ALGE
TIMING

THE SPORTS TIMING EXPERTS

Catalog

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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 temperaturecompensated 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.

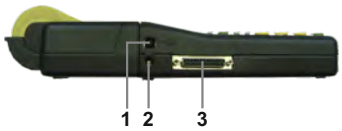
TIMING DEVICES

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		
Timing:	9 timing channels, external extension possible		
Program memory:	flash memory with 16 Mbit		
Data memory:	RAM with 4 Mbit (about 30,000 times)	Power consumption:	without printer about 100 hours with printer about 47 hours
Display:	monochrome LCD graphic display with backlight, 128 x 64 pixels, extended temperature range	Charging time:	approx. 14 hours
		Printer:	graphic thermal printer, max. 5 lines per second
Keypad:	silicone keypad, 26 keys	Temperature range:	-20°C to +60°C
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	Measurements:	Timy3 W: 204 x 91 x 50 mm Timy3 WP: 307 x 91 x 65 mm
		Weight (no battery):	Timy3 W: 450 g Timy3 WP: 650 g (without battery & paper)

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 delayed by using a special technology and 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

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 TRI128
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 TRI128
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 TR128

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 ab 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.

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

alge-results.com Platform

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.

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.

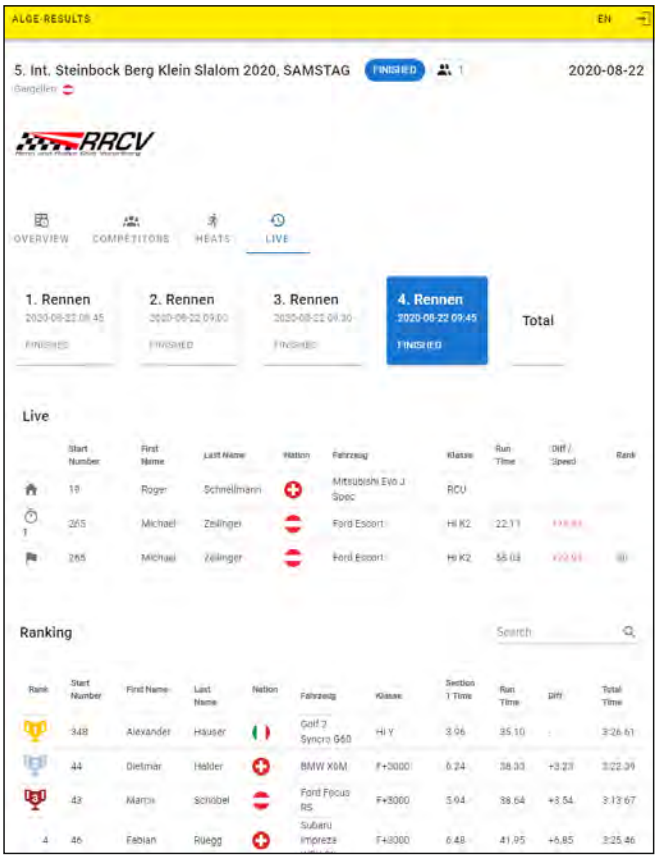
The timing setup can be adjusted for each competition. There you assign the corresponding function to the respective device and timing channel.

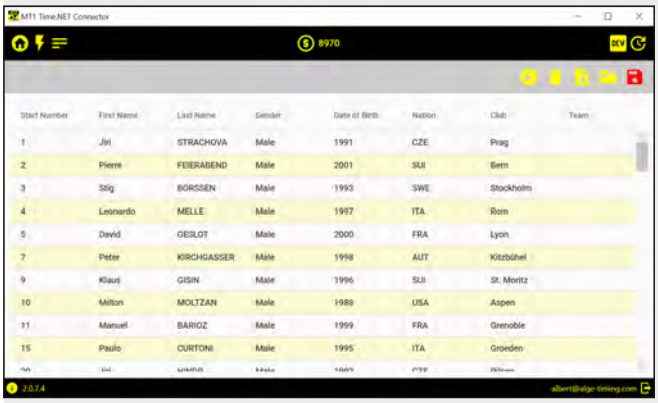
With the help of a PC program (Time.NET Connector), the participant data and times can be transferred to the PC and imported into the evaluation software.

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





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

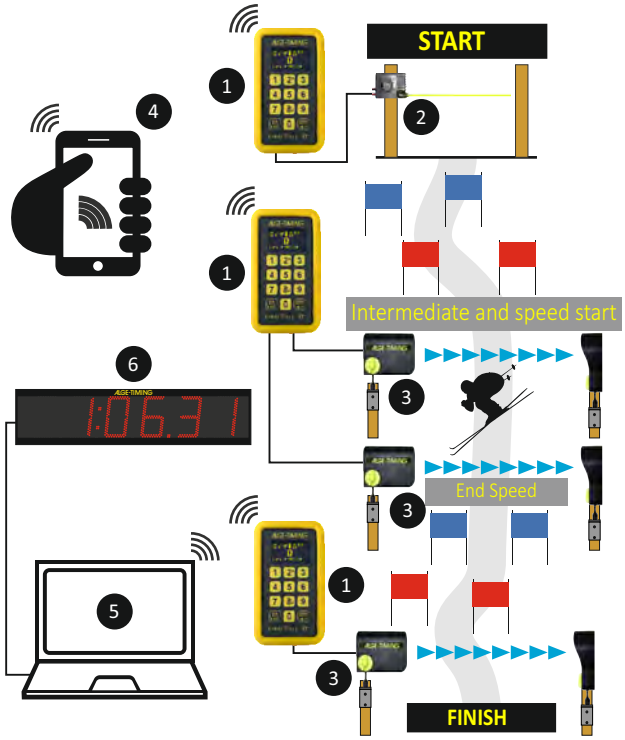
Alpine Skiing or Downhill

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

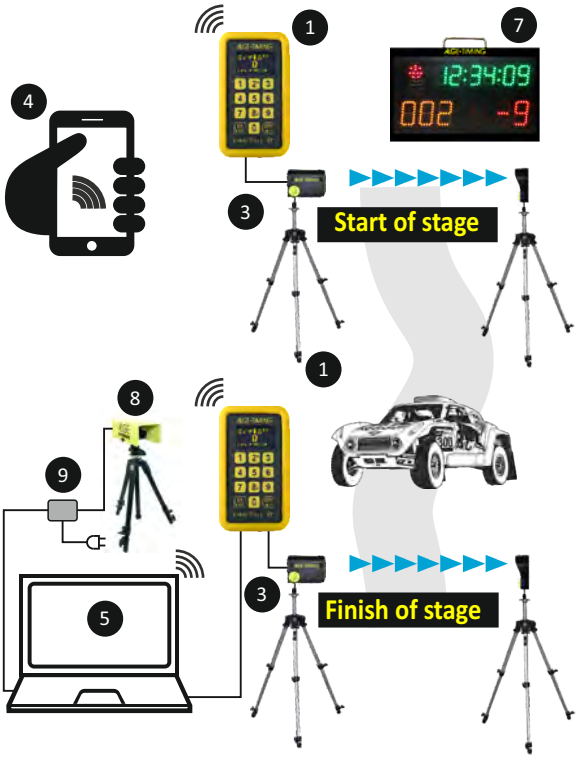
The ID-number is entered for MT1 at the start. You do not need to enter the ID-number for the other MT1s.

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	4 Mobile device for Live Results	7 Startclock ASC3
2 Startgate STSn1A or photocell	5 PC for timing	8 IDCam
3 Photocell with reflector	6 Display Board D-LINE	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 ID-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

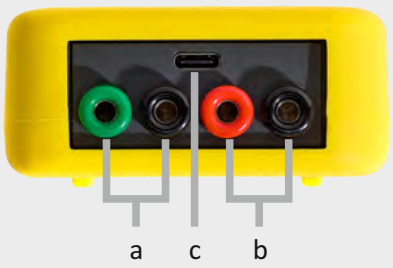
- Standard mode with an extra-large display for the start number
- Scroll mode: all times at a glance
- Memo mode: Subsequent entry of the start number after crossing the finish line
- Synchronization output: With the high-precision pulse output, you can synchronize other devices to an exact time.
-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



a ..... Banana socket channel C0
b ..... Banana socket channel C0
c ..... USB port

START DEVICES

Startclock ASC3

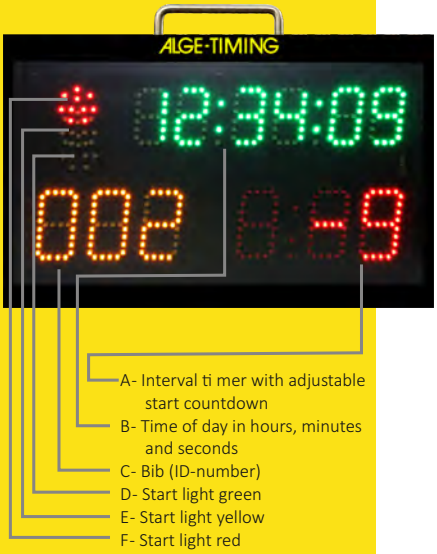
The Startclock ASC3 is an important device for the professional handling of the start. It is equipped with the latest LED technology and provides accurate start information for the participants and start judge. The ASC3 is optimally readable a daytime or night. The battery-driven Startclock ASC3 is used 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 · external push button · external power supply · on/off switch · internal push button
Sound converter:	horn loudspeaker, swivelling
Housing:	polyamide, glass fibre 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 voice 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 start gun e-Start has an integrated flash.

Advantages of the Start System BANG2

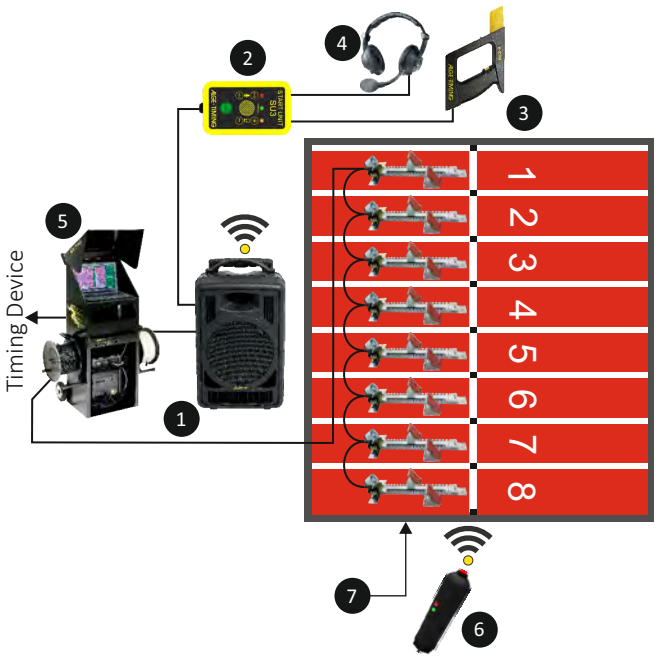
- Start system is always ready, no reloading of a gun necessary.
- No starting problems due to unloaded start guns or bad blanks.
- No costs for expensive blanks.
- There is no cleaning of guns necessary after the end of a race day.
- No legal problems with the use of the start system (in many countries a gun license is necessary for a start gun).
- 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.
- works with cable or radio (WTN)

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

START DEVICES

Speaker System BANG2

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



1 BANG2
2 Start Unit SU3
3 e-Start
4 Headset HS4-2
5 Start Judge SJ2
6 False Start Push Button WTN-PB
7 Starting Block with Sensor SJS2

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 start gun. 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 voice 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.

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 H4-2
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

Electronic Start Gun e-Start and e-Start W

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

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

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

Start gun e-Start

Start gun e-Start W

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

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

Technical Specifications

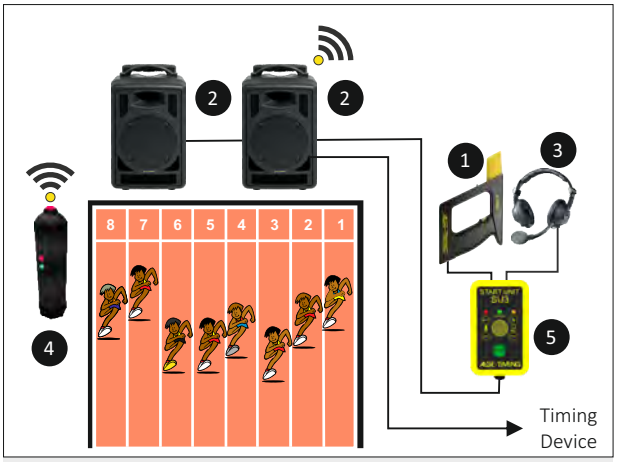
Flash:	4 x LED (Ultra Bright Power LED)
Operating temperature:	-20 °C to +45 °C
Dimensions:	265 x 150 x 35 mm

e-Start Specifications

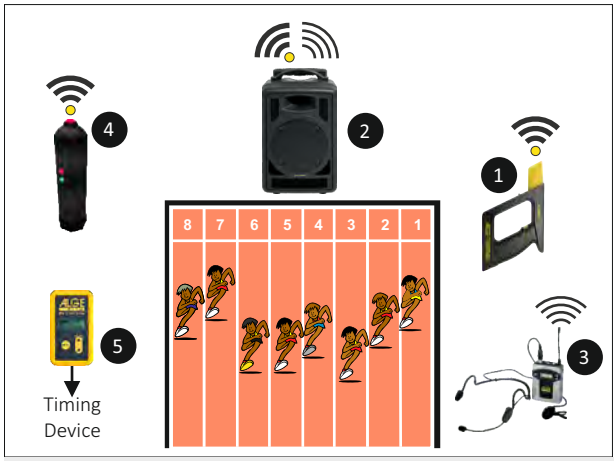
Weight:	approx. 0.3 kg
Connector:	2 m long connection cable with DIN plug

e-Start W Specifications

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



1 e-Start
2 BANG2
3 HS4-2
4 WTN-PB
5 Start Unit SU3



1 e-Start W
2 BANG2
3 BANG-HS
4 WTN-PB
5 WTN

START DEVICES

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 fi x 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 micro switch 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 a non-slip 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 re-chargeable 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 HS4-2**
for the timing communication

7 **Speech Amplifier SV4-S**
for plugging in at the start-finish line and connecting the headset

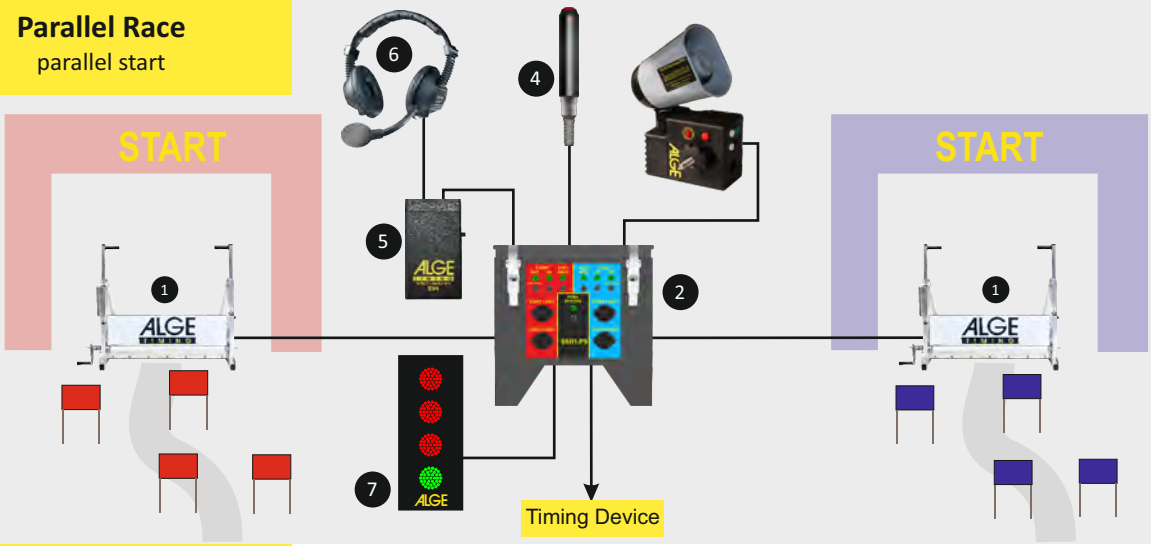
8 **Multi Channel MC9**
docking station with 9 channels for Timy3

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.

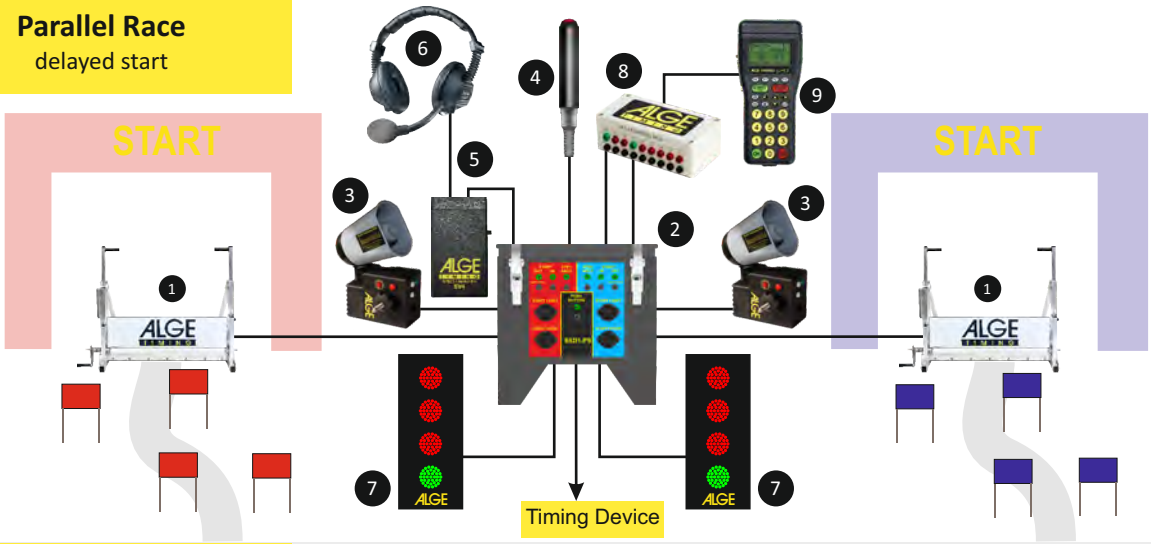
START DEVICES

Start Door SDD1

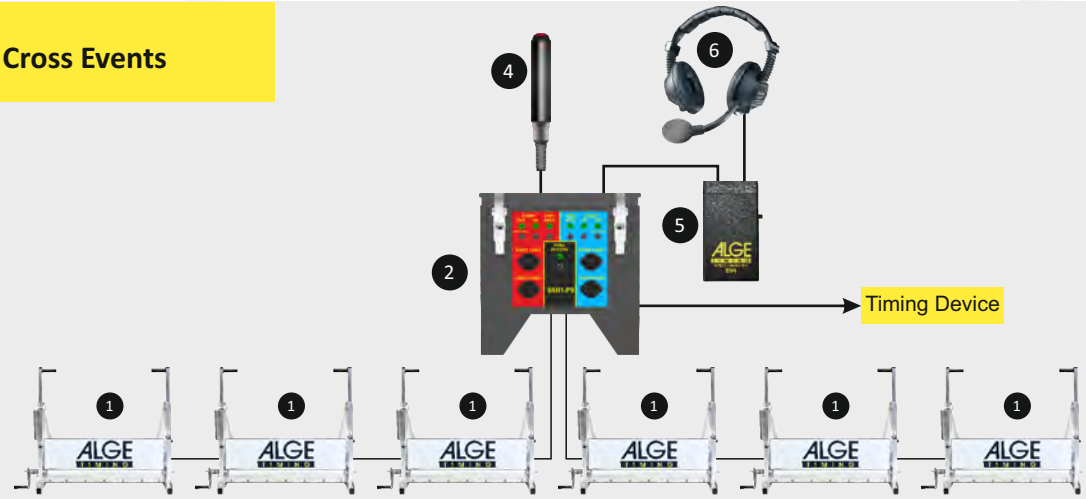
Parallel Race
parallel start



Parallel Race
delayed start



Cross Events



1. Start Door SSD1
2. Distribution Box SSD1-PS
3. Startbeep STB1
4. Push Button 023-02
5. Speech Amplifier SV4-S
6. Headset HS4-2
7. Start Light D-SL105-3xR-G
8. Multichannel Mc9
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

IMPULSE DEVICES

Photocell PR1a and PR1aW

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)

IMPULSE DEVICES

Photocell Accessory

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, 002-30Stop cable with power supply:001-01, 001-10, 001-30Banana 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

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 ATSxY

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 ATS3Y: 3 m tape switch
- tape switch ATS6Y: 6 m tape switch
- tape switch ATS7Y: 7 m tape switch
- tape switch ATS9Y: 9 m tape switch

Other tape switch lengths on request.

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.

Bluetooth Headset HS-BT1

Wireless headset with Bluetooth, headphones on both sides and microphone. Suitable for use at high surrounding sound level. Usable with the speech amplifier SV4-BT .

Headset HS4-2

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

Headset HS4-1

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

Speech Amplifier SV4-BT

Speech amplifier with integrated Bluetooth for pairing with Bluetooth headphones. Two connections for two-wire connection cables (banana plugs). Volume control and switch or button for microphone.

Speech Amplifier SV4-S

With two connections for two-core con-nection 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 head-set, connection for startmicrophone, volume control and switch and/or push button for microphone

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

GPS Receiver GPS-A

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

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)

Adapter USB RS232I

The USB-RS232I is a 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 de-vice 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 P6

The P6 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, Start-clock ASC3, Mobile Timing MT1 or Teledata TED2. The power is supplied by the connected device, power supply PS12A or through USB-C.

CABLES & ADAPTERS

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 to transport 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 D-LINE dis-play 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 TED2

The TED2 is a modern radio with built in high precision timing device. The TCXO-quartz of the TED2 is permanently synchronized via an integrated GPS receiver and the quartz well be permanent re-calibrated. This results in a yet unknown time accuracy.

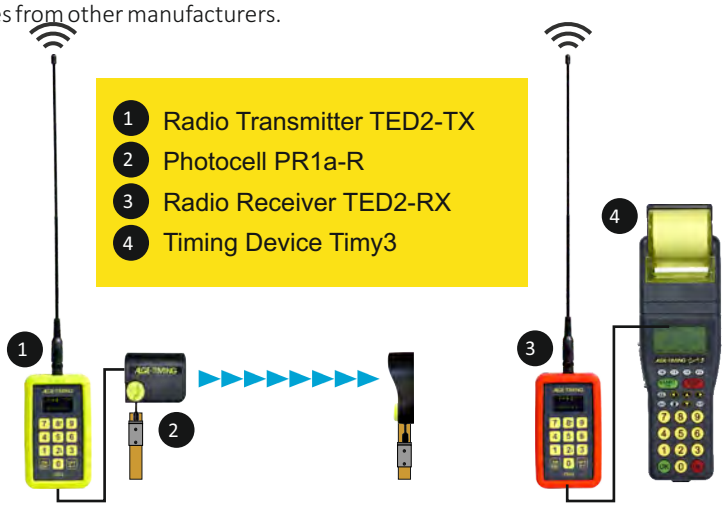
The radio transmits in the 433 MHz band. The radio frequency and radio power can be set by the operator. This TED2 allows distances of up to 4.5 km to be bridged by radio.

An integrated keyboard in the TED2 allows to enter bibs for at the transmitter and receiver. The timing impulse or the "time stamp" can be transmitted wirelessly from the transmitter TED2-TX to the receiver TED2-RX. The “time stamp” contains the time of day, the timing channel and the bib or alternatively a continuous number.

This means that the Timy3 will accept the transmitted "time stamp" with the bib. This makes timing easy and stress-free.

The transmitter TED2-TX has two timing channels. If you use more transmitters in one system you can adjust the timing channels so you can receive up to 10 different timing channels. Our technology enables the TED2-RX to receive all 10 timing channels simultaneously.

Since the TED2 can also transmit timing impulses, it is compatible with timing devices from ALGE of previous generations and can also be connected to most timing devices from other manufacturers.



1. Radio Transmitter TED2-TX
2. Photocell PR1a-R
3. Radio Receiver TED2-RX
4. Timing Device Timy3

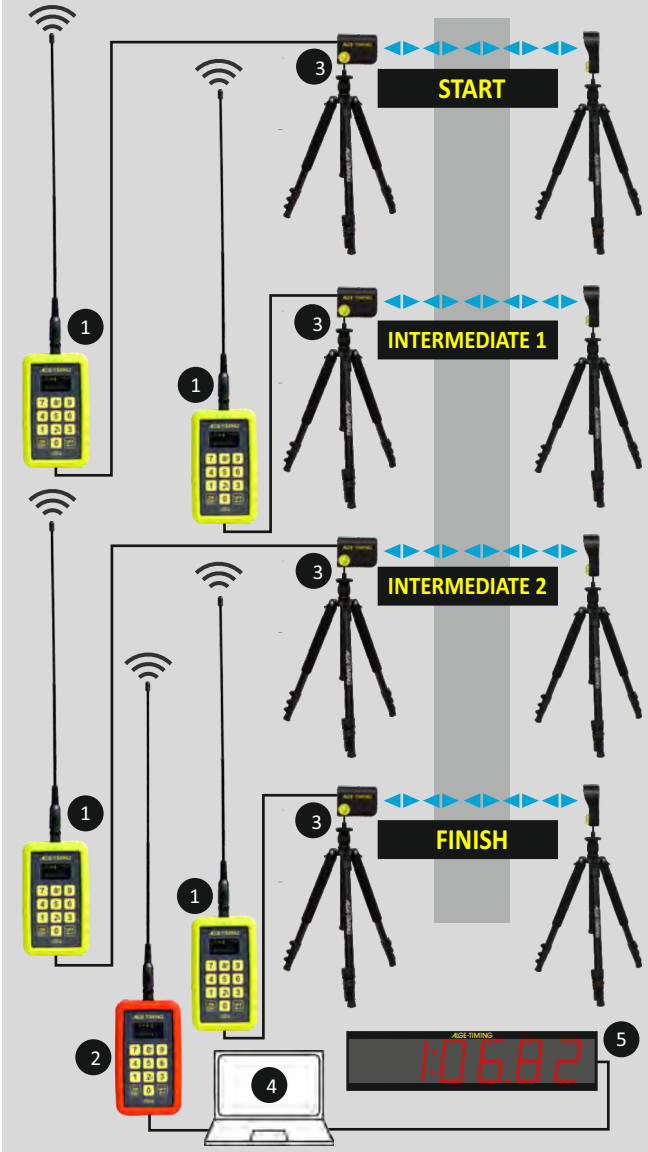
Facts about the TED2

- radio system with integrated accurate timing device
- TED2 stores up to 7000 time stamps
- automatic synchronization via GPS
- transmission of "time stamps" or timing pulses
- display and keyboard for easy operation
- up to 10 different “timing stamps” can be transmitted
- simultaneous reception of up to 10 “time stamps”
- display and keyboard for easy operation
- 139 adjustable radio frequencies
- the frequency of 433 MHz guarantees a long range of up to 4.5 km
- USB-C connecter for printer or other devices connected via a USB-type C cable

RADIO DEVICES

Teledata TED2

Timing with two Intermediate Times and PC

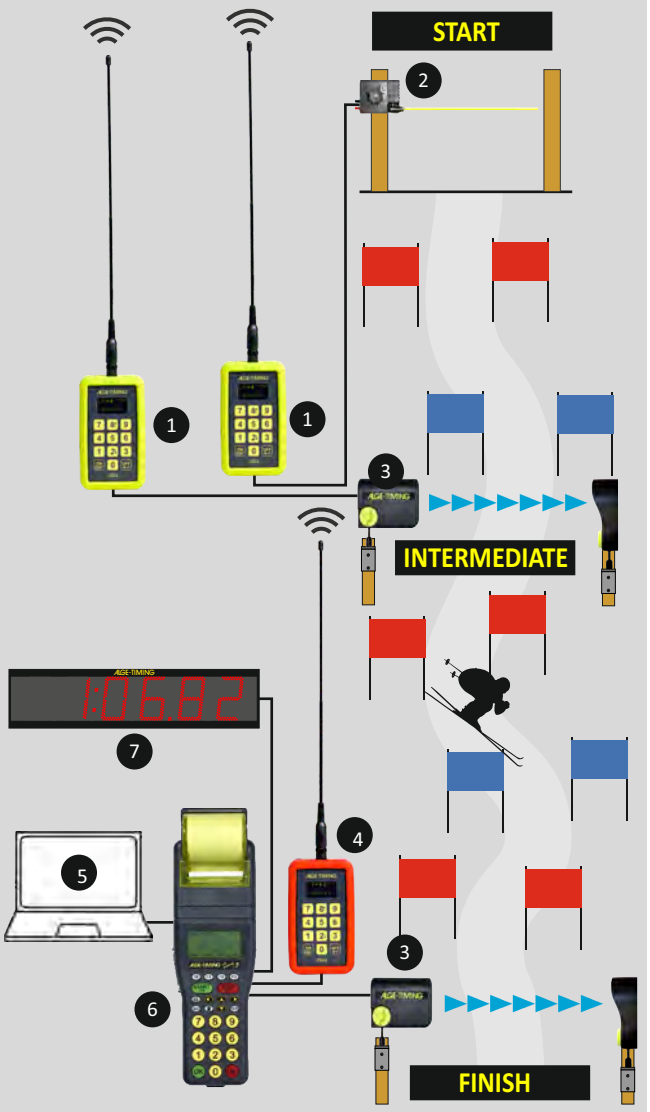


1 Radio Transmitter TED2-TX
2 Radio Receiver TED2-RX
3 Photocell PR1a-RT
4 PC for Timing Operation
5 Display Board D-LINE

All TED2 are automatically synchronized to the time of day when GPS reception is received. If a start, intermediate or finish impulse occurs, the TED2 registers this time of day. This is saved together with the entered ID-number or consecutive number (if no ID-number is entered) and the timing channel used. The TED2-TX will send this „time stamp" to the receiver TED2-RX.

The PC requires software that reads the „time stamps" via the USB interface (e.g. ALGE TimeNet2). Thus, you can manage the time measurement on the PC and make necessary corrections.

Ski Alpine with Intermediate Time



1 Radio Transmitter TED2-TX
2 Startgate STSn1M
3 Photocell PR1a-R
4 Radio Receiver TED2-RX
5 Evaluation PC
6 Timing Device Timy3 WP
7 Display Board D-LINE

The times from the start and from the intermediate time are sent to the Timy3 via TED2-TX, whereby the user is free to enter the start numbers directly at the TED2-TX or Timy3.

In this example, the finish photocell is connected directly to the Timy3, but could also be operated via radio.

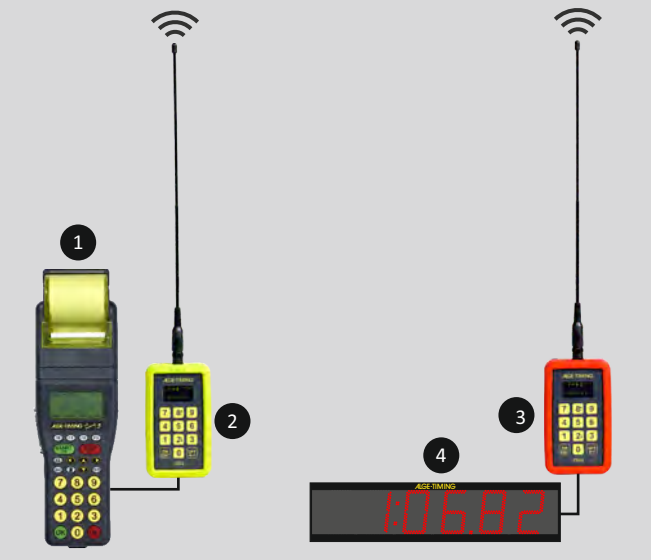
RADIO DEVICES

Teledata TED2

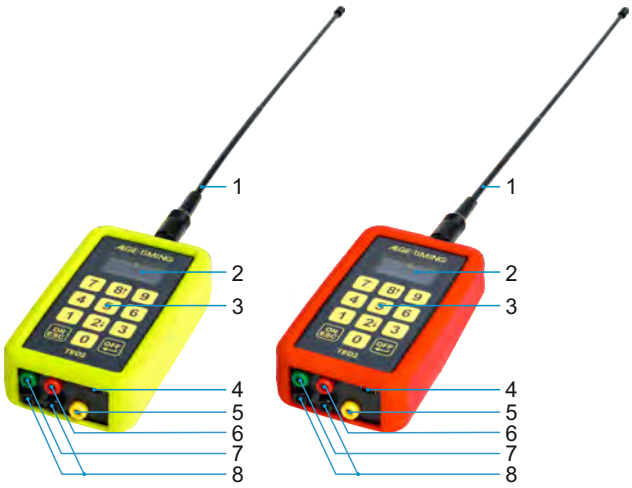
Data Transmission to Display Boards

It is possible to send data with the TED2 from an ALGE-timing device to a display board.

Data Transmission to Display Board D-LINE



1 Timing Device Timy 3
2 Radio Transmitter TED2-TX
5 Radio Receiver TED2-RX
6 Display Board D-LINE



1..... Antenna
2..... Display
3..... Keyboard
4..... USB-C Connector
5..... Banana Socket, RS232 out
6..... Banana Socket, Timing Channel C1 (out/in)
7..... Banana Socket, Timing Channel C0 (out/in)
8..... Banana Sockets, Ground

Technical Data

Timing:

Measuring Range:	23 hours, 59 minutes 59.9999 seconds
Timing Precision:	1/10,000 s
Time-Base:	self-calibrating TCXO quartz
Synchronization:	integrated GPS receiver, alternative via timing impulse
Timing Channels:	2 (banana sockets), adjustable C0 to C9
Memory:	7,000 time stamps (permanent stored)
Display:	OLED, 37 x 20 mm, 128 x 64 Pixel
Keyboard:	Splash-proof membrane keyboard with12 keys
Power Supply:	External: through USB-C cable Internal: Li-Ion battery, 3.6 V / 10.4 Wh Charging time: app. 4 h at +25 °C Operation time*: TED2-TX: 24 h at-20 °C TED2-RX: 12 h at-20 °C
Operating Temperature:	-20 to +65°C
Measurements:	152 x 81 x 40 mm without antenna
Weight:	TED2-TX: 320 g (without antenna) TED2-RX: 320 g (without antenna)
Case:	Splash-proof plastic housing with shock-absorbing rubber coating

Radio:

Radio Frequency:	433 MHz band 139 adjustable frequencies
Radio Performance:	TED2-TX400: standard 10 mW adjustable 5 – 500 mW
Radio Range:	up to 4.5 km
Antenna:	BNC-antenna

* operation time at-20°C with one impulse per minute

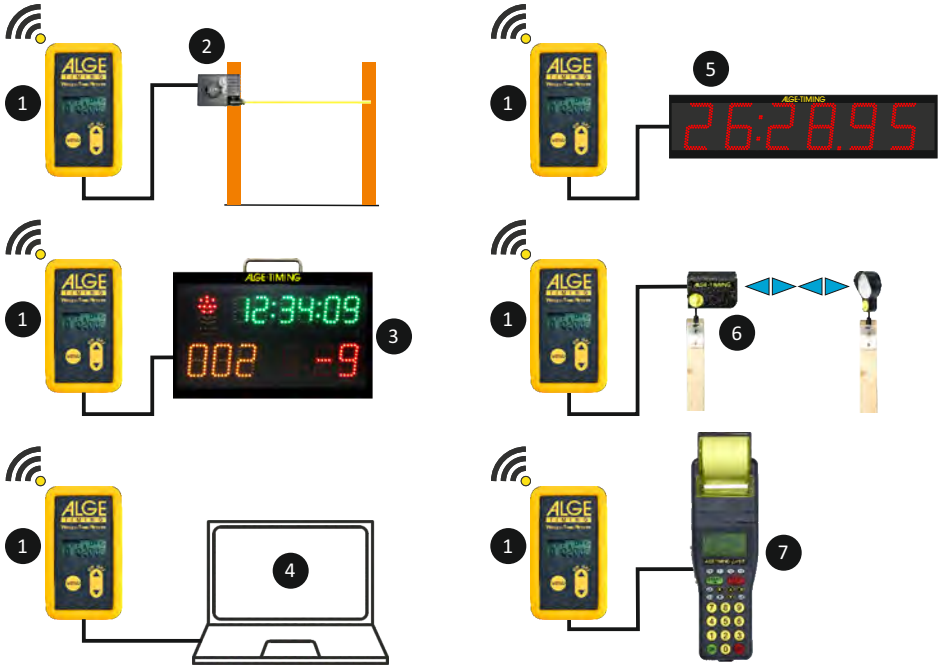
RADIO DEVICES

Wireless Timing Network WTN

The "Wireless Timing Network WTN" is a worldwide unique radio timing network with mesh topology in the 2.4 GHz band. It can transmit timing information as well as serial data and display board information simultaneously. All devices act as transceivers.
Redundancy: The more devices in the network, the more reliable!

The WTN allows wireless communication between the timing device and peripheral devices such as photocells, display boards or PC. For example, the photocell sends the impulse wirelessly to the timer, which forwards the data wirelessly to the display board and to the PC with evaluation software.

Examples for the use of the Wireless Timing Network WTN

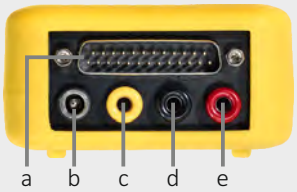


1. WTN
2. Startgate STSn*
3. Startclock ASC3
4. PC for Timing or Results
5. Display Board**
6. Photocell*
7. Timing Device***

* 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 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 du-ring 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 but-ton 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 take place through the display panel via the 4-pin Amphenol connector.

1. Timing Device Timy3 WP
2. Wierless 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.

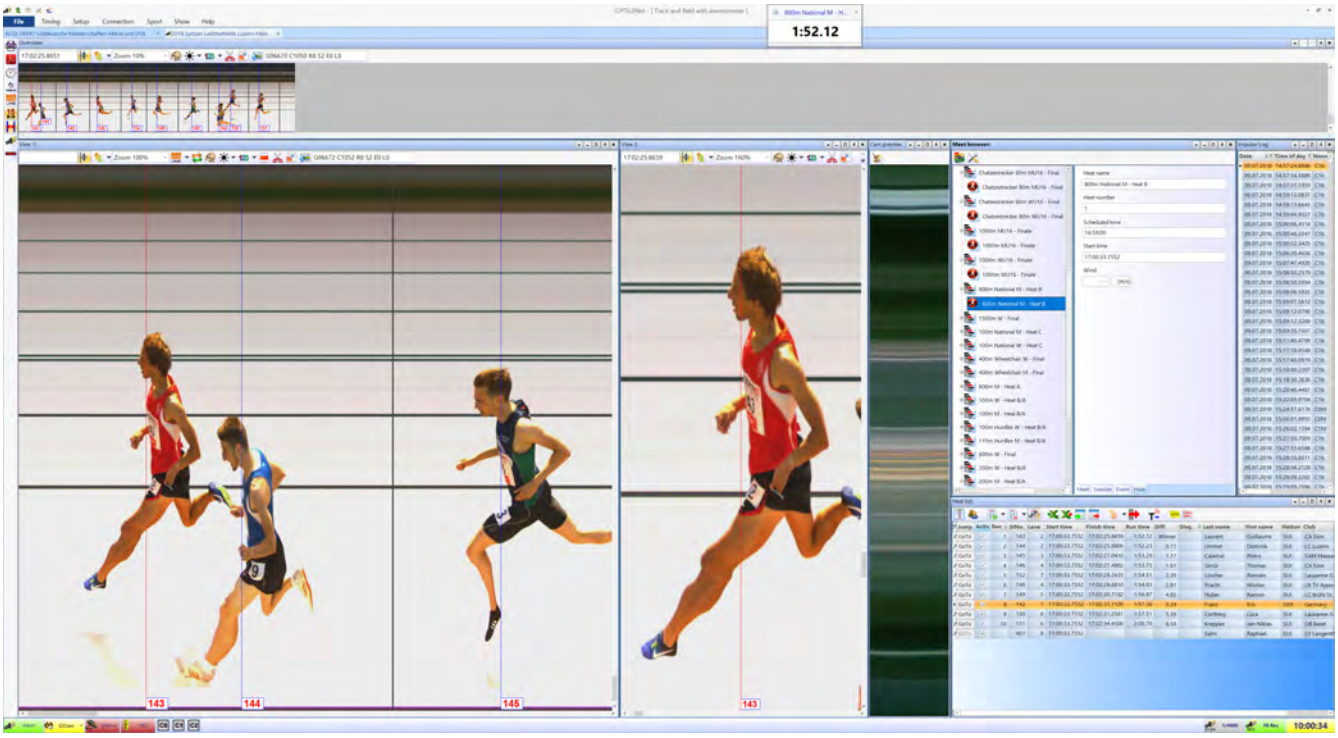
2-D Image Adjustment
With the new 2-D image adjustment (maximum 2,016 x 360 pixels), you can accurately align the camera on the finish line in a very short time.

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, Windows 11 (x64)

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

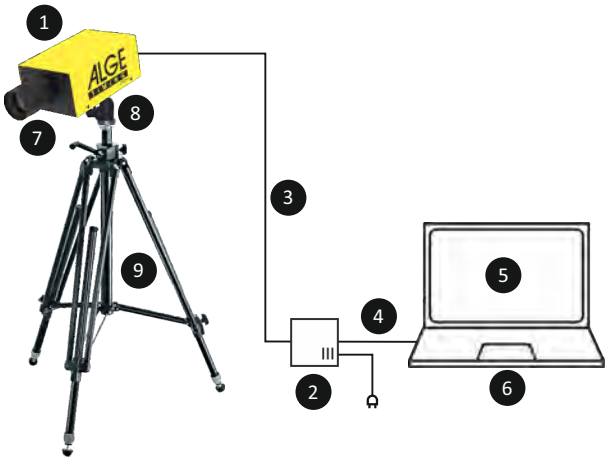
The professional photo finish system that leaves nothing to be desired. The following features are integrated:

- 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

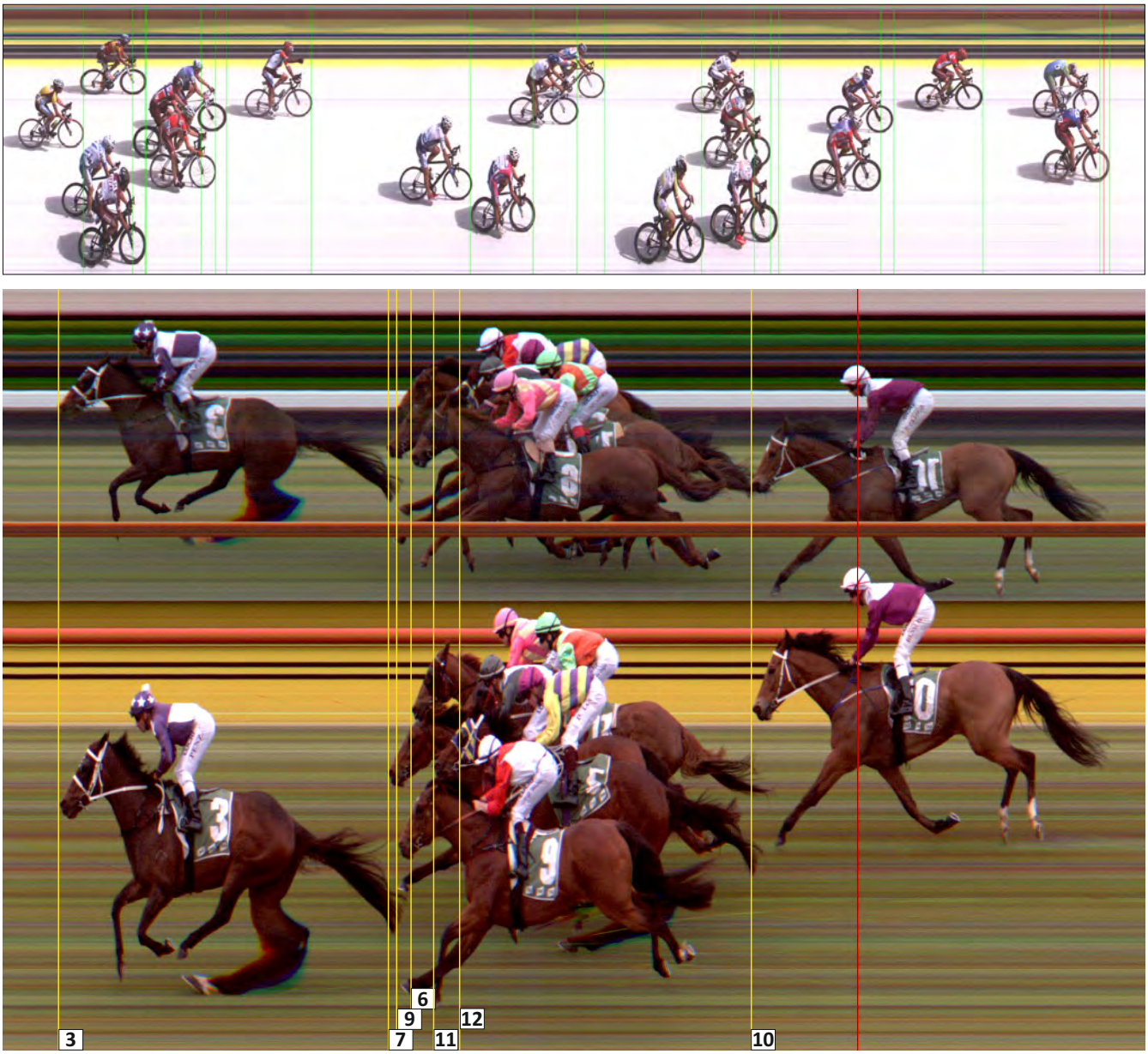


PHOTO FINISH

OPTIc3

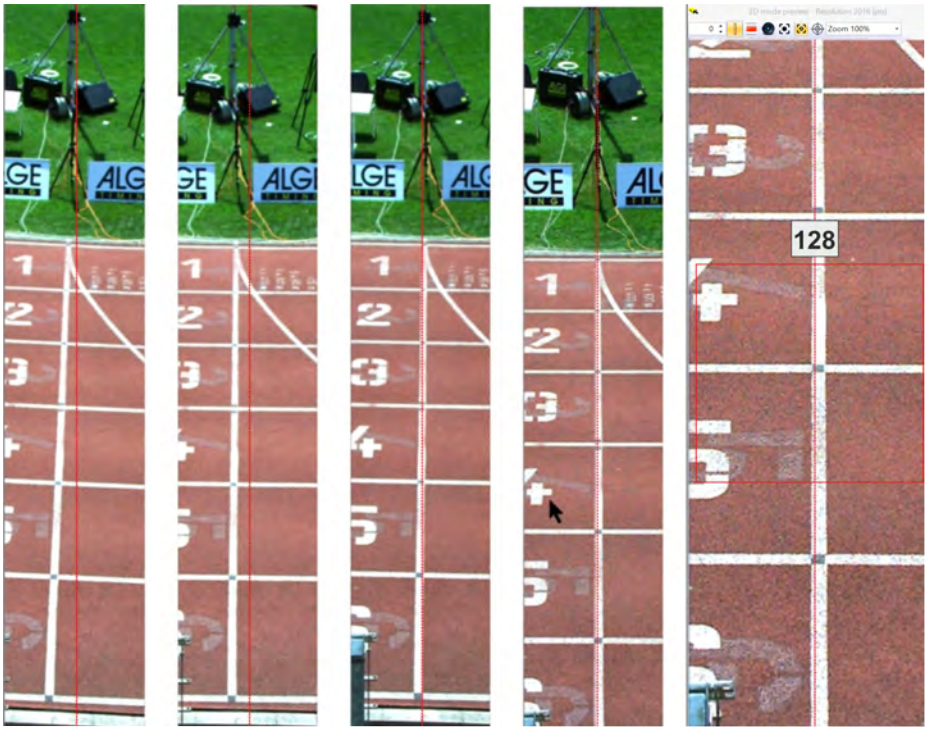
The OPTIc3 is used for sports where several participants reach the finish at the same time. In addition, the OPTIc3 is the ideal device to monitor the finish arrival. When discussing a result, the picture of the OPTIc3 shows the proof. Here the saying is true:

“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

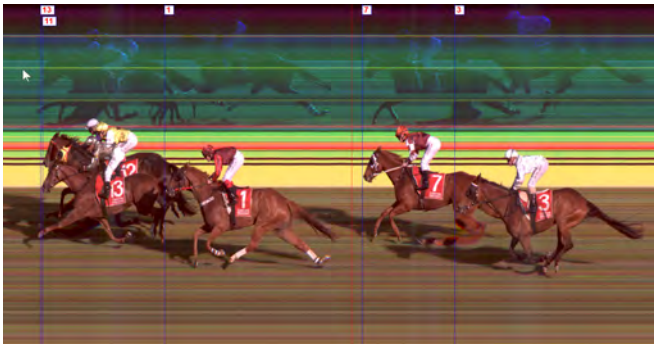
PHOTO FINISH

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 oszillator TCXO: +/- 0.006 ppm at 25 °C (0.0002 s/h)	
PC Connection:	Gigabit Ethernet / WLAN	
Lens Mount:	C-Mount / F-Mount with adapter	
Distance Camera to PC:	CAT6 cable: up to 100 m Fibre Optic: up to 2000 m (with converter)	
Connection for Electronic Gear Head:	yes	
Option for ALGE-TIMING Motor Zoom:	yes	
Remote Control for Zoom:	yes (for ALGE-TIMING motor zoom)	
Remote Control for Iris:	yes (for ALGE-TIMING motor zoom)	
Remote Control for Focus:	yes (for ALGE-TIMING motor zoom)	
Autofocus:	yes (for ALGE-TIMING motor zoom)	
Automatic Brightness Adjustment:	yes (for ALGE-TIMING motor zoom)	
White Balance:	automatic and PC software	
Gamma Adjustment:	PC software	
Recording Time:	unlimited, depending on the PC hardware	
Recording Speed Adjustment (fps):	software (adjustable at any time)	
Timing Impulse Inputs:	3 (start, intermediate time, finish)	
Connection for Display Board:	Rs232 / Rs485 / Ethernet	
USB Interface:	2	
Recording and Evaluation:	possible on 2 different PC	
Transponder Integration:	optional	
Power Supply:	Ethernet with PoE+ power supply PS12A (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 finish input (banana socket)
2 x DIN socket (3 input channels)
1 x display board RS232 (banana socket)
1 x display board RS485 (banana socket)
1 x motor zoom
1 x gear head
2 x USB (e. g. for WLAN)
1 x RJ45 (Gigabit Ethernet)
1 x power supply (9 – 13.4 VDC)



Example of a Result List Printed by the OPTIc3:

Spitzen Leichtathletik LUZERN

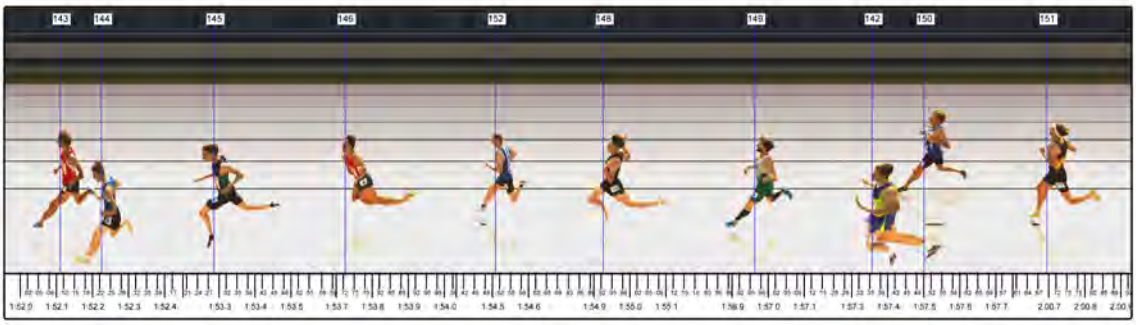
Sportfaszination im Weltformat.

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

boduri CKW. LUZERN SWISSLOS

Photofinish: ALGE-TIMING OPTIc3
Software: ALGE-TIMING OPTIc3.NET

2020-11-19 / 10:46

ALGE-TIMING

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

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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 ⅔ “, 12.5- 75 mm / F1.2

Motor Zoom MZ75C
control of focus, zoom and brightness from the PC
C-Mount ⅔“, 12.5 – 75 mm / F1.2

Motor Zoom MZ48C
control of focus, zoom and brightness from the PC
C-Mount ½“, 8- 48 mm / F1,2

Wide-Angle Lens L8C
C-Mount ⅔“, 8 mm / F1.4

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

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

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

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

Tripod STATIV6
tripod with a maximum height of 3.66 m

Tripod TRIMAN
tripod with a maximum height of 2.4 m

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

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

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

Ethernet Cable K-RJ45G03
CAT6 patch cable with 3 m

Ethernet Cable K-RJ45G10
CAT6 patch cable with 10 m

Ethernet Cable K-RJ45G20
CAT6 patch cable with 20 m

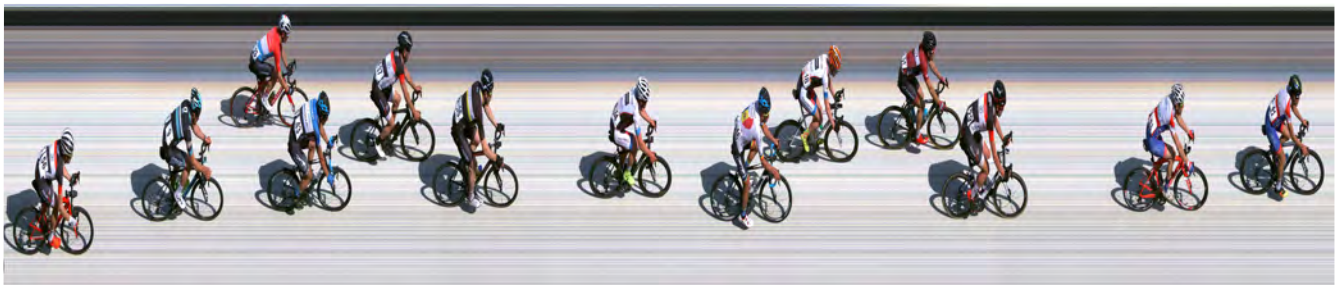
Cable Reel KT-RJ45G90
cable reel with 90 m CAT6 Ethernet cable for the OPTIc3 (with this cable, the POE can also feed the camera)

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

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

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

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



MONITORING OF THE FINISH LINE

IDCam

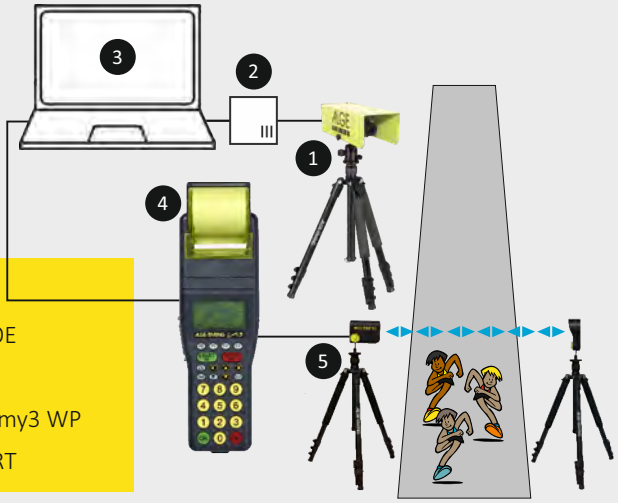
The IDCam is a reliable and simple way to monitor the finish line. When an athlete crosses the finish line a series of high resolution pictures is taken and stored on the PC with the time of the day for each image.

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.



1. IDCam
2. Power Supply POE
3. PC for IDCam
4. Timing Device Timy3 WP
5. Photocell PR1a-RT

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 fps (5 MP), or up 180 fps (HDTV 720p)
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, 11
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.

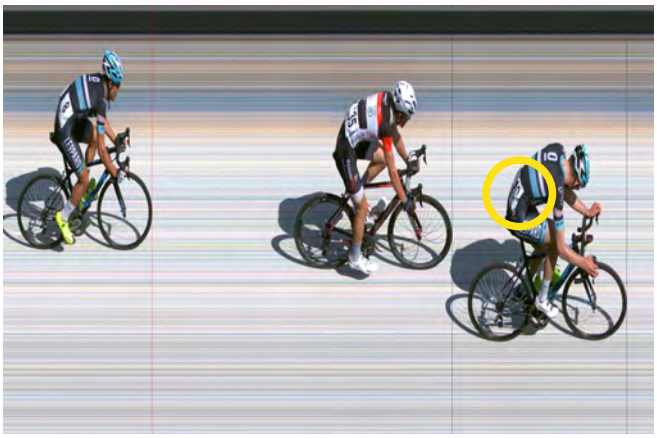


Photo Finish OPTIc3 image

The cyclist with ID-number 10 can not be identified in the photo finish picture. In the picture taken by the IDCam, the ID-number 10 is, however, clearly recognizable (see image below).

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).

