

ALGE

T I M I N G



THE SPORTS
TIMING EXPERTS

Equestrian
Show Jumping & Endurance



EQUESTRIAN

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

The wireless system WTN (Wireless Timing Network) without cable connections can be set up faster and is extremely reliable. The new radio- and timing system TED2 is absolute reliable in almost all environmental influences and is mainly used for big events with many spectators or TV coverage.



CERTIFICATE

FEI
Fédération Equestre Internationale

This is to certify that the following timing devices manufactured by **ALGE-TIMING GmbH**

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

Timers	Photocells	Wireless Transmission
TdC 8001	RLS 1n	TED-TX10 / RX10
Timy PXE	RLS 1nd	TED-TX400 / RX400
Timer S4	PR1a	WTN
Timy2 PXE	PR1aW	
Timy2 XE		
TdC 8000		
Timy3 WP		

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

J.P. Roche
John P. Roche
Director, FEI Jumping

FEI certified

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

SHOW JUMPING

Simple Timing System

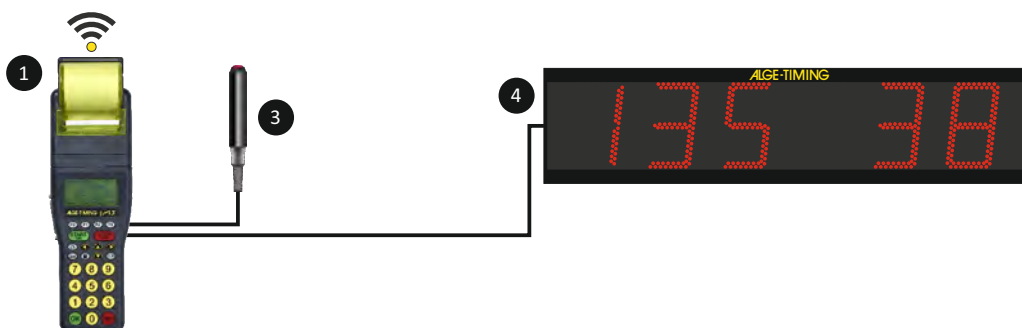


Various timing systems are suitable to handle show jumping tournaments, which are adapted to the individual circumstances for tournaments of different levels.

