TimeTronics

Manual

Wireless Start System for Argus Photo Finish

Wireless Serial Interfaces for WindSpeed & Scoreboards

SPORT TIMING SYSTEMS

June 2026v1

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Welcome to the Wireless Start System & Wireless Serial Interfaces user manual.

This guide is designed to explain the functionalities of TimeTronics' Wireless Start System in combination with Argus Photo Finish software & the use of TimeTronics' Wireless Serial Interfaces in combination with our WindSpeed devices and Scoreboards.

Please note that all images in this manual are examples; the version you receive may differ slightly from what is shown. Most images in this manual are based on Argus version 2.32.0.

If you have any questions regarding the operation or service of this or any other TimeTronics equipment after reading this document, please contact your local distributor or TimeTronics directly via email at info@timetronics.be or by phone at +32 (0) 14 23 19 11.

We also welcome any feedback or suggestions regarding this user manual at info@timetronics.be.

Thank you for choosing TimeTronics products and services.

Sincerely,

The editors

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Introduction

TimeTronics Standard Cabled Configuration

Our primary photo finish camera system and its peripheral devices are typically connected by cables, which ensures optimal speed and reliability. These devices use either our established fixed or mobile cabled network, which consists of various Interface & Connection Boxes paired with 5- or 12-pole cables, as well as Ethernet or Fiber cables. To facilitate a better comprehension of our various cable solutions, we advise consulting our wiring schemes and diagrams.

TimeTronics Standard Wireless Configuration

A standard wireless configuration can be a better or alternative choice to a standard cabled configuration for several reasons. Wireless setups offer greater flexibility and mobility, allowing devices to connect from various locations without being tethered by physical cables. This makes it easier to rearrange workspaces, expand coverage areas, and accommodate new devices without the hassle of running additional wires. Additionally, wireless configurations can reduce installation time and costs, especially in environments where laying cables would be challenging or disruptive. While cabled connections may still offer advantages in terms of speed and reliability, wireless networks provide a convenient and scalable solution for many modern connectivity needs.

Configuration Type	Description	Connection Method	Advantages
TimeTronics Standard Cabled Configuration	Primary photo finish camera system and peripheral devices connected by cables	Fixed or mobile cabled network, Interface & Connection Boxes, 5- or 12-pole cables, Ethernet or Fiber cables	Optimal speed and reliability
TimeTronics Standard Wireless Configuration	Wireless alternative to cabled configuration for greater flexibility and mobility	Wireless networks	Greater flexibility, mobility, reduce installation time and costs

Aim of TimeTronics Standard Wireless Configuration

Generally, outdoor athletics events use a photo finish camera system together with a wind gauge and a timing scoreboard to show running times or race results at the finish line. The race begins when a starter uses either a traditional start pistol or an electronic starting device. All these systems are typically connected using a network of fixed or mobile cables.

The TTC-217 Wireless Start System is designed to transmit the starting signal wirelessly to the Argus Photo Finish system. This solution utilizes a two-device configuration: one unit positioned at the starter's location and the other connected to the Argus Photo Finish camera. A range of mounting options are offered to accommodate varied operational requirements. Please note, the TTC-217 Wireless Start System is exclusively compatible with Argus Photo Finish camera systems and does not support legacy MacFinish camera systems.

