

# **smartspeed** **PT**



## ***USER MANUAL***

**Version 2.1**

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# Welcome to SMARTSPEED PT

Welcome and thank you for purchasing SMARTSPEED PT. The system has been designed to offer simple yet accurate single lane timing. For more information on regarding PT Accessories, or other SMARTSPEED system versions, please visit our website ([www.fusionsport.com](http://www.fusionsport.com)).

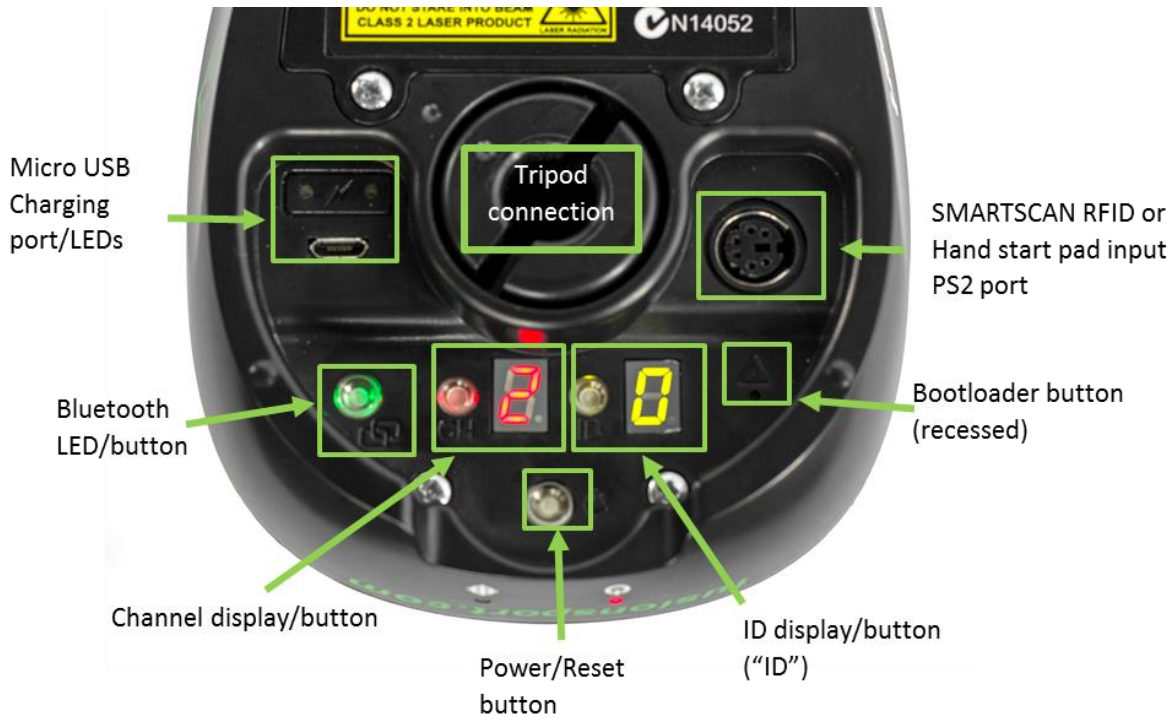
## SYSTEM COMPONENTS



## TIMING UNIT OVERVIEW



## UNDERNEATH



## BUTTONS EXPLAINED

Button	Action	Unit Response	Purpose
<b>Power/Reset Button</b>	Press and release	LED display lights up, Power/Reset indicator LED turns red, buzzer may sound if not aligned with reflector	Turn unit on
	Press and hold (2 seconds)	All LEDs turn off	Turn unit off
	Press and hold (10 seconds)	Power/Reset indicator LED on back turns green	Reset the unit
<b>Bluetooth LED/Button</b>	Press and hold (3 seconds)	Button will turn green and unit will emit a triple beep	Initial pairing of Master unit to your mobile device
	No action	Button flashing blue	Unit is waiting for Bluetooth connection
	No action	Button solid Blue	Unit is connected to Bluetooth
<b>Channel Button (CH) or ID Button</b>	Press and release	Displays current Channel and ID settings	Check current unit settings
	Press and hold (3 seconds)	Unit will triple beep, Channel and ID Buttons will begin flashing	Enter Channel or ID setting mode
	Press and release (when button is flashing)	Channel or ID display number will change	Change Channel or ID setting

**NOTE** – a short time after turning a PT unit on, it may begin to emit a constant high pitched buzzer sound. This buzzer is designed to alert you when the unit is not aligned correctly with the reflector during use. During setup you may find this very annoying! If you press any of the buttons under the unit, the buzzer will stop for 15 seconds to allow you to perform your setup functions without the buzzer sounding.