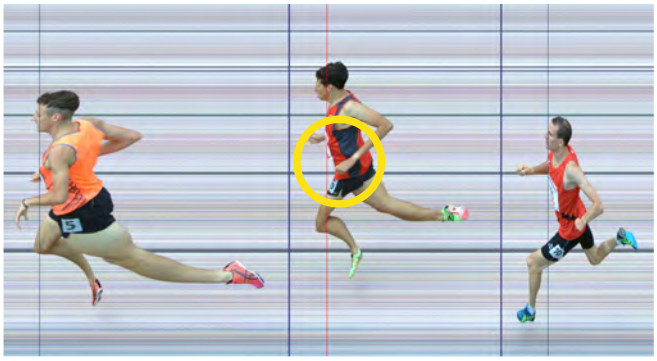


Photo Finish OPTIc3 image

IDCam image

DISPLAY BOARD

D-LINE

The multifunctional LED display board

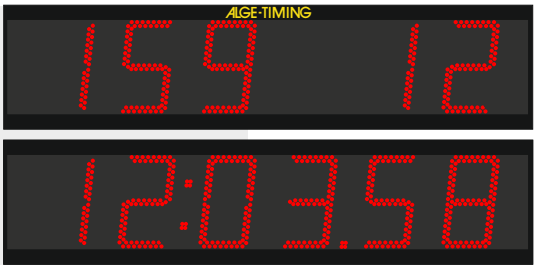
The ALGE-TIMING D-LINE can universally be used. It is a numeric LED display board, directly controlled by ALGE-TIMING timing devices. Via RS232 interface data from other devices can also be displayed.

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
- Amphenol socket (four-pin) for data or power supply (12 VDC)
- integrated power supply (100- 240 VAC, 50- 60 Hz)
- fastening:
  - 4 hangers
  - ¾“ thread for tripod
- black aluminum case with red front plexiglass
- operating temperature: -20°C to +60°C

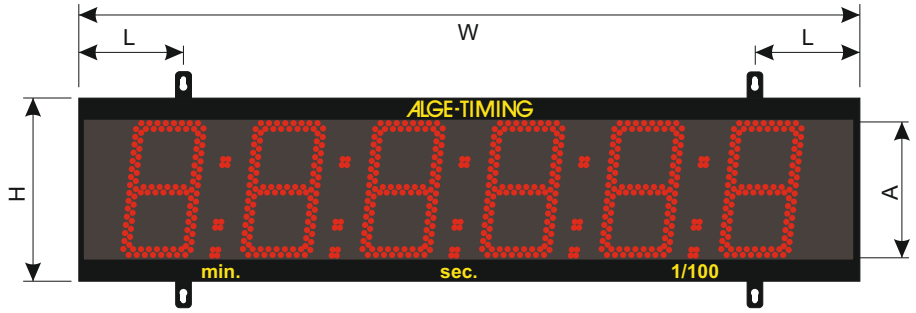
Display boards can display the following numeric data:

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

DISPLAY BOARD

D-LINE

	Amount of Digits	Figure Height [A]	Height [H]	Width [W]	Depth	Hanging Loops Spacing [L]	Weight	Power Consump-tion	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	80 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 250mm figure height (outdoor)

Digit with 150mm 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

- D-LINE: product name
- 150: figure height in mm
- O: I = indoor model, O = outdoor model
- 6: number of digits, here 6 digits
- E0: additional spaces between the digits

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.

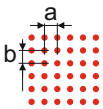
The lightweight, rugged aluminum housing allows easy transportation of the scoreboard. The outdoor version is easily readable even in direct sunlight. If it is used at night or on rainy days in difficult light conditions, the brightness can be adjusted in 100 levels.

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

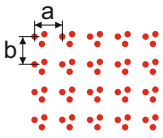
Pixel Arrangements:

P1



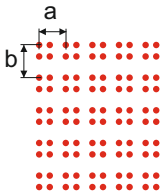
a + b = 10.0 mm
a + b = 15.0 mm
a + b = 20.0 mm

P3



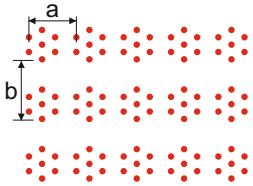
a = 21.6 mm
b = 21.6 mm

P4



a = 20.7 mm
b = 25.4 mm

P7



a = 36.8 mm
b = 46.4 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

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.

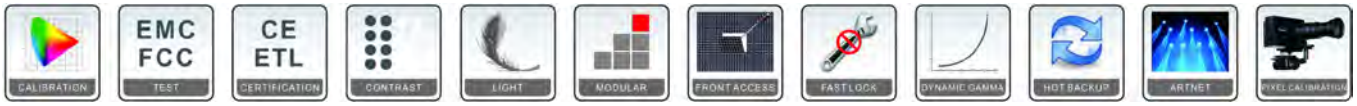
Due to the quick-release fasteners it is possible to build up the entire video wall in a few minutes.

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 al 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

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 break-downs 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/m² or in Nit. Especially for full-color 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 cd/m², the same brightness is present, but after white balance, is then indicated as 5,000 cd/m². 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 cd/m²
Full colour 5,000 cd/m², white balance

Viewing Angle
This information is specified different-ly. 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.

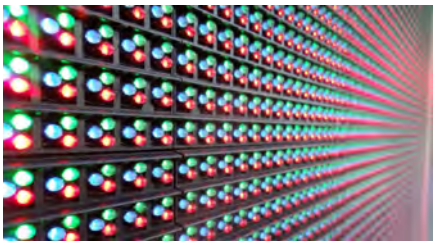
Outdoor
The LEDs are cast with a special potting compound with a disc. High quality products are only shed, a each disc reflects.

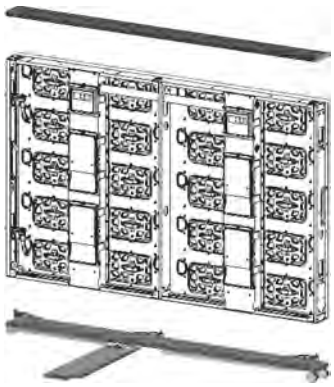
Single Colour
The display can only show one colour. There are, however, still very big differences between the different video walls. In our systems, a colour can also be divided into 256 or 4.096 brightness levels. Such a system can be used to display pictures or movies as on a black-and-white TV.

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





DISPLAY BOARD

Lap Counter D-LCC

The lap counter D-LCC 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 (battery and charger), tripod, external operating console and, if desired, a bell.

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.

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

- number of faces
- figure height in cm
- number of digits
- B- lab counter with bell
- product name

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

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

Technical Data

- one-, two- or three-sided models available
- two or three digits
- red numeric seven-digit numbers
- connections:
- Amphenol socket to connect controller
- banana socket for RS232 input
- power supply: internal battery
  or network mains (100- 240 VAC)
- integrated power-pack (battery and charger)
- automatic power saving mode
- fastening: ⅜ 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

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.

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	80 / 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

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

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

ATHLETICS

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

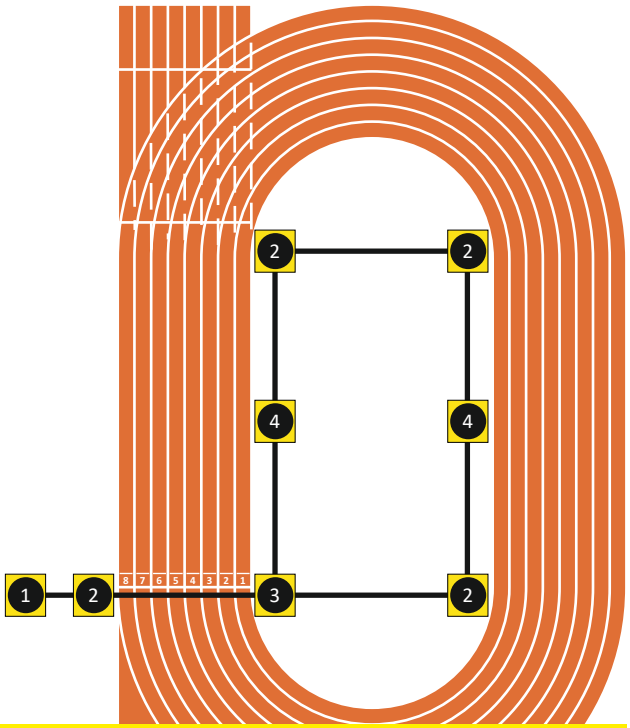
For the timing in stadiums, ALGE-TIMING offers cabling for fixed as well as for mobile installations.

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

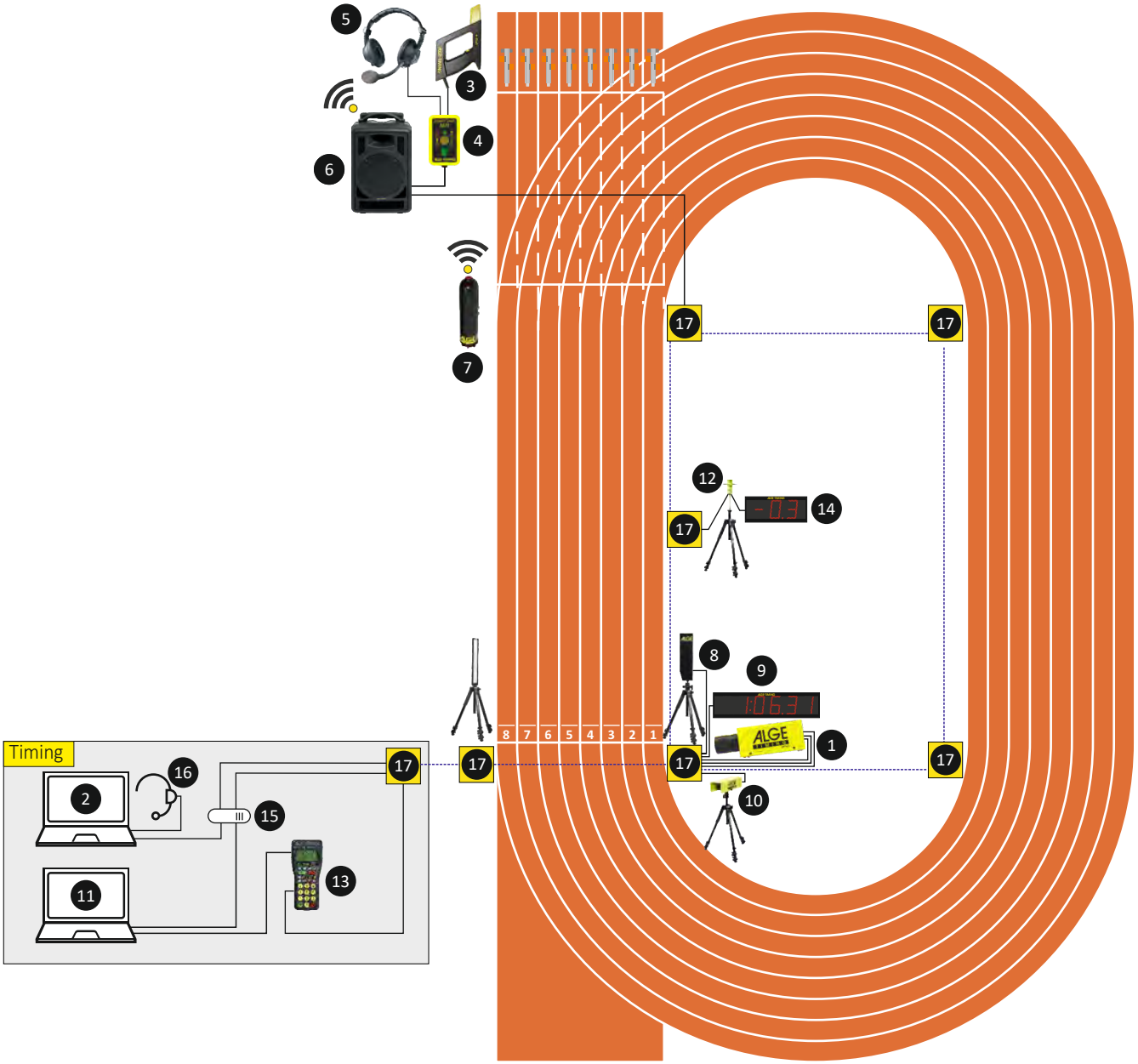
1. Track Box TB2 F in finish house with Ethernet
2. Track Box TB2 A-D in manhole
3. Track Box TB2 A-D-RJ in manhole with Ethernet
4. Track Box TB W in manhole for wind

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 signalized 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 winning time is shown on the display board at the finish.

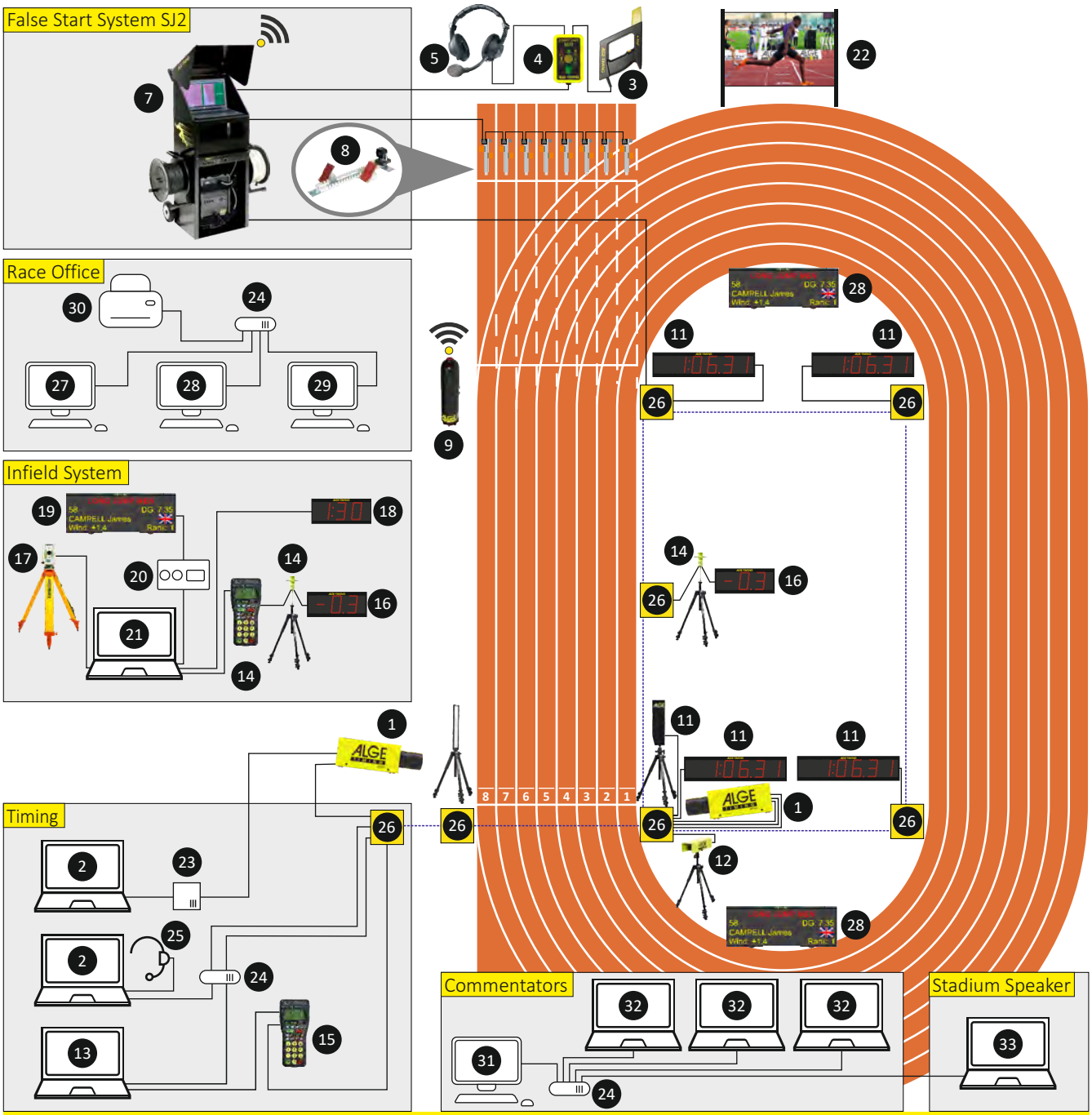


1	Photo Finish OPTIc3	7	False Start Trigger WTN-PB	13	Controller Timy3 W
2	Notebook for OPTIc3	8	Photocell RLS3c	14	Display Board D-LINE (Wind)
3	Electronic Start Device e-Start	9	Display Board D-LINE (Time)	15	Switch (with PoE for Timing)
4	Start Unit SU3	10	Finish Arrival Camera IDCam	16	PC-Headset
5	Headset HS4-2	11	Notebook for IDCam	17	Stadium Cabling
6	Speaker System BANG2	12	Anemometer WS2		

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.



1	Photo Finish OPTIc3	12	IDCam	23	PoE
2	Notebook OPTIc3	13	Notebook IDCam	24	Switch (with PoE for Timing)
3	Start Device e-Start	14	Anemometer Ws2	25	PC-Headset
4	Start Unit SU3	15	Controller Timy3 W	26	Stadium Cabling
5	Headset HS4-2	16	Display Board D-LINE (Wind)	27	PC for Meet Manager
6	Speaker BANG2	17	Distance Measurement	28	PC for Video Wall
7	Start Judge SJ2	18	Concentration Clock	29	PC for TV-Graphics
8	Starting Block STAMA with SJS2	19	Infield Display Board	30	Printer for Meet Manager
9	False Start Trigger WTN-PB	20	Video Controller	30	CIS Server
10	Photocell RLS3c	21	PC for Infield Events	32	CIS Client
11	Display Board D-LINE (Time)	22	Video Wall	33	Stadium Announcer

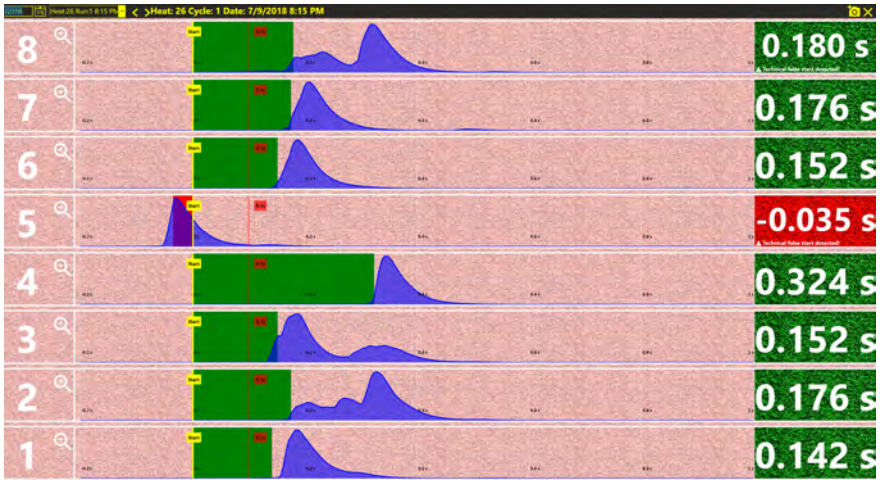
The Start Judge SJ2 is a false start system for athletics to monitor the start of running competitions up to 400 m. It consists of the Start Judge transport cart SJT2 with integrated controller and battery. The transport cart can store the complete system.

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.

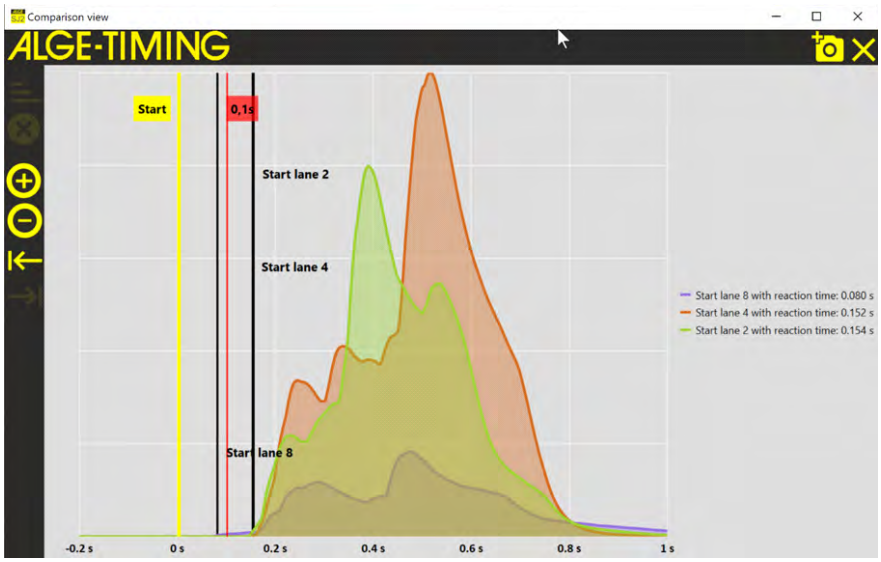
Cable Version SJ2-C:
This system requires a cable (KT313-30) from the Start Judge transport cart to the first sensor SJS2 (first starting block). The-sensors of the further lanes are one after another connected with cables 139-12. With the Start Unit SU3 and the connected e-Start and HS3-2, the starter 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.

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

WORLD ATHLETICS

ALGE-TIMING
Att. Mr Roman Merhar / Project Manager
Rotkreuzstrasse 39
A-6890 Lustenau
Austria

Monaco, 1 March 2023

Dear Roman,

Technological devices other than the reaction time measuring module of the Start Information System (SIS) (e.g., Timing Systems, Wind Gauges, Distance Measuring Equipment etc.) used in athletics are not issued a certificate by World Athletics and therefore no certified lists for such devices are available.

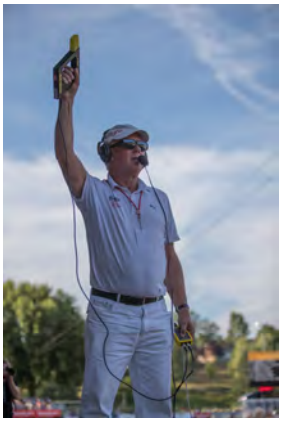
The "Start Judge SJ2" accelerometer-based reaction time measuring module of the SIS by ALGE-TIMING GmbH (firmware V18.61) meets the requirements for a World Athletics Product Certificate.

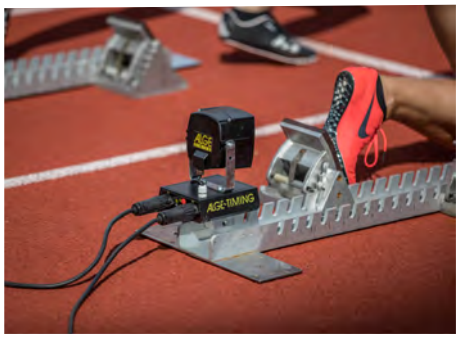
All measuring equipment used in IAAF competitions shall be manufactured and calibrated according to international standards. The accuracy must be guaranteed by the manufacturer according to the relevant international standards and shall have been verified by an appropriate organisation accredited by the national measurement authority.

To our knowledge and experience, the equipment of ALGE-TIMING GmbH meets this condition and is also successfully used in international athletics competitions organised under World Athletics Rules and Regulations.

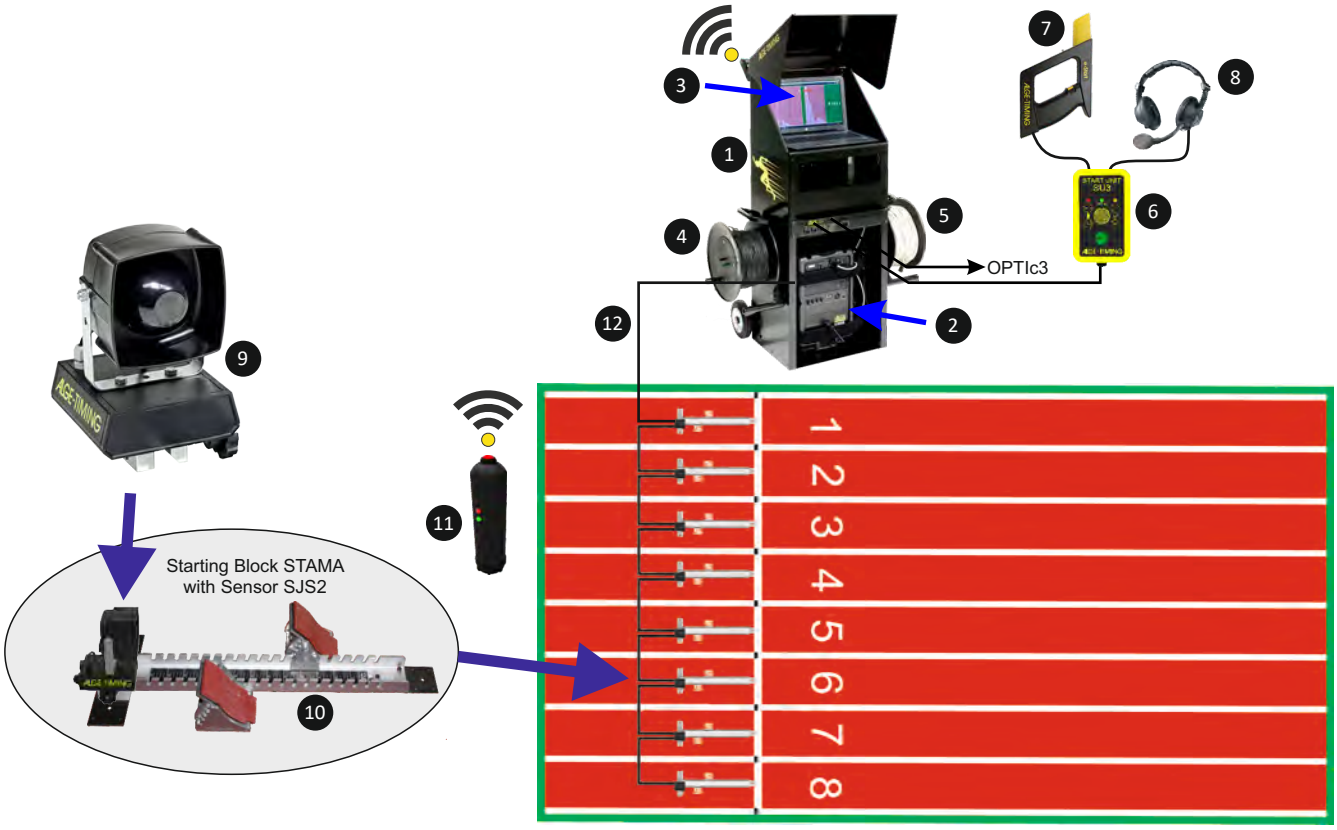
Sincerely,

Imre MATRAHÁZI
Technical Services Senior Manager
Competition & Events Department

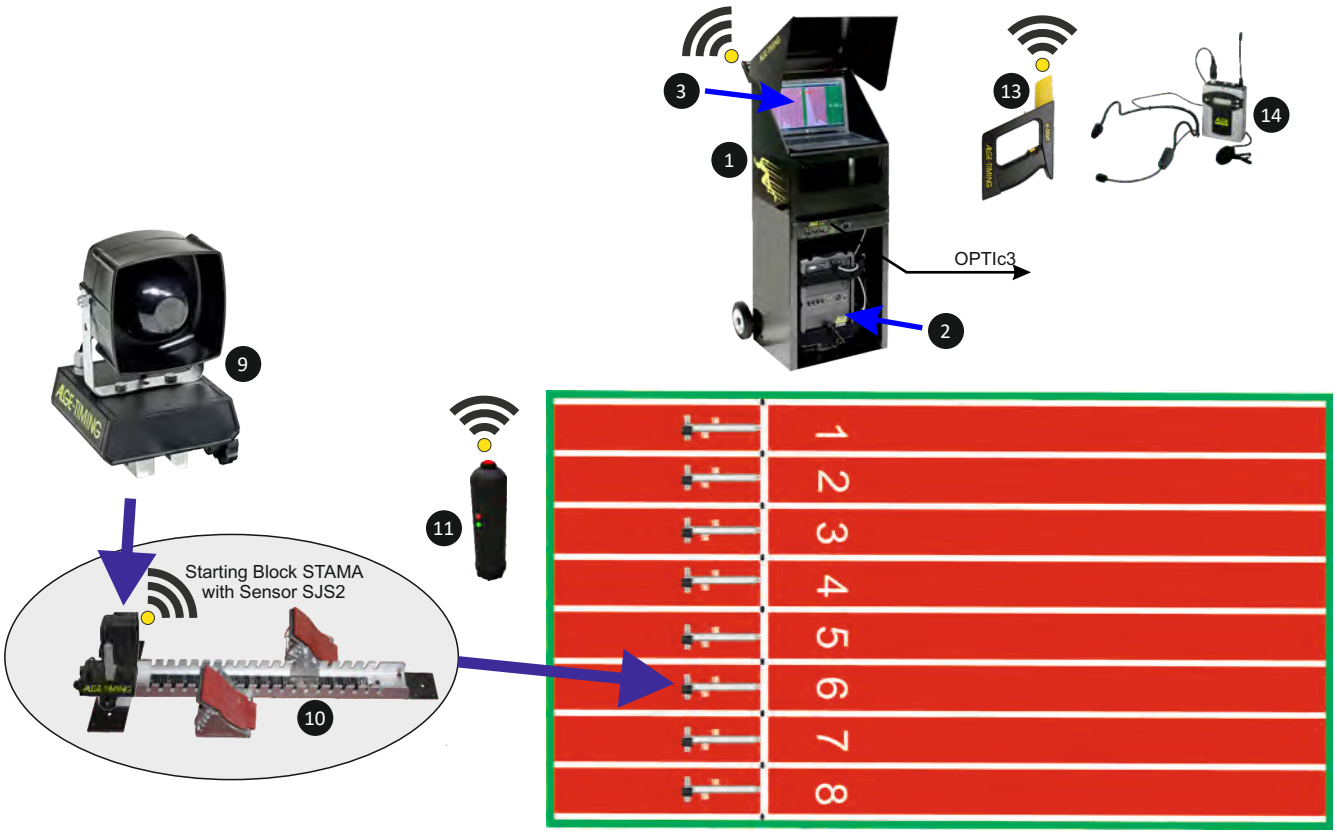




Cable Version SJ2-C



Radio Version SJ2-W



ATHLETICS

Start Judge SJ2

The Start Judge Cart SJT2 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 SJT2**
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 SJT2

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 SJS2of 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 HS4-2** *
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

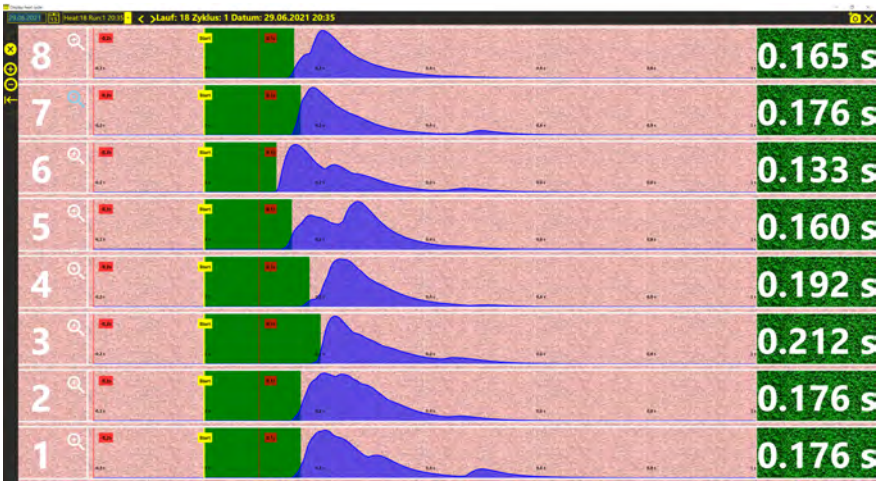
13 **Electronic Start Device e-Start W** **
for triggering the start signal with integrated flash light, battery and radio system WTN

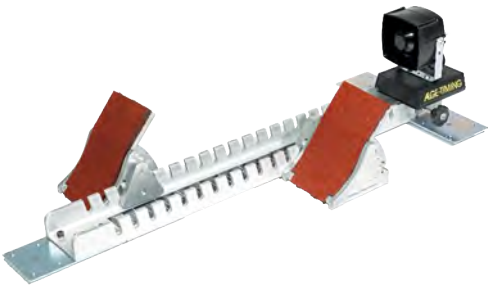
14 **Radio Microphone BANG-HS** **
head band with radio microphone for communication through the BANG

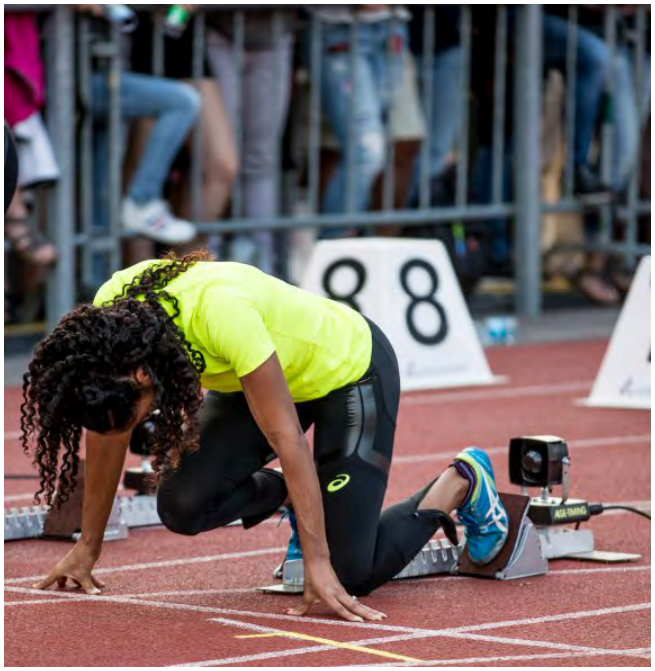
* only for cable version
** only for radio version

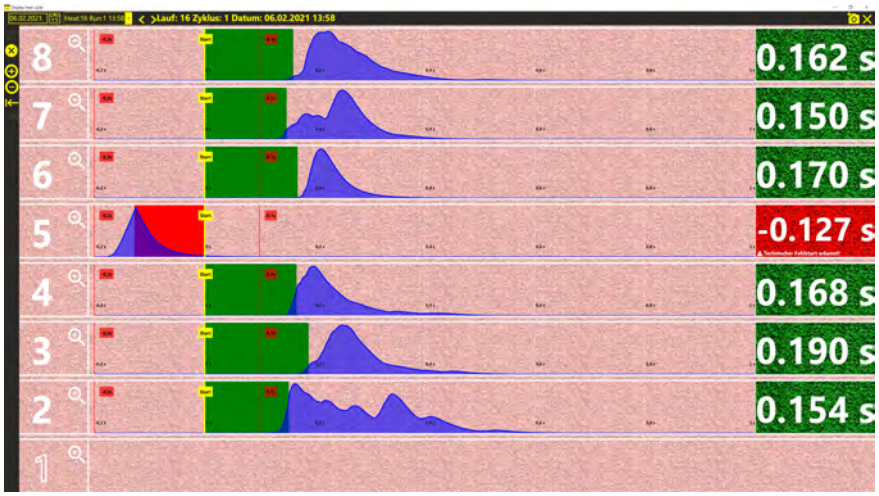
ATHLETICS

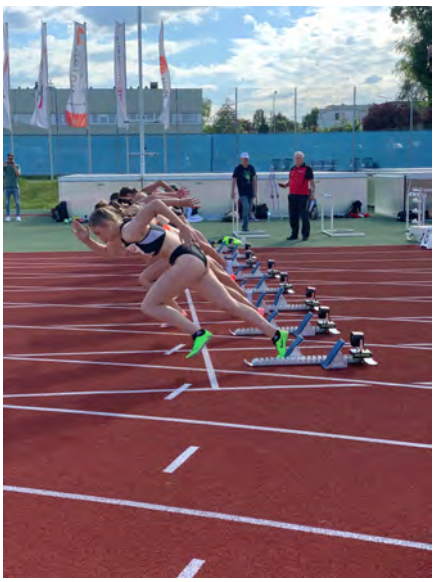
Start Judge SJ2











The Start Judge SJ2 can be used with reduced equipment to train the start. It is possible to set it up for 1 or up to 10 tracks. The start sensor transmits the data of the start curve by including the reaction time by radio to the PC. Because it works wireless the setup is easy and fast. It has a training mode integrated that allows an athlete to train by himself without any starter.

SJ2-T with Start Operator

- the start operator will give the start commands
- if the athletes are ready the start operator presses the button of the radio push button WTN-PB to trigger the start signal
- the athlete can now check his reaction time and his start curve on the PC-Screen

SJS-T using the Automatic Start Mode

- click with the mouse at the PC on the automatic start button
- after 15 seconds a voice from the Start Judge Sensors will announce "Take your marks!"
- after 5 seconds the speaker will output "Get Set!"
- after a random time of 2 to 4 seconds the start shoot will appear
- the athlete can now check his reaction time and his start curve on the PC-Screen

Components of the Trainings False Start System SJ2-T:

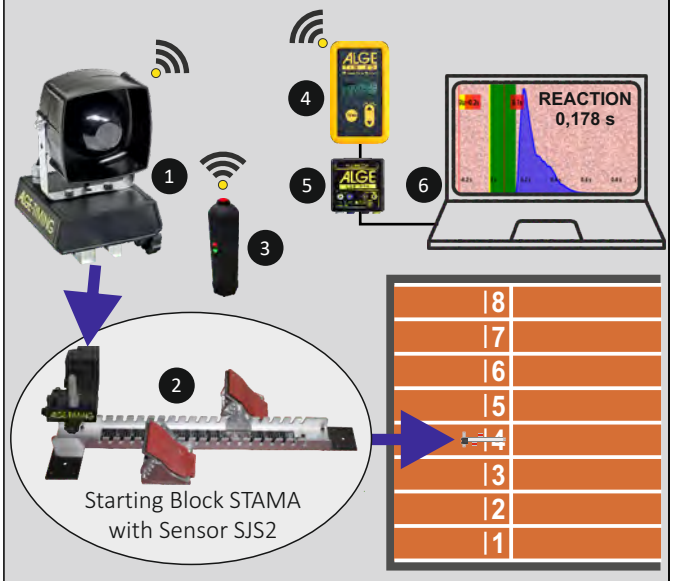
- Start Judge Sensor SJ2S
- Wireless Timing Network WTN
- Radio Push Button WTN-PB
- Converter USB-WTN
- Power Supply PS24-70

Additional Equipment Needed:

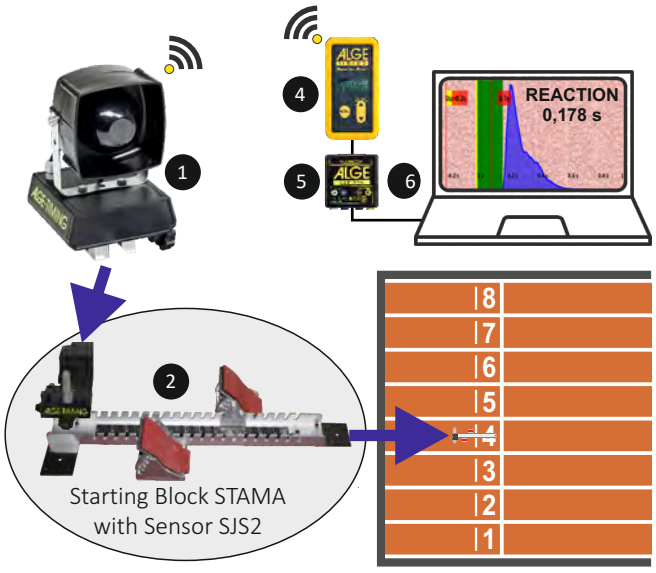
- Notebook for Evaluation
- Starting Block STAMA (or other)

1. Start Judge Sensor SJS2
2. Starting Block STAMA
3. Radio Push Button WTN-PB
4. Wireless Timing Network WTN
5. Converter USB-WTN
6. Notebook for Start Judge SJ2-T

Start Judge Training System SJ2-T
Operated by a Starter



Start Judge Training System SJ2-T
Automatic Mode



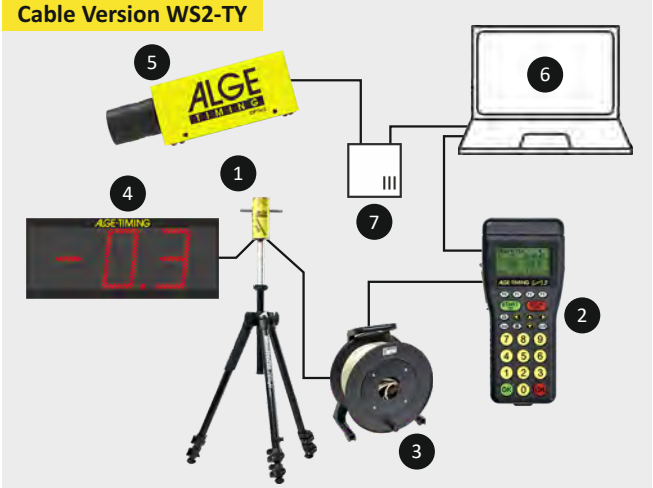
Windspeed WS2 & Distance Measuring Device DMD-Arc5

Windspeed WS2

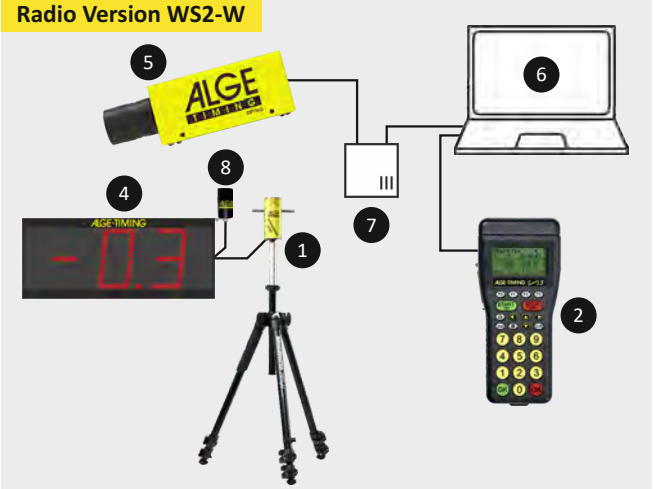
The ALGE-TIMING Windspeed WS2 works with a calorimetric mass flow sensor, which allows fast and accurate wind measurement. It is used to measure the windspeed during running and long jump events.

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.

Cable Version WS2-TY



Radio Version WS2-W



1. Anemometer WS2
2. Terminal Timy3 W
3. Cable Reel KT245Z10
4. Display Board D-LINE250-O-3-E0
5. Photo Finish OPTIc3
6. PC for Photo Finish
7. Power Supply PoE
8. Radio Receiver WTN-PB

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

ALGE-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. ALGE-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.

Video Wall

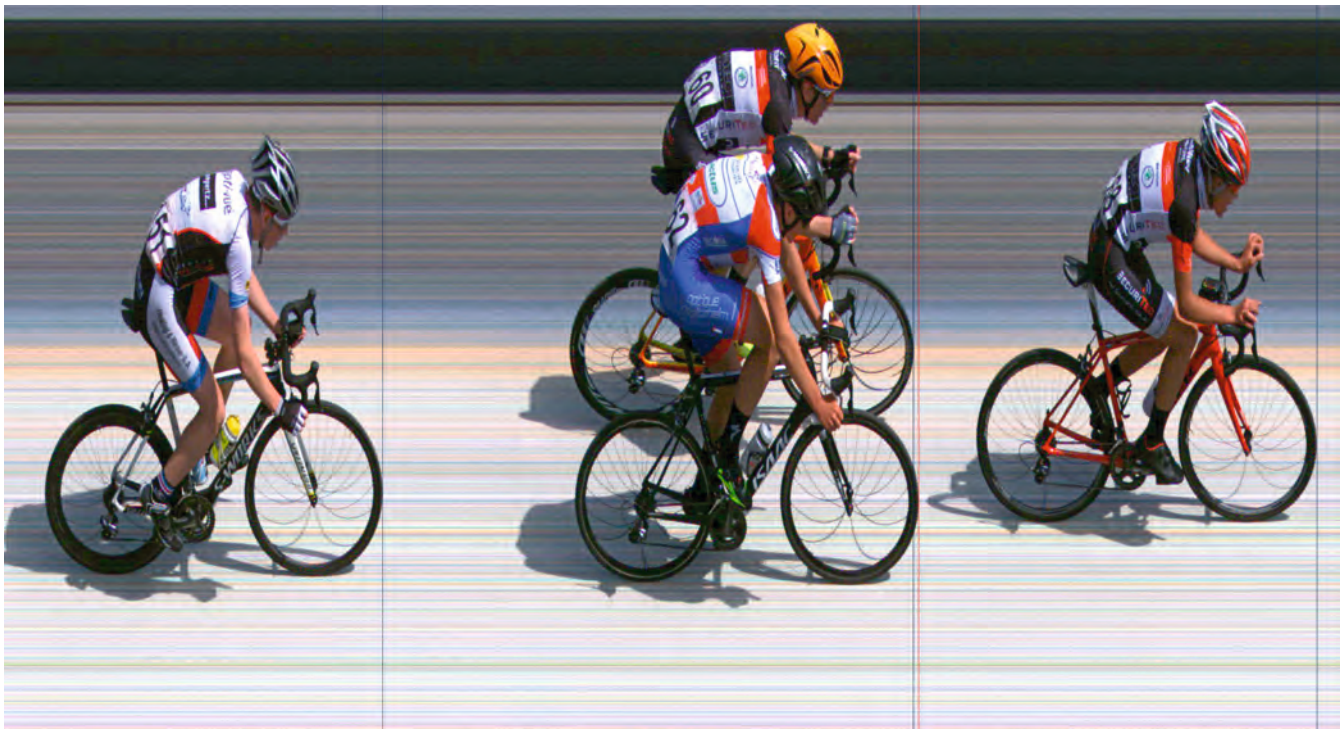
ALGE-TIMING can offer video walls of all sizes with different resolutions for stadiums. Together with evaluation software, start lists, result lists or live TV broadcasts can be shown.

CYCLING

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

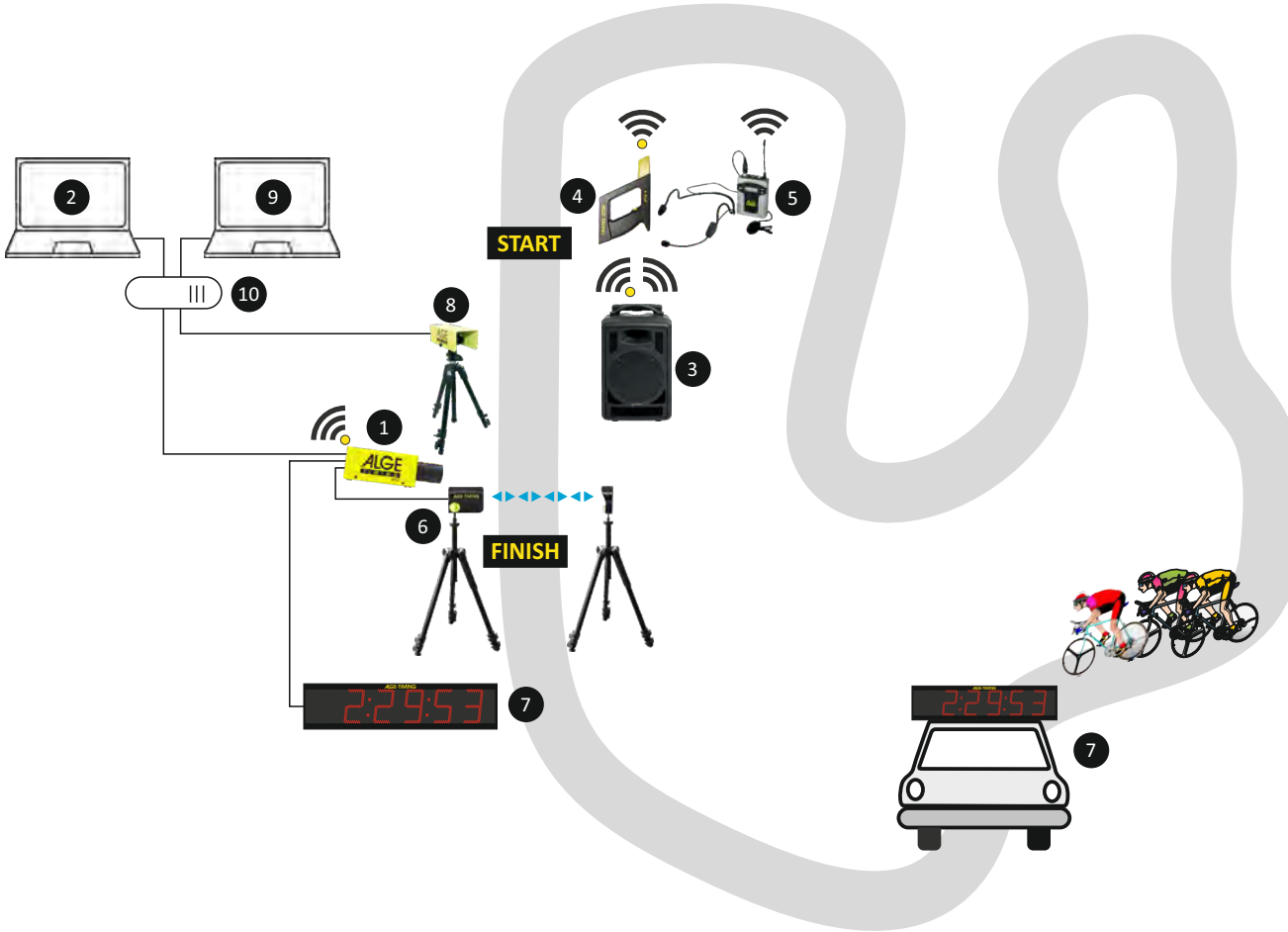
Road Races

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.



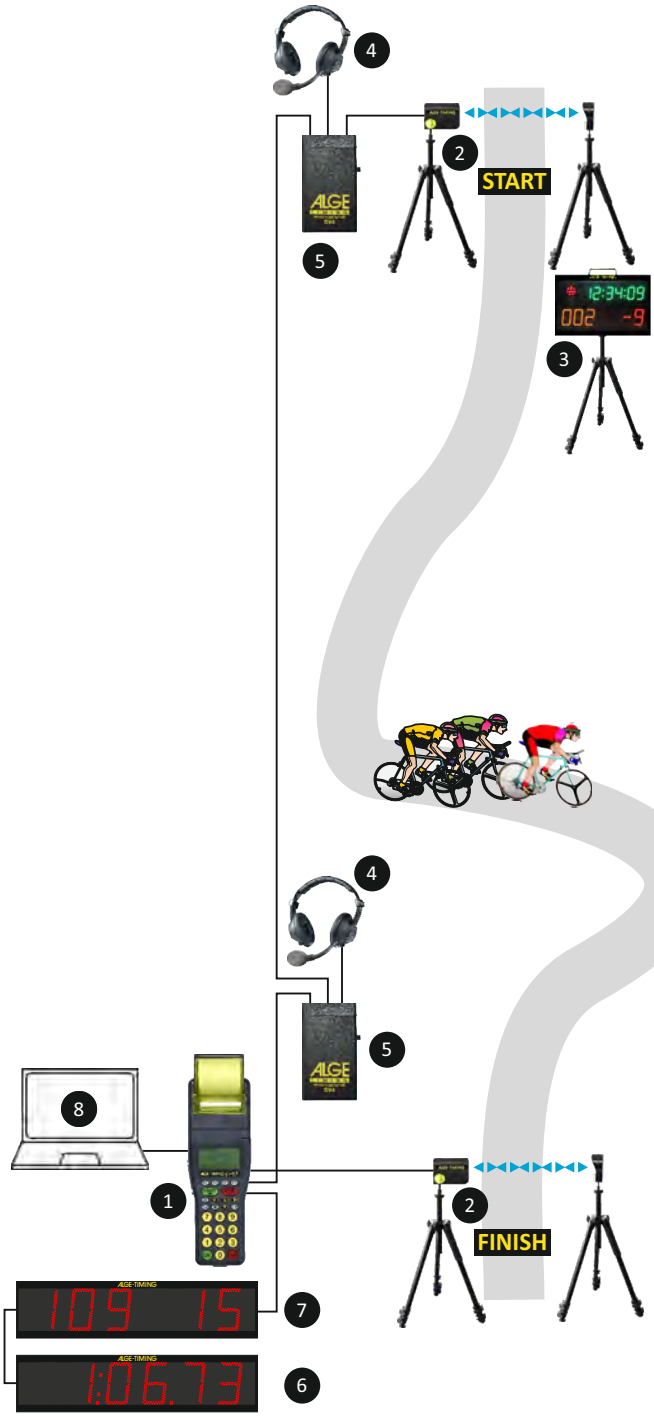
1	Photo Finish OPTIc3	5	Headset BANG-HS	9	PC for IDCam
2	PC for Photo Finish	6	Photocell PR1a-RT	10	Switch with PoE
3	Speaker BANG2	7	Display Board D-LINE		
4	Start Trigger e-Start W	8	Finish Recording IDCam		

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
2 Photocell PR1a-RT
3 Startclock ASC3
4 Headset HS4-2
5 Speech Amplifier SV4-S
6 Display Board D-LINE (time)
7 Display Board D-LINE (bib & rank)
8 PC for Result Service

CYCLING - TRACK CYCLING

General

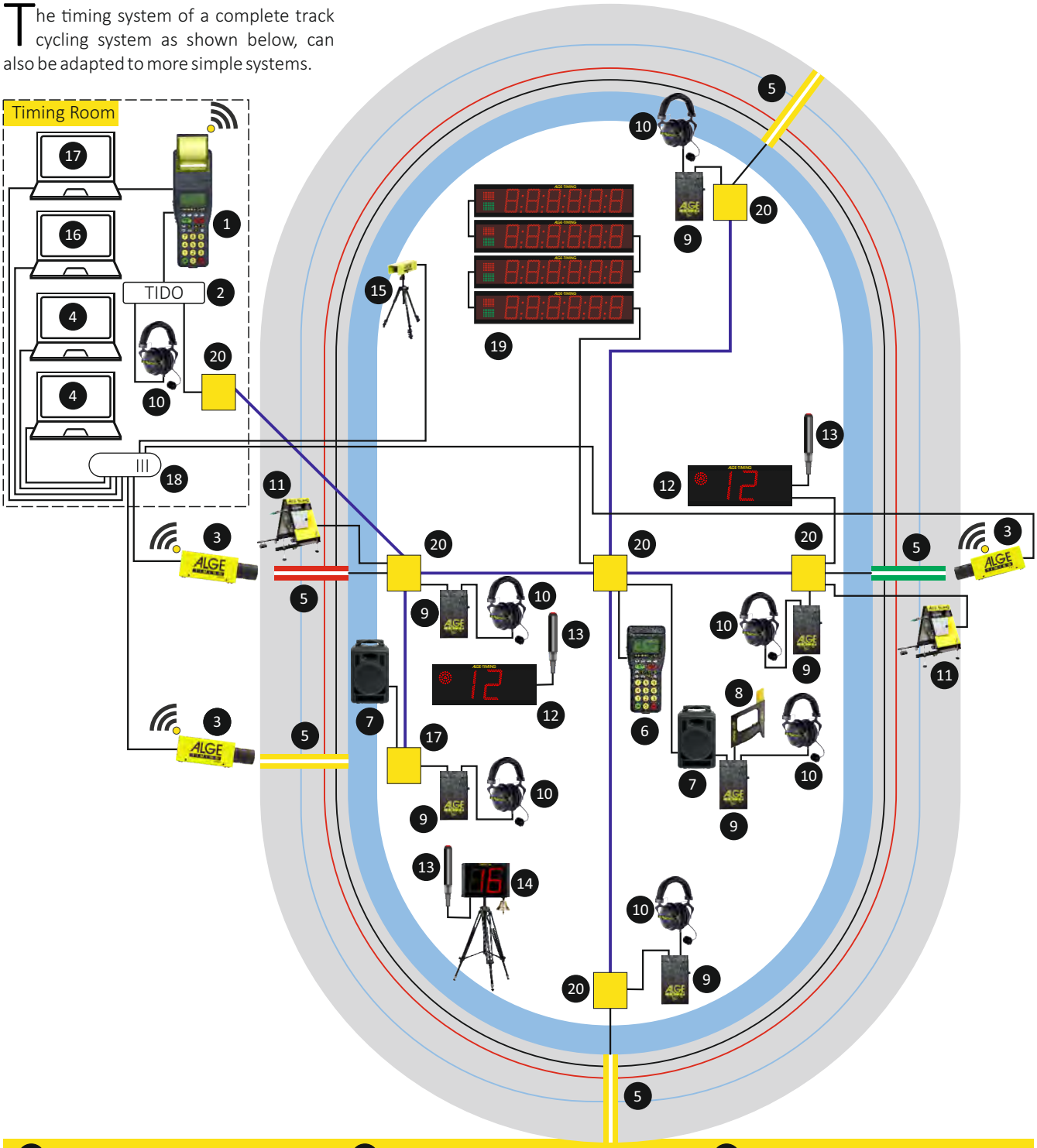
ALGE-TIMING can offer the complete technical equipment for carrying out track cycling events may they be large or small. This ranges from simple training systems to complete systems for major events.

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.



