

# ALGE

TIMING



THE SPORTS  
TIMING EXPERTS

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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

		CONTROLE OFFICIEL SUISSE DES CHRONOMETRES	
BUREAUX OFFICIELS DE CONTROLE (BO) de Bienne, La Chaux-de-Fonds, Saint-Imier		Edition : 1	
<b>Homologation Report FEI</b>		Edited by : PSO	
		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**

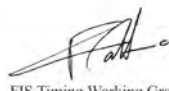
based on FEI Procedure for approval of timing devices (30.04.2013)

Report Number	FEJ-TPW-ALG_2014001		
Requested by	<b>ALGE-TIMING GmbH</b> 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	<b>ALGE-TIMING GmbH</b>		
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	<b>Passed</b>		
Signatures	Tests and report by Pascal Soltermann 	Controlled by Andreas Wyss 	
Comments	The reference triggering is within +/- 1µs GPS time-scale absolute time, uncertainty and propagation delays are included. DUT Time-of-Day is synchronized electronically through discrete CO input with 60s reference pulse. Low resolution inputs (c6, c7 and c8) were not tested.		
<b>Content:</b>	<b>Abbreviations:</b>		
Report: 4 pages	P = Pass	N/C = Not Conducted	
Appendices: none	F = Fail	DUT = Device Under Test	
	N/A = Not Applicable	GPS = Global Positioning System	

**Certificate  
of  
Homologation**

**F I S**

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

  
FIS Timing Working Group

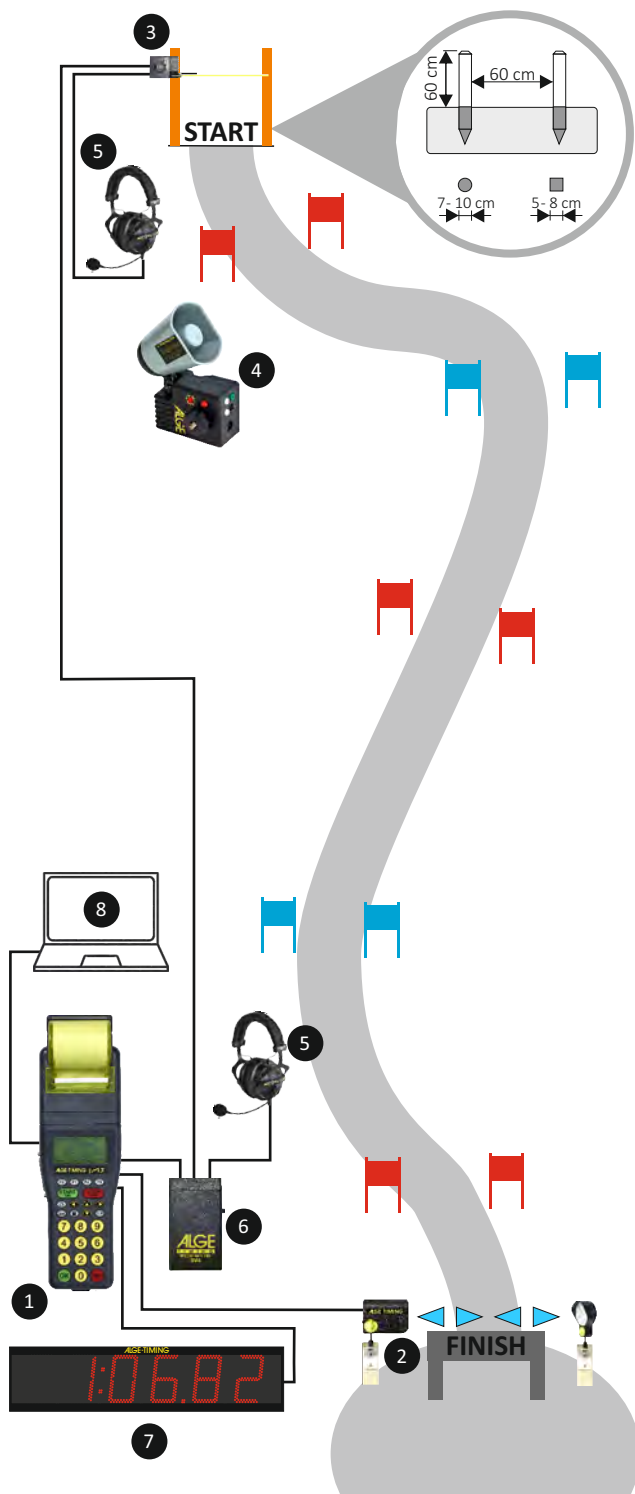
# ALPINE SKIING

## 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.



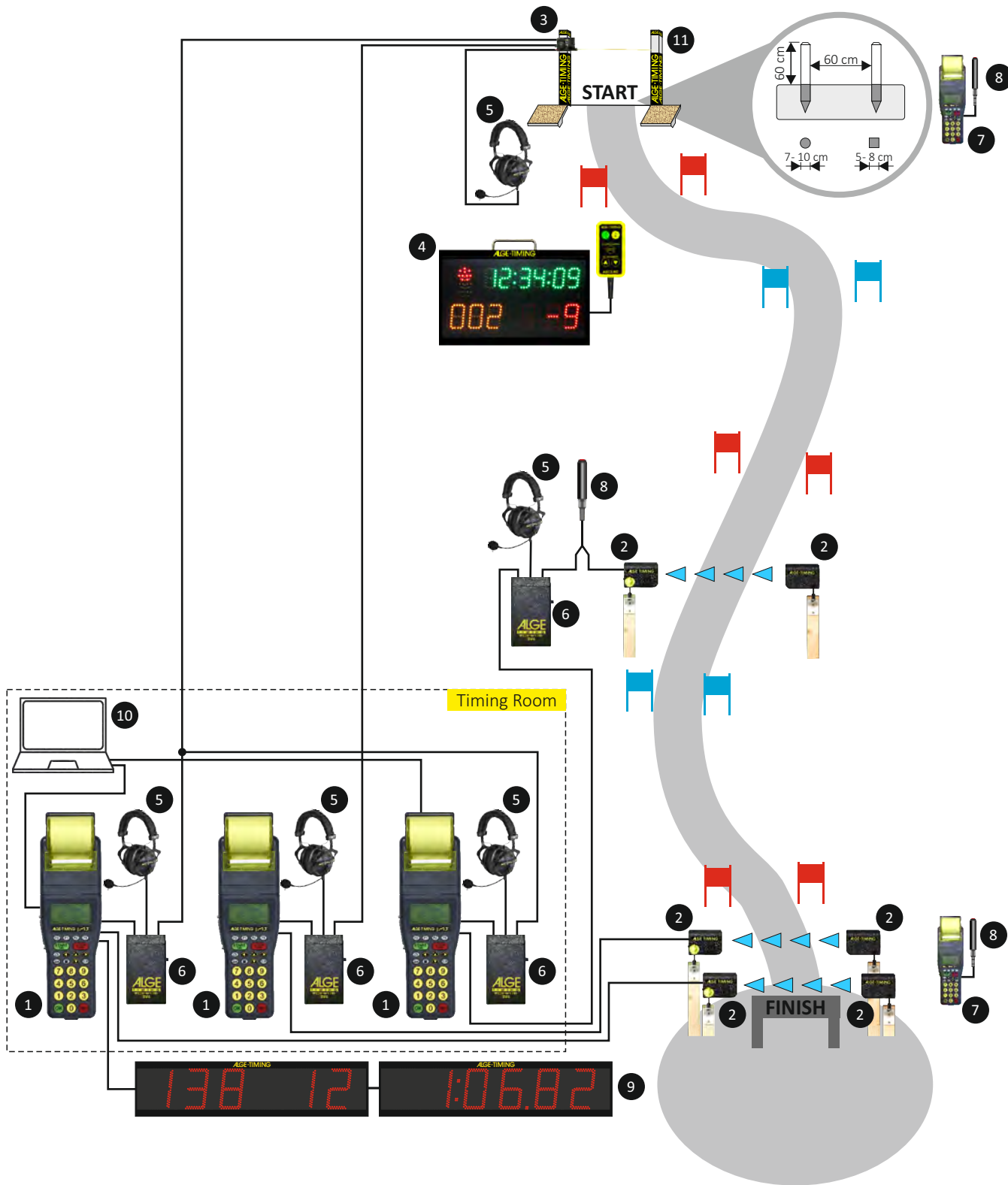
- 
**1 Timy3 WP**  
 FIS homologated high end timing device with for the timing professional with a large, easy-to-read graphic display, up to 8 timing channels and a log printer. USB interface and RS232 interface is integrated in the device for data transfer. A built-in WTN radio module enables wireless 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 Startschanke STSnM1S**  
 Startgate for individual start at ski races. It has one start output and a built-in speech amplifier.
- 
**4 Startbeep STB1**  
 Device to handle the start professional. An acoustic start countdown indicates the start interval.
- 
**5 Headset HS3-2**  
 headset with microphone for the timing communication
- 
**6 Speech Amplifier SV4-S**  
 for plugging in at the start-finish line and connecting the headset
- 
**7 Results Software Time.NET2**  
 Universal result software (freeware) from ALGE-TIMING that is ideal for small ski races.
- 
**8 Display Board D-LINE**  
 numeric display board with red 7-segment LED digits to show the time or bib and rank (e.g. D-LINE250-O-6-E0)