## SYSTEM OVERVIEW: HOW DOES PT WORK?

Each SMARTSPEED PT gate contains two in-built radio devices – one for communicating between the gates (a technology known as Zigbee), and one for communicating between the master gate, and your mobile device (Bluetooth).

You will set up one of your PT units to be the master gate, which will connect via Bluetooth to your mobile device. This gate will then command your other gates during the session. The master gate **must** have its ID set to 0 to enable the Bluetooth module.

It is VERY IMPORTANT that you always place your master gate close to where you will be standing to run the session, as the range of the Bluetooth connection is between 10-20m (depending on your device). The master gate can be any of the gates – it does not have to be at the start or finish.



DON'T Worry! If you walk out of range, the gates will still collect the data for the current athlete, and your mobile device will give you a warning message. Once you walk back into range, the results will come to your device, and the next person will be able to start.

Once you set up and align your units, a beam will be created between the timing unit and the reflector. We call this a **timing gate**. When someone passes through this beam, we say that the gate has been **broken**.

The first time you break the timing gate beam, the starting point/time will be set and the subsequent beam breaks will then list the split times. A **split time** is the time between beam breaks on one or more units.

## WHAT IS SMARTSPEED ONLINE?

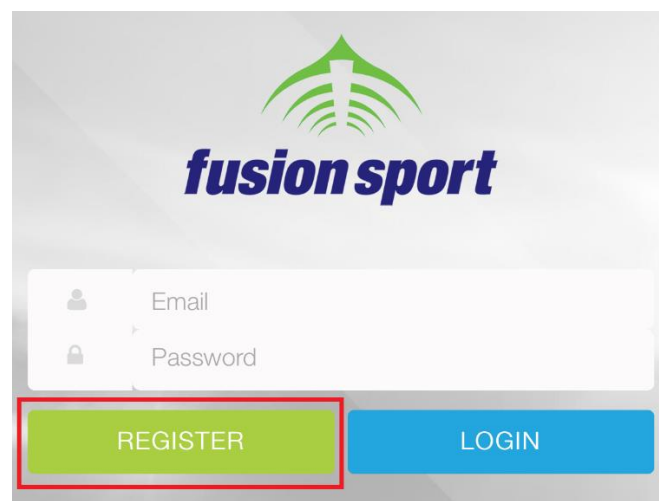
SMARTSPEED Online is a free cloud hosted service available to all PT customers, powered by a simplified version of our industry leading SMARTABASE Athlete Management System. You can register as many accounts as you like, for example if you have multiple people sharing one mobile device and wish to separate your records and settings.



SMARTSPEED Online is synchronized with the PT Mobile App on your mobile device whenever you connect to the internet, and allows you to:

1. Create new team lists to download and use on your mobile device
2. View your uploaded results where you may export them to an Excel or a PDF file
3. Create Preset drills with your favorite settings and names and use them to your mobile device
4. Register your device for warranty (automatic the first time you connect)

Please register your free SMARTSPEED Online account by using the registration page in the application, accessed by clicking "REGISTER HERE" at the Smartspeed home screen.



# First Time Use

To get started with using SMARTSPEED PT, you will need the following –

1. Your PT system
2. A supported Apple or Android, Bluetooth enabled device, connected to the internet
3. A computer that is connected to the internet

## STEP 1 – DOWNLOAD THE APP

Download the SMARTSPEED App for your device from either the iOS App Store (Apple iPhone, iPod and iPad 4<sup>th</sup> and 5<sup>th</sup> Gen) or Google Play (Android mobile devices).

## STEP 2 – REGISTER YOUR ACCOUNT

**You MUST register your account before you will be able to start using your system.**

To register, launch the PT App on your mobile device, click Register, and complete the form. You will need to be connected to the internet to do this.

## STEP 3 – MAKE YOUR FIRST TEAM LIST (RECOMMENDED)

If you do not have an internet connection and computer with you then you can skip this step, but it is highly recommended to get the proper PT experience.

To create your first team List, skip to the SMARTSPEED Online section of this manual on page 15.

If you don't want to do this right now, we have pre-installed a team you can use to get started.

