

1. WINP (Wireless Input)

1.1 Appearance



The transmitter WINP (Wireless Input) is used to transmit wirelessly an impulse from a normally wired timing device (E.g. photocell, start gate) via the internal radio transmitter

1.2 Power ON/OFF

The ON/OFF button switch has 2 functions:

1) Battery status

Press and hold the ON/OFF button (front left)

LED green: > 60%

LED yellow: > 20%

LED red: < 20%

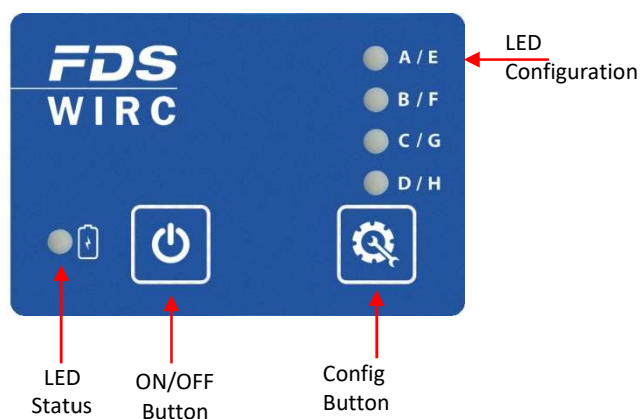
2) Switch ON – OFF the WINP

a) Press and hold (1sec. – 2secs.) the ON/OFF button until the battery LED status is Yellow

b) Immediately release the ON/OFF button and quickly repress it (within 1 second) and hold down until the battery Led status briefly flashes Yellow and then turns to Green.

Switch OFF WINP, simply repeat step a and b (until the LED is OFF)

EmitterWINP



1.3 Battery Status

1) Battery status whilst charging

LED	WINP On/Off	USB	Battery
Yellow	OFF	connected	Battery Charging
Green	OFF	connected	100% charged
Yellow Flashing	ON	connected	Battery Charging
Green Flashing	ON	connected	100% Charged

2) Battery status with device ON and USB disconnected

LED	WINP On/Off	USB	Battery
Green	ON	disconnected	100% charged
Yellow	ON	disconnected	20% - 60% charged
Red	ON	disconnected	10% - 20% charged

3) Battery status with device OFF and USB disconnected

Test by briefly pressing ON / OFF button

LED	WINP On/Off	USB	Battery
Green	OFF	disconnected	60% - 100% charged
Yellow	OFF	disconnected	20% - 60% charged
Red	OFF	disconnected	<20% charged

1.4 Wireless Configuration

The transmitter WINP and TBox-Radio are configured and linked using two Parameters

- **Group** (frequency parameter)
- **ID** (photocell identification – used only on the TBox-Radio)

NOTE: Each WINP working with TBox-Radio must be configured with the identical group setting

1.4.1 Group (Frequency parameter) – EU / India

We have the choice of selecting either from the 6 Group options below

Group A, B, C, D:

Wireless Transmission Distance: up to 2000m (clear line of sight)


Each group uses $\frac{1}{4}$ of the full frequency band

Min locking time of 200ms

Group E, F:

Wireless Transmission Distance: up to 5000m (clear line of sight)

Each group uses the full frequency band

 Those groups limit the use of 2 radio systems (WIRC / WINP)

Min locking time is longer: 500ms

OFF:

The radio transmission function is disabled and device is powered down when not in use.

1.4.2 Group (Frequency parameter) – North America

We have the choice of selecting either from the 8 Group options below

Group A, B, C, D:

Wireless Transmission Distance: up to 2000m (clear line of sight)


Each group uses $\frac{1}{4}$ of the full frequency band

Minimum locking time of 200ms

Group E, F, G, H:

Wireless Transmission Distance: up to 5000m (clear line of sight)

Each group uses $\frac{1}{4}$ of the full frequency band

 Those groups limit the use of 2 radio systems (WIRC / WINP)

Minimum locking time is longer: 500ms

OFF:

The radio transmission function is disabled and device is powered down when not in use.

To configure your desired Group, press the Setup button 

The current Group selected is indicated by the (LED array A, B, C & D)

Release and press the number of times you want to change the setting.

