ALGE
TIMING

THE SPORTS TIMING EXPERTS

Motor Sports

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.

MOTOR SPORTS

Speed Measurement

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.

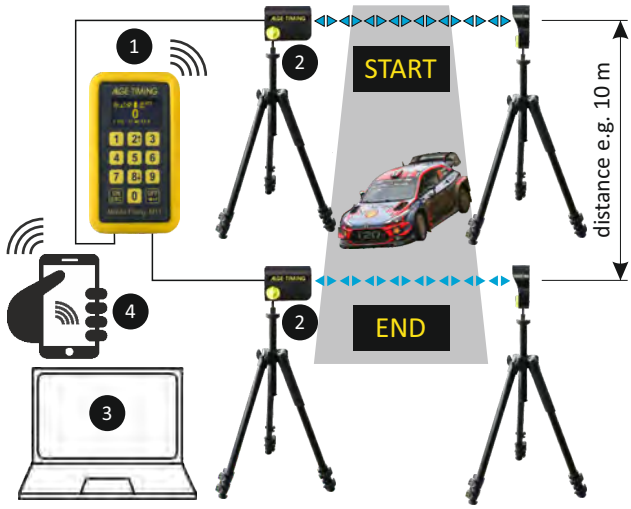
Speed Measurement with Timy3

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

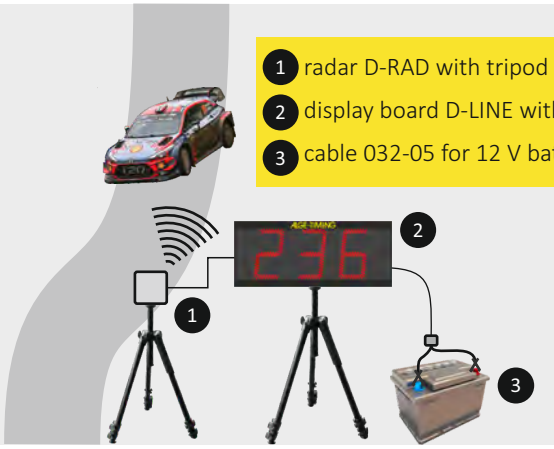
In addition to the timing device MT1, two photocells are required. The photocells are set up at a defined distance from one another (e.g. 10 m). The timing device MT1 then measures the start time and end time of the crossing car and forwards the times to the internet platform alge-results.com. The speed 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:

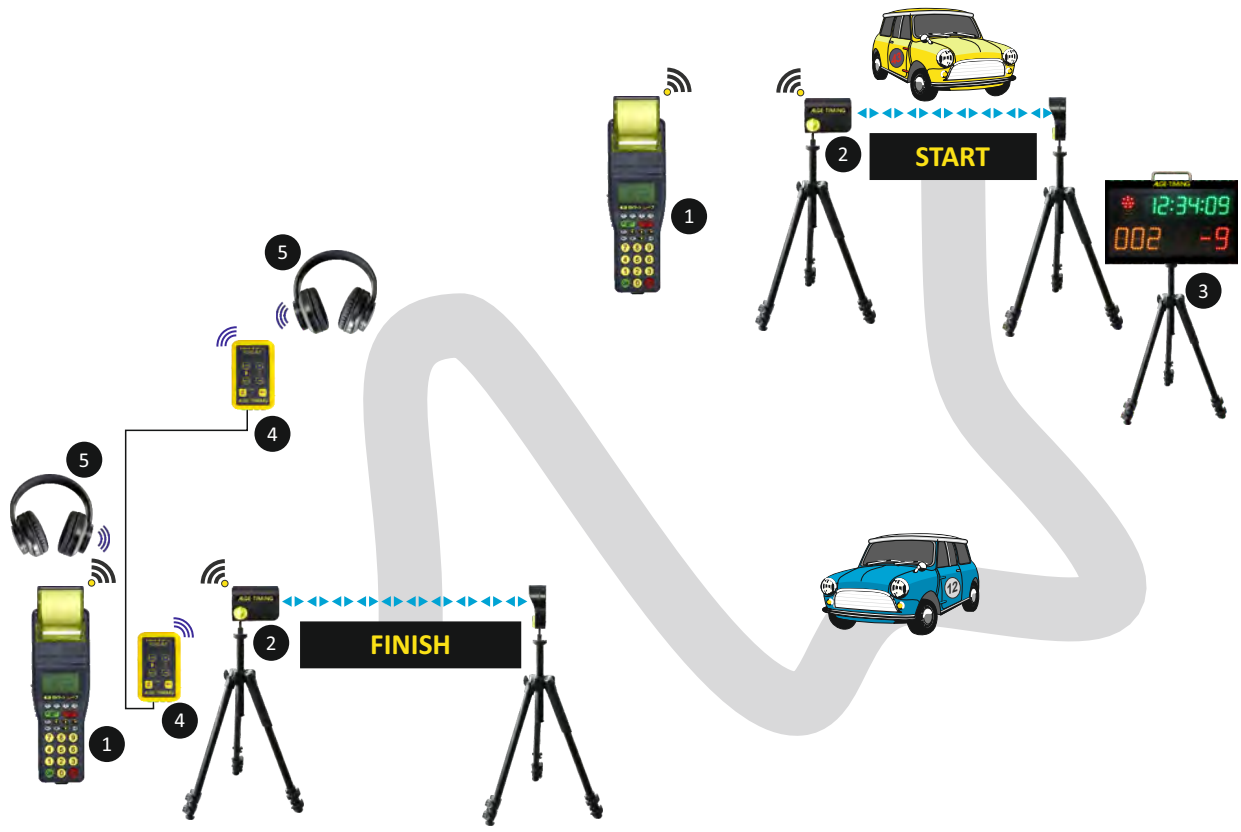
The timing for a rally stage needs a timing system that includes a Timy3 WP and a photocell for the start and for the finish. The times are stored in the memory of the timing device Timy3 WP and then subsequently loaded into a PC, which calculates the running times.

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 SV5-BT
5 Headset HS-BT1

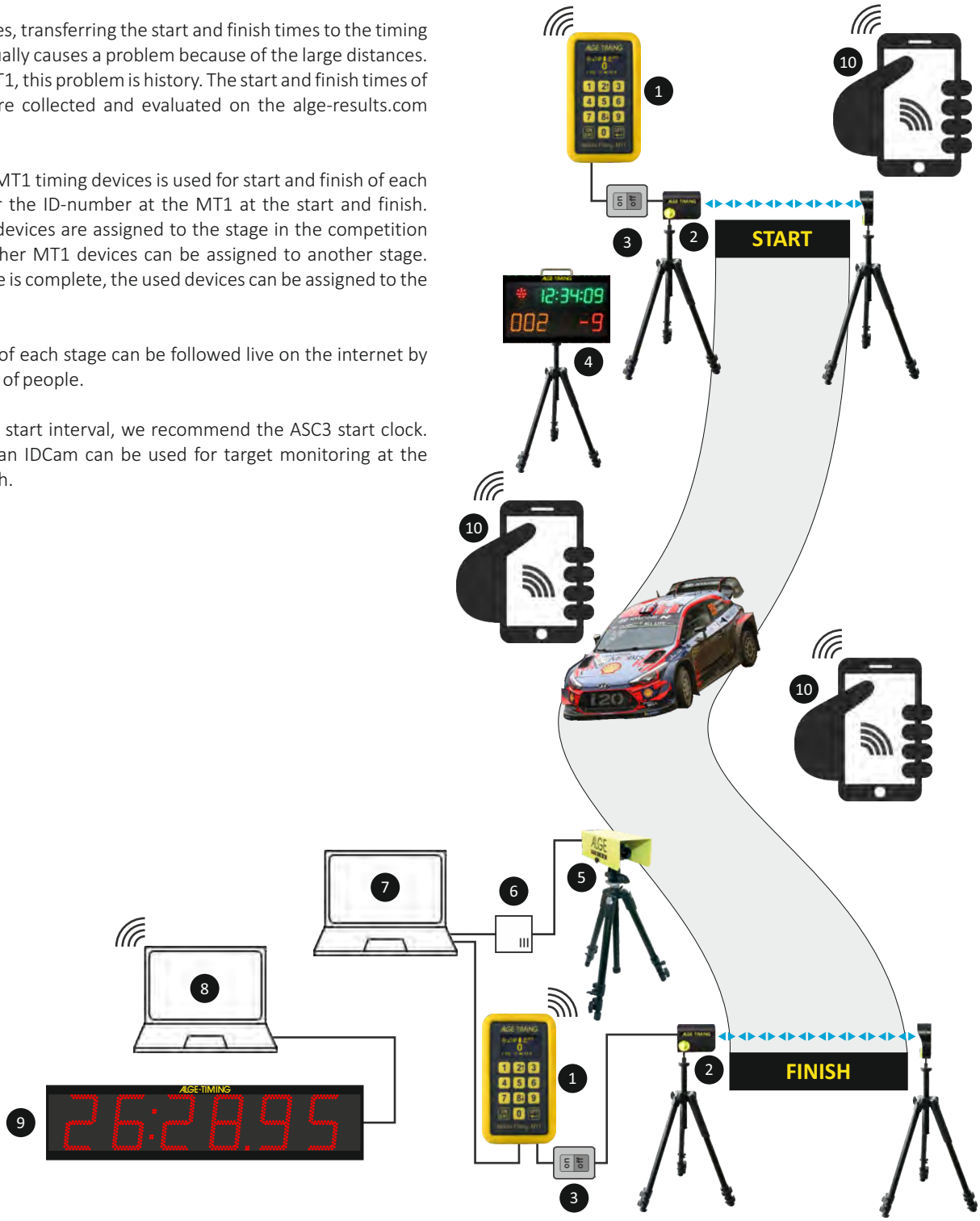
Timing system for Rally with Mobil Time MT1

