ALGE-TIMING

Timy 3

**Manual
Jumping**

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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Declaration of Conformity

We declare that the following products comply with the requirements of the listed standards.

We,   *ALGE·*TIMING **GmbH**
     Rotkreuzstrasse 39
     A-6890 Lustenau

declare under our sole responsibility, that the timing device

Timy3 W-F and Timy3 WP-F

complies with the following standards/normative documents and in case of intended use complies with the basic requirements of R&TTE 1999/5/EC:

Telecommunication (TC)terminal device
Short Range Device

Applied harmonized standards…
          EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
EMC: EN301 489-17 v2.1.1. (2009-05) v2.2.1 (2012-09)
          EN 300 328 v1.7.1 (2006-10) v1.9.1 (2015-02)
          EN 55022 : 2010 / AC : 2011
          EN 55024 : 2010 / A1: 2015
          EN 61000 3-2:2014
          EN 61000 3-3:2013

Additional Information:
The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC, also the EMC Directive 2004/108EG and accordingly carries the CE-marking.
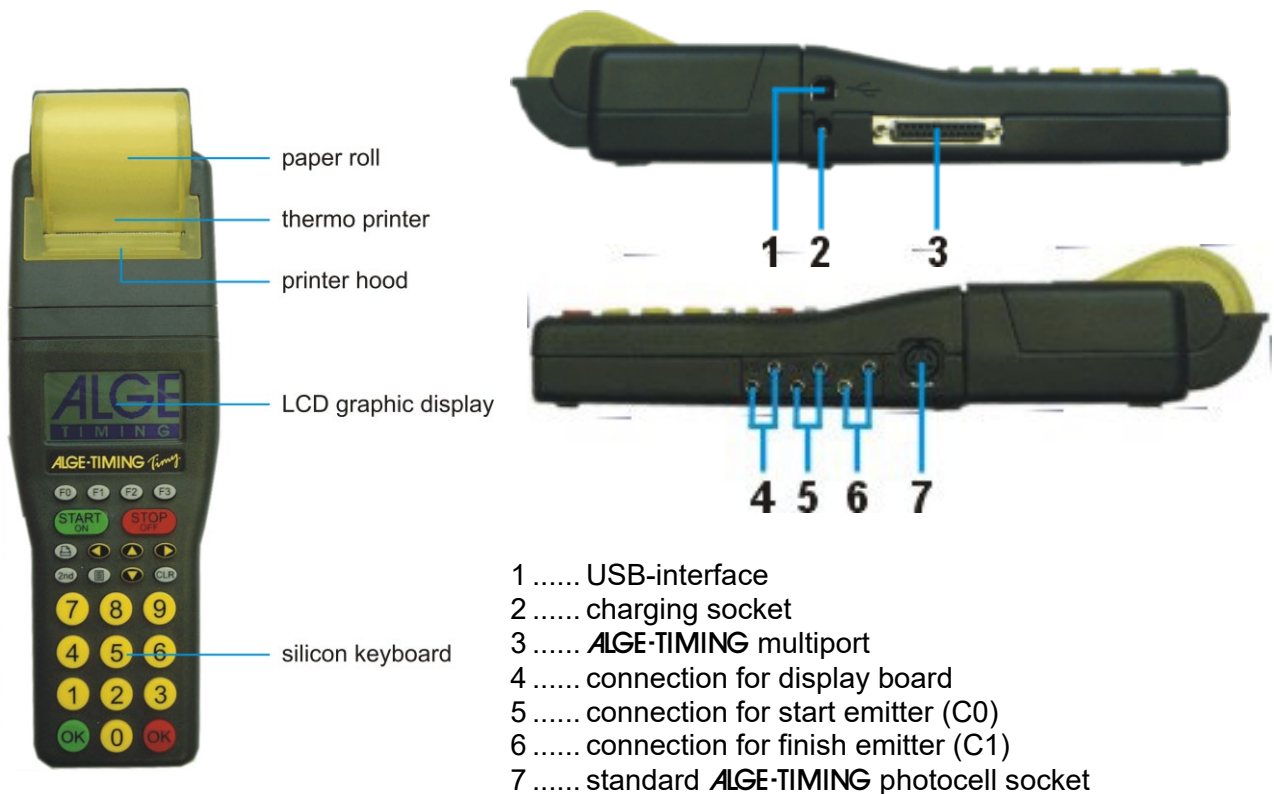
Lustenau, 2017-03-22   *ALGE·*TIMING GmbH

