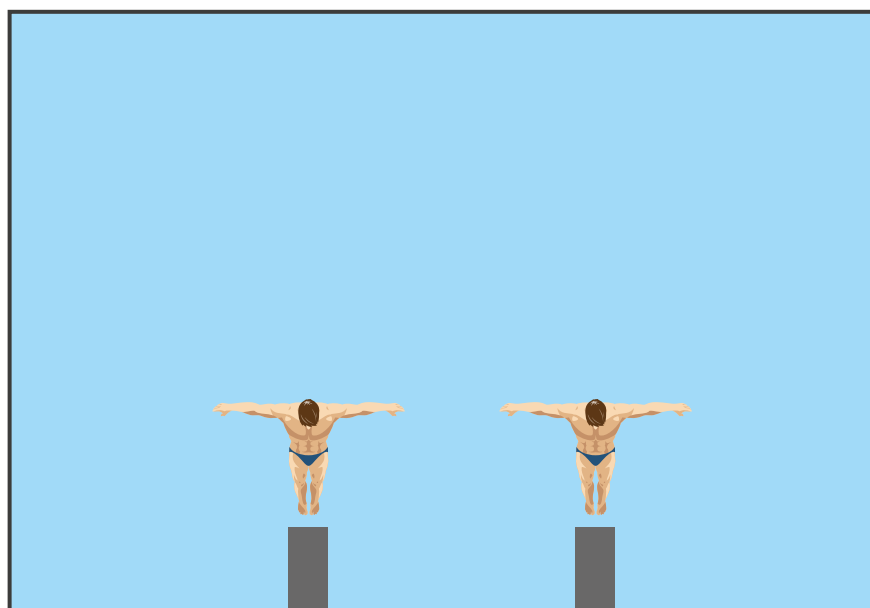




The evaluation system is based on the unique Wireless Timing Network from ALGE-TIMING. This ensures a secure data transmission and a simple setup of the system.

The evaluation software complies with the requirements of the FINA and can control video walls and numerical displays of ALGE-TIMING.

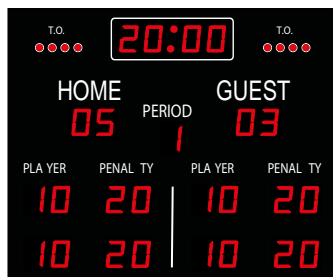
 Synchronized 3m - MEN FINAL				
1		Ilia ZAKHAROV Evgenii KUZNETSOV	RUS	464.64
2		Patrick HAUSDING Stephan FECK	GER	438.15 26.49
3		Oleksandr GORSHKOVOZOV Illya KV ASHA	UKR	433.98 30.66
4		Michele BENEDETTI Giovanni T OCCI	ITA	400.59 64.05
5		Christopher MEARS Jack LAUGHER	GBR	391.98 72.66





WATER POLO

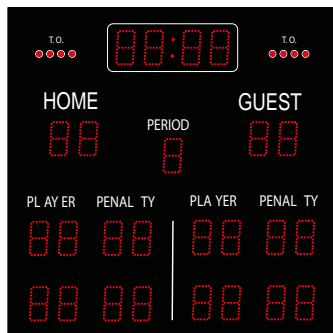
Scoreboards



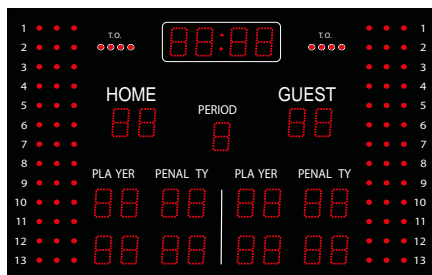
model D-S10BP2W



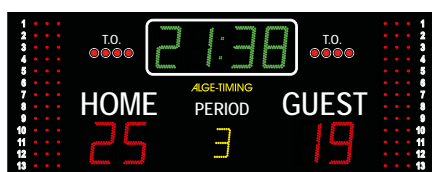
model D-S10-5W



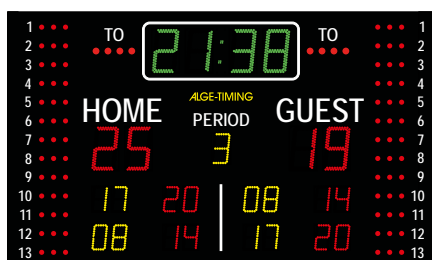
model D-S15BP2W



model D-S15-5W



model D-M1SW



model D-M5SW

Model D-S10BP2W

- digit height: 100 mm
- dimensions: 1,200 x 1,000 x 70 mm
- weight: 25kg

Model D-S10-5W

- digit height: 100 mm
- dimensions: 2,000 x 1,200 x 70 mm
- weight: 45kg

Model D-S15BP2W

- digit height: 150 mm
- dimensions: 1,400 x 1,400 x 70 mm
- weight: 40 kg

Model D-S15-5W

- digit height: 150 mm
- dimensions: 2,000 x 1,400 x 70 mm
- weight: 55 kg

The following is displayed on the scoreboard:

- running time: 99:59 minutes up/down (green digits except on the S models - red digits). Last game minutes show the current tenth of a second.
- daytime can be displayed in the game time field
- goals: 0 to 99 on each side (red digits)
- period: 0 to 9 (yellow digits, except for the S models - red digits)
- time out: 4 red LED points for each team
- penalties: two penalty times for each team: 0 - 59 seconds (red digits)
- player ID: 0 to 99 (yellow digits, except for the S models - red digits)
- personal fouls: 39 red LED points for each team (models S10WL, S15WL and M6W)

Technical Data

- power supply: 110 - 220 V AC/50 Hz, shot clocks with 24 V DC directly from the main scoreboard
- horn
- D-CKN console with LCD display

Optional

Wireless data transmission only between console and main display possible, shot clocks need 12 V from the main display, for safety reasons.

All models, except D-S are also available in outdoor versions.

WATER POLO

Shot Clock



shot clock for water polo (beach ball)

D-SC15W-PH (Indoor) or D-SC15W-PH-O (Outdoor)

- attack time (2 digits): 15 cm
- dimensions: 34 x 25 x 7 cm
- weight: 1.5 kg per side

D-SC25W-PH (Indoor) or D-SC25W-PH-O (Outdoor)

- attack time (2 digits): 25 cm
- dimensions: 45 x 35 x 7 cm
- weight: 3 kg per side

D-SC25GT15W-PH (Indoor) or D-SC25GT15W-PH-O (Outdoor)

- game time (3 digits): 15 cm
- attack time (2 digits): 25 cm
- dimensions: 55 x 55 x 7 cm
- weight: 6 kg per side

D-SC45GT25W-PH (Indoor) or D-SC45GT25W-PH-O (Outdoor)

- game time (3 digits): 25 cm
- attack time (2 digits): 45 cm
- dimensions: 85 x 90 x 7 cm
- weight: 15 kg, per side

Technical Data

- The set consists of 2 shot clock displays each with horn.
- 15, 25 or 45 cm digit height, upon request, up to 100 cm possible
- models for indoor and outdoor, power supply with 24 V DC from main display
- works only with an ALGE-TIMING water polo scoreboard, with D-CKN console
- Cables must be ordered separately, 200-XX are utilized.
- Radio connection is not possible.





ROWING/CANOEING

Simple Timing System

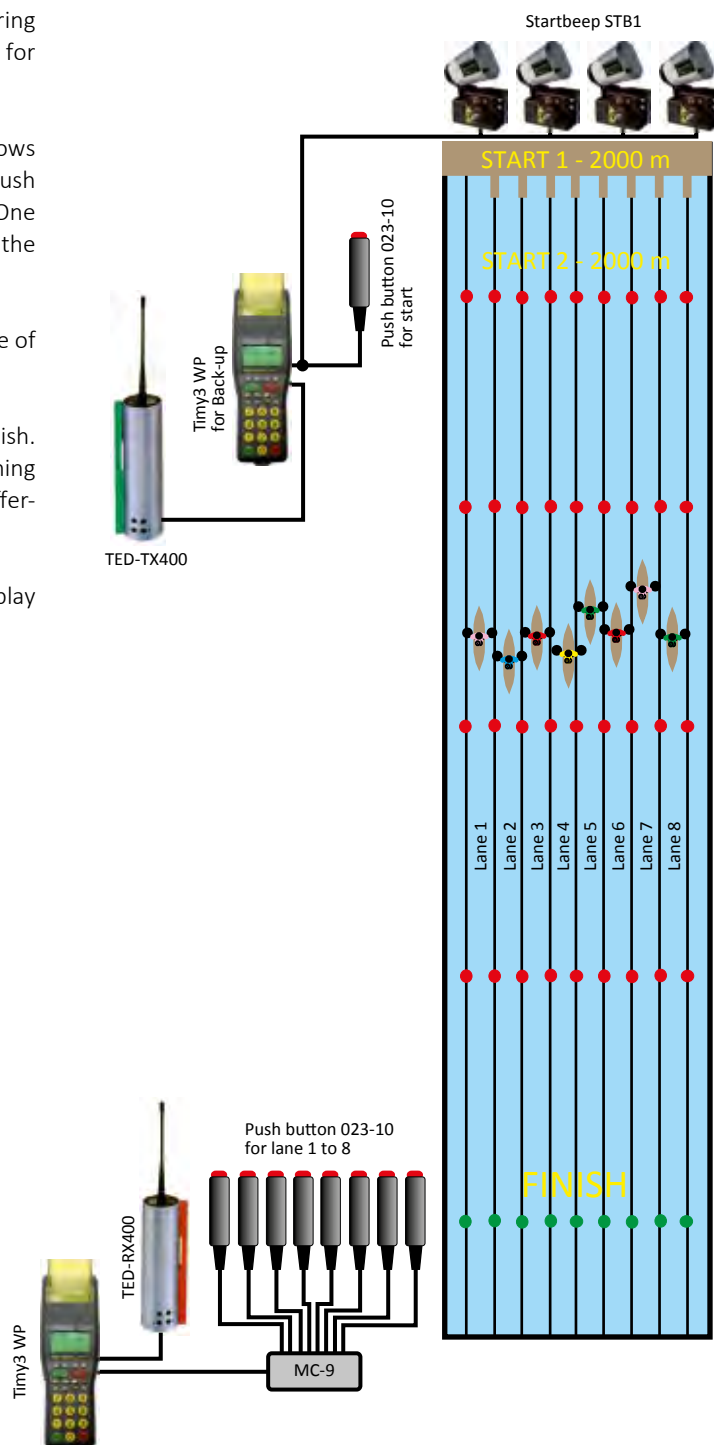
Rowing and canoe events require different time measuring systems, such as a simple system with manual timing for each track and radio transmission.

As the name suggests, this timing system is simple and allows for mobile use. The start takes place by means of a manual push button, which emits a horn signal via the Startbeep STB1. One or more start beeps can be distributed along the lanes in the start area.

The Timy3 WP in the start area is required for reliable storage of the start time, i.e. as a backup.

The start impulse is transmitted via radio TED to the finish. A manual push button is available for each lane. On the timing device, up to eight lanes are recorded and printed (eight different timing channels).

It is also possible to connect to the Timy3 in the finish a display board showing the running time or the winner's time.



ROWING/CANOEING

Professional Timing System



The professional timing system with the TimeManager TM allows to output all channels for each lane with identification (interim time and finishing time). This means for a regatta course with nine lanes there is one start channel, three times nine interim times and nine finishing times, altogether 37 timing channels.

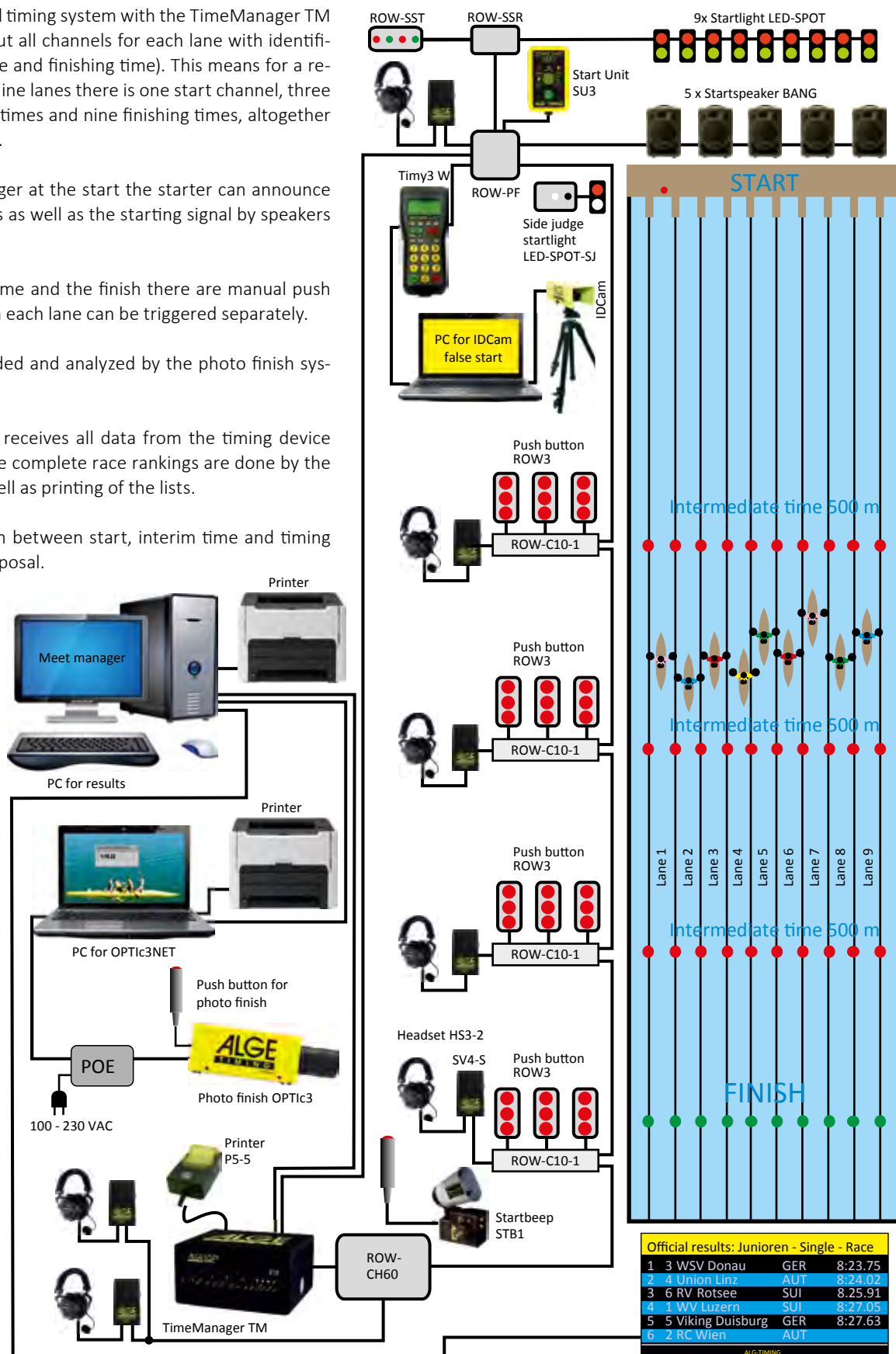
Via the TimeManager at the start the starter can announce starting commands as well as the starting signal by speakers to the rowers.

For each interim time and the finish there are manual push buttons with which each lane can be triggered separately.

The finish is recorded and analyzed by the photo finish system OPTic3.

The evaluation PC receives all data from the timing device and analyzes it. The complete race rankings are done by the evaluation PC as well as printing of the lists.

For communication between start, interim time and timing headsets are at disposal.



All computers in the illustrated system are connected in a network.



MOTOR SPORTS





Car Slalom / Mountain Racing

An example of a timing system used in motor sports is the system for car slalom or mountain racing (shown at the right).

The regular start intervals can be controlled via a Startclock ASC3. The timing is triggered by a photocell at the start. The starter and timing operator can communicate via headsets.

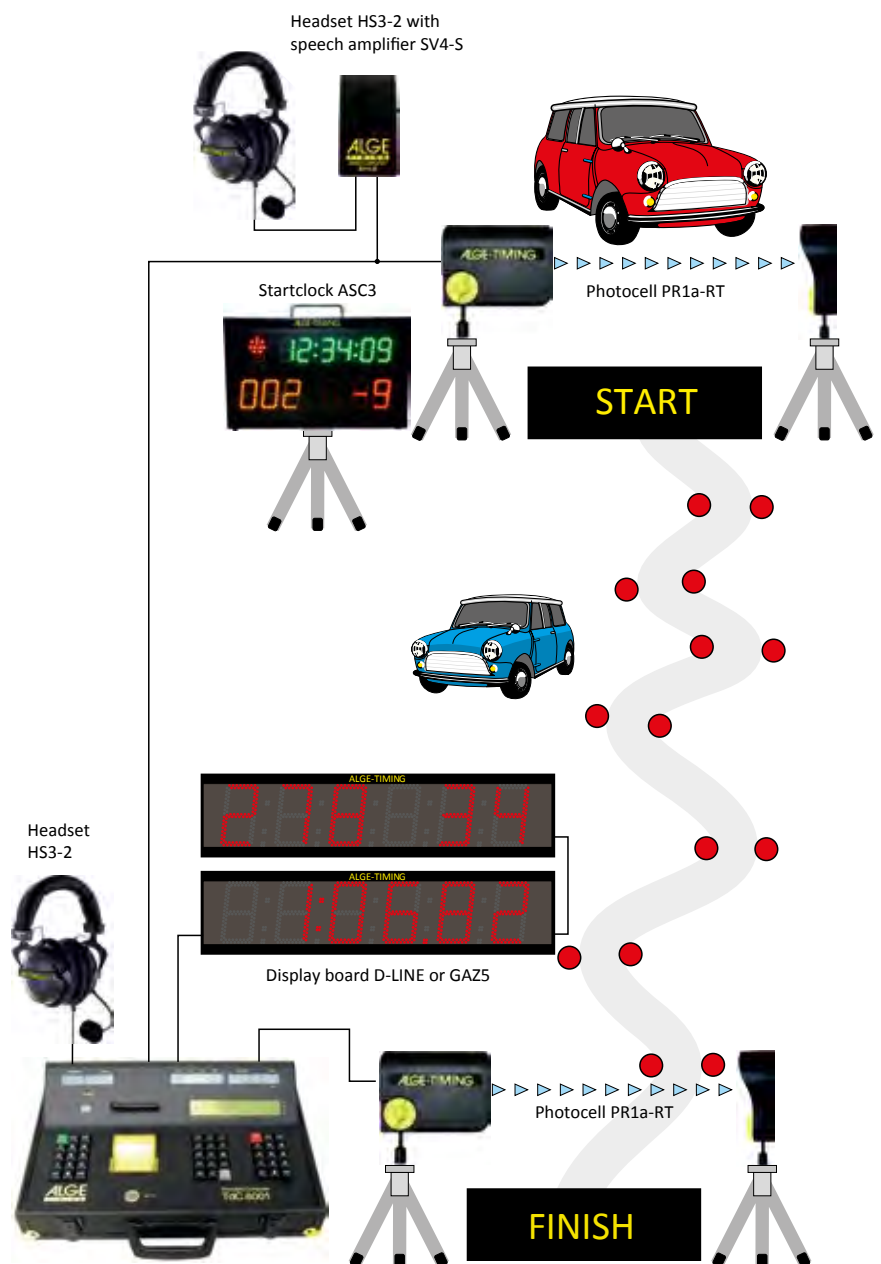
When triggered, the finish photocell stops the time of the TdC8001 or Timy3.

A display board can be controlled by the timing device.

If there is a large distance between the start and the finish, the Teledata TED400 can be used for impulse transmission.



The versatility of the motor sport requires a large selection of timing systems, which meet the challenges of different races. This is why ALGE-TIMING has developed individual timing systems and the appropriate accessories especially for motor sports.

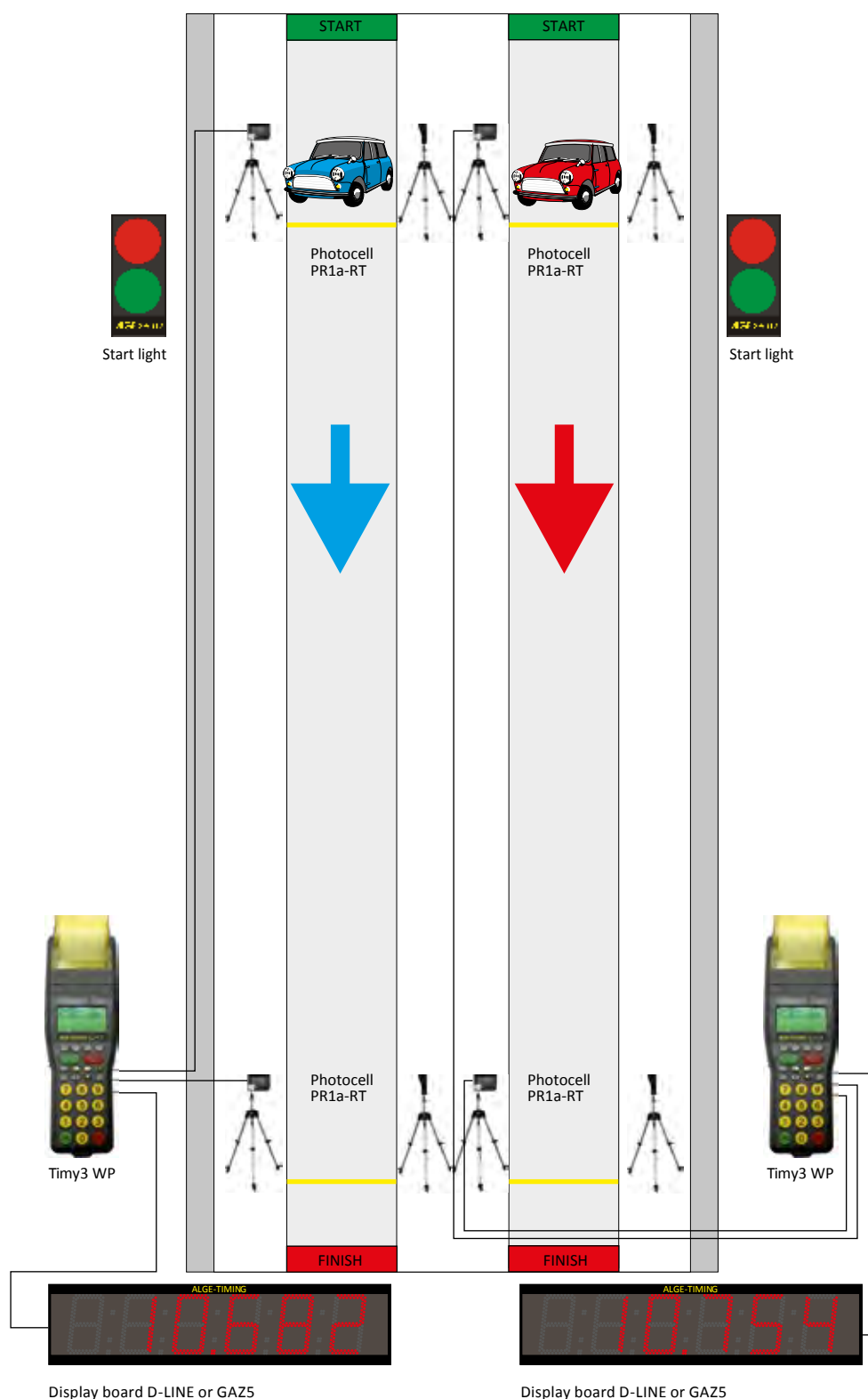




MOTOR SPORTS

Dragsters

For dragster races there are different ways to measure the times and record the results. For the sake of illustration, a simple system is presented, which can be customized according to the specific wishes of clients and the intended use. This means that, for example, the exact speed in the finish region can also be measured.



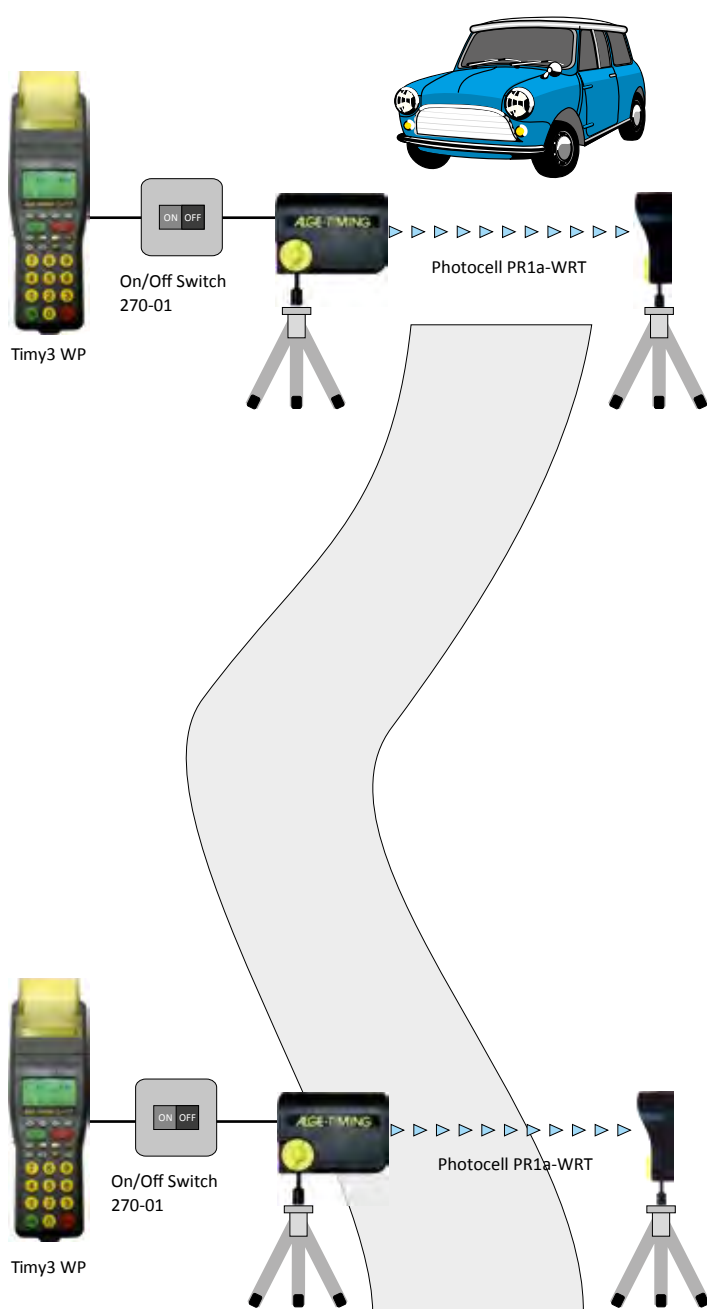


The timing for a rally consists of at least one timing system with two Timy3 WP and a manual push button. Of course, the system can be expanded with additional devices, which make a more precise timing possible.

In the figures, a timing device Timy3 WP and a photocell are used for a simple timing system for start and finish. The time of day is always measured. The timing operator enters the ID-number of the vehicle into the Timy3. The run time is calculated from the difference of start and finish time.

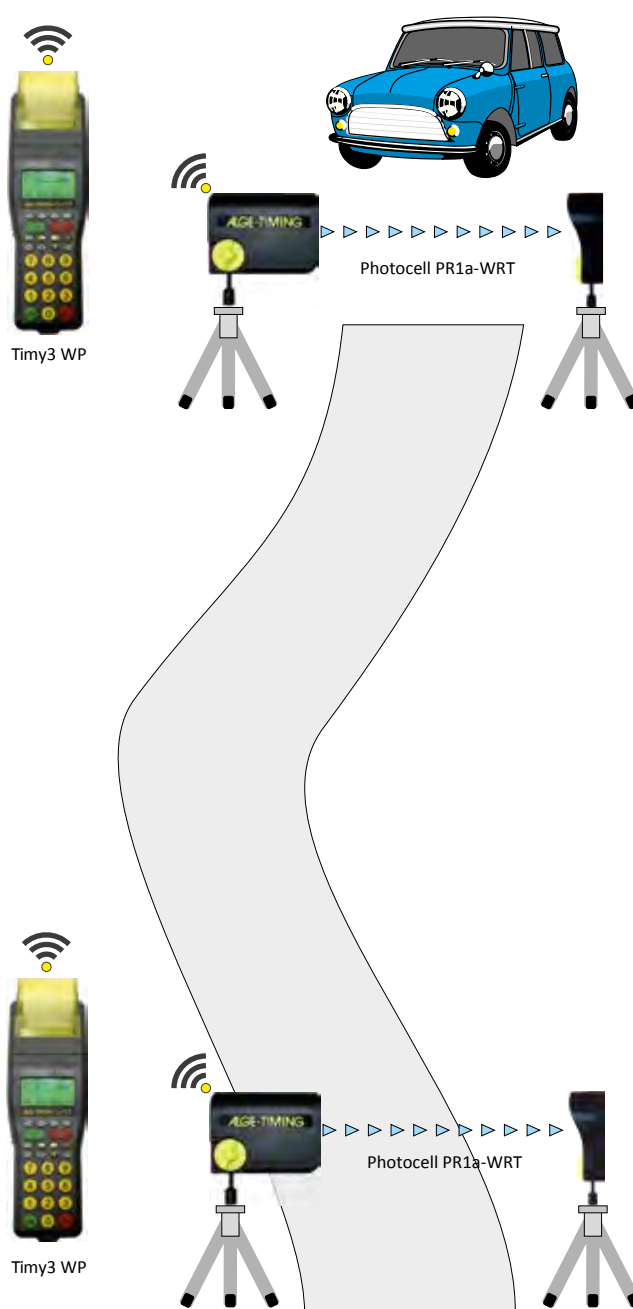
Simple rally timing system with cable

A Timy3 WP is connected to the photocell at the start, the other to the photocell in the finish. Both Timy3 are synchronized before the start of the race.



Simple rally timing system with radio

The Timy3 WP and photocell PR1aW have an integrated Wireless Timing Network WTN. Both Timy3 are synchronized before the start of the race.





MOTOR SPORTS

Rally

A Timy3 and photocell is located at the start and finish.