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. mobil device for live results (mobile phone, tablet, ...)

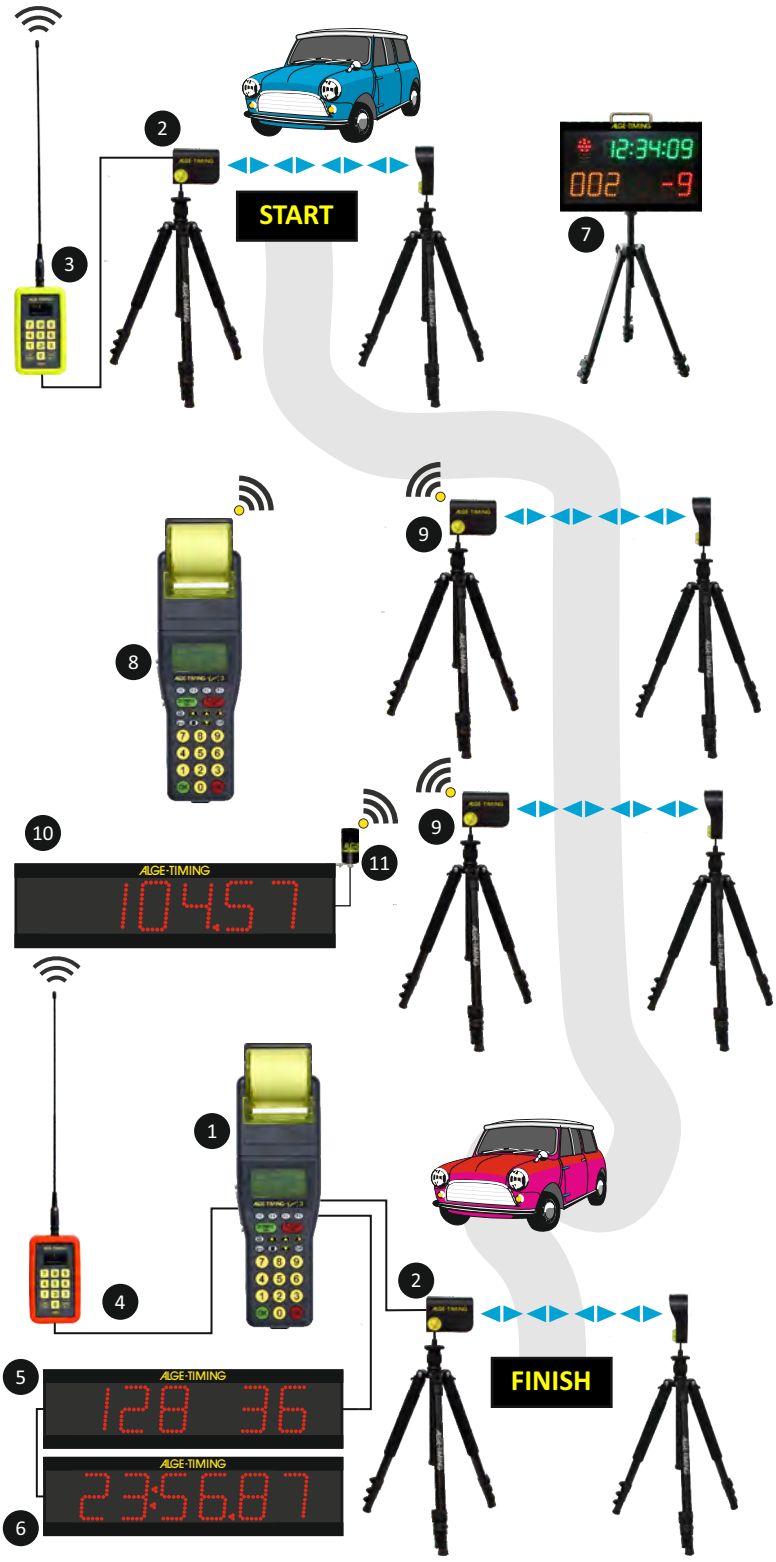
MOTOR SPORTS

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. Potocell 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

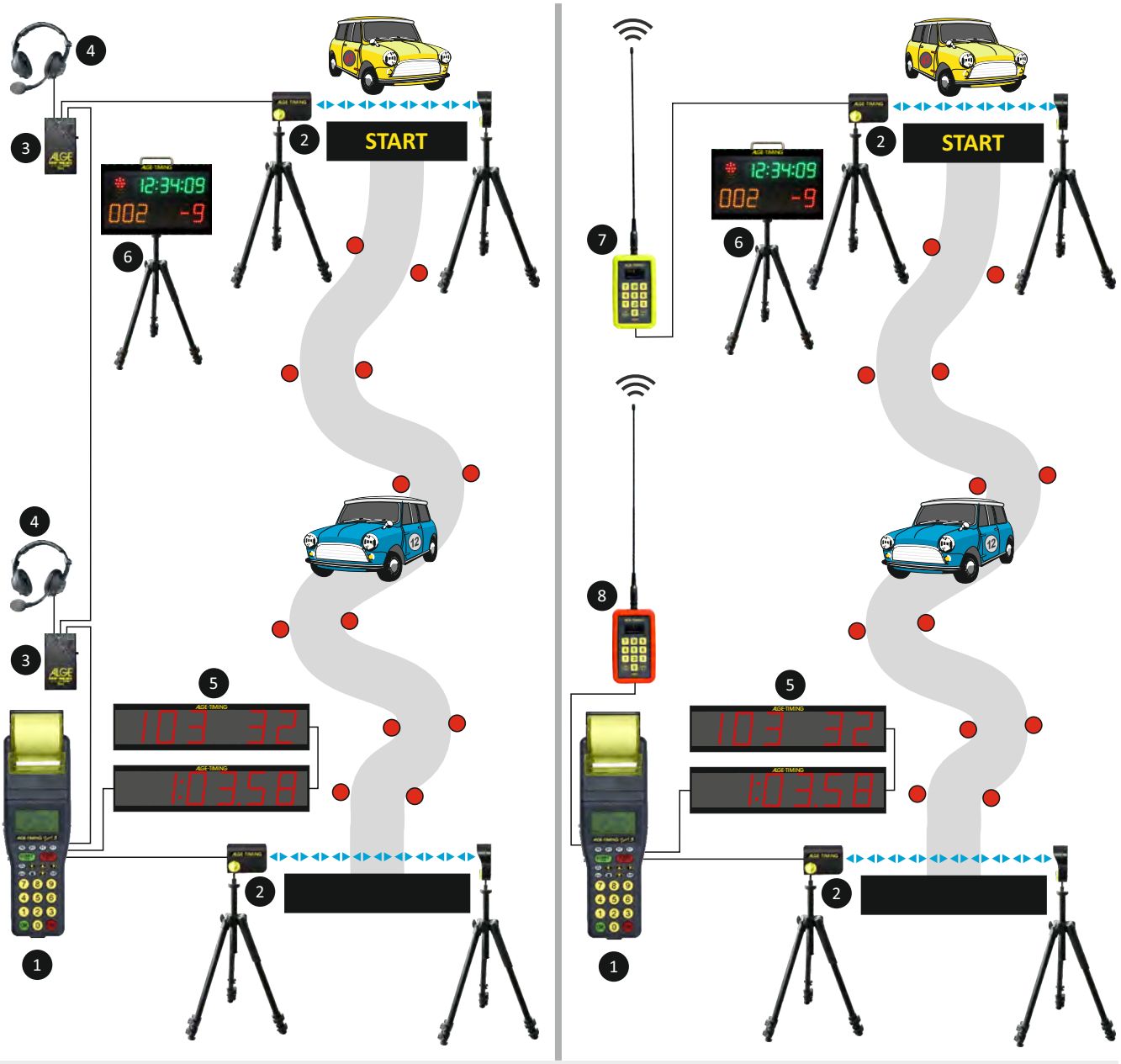
Car Slalom and Mountain Racing

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 Startclock 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 Teledatea TED2-TX
8 Teledata TED2-RX