## STEP 4 - SET UP YOUR MASTER GATE

**NOTE** – when you turn on a PT unit, it will start to sound a high pitched buzzer. This buzzer is designed to alert you when the unit is not aligned correctly with the reflector during use. During setup you may find this very annoying! If you press any of the buttons under the unit, the buzzer will stop for 15 seconds to allow you to perform your setup functions without the buzzer sounding.

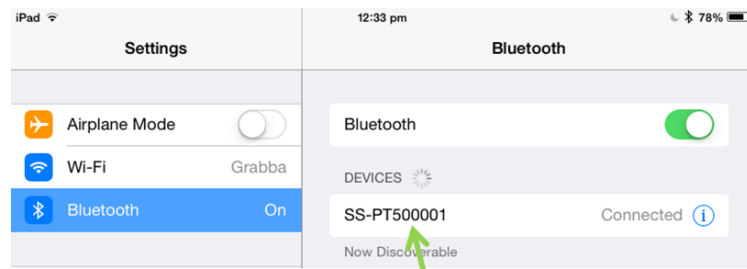
1. Turn on **ONLY ONE** of your timing units to start with. This will be set as your master gate (you can change this later, but it may be easier to take note that this unit is the master gate for future use without modifying the system).
2. Check that the ID of the unit is set to 0. This means the unit will operate in Master gate mode. If the unit is not on ID 0, press and hold the ID button for 3 seconds until the 8 digit display turns on and the units makes 3 short audio beeps. Then continue to press the ID button until the ID 0 is shown. Once the ID is correct, wait until the display stops flashing, and the ID is now set.
3. On the PT unit, press and hold the Bluetooth LED/Button until it starts to flash green. This means it is now discoverable by your mobile device and will remain in discoverable mode for 3 minutes.

Green = Discoverable  
Flashing Blue = Ready to Connect  
Solid Blue = Connected



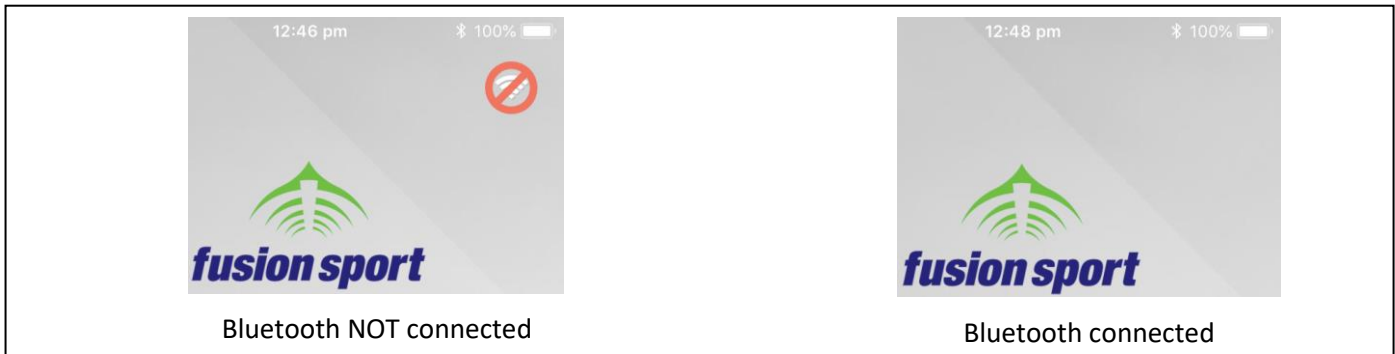
#### 4. a) Connecting (iOS/Apple)

On your Mobile device, go to the Bluetooth settings area and you will see a device in the list starting with "SS-PT". The other number in the list will correspond to the serial number of the unit, which you can see on the sticker under the unit. Click on this device to pair with the gate. If successful, the green Bluetooth LED/Button on the PT unit will turn to solid Blue.