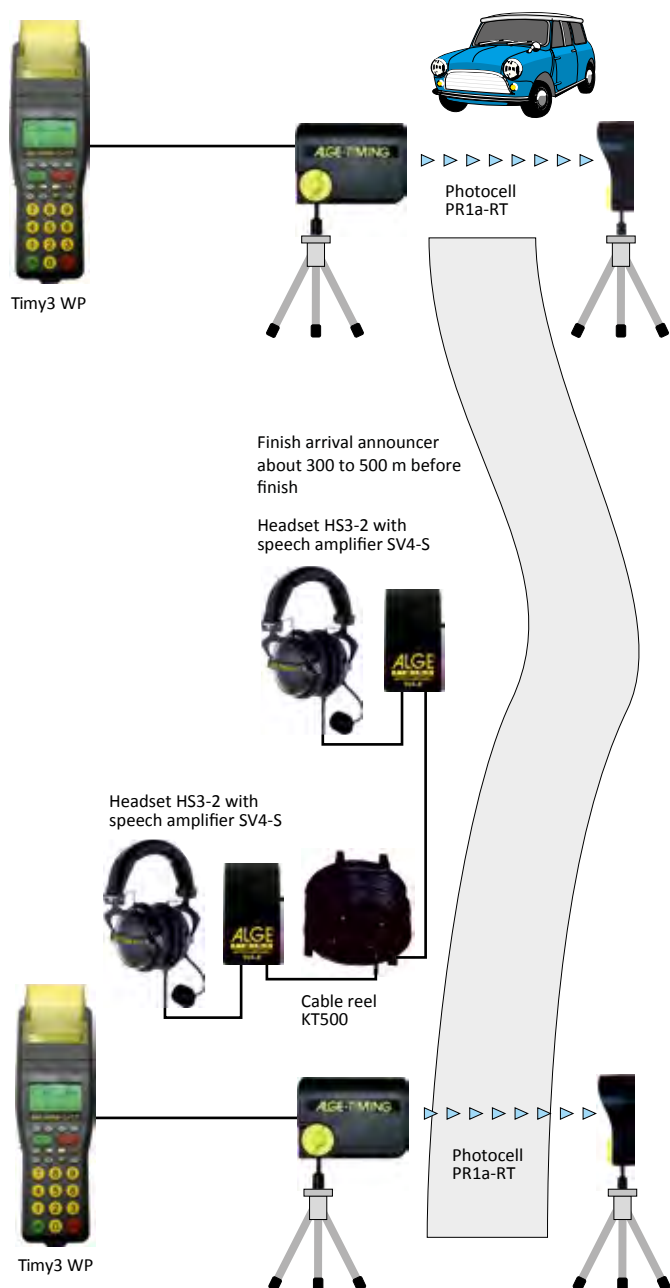
The ID-number and time of each car is stored in the timing device at start and finish. After the stage is finished the data from each timing device are transferred to a PC, which calculates the run times.

For each stage that is executed at the same time you need additional timing system. Sometimes it is also necessary to have additional timing systems to prepare the following stages.

This solution with Timy3 and photocell at start and finish is supported by a Startclock ASC3 to keep regular start intervals.

The ID-number and time of each car is stored in the timing device at start and finish. After the stage is finished the data from each timing device are transferred to a PC, which calculates the run times.

For each stage that is executed at the same time you need additional timing system. Sometimes it is also necessary to have additional timing systems to prepare the following stages.







SPORT CLIMBING

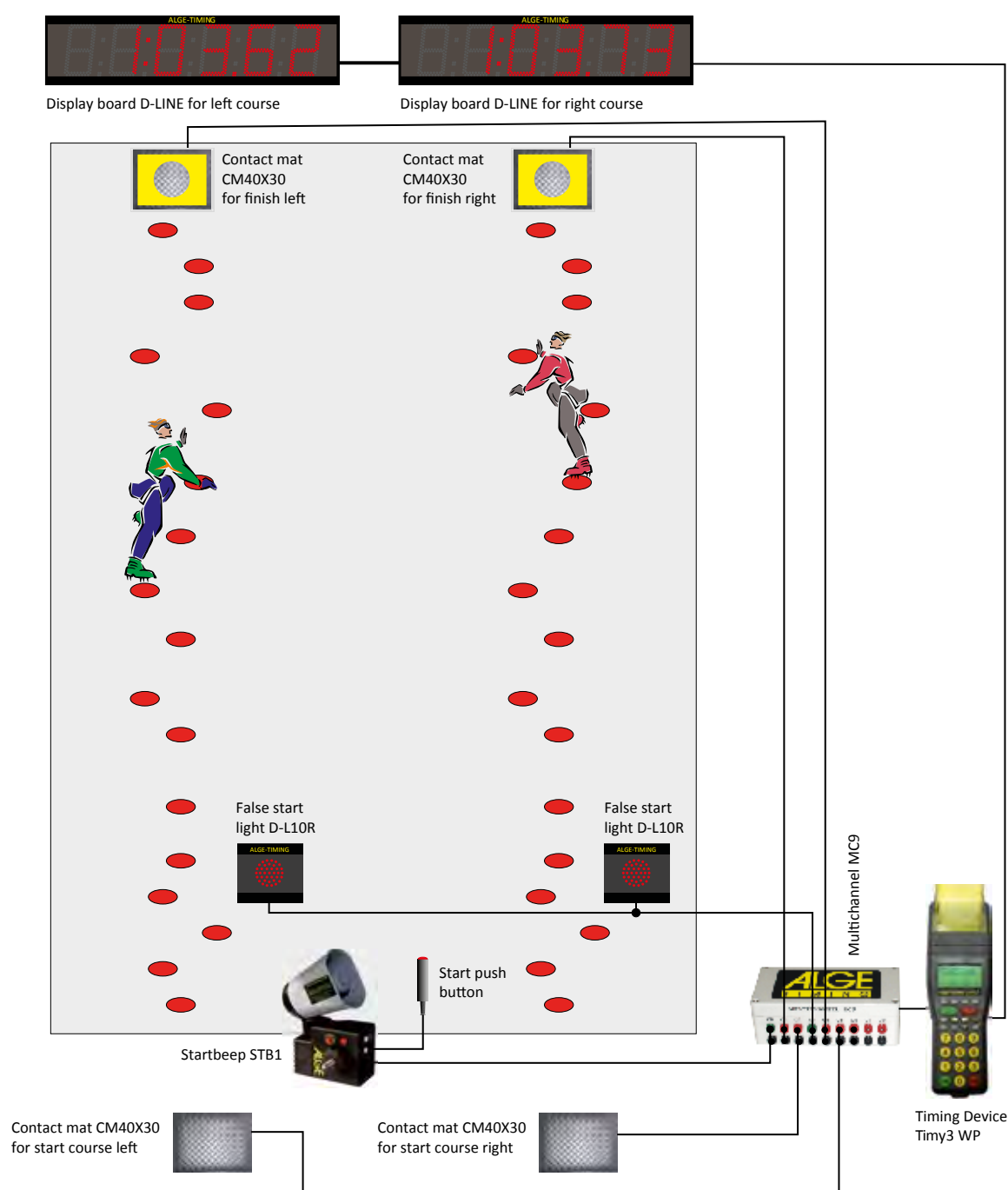
Speed Climbing

ALGE-TIMING offers a timing system especially developed for speed climbing. The acoustic start signal comes from the Startbeep STB1. Both tracks have a contact mat on the floor in the starting area. This allows to check false starts. If a climber leaves the contact mat before the start signal is given, the display board shows FS (false start) and the false start light will light up red. Of course, the false start is protocolled on the printer of the timing device Timy3 WP.

The finish is triggered via contact mats at the top of the wall. The timing device measures the run time of each competitor and displays it on the display board D-LINE.

Alternative ALGE-TIMING offers as well automatic training systems that can be fix installed on the climbing wall.

The ALGE-TIMING timing system is recommended by FISC (International Federation for Sport Climbing).





Devices that are required for timing during speed climbing

Timy3 WP

The Timy3 WP is the control center from which all devices are controlled and timing impulses are processed. When the start is triggered, the starting sound is emitted via the Startbeep STB1 with a countdown of 3 seconds according to the regulations. Also, the false start is checked and the display board is driven by the Timy3.



Multichannel MC9

The MC9 is a docking station for the Timy3. The contact mats, the start beep and the false start light are connected to the Multichannel MC9.



Startbeep STB1

Device with integrated horn, which omits the start sound.



Contact Mat CM40x30 for Start

Checks whether the climber does not leave the start before the start tone.



Contact Mat CM40x30 for Finish

When the climber strikes the contact mat, the timing is stopped.

Display Boards D-LINE

The display shows the running time and run time for a competitor. In case of a false start it shows "FS".



False Start Light D-L10R

The false start light shows the climber on the wall that a false start occurred. It is usually integrated into the climbing wall.





ALPINE SKIING






A wide range of timing devices and accessories are available from ALGE-TIMING for alpine ski races. Important is mainly the reliability and rugged design for difficult conditions like freezing temperatures and snow. Most of ALGE-TIMING's devices are homologated by the FIS (International Ski Federation).

ALGE-TIMING has a long history in timing for alpine skiing. The market share of more than 40 % of ALGE-TIMING equipment used in FIS races clearly shows the leading role.

Although timing devices have been produced for many years, most of the older models are still compatible with the current

		CONTROLE OFFICIEL SUISSE DES CHRONOMETRES	
BUREAUX OFFICIELS DE CONTROLE (BO) de Bienne, La Locle, Saint-Imier		Edition : 1	Edited by : PSO
Homologation Report FEI		Date : 20.10.2014	Page : 1 of 4

Homologation Report of Timing Device ALGE-TIMING TIMY3 WP Photocell ALGE-TIMING PR1aW and integrated Wireless Transmission

based on FEI Procedure for approval of timing devices (30.04.2013)

Report Number	FEI-TPW-ALG_2014001		
Requested by	ALGE-TIMING GmbH Mr. Albert Vetter Rotkreuzstrasse 39 A-6890 Lustenau		
Description of equipment	Multi sports timing device, internal printer with battery Photocell (Wireless Transmission available)		
Type	Timer: TIMY3 WP	Photocell: PR1aW	
Manufacturer	ALGE-TIMING GmbH		
Serial Number	Timer: 140123009	Photocell: 131016071	
Production Year	Timer: 2014	Photocell: 2013	
Date(s) of measures	25.08.2014 – 03.09.2014		
Date of report	20.10.2014		
Location(s) of measures	Bureau Officiel de Saint-Imier		
Rules	FEI Procedure for approval of timing devices (30.04.2013)		
Results	Passed		
Signatures	Tests and report by Pascal Soltermann 	Controlled by Andreas Wyss 	
Comments	The reference triggering is within +/- 1µs GPS time-scale absolute time, uncertainty and propagation delays are included. DUT Time-of-Day is synchronized electronically through discrete CD input with 60s reference pulse. Low resolution inputs (c6, c7 and c8) were not tested.		
Content:	Abbreviations:		
Report: 4 pages	P = Pass	N/C = Not Conducted	
Appendices: none	F = Fail	DUT = Device Under Test	
	N/A = Not Applicable	GPS = Global Positioning System	

Certificate of Homologation FIS

Company: **ALGE-TIMING**
Timer Name: **Timy3 WP**
Codex Timing: **ALG.090.14**
Date: **October 2014**


FIS Timing Working Group

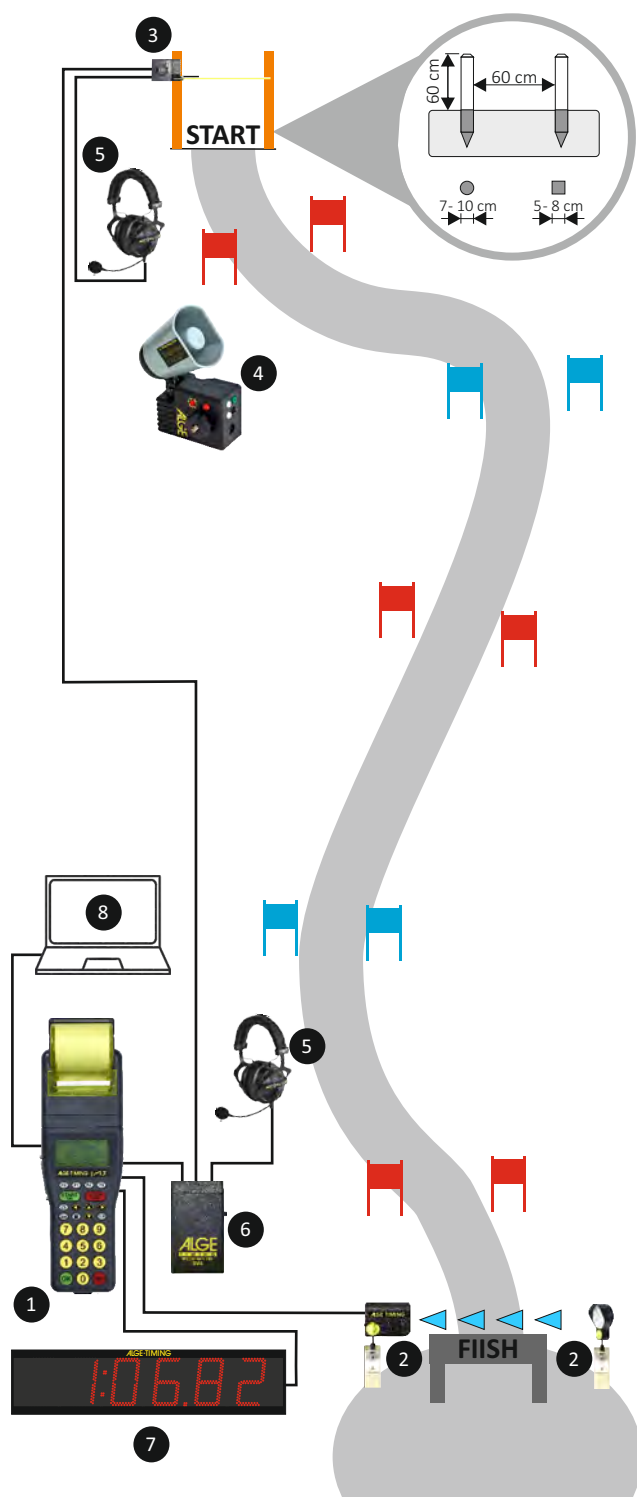


ALPINE SKIING

Simple Timing Solutions

For timing at alpine skiing races, a simple timing system can be used as basis system, consisting of a timing device, startgate and photocell. We recommend as well the headsets for a speech

connection between start operator and timing operator, a start device such as the Startclock ASC3 or Startbeep STB1, and a display board.



1 Timy3 WP

FIS homologated high end timing device with for the timing professional with a large, easy-to-read graphic display, up to 8 timing channels and a log printer. USB interface and RS232 interface is integrated in the device for data transfer. A built-in WTN radio module enables wireless communication with other devices.



2 Photocell PR1a-R

FIS homologated reflection photocells with transmitter and receiver in one case; including reflector, bracket and cable



3 Startschranke STSnM1S

Startgate for individual start at ski races. It has one start output and a built-in speech amplifier.



4 Startbeep STB1

Device to handle the start professional. An acoustic start countdown indicates the start interval.



5 Headset HS3-2

headset with microphone for the timing communication



6 Speech Amplifier SV4-S

for plugging in at the start-finish line and connecting the headset



7 Results Software Time.NET2

Universal result software (freeware) from ALGE-TIMING that is ideal for small ski races.



8 Display Board D-LINE

numeric display board with red 7-segment LED digits to show the time or bib (e.g. D-LINE250-O-6-E0)

1 Timy3 WP

2 Photocell PR1a-R

3 Startgate STSnM1S

4 Startbeep STB1

5 Headset HS3-2

6 Speech Amplifier SV4-S

7 Display Board D-LINE

8 Time.NET2 Software

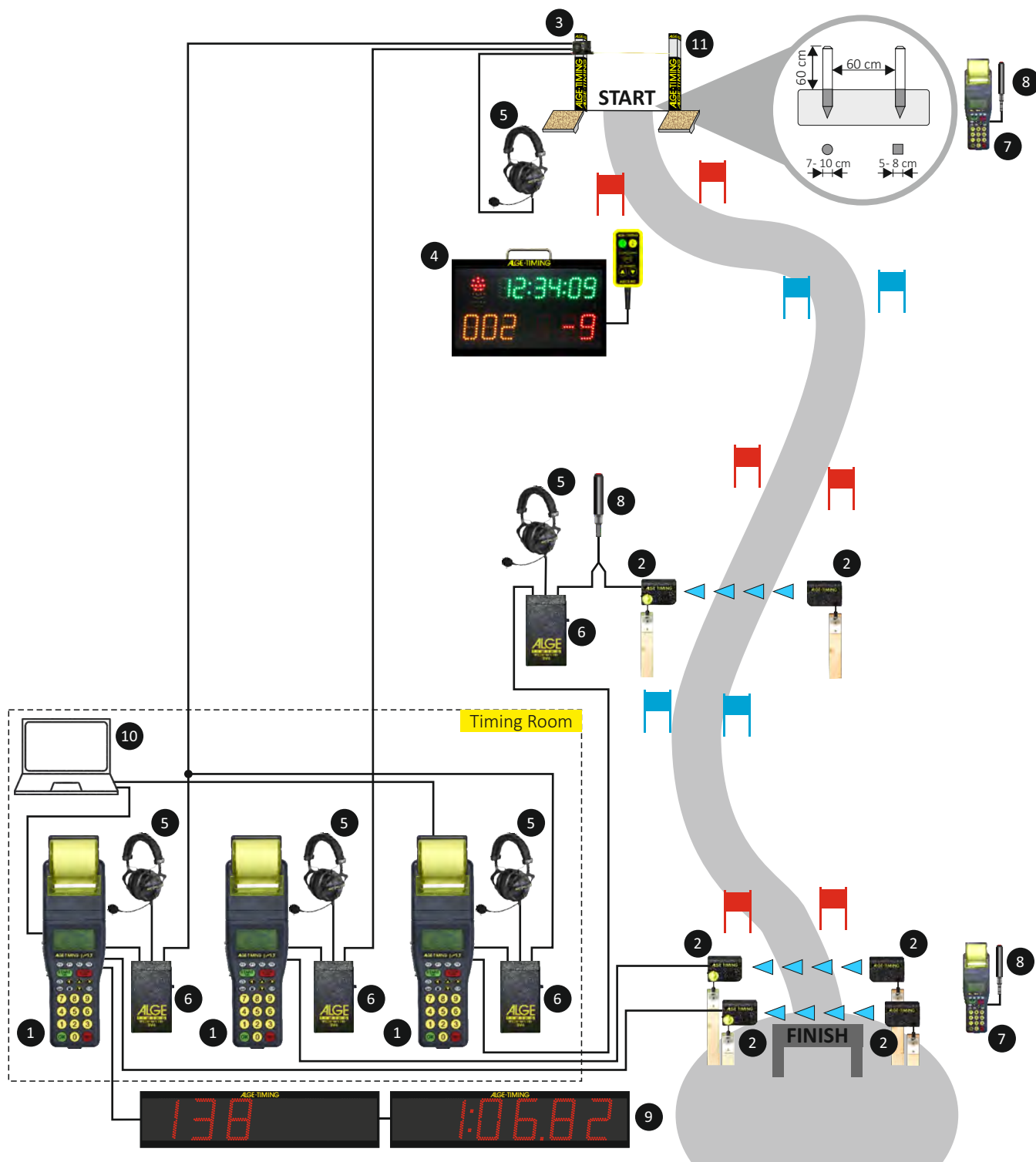
ALPINE SKIING

Timing System for FIS Level 1



The timing system shown below is set up as needed for FIS races or Continental Cup races (e.g. Europa Cup). An intermediate time is not mandatory. Using an intermediate time,

we recommend using a separate timing device, since a competitor could reach the intermediate the same time as another competitor goes through the finish.



- | | | | |
|---------------------|--------------------------|----------------------------|---------------------|
| 1 Timy3 WP | 4 Startclock ASC3 | 7 Timy3 WP (Manual Timing) | 10 Results Software |
| 2 Photocell PR1a | 5 Headset HS3-2 | 8 Push Button 023-02 | 11 Start Poles SSP |
| 3 Startgate STSnM2S | 6 Speech Amplifier SV4-S | 9 Display Board D-LINE | |

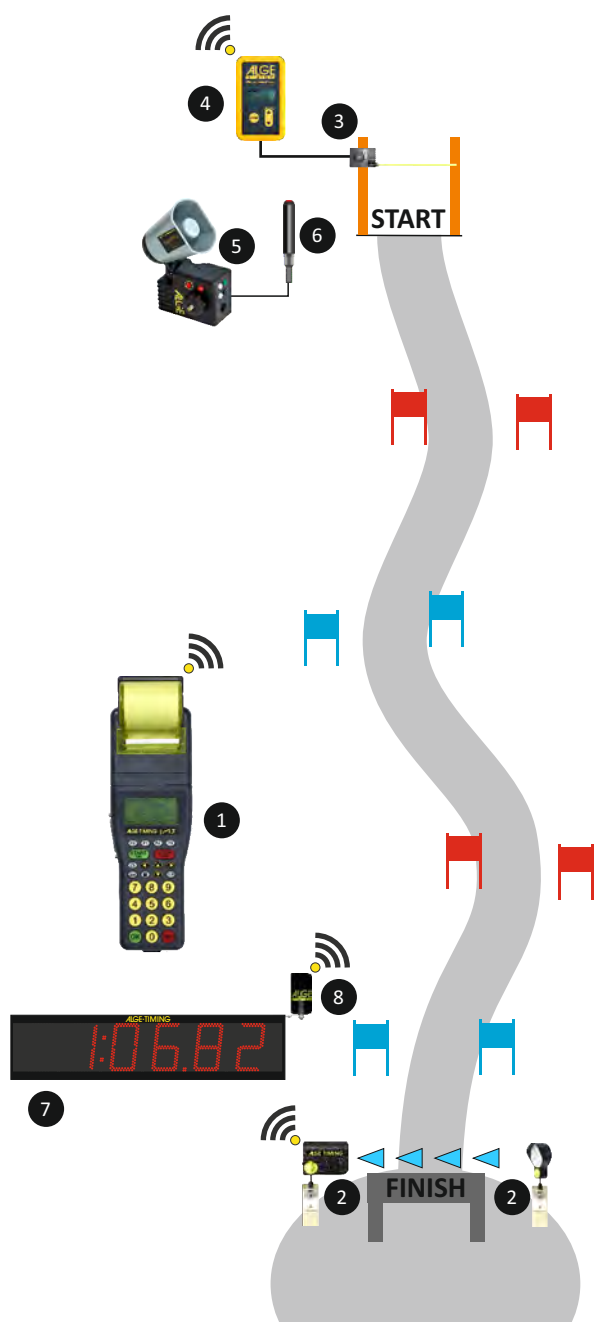


ALPINE SKIING

Training System with MT1 (Live Timing at Internet)

For children a ski race is the highlight of a visit to a ski school. it is important for them to show what you have learned during the past days. For the ski school itself, it is important that the timing system is easy to use and quick to set up.

Ski school races use a short distance, therefore the "Wireless Timing Network" WTN is ideal. It connects all devices by radio. If the timing system is equipped with a display board and a start beep, the race is a unforgettable experience for the participants.



1 Timy3 WP

FIS homologated high end timing device with for the timing professional with a large, easy-to-read graphic display, up to 8 timing channels and a log printer. USB interface and RS232 interface is integrated in the device for data transfer. A built-in WTN radio module enables wireless communication with other devices.



2 Photocell PR1aW-R

Photocell with transmitter/receiver unit and built-in radio WTN. The system consists of a photocell, reflector and chain brackets. The photocell can cover distances of up to 25 m.



3 Startgate STSnA1

Startgate with automatic reset of the start wand. I has one impulse output to start the timing device.



4 Wireless Timing Network WTN

The universal radio system WTN is used to forward the start impulse to the timing device.



5 Startbeep STB1

Device to handle the start professional. An acoustic start countdown indicates the start interval.



6 Push Button 023-02

to start the countdown of the STB1; rugged and water-resistant push button for manual timing with 2 m cable length to connect at the timing device



7 Display Board D-LINE

numeric display board with red 7-segment LED digits to show the time or bib (e.g. D-LINE250-O-6-E0)



8 Display Board Radio Receiver WTN-DB

to receive the data for the display board from the timing device.

1 Timy3 WP

2 Photocell PR1aW-R

3 Startgate STSnA1

4 WTN

5 Startbeep STB1

6 Push Button 023-02

7 Display Board D-LINE

8 WTN-DB

ALPINE SKIING

Training System with Radio TED

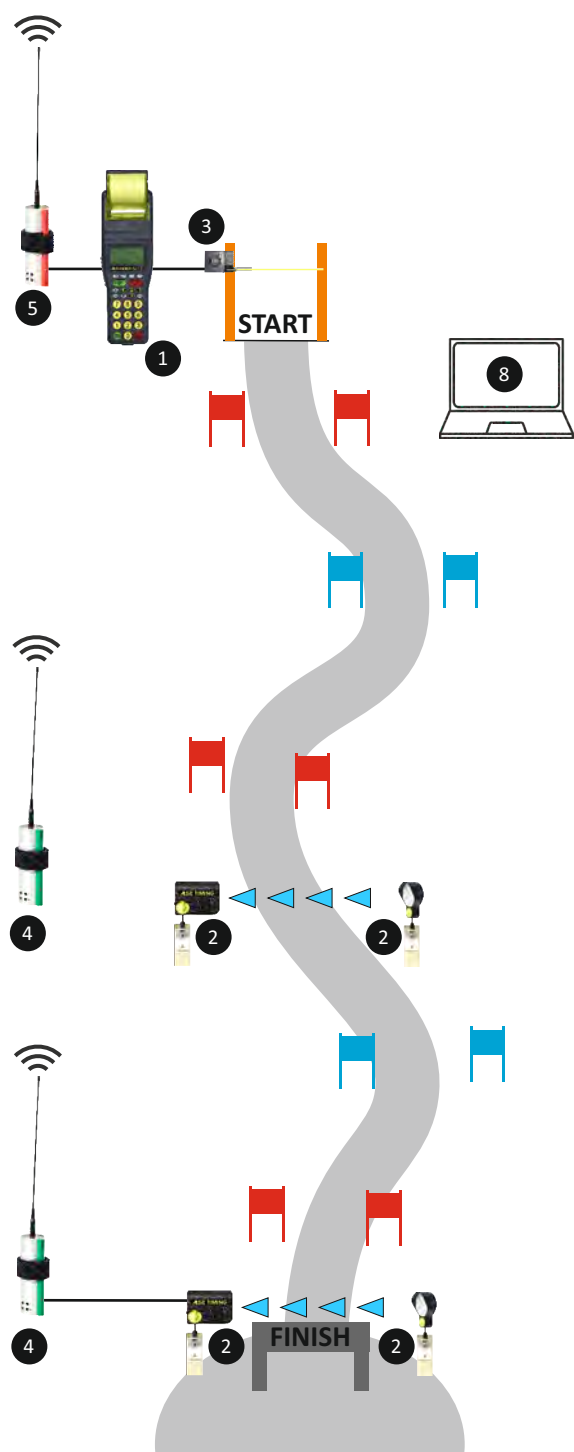








A large number of professional users, such as national ski teams, ski manufacturers, or waxing companies, use the ALGE-TIMING training system because they appreciate the high reliability and performance of the radio system TED400. Even on alpine terrain long distances can be bridged.

The timing device Timy3 is homologated for FIS races and can be

used for training or races. The radio system Teledata TED400 can also be used for FIS races up to level 3, when respecting the criteria for timing without cable between start and finish.

The training system shown here consists of start, split time and finish. It could support up to eight split times as well.



- 
1 Timy3 WP
 FIS homologated high end timing device with for the timing professional with a large, easy-to-read graphic display, up to 8 timing channels and a log printer. USB interface and RS232 interface is integrated in the device for data transfer. A built-in WTN radio module enables wireless communication with other devices.
- 
2 Photocell PR1a-R
 FIS homologated reflection photocells with transmitter and receiver in one case; including reflector, bracket and cable
- 
3 Startgate STSnA1
 with an automatic reset of start wand; optimal use for training
- 
4 Teledata TED-TX400
 radio transmitter with 400 mW for transmitting the timing impulses to the timing device; working distance up to 4.5 km
- 
5 Teledata TED-RX400
 radio receiver receives the timing impulses at the timing device
- 
6 Result Software Training
 ALGE-TIMING provides special designed software to evaluate the training results. Data transfer from Timy3 to PC is possible online or offline.

1 Timy3 WP

2 Photocell PR1a-R

3 Startgate STSnA1

4 Radio Transmitter TED-TX400

5 Radio Receiver TED-RX400



SPEED MEASUREMENT

Speedy

The Permanent Speed Check for Skiers

The ALGE-TIMING Speedy is a permanent speed check for skiers, with which every skier can measure his/her own speed. A radar measures the speed of an approaching skier und displays the speed on a display board. For the speed measurement a closed slope is recommended. Each skier has to go down the slope individually. The installation of the radar is very easy on a post at

the side of the speed measuring slope. Therefore, the maintenance of the slope is very easy.

The Speedy is used successfully in many ski resorts worldwide. Because of the attraction for skiers it is often installed on less frequented slopes to bring more skiers to that area.

1 Speedy 150-3-R:

LED display board D-LINE150-O-3-E0 with three digits with 150 mm digit height, radar D-RAD and cables

1 Speedy 250-3-R:

LED display board D-LINE250-O-3-E0 with three digits with 250 mm digit height, radar D-RAD and cables

2 Radar D-RAD:

radar to measure the speed of a skier

Technical Data

Power supply:	100- 240 VAC and 12 VDC
Power consumption:	max. 17 watts (Speedy 150-3-R) max. 37 watts (Speedy 250-3-R)
Operating temperature:	-30 °C to +40 °C
Speed:	from 1.0 to 99.9 km/h
Measuring unit:	km/h, m/s or mph



1 Display Board D-LINE150-O-3-E0 or D-LINE250-O-3-E

2 Radar D-RAD

TIMING DEVICES

Selftimer SF3



Self Service Timing for Permanent Race Courses

The Selftimer SF3 is an automatic timing system for skiing. duels with friends or family members. Thus, every skier can measure his time and make private ski



Components of the System

Display Board D-SF150-O-6-E0 or D-SF250-O-6-E0

Six extra bright, red LED digits with a figure height of 150 mm (D-SF150) or 250 mm (D-SF250) ensure the best visibility even in direct sunlight. The integrated electronic controls the entire SF3 system, including minimum and maximum run time and start light indicator. The display board shows either run time or speed. The display board can also be used with other ALGE-TIMING timing devices.



Selftimer Start Light SF3L

The start light is mounted at the start and regulates the starting sequence. The green light indicates that you can start, and the red light will light up after the start, until the previous competitor has reached the finish or a maximum run time has elapsed.



Startgate STSnA1

The startgate is used to trigger the start. The STSnA1 has a startwand that automatically closes and is equipped with a mounting chain.



Photocell PR1a

The photocell is used for the timing device at the finish or for the speed measurement. It consists of a transmitter/receiver unit and a reflector, both of which are easily and precisely aligned with a ball head. The photocell is screwed onto a mounting bracket and attached to a wooden post with a chain. A cover protects the lens of the photocell from rain and snow.



Display Board D-LINE150-O-6-E0 or D-LINE250-O-6-E0

In Comparison to the D-SF the D-LINE display board has no selftimer controller integrated. This display board can also be used at the start, so that the racers waiting at the start can see the times.