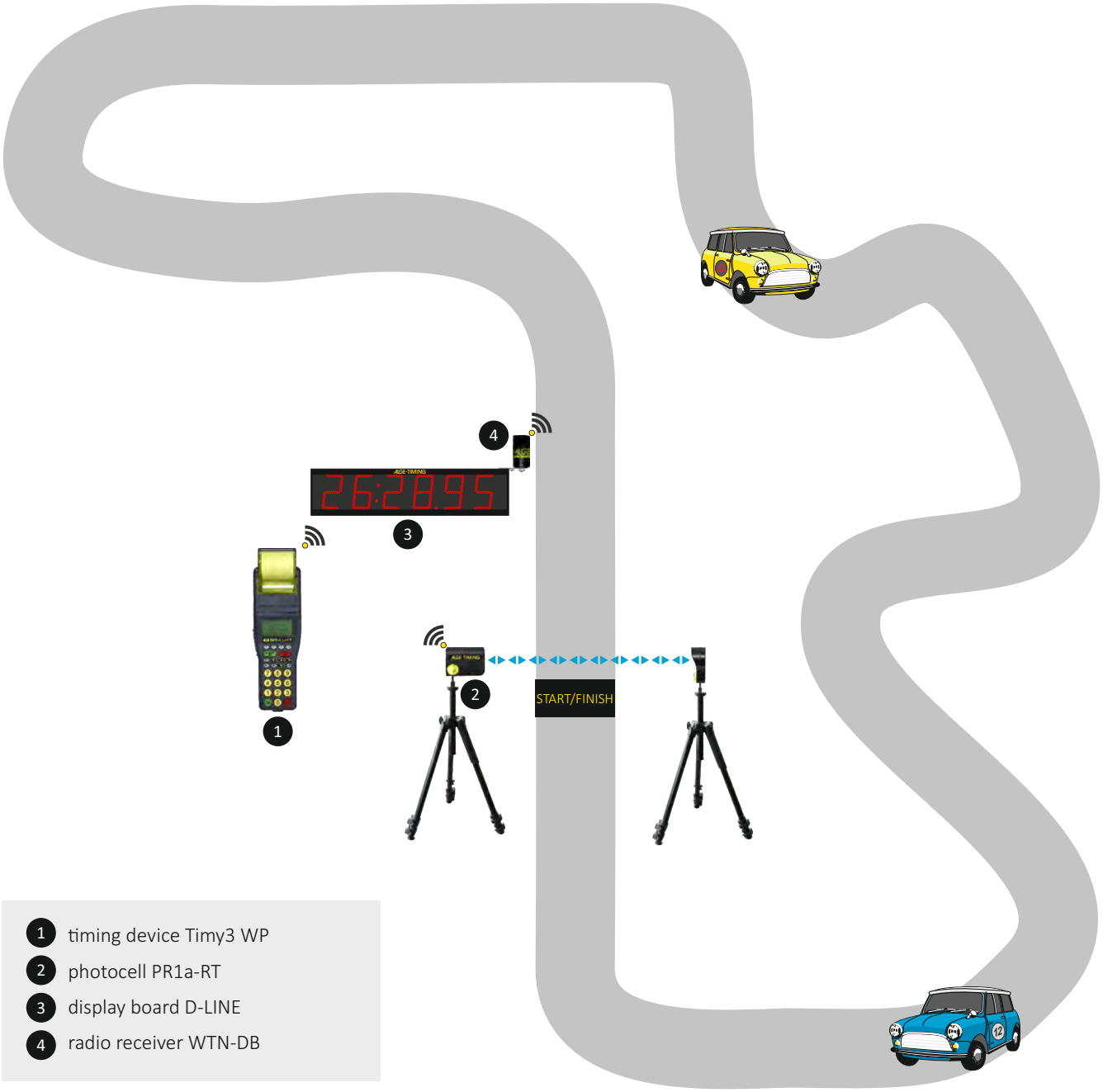
MOTOR SPORTS
Circuit and Training

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.

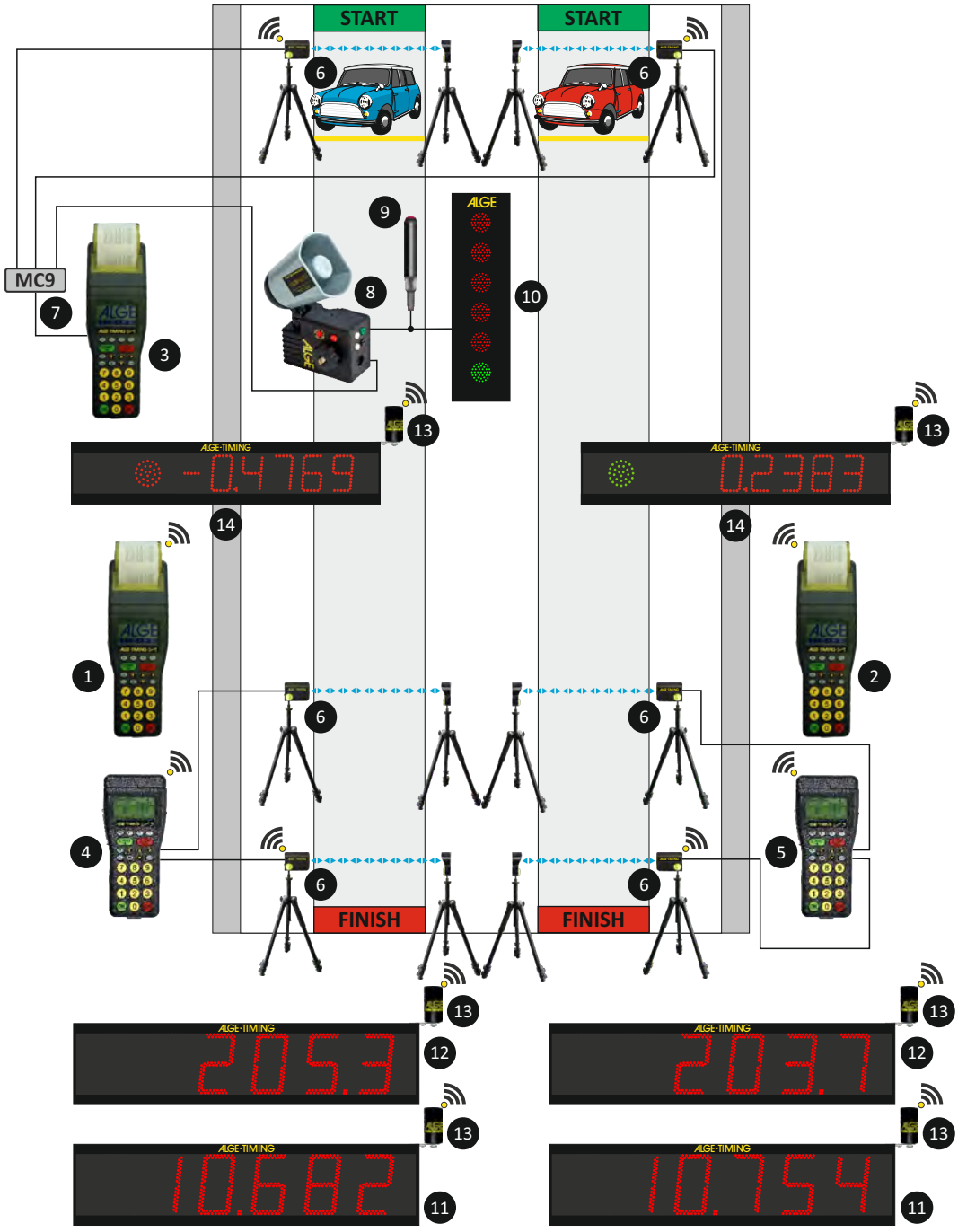
If there is only one car on the track, the ID-number is only entered once before the start. After that, no further operation is necessary. The timing system can be set up with cable or radio. With the cable solution, the photocell and display board are connected to the timing device by cable. No cables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