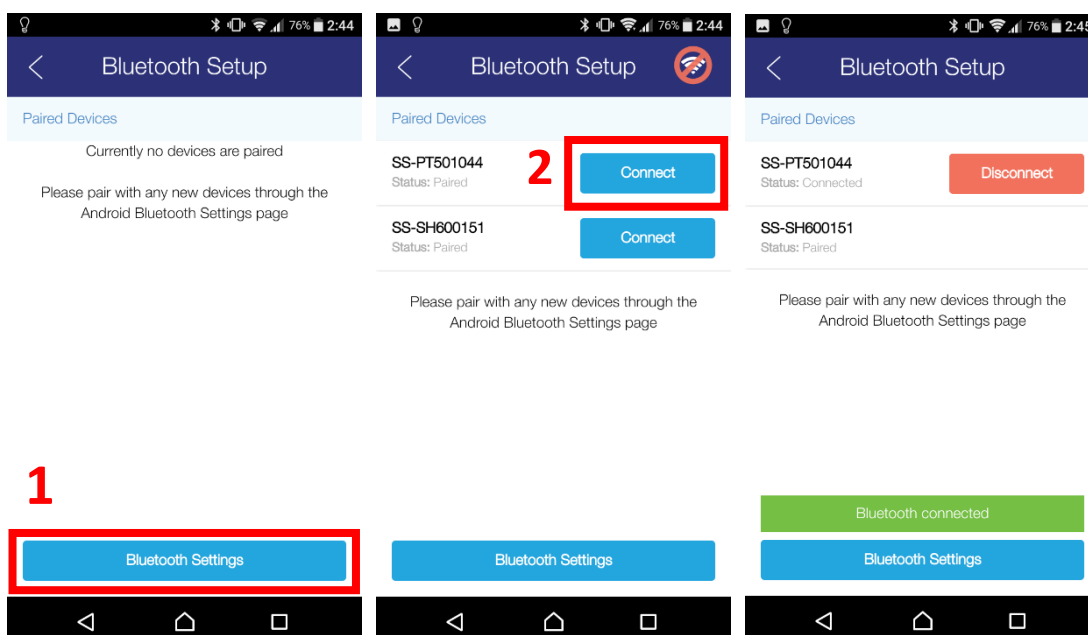
Master Gate serial number

Open the SMARTSPEED PT app, and press the connection icon in the top left corner. Once connected this icon will become invisible. **Note:** If you are connected to your master gate but the Bluetooth button is still visible, try pressing the Bluetooth button to check the connection.



#### b) Connecting (Android)

Open the Smartspeed PT application and press the settings icon. From here, open Bluetooth Setup. Ensuring that the master gate is still in discoverable mode, press the "Start Discovery" button. The gate should appear under the "Discovered Devices" heading. Please note that while the phone is searching for devices, you will not be able to press the connect button. Once the master gate is found, you may press "Stop Discovery" or wait for the scan period to finish. Press the "Connect" button and wait for the connection process to complete.





**Note:** Once you have connected to your master gate, the device details will be saved. This means that the next time you use the application, all you need to do is turn your master gate on, and press the connect button like the one found on the home screen, and the application will attempt a connection to the master gate. Note that with this method, you do not need to make the device discoverable.

### STEP 3 - CONFIGURE THE REST OF YOUR GATES

Once your Master Gate is connected,

1. Turn on the rest of your gates and check that they are on the same CHANNEL as the Master gate (don't worry about the IDs, they will all be set to zero).
2. Launch the SMARTSPEED PT App and press START and on the next page the system will scan all of your gates and set their IDs automatically. After this you will notice that each gate has a different ID number when you look at the ID display button on the underside of the unit.

Your units are now ready to start testing! **NOTE** – you can actually do this step after setting up your gates if you are sure they are all on the same channel.

#### Side Note: Channels and ID Explained

As the wireless system PT units need to be identified in the wireless environment, so that they can be communicated with free of interference from other wireless objects in the same area. This is especially important when you have multiple PT systems operating in the same vicinity and want to be able to sue them at the same time without them interfering.

**Channel** refers to the radio channel or sub-frequency that a unit is set to. For each test station, the units in that test station need to all be set to the same channel, and any other system in the area all need to be set to different channels.

**ID** refers to the unique identification number of a unit WITHIN a channel. So if you have multiple units in a test station, they all need to be set to a unique ID number, but all be on the same channel.

If a unit is set to ID 0, it will act as a master gate and can be paired with your mobile device.

If a unit is set to ID 1 to 9, it will act as a standard gate and cannot be paired with your mobile device. It will instead be controlled by the Master gate.

At any stage you can change which one of your gates is the Master by changing its ID to 0 and repeating the Master gate setup procedure above.

## STEP 4 – SET UP YOUR GATES FOR TESTING

When set up correctly each gate should look like this –



### TRIPOD ASSEMBLY

1. Loosen tripod knob and pull legs away from stem.
2. Push down on knob assembly until supports are horizontal.
3. Extend Tripod to Desired height. We recommend extending one segment of the tripod to full extension
4. Connect reflectors and remote data units and ensure tripod neck is firmly tightened.