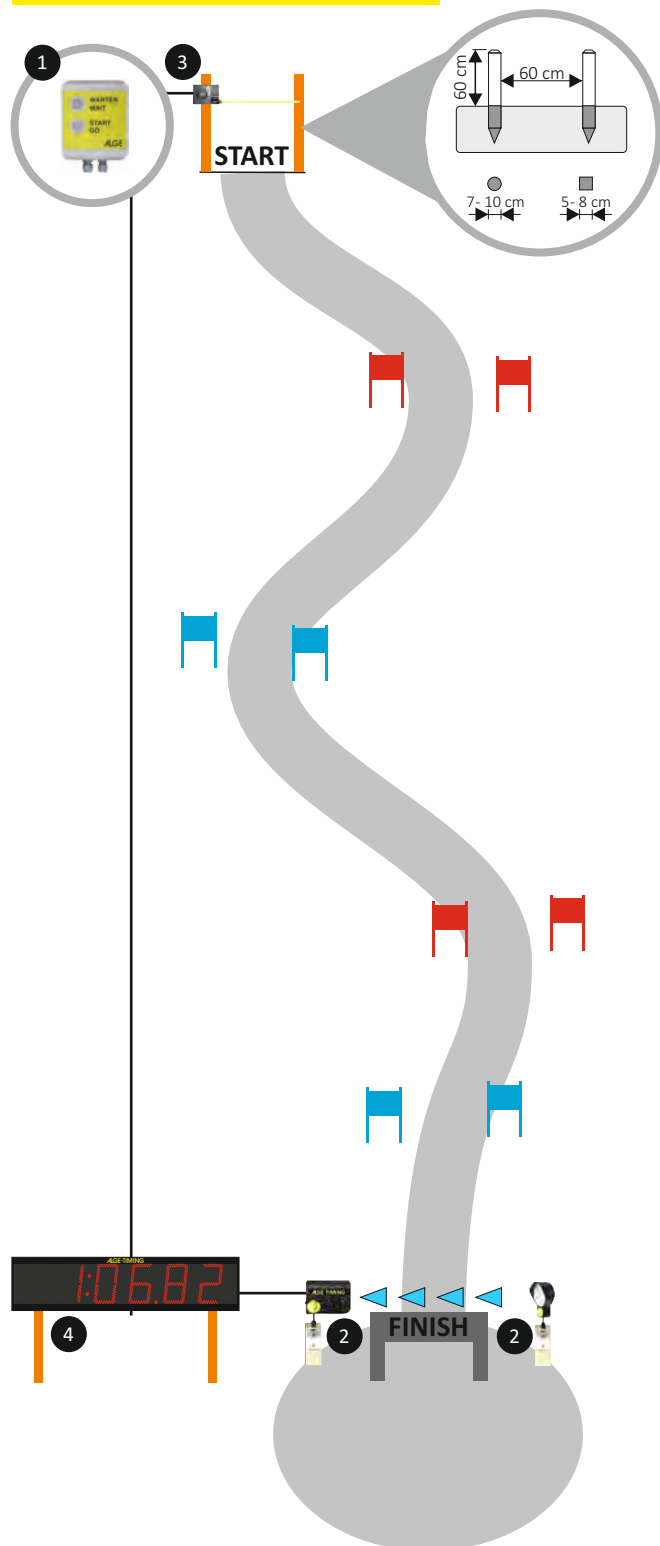




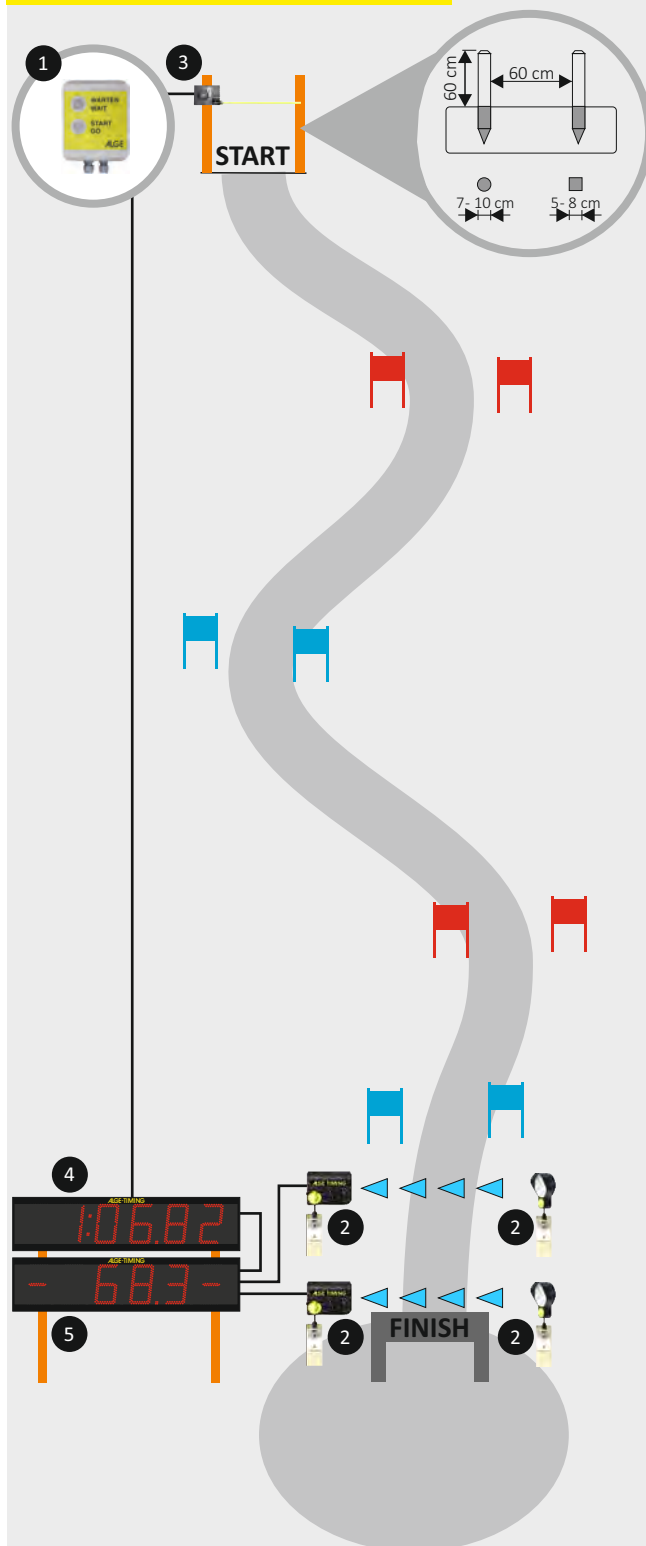
TIMING DEVICES

Selftimer SF3

Time Measurement



Time Measurement and Speed



1 SF3L

2 Photocell PR1a-R

3 Startgate STSnA1

4 Display Board D-SF150-O-6-E0
or D-SF250-O-6-E0 showing time

5 Display Board D-LINE
showing speed



Selftimer SF3

Selftimer SF3-L150

- with startgate and photocell
- display board 6-digit, LED, 150 mm digit height
- start light red and green

Selftimer SF3-L250

- same as SF3-L150
- display board 6-digit, LED, 250 mm digit height

Selftimer SF3-2L150

- same as SF3-L150
- second photocell for speed measurement at the finish line
- display alternately shows run time and speed

Selftimer SF3-2L250

- same as SF3-2L150
- display board with 250 mm digit height

Selftimer SF3-22L150

- same as SF3-L150
- second photocell for speed measurement at the finish line
- second display board (D-LINE150-O-6-E0) to display speed or runtime

Selftimer SF3-22L250

- same as SF3-22L150
- display board with 250 mm digit height

Technical Data

Power supply:	100- 240 VAC and 12 VDC, respectively
Power consumption:	max. 20 Watts for SF3-L150 or SF3-P150 max. 45 Watts for SF3-L250 or SF3-P250
Operating temperature:	-30 °C to +40 °C
Time resolution:	1/100 second
Run time:	24 hours
Time setting:	it is possible to set the minimum and maximum time allowed for a competitor

Necessary cables and connections:

Selftimer System with Start Light SF3L

Cable between start and display board: 1 pair (2-core cable)

Power supply: 100 – 240 VAC or 12 VDC for display board

A 2-core cable is required between the start and finish. The cable from the start to the finish is not included in the scope of delivery and must have a maximum loop resistance of 130 Ohm.



CROSS-COUNTRY SKIING

A wide range of timing devices and accessories are available from ALGE-TIMING for cross-country. Important is mainly the reliability and rugged design for difficult conditions like freezing temperatures and snow. Most of ALGE-TIMING's devices are homologated by the FIS (International Ski Federation). ALGE-TIMING has a long history in timing for cross-country. Although timing devices have been produced for many years, most of the older models are still compatible with the current ones.

The various disciplines in cross-country require different timing systems, which meet the special conditions of single start, mass start, pursuit or relay competitions.

For some disciplines a traditional timing system with startgate and photocell is sufficient, photo finish is mainly needed for events with mass arrival. The photo finish produces a photo finish picture of each competitor and allows to check the times, bib numbers or even correct times or arrival order.



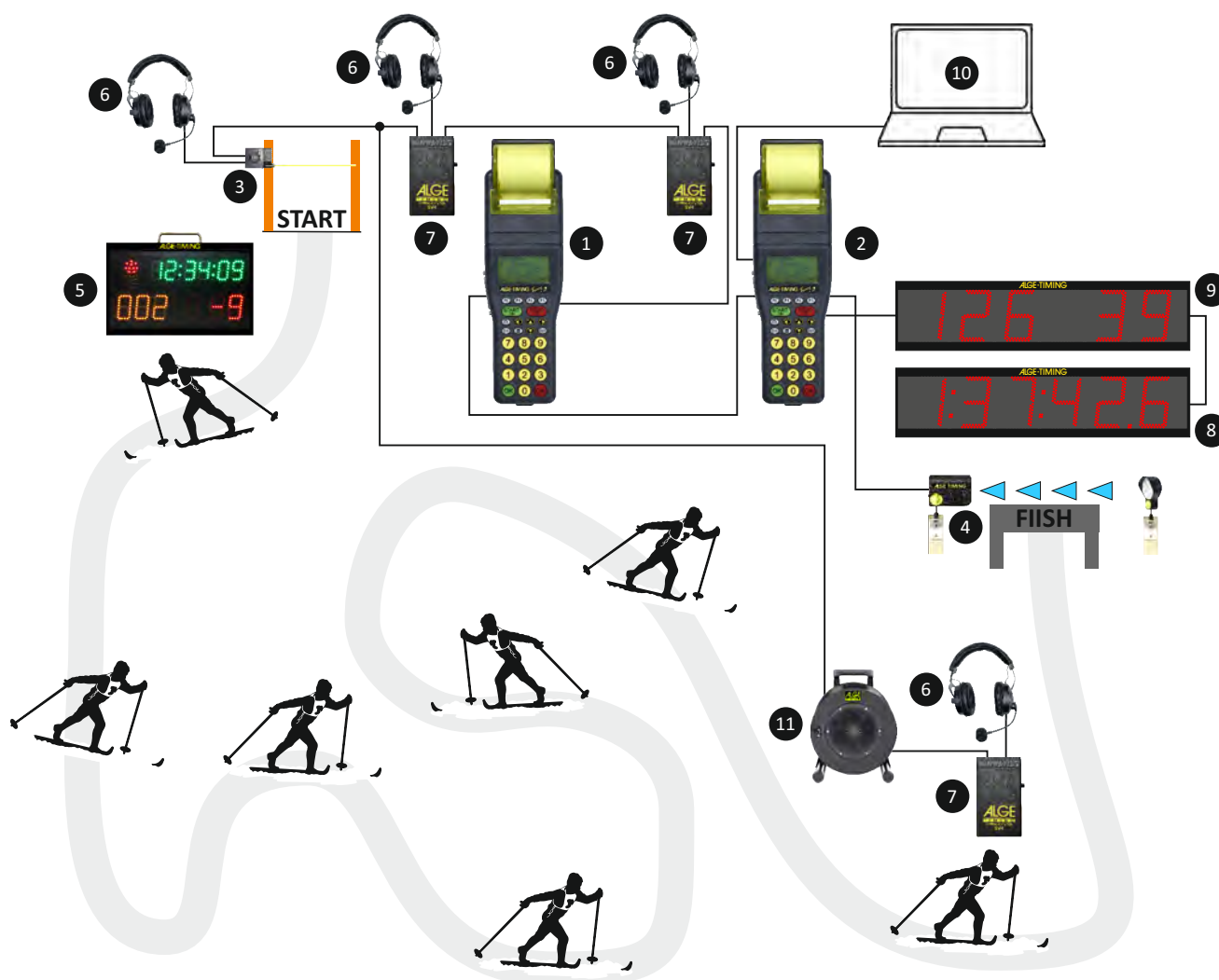
Individual Start / Sprint Qualification



The Startclock ASC3 automatically outputs the start interval visually (start light) and acoustically (speaker system) for an easy and regular start procedure. The start is affected by the competitor by triggering the startgate. The start operator and a finish arrival announcer are in contact with the timing operator

The timing device in the finish is triggered by a photocell and can be connected to a display board, so the spectators and athletes can see the run time immediately.

The timing system shown below for cross-country with individual start is a basic system. For event like FIS-races a backup timing system and a manual timing system is additional needed.



- | | | | | | |
|---|---------------------|---|-----------------------------|----|-----------------------------------|
| 1 | Timy3 WP for start | 5 | Startclock ASC3 | 9 | Display Board D-LINE (bib + rank) |
| 2 | Timy3 WP for finish | 6 | Headset HS3-2 | 10 | PC for Results Software |
| 3 | Startgate STSnM2S | 7 | Speech Amplifier SV4-S | 11 | Cable Reel KT300 |
| 4 | Photocell PR1a-R | 8 | Display Board D-LINE (time) | | |



CROSS-COUNTRY SKIING

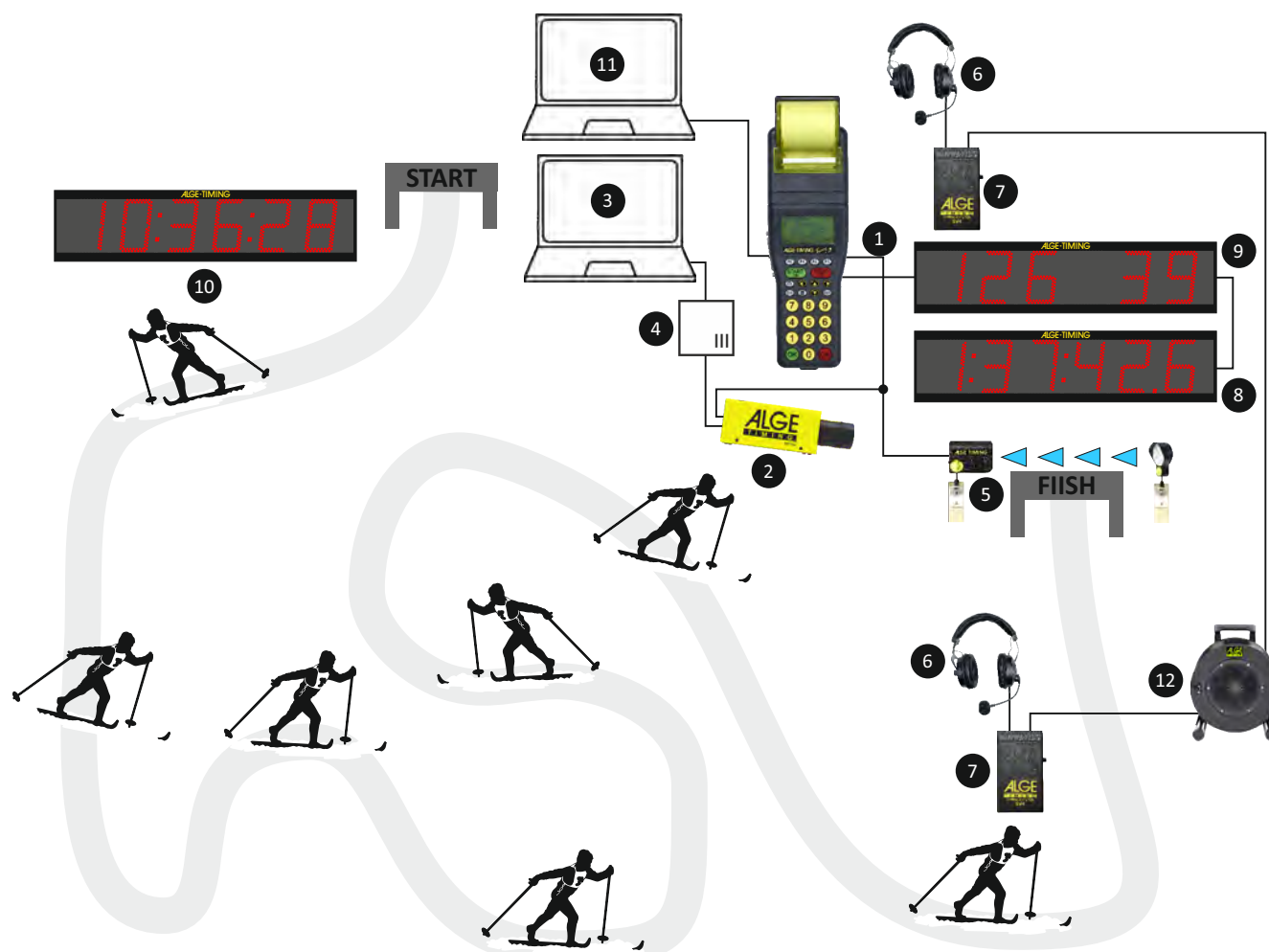
Pursuit / Gunderson Start

For Pursuit Races and Races with Gunderson Start the time of day is displayed at a display board at the start. This is needed by the racers and the start judge to know, when it is their turn to start. Alternative a start clock ASC1 can be used.

The finish arrival announcer is in contact with the timing operator using headsets.

At the timing device Timy3 the start times are input before the pursuit race starts. It can control a display boards, so the spectators and athletes can see the run time immediately.

Close finish arrivals of competitors can be evaluated on the photo finish picture.



- | | | |
|---------------------------|-------------------------------|---------------------------------------|
| 1 Timy3 WP | 5 Photocell PR1a-R | 9 Display Board D-LINE (bib + rank) |
| 2 Photo Finish OPTIc3 | 6 Headset HS3-2 | 10 Display Board D-LINE (time of day) |
| 3 PC for Photo Finish | 7 Speech Amplifier SV4-S | 11 PC for Results Software |
| 4 Power over Ethernet PoE | 8 Display Board D-LINE (time) | 12 Cable Reel KT300 |

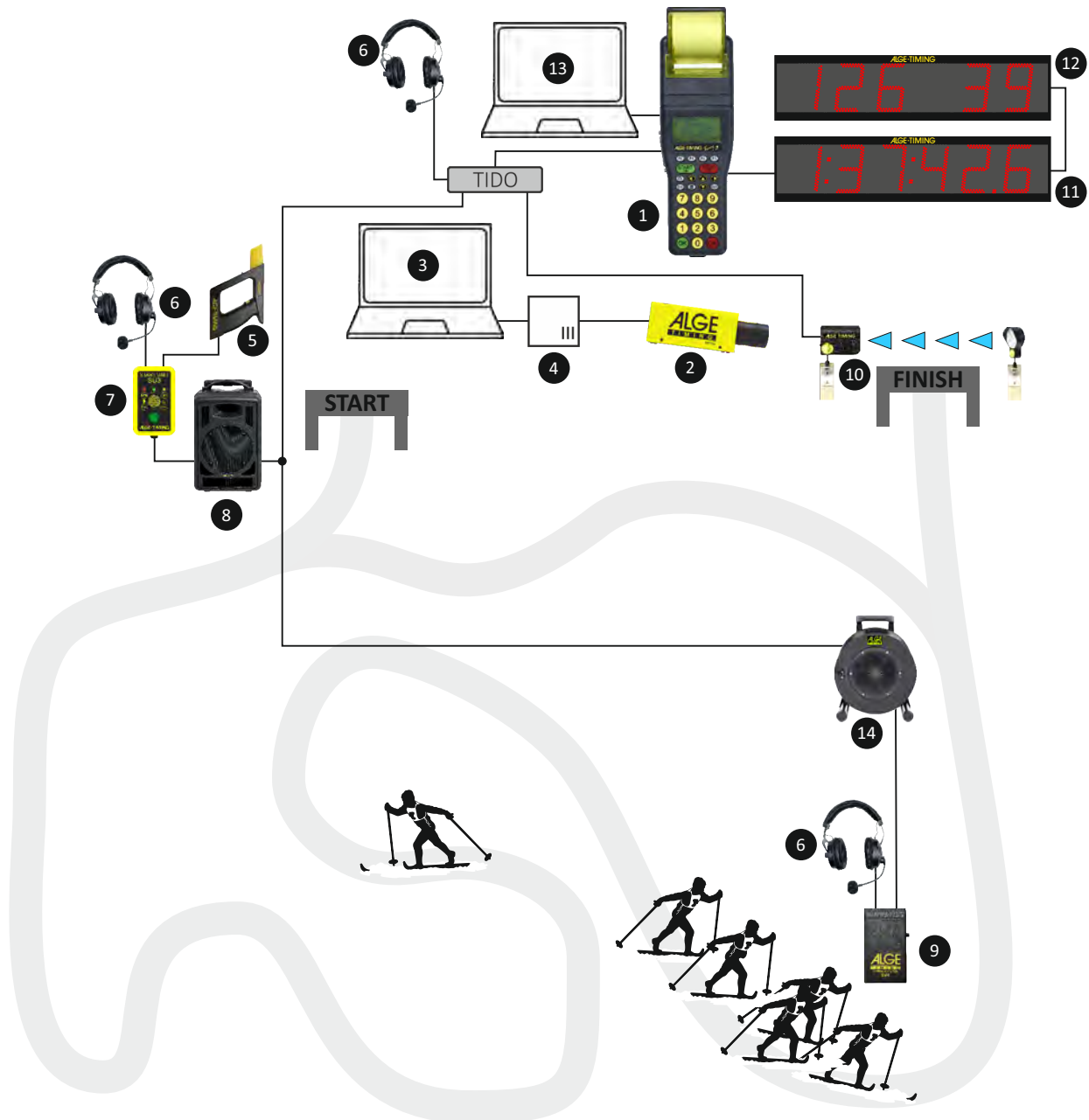
CROSS-COUNTRY SKIING

Relay and Mass Start Competitions



When having relay- or mass start races, an electronic or traditional start gun is used to start the complete competitor field. The start operator and a finish arrival announcer are in contact with the timing operator using headsets. When the photocell PR1a is triggered at the finish line, the arrival at the finish line is simultaneously recorded with the photo finish system.

Tight arrivals or missing bib numbers can be determined with the photo finish picture. The timing device Timy3 can control a display board, so the spectators and athletes can see the run time immediately.



- | | | |
|-------------------------------|--------------------------|--------------------------------------|
| 1 Timy3 WP | 6 Headset HS3-2 | 11 Display Board D-LINE (time) |
| 2 Photo Finish OPTIc3 | 7 Start Unit Su3 | 12 Display Board D-LINE (bib + rank) |
| 3 PC for Photo Finish | 8 Speakersystem BANG2 | 13 PC for Results Software |
| 4 Power over Ethernet PoE | 9 Speech Amplifier SV4-S | 14 Cable Reel KT300 |
| 5 electronic Startgun e-Start | 10 Photocell PR1a-R | |



CROSS-COUNTRY SKIING

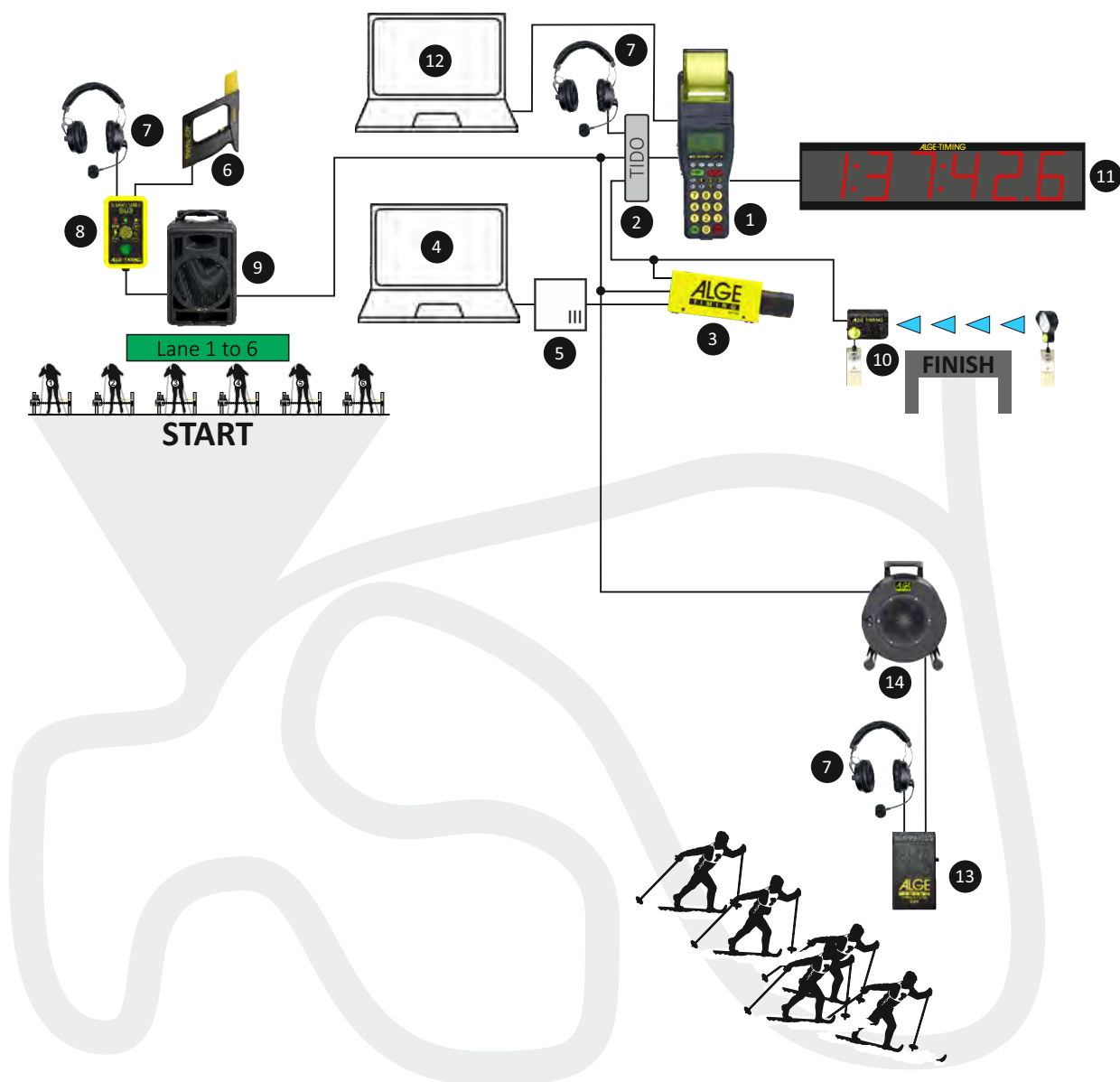
Sprint Final

For cross-country sprint final races, an electronic or traditional startgun can be used to start the racers. The starter must be very careful, that no competitor starts before the start tone.

A false start system is mandatory for FIS level 0 sprint races. This measures the time of the starting gun compared to the starting time of each runner. This means that the start can be checked at any time and runners that started too early can be disqualified (see next page).

The starter and finish announcer can communicate per headsets with the timing operator. The finish announcer is positioned short before the finish and announces for the timekeeper the bibs of the arriving runners.

When the photocell PR1a is triggered at the finish, the timing device is stopped and the photo finish makes a picture of each racer. Tide finish arrivals or missing bibs can be evaluated at the photo finish picture.



- | | | |
|-----------------------------|-------------------------------|--------------------------------|
| 1 Timy3 WP | 6 electronic Startgun e-Start | 11 Display Board D-LINE (Time) |
| 2 Timy Docking Station TIDO | 7 Headset HS3-2 | 12 PC for Results |
| 3 Photo Finish OPTIc3 | 8 Start Unit SU3 | 13 Speech Amplifier SV4-S |
| 4 PC for Photo Finish | 9 Speaker System BANG2 | 14 Cable Reel KT300 |
| 5 Power over Ethernet PoE | 10 Photocell PR1a-R | |

CROSS-COUNTRY SKIING

Sprint Final



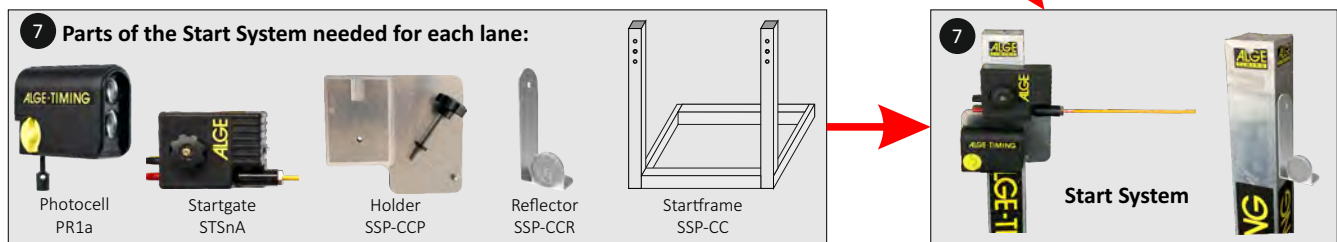
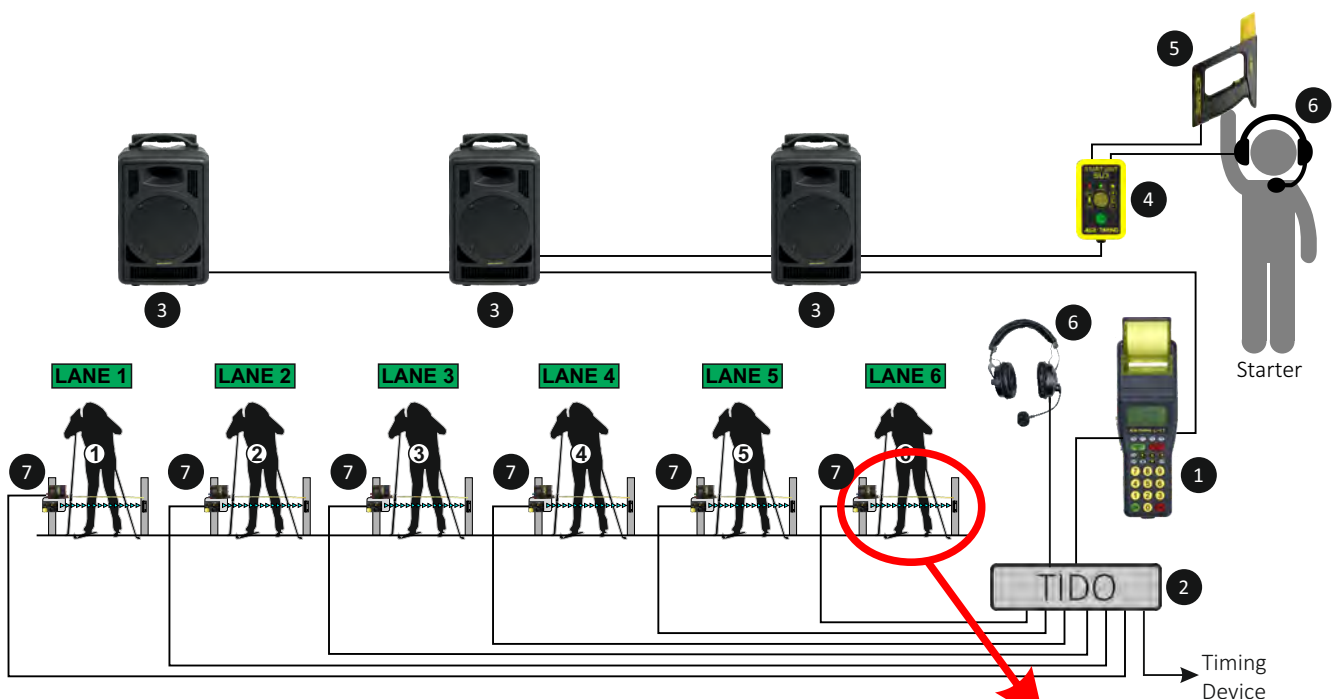
False start system "CC-False Start"

The false start system can control up to 8 start lanes. The actual start time (start sound) is compared with the start time of each runner. If the start time of a runner is negative (started before the start sound), then he made a false start and can be disqualified.

The measurement of the start time of each runner takes place via a photocell which is set up at the start poles. In addition to the photocell a startgate is set up so the racers have a defined starting line.