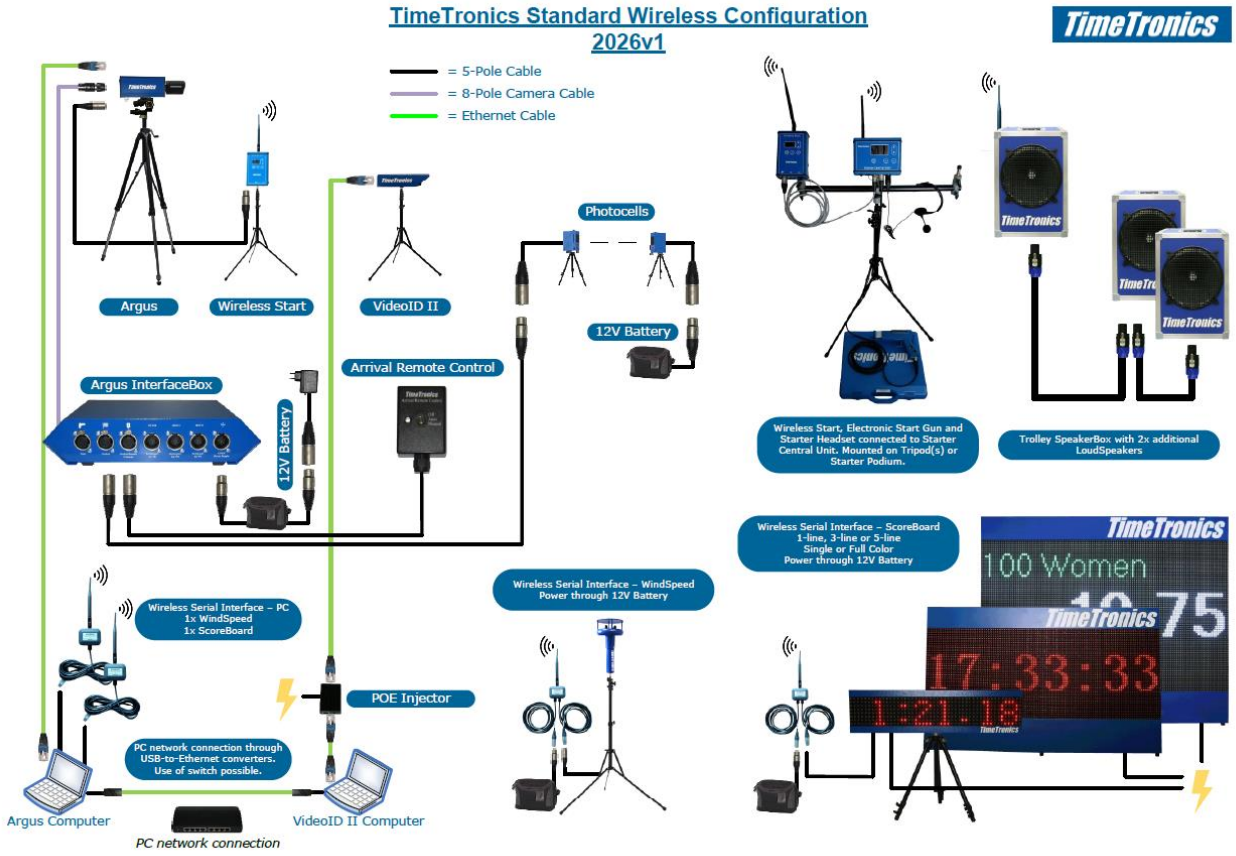
In addition, we have introduced the TTC-220 Wireless Serial Interface Set in 2026, designed for wireless operation of wind gauges and LED scoreboards. These devices seamlessly complement the Wireless Start System and also employ a dual-device setup, with one unit connected to the relevant equipment and the other linked to the computer.

Together, the Wireless Start System and Wireless Serial Interface Devices are designed to deliver an effective standard wireless configuration for customers. This approach eliminates the necessity of cabling around or under the track, offering enhanced flexibility while significantly reducing installation time and associated costs.

Finally, our latest Electronic Start System, introduced in 2024, is also an integral component of this standard wireless configuration. The system features a Starter Central Unit that accommodates a Headset and either an Electronic Starting Pistol or a Start Button. This arrangement enables the starting sound to be transmitted wirelessly to a Trolley SpeakerBox and additional LoudSpeakers for athlete notification. Furthermore, as previously noted, the starting signal can also be sent wirelessly to the Argus Photo Finish system. For comprehensive details regarding our Electronic Start System, please see its product brochure.

System	Purpose	Components	Compatibility	Features
TTC-217 Wireless Start System	Transmit starting signal wirelessly to Argus photo finish system	Two-device configuration: starter's location unit, Argus camera unit	Argus photo finish camera systems only	Range of mounting options, eliminates cabling
TTC-220 Wireless Serial Interface Set	Wireless operation of wind gauges and LED scoreboards	Dual-device setup: equipment unit, computer unit	Complement Wireless Start System	Eliminates cabling, enhanced flexibility

See pdf diagram for more details: *TimeTronics Standard Wireless Configuration 2026v1*.



Wireless Start System

Components

The TTC-217 Wireless Start System consists of following main components:

- 1x TTP-1259 Wireless Start - Starter Unit
- 1x TTP-1260 Wireless Start – Argus
- 3x TTP-1261 Whip Antenna 434 MHz
- 2x TTP-1262 Wireless Start Charger 4.2VDC - 500mA
- 2x TTP-505 3m 5-wire extension cable

In addition, an optional carrying case and a range of mounting options are offered to accommodate varied operational requirements:

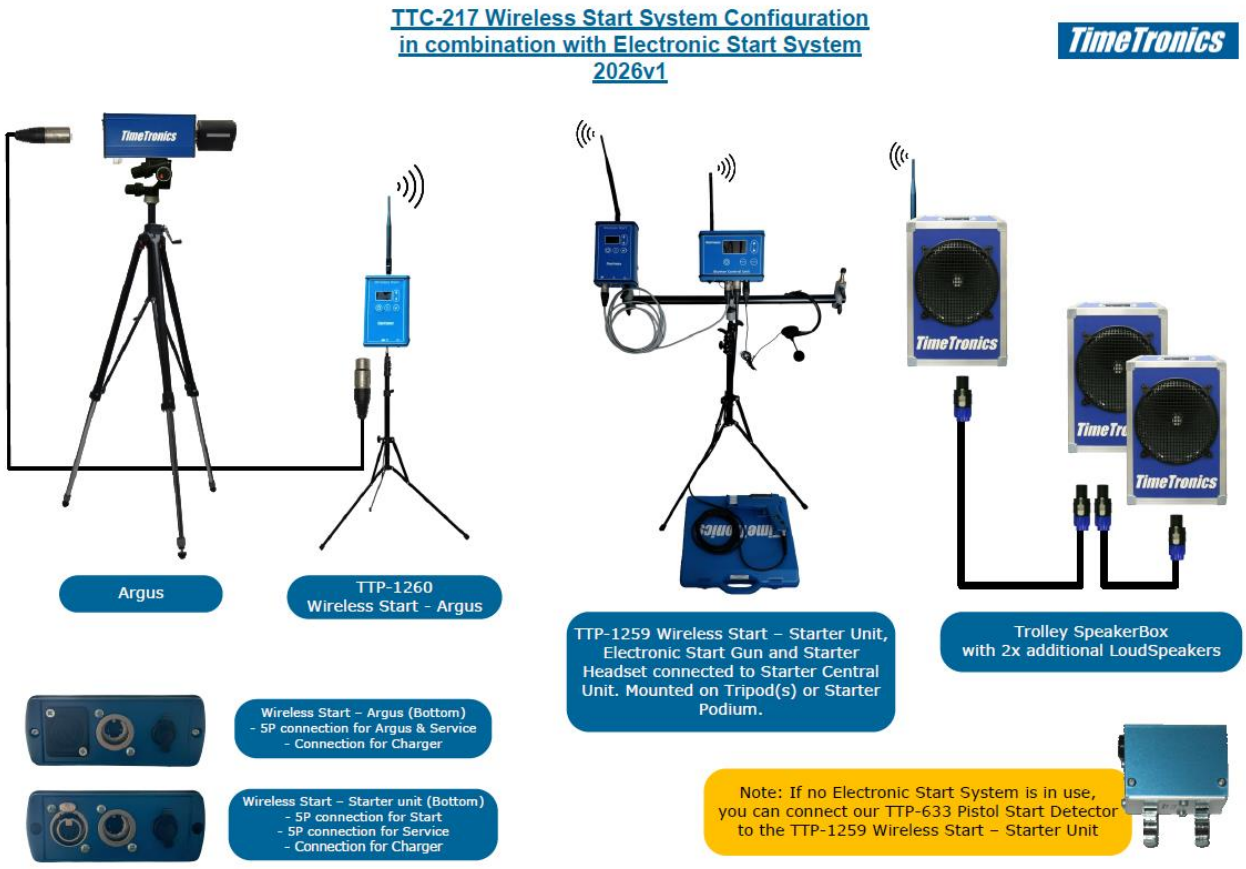
- TTP-1131 Optional Carrying Case for Wireless Start System
- TTC-33 Optional Mounting - Tripod 55-190cm (Compact) + Micro Ball Head
- TTP-1118 Optional Mounting - Nano Clamp
- TTP-1146 Optional Mounting – Pump Cup for Wireless Start Argus
- TTP-1272 Optional Mounting – T-support for Wireless Starter Unit + Starter Central Unit

Hardware Setup

See pdf diagram for more details: *TTC-217 Wireless Start System Configuration in combination with Electronic Start System 2026v1*.

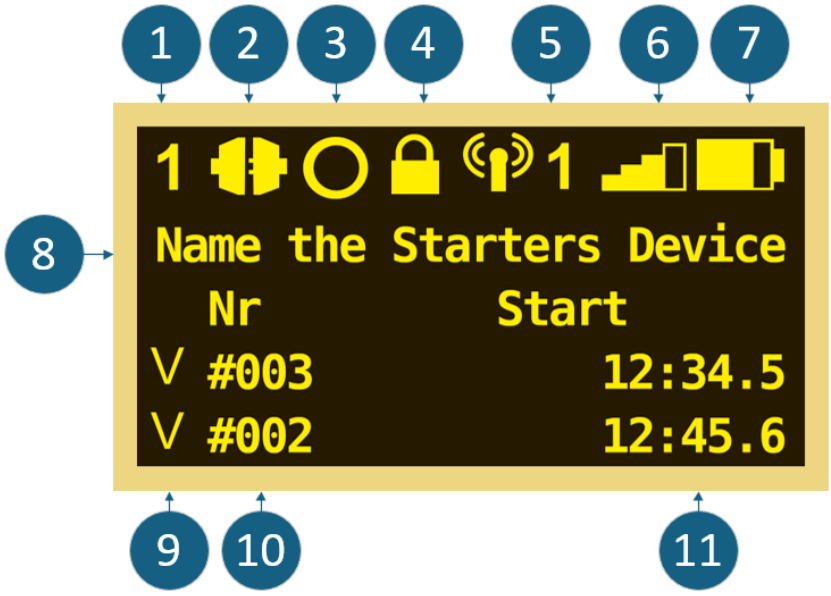
Please pay attention to these topics:

- The 'Wireless Start – Argus' and the 'Wireless Start – Starter Unit' have a built-in battery which needs to be charged through their 4.2VDC - 500mA charger.
- Be sure that the 'Wireless Start – Argus' and the 'Wireless Start – Starter Unit' have a clear line-of-sight. They must "see" each other without large blocking objects in the way.
- Be sure to place the 'Wireless Start – Argus' high enough (it is connected to the Argus camera, so it shouldn't be a problem to place it at least two-three meters high).
- Be sure to place the 'Wireless Start – Starter Unit' at a decent height above the ground (+1.5m). The wireless communication quality decreases dramatically when you place the device close near the ground.
- Be sure that the wireless communication is not blocked by isolated windows. If necessary, place the Wireless Start – Argus on the outside of the window.