### ATTACHING THE TIMING GATE

1. Line up the tripod connection with the bayonet the top of the tripod.
2. Press down, into the tripod, and twist the timing unit into a locked position
3. When ready, you may turn the unit on by pressing the power button, verify the unit turns on by viewing the power LED on the back of the unit

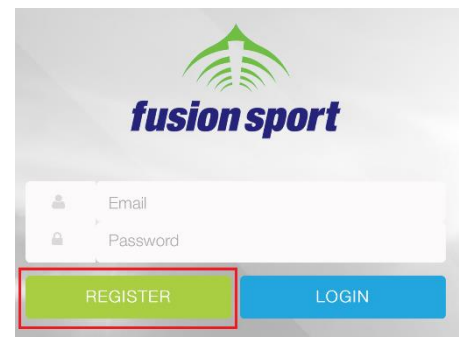
### ALIGNING YOUR TIMING GATES

1. Place the reflector tripod opposite the PT unit. The Reflector can be up to 5 meters away from the PT timing unit.
2. Stand behind the PT Timing unit. Hold the unit with one hand, and the tripod neck with the other hand to hold the tripod in place
3. Turn the PT unit on by pressing the power button
4. Adjust the beam until the red alignment light on the back of the unit is on. This can be done by aiming the photocell and directional laser at the center of the reflector. Once aligned, the laser will stay illuminated for an additional 5 seconds before turning off.
5. In windy environments, ensure the unit is remains aligned when wobbling the unit slightly side to side.



## STEP 5 – REGISTER YOUR ACCOUNT

Please register your free account on SMARTSPEED Online before you start testing. This will be explained further later in this manual. Unless you plan to be sharing the mobile device used for the system, leave the “Remember Me” box ticked and your device will stay logged in in the future.



## STEP 6 – RUN YOUR SESSION

1. Press START SESSION on the Home Screen and proceed to the SESSION SETUP screen
2. Choose your options and team for the session. If you haven't created any of your own teams yet using SMARTSPEED Online, you can use the Default team
3. Once you have configured your settings, press START to start testing
4. When you have completed your testing, press STOP to end the session and view the results.

## STEP 7 – PACK UP AND CHARGING

To turn off your PT timing units, press and hold the power button on each unit until all LEDs turn off.

We recommend that you recharge your PT units prior to every session. To charge the units, connect them to the USB charger provided. When charging the red AND green charge lights under the unit will illuminate. When fully charged, only the GREEN charge light will remain.

# Detailed Software Overview

## THE HOME SCREEN



Home screen functions include:

**User registration and selection:** One of the primary uses of the home page is log into your account. You should always double check your account is logged in prior to testing to ensure your teams and results are synchronized with SMARTSPEED Online. Additionally, here you may access the registration page, or log out so you may log into a different account. Saved accounts will be accessible from the switch account dropdown.

**Settings and Help:** Opening the advanced settings menu will allow the user to set up more advanced options as well as access help tutorials and more information about PT.

**Bluetooth Connection Status:** This icon demonstrates the connectivity status of Bluetooth. If you can see this icon, it means Bluetooth is not currently connected.

**Message Board:** this is where we will send you messages on help topics, upgrades, new features and accessories

**Results:** you can view past results and check if they have all been uploaded to SMARTSPEED Online

## RUNNING A SESSION

1. Click the **“START”** button. This will take you to the **Session Setup** screen.
2. The system will scan all of your gates and report the number of gates detected, with their battery levels. If the scan returns an unexpected number of gates, press the scan button again. If the problem persists, consult the troubleshooting guide at the end of this manual.
3. Configure your settings for the session. These are explained below.
4. You are now ready to start your testing **session** by pressing **“Start”**.

- In each session, the first time someone runs through the gates, the system will remember the movement pattern for that session, so make sure it is done properly. If the person makes a mistake, press “STOP” to end the session and start the session again.
- Continue to run people through the drill until you are finished. Then press STOP and the session will be closed, and if you are connected to the internet, your results will be automatically uploaded to SMARTSPEED Online.