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

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

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



1 Timy3 WP

2 Photocell PR1aW-RT

3 Push Button 023-02

4 Display Board D-LINE (runing time)



SHOW JUMPING

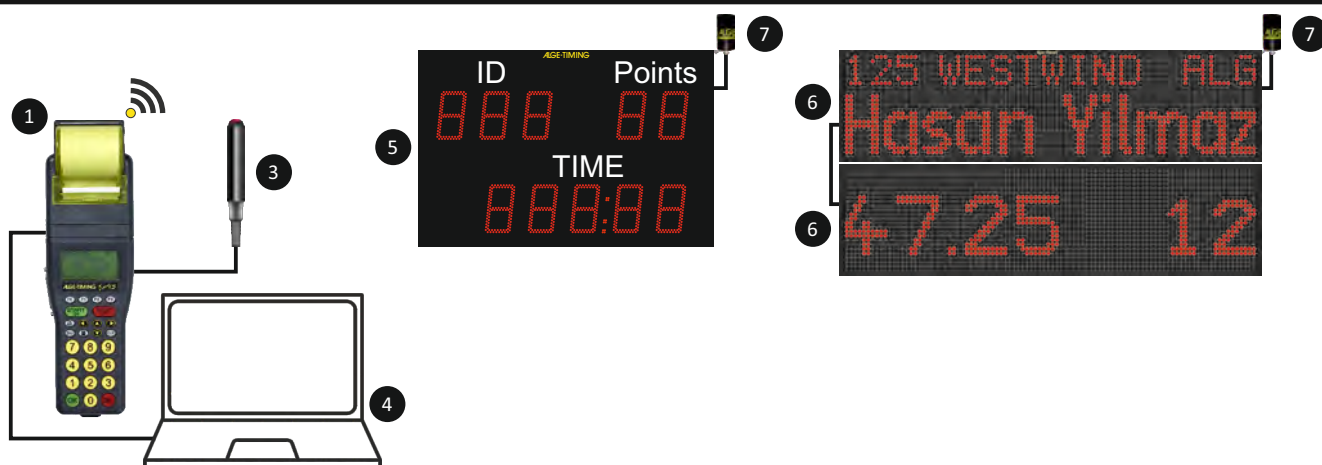
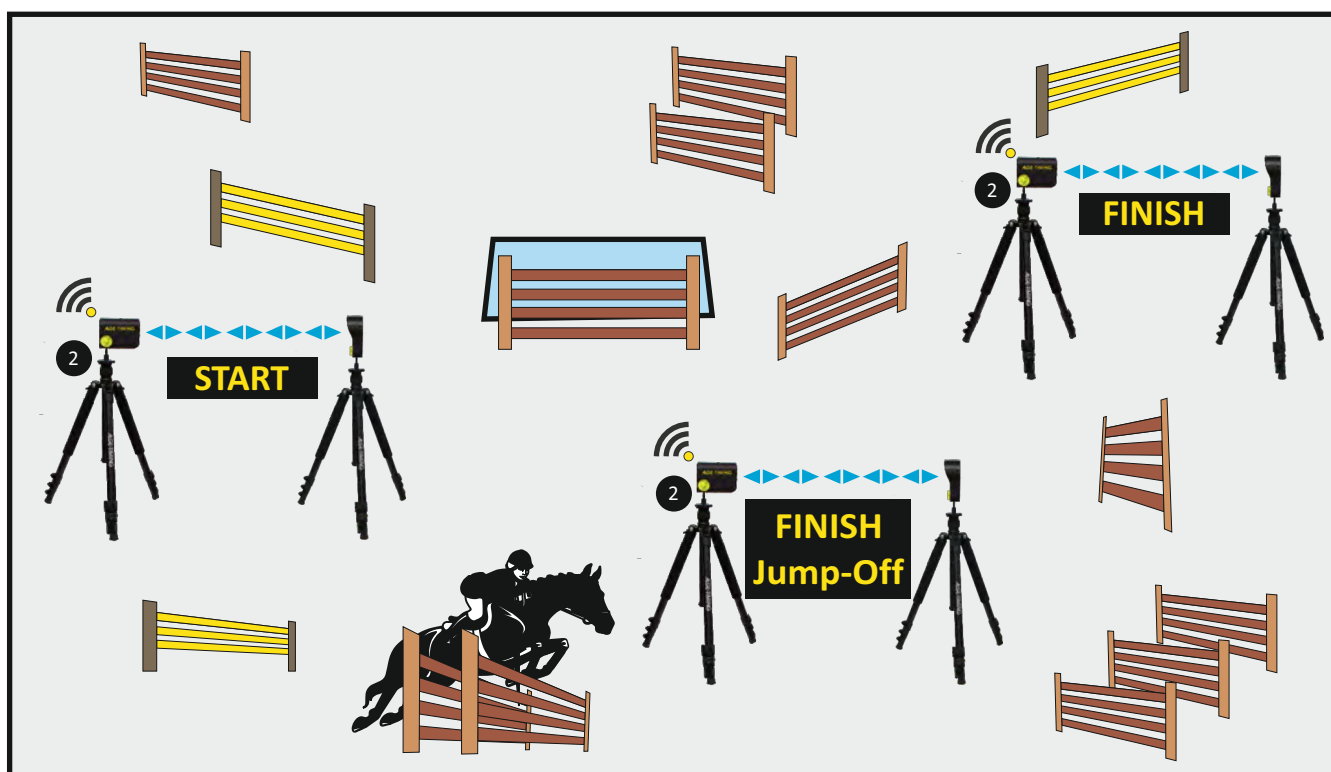
Advanced Timing System

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

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

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

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



- | | | |
|----------------------|---------------------------------|-------------------------|
| 1 Timy3 WP | 4 PC with Software ALGE-SJ-T | 7 Radio Receiver WTN-DB |
| 2 Photocell PR1aW-RT | 5 Display Board D-EQxxx-2-V5-E2 | |
| 3 Push Button 023-02 | 6 Matix-Display Board D-RTNM | |