The system includes one or more speaker systems BANG2. The starter can use it to give start commands to the runners. When the starter triggers the electronic startgun e-Start the speaker system makes a start sound.

All start times are saved in the memory of the timing device Timy3 WP and recorded on an internal printer.



- | | | |
|--|-------------------------------|-------------------------|
| 1 Timy3 WP with Prog. „CC False Start“ | 4 Start Unit SU3 | 7 Start System per Lane |
| 2 Timy Docking Station TIDO | 5 electronic Startgun e-Start | |
| 3 Speaker System BANG2 | 6 Headset HS3-2 | |



SKI JUMPING

The handling of ski jumping competitions requires the right technical equipment that is very unique.

A system for speed measurement, a start display board D-SDA1S, a wind measuring system, judges terminals and a video width

measuring system might be necessary depending on the importance of the event. Further ALGE-TIMING supplies also the connection boxes for all devices that are used all over the jumping hill for a fix cable installation.



Start Display Board D-SDA1-S

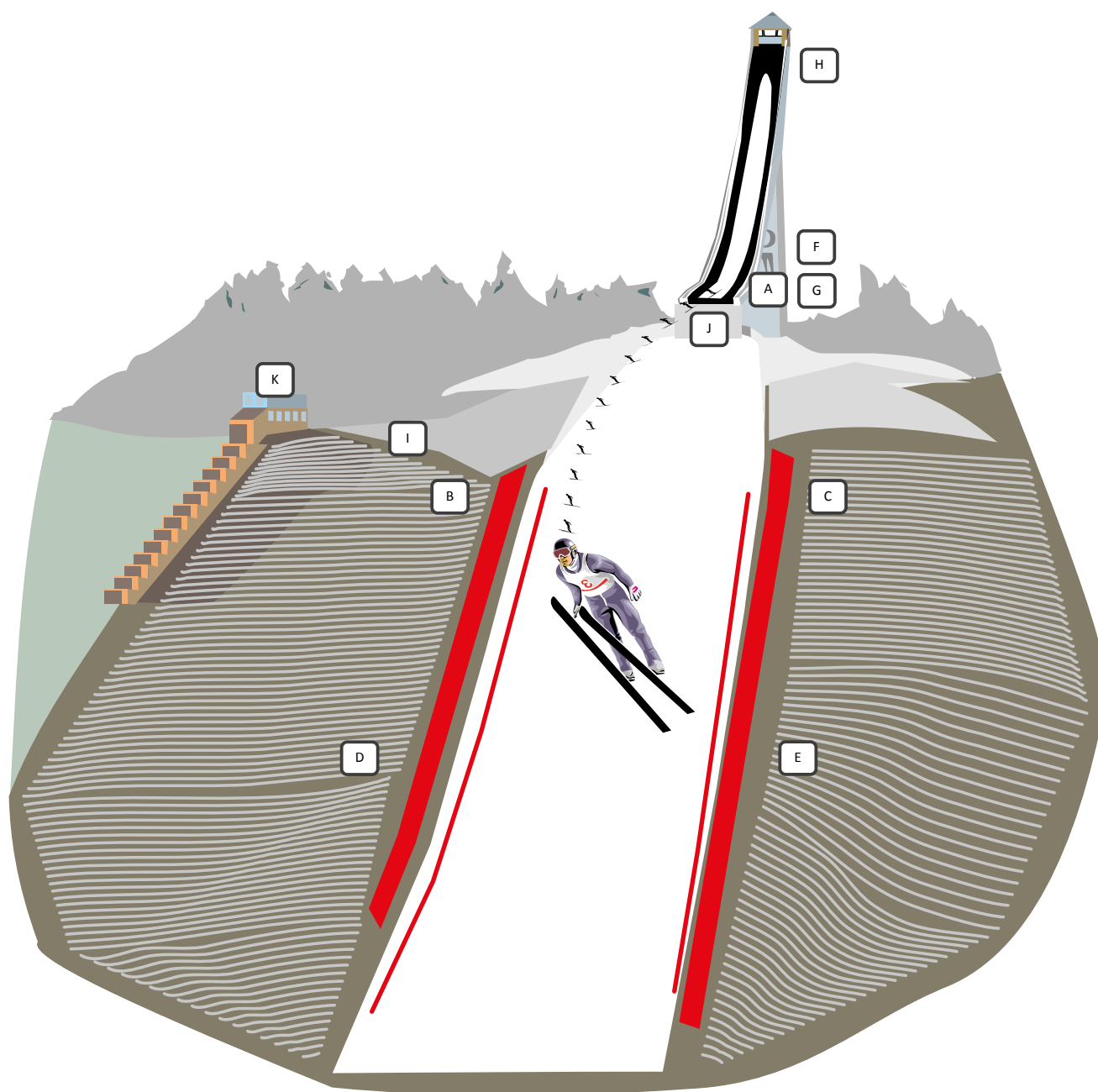
The LED display board D-SDA1 shows the red, yellow and green phase, each with a two-digit countdown with a digit height of 9 cm and a start light.

The system consists of a controller Timy3 W and one or two display boards, which are usually set up at the start and at the coach platform. The time of the countdown phases can be set individually in the controller and stopped at any time. The operation of the lights corresponds with the FIS specifications.



SKI JUMPING

Installation



A - SJB-Wind
B - SJB-Wind
C - SJB-Wind
D - SJB-Wind
E - SJB-Wind
F - SJB-Speed
G - SJB-Speed
H - SJB-SD
I - SJB-TD
J - SJD-Jump
K - SJD-Cent

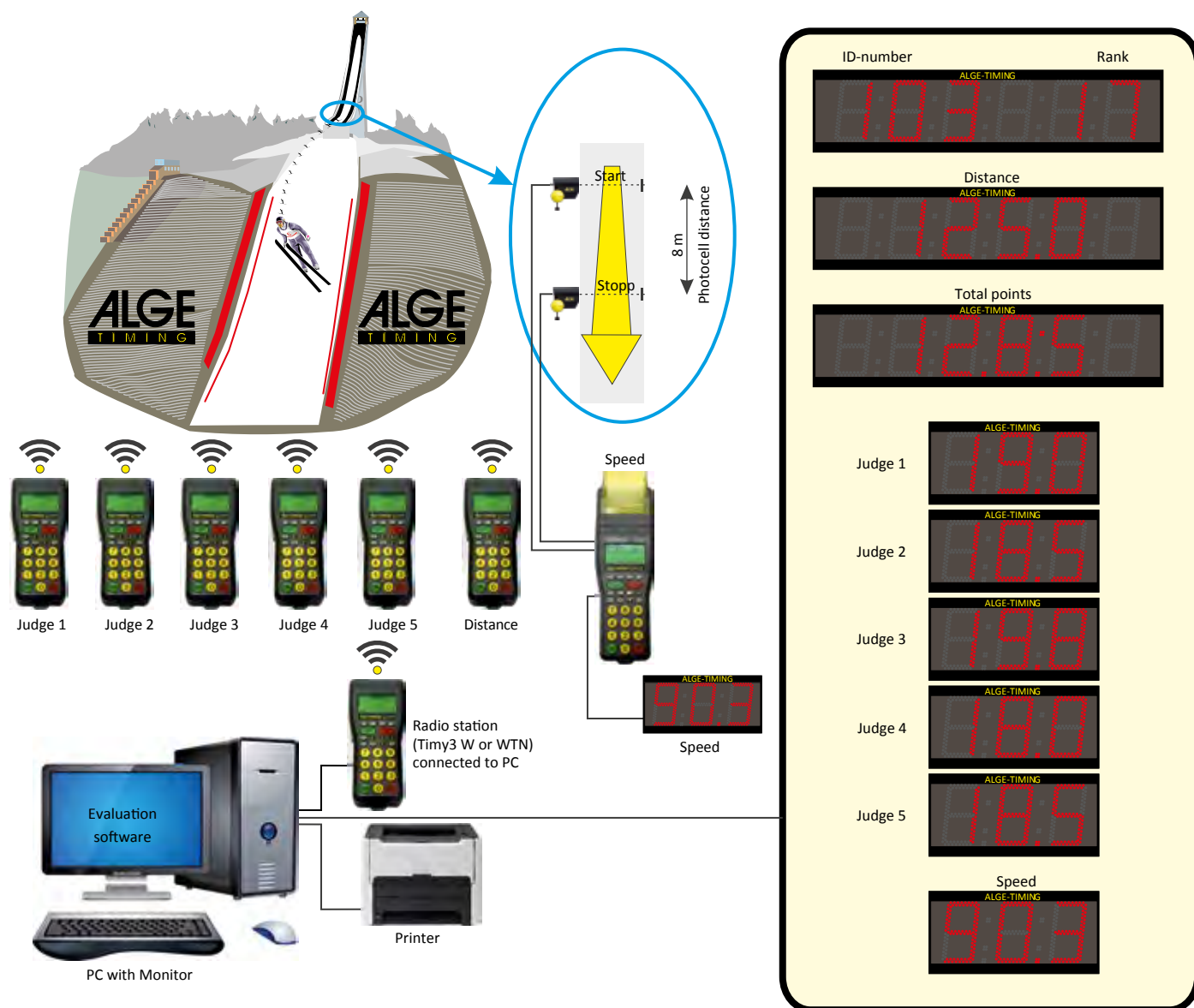
take off area
landing area
landing area
landing area
landing area
take off area
take off area
starting area
trainer sector
take off area
judges tower

distribution box for anemometer
distribution box for anemometer 1 - left side
distribution box for anemometer 1 - right side
distribution box for anemometer 2 - left side
distribution box for anemometer 2 - right side
distribution box for speed trap - photocell 1
distribution box for speed trap - photocell 2
distribution box for start display board
distribution box for coach display board
jumping hill distribution box
central distribution box



SKI JUMPING

Judge Terminals and Speed Measurement



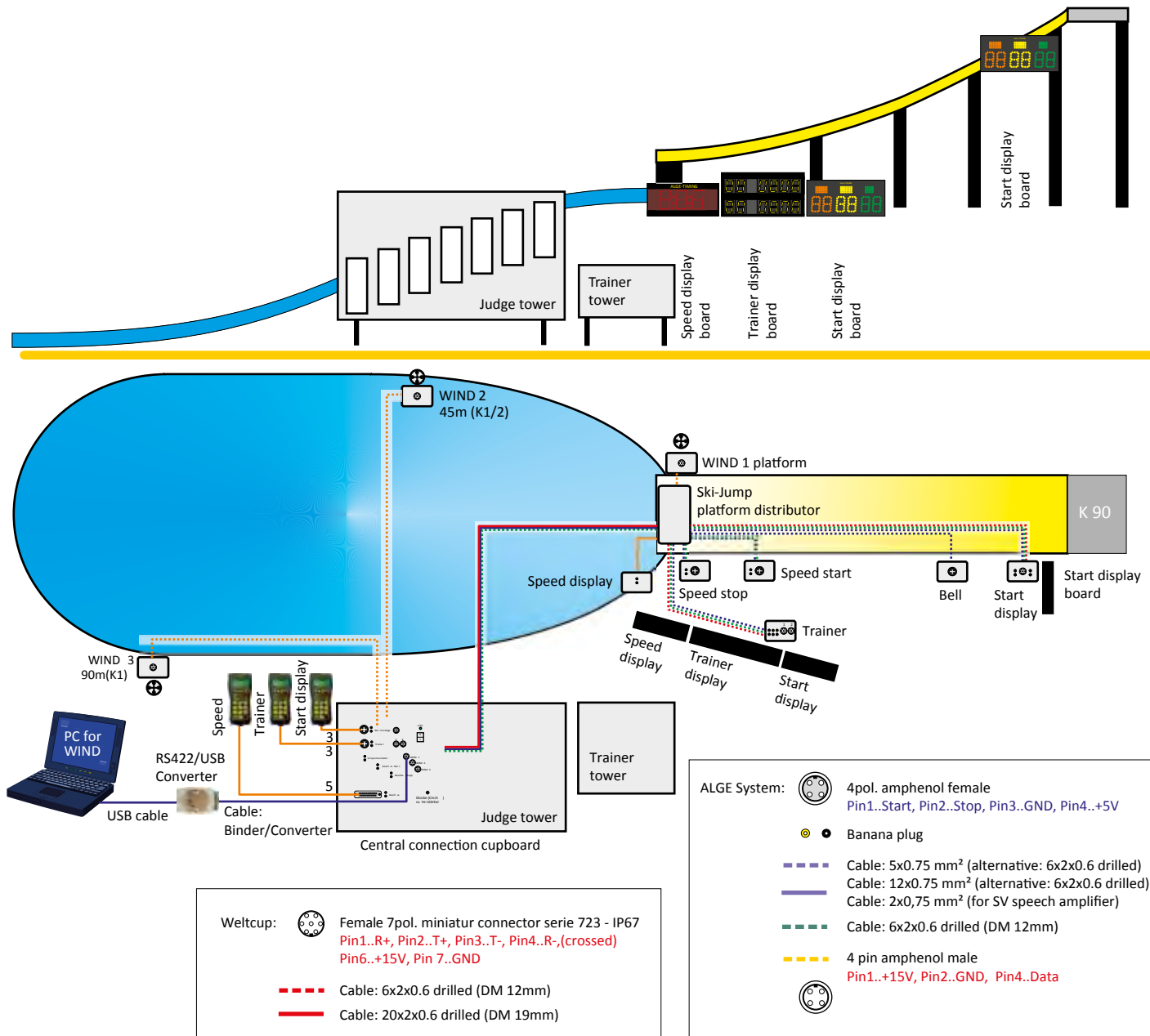
Each judge has a Timy3 W terminal for input of points. The terminals are connected by a Wireless Timing Network (cable free radio network) to each other and the PC. On the PC runs a ski jumping results software. The display boards are controlled directly from the PC.

The speed measurement is also carried out via a Timy3, which directly controls the speed display board and therefore can also be used for training.

The jumping distance can be input manually through a terminal Timy3 or directly at the PC. When using a video distance measuring system, the distance is received online from this system (FIS homologated video distance measuring systems on demand).

SKI JUMPING

System Overview



The Anemometer (Wind Speed Indicator)

A three-dimensional anemometer with PC software that indicates the wind direction is needed for the ski jumping hill. Three to seven points exist where a wind anemometer can be installed. For events, one to three anemometers are used depending on the size of the ski jumping hill and the event level. A PC reads the anemometer data and displays the wind information. This PC is situated with the chief of race.





SPEED SKATING

Timing System with Radio

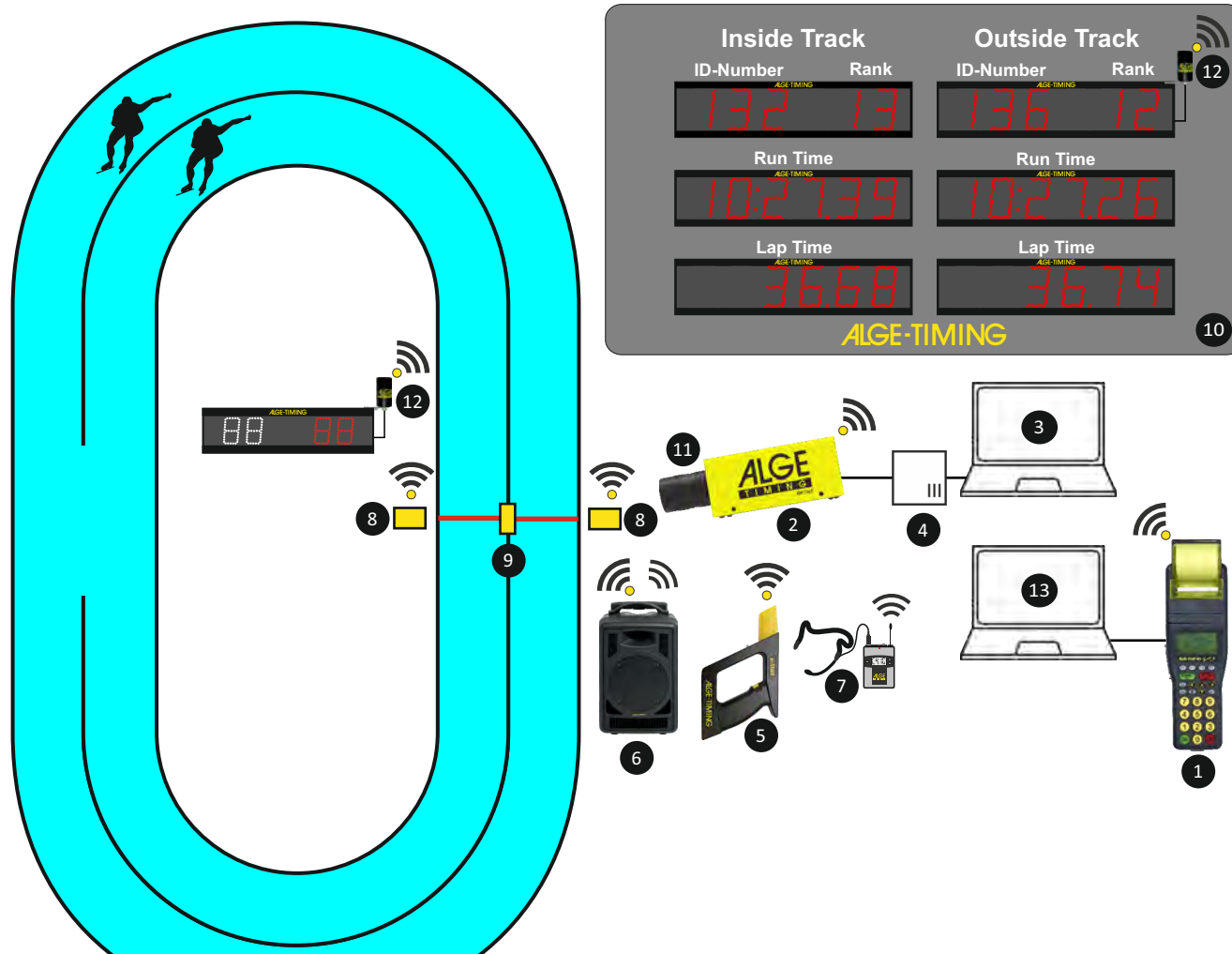
Timing for speed skating is quite complicated, as the two participants in a race change the course each lap (inner curve-outer curve). To ensure the easiest timing operation, we recommend the Timy3 as a timing device in combination with a timing and result software on the PC. The Timy3 registers all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

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

SPEED SKATING

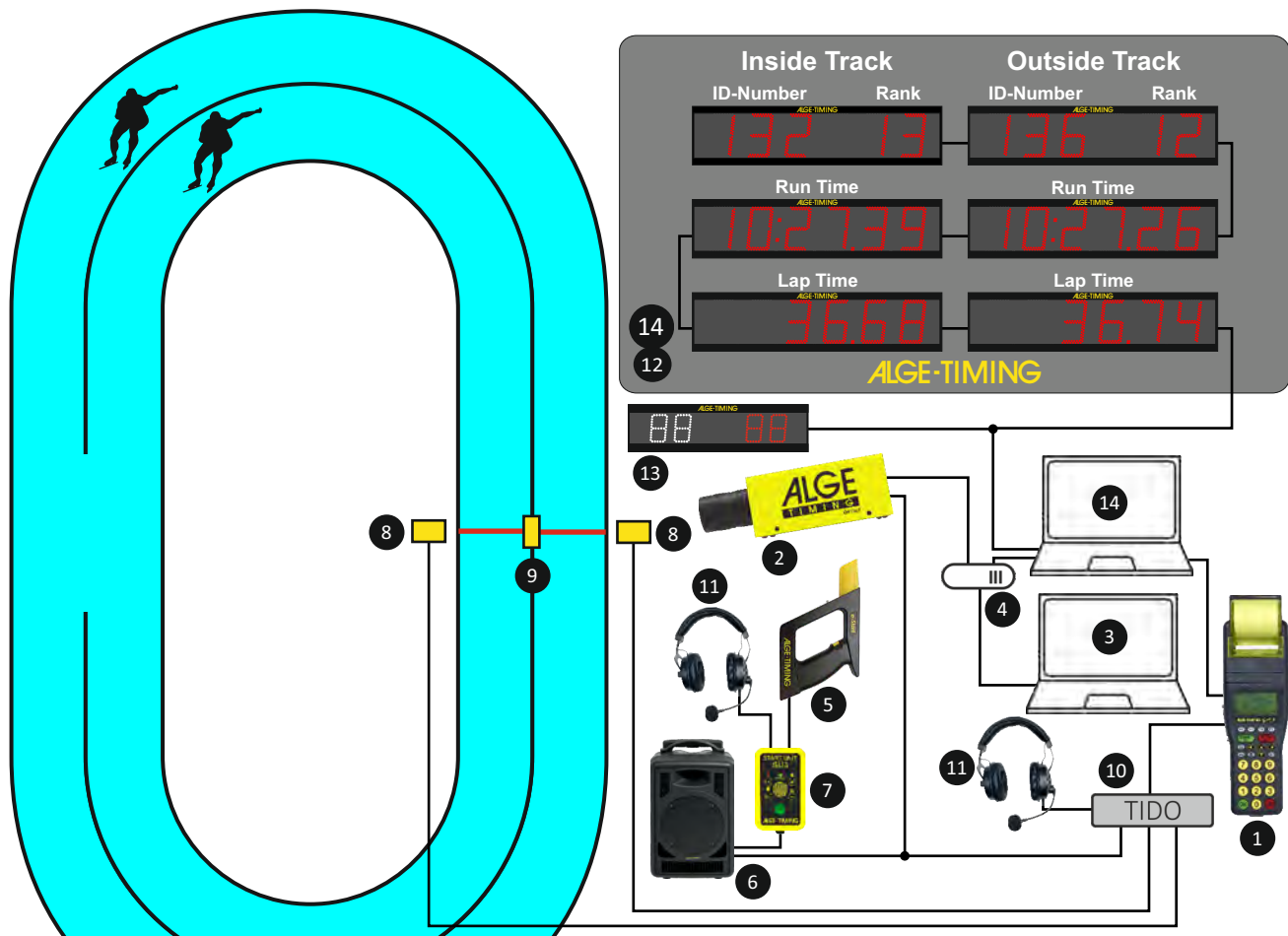
Timing System with Cable



This 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

communication. The starter can give commands to the participants at the start via the BANG2 loud-speaker system.

As timing system we recommend as well the Timy3 WP and the OPTIc3.



- | | | |
|---------------------------|--|--|
| 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 | |

Photocells for Ice-Sports

Photocell PR1A and PR1aW

Reflection photocell with transmitter and receiver in one case with integrated socket joint. The type PR1aW has additional a radio WTN integrated. For ice sports a holder ICE-FH1 is necessary.

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 photocell on the ice





SHORT TRACK - INLINE SKATING

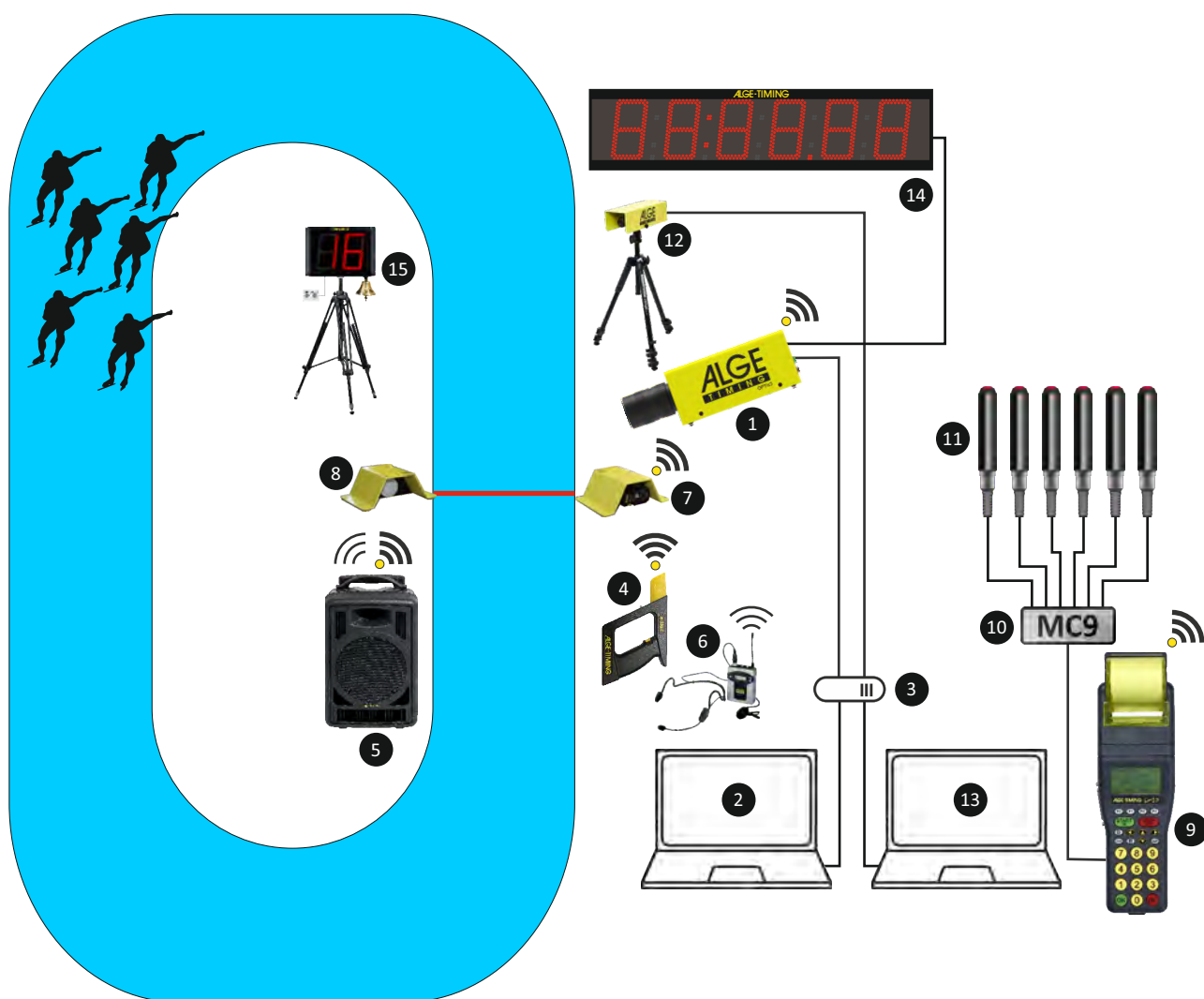
This timing system can be used for short track or inline skating (oval track). An electronic starting pistol e-Start or e-Start W and a loudspeaker system BANG2 are used for starting with a cable or radio connection.

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.

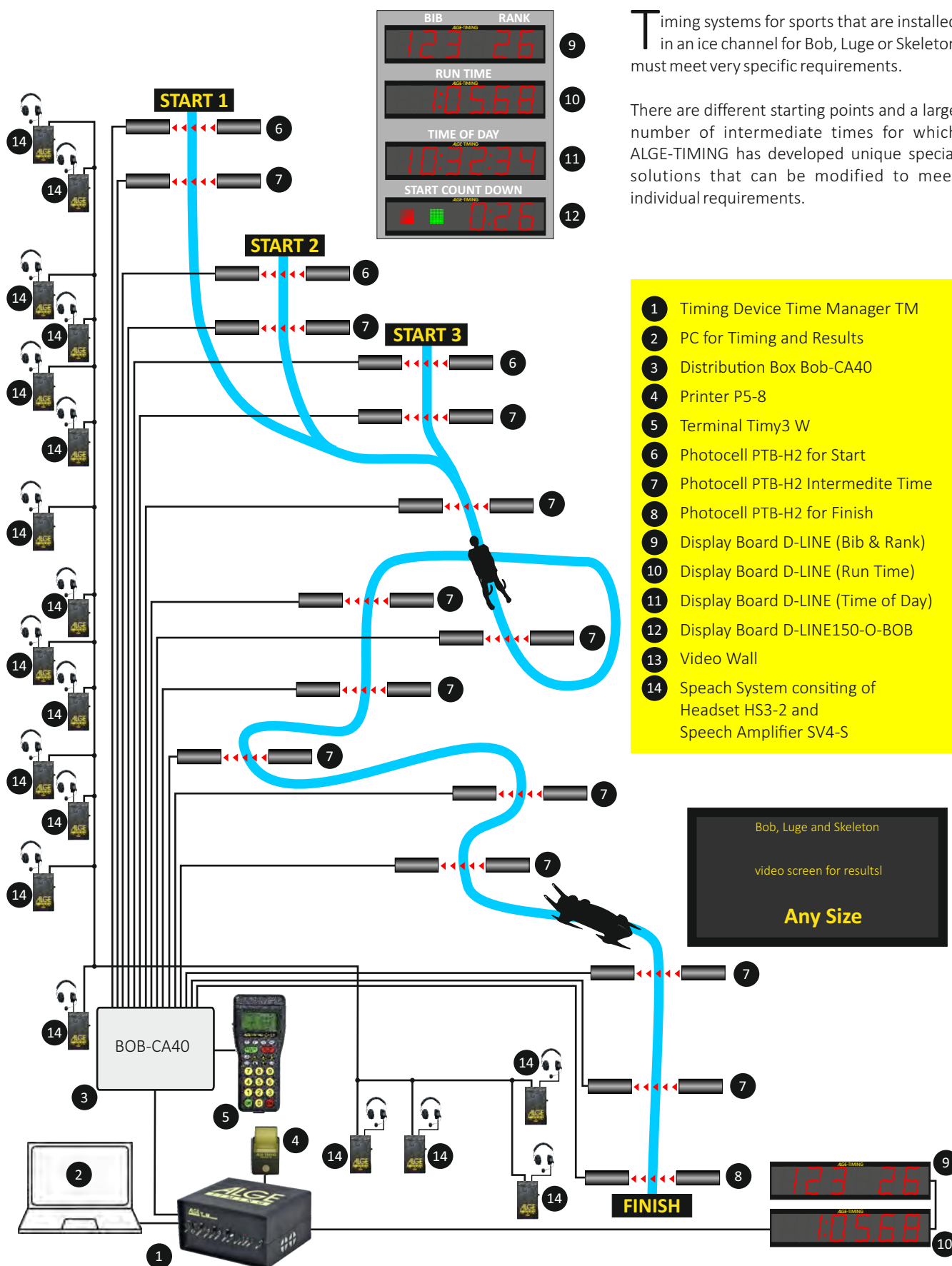
The Timy3 WP is a backup system in which each participant is stopped with a separate push button.

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 |

BOB - LUGE - SKELETON





SOCCER / FOOTBALL



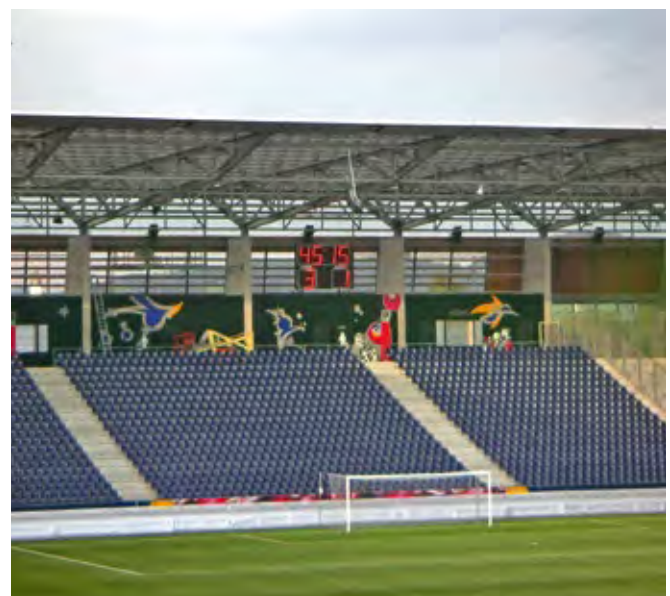
SOCCER / FOOTBALL

Scoreboards



Soccer scoreboards are used for small sport facilities, but also in large soccer stadiums and must meet different requirements. In order to guarantee the best possible readability, the scoreboards are available with digit heights from 30 to 150 cm. The brightness of the scoreboard is adapted to the ambient

light, which means that the red LEDs are also very well readable in direct sunlight. In dark light conditions, such as at night, the brightness can be reduced. The scoreboard is controlled by a control console connected by cable or radio.





