WITTY

WIRELESS TRAINING TIMER

MICROGATE
TIMING AND SPORT

Train
your **TIME**

WITTY TIMER

The compact size, ergonomic shape, and innovative design make the Witty timer practical and easy to use. Graphical icons and on screen instructions on its color display ensure user-friendliness and ease of use. With8 different radio frequencies to choose from, it is possible to work simultaneously with several Witty timing systems (timer and photocells) in the same training area. Various preconfigured test types are available (single tests, group tests, in-line tests, go & return, counter, etc.), plus the user can also create customized test protocols directly on the timer. Witty stores and displays all times which can then be downloaded into the Witty Manager software.

PRACTICAL AND PRECISE

THE NEW WITTY HAS BEEN DESIGNED TO FULLY SATISFY TIMING REQUIREMENTS CONNECTED TO THE NEW TRAINING METHODS.

The Witty Kit includes all the accessories necessary to immediately start a training session:

1 Witty timer
2 wireless photocells
2 reflectors
4 telescopic tripods
1 battery charger (charges the two photocells and timer simultaneously)
4 USB cables
1 backpack for transport with safety padding (contains all the components of the Kit, including accessories)
1 Witty Manager software
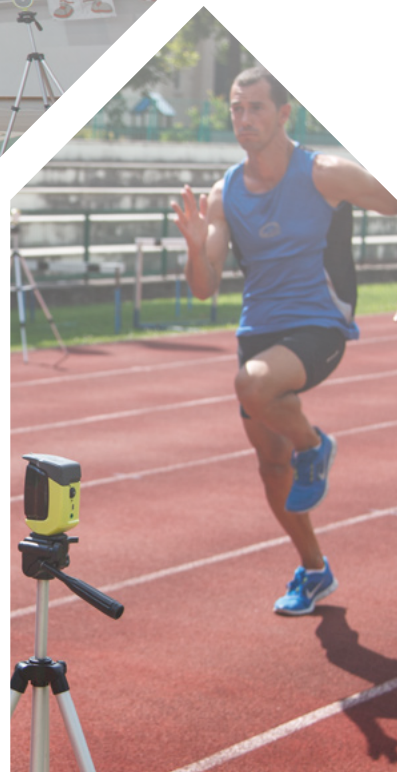
THE RIGHT TOOL
FOR EVERY TRAINER

The compact size and anatomical form make the Witty timer practical and easy to use in the field.
The Witty's wireless transmission allows coaches to move around the training pitch and can provide immediate feedback to athletes.

MULTI SPORT

Witty has been developed to satisfy timing requirements for all forms of training and testing. The timer comes with a variety of preconfigured tests, used in athletic preparation (including sprint, shuttle, endurance, course), it also allows the trainer to define and set sport specific customized tests.

PHOTOCELLS

Due to the integrated transmission system, which has a range of 150 meters, the photocells are highly reliable. Redundant radio transmission ensures that the data acquired is transmitted to the timer with the maximum precision (±0.4 thousandths of a second) even if the signal is disturbed. The Witty timer remotely recognizes the photocell ID number, so the user can easily set the signal type on the photocell: start, stop, and intermediate times.

Double Photocells

It is also possible to use the Witty System with double photocells, i.e. one on top of the other, so that only the simultaneous interruption of both photocells generates a signal. This system ensures that the photocells are interrupted by the chest and not by the athlete's leading arm. It is also possible to use an unlimited number of photocells to allow intermediate times.
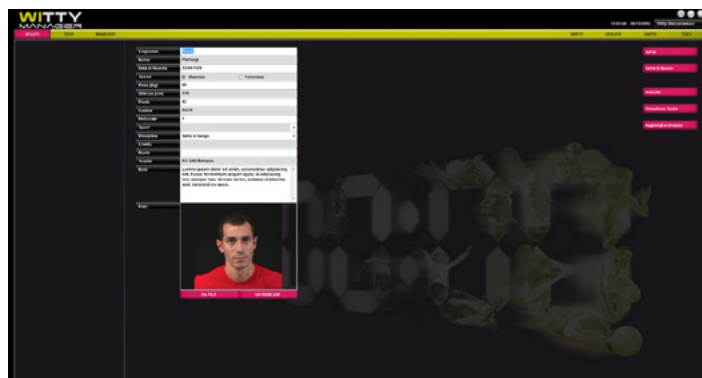
ADVANTAGES OF WITTY