Group	LED A	LED B	LED C	LED D
A	GREEN			
B	GREEN	GREEN		
C	GREEN	GREEN	GREEN	
D	GREEN	GREEN	GREEN	GREEN
E	YELLOW			
F	YELLOW	YELLOW		
G (*)	YELLOW	YELLOW	YELLOW	
H (*)	YELLOW	YELLOW	YELLOW	YELLOW
OFF	RED	RED	RED	RED

(*) only available for North America

1.4.3 ID (Transmitter Identifier)

Each impulse from a specific transmitter WINP, will be identified with the input number configured. TBox-Radio uses a lookup table to link the photocell ID to a defined input (A to D).

With the “TBox-Setup” App, you can configure each specific Input value with WINP ID.

You can also manually change the Input attribution on the photocell itself provided a connection with the TBox-Radio is already established.

NOTE: Each Transmitter WINP input (A to D) must be configured with a different photocell ID to avoid data conflict.

To set the ID from the WINP, press the Setup button for 5 seconds until the audible beep is heard.

Then Each time you press the button Setup, it will change the ID setting

ID	LED A	LED B	LED C	LED D
A	GREEN			
B		GREEN		
C			GREEN	
D				GREEN

Once the desired ID is selected, press again the Setup button for 5 seconds until the audible beep is heard (this will activate the selection)

If no confirmation is performed, the WINP return to an idle state after a few seconds on inactivity.

1.5 Radio Communication

The WINP will indicate each time an impulse is transmitted, by flashing the relevant LED representing the configured ID (refer to table above)

The WINP communication works with an acknowledge (ACK) signal.

The transmitter will resend their ID and impulse several times if no ACK is received and each time also flash the relevant LED representing the configured ID (refer to table above)

Red flash means no that no acknowledgement has been received from the TBox-Radio.

Flashing green means that pulse transmission is successfully completed.

The ACK feature provides the user with a basic level of testing the positioning and communication between TBox-Radio and photocells.

Many attempts may indicate that the communication is not very stable. A change of position of the photocell or the TBox-Radio (or just the antennas) may improve the communication.

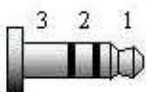
- ⚠ Radio transmissions cannot be 100% guaranteed. An unfavourable environment, lack of line of sight, interference or an improper installation might lead to the loss of data. FDS cannot be held responsible for any of the above.

1.6 Wired Connection

The Jack connector on the rear of the WINP Transmitter works in parallel to the main Input (Banana connector) on the front.

The photocells simulate a short-circuit between the 2 wires.

The input impedance is 660ohm, and the max voltage allowed on the output pin is 5.5V.



- 1: Input
- 2: NC
- 3: GND

1.7 USB

The Mini-USB connector has various functions including:

- External power supply and battery charging
- Configure the WINP photocell options /parameters (with the PC app “TBox-Setup”)
- Update the Firmware

1.8 How to update the WINP Firmware

Updating the firmware is relatively simple. The software “FdsFirmwareUpdate” is required

- a) Install the program “FdsFirmwareUpdate” on your computer
- b) Connect the USB cable to your PC and WINP
- c) Run the program “FdsFirmwareUpdate”
- d) Select the COM Port
- e) Select the update file (.bin)
- f) Press Start on the program (do not unplug the device during update)
- g) The WINP transmitter will be update d
- h) Once the update is complete, remove USB cable and switch ON the WINP transmitter

1.9 Technical specifications

Radio Power	100 mW
Frequency :	
Europe	869.4-869.65 MHz
India	865-867 MHz
North America	920-924 MHz
Operating temperature:	-20°C to 70°C
Precision	1ms
Min locking time (between two detections)	200ms for Groups A-D; 500ms for Groups E-F
External power input:	USB compatible (5V +/- 10%) up to 1A
Battery:	LiPo 1700mAh
Autonomy:	150 hours radio ON
Dimension:	93x60x27mm
Weight (Tx / Rx):	100gr each

2. Copyright and Declaration

WINP – Wireless Input

User manual

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