SHOW JUMPING

Professional Timing System

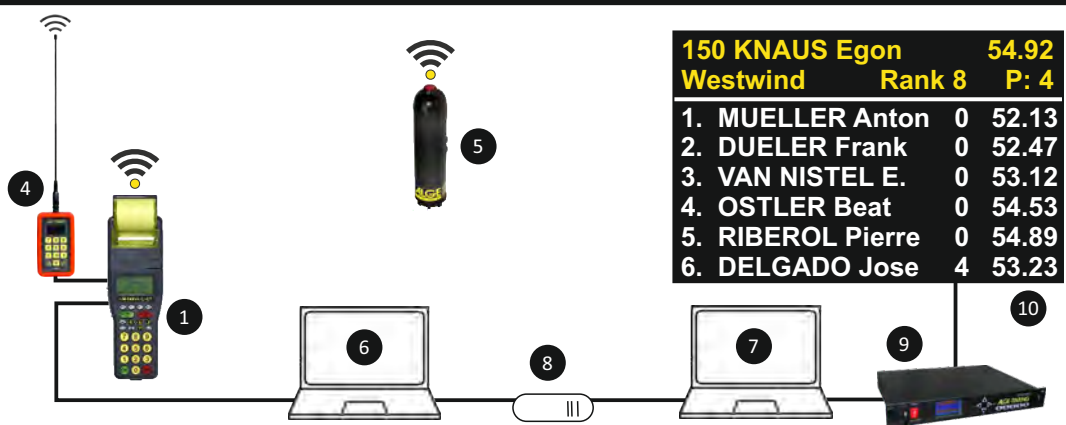
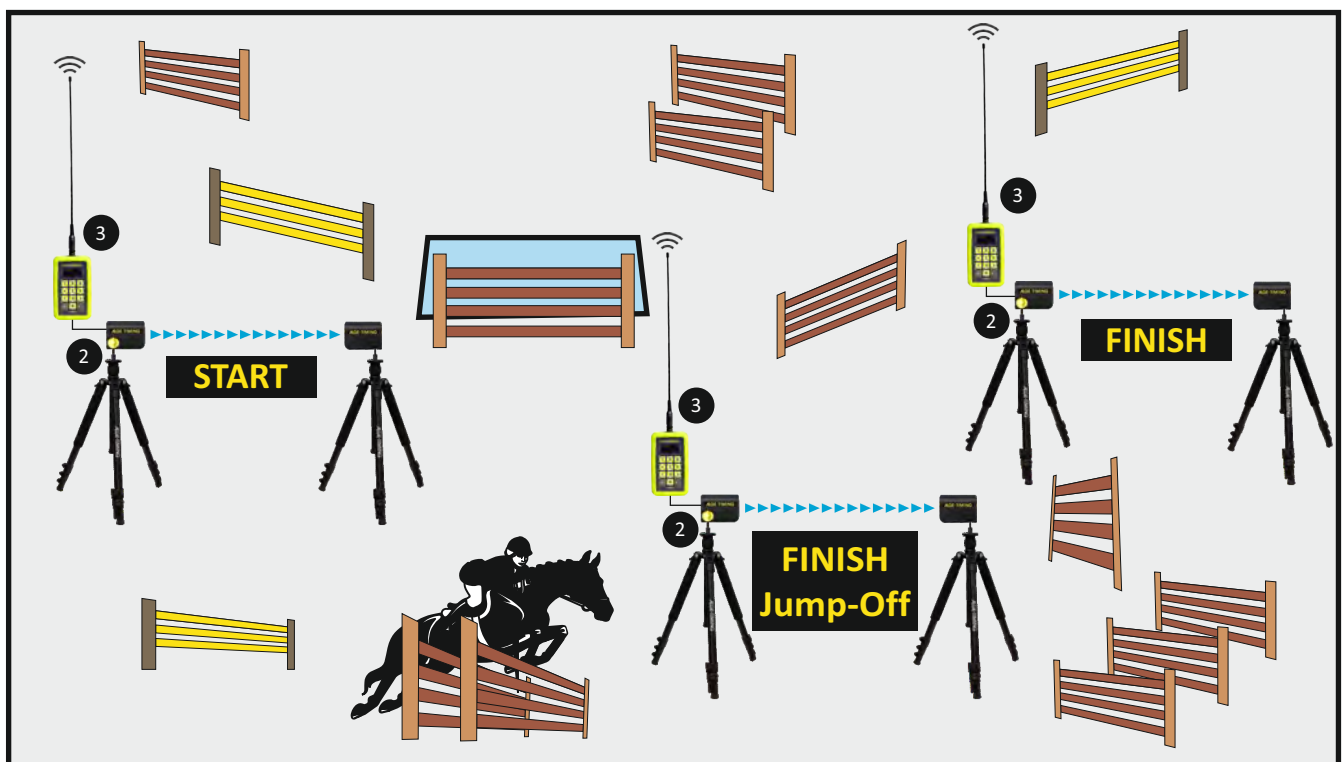


The timing system with the high-quality TED2 radio system is absolutely reliable as the times are both stored in the TED2-TX radio transmitter and sent as data to the Timy3 timing device by radio. The photocells with separate transmitter and receiver can cover a start or finish line of over 100 m. This makes setting up the course more flexible.

The timing device Timy3 transmits the timing impulses as time of day to the ALGE-SJ-T software running on a PC. This software controls the entire timing process. The permitted clear round

time is given and penalty points are automatically calculated from the time overrun. The penalty points for obstacle drops are also entered into the software. This means that the total points and total time are calculated automatically when passing the finish.

The display board used in this example is a video wall which is suitable for all FEI competitions. The start list, ranking list, the current rider and advertising or videos can be displayed on it.