SOCCKER / FOOTBALL

Scoreboards

These soccer scoreboards count the game time in minutes (two digits) and the score, which is displayed, depending on the model, from 0 to 9 or from 0 to 19 for each team. The display board is controlled by radio using a simple control panel with 3 buttons.

The models are mainly designed for outdoor use and include a soccer scoreboard with radio receiver D-RX and control unit D-CKNF-TXA.

D-LINE300-O-4-E2

Digit height: 30 cm
Readability: up to approx. 150 m
Game time: 2 digits in minutes
Score: per team, from 0 to 9

D-LINE300-O-2 + 2x19-E1

Digit height: 30 cm
Readability: up to approx. 150 m
Game time: 2 digits in minutes
Score: per team, from 0 to 19

D-LINE450-O-4-E2

Digit height: 45 cm
Readability: up to approx. 200 m
Game time: 2 digits in minutes
Score: per team, from 0 to 9

D-LINE450-O-2 + 2x19-E1

Digit height: 45 cm
Readability: up to approx. 200 m
Game time: 2 digits in minutes
Score: per team, from 0 to 19

D-FB300-4-O-WR

Digit height: 30 cm
Readability: up to approx. 150 m
Game time: 2 digits in minutes
Score: per team, from 0 to 9

D-FB300-2 + 2xH-O-WR

Digit height: 30 cm
Readability: up to approx. 150 m
Game time: 2 digits in minutes
Score: per team, from 0 to 19

D-FB300/450-2 + 2xH-O-WR

Digit height: 45 cm and 30 cm
Readability: up to approx. 200 or 150 m
Game time: 2 digits in minutes (45 cm)
Score: per team from 0 to 19 (30 cm)

D-FB450-4-O-WR

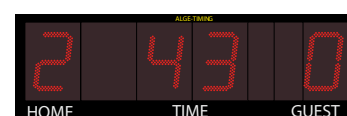
Digit height: 45 cm
Readability: up to approx. 200 m
Game time: 2 digits in minutes
Score: per team, from 0 to 9

D-FB450-2 + 2xH-O-WR

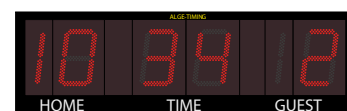
Digit height: 45 cm
Readability: up to approx. 200 m
Game time: 2 digits in minutes
Score: per team, from 0 to 19



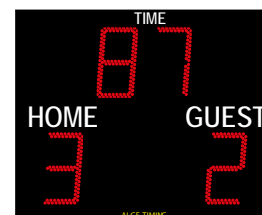
D-CKNF-TXA



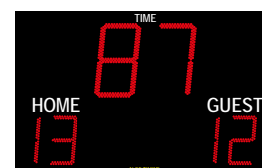
D-LINE450-O-4-E2



D-LINE450-O-2+2x19-E1



D-FB300-4-O-WR



D-FB300-450-2+2xH-O-WR



D-FB450-2+2xH-O-WR

SOCCER / FOOTBALL

Scoreboards



The scoreboard models show the score and time next to each other (one line). Outside it shows the score and in the middle the time. The models that are used for soccer only consist of four digits, that show the game time in minutes and seconds. The models that are for soccer and athletics have six digits. When used for athletics it shows the run time in minutes, seconds and 1/100th. The score for each team is from 0 to 9 or 0 to 19 depending on the model.

The controller has an integrated display. The standard model needs a cable between the scoreboard and the controller. On request, the scoreboard is controlled by a radio. The scoreboard is designed for outdoor use and figure heights of 30 and 45 cm are available.

D-LINE300-O-6-E2-T

Digit height: 30 cm
Readability: up to 150 m
Game time: 4 digits in minutes and seconds
Score: per team, from 0 to 9

D-LINE450-O-6-E2-T

Digit height: 45 cm
Readability: up to 200 m
Game time: 4 digits in minutes and seconds
Score: per team, from 0 to 9

D-LINE300-O-4 + 2 x 19-E1

Digit height: 30 cm
Readability: up to 150 m
Game time: 4 digits in minutes and seconds
Score: per team, from 0 to 19

D-LINE450-O-4 + 2 x 19-E1

Digit height: 45 cm
Readability: up to 200 m
Game time: 4 digits in minutes and seconds
Score: per team, from 0 to 19

D-LINE300-O-8A-E2 (also for athletics)

Digit height: 30 cm
Readability: up to 150 m
Game time: 6 digits in minutes, seconds and 1/100 seconds
Score: per team, from 0 to 9

D-LINE450-O-8A-E2 (also for athletics)

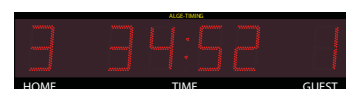
Digit height: 45 cm
Readability: up to 200 m
Game time: 6 digits in minutes, seconds and 1/100 seconds
Score: per team, from 0 to 9

D-LINE300-O-6 + 2x19-E1 (also for athletics)

Digit height: 30 cm
Readability: up to 150 m
Game time: 6 digits in minutes, seconds and 1/100 seconds
Score: per team, from 0 to 19

D-LINE450-O-6 + 2x19-E1 (also for athletics)

Digit height: 45 cm
Readability: up to 200 m
Game time: 6 digits in minutes, seconds and 1/100 seconds
Score: per team, from 0 to 19



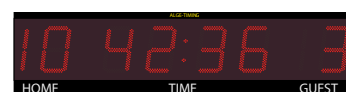
D-LINE300-O-6-E2-T



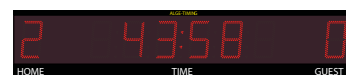
D-LINE450-O-6-E2-T



D-LINE300-O-4+2x19-E1



D-LINE450-O-4+2x19-E1



D-LINE300-O-8A-E2 in soccer mode



D-LINE300-O-8A-E2 in athletics mode



D-LINE450-O-8A-E2 in soccer mode



D-LINE450-O-8A-E2 in athletics mode



D-LINE300-O-6 + 2 x 10-E1 in soccer mode



D-LINE450-O-6 + 2 x 19-E1 in athletics mode



SOCCKER / FOOTBALL

Scoreboards

These soccer scoreboards display the game time with 4 digits, in minutes and seconds. Some models can display the time with 6-digits and are usable as well for athletics competitions. Depending on the model, the score will be 0 to 9 or 0 to 19, per team.

The controller has an integrated display. The standard model needs a cable between the scoreboard and the controller. On request, the scoreboard is controlled by a radio. The scoreboard is designed for outdoor use and figure heights of 30, 45, 60, 100 and 150 cm are available.

D-FB3-19-300

Digit height: 30 cm
Readability: up to 150 m
Game time: 4 digits in minutes and seconds
Score: per team, from 0 to 19

D-FB3-19-600

Digit height: 60 cm (23.6 inches)
Readability: up to 250 m
Game time: 4 digits in minutes and seconds
Score: per team, from 0 to 19

D-FB3-19-A-300

Digit height: 30 cm
Readability: up to 150 m
Game time: 6 digits in minutes, seconds and 1/100 seconds
Score: per team, from 0 to 19

D-FB3-19-A-600

Digit height: 60 cm (23.6 inches)
Readability: up to 250 m
Game time: 6 digits in minutes, seconds and 1/100 seconds
Score: per team, from 0 to 19

D-FB3-19-450

Digit height: 45 cm
Readability: up to 200 m
Game time: 4 digits in minutes and seconds
Score: per team, from 0 to 19

D-FB3-19-1000

Digit height: 100 cm (39.4 inches)
Readability: up to 400 m
Game time: 4 digits in minutes and seconds
Score: per team, from 0 to 19

D-FB3-19-A-450

Digit height: 45 cm
Readability: up to 200 m
Game time: 6 digits in minutes, seconds and 1/100 seconds
Score: per team, from 0 to 19

D-FB3-19-1500

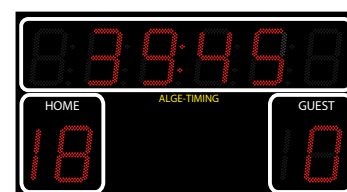
Digit height: 150 cm
Readability: up to 600 m
Game time: 4 digits in minutes and seconds
Score: per team, from 0 to 19

D-FB3-19-600/450

Digit height: 60 cm and 45 cm
Readability: up to 250 m or 200 m
Game time: 4 digits in minutes and seconds
Score: per team, from 0 to 19



D-FB3-19-450



D-FB3-19-A-450 with game display for soccer



D-FB3-19-A-450 with time for light athletics



D-FB3-19-600-450



SOCCER / FOOTBALL

Scoreboards



All soccer scoreboards contain a controller. The controller can differ from model to model and is expandable on request.

Controller with integrated display for scoreboards that show the time with at least 4-digits

D-CKN: standard control for all models with a minimum 4-digit time display

D-CKN-TXA: expandable alternative - integrated - rechargeable battery and radio so that the operator can move freely in the soccer field



D-CKN

D-CKN-TXA

Controller without display with 3 buttons and integrated radio for scoreboards that show the time with 2 digits

D-CKNF-TXA: standard controller for scoreboards that display the time on 2-digits, complete with integrated radio and battery



D-CKNF-TXA

Radio for Soccer Scoreboards

When switching from controller D-CKN to a controller with integrated radio, it needs as well a radio receiver D-RX (surcharge) for the scoreboard.

Attention: Radio controlled scoreboards also require a power supply from mains.

Accessories for Soccer Scoreboards

DCF radio receiver D-DCF: The time is always precise to the second and it switches automatically between summer and winter time.
Reception: Central Europe

GPS receiver D-GPS: The time is always precise to the second and it switches automatically between summer and winter time.
Reception: Worldwide

Temperature sensor D-AT: The temperature is displayed when the scoreboard is not needed for football. It is possible to display the time of day and temperature alternating.

Light sensor D-LS: The brightness is automatically adjusted to the ambient light conditions.

Models with text display: It is possible to add a matrix display to the soccer scoreboard.
Depending on the size of the matrix display board D-RTNM, it can display, e.g. the club names or advertising.



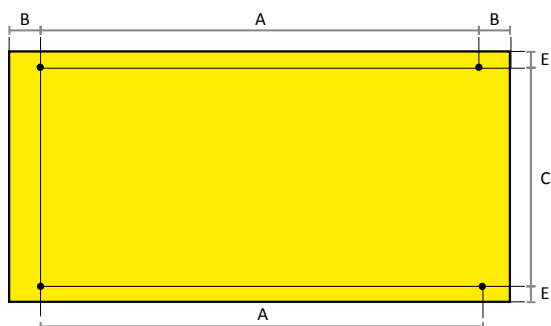
example: D-FB3-19-450 and D-RTNM matrix



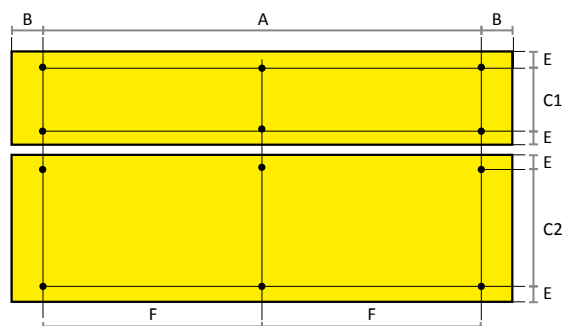
SOCCKER / FOOTBALL

Scoreboards

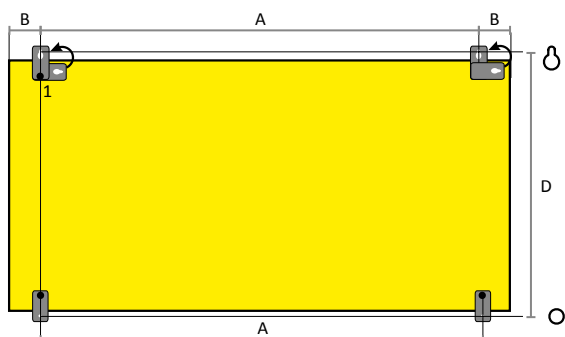
Assembly



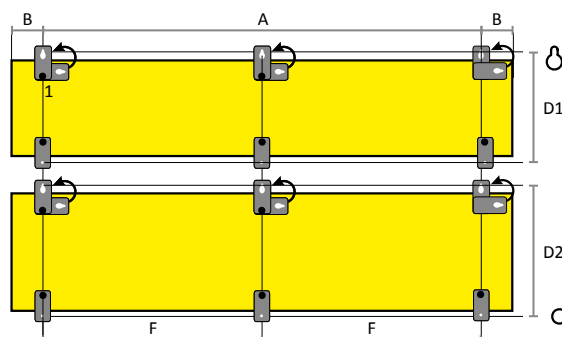
D-FB3 19-xxx mounting holes - all with M6



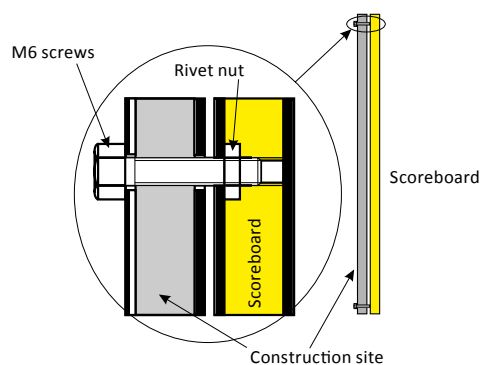
D-FB3 19-xxx mounting holes - all with M6



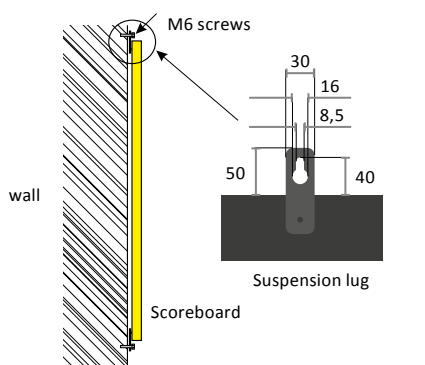
D-FB3 19-xxx mounting with lugs



D-FB3 19-xxx mounting with lugs



Mounting on the same mounting structure, fastened with M6 screws from the back



Mounting on wall, fastened with M6 screws over lugs

Matching D-RTNM Matrix Boards to the Models D-FB3	D-FB3-19-300	D-FB3-19-450	D-FB3-19-600/450	D-FB3-19-600	D-FB3-19-1000	D-FB3-19-1500	D-FB3-19-A-300	D-FB3-19-A-450	D-FB3-19-A-600
1 line, 7 pixels height	P3-7x56	P4-7x80	P4-7x88	P4-7x104	P7-7x96	P7-7x128	P3-7x56	P4-7x80	P4-7x104
1 line, 8 pixels height	P3-8x56	P4-8x80	P4-8x88	P4-8x104	P7-8x96	P7-8x128	P3-8x56	P4-8x80	P4-8x104

You can add a matching matrix display board to the soccer scoreboard. Thus, additional information, such as team names, scorer, lineups, animations, etc. can also be displayed.

SOCCER / FOOTBALL

Scoreboards



Dimensions

Model	Parts of the Scoreboard	Length*	Height*	Depths*	Weight**	Mounting holes or hangers	A*	B*	C, C1, C2*	D, D1, D2*	E*	F*	Digit height*	Caption height*
D-LINE300-O-4-E2	1	1,800	550	70	20	4	1,400	200	480	590	35	-	300	80
D-LINE300-O-2+2x19-E1	1	1,800	550	70	20	4	1,400	200	480	590	35	-	300	80
D-LINE300-O-6-E2-T	1	2,300	550	70	25	4	1,900	200	480	590	35	-	300	80
D-LINE300-O-4+2x19-E1	1	2,300	550	70	25	4	1,900	200	480	590	35	-	300	80
D-LINE300-O-8A-E2	1	2,800	550	70	30	4	2,400	200	480	590	35	-	300	80
D-LINE300-O-6+2x19-E1	1	2,800	550	70	30	4	2,400	200	480	590	35	-	300	80
D-LINE450-O-4-E2	1	2,500	800	70	40	4	2,100	200	730	840	35	-	450	130
D-LINE450-O-2+2x19-E1	1	2,500	800	70	40	4	2,100	200	730	840	35	-	450	130
D-LINE450-O-6-E2-T	1	3,300	800	70	52	4	2,900	200	730	840	35	-	450	130
D-LINE450-O-4+2x19-E1	1	3,300	800	70	52	4	2,900	200	730	840	35	-	450	130
D-LINE450-O-8A-E2	1	4,100	800	70	66	4	3,700	200	730	840	35	-	450	130
D-LINE450-O-6+2x19-E1	1	4,100	800	70	66	4	3,700	200	730	840	35	-	450	130
D-LINE600-O-4-E2	1	3,300	1,100	70	73	4	2,900	200	1,030	1,140	35	-	600	180
D-LINE600-O-2+2x19-E1	1	3,300	1,100	70	73	4	2,900	200	1,030	1,140	35	-	600	180
D-LINE600-O-6-E2-T	1	4,200	1,100	70	92	4	3,800	200	1,030	1,140	35	-	600	180
D-LINE600-O-4+2x19-E1	1	4,200	1,100	70	92	4	3,800	200	1,030	1,140	35	-	600	180
D-LINE600-O-8A-E2	1	5,100	1,100	70	112	4	4,700	200	1,030	1,140	35	-	600	180
D-LINE600-O-6+2x19-E1	1	5,100	1,100	70	112	4	4,700	200	1,030	1,140	35	-	600	180
D-FB300-4-O-WR	1	1,100	900	70	20	4	700	200	830	940	35	-	300	80
D-FB300-2+2xH-O-WR	1	1,100	900	70	20	4	700	200	830	940	35	-	300	80
D-FB300/450-2+2xH-O-WR	1	1,600	1,000	70	32	4	1,200	200	930	1,040	35	-	300/450	80
D-FB450-4-O-WR	1	1,700	1,200	70	40	4	1,300	200	1,130	1,240	35	-	450	100
D-FB450-2+2xH-O-WR	1	1,700	1,200	70	40	4	1,300	200	1,130	1,240	35	-	450	100
D-FB3-19-300	1	1,200	850	70	21	4	800	200	680	890	35	-	300	50
D-FB3-19-A-300	1	1,700	850	70	33	4	1,300	200	680	890	35	-	300	50
D-FB3-19-450	1	1,900	1,400	70	55	4	1,500	200	1,350	1,460	35	-	450	150
D-FB3-19-A-450-1	1	2,490	1,400	70	70	6	2,090	200	1,330	1,440	35	1,045	450	150
D-FB3-19-A-450	1	2,490	1,400	70	70	6	2,090	200	1,330	1,440	35	1,045	450	150
D-FB3-19-600/450	2	2,000	600/1,000	70	64	2x6	1,600	200	530/930	640/1,040	35	800	600/450	200
D-FB3-19-600	2	2,490	800/1,000	70	90	2x6	2,090	200	730/930	840/1,040	35	1,045	600	200
D-FB3-19-A-600	2	3,400	800/1,000	70	120	2x6	3,000	200	730/930	840/1,040	35	1,045	600	200
D-FB3-19-1000	2	3,800	1,200/1,500	70	205	2x6	3,400	200	1,130/1,430	1,240/1,540	35	1,700	1,000	250
D-FB3-19-1500	2	5,200	1,800/2,200	70	416	2x6	4,800	200	1,730/2,130	1,840/2,240	35	2,400	1,500	300

* Dimensions in millimeter, ** Weight in kilo



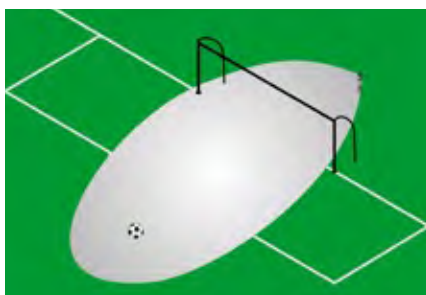
BALL SPORTS

Ball Speed BS-R

The Ball Speed Radar BS-R

The ball speed radar BS-R can detect speeds up to 300 km/h and is used in various sports to measure the speed of balls, pucks and other moving objects. The radar can be mounted behind a goal and measure through the net. The measured speed is

shown on a display board. The ball speed radar BS-R is quick and easy to set up and thanks to its compact, rugged construction it is weatherproof and suitable for outdoor use.



Approximate measuring range for football



Components of the System

Radar Sensor

Radar photocell offering exact measurements, despite large measuring range

It makes exact measurements, although it has a large measuring range.

Radar frequency:	24,125 GHz
Transmission power:	< 5 mW
Speed measurement:	10 to 300 km/h
Measuring angle:	approx. 40 °C
Accuracy:	less than 100 km/h: approx. +/- 2 km/h more than 100 km/h: approx. 2 %



Display Board D-LINE150-O-3-E0

- 3 red LED digits
- digit height 150 mm (readable up to 70 m)
- best readability even in direct sunlight
- weatherproof aluminum housing
- for speed indication
- integrated power supply (100 to 240 VAC)
- connection to radar sensor with integrated power supply

Model Selection

Ballspeed BS-R150

- 3-digit scoreboard, 150 mm digit height
- radar sensor
- tripod for radar

Ballspeed BS-R250

- 3-digit scoreboard, 250 mm digit height
- radar sensor
- tripod for radar



Display Board D-LINE250-O-3-E0

The difference to the display board D-LINE150-O-3-E0 is the figure height of the LED-digit that is for this model 250 mm (readable up to 120 m).

Tripod TRI128

for mounting the radar sensor

Floor Support FH

for mounting the scoreboard

The following sports are supported

- soccer / football
- handball
- ice hockey
- bandy
- american football





TENNIS

LED Scoreboards

ALGE-TIMING tennis scoreboards have been used for many years in various tournaments, from the local club tournament to the big events such as the GP tournament or the Davis Cup. Control takes place via a terminal with intelligent software in which it is entered who makes the point. The rest is done by the controller. At the status of 6 to 6 in the set, it can be decided whether there is a tie-break or if the set will be played out.

LED tennis scoreboards work silently in comparison to electro-magnetic display panels. The brightness of the display can be adjusted. Both, direct sunlight and dark areas in a hall are no problem. It guarantees optimum readability in all light conditions.

LED Tennis Scoreboard Models

Tennis Scoreboard D-TA615

Digit height: 150 mm
Max. readability: up to 70 m
Game display: 3 records

Tennis Scoreboard D-TA625

Digit height: 250 mm
Max. readability: up to 120 m
Game display: 3 records

Tennis Scoreboard D-TA645

Digit height: 450 mm
Max. readability: up to 200 m
Game display: 3 records

Tennis Scoreboard D-TA815

Digit height: 150 mm
Max. readability: up to 70 m
Game display: 5 sets

Tennis Scoreboard D-TA825

Digit height: 250 mm
Max. readability: up to 120 m
Game display: 5 sets

Tennis Scoreboard D-TA845

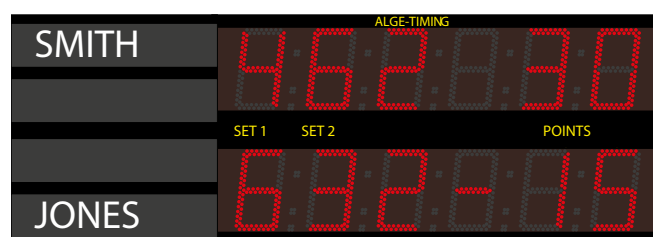
Digit height: 450 mm max.
Max. readability: up to 200 m
Game display: 5 sets

Tennis Scoreboard D-TA815-T415

Digit height: 150 mm
Max. readability: up to 70 m
Game display: 5 sets
Time display: hours and minutes

Tennis Scoreboard D-TA825-T415

Digit height: 250 mm
Max. readability: up to 120 m
Game display: 5 sets
Time display: hours and minutes with 15 cm digits



Example: D-TA625



Example: D-TA815



Example: D-TA825-T415



The players' names can be placed on the boards using magnetic letters. Magnetic letters are available as an option.

TENNIS

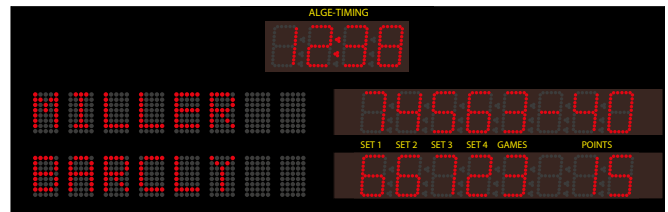
LED Scoreboards



With LED Name Field

Tennis Scoreboard D-TA815-T415

Digit height: 150 mm
 Max. readability: up to 70 m
 Game display: 5 sets
 Time display: hours and minutes



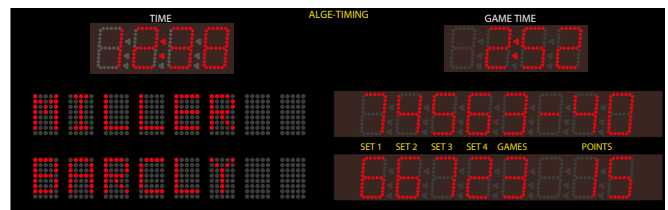
Tennis Scoreboard D-TA825-T415

Digit height: 250 mm
 Max. readability: up to 120 m
 Game display: 5 sets
 Time display: hours and minutes with 150 mm digits



Tennis Scoreboard D-TA815-2xT415-T

Digit height: 150 mm
 Max. readability: up to 70 m
 Game display: 5 sets
 Time display: hours and minutes
 Game time: hours and minutes



Tennis Scoreboard D-TA825-2xT415-T

Digit height: 250 mm
 Max. readability: up to 120 m
 Game display: 5 sets
 Time display: hours and minutes with 150 mm digit
 Game time: hours and minutes with 150 mm digits



Game, Set, Match - for the ALGE-TIMING LED Tennis Scoreboards

- red extra bright LEDs, which are easy to read even in direct sunlight
- adjustable brightness
- weatherproof aluminum housing for universal use in indoor and outdoor areas
- plexiglass protects LEDs from tennis balls
- controller with display and "intelligent" software
- (100 - 240 VAC) integrated in the scoreboard

MULTISPORT SCOREBOARDS



MULTISPORT SCOREBOARDS

General Information

0:00:00

The multisport scoreboards are designed for several ball sports, such as basketball, handball, volleyball, tennis, table tennis, hockey or football. As competitions in judo, karate, taekwondo or wrestling can be accompanied by multisport scoreboards from ALGE-TIMING.

All scoreboards are connected by cable to the controller as standard, but are optionally supplied wirelessly, with radio. The multisport scoreboards can also be designed individually, for example, with text fields to display the team or player names.



Indoor and Outdoor Scoreboards

Most of the models are designed for use in halls but can be made with brighter LEDs for outdoor use.

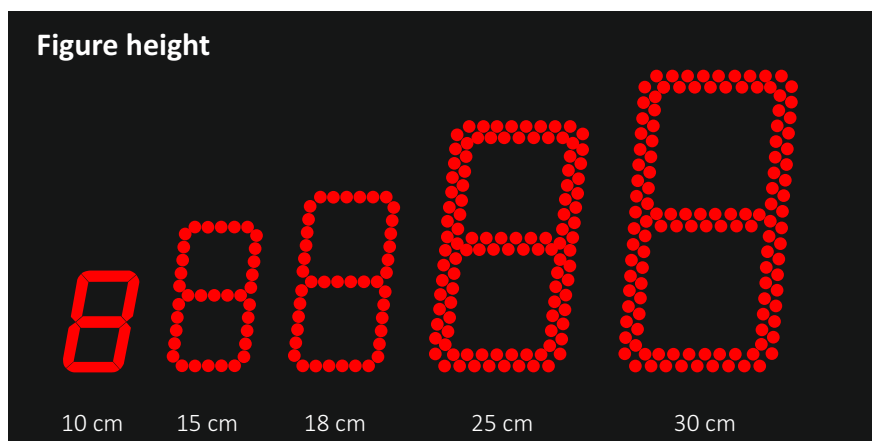
Indicators (Digits)

The different models have different digit heights:

- D-S series: 15 cm digit height
- D-M series: 25 cm, 18 cm, 15 cm and 8 cm digit height
- D-L series: 30 cm, 25 cm, 18 cm and 15 cm digit height

Readability

Depending on the type of sport, the conditions that the scoreboard must meet are different. Please note, when selecting a scoreboard, that the digits are easy to read from everywhere inside the hall.



Dight Height	Maximum Reading Distance
10 cm	up to 50 m
15 cm	up to 75 m
18 cm	up to 90 m
25 cm	up to 125 m
30 cm	up to 150 m



MULTISPORT SCOREBOARDS

General Information

Cable or Radio

The standard ALGE-TIMING Multisport scoreboard systems comes with a cable connection. The included test cable must be replaced by the electrician who installs the scoreboard with a fix installed cable. The advantage lies, above all, in the safe and uncomplicated data transmission.

In addition, there is the possibility to control the system via radio. To do this, use the controller with integrated radio D-CKN-WTN-A and a scoreboard with a radio receiver WTN-DB. The wireless installation is mainly used in arenas where cable connections are difficult. In the case of radio solutions, it must be noted that the scoreboard must be connected to the mains, despite a radio connection.

The operator of the scoreboard can move around in the sports arena, since the radio controller D-CKN-WTN-A has an integrated rechargeable battery.



controller D-CKN

Controller

ALGE-TIMING offers three different controllers. The standard controller D-CKN is always included in the scoreboard. For scoreboards which also contain text, a PC keyboard can be connected to the controller to enter the texts. The controller automatically saves the data in the case of a power failure. The time of day can be displayed on the scoreboard during times when it is not needed for a game.

Controller D-CKN

Standard controller for scoreboards controlled by cable

Controller D-CKN-WTN-A

Controller with integrated radio transmitter WTN (Wireless Timing Network) and battery for radio-controlled scoreboards and flexible use of the controller. The scoreboard requires a radio receiver WTN-DB.



controller D-CKN with input keyboard



controller D-CKN-WTN-A

MULTISPORT SCOREBOARDS

General Information

0:00:00

Modules for Team Names

Alphanumeric modules with 3 to 9 characters make it possible, e.g. to display team names with 15 cm characters on the D-M models. Each red LED field of 7 x 5 pixels can display an alphanumeric character (option: 8 x 5 pixels).

On the D-L scoreboard series, team names can be displayed with a digit height of 25 cm, since the LED field for each character is 12 x 7 pixels. To enter the team names, a PC keyboard is connected to the controller.