- |                           |                            |                                 |                               |
|---------------------------|----------------------------|---------------------------------|-------------------------------|
| <b>1</b> Timy3 WP         | <b>3</b> Startgate STSnM1S | <b>5</b> Headset HS3-2          | <b>7</b> Display Board D-LINE |
| <b>2</b> Photocell PR1a-R | <b>4</b> Startbeep STB1    | <b>6</b> Speech Amplifier SV4-S | <b>8</b> Time.NET2 Software   |



# ALPINE SKIING

## Timing System for FIS Level 1



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

# ALPINE SKIING

## Timing System for FIS Level 1



The timing system in the sketch on the left 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 7 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.

Position 1 are devices that are used for system A, system B and as well as for the intermediate timing. Position 7 are timing devices for manual timing.



### 2 Photocell PR1a-d

FIS homologated photocells with separate transmitter unit and receiver unit to cover the finish line over a distance of up to 120 m.



### 3 Startgate STSnM2S

FIS homologated startgate for individual start at ski races. The model STS2nM2S has two contacts for system A and B and a speech amplifier .



### 4 Startclock ASC3

Professional device to handle the start. It provides an exact acoustical and visual start information for the participants and the start referee.



### 5 Headset HS3-2

headset with microphone for the timing communication



### 6 Speech Amplifier SV4-S

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



### 8 Push Button 023-02

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



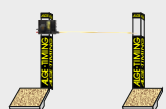
### 9 Display Board D-LINE

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



### 10 Results Software

FIS conform result software (not from ALGE-TIMING)



### 11 Start Poles with Starting Plates SSP

Robust start poles made of aluminum to mount the startgate. Attached starting plates allow a good grip for the ski sticks of the starter.





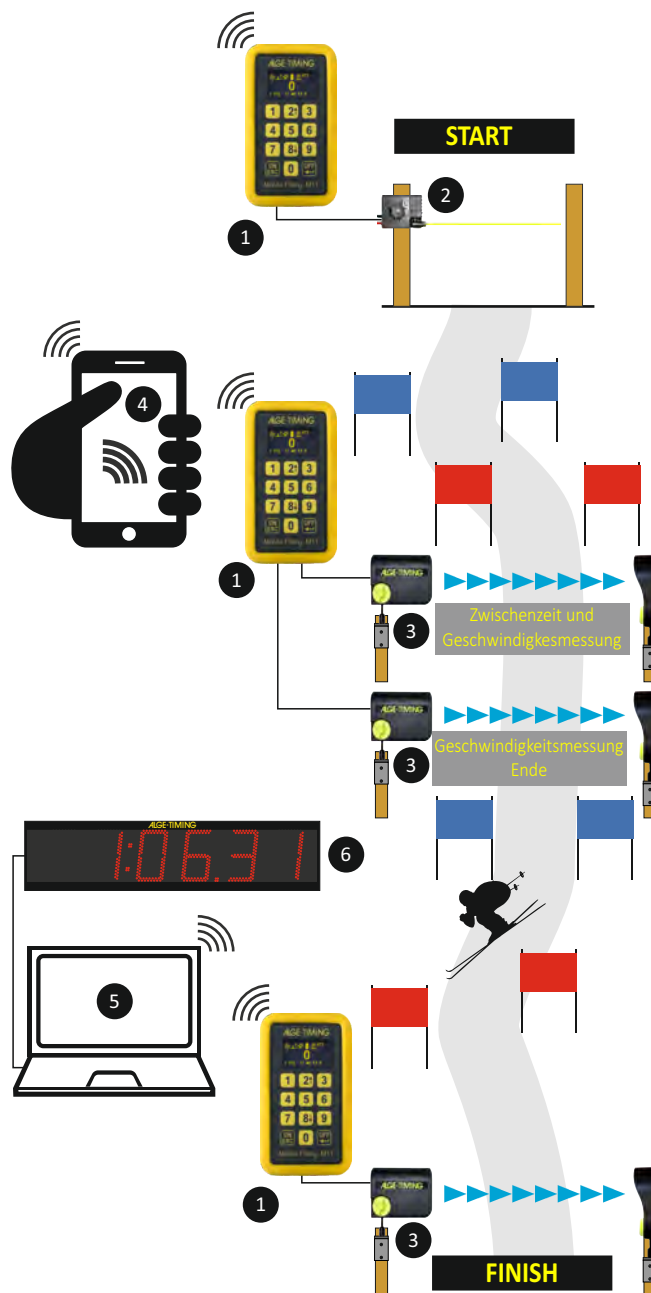
# ALPINE SKIING

## Timing System for Races with Mobil Timing MT1

This system is mainly used for ski races. Large distances between the timing points can be bridged by mobile radio data transmission. The entire system can be set up and is ready for use quickly.

The bib is entered for MT1 at the start. Additional MT1s for intermediate times and the finish time do not require the entry of a bib, if the system is configured correctly. Unwanted timing impulses are automatically eliminated by defining permissible time windows (e.g. for sliders).

Since every MT1 has two timing channels, one can measure the speed on one device. Every spectator, trainer, runner and even the parents at home can follow the results of the race on an internet-enabled device (mobile phone, tablet, PC).



- 1 Mobile Timing MT1**  
timing device with integrated data modem, GPS and 2 timing channels



- 2 Startgate STSnM1S or STSnA1**  
with one or two timing contacts to trigger the timing at the start



- 3 Photocell PR1a-R**  
FIS-homologated photocell with transmitter/receiver unit and reflector as well as mounting brackets. The photocell can cover distances of up to 25 m.



- 4 PC, Mobil Phone or Tablet for Results**  
every spectator, trainer or runner can view the results on the Internet



- 5 PC, Mobil Phone or Tablet for Timing**  
timing is controlled on a device logged into the Internet



- 6 Display Board D-LINE**  
numeric display board with red 7-seg-ment LED digits to show the time or bib and rank. The display is controlled via the timing PC.

DE	Rang	Bib	Name	Nation	1. Rennen	2. Rennen	Totalzeit
	5		Greis Maurizio	IT	45.21	44.47	1:29.68
	9		Bougniol Maucic	FR	45.63	44.23	1:29.86
	29		Oberauer Josef	IT	45.94	44.20	1:30.14
	4	21	Ofner Harald	AT	46.13	44.07	1:30.20
	5	33	Hummel Karl	AT	46.07	44.62	1:30.69
	6	18	Defago Jean Pierre	FR	46.13	44.68	1:30.81
	7	26	Klammer Werner	AT	46.35	44.53	1:30.88
	8	31	Chapuis Henry	CH	45.70	45.30	1:31.00
	9	27	Hummels Martin	DE	46.15	44.90	1:31.05

# ALPINE SKIING

## Timing System for Training with Mobil Timing MT1



This structure of an MT1 system is mainly used for training. Large distances between the time measurement points can be bridged by mobile radio data transmission. The entire system can be set up and is ready for use in a very short time.