150 KNAUS Egon		54.92
Westwind		Rank 8 P: 4
1.	MUELLER Anton	0 52.13
2.	DUELER Frank	0 52.47
3.	VAN NISTEL E.	0 53.12
4.	OSTLER Beat	0 54.53
5.	RIBEROL Pierre	0 54.89
6.	DELGADO Jose	4 53.23

- 1 Timy3 WP
- 2 Photocell PR1aW-dT
- 3 Teledata TED2-TX
- 4 Teledata TED2-RX
- 5 Radio Push Button WTN-PB
- 6 PC with Software ALGE-SJ-T
- 7 PC for Controlling the Video Wall
- 8 SWITCH
- 9 Video Wall Controller
- 10 Video Wall

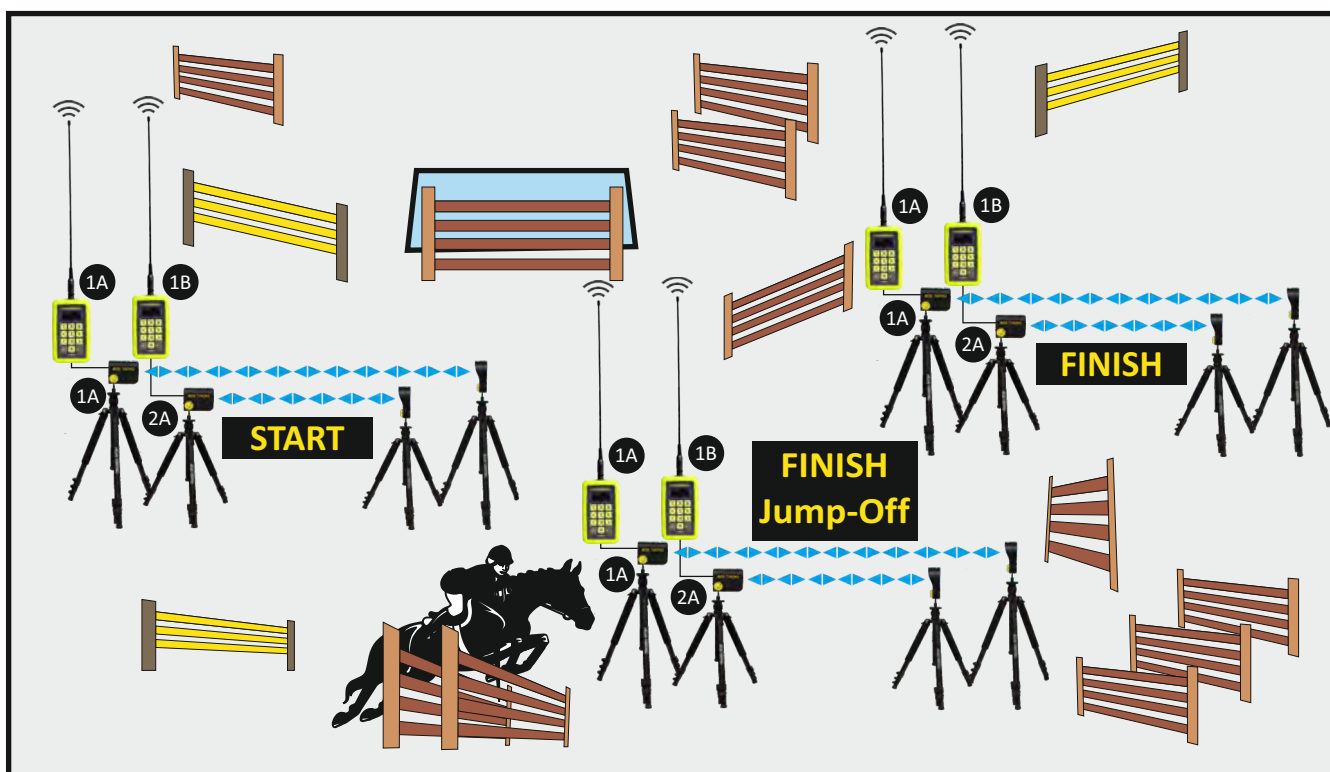


SHOW JUMPING

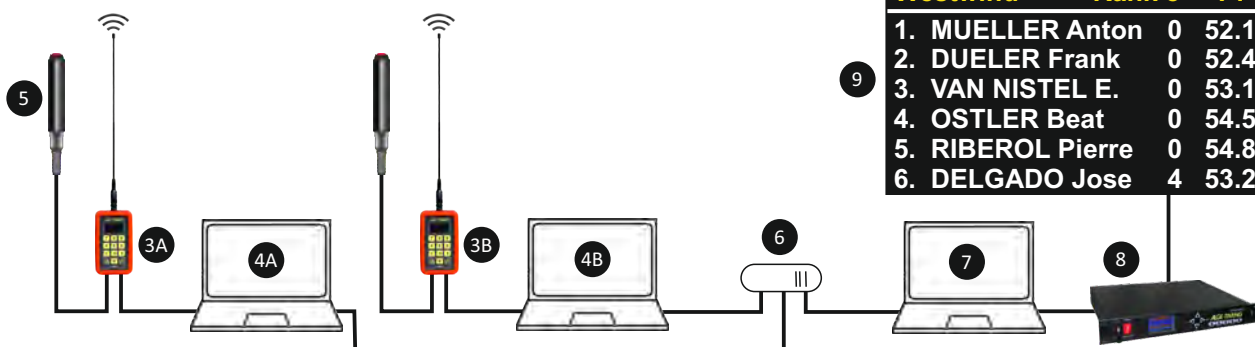
Professional Timing System with Back-Up (FEI)

Identical timing system as shown on the previous page (professional timing system), but the system is double and conform with the timing rules for big international events. This means the second system will take over in case of problems with the main timing system.