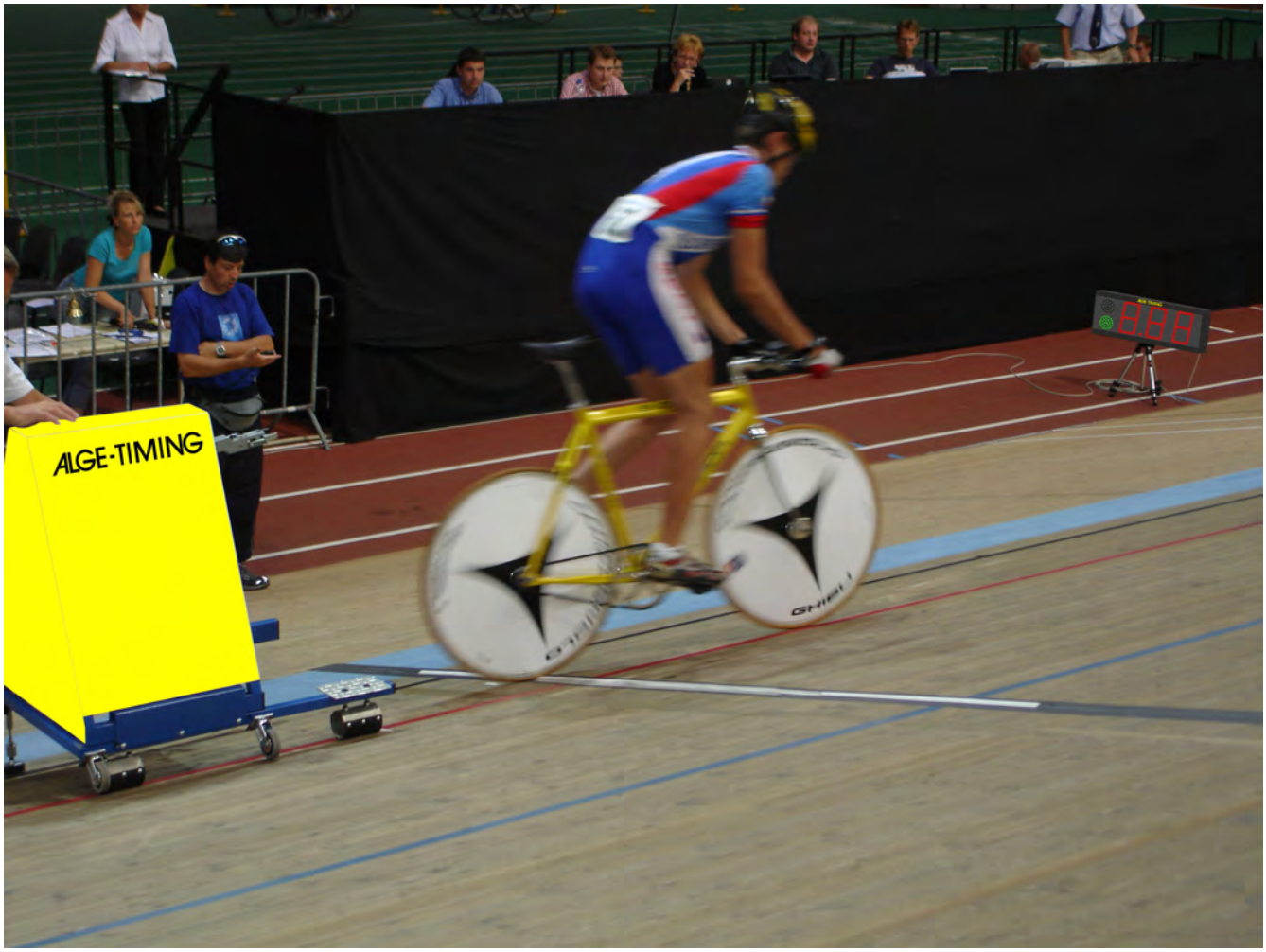
1 Timing Device Timy3 WP
2 Docking Station TIDO for Timy3
3 Photo Finish OPTIc3
4 PC for Photo Finish
5 Tape Switch ATS (different length)
6 Start Controller Timy3 W
7 Electronic Start Gun e-Start
8 Speech Amplifier SV4-S
9 Headset HS3-2
10 Cycling Starting Machine ST-BSM1
11 Cycle Start Display D-LINE250-3-RG-SP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

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 D-LINE250-O-3-RG-SP
- 2 x floor holder FH to setup the display board
- control unit Timy3 W with rechargeable batteries
- 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 D-LINE250-O-3-RG-SP
- 2 x floor holder FH to setup the display board
- control unit Timy3 W with rechargeable batteries
- 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.

e.g. distributor VELO-M-A

e.g. distributor VELO-P-C

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

Distribution Boxes

The distribution boxes are installed in the stadium so that the timing devices can always be connected nearby. There is a fix wired 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)

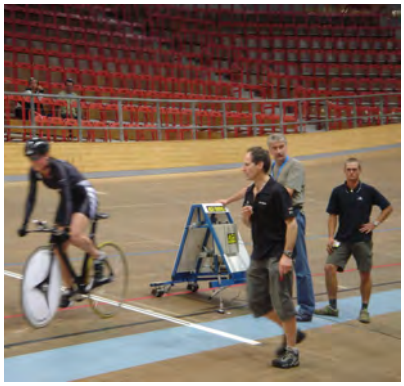
Track Cycling Startmachine ST-BSM1

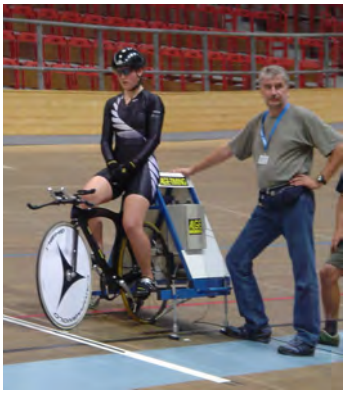
control elements

saddle bar holder

pneumatic compressor

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



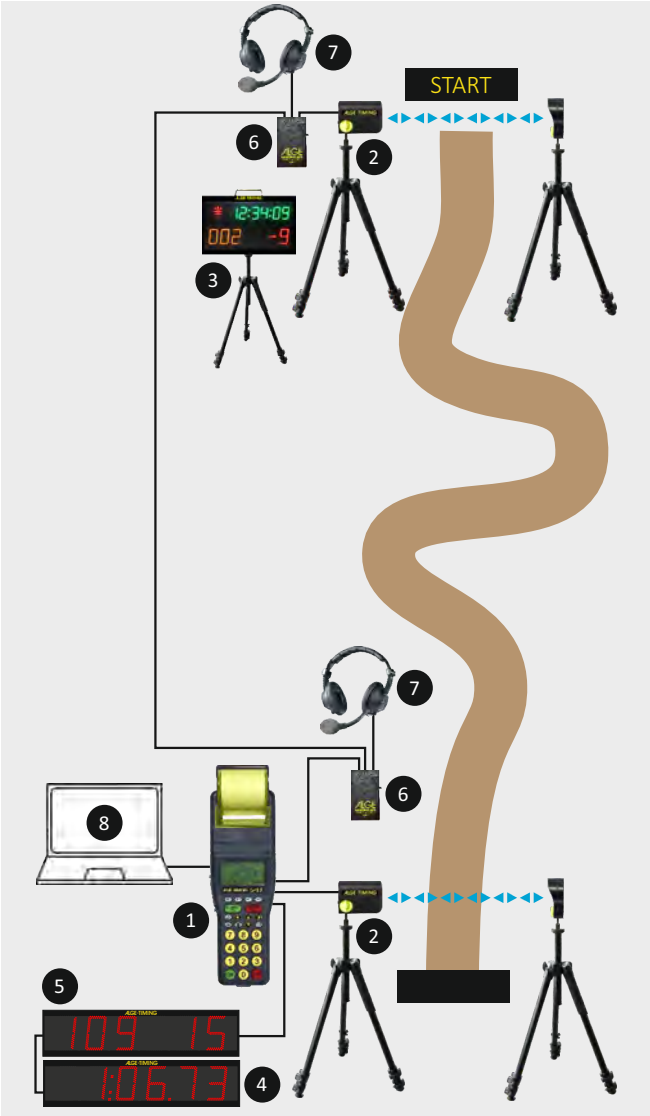


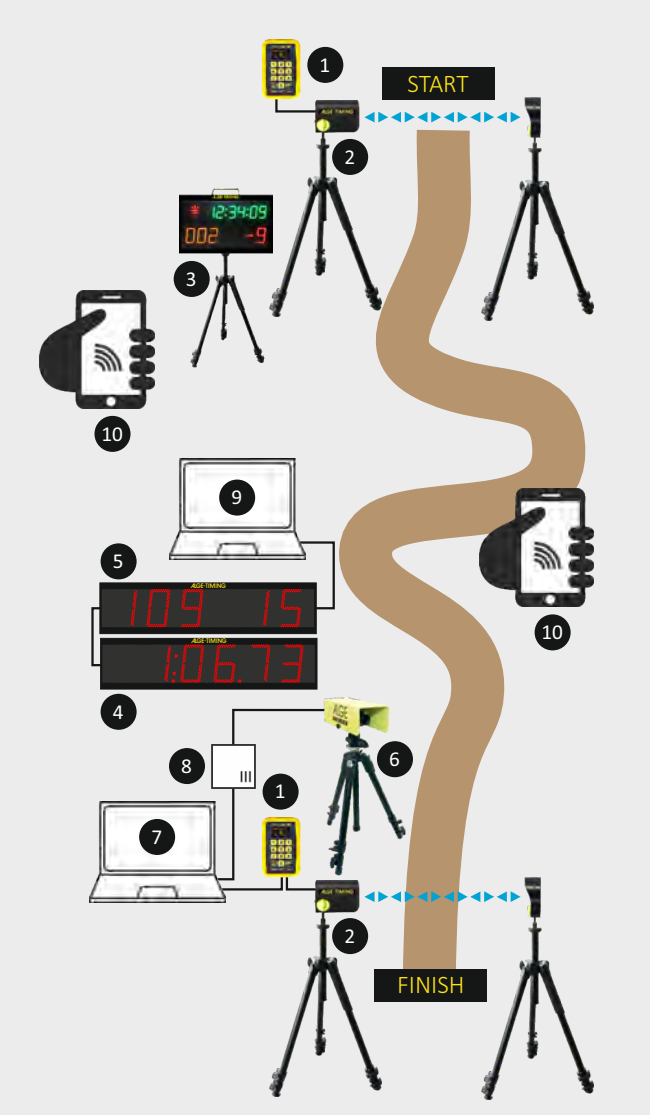
CYCLING - MOUNTAIN BIKE

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 HS4-2
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

Mountain Bike - Cross Country

The race is started with the electronic start gun 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.

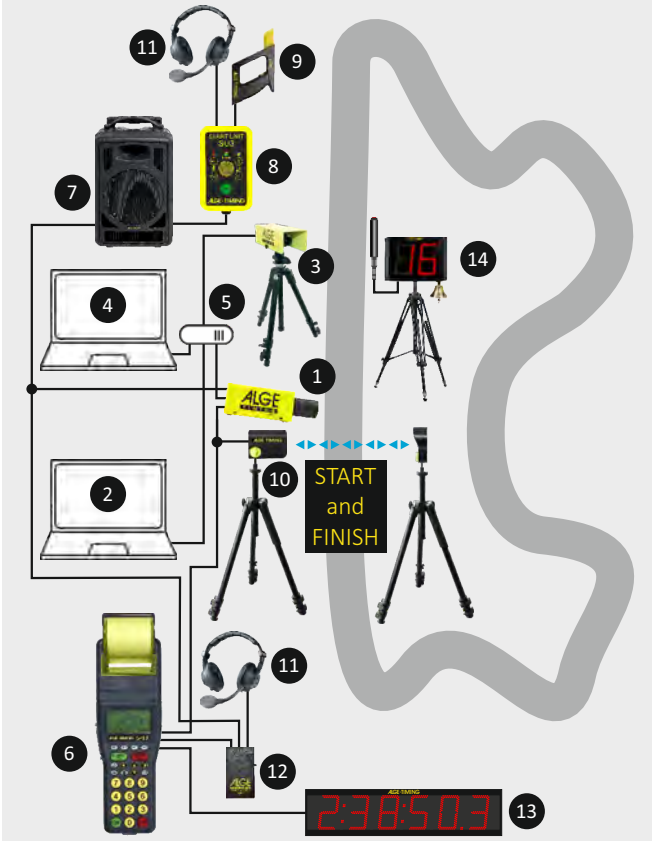
The photocell stops the time at the finish and triggers the photo finish recording and IDCam recording.

Mountain Bike - 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).

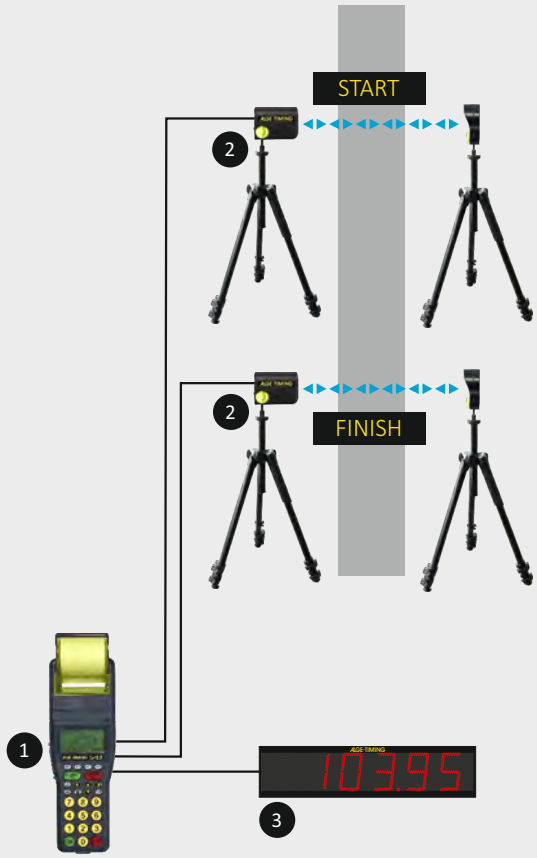
The display board shows the speed.

Mountain Bike - Cross Country



1. Photo Finish OPTIc3
2. PC for Photo Finish
3. Finish Camera IDCam
4. PC for IDCam
5. SWITCH with PoE+
6. Timer Timy3 WP
7. Speaker BANG2
8. Start Unit SU3
9. Electric Startgun e-Start
10. Photocell PR1a-RT
11. Headset HS4-2
12. Speech Amplifier SV4-S
13. Display Board D-LINE
14. Lap Counter D-LC

Mountain Bike - Speed

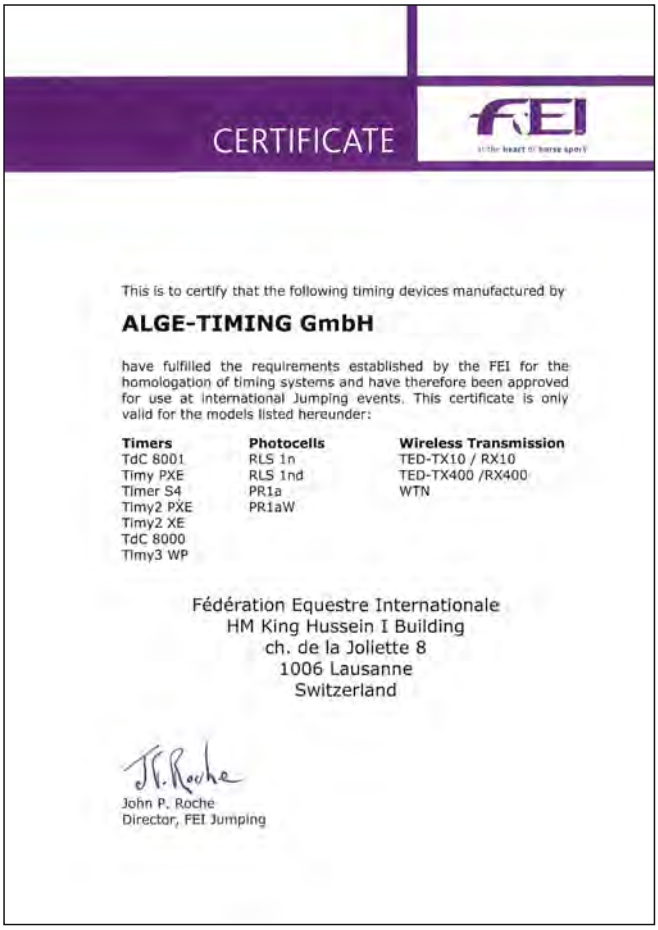


1. Speed Measuring Device Timy3 WP
2. Photocell PR1a-RT
3. Display Board D-LINE (speed)

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.



CERTIFICATE

This is to certify that the following timing devices manufactured by

ALGE-TIMING GmbH

have fulfilled the requirements established by the FEI for the homologation of timing systems and have therefore been approved for use at international Jumping events. This certificate is only valid for the models listed hereunder:

Timers	Photocells	Wireless Transmission
TdC 8001	RLS 1n	TED-TX10 / RX10
Tlmy PXE	RLS 1nd	TED-TX400 /RX400
Tlmer S4	PR1a	WTN
Tlmy2 PXE	PR1aW	
Tlmy2 XE		
TdC 8000		
Tlmy3 WP		

Fédération Equestre Internationale
HM King Hussein I Building
ch. de la Joliette 8
1006 Lausanne
Switzerland

John P. Roche
Director, FEI Jumping

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.

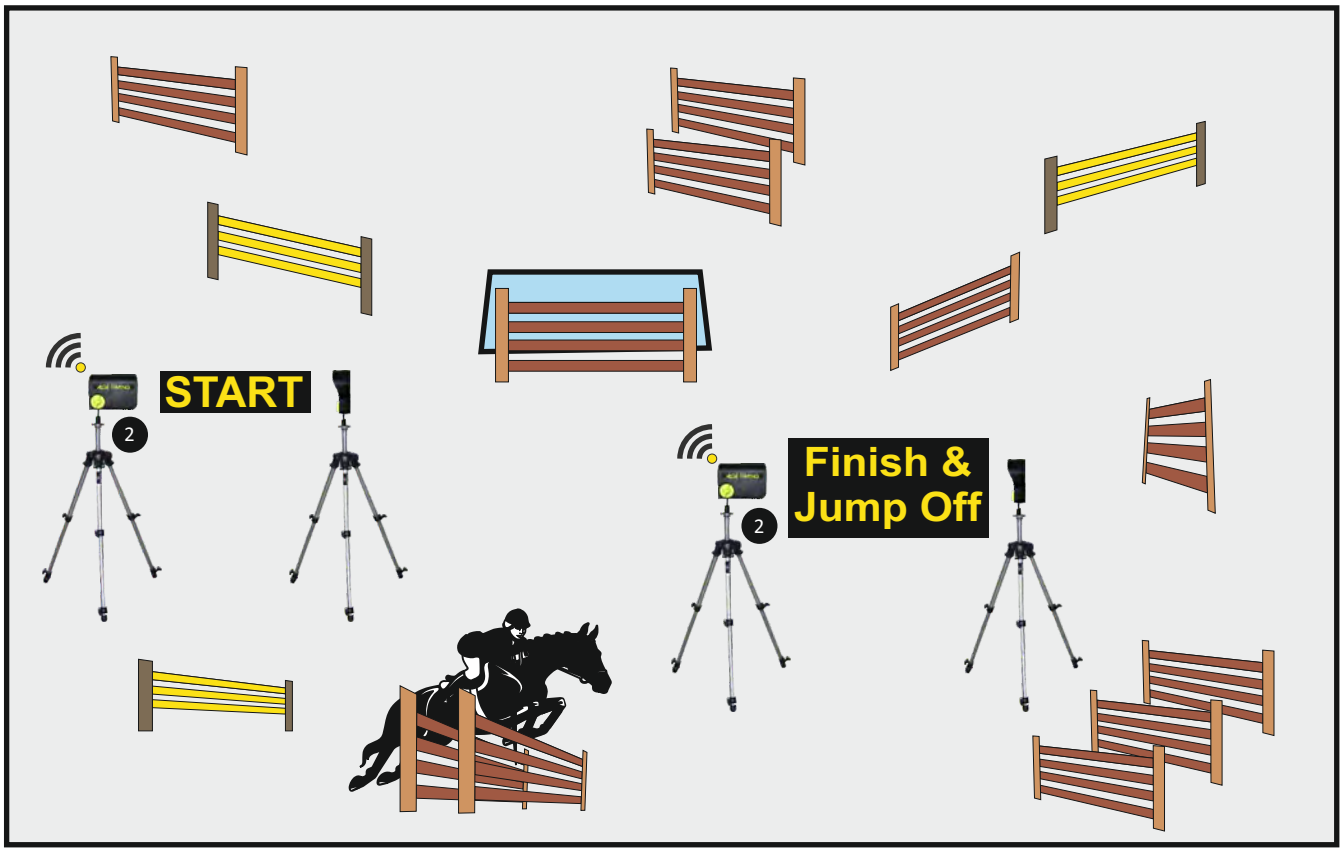
EQUESTRIAN

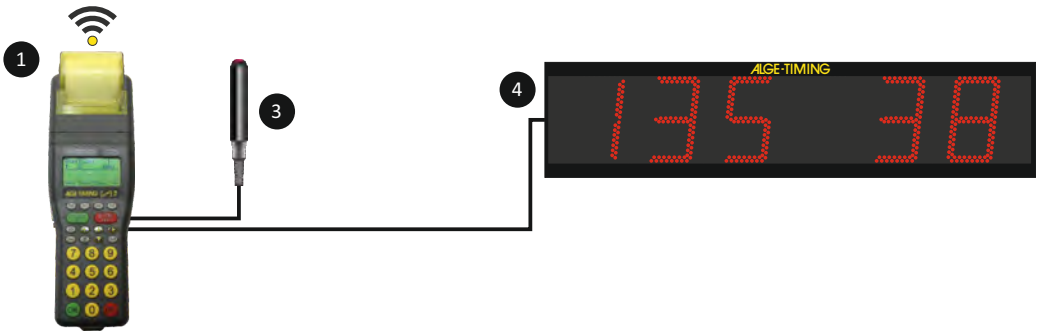
Simple Show Jumping Timing System

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)

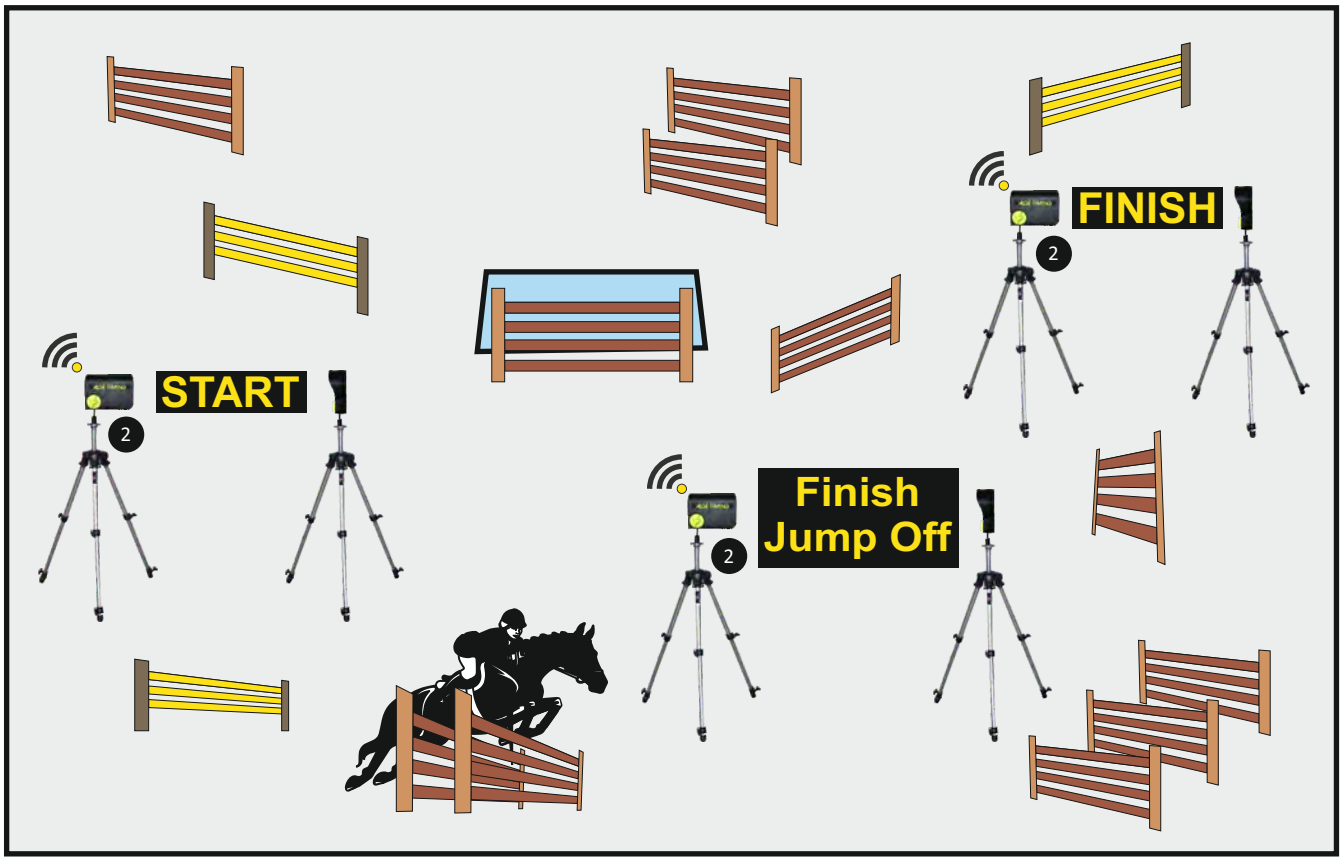
EQUESTRIAN

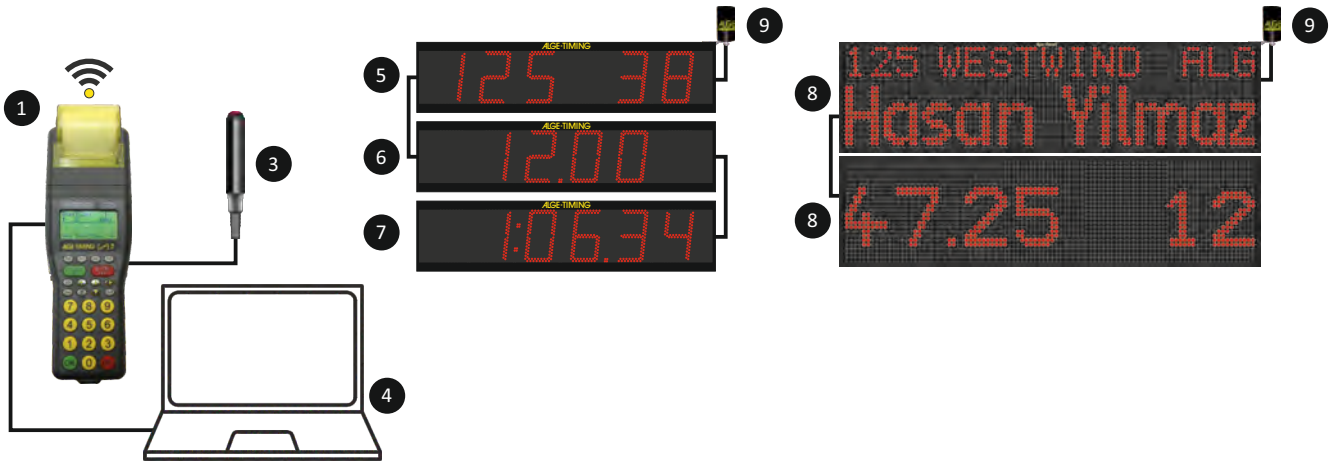
Advanced Show Jumping Timing System

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
2. Photocell PR1aW-RT
3. Push Button 023-02
4. PC with Software ALGE-SJ-T
5. Display Board D-LINE (ID-number and rank)
6. Display Board D-LINE (points)
7. Display Board D-LINE (time)
8. Matrix Display Board D-RTNM
9.

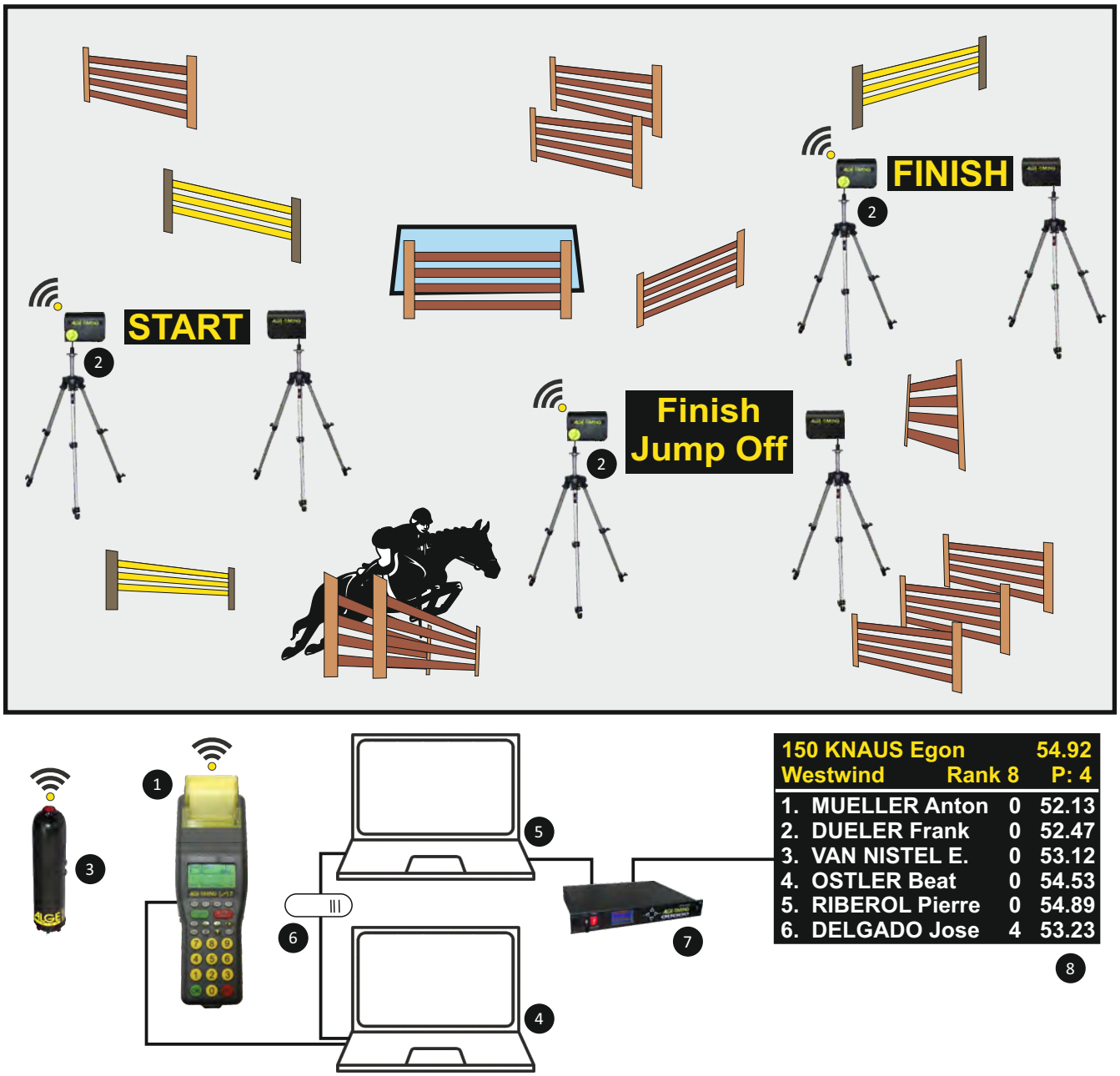
EQUESTRIAN

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

EQUESTRIAN

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
WTN-radio receiver for display boards such as D-LINE

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.

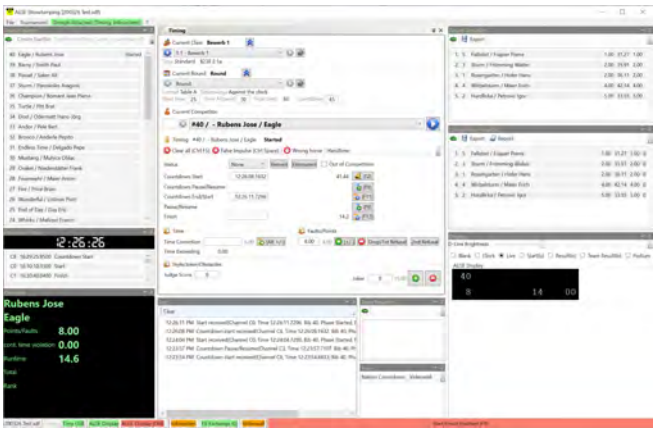
Software for Show Jumping and Carriage Driving

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.



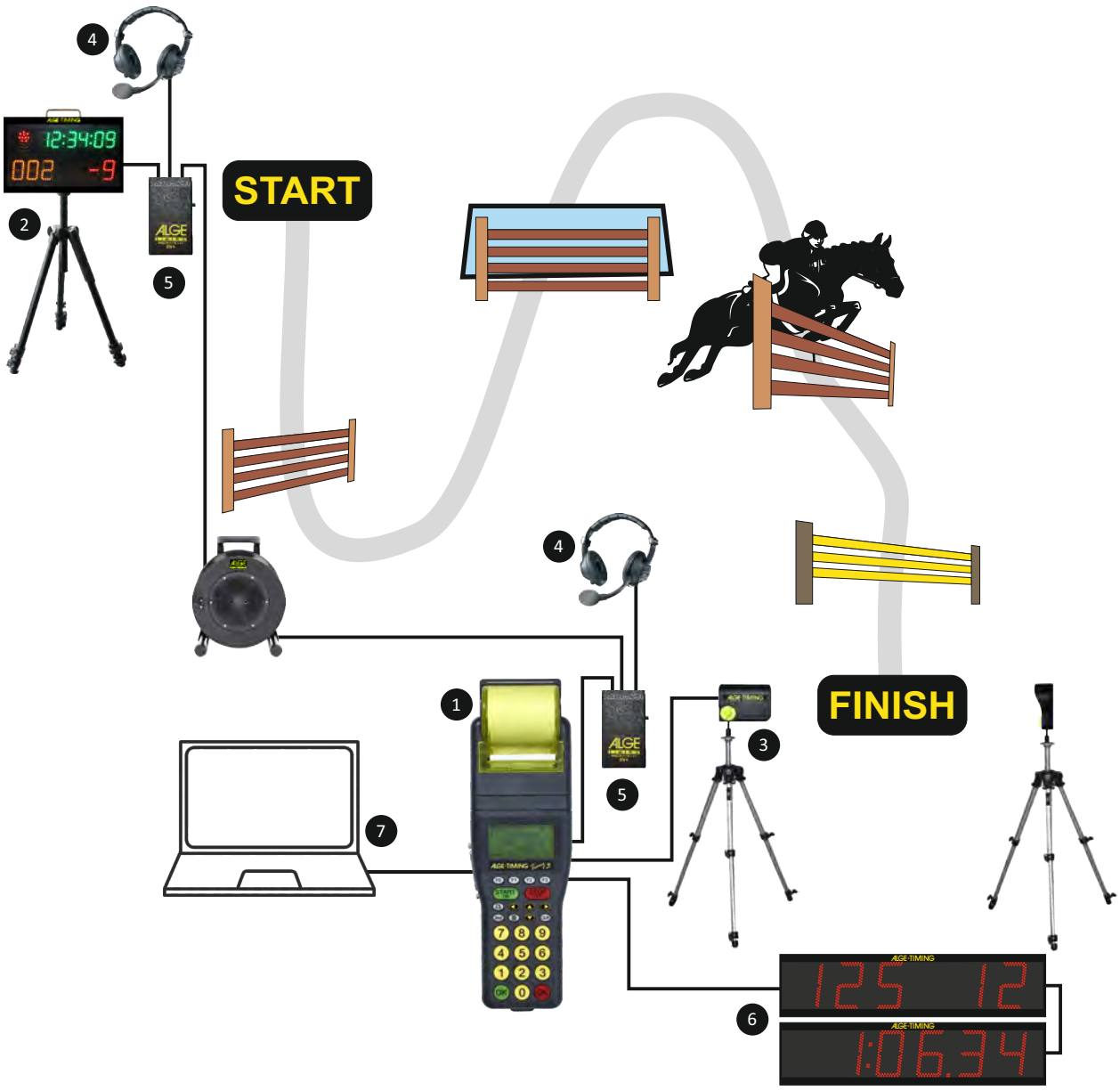
EQU-INET
Yearly licence for webhosting of results (EQU-LIVE is required). Additional you need to get a “one-time” installation for the webhosting (EQU-INET-INST).

EQUSTRIAN

Endurance

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.

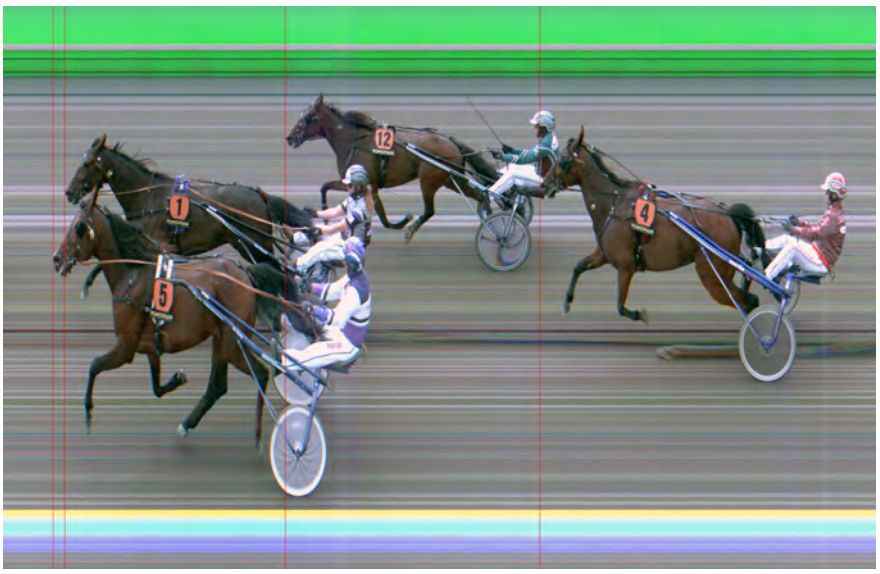


1 Timy3 WP
2 Startclock ASC3
3 Photocell PR1a-dT
4 Headset HS4-2
5 Speech Amplifier SV4-S
6 Display Board D-LINE
7 PC for Results (e.g. TimeNet2)

HORSE RACING

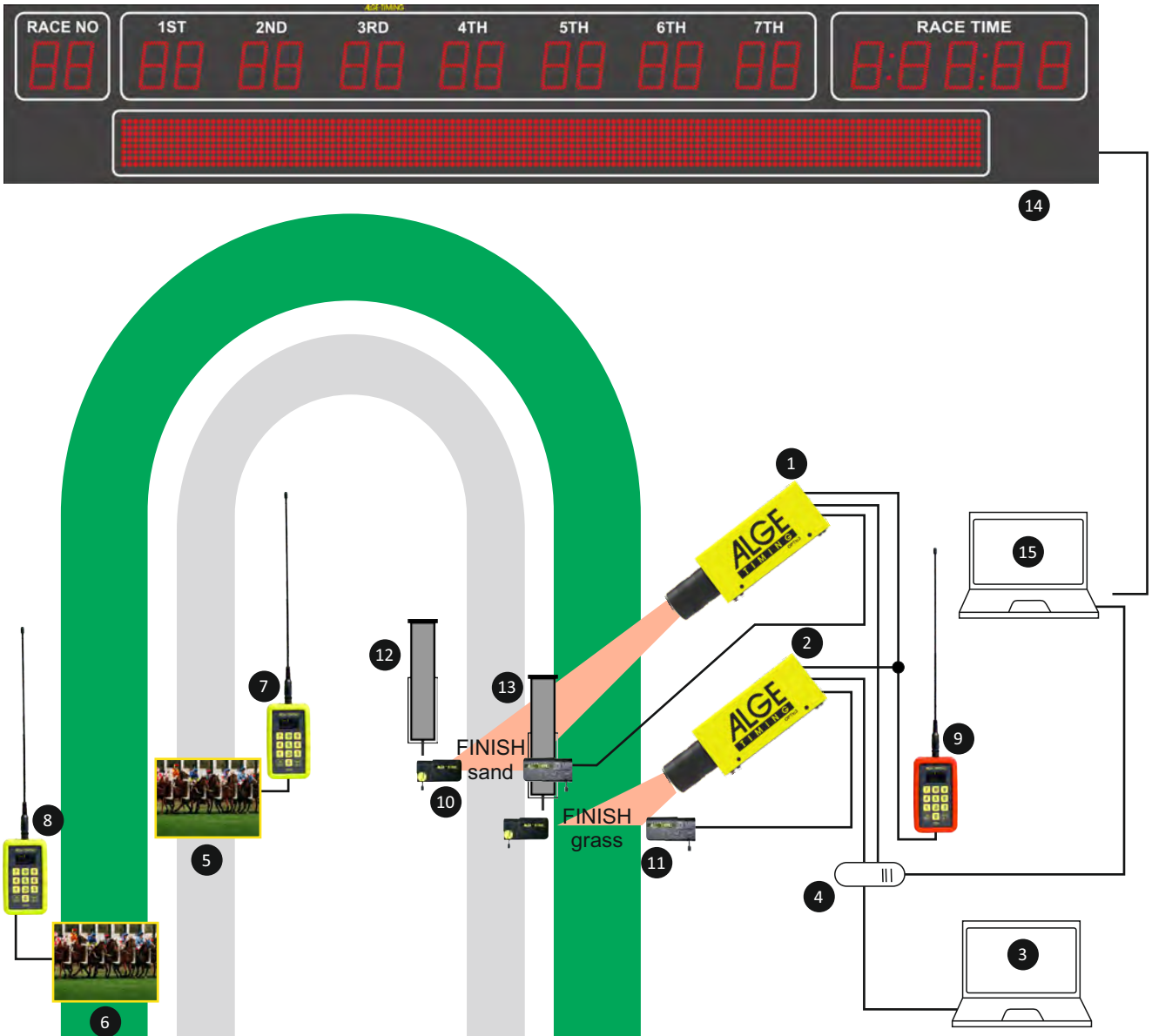
Horse race courses may have one or more tracks. When using only one OPTIc3 photo finish camera, it must be aligned to the according finish line used. It is also possible to use one camera per finish line. In addition, the tracks can be equipped with photo-cells, radio transmission, display boards and video screens.

pictures from OPTIc3 gallop



pictures from OPTIc3 trotting

HORSE RACING



1 Photo Finish OPTIc3 for sand track
2 Photo Finish OPTIc3 for grass track
3 PC for Photo Finish
4 SWITCH with PoE+
5 GATESWITCH to mount on start gate (sand)
6 GATESWITCH to mount on start gate (grass)
7 Teledata TED2-TX for sand track
8 Teledata TED2-TX for grass track
9 Teledata TED2-RX receiver
10 Photocell PR1a-d for sand track
11 Photocell PR1a-d for grass track
12 Photo Finish Mirror OMH for sand track
13 Photo Finish Mirror OMH for grass track
14 Display Board D-HS300-17N-P7-8x144
15 PC to control the Display Board

Photocell PR1a-d
photocell with transmitter and receiver for long distances (up to 100 m)

Photocell PR1a-d

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.


Photocell Housing PB4 or PB4H

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 Teledata TED2-TX which sends an start information by radio to the photo finish device OPTIc3.


GATESWITCH

Radio Teledata TED2
for wireless transmission of the start signal or data 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).


Teledata TED2

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


Mirror OMH or OMH-H

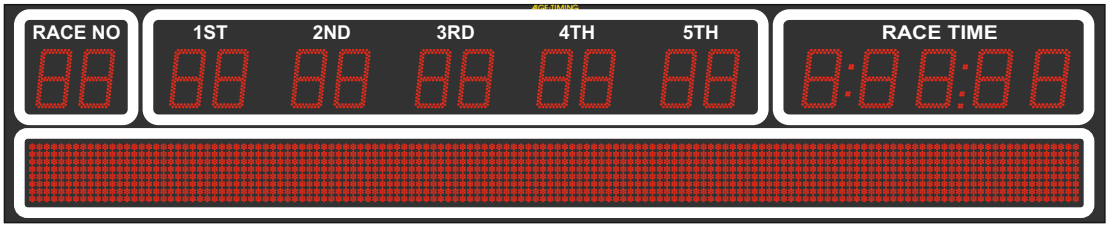
HORSE RACING

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

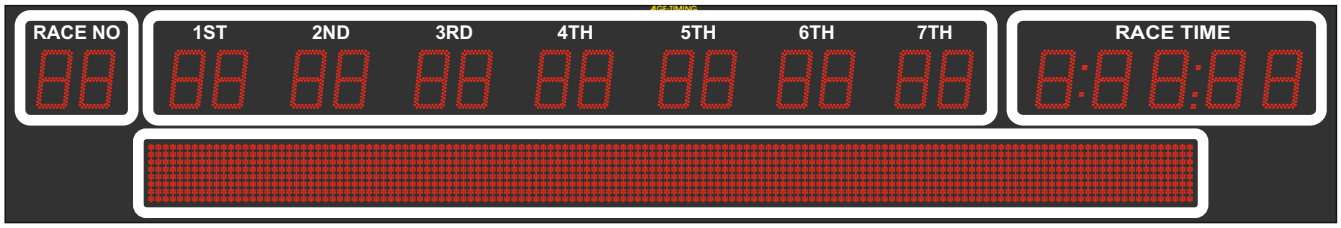
1st Line: with 17 numeric digits (digit height = 300 mm) to display the race number (2 digits), horse number of the first 5 places (2 digits) and time (5 digits for minutes, seconds and 1/100)
2nd Line: with a full matrix of 8 x 144 pixels (at least 25 characters), each pixel consists of 7 extra bright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




control consol
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)



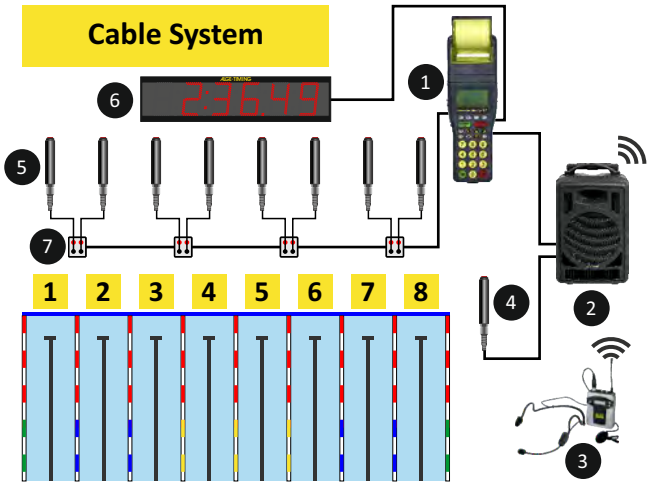
SWIMMING

SWIMMING

Based on years of experience in timing the most different sports, ALGE-TIMING has developed selected solutions for timing all kinds of swimming competitions. Thanks to the tough design and processing only high-quality materials, ALGE-TIMING guarantees reliable results and above average operating time of the system.

The Semi-Automatic Timing System is used at lower-level competitions for swimming. It is easy to setup and to operate. Of course, the price is as well much lower than Automatic Timing Systems. ALGE-TIMING offers two different semi-automatic systems, one is wired and the other is a radio system.

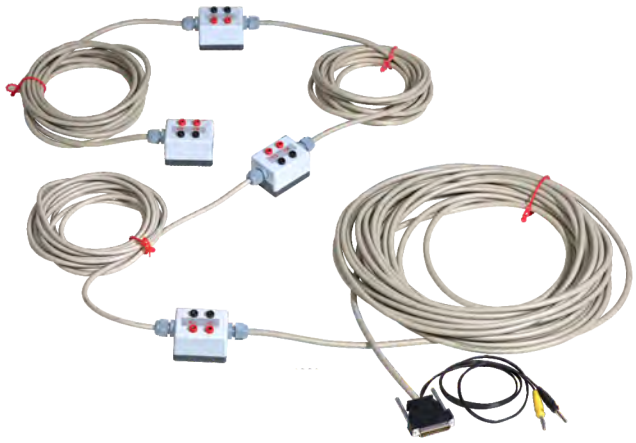
Cable System



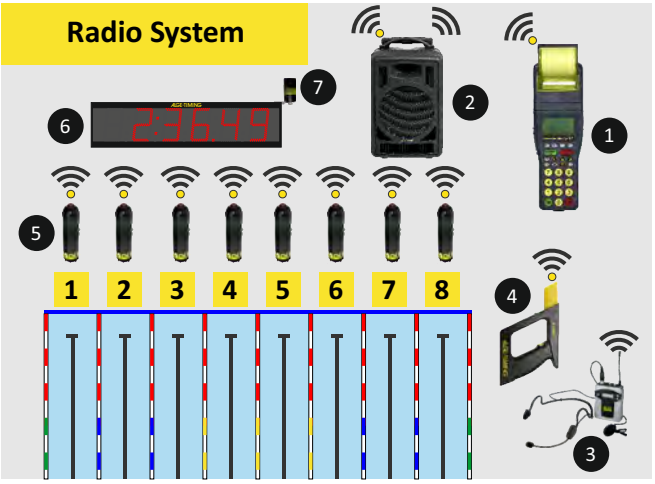
1. timing device Timy3 WP
2. speaker system BANG2
3. radio headset BANG-HS
4. start push button 023-10
5. finish push button 023-02
6. display board D-LINE (Time)
7. connection cable for 8 lanes MC8-S2

A semi-automatic timing system is a system with manual finish triggering. Each lane is equipped with one push button with its own timing channel. The push buttons are connected via MC8-S2 cable. The start signal is given on the speaker BANG2.

The cabling for the system is configured as needed. The picture below shows the cabling for a pool with 8 lanes (MC8-S2).



Radio System



1. timing device Timy3 WP
2. speaker system BANG2
3. radio headset BANG-HS
4. radio startgun e-Start W
5. radio push button WTN-PB for finish
6. display board D-LINE (time)
7. radio data receiver for display board WTN-DB

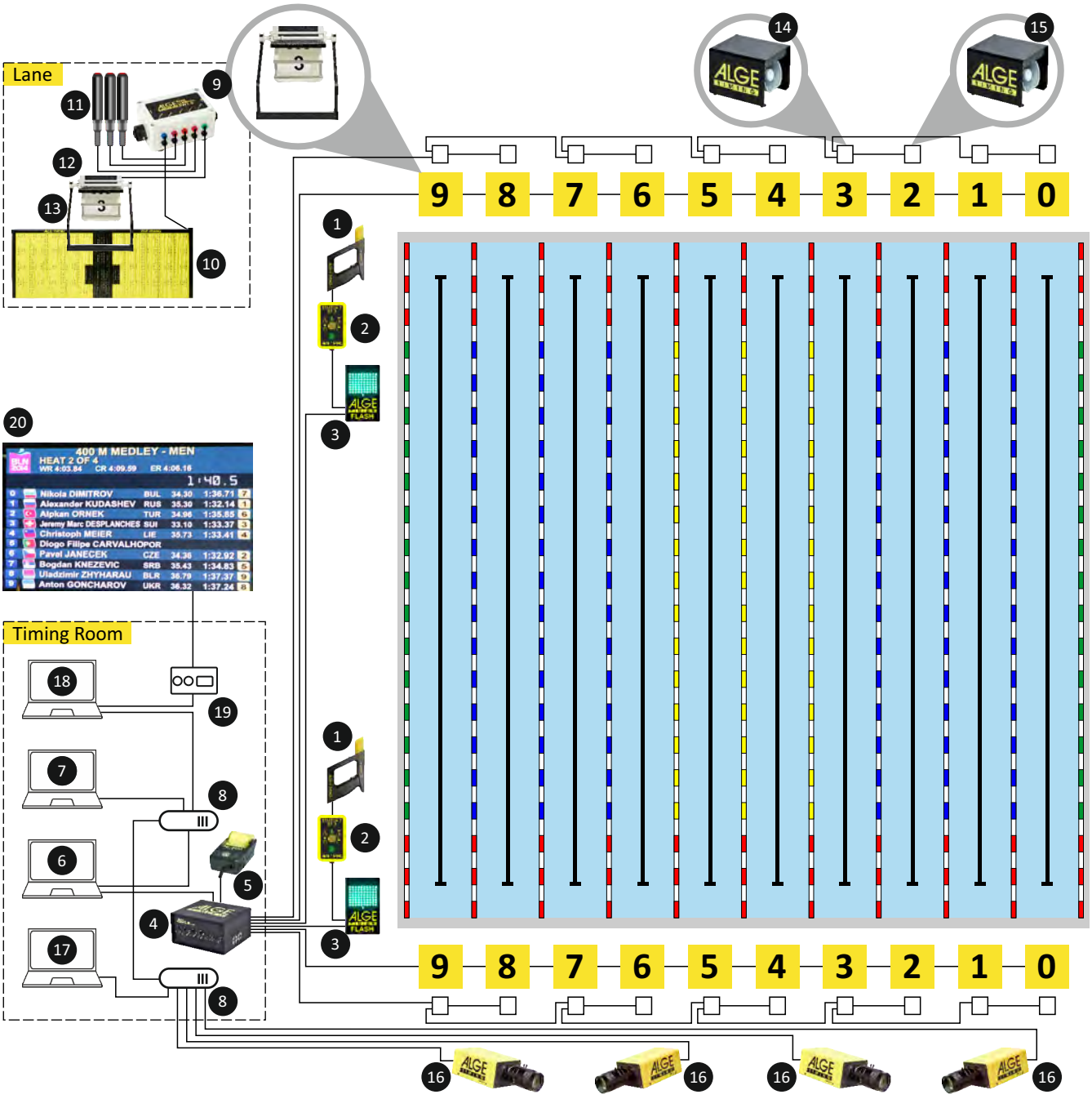
ALGE-TIMING offers a wireless, semi-automatic timing system with one push button WTN-PB for each lane. Each push button has its own timing channel and is equipped with the ALGE-TIMING Wireless Timing Network. This allows wireless timing for up to eight lanes. A display board can be connected at the timing device Timy3 WP.

The complete system is very flexible and the setup is very fast, since it does not need cables.

SWIMMING

Fully Automatic Timing System

The fully automatic SwimTime system is equipped with advanced technology that intelligently supports the timekeeper. Thus, the timekeeper can concentrate on the essentials and execute the events without stress. The shown system is used for large events. Depending on the budget, components can be reduced or deleted.



1 elect. startgun e-Start	6 PC for timing	11 push button 023-02	16 video backup OPTIc3
2 start unit SU3	7 PC for meet management	12 starting block SO5	17 PC for video backup
3 flash XL	8 switch with POE+	13 backstroke start aid BSA	18 PC for video wall
4 timing device TM-SWIM	9 swim terminal SWT3	14 speaker active SPA	19 video wall controller
5 printer P6-8	10 touchpad TP2400C	15 speaker passive SPP	20 video wall for results

SwimTime with TimeManager TM-SWIM

New technologies turn timing into pleasure.

The TM-SWIM was especially designed for the extreme demands in aquatic sports. The TimeManager has an integrated audio amplifier and a backup battery. It combines know-how, modern electronics and the solid ALGE-TIMING design.

All timing functions are executed and stored directly in the TM-SWIM. The computer is only necessary for registering a competition in the system. The PC is also used for visualizing and controlling the TimeManager. The TM-SWIM executes the heat automatically and at the same time sends the times to the SwimTime PC software. Thus, the user can follow the competition on the easy-to-use operating environment.

Facts of the ALGE-TIMING SwimTime Timing System

- PC based timing system
- USB interface
- user-friendly handling
- control of up to 16 lanes at both sides
- visual and acoustical control of all lanes
- connections for 1 touchpad, 3 push buttons and 1 starting platform per lane (5 independent timing channels per lane and side)
- integrated battery backup, works for 4 hours independently from power supply and PC
- integrated amplifier system
- voice communication between starter and timekeeper via headset
- false start warning on display
- warning for too large a time difference between manual timing and touchpad
- warning for unregistered touches
- fail-safe and robust touchpads
- registering statistical data such as: reaction time, block-off time, duration of pressure to starting platform and touchpads
- conformity: FINA, SSCH, AAU, NCAA and LEN rules

Technical Data

Measuring range:	23 hours, 59 minutes, 59.9999 seconds
Time reference:	TCXO 10,000 MHz (temperature compensated crystal oscillator)
Precision:	+/- 0.1 ppm (0.00036 s/h)
Temperature range:	-25 °C to +50 °C
Power supply:	internal: 12 V gel-cell rechargeable 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 log printer
	2 x RS232 interface for display board
	RS485 for display board
Further connections:	2 x timing bus start and turn side
	2 x speaker active
	2 x SU3 (start unit) / FLASH XL
	start (banana jack)
	audio line in
	audio line out
Volume control:	microphone
	headset
	audio in
	total volume

RÉPUBLIQUE ET CANTON DE NEUCHATEL (SUISSE)

OBSERVATOIRE ASTRONOMIQUE ET CHRONOMÉTRIQUE DE NEUCHATEL

CERTIFICAT DE VÉRIFICATION

délivré à

ALGE Timing Lustenau (A)

pour le garde-temps : SWC

No 9913001

Température : 21°C

Position : horizontale

Le directeur de l'Observatoire,

NEUCHATEL, le 16 mars 1999

SWIM Terminal SWT3

Each lane and side needs one Swim Terminal. All SWT3 are identical and not internally numbered. On switching on, the TM-SWIM automatically recognizes how many lanes are connected to the system and numbers them according to this input.

