

Vista

Visual Central Control System

Vista, the first golf course irrigation central system with truly automated programming and real-world visual control, is also the most advanced and powerful golf irrigation control system available today. Utilizing the precision of your consultant's AutoCAD™ design coupled with GPS* technology and daily ET** data, Vista automatically creates your base irrigation program – saving you time and money. Its dynamic flow management system incorporates the flow characteristics of your system and re-balances system flow daily to optimize pump efficiency and minimize the watering window automatically. Vista can also monitor and sense problems in the field, then react in real-time, making programming and flow balancing adjustments on-the-fly.

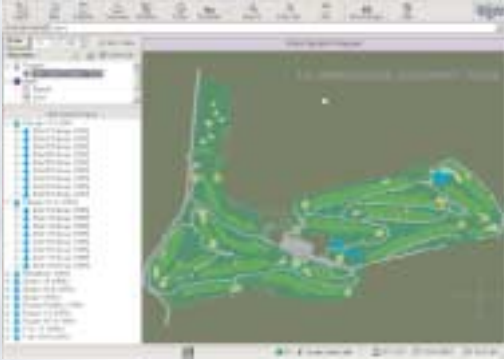
Advanced yet easy-to-use, Vista's computer interface will be familiar to many superintendents because it resembles popular web browsers, commonly used to connect with the Internet. And the unique VistaView graphics offer a simple and easy way to fine tune the system, from the Superintendent's point of view, in a real-world golf cart perspective.



Vista
With the Power of
Real-World Visual Control

Vista Central Software

Vista is a complete golf course irrigation management system that is organized the way golf irrigation managers think: by individual holes, by hole groups (front nine/back nine), by plant types (greens, tees, fairways, etc.) or by custom groups you define. Set custom routines for those troublesome hard-to-irrigate areas, then let Vista fit them within your watering window. Vista is the complete irrigation tool.



The overhead PlanView shows the entire course at a glance in a browser-style format.

Vista will be the simplest system you have ever used, yet you will be in awe of its flexibility and power. Vista uses the original design format to create the incredible graphics in the overhead PlanView and the realistic VistaView animation, allowing you to be “virtually” everywhere on the course with a click of the mouse. VistaView 3D animation technology is a precise graphical representation allowing you to quickly locate and identify system components (sprinklers, controllers, etc.), terrain features, and even individual tree attributes all within a centimeter of their location on your course***.

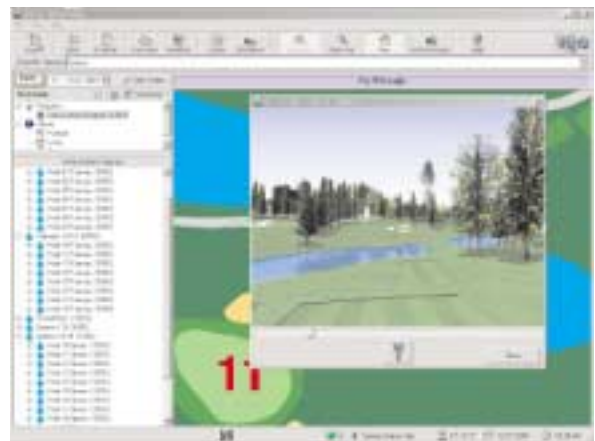
While moving in VistaView, stop and click on any sprinkler. Pop up windows will instantly show you every characteristic of that sprinkler including model, nozzle size, flow, pressure, precipitation rate and the surrounding soil infiltration rate, just to name a few. Need to make an adjustment in order to accommodate a shady, low-lying area? With a click of the mouse, water applications can be changed in runtime minutes, in hundredths of an inch or in number of sprinkler rotations. Use VistaView to train new employees, direct daily tasks and plan course maintenance.

Vista’s versatility also provides the tools to create traditional Program-Start Time-Run Time irrigation schedules for site-specific conditions, special events and during the grow-in period. Special irrigation routines can also be created to manage over-seeding, frost control and other maintenance practices.