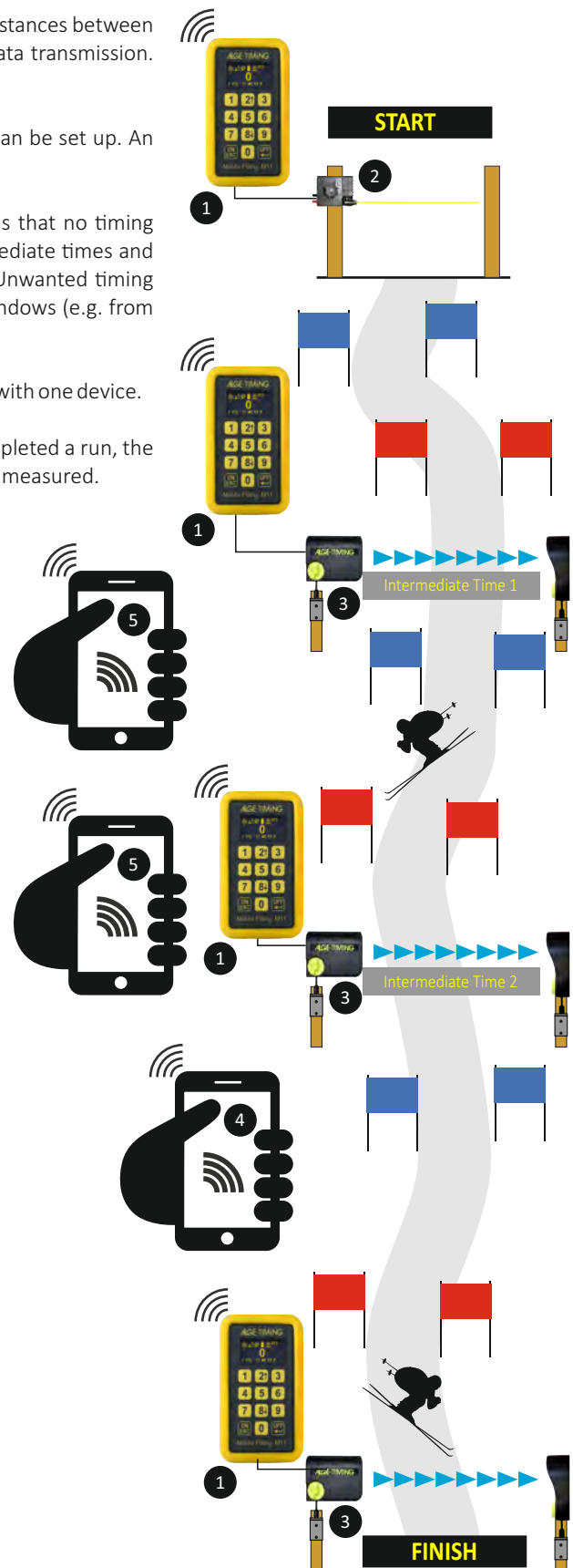
Any number of intermediate times and speed measurement points can be set up. An MT1 and photocell(s) are required for each of these measuring points.

At the start, the runner enters the start number himself. This means that no timing operator is required. If the system is configured correctly, the intermediate times and the running time are automatically assigned to the correct runner. Unwanted timing impulses are automatically eliminated by setting permissible time windows (e.g. from slides).

Since every MT1 has two timing channels, one can also measure speed with one device.

Several runs are created for a training session. If a participant has completed a run, the next result will be saved in the following run. Any number of runs can be measured.

Rang	Bib	Name	1	2	Ladzeit	Diff
1	1	Häuser Andreas	15:51	14:87	30:38	-
11	11	Hagen Daniel	15:69	14:70	30:39	0:01
7	7	Berchold Erich	15:50	14:89	30:39	0:01
4	6	Schneider Fritz	15:91	14:63	30:54	0:16
5	10	Bösch Anton	15:74	14:81	30:55	0:17
6	9	König Paul	15:29	15:41	30:70	0:32
7	13	Neußbauer Othmar	15:24	15:54	30:78	0:40
8	4	Mosbrugger Martin	15:63	15:32	30:95	0:57
9	8	Egger Ulrich	17:30	14:91	32:21	1:83



-  **1 Mobile Timing MT1**  
timing device with integrated data modem, GPS and 2 timing channels
-  **2 Startgate STSnA1**  
startgate with automatic reset of the start wand. It has one impulse output to start the timing device
-  **3 Photocell PR1a-R**  
FIS-homologated photocell with transmitter/receiver unit and reflector as well as mounting brackets. The photocell can cover distances of up to 25 m.
-  **4 PC, Mobil Phone or Tablet for Timing**  
timing is controlled on a device logged into the Internet
-  **5 PC, Mobil Phone or Tablet for Results**  
every spectator, trainer or runner can view the results on the Internet

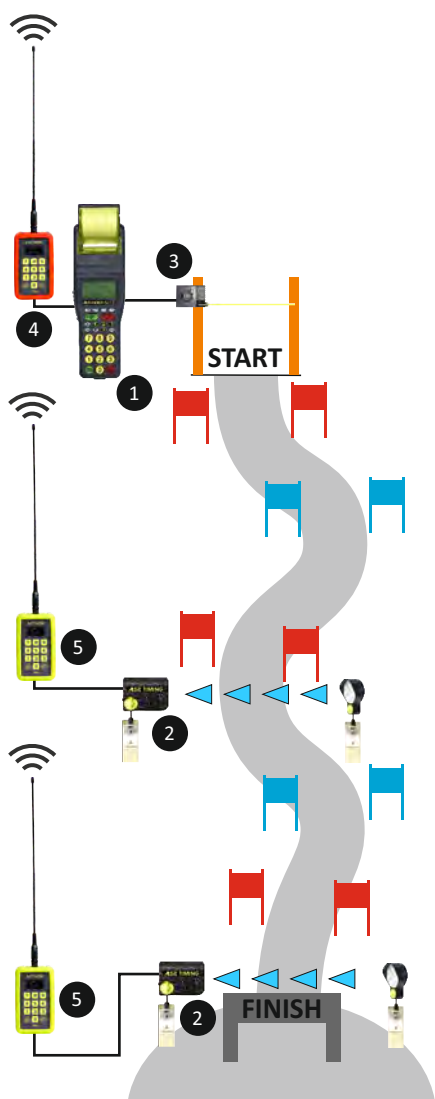


# ALPINE SKIING

## Training System with Radio TED2


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 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



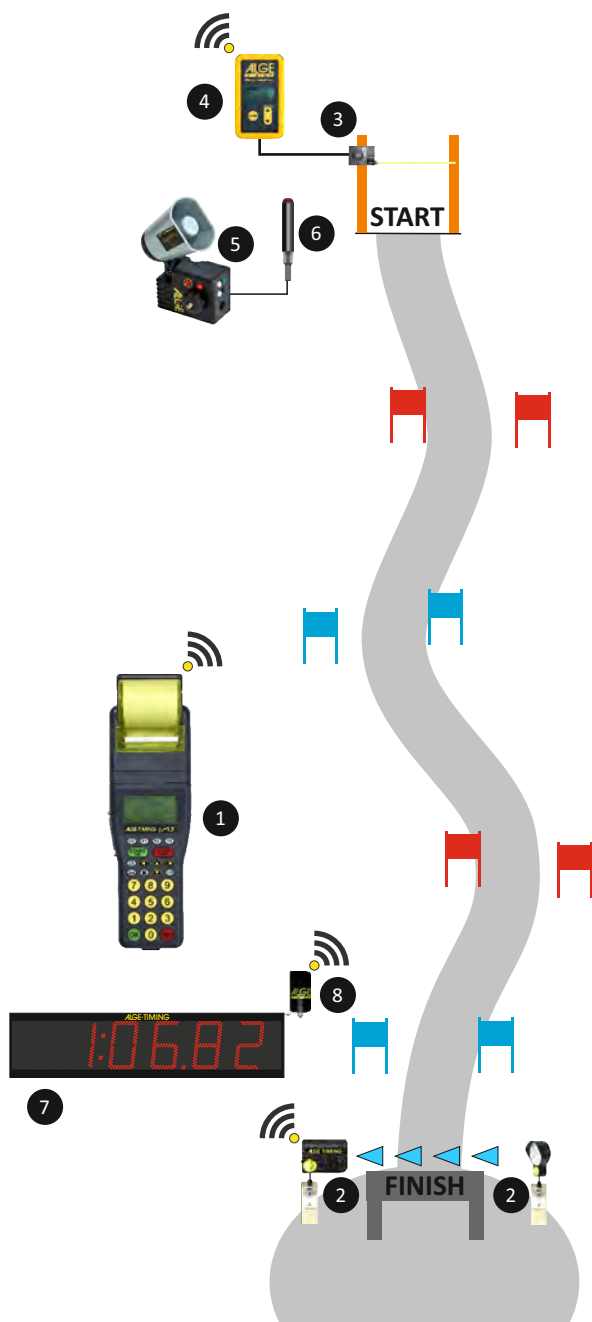
# ALPINE SKIING

## 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 a 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 (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          | 3 Startgate STSnA1 | 5 Startbeep STB1     | 7 Display Board D-LINE |
| 2 Photocell PR1aW-R | 4 WTN              | 6 Push Button 023-02 | 8 WTN-DB               |



# 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. duels with friends or family members. Thus, every skier can measure his time and make private ski