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 multi channel 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

TIMING DEVICES

Photo Finish OPTIc3

The photo finish system OPTIc3 takes over the technical market leadership. It has a recording rate of up to 30,000 frames per second (fps) and up to 2,016 vertical pixels. This makes it the 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+ or10.6 - 13.4 VDC
temperature range:	-20 °C to +50 °C

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

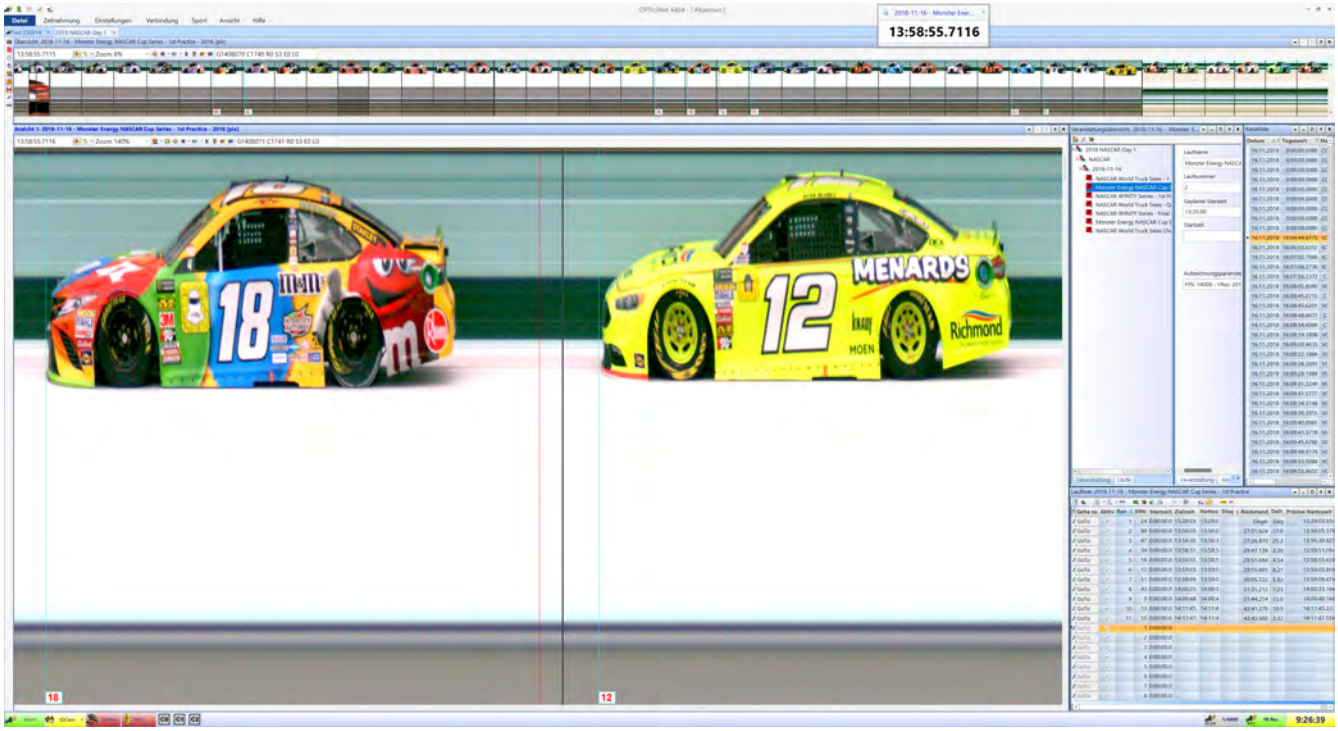
Automatic Iris Adjustment
With the motor zoom of ALGE-TIMING you can access functions such as autofocus and automatic iris adjustment.

Live View
The camera image can be viewed via WiFi on a mobile phone or tablet. This allows to adjust the lens of an OPTIc3 camera that is placed far away from a PC and has no motor zoom in an easy, fast and precise way.

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

High-Speed Camera with 2-D Images
With 2-D mode with 100 Hz (100 fps) and full-screen mode, the OPTIc3-PRO is ideal for sports such as swimming and rowing. Since the OPTIc3 has a built-in timing device, exactly synchronized 100 frames per second can be guaranteed.

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



The photo finish system OPTIc3 is available in two versions

OPTIc3 Basic System

photo finish system for the small budget

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

OPTIc3-PRO

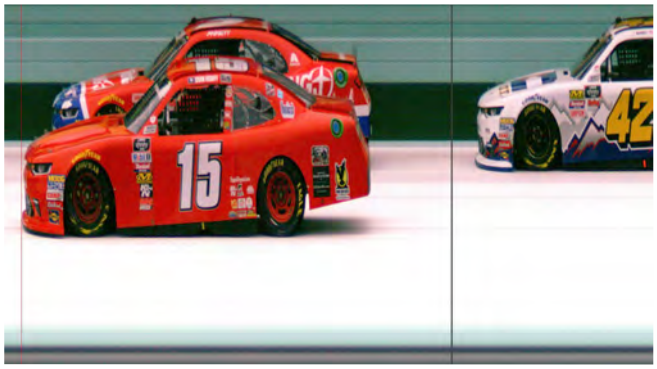
The professional photo finish system that leaves nothing to be desired. The following features are integrated:

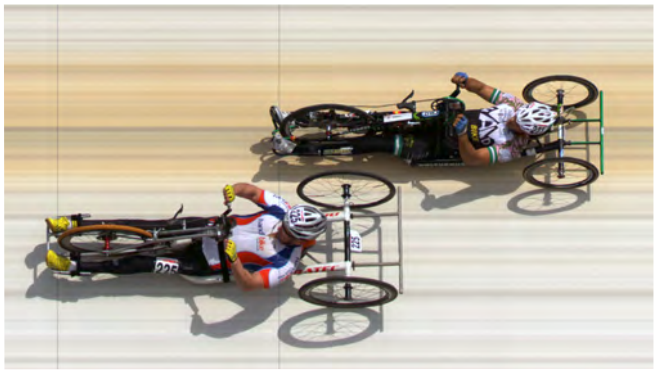
- high-speed recording: up to 30,000 fps
- high resolution: 2,016 pixels vertical resolution (48 % more than OPTIc2)
- 2-D image preview to set and adjust the camera
- eXtremLuX: various technologies for image improvement under bad light conditions
- motion detection: automatic recording with motion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

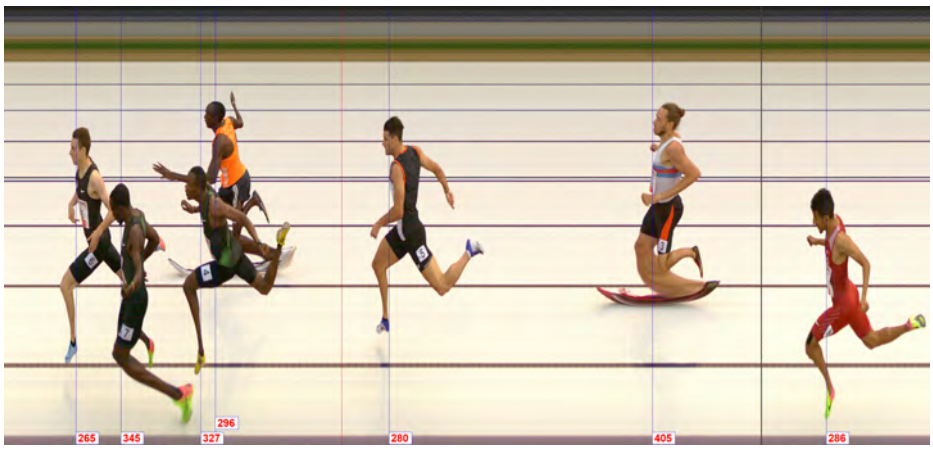
TIMING DEVICES

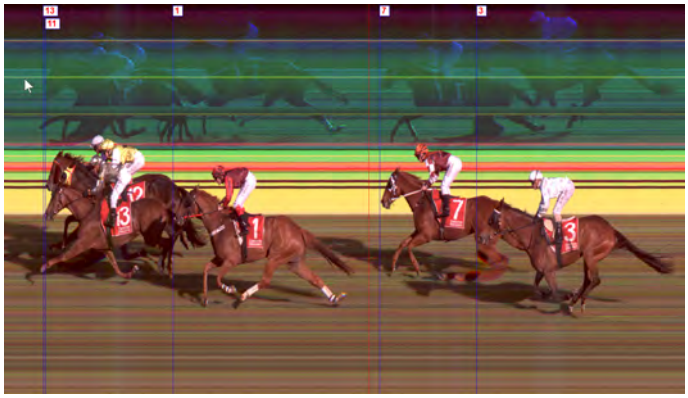
Photo Finish OPTIc3

The OPTIc3 is used for sports where several participants reach the finish at the same time. In addition, the OPTIc3 is the ideal de-vice to monitor the finish arrival. When discussing a result, the picture of the OPTIc3 shows the proof. Here the saying is true “a picture is worth a thousand words”.