Daily ET data is automatically gathered from your on-site weather station (you may also input weather data manually). Then, Vista automatically recalculates, flow balances and downloads to the field a multiple-day “look ahead” schedule *every day*. This constantly updated multiple-day schedule resides in the VSX Field Controller’s field resident memory in the unlikely event of an extended loss in communication with the central computer.

Water requirements for the various plant-types on your course are calculated to one hundredth of an inch, based on daily weather conditions, and is automatically fit into the water window you specify based on the capacity of your system. Vista works with embedded attributes, meaning that the key information for your course is already installed when your Vista system is delivered.

Vista automatically manages flow at the individual station level for optimum energy use and minimum equipment wear. Let Vista save you the time and effort of manually re-creating tedious, time-consuming flow characteristics and soil attributes. They were all in the original course design and Vista extracts them automatically.



VistaView: 3D fly-through animation locates heads for easy adjustment.

* GPS = Global Positioning System
** ET = Evapotranspiration
*** Cost for graphics will vary depending upon detail requested

FEATURES & BENEFITS

Central Computer

Precision 3D graphics technology – overhead MapView and animated VistaView fly-through

Navigate your course and see vital statistics with simple mouse clicks down to the individual rotor level, from a real-world golf cart perspective

Dynamic flow balancing automatically tracks program changes and operator-initiated events in the background

Maximizes pump efficiency, minimizes water window and simplifies operation to save time and money

Simulated “dry run” displays irrigation in accelerated time

See effects of irrigation scheduling changes before they take place

Daily automatic ET adjustments

Save water while preventing plant disease and enhancing playability

Wide range of ET and other adjustments by plant types, holes of golf or custom groups

Flexibility to offset troublesome or unique areas for special treatment

Active Group feature displays course irrigation status in real time

Know what's really going on with your course right now

Prioritize irrigation by plant type or irrigated area like greens and tees

Automatic scheduling and balancing from start or end of water window

Real-time weather monitoring

View conditions as they occur, and set alarm shutdowns

Timed micro-adjustments deal with problem areas (hot spots, low-lying wet areas)

Set-and-forget irrigation therapy handles temporary situations, then returns to normal

Timer Mode central programming for pre-CAD “grow-in” controller programming

Conventional central system for fast, easy start-up on new construction courses

Unlimited pre-set central contingency programs for timed or immediate execution

Stores and runs special routines for frost control, dew wipe, overseeding or other system-wide special cases

TriSend technology allows mixing of hardwire, radio and even telephone remote-modem controllers within the same system

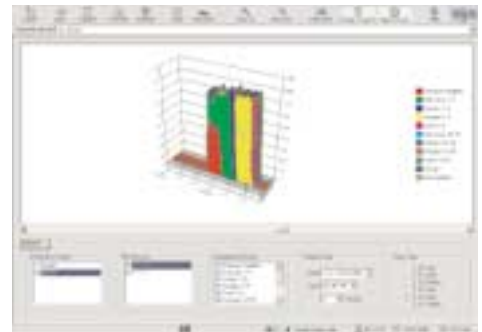
Maximizes versatility while providing the most cost effective control system



Zoom in to view precise head locations and manage key irrigation system functions.



In MapView, system piping can be toggled on and off for analysis.



Color-coded flow graphs show pump efficiency and water usage from different water sources, for any time window.



Vista, the most advanced and powerful golf irrigation control system available, enhances the playability of your course.

FEATURES & BENEFITS

Field Controller

64 independent local programs (in addition to Vista programs)

Incredible flexibility for the most demanding applications

Up to 15 cycles each, and cycle delays

Allow soak-in time for slopes or compacted soils to prevent run-off

One touch presets for common routines

Store special syringe, dew wipe and other routines for instant access

Block mode sequences up to 64 groups of up to 8 stations each

Faster programming, more efficient flow control during grow-in
(works with presets, too!)

