TeeSafe™

Solar Powered Golf Hazard Warning System

The TeeSafe™ Solar Powered Hazard Warning System is an advancement on the traditional bell system used for blind shots on a golf course. The system is activated when the golfer enters the blind region and is deactivated as the golfer leaves the blind region. Approaching golfers have a clear indication when other players are within the blind region.

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Background

A blind region is a position on a golf course where a golfer is not visible to approaching golfers due to the terrain. This poses a safety risk to all golfers hitting into or from the blind region. The traditional method to minimise this risk is for the golfer to avoid hitting into these blind regions until they hear the bell sounded by golfers leaving the area. The bell may not always be heard by golfers particularly during windy conditions or where bells are used on more than one hole it may be difficult to determine which hole the bell was sounded for.

TeeSafe™

The TeeSafe™ hazard warning system addresses the risk to golfers by providing a clear signal when golfers are playing into or from the blind regions. The signal is activated by the golfers. The system comprises two units (primary and secondary) and includes a solar panel that recharges the unit batteries. The two standalone units communicate with each other via a wireless radio link. Price ranges from $1250 (battery powered) to $1600 (fully solar powered).

TeeSafe™ installed in a blind region on an Australian golf course.

TeeSafe™ Operation Summary

Activating and Deactivating

When a golfer enters the blind region they manually activate the button on the primary unit. Lights will flash to warn approaching golfers to wait before playing their next shot as golfers are inside the blind region. The golfer activates the button on the secondary unit to signify that they have left the blind region. The lights will stop flashing to indicate to the approaching golfers that they are free to play their next shot. If the secondary unit is not deactivated manually the system has inbuilt timers that will reset the system for continued normal operation. When the buttons are activated a buzzer will sound to inform the golfer that the system has received the button press.

Lights

The primary unit has a large light which can be seen by approaching golfers from up to 100m away. The secondary unit has a small light on the button module. Golfers approaching the blind region can use the light on the primary unit to inform them when it is safe to hit into the blind region. Golfers in the blind region can use the light on the secondary unit to reassure them that they are not at risk, and as a reminder to activate the button upon leaving the blind region.

Unit Timers

The primary unit has two timers. When the primary unit is activated, the lights will flash for 5 minutes plus the time (0-9 minutes) set by the golf course manager, and then the lights will flash at a quicker rate for a period (0-9 minutes) set by the golf course manager. The secondary unit has one timer. When this unit is activated, the button on the secondary unit will be ignored for a period (0-9 minutes) as defined by the golf course manager. This standoff period is designed to guard against golfers leaving the blind area and inadvertently cancelling a period started by golfers in the group behind.

Batteries

The batteries use SLA (Sealed Lead Acid) technology and are 12Volts (7Amp hour). The typical life expectancy of these batteries is 3 to 5 years. Once the batteries are unable to sustain an adequate charge they should be replaced. NOTE: Based on 14 hours of play per day – the system should run for 3 days solely from the battery (i.e. for 3 consecutive cloudy days, where the solar panels are unable to charge the batteries).

Installation

Both the primary and secondary units comprise three modules; the solar panel, the main module and the button module.

Location

The primary unit should be placed just before the blind region so that it is clearly visible by approaching golfers. The secondary unit should be placed just after the blind region so that it is convenient for golfers leaving the blind region to access. The solar panel should face north and be 30 degrees from horizontal and the solar panels should be mounted in direct sunlight. The main module on the primary unit should be rotated so that approaching golfers can clearly see the light. Both the solar panel and main module should be mounted high enough (ie. 3m above ground to avoid damage). The button module should be mounted for easy access (0.8 to 1.3m above ground).

TeeSafe™ showing the solar panel, lights and button for activating and deactivating lights.