Sports:

- Athletics
- Cycling
- Horse Racing
- Motorsport
- Rowing
- Canoe
- Dragonboat
- Inline Skating
- Snowboard
- Ski Cross
- Alpine Skiing
- Cross Country Skiing
- Biathlon
- Short Track
- Speed Skating

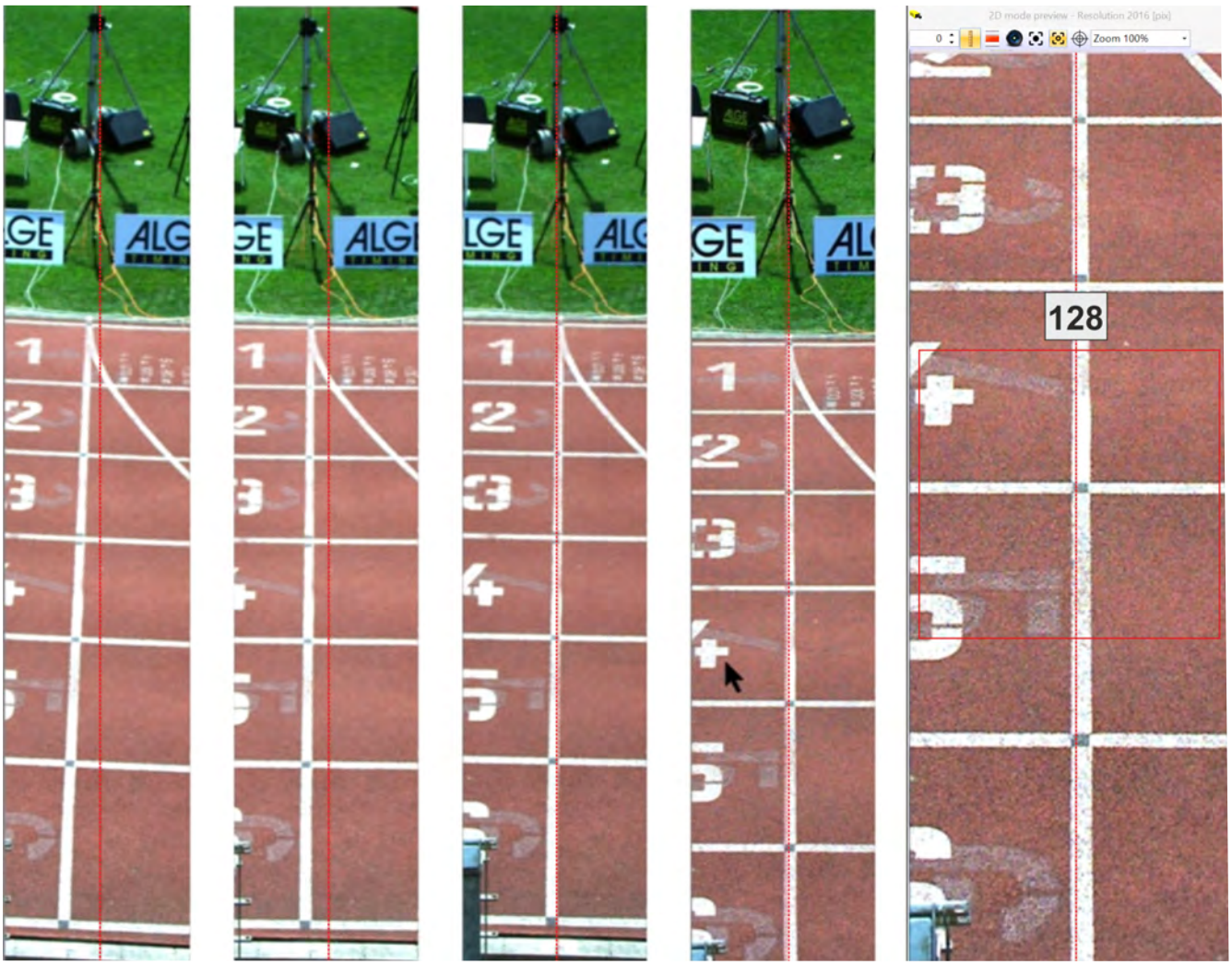
Special Solutions:

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

Easy camera setting in 2-D mode

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

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



TIMING DEVICES

Photo Finish OPTIc3

The photo finish system OPTIc3 can be extended as desired with practical accessories or equipped for specific requirements of sport events. In addition to the standard accessories, there are also unique special solutions that can be customized.

Zoom Lens Z75
manual zoom lens
C-Mount 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

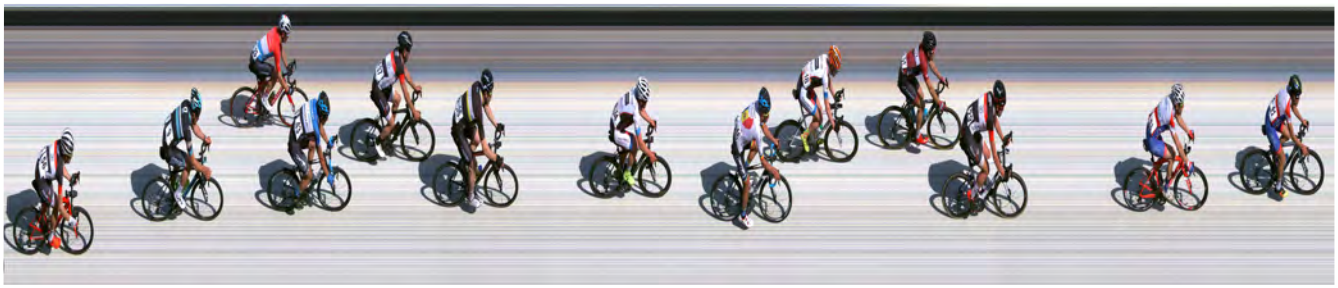
Cable Reel KT-RJ45G90
cable reel with 90 m CAT6 Ethernet cable for the OPTIc3 (with this cable, the POE can also feed the camera)

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)



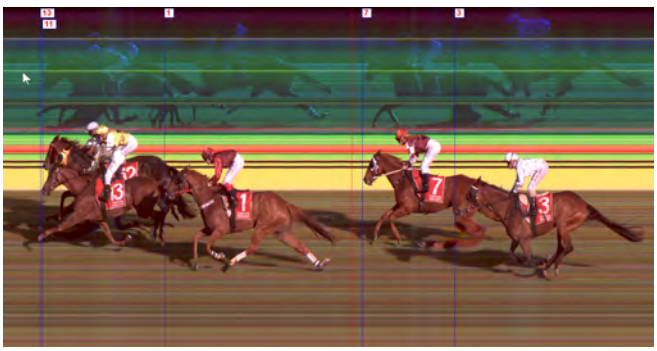
TIMING DEVICES

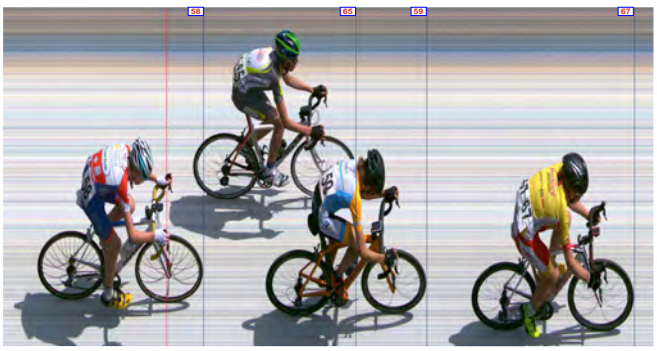
Photo Finish OPTIc3

Technical Data	OPTIc3	OPTIc3-PRO
Pixel (vertical):	1360 pixel	2016 pixel
Recording Speed (fps):	100 - 3,000 fps	100 - 30,000 fps
Voice over IP (VoIP):	optional	yes
Light Amplification eXtremLux:	optional	yes
Line Doubling:	optional	yes
Wireless Timing Network:	optional	yes
High Speed Video (100 pictures per second)	optional	yes
Sensor Type:	CMOS	
Time Base:	temperature compensated quartz 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 (10.6- 13.4 VDC)	
Tripod Thread:	3/8 inch	
Operating Temperature:	-20 to 50 °C	
Measurements (excluding lens):	180 x 120 x 80 mm (L x W x H)	
Weight (excluding lens):	1.5 kg	

Connections

2 x start input (banana socket)
1 x 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)





TIMING DEVICES

Timy3

The ALGE-TIMING Timy3 is a compact ti ming 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 soft ware. 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 fora display board, an RS232 and an RS485 interface.