Each Swim Terminal has five independent channels:

- 1 x touchpad
- 3 x push button
- 1 x relay take-off sensor

Log Printer P6-8

online log of all pulses

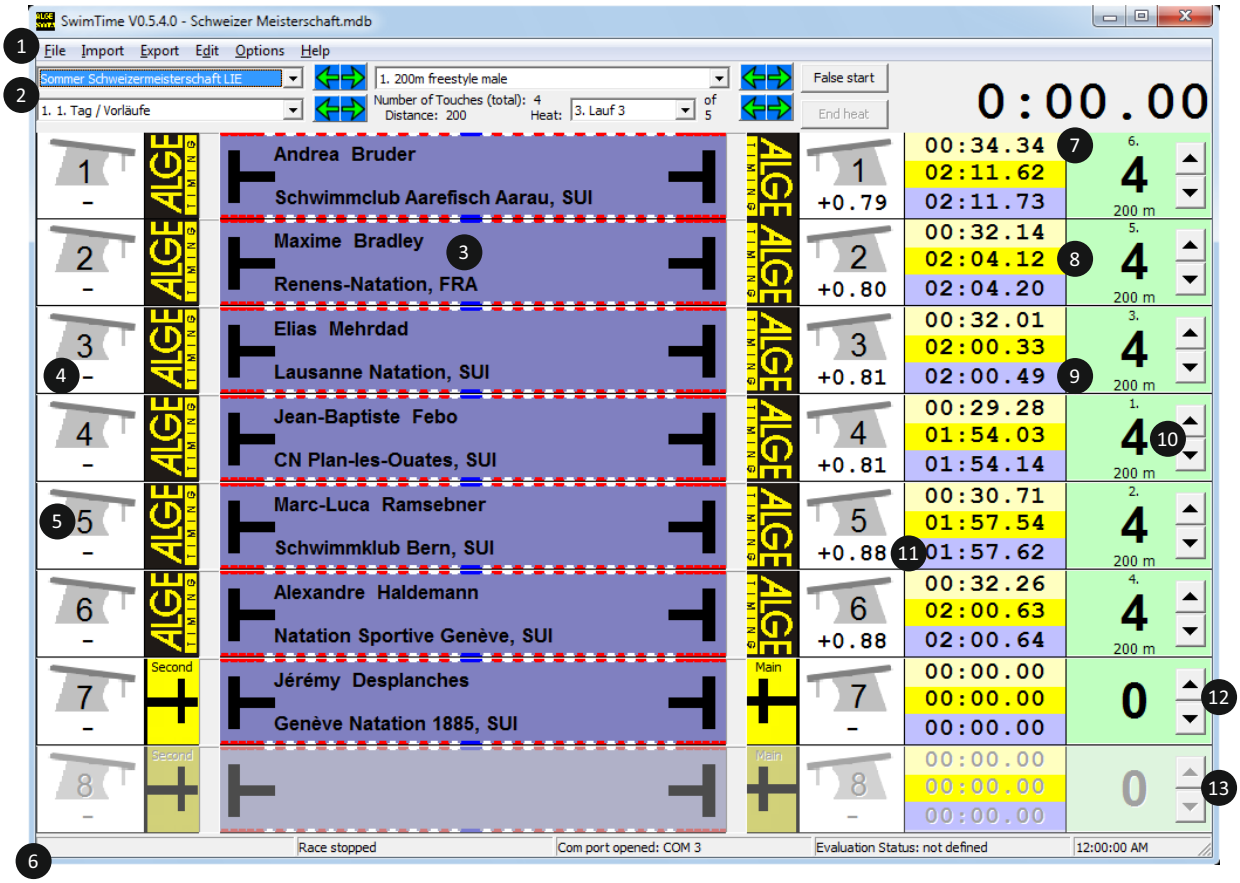
- competition and heat number
- competition name
- times (start, starting platform, touchpads, push button)
- times outside a heat are printed in time of day format
- printing speed: 5 lines per second

SwimTime with TimeManager TM-SWIM

PC software

The ALGE-TIMING PC software SwimTime clearly manages all times and possesses optimal interfaces to all established evaluation software in swimming. By dividing the software into timing and evaluation program (meet management software), the timing can be executed on one PC while the tasks of the race office (heat classification, list printing etc.) are being carried out on one or more further PCs.

SwimTime is compatible with Microsoft Windows 7, Windows 8 or Windows 10.

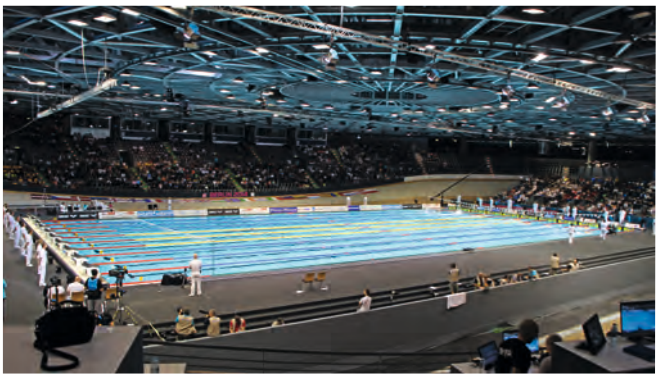


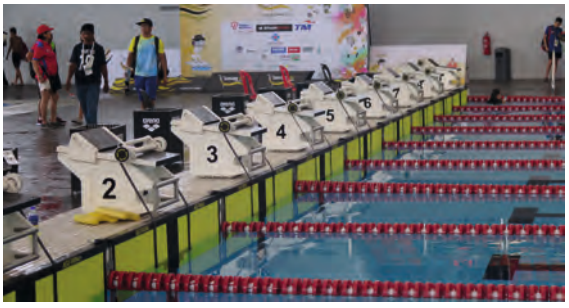
1 menu bar	5 lane number	9 manual time	12 lane with swimmer who did not start
2 competition selection	6 status line	10 touches	13 free lane
3 participant data	7 lap time	11 reaction time start side	
4 reaction time turn side	8 total time		

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

- coordinated with the evaluation
- visualization
- simple operation
- free software updates
- battery backup
- clear logs
- expandable to 16 lanes
- participants' data visible during timing
- many helpful monitoring functions

SWIMMING





Touchpads TP2400C and TP1890C

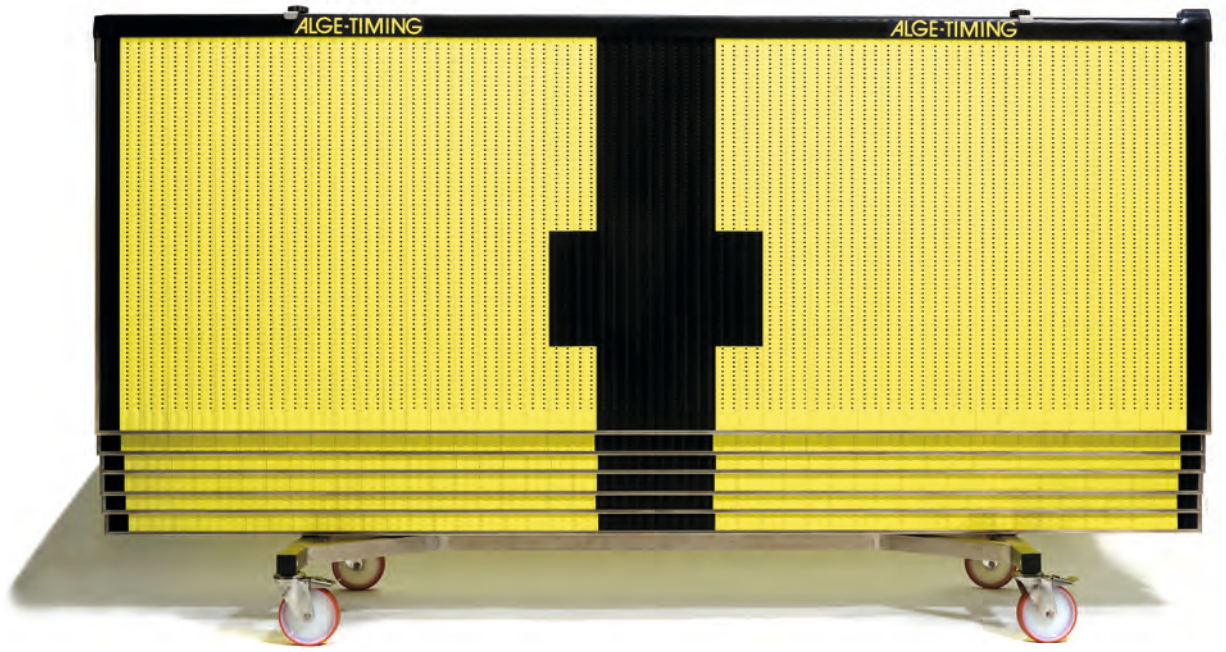
The complete timing for swimming depends on the reliability of the touchpad TP. The touchpad must withstand the aggressive conditions in the pool. ALGE-TIMING forms a solid frame from stainless steel around the touchpad. This protects the integrated tape switches from damage and optimizes the touchpad for operation in the swimming pool.

The four tape switches are situated over the complete length of the touchpad. So wherever the swimmers touches, it is perfectly triggered. It complies with the rules of FINA, SSCH, AAU, NCAA and LEN.

The innovative and patented touchpads exhibit a surface from pluggable lamellas which guarantee exemplary slip resistance for the swimmers. Many experiments and tests were executed with different materials to reach such an ideal result. The ALGE-TIMING touchpad with small nubs provides for the desired grip.

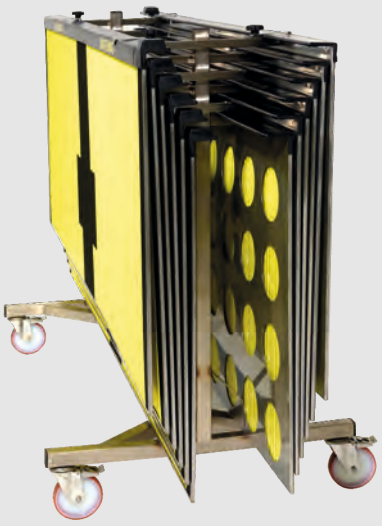
Moreover, every touchpad has hundreds of small holes that allow the water to flow through and produce optimal water current conditions for all lanes.

By applying new materials and a stainless-steel casing with holes on the back side, the weight of the touchpads was reduced by about 30 % compared to previous ALGE-TIMING touchpad models.



All advantages at a glance:

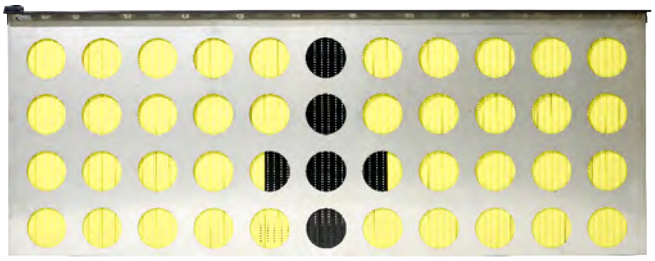
- special anti-slip surface for optimal grip
- four tape switches for constant and safe triggering
- no faulty pulses by splash water or waves
- patented water flow-through during the competition provides for fair conditions
- casing from stainless steel 1.4404
- solid construction
- simple banana plug connection with timing system
- compatible with most of the timing systems (NOC)
- two standard models (TP2400C / TP1890C)
- customer-specific dimensions on request
- special transport cart for storing up to 12 touchpads
- complies with: FINA, SSCH, AAU, NCAA and LEN rules

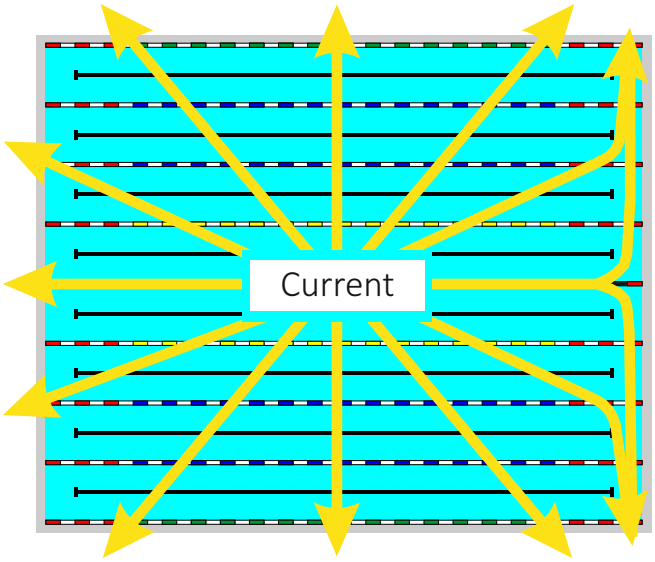


A stainless steel rear plate protects the touchpad from damage (high-quality stainless steel for application in swimming pools).

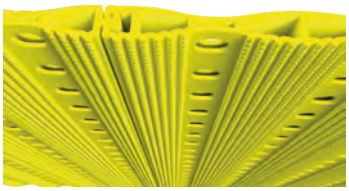
The secret of the unrivalled slip resistance is the special lamella design by ALGE-TIMING. The lamella has a rough surface with thousands of tiny nubs.

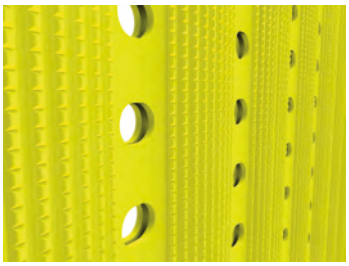
Unlike other touchpads, the water flows through the ALGE-TIMING touchpads and guarantees optimal water current conditions in overflow pools. Other touchpads block the pool current at the ends causing cross flows. They require shutting down the filter system of the pool in order to prevent unfair competition conditions. With the patented construction of the ALGE-TIMING touchpads, fair conditions are ensured for all participating athletes also when operating the filter system during the competition.





On the left, the water current is shown using the new ALGE-TIMING touchpad.
The right shows the water current with closed touchpads.



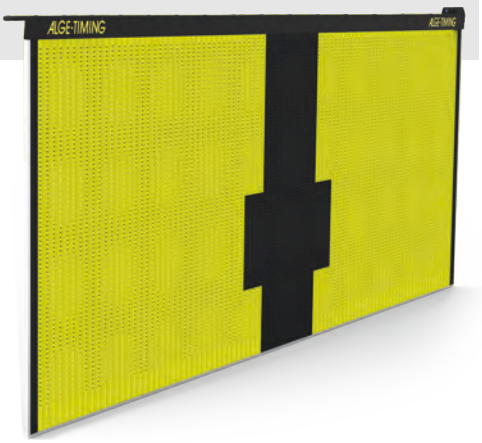


Touchpad Models

TP2400C for swimming pools with lanes of 2.5 m width
stainless steel casing with steel 1.4404 and PCV lamellas 2,400 x 906 mm, max 9.5 thick in active area, 26 kg

TP1890C for swimming pools with lanes of 2 m width
stainless steel casing with steel 1.4404 and PVC lamellas 1,890 x 966 mm, max 9.5 mm thick in active area, 20 kg

TP914C for Training
stainless steel casing with steel 1.4404 and PCV lamellas 890 x 906 mm, max 9.5 thick in active area, 26 kg



All ALGE-TIMING starting platforms and relay take-off sensors has an integrated relay take-off sensor.

It allows to check if the relay take-off is executed correctly during the competition. When the swimmers start, the reaction time can be measured.

Starting Platform SO5

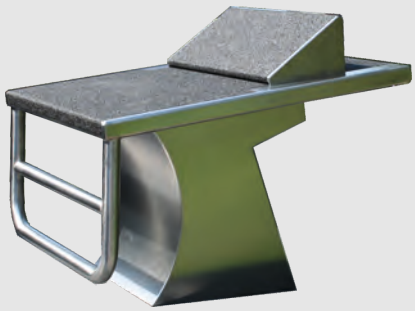
The SO5 is made from plastic (polyethylene) and provides relay take-off times, block-off times or reaction times. The footrest can be adjusted by the swimmer in six different positions and thus enables an optimal track start. When used for public swimming, the footrest can be removed without tools. The SO5 is designed for permanent use in indoor and open-air swimming pools.
New: improved surface for ideal grip

Technical Data

Measuring system:	integrated sensor for reaction time and jump duration
Footrest:	6-stage adjustable, removable without tools
Material:	plastic, stainless steel reinforced
Dimensions:	740 x 560 x 400 mm
Weight:	24 kg
Complies with:	FINA, SSCH, AAU, NCAA and LEN rules

Starting Platform SO4

The SO4 is made from high quality stainless steel 1.4404 and supplies relay exchange times, block-off times or reaction times. The adjustable footrest enables the swimmers to adjust the distance to the front-edge to have the perfect start position for the step-start. For public use you can remove the foot rest without any tools within a few seconds. The SO4 is built for constant use in indoor and outdoor pools.



Technical Data

Measuring system:	integrated sensor for reaction time and jump duration
Footrest:	5-stage adjustable, removable without tools
Material:	stainless steel 1.4004
Dimensions:	740 x 560 x 400 mm
Weight:	40 kg
Complies with:	FINA, SSCH, AAU, NCAA and LEN rules

Relay Take-off Sensor SWR7

The SWR7 is made from high-quality stainless steel 1.4404 and provides relay take-off times, block-off times or reaction times. The SWR7 must be fitted to the existing starting platforms. It is fixed to those starting platform using screws. The extraordinarily slip-resistant surface designed by ALGE-TIMING is indestructible and does not change its specifications even after many years of use.

Technical Data

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

Relay Take-off Sensor SWR7M

The SWR7 is made from high-quality stainless steel 1.4404 and provides relay take-off times, block-off times or reaction times. The SWR7 must be fitted to the existing starting platforms with a tension belt. The extraordinarily slip-resistant surface designed by ALGE-TIMING is indestructible and does not change its specifications even after many years of use.

Technical Data

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

Backstroke Start Aid BSA

The Backstroke Start Aid is fully compatible with the ALGE-TIMING SO3, SO4, and SO5 and with any other brand of starting blocks. Each unit consists in a lower part including a footrest designed to support the swimmer's push at the start and an upper part to hook the assembly to the starting platform. The upper part includes a rotating mechanism to set the BSA to the swimmer's starting position. A return spring allows a "one hand" easy adjustment, even if the athlete is in water. The upper handlebar allows to grab the unit for a quick removal after the start.

Technical Data

Mounting:	universal, without tools
Dimensions:	according to FINA; 786 x 10- 1600 (adjustable) x 150 mm
Weight:	2.8 kg
Complies with:	FINA, SSCH, AAU, NCAA and LEN rules

ALGE-TIMING has the perfect display system for every area of application, ranging from classical seven-segment displays to video walls. The displays can be customized to the individual requirements.

Numerical LED Display Systems

The seven-segment display boards are ideally suited for indoor and outdoor.

Full Colour Video Walls

ALGE-TIMING offers large scale of LED video walls that are designed for use in sports facilities. For more information, please contact your ALGE-TIMING dealer.

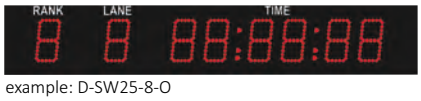
Seven-Segment LED Display Boards

The display boards D-SWxxx are especially designed for indoor and outdoor use. They are controlled by TimeManager TM-SWIM, Timy3 or multisport controller D-CKN. All LED display systems are assembled with extra bright LEDs with an operational period of more than 100,000 hours. Displays with 57 to 600 mm figure height are available.

Figure heights for indoor systems:
57, 100, 150 and 250 mm
Figure heights for outdoor displays:
80, 150, 250, 450 and 600 mm

D-1xSWxx-8-(IO)

Single-line display board for rank, lane and time. The results of all swimmers can be shown alternating. The optional water polo control terminal D-CKN can be used to show match time and goals (0 to 9).



example: D-SW25-8-O

D -XxXxSWxx-7(-IO)

In order to show the time for every lane, multiline display boards with varying configurations are available. The optional water polo control terminal can be used for showing the match time, goals, and penalty times.


example: D-2x4xSW25-7-O

D-1xSWxx-5-(IO)

This additional display offers the complete overview of the competition and shows not only the name of the competition but also the heat number. This option can be integrated into every display.

example: D-SW25-5-O

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

The D-RTNM full matrix display systems offer unsuspected display possibilities. In addition to competition name, heat number and name of swimmer, this display can also be used for promotion: graphic animations and running texts are available at any time by mouse click.


example: D-RTNM-XX-X-O

Personal Foul Module for Water Polo D-WPF15-(IO)

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

D-WPF25-(IO)

- 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


example: D-WPF25-O

All display boards are available as outdoor and indoor models.

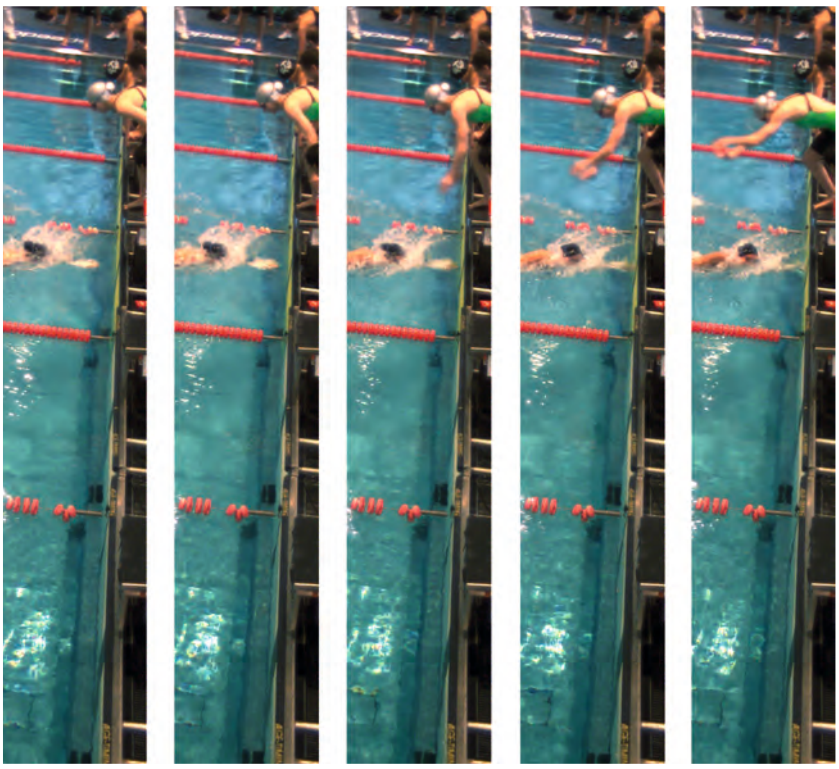

seven segment LED display board

seven segment LED display board with LED matrix display board D-RTNM (top)

OPTIc3 Video Backup

The ALGE-TIMING photo finish system OPTIc3 can record. All movements in the start and finish area in 2-D mode with 100 pictures per second. These recordings are an independent backup for the timing and can be used as evidence in case of a protest. This can especially be helpful for relay take-offs.

The pictures are stored on the hard disk of a PC. The IDCam software assists in evaluating them quick and clearly. One camera
can cover up to four lanes.



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 auto-focus 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

Technical Facts:

vertical resolution:	up to 2,016 pixels
scan rate (fps):	up to 30,000 frames per second up to 100 pictures with a resolution of 1024 x 768 or 2016 x 360 Pixel
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

ALGE-TIMING has developed a special Timy3 timing program for swim training. The program has specific measuring features for two training lanes.

The following measured data is available:

Individual training

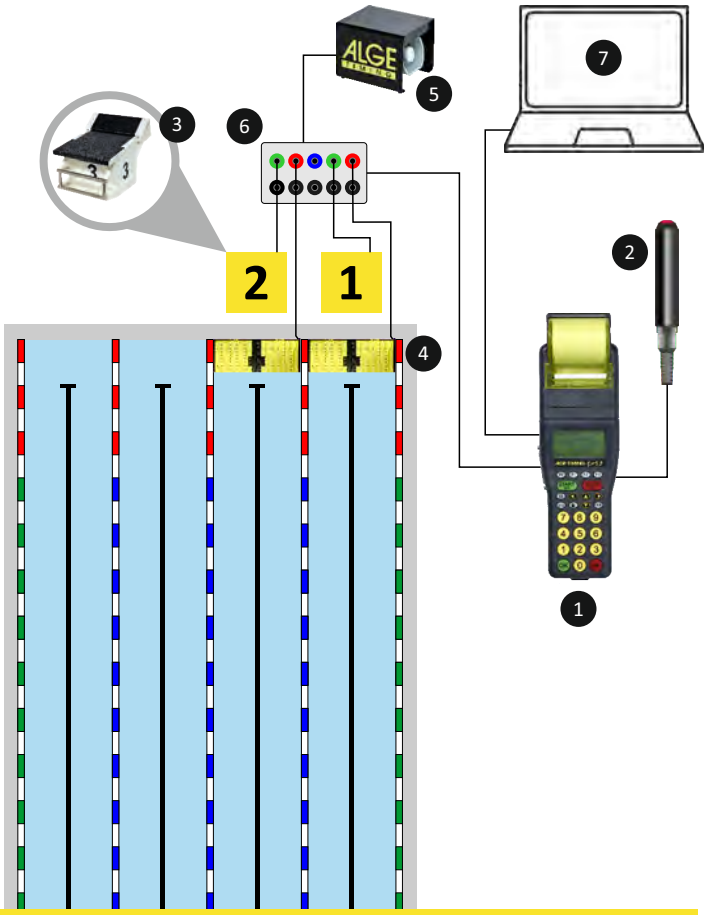
Reaction time	time after the swimmer puts pressure on the starting platform
Duration of pressure	duration of jump phase
Block-off time	time after the swimmer leaves the starting platform
Touch 1	first touch
Turn time	time from touch until leaving the touchpad
Touch 2	etc.

