

ALGE-TIMING

Radar Speed Check Speedy 150-3-R Speedy 250-3-R



MANUAL

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. Parts that we use in the product are CE certificated by the manufacturers and ALGE-TIMING GmbH does not change them.

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

Declare under our sole responsibility, that the display board:

D-LINE

and its models of the series 57, 100, 150, 250, 300, 450, 600, 1000, 1500, SDA1 produced from 01.01.2005 and later

is in conformity with the following standard(s) or other normative documents(s):

Safety: IEC 60950:1999 / EN 60950:2000
EN 60335-1:2002 + A11:2004 + A1:2004 + A12:2006 + A2:2006

EMC: EN55022:2006+A1:2007
EN55024:1998+A1:2001+A2:2003
EN61000 3-2:2006
EN61000 3-3:1995+A1:2001+A2:2005

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, 30.11.2010

ALGE-TIMING GmbH



Albert Vetter
(General Manager)

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1 Scope of Supply

This system includes a radar sensor D-RAD (with fixed 30 m cable), a display board D-LINE and a power cable K-NETZ 4.



Radar Sensor D-RAD
with 30 m Cable



Display Board D-LINE



Power Cable
K-NETZ 4

2 Operation

2.1 Set Up of System

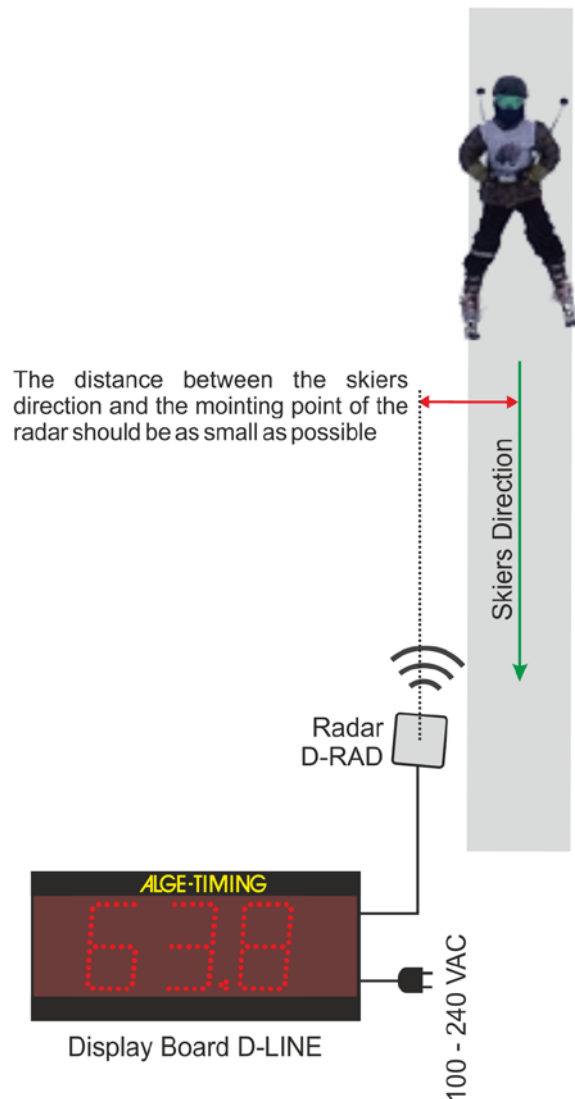
The radar sensor D-RAD should be fixed on a pole directed towards the skier. If you open the four screws on the front side of the sensor, you can align the radar vertically to the ideal position to detect the skier (see picture below). The cable of the radar sensor must point downwards (to avoid water damage).



This side (see upper picture) must show in direction of the skier. The distance between the skiers to the mounted radar (see picture to the right) must be as small as possible (small measuring angle).

The cable of the radar sensor is connected with the 4-pin Amphenol plug at the display board. The power cable connects the display board with the mains (100 – 240 VAC).

Attention: Speeds below 20 km/h (12 mph) are neither measured nor shown!



2.2 Standard Settings

The D-LINE scoreboards are delivered with standard settings optimized for speed measurement with radar. It shows speeds between 20 km/h (12 mph) and 241 km/h (150 mph).

Speeds below 100 (with two digits) are shown with one decimal, speeds of 100 and more are shown without decimal.



The display board is set to show the measured speed for 10 seconds before it returns to blank. It always shows the last measured value.

2.3 Parameter List

You can change the parameters with the internal push button of the display board. To reach the adjustment menu press the push button until the display shows the first parameter (e.g. **br**). If you release the button first the parameter blinks for some seconds and then the parameter value. When the value blinks, you can change it by pressing the push button (each push increases the value). If it is set wait until the parameter value changes back to the parameter. Press the push button to move to the next parameter and continue as before. To leave the parameter menu repeatedly press the push button when a parameter blinks until the parameter display disappears.