Multi-manual program of up to 20 stations running simultaneously

Powerful maintenance and spot irrigation tool

Selectable Daily, Day-of-Week or 14-day scheduling by Program

Schedule for different plant types, or to maximize play

Percent scale (1-250% in 1% increments)

Fast adjust by hole, group or station to fine tune watering and maximize playability

20, 30, 40, 50, or 60 station units, optional manual On-Off-Auto Switches available for each station (103 station in decoder configurations)

Modular design for optimum control flexibility and expansion

Field-resident memory

Prevents program loss in event of computer or communication failure

Alpha-numeric program labels

Quickly find or run individual programs by the names you have given them

Automatic current overload protection

Protects transformers and circuitry

Straight-Talk!™ Maintenance Radio standard on all radio models, optional through the central on hardwire versions

Labor-saving remote control saves time, time, time

Hunter Applied Lightning Technology (HALT™)

Heavy-duty surge and lightning protection included to protect your investment

Attractive, key-lockable stainless steel or plastic pedestals and wall mounts

Complements the golf environment while discouraging vandalism

75VA Transformer for station activation (separate 40VA transformer for communications)

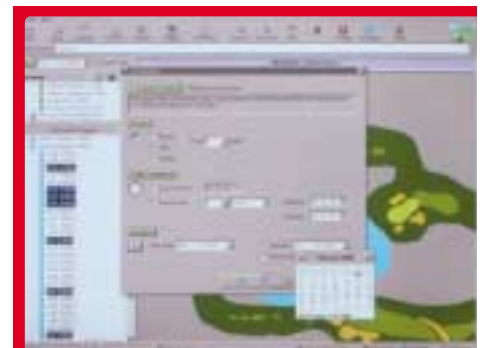
Enough power to simultaneously operate multiple Hunter Golf solenoids

Radio pedestals include built-in Stealth antenna (antennas sold separately for wall mounts)

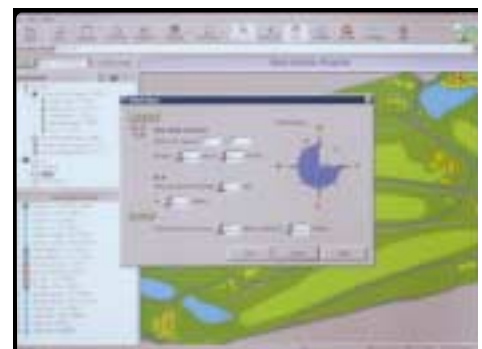
Low profile, high durability, aesthetically appropriate for the golf environment



Edit head attributes and adjust coverage arcs to reflect changes in the real world.



Fine-tune and schedule system with intuitive point & click pop-up windows.



Sensor capabilities include a wind shut down utility to maximize safety and conservation.



Selectable alpha-numeric program naming and one-touch presets make the VSX easy to learn and use.

VSX Field Controllers

Based on the proven and reliable Genesis Field Controller, VSX Field Controllers are really two control packages in one:

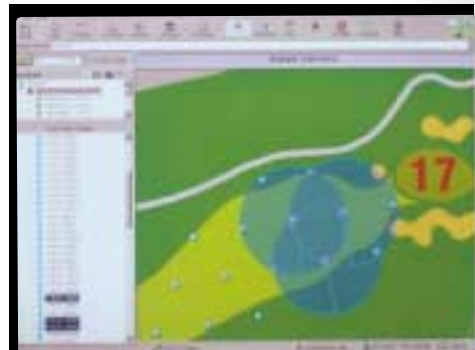
- A sophisticated and intelligent field controller with interactive central computer communications.
- A powerful standalone timer system for new construction grow-in, or special applications.

Vista's daily, ET-based, flow balanced schedules are transmitted to the VSX Field Controllers for safe, non-computer dependent irrigation. The field controller stores up to 3 days (user selectable) of fresh schedules and, if central communications are ever lost, they continue to operate on their own. The ET-based central program for a field controller can be reviewed on-site, in the illuminated two-line display, at any time.

VSX Field Controllers may also operate in a standalone "timer mode" for grow-in periods (during new construction, before the central is available). Using a greatly enhanced operating system, the controller's intuitive keypad allows the superintendent to program the controller quickly and easily.

Up to 64 local automatic programs can be created for special applications or for standalone operations. Innovative new "preset" technology allows you to customize and store common routines (such as syringe cycles) and start them with the push of a button. All presets and automatic programs feature alphabetical labels for quick and easy identification and activation. And a new "block" function allows you to group similar stations to run simultaneously (up to 8) – then sequence the blocks to run as an automatic program!