Relay training

Reaction time	time after the swimmer puts pressure on the starting platform
Block-off time	time after the swimmer leaves the starting platform
Touch 1	first touch
Reaction time	time after the swimmer puts pressure on the starting platform
Block-off time	timer after the swimmer leaves the starting platform
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+0.14 0.56 +0.69
L2 TP 001        27.35
L2 Duration       0.86
L1 TP 001        28.17
L1 Duration       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
```

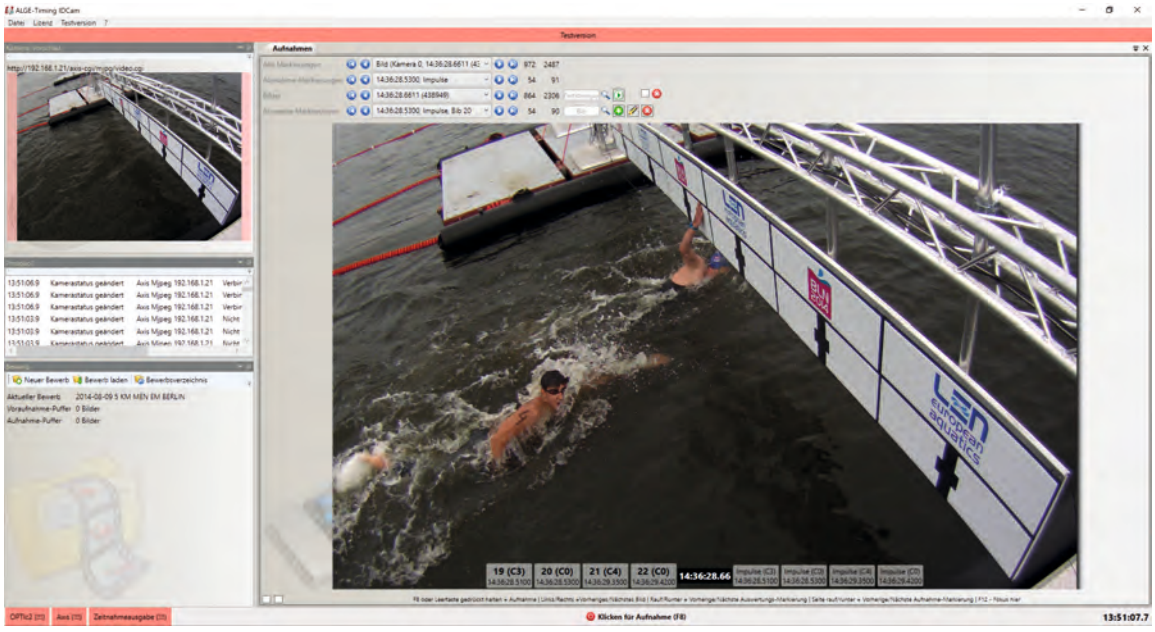


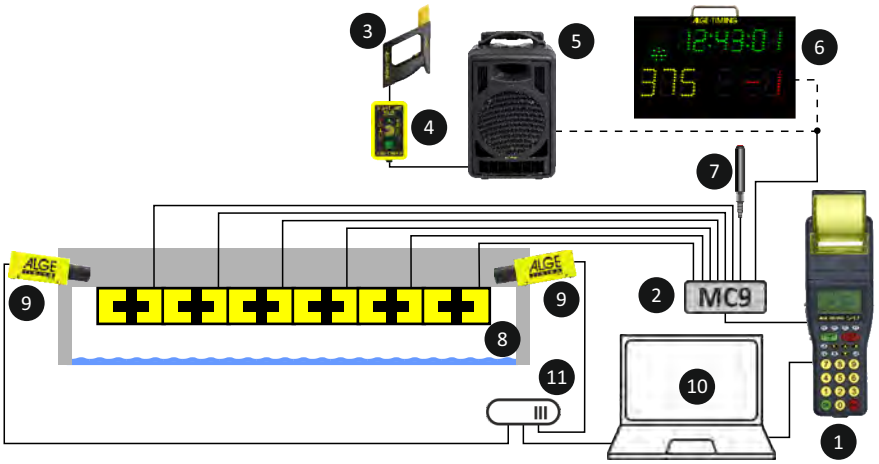
1 timing device Timy3 WP
2 push button 023-02
3 start block SO5 / SWR7 / SWT7M
4 touchpad TP1980C / TP2400C
5 speaker SPP2
6 connection box MC2-S
7 PC for evaluation

SWIMMING

Open Water Swimming

For open water swimming competitions, the combination of several small touchpads and finish monitoring with OPTIc3 or IDCam is ideally suited. It is then easily possible to read the start numbers of the swimmers from the recorded high-resolution pictures including day time.



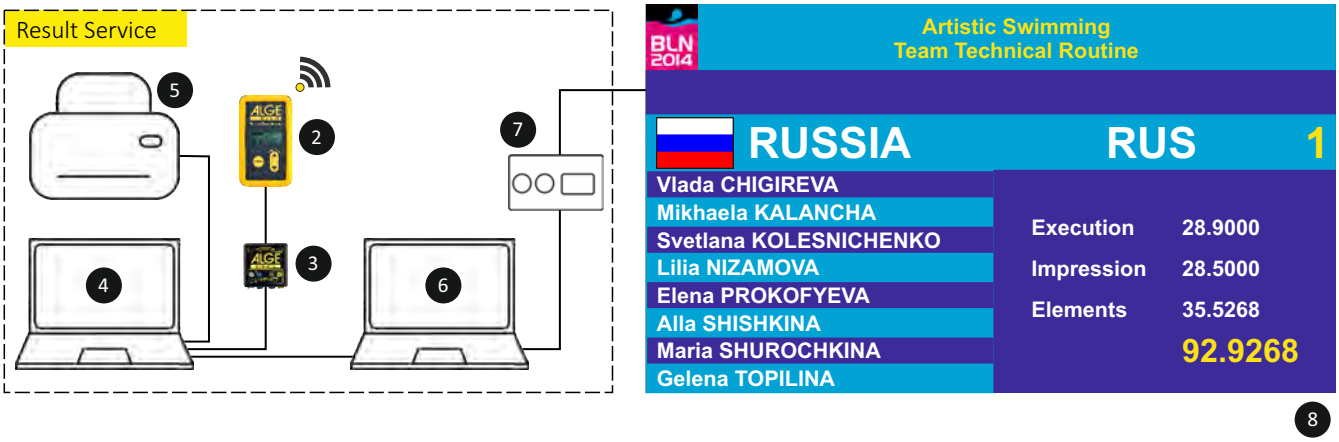


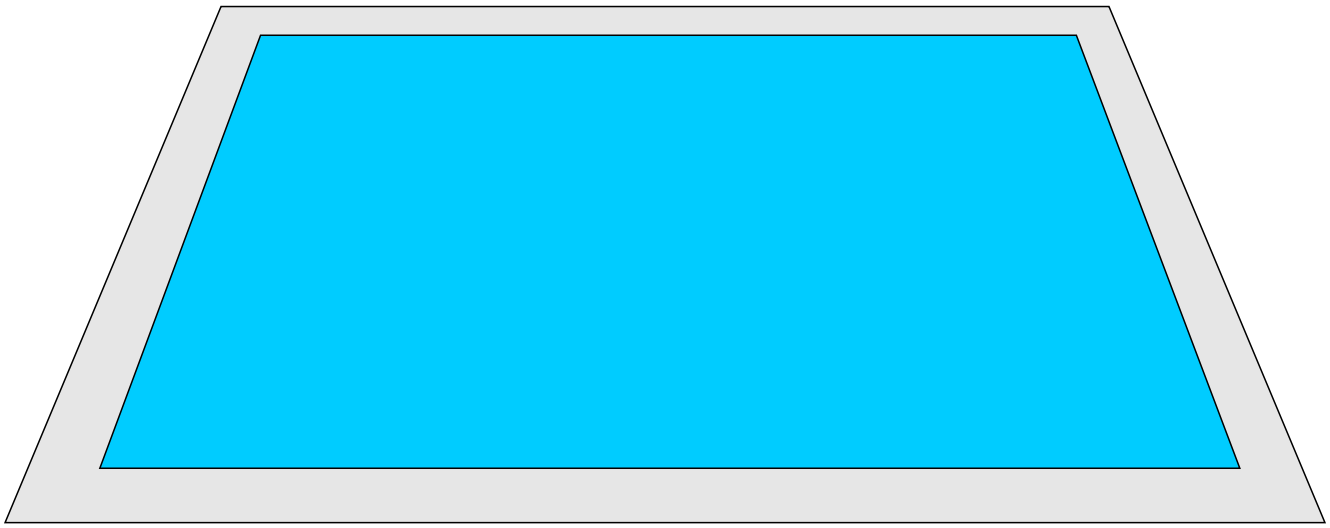
1. Timing Device Timy3 WP
2. Multichannel MC9
3. elect. Startgun e-start
4. Start Unit SU3
5. Speaker System BANG2
6. Start Clock ASC3
7. Push Button 023-02
8. Touchpad CM30/100 (6 pieces)
9. High Speed Camera OPTIc3 or IDCam
10. PC for OPTIc3 or IDCam
11. Switch with PoE

ARTISTIC SWIMMING

The unique ALGE-TIMING Wireless Timing Network guarantees safe data transmission and simple installation of the system for artistic swimming competitions.

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



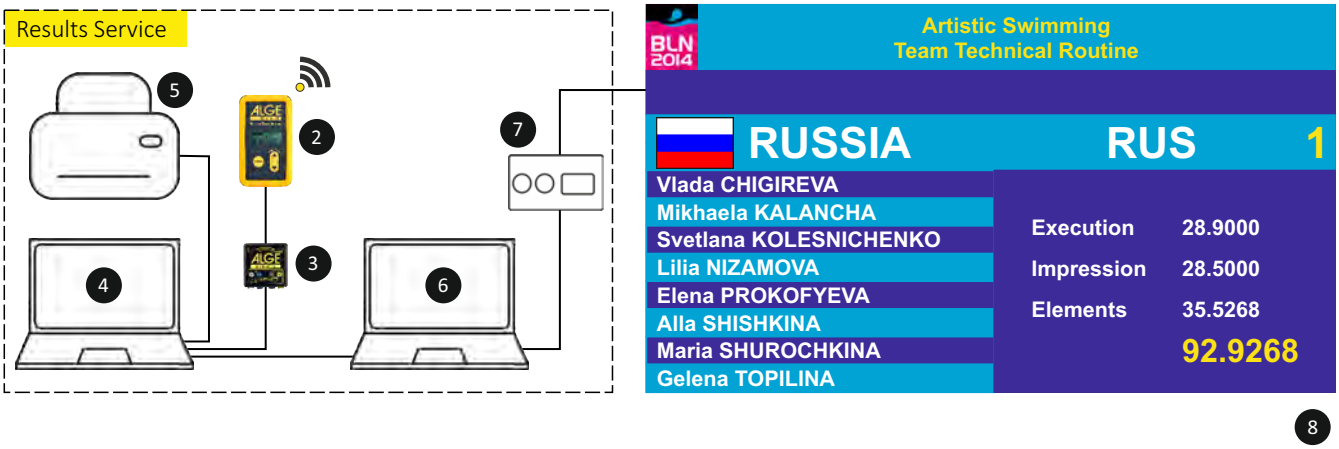


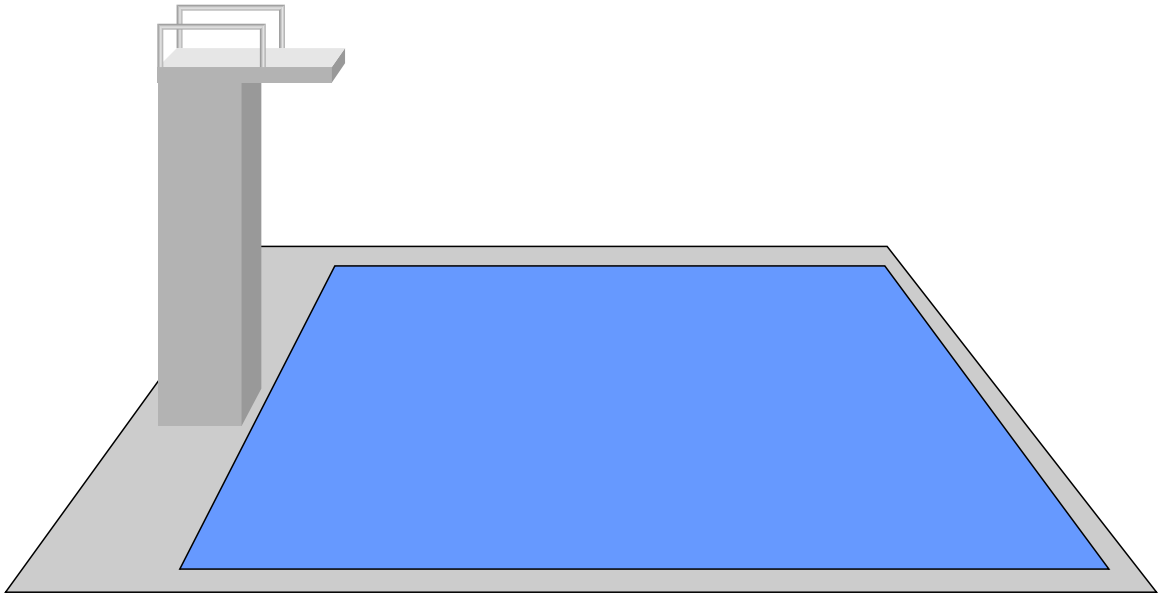
1 Timy3 W (one per judge)
2 wireless timing network WTN
3 adapter USB-WTN
4 notebook for result service
5 printer
6 notebook for video wall
7 video wall controller
8 video wall

DIVING

The scoring system for diving is based on the unique ALGETIMING Wireless Timing Network. This ensures safe data transmission and easy installation of the system.

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





1. Timy3 W (one per judge)
2. wireless timing network WTN
3. adapter USB-WTN
4. notebook for result service
5. printer
6. notebook for video wall
7. video wall controller
8. video wall

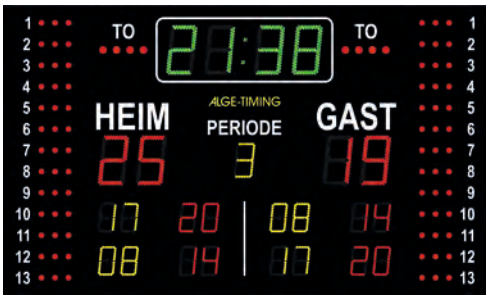
Model D-S15BP2W
- figure height: 150 mm
- dimensions: 1,400 x 1,400 x 70 mm
- weight: 40 kg

model D-S15BP2W

Model D-S15-5W
- figure height: 150 mm
- dimensions: 2,000 x 1,400 x 70 mm
- weight: 55 kg

model D-S15-5W

Model D-M5SW
- figure height: 250 mm (time and score) and 150 mm (penalties and period)
- dimensions: 2,500 x 1,000 x 70 mm
- weight: 80 kg



model D-M5SW

The following is shown on the display board:
- running time: 99:59 minutes up/down (green figures); last match minute is shown in tenths of a second
- time of day can be shown in match time field
- scores: 0 to 99 each side (red figures)
- period: 0 to 9 (yellow figures)
- time-out: 4 red LED points for each team
- penalties: 2 penalties for each team: 0 to 59 seconds (red figures)
- layer number: 0 to 99 (yellow figures)
- personal fouls: 39 red LED points each team (models D-S15-5W, and D-M5SW)

Technical Data
- power supply: 110- 220 VAC / 50 Hz
- horn
- D-CKN terminal with LCD display

Optional
- wireless data transmission
- outdoor models have at the end of the code -O; e.g. D-M5SW-O


operating console D-CKN

WATER POLO

Shot Clocks

model D-SC25W-PH

model D-SC45GT25W-PH

D-SC15W-PH

- attack time (2 figures): 150 mm
- dimensions: 340 x 250 x 70 mm
- weight: 1.5 kg each side

D-SC25W-PH

- attack time (2 figures): 250 mm
- dimensions: 450 x 350 x 70 mm
- weight: 3 kg each side

D-SC25GT15W-PH

- match time (3 figures): 150 mm
- attack time (2 figures): 250 mm
- dimensions: 550 x 550 x 70 mm
- weight: 6 kg each side

D-SC45GT25W-PH

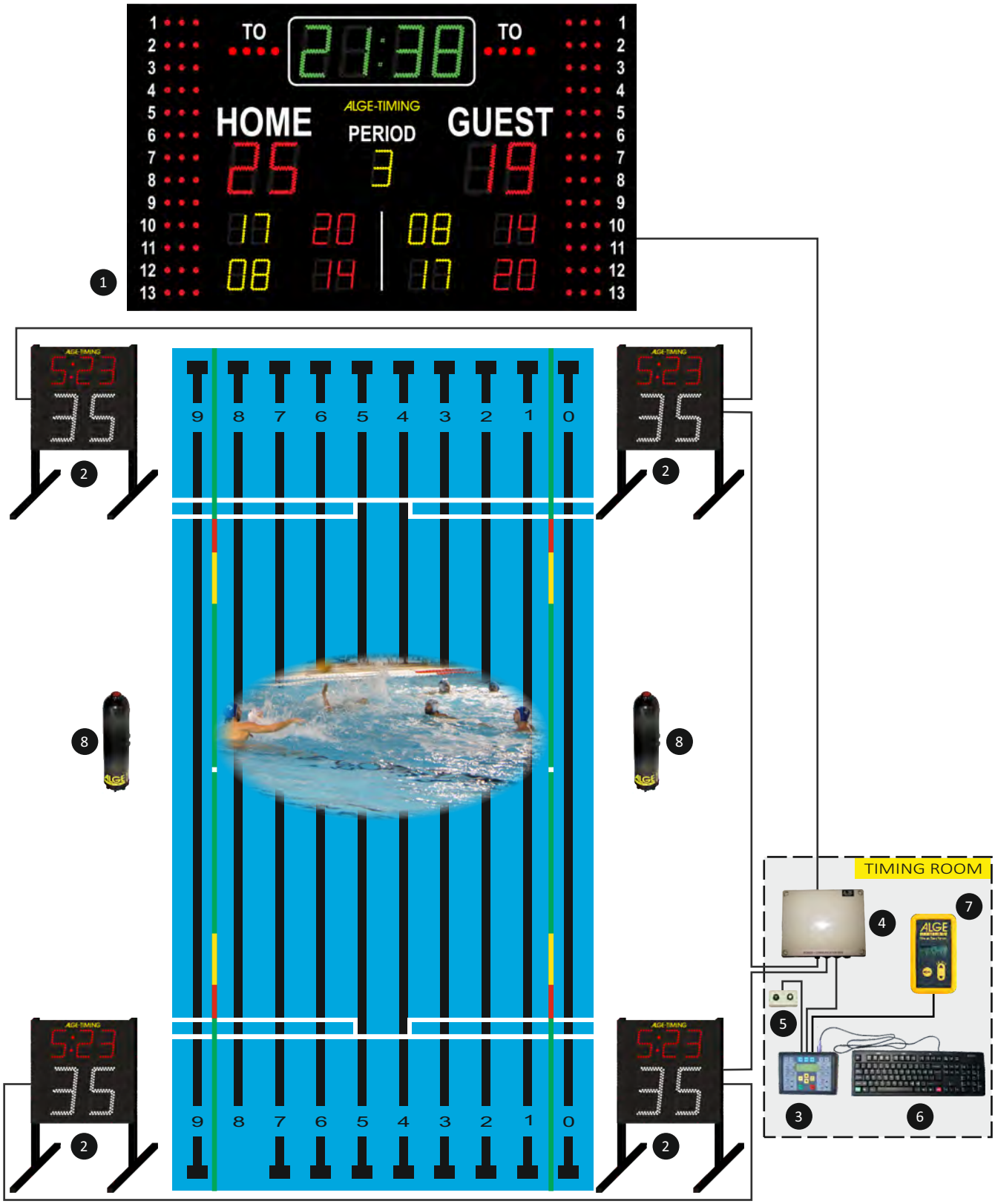
- match time (3 figures): 250 mm
- attack time (2 figures): 450 mm
- dimensions: 850 x 900 x 70 mm
- weight: 15 kg each side

Technical Data

- set consisting of 2 attack time display boards with horn
- 150, 250, or 450 mm figure height, on request up to 1,000 mm possible
- models for indoor and outdoor
- power supply with 24 VDC from main display board
- only works with ALGE-TIMING water polo display board with D-CKN terminal
- cable must be ordered separately, 200-XX are in use
- shot clocks meet safety requirements for operation in swimming pools

Optional

- wireless data transmission and built in rechargeable battery
- outdoor models have at the end of the code -O; e.g. D-SC15W-PH-O



1 water polo score board (e.g. D-M4SW)
2 shot clock (e.g. D-SC25GT25W-PH
3 operator console D-CKN
4 power and communication box
5 shot clock keyboard D-CKA2
6 keyboard D-CKN-KB
7 wireless timing network WTN
8 radio push button WTN-PB

SWIMMING

ROWING & CANOE

Simple Manual Timing System

Rowing and canoeing events are usually held on the same regatta courses with the same finish but with different distances. You need similar timing systems, but the structure is usually somewhat different (start and intermediate times are different). The number of lanes might be as well not identical. Of course, the photo-finish system is also used in dragon boat races.

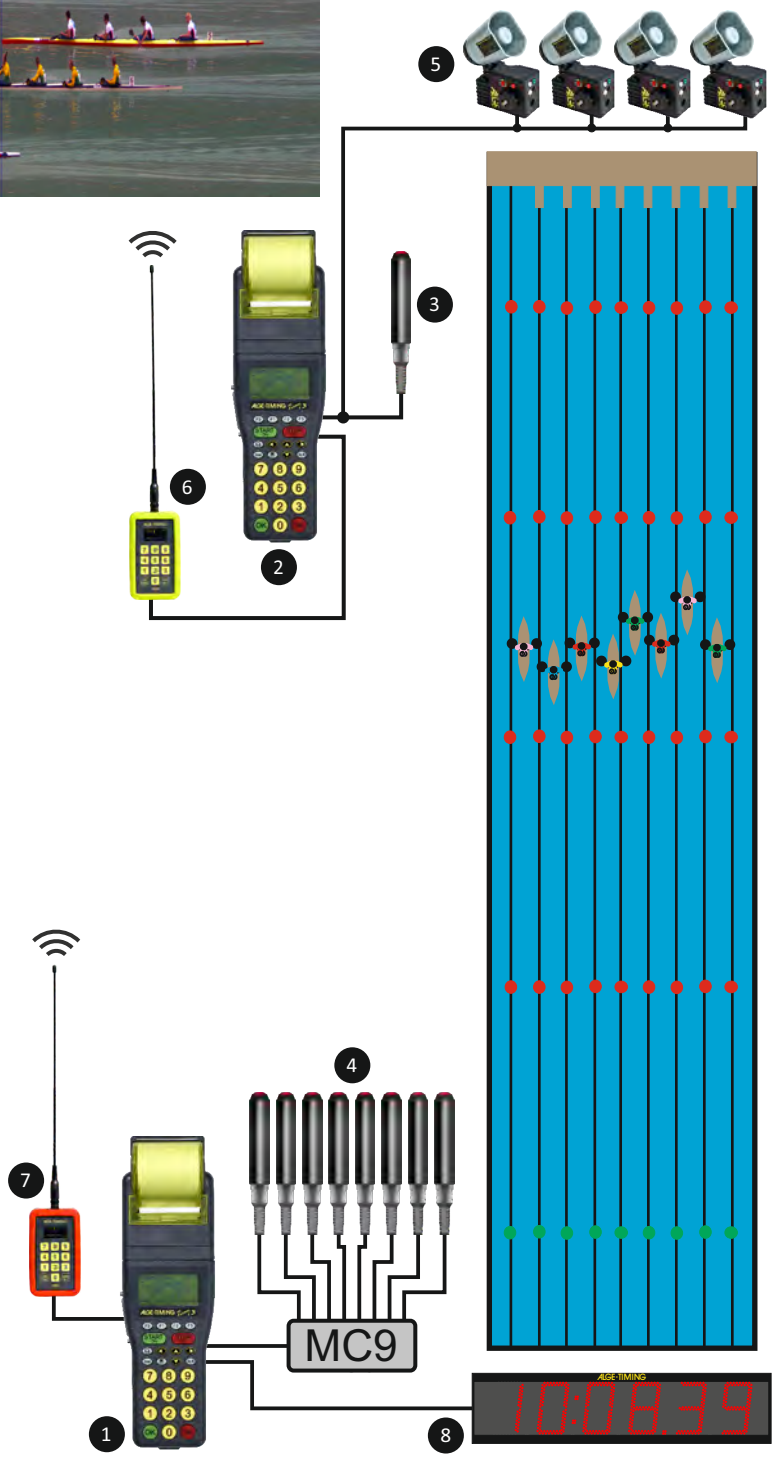
ALGE-TIMING supplies timing systems for regatta courses for more than 30 years. Different systems are available from a simple manual timing system with radio transmission up to systems with intermediate times for each lane and photo finish used for major events.

This manual timing system is inexpensive, easy to operate and to set up and can be used on a mobile basis. The start is triggered with a hand switch that emits a horn signal of the Startbeep STB1. One or more Startbeep can be distributed in the start area.

The Timy3 WP in the start area is required for reliable backup of the start time.

The start impulse is transmitted to the finish by radio system TED2. The Multichannel MC9 is connected to the timing device Timy3 WP at the finish. Up to eight push button 023-10 can be connected (one for each lane). Each push button impulse triggers the timing device and is printed by the integrated printer of the timing device.

It is possible to connect a display board to the timing device Timy3 WP, which shows the running time or the winning time.



1. Timing Device Timy3 WP
2. Timing Device Timy3 WP for start
3. Push Button 023-10 for start
4. 8 x Push Button 023-10 for each lane
5. 4 x Startbeep STB1 for start signal
6. Teledata TED2-TX transmitter
7. Teledata TED2-RX receiver
8. Display Board D-LINE

ROWING & CANOE

Professional Timing System

The professional timing system with the TimeManager TM allows to measure the time of each competitor of each lane the for the intermediate- and finish times. For a regatta course with nine lanes, this means there are at least 37 timing channels necessary; 1 start channel, 3 x 9 intermediate times and 9 finish times.

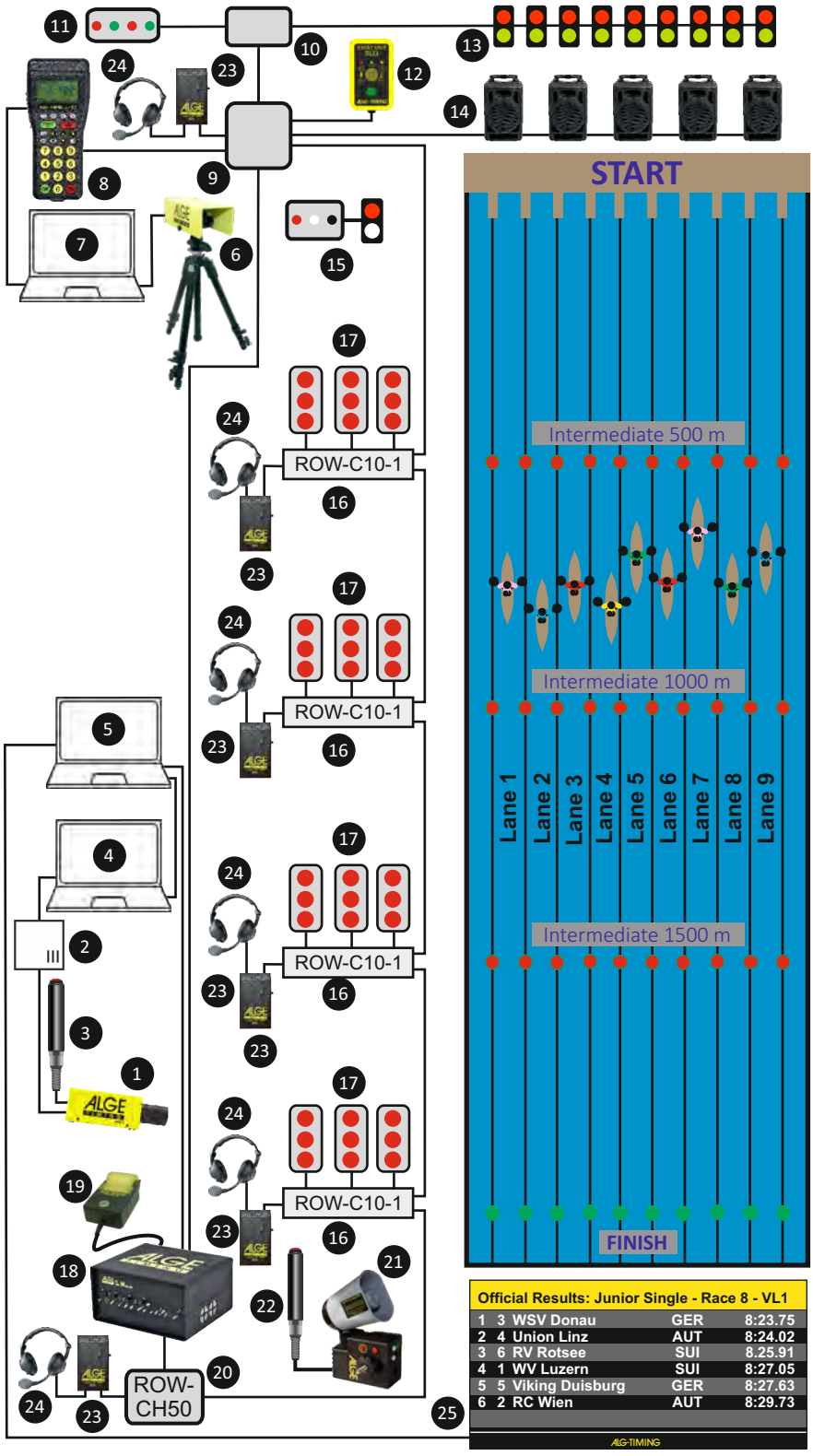
The speaker system BANG2 is used by the starter to give commands and the start signal. The start is recorded with the IDCam and shows the start image in order to detect a false start.

Each lane at the intermediate and finish has a push button to trigger the timing. A headset is available for communication between start, intermediate and timing.

The finish arrival is recorded by the photo finish OPTIc3. The times of the photo finish will be used as official time. With the horn of the Startbeep STB1 the crossing of a competitor is signalized.

All data are transferred from the timing devices to the PC and evaluated. The entire race management and printing of documents (start lists, result lists) is done on this PC.

1. **Photo Finish Camera OPTIc3**
2. **Power over Ethernet PoE**
3. **Push Button 023-10** to control the photo finish recording
4. **PC for Photo Finish**
5. **PC for Evaluation**
6. **IDCam:** camera for start control)
7. **PC for IDCam-Evaluation**
8. **Timy3 W** (start timing device)
9. **Potential-Free Output ROW-PF**
10. **Start Light Controller ROW-SSR**
11. **Start Light Terminal ROW-SST**
12. **Start Unit SU3**
13. **Start Light LED-SPOT**
14. **Start Speaker BANG2**
15. **Start-Ready-Light LED-SPOT-SJ**
16. **Adapter ROW-C10-1** to connect the push buttons ROW3
17. **Push Button ROW3** for 3 lanes
18. **TimeManager TM:** timing device
19. **Printer P6-8** for timing device
20. **Adapter ROW50** extension for 50 timing channels
21. **Startbeep STB1** horn for finish arrival
22. **Push Button 023-10** to activate the finish horn
23. **Speech Amplifier SV4-S**
24. **Headset HS4-2**
25. **Display Board** e.g. video wall



MOTOR SPORTS

The versatility of motor sports requires a large selection of timing devices that meet the challenges of the different races.

That's why ALGE-TIMING has developed individual timing systems and the right accessories especially for motor sports and supplies the right timing system for many motor sports events, training sessions and tests facilities.

A radar measurement has advantages and disadvantages compared to a photocell measurement. The photocell measurement always takes place at the same position of the car, whereas the radar measurement measures the speed over a certain area. For example, if you want the exact speed before a curve, you need a photocell measurement.

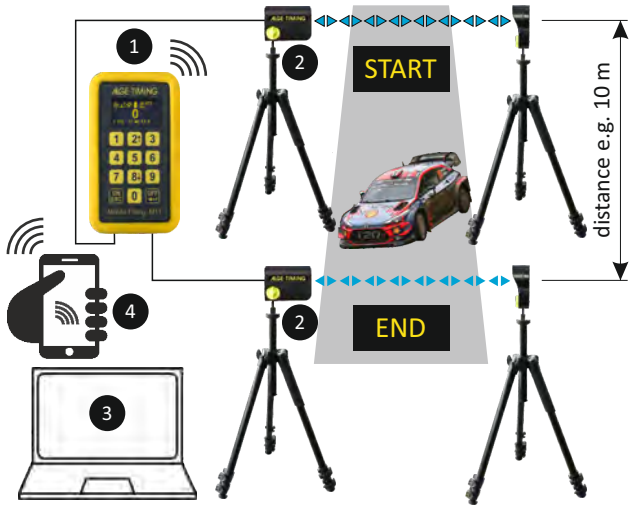
Speed Measurement with Timy3

In addition to the timing device Timy3, you need two photocells. The photocells are set up at a defined distance from one another (e.g. 10 m). This allows the timing device Timy3 to calculate the speed from the time for the measured route and display it on a display board. All speed measurements are saved in the Timy3.

1 timing device Timy3 WP
2 photocell PR1a-RT
3 display board D-LINE
4 radio receiver WTN-DB

Speed Measurement with Mobile Time MT1

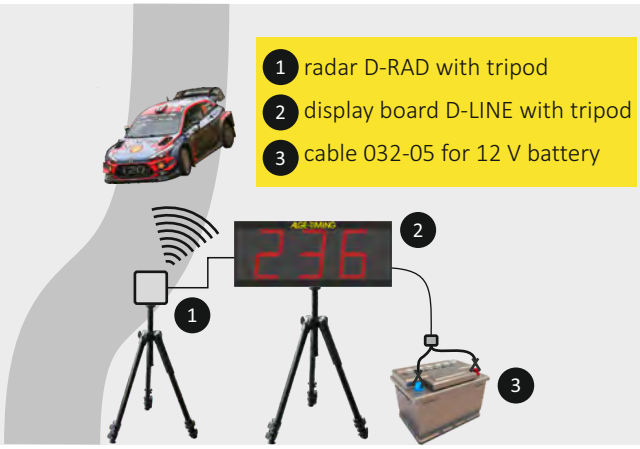
In addition to the timing device MT1, two photocells are required. The photocells are set up at a defined distance from one another (e.g. 10 m). The timing device MT1 then measures the start time and end time of the crossing car and forwards the times to the internet platform alge-results.com. The speed is calculated and displayed on the internet device (mobile phone, tablet, PC). Everyone can track the speeds on the Internet.



1 timing device MT1
2 photocell PR1a-RT
3 PC for timing
4 device with internet

Speed Measurement SPEEDY with Radar

The radar device is set up on a tripod and should detect the oncoming car as straight as possible. It is ideal to track the speed over a distance. The measured speed is displayed on a display board.



1 radar D-RAD with tripod
2 display board D-LINE with tripod
3 cable 032-05 for 12 V battery

MOTOR SPORTS
Rally

ALGE-TIMING can offer two different timing systems for rally races. One system works with the proven Timy3, the other with the Mobil Timing MT1. Every system has its advantages.

Timing system for rally with Timy3:

The timing for a rally stage needs a timing system that includes a Timy3 WP and a photocell for the start and for the finish. The times are stored in the memory of the timing device Timy3 WP and then subsequently loaded into a PC, which calculates the running times.

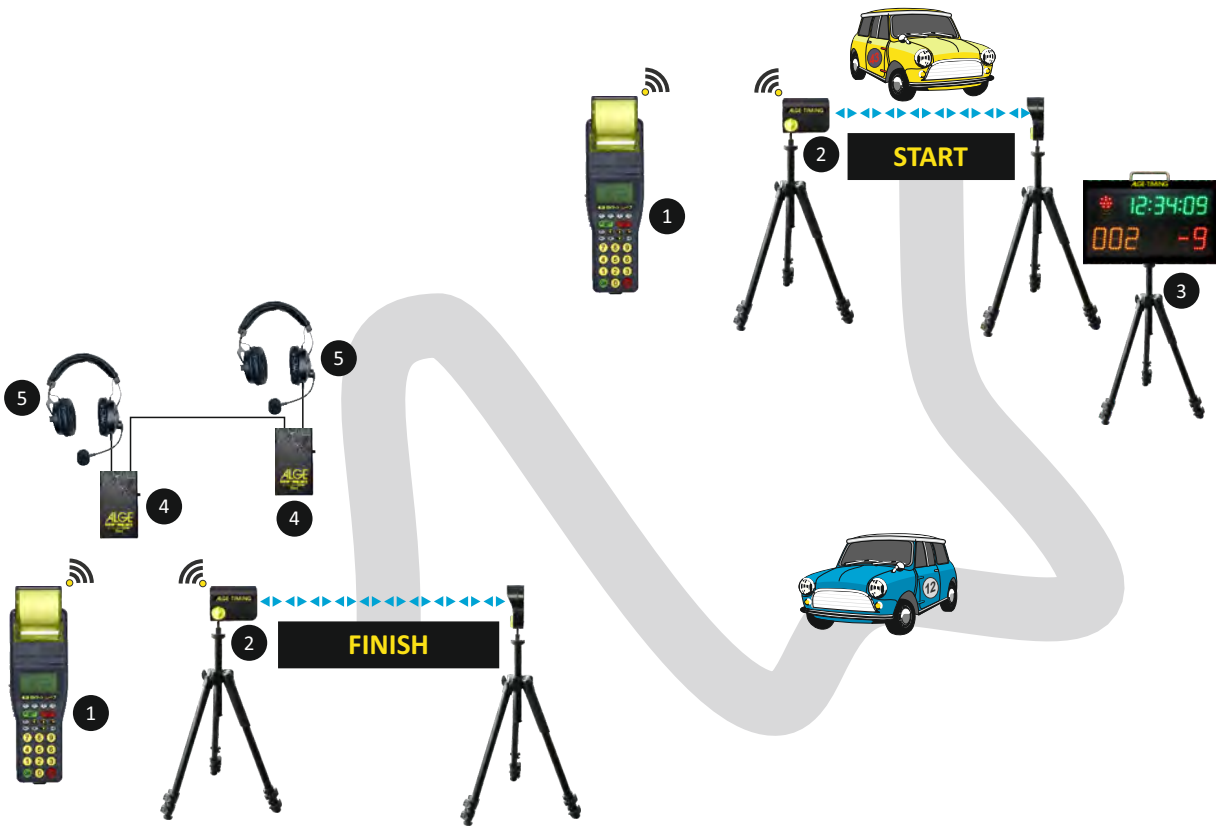
The sketch shows an extended timing system that uses the Timy3 WP as timing device and the photocell to trigger the start- and finish impulses. The impulses are stored in the timing device as time of day. The timekeeper keys into the Timy3 the ID-number of the vehicle.

At the start, a Startclock ASC3 helps to retain and control the start intervals. For the finish a headset is recommended to report the ID-number of the car in advance to the timing operator. A voice amplifier with a headset is connected at each end via a 2-core cable real. Thus, a finish announcer can

announce the arriving ID-number to the timing operator a few 100 m before the car reaches the finish.

After the end of each stage, the times are transferred from the timing devices to a PC, which calculates the run times of the stage.

You have to take into account that you need a separate timing system for stages that happen at the same time and possibly one or more to be able to set up the next stages.



1 Timing Device Timy3 WP
2 Photocell PR1a-RT
3 Startclock ASC3
4 Speech Amplifier SV4-S
5 Headset HS3-2

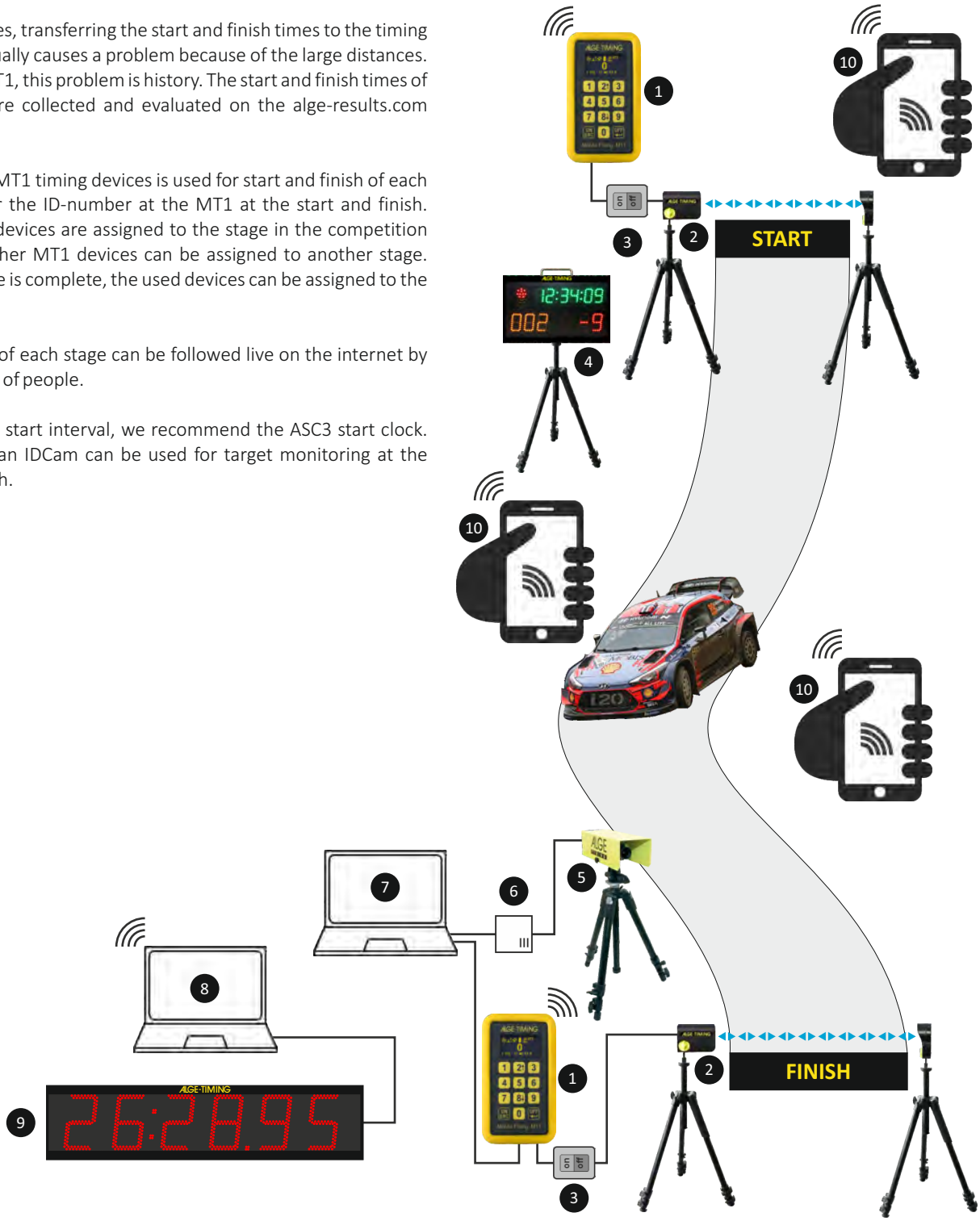
Timing system for Rally with Mobil Time MT1

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

A separate MT1 timing devices is used for start and finish of each stage. Enter the ID-number at the MT1 at the start and finish. These two devices are assigned to the stage in the competition settings. Other MT1 devices can be assigned to another stage. Once a stage is complete, the used devices can be assigned to the next stage.

The results of each stage can be followed live on the internet by any number of people.

To display a start interval, we recommend the ASC3 start clock. Optionally, an IDCam can be used for target monitoring at the start or finish.



1. Mobile Time MT1
2. photocell PR1a-RT
3. On/Off switch for photocell
4. Start Clock ASC3
5. finish monitoring camera IDCam
6. Power over Ethernet (PoE+)
7. PC for IDCam
8. PC for timing operation
9. display board D-LINE
10. mobile device for live results (mobile phone, tablet, ...)

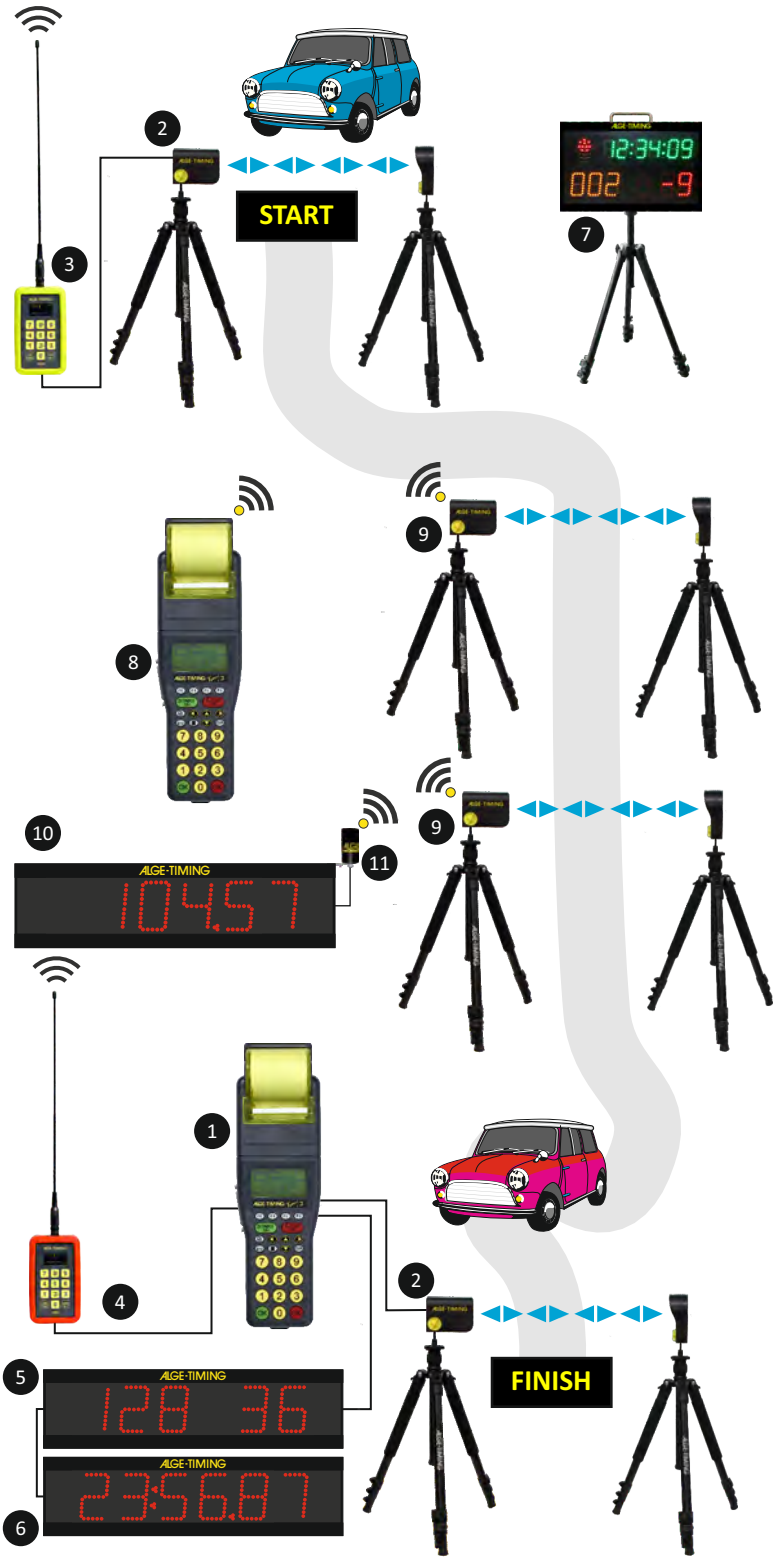
MOTOR SPORTS

Antique Car Rally

At antique car rallies, there are a wide variety of timekeeping requirements.

It's mostly about precision. For example, you have to adhere to a given time as precisely as possible on a given route.

Another test could be to keep to the speed exactly on a section of the route. In this case, a speed measurement is required. Since the speed has to be measured at exactly one point, this is usually carried out with photocells and not with radar.



1. Timy3 WP (timing)
2. Photocell PR1a (timing)
3. Radio Transmitter TED2-TX
4. Radio Receiver TED2-RX
5. Display Board D-LINE (ID + rank)
6. Display Board D-LINE (time)
7. Start Clock ASC3
8. Timy 3 WP (speed)
9. Photocell PR1a (speed)
10. Display Board D-LINE (speed)
11. Radio Receiver WTN-DB

MOTOR SPORTS

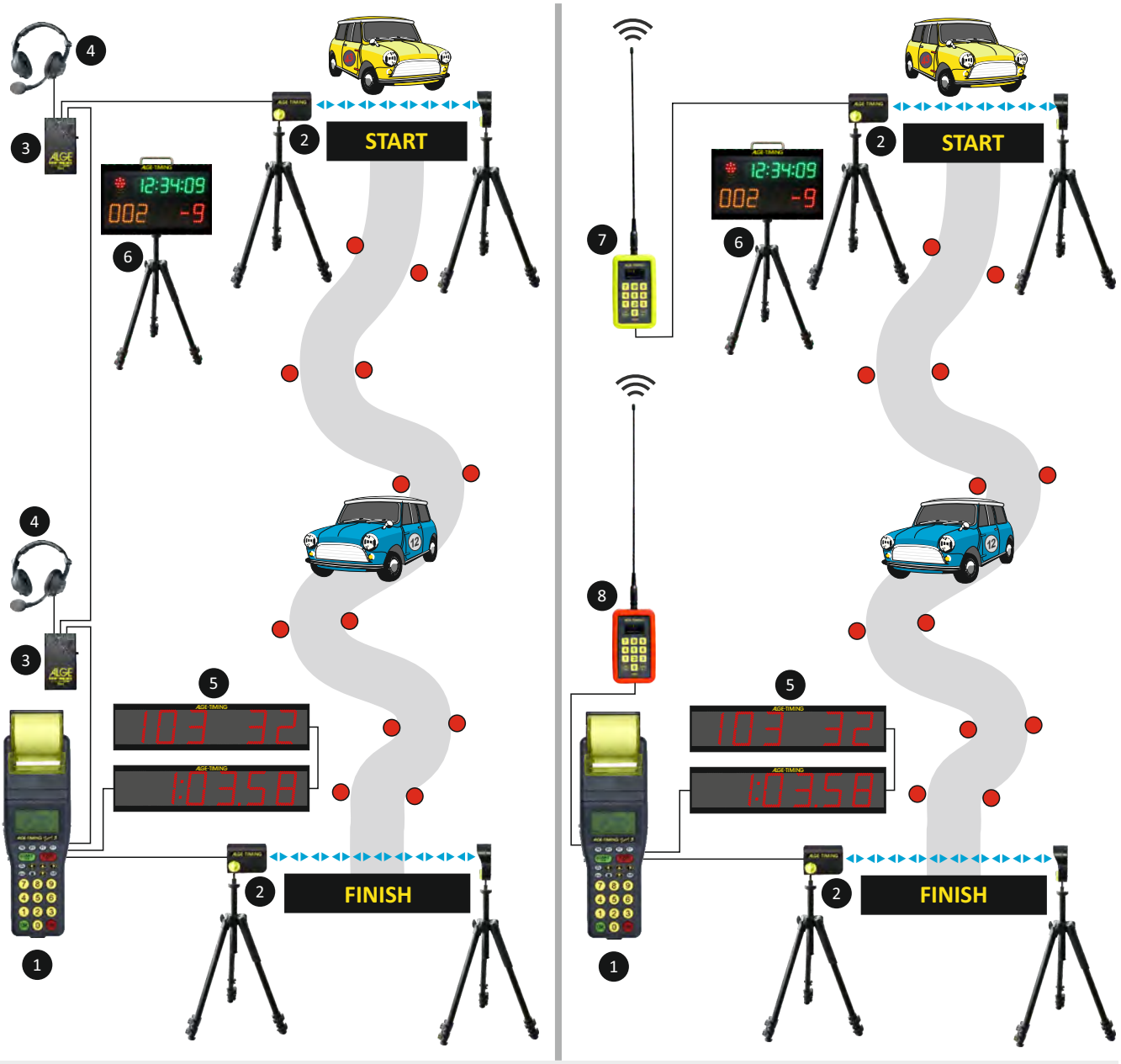
Car Slalom and Mountain Racing

Examples of timing systems used in motor sports are the systems shown below for car slalom or mountain races. Both systems are identical, except that the left system uses a cable between start and finish and thus a voice connection is also possible.

With the system on the right, the start impulses are transmitted to the timing device by radio.

The regular start intervals are regulated by the Start Clock ASC3. The timing device (Timy3 WP) is triggered by a photocell at the start and at the finish.

A display board shows the running time.



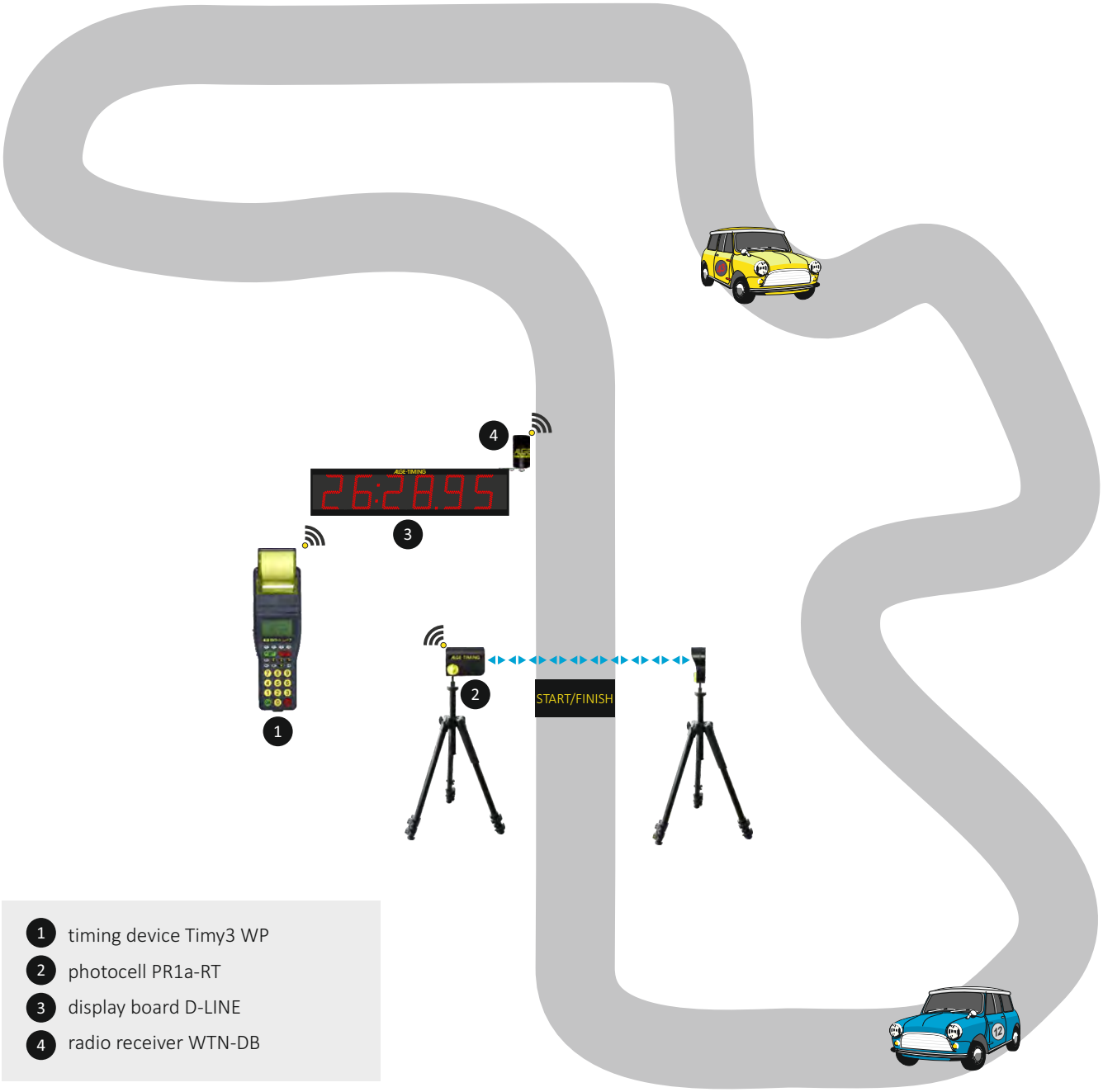
1 Timing Device Timy3 WP
2 Photocell PR1a-RT
3 Speech Amplifier SV4-S
4 Headset HS3-2
5 Display Board D-LINE
6 Start Clock ASC3
7 Teledata TED2-TX
8 Teledata TED2-RX

The Timy3 is the ideal timing device for training with one or more cars on the circuit. At each lap, the ID-number is entered before the car is passing. When crossing the finish line, the total time and lap time is calculated.