Wireless Start – Starter Unit: Screens

Overview



1. Node number: this is the unique number of the 'Wireless Start – Starter Unit' device. Each device you use, must have a unique node number. You can use up to four devices at the same time.
2. 'Wireless Start – Starter Unit' device connected: this indicates if a start device (start pistol or push button) is connected to the Wireless Start (for TimeTronics devices).
3. Argus armed-for-start status: is your Argus camera armed to act on the next start signal
4. This must be a closed lock, it is an internal check of the electronics.
5. The number next to the wireless symbol indicates the channel in use. Be sure to use the same channel on the 'Wireless Start – Argus' and the 'Wireless Start – Starter Unit' devices.
6. Quality of the wireless communication. If it drops to one block or less, check the antennas and if the devices have line-of-sight.
7. Battery level.
8. You can name your 'Wireless Start – Starter Unit' device so it is clear in Argus which one to use.
9. A start signal is marked when the 'Wireless Start – Argus' device has confirmed it was received.
10. Every new start gets a new number (it wraps around after 255).
11. This timer counts the time since the start was detected.

Menu

Enter the menu with the right-button (v).
You have two menu-options: set the channel and set the node number. You can move the menu with the arrow-buttons, confirm your choice with (v) and exit the current menu with ([>]).

Channel

Be sure that all your devices are on the same channel. If not, they cannot communicate with each other.

Node number

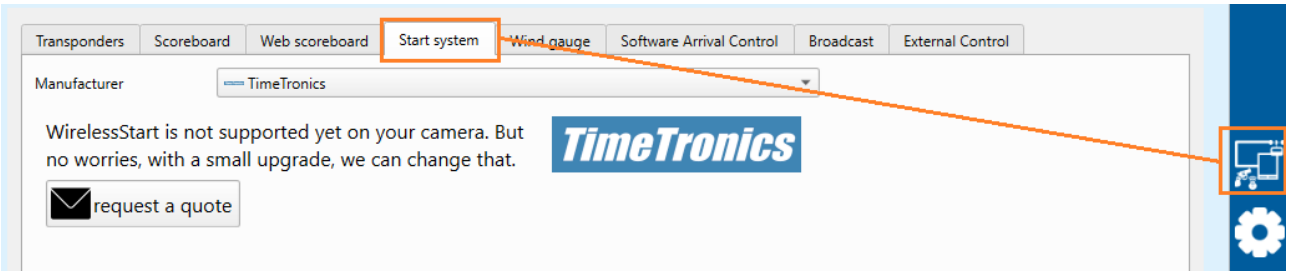
Every 'Wireless Start – Starter Unit' device must have a different node number. You can use up to four devices simultaneously.

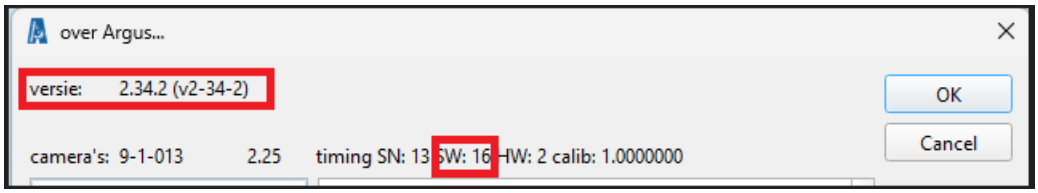
Integration in Argus

Since version Argus 2.32.0, TimeTronics Wireless Start is integrated in Argus.

Is my Argus camera ready to be used with TimeTronics' Wireless Start ?

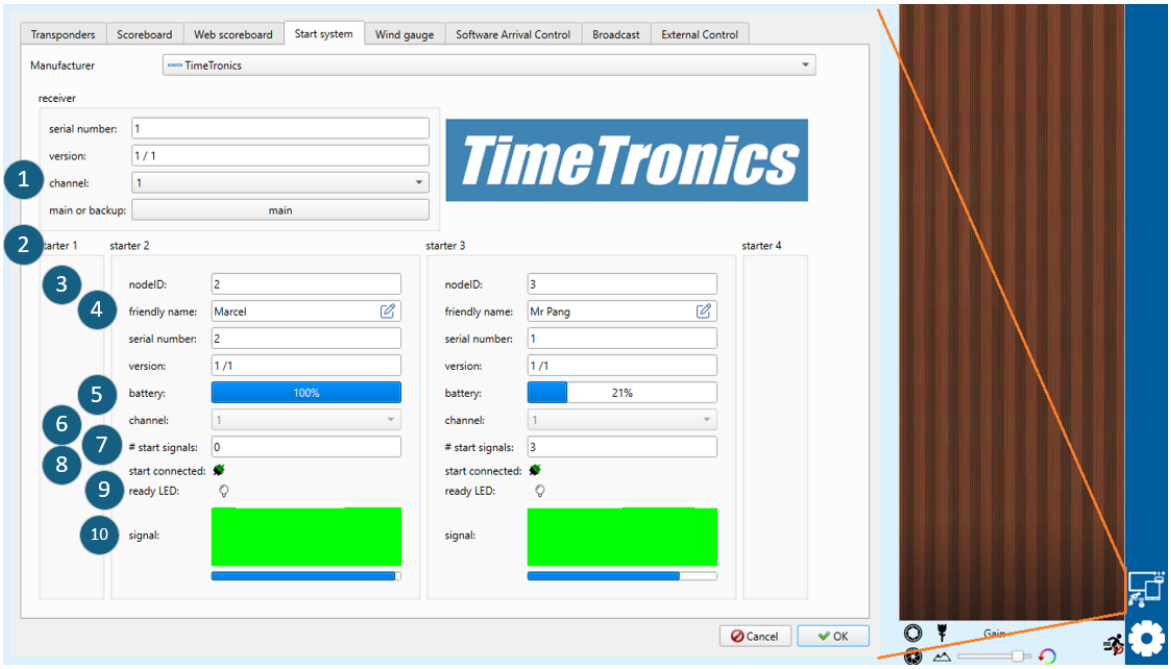
Your Argus camera needs at least firmware version 16. If your camera needs an update, you'll see it when you try to enable TimeTronics Wireless Start in Argus: connect your camera and find the start system settings in the link-with-others configuration. If you select "TimeTronics" as manufacturer and the info as in the screenshot below pops up, you need to contact TimeTronics for an update of your camera.





