ALGE-TIMING

Timy 3

Manual
Track + Field

Important Information

General

Before using your ALGE-TIMING device read the complete manual carefully. It is part of the device and contains important information about installation, safety and its intended use. This manual cannot cover all conceivable applications. For further information or in case of problems that are mentioned not at all or not sufficiently detailed, please contact your ALGE-TIMING representative. You can find contact details on our homepage www.alge-timing.com

Safety

Apart from the information of this manual all general safety and accident prevention regulations of the legislator must be taken into account.
The device must only be used by trained persons. The setting-up and installation must only be executed according to the manufacturer's data.

Intended Use

The device must only be used for its intended applications. Technical modifications and any misuse are prohibited because of the risks involved! ALGE-TIMING is not liable for damages that are caused by improper use or incorrect operation.

Power supply

The stated voltage on the type plate must correspond to voltage of the power source. Check all connections and plugs before usage. Damaged connection wires must be replaced immediately by an authorized electrician. The device must only be connected to an electric supply that has been installed by an electrician according to IEC 60364-1. Never touch the mains plug with wet hands! Never touch live parts!

Cleaning

Please clean the outside of the device only with a smooth cloth. Detergents can cause damage. Never submerge in water, never open or clean with wet cloth. The cleaning must not be carried out by hose or high-pressure (risk of short circuits or other damage).

Liability Limitations

All technical information, data and information for installation and operation correspond to the latest status at time of printing and are made in all conscience considering our past experience and knowledge. Information, pictures and description do not entitle to base any claims. The manufacturer is not liable for damage due to failure to observe the manual, improper use, incorrect repairs, technical modifications, use of unauthorized spare parts. Translations are made in all conscience. We assume no liability for translation mistakes, even if the translation is carried out by us or on our behalf.

Disposal

If a label is placed on the device showing a crossed out dustbin on wheels (see drawing), the European directive 2002/96/EG applies for this device.
Please get informed about the applicable regulations for separate collection of electrical and electronical waste in your country and do not dispose of the old devices as household waste. Correct disposal of old equipment protects the environment and humans against negative consequences!
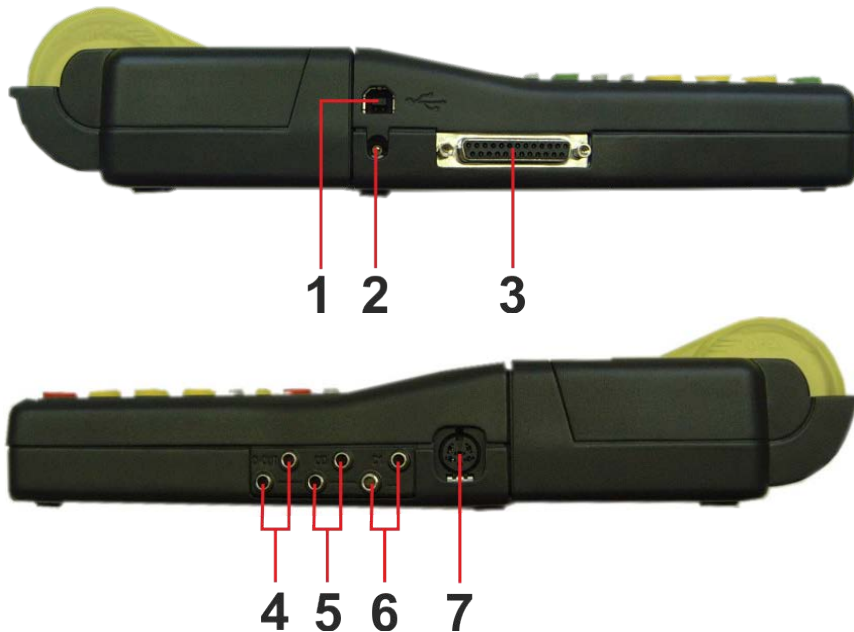
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Control elements

A .... paper roll
B .... thermal printer
C .... printer hood
D .... printer hood opener
E .... LCD graphic display
F .... silicon keyboard
G .... carrying band eyelet

1 .... USB interface
2 .... charging socket
3 .... ALGE·TIMING multiport
4 .... connection for display board
5 .... connection for start impulse
6 .... connection for finish impulse
7 .... standard ALGE·TIMING photocell socket

Table of contents

1   Device Description

The ALGE-TIMING Timy3 is a handy device, equipped with high-quality technology.

