TimeTronics

Manual
Electronic Start System

SPORT TIMING SYSTEMS

2024v1

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Contents

Welcome to the "Electronic Start System" user manual. 3

1. Electronic Start System 4

2. Starter Unit 4

3. Buttons 5

3.1. Startup screen 5

3.2. Status screen 6

3.3. Menu screen 7

4. SpeakerBox trolley 7

4.1. Switch on and off 8

4.2. Connectors 8

4.3. Audio channel selection 9

4.4. Volume adjustment 9

4.5. LED's 10

5. Passive Speakers 10

5.1. Connectors 11

6. Electronic Start System – Setup 11

6.1. Electronic Start System Setup 11

6.2. Electronic Start System: Setup with old SpeakerBox 12

6.2.1. Level 3 12

6.2.1.1. Level 4 12

6.3. Electronic Start System: Setup with old Extra Speakers 12

7. Operation 13

Welcome to the "Electronic Start System" user manual.

May we recommend you to gently browse through the entire manual first, just to have an initial idea of how the book is structured. As we can't possibly explain all details simultaneously, this might help you a bit in understanding and tracing things back. Of course, the table of contents will also help you in doing so.

Please note that all pictures are examples, the delivered version can be different than shown in this manual please inform yourself before purchase.

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

Please also contact us if you have any remarks or advice regarding this user manual: info@timetronics.be

Good luck and thank you for your confidence in the TimeTronics products and services.

The editors

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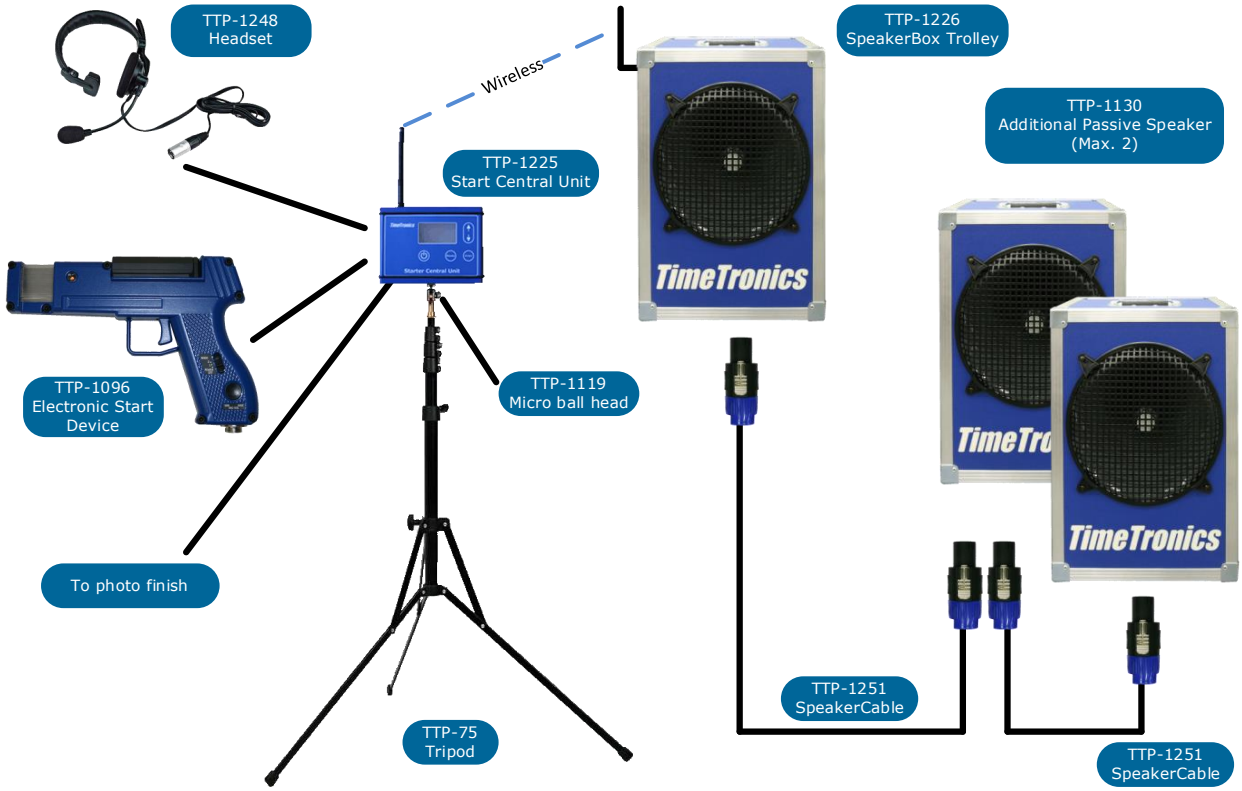
1. Electronic Start System