## SESSION SETUP SCREEN

The screenshot shows the 'Drill Setup' screen on a mobile device. The status bar at the top indicates 'SOS only', signal strength, 12:55 pm, and 100% battery. The screen is divided into several sections with annotations:

- Units:** A dropdown menu set to '1'. An annotation points to it: 'Select the number of PTs to be used'.
- Buttons:** 'Beep' (blue) and 'Status' (orange) buttons.
- Drill:** A dropdown menu set to 'Free Timing'. An annotation points to it: 'Select the training drill'.
- MyDrill:** A dropdown menu set to 'Standard'. An annotation points to it: 'Select the custom drill settings stored on the server'.
- Team:** A dropdown menu set to 'Preset team (40)'. An annotation points to it: 'Select the team to participate'.
- Mode:** Radio buttons for 'Automatic' (selected), 'Manual', and 'RFID'. An annotation points to it: 'Select the session run mode'.
- Rearm:** A text input field set to '500 ms'. An annotation points to it: 'Select the PT photocell rearm duration after the photobeam is broken by athlete'.
- Live:** A 'GO LIVE!' button and an 'Exp 12/31/18' field. An annotation points to it: 'Select the enable the instant web-scoreboard option'.
- Name:** A text input field set to '1 Gate Free Timing'. An annotation points to it: 'Configure the name of this session'.

At the bottom, there are two large blue buttons: 'SCAN' and 'START'. Annotations point to them: 'Tap to scan the available PTs in the field' (pointing to SCAN) and 'Tap to start the session' (pointing to START).

The following session options are available on the configuration page:

### UNITS

Even if you have scanned more gates than you need for a drill, you don't need to actually switch the excess gates off. Instead, you can select the exact number of gates you need for the session and the other gates will be ignored once the session starts.

### DRILL

There are two timing modes available –

- One-way:** The athlete must run from the start gate, and run through the remaining gates in order from start to finish, breaking each gate only once. This is what you would use for a standard speed test such as a 20m straight sprint or an agility test where the start and finish are in different places.
- Free:** The Free Timing mode means you can use any test logic and athletes can run through the gates in whichever order you like. Each gate may be broken multiple times and it can be different for different gates. If you select Free timing mode, you will also need to select how many splits you want to collect, or if you select the infinite symbol ( $\infty$ ) then the system will simply continue to record splits for each athlete until you press FINISH.

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## MODE

There are 3 running modes available for use:

1. **Manual Mode (default):** In manual mode you will be able to choose from a list which athlete is running next and press GO. In between athletes, you can leave the gates and it won't matter if people walk through them by mistake. The app will by default move to the next athlete in the list but you will still need to press GO to activate the gates.
2. **Auto Mode:** Similar to Manual Mode but without the GO button. Once one athlete is finished, the App will by default move to the next athlete in the list, and if anyone breaks the start gate, that drill has started. You can still change the order by selecting people from the list as long as the next athlete hasn't broken the start gate. Use this mode if you don't have people walking around that might break your gates by accident.
3. **RFID:** SMARTSPEED PT is fully compatible with our SMARTSCAN RFID (Radio Frequency Identification) system. By connecting an RFID reader to the start gate, your system will run completely automatically. When an athlete is ready to run, they simply swipe their wrist band at the start gate and go. In between athletes, it won't matter if people walk through the gates.

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## TEAM

This is where you can choose your team for the session from your list of teams created on the SMARTSPEED Online website.

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## NAME

This will be the name given to your session on the SMARTSPEED Online website. The name will be created automatically based on the session settings, but you can edit it if you wish.

Once you have confirmed your settings, press **START** to start the timing session.

## SESSION RESULTS PAGE

**Configure drill options** →

**Select athlete(s) to run the trial** ←

**App scoreboard mode** →

**3.602**

**Full result info on table** →

**Full result info on table** →

**Expand for more display options** ←

**Temporarily pause the session** →

**Stop this session and review the results** ←

**Hide the display options** ←

**Show/hide different columns on the table** ←

**Choose different display mode** ←

#	First	Last	T	S#	Split	Total
6	David	Murphy	1	2	1.717	3.602
5	David	Murphy	1	1	1.885	1.885
4	Ben	Smith	1	2	1.752	3.712
3	Ben	Smith	1	1	1.960	1.960
2	Alan	Hung	1	2	1.814	3.374
1	Alan	Hung	1	1	1.560	1.560

The Session results page displays who you are testing and the results collected so far during your session. In the timing page you can:

1. See who is currently running, and who is due to run next (if using manual or auto mode)
2. See the most recent result
3. See the previous results in the session. You can also sort by any column by clicking the header row of the table
4. Pause the session by clicking the PAUSE button. Use this if you want to pause your testing session and not worry about people walking through the gates or starting without you!
5. Select who is running next (manual or auto mode) from the list by tapping on the athlete selection icon
6. If an athlete starts a test but cannot finish it, you can press the DNF button, and the system will reset. The DNF button will be displayed instead of the stop button when an athlete run is in progress.
7. Once you have finished testing, press the STOP button to end the session and your results will be uploaded to SMARTSPED online.