The lap time can be displayed on a display board to show the driver the current lap time.

If there is only one car on the track, the ID-number is only entered once before the start. After that, no further operation is necessary. The timing system can be set up with cable or radio. With the cable solution, the photocell and display board are connected to the timing device by cable. No cables are required for the radio system (see diagram below).

All times are stored in the Timy3 and can be transferred to a PC online or offline.

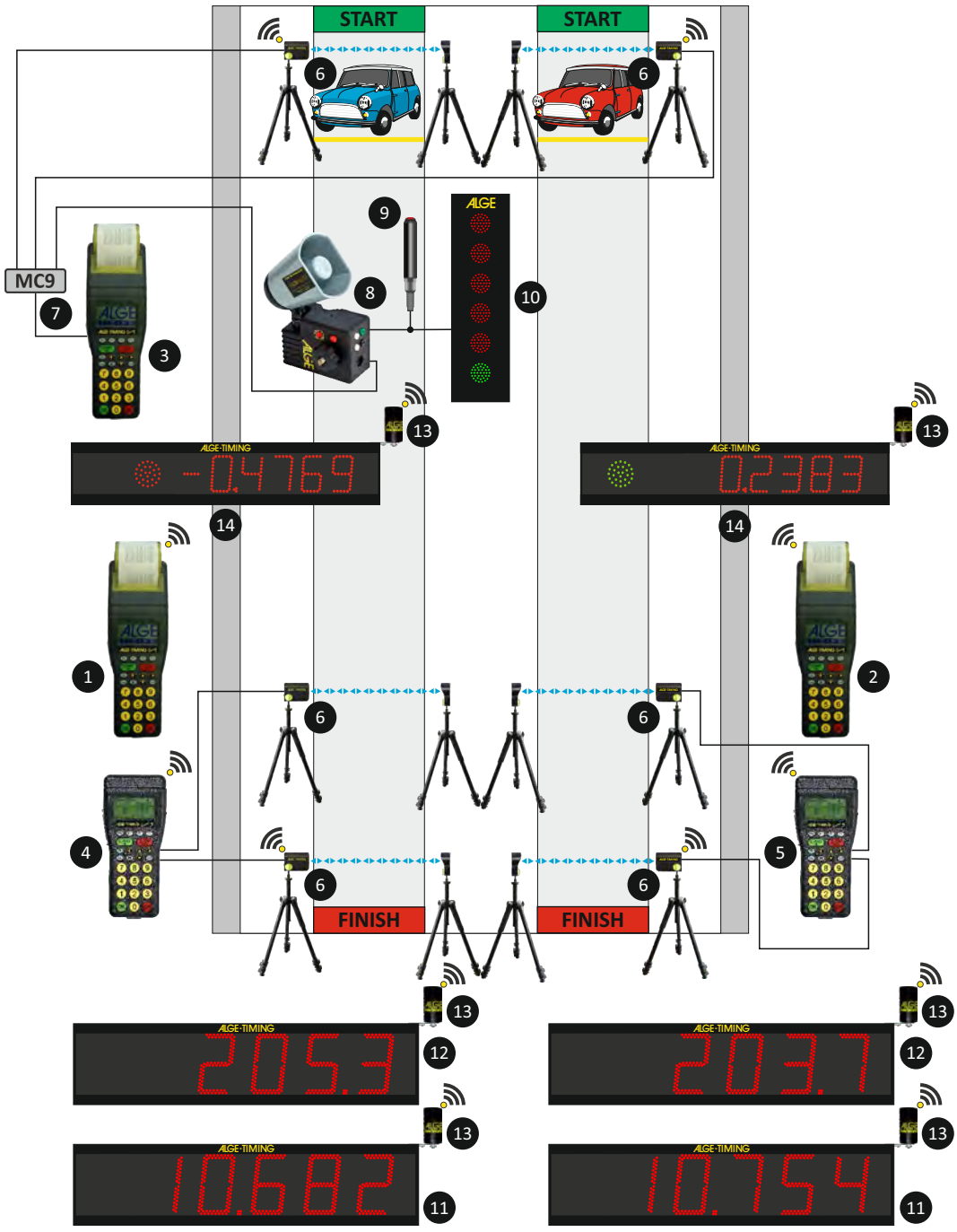


1. timing device Timy3 WP
2. photocell PR1a-RT
3. display board D-LINE
4. radio receiver WTN-DB

MOTOR SPORTS

Dragster

For dragster races there are different ways to measure the times and record the results. For the sake of illustration, a system is presented, which includes for both courses the timing, a false start control and a speed trap. The timing system can be customized according to the specific wishes of clients and the intended use

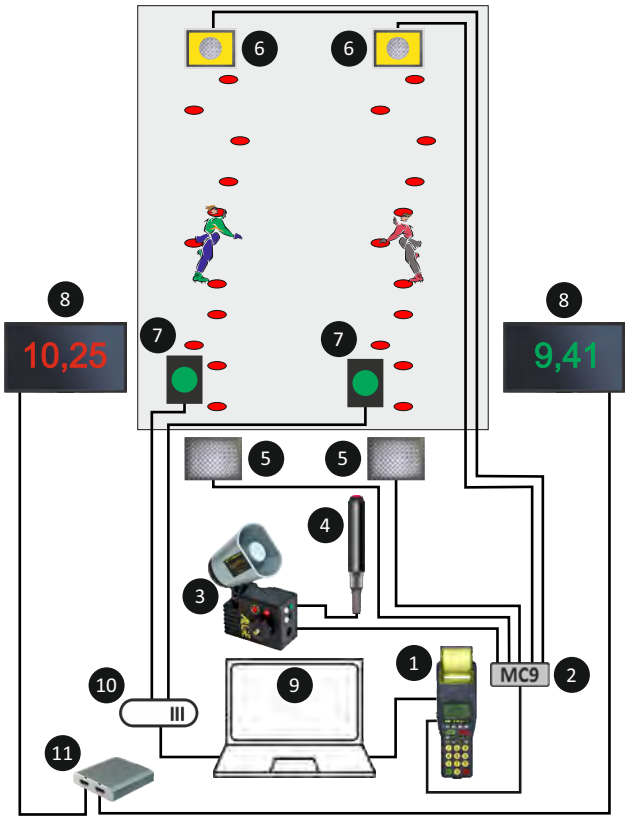


1 Timy3 WP - timing left course
2 Timy3 WP - timing right course
3 Timy3 WP - false start control
4 Timy3 WP - speed left course
5 Timy3 WP - speed right course
6 Photocell PR1a-RT
7 Multichannel MC9
8 Startbeep STB1
9 Push Button 023-02
10 Start Light D-SL85-5XR+G-DS
11 Display Board D-LINE - time
12 Display Board D-LINE - speed
13 Radio Receiver WTN-DB
14 False Start Display Board D-LINE150-O-6-E0-SL105-R-G

Speed Climbing Timing System

Timing system especially developed for speed climbing respecting the rules of FISC (International Federation for Sport Climbing). The acoustic start signal comes from the Startbeep STB1. Both tracks have a contact mat in the starting area. This allows to check false starts. If a climber leaves the contact mat before the start signal is given a start light shows on each lane the false start.

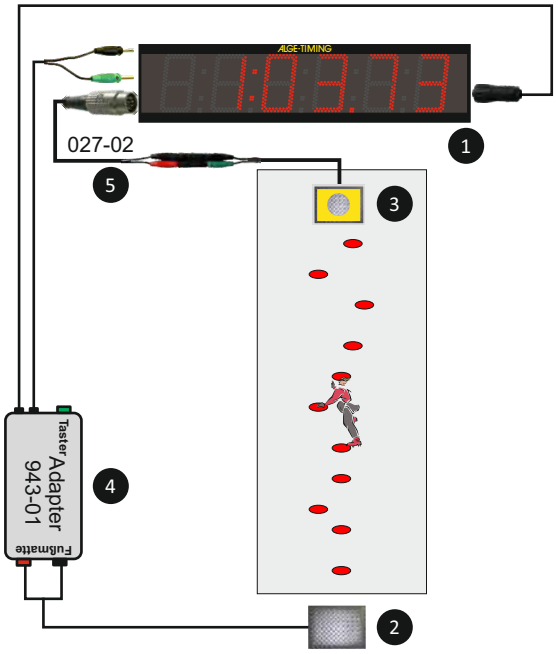
The finish is triggered via contact mats at the top of the wall. The timing device measures the run time of each competitor and displays it on a monitor or video wall. The winner's time is shown in green, the time of the looser in red.



1. Timing Device Timy3 WP
2. Multichannel MC9
3. Startbeep STB1
4. Start Push Button 023-02
5. Contact Mat CM40x30 for Start
6. Contact Mat CM40x30 for Finish
7. Indication Start Light D-SL-SC50
8. Timing Display Monitor Tv40
9. PC for Timing Operation
10. POE-SWITCH8
11. USB-C-Multiport Adapter

Speed Climbing Training System

The automatic training system for speed climbing is permanently installed on a climbing route. Before a climber starts, he presses a reset button for a few seconds to get the system ready for the climber. The start and the finish are triggered by a contact mat. The timing device is built into the scoreboard. After the start the running time is displayed. When the climber hits the finish contact



1. Display Board SFxxx-O-6-E0
2. Contact Mat CM60x40 for Start
3. Contact Mat CM40x30 for Finish
4. Adapter 943-01
5. Cable 943-01

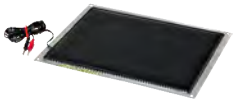
SPORT CLIMBING
Speed Climbing

Devices that are required for timing during speed climbing:

Timy3 WP
The Timy3 WP is the control centre 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 countdown.



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.

Timing Display Monitor
This monitor can be a TV-monitor or a video wall. The winner`s time is shown in green, the time of the looser in red. If the timing display monitor is big enough it is possible to show as well additional information like competitors name, nation or club.

Start Light D-SL-SC50
The start light shows the climber on the wall with different colours the start condition. If no climber is on the start mat it shows red, if somebody steps on the mat it will show orange. During the start countdown it blinks green. At the start the light stays green unless in case of a false start. For the course with the false start it will show a flashing red, for the other course a flashing green. When the first climber arrives at the finish it will show for the winner continues green and for the looser no colour.

Display Board SFxxx-O-6-E0
For a training system the display board with integrated timer is used. The times are shown on the display board but not they are not or printed.

ALPINE SKIING

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 ones.

COSC

CONTROLE OFFICIEL SUISSE DES CHRONOMETRES

BUREAUX OFFICIELS DE CONTROLE (BO) de Bienne, Le 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 absolu time, uncertainty and propagation delays are included. DUT Time-of-Day is synchronized electronically through discrete c0 input with 60s reference pulse. Low resolution inputs (c6, c7 and c8) were not tested.	
Content: Report: 4 pages Appendices: none	Abbreviations: P = Pass F = Fail N/A = Not Applicable	N/C = Not Conducted DUT = Device Under Test GPS = Global Positioning System

Certificate of Homologation

F I S

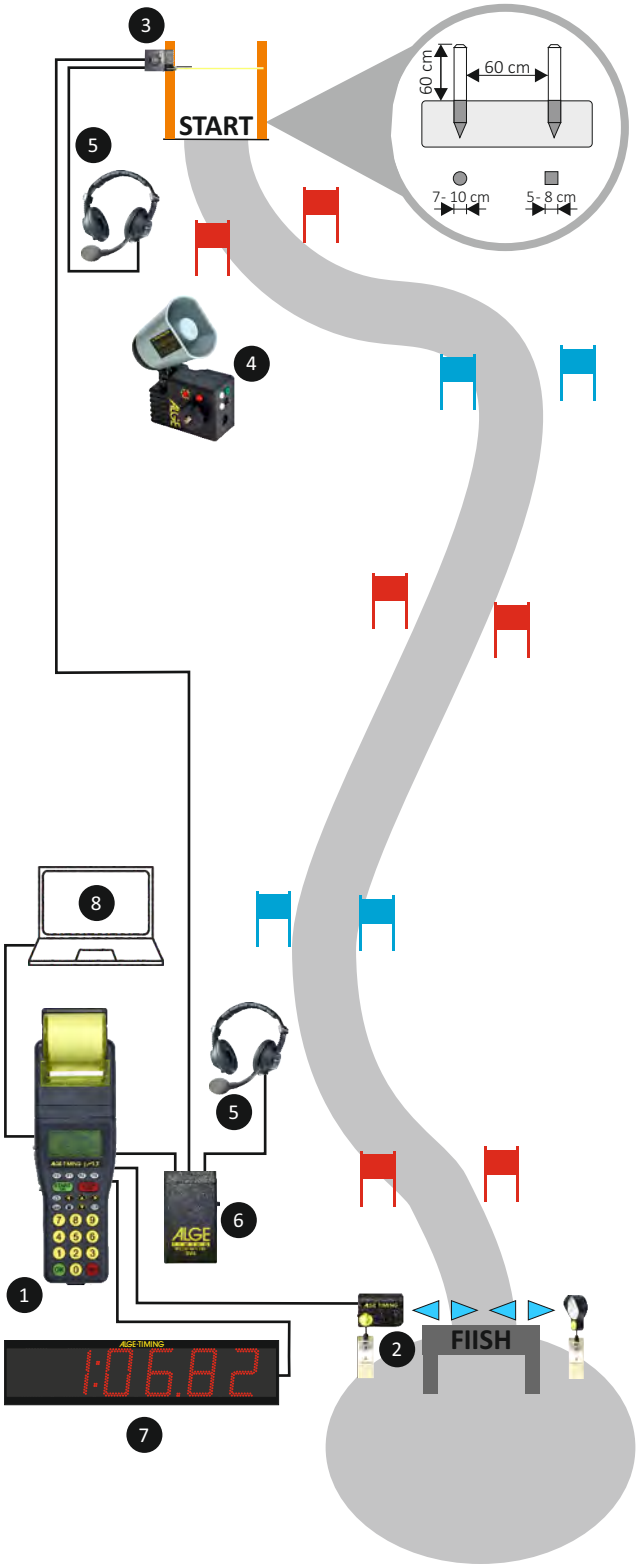
Company: **ALGE-TIMING**
Timer Name: **Timy3 WP**
Codex Timing: **ALG.090.14**
Date: **October 2014**

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. It can be extended as required. 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. It can cover distances of up to 25 m.

3 **Startgate 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 HS4-2**

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.

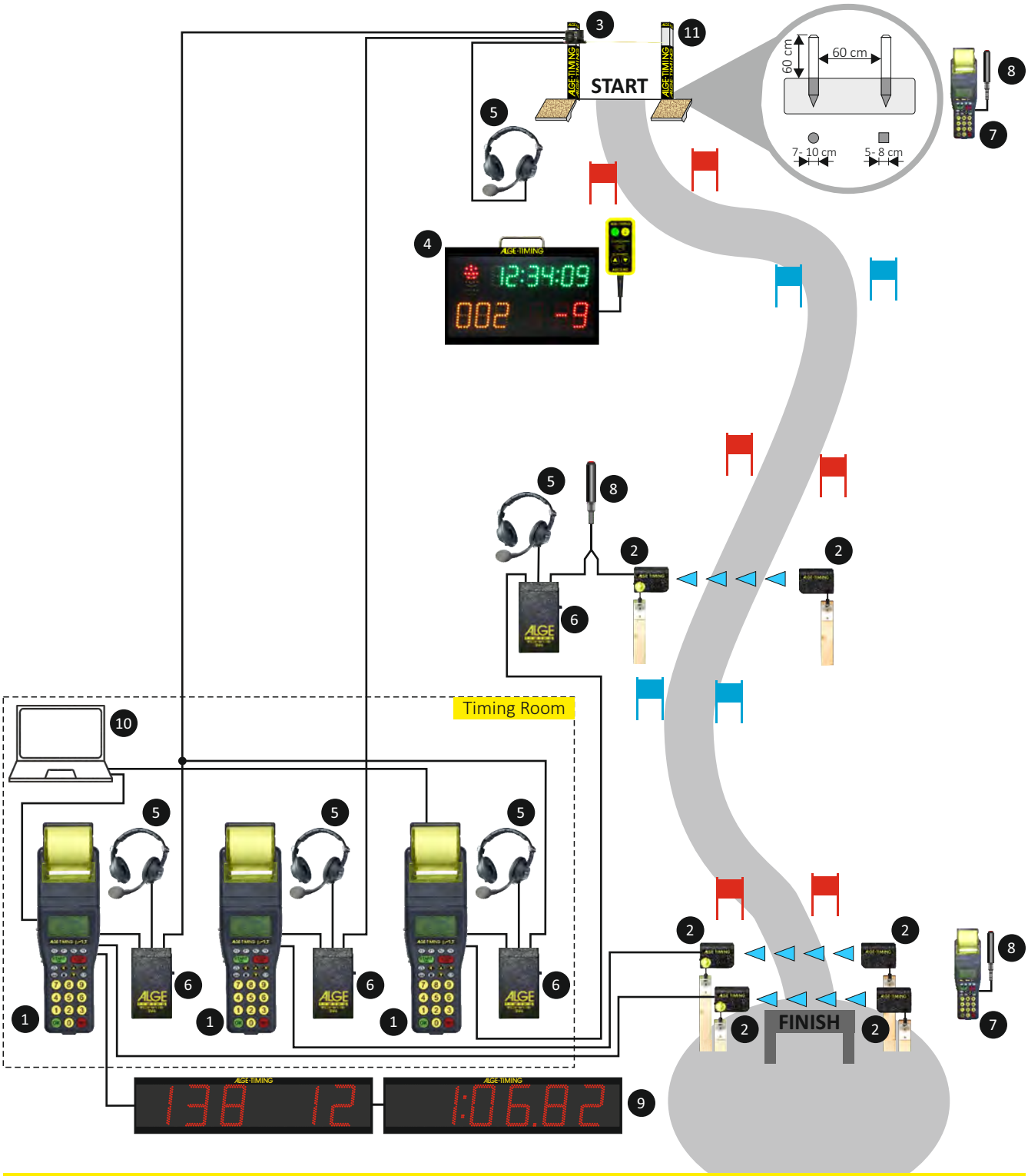
8 **Display Board D-LINE**

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

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
2 Photocell PR1a
3 Startgate STSnM2S
4 Startclock ASC3
5 Headset HS4-2
6 Speech Amplifier SV4-S
7 Timy3 WP (Manual Timing)
8 Push Button 023-02
9 Display Board D-LINE
10 Results Software
11 Start Poles SSP

ALPINE SKIING

Timing with the WTN-System for Ski Schools

For children a ski race is the highlight of a visit to a ski school. it is important for them to show what they 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 an unforgettable experience for the participants.

1 Timy3 WP
FIS homologated high end timing device 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. It 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 and rank (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.

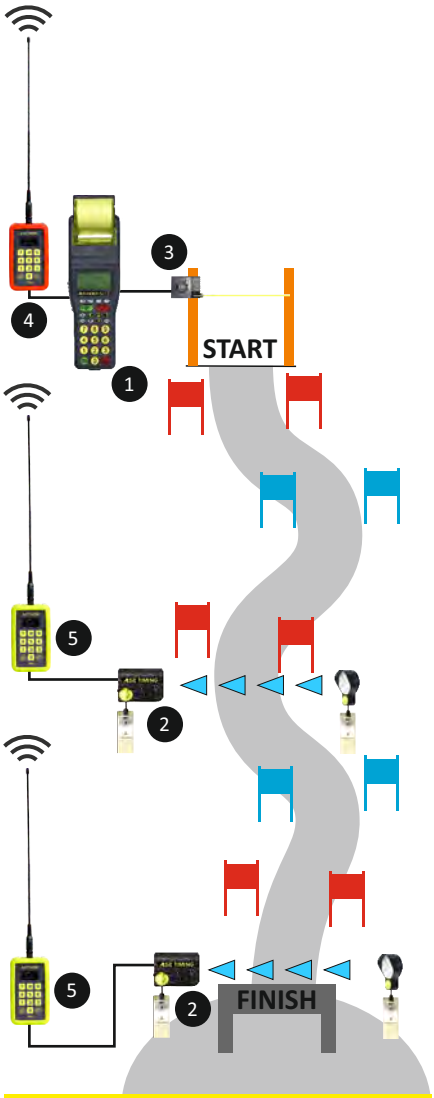
1 Timy3 WP
2 Photocell PR1aW-R
3 Startgate STSnA1
4 WTN
5 Startbeep STB1
6 Push Button 023-02
7 Display Board D-LINE
8 WTN-DB

ALPINE SKIING

Training System with Radio TED

A large number of professional users, such as national teams, ski manufacturers and wax companies use the training system shown. They like the high reliability and performance of the TED2 radio system. Even in alpine terrain, large distances can be bridged by radio. The training system shown below consists of start, intermediate time and finish. It can support up to eight intermediate times.

The timing device Timy3 is homologated for FIS races. The Teledata TED2 radio system may be used in FIS races up to level 3, provided the rules for timing without start-cables are observed.



1. Timy3 WP
2. Photocell PR1a-RS
3. Startgate STSnA1
4. Radio Receiver TED2-RX
5. Radio Transmitter TED2-TX

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. It can cover distances up to 25 m.

3 Startgate STSnA1
with a timing contact and an automatic reset of start wand; optimal use for training

4 Teledata TED2-RX
radio receiver receives the timing data or impulses

5 Teledata TED2-TX
radio transmitter that transmits the timing data or timing impulse to the radio receiver, working distance up to 4.5 km

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.

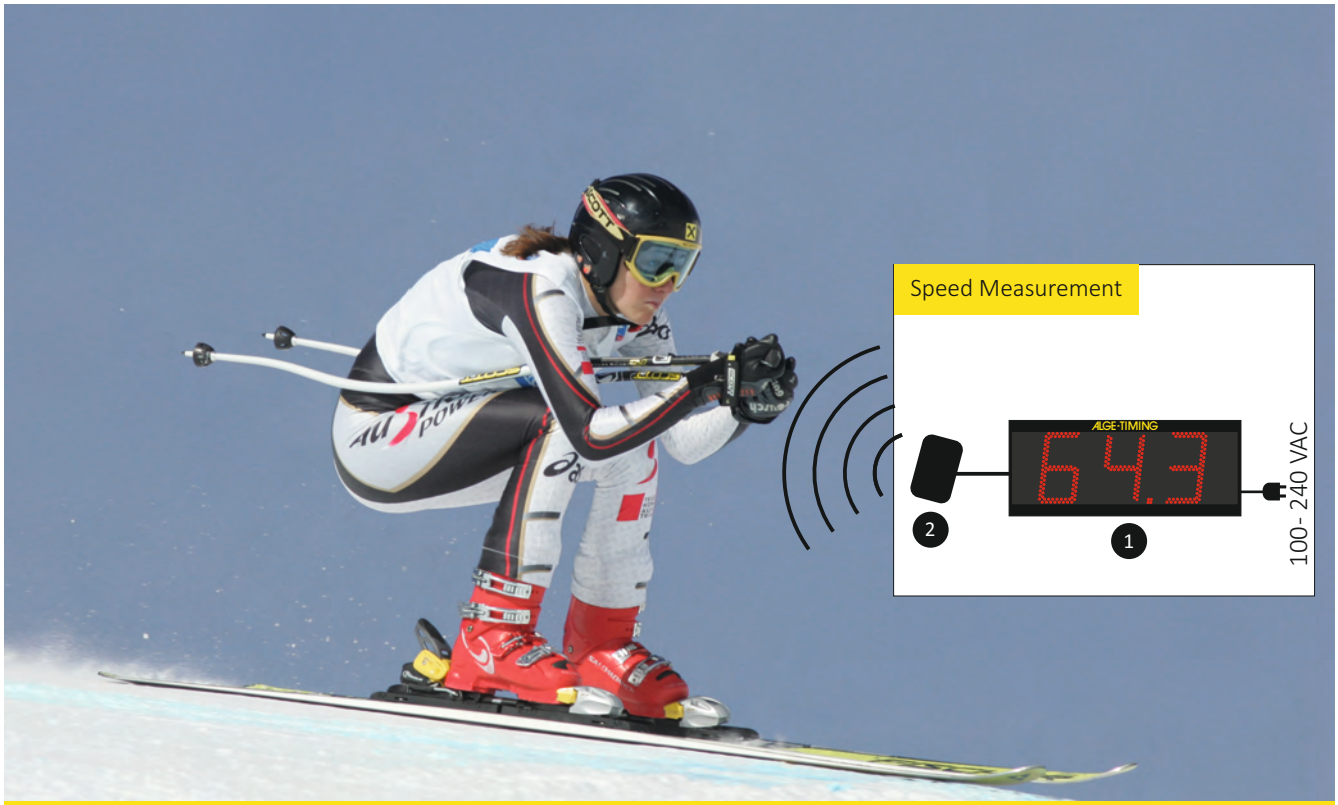
1 **Speedy 150-3-R:**
LED display board D-LINE150-O-3-E0 with three digits with 150 mm digit height, radar D-RAD and cables

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

Self Service Timing for Permanent Race Courses

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

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.

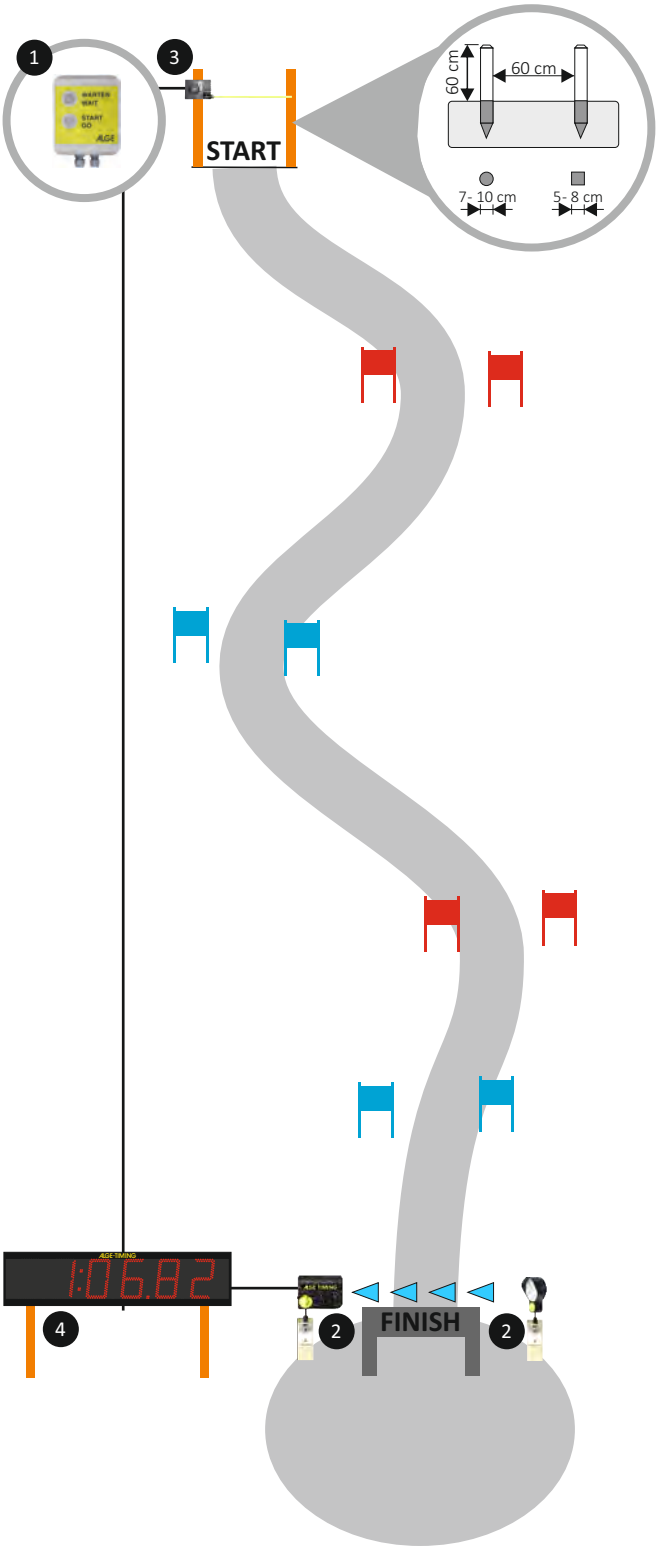
Selftimer Start Light SF3L
The start light is mounted at the start and regulates the starting sequence. The green light indicates that you can start, and the red light will light up after the start, until the previous competitor has reached the finish or a maximum run time has elapsed.

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.

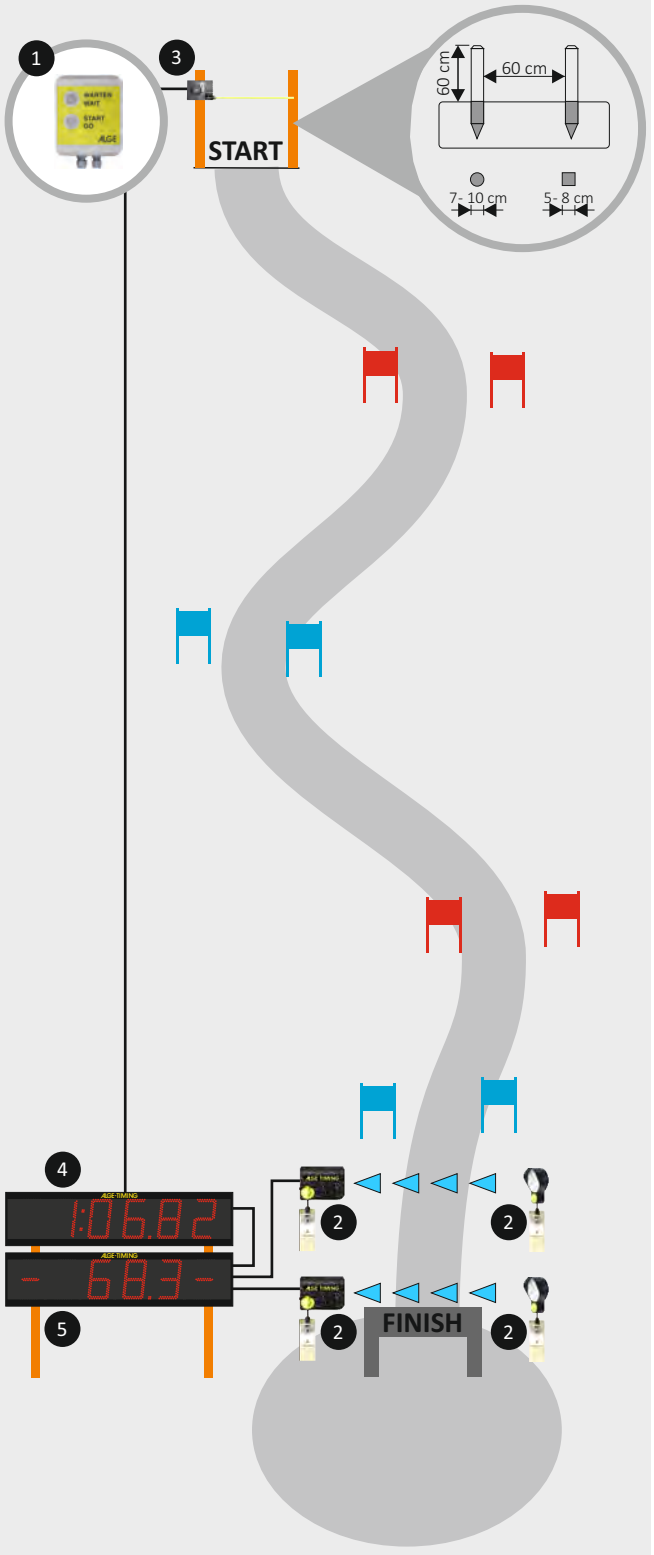
Photocell PR1a
The photocell is used for the timing device at the finish or for the speed measurement. It consists of a transmitter/receiver unit and a reflector, both of which are easily and precisely aligned with a ball head. The photocell is screwed onto a mounting bracket and attached to a wooden 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.

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 manly 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.

CROSS-COUNTRY SKIING

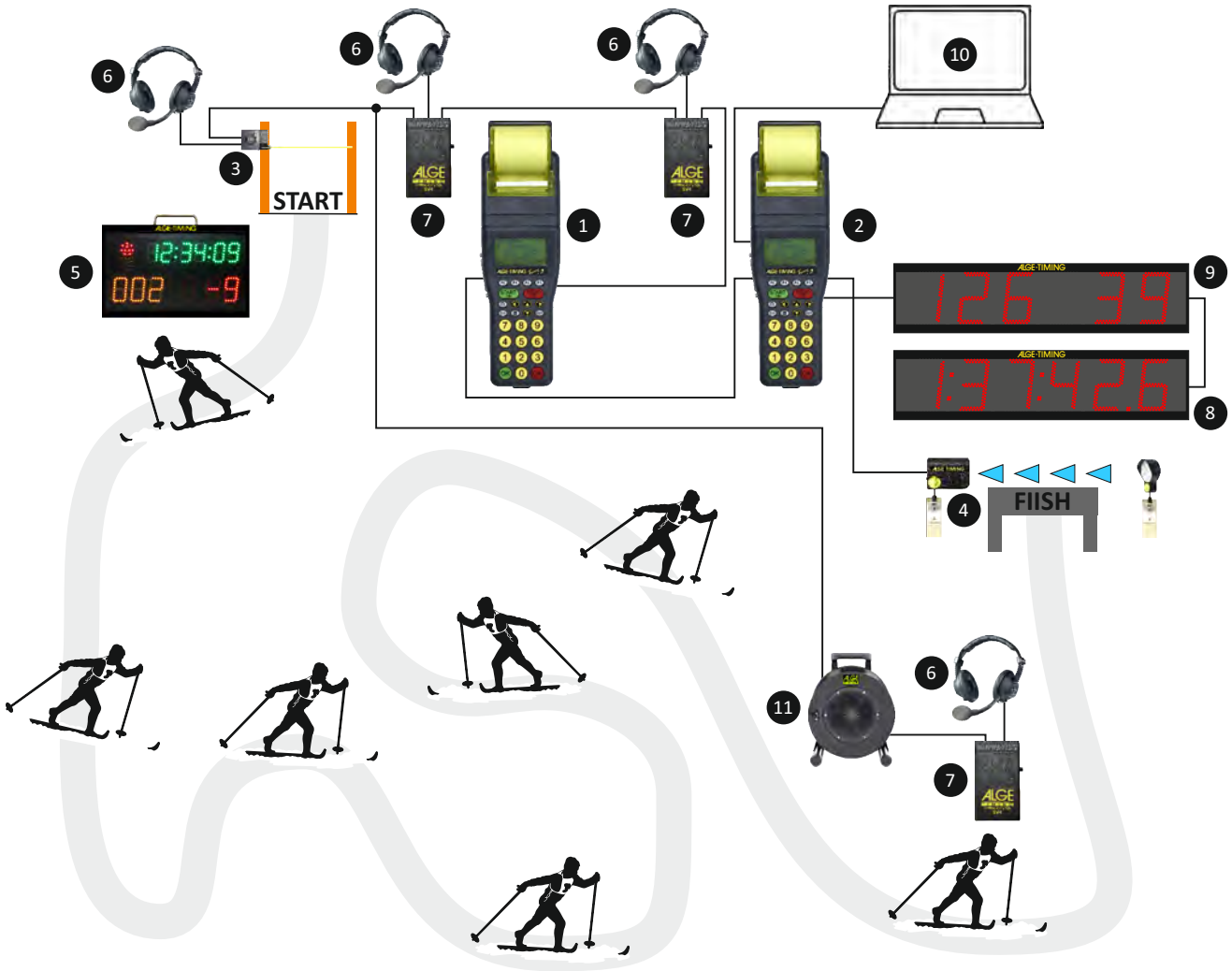
Individual Start / Sprint Qualification

Timing for cross-country with individual start is very challenging. The competitors have single starts with a fix interval time. It can happen that during the race people start and finish at the same time. Often it will happen as well that two or more competitors pass the finish line at the same time.

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 using headsets. A separate timing device Timy3 WP is used for start and finish. They are connected by cable (alternative by radio WTN).

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 HS4-2	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

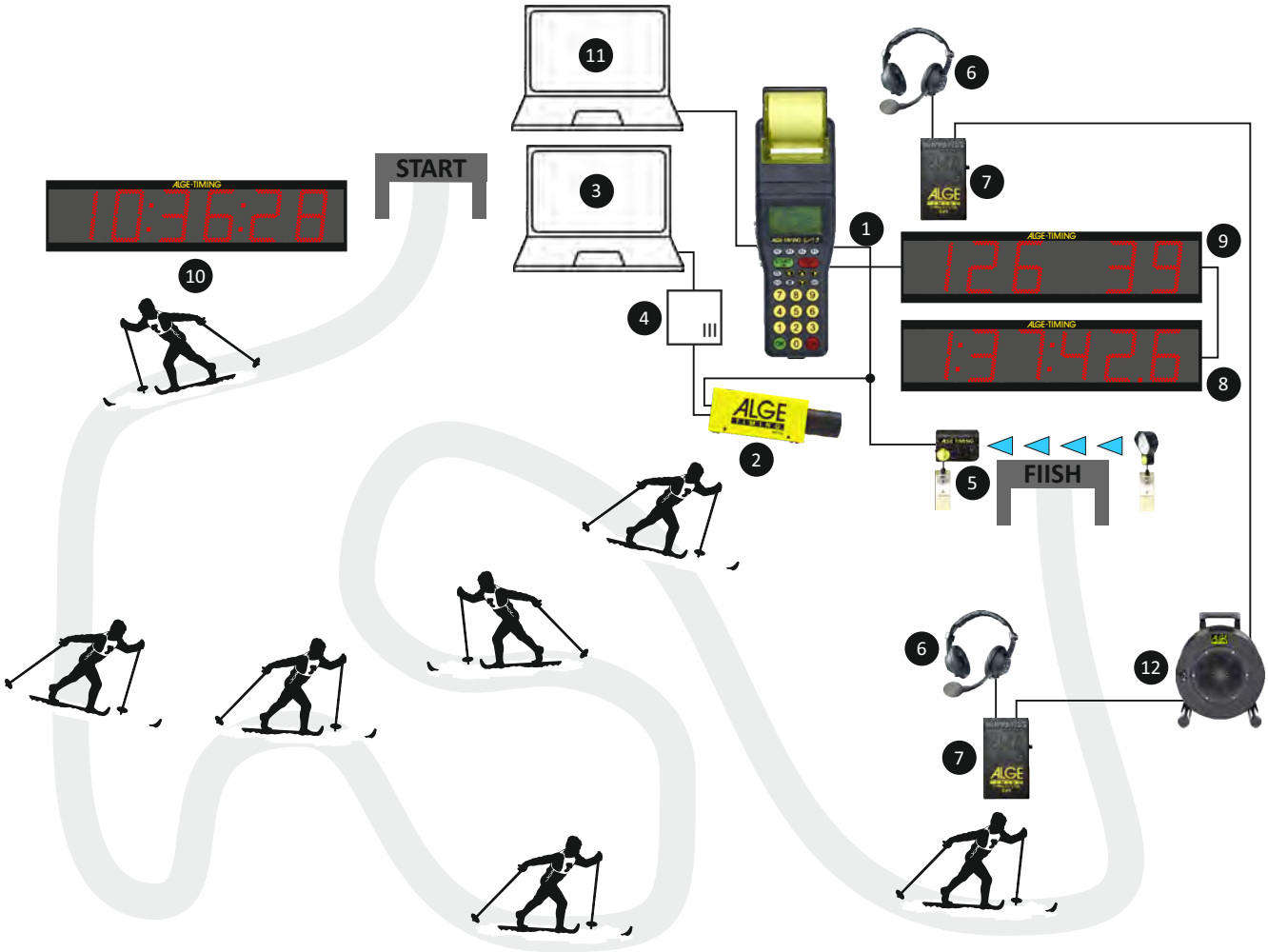
Pursuit / Gundersen Start

For Pursuit Races and Races with Gundersen 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.



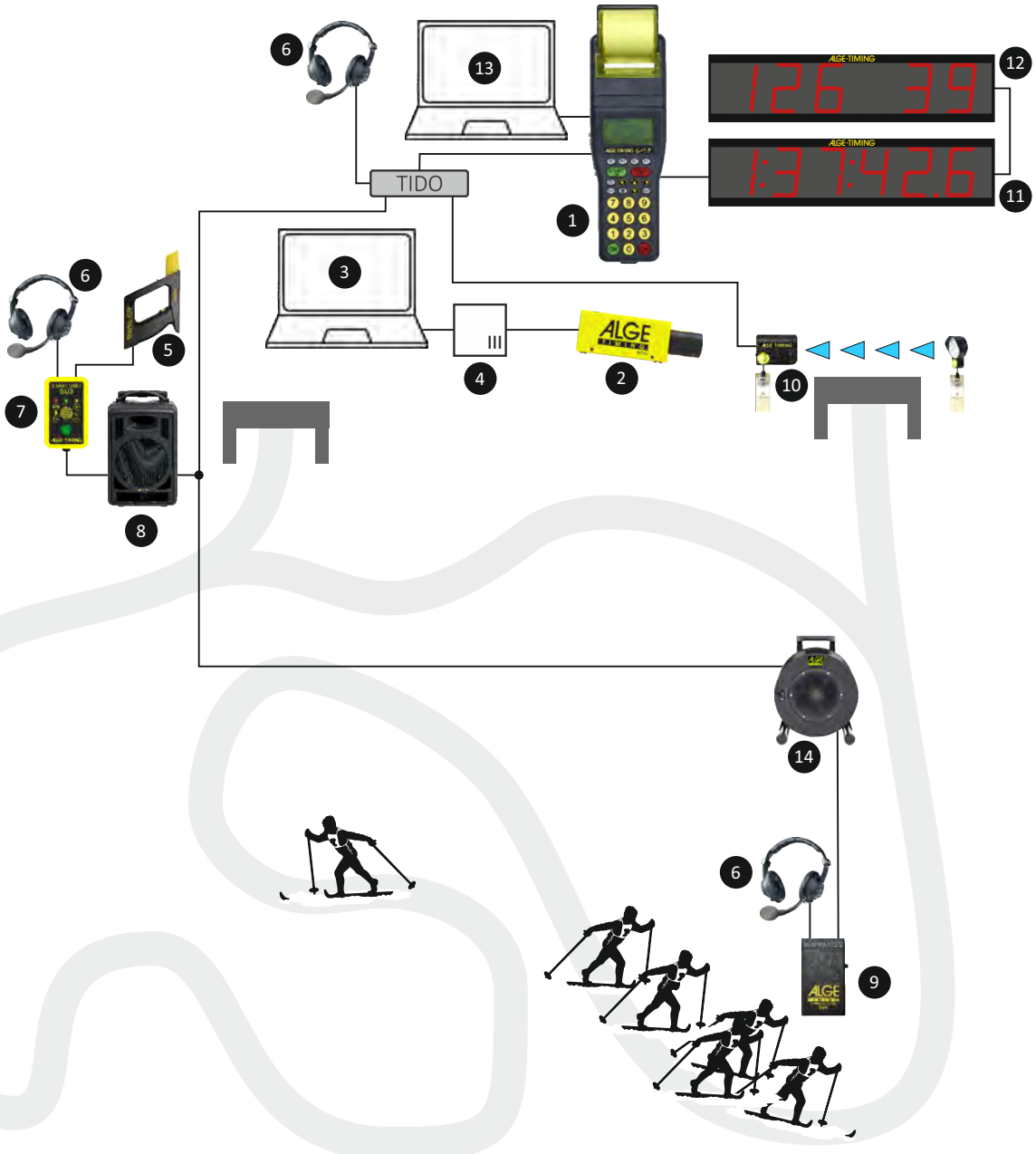
1 Timy3 WP	5 Photocell PR1a-R	9 Display Board D-LINE (bib + rank)
2 Photo Finish OPTIc3	6 Headset HS4-2	10 Display Board D-LINE (time of day)
3 PC for Photo Finish	7 Speech Amplifier SV4-S	11 PC for Results Software
4 Power over Ethernet PoE	8 Display Board D-LINE (time)	12 Cable Reel KT300

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
2. Photo Finish OPTIc3
3. PC for Photo Finish
4. Power over Ethernet PoE
5. electronic Startgun e-Start
6. Headset HS4-2
7. Start Unit SU3
8. Speaker BANG2
9. Speech Amplifier SV4-S
10. Photocell PR1a-R
11. Display Board D-LINE (time)
12. Display Board D-LINE (bib + rank)
13. PC for Results Software
14. Cable Reel KT300

CROSS-COUNTRY SKIING

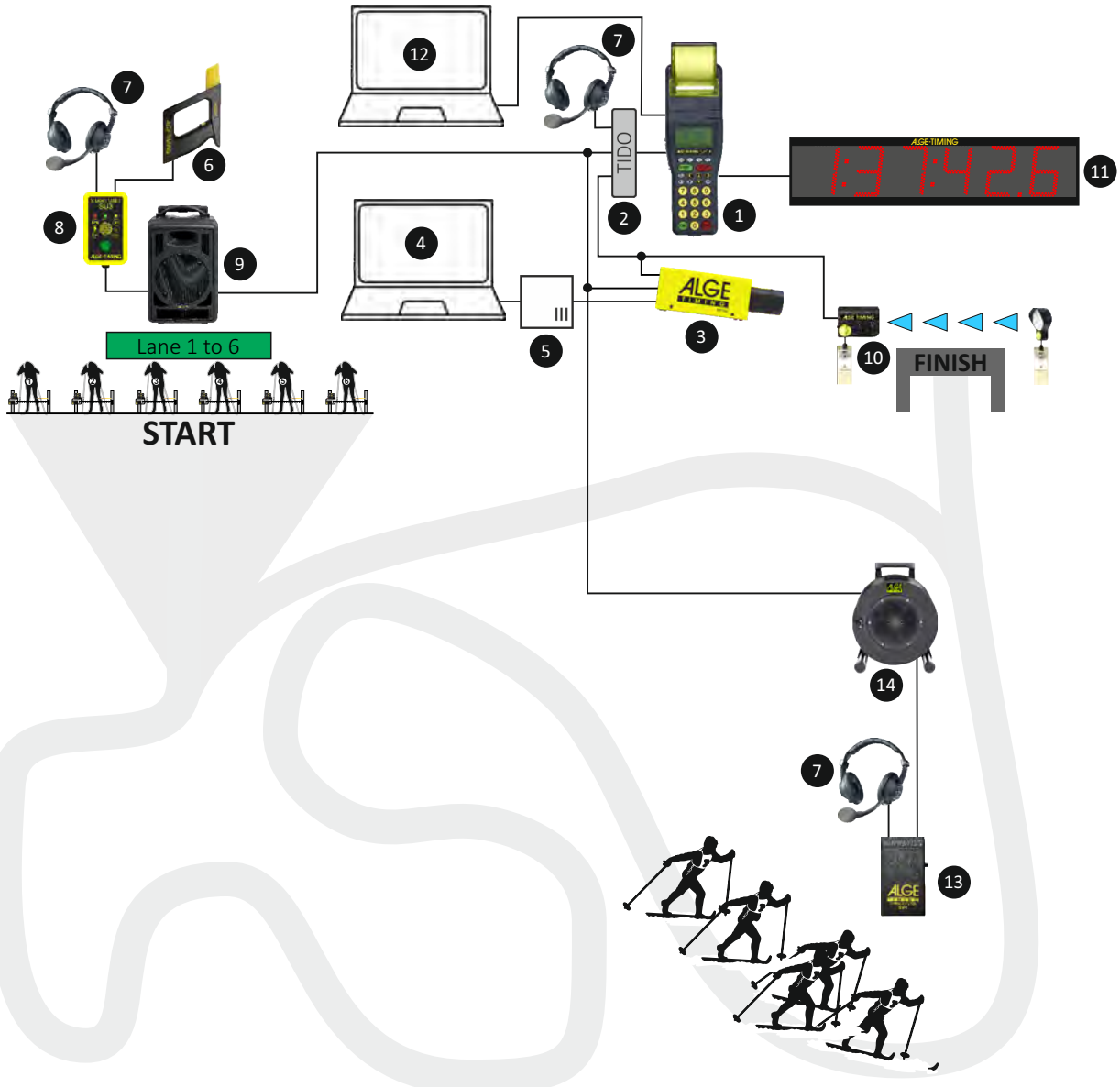
Sprint Final

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
2 Timy Docking Station TIDO
3 Photo Finish OPTIc3
4 PC for Photo Finish
5 Power over Ethernet PoE
6 Electronic Start Gun e-Start
7 Headset HS4-2
8 Start Unit SU3
9 Speaker System BANG2
10 Photocell PR1a-R
11 Display Board D-LINE (Time)
12 PC for Results
13 Speech Amplifier SV4-S
14 Cable Reel KT300

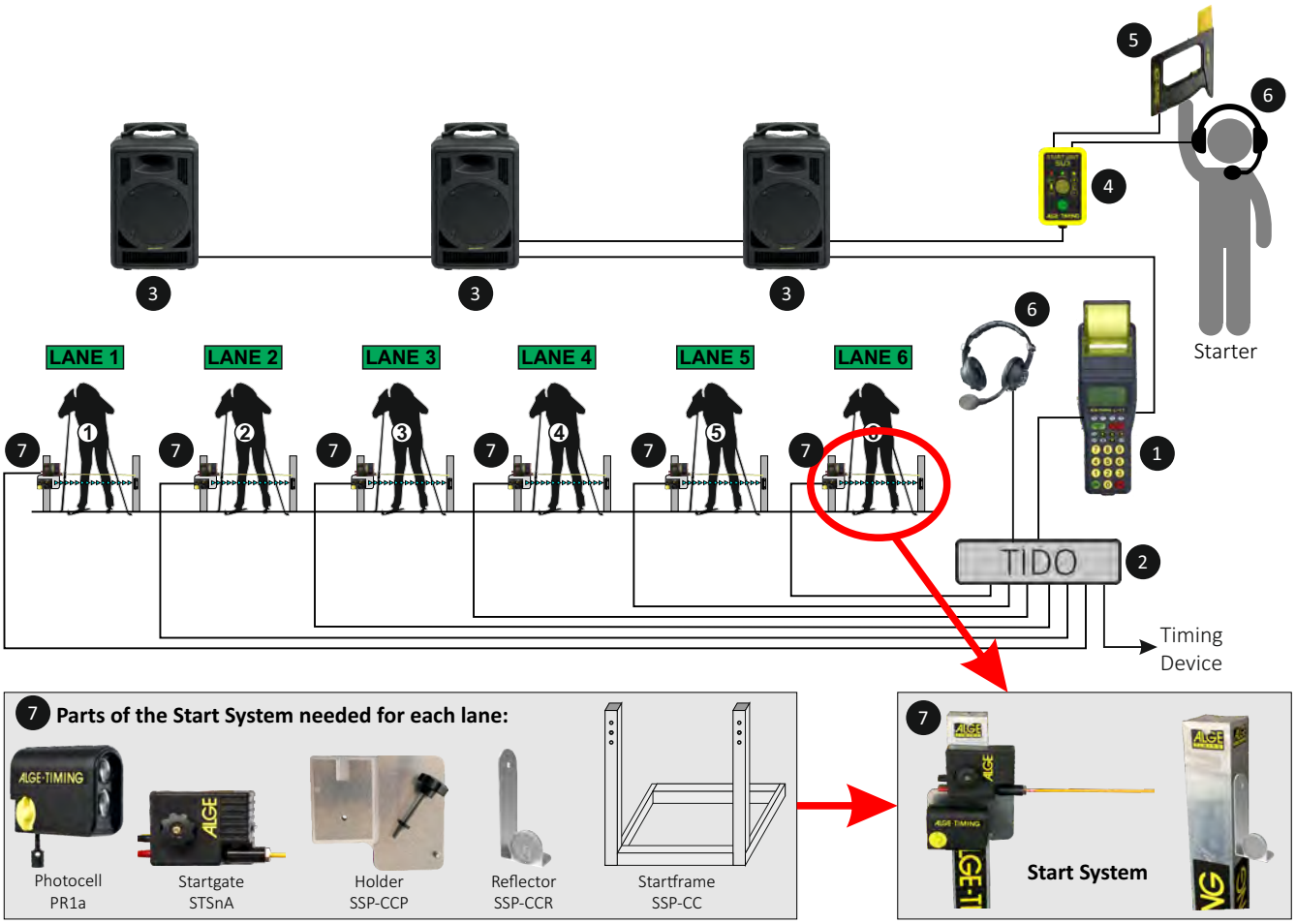
False start system "CC-False Start”

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 pols. 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 it to give start commands to the runners. When the starter triggers the electronic start gun 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“
2 Timy Docking Station TIDO
3 Speaker System BANG2
4 Start Unit SU3
5 electronic Start Gun e-Start
6 Headset HS4-2
7 Start System per Lane

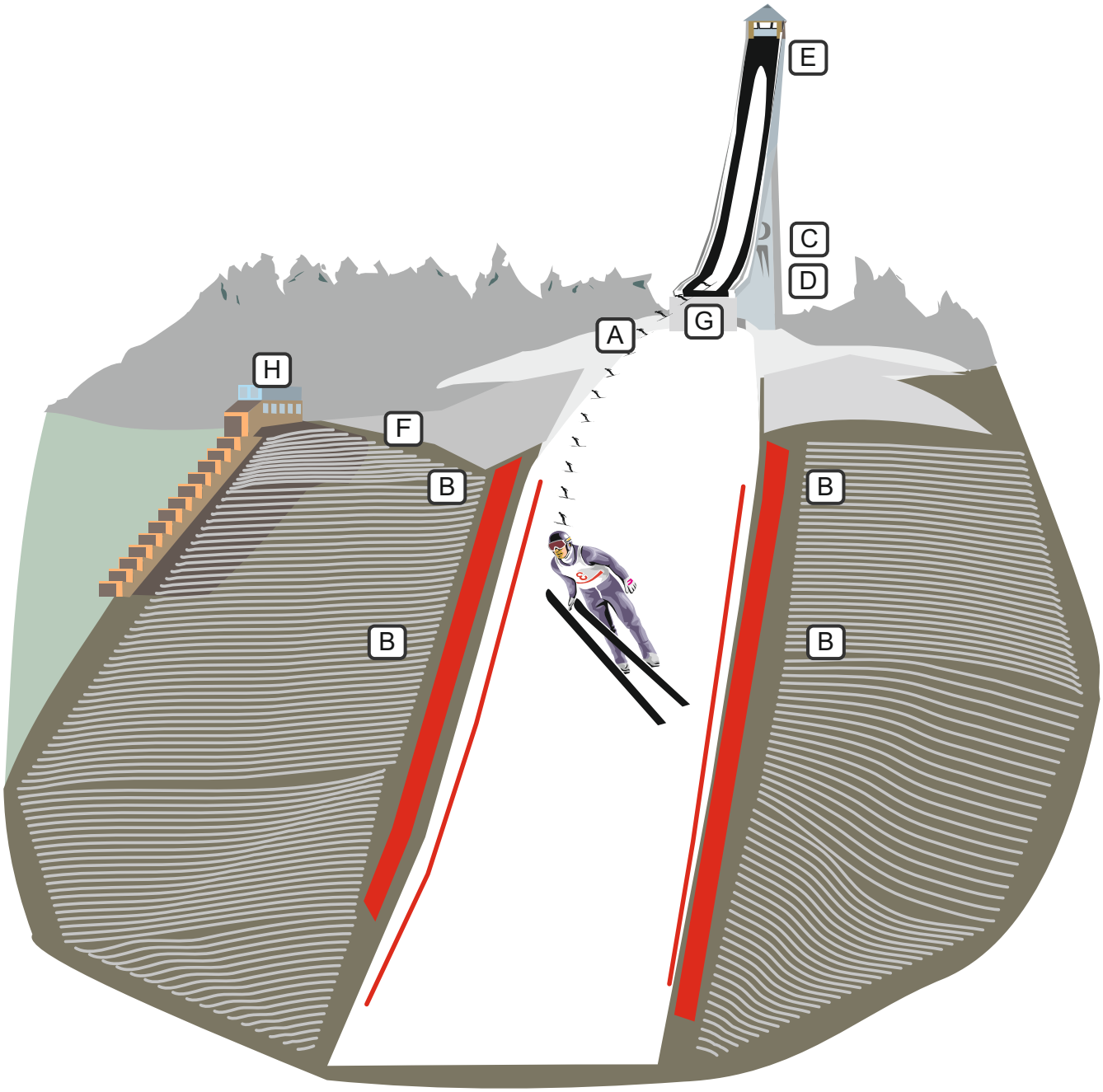
SKI JUMPING

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.

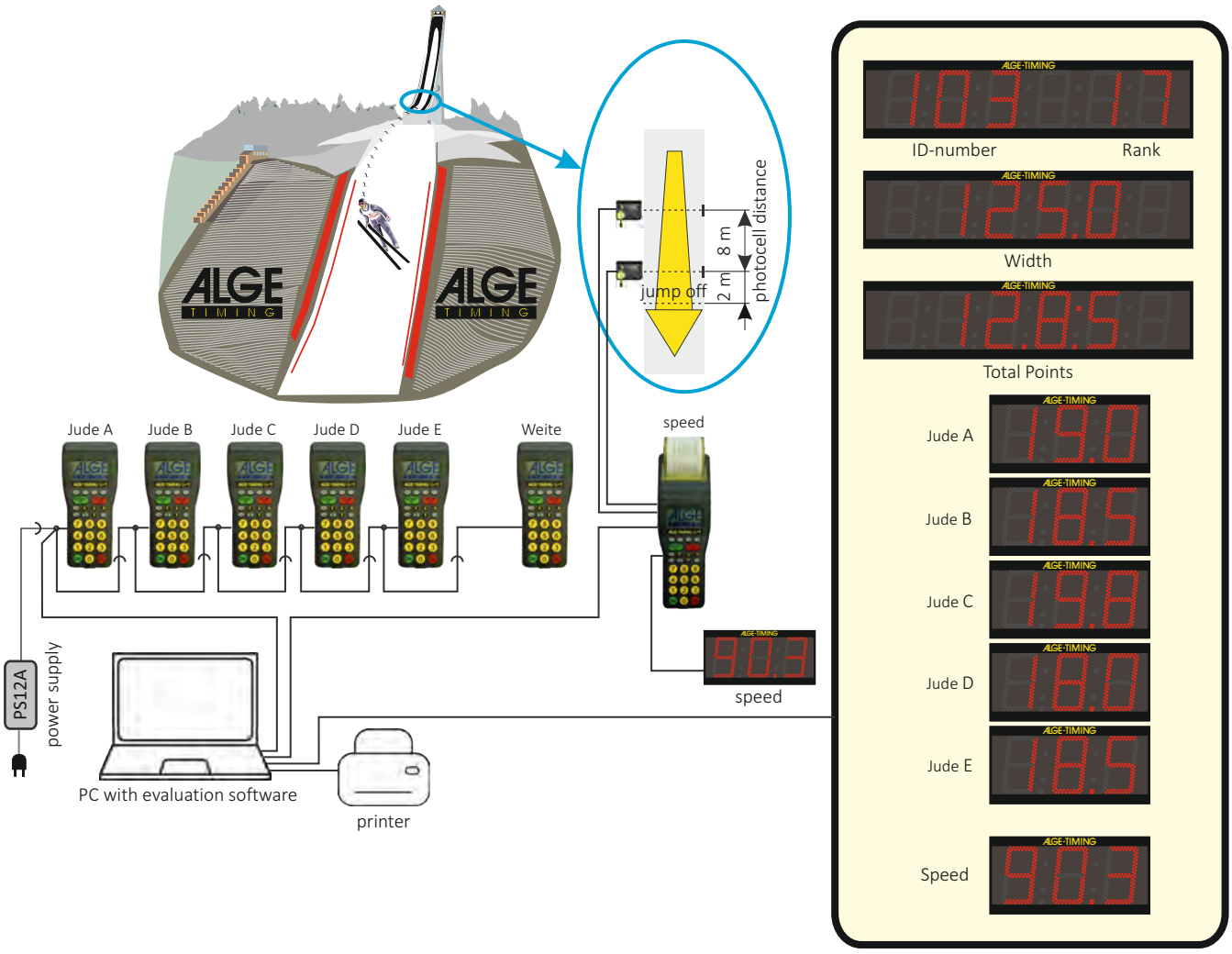
The system consists of a controller Timy3 W and one or two display boards, which are usually set up at the start and at the coach platform. The time of the countdown phases can be set individually in the controller and stopped at any time. The operation of the lights corresponds with the FIS specifications.



A . . . . SJB-Wind . . . . . take off area . . . . . distribution box for anemometer
B . . . . SJB-Wind . . . . . landing area . . . . . distribution box for anemometer
C . . . . SJB-Speed . . . . . take off area . . . . . distribution box for speed- photocell 1
D . . . . SJB-Speed . . . . . take off area . . . . . distribution box for speed- photocell 2
E. . . . . SJB-SD . . . . . tower (start area) . . . . distribution box for start display at take off
F. . . . . SJB-TD . . . . . trainer sector . . . . . distribution box for trainer display board
G . . . . SJD-Jump. . . . . take off area . . . . . jumping hill distribution box
H . . . . SJD-Cent . . . . . judges tower. . . . . central distribution box

SKI JUMPING

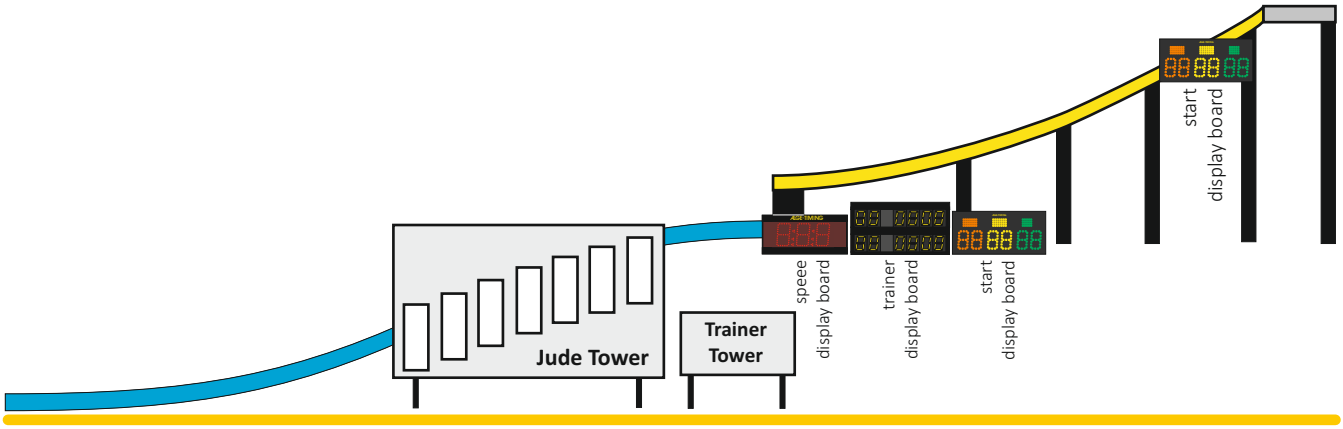
Judge Terminals and Speed Measurement

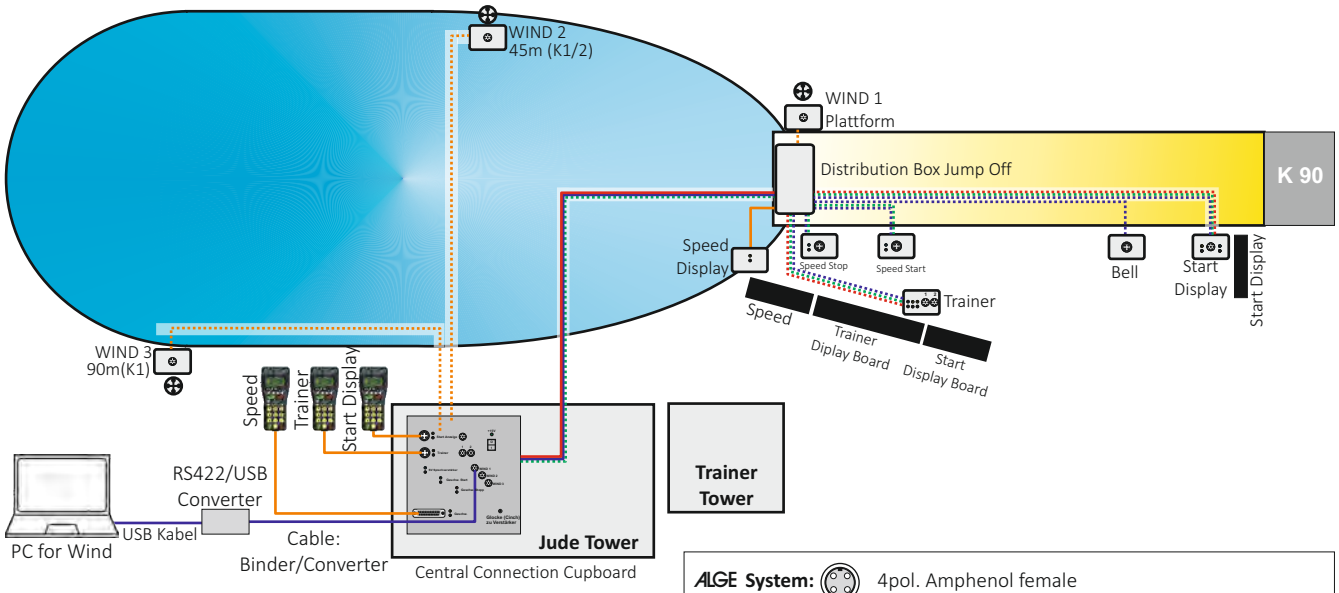


Each judge has a Timy3 W terminal for input of points. The terminals are connected by a Wireless Timing Network (cable free radio network) to each other and the PC. On the PC runs a ski jumping results software. The display boards are controlled directly from the PC.

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).





Weltcup: female 7pol.Miniatur Connector Serie 723- IP 67
Pin1..R+, Pin2..T+, Pin3..T-, Pin4..R-,(crossed)
Pin6..+15V, Pin 7..GND

cable 6x2x0.6 drilled (DM 12mm)

cable 20x2x0.6 drilled (DM 19mm)

ALGE System: 4pol. Amphenol female
Pin1..Start, Pin2..Stop, Pin3..GND, Pin4..+5V

Banana Plug

cable 5x0.75 mm² (alternative: 6x2x0.6 drilled)

cable 12x0.75 mm² (alternative: 20x2x0.6 drilled)

cable 2x0,75 mm² for SV speech amplifier)

cable 6x2x0.6 drilled (DM12mm)

4p. Amphenol male
Pin1..+15V, Pin2..GND, Pin4..Data

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

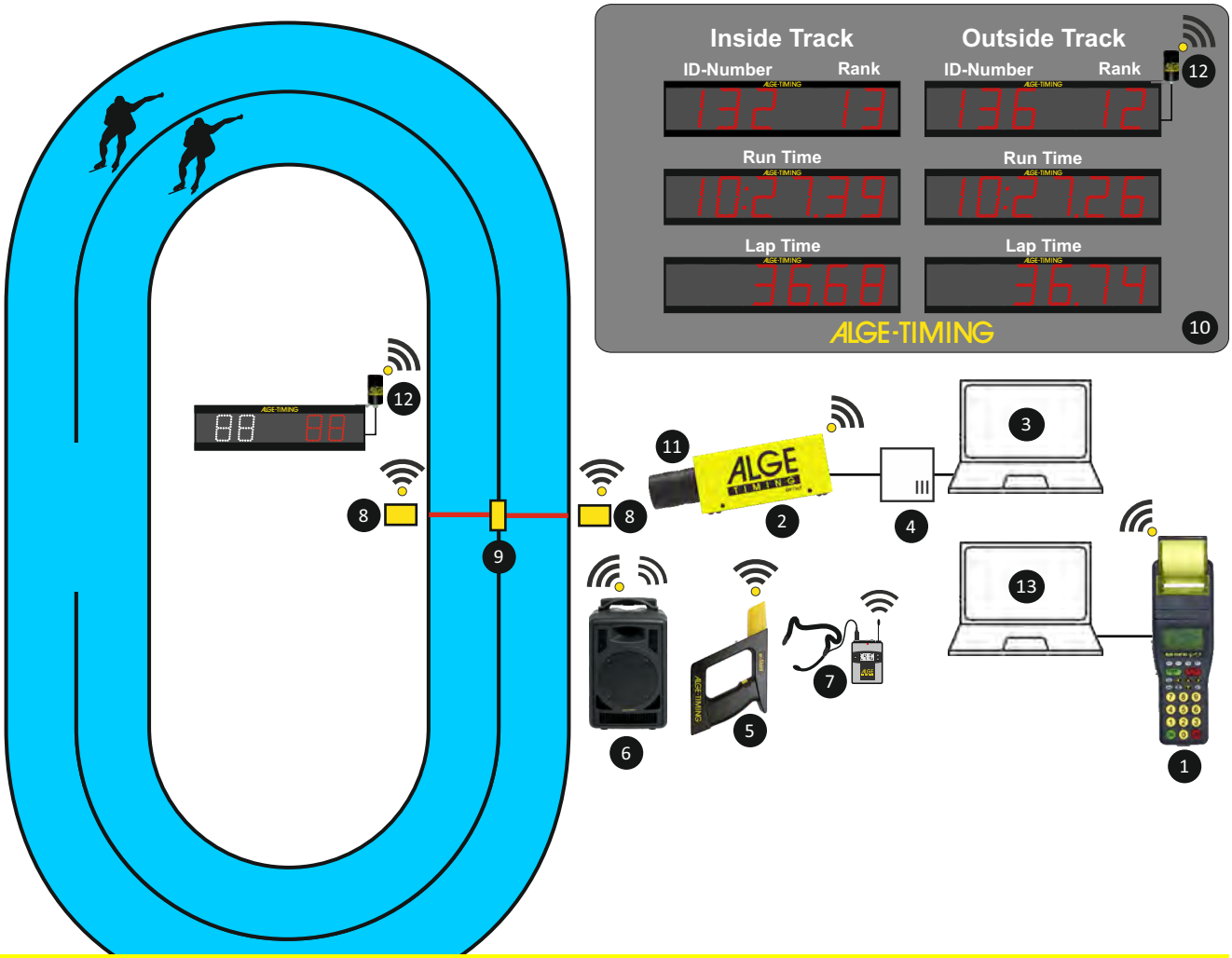
Timing System with Radio

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.



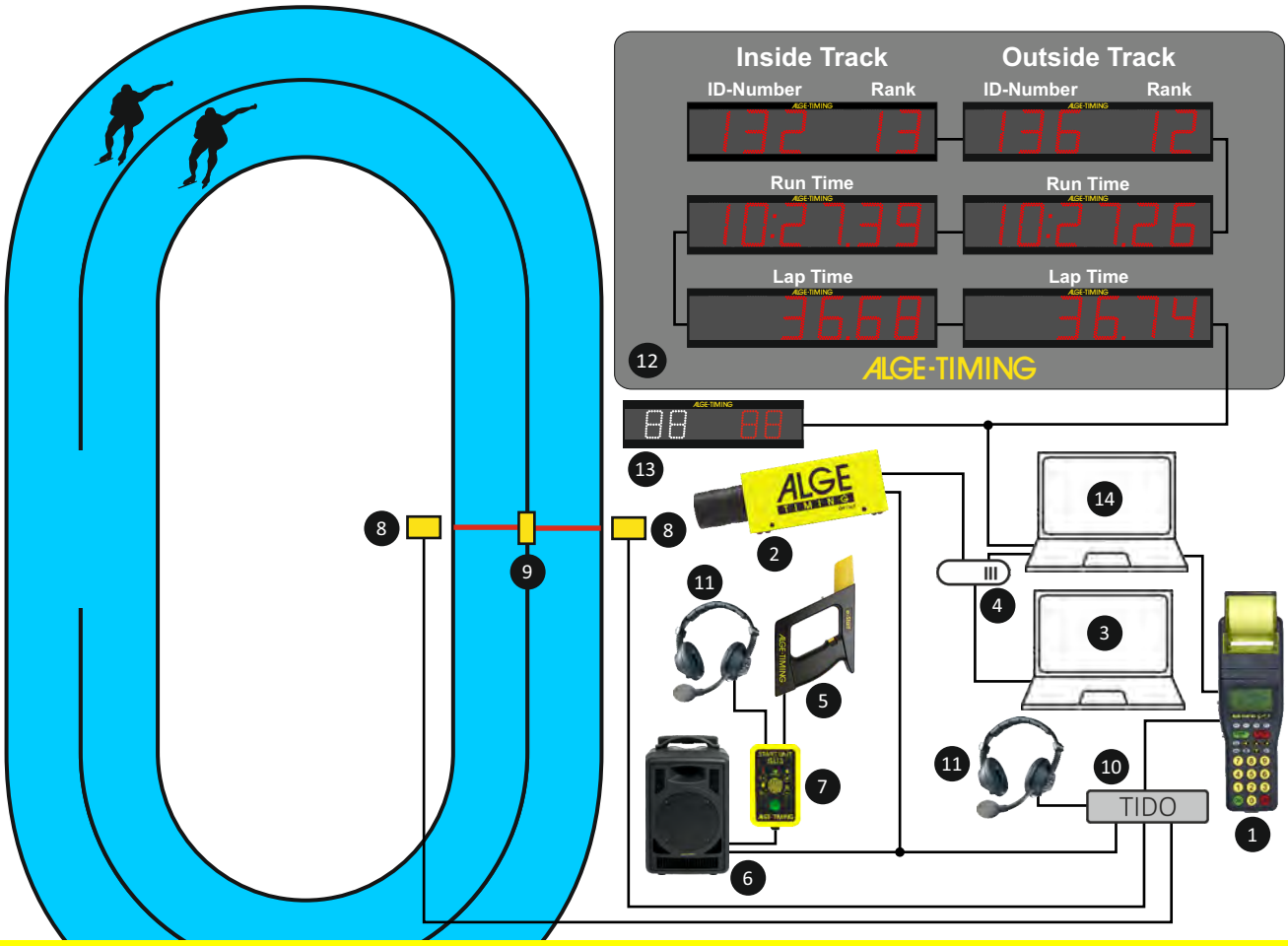
1. Timing Device Timy3 WP
2. Photo Finish OPTIc3
3. PC for Photo Finish
4. Power over Ethernet PoE
5. Radio Startgun e-Start W
6. Speaker System BANG2
7. Radio Microphone BANG-HS
8. Photocell PR1aW with Holder ICE-FH1
9. Reflector ICE-REF1 with Holder ICE-FH1
10. Display Board D-LINE (time, lap time,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

SPEED SKATING

Timing System with Cable

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
2 Photo Finish OPTIc3
3 PC for Photo Finish
4 Switch with PoE
5 elect. Startgun e-Start
6 Speaker System BANG2
7 Start Unit SU3
8 Photocell Pr1a with Holder ICE-FH1
9 Reflector ICE-REF1 with Holder ICE-FH1
10 Timy-Dockingstation TIDO
11 Headset HS4-2
12 Display Board D-LINE (time, lap time, ID, rank)
13 Lap Counter D-LC-SS25-2x2-BAT-O
14 PC for Timing and Results

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

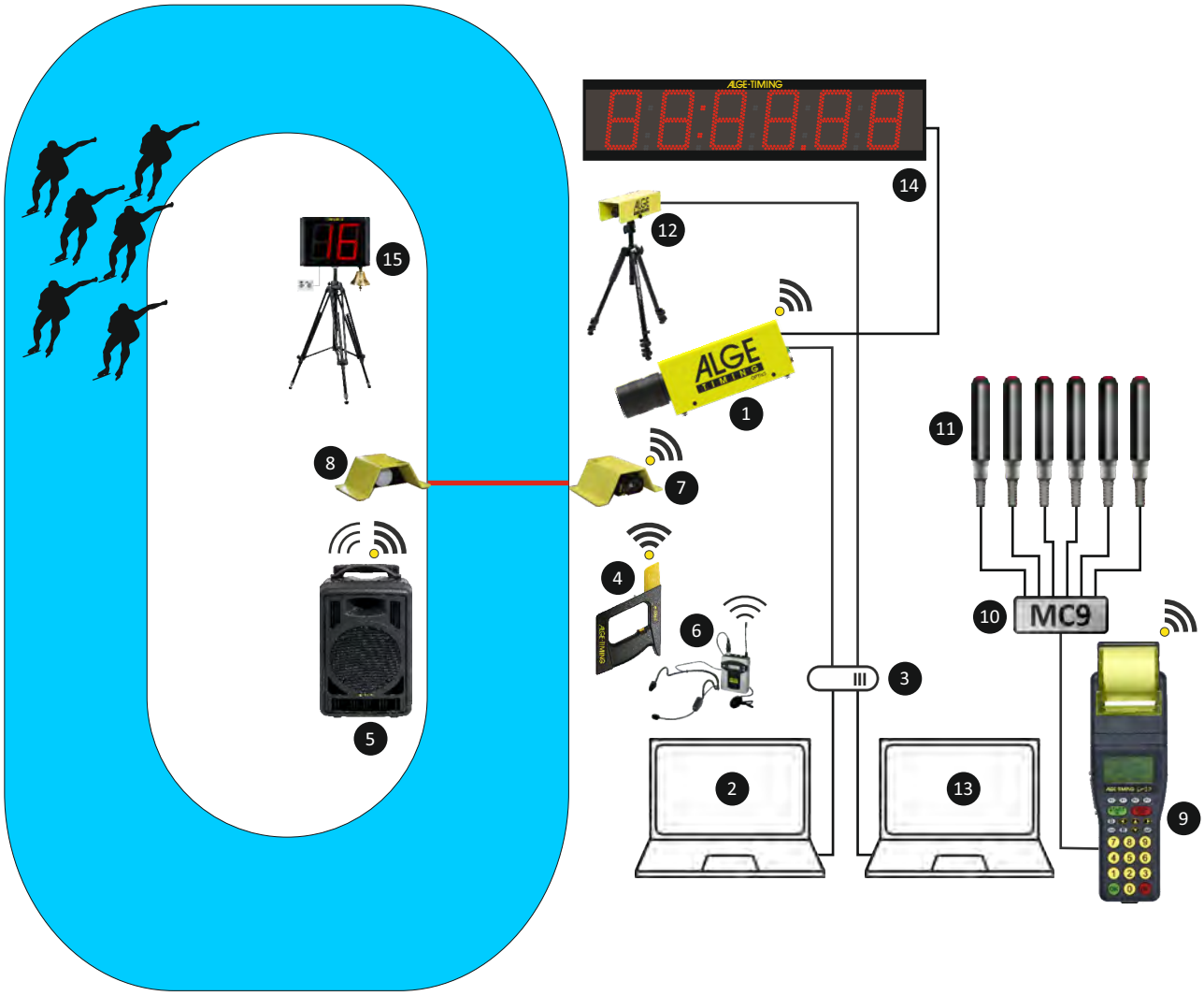
This timing system can be used for short track or inline skating (oval track). An electronic start gun e-Start or e-Start W and a loudspeaker system BANG2 are used for starting with a cable or radio connection.

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.

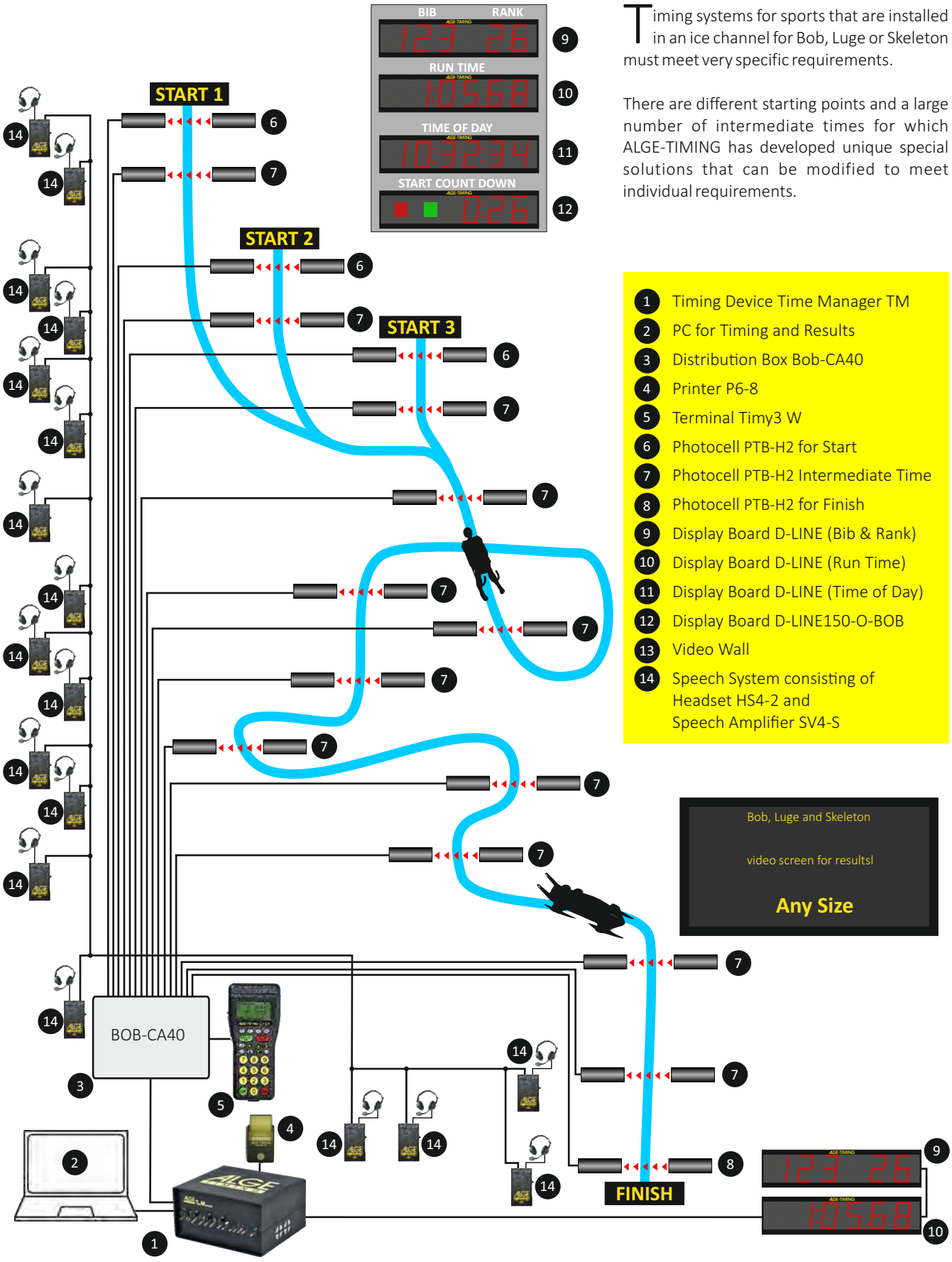
The Timy3 WP is a backup system in which each participant is stopped with a separate push button.

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



1 Photo Finish OPTIc3	6 Radio Microphone BANG-HS	11 Push Button 023-02 (6 pieces)
2 PC for Photo Finish	7 Photocell PR1aW with Holder ICE-FH1	12 Finish Arrival Camera IDCam