Settings of Wireless Start Devices

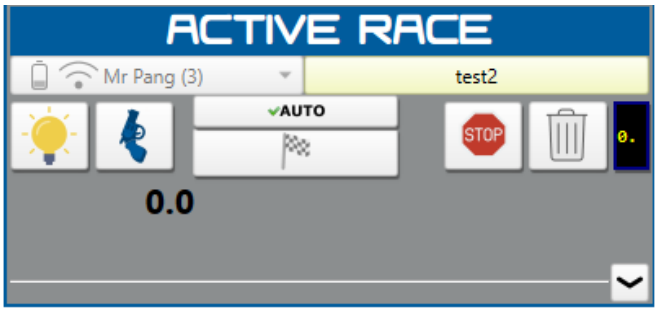
You can open the settings for the Wireless Start, both 'Wireless Start – Argus' and 'Wireless Start – Starter Unit' Devices, through the link-with-others configuration.

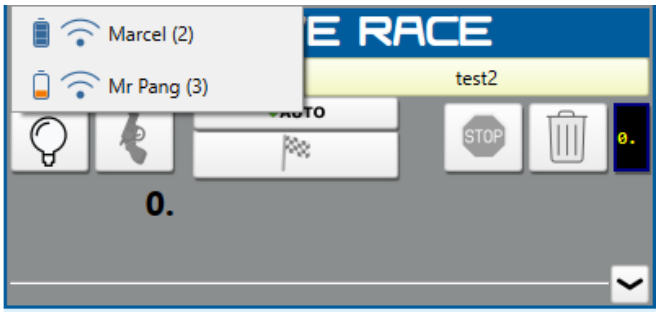


1. You can change the channel of the Receiver here. Note that you need to change the channels of all Starters Devices as well, but you need to do is on the device itself.
2. You see there is place for up to four Starters Devices. The device with nodeID 1 will be shown in the leftmost column, the one with nodeID 4 in the rightmost. In this screenshot, only devices with nodeID's 2 and 3 are active.
3. You see the nodeID of the Starters Devices here.
4. You can name the Starters Devices here, click on the button to the right and enter a new name. You will see that the name on the display of the Starters Device will change as well.
5. Here you see the battery level in detail.
6. The channel for a Starters Device is displayed here. Note that you cannot change it here, that is only possible on the device itself.
7. Here you see the number of start signals the device has detected. You can use this as a test to check the connection.
8. Here you see if there is a start detection connected to the Starters Device or not.
9. Here you see the status of the Argus-armed-for-start indication on the Starters Device. On all TimeTronics starter equipment, this is also reflected in the "ready LED". You can click on the light bulb in Argus to set or unset the status.
10. Here is an indication of the wireless communication signal strength in time.

Use the Wireless Start during races

You will see an extra select list in the race control window where you can select another Starters Device. Note that, even if you would have selected another Starters Device, all start signals detected (wired and wireless) are recorded all the time.





Wireless Serial Interfaces

Components

The TTC-220 Wireless Serial Interface Set consists of following main components:

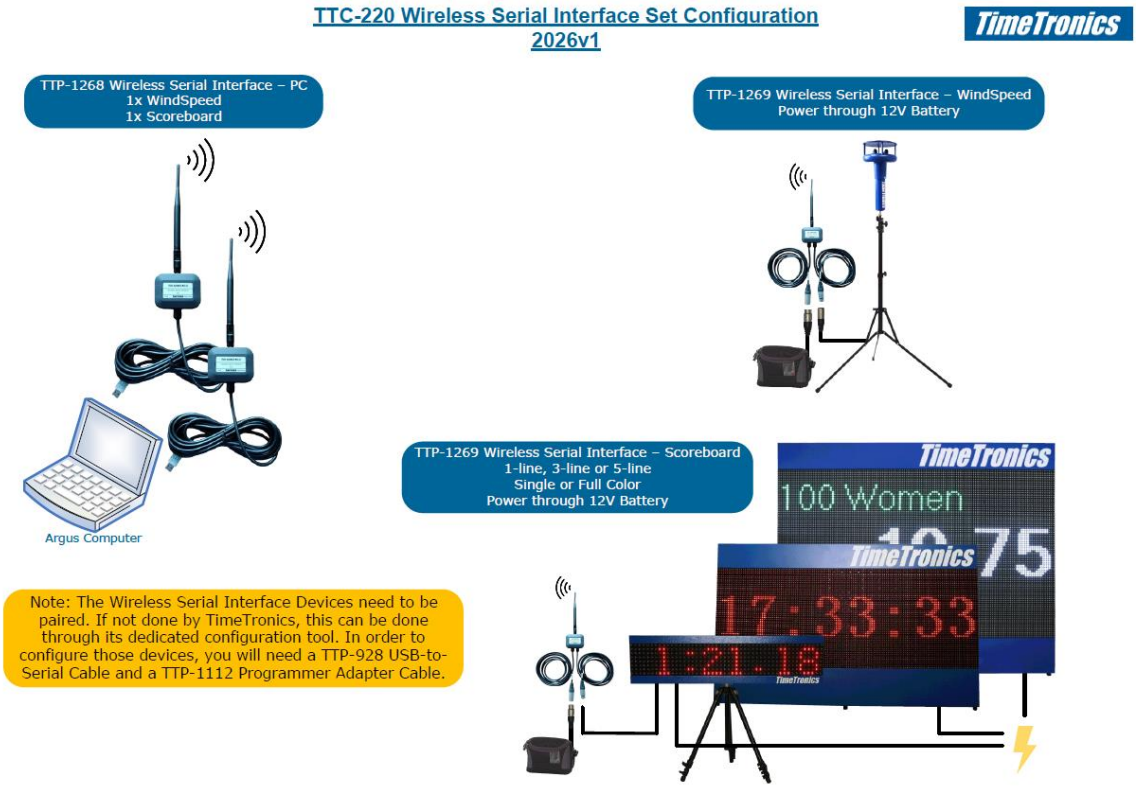
- 1x TTP-1268 Wireless Serial Interface – PC
- 1x TTP-1269 Wireless Serial Interface – WindSpeed/Scoreboard
- 3x Antenna 868 MHz
- Velcro and Tie Wraps Mounting

In addition, a range of product options are offered to accommodate varied operational requirements:

- TTP-41 12V 7Ah Battery Pack
- TTP-72 Battery charger - 220VAC, 12VDC, 0.9A
- TTP-928 USB-to-Serial Cable (to program)
- TTP-1112 Programmer Adapter Cable (to use in combination with TTP-928)

Hardware Setup

See pdf diagram for more details: *TTC 220 Wireless Serial Interface Set Configuration 2026v1.*



Configuration of the Wireless Serial Interfaces

Prerequisites

You can find the software to configure the Wireless Serial Interface Devices on our website.

Setup

TTP-1268 Wireless Serial Interface – PC

Plug in the USB cable into your computer. The computer should create a new COM port. You can check this in your device manager configuration window. If there is no extra COM port available, you should install the FTDI driver: https://ftdichip.com/drivers/

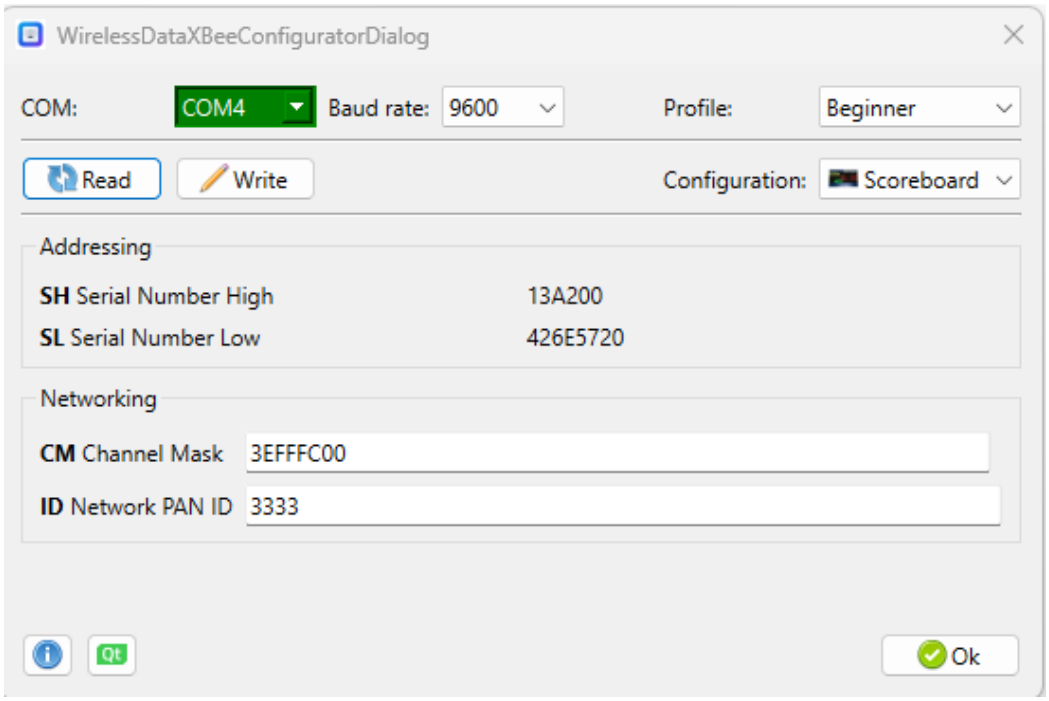
TTP-1269 Wireless Serial Interface – WindSpeed/Scoreboard