# Further Information of Interest

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## RESETTING THE DEVICE

To reset the device press and hold the power button until the power LED goes green, when the LED illuminates green release the power button. The unit will reset and enter low power mode. Press the power button again to turn the unit again.

## PERFORMING A FIRMWARE UPGRADE

From time to time you may need to perform a firmware upgrade on your units, when instructed by the Fusion Sport support team. Our support team will guide you through this process if and when required.

## UPGRADING YOUR SOFTWARE

Please be sure to keep your mobile application up to date with the latest release for optimal user experience. We will send you an email to remind you when updates become available.

## UNDERSTANDING THE LEDS

### BLUETOOTH LED

- Flashes green when the unit is connectable and discoverable. To make the unit discoverable, make sure it has the ID set to 0, and hold the Bluetooth button for 3 seconds. The unit will sound a triple beep and the light will flash green. The unit will remain discoverable for up to 3 minutes.
- Flashes Blue when the unit is set to be a Master unit (ID = 0) and the unit is not yet connected to your mobile device
- Turns solid Blue when it is successfully connected to your Mobile device via Bluetooth

### POWER LED (ON BACK OF UNIT)

- Solid red when the unit is powered on
- Off when the unit is low power mode

### ALIGNMENT LED

- Solid red when the unit's photocell has alignment to the reflector
- Off when the unit's photocell does not have alignment to the reflector. If not aligned the unit will also make a loud buzzing sound.

### CHARGE LED

- Red on, Green off – Unit is very flat – slow charge rate to ensure no damage to battery
- Red on, Green on – Normal charge mode
- Red off, Green on – Unit is fully charged



# Product Support and Warranty

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## HOW TO GET SUPPORT

For all product support please email:

[support@fusionsport.com](mailto:support@fusionsport.com)

## WARRANTY STATEMENT AND DISCLAIMER

The Fusion Sport devices are manufactured by Fusion Sport Pty. Ltd. at its Brisbane, Australia facility. The devices have a 12-month warranty from the date of purchase. Fusion Sport warrants and represents that all Fusion devices are free of all defects in material, workmanship and design, and have been produced and labelled in compliance with all applicable laws, regulations and ordinances pertaining to their production and labelling. This warranty is expressly limited to repair, replacement of product or refund of product price at the sole discretion of Fusion Sport. Equipment for repair must be returned to the Fusion Sport facility in Brisbane, Australia or a Fusion Sport authorised repair centre. To do this, contact Fusion Sport's service/ repair department to obtain a Return Authorisation (RA) number.

CONSEQUENTIAL DAMAGES RELATING TO DATA LOSS, SUBSEQUENT EQUIPMENT FAILURE, AND/ OR EQUIPMENT DAMAGE ETC IS EXPRESSLY EXCLUDED FROM THIS WARRANTY AND GRABBA INT. ACCEPTS NO LIABILITY FOR ANY LOSS OR DAMAGE INCURRED WHAT-SOEVER.

In the event that it is determined the equipment failure is covered under this warranty, Fusion Sport shall, at its sole discretion, repair the product or replace the product with a functionally equivalent unit and return such repaired or replaced product without charge for service or return freight, whether distributor, dealer, or retail consumer. This limited warranty does not extend to any product which, in the sole judgment of Fusion Sport, has been subjected to abuse, misuse, neglect, improper installation, accidental damage, nor any damage due to use or misuse produced from integration of the product into any mechanical, electrical or computer system. The warranty may be void if the case of the product is opened by anyone other than Fusion Sport's repair department or authorised repair centres.

Apple, iPhone and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries.

"Made for iPod iPhone iPad" means that an electronic accessory has been designed to connect specifically to iPod touch, iPhone and iPad respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

## FCC STATEMENT

### FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

**Warning:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause

harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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#### FCC RADIATION EXPOSURE STATEMENT

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.