- new, intuitive, easy to use graphical interface
- simple and quick learning process
- color display
- perform all the tests typical of modern athletic preparation (such as sprint, shuttle, resistance, courses) or customized ones
- single or double photocells available
- unlimited extra photocells for unlimited intermediate times
- acquire results with an accuracy higher than one thousandth of a second
- easy and fast repositioning of the photocells when passing from one exercise to another, thanks to a reliable wireless transmission (range 150 m)
- calculate speed (km/h, m/s, mph)
- battery powered (10 hour autonomy)
- very quick Witty to PC data transfer (for rankings, data assessment and export), thanks to the USB interface
- self-configuring photocells
- several transmission frequencies available
- water resistant
- great portability is insured by the included backpack
- compatibility with Optojump Next system
- the system is largely expandable with the possibility to add (single or double) photocells for lap times, accessories such as starting pads, time displaying LED boards, direction indicators, etc.

WITTY MANAGER

The Kit includes also the **Witty Manager** software for Windows PCs. It can be used to create athletes' personal data, configuring customized tests and displaying acquired results.
It is divided into 4 main sections:

ATHLETES' PERSONAL DATA

In this section athlete profiles can be created and edited. Every profile can contain detailed information (personal data, notes, pictures, etc.). In addition, it is possible to create 'start lists' so that when transferring data to Witty not only the athletes' names and information are sent, but also in the exact order of athletes performing the tests. The lists can be used to divide a large athletes' personal database into groups (e.g. squads).
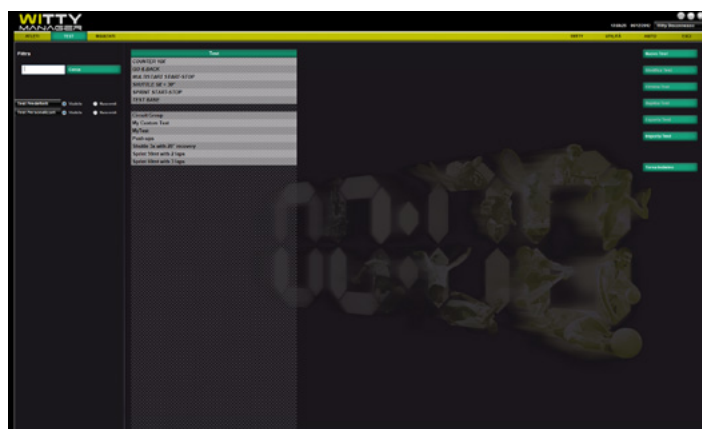

TEST

The main function of this software section is to define customized tests to be then downloaded to the Witty Timer. There are 3 main test types: **Basic**, **Multistart**, and **Counter**.

BASIC: this test is usually executed with one person after the other, allowing to carry out most of the tests. Depending on the requirements it is possible to define a **Sprint** test (straight or circuit, with or without intermediate times), **Go & return** (multiple runs from one point to another or with more points), as well as **Shuttle with recovery** (if a monitored recovery period is needed between one run and another).

MULTISTART: his option is selected if, for example because of the test length, it is necessary to have the next athlete start before the first has finished the test.

COUNTER: This test type is useful to verify how many repetitions of a given action an athlete can execute within a certain amount of time, or, viceversa, how much time an athlete needs to carry out a set number of repetitions.

RESULTS

In this section the results of previously performed tests can be viewed. The results can be filtered by athlete (typing the name of an athlete only the results of tests, in which that person has participated, will be displayed), test type, date or a combination of these.
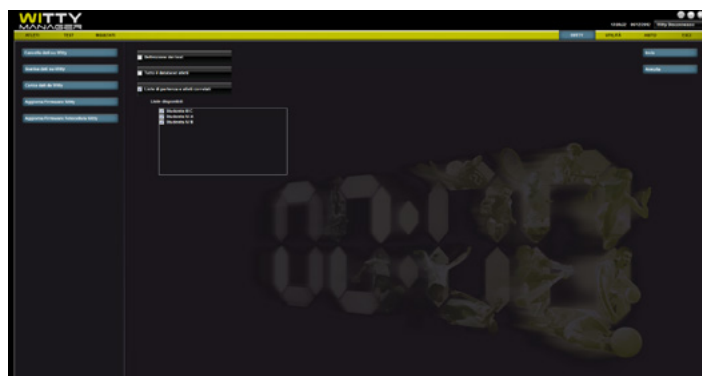Once a test is selected and the **View** mode is entered, the results are displayed in graphical and numerical form, depending on the layout of the predefined or customized **Tables**.
Data can be printed and exported using a one-click option (selecting various tests) or a **Report** (selecting one test, where the data to be printed or exported can be configured, a logo may be added, etc.).

