Version-E23-10-27

ALGE-TIMING

BALLSPEED
WITH RADAR
BS-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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1 General

Ballspeed BS-R is a professional speed measurement system for balls. It is precise, rugged and simple to operate. It can be used to measure the Ballspeed of most ball sports. Depending on the sport the radar sensor might have sport specific adjustments. The following manual is specified for football (soccer).

The Ballspeed System BS-R includes the following components:

1 x Radar Sensor Speedmaster
1 x Display Board D-LINE150-O-3-E0 (150 cm figure height) or
D-LINE250-O-3-E0 (250 cm figure height)
1 Tripod TRI128
1 Cable 288-10 (between display board and radar sensor)
1 Main Plug K-NETZ4 for display board

D-LINE150-O-3-E0

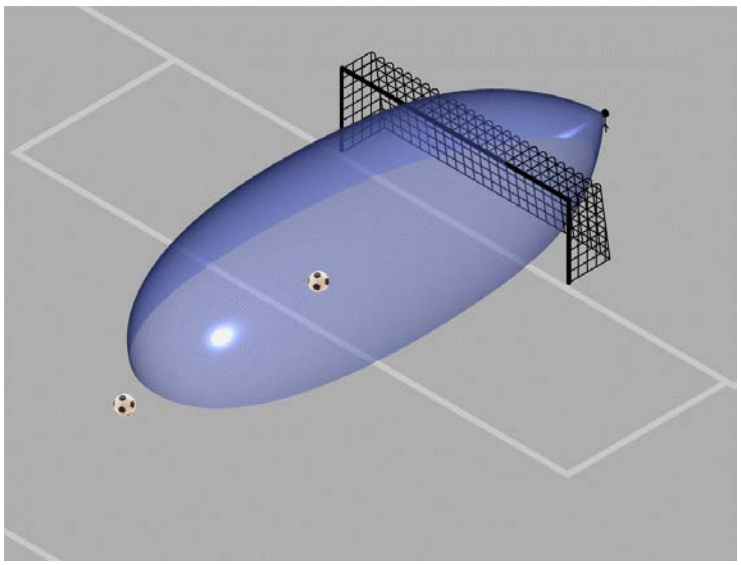
D-LINE250-O-3-E0

Radar Sensor Speedmaster

Tripod TRI128

2 Commissioning

- It measure shoots on the goal with speeds **between 30 km/h and 200 km/h**.
- The radar sensor measures the speed of the ball moving frontal against it.
- To get the best and most accurate results it is necessary that the ball is moved as straight as possible in direction to the radar sensor.
- To measure the speed in football it is recommended to use a handball or junior goal.
- In order that the radar sensor measures the full area of the goal it should be positioned for a handball goal (3 m wide) about 3 m behind the goal. For a junior football goal (5 m wide) set the radar sensor about 5 m behind the goal.
- The radar sensor must be positioned in the middle of the goal at about 1 m height (halve height of the goal). The height of the radar sensor you adjust with the tripod. The tripod that is included in the system and is adjustable in the height.
- The radar sensor must be set so it looks straight to the goal.
- Connect the cable 288-10 at the radar sensor and at the display board D-LINE and fasten it with the screwing plugs.
- Plug the mains cable at the display board and plug it to the mains.



- Set the display board at a safe position (either behind the goal if you have a net) or on a side of the goal in a safe distance so nobody will shoot on it.
- The ball must be shoot with a minimum distance of 6 to 7 m to the goal. It is recommended to mark the point from where you shoot.

3 Safety

- To measure the speed use always a goal with a net. This prevents that the radar sensor will be hit by the ball. The radar sensor is a highly sensible measuring device and can be damaged if it is hit with the ball.
- Stay away from streets. This radar sensor is not made to measure the speed of cars.
- All people should be behind the ball. If they are before the ball in shooting direction somebody can be hurt.
- Do not set up radios or speakers next to the radar sensor. It can influence the measurement.
- Do not set up the sensor towards a street. Moving vehicles could lead to wrong measurements.

4 Adjustments of the Display Board D-LINExxx-O-3-E0

The following menu adjustments are necessary for the use of the radar sensor that is connected at the display board D-LINE:

b 0 9.....Adjustment of **B**rightness
S S 2.....Baud rate of serial interface RS232 (2400 Baud)
t 0 0.....Timeout 0 (must be set on 0)
A 0 0.....Address 0 (must be set on 0)

The following adjustment is variable depending of the display board format:

S S 2.....shows the speed in the format 123 km/h (only full km/h)
S h 2.....shows the speed in the format 1.23 km/h (with two decimal)
S t 2.....shows the speed in the format 12.3 km/h (with one decimal)

5 Technical Data

internal button to set the display mode

Amphenol socket:
1 +10 - 12 VAC (external supply)
2 ground
3 no function
E RS232 Data in from Radar

Timing mode (no function for Radar)

RS232 Data (parallel to Amphenol socket)

90 - 240V, 50-60Hz
1.0A Fuse

5.1 Power Supply

5.1.1 Mains

90 - 240V, 50-60Hz
1.0A Fuse

5.1.2 External Battery

+10 - 12 VAC

Subject to changes

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