2. Starter Unit

The Starter Unit has 5 connectors at the bottom of the device. Check their description in the table underneath.

1	Charger	Plug in the charger to charge the internal battery.
2	Service	This connector is used for service by TimeTronics.
3	Camera	Use this connector to send the start to the photo finish camera.
4	Start	Plug in the start device (electronical pistol or start detector)
5	Headset	Plug in the headset to give voice commands and hear the start sound.

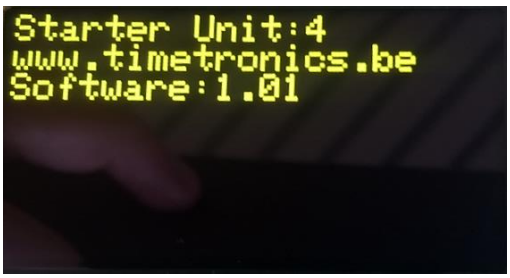
3. Buttons

The Starter Unit can be controlled by using the 5 buttons.

1	Power	Hold the power button for 1 second to power on the device. To power off the device, hold the power button for 4 seconds.
2	Ready	Press the ready button to set the device in ready status. When being in ready status, pressing the ready button will reset the device to idle status. The ready button is also used to navigate to the status screen while you are in the menu screen.
3	Enter	The enter button is used to navigate to the menu screen while you are in the status screen. It is also used to confirm settings from the menu screen.
4	Up	The up button is used to navigate to a previous option in the menu screen.
5	Down	The up button is used to navigate to a next option in the menu screen.

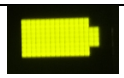
3.1. Startup screen

When starting up, you will see the serial number of the device and the software version of the firmware for 2 seconds. It will proceed to the status screen.



3.2. Status screen

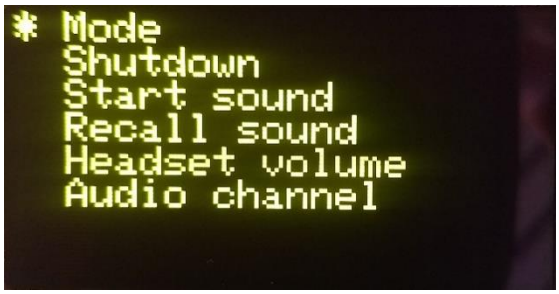
When the device is started up, you will see the status screen. In the top of the screen, you can find information about the status and settings of the device. From left to right, it displays the status of start connected, the photo finish ready led, the sound enabled, the wireless audio channel and the battery.

Start connected	• The start device is connected. • No start device is connected • The start device is short circuited. If this status stays on the screen, your start device is malfunctioning and needs to be changed.
Photo finish ready led	• The photo finish system is in idle status. It has not given the ready signal. • The photo finish system is in ready status. It has given the ready signal.
Sound enabled	• The start sound is not enabled. You will not hear any voice commands or start sound when giving a start. • The start sound is enabled. You will hear a start sound on the SpeakerBox trolley when a start is given. Pay attention that the wireless audio channel is set to the same channel on both devices.
Wireless audio channel	• The current wireless audio channel is displayed.
Battery	•  The battery status is displayed. There are 4 blocks drawn in the battery to indicate the battery status. It is advised to charge the device when only 1 battery block is displayed.