TNP1V11-3

TNP1V11-4

TNP1V11-5

TNP1V11-6

TNP1V11-7

TNP1V11-8

TNP1V11-9



Model	Dimensions	Scoreboard
TNP1V11-3	2 x display size 26 x 15 cm	2 x 3 characters, 7 x 5 dots, character height 15 cm
TNP1V11-4	2 x display size 35 x 15 cm	2 x 4 characters, 7 x 5 dots, character height 15 cm
TNP1V11-5	2 x display size 44 x 15 cm	2 x 5 characters, 7 x 5 dots, character height 15 cm
TNP1V11-6	2 x display size 53 x 15 cm	2 x 6 characters, 7 x 5 dots, character height 15 cm
TNP1V11-7	2 x display size 66 x 15 cm	2 x 7 characters, 7 x 5 dots, character height 15 cm
TNP1V11-8	2 x display size 71 x 15 cm	2 x 8 characters, 7 x 5 dots, character height 15 cm
TNP1V11-9	2 x display size 80 x 15 cm	2 x 9 characters, 7 x 5 dots, character height 15 cm
TNLP1V11-3	2 x display size 35 x 25 cm	2 x 3 characters, 12 x 7 dots, character height 25 cm
TNLP1V11-4	2 x display size 51 x 25 cm	2 x 4 characters, 12 x 7 dots, character height 25 cm
TNLP1V11-5	2 x display size 65 x 25 cm	2 x 5 characters, 12 x 7 dots, character height 25 cm
TNLP1V11-6	2 x display size 78 x 25 cm	2 x 6 characters, 12 x 7 dots, character height 25 cm
TNLP1V11-7	2 x display size 92 x 25 cm	2 x 7 characters, 12 x 7 dots, character height 25 cm
TNLP1V11-8	2 x display size 105 x 25 cm	2 x 8 characters, 12 x 7 dots, character height 25 cm
TNLP1V11-9	2 x display size 119 x 25 cm	2 x 9 characters, 12 x 7 dots, character height 25 cm

Modules for player names

Each expansion module can display 12 game names with 9 to 12 characters. In the D-M scoreboard series, the digit height is 7 cm and in the DL scoreboard series is 14 cm. The expansion modules

can be combined with numeric digit fields for player numbers, personal fouls, points and goals.

Model	Dimensions	Scoreboard
MPN9	2 moduls with 70 x 150 cm	2 x 12 player names, 9 characters with 7 x 5 dots, character height 7 cm
MPN10	2 moduls with 80 x 150 cm	2 x 12 player names, 10 characters with 7 x 5 dots, character height 7 cm
MPN11	2 moduls with 85 x 150 cm	2 x 12 player names, 11 characters with 7 x 5 dots, character height 7 cm
MPN12	2 moduls with 90 x 150 cm	2 x 12 player names, 12 characters with 7 x 5 dots, character height 7 cm
LPN9	2 moduls with 100 x 250 cm	2 x 12 player names, 9 characters with 7 x 5 dots, character height 14 cm
LPN10	2 moduls with 105 x 250 cm	2 x 12 player names, 10 characters with 7 x 5 dots, character height 14 cm
LPN11	2 moduls with 115 x 250 cm	2 x 12 player names, 11 characters with 7 x 5 dots, character height 14 cm
LPN12	2 moduls with 120 x 250 cm	2 x 12 player names, 12 characters with 7 x 5 dots, character height 14 cm





MULTISPORT SCOREBOARDS

Customized Scoreboards

Customer-specific scoreboards can be individually designed. Many additional features are possible like team names, player name, time of day or temperature. It can be connected via cable or radio to the controller. Special solutions like scoreboards built in a cube and/or integrated video wall(s) are possible.

Example: Customized scoreboard with integrated video wall for basketball

Sports Colloseum

20:36
19:00

ALGE-TIMING

FRANCE	SCORE	TIME	GREECE	SCORE	TIME
8 ROBERTS	22	1	39 TEODOSIC	4	2
24 GARBAHOSA	05	3	71 RIGODEAU	18	5
6 DIJAMANTIDIS	14	2	00 LAZME	6	
81 PAPALUKAS	8	1	92 NESTEROVIC	1	
15 MAGNIFICO	10	4	12 LAVROV	4	5
9 ROBERTS	27	5	47 RANDOLF	20	3
53 CONOCINI	6	2			
33 VELICKOVIC	18	5	TR. VUJOSEVIC		

24:37

FRANCE 136 **GREECE 116**

24 0:50 **06 1:38**
06 1:38 **74 2:00**
74 2:00 **24 0:50**

MULTISPORT SCOREBOARDS

Tabletop Scoreboards

0:00:00

Tabletop scoreboards are easy to transport, thanks to their size, and setting them up on a table near the field is simple. The operator of the scoreboard has a separate display on the back and a simple control panel with four buttons. The tabletop scoreboard is ideal for schools and other small ball sport events.

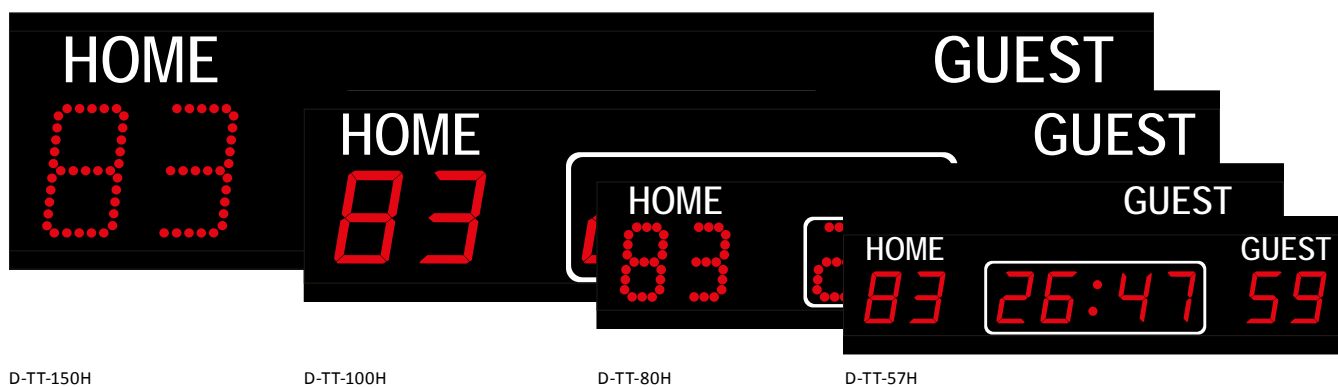


Facts of the Tabletop Scoreboard

- small, universal and easily transportable
- designed for use in halls
- red digits (LED) with white captions
- game time: 99:59 minutes, counted down or up; last minute in 1/10 seconds
- time of day (integrated realtime chip) can be displayed at "Playtime" position
- scores: 0 to 99 for both teams
- Operator can see the scoreboard data on the back side of the scoreboard.
- complete system with controller and four push buttons
- integrated horn
- power supply: 110/220 VAC - 50/60 Hz
- Models are available with 57 mm, 80 mm, 100 mm and 150 mm digit height.
- sturdy aluminum housing with plexiglass on the front



Model	Dimensions (LxHxW)	Digit height	Visibility	Purpose of use
D-TT57-H	550 x 150 x 70 mm	57 mm	25 m	Indoor
D-TT80-H	750 x 180 x 70 mm	80 mm	40 m	Indoor
D-TT100-H	1,000 x 230 x 70 mm	100 mm	50 m	Indoor
D-TT150-H	1,250 x 280 x 70 mm	150 mm	75 m	Indoor
D-TT80-OH	750 x 180 x 70 mm	80 mm	40 m	Outdoor/Indoor
D-TT150-OH	1,250 x 280 x 70 mm	150 mm	75 m	Outdoor/Indoor



D-TT-150H

D-TT-100H

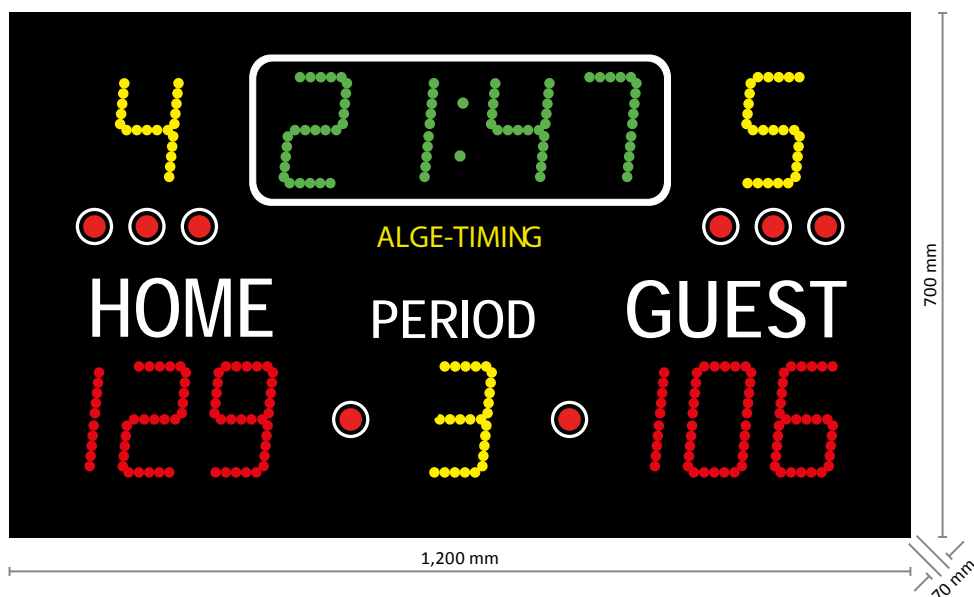
D-TT-80H

D-TT-57H



MULTISPORT SCOREBOARDS

D-S1S



Facts about the D-S1S Scoreboard

- small, universal scoreboard for indoor use
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 15 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 15 cm digits)
- period: 0 to 9 (yellow 15 cm digit)
- team fouls: 0 to 9 for each team (yellow 15 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- horn (interval time adjustable from 0 to 9 seconds)
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 1'200 x 700 x 70 mm
- weight: approx. 15 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

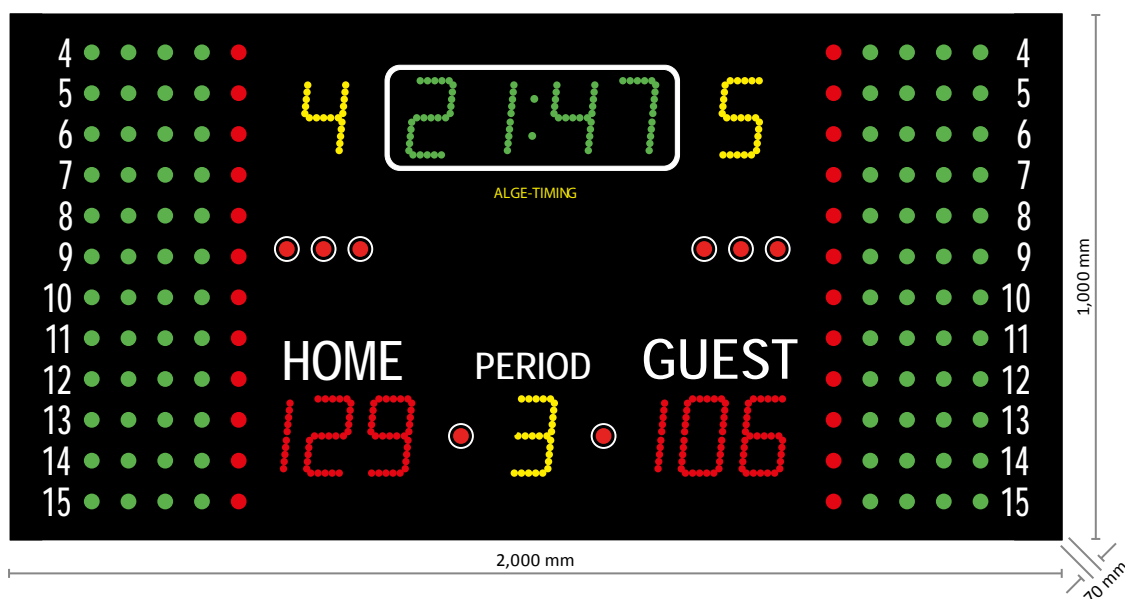
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-S3S

0:00:00



Facts about the D-S3S Scoreboard

- small, universal scoreboard for halls
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 15 cm digits)
- period: 0 to 9 (yellow 15 cm digit)
- team fouls: 0 to 9 for each team (yellow 15 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- personal fouls: 12 players per team, per player 4 green and 1 red LED cluster (each 2 cm diameter)
- horn (interval time adjustable from 0 to 9 seconds)
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 2,000 x 1,000 x 70 mm
- weight: approx. 40 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

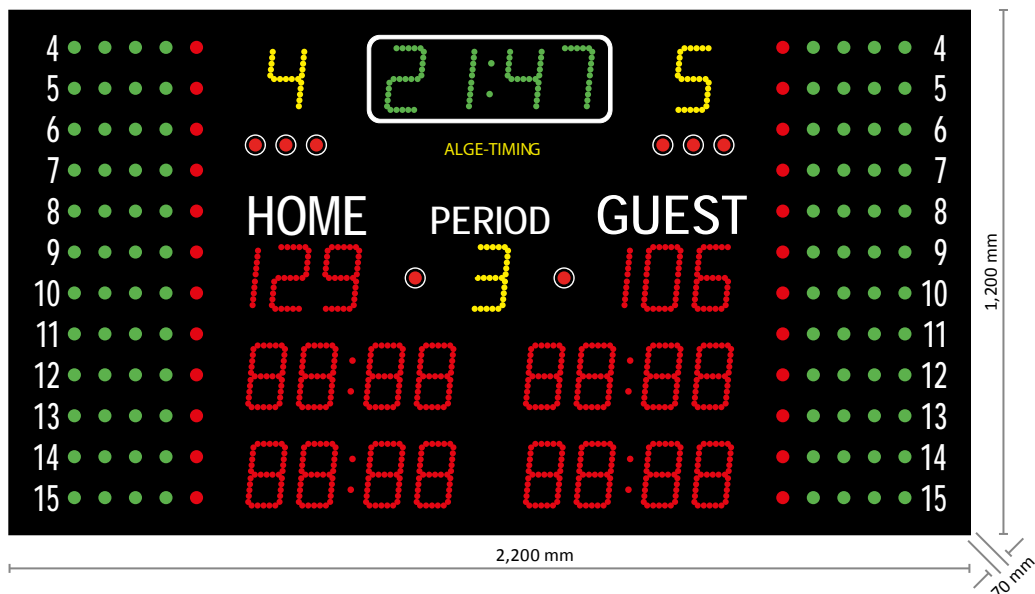
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-S5S



Facts about the D-S5S Scoreboard

- small, universal scoreboard for halls
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 15 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 15 cm digits)
- period: 0 to 9 (yellow 15 cm digit)
- team fouls: 0 to 9 for each team (yellow 15 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- personal fouls: 12 players per team, per player 4 green and 1 red LED cluster (each 2 cm diameter)
- penalties: two penalties per team, per penalty four red digits (red 15 cm digits)
- horn (interval time adjustable from 0 to 9 seconds)
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 2,200 x 1,200 x 70 mm
- weight: approx. 50 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

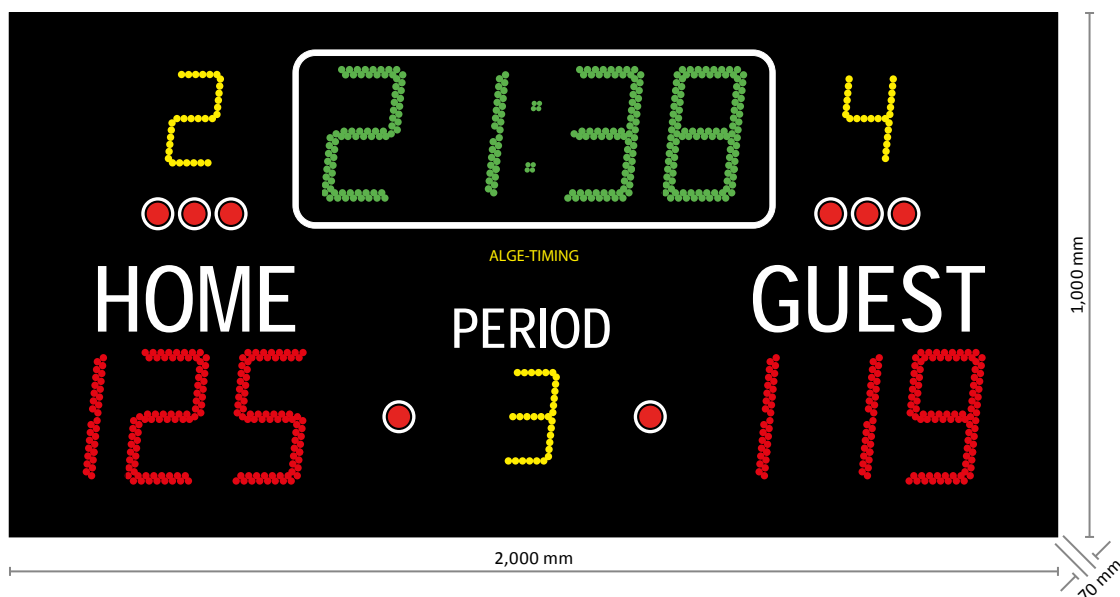
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M1S

0:00:00



Facts about the D-M1S Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed in the game time field
- time can be displayed in the game time field
- scores: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 2,000 x 1,000 x 70 mm
- weight: approx. 40 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

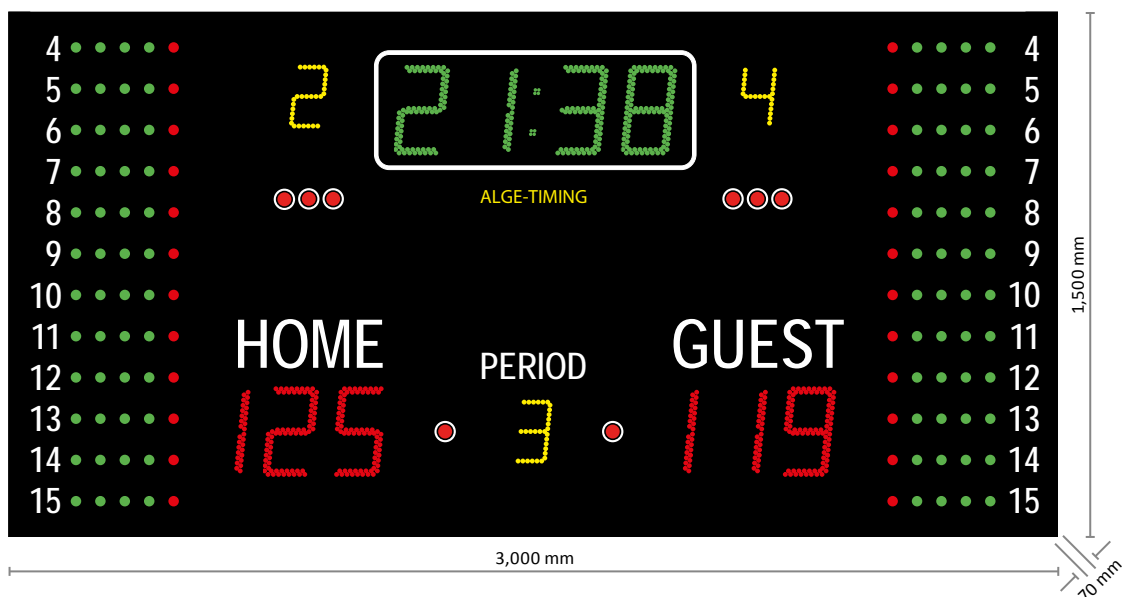
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-M3S



Facts about the D-M3S Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- scores: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digit)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- personal fouls: 12 players per team, per player 4 green and 1 red LED cluster (each 2 cm diameter)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,000 x 1,500 x 70 mm
- weight: approx. 90 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

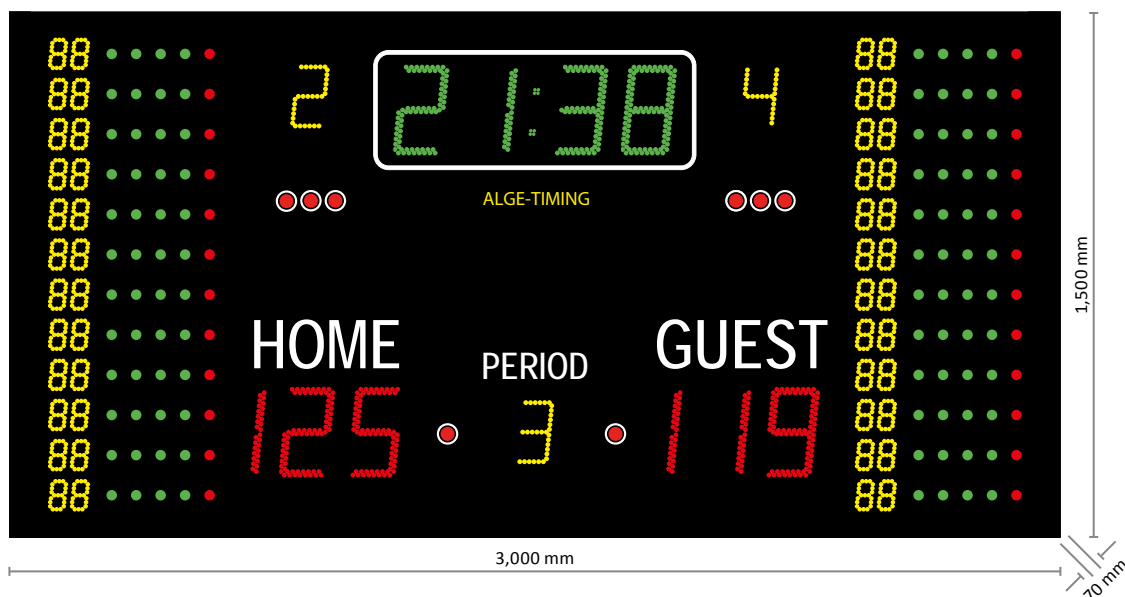
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M3SP

0:00:00



Facts about the D-M3SP Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- scores: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digits)
- personal fouls: 12 players per team with adjustable number of players (0 - 99; yellow 8 cm digits), per player 4 green and 1 red LED cluster (2 cm diameter each)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,000 x 1,500 x 70 mm
- weight: approx. 90 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

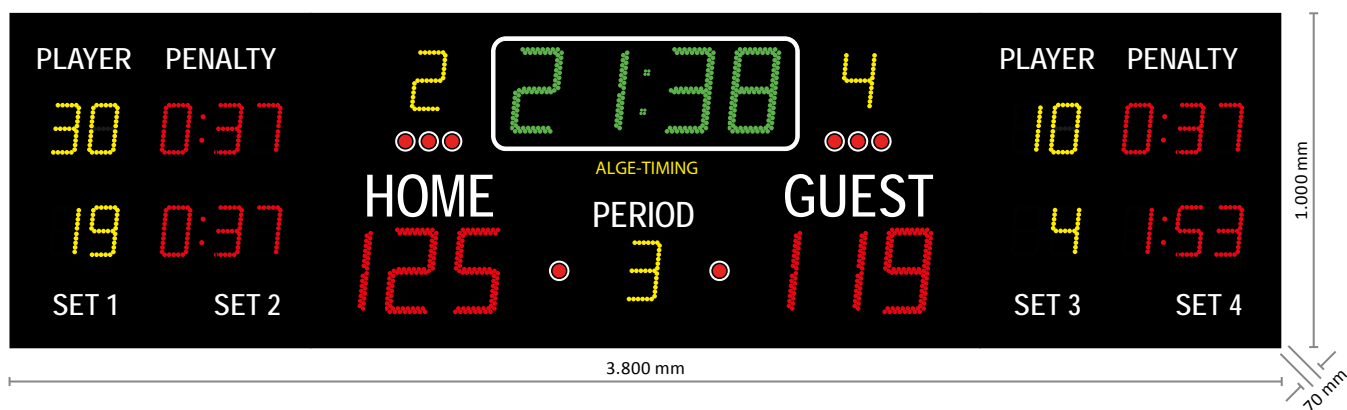
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-M4SH2



Facts about the D-M4SH2 Scoreboard

- three modules: middle part 2,000 x 1,000 mm, sides 2 x 900 x 1,000 mm Digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed on the game time field
- score: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 15 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 15 cm digits)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,800 x 1,000 x 70 mm
- weight: approx. 75 kg

Basketball

- team fouls: 0 to 9 (yellow 18 cm digits)
- player ID: 0 to 99 (yellow 15 cm digits)
- personal fouls: 0 to 99 (red 15 cm digits)

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (15 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 15 cm digits)
- player foul: 0 to 9:59 (red 15 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

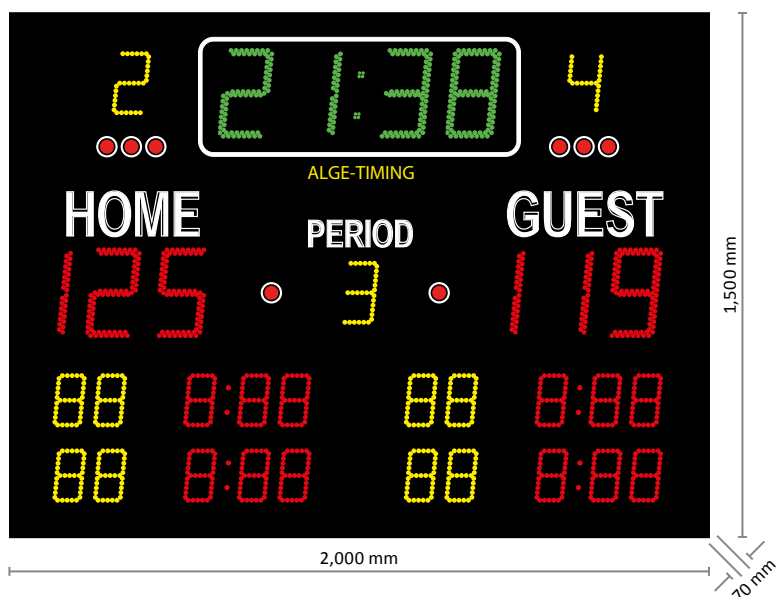
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M4SV2

0:00:00



Facts about the D-M4SV2 Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 15 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 15 cm digits)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 2,000 x 1,500 x 70 mm
- weight: approx. 60 kg

Basketball

- team fouls: 0 to 9 (yellow 18 cm digits)
- player ID: 0 to 99 (yellow 15 cm digits)
- personal fouls: 0 to 99 (red 15 cm digits)

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (15 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 15 cm digits)
- player foul: 0 to 9:59 (red 15 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

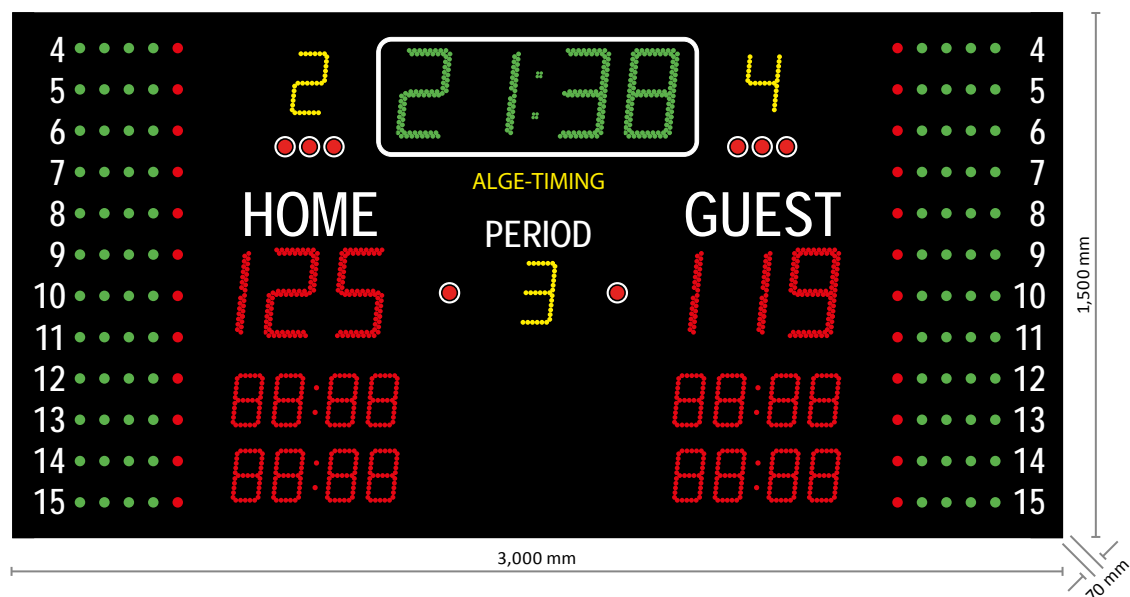
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-M5S



Facts about the D-M5S Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: two penalties per team, per penalty four red digits (red 15 cm digits)
- personal fouls: 12 players per team, per player 4 green and 1 red LED cluster (each 2 cm diameter)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,000 x 1,500 x 70 mm
- weight: approx. 90 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

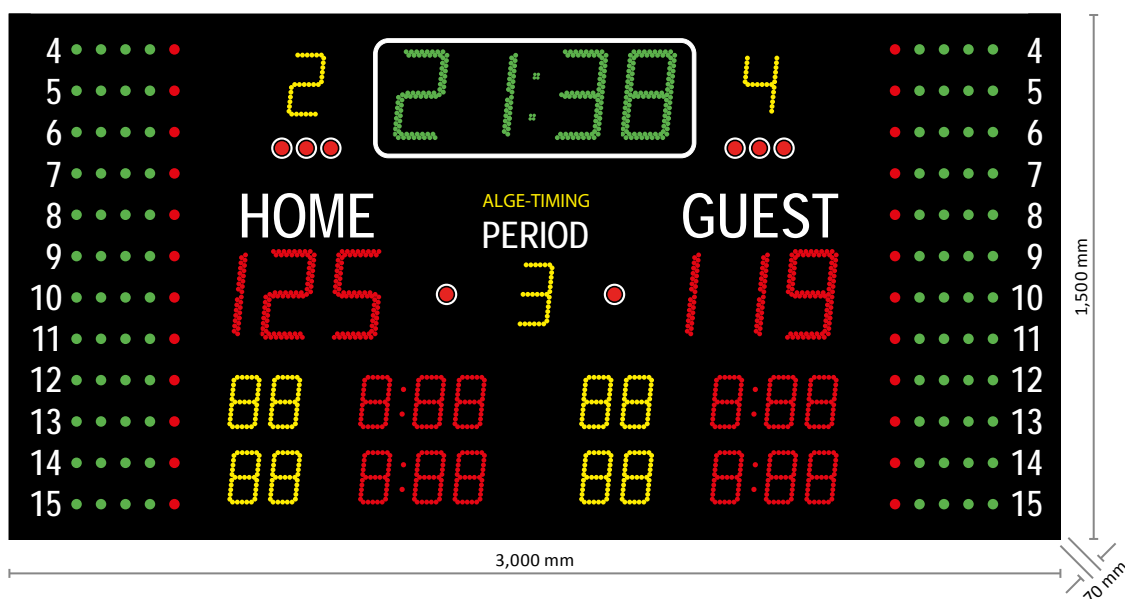
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M6S

0:00:00



Facts about the D-M6S Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 15 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 15 cm digits)
- personal fouls: 12 players per team, per player 4 green and 1 red LED cluster (each 2 cm diameter)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,000 x 1,500 x 70 mm
- weight: approx. 90 kg

Basketball

- team fouls: 0 to 9 (yellow 18 cm digits)
- player ID: 0 to 99 (yellow 15 cm digits)
- personal fouls: 0 to 99 (red 15 cm digits)

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (15 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 15 cm digits)
- player foul: 0 to 9:59 (red 15 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