WITTY

When accessing this part of the software, you will be able to interact with your Witty timer in order to, for example: delete information stored on Witty, download data from your PC to Witty, upload data from Witty to your PC, update the firmware of Witty and the photocells.
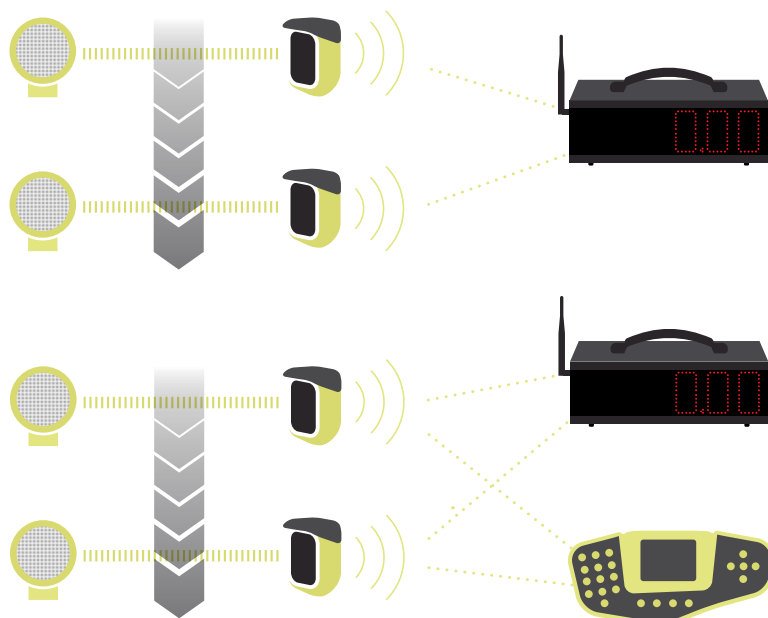
WITTY•TAB

WITTY•TAB is the ideal choice for anyone seeking a multi-capable, lightweight, easily transportable and user-friendly display board. Measuring 13x41.5x6 cm, the board is equipped with a Led dot matrix displaying 6 numeric digits of 7 segments each (10 x 5 Leds), and a sensor allowing automatic adjustment of the brightness level to suit the ambient light conditions. Brightness can also be controlled manually. The 2 lead storage batteries guarantee stand-alone operation for at least 10 hours without the need for a connection to the a.c. mains supply.

The **WITTY•TAB** display board has an internal timer and comes complete with a radio transceiver able to communicate with Witty photocells: as the athlete passes, the photocell transmits the pertinent signal (start/lap/stop) to the board by radio. The transmission range is 150 metres under standard conditions.

The **WITTY•TAB** display board can be used in 2 different modes:

- on its own, in combination with Witty photocells only; in this mode, times are simply displayed, without being saved for subsequent computer analysis

- in combination with the Witty timer; pulses transmitted by the photocells are received by the board and by the timer independently, but in this case, with the timer function, data can be saved and stored for analysis subsequently on a computer using the WittyManager software package

PROGRAMS

The **WITTY•TAB** is equipped with a library of internal programs, designed to meet the many and various timing requirements connected with athlete assessment and performance monitoring.

#	Name	Description
P0	Start, Stop	Basic timing with auto reset after 5 seconds
P1	Start, Lap1, Stop	Basic timing with 1 intermediate time
P2	Start, Lap1, Lap2, Stop	Basic timing with 2 intermediate times
P3	Speed	Speed measurement based upon any length between two photocells
P4	Lap Speed	Lap speed measurement with one photocell
P5	Start, LapN, Stop	Basic timing with n intermediate times and configurable display time
P6	Continuous Timing	Continuous timing, configurable "dead time"
P7	Starting System	Start and Stop with reaction time at start
P8	Event Counter	Counter increasing automatically with each impulse
P9	Parallel Event Counter	Two counters (left and right) for two photocells
P10	Date and Time	Displays date and time
P11	Time	Time display
P97	LED Segments Test	Checks that the LEDs work correctly
P98	Photocell Radio Signal Test	Checks the correct radio transmission functioning
P99	Parameter Configuration	Configuration of the brightness, radio channel and date & time parameters

