TEE SENTRY®

OPERATION & INSTALLATION MANUAL

42535 Wireless Tee Sentry® **42636 Hybrid Tee Sentry**
42534 Hardwire Tee Sentry®

Equipment List

- Main Control Unit with 6’ power cable
- Light Sensor (Automatic power off at night)
- Red pushbutton box
- Green pushbutton box
- Sign for hitting area
- Sign for landing Area
- Additional Accessories as Ordered

Thank you for your purchase of the Tee Sentry® from Reliable Golf Supplies. If you have any questions about this product or need technical assistance please call us at 1-800-274-6815.

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Standard Tee Sentry® Operation

The Standard Tee Sentry® uses two remote buttons to control the red and green LED lights in the main control unit. The red button is usually located at the tee-off or initial blind shot area and turns the red LEDS on and the green LEDS off. The green button is placed in the landing area and turns the green LEDS on and the red LEDS off. Additional remote buttons can be added with the possibility to have up to a total of four remote buttons per main unit when using the standard receiver.

Light Sensor – Built in photo control that automatically turns the Tee Sentry® off at night and back on again during daylight hours.

Red Button - Prior to hitting a blind tee or fairway shot that is protected by the Tee Sentry make sure to check the LED lights on the main unit. IF THE RED LEDS ARE ILLUMINATED, STOP! THE PREVIOUS PARTY HAS NOT LEFT THE LANDING AREA AND IT IS NOT SAFE TO HIT. If the GREEN LEDS are illuminated this indicates a clear landing area. After all members of the party have hit their shot, push the red button and this will turn the GREEN LEDS off and illuminate the RED LEDS in the main control unit. You may then proceed to the landing area.

Green Button - After the last member of the party has hit their next shot and has left the landing area push the green button in the landing area. This will switch the Red LEDS in the main control unit off and turn the green LEDS on indicating to the next party that it is okay to proceed with their shots. The red LED indicators in the main unit will automatically switch back to green after an adjustable pre-set time limit even if the green button is not pushed. This setting can be adjusted from 1 minute to 15 minutes of duration in 30 second increments. Fig 1 has a diagram to show these adjustments.

Tee Sentry® Installation

In addition to the items supplied with your Tee Sentry® the following additional items will be needed: mounting posts and fasteners in the desired locations for the remote pushbutton boxes, signs, and main control unit. A 12 volt battery or 110 VAC to 12 VDC power supply to power the main unit is also required.

Cable to connect the remote green pushbutton to the main control unit will also be needed if you have purchased the hardwire version of the Tee Sentry. The hardwired main control unit and green pushbutton box are delivered with 6’ pigtails to splice in a junction box or direct connection to your connecting cable. In all cases preserve the water tightness of the provided junction boxes and or connections and utilize the watertight strain relief connectors where provided. We recommend the use of a 2 conductor 18 gauge outdoor rated direct burial grade cable for this purpose.

1. Mount the main unit to a post in a location that is a safe distance away yet visible to the players making the “blind shot”. The red and green LEDS can easily be seen from 100 feet away.

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2. Mount the remote red pushbutton box and included sign in a location that will be convenient to the players to use after making their shot.

3. Mount the remote green pushbutton box and included sign in a location that will be easy for players to push as they exit the landing area. If you ordered the hardwire version you must complete the cable connection from the 6' green pushbutton box pigtail to the interconnect cable from the main control unit 6' pigtail. Polarity does not matter.

4. Connect the main unit to a 12 volt DC power source. Attach any ordered accessories such as a solar charger panel if applicable to the battery as well. Respect polarity when making any power connections.

5. On power up the Tee Sentry® will default to showing the green LEDS. Test the installation by pressing the red button and making sure the main unit changes to showing the red LEDS. Make sure the signal from the green remote button is being received by testing it as well. In some instances a remote button may need to be relocated due to localized interference or blocking of the radio signal by terrain and or objects in the vicinity. Please relocate as needed to ensure optimum reception.

6. The Tee Sentry® comes with a selectable time out function which will automatically reset the main control unit to green even if the green button is not used. It is delivered pre-set to 9 minutes and can easily be changed by utilizing the rotary switch and slide switch on the main circuit board. Fig 1 of this manual has a diagram to show these adjustments. This information can also be found on the LED circuit board itself inside the main unit of the Tee Sentry.