In spite of the handy dimensions, the Timy3 provides a large and easy-to-use silicone keypad.

The model Timy3 WP has an integrated printer that records the entire competition.

The Timy3 is also equipped with the necessary interfaces for communication with external devices: interface for display boards, RS232 interface for communication with a computer, RS485 interface to establish a network of timing devices and future-proof USB interface.

The memory of the Timy3 can store up to 30,000 times which can be shown on the display or transmitted to a computer by RS232 or USB interface at any time.

The integrated radio modem WTN allows linking the Timy3 via radio with all devices of the WTN series.

For operating the Timy3 with the internal radio module please also refer to the manual WTN.

1.1   Timy3 Models

Both Timy3 models are equipped with a temperature compensated quartz-oscillator and therefore suited for highest accuracy. The extended temperature range allows operating the Timy3 from +50°C until -20°C (for summer and winter sports).

Timy3 W:

Timy3 W is a timing device without printer.

Timy3 WP (Design2):

Timy3 WP is a timing device with integrated printer.

1.2   Timy3 Software

Available programs for the Timy3:

Stopwatch: universal timing program which is suitable for several heats (run/total time)

Backup: to measure time of day times (e. g. as backup-system or as time reference for the computer)

PC-Timer: to measure time of day times with simultaneous output of the running time in 1/10 seconds via the RS232 interface; ideal as an accurate timing device for the computer

LapTimer: timing program with run times and lap times (e. g. for motor sport)

TrackTimer: timing program for events with several lanes, e. g. athletics and swimming

Training Lite: universal training software (several intermediate times are possible)

Training REF: training software with reference run (several competitors on course)

Speed: speed measurement

Commander: terminal for diverse subprograms (see manual)

CycleStart: program for track cycling with countdown and lap counter

Terminal: terminal for judges (e. g. gymnastics)

Track + Field: for measuring the wind speed with anemometer WS2, to control a concentration clock and infield display board

Parallel-Diff: timing for parallel slalom (difference time of both slopes)

Dual Timer: timing of two separate courses

Timeout: timing with timeout, also applicable for show jumping (with start countdown)

Swim Trainer: training program for swimming

Jumping: training program for jump trials, measures jumping height on the basis of time between jump and landing on a contact mat (several subprograms)

Speed-Climbing: timing for parallel competitions at speed climbing with false start

Start-Liner: to control Startclocks ASC3 or display boards D-LINE when using individual start time (e.g. Gundersen start)

Parallel-Start: to control and input start doors for opening with a different time delay

TV-Timer: simple timing program for controlling a display board or TV time flashes

Voting: radio judging console (WTN) for judges, voting, etc. (e.g. ski jumping)

Safe Driving 2: to control a display board and speed measurement for driver training

CC False Start: false start detection for cross country skiing sprint events

1.3   Driver Installation

For installation of drivers, separate manuals are available. You can download them from our website www.alge-timing.com or contact your ALGE-TIMING representative.

1.4 Keypad

The Timy3 has a weather-proof (water-proof) silicone keypad. The keypad is ideal for outdoor use. The keys are raised and have ideal pressure points. Although the Timy3 is small in dimensions, the keys are easy to operate.

F0 F1 F2 F3 **Control keys:** all-purpose keys; the function of each one is always visible on the display.

START ON **START/ON:** manual start impulse and switch on the Timy3

STOP OFF **STOP/OFF:** manual stop impulse and switch off the Timy3

Printer: paper output; combination 2nd and 🖶 , opens printer menu

2nd **2nd:** always used in combination with a second key (additional function)

Menu: enter the device menu

CLR **CLR:** clear the marked times or memory

Cursor: move the cursor in the display

2nd + ▲ beginning of a list

2nd + ▼ end of a list

OK **OK green:** switch on, confirm commands or start inputs

OK **OK red:** switch off, confirm commands or finish inputs

2   Start Up

2.1   Switch On

- Press „START/ON" key.
- Display shows:
  "Really switch-on? Press the green OK button!"
- If you press the green OK key within 10 seconds, the Timy3 switches on, otherwise it automatically switches off again.