### Components of the System

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

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



#### Selftimer Start Light SF3L

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



#### Startgate STSnA1

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



#### Photocell PR1a

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



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

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

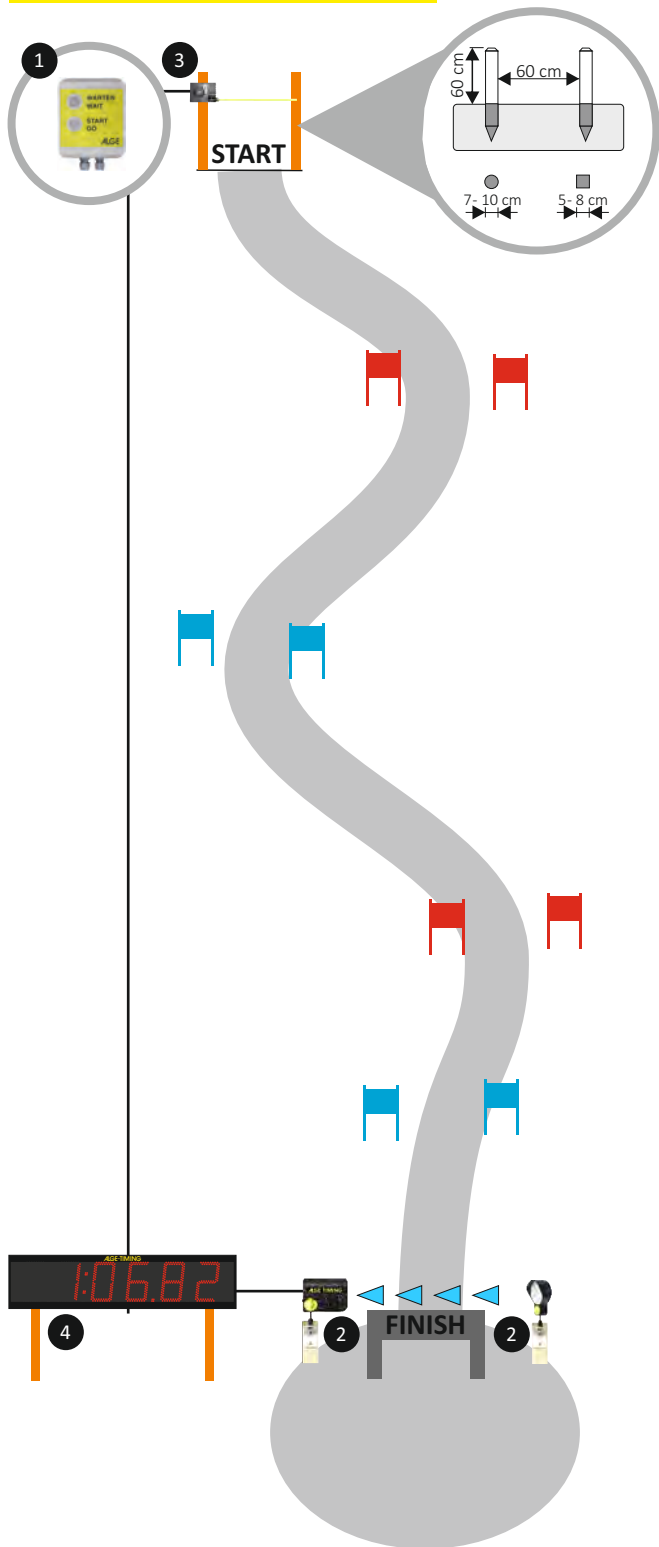




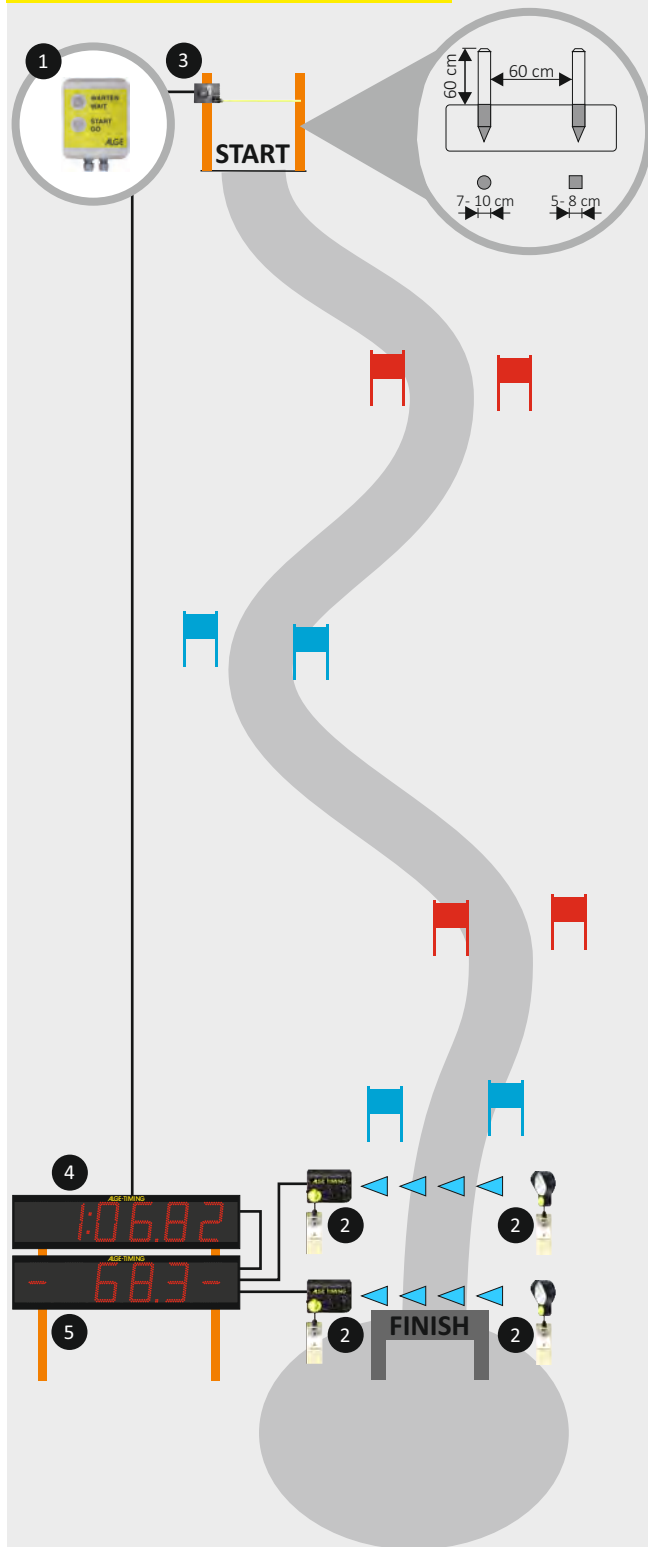
# TIMING DEVICES

## Selftimer SF3

### Time Measurement



### Time Measurement and Speed



- 1 SF3L
- 2 Photocell PR1a-R

- 3 Startgate STSnA1
- 4 Display Board D-SF150-O-6-E0 or D-SF250-O-6-E0 showing time

- 5 Display Board D-LINE showing speed



### Selftimer SF3

#### Selftimer SF3-L150

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

#### Selftimer SF3-L250

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

#### Selftimer SF3-2L150

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

#### Selftimer SF3-2L250

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

#### Selftimer SF3-22L150

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

#### Selftimer SF3-22L250

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

### Technical Data

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

### Necessary cables and connections:

#### Selftimer System with Start Light SF3L

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

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

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





# 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. So it 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.

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



### Display

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

### Keypad

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

### Accuracy

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

### Printer

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

### Memory

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

### Casing

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

### Connections

Regarding the wide range of possible connections with external devices, the Timy3 offers unequalled opportunities in its class and size. For example it is possible to connect several devices by the RS485 interface to work as a network and it offers 9 independent timing channels.