7. Test all functions and the time out duration after initial power up. Your Tee Sentry® is now ready for use.

Technical Specifications:

- Main Control Unit – 12VDC Bat. Or 110VAC to 12 VDC Transformer
- Wireless Pushbuttons – 3.0 V Lithium (approx. 3-4 yr. life)
- Radio Frequency (Wireless Model) - Spread Spectrum 902-928 MHz (USA)
- Radio Receiver Current Consumption – 135-400mA
- LED Board Current Consumption – 275mA
- Main Unit – Outdoor Fiberglass NEMA 8 X 6 X 4 Enclosure
- Pushbutton – 4 X 4 X 2 PVC Junction Box

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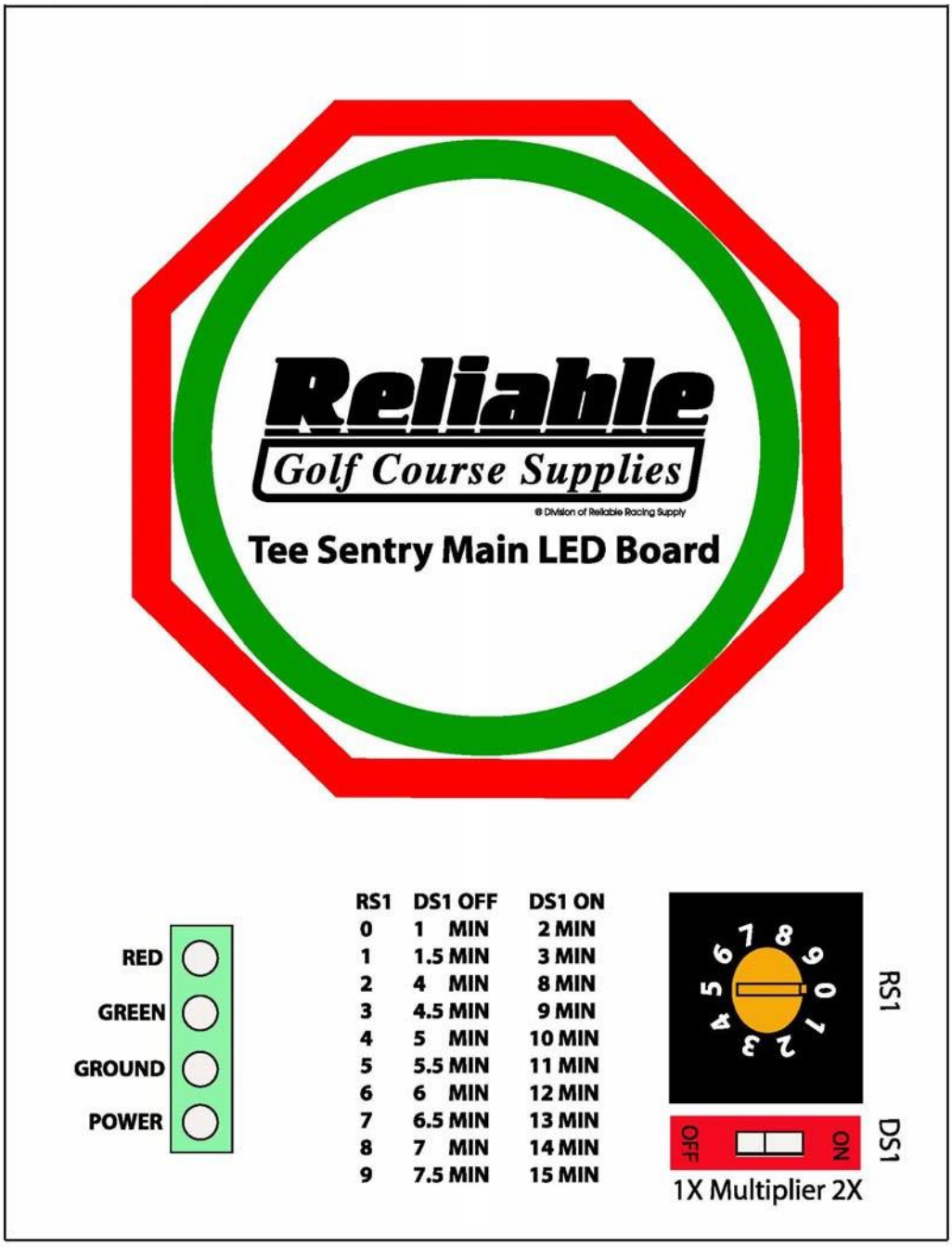
Tee Sentry® Main Board Figure 1



The red and green terminals are connected to the appropriate output of the wireless receiver or directly connected by wire to the red and green buttons. The power connection is used to power the wireless receiver unit if present in the main unit as well. Ground is common to all connections.

Note: The Wireless Receiver and Transmitter are used in the Wireless Version of the Tee Sentry® and are not included in the Hardwire Version.