Display
The Timy3 has a monochrome LCD graphic display with 128 x 64 pixels and back light. 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 ti me of day basis and records it with an accuracy of 1/10,000 seconds. That means that calculated net times of a precision of 1/1,000 seconds are exactly calculated. Highest accuracy at any temperature is guaranteed by a temperature-compensated quartz.

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

Memory
Approximately 30,000 times can be stored with the corresponding bib and timing channels. The soft ware is stored in a flash memory. Updates of the soft-ware 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.

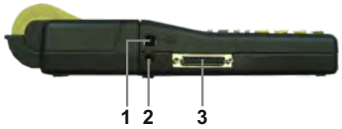
Radio Network - Wireless Timing Network WTN
An integrated WTN module allows to communicate with all devices of the WTN series (WTN wireless radio, WTN-PB wireless push butt on, PR1aW photocell, WTN-DB and Windspeed WTN-WS score-board). For example it is possible to connect two Timy3 and use one for the start and the other for the finish.

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.

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

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.

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.

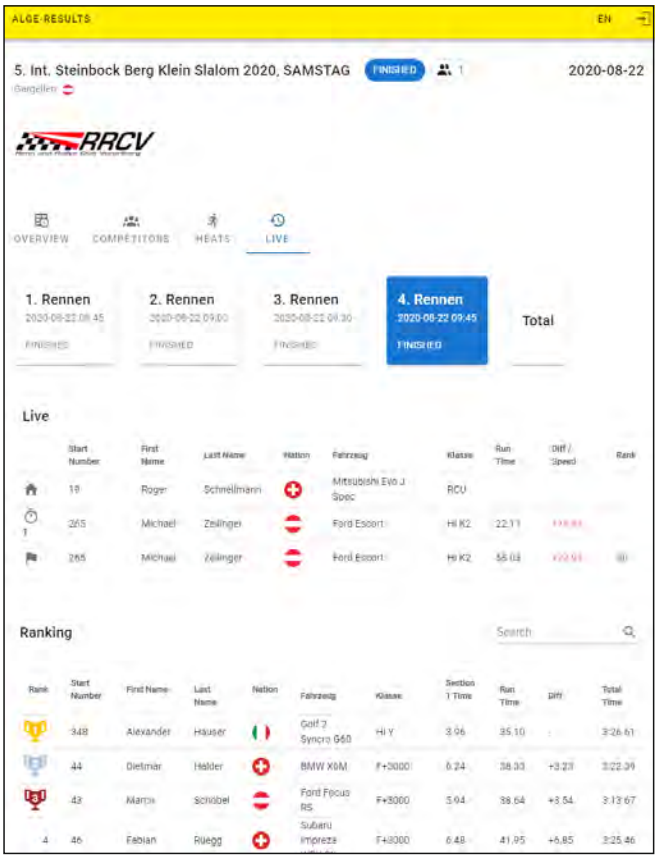
When creating a competition, you decide whether the participants register online for their competition on alge-results.com or whether the registration is carried out by the timer.

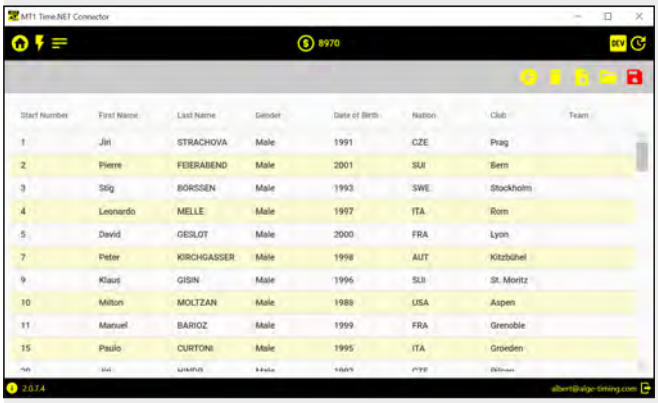
The timing setup can be adjusted for each competition. There you assign the corresponding function to the respective device and timing channel.

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

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

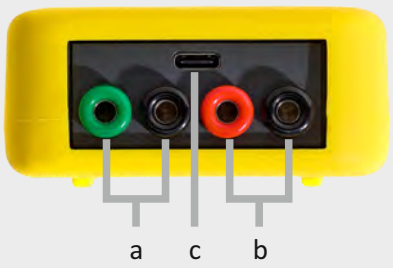
- Standard mode with an extra-large display for the start number
- Scroll mode: all times at a glance
- Memo mode: Subsequent entry of the start number after crossing the finish line
- Synchronization output: With the high-precision pulse output, you can synchronize other devices to an exact time.
-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

IDCam

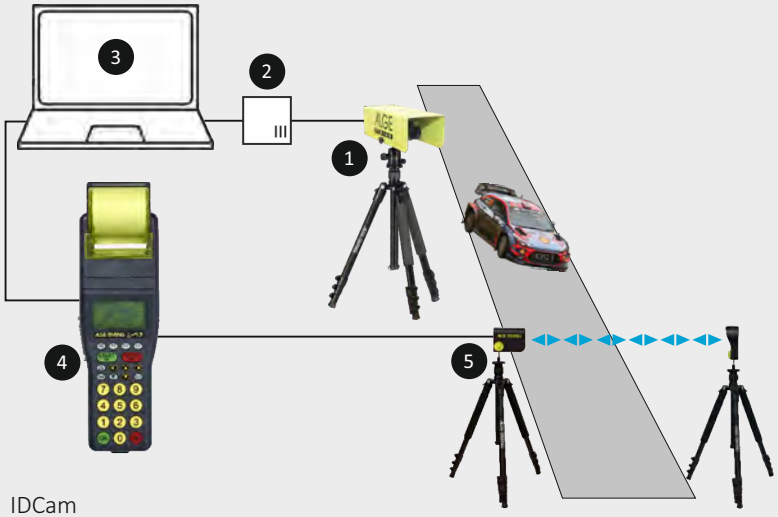
The IDCam is a reliable and simple way to monitor the finish line. When an athlete crosses the finish line a series of high resolution pictures is taken and stored on the PC with the time of the day for each image.

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

START DEVICES

Startclock ASC3c3

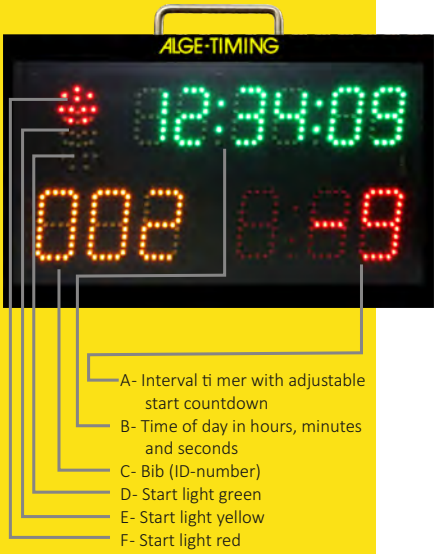
The Startclock ASC3 is an important device for the professional handling of the start. It is equipped with the latest LED technology and provides accurate start information for the participants and start judge. The ASC3 is optimally readable a daytime or night. The battery-driven Startclock ASC3 is used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

IMPULSE DEVICES

Photocell PR1a and PR1aW

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

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

Photocell PR1a

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

Photocells PR1aW

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

Additional Functions

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

Photocell Sets

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

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

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

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

Radio Reflection Photocell PR1aW-R (like PR1a-R, but with radio)
Scope of delivery: 1 x PR1aW, 1 x PR1a-REF, 2 x BBG

Radio Reflection Photocell PR1aW-RT (like PR1a-RT, but with radio)
Scope of delivery: 1 x PR1aW, 1 x PR1a, 2 x TRI128

Radio Through-Beam Photocell PR1aW-dT (like PR1a-dT, but with radio)
Scope of delivery: 1 x PR1aW, 1 x PR1a, 2 x TRI128

Photocell PR1a

Radio Photocell PR1aW

Technical Data

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

IMPULSE DEVICES

Photocell PR1a and PR1aW / 023-XX / 300-01 / FLASH XL

Photocell Accessory:

Reflector PR1a-REF
standard reflector for photocells PR1a and PR1aW

Reflector REF-L
simple reflector for photocell PR1a and PR1W

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

Case KL-PR1a
for the photocell and reflector including tripods TRI128

Case KS-PR1
for photocells PR1a and PR1aW and other accessories

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

Accessory

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.