True two-way communication and field resident memory ensure that your course will be irrigated without dependency upon a central computer or communication links. VSX Field Controllers are available with either hardware or synthesized UHF radio communications, or can be fully functional standalone controllers. Vista's new TriSend technology central interface even allows you to mix hardwire, radio and remote telephone modem controllers within the same system for maximum versatility at lowest cost! All are available with Maintenance Radio remote control. With their modular design, VSX Field Controllers are expandable up to 60 stations (in 10 station increments) and include our celebrated HALT™ lightning protection as a standard feature.



Check current status and perform "dry runs" to evaluate irrigation schedule and coverage. It's like having a window in your office - on every hole.



Proven reliable, the VSX Field Controller includes field resident memory and true two-way communications.

SPECIFICATIONS:

Central Computer

Operating System:

- Windows NT™ (Windows 2000™ compatible)
- Adjustment Programs: Unlimited
- Contingency Programs: Unlimited
- Maximum Field Controllers: 999
- Maximum Stations: 102,897
- Scheduling: Dynamic ET-based (one new schedule per day, based on rolling 24-hour weather monitor)
- Flow Management: Dynamic CAD-based (continuously recalculated from original system design and irrigation demand)

True Two-Way Communications Range:

- Radio Versions: 2 miles (approximate, depends on terrain)
- Hardwire Versions: Up to 10,000 feet to first field controller, additional 10,000 feet between each additional field controller
- TriSend technology allows Radio, Hardwire and Telephone Modem communications to be combined in the same system

Options & Accessories:

- RA5M: Base Antenna
- GENDAT (R or HW): Data Retrieval for sensor feedback to Vista
- CWS4: Full Weather Station with sensors for ET



Hunter Golf offers a full line of advanced, efficient products for the golf course irrigation market.

PRODUCT EXPLANATION	
EXAMPLE: VC - R	
MODELS VC = Vista Central (includes Central Computer, software and interface)	COMMUNICATION TYPE R = Radio HW = Hardwire HWGMR = Hardwire, Maintenance Radio capable

Field Controller

Dimensions

- Stainless Steel Pedestal: 36" (92 cm) tall x 13.5" (35 cm) wide x 10" (26 cm) deep
- Plastic Pedestal: 35" (89 cm) tall x 17.5" (45 cm) wide x 10.5" (27 cm) deep
- Average weight: 56 lbs (25.5 kilos)
Stainless and Plastic Wall-Mount enclosures available upon request

Electrical Specifications

- Primary (Input): 105-125VAC, 60Hz 1A maximum
- Primary (Input) SV Version: 205-230VAC, 50Hz, .62A maximum
- Secondary (Output): 24VAC, 50/60Hz 1A maximum per station 3A total output 1.67A communications output
NOTE: Pump output 1A max. if connected

Signal Output

- Hardwire: 4 - 20 milliamp loop
- Radio: 2 Watts, UHF (450 - 470 MHz)

Communications Cable: (hardwire)

- GCBL: Shielded 2 twisted pair, 18AWG
- GCBLA: Armored, shielded 2 twisted pair, 18AWG (for direct burial applications)

Options & Accessories:

- SV: 230VAC, 50Hz versions
- GMR: Maintenance Radio capability for hardwire systems (through the Central Interface, does not include TRNR)
- TRNR: Handheld Radio for GMR or Straight-Talk™ communications

PRODUCT EXPLANATION

EXAMPLE: **VFC - 20 - HW - SW**

MODELS*	STATION QUANTITY	COMMUNICATION TYPE	OPTION
VFC = Stainless Steel Pedestal	20 = 20 stations	S = Stand-alone	SV = 230VAC
VFCP = Plastic Pedestal	30 = 30 stations	R = Radio*	SW = Switches
VWC = Stainless Steel Wall-Mount	40 = 40 stations	HW = Hardwire	
VWCP = Plastic Wall-Mount	50 = 50 stations		
	60 = 60 stations		

* For Viking decoder models, add "V" to the beginning of model number

* License required, specify frequency when ordering