### 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

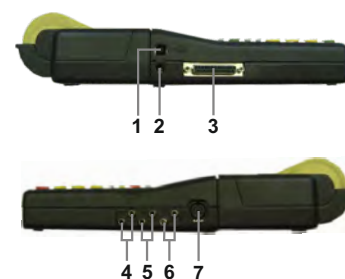


### Timy3 Software

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 multiple 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 for 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, high 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 high diving



Timy3 W timing device without printer



#### Connections:

- 1- 1 x USB
- 2- 1 x power supply 8- 22 VDC
- 3- 1 x D-Sub 25-pin
- 4- 1 x pair of banana sockets- scoreboard
  - 9 time measuring channels
  - RS232 (PC connection)
  - display board
  - RS485 (network)
  - power supply (8- 24 VDC in/out)
- 5- 1 x pair of banana sockets- start input
- 6- 1 x pair of banana sockets- finish input
- 7- 1 x DIN socket for photocell

### Technical Data

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

\*without battery & paper





# 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+ 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.

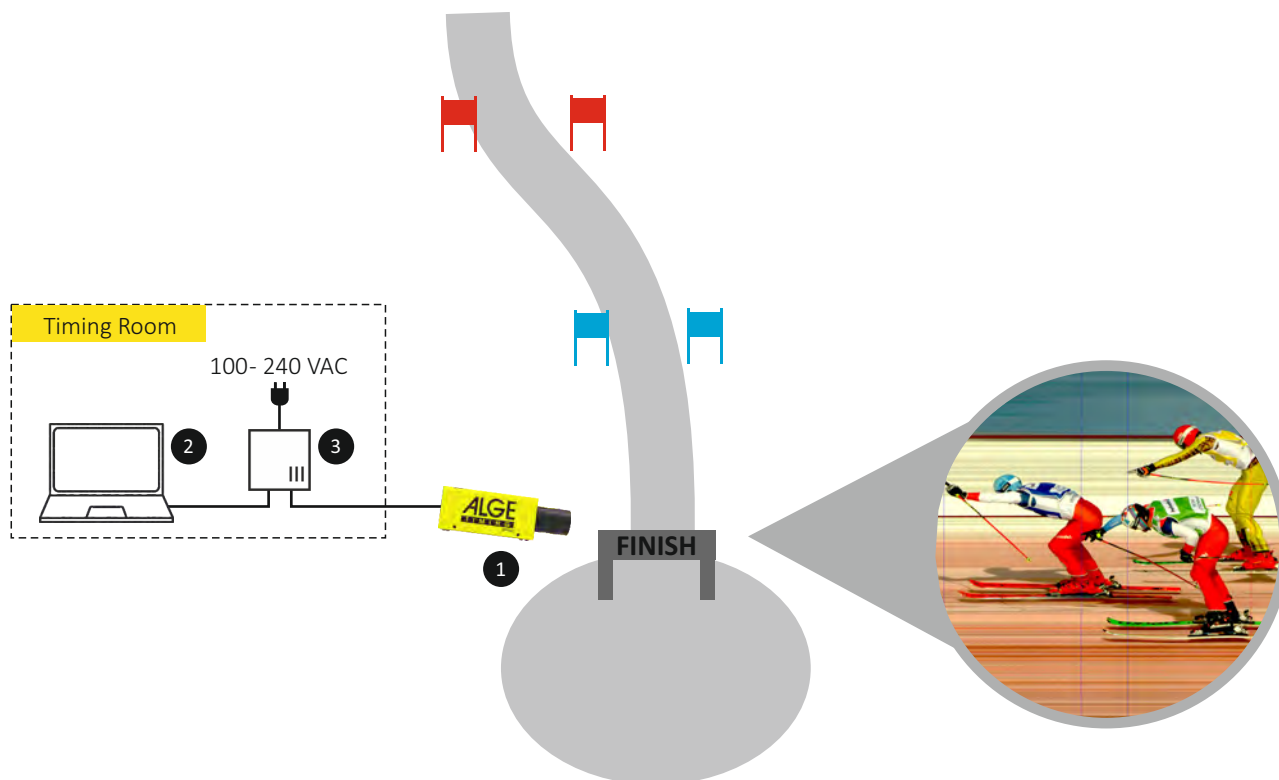
Since the OPTIc3 has a built-in timing device, exactly synchronized 100 frames per second can be guaranteed.

### 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 (x86 or x64)

# TIMING DEVICES

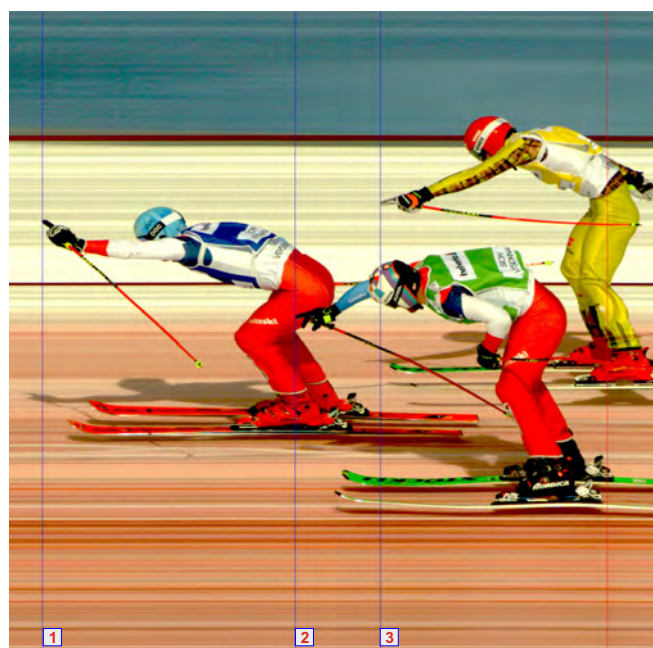
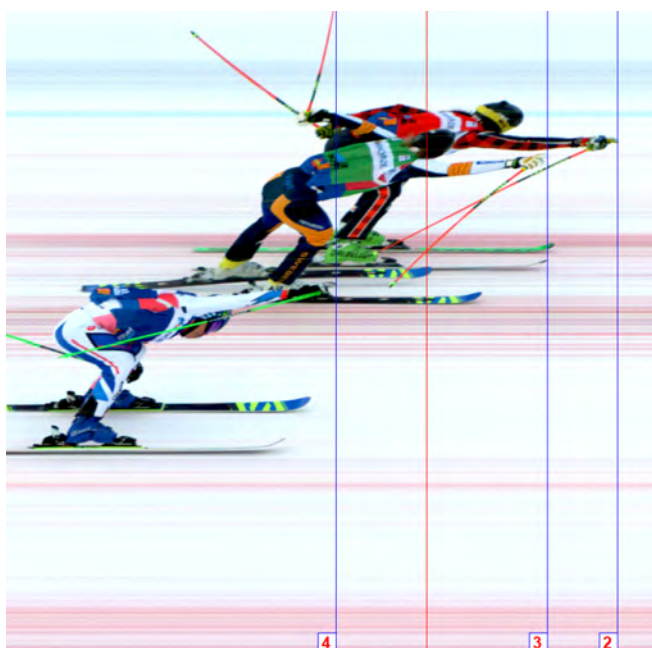
## Photo Finish OPTIc3



1 Photo Finish OPTIc3

2 PC for Photo Finish

3 PoE (Power over Ethernet)







# TIMING DEVICES

## Mobile Timing MT1

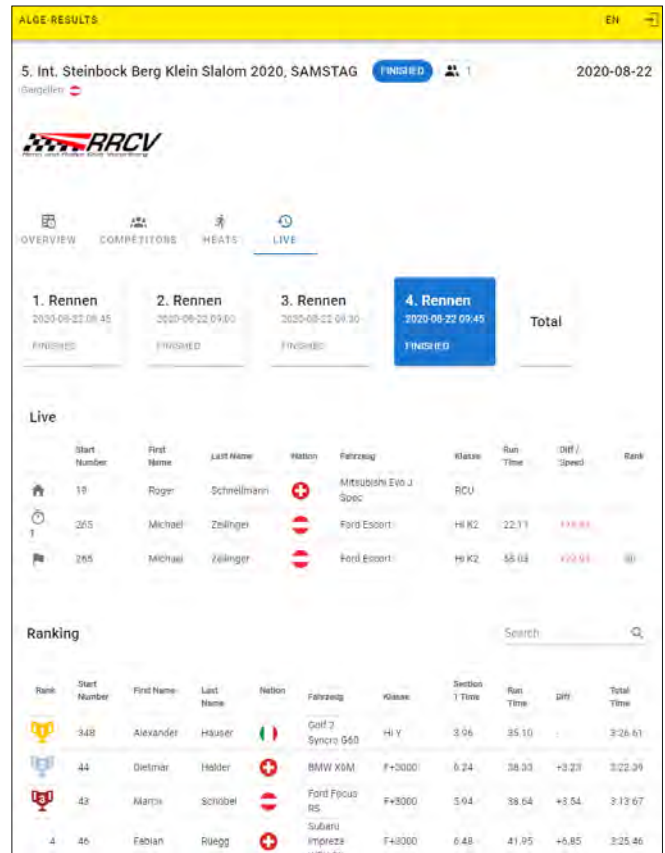
The future of timekeeping has begun with the Mobile Time MT1 timing device. Forget kilometre-long cables and problems with the range of the radio system. With the MT1, the measuring points can be as far apart as you want. The accuracy of the GPS synchronization enables multiple MT1 timing devices to 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.