Important is, that both radio system work on different frequencies, so they do not influence each other. The timing impulse of the photocells of system A are sent to the timing system A and the from the photocells of system B to the timing system B.



150 KNAUS Egon		54.92
Westwind	Rank 8	P: 4
1.	MUELLER Anton	0 52.13
2.	DUELER Frank	0 52.47
3.	VAN NISTEL E.	0 53.12
4.	OSTLER Beat	0 54.53
5.	RIBEROL Pierre	0 54.89
6.	DELGADO Jose	4 53.23



- 1A Teledata TED2-TX (Main)
- 1B Teledata TED2-TX (Backup)
- 2A Photocell PR1a-dT (Main)
- 2B Photocell PR1a-dT (Backup)
- 3A Teledata TED2-RX (Main)
- 3B Teledata TED2-RX (Backup)
- 4A PC with Software ALGE-SJ-T (Main)
- 4B PC with Software ALGE-SJ-T (Backup)
- 5 Push Button 023-10 (Timeout)
- 6 SWITCH
- 7 PC for Controlling the Video Wall
- 8 Video Wall Controller
- 8 Video Wall



Timy3 WP

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



Photocell PR1a-RT

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



Photocell PR1a-dT

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



WTN-PB Wireless Push Button

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



Push Button 023-02

alternative with cable to trigger the time-outs



Radio Receiver WTN-DB

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



Display Board D-LINE

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



Display Board D-RTNM

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



Video Wall

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

Software for Show Jumping and Carriage Driving

ALGE-SJ-T

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

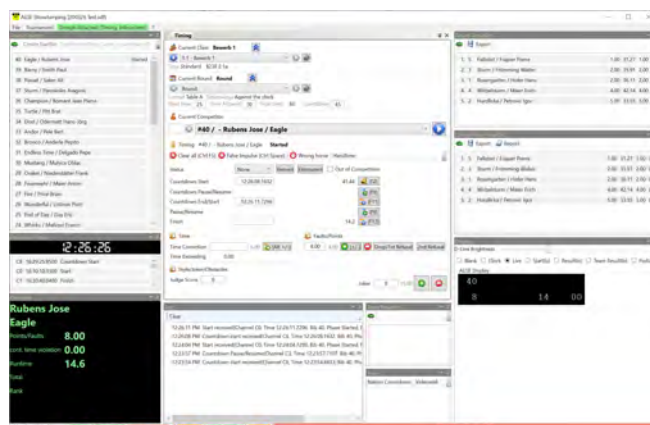
Additional to the freeware ALGE-SJ-T we offer modules that you can integrate to extend the functions of the software.

EQU-EXP

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

EQU-LIVE

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



EQU-INET

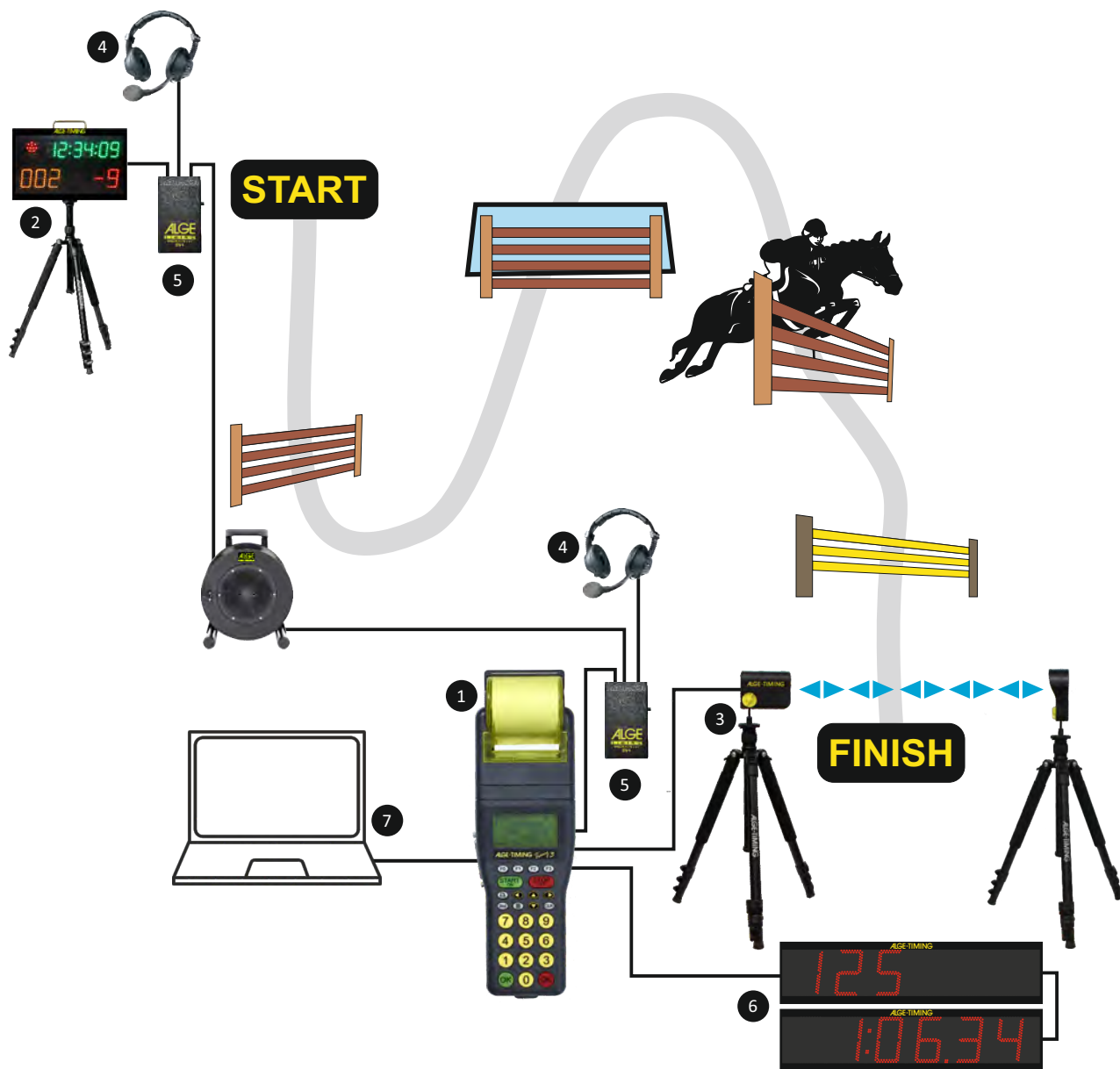
Yearly licence for webhosting of results (EQU-LIVE is required). Additional you need to get a "one-time" installation for the webhosting (EQU-INET-INST).