- Choose the program: with the keys ⬇ and ⬇ you can select the program "Track + Field". Confirm it with the key OK.

2.2   Switch Off

You have got two possibilities to switch off the Timy3:

Method 1:

- Press „STOP/OFF" key for 3 seconds.
- Display shows:
  "Really switch-off? Press the red OK button!"
- If you press the red OK key within 10 seconds, the Timy3 switches off, otherwise it returns to the program.

Method 2:

- Press „2nd" and „STOP/OFF" keys
- Display shows:
  "Really switch-off? Press the red OK button!"
- If you press the red OK key within 10 seconds, the Timy3 switches off, otherwise it returns to the program.

3 Track + Field Program

The Track + Field program has 3 sub-programs:

- **WINDSPEED**
  Only used to measure wind in running and infield competitions.

- **TRACK TIMER**
  Only a short description here, see the separate instructions for Timy TRACKTIMER

- **FIELD EVENT**
  Used to measure wind, display the concentration time, wind speed and display the distance. For technical disciplines only!

3.1 Windspeed

This program is used for pure wind measurement (e.g. for running competitions). If the Timy is connected to the WS2 anemometer and the OPTIc3 photo finish system, the wind measurement takes place automatically (controlled by the OPTIc3).

Various information is displayed on the Timy.

The measured windspeed (1) is displayed in the middle on the left. If a measurement is carried out, the measurement time is displayed instead of the windspeed.

There are 4 different types of measurements that are shown in the lower line (2) and operated with the keys F0 – F3.

The five-digit number on the right (3) indicates how many measurements the WS2 has sent to the TIMY.

F0 NORM
It continuously measures the wind speed. This mode can be switched on before the race or during breaks. By default, the continuous wind measurement is not shown on the display board. If you want this display show it use the menu and go the "FIELD EVENT - WS NORM MODE"

F1 10
The wind is measured for 10 seconds and this mode is used for all sprint races from 75 m to 100 m (except for 100 m hurdles and 110 m hurdles).

F2 13
The wind is measured for 10 seconds and this mode is used for 100 m hurdles and 110 m hurdles.

F3 5
The wind is measured for 5 seconds and this mode is used for all sprint races under 75 m and as well for long and 3-jump competitions. If the Windspeed WS2-system is connected to the ALGE photo-finish system OPTIc the measurement is automatically started from the photofinish system and the wind data will be transmitted to the photo finish system.

Display Board:

We recommend to use a 3-digit D-LINE display board to show the wind. In case of a anemometer with radio connection (WTN) the anemometer and WTN-WS is supplied direct from the display board.

The duration of the windspeed shown on the display board can be regulated in the menu "DISPLAY" and then "TAG TIME ". A detailed explanation is given in the "General Operating Instructions of the Timy".

The display board needs the following settings for 3-digit D-LINE:

Brightness
Set the brightness you need (1 = low brightness, 9 = high brightness)

Display Mode and Interface
t = format = ss.z
2 = Protocol = 2400 Baud, no parity bit, 8 data bit, 1 stop bit,

Time-Out for Time, Date and Temperature
If you set to 00 it will show only the wind data and no time of day

Address Setting
No address is necessary, therefore use address 00.

For use in athletics, 3-digit displays can be used that show the concentration time, then the wind and finally the width one after the other in the "Field Event" program. If the display is used universally in athletics, or if several such display boards are used, we recommend the following setting in the extended data mode. The display board can then be used for both, the "Windspeed" and "Field-Event" programs, without changing the settings.

extended protocol, 2400 bps

address of display board = 03

first digit of display board, byte 13

first decimal point of display board, byte 14

second digit of display board, byte 15

second decimal point of display board, byte 16

third digit of display board, byte 17

3.2 Tracktimer

Simple program for hand timing in training or competitions.

You can enter the start number (run number) (1). The running time is displayed in field (2), while the intermediate times are displayed in field 3. You can enter the running distance by pressing the <F0> key and the gender with F5.