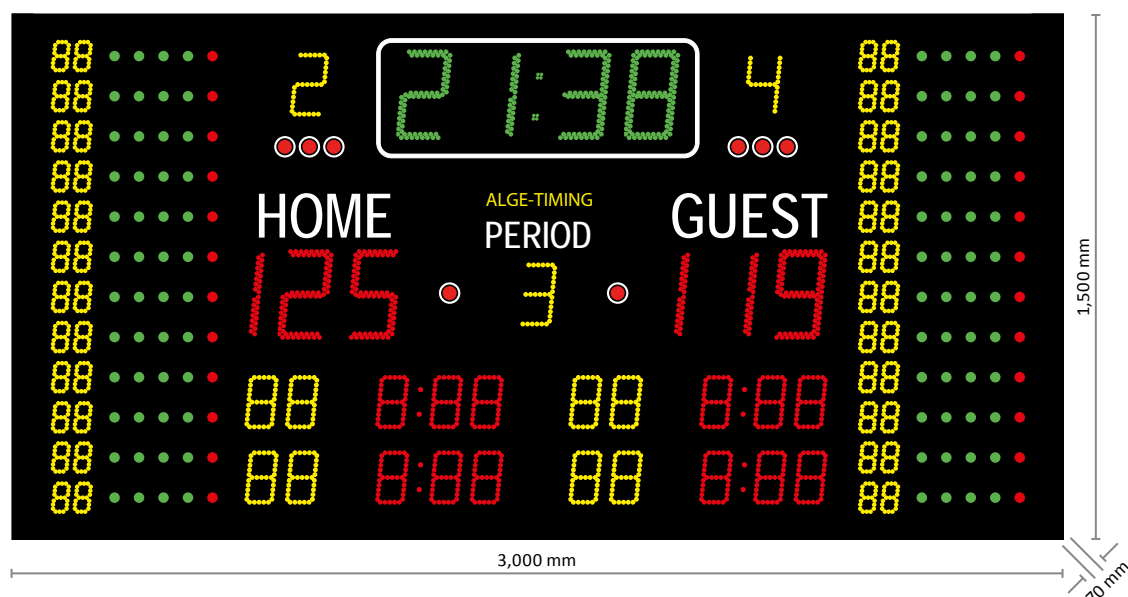
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-M6SP



Facts about the D-M6SP Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 15 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 15 cm digits)
- personal player data: 12 players per team, with adjustable number of players (0 - 99; yellow 8 cm digits), per player 4 green and 1 red LED cluster (2 cm diameter each)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,000 x 1,500 x 70 mm
- weight: approx. 90 kg

Basketball

- team fouls: 0 to 9 (yellow 18 cm digits)
- player ID: 0 to 99 (yellow 15 cm digits)
- personal fouls: 0 to 99 (red 15 cm digits)

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (15 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 15 cm digits)
- player foul: 0 to 9:59 (red 15 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

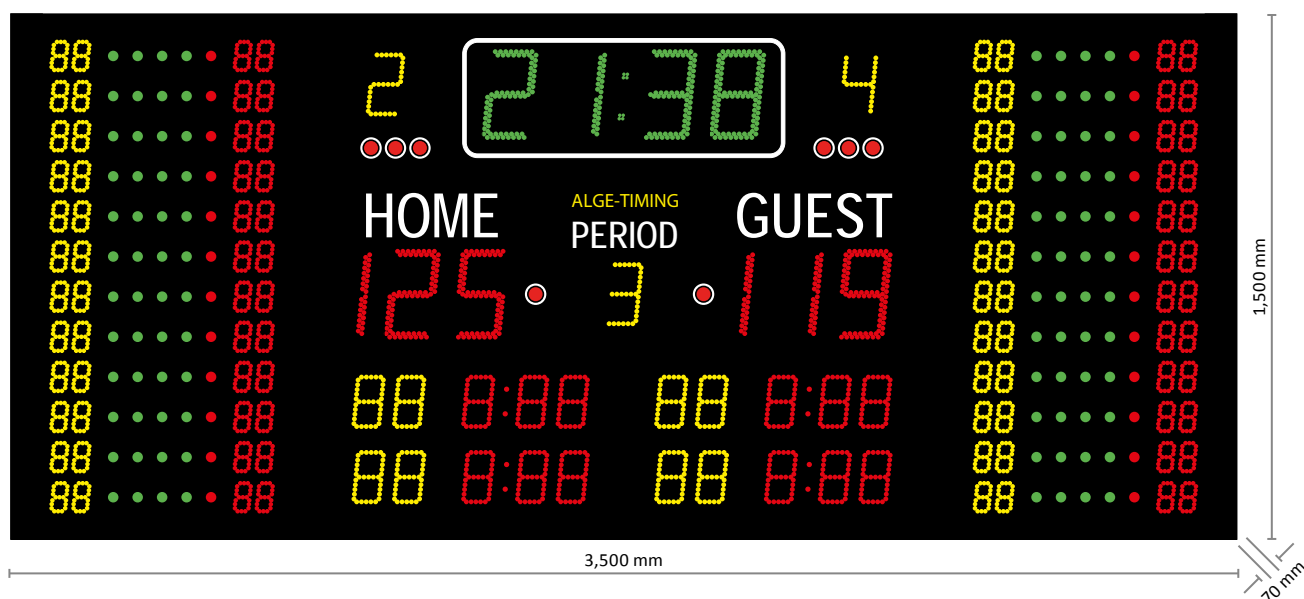
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M6SPP

0:00:00



Facts about the D-M6SPP Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 15 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 15 cm digits)
- personal player data: 12 players per team, with adjustable number of players (0 - 99; yellow 8 cm digits), per player 4 green and 1 red LED cluster (2 cm diameter each)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,500 x 1,500 x 70 mm
- weight: approx. 100 kg

Basketball

- team fouls: 0 to 9 (yellow 18 cm digits)
- player ID: 0 to 99 (yellow 15 cm digits)
- personal fouls: 0 to 99 (red 15 cm digits)

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (15 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 15 cm digits)
- player foul: 0 to 9:59 (red 15 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

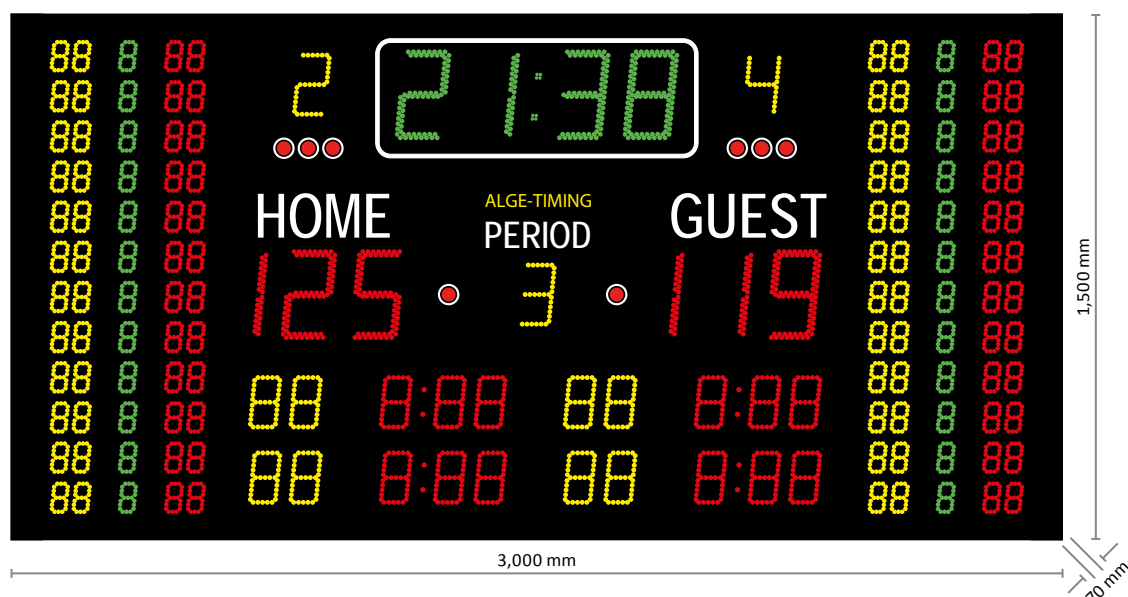
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-M6SPFP



Facts about the D-M6SPFP Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- scores: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 15 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 15 cm digits)
- personal player data: 12 players per team with adjustable number of players (0 - 99, yellow 8 cm digits), personal fouls (0 - 9, green 8 cm digits) and points (0 - 99, red 8 cm digits)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,000 x 1,500 x 70 mm
- weight: approx. 90 kg

Basketball

- team fouls: 0 to 9 (yellow 18 cm digits)
- player ID: 0 to 99 (yellow 15 cm digits)
- personal fouls: 0 to 99 (red 15 cm digits)

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (15 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 15 cm digits)
- player foul: 0 to 9:59 (red 15 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

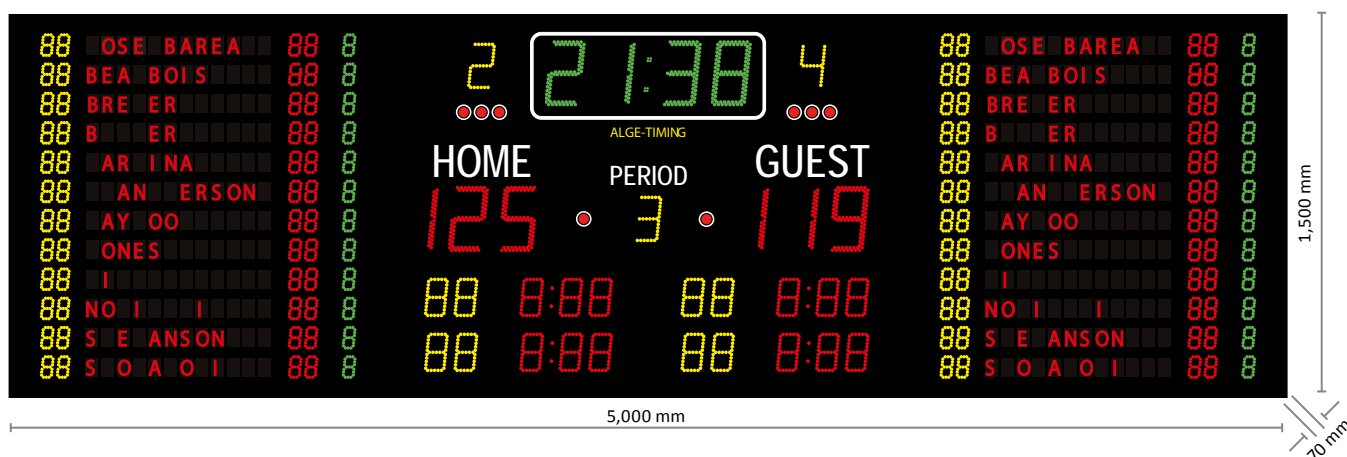
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M6SBHV

0:00:00



Facts about the D-M6SBHV Scoreboard

- three modules: middle section 2,000 x 1,500 mm, sides 2 x 1,500 x 1,500 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team (yellow 18 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 15 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 15 cm digits)
- personal player data: 12 players per team with adjustable
 - player number (0 - 99; yellow 8 cm digits)
 - player names (12 alphanumeric characters, red 8 cm digits)
 - points (0 - 99, red 8 cm digits)
 - personal fouls (0 - 9, green 8 cm digits)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 5,000 x 1,500 x 70 mm
- weight: approx. 150 kg

Basketball

- team fouls: 0 to 9 (yellow 18 cm digits)
- player ID: 0 to 99 (yellow 15 cm digits)
- personal fouls: 0 to 99 (red 15 cm digits)

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (15 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 15 cm digits)
- player foul: 0 to 9:59 (red 15 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

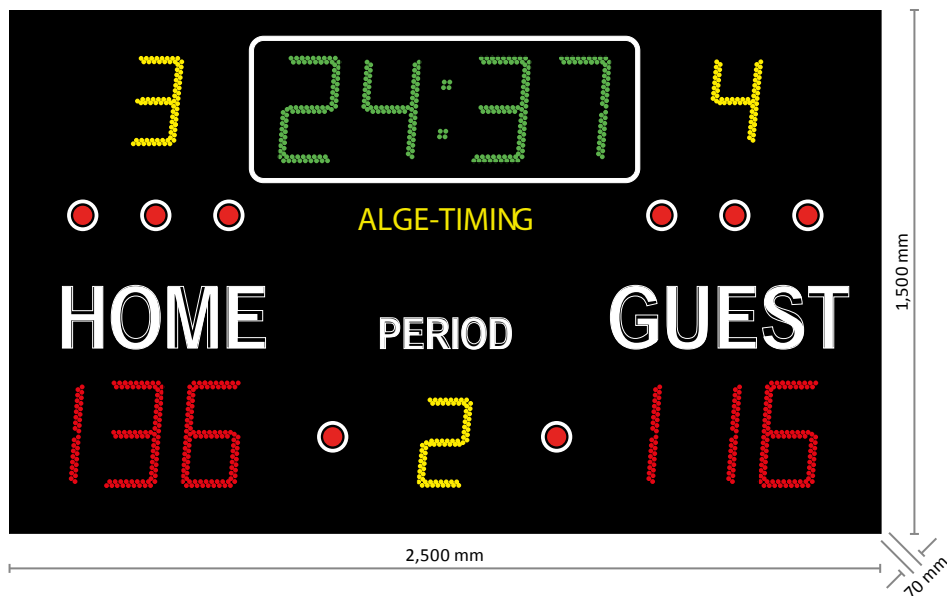
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-L1S



Facts about the D-L1S Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- scores: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- LED cluster: red LED cluster (2 cm diameter) for time-out, bonus, serve and/or ball possession
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 2,500 x 1,500 x 70 mm
- weight: approx. 70 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

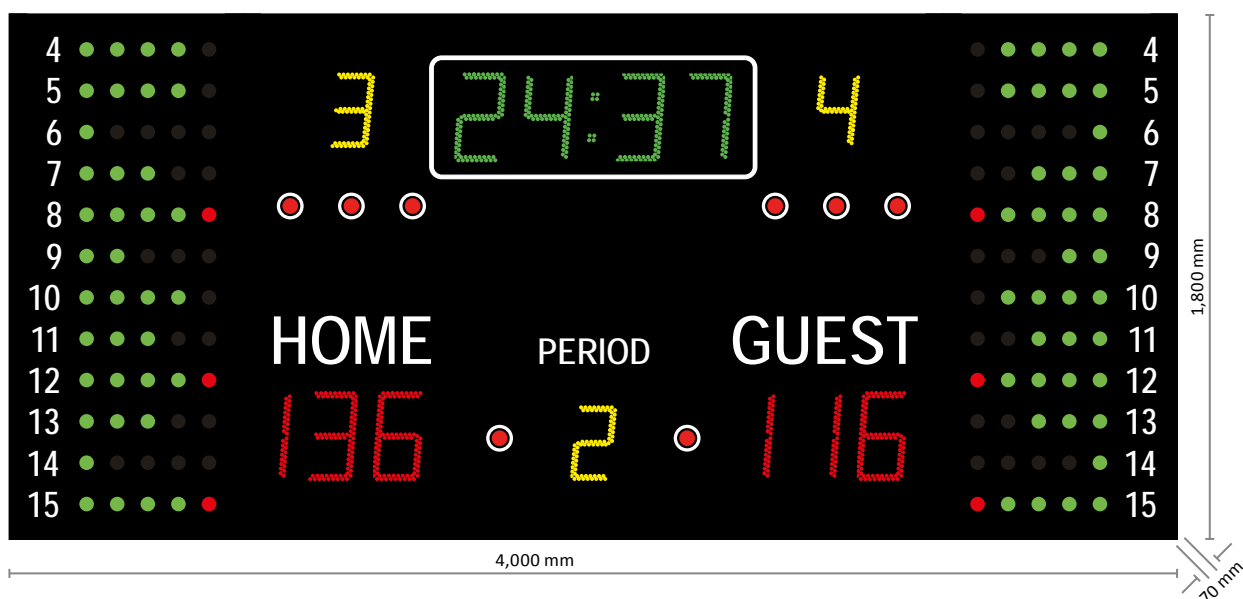
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L3S

0:00:00



Facts about the D-L3S Scoreboard

- three modules: middle part 2,400 x 1,800 mm, sides 2 x 800 x 1,800 mm Digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- scores: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- LED cluster: red LED cluster (4 cm diameter) for time-out, bonus, serve and/or ball possession
- personal Fouls: 12 players per team, per player 4 green and 1 red LED cluster (each 4 cm diameter)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 4,000 x 1,800 x 70 mm
- weight: approx. 140 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

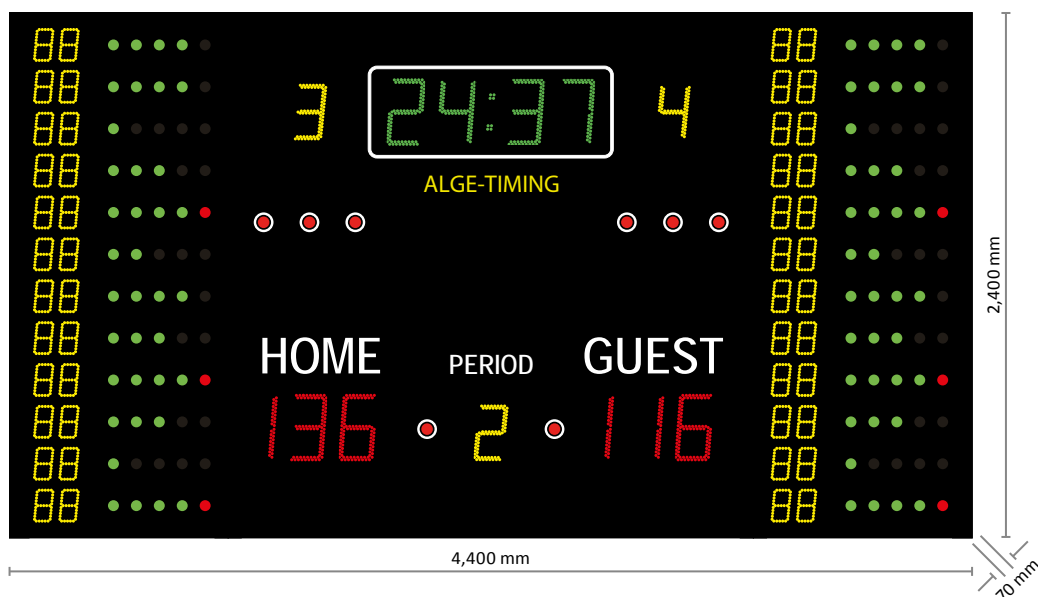
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-L3SP



Facts about the D-L3SP Scoreboard

- three modules: middle section 2,400 x 2,400 mm, sides 2 x 1,000 x 2,400 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- scores: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- personal fouls: 12 players per team with adjustable number of players (0 - 99; yellow 15 cm digits), per player 4 green and 1 red LED cluster (4 cm diameter each)
- LED cluster: red LED cluster (4 cm diameter) for time-out, bonus, serve and/or ball possession
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 4,400 x 2,400 x 70 mm
- weight: approx. 210 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

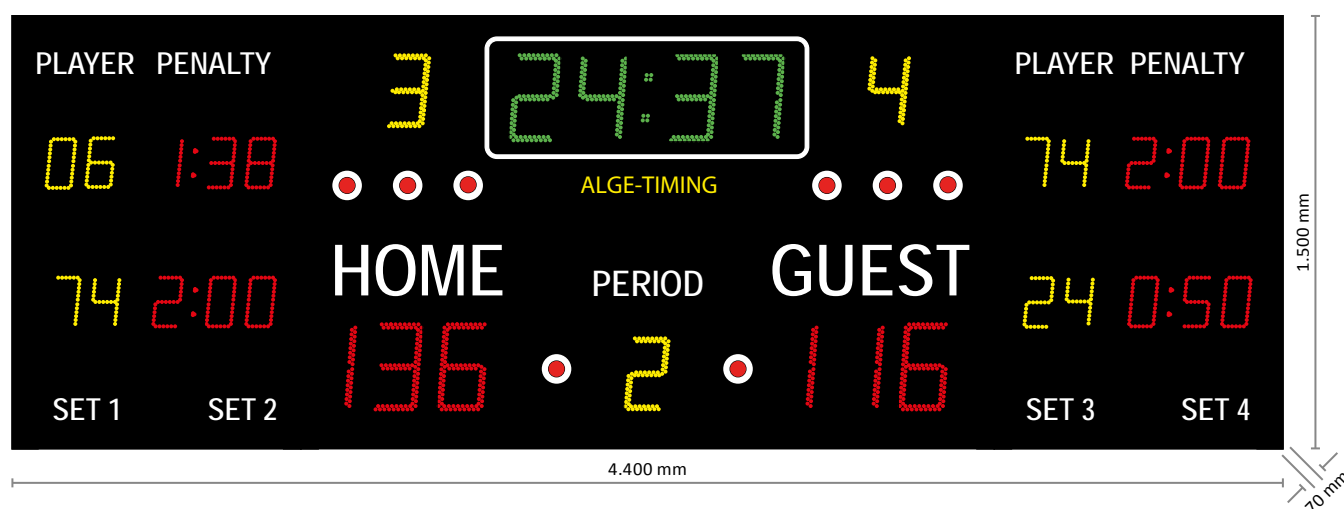
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L4SH2

0:00:00



Facts about the D-L4SH2 Scoreboard

- three modules: middle section 2,400 x 1,500 mm, sides 2 x 1,000 x 1,500 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- scores: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- LED cluster: red LED cluster (4 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 18 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 18 cm digits)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 4,400 x 1,500 x 70 mm
- weight: approx. 130 kg

Basketball

- team fouls: 0 to 9 (yellow 25 cm digits)
- player ID: 0 to 99 (yellow 18 cm digits)
- personal fouls: 0 to 99 (red 18 cm digits)

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (18 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 18 cm digits)
- player foul: 0 to 9:59 (red 18 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

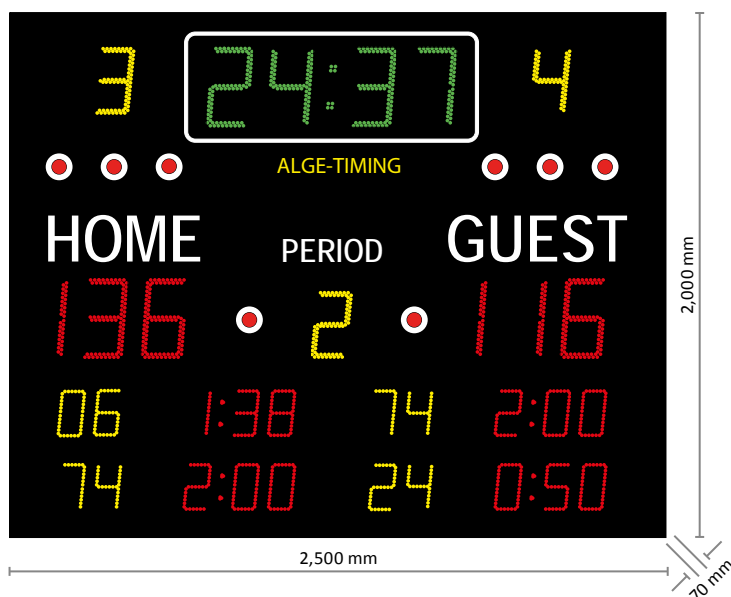
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-L4SV2



Facts about the D-L4SV2 Scoreboard

- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- scores: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- LED cluster: red LED cluster (4 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 18 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 18 cm digits)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 2,500 x 2,000 x 70 mm
- weight: approx. 100 kg

Basketball

- team fouls: 0 to 9 (yellow 25 cm digits)
- player ID: 0 to 99 (yellow 18 cm digits)
- personal fouls: 0 to 99 (red 18 cm digits)

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (18 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 18 cm digits)
- player foul: 0 to 9:59 (red 18 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

8:88:88



- ### Type of Sport

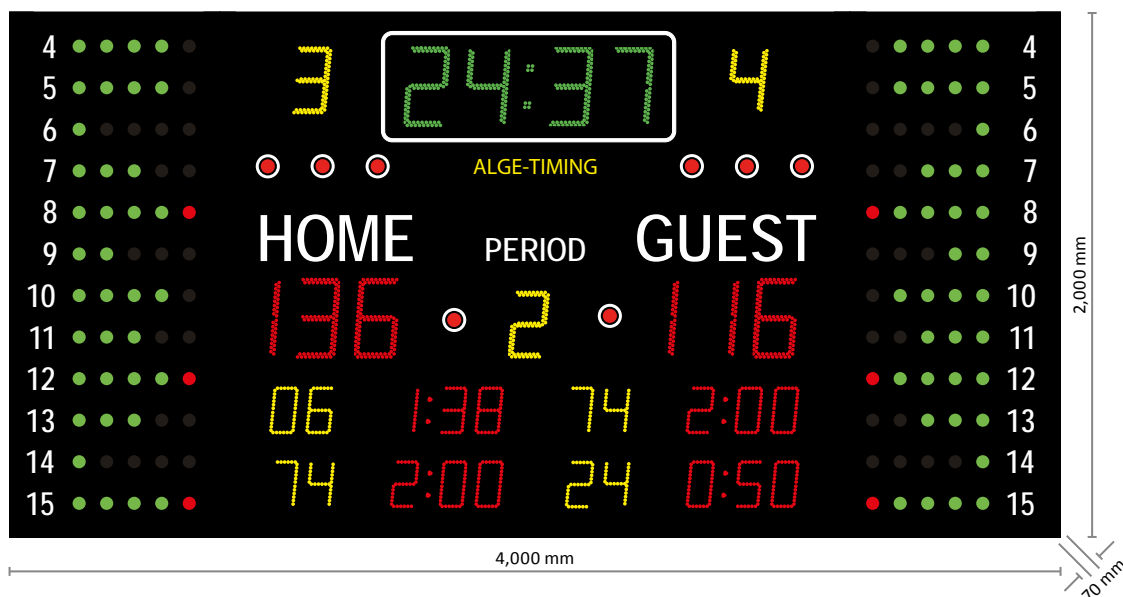
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-L6S



Facts about the D-L6S Scoreboard

- three modules: middle section 2,400 x 2,000 mm, sides 2 x 800 x 2,000 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- LED cluster: red LED cluster (4 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 18 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 18 cm digits)
- personal fouls: 12 players per team, per player 4 green and 1 red LED cluster (each 4 cm diameter)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 4,000 x 2,000 x 70 mm
- weight: approx. 155 kg

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (18 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 18 cm digits)
- player foul: 0 to 9:59 (red 18 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

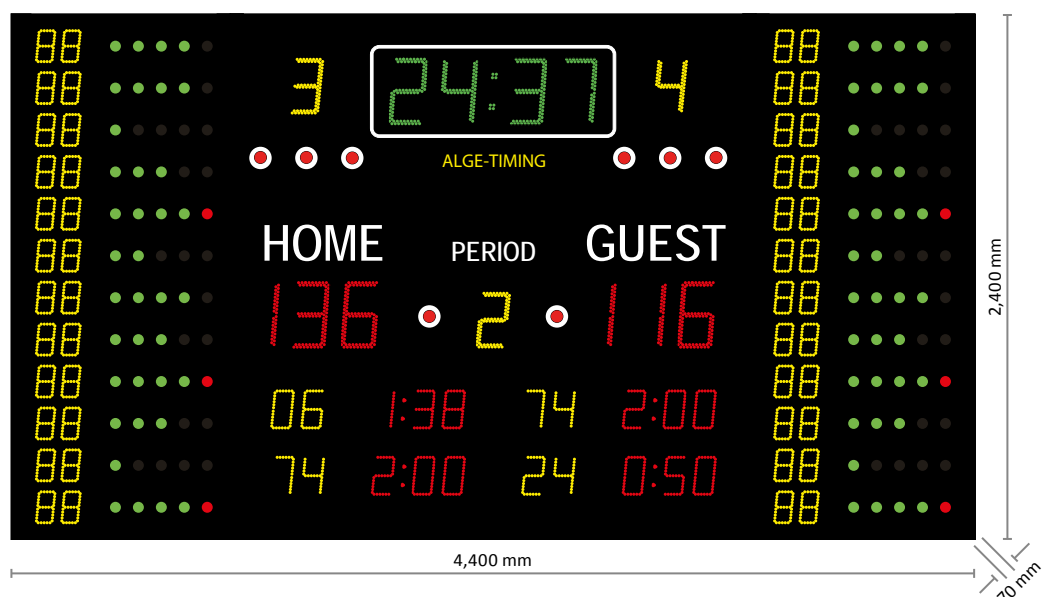
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L6SP

0:00:00



Facts about the D-L6SP Scoreboard

- three modules: middle section 2,400 x 2,400 mm, sides 2 x 1,000 x 2,400 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- LED cluster: red LED cluster (4 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 18 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 18 cm digits)
- statistics for 12 players per team (all digits 15 cm):
 - player ID: 0 to 99 (yellow digits)
 - personal fouls: 5 LED cluster (4 cm diameter, 4 x green, 1 x red)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 4,400 x 2,400 x 70 mm
- weight: approx. 210 kg

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (18 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 18 cm digits)
- player foul: 0 to 9:59 (red 18 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

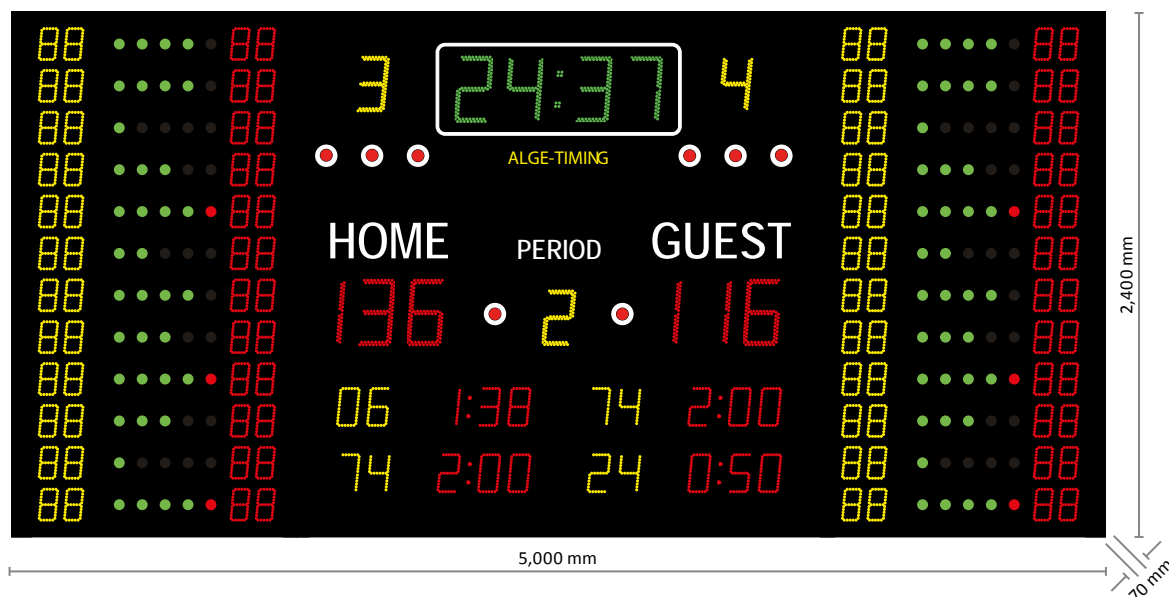
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-L6SPP