Use a TTP-928 USB-to-Serial cable in combination with a TTP-1112 Programmer Adapter cable to connect the cable to the connecter marked with 'Data'. Plug in a 12V battery or 12V power supply in the connector marked with 'Power'. The computer should create a new COM port. Please read the steps above if this is not the case.

Configuration

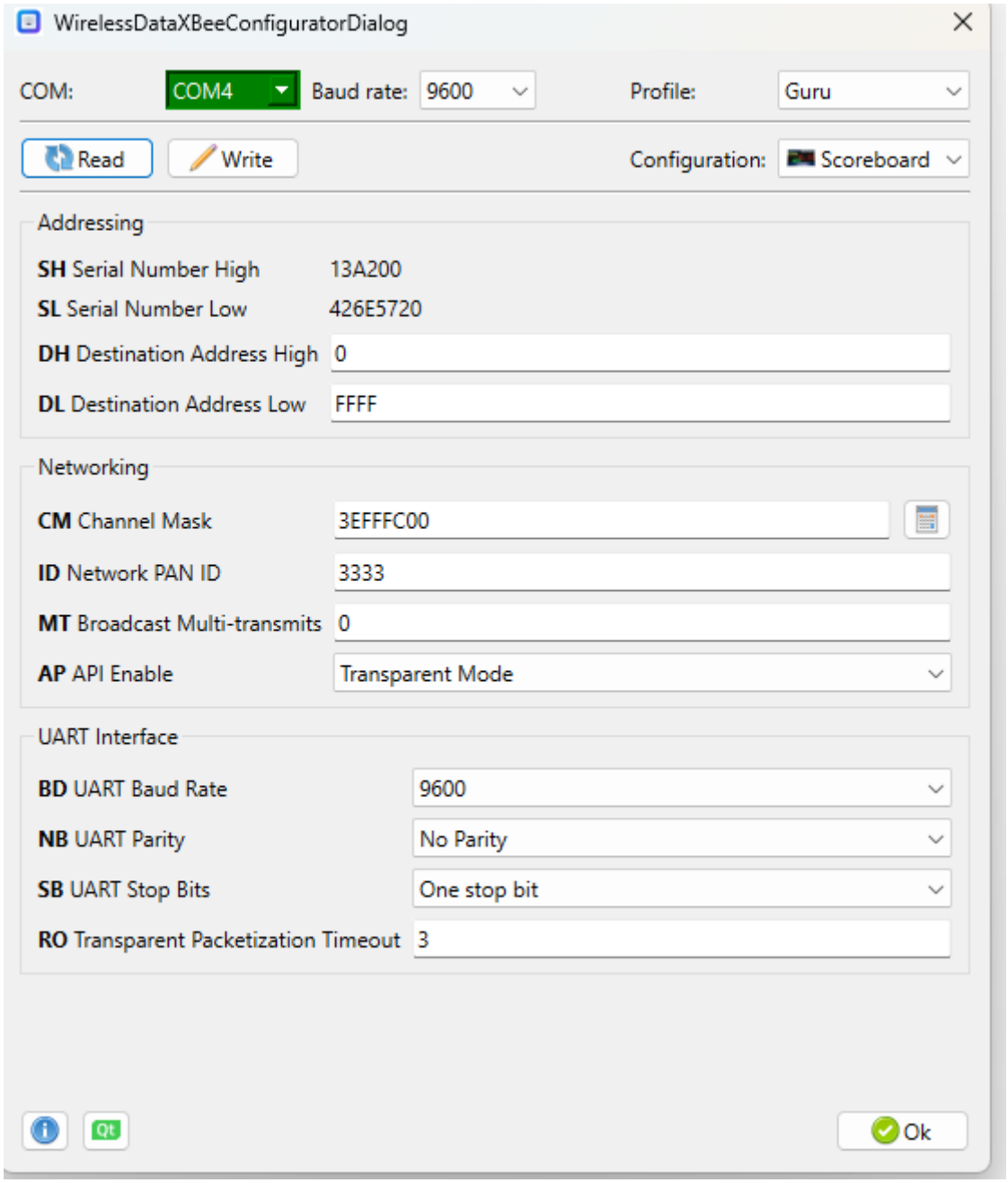
You can see a Profile dropdown box at the top right. There is a beginner and guru option. We advice to use the beginner option which gives the easiest form to configure the devices. If you change this to Guru, you can manually adjust all suggested parameters but keep in mind that you could misconfigure things and the devices will not be able to communicate anymore.