The external channels can be used for time measurement (e.g. C0) or the buttons START ON and STOP OFF .
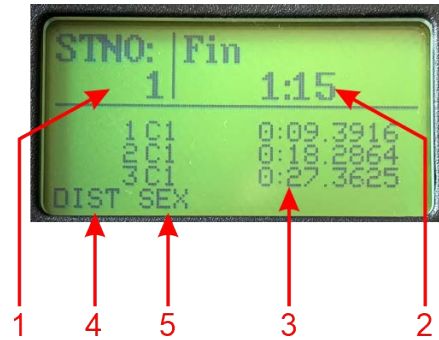
3.3   Field-Event

After selecting the FIELD-EVENT program, the functions listed below are available for selection.

1. Windspeed
2. ID-Number, Attempt, Width
3. Adjusted Countdown Time
4. Countdown Time in selected (in use)
5. Status of Windspeed

Depending on the display boards used, all data can be shown on the display. In most cases, however, only the concentration time and wind speed are displayed.

- The ID-number position flashes (2).
- Enter a start number with up to 4 digits and confirm with the red OK button.
- Enter the number of attempts and confirm with the red OK button.
- Use the F0-F2 keys to select the current countdown time (concentration clock).
- The countdown time is started with the green start key.
- When the athlete starts his attempt, you have to start the wind measurement with the F3 key.
- The wind is automatically displayed after a measurement time of 5 seconds.
- The width field flashes. Enter the distance or height of the athlete and confirm with the red OK button.

3.3.1   Display Board:

Different display boards can be used. Depending on the type and what is to be displayed, each display board must be set differently.

Display board for wind and concentration clock:
For use in "Field-Events" display boards with 3 or 4-digits can be used. They can show the concentration time, then the wind and the distance (for the width 4-digit display boards are needed).

Adjustment for a 3-digit D-LINE

`SE2`	extended protocol, 2400 bps
`A.03`	address of display board = 03
`1.13`	first digit of display board, byte 13
`1.14`	first decimal point of display board, byte 14
`2.15`	second digit of display board, byte 15
`2.16`	second decimal point of display board, byte 16
`3.17`	third digit of display board, byte 17

Adjustment for a 4-digit D-LINE

`SE E2`	extended protocol, 2400 bps
`Ad 03`	address of display board = 03
`1. 11`	first digit of display board, byte 11
`1: 12`	first decimal point of display board, byte 12
`2. 13`	second digit of display board, byte 13
`2: 14`	second decimal point of display board, byte 14
`3. 15`	third digit of display board, byte 15
`3: 16`	third decimal point of display board, byte 16
`4. 17`	fourth digit of display board, byte 17

Freeze Decimal Point or Colon

With older ALGE-TIMING timing devices it can happen that the decimal point or the colon are not part of the protocol. In such a case it can be programmed permanently on the D-LINE.

Decimal Point	98
Colon	99

Infield Display Board D-LINE150-3+1+5-OR or D-LINE250-3+1+5-OR

These display boards are pre-programmed for use as infield display boards and do not require any settings.

4   Technical data

Processor:	Siemens C161 with 3.3 V technology
Time reference:	12.8 MHz TCXO or standard quartz
Time resolution:	1/10,000 seconds
Running precision:	**Temperature compensated quartz oscillator TCXO:**

temperature range -25 to 50 °C:........+/- 2.5 ppm (+/- 0.009 sec/h)
at aging:..max. +/- 1 ppm per year
at 25 °C, calibrated ....+/- 0.3 ppm

Program memory:	FLASH memory with 16 MBit
Data memory:	RAM with 4 MBit, approx. 30,000 times
Display:	monochrome LCD graphic display 128 x 64 pixels with extended temperature range and backlight
Keypad:	silicone keypad, 26 buttons
Connections:	DIN-plug for photocell (7)

banana plug pair – start input (5)
banana plug pair – finish input (6)
banana plug pair – display board (4)
D-sub-25 pin (3)

- 9 timing channels
- RS232 (PC-connection)
- display board
- RS485 (network)
- power supply (8 - 22 VDC in / 7.5 - 21 VDC out)

