

#### **OPERATION & INSTALLATION INSTRUCTIONS**

Congratulations on your purchase of Reliable Golf Course Supplies Tee Sentry. Your shipment should include the following items:

- 1) Main Control Unit with 6' power cable
- 2) Red pushbutton box with 6' interconnect cable
- 3) Green pushbutton box
- 4) Envelope w/mounting standoffs for Main Control Unit and black programming cable

## **Standard Tee Sentry® Operation**

The Tee Sentry® requires the use of only two buttons - a Red Button located at the tee-off or initial blind shot area and a Green Button located in the landing area.

**Red Button** - Prior to hitting a blind tee or fairway shot that is protected by the Tee Sentry®, make sure to check the Main Control Indicators. IF THE RED INDICATOR IS PRESENT, STOP. THE PREVIOUS PARTY HAS NOT LEFT THE LANDING AREA AND IT IS NOT YET SAFE TO HIT. A Green indicator signifies that the landing area is clear and it is safe to proceed. After the last member of your group has hit their shot, push the Red button to turn the Main Control Unit to Red and proceed to the landing area.

**Green Button** - When the last member of your group has hit his/her next shot and is safely leaving the landing area, push the Green button in the landing area to change the indicator in the Main Control Unit back to Green allowing the next group to hit. The Main Control Indicator will automatically return to green after an adjustable pre-set time even if the Green Button in the landing area is not pushed.

### Tee Sentry® Installation

In addition to the parts supplied with your Tee Sentry it will be necessary to have the following: mounting posts, power supply or battery, and 2/18 cable (for hardwire version only).

- 1. Mount the Main Control Unit a safe distance from, yet visible to, the area visible from which the "blind shot" will be hit. The Red/Green indicators can be easily seen from a distance of 100 feet.
- 2. Use the Red (+) and Black (-) battery clamps to connect the DC input cable (see fig. 1) to a 12VDC battery or power supply (not provided). The Green indicator will activate on power-up. OBSERVE POLARITY.
- 3. Plug the Red Button into the Main Control Unit using the cable provided. If it is necessary to mount the Red Button further away from the Main Control Unit than the length of wire provided, a standard 18 gauge stranded outdoor/burial wire should be used.
- 4. *Hardwire version only* Connect the wire in the Main Control Unit for the Green Button Input (see fig. 1) to the interconnect cable to the green button (no polarity required).
- 5. The Tee Sentry® comes with a selectable time out from 1 to 15 min. that is pre-set to a value of 9 minutes. The time out is set using the S1 four position dipswitch bank on the main circuit board in the Main Control Unit (see fig. 2 to set time out). If a group fails to push the green button upon leaving the landing area, the Main Control Unit automatically resets to green after the selected time out value has expired.

Tee Sentry® Installation (cont')

- 6. Mount the Green Button in an area convenient to golfers as they exit the landing area. For hardwire version connect the wire from the Green Button to the interconnect cable that runs back to the Main Control Unit (no polarity required).
- 7. Your Tee Sentry® is now ready for use.

DO NOT LOSE THE PROGRAMMING CABLE!!! If you have special needs it <u>is</u> possible to provide expanded functionality to your Tee Sentry®. Please call 800-274-6815 for details.

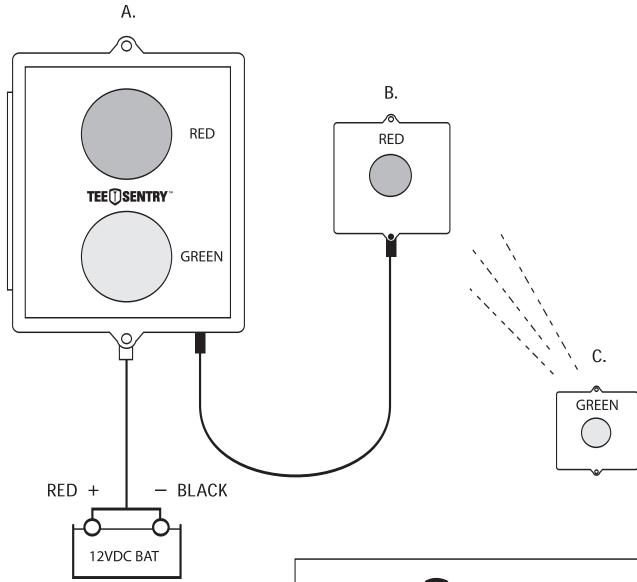
Reliable Golf Course Supplies has available 12VDC power supplies, Solar Charger/battery conditioner, and Lightening Suppression Modules for hardwired power situations.