                                             Albert Vetter
                                             (General Manager)

Table of Contents

1   Control Elements

paper roll
thermo printer
printer hood

LCD graphic display

silicon keyboard

1 ...... USB-interface
2 ...... charging socket
3 ...... ALGE-TIMING multiport
4 ...... connection for display board
5 ...... connection for start emitter (C0)
6 ...... connection for finish emitter (C1)
7 ...... standard ALGE-TIMING photocell socket

2   General

The program jumping is a program to execute certain training tests with jumping. For this test you need a contact mat (e.g. ALGE-TIMING contact mat CM40x30 (see below)). We can also offer bigger contact mats on request.

The time from leaving the mat until landing on the mat is measured by the timing device TIMY3. From the measured "time in the air", the timing device is calculating the height of the jump.

3   Select Program Jumping

The TIMY3 program "JUMPING" measures the height of the jump when using a contact mat. The contact mat is connected to channel 0 (C0) at the TIMY3.

1. Connect the contact mat to the TIMY3 (channel C0)
2. Start the TIMY3 and select program Jumping
3. Select the jumping mode with the function key <F0>, <F1>, <F2>, <F3>
   3.a. <F0> select further jumping modes
   3.b. <F1> <F2> <F3> : select the mode that is specified above it

4   Jumping Modes

You can select between the following jumping modes:
- squat
- count
- drop
- pow15
- pow30
- pow60

4.1   Squat Jump

The squat jump is used in sports science for jump analysis to test the pure concentric force of the jump ability of muscles (a backswing is not allowed).

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TIMY3 – Jumping

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The jump is executed from a squatting position standing on a contact mat. The arms are placed parallel to the body and should not be actively involved during the movement. The goal is to jump as high as possible and to land again on the contact mat. As a performance index of the jump, the height is measured.

1. Select with <F1> the software "Squat"
2. The display shows "NOT READY, Squat Jump"
3. Input an ID-number for the athlete and confirm it with key <OK>
4. Display shows "WAITING FOR JUMPER …"
5. Athlete steps on contact mat; upper and lower leg have a 90 degree angle; hands on the hip. The jump starts from this position.
6. Athlete jumps as high as he can.
7. The TIMY3 measures the time that the athlete is in the air and outputs the height in cm.

Printer Output:

0002 C0	12:45:22.1706	time of day when jump happens
Squat	0.4435 fly	time in the air
Squat	24 cm	jumping height
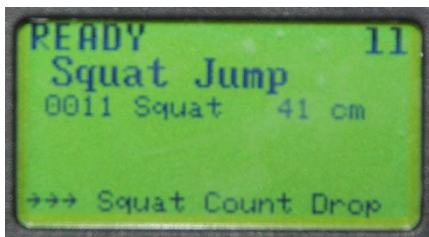
Display:

The display shows the 11th jump of program squat. The jump was 41 cm high.

4.2   Counter Movement Jump

The counter movement jump is used in sports science for jump analysis. It helps to test the ability of concentric force of jump muscles (a backswing (down) is allowed). The measurement is the same as for squat jump but the movement of the athlete is different.

In this case, the jump is normally designed from the base position standing on a contact mat; the arms are placed on the hips and should not be involved in the backswing. The goal is to jump as high as possible and land again on the contact mat. As a performance index of the jump the height is measured.

1. Athlete steps onto contact mat; hands on the hip; standing upright. The jump starts from this position.
2. In one motion, the athlete goes into a squat and uses this counter movement to then jump as high as he can.
3. The TIMY3 measures the fly time and outputs the height in cm.