ENDURANCE

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

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



- 1 Timy3 WP
- 2 Startclock ASC3
- 3 Photocell PR1a-dT

- 4 Headset HS3-2
- 5 Speech Amplifier SV4-S
- 6 Display Board D-LINE

- 7 PC for Results
e.g. TimeNet2





EQUESTRIAN

Timy3

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

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

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

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



Display

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

Keypad

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

Accuracy

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

Printer

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

Memory

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

Casing

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

Connections

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

Radio Network - Wireless Timing Network WTN

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

Software

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

EQUESTRIAN

Timy3

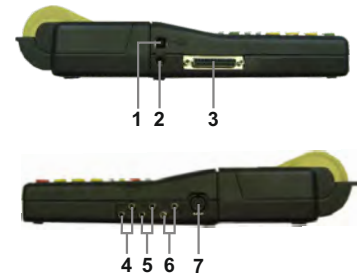


Timy3 Software

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



Timy3 W timing device without printer



Connections:

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

Technical Data

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





EQUESTRIAN

Photocell 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



EQUESTRIAN

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)



Photocell Sets

Radio Reflection Photocell PR1aW-RT

Reflection photocell with mounting tripod TRI128 and build in radio WTN.
Scope of delivery: 1 x PR1aW, 1 x PR1a-REF, 2 x TRI128



Radio Through-Beam Photocell PR1aW-dT

Consists of separate transmitter and receiver. The photocell beam is directed from transmitter direct to receiver (distance over 100 m possible); built in radio WTN.
Scope of delivery: 2 x PR1aW, 2 x TRI128



Tripod TRI128

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



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



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



EQUESTRIAN

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

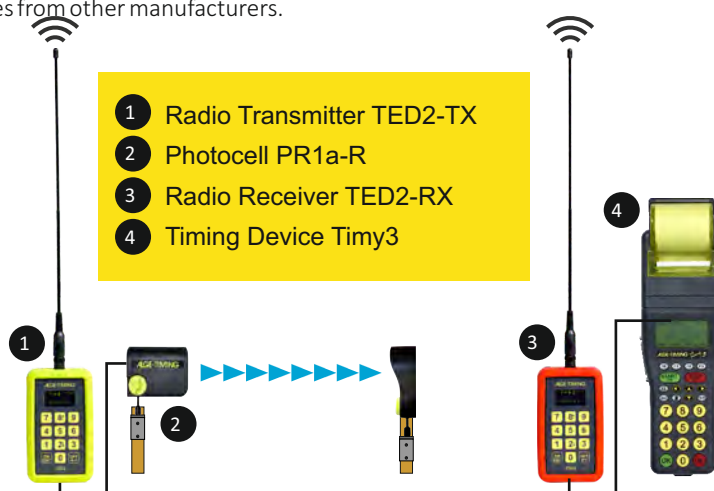
The radio transmits in the 433 MHz band. The radio frequency and radio power can be set by the operator. This TED2 allows distances of up to 4.5 km to be bridged by radio.