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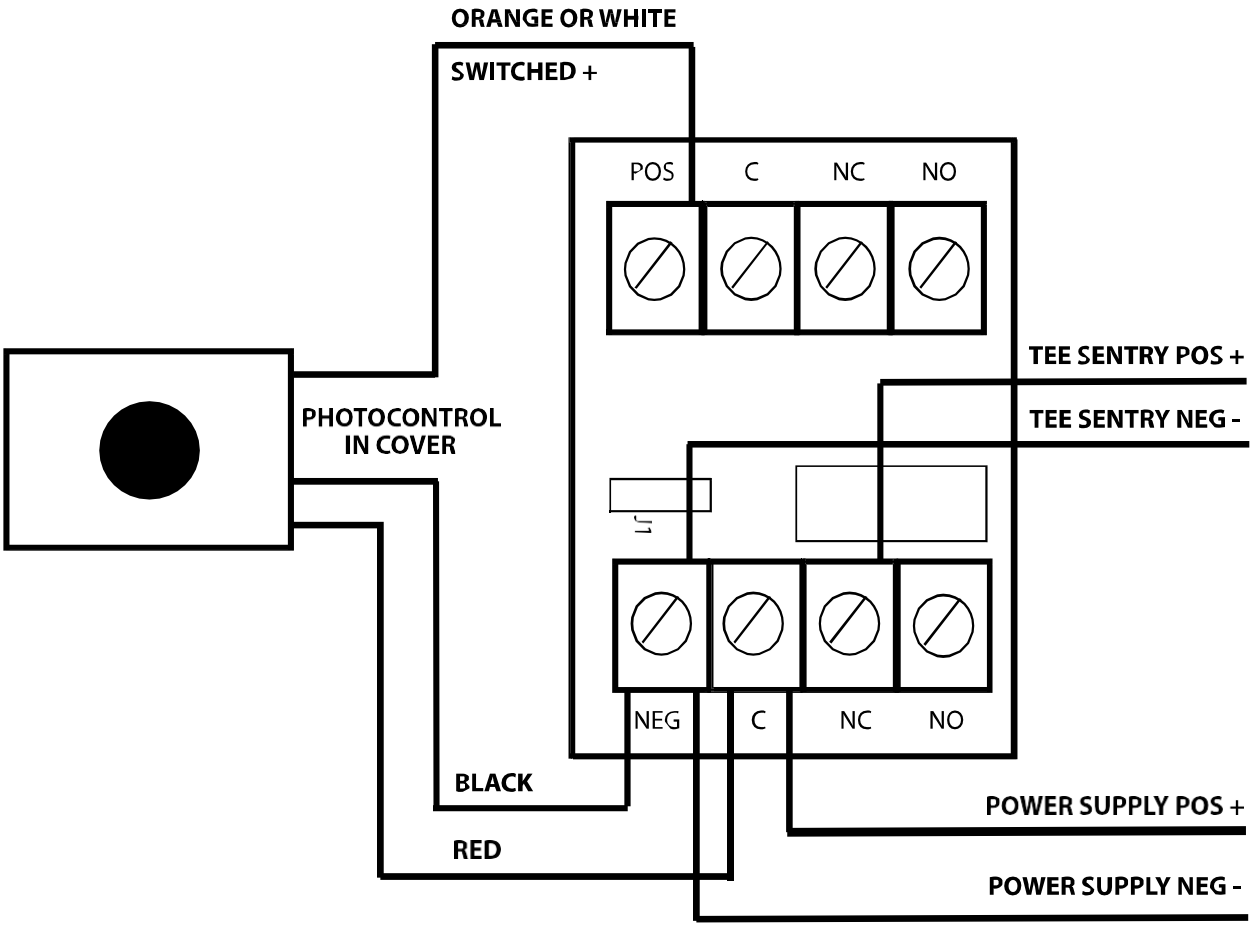
Light Control Sensor



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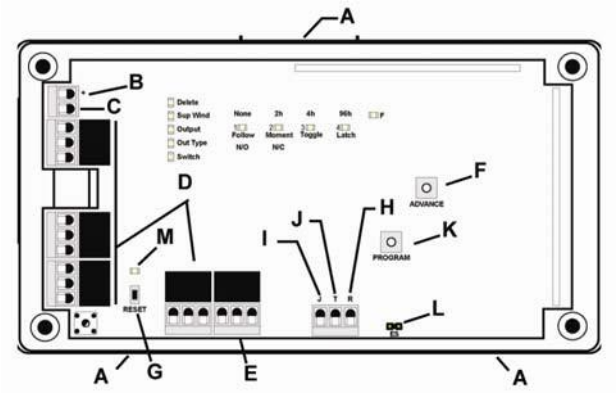
Wireless Receiver Inovonics EN4204R / Main Unit Figure 2

The power and ground connections are shared with the main LED board. Up to four wireless transmitters can be assigned to one receiver. The outputs are assigned to the corresponding remote buttons to change the LEDs from green to red and from red to green. These outputs are wired to the corresponding connection on the main LED board. The fault, rest, jam, and tamper connections are not used. The frequency is preset to USA (902-928 MHZ) and should not be changed. The reset, program, and advance buttons are used when assigning transmitters to the receiver.