The MT1 has an internal cellular data modem with a built in SIM card. It supports practically every provider around the world. A server provided by ALGE-TIMING collects the data transmitted from all MT1. The time keeper configures before the race or training the server. The results are displayed live on the Internet. Anyone with internet access can follow the race or training on his mobile phone, tablet or PC. The Mt1 can also be used offline. Then the times can 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.
- two timing channels (e.g. for speed measurement)
- USB socket (Type C) for data transfer to a PC and charging
- keyboard to enter the bib
- memo function to enter bib after finish arrival
- storage space for up to 7000 times
- built-in Li-Ion battery for operation up to 24 hours
- light, small and handy
- high-precision impulse output for other timing devices



### The MT1 timing system

Register as a timekeeper for free on the [alge-results.com](https://alge-results.com) platform and create competitions, manage participants and your MT1 devices. Timekeeping is also managed on this platform. When creating a competition, you decide whether the participants register online on [alge-results.com](https://alge-results.com) or by yourself.

### Timing Points

Timing Points (TP) are necessary for data transfer and server use. 2000 timing points are included when purchasing a MT1 device.

- Timing Points Package Bronze: 5,000 TP
- Timing Points Package Silver: 10,000 TP
- Timing Points Package Gold: 20,000 TP



### alge-results.com Platform:

The timing data are transferred from the MT1 to the [alge-results.com](https://alge-results.com) server. The spectators can follow the results live at a mobile phone, tablet or PC (internet connection is necessary). The data is stored in a European data center in accordance with GDPR.








# 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.

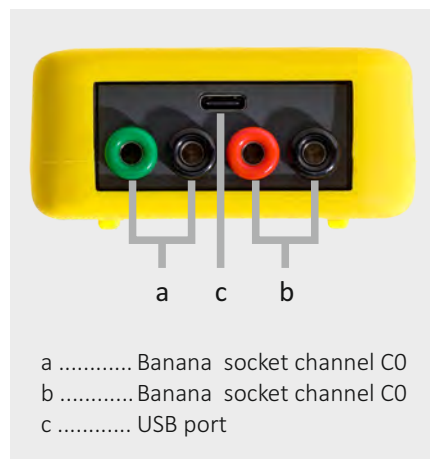
### Scope of delivery for one MT1 device

- 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 connection
Operation time (battery):	24 hours at + 25°C with one Impulse per minute 14 hours at - 20°C with one Impulse per minute
Charging time:	app. 2,5 hours at + 25°C.
Roaming:	world wide, not Provider depended
Housing:	splash-proof plastic housing with removable, shock-absorbing silicone cover
Dimensions:	74 x 34 x 22 mm
Weight:	235 g





# START DEVICES

## Startgate STSn

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

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



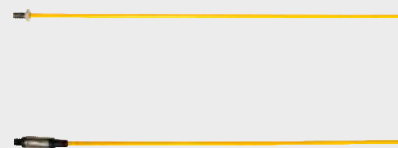
Connection of the Startgate STSnM2S

### There are different types of startgates

- STSnM1S:** manual reset, 1 contact, integrated amplifier
- STSnM2S:** manual reset, 2 contacts, integrated amplifier (FIS homologated Startgate)
- STSnA1S:** automatic reset, 1 contact, integrated amplifier
- STSnA1:** automatic reset, 1 contact, without amplifier

### Startwand STSn-S

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



### Startwand STSn-FSTAB

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

### Contacts

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

### Integrated Speech Amplifier

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

### Startwand Reset

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



### Start Poles with Starting Plates SSP

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



# START DEVICES

## 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)
- 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
- integrated rechargeable lead battery for operation independent from mains supply
- 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 (highest LED-brightness and full sound volume)
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)





# START DEVICES

## Startbeep STB1

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

### Startbeep STB1

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



### Technical Data

Electronics:	μP-controlled in CMOS
Working temperature:	-25°C to +45°C
Power supply:	9 V Alkaline battery or external power supply
Connections:	potential-free closing contact for synchronizing or triggering of a timing device <ul style="list-style-type: none"> <li>· external push button</li> <li>· external power supply</li> <li>· on/off switch</li> <li>· internal push button</li> </ul>
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

## Startdoor SSD1

The FIS homologated Start Door SSD1 is made for universal use. It can be used for parallel applications (alpine skiing and snowboard), cross competitions (snowboard 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 without any screws. 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.

A wide range of accessories is available.



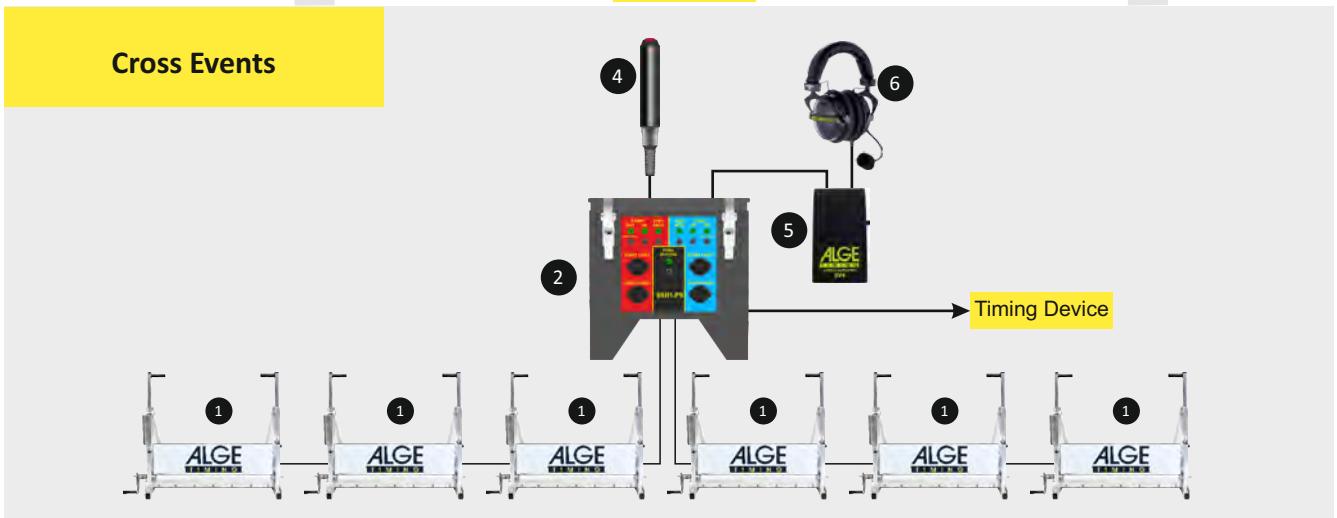
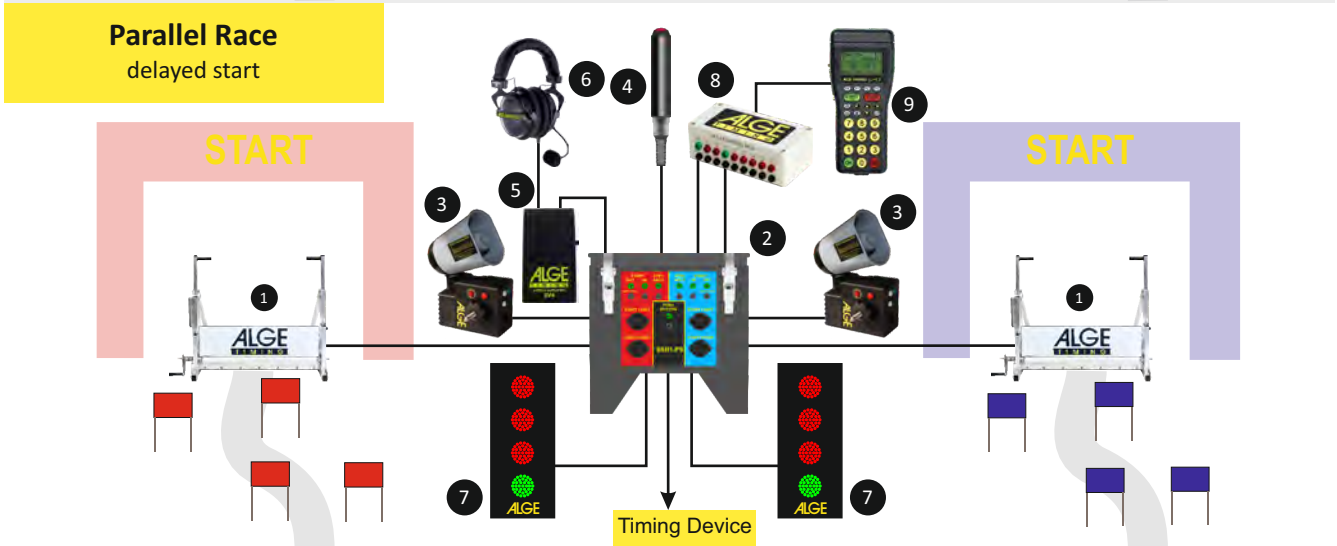
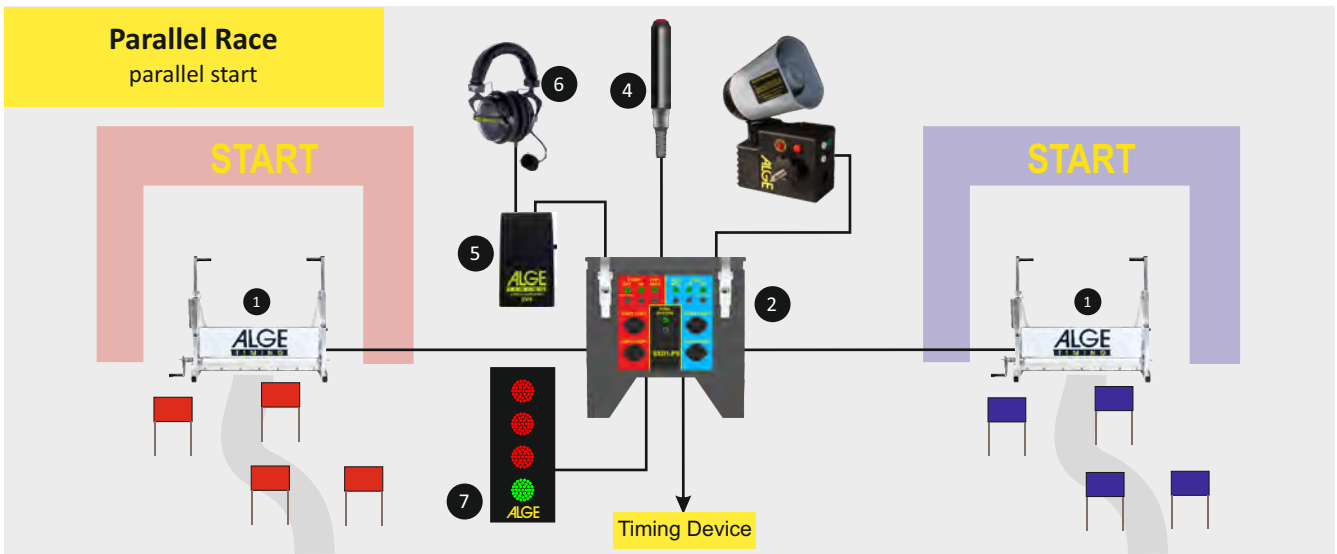
### Accessories