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.

FLASH XL
The starting flash light FLASH XL is an optical start device that can additionally be used with acoustic starting devices. 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.

CABLES & ADAPTER

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

Headset HS-BT1
Bluetooth headset with headphones on both sides and a microphone as well as good sound insulation for the SV5-BT speech amplifier

Speech amplifier SV5-BT
with two connectors for two-wire connection cable, volume control and on/off switch for microphone. Can be paired with most Bluetooth headsets

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

Multichannel MC9
Channel expansion for the Timy3 with 9 pairs of banana jacks (impulse channel 0, 1, 2, 3, 4, 5, 6, 7 and 8) and RS232/RS485 socket

Timy Docking Station TIDO
Extension for the Timy3 with integrated speech amplifier and the following con-nections:
4 x DIN sockets for photocells, multiport socket, socket for RS232, socket for the headset, 9 x banana sockets for timing channels

Printer P5
The P5 is a fast and quiet thermal printer with a wide temperature range (-20 °C to +50 °C). The power is supplied by the timing device or the PS12A.

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

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

Tripods
Tripods of various heights and with different load carrying capacities
- TRIMAN: professional camera tripod max. height 2.4 m, max. load 12 kg
- TRI-PRO: professional camera tripod max. height 2.67 m, max. load 20 kg
- STATIV6: professional camera tripod max. height 3.66 m, max. load 34 kg
- TRI128: professional tripod, max. height 132 cm, max. load 5 kg

Cables
a wide selection of cables for different use in various lengths is available for 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

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

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

Carrying Bag for Display Boards
Carrying Bags for GAZ5 and D-LINE display boards
- GTT15: digit height 15 cm and 6-digit
- GTT25: digit height of 25 cm and 6-digit

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.

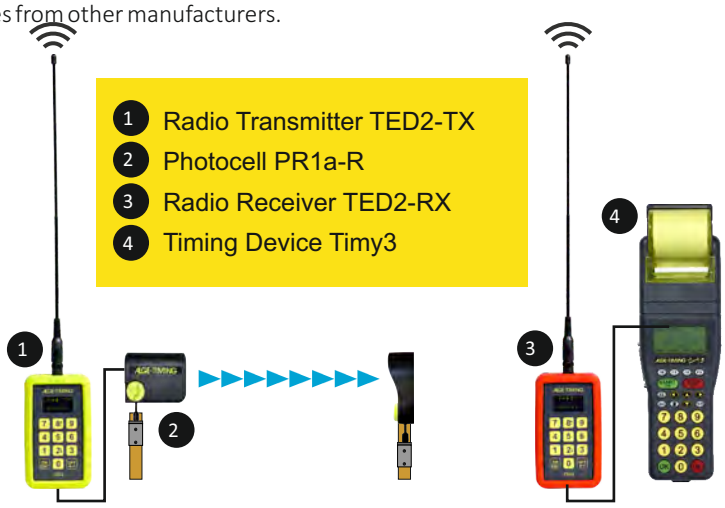
The radio transmits in the 433 MHz band. The radio frequency and radio power can be set by the operator. This TED2 allows distances of up to 4.5 km to be bridged by radio.

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.

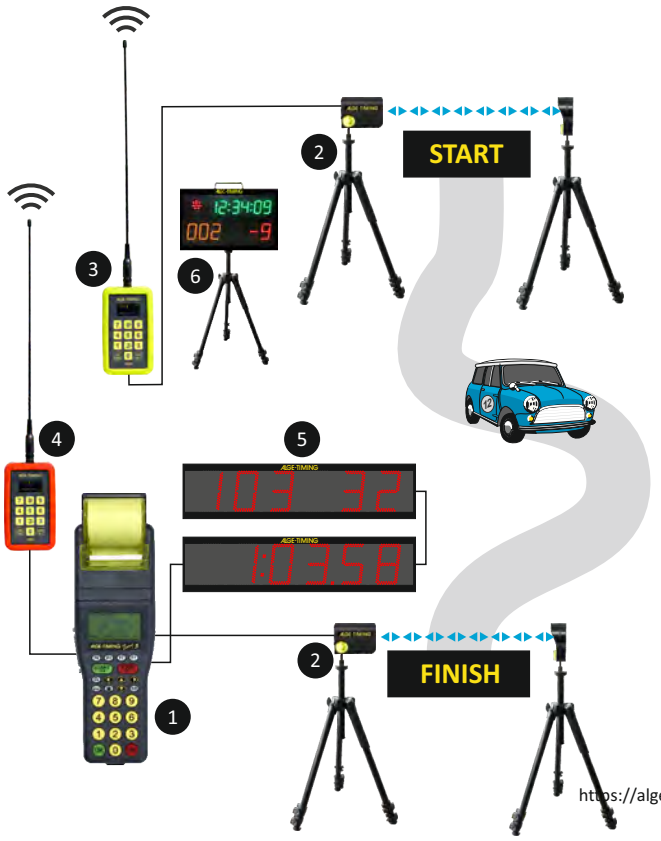


Facts about the TED2

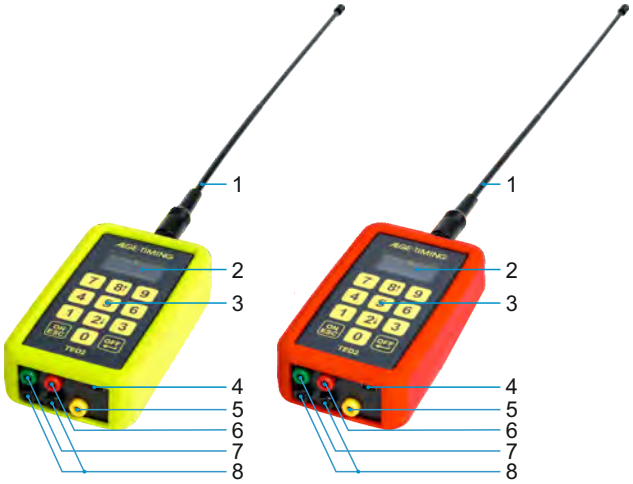
- radio system with integrated accurate timing device
- TED2 stores up to 7000 time stamps
- automatic synchronization via GPS
- transmission of "time stamps" or timing pulses
- display and keyboard for easy operation
- up to 10 different “timing stamps” can be transmitted
- simultaneous reception of 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 conectior for printer or other devices

RADIO DEVICES

Teledata TED2

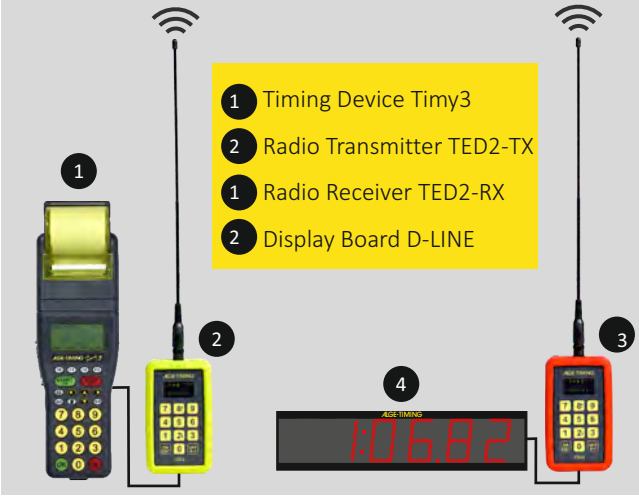


1 Timing Device Timy3 WP
2 Photocell PR1a-RT
3 Teledata TED2-TX
4 Teledata TED2-RX
5 Display Board D-LINE
6 Start Clock ASC3



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

Data Transmission to Display Boards D-LINE



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

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, alterative 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 Typ 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