WITTY TIMER

Weight	337g, battery included
Dimensions	214 x 100 x 36 mm
Operating temperature	0° C/+45°C
Unit of time measurement	Selectable 1 s – 1/10 s – 1/100 s – 1/1000/s Selectable speed m/s – km/h – mph - knots
Measurement resolution	$4 \times 10\text{-}5$ s (1/25000 s)
Display	Graphic color TFT display, visible area 59x44 mm, 320x 240 pixel, with backlight adjustment via software
Radio module	Multi-Frequency Transceiver 433-434MHz
Radio transmission	Digital FSK transmission; redundant code with information correctness verification and auto-correction
Radio frequencies	433.1125 MHz to 434.7375 MHz
Radio transmission power	10 mW
Processing unit	Two 32-bit microprocessors
Time base	12 quartz 8 MHz, stability ±10ppm between 0°C and +45°C
Power supply	Internal polymer lithium battery, external power supply 5VDC
Battery charging	Integrated intelligent charging device
Battery life	> 10 hours
Keypad	• 23-key membrane keyboard • Start-Stop keys • Numerical keypad • 4 function keys • 4 arrow keys and selection key • Home key • Key for line blocking
Connections	• MICRO USB type B connector for charging and connecting to a PC • Jack connector for external input

PHOTOCELL

Weight	169g, battery included
Dimensions	75 x 103 x 48 mm
Operating temperature	0° C/+45°C
Minimum resolution	0.125 ms
Delay with respect to the event	1 ms
Optical range	12 m
Radio module	Multi-Frequency Transceiver 433-434MHz
Radio transmission	Digital FSK transmission; redundant code with information correctness verification and auto-correction
Radio frequencies	433.1125 MHz to 434.7375 MHz
Radio transmission power	10 mW
Impulse transm.accuracy	±0.4 ms
Radio transmission range	Approx. 150 meters
Processing unit	16-bit microprocessor
Time base	8 MHz quartz, stability ±30ppm between 0°C and +45°C
Power supply	Internal lithium ion battery, external power supply 5VDC
Battery charging	Integrated intelligent charging device
Battery life	> 10 hours
Connections	• MICRO USB type B connector for charging and connecting to a PC • Jack connector for external input connection or double photocells.

WITTY•TAB

Weight	2.9 kg, batteries included
Dimensions	13 x 41.5 x 6 cm (H x W x D)
Operating temperature	0° C/+45°C
Unit of time measurement	1/100 s Selectable speed m/s – km/h – mph
Measurement resolution	4×10^{-5} s (1/25000 s)
LED matrix	Numerical: 6 digits x 7 segments (10 x 5 LEDs) with 4 punctuation marks (full stop or colon) with manual/automatic brightness adjustment.
Radio module	433-434MHz multi-frequency transceiver
Radio transmission	Digital FSK transmission; redundant code with information correctness verification and auto-correction
Radio frequencies	433.1125 MHz to 434.7375 MHz
Radio transmission power	10 mW
Radio transmission range	Approx. 150 meters
Processing unit	16-bit microcontroller
Time base	12. quartz 8 MHz, stability ±10ppm between 0°C and +45°C
Power supply	Two internal Pb batteries
Battery charging	Intelligent external Pb battery charger device
Battery life	> 10 hours
Buttons	• START/STOP button • LAP/RESET button
Connections	• Type B MICRO USB connector to connect to a PC • Jack connector for external input/output • SMA connector for connection to an external aerial

SOFTWARE WITTY MANAGER

	Minimum	Recommended
Operating System	Microsoft XP SP3	Vista/7/8 (32 or 64 bit)
CPU	Atom/Centrino	i3/i5/i7
RAM	2 GB	4 GB
Hard Disk	40 GB	160 GB
Graphics card	Integrated	Dedicated (512 Mb or above)
Graphic Display Resolution	1024x600	1600x900 or higher
USB ports	1	2 (Witty + Webcam)

MICROGATE
TIMING AND SPORT

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