- 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

	<p><b>1 Start Door SSD1</b> FIS homologated start door for parallel events and cross events</p>		<p><b>6 Headset HS3-2</b> for the timing communication</p>
	<p><b>2 Controller SSD1-PS</b> controller for start door with built in rechargeable battery</p>		<p><b>7 Speech Amplifier SV4-S</b> for plugging in at the start-finish line and connecting the headset</p>
	<p><b>3 Start Light D-SL85-3xR-G or D-SL85-3xR-G-DS</b> single- or double-sided start light for parallel races controlled by the SSD1-PS</p>		<p><b>8 Multi Channel MC9</b> docking station with 9 channels for Timy3</p>
	<p><b>4 Startbeep STB1</b> acoustic start countdown device to handle the start</p>		<p><b>9 Timy3 WP</b> FIS-homologated 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.</p>
	<p><b>5 Push Button 023-02</b> rugged and water-resistant push button to trigger the start impulse with 2 m cable length connected to the controller SSD1-PS</p>		

# START DEVICES

## Startdoor SSD1



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



# IMPULSE DEVICES

## Photocell PR1a and PR1aW

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

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



### Photocell PR1a

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



### Photocells PR1aW

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

#### Additional Functions

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



# IMPULSE DEVICES

## Photocell PR1a and PR1aW



### Technical Data

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



### Photocell Sets

#### Reflection Photocell PR1a-R

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



#### Radio Reflection Photocell PR1aW-R (as PR1a-R but with radio)

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

#### Through-Beam Photocell PR1a-d

Consists of separate transmitter and receiver. The photocell beam sends the infrared-beam direct from the transmitter to the receiver (distance over 100 m possible);

Scope of delivery: 2 x PR1a, 2 x BBG, 1 x 001-30 (30 m)



### Photocell Accessory:



#### Mounting Bracket BBG

chain holder for fixing the photocell or reflector to poles



#### 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.



#### Case KS-PR1

for photocells PR1a and PR1aW



#### Case KL-PR1a

for the photocell and reflector including tripods TRI128



#### Reflector PR1a-REF

standard reflector for photocells PR1a and PR1aW



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 will be permanent re-calibrated. This results in a yet unreached time accuracy.

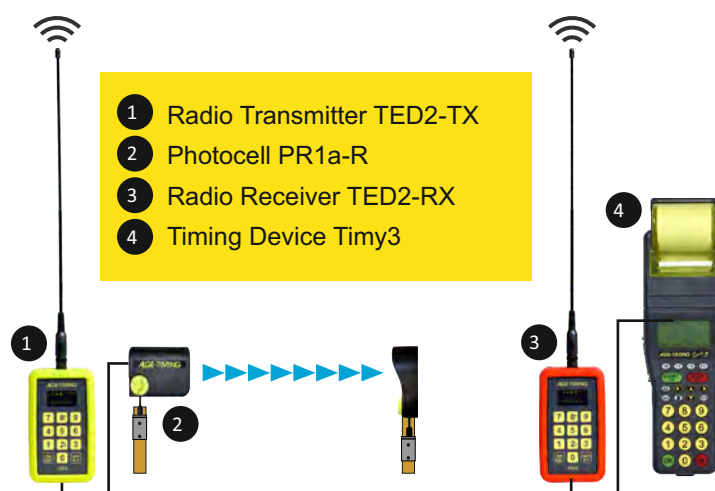
The radio transmits in the 433 MHz band. The radio frequency and radio power can be set by the operator. This TED2 allows distances of up to 4.5 km to be bridged by radio.

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 direct from the TED2. 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

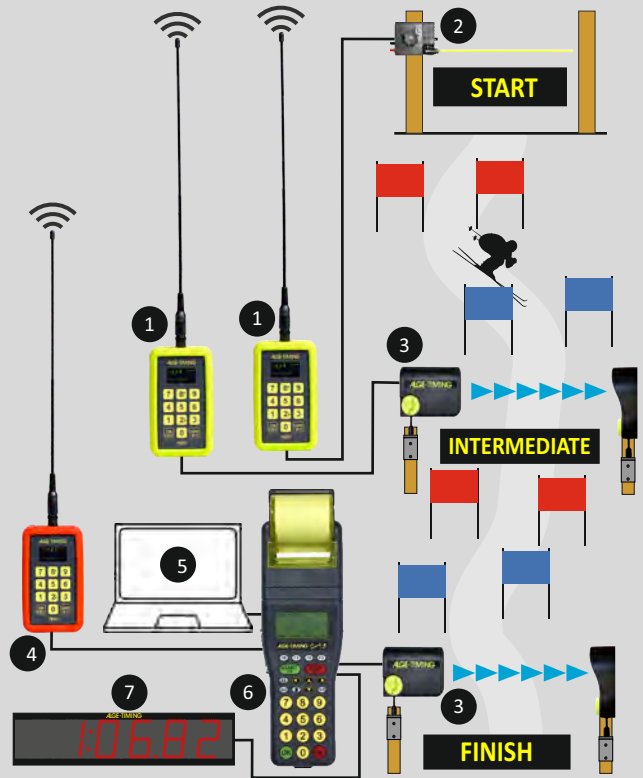
- radio system with integrated accurate timing device
- TED2 stores up to 7000 time stamps
- automatic synchronization via GPS
- transmission of "time stamps" or timing pulses
- display and keyboard for easy operation
- up to 10 different "timing stamps" can be transmitted
- simultaneous reception of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



