Wireless Timing Network
Push Button
WTN-PB

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).
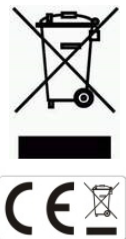
Liability Limitations

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 electronic 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!

Operating ranges and interferences

The ALGE WTN operates in 4.2 GHz frequency band, the same as WLAN. This is also used by other services. The operating range as well as the operation may be disturbed by devices working at the same or neighboring frequencies.

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Declaration of Conformity

We hereby declare that the following product complies with the below stated standards. All components used by us are CE certified by their producer and are not modified by ALGE-TIMING GmbH.

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

Declare in sole responsibility that the radio receiver

Wireless Timing Network WTN-PB

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 complies with the low voltage directive 73/23/EEC and EMC directive 2004/108EG and carries the CE sign.

Lustenau, 2016-11-12   ALGE-TIMING GmbH

                                                       Albert Vetter
                                                         (CIO)

Table of Contents

1   Device Description

The ALGE WTN is a compact radio system for timing and is equipped with the most updated technology. A radio network consists of two or more devices of the WTN series.

ALGE-TIMING offers the following devices of the WTN-Series:

- WTN ....Universal Radio Network
- Timy3 WP ....Timing Device with built in Radio Network
- PR1aW ....Photocell with built in Radio
- WTN-DB ....Radio Network for Display Boards
- WTN-WS...................Radio Network for Windspeed (Athletic)
- WTN-PB....................Push Button
- Bang W ....Speaker system for start
- E-Start W ....Electronic start

The network is designed in such a way that you can transmit data to a display board (e.g. ALGE GAZ or D-LINE), serial RS232 data (e.g. to a PC), RS485 data, and timing impulses at the same time (e.g. photocell PR1aW).

The WTN-DB is specially designed as data-radio for display boards. It receives the data sent from a timing device and feeds a display board.

When designing the Wireless Timing Network the ALGE development team concentrated on features that make ALGE devices unique, but also on features that stand for ALGE products: easy operation, highest reliability, rugged casing. Up-to-date technology, integrated in a solid case, results in exceptional features.

Attention: Before using the device make sure that you are allowed to operate it in your country. The radio power output must be adjusted so that it is legal to use it in the country you operate it in.
     EU: max. 10 mW is allowed
     USA: max. 100 mW is allowed

2 Initial Operation

For the initial operation you have to remove the transportation lock. For this you remove the battery cover and remove the plastic coating. Close the battery cover. The WTN-PB is now ready for operation.
Re-insert this plastic coating for transportation.
Please remove the battery if you do not use the WTN-PB for a longer period.

3 Operation

3.1 Switch On / Switch Off

- *Switch on:* press the red button shortly, both LED must blink green
- *Switch off:* keep the red button pressed for 5 seconds until the both LED show permanent red

3.2 Timing Channel

You can setup the timing channel as follows:
- Hold down the button for 5 seconds when switching on.
- Both LEDs shine green.
- Release the button. Now the channel is set co C0.
- Other channels you can setup by pressing the button. Once for C0, Twice for C1, …
- If you do not press the button for 5 seconds the WTN-PB returns to normal operation mode. The chosen channel will be stored even when you switch the device off and on again.

3.2.1 Adjust Channel 0

- WTN-PB must be switched off
- Press button of WTN-PB for about 5 seconds until both LED show permanent green
- Release button and wait until both LED blink green
- Channel 0 is adjusted

3.2.2 Adjust Channel 1

- WTN-PB must be switched off
- Press button of WTN-PB for about 10 seconds until both LED show permanent red
- Release button and wait until both LED blink green
- Channel 1 is adjusted

3.3   Team

This function is to select the team number of a WTN system. You can select between 15 team numbers. There are 9 single teams (1-9) and 6 common teams (A-F). To adjust the team numbers, use a small screw driver. Position 0 is an internal factory test mode and has no function for the user.

Separate Teams = SINGLE
Used for completely independent networks. If you operate two networks next to each other both networks work in this mode on different frequencies and do not communicate among each other.

Joint Teams = ALL
Used for networks that work independently next to each other. If different A teams with the same radio channel are operated, the other A teams can be used for data transmission. The data of the other team however is not used (e.g. for two show jumping grounds that are next to each other).

Adjustment:
The rotation switch to adjust the teams is hidden in the battery compartment in order to prevent changes that are not wanted. In order to change the team, it is necessary to open the battery compartment and remove the battery. For the adjustment a small screwdriver is necessary (delivered by ALGE-TIMING with the WTN-PB).

3.4   Factory Setting

If you want to set the WTN-PB to factory settings you can make a reset:
- Hold down the button for 10 seconds when switching on.
- Both LEDs shine red.
- The WTN-PB will be set to factory setting: Timing channel C1
- Release the button and the WTN-PB returns to normal operation mode.

In the normal operating mode, you can trigger a timing event by a short press to the button.

4   LED Signals

The two LEDs show the following operation modes:

Upper LED:
If you press the button in normal operation mode:
Permanent red   Channel is triggered
Permanent green   Channel is free again. After 3 seconds the LED will return to bat-
                                       tery display mode (blinking)

Battery display mode:
Blinking green   Battery is full
Blinking orange   Battery is half full
Blinking red   Battery is nearly empty

Lower LED:
This LED shows the RSSI of the nearest Neighbor device. The means it shows the strength
of the radio signal of the next WTN partner device.
LED is off   no connection to any other device
Blinking red   there is no good connection.
Blinking orange   there is a connection
Blinking green   there is a good connection.

5   Battery

The WTN-PB needs a 1,5V C Battery for operation. You can change the battery by screw off
the battery cover at the bottom.

If you do not use the WTN-PB for a longer time you should remove the battery to prevent
leakage.

The Battery life depends on several factors. Average lifetime is 52 hours at 20°C. At low
temperatures of -20°C it will be approximately 8 hours.

Subject to changes and misprints

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