USB (1)
power supply 8 - 22 VDC in (2)

Radio module WTN:	2.4 GHz band, integrated with 16 adjustable frequencies, adjustable output 10 to 100 mW, 5 different timing channels, range approx. 350 m at free sight
Timing Channels:	9 independent timing channels (normally open contact)

C0 to C5 with 1/10,000th seconds precision
C6 to C8 with 1/100th seconds precision
max. loop resistance per channel is 2000 Ohm

Channel extension:	5 channels per extension, max. 99 channels
Power supply:	**Internal:**

NM-TIMY2 battery pack or
6 x AA-Alkaline 2 Ah (only for Timy3 W)
External:
with charger PS12A, 12 V battery or 8 -24 VDC

Operating time (20 °C):	Alkaline: without printer about 50 hours

NM-TIMY2: without printer about 60 hours
NM-TIMY2: with printer (3 printed lines per minute) about 47 hours

Charging:	approx. 14 hours
Printer:	graphic thermal printer, max. 5 lines per second
Temperature range:	Timy3 W and WP: -20 to 60°C
Dimensions:	Timy3 W: 204 x 91 x 50 mm
	Timy3 WP: 307 x 91 x 65 mm
Weight:	Timy3 W: 450 g (without battery)
	Timy3 WP: 650 g (without battery and paper)

4.1 Pin Assignment

1 2   3   4 5 6 7
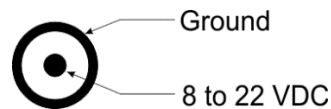
USB Interface (1):
The USB interface is used as interface between Timy3 and computer. Via this interface the Timy3 can be controlled completely and all data can be recalled.

Charger Connection (2):

Ground

8 to 22 VDC

ALGE-TIMING Multiport (3):
Pin assignment:
1 .... terminal numbering connection
2 .... c0 .... start channel (precision 1/10,000 s)
3 .... c2 .... timing channel 2 (precision 1/10,000 s)
4 .... c3 .... timing channel 3 (precision 1/10,000 s)
5 .... c7 .... timing channel 7 (precision 1/100 s)
6 .... data output for display board
7 .... RS485B
8 .... RS485A
9 .... clock for terminals CLK
10 .... RS232 TX
11 .... RS232 RX
12 .... common ground GND
13 .... stabilized voltage out (+5 V 100 mA limited, short circuit proof)
14 .... c1 .... stop channel (precision 1/10,000 s)
15 .... c5 .... timing channel 5 (precision 1/10,000 s)
16 .... c8 .... timing channel 8 (precision 1/100 s)
17 .... c6 .... timing channel 6 (precision 1/100 s)
18 .... c4 .... timing channel 4 (precision 1/10,000 s)
19 .... RS232 RTS
20 .... printer data out
21 .... horn output 8 Ω
22 .... RS232 CTS
23 .... power supply out: 7.5 - 21 VDC 2A max.
24 .... common ground GND
25 .... power supply in: 8 - 22 VDC
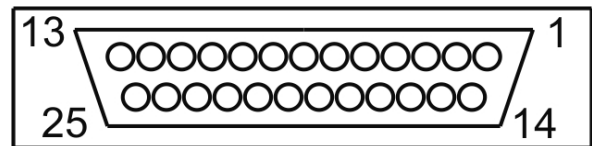
Banana   **Socket:**
banana socket for display board   (4)
banana socket for start channel C0   (5)
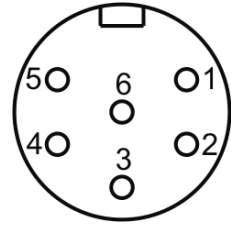banana socket for stop channel C1   (6)

GAZ OUT   START C0   STOP C1

D-OUT   C0   C1

COMMON GROUND GND

Photocell socket (7)

Pin assignment:

1 ....c0.......... start channel
2 ....c1.......... stop channel
3 ....GND...... common ground
4 ....+Ua ...... power supply out 8-22 VDC (only on external supply)
5 ....+5V ...... stabilized voltage out (+5 VDC 100 mA limited)
6 ....c2.......... intermediate time channel

Subject to changes and misprints