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.

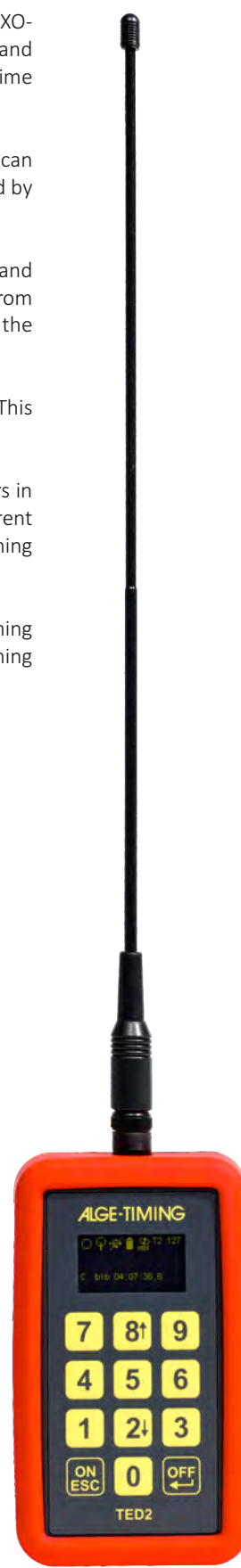
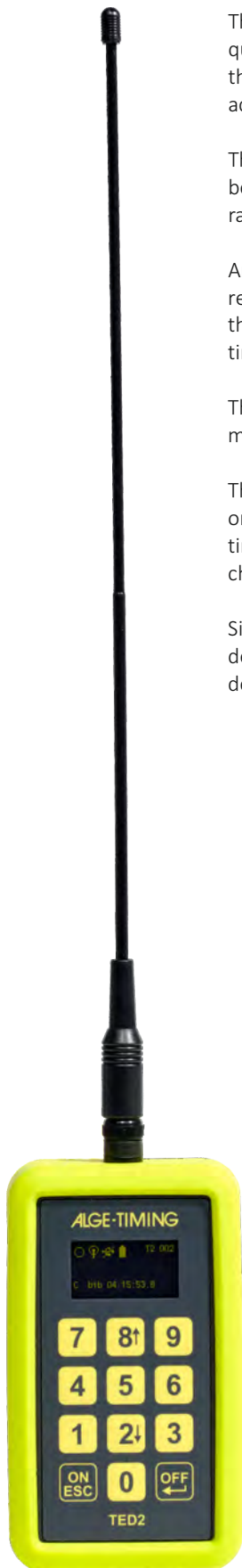
The transmitter TED2-TX has two timing channels. If you use more transmitters in one system you can adjust the timing channels so you can receive up to 10 different timing channels. Our technology enables the TED2-RX to receive all 10 timing channels simultaneously.

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

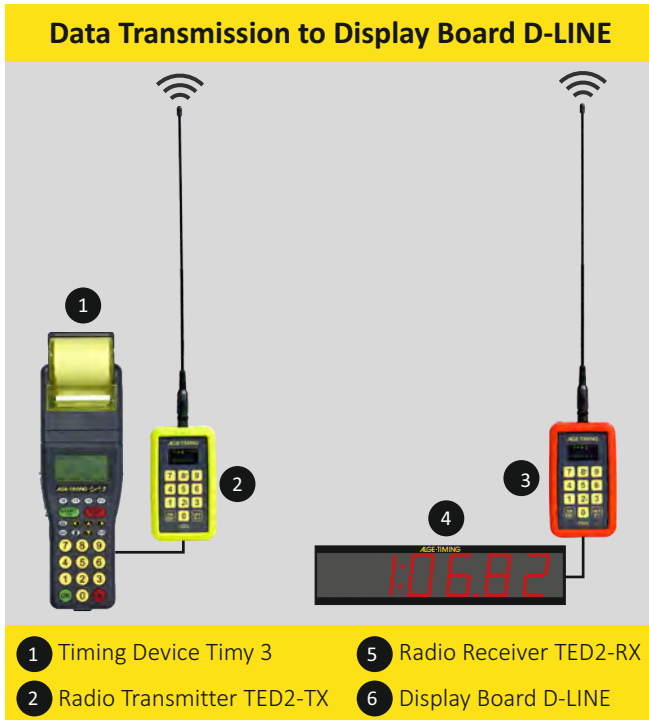
- radio system with integrated accurate timing device
- TED2 stores up to 7000 time stamps
- automatic synchronization via GPS
- transmission of "time stamps" or timing pulses
- display and keyboard for easy operation
- up to 10 different "timing stamps" can be transmitted
- simultaneous reception of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





Data Transmission to Display Boards

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



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



Technical Data

Timing:

- Measuring Range:* 23 hours, 59 minutes 59.9999 seconds
- Timing Precision:* 1/10,000 s
- Time-Base:* self-calibrating TCXO quartz
- Synchronization:* integrated GPS receiver, alternative via timing impulse
- Timing Channels:* 2 (banana sockets), adjustable C0 to C9
- Memory:* 7,000 time stamps (permanent stored)
- Display:* OLED, 37 x 20 mm, 128 x 64 Pixel
- Keyboard:* Splash-proof membrane keyboard with 12 keys
- Power Supply:* External: through USB-C cable
Internal: Li-Ion battery, 3.6 V / 10.4 Wh
Charging time: app. 4 h at +25 °C
Operation time*: TED2-TX: 24 h at -20 °C
TED2-RX: 12 h at -20 °C

Operating Temperature: -20 to +65°C

Measurements: 152 x 81 x 40 mm without antenna

Weight: TED2-TX: 320 g (without antenna)
TED2-RX: 320 g (without antenna)

Case: Splash-proof plastic housing with shock-absorbing rubber coating

Radio:

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

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



EQUESTRIAN

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.

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



Wireless Timing Network WTN

The universal genius WTN can be connected to almost any timing device, impulse device or display board from ALGE-TIMING. Perfectly suited even for data transfer to a PC. This variety of applications is supported by a LCD display with keyboard for setting the required application purpose, the universal connections (timing channels, RS232, RS485) and internal batteries.

Timy3 with integrated Wireless Timing Network WTN

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

Photocell PR1aW

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

Wireless Timing Network Manual Push Button WTN-PB

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

Wireless Timing Network WTN-DB for Score Boards

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

Technical Data of the Radio System WTN

Frequency:	2.4 GHz band, 15 adjustable teams
Transmission performance:	10 mW to 100 mW (adjustable)
Time measuring channels:	5 different time measuring channels
Range:	approx. 350 m with clear view, each WTN device serves as a repeater; the range can be extended
Display board interface:	RS232 interface- 2,400 to 19,200 baud
RS232 interface:	RS232 interface- 2,400 to 115,200 baud

EQUESTRIAN

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.

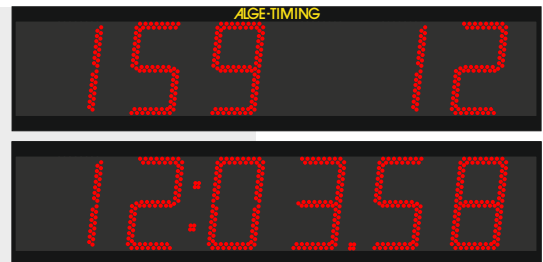
The integrated clock can be used in stopwatch or countdown mode and show the exact time of day. If the D-LINE is equipped with DCF, GPS and/or temperature sensor, the temperature can be displayed in addition to the exact time of day, even if no timing device is connected. The outdoor models differ from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



Possible Extensions:

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



Technical Data

- LED seven-segment digits with three dots between digits
- internal clock
- internal push button
- RS232 and RS485 interface
- connections:
 - banana socket for data (Rs232)
 - banana socket for data (Rs485)
 - banana socket for external manual push button
- Aamphenol socket (four-pin) for data or power supply (12 VDC)
- integrated power supply (100- 240 VAC, 50- 60 Hz)
- fastening:
 - 4 hangers
 - 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





EQUESTRIAN

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

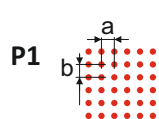
readable even in direct sunlight. If it is used at night or on rainy days in difficult light conditions, the brightness can be adjusted in 100 levels.

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.

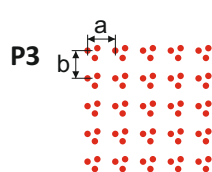


- matrix display board with red LEDs
- models with 1, 3, 4 or 7 LEDs per pixel
- models for outdoor and indoor use
- standard models with a resolution of 16 or 24 pixels in height and 96 or 160 pixels in length
- universal with Ethernet, RS485 and RS232 interface
- internal memory of 4 MB for storing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

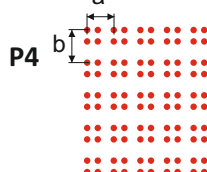
Pixel Arrangements:



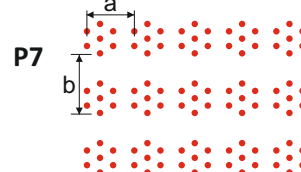
a + b = 10.0 mm
a + b = 15.0 mm
a + b = 20.0 mm



a = 21.6 mm
b = 21.6 mm



a = 20.7 mm
b = 25.4 mm



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)

EQUESTRIAN

Video Wall



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

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

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



Model CH-LITE II (Indoor Display Board)

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

Pixel pitch from 1.33 mm to 16 mm.



Model CH-EIII (Outdoor Display Board)

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

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

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

Pixel pitch from 6.4 mm to 16 mm.



Model CH-EII (Outdoor Display Board)

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

Pixel pitch from 10 mm to 26.7 mm.



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