IMPORTANT!!! The radio receiver is a sophisticated microprocessor based control and can be damaged by power surges or "brown out" power situations. When using a battery it is necessary to maintain a charge above 10 Volts and protect from power spikes and lightening.

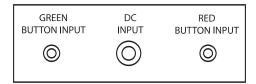
**Drawings:** Figure 1 - Component layout Figure 2 - Tee Sentry Main Board Figure 3 - Wireless Transmitter Figure 4 - Wireless Receiver

## Programming the Transmitter to the Receiver (comes pre-programmed) - See Fig. 3 and 4

- 1. The Main Control Unit (Fig. 4) and the Wireless Pushbutton (Fig. 3) should be opened and sitting next to each other. Take the covers off the Wireless Receiver in the Main Control Unit and the Wireless Transmitter in the Pushbutton. Apply power to the Main Control.
- 2. Plug the enclosed black programming cable to the 3-pin Programming Header on the receiver board in the Main Control Unit (see Fig. 4). The cable has no polarity and can be plugged in either way.
- 3. Press the the programming button (labeled PGM) on the receiver for 1 second. This will cause the top light to flash as the receiver goes into program mode. If the top light goes to solid press the reset/delete button to clear whatever is in memory and repeat step 3.
- 4. Now connect the other end of the programming cable to the Wireless Transmitter in the pushbutton box and press the Reset button (Fig. 3). The program light on the receiver will go out and the valid/decode light will flicker intermittently indicating normal operation.
- 5. Test the entire unit for normal operation.



## **BATTERY OR POWER SUPPLY**



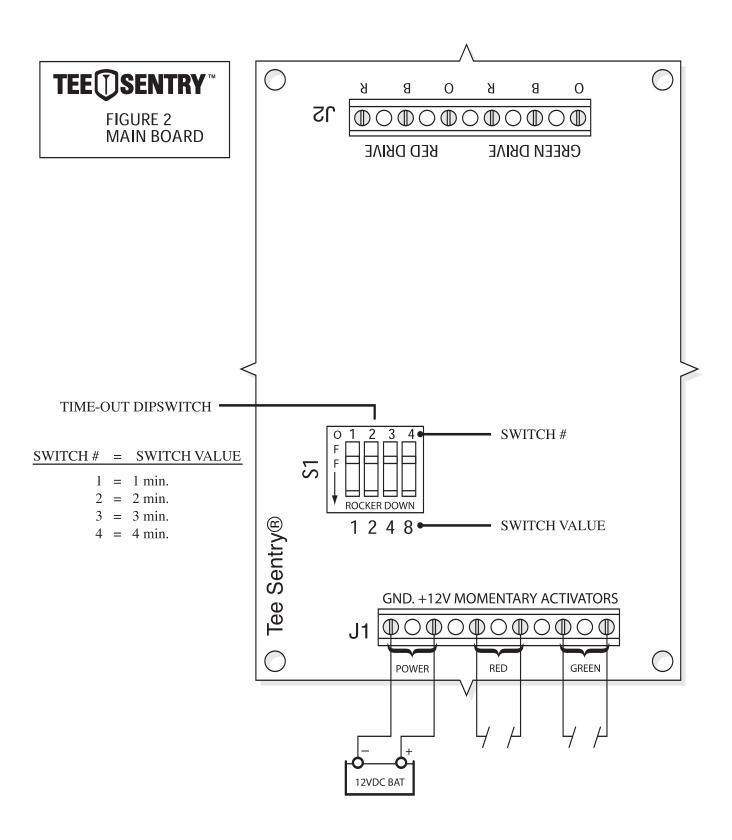
BOTTOM VIEW (Green input for hardwired version only)