2.3.1 **br** Brightness [A0] (b)

With this parameter the brightness settings and effects can be set. The first digit is for the appearance, the second one for the brightness.

2.3.1.1 First Digit of Settings

The first digit defines the type of transition between time and temperature. Fade-in changes over with brightness effect from time to temperature.

2.3.1.1.1 **br 0** Fade-in off

Fading is not activated.

2.3.1.1.2 **br 1** Fade-in on

Fading is activated.

2.3.1.2 Second Digit of Settings

This setting defines the brightness mode of the display.

2.3.1.2.1 **br 8** Manual Setting

The second digit of the brightness settings can be adjusted manually from 0 to 9. Value 0 is minimum brightness and value 9 is maximum brightness. You can also execute this adjustment by using the menu of TdC8001 or TIMY.

2.3.1.2.2 **br d** Daytime Dependent Brightness [x3]

Brightness is set automatically, depending on the daytime.

2.3.1.2.3 **br A** Light Sensor Dependent Brightness [x4]

With this setting, the brightness depends on the light sensor. If no light sensor is connected, maximum brightness is set.

2.3.2 Display Time

With this parameter you can adjust the display duration of the speed (time how long the speed is shown on the display board). It is possible to make adjust the period between 1 and 99 seconds.

If you set 00 as parameter, the speed is permanently displayed until the next measurement.

2.4 Parameter Adjustment of Radar D-RAD

The following adjustments are valid for standard radar sensor D-RAD. On request, we can change the values for the customer (e.g. mph instead of km/h).

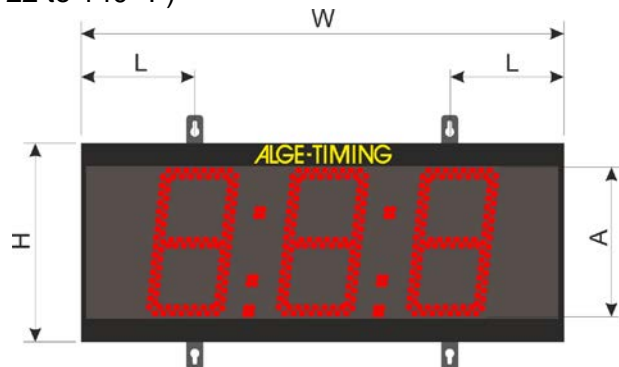
Target Direction:	adjustment: approaching	possible: approaching, receding, both
Sensitivity:	adjustment: 4	possible: 1 to 5
Target Tracking:	adjustment: sports	possible: sports or vehicles
Unit of Measure:	adjustment: km/h	possible: mph, km/h, m/s
Min. Speed Limit:	adjustment: 20	possible: 2 to 64 km/h
Max. Speed Limit:	adjustment: 241	possible: 80 to 241 km/h
Output Baud rate:	adjustment: 9600	possible: 1200, 2400, 4800, 9600, 19200

3 Technical Data

3.1 Radar

<i>Accuracy:</i>	+/- 1.6 km/h (+/- 1 mph)
<i>Speed Range:</i>	2 to 241 km/h (5 to 150 mph)
<i>Frequency:</i>	K-band 24.125 MHz; +/- 100 MHz
<i>Beam Width:</i>	12° horizontal
<i>Voltage:</i>	7.4 – 24.0 VDC
<i>Measurements:</i>	7.62 cm x 7.62 cm x 3.81 cm (3" x 3" x 1.5")
<i>Operating Temperature:</i>	-30 to 60°C (-22 to 140° F)

3.2 Dimensions



Type	Number of digits	Figure Height A [mm]	Width W [mm]	Height H [mm]	Depth [mm]	Suspension Brackets L [mm]	Bottom Brackets	Middle Brackets	Max. Reading Distance [m]	Power Input [W]
D-LINE80-O-3-E0	3	80	450	150	60	100	no	no	40	6
D-LINE150-O-3-E0	3	150	600	250	60	150	yes	no	75	6
D-LINE250-O-3-E0	3	250	850	350	80	200	yes	no	125	17

3.3 Power Supply for Display Board D-LINE

Display board up to 250 cm figure height:

100 – 240VAC / 50-60 Hz, automatic switching

3.4 Connections of D-LINE



Internal button to set the display mode

Amphenol socket:

- 1 +10 - 12 Volt
- 2 Ground
- 3 Data Out
- E Data In

Connection for push button for stopwatch, countdown and counter function

Data In and Ground

100-240V, 50-60Hz
1.0A Fuse

3.5 Interface Formats

3.5.1 Serial Interface:

Signal compatible with RS 232 C interface, serial, no handshake operation.

3.5.1.1 Standard Settings

9600 Baud, 1 Start bit, 8 Data ASCII-Bit, 1 Stopbit, no Paritybit

Subject to changes

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