In the middle of the screen, you can see the operation status of the Starter Unit. It will display "PRESS READY" to set the device active or "START READY" when the device is activated to give a start. The status screen shall look like this when the Starter Unit it armed for a start.

3.3. Menu screen

When you press the "ENTER" button while being in the status screen, you will open the menu screen. Here you can change some settings of the Starter Unit. Navigate with the "UP" and "DOWN" buttons to select the desired menu item. Press the "ENTER" button to confirm the selection and open the setting options.



Mode	Set the Starter Unit to SpeakerBox mode. Currently on this mode is supported.
Shutdown	This option is under development and can currently be ignored.
Start sound	• Bang: the Starter Unit will produce a gun sound for the start. • Beep: the Starter Unit will produce a beep sound for the start. • No sound: the Starter Unit will not produce any sound for the start.
Recall sound	• Bang: the Starter Unit will produce a gun sound for the recall. • Beep: the Starter Unit will produce repeated beep sounds for the recall. • No sound: the Starter Unit will not produce any recall sound.
Headset volume	You can select the volume of the headset. • High • Mid • Low
Audio channel	You can select the wireless audio channel. You can select any channel between 1 and 15 or set the channel to "OFF". If you change the audio channel, you must also change to audio channel on the SpeakerBox trolley to hear the starter's voice and start/recall sounds.

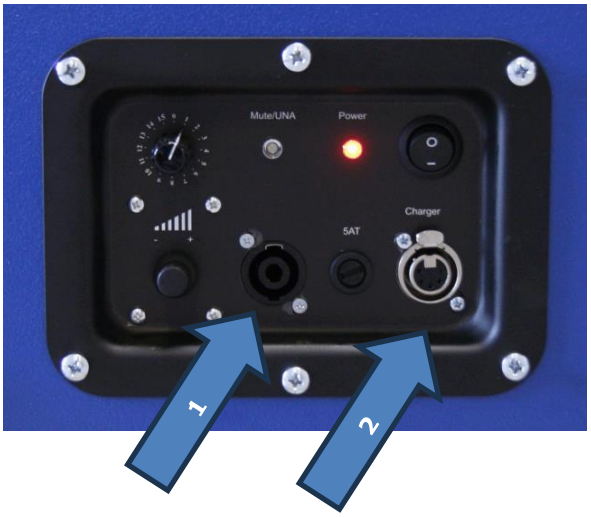
4. SpeakerBox trolley

4.1. Switch on and off

When switched on then you will see the red power led on. Do not forget to switch of after the event and charge the internal battery before and after each event day. Also charge the battery every 4 months when it is not in use.

4.2. Connectors

The SpeakerBox trolley has 3 connectors, 2 at the back of the device and 1 at the side. Check their description in the table underneath.



1	SPL	Speaker OUT to connect MAX. 2 passive speakers
2	Charger	Plug in the charger P72 to charge the internal 7Ah lead acid battery.
3	BNC	868MHz whip antenna

4.3. Audio channel selection

You can select the wireless audio channel. You can select any channel between 1 and 15 or set the channel to "OFF".

Important remark:

Audio channels have overlap with each other so it might be that you have also connection between the Starter Central Unit and the SpeakerBox Trolley when you have only 1 channel difference.

Example:
Starter Central Unit : Channel 1
SpeakerBox Trolley : Channel 2

You might have connection, but it will be low quality sound. You must set the exact same channel to both devices to an have optimal working system.

If you want to separate the Electronic Start Systems, you have to skip at least 1 channel between each set.

4.4. Volume adjustment

The volume of the SpeakerBox trolley and passive speakers can be controlled by the volume knob.

1	Turn right	Increase the volume
2	Turn left	Decrease the volume
3	Press button	Mute/unmute function

Important remark:

Mute and unmute function can be activated accidentally by an operator, please check this first if you do not hear any sound!