Facts of the D-L6SPP Scoreboard

- three modules: middle section 2,400 x 2,400 mm, sides 2 x 1,300 x 2,400 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- LED cluster: red LED cluster (4 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 18 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 18 cm digits)
- statistics for 12 players per team (all digits 15 cm):
 - player ID: 0 to 99 (yellow digits)
 - personal fouls: 5 LED cluster (4 cm diameter, 4 x green, 1 x red)
 - points: 0 to 99 (red digits) horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 5,000 x 2,400 x 70 mm
- weight: approx. 240 kg

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (18 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 18 cm digits)
- player foul: 0 to 9:59 (red 18 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

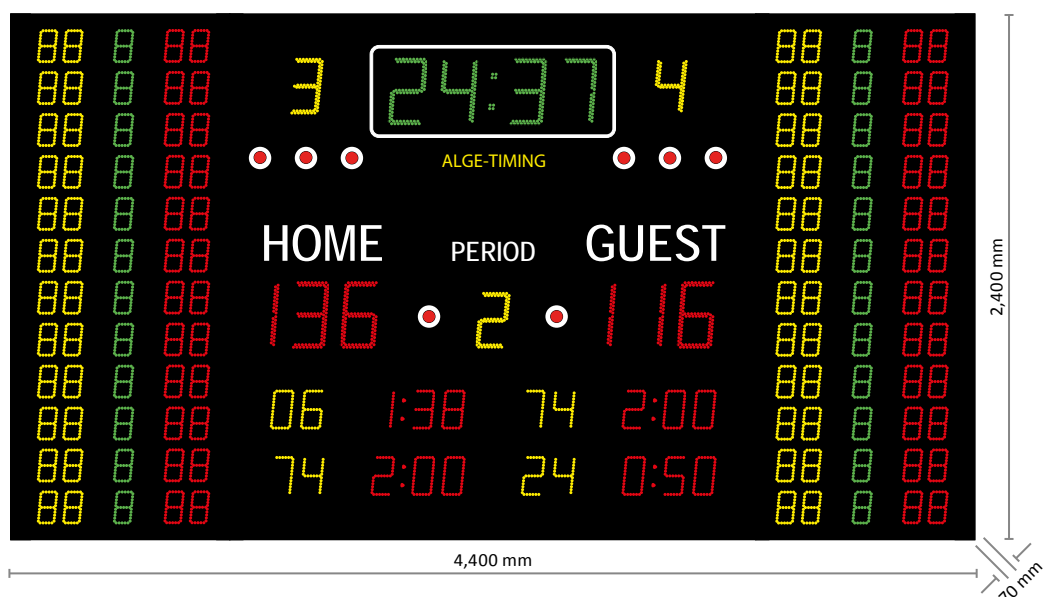
Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L6SPFP

0:00:00



Facts about the D-L6SPFP Scoreboard

- three modules: middle section 2,400 x 2,400 mm, sides 2 x 1,000 x 2,400 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- LED cluster: red LED cluster (4 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 9:59 per team (red 18 cm digits)
- player number for penalties: 2 x 0 to 99 per team (yellow 18 cm digits)
- statistics for 12 players per team (all digits 15 cm):
 - player ID: 0 to 99 (yellow digits)
 - personal fouls: 0 to 9 (green digit)
 - points: 0 to 99 (red digits)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 4,400 x 2,400 x 70 mm
- weight: approx. 210 kg

Volleyball, Table Tennis and Tennis

- score per set: 2 x 0 to 99 (18 cm digits)

Handball and Hockey

- player ID: 0 to 99 (yellow 18 cm digits)
- player foul: 0 to 9:59 (red 18 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

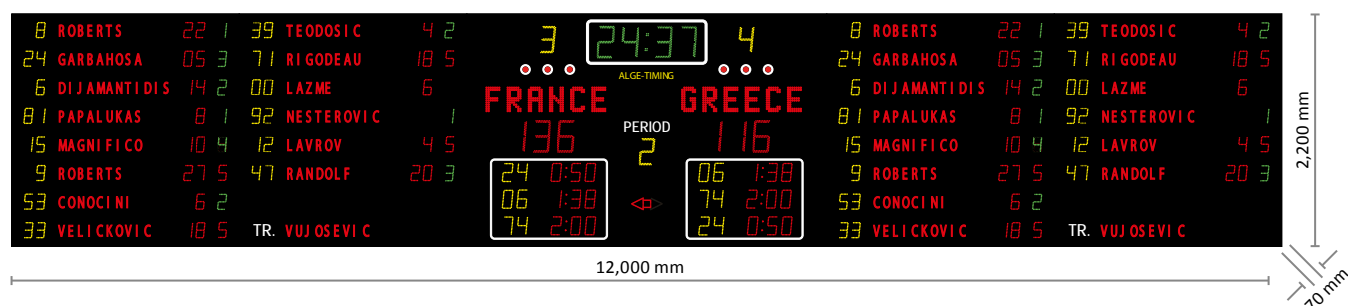
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-LS-BHV-H



Facts about the D-LS-BHV-H Scoreboard

- 5 modules: middle section 3,400 x 2,200 mm, sides 4 x 2,150 x 2,200 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- team name: 6 alphanumeric characters per team (red 25 cm characters)
- LED cluster: 3 x red LED cluster per team (4 cm diameter) for time-out
- arrow for displaying the team with ball possession
- penalties: 3 x 0 to 9:59 per team (red 18 cm digits)
- player number for penalties: 3 x 0 to 99 per team (yellow 18 cm digits)
- statistics for 14 players per team (all digits 15 cm)
 - player ID: 0 to 99 (yellow digits)
 - player name: 12 alphanumeric characters (red characters)
 - points: 0 to 99 (red digits)
 - personal fouls: 0 to 9 (green or red digit)
 - trainer: 12 alphanumeric characters (red digits)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 12,000 x 2,200 x 70 mm
- weight: approx. 520 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-LS-BHV-V

0:00:00



Facts about the D-LS-BHV-H Scoreboard

- three modules: middle section 3,000 x 3,000 mm, sides 2 x 2,400 x 3,000 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed in the game time field
- time can be displayed in the game time field
- score: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- team name: 6 alphanumeric characters per team (red 25 cm characters)
- LED cluster: 3 x red LED cluster per team (4 cm diameter) for time-out
- LED cluster: 1 x red LED cluster per team (4 cm diameter) for ball possession (or surcharge)
- penalties: 3 x 0 to 9:59 per team (red 18 cm digits)
- player number for penalties: 3 x 0 to 99 per team (yellow 18 cm digits)
- statistics for 14 players per team (all digits 18 cm):
 - player ID: 0 to 99 (yellow digits)
 - player name: 12 alphanumeric characters (red digits)
 - points: 0 to 99 (red digits)
 - personal fouls: 0 to 9 (green or red digit)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 7,800 x 3,000 x 70 mm
- weight: approx. 460 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

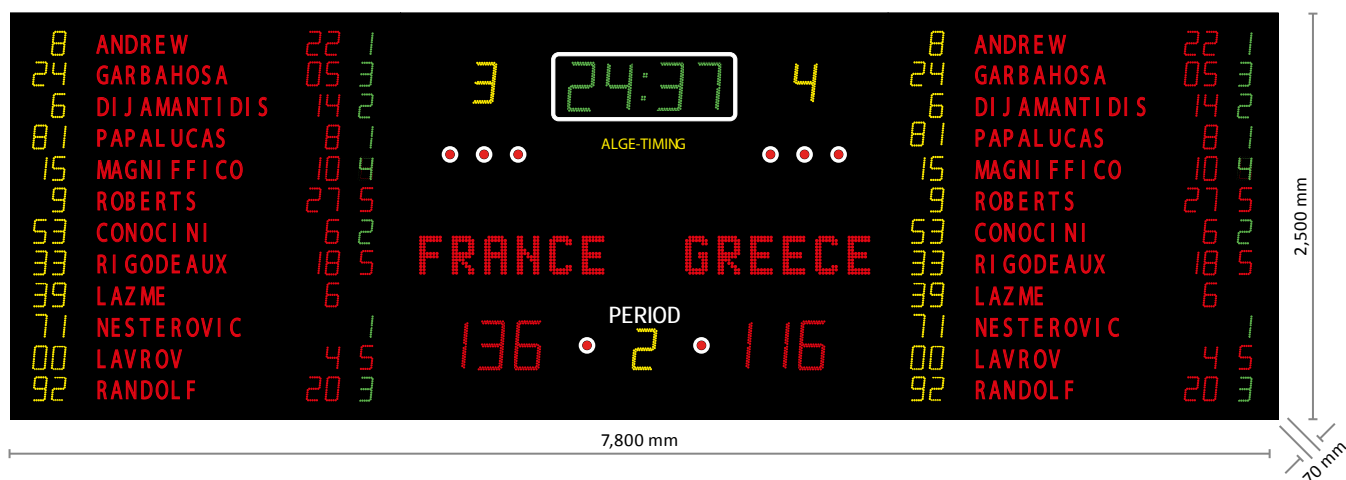
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



MULTISPORT SCOREBOARDS

D-LS-FIBA



Facts about the D-LS-FIBA Scoreboard

- three modules: middle section 3,000 x 2,500 mm, sides 2 x 2,400 x 2,500 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); during last minute display in seconds and 1/10
- daytime can be displayed on the game time field
- time can be displayed on the game time field
- score: 0 to 199 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team (yellow 25 cm digits)
- team name: 6 alphanumeric characters per team (red 25 cm characters)
- LED cluster: 3 x red LED cluster per team (4 cm diameter) for time-out
- LED cluster: 1 x red LED cluster per team (4 cm diameter) for ball possession (or surcharge)
- penalties: 3 x 0 to 9:59 per team (red 18 cm digits)
- statistics for 12 players per team (all digits 15 cm):
 - player ID: 0 to 99 (yellow digits)
 - player name: 12 alphanumeric characters (red digits)
 - points: 0 to 99 (red digits)
 - personal fouls: 0 to 9 (green or red digit)
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 7,800 x 2,500 x 70 mm
- weight: approx. 380 kg

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

Shot Clock D-SC

0:00:00

In basketball, the indoor shot clocks are combined with ALGE-TIMING multisport scoreboards. The set of shot clock always includes two pieces with horn, one controller with three buttons (start, 24 and 14 seconds and reset), which is connected to the controller D-CKN of the Multisport display board, and a cable set. The supplied cable set consists of short cables for testing the system. Specific cable lengths are available at ALGE-TIMING.

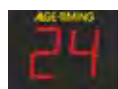
Function

- shot clock horn honks when attack time has elapsed
- multisport display board horn honks when period has elapsed
- time-out possible
- LED cluster lights up for the D-SC25SFD-PH at time-out
- no additional power supply required, power supply via scoreboard
- modular system
- models with extra loud horn available
- protected digits by metal frame - additional protection not necessary
- outdoor model available upon request
- shot clocks also available with two faces, three faces and as a cube

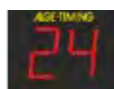


Shot Clock D-SC15SD-PH

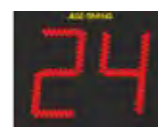
- shot clock: 0 - 99 seconds (red digits, 15 cm)
- integrated piezo-electronic horn (approx. 100 dB)
- dimensions: 340 x 250 x 70 mm
- weight: 2 kg



shot clock D-SC15SD-PH

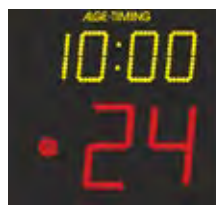


shot clock D-SC25SD-PH

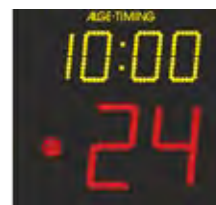


Shot Clock D-SC25SD-PH

- shot clock: 0 - 99 seconds (red digits, 25 cm)
- integrated piezo-electronic horn (approx. 100 dB)
- dimensions: 450 x 350 x 70 mm
- weight: 3 kg

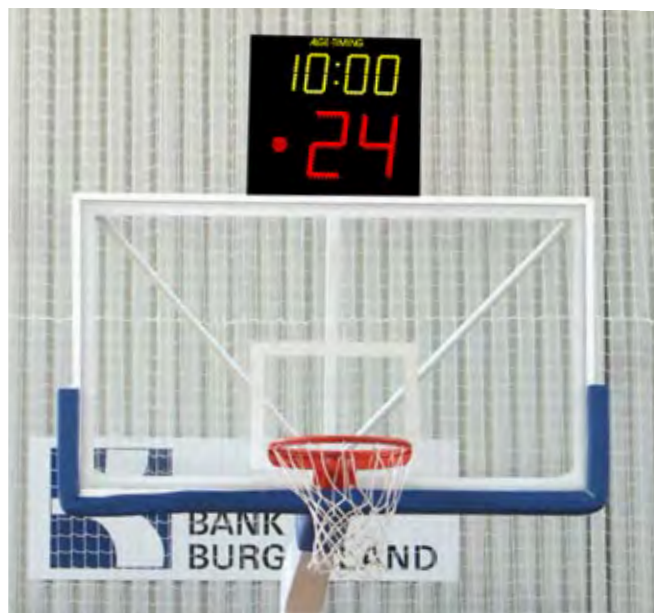


shot clock D-SC25SFD-PH



Shot Clock D-SC25SFD-PH

- game time: 99:59 minutes (yellow digits, 15 cm)
- shot clock: 0 - 99 seconds (red digits, 25 cm)
- LED cluster (red, 8 cm): lights when horn honks
- horn with approx. 100 dB
- dimensions: 650 x 600 x 70 mm
- weight: 12 kg





MULTISPORT SCOREBOARDS

Customized Scoreboards

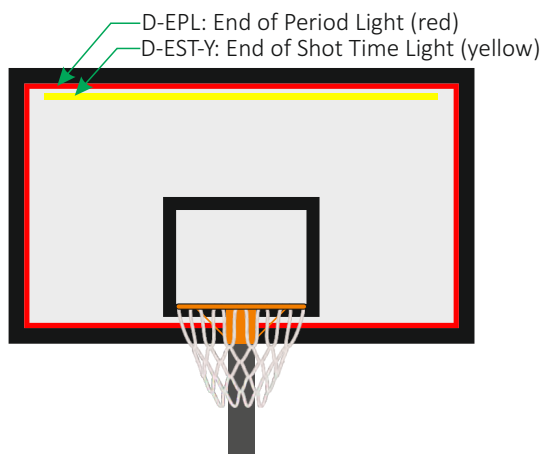
End of Period Light D-EPL2

If a D-EPL2 is installed at the basketball backboards behind the baskets, the D-EPL2 light will turn red at the end of each period. The dimensions and design of the D-EPL2 is always adapted to the basketball backboard. The D-EPL2 includes the LED-lights for both backboards.

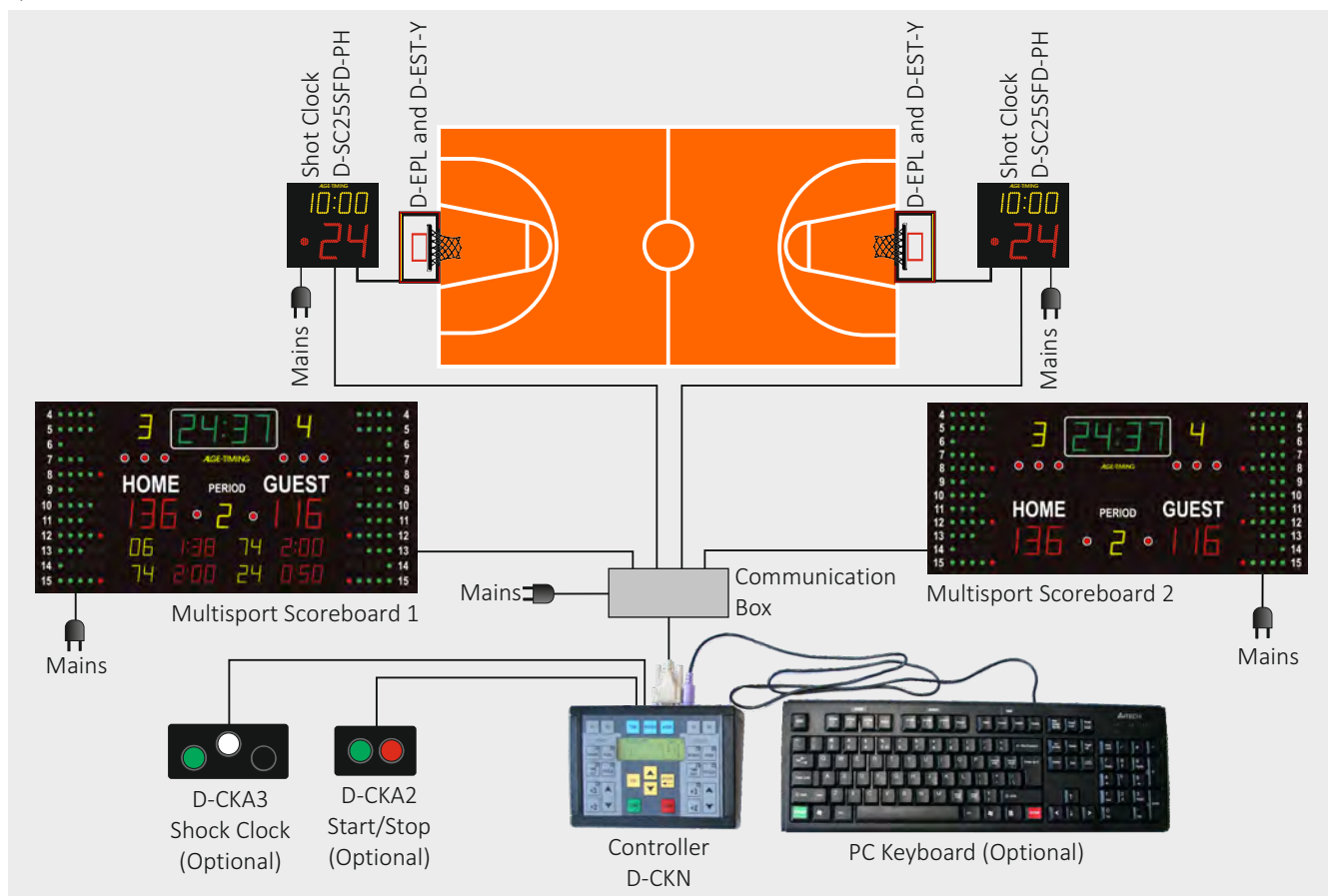


End of Shot Time Light D-EST-Y

The D-EST-Y signals the end of a period. It is installed on the basketball backboard. A yellow LED-light shows the end of a period. The dimensions and design of the D-EST-Y is always adapted to the basketball backboard. The D-EST-Y includes the LED-lights for both backboards.

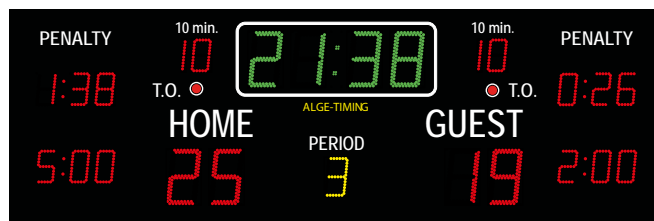


A system for basketball can consist of several Multisport Scoreboards, Shot Clocks, End of Period Lights D-EPL2 and End of Shot Time Lights D-EST-Y. The sketch below shows such a system.



ICE HOCKEY

D-M4SH2H and D-M5SH2H



Ice Hockey Scoreboard for Indoor (D-M4SH2H) and Outdoor (D-M4SH2H-O)

- three modules: middle section 2,000 x 1,000 mm, sides 2 x 900 x 1,000 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); shows 1/10 seconds during last minute
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 99 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- 10 minutes fouls: 0 to 19 for each team (red 15 cm digits)
- penalties: 2 x per team, 0 to 9:59 (red 15 cm digits)
- player number for penalty: 2 x per team, 0 to 99 (yellow 15 cm digits)
- timeout: 1 LED cluster per team with 2 cm diameter
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,800 x 1,000 x 70 mm
- weight: 75 kg

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

Ice Hockey Scoreboard for Indoor (D-M5SH2H) and Outdoor (D-M5SH2H-O)

- the display board consists of one module
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 25 cm digits); shows 1/10 seconds during last minute
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 99 for each team (red 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- penalties: 2 x per team, 0 to 9:59 (red 15 cm digits)
- 10 minutes fouls: 0 to 19 for each team (red 15 cm digits)
- timeout: 1 LED cluster per team with 2 cm diameter
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,000 x 1,000 x 70 mm
- weight: 60 kg

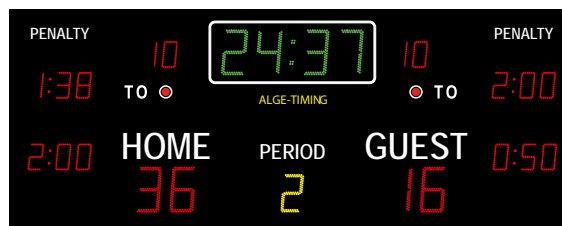
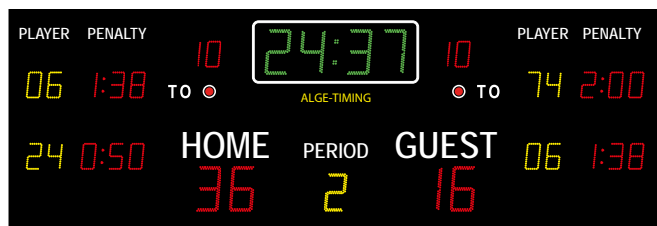
Controller

D-CKN (standard) or D-CKN-WTN-A (option)



ICE HOCKEY

D-L4SH2H and D-L5SH2H



Ice Hockey Scoreboard for Indoor (D-L4SH2H) and Outdoor (D-L4SH2H-O)

- three modules: middle section 2,400 x 1,500 mm, sides 2 x 1,000 x 1,500 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); shows 1/10 seconds during last minute
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 99 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- 10 minutes fouls: 0 to 19 for each team (red 18 cm digits)
- penalties: 2 x per team, 0 to 9:59 (red 18 cm digits)
- player number for penalty: 2 x per team, 0 to 99 (yellow 18 cm digits)
- timeout: 1 LED cluster per team with 4 cm diameter
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 4,400 x 1,500 x 70 mm
- weight: 130 kg

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

Ice Hockey Scoreboard for Indoor (D-L5SH2H) and Outdoor (D-L5SH2H-O)

- three modules: middle section 2,400 x 1,500 mm, sides 2 x 900 x 1,500 mm
- digits (LED) in three colors: red, green and yellow, white captions
- running time in minutes and seconds (up/down, green 30 cm digits); shows 1/10 seconds during last minute
- daytime can be displayed on the game time field
- time can be displayed in the game time field
- score: 0 to 99 for each team (red 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- 10 minutes fouls: 0 to 19 for each team (red 18 cm digits)
- penalties: 2 x per team, 0 to 9:59 (red 18 cm digits)
- timeout: 1 LED cluster per team with 4 cm diameter
- horn
- power supply: 110/220 VAC - 50/60 Hz
- dimensions: 3,800 x 1,500 x 70 mm
- weight: 110 kg

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

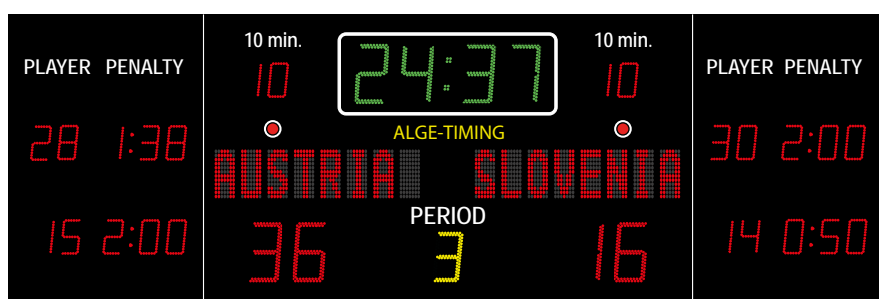
ICE HOCKEY

Accessories



Ice hockey scoreboards are used indoors and outdoors, and must meet appropriate criteria, depending on the application, in order to be easily readable and guarantee a secure data transmission.

- extra bright LEDs for models for outdoor areas, so that the display is easy to read even in direct sunlight
- flexibility through data transmission by radio from the controller D-CKN-WTN-A to the scoreboard
- each model also available with integrated LED text field to show the team names
- possibility of four-sided cube scoreboard systems to mount in the center of the ice stadium
- scoreboard with attached matrix-display board to show information (e.g. team lineup, scorer, advertising, etc.)
- scoreboard with integrated video wall



Hockey Goal Light D-HGL

The goal light consists of a red and green light, which is installed behind each goal. A goal judge operates the goal light to indicate to the referee his decision. Goal lights have to be used by the rules for international hockey games, but also many national leagues demand a goal light.





WEIGHTLIFTING



Model D-BVDT-S2

Attempt, Decision Light and Timer Board

Dimensions: 1,100 x 600 x 70 mm

Weight: 15 kg

Display

Time, weight, attempt: 100 mm LED digits

Referees' light system: 6 LED clusters, with a diameter of 20 mm each

Caption: digit height 60 mm (language can be selected)

Power supply: 100 - 240 VAC



Model D-BVDT-S1

Attempt, Decision Light and Timer Board

Dimensions: 1,100 x 800 x 70 mm

Weight: 20 kg

Display

Time, weight, attempt: 100 mm LED digits

Contestant name: 100 mm caption height (nine letters)

Contestant country: 100 mm letter height (three letters)

Referees' light system: 6 LED clusters, with a diameter of 20 mm each

Caption: digit height 60 mm (language can be selected)

Power supply: 100 - 240 VAC



Decision Light Table DL2

with three white and three red lights indicating the decision of the referees



Down' Apparatus

acoustic and visual "down" signal



Referee Boxes

three referee boxes with two buttons each (white and red) and acoustic signal

Controller

D-CKN (standard) or D-CKN-WTN-A (option)



Model D-BVJ

Dimensions:	1,200 x 800 x 70 mm
Weight:	20 kg
Scoreboard digit:	extra bright LED digits, digit height 100 mm
Osaekomi:	extra bright LED digits, digit height 100 mm
Penalties & winner:	LED cluster, 20 mm diameter
Power supply:	110 - 220 VAC - 50 Hz

Display

- result (Wazari, Yuko, Koka): display in numbers
- contest time
- winner indicator light
- penalty indicator light (Keykoka, Cuji, Sido)
- ipon indicator lights



Model D-BVJ-CT

Dimensions:	1,400 x 800 x 70 mm
Weight:	25 kg
Scoreboard digit:	extra bright LED digits, digit height 100 mm
Osaekomi:	extra bright LED digits, digit height 100 mm
Penalties & winner:	LED cluster, 20 mm diameter
Power supply:	110 - 220 VAC - 50 Hz

Display

- result (Wazari, Yuko, Koka): display in numbers
- contest time
- winner indicator light
- penalty indicator light (Keykoka, Cuji, Sido)
- ipon indicator lights
- participant's country (2 x 3 characters)



Model D-BVJ-CT

Dimensions:	1,800 x 900 x 70 mm
Weight:	40 kg
Scoreboard digit:	extra bright LED digits, digit height 100 mm
Osaekomi:	extra bright LED digits, digit height 100 mm
Penalties & winner:	LED cluster, 20 mm diameter
Power supply:	110 - 220 VAC - 50 Hz

Display

- result (Wazari, Yuko, Koka): display in numbers
- contest time
- winner indicator light
- penalty indicator light (Keykoka, Cuji, Sido)
- ipon indicator lights
- participant's name (2 x 9 characters) and country (2 x 3 characters)

Options

- DS - double-sided display board
- ST - stand with 4 wheels for mounting the display board



Model D-BVK

Dimensions:	1,200 x 800 x 70 mm
Weight:	approx. 25 kg
Digit:	extra bright LED, height 100 mm
Penalties C1 & C2	
(W, K, HC, H):	20 mm LED cluster
Power supply:	110 - 220 VAC - 50 Hz

Display

- score (Shiro & Aka): display in numbers
- current time of round
- penalty point indicator lights
- weight display
- tatami display



Model D-BVK-CT

Dimensions:	1,400 x 800 x 70 mm
Weight:	approx. 30 kg
Digit:	extra bright LED, digit height 100 mm
Penalties C1 & C2	
(W, K, HC, H):	20 mm LED cluster
Power supply:	110 - 220 VAC - 50 Hz

Display

- score (Shiro & Aka): display in numbers
- current time of round
- penalty point indicator lights
- weight display
- tatami display
- participant's country (2 x 3 characters)



Model D-BVK-T

Dimensions:	1,800 x 900 x 70 mm
Weight:	approx. 40 kg
Digit:	extra bright LED, digit height 100 mm
Penalties C1 & C2	
(W, K, HC, H):	20 mm LED cluster
Power supply:	110 - 220 VAC - 50 Hz

Display

- score (Shiro & Aka): display in numbers
- current time of round
- penalty point indicator lights
- weight display
- tatami display
- extension name (2 x 9 characters)
- participant's country (2 x 3 characters)

Game Judge

Voting Console

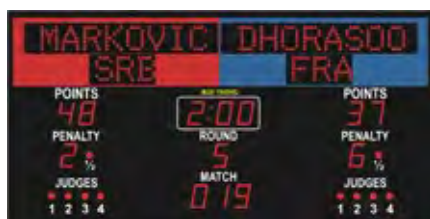
The voting console for the five judges (1 red button and 1 blue button) allows them to vote during kata.

Options

- DS - Double-sided scoreboard
- ST - stand with 4 wheels for mounting the scoreboard
- controller with radio



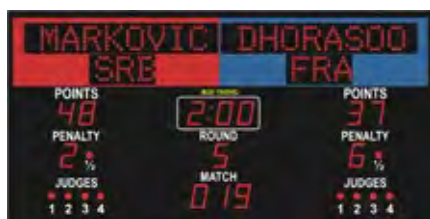
model D-BVT-0



model D-BAT



model D-BVT-CT



model D-BVT-T

Model D-BVT-0

- dimensions: 1,000 x 650 x 70 mm
- weight: 13 kg

Model D-BAT

- dimensions: 1,000 x 650 x 70 mm
- weight: 13 kg

Model D-BVT-CT

- dimensions: 1,200 x 800 x 70 mm
- weight: 20 kg

Model D-BVT-T

- dimensions: 1,800 x 900 x 70 mm
- weight: 40 kg

All models

- digits: red LED, digit height 100 mm
- judges 1, 2, 3, 4 penalty ½: LED cluster, 20 mm diameter
- power supply: 110 - 220 VAC - 50 Hz

Display of all models

- red (Hong) - result in numbers
- blue (Chung) - result in numbers
- time of round
- round number
- full points deductions (gam-jeom)
- judge lights
- half point deduction (kyung-go) indicators

Model D-BAT

- additional match number

Model D-BVT-CT

- additional match number
- nation (2 x 3 characters)

Model D-BVT-T

- additional match number
- nation (2 x 3 characters)
- name (2 x 9 characters)

Controller

D-CKN (standard) or D-CKN-TXA (option)

Controller Functions

- scoreboard diagnostics
- adjustable time window for judging decisions - controls the time at which two judges must agree whether a point is scored
- point buzzer - the buzzer, which signals a point, can be switched off; when this function is disabled, loop and pause buffers are still active
- break length - adjustable time for the break
- round length - adjustable time for the rounds
- round number - adjustable number of rounds for a match

Options

- DS - double-sided scoreboard
- ST - stand with 4 wheels for mounting the scoreboard

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