Beginner profile



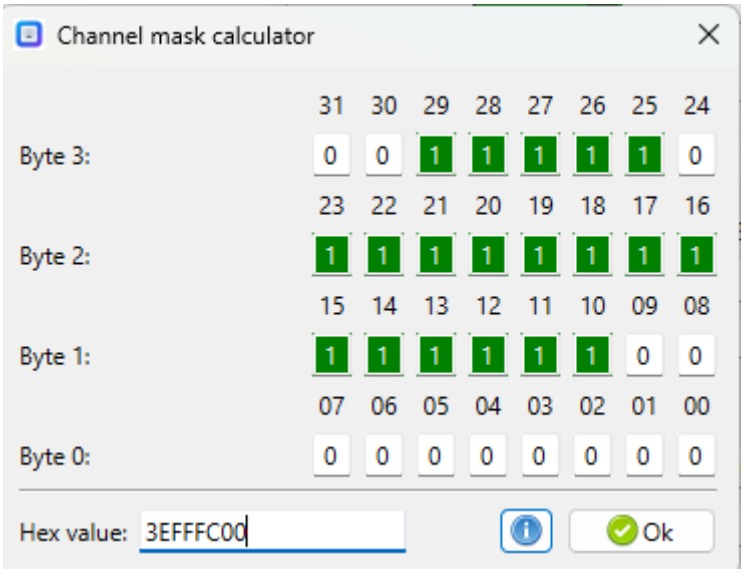
- Select the new COM port. If the port is open for work, it will be marked in green.
- Select the baud rate. The 868 XBEE modules are factory programmed to work on 1200 baud rate. So select this baud rate if this XBEE module is not yet programmed.
- Press the Read button to read all settings from the device.
- Select a configuration: scoreboard or windspeed.
- Press the Write button to program the device with the TimeTronics settings.

Guru profile



Calculating the channel mask

- Press the calculator next to the channel mask text field.

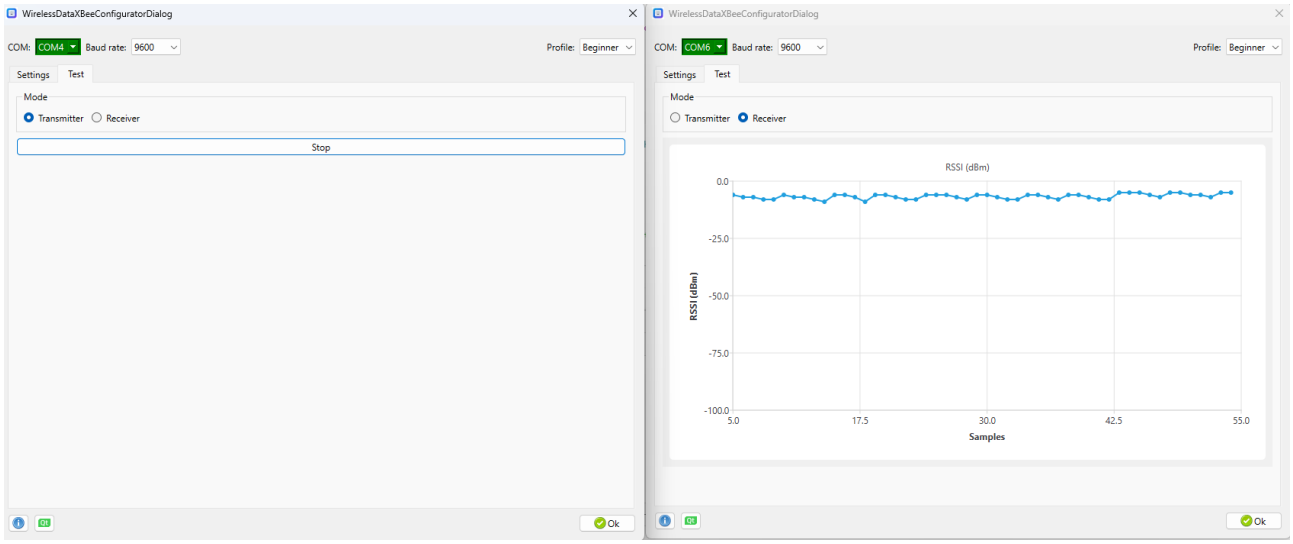


- Each bit of the channel represents an RF transmission channel. Click on the channel text field to enable (1) or disable (0) the selected channel. You can press the info button for extra info about the available channels and their frequencies.
- Press Ok once you are done to set the channel mask in the main window.
- Press the Write button to store the new channel mask

Range test

To test the RSSI values of the XBee module, you need to install the tool on 2 computers. Each computer has a wireless device connected to it (or by the USB cable or by using a TTP-928 and TTP-1112 cable).

- Open the tool on both computers and select the correct COM port
- Select the tab Test of the tool
- Select the Transmitter mode on 1 computer and Receiver on the other
- Press the start button in the transmitter mode
- The transmitter will send a message each 5 seconds to the receiver. The receiver will validate the received packet (packet must be matching) and request the RSSI value if the data matches. You can hover over the values to see the actual value



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