4.5. LED's

You will find 2 LED's on the back of the SpeakerBox Trolley. The Power ON/OFF LED has 1 function and the UNA/MUTE LED has 2 functions. You will find the complete description below

1	Power	LED ON when power = ON and 12V battery is sufficient charged (>10.4V). Battery will protected by a internal battery guard
2	UNA	= Unavailable Channel, LED RED when audio channel selection = 0
3	MUTE	- LED OFF = no available audio channel selected or out of range - LED GREEN = same audio channel selected regarding False Start detection system or Central Starter Unit

5. Passive Speakers

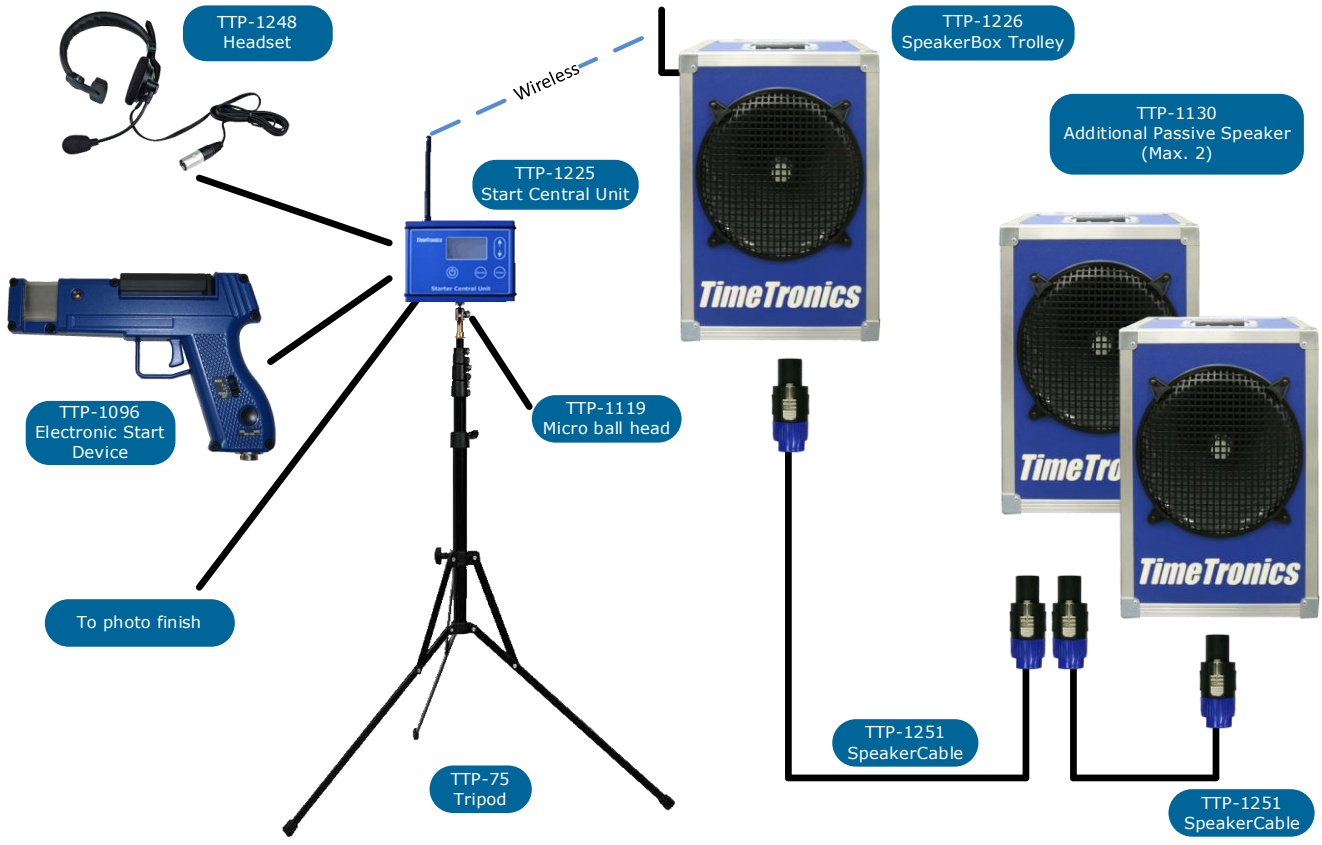
5.1. Connectors

The passive Speakers has 2 connectors at the back of the device. Check their description in the table underneath.

