The decoder hub shall be housed in a lockable, weather-resistant plastic pedestal. The hub shall be completely solid state with tactile keys on a membrane overlay for programming, and shall be fully illuminated for low light operations. The hub shall include an optional password setting for security purposes.

The hub shall store all irrigation schedules in non-volatile, field resident memory and shall not be dependent on the central computer to irrigate or to create or edit watering schedules.

The hub shall have a minimum of [250, 500, 750 or 999] \_\_\_\_\_ decoder addresses using up to four decoder output modules. The hub shall supply sufficient power to activate up to 20 standard Hunter golf solenoids simultaneously per decoder output module and up to 120 solenoids in a fully loaded hub.

Each decoder output module shall be equipped with heavy duty lightning protection as a standard feature, and shall be equipped with replaceable automotive style fuses. Each hub shall be furnished with spare fuses in a holder designed for this purpose, immediately above the output modules.

All hub components shall be replaceable with no tool other than a standard #2 Phillips screwdriver, which shall be furnished and stored within the controller lid.

Each controller shall have a copper clad steel ground lug, and shall be grounded in accordance with ASIC specifications to a minimum of 10 Ohms or less.

The hub shall have a keypad-selectable identification number, variable schedule lengths from one to 32 days, 64 independent schedules (which are automatic and can operate in series, parallel, or independent of each other).

The hub shall have 64 automatic schedules with maximum station run times of at least 6 hours. The hub shall have seasonal adjustment which scales scheduled runtimes from 1% to 300%.

The hub shall include a rain shutdown feature which can prevent automatic operation for 1 to 31 days or indefinitely.

The hub keypad shall permit local editing of decoder/station assignments, both for initial setup and for editing decoders after subsequent repairs or replacement. The keypad shall permit assignment of stations to up to 64 “blocks” of up to 10 stations each, so that a single run time may be assigned to groups of stations for simultaneous activation.

The hub shall permit direct programming of decoder addresses via an onboard programming port.

**Additional specifications for Standalone hubs:**

The hub shall be upgradable after initial installation to either hardwire or wireless central communications, with the addition of a communications module.

**Additional specifications for Hardwire Communications:**

The hub shall feature hardwire communications in order to provide true two-way communications with the central computer. The communications link shall be over GCBL cable, two twisted pair, 18 AWG solid copper, foil-shielded with drain wire and PVC jacket (or GCBLA armored cable), and no other cable shall be acceptable. The communications circuitry shall include transmit and receive LEDs for the individual hub, and all communications between the hub and the central computer.

The hub shall have the ability to respond to remote Maintenance Radio commands received by the central interface and relayed over the hardwire communications path.

The hub shall be Hunter Golf Model PILOTDH \_\_\_ [station size, communication option].

**Additional specifications for Radio Communications:**

The hub shall be radio-equipped for communications to the central computer. The radio shall be an (FCC/DOC) type-accepted UHF transceiver of not more than 2 Watts power output in order to provide true two-way communications with the central computer and Maintenance Radio, in full compliance with governmental standards and regulations. The radio antenna shall be integral to the hub pedestal and shall not protrude above the top plane of the hub, to prevent damage. The communications circuitry shall include transmit and receive LEDs for the individual hub, active carrier LED showing all transmissions on the frequency, and a valid DTMF LED showing Straight Talk™ Maintenance Radio commands. The radio hub shall feature a keypad-activated transmit test tone of 5 seconds duration for diagnostics.

The hub shall automatically include direct Straight Talk™ Maintenance Radio capability for activation of stations or programs from a portable radio. Maintenance Radio operations shall not require the central computer to function and shall operate whenever the hub is powered, regardless of the central’s status.

An FCC or equivalent international license is required to operate all radio-equipped hubs. The license shall be obtained and presented with the order for the radio hardware.