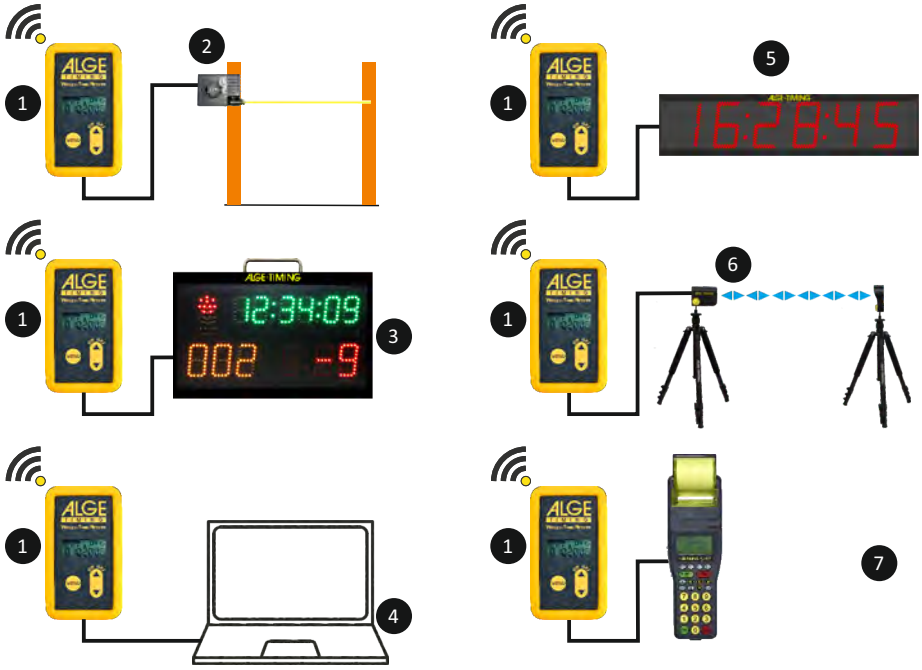
RADIO DEVICES

Wireless Timing Network WTN

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

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

Examples for the use of the Wireless Timing Network WTN

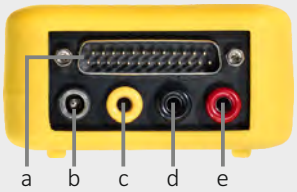


1 WTN
2 Startgate STSn*
3 Startclock ASC3
4 PC for Timing or Results
5 Display Board**
6 Photocell*
7 Timing Device***

* 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, im-pulse 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.

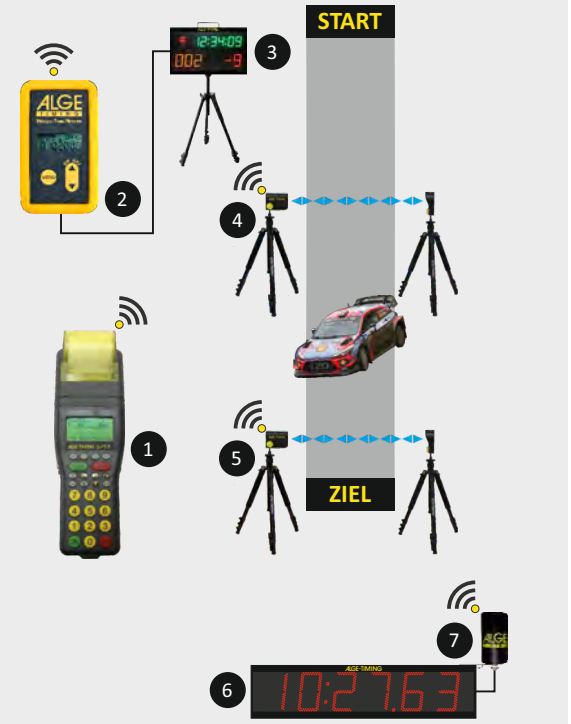
Wireless Timing Network manual push but-ton WTN-PB

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 is receiving the display board data from the WTN network and sending them via serial interface to the display board.It is supplied directly from the display.



1. timing device Timy3 WP
2. Wireless Timing Network WTN
3. startclock ASC3 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)

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

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

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.

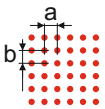
The lightweight, rugged aluminum housing allows easy transportation of the scoreboard. The outdoor version is easily readable even in direct sunlight. If it is used at night or on rainy days in difficult light conditions, the brightness can be adjusted in 100 levels.

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

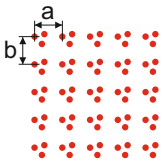
Pixel Arrangements:

P1



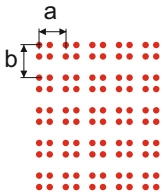
a + b = 10.0 mm
a + b = 15.0 mm
a + b = 20.0 mm

P3



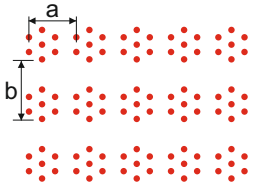
a = 21.6 mm
b = 21.6 mm

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

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.

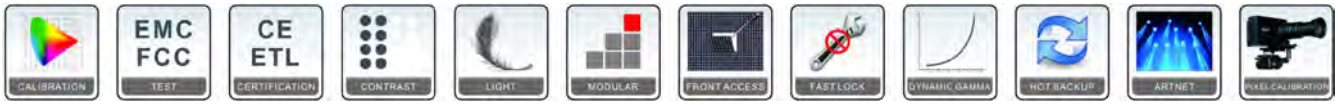
Due to the quick-release fasteners it is possible to build up the entire video wall in a few minutes.

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 trans-port as well as stand and rubber protection for LED advertising boards.
Pixel pitch from 6.4 mm to 16 mm.

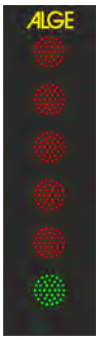


Model CH-EII (Outdoor Display Board)

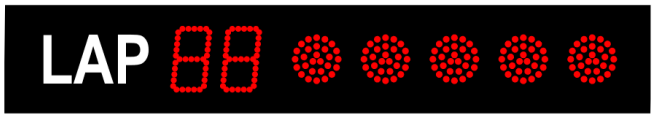
Modular design with separate LEDs for each colour of a pixel (red, green, blue). A standard module has the dimensions of 1,280 mm (H) x 640 mm (L) x 122 mm (T). There are models for which main-tenance is possible on the front or rear. A quick-lock system ensures a quick setup. Larger blocks can also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

ALGE-TIMING can offer different starting lights. Solutions with integrated lap counters in the starting lights are offered as well. There are sport-specific models for dragster or endurance. The most popular models are described below. If the desired model is not listed, please contact our responsible ALGE-TIMING representative to clarify whether the desired model is available or to find out if it is possible to produce a customer-specific starting light.

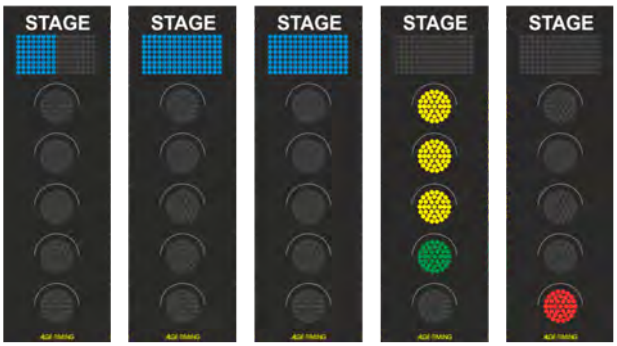
Start Light with 5 Second Countdown
The start light has 5 red clusters and 1 green cluster. If the start light is started via a manual push button, a red cluster is coming up every second. At 5 seconds the red clusters go out and it turns green.



Start Light with Integrated Lap Counter
Number of laps from 0 to 99, digit height 15 cm, legibility up to approx. 75 m. The start scoreboard has 5 red clusters (each with a 10 cm diameter). If the start light is started via a manual push button, a red cluster is coming up every second. At 5 seconds the red clusters go out.



Starting Lights for Dragster
with the following functions:
Pre-stage: half blue light is on
Stage: full blue light is on
Deep Stage: Whole blue light flashes every second
Start: yellow traffic lights increase every second
Pre-Stage (Jump Start): a red cluster is displayed



Start Light for Endurance D-LINE150-14&2FL-RG
Digit height: 15 cm
Dimensions: 800 x 1385 mm (W x H)

ALGE-TIMING
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www.alge-timing.com