4.3   Drop Jump

The drop jump is a used in sports science for jump analysis. It helps to test the force capability including the reactive power capability of the jump muscles.

Normally, the jump is executed from a defined height (approx. 30 cm); the arms are parallel to the body and have no active part in the movement. The athlete jumps on the ground (contact mat) and then tries to jump as high as possible and lands again on the contact mat. As a performance index of the jump, the height is measured.

1. Athlete starts on a socket next to the mat, hands on hip, and jumps down onto the mat.
2. On landing on the mat, the athlete jumps up as high as he can.
3. The TIMY3 measures the contact time and the fly time.

Printer Output:

```
0003 C0    13:41:02.1706
     Drop      0.3483 con
     Drop      0.5134 fly
     Drop         32 cm
```

time of day when jump happens
time on the mat
time in the air
jumping height

4.4   Power Test 15s, 30s and 60s

This test measures how many jumps the athlete can execute in a certain period. The printer outputs the time on the mat, the time in the air and the jump height for each jump.

1. Athlete starts on the mat and jumps as often as he can until the interval is elapsed.
2. The TIMY3 measures the fly time and the contact time between each jump.

Printer Output:

```
0005 C0    13:53:11.1796
   1 Pow15     0.5134 fly
   1 Pow15         32 cm
   2 Pow15     0.3572 con
   2 Pow15     0.6208 fly
   2 Pow15         47 cm
   3 Pow15     0.3572 con
   3 Pow15     0.6079 fly
   3 Pow15         45 cm
```

time of day when jump happens
1st jump, power test for 15 sec., time in the air
1st jump, power test for 15 sec., jumping height
2nd jump, power test for 15 sec., time on the mat
2nd jump, power test for 15 sec., time in the air
2nd jump, power test for 15 sec., jumping height
3rd jump, power test for 15 sec., time on the mat
3rd jump, power test for 15 sec., time in the air
3rd Jump, Power Test for 15 sec., jumping height

5   Interface for Display Board

Output format: 1 start-bit, 8 data-bit, no parity-bit, 1 stop-bit
Bit rate: factory setting 2400 baud (necessary for **ALGE·TIMING** GAZ display board)
                      2400, 4800, 9600, 19200, 28800, 38400
Transmission protocol: ASCII

You can see the number of attempts and the height in cm on the display board.
The best height can be shown on address "A".

Each line ends with a carriage return (CR)

Output by RS232 or USB for power test 15 seconds:

```
12345678901234567890123456  character counter
 0008 C0  16:04:13,1768 00
 0008 Pow15  0,4736 fly 01
 0008 Pow15     028 cm  01
 0008 Pow15  0,9523 con 01
 0008 Pow15  0,5084 fly 02
 0008 Pow15     032 cm  02
 0008 Pow15  0,9761 con 02
 0008 Pow15  0,4564 fly 03
```

```
0008 Pow15    026 cm  03
0008 Pow15 0,9664 con 03
0008 Pow15 0,5540 fly 04
0008 Pow15    038 cm  04
0008 Pow15 1,0316 con 04
0008 Pow15 0,5353 fly 05
0008 Pow15    035 cm  05
0008 Pow15 1,1512 con 05
0008 Pow15 0,5945 fly 06
0008 Pow15    043 cm  06
0008 Pow15 1,1634 con 06
0008 Pow15 0,4892 fly 07
0008 Pow15    029 cm  07
0008 Pow15 1,0877 con 07
0008 Pow15 0,5328 fly 08
0008 Pow15    035 cm  08
0008 Pow15 1,1974 con 08
0008 Pow15 0,5273 fly 09
0008 Pow15    034 cm  09
0008 Pow15 1,2228 con 09
0008 Pow15 0,4756 fly 10
0008 Pow15    028 cm  10
```

Each line ends with a carriage return (CR)

Subject to changes and misprints