1	SPL	Speaker IN/OUT
2	SPL	Speaker IN/OUT

6. Electronic Start System – Setup

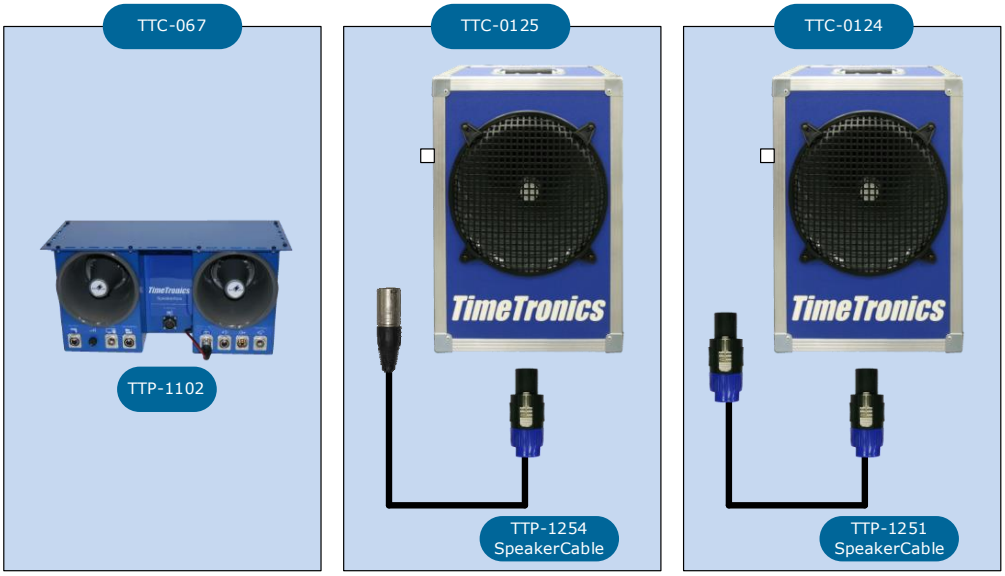
6.1. Electronic Start System Setup



6.2. Electronic Start System: Setup with old SpeakerBox

6.2.1. Level 3

6.2.1.1. Level 4



6.3. Electronic Start System: Setup with old Extra Speakers

7. Operation

After power on, verify that the status screen looks like this (the photo finish ready led may be not filled in depending on the status of the photo finish system):

Now you must press the "READY" button to activate the Starter Unit. Wait for the photo finish system to be activated. The photo finish ready led icon will be colored. When this is done, you will see the next screen.

The audio is now also activated, and you can start giving voice commands to the athletes. When the athletes are ready, you can give a start. This start sound will also be heard in the headset. This gives you the advantage that you hear the start sound at the exact moment that the athletes hear the start sound. It helps you in judging if an athlete started too early.

The Starter Unit will automatically go to idle status after 4 seconds. Within these 4 seconds you can give a recall by giving a 2nd start. The Starter Unit will start playing the selected recall sound.

Afterwards, the Starter Unit will be back in idle status (notice that the photo finish ready led is off).

It is also possible to give a start without the photo finish system being ready. You can follow the operation procedure and ignore the photo finish ready led status. Even then, a start pulse will be emitted to the photo finish system but the race in the photo finish system will not get started (as you have not set the race ready). If you are using the Argus photo finish system, all starts will be recorded so even if a start is given without the photo finish ready led, the start can still be recovered and selected for the race.

To save battery, the Starter Unit will power off if no actions are done for the past 15 minutes. A warning message will be displayed on the screen and a beep will be heard each second before powering down. You now have 10 seconds to press any button to abort the automatic power down.

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