3 Power over Ethernet PoE	8 Reflector ICE-REF1 with Holder ICE-FH1	13 PC for IDCam
4 Radio Start Gun e-Start W	9 Timing Device Timy3 WP	14 Display Board D-LINE (time)
5 Speaker System BANG2	10 Multichannel MC9	15 Lap Counter D-LCCB

BOB - LUGE - SKELETON



Timing systems for sports that are installed in an ice channel for Bob, Luge or Skeleton must meet very specific requirements.

There are different starting points and a large number of intermediate times for which ALGE-TIMING has developed unique special solutions that can be modified to meet individual requirements.

1. Timing Device Time Manager TM
2. PC for Timing and Results
3. Distribution Box Bob-CA40
4. Printer P6-8
5. Terminal Timy3 W
6. Photocell PTB-H2 for Start
7. Photocell PTB-H2 Intermediate Time
8. Photocell PTB-H2 for Finish
9. Display Board D-LINE (Bib & Rank)
10. Display Board D-LINE (Run Time)
11. Display Board D-LINE (Time of Day)
12. Display Board D-LINE150-O-BOB
13. Video Wall
14. Speech System consisting of Headset HS4-2 and Speech Amplifier SV4-S

FOOTBALL / SOCCER

Scoreboards

FOOTBALL / SOCCER

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 (11.8 to 59 inch). 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.

4

FOOTBALL / SOCCER

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-CKNF-TXA

D-LINE300-O-4-E2
Figure Height: 30 cm (11.8")
Readability: up to 150 m
Game time: 2 digits in minutes
Score: per team from 0 to 9
Dimensions: 1800 x 550 x 70 mm

D-LINE300-O-2 2X19-E1
Figure Height: 30 cm (11.8")
Readability: up to 150 m
Game time: 2 digits in minutes
Score: per team from 0 to 19
Dimensions: 2200 x 550 x 70 mm

D-LINE450-O-4-E2
Figure Height: 45 cm (17.7")
Readability: up to 200 m
Game time: 2 digits in minutes
Score: per team from 0 to 9
Dimensions: 2500 x 800 x 70 mm

D-LINE450-O-2 2X19-E1
Figure Height: 45 cm (17.7")
Readability: up to 200 m
Game time: 2 digits in minutes
Score: per team from 0 to 19
Dimensions: 2500 x 800 x 70 mm

D-FB300-4-O-WR
Figure Height: 30 cm (11.8")
Readability: up to 150 m
Game time: 2 digits in minutes
Score: per team from 0 to 9
Dimensions: 1100 x 900 x 70 mm

D-FB300-2&2XH-O-WR
Figure Height: 30 cm (11.8")
Readability: up to 150 m
Game time: 2 digits in minutes
Score: per team from 0 to 19
Dimensions: 1100 x 900 x 70 mm

D-FB300-450-2&2XHO-WR
Figure Height: 30 cm (11.8") and 45 cm (17.7")
Readability: up to 200 or 150 m
Game time: 2 digits in minutes (45 cm)
Score: per team from 0 to 9 (30 cm)
Dimensions: 1600 x 1000 x 70 mm

D-FB450-4-O-WR
Figure Height: 45 cm (17.7")
Readability: up to 200 m
Game time: 2 digits in minutes
Score: per team from 0 to 9
Dimensions: 1700 x 1200 x 70 mm

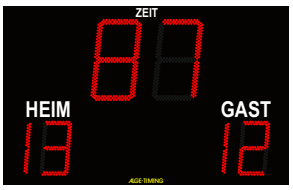
D-FB450-2&2XH-O-WR
Figure Height: 45 cm (17.7")
Readability: up to 200 m
Game time: 2 digits in minutes
Score: per team from 0 to 19
Dimensions: 1700 x 1200 x 70 mm

D-LINE300-O-4-E2

D-LINE450-O-2+2-E2

D-FB300-4-O-WR

D-LINE450-0-2+2x19-E1



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

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.

Controller D-CKN

D-LINE300-O-6-E2-T

Figure Height:	30 cm (11.8")
Readability:	up to 150 m
Game time:	4 digits in minutes and seconds
Score:	per team from 0 to 9
Dimensions:	2300 x 550 x 70 mm

D-LINE450-O-6-E2-T

Figure Height:	30 cm (11.8")
Readability:	up to 200 m
Game time:	4 digits in minutes and seconds
Score:	per team from 0 to 9
Dimensions:	3300 x 800 x 70 mm

D-LINE300-O-4 2x19-E1

Figure Height:	30 cm (11.8")
Readability:	up to 150 m
Game time:	4 digits in minutes and seconds
Score:	per team from 0 to 19
Dimensions:	2300 x 550 x 70 mm

D-LINE450-O-4 2x19-E1

Figure Height:	45 cm (17.7")
Readability:	up to 200 m
Game time:	4 digits in minutes and seconds
Score:	per team from 0 to 19
Dimensions:	3300 x 800 x 70 mm

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

Figure Height:	30 cm (11.8")
Readability:	up to 150 m
Game time:	6 digits in minutes, seconds and 1/100 seconds
Score:	per team from 0 to 9
Dimensions:	2800 x 550 x 70 mm

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

Figure Height:	45 cm (17.7")
Readability:	up to 200 m
Game time:	6 digits in minutes, seconds and 1/100 seconds
Score:	per team from 0 to 9
Dimensions:	4100 x 800 x 70 mm

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

Figure Height:	30 cm (11.8")
Readability:	up to 150 m
Game time:	6 digits in minutes, seconds and 1/100 seconds
Score:	per team from 0 to 19
Dimensions:	2800 x 550 x 70 mm

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

Figure Height:	45 cm (17.7")
Readability:	up to 200 m
Game time:	6 digits in minutes, seconds and 1/100 seconds
Score:	per team from 0 to 19
Dimensions:	4100 x 800 x 70 mm

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 football mode

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

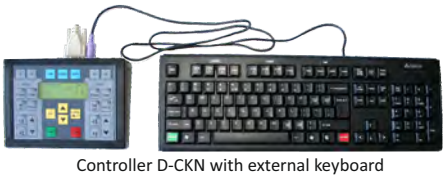
D-LINE450-O-8A-E2 im in football mode

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

D-LINE300-O-6 2x19-E1 in football mode

D-LINE450-O-6 2x19-E1 in athletics mode

Controller D-CKN-WNT-A



Controller D-CKN with external keyboard

FOOTBALL / SOCCER

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, 600, 100 and 150 cm are available.

Controller D-CKN

D-FB3-19-300
Figure Height: 30 cm (11.8")
Readability: up to 150 m
Game time: 4 digits in minutes and seconds
Score: per team from 0 to 19
Dimensions: 1200 x 850 x 70 mm

D-FB3-19-A-300
Figure Height: 30 cm (11.8")
Readability: up to 150 m
Game time: 6 digits in min., sec. and 1/100 sec.
Score: per team from 0 to 19
Dimensions: 1700 x 850 x 70 mm

D-FB3-19-450-1
Figure Height: 45 cm (17.7")
Readability: up to 200 m
Game time: 4 digits in minutes and seconds
Score: per team from 0 to 19
Dimensions: 1900 x 1400 x 70 mm

D-FB3-19-A-450
Figure Height: 45 cm (17.7")
Readability: up to 200 m
Game time: 6 digits in min., sec. and 1/100 sec.
Score: per team from 0 to 19
Dimensions: 2491 x 1400 x 70 mm

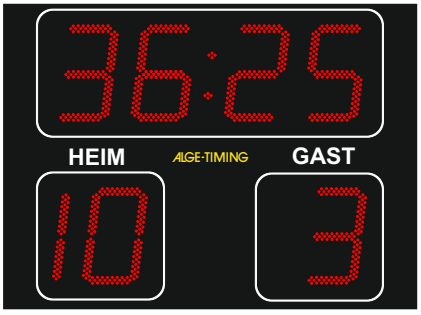
D-FB3-19-600/450
Figure Height: 60 cm and 45 cm
Readability: up to 300 and 200 m
Game time: 4 digits in minutes and seconds
Score: per team from 0 to 19
Dimensions: 2000 x 600+1000 x 70 mm

D-FB3-19-600
Figure Height: 60 cm (23.6")
Readability: up to 300 m
Game time: 4 digits in minutes and seconds
Score: per team from 0 to 19
Dimensions: 2490 x 800+1000 x 70 mm

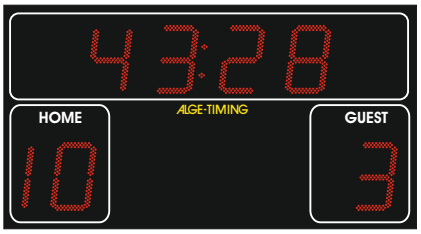
D-FB3-19-A-600
Figure Height: 60 cm (23.6")
Readability: up to 300 m
Game time: 6 digits in min., sec. and 1/100 sec.
Score: per team from 0 to 19
Dimensions: 3400 x 800+1000 x 70 mm

D-FB3-19-1000
Figure Height: 100 cm (39.4")
Readability: up to 500 m
Game time: 4 digits in minutes and seconds
Score: per team from 0 to 19
Dimensions: 3800 x 1200+1500 x 70 mm

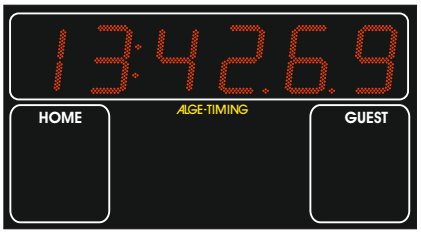
D-FB3-19-1500
Figure Height: 150 cm (59")
Readability: up to 750 m
Game time: 4 digits in minutes and seconds
Score: per team from 0 to 19
Dimensions: 5200 x 1800+2200 x 70 mm



D-FB3-19-450-1



D-FB3-19-A-450-1 in football mode



D-FB3-19-A-450-1 in athletics mode

D-FB3-19-600/450

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-WTN-A: expandable alternative- integrated- rechargeable battery and radio WTN so that the operator can move freely in the football field


Controller
D-CKN


Controller
D-CKN-WTN-A

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

Controller
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 WTN-DB (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

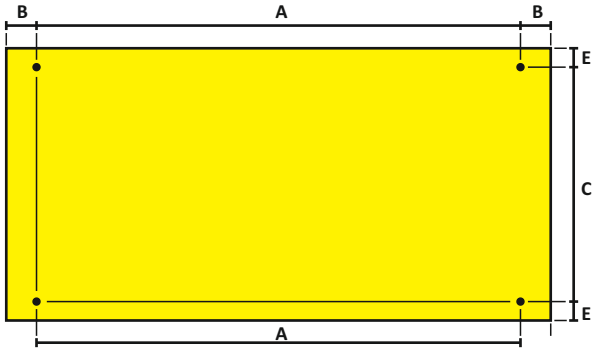
Temperature sensor D-AT2: The temperature is displayed when the scoreboard is not needed for football. It is possible to display the time of day and temperature alternating.

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

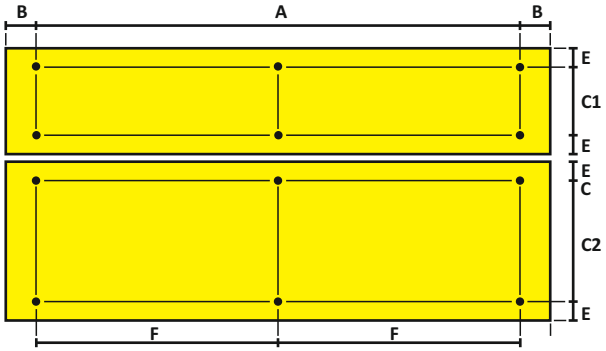
Models with text display: It is possible to add a matrix display to the soccer scoreboard. Depending on the size of the matrix display board D-RTNM, it can display, e.g. the club names or advertising.

Example D-FB3-19-450 and D-RTNM matrix

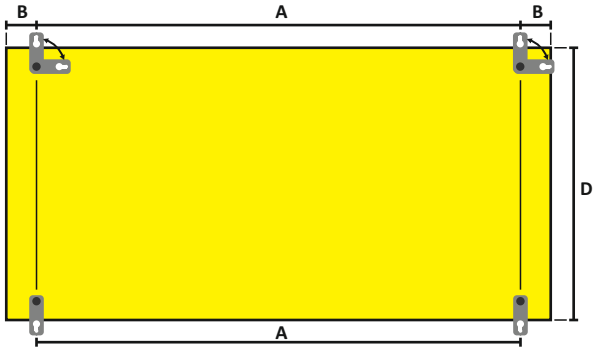
Assembly



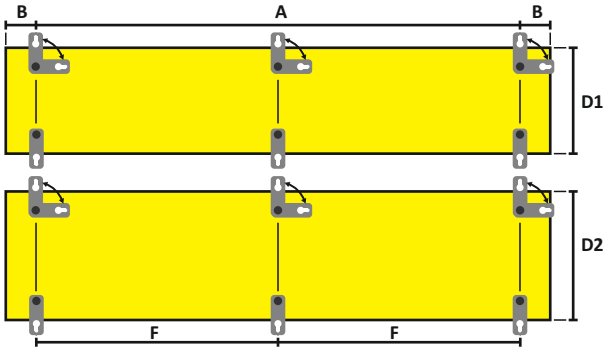
D-FB3-19-xxx mounting holes - all with M6



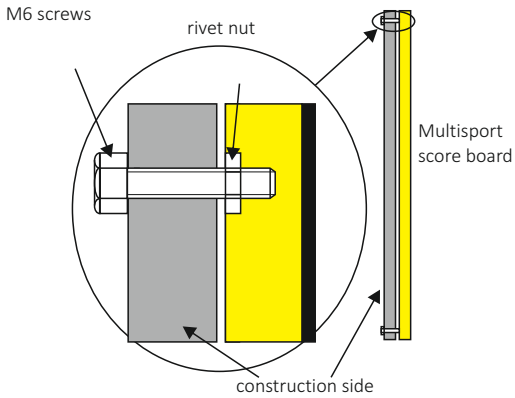
D-FB3-19-xxx mounting holes - all with M6



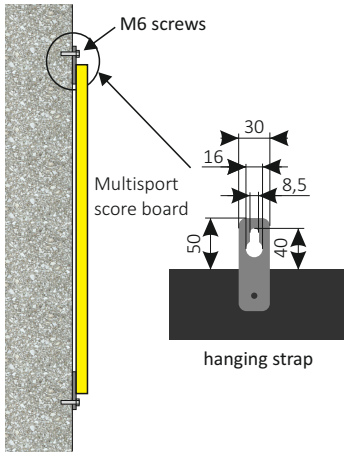
D-FB3-19-xxx mounting with hanging straps



D-FB3-19-xxx mounting with hanging straps



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



Dimensions

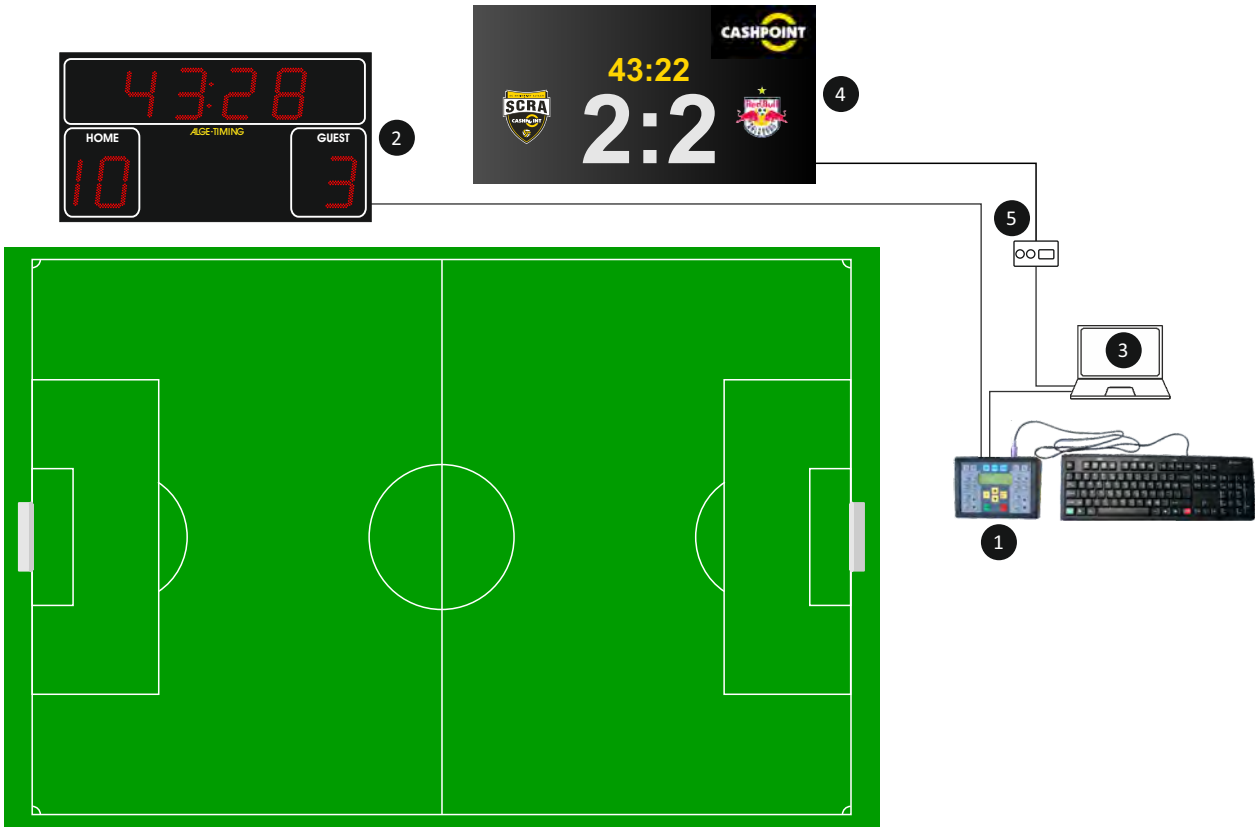
Model	Scoreboard Parts	Lenght*	Hight*	Width*	Weight**	Fixing Holes or Hanging Lugs	A*	B*	C, C1, C2*	D, D1, D2*	E*	F*	Figure Height*	Caption Height*
D-LINE300-O-4-E2	1	1.800	550	70	20	4	1.400	200	480	590	35	-	300	80
D-LINE300-O-2+2x19-E1	1	1.800	550	70	20	4	1.400	200	480	590	35	-	300	80
D-LINE300-O-6-E2-T	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 0	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	1000	70	32	4	1.200	200	930	1.040	35	-	300/450	80
D-FB450-4-O-WR	1	1.700	1200	70	40	4	1.300	200	1.130	1.240	35	-	450	100
D-FB450-2+2xH-O-WR	1	1.700	1200	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	150
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	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	2 x 6	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	2 x 6	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	2 x 6	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	2 x 6	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	2 x 6	4.800	200	1.730/2.130	1.840/2.240	35	2.400	1.500	300

* Dimensions in mm
** Weight in kg

FOOTBALL / SOCCER

Video Walls

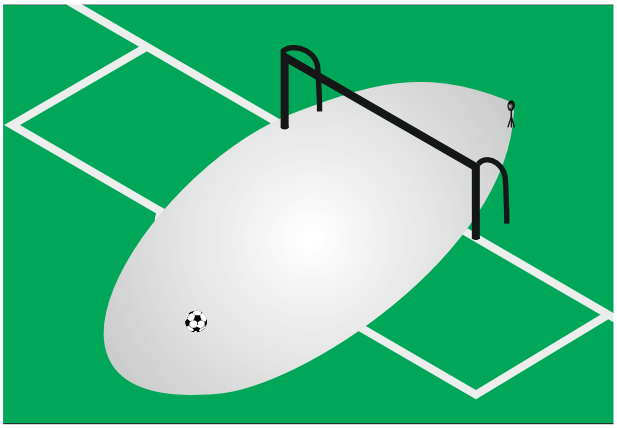
ALGE-TIMING also has customised solutions for using a LED scoreboard and a video wall in the stadium at the same time. For example, the score and time can be controlled via the D-CKN controller on both scoreboards. It is important that the time comes from one source, not that the two display boards show a different time.



1 Game Controller D-CKN with keyboard
2 Football Scoreboard (e.g. D-FB3-19-450-1)
3 PC for Video Screen Control
4 Video Wall
5 Video Wall Controller

- The Ballspeed BS-R is used to measure the speed of balls for different sports
- The Ballspeed BS-R measures the speed of moving objects up to 300 km/h (186 mph)
- Balls are picked up by the radar sensor also through goal nets
- The ballspeed is shown on an LED display board
- Compact and rugged system
- Fast and easy setup

Supported Sports
- Football (Soccer and American Football)
- Handball
- Ice Hockey
- Bandy



sketch of measuring range for football (soccer)

Available Models:

Ballspeed BS-R150:
Radar sensor to measure the ball speed with additional LED display board to show the speed (3 figures, 15 cm figure height). The radar and tripod is fastened on tripods. The system needs mains (100- 240 VAC) or an external 12 V battery.

Ballspeed BS-R250:
Radar sensor to measure the ball speed with additional LED display board to show the speed (3 figures, 25 cm figure height). The radar and display board is fastened on tripods. The system needs mains (100- 240 VAC) or an external 12 V battery.

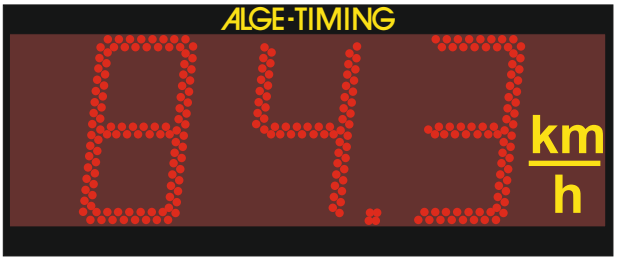
Components of the System (depending on model):

Radar Sensor:
Radar sensor that gives accurate results over a wide measuring range.

Radar Frequency:	24.125 GHz	
Transmission Power:	<5 mW	
Speed Measurement:	10 to 300 km/h (6 mph to 186 mph)	
Measuring Angle:	about 40°	
Accuracy:	<100 km/h (< 62 mph):	about +/- 2 km/h
	>100 km/h (> 62 mph):	about 2%

Display Board D-LINE150-O-3-E0:
Display board with 3 red LED figures, figure height 15 cm (5.9 in), readable up to 70 m (230 feet), best readability even at direct sun light, aluminium case for outdoor use, to show the speed, including integrated power supply (100 - 240 VAC). The radar is connected at the display board with a cable. The radar sensor is supplied by the display board.

Display Board D-LINE250-O-3-E0:
Display board with 3 red LED figures, figure height 25 cm (9.8 in), readable up to 70 m (394 feet), best readability even at direct sun light, aluminium case for outdoor use, to show the speed, including integrated power supply (100 - 240 VAC). The radar is connected at the display board with a cable. The radar sensor is supplied by the display board.



Tripod TRI128:	to mount the display board
Tripod TRI-S4:	with integrated head to mount the radar sensor

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 electromagnetic 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

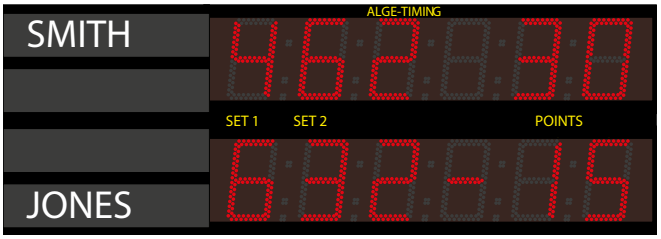
Tennis Scoreboard D-TA815
Digit height: 150 mm
Max. readability: up to 70 m
Game display: 5 sets

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

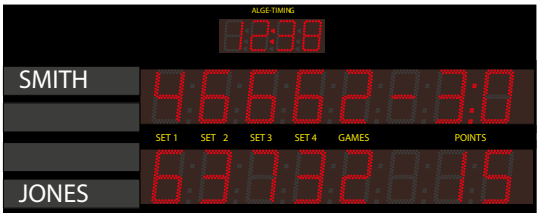
Tennis Scoreboard D-TA815-T415
Digit height: 150 mm
Max. readability: up to 70 m
Game display: 5 sets
Time display: hours and minutes

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



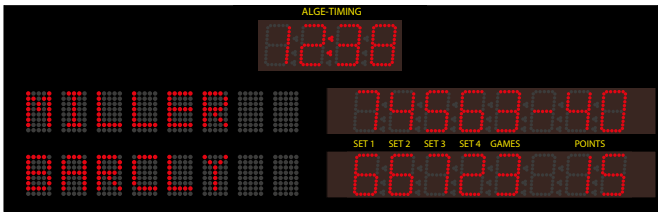
Example: D-TA825-T415

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

With LED Name Field

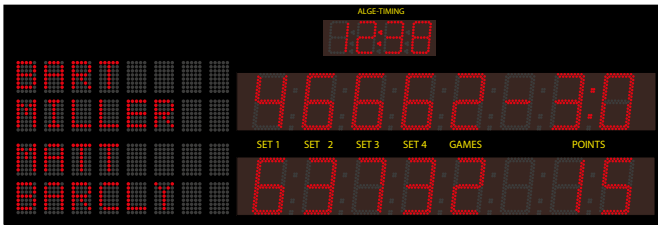
Tennis Scoreboard D-TA815-T415

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



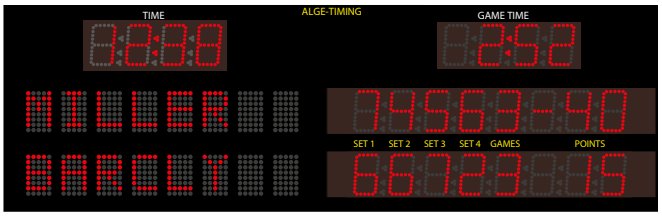
Tennis Scoreboard D-TA825-T415

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



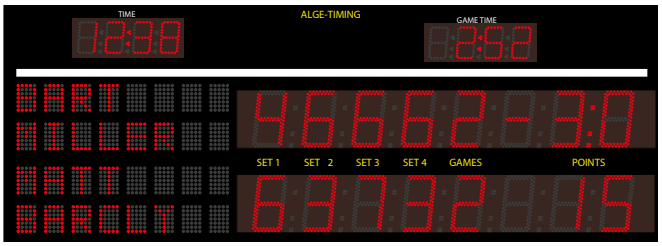
Tennis Scoreboard D-TA815-2xT415-T

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

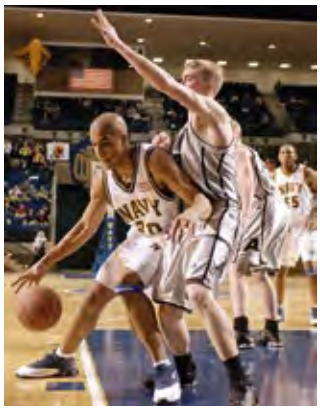
Digit height: 250 mm
Max. readability: up to 120 m
Game display: 5 sets
Time display: hours and minutes with 150 mm digit
Game time: hours and minutes with 150 mm digits



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

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.

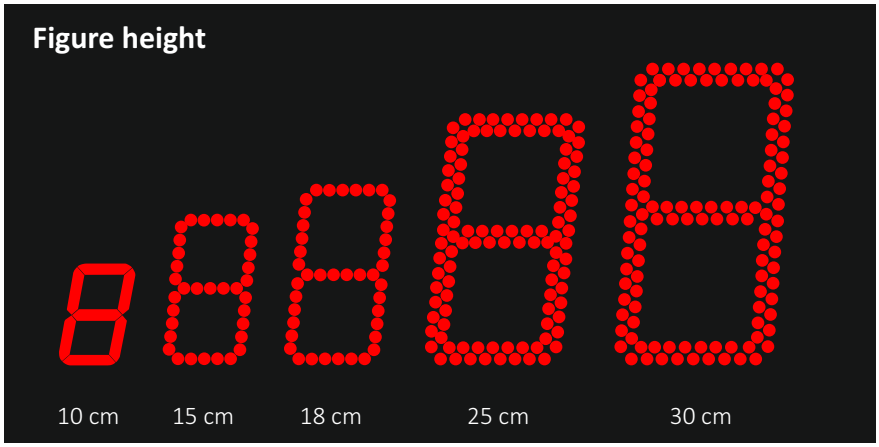
Indicators (Digits)

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

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-WNT-A

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 alpha-numeric 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.

TNLP1V11-3
TNLP1V11-4
TNLP1V11-5
TNLP1V11-6
TNLP1V11-7
TNLP1V11-8
TNLP1V11-9

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.

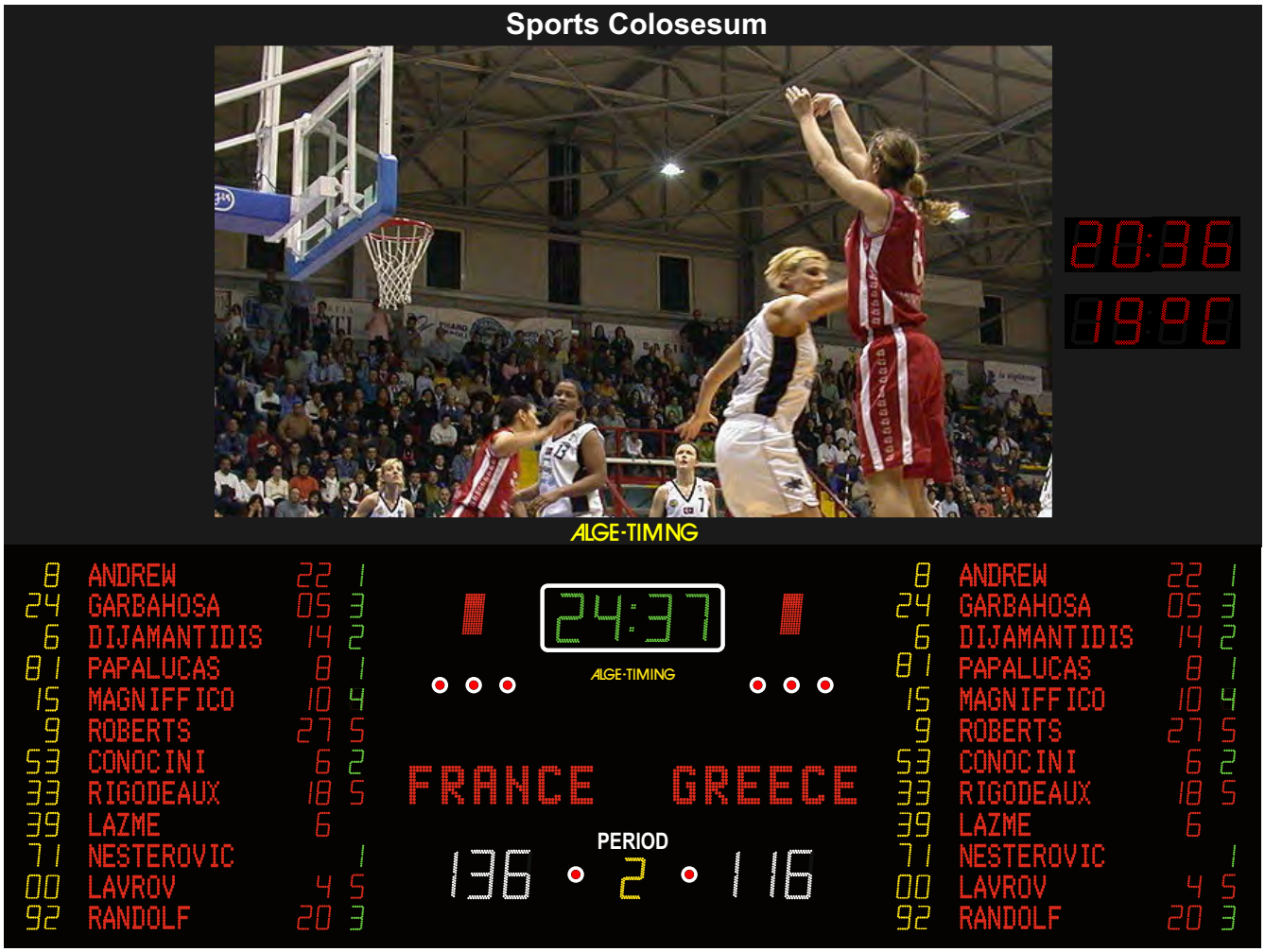
Model	Dimensions	Scoreboard
MPN9	2 modules with 70 x 150 cm	2 x 12 player names, 9 characters with 7 x 5 dots, character height 7 cm
MPN10	2 modules with 80 x 150 cm	2 x 12 player names, 10 characters with 7 x 5 dots, character height 7 cm
MPN11	2 modules with 85 x 150 cm	2 x 12 player names, 11 characters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

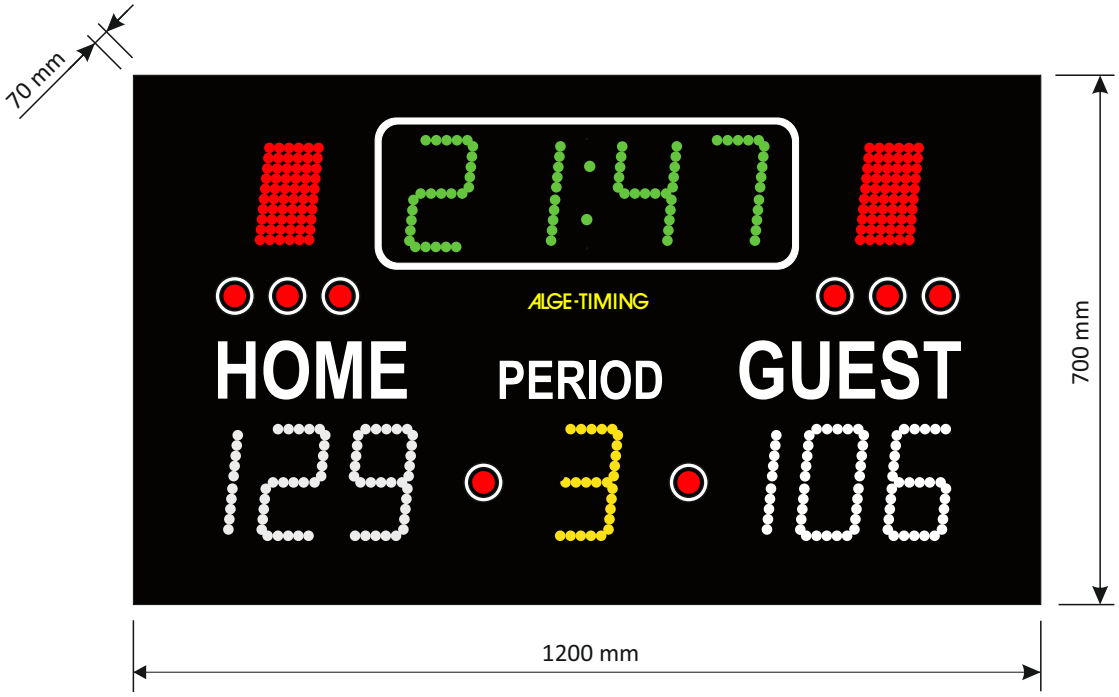
NPN9 NPN10 NPN11 NPN12

LPN9 LPN10 LPN11 LPN12

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





Facts about the D-S1S-FIB Scoreboard

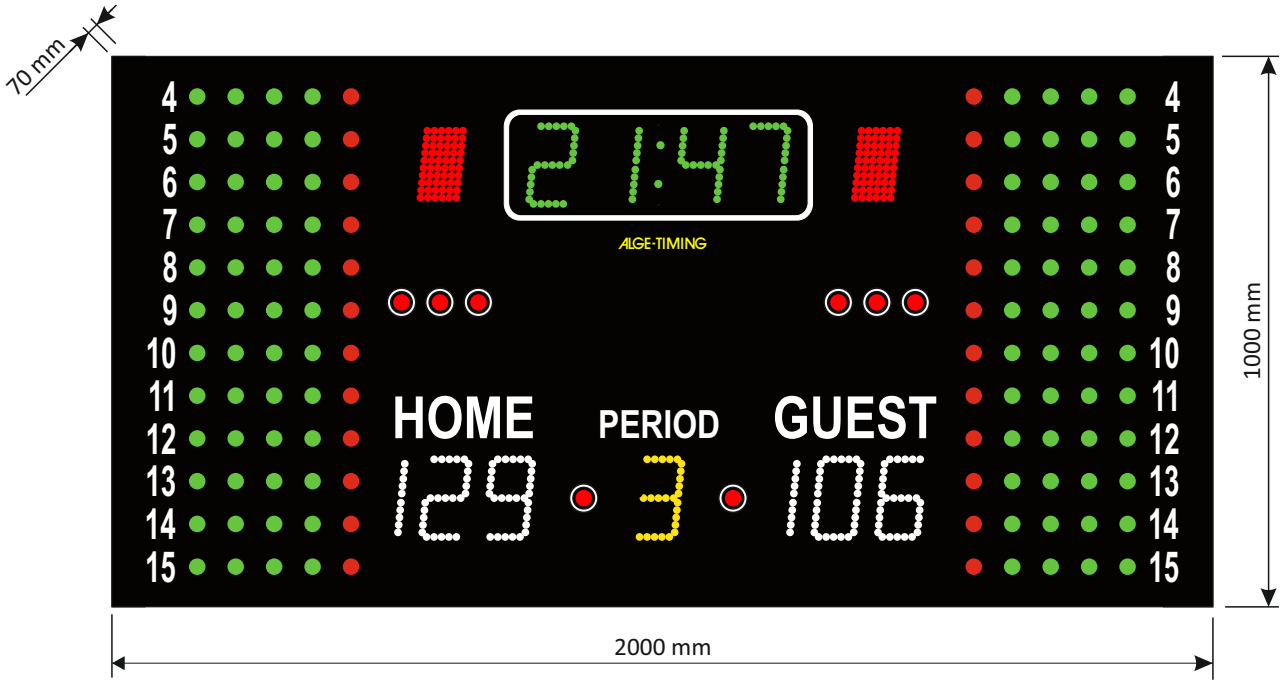
- small, universal scoreboard for indoor use
- digits (LED) in four colours: red, green, white and yellow; white captions
- running time in minutes and seconds (up/down, green 15 cm digits); during last minute display in seconds and 1/10 seconds
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 15 cm digits)
- period: 0 to 9 (yellow 15 cm digit)
- team fouls: 0 to 9 for each team and full field (red 12 cm Matrix digit)
