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

The field controller 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.

Station activation shall be via triac activation to reduce current draw and enhance reliability. Mechanical relay activation is not solid-state and shall not be acceptable.

The controller shall have a minimum of [10, 20, 30, 40, 50, 60, 70 or 80] \_\_\_\_\_ stations (outputs) for valve activation. The controller shall supply sufficient power to activate up to 18 standard Hunter golf solenoids simultaneously.

Each station output module shall feature three-position toggle switches for On-Off-Auto activation of stations as a standard feature, and shall include status LED indicators for station activity and switch status.

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.

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

The field controller 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 field controller shall have 64 automatic schedules with maximum station run times of at least 6 hours. The field controller shall have overload sensing that skips problem stations (rather than blowing fuses) and reports station failures when the irrigation cycle is complete. The controller shall have seasonal adjustment which scales scheduled runtimes from 1% to 300%.

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

The controller 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.

**Additional specifications for Standalone controllers:**

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

**Additional specifications for Hardwire Communications:**

The field controller 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 field controller, and all communications between the field and the central computer.

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

The controller shall be Hunter Golf Model VFC \_\_\_ [station size, communications, switches, voltage, as shown under “Model Designations”].

**Additional specifications for Radio Communications:**

The controller 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 field controller pedestal and shall not protrude above the top plane of the controller, to prevent damage. The communications circuitry shall include transmit and receive LEDs for the individual field controller, active carrier LED showing all transmissions on the frequency, and a valid DTMF LED showing Straight Talk™ Maintenance Radio commands. The radio field controller shall feature a keypad-activated transmit test tone of 5 seconds duration for diagnostics.

The controller 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 field controller 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.