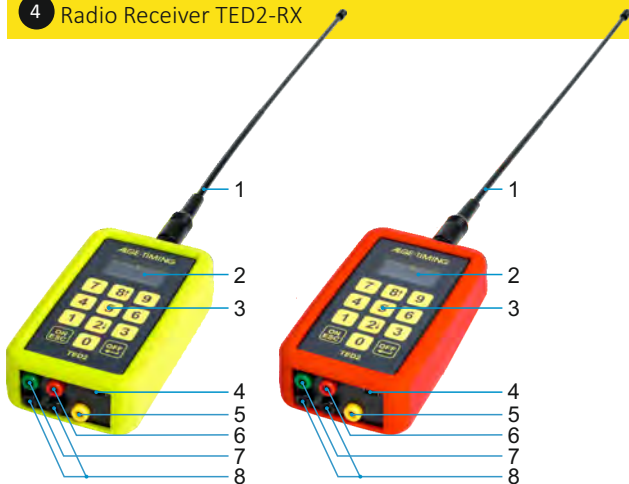




### Ski Alpine with Intermediate Time

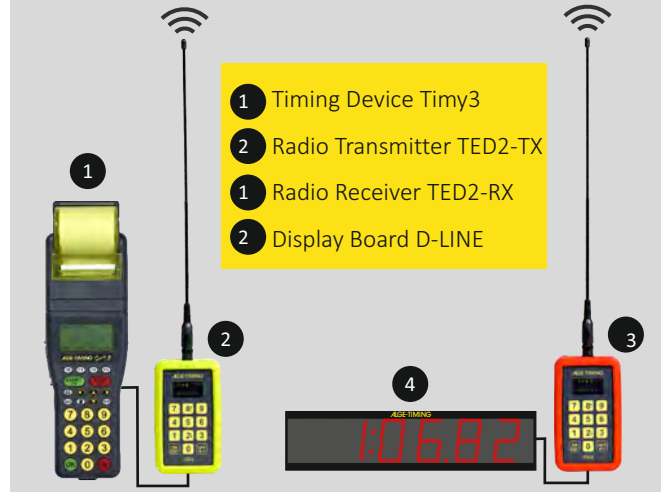


- 1 Radio Transmitter TED2-TX
- 2 Startgate STSn1M
- 3 Photocell PR1a-R
- 4 Radio Receiver TED2-RX
- 5 Result-PC
- 6 Timing Device Timy3 WP
- 7 Display Board D-LINE



- 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

### Data Transmission to Display Boards D-LINE



- 1 Timing Device Timy3
- 2 Radio Transmitter TED2-TX
- 3 Radio Receiver TED2-RX
- 4 Display Board 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, 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 with 12 keys
- Power Supply:* external: through USB Type 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 (433.0626- 434.7875)  
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



# 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 or RS485 it is possible to send data from other devices to the displayed.

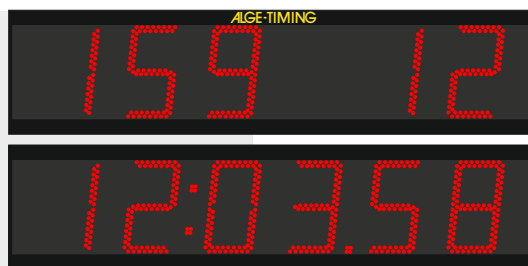
The integrated clock can be used in stopwatch or countdown mode and show the exact time of day. If the D-LINE is equipped with DCF, GPS and/or temperature sensor, the temperature can be displayed in addition to the exact time of day, even if no timing device is connected. The outdoor models differ from the indoor models mainly by much brighter LEDs. This ensures perfect readability even at direct sunlight. The standard display boards is made for outdoor use and has 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
  - 3/4" thread for tripod
- black aluminum case with red front plexiglass
- operating temperature: -20°C to +60°C

### Possible Digit Heights

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



# DISPLAY BOARD

## D-RTNM



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

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

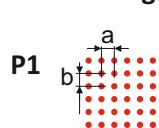
readable even in direct sunlight. If it is used at night or on rainy days in difficult light conditions, the brightness can be adjusted in 100 levels.

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

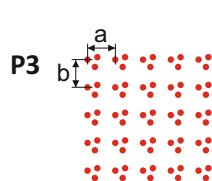


- matrix display board with red LEDs
- models with 1, 3, 4 or 7 LEDs per pixel
- models for outdoor and indoor use
- standard models with a resolution of 16 or 24 pixels in height and 96 or 160 pixels in length
- universal with Ethernet, RS485 and RS232 interface
- internal memory of 4 MB for storing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

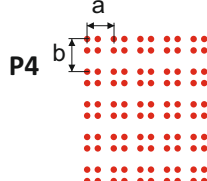
### Pixel Arrangements:



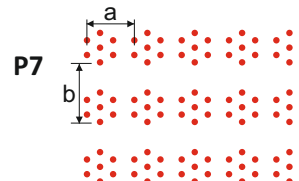
$a + b = 10.0 \text{ mm}$   
 $a + b = 15.0 \text{ mm}$   
 $a + b = 20.0 \text{ mm}$



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



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



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



### Options

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





# DISPLAY BOARD

## Videowall

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 or rear. A quick-release system allows a quick setup. The power consumption is low. For the small modules, it can be up to 150 W; and for the large ones, up to 300 W. This makes it ideal for mobile use (e.g. for renting it out).

Pixel pitch from 1.33 mm to 16 mm.



### Model CH-EIII (Outdoor Display Board)

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

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

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

Pixel pitch from 6.4 mm to 16 mm.



### Model CH-EII (Outdoor Display Board)

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

Pixel pitch from 10 mm to 26.7 mm.



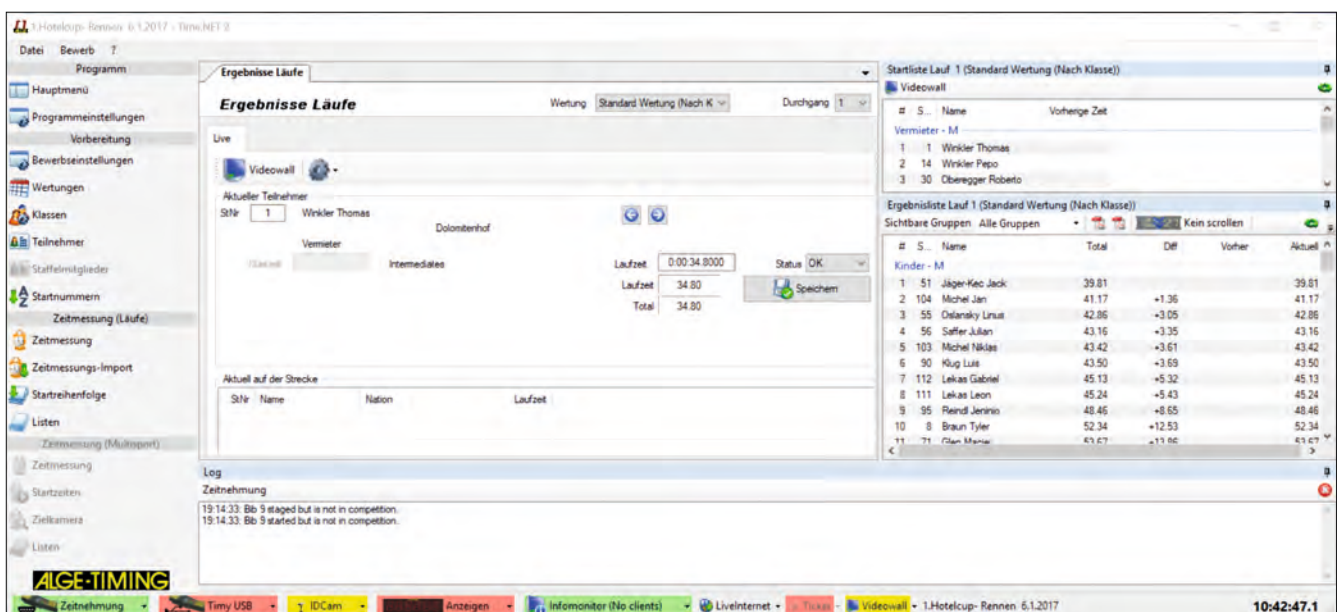


Matching our timing devices, we have a variety of free PC software to evaluate our timing devices. All programs run on Windows 7 up to Windows 11 (32 and 64 bit); available in several languages.

### Time.NET2

Universal result software for many different sports and competitions.

- several heats possible
- starting lists, result lists that you can configure, team result lists, result analysis, etc.
- Excel import of competitor lists, export to Excel and pdf
- live- and off-line-mode for timing
- output for ALGE-TIMING display boards
- CIS (commentator info system): Time.NET 2 Infomonitor
- live timing for internet on request



### ALGE-Training

Training analysis software for the Timy programs "Training Light", "Training Ref", "Stop-watch", "Speed" and "Jumping". Several runs or participants can be compared to each other.



### ExcelWriter

Software to read the data from the ALGE-TIMING timing devices into Microsoft Excel and match it with the bibs time and competitor data. In Excel it is possible to evaluate the data as you need it (special results).



### ALGE StartClock

Software to control and adjust the Startclock ASC3. With this program settings can be changed and individual start times can be programmed.



### Further PC Software

ALGE-Skitest: off-line evaluation for (ski) tests and training. Starts must match according to specified start list.



ComToFile: Universal program to control and/or save data from a USB interface or RS233 interface on the PC.



All ALGE-TIMING result software is available on our website [www.alge-timing.com](http://www.alge-timing.com).

Software developers who integrate our timing devices into their software are welcome. We support them with software examples and interface descriptions.





# NOTES



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