# **TEE () SENTRY**<sup>™</sup>

## FIGURE 1 - TEE SENTRY COMPONENTS

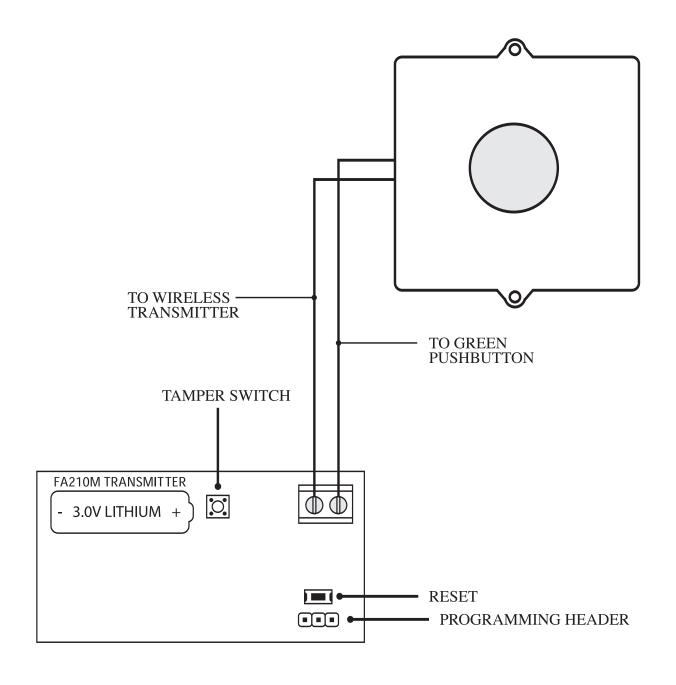
- A. MAIN CONTROL W/ RED & GREEN INDICATORS
  - 1. MAIN CIRCUIT BOARD (SEE FIG. 2)
  - 2. WIRELESS RECEIVER (SEE FIG. 4)\*
- B. RED INDICATOR ACTUATOR BUTTON
- C. GREEN INDICATOR ACTUATOR BUTTON
  - 1. WIRELESS TRANSMITTER (SEE FIG. 3)\*

<sup>\*</sup> These items are not used in the hardwired version.





## FIGURE 3 - WIRELESS PUSHBUTTON



## Figure 4

## **Wireless Receiver Technical Specifications**

**Dimensions (housing):....** 6.38" x 3.60" x 1.10"

**Weight:** . . . . . . . . . . . . 6.9 oz.

#### **Environmental:**

Operating Temperature: . . . . . 32° - 120°F (0° - 50°C) Relative Humidity: . . . . . . . 95% (non condensing)

#### **Electrical:**

Power Requirement: . . . . . . . 11 -14VDC

Power Consumption: . . . . . . . 120mA (max, relays activated)

Typical: . . . . . . . . . . . . . . . . 40mA (quiescent)

FA404R output relay: . . . . . . Form C, 2A @ 120VAC, 2A @ 300VDC

#### Receiver:

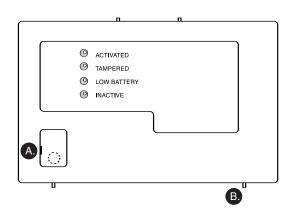
Type: ..... frequency-hopping spread spectrum

Operating Frequency: . . . . . . . 902 - 928 MHz

The VALID DEDCODE LED indicates transmissions from transmitters programmed to the receiver.

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Note: FA transmitters have non-volatile memory. It is not necessary to reprogram transmitters after losing power or changing batteries. Press the transmitter reset button to resotre programming.



#### **Reset Button Access Cover:**

Insert small screwdriver in slot on left side A. Hold cover lightly while prying. Install by inserting top latch and snapping in at bottom.

Insert a small flat screwdriver behind pry point indicator nubs on top or bottom **B** of the housing cover (4 places). Gently pry or twist the housing cover apart.

## **FA401 RECEIVER**