Components

A. Housing Release Tabs
B. Power + (11-14 VDC)
C. GND Connection (-)
D. Output Terminals
E. Fault Output
F. Frequency Selection Pins
G. Reset Button
H. Reset Input
I. Jam output
J. Tamper Output
K. Program Button



Programming the Receiver
Note: If changing programming for a point that already has a transmitter registered to it, there is no need to re-register the transmitter. Changes to point programming are automatically assigned to the transmitter registered to that point.
To program any of the four transmitter points or the fault output:
1. Use a small screwdriver to press the housing release tab on either side of the receiver; separate the housing.
2. Use the **Advance** button to select any of the four transmitter points or the fault output.

Select the Output to Program
Note: The only programmable parameter on the fault output is whether the output is normally open or normally closed.
3. Press the **Program** button to begin programming the point. If no transmitter has been registered to the chosen point, the receiver advances to the supervision window option.
Note: If a transmitter has already been registered to the chosen point, the Delete LED lights. Press **Advance** to delete the point and return to normal operation; press **Program** to advance to the supervision window option.
4. Use the **Advance** button to choose a supervision window of None, 2h,4h and 96h. Press **Program** to complete and advance to the output option.

Select the Supervision Window
5. Use the **Advance** button to select the output number. Press **Program** to complete and advance to output type option.

Select the Output Number
6. Use the **Advance** button to select the output type. There are four output types:

Follower: The output reflects the transmitter's alarm status.
Momentary: The output turns on for seven seconds, then turns off, regardless of the device status.
Toggle: The output changes state each time the device sends a new activation. A minimum of four seconds must elapse before the output can send a new activation
Latching: The output turns on when activated and remains on until the receiver is reset.

Select the Output Type
Press **Program** to complete and advance to the switch type option.
7. Use the **Advance** button to choose between N/O and N/C
Press **Program** to complete.

Select the Switch Type
8. All the option LEDs will light and the point you've just programmed will flash. If you wish to register a transmitter to the point you've just programmed, press the transmitter's **Reset** button; otherwise, press **Program** to save programming changes without registering a transmitter.
Note: All of the alert LEDs will turn off when the receiver has received the transmitter's registration message, and the point number LED will light for two seconds. The registration is not complete until all LEDs turn off and the point number lights, indicating the receiver has received the transmitter's registration message. If this does not occur, press **Reset** on the transmitter again.

2.4 Factory Config
The factory config option is used to restore the EE4204 to it factory defaults. **Caution:** The factory config will erase all programmed point, output, and language information.
To restore the factory configuration defaults to the EE4204:
1. Hold down the **Reset** and **Advance** buttons.

2. With the buttons held down, cycle the power off/on.

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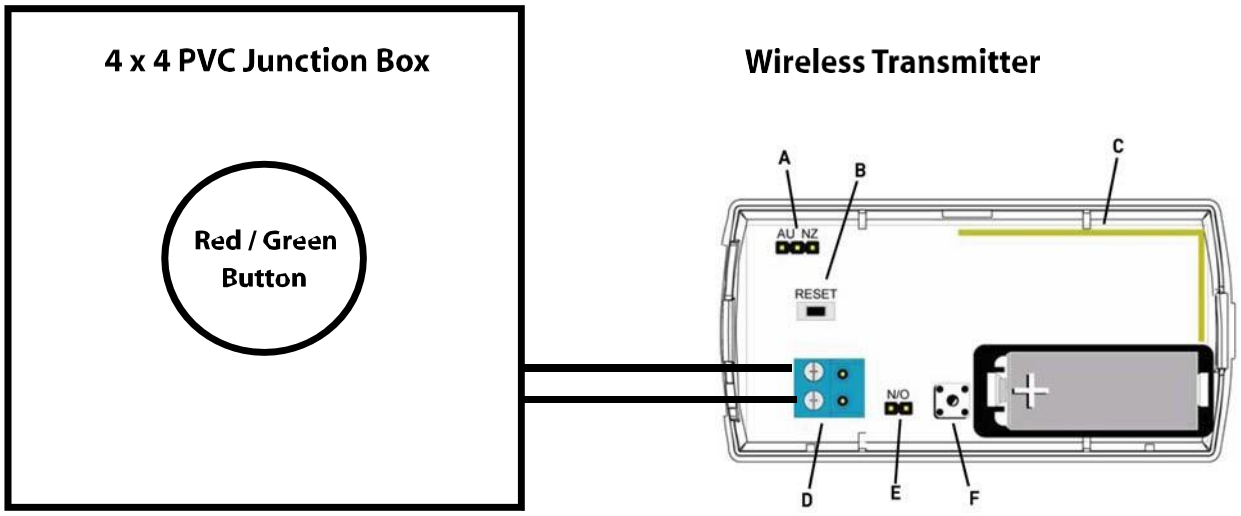
Wireless Transmitter Inovonics EN1210 / Remote Button Figure 3