- 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: 1200 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-FIB



Facts about the D-S3S-FIB Scoreboard

- small, universal scoreboard for indoor use
- digits (LED) in four colours: red, green, white 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 seconds
- day time can be displayed on the game time field
- break time can be displayed in the game time fields
- score: 0 to 199 for each team (white 15 cm digits)
- period: 0 to 9 (yellow 15 cm digit)
- team fouls: 0 to 9 for each team and full field (red 13 cm Matrix 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 (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

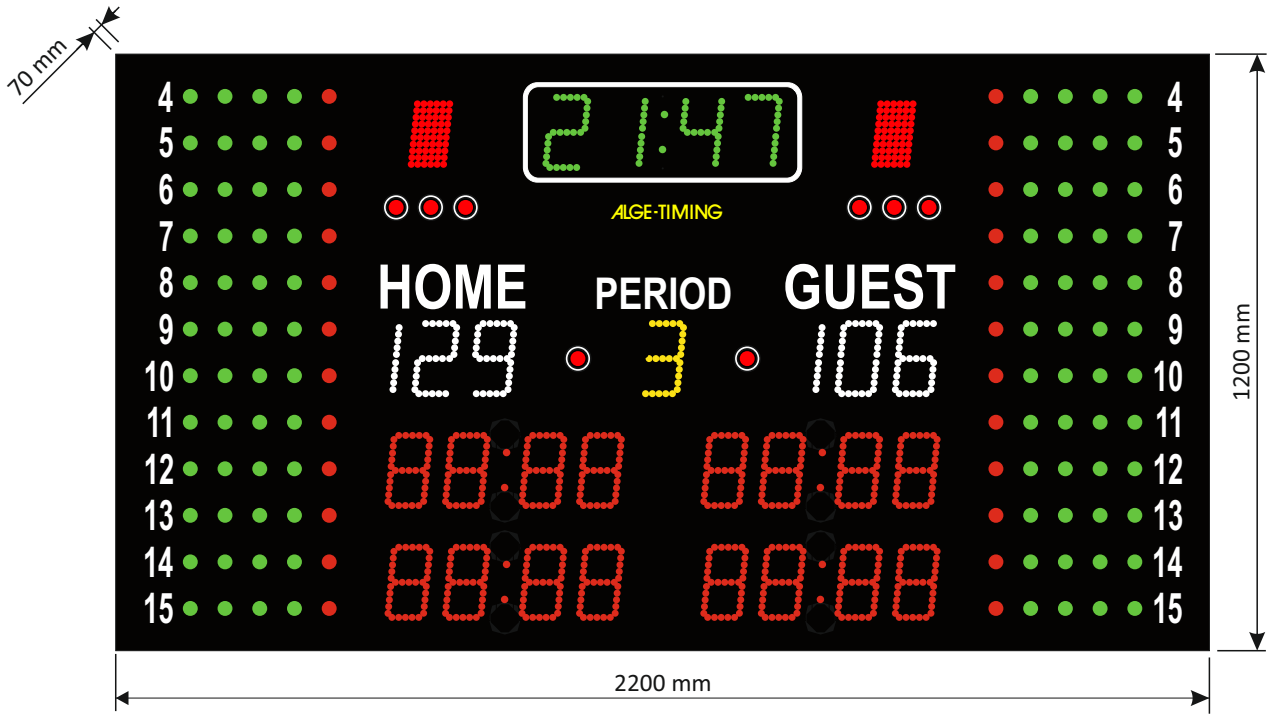
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-S5S-FIB



Facts about the D-S5S-FIB Scoreboard

- small, universal scoreboard for halls
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 15 cm digits)
- period: 0 to 9 (yellow 15 cm digit)
- team fouls: 0 to 9 for each team and full field (red 13 cm Matrix 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)
- 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

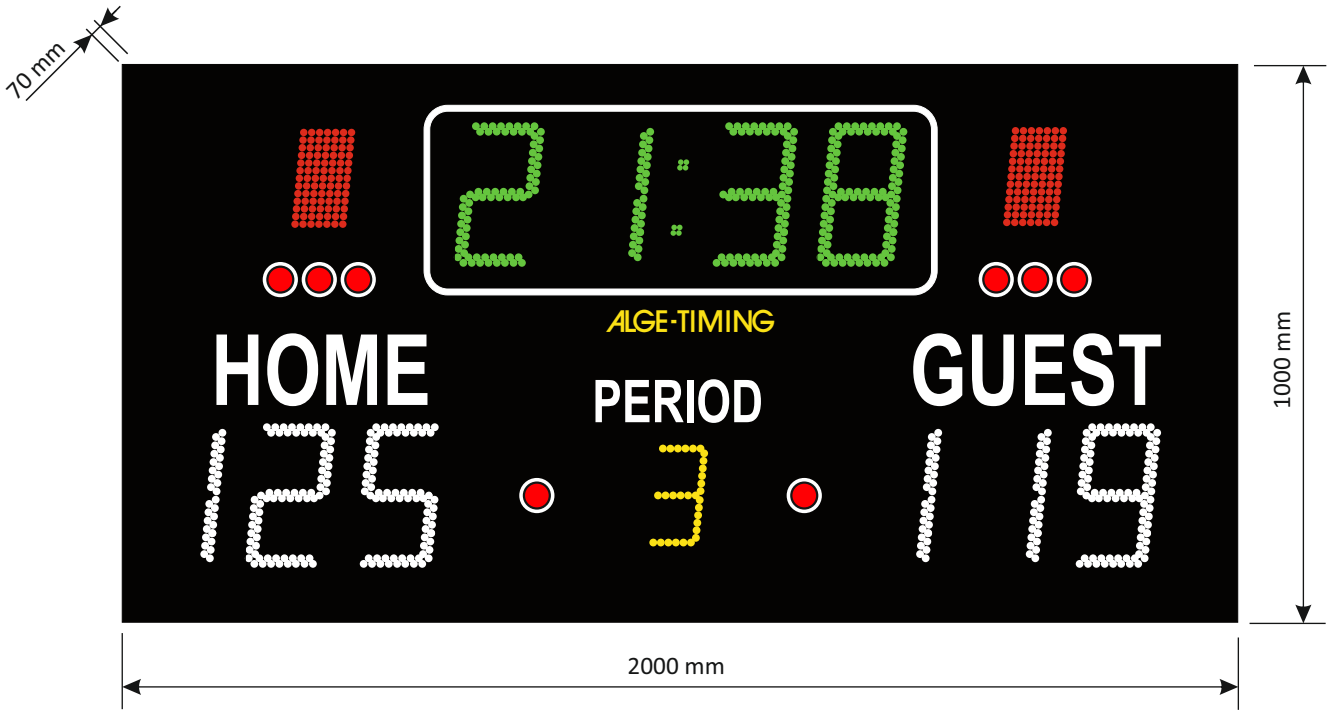
Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

D-M1S-FIB



Facts about the D-M1S-FIB Scoreboard

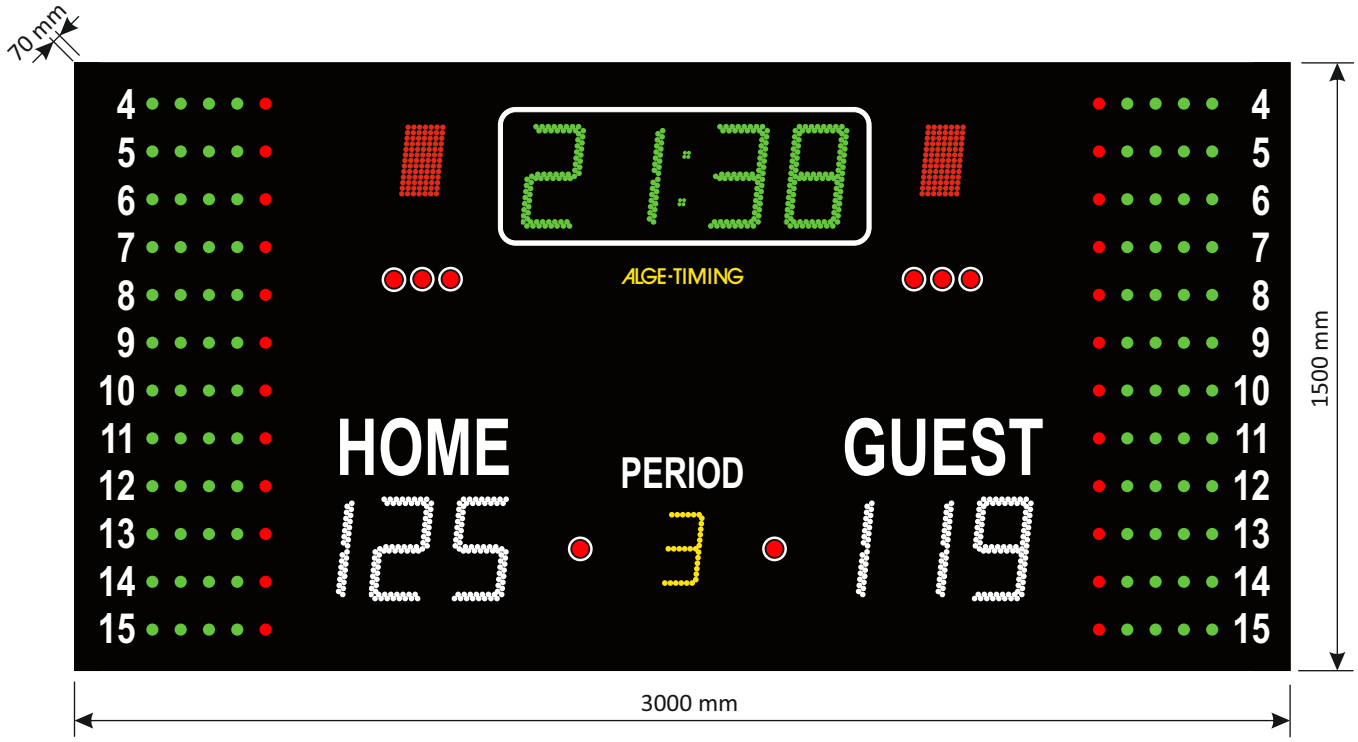
- digits (LED) in four colours: red, green, white and yellow; white captions
- running time in minutes and seconds (up/down, green 25 cm digits); during last minute display in seconds and 1/10
- day time can be displayed in the game time field
- break time can be displayed in the game time field
- scores: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix digit)
- 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-FIB



Facts about the D-M3S-FIB Scoreboard

- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- scores: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix 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

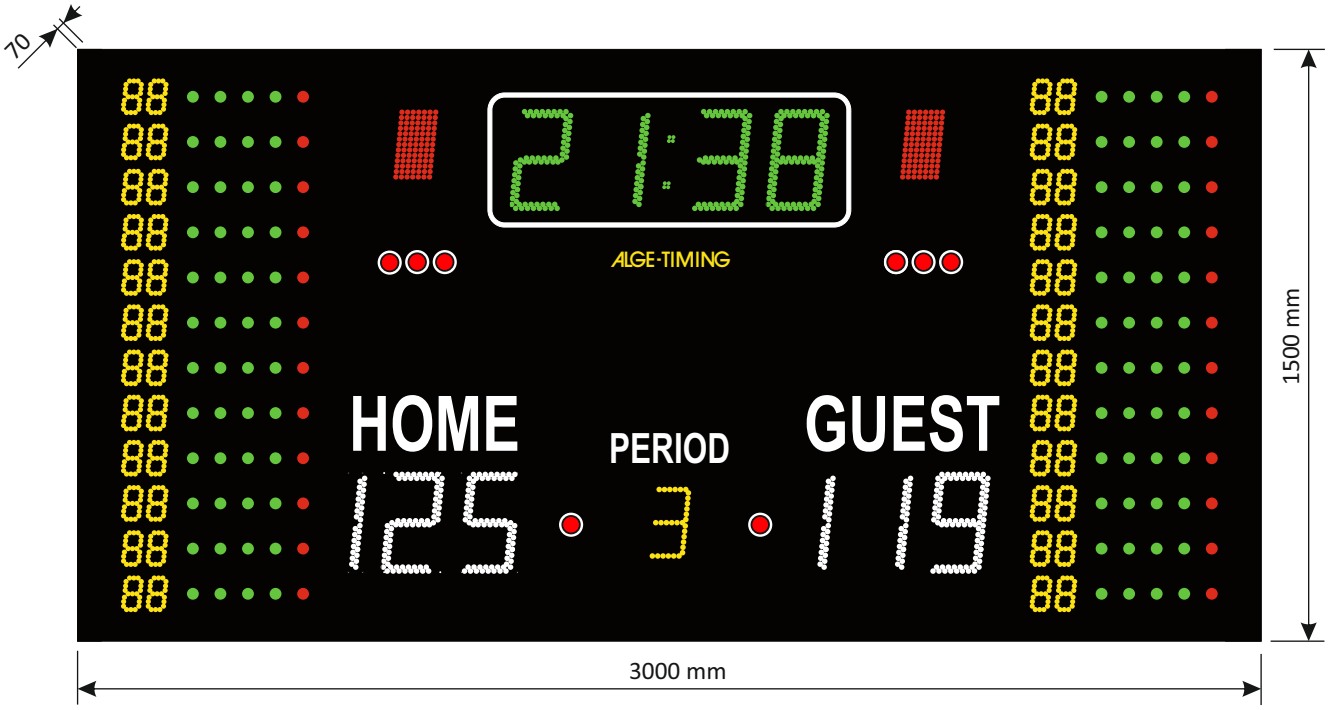
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M3SP-FIB



Facts about the D-M3SP-FIB Scoreboard

- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- scores: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix digit)
- 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

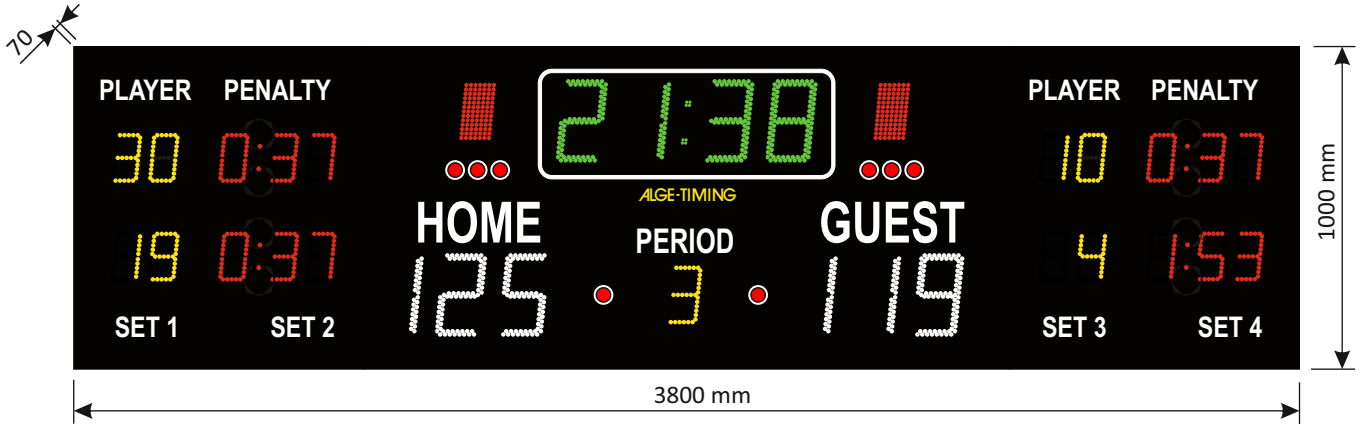
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M4SH2-FIB



Facts about the D-M4SH2-FIB Scoreboard

- three modules: middle part 2,000 x 1,000 mm, sides 2 x 900 x 1,000 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed on the game time field
- score: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix digit)
- 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

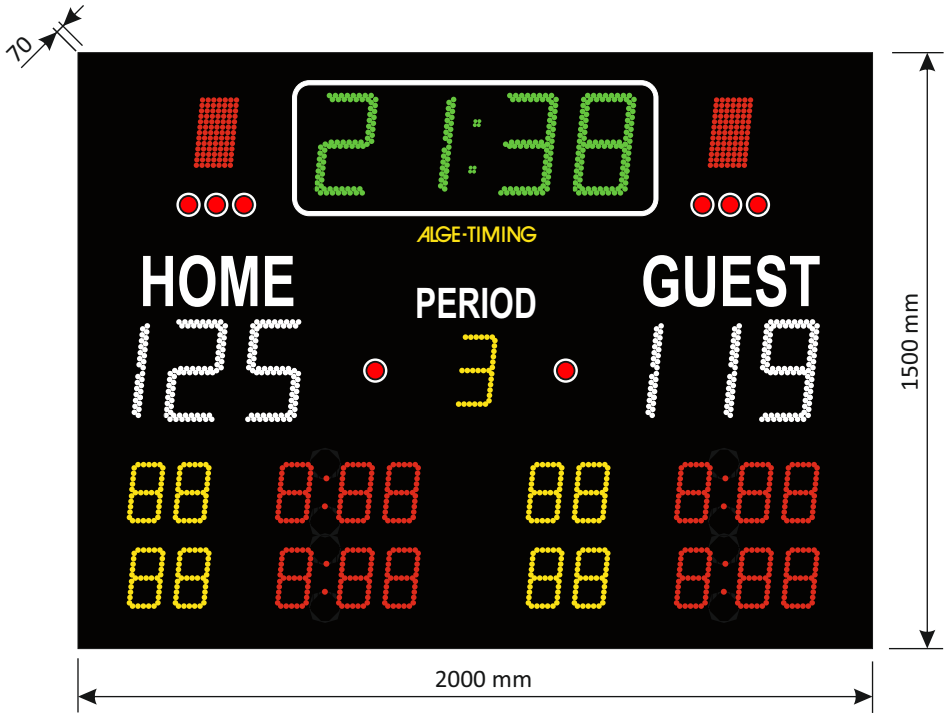
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M4SV2-FIB



Facts about the D-M4SV2-FIB Scoreboard

- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix digit)
- 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

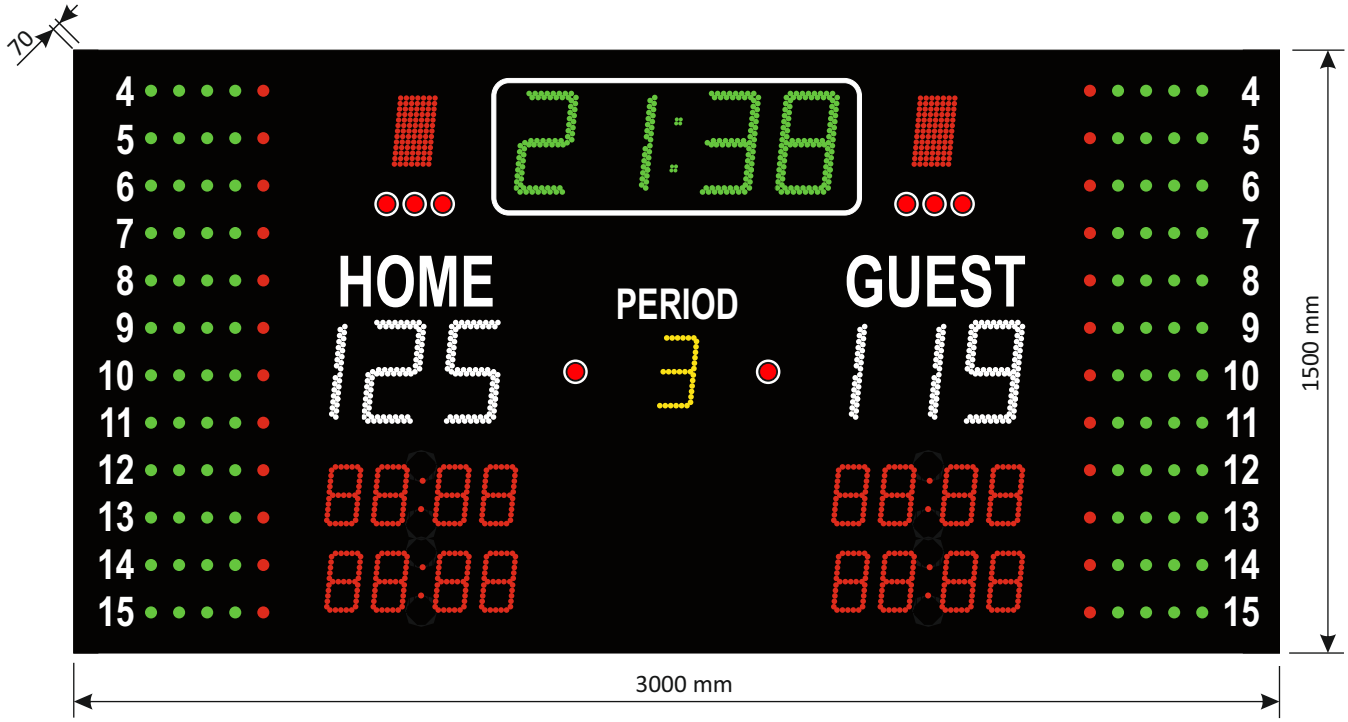
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M5S-FIB



Facts about the D-M5S-FIB Scoreboard

- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix digit)
- 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

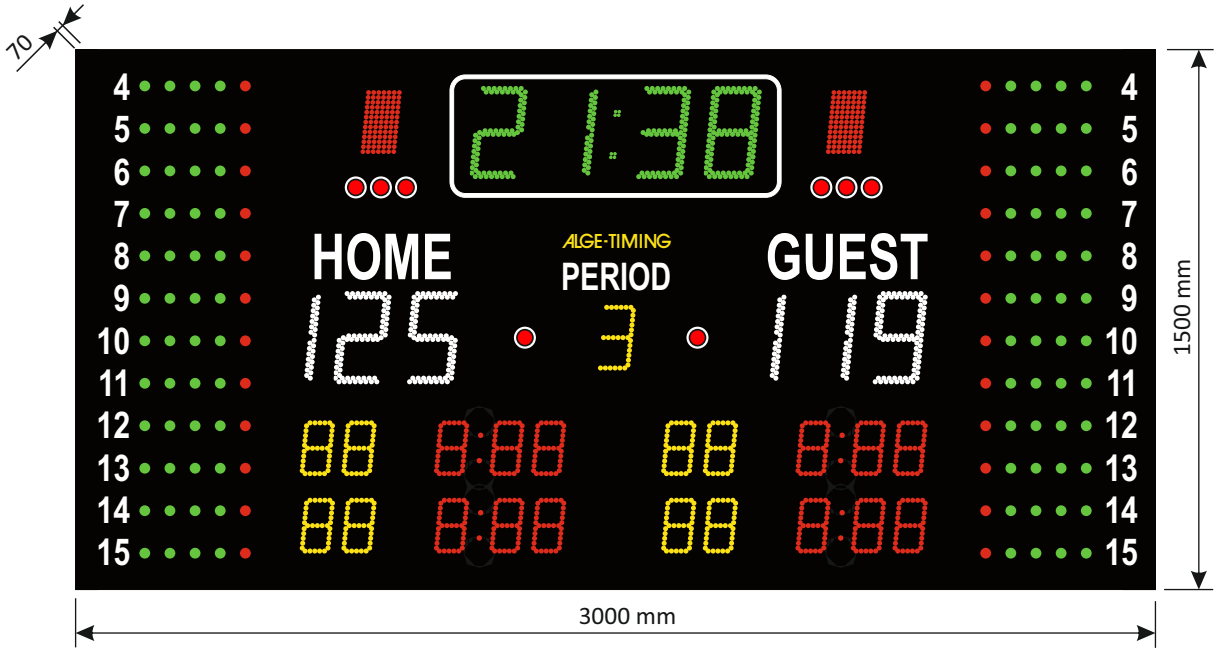
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M6S-FIB



Facts about the D-M6S-FIB Scoreboard

- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix digit)
- 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

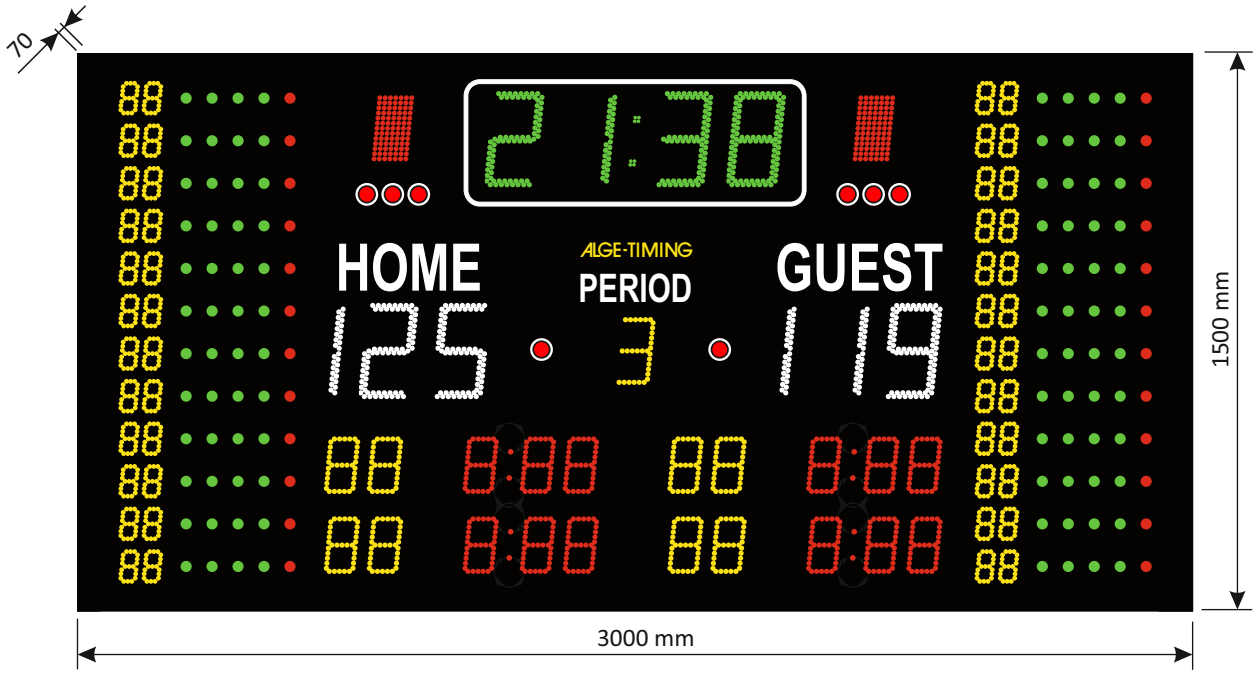
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M6SP-FIB



Facts about the D-M6SP-FIB Scoreboard

- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix digit)
- 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

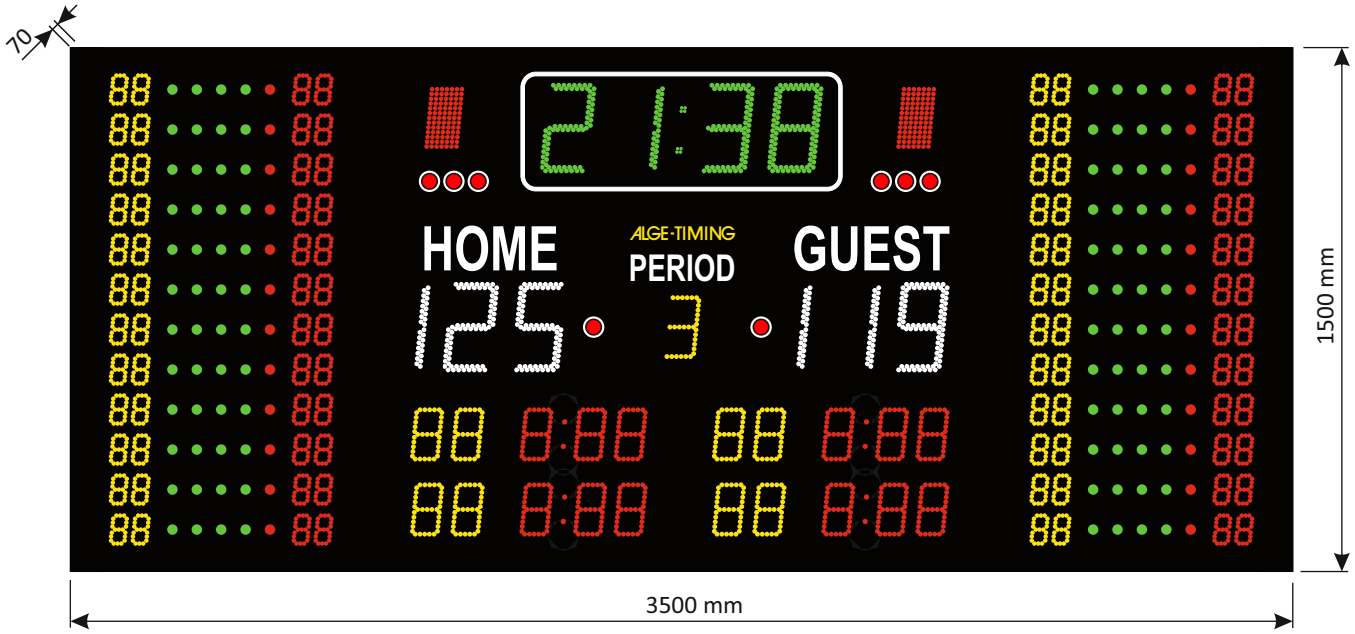
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M6SPP-FIB



Facts about the D-M6SPP-FIB Scoreboard

- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix digit)
- 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

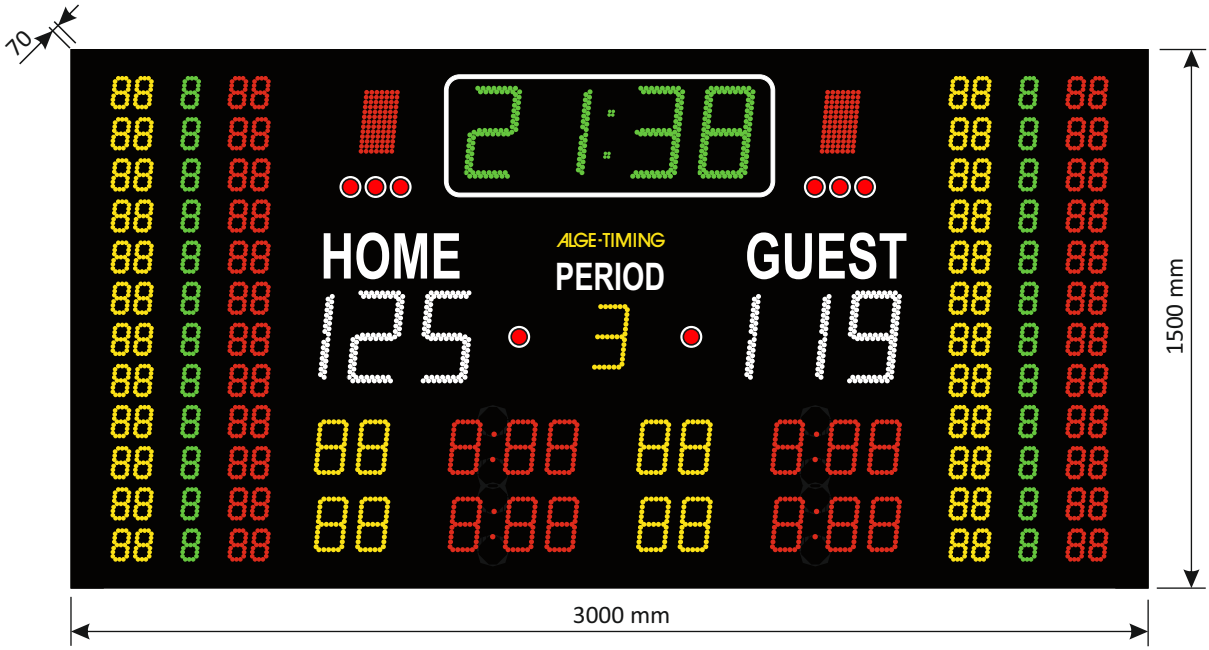
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M6SPFP-FIB



Facts about the D-M6SPFP-FIB Scoreboard

- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- scores: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix digit)
- 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

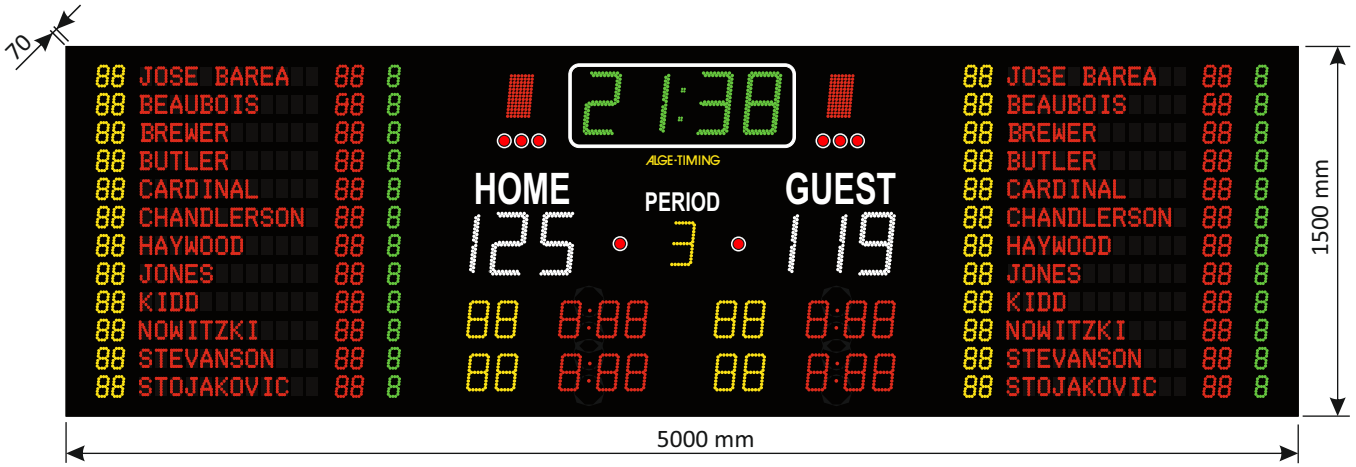
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-M6SBHV-FIB



Facts about the D-M6SBHV-FIB Scoreboard

- three modules: middle section 2,000 x 1,500 mm, sides 2 x 1,500 x 1,500 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 25 cm digits)
- period: 0 to 9 (yellow 18 cm digit)
- team fouls: 0 to 9 for each team and full field (red 16 cm Matrix digit)
- 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

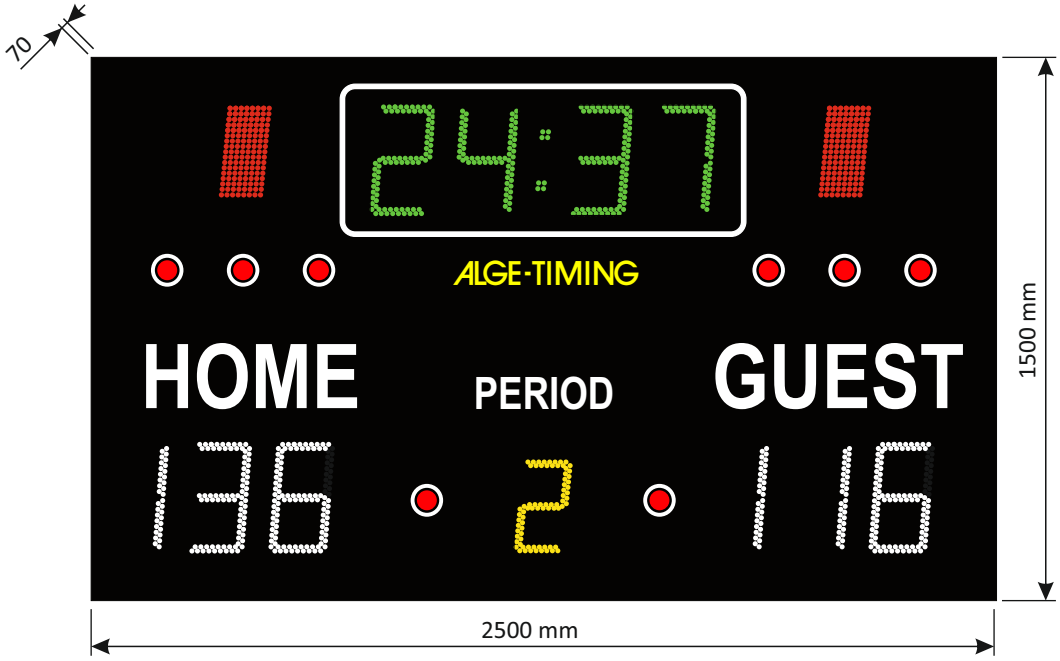
- player ID: 0 to 99 (yellow 15 cm digits)
- player foul: 0 to 9:59 (red 15 cm digits)

Type of Sport

basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)



Facts about the D-L1S-FIB Scoreboard

- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- scores: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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

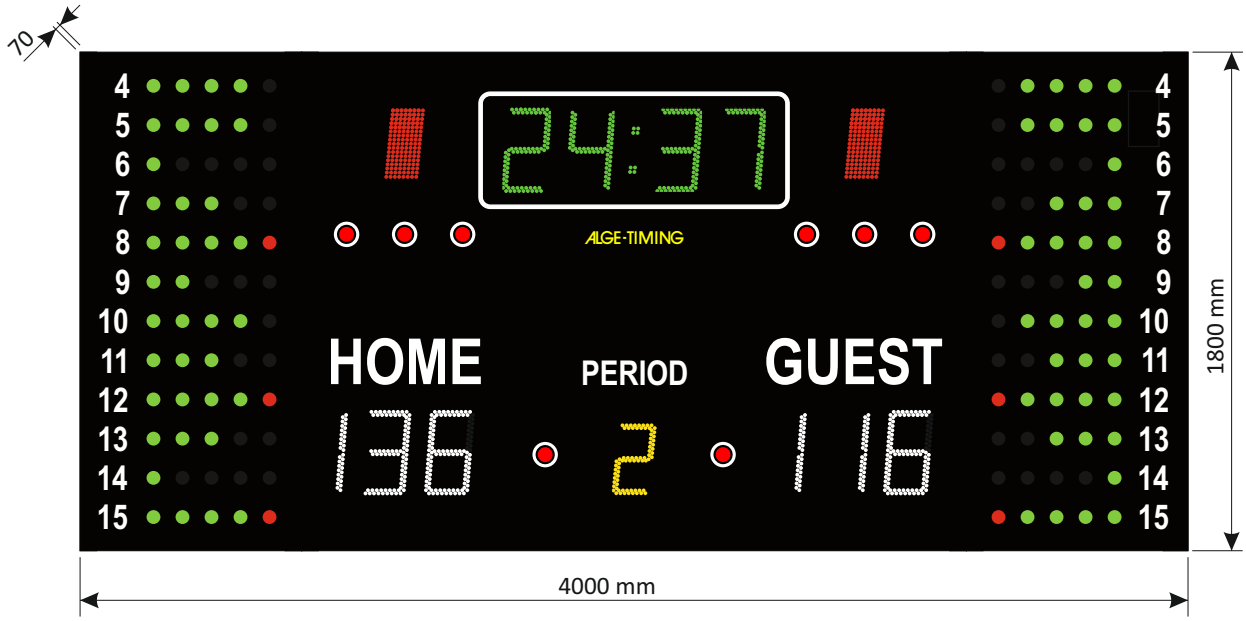
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L3S-FIB

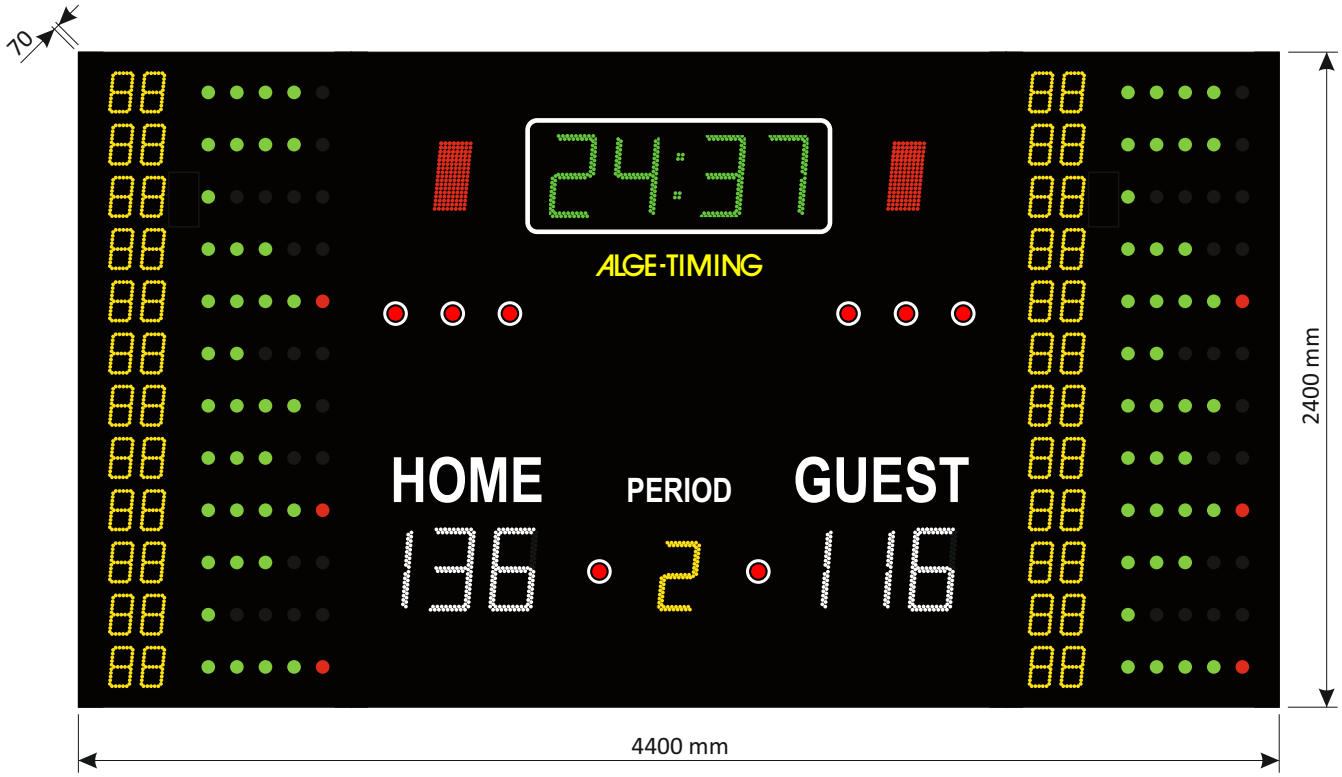


Facts about the D-L3S-FIB Scoreboard

- three modules: middle part 2,400 x 1,800 mm, sides 2 x 800 x 1,800 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- scores: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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)



Facts about the D-L3SP-FIB Scoreboard

- three modules: middle section 2,400 x 2,400 mm, sides 2 x 1,000 x 2,400 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- scores: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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

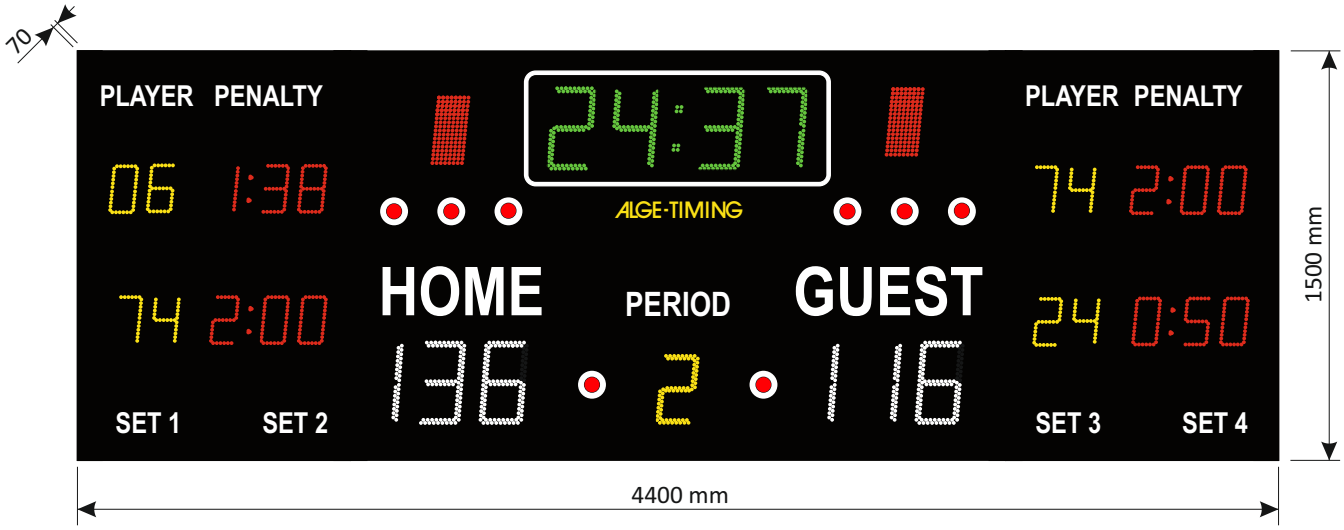
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L4SH2-FIB



Facts about the D-L4SH2-FIB Scoreboard

- three modules: middle section 2,400 x 1,500 mm, sides 2 x 1,000 x 1,500 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- scores: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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

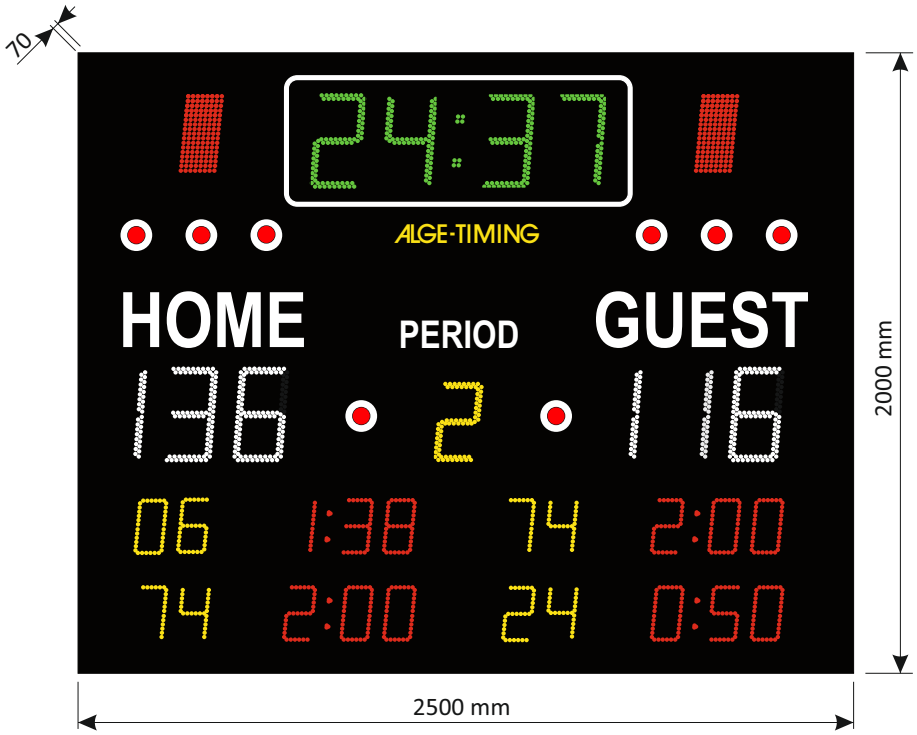
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L4SV2-FIB



Facts about the D-L4SV2-FIB Scoreboard

- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- scores: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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

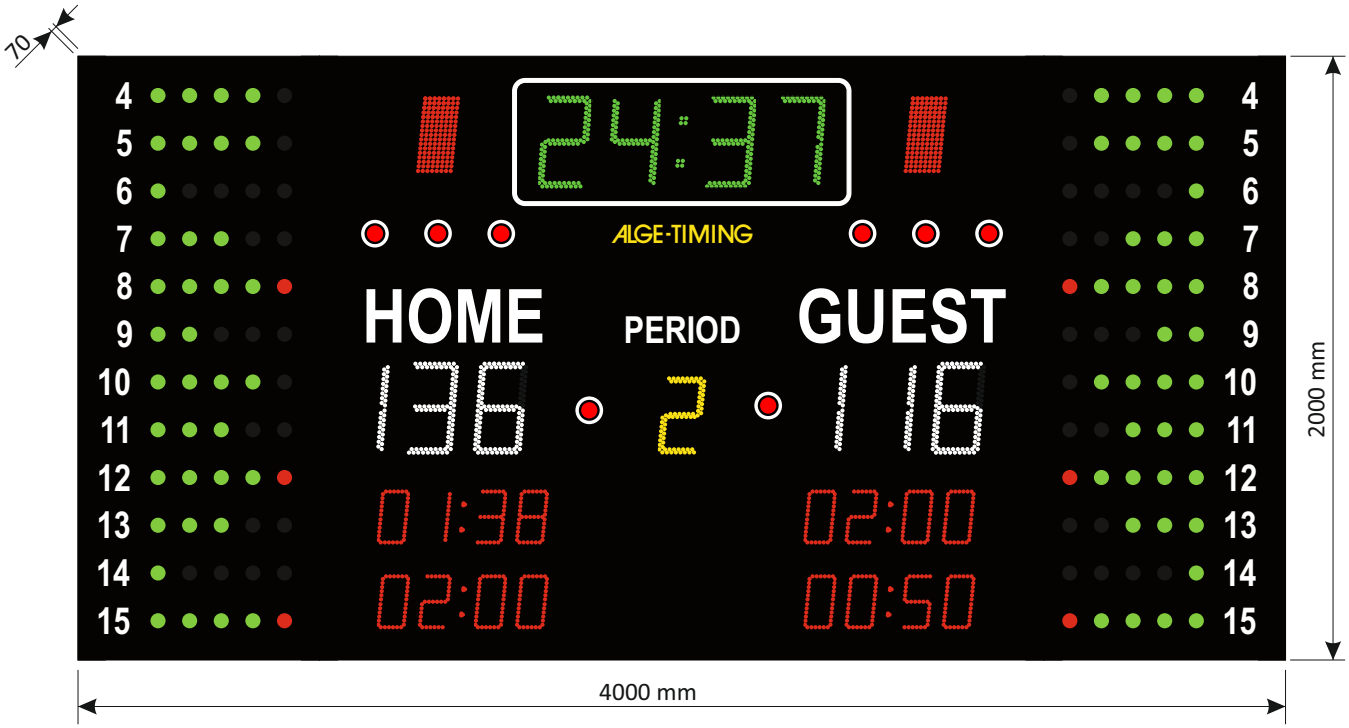
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L5S-FIB



Facts about the D-L5S-FIB Scoreboard

- three modules: middle section 2,400 x 2,000 mm, sides 2 x 800 x 2,000 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- scores: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- LED cluster: red LED cluster (4 cm diameter) for time-out, bonus, serve and/or ball possession
- penalties: 2 x 0 to 99:59 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

Type of Sport

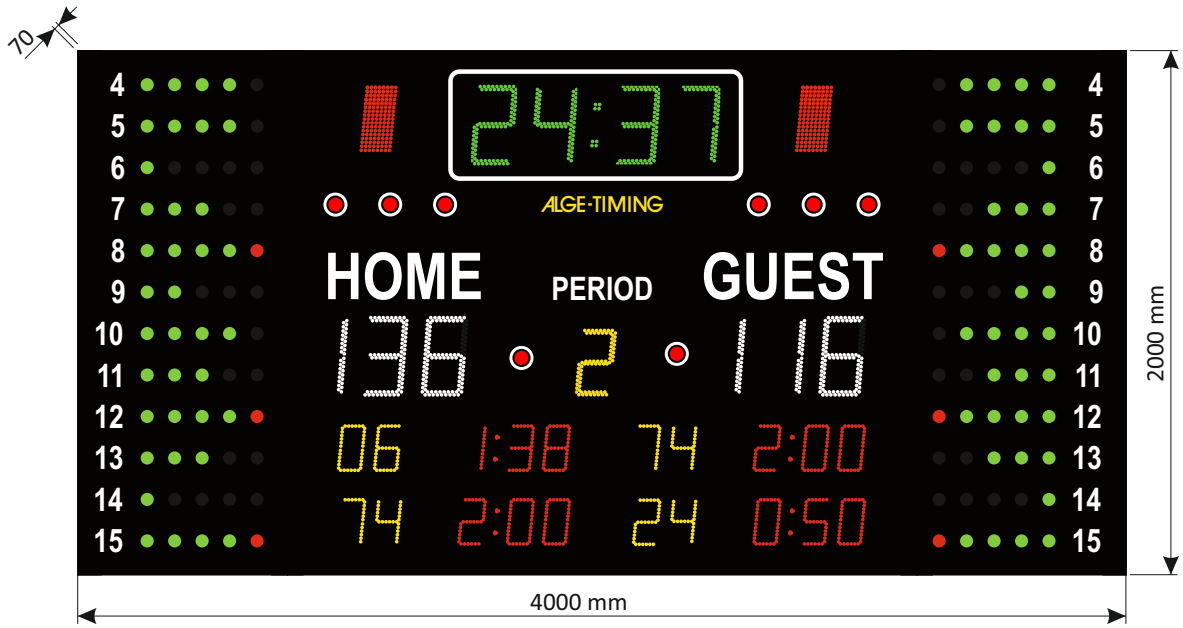
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L6S-FIB



Facts about the D-L6S-FIB Scoreboard

- three modules: middle section 2,400 x 2,000 mm, sides 2 x 800 x 2,000 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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

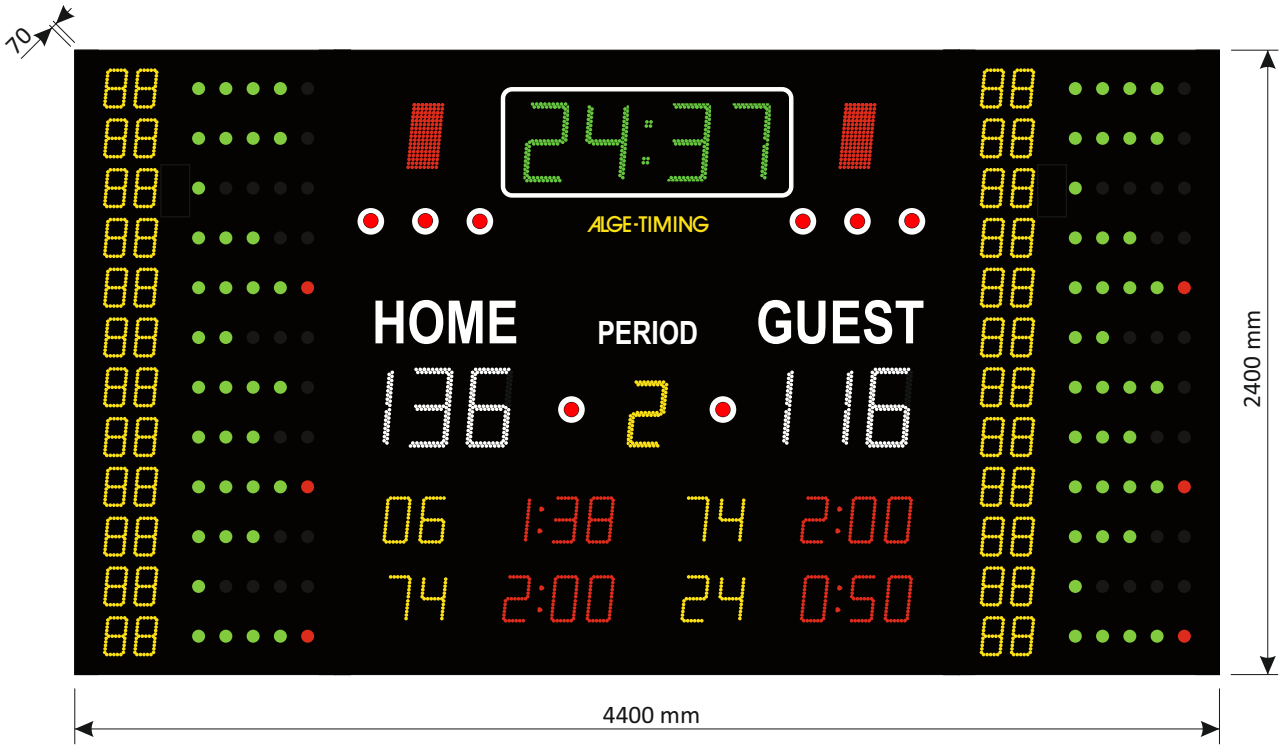
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L6SP-FIB



Facts about the D-L6SP-FIB Scoreboard

- three modules: middle section 2,400 x 2,400 mm, sides 2 x 1,000 x 2,400 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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

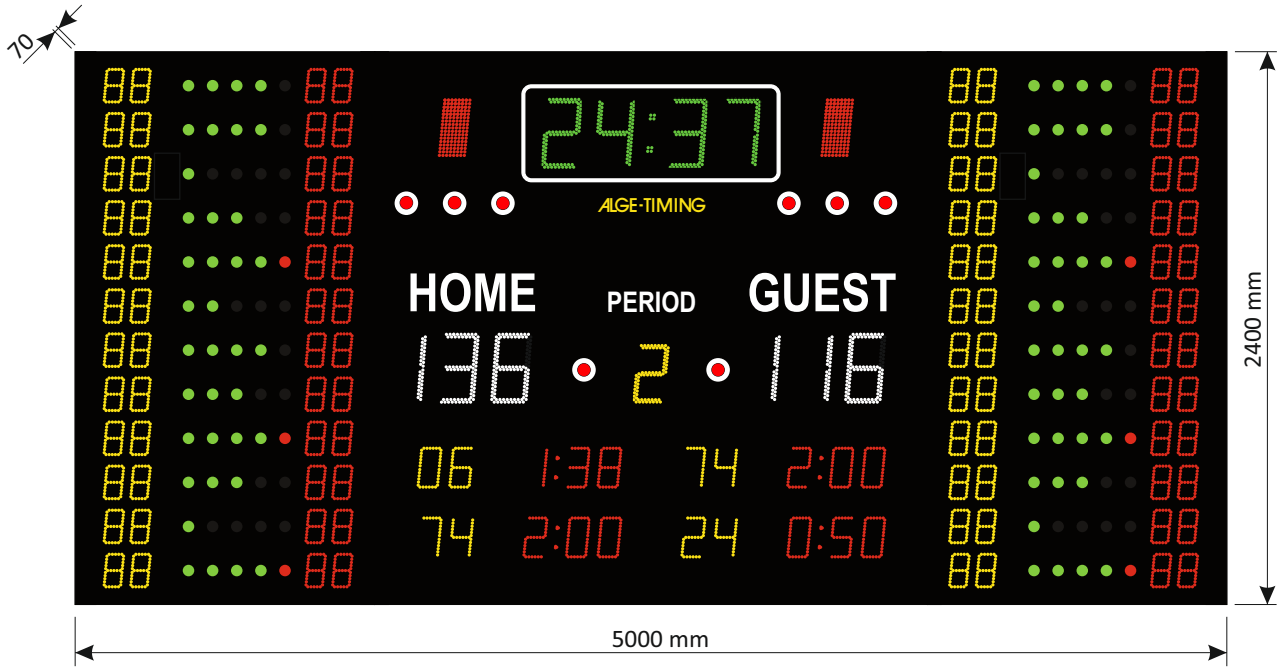
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L6SPP-FIB



Facts of the D-L6SPP-FIB Scoreboard

- three modules: middle section 2,400 x 2,400 mm, sides 2 x 1,300 x 2,400 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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

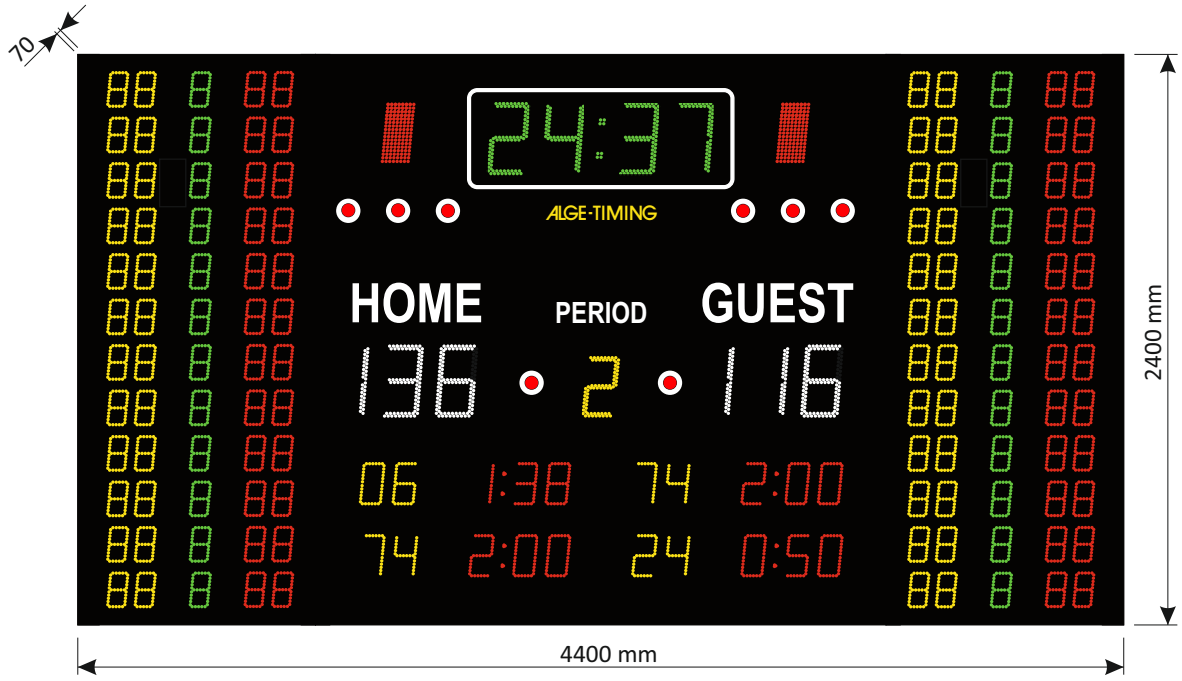
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-L6SPFP-FIB



Facts about the D-L6SPFP-FIB Scoreboard

- three modules: middle section 2,400 x 2,400 mm, sides 2 x 1,000 x 2,400 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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

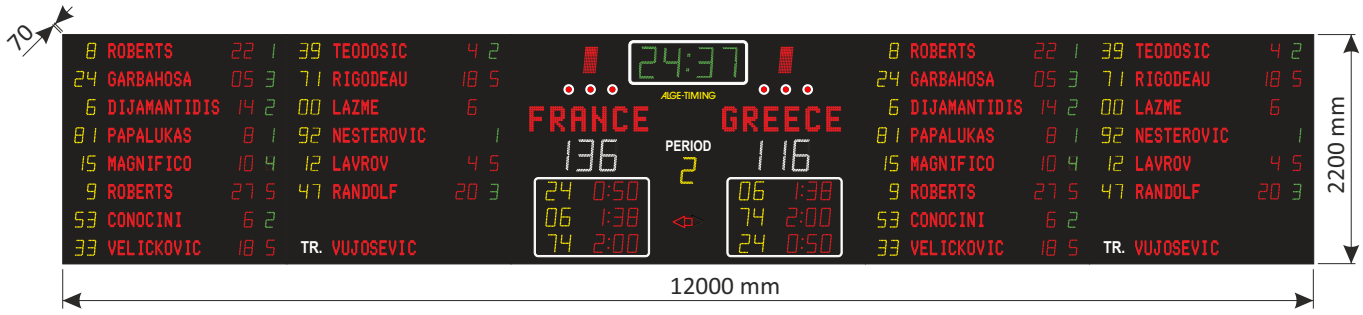
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-LS-BHV-H-FIB



Facts about the D-LS-BHV-H-FIB Scoreboard

- 5 modules: middle section 3,400 x 2,200 mm, sides 4 x 2,150 x 2,200 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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

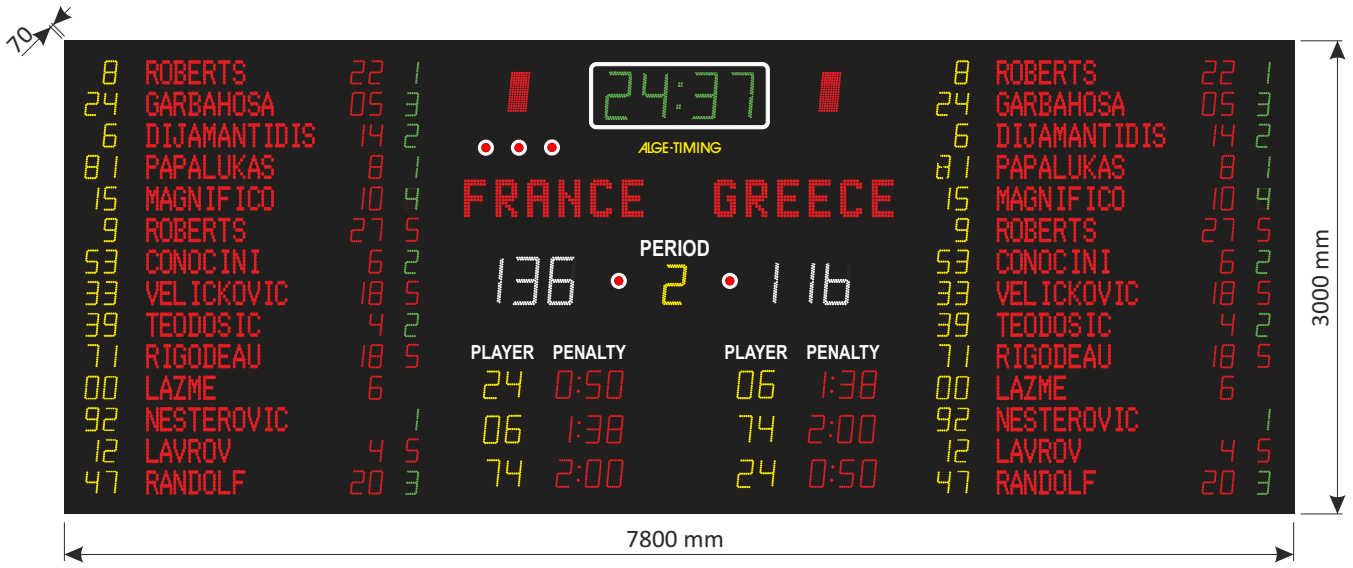
basketball, handball, volleyball, football, tennis, table tennis, etc.

Controller

D-CKN (standard) or D-CKN-WTN-A (option)

MULTISPORT SCOREBOARDS

D-LS-BHV-V-FIB



Facts about the D-LS-BHV-H-FIB Scoreboard

- three modules: middle section 3,000 x 3,000 mm, sides 2 x 2,400 x 3,000 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed in the game time field
- break time can be displayed in the game time field
- score: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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-FIB

Facts about the D-LS-FIB Scoreboard

- three modules: middle section 3,000 x 2,500 mm, sides 2 x 2,400 x 2,500 mm
- digits (LED) in four colours: red, green, white 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
- day time can be displayed on the game time field
- break time can be displayed on the game time field
- score: 0 to 199 for each team (white 30 cm digits)
- period: 0 to 9 (yellow 25 cm digit)
- team fouls: 0 to 9 for each team and full field (red 23 cm Matrix digit)
- 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

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 LED with Plexiglas front
- 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-SC25SD-PH

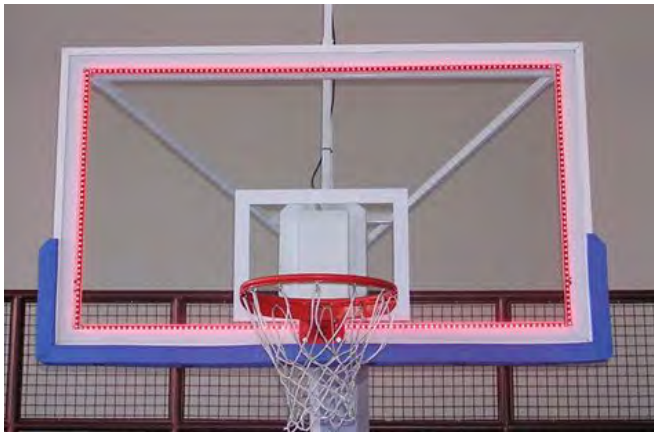
- shot clock: 0- 99 seconds (red digits, 25 cm)
- integrated piezo-electronic horn (approx. 100 dB)
- dimensions: 450 x 350 x 70 mm
- weight: 3 kg

Shot Clock D-SC25SFD-PH

- 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

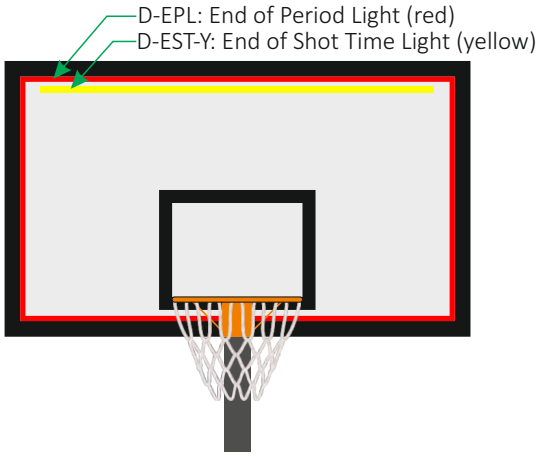
End of Period Light D-EPL2

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.

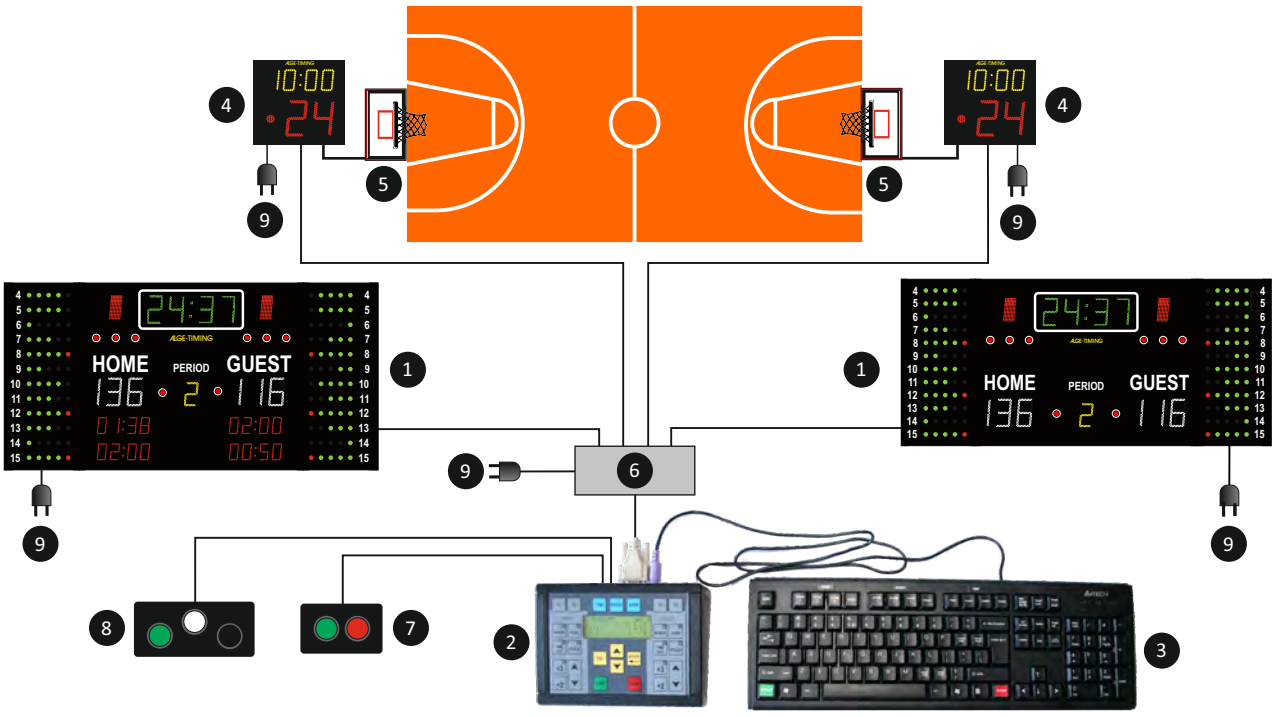


End of Shot Time Light D-EST-Y

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.



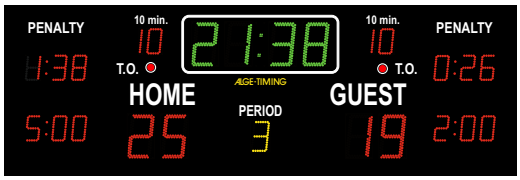
A system for basketball can consist of several Multisport Scoreboards, Shot Clocks, End of Period Lights D-EPL2 and End of Shot Time Lights D-EST-Y. The sketch below shows such a system.

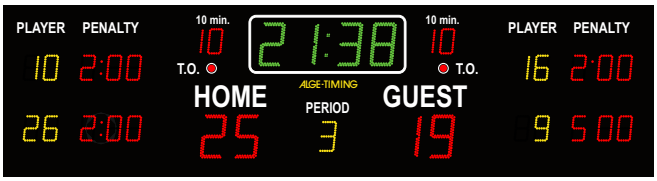


1 Multisport Scoreboard
2 Controller D-CKN
3 Keyboard
4 Shot Clock D-SC24SFD-PH
5 D-EPL and D-EST-Y
6 Connection Box
7 D-CKA2 (Start/Stop-keys / optional)
8 D-CKA3 (Shot Clock / optional)
9 Mains Power Supply

ICE HOCKEY

Scoreboard D-M5SH2H and D-M4SH2H





Ice Hockey Scoreboard for Indoor (D-M5SH2H) and Outdoor (D-M5SH2H-O)

- the display board consists of one module
- digits (LED) in three colours:
  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)

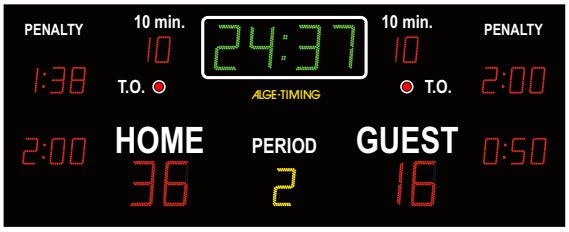
Ice Hockey Scoreboard for Indoor (D-M4SH2H) and Outdoor (D-M4SH2H-O)

- three modules: middle section 2,000 x 1,000 mm, sides 2 x 900 x 1,000 mm
- digits (LED) in three colours:
  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

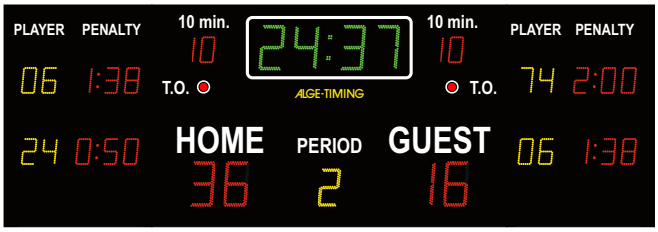
Scoreboard D-L5SH2H and D-L4SH2H



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 colours:
  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 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 colours: 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

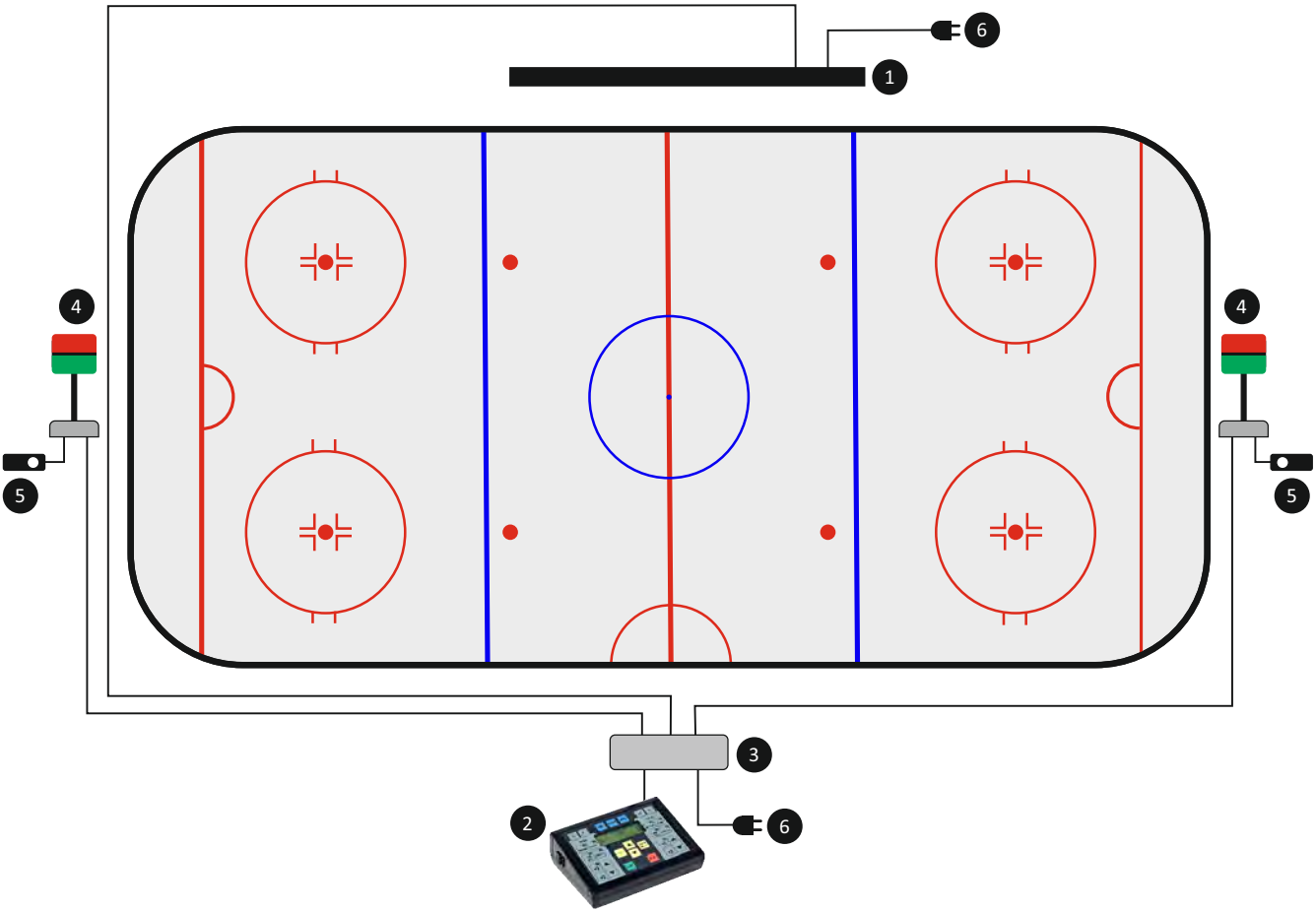
Controller: D-CKN (standard) or D-CKN-WTN-A (option)

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.

Sketch of the Setup for a Hockey Scoreboard with Goal Light:



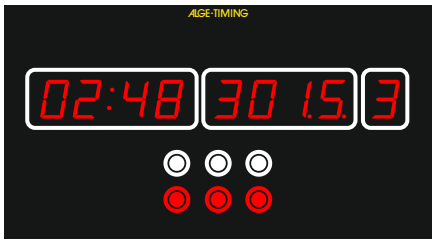
1 Ice Hockey Scoreboard	3 Connection Box	5 Judge Console
2 Controller D-CKN	4 Goal Light D-HGL	6 Mains Power Supply

ICE HOCKEY

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 centre 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

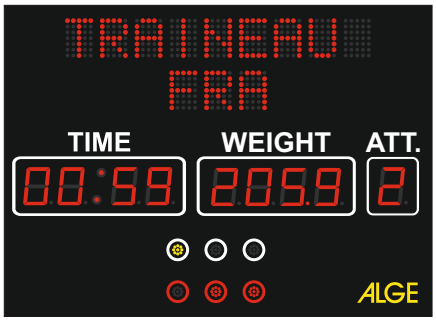
WEIGHTLIFTING



Model D-BVDT-S2

Attempt, Decision Light and Timer Board

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
Dimensions:	1,100 x 600 x 70 mm
Weight:	15 kg



Model D-BVDT-S1

Attempt, Decision Light and Timer Board

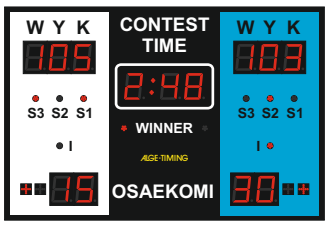
Time, weight, attempt:	100 mm LED digits
Contestant name:	100 mm caption height (nine letters)
Contestant country:	100 mm letter height (three letters)
Referees' light system:	6 LED clusters, with a diameter of 20 mm each
Caption:	digit height 60 mm (language can be selected)
Power supply:	100- 240 VAC
Dimensions:	1,100 x 800 x 70 mm
Weight:	20 kg

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

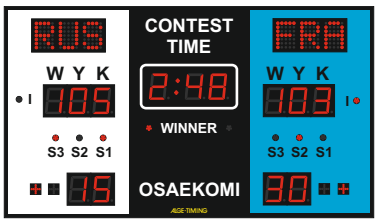
Controller
Standard controller (wired / standard) or controller with radio connection (standard) or (option)



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

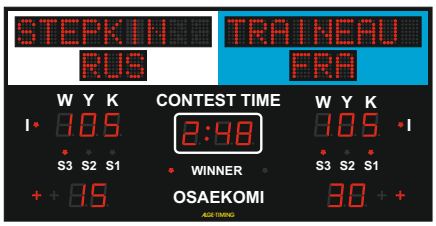
Display
- result (Wazari, Yuko, Koka): display in numbers
- contest time
- winner indicator light
- penalty indicator light (Keykoka, Cuji, Sido)
- ipon indicator lights



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)



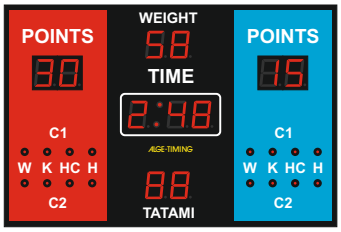
Model D-BVJ-T

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

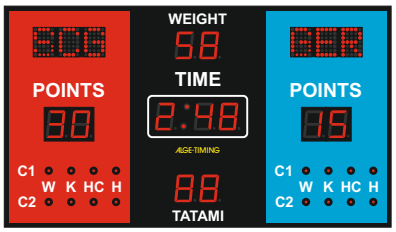
KARATE



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

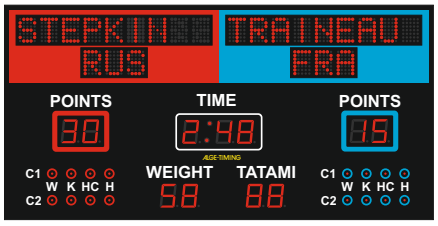
Display
- score (Shiro & Aka): display in numbers
- current time of round
- penalty point indicator lights
- weight display
- tatami display



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)

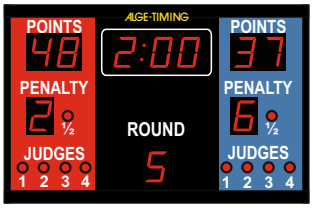


Model D-BVK-T

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)

TAEKWONDO



Model D-BVT-0

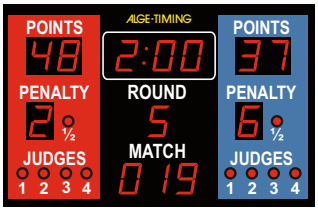
- digits: red LED, digit height 100 mm
- judges 1, 2, 3, 4 penalty ½: LED cluster, 20 mm diameter
- power supply: 110- 220 VAC- 50 Hz
- Display of all models
- red (Hong)- result in numbers
- blue (Chung)- result in numbers
- time of round
- round number
- full points deductions (gam-jeom)
- judge lights
- half point deduction (kyung-go) indicators
- dimensions: 1,000 x 650 x 70 mm
- weight: 13 kg

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

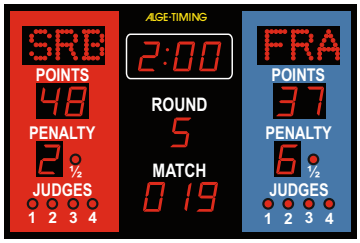


Model D-BAT

- all functions of model D-BVT-0
- additional match number
- dimensions: 1,000 x 650 x 70 mm
- weight: 13 kg

Options

- DS- double-sided scoreboard
- ST- stand with 4 wheels for mounting the scoreboard



Model D-BVT-CT

- all functions of model D-BVT
- additional match number
- nation (2 x 3 characters)
- dimensions: 1,200 x 800 x 70 mm
- weight: 20 kg

Model D-BVT-T

- all functions of model D-BVT-CT
- additional match number
- nation (2 x 3 characters)
- name (2 x 9 characters)
- dimensions: 1,800 x 900 x 70 mm
- weight: 40 kg

NOTES

NOTES

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