The transmitter comes preset to USA frequency (902-928 MHZ) and normally open contact. To replace the battery use your thumb to depress the housing release tab on the bottom of the transmitter; separate the housing. Use the hole in the back of the housing to push out the old battery if necessary. Install the new battery observing the correct polarity. Press the rest button to initialize the transmitter. Use a 3.0 Volt CR123A lithium battery or the equivalent for replacement. (3-4 year life)

Components

A. Frequency Selection Pins
B. Reset Button
C. Antenna
D. Input Terminal (Red or Green Button Connection)
E. N/O – N/C Selection Pins
F. Tamper Button and Spring

Note: The Wireless Receiver and Transmitter are used in the Wireless Version of the Tee Sentry® and are not included in the Hardwire Version.

INOVONICS TECHNICAL SUPPORT: Call 303-939-9336 (Option 2 for tech support).

Contact us about this and other golf related products at

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SKU #	**DESCRIPTION**	RETAIL EA
42557	TEE SENTRY MAIN PCB	$395.00
42908	LIGHT SENSOR LCA-612D	$125.00
42907	ALTRONIX RBSN RELAY	$35.00
41139	ALLIED AMP864CCH /CLEAR DOOR	$115.00
60871	4 X 2 X 2 JCT BOX	$28.50
42568	ALUM STAND-OFF 10-32 X 2.75L, 3/8 HEX	$6.00
60777BLK	CINCH BANANA JACK, BLACK J152-ND, DIGIKEY	$3.00
60777WHT	CINCH BANANA JACK, WHITE J150-ND, DIGIKEY	$3.00
60777BLK	CINCH BANANA PLUG, BLACK J146-ND, DIGIKEY	$5.00
60777WHT	CINCH BANANA PLUG, WHITE J144-ND, DIGIKEY	$5.00
60800GRN	CINCH BANANA JACK, GREEN J153-ND	$3.00
60800RED	CINCH BANANA JACK, RED J151-ND	$3.00
60777BLK	CINCH BANANA PLUG, BLACK J146-ND, DIGIKEY	$5.00
60777WHT	CINCH BANANA PLUG, WHITE J144-ND, DIGIKEY	$5.00
60777GRN	CINCH BANANA PLUG, GREEN J340-ND	$5.00
60777RED	CINCH BANANA PLUG, RED J145-ND	$5.00
60701	COLLAR AND N.O. CONTACT BLOCK #PB-BZ101, ELECDIRECT.COM	$7.25
60701	ACTUATOR PUSHBUTTON METAL, GREEN #PB-BL3, ELECDIRECT.COM	$4.70
60701	ACTUATOR PUSHBUTTON METAL, RED #PB-BL4, ELECTDIRECT.COM	$4.70
40991	SIGN "FOR YOUR…." 2826-FOAMCOREPRINT	$45.00
40992	SIGN "DON'T FORGET…" 2826-FOAMCOREPRINT	$45.00
40996	TEE SENTRY MANUAL, INTERNAL	$5.00
60701	TEE SENTRY MAIN ASSY (W/O WIRELESS RCVR)	$695.00
42553	INOVONICS EN1210 TRANSMITTER	$125.00
42554	INOVONICS EN4204 4-ZONE RCVR	$285.00
42534	**HARDWIRED TEE SENTRY COMPLETE**	**$1,275.00**
42535	**WIRELESS TEE SENTRY COMPLETE**	**$1,525.00**
42536	**HYBRID TEE SENTRY COMP (hardwired red button on tee)**	**$1,400.00**
42909	REPLACEMENT LIGHT SENSOR WITH 4X4X2 BOX	$165.00
62740	WIRELESS PUSH BUTTON BOX COMP, INOVONICS	$225.00

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