



Aurora Hills Superintendent Michael Osley likes the system's individual sprinkler head control.

Irrigation Upgrade

New technology makes golf course watering a lot less complex

By Larry Aylward, Editor in Chief

Something looks different about the Aurora Hills Golf Course — above-ground and underground.

Scan the course above-ground, and you'll notice the irrigation system's controller boxes are missing. And if you had the Superman-like ability to gaze underground, you would see a much simpler irrigation system — a system that, incredibly, eliminates the need for satellite controllers or decoders on a golf course.

The system, developed by Rain Bird's Tucson, Ariz.-based golf division, is called the IC (Integrated Control) System. The

system is a control platform that uses Rain Bird's patented Integrated Control Technology to link a course's central control directly with its rotors. Basically, it's a system that provides a higher level of control at a lower price, according to the company.

"They've taken the technology up to a level where the computer is talking directly to the sprinkler head," says Dennis Lyon, manager of golf for the City of Aurora's Golf Division, including Aurora Hills. "It's less complex. Simpler is always better."

Each rotor or valve is fastened with a small Integrated Control Module (ICM), which acts as a think center and eliminates

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PHOTOS BY: LARRY AYLWARD

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Michael Osley says he's impressed with the IC System's diagnostics, which enable him to troubleshoot the system from his computer.

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the need for satellite controllers and decoders. The ICM is built into the rotor or valve and protected under a flange.

"Basically, we made a single-station satellite that plugs right into the rotor and valve," says Matt Mikucki, product manager for Rain Bird's golf central control systems.

The ICM can turn a sprinkler on and off and also aid in troubleshooting.

"It lets us talk to it and get a lot of information," Mikucki says.

The system has been in development and testing for more than three years and is in place

at four other golf courses: Pebble Beach (Calif.) Golf Club, Sun Bird Golf Course in Chandler, Ariz.; Colony West Country Club in Tamarac, Fla., and Moor Hall Golf Club in the West Midlands, United Kingdom.

Mikucki, who has been at Rain Bird for 11 years, has been involved with the project from the onset. He says Rain Bird studied its current satellite technology with the goal of simplifying the concept and minimizing the pieces that go with it. When developing the IC System, the company aimed to combine simplicity with lower costs — knowing both attributes would attract superintendents' attention.

The IC System functions on software that can operate through a handheld radio and cell phone in addition to a computer. It also features single-head control over the entire golf course.

Superintendents like simplicity

Michael Osley, certified golf course superintendent at Aurora Hills, says the complexity of today's golf course irrigation systems can be challenging. There are different components inside a controller — lots of pieces and parts, including bundles of wires — that lead to sprinklers and valves.

"Do we really need all of those items," Osley asks. "Can we go straight from the central control to the sprinkler?"

Turns out the answer is "yes."

At Aurora Hills, where Osley had a Rain Bird decoder system, the ICMs were incorporated easily into an existing single wire path that included 439 sprinkler heads. Each ICM required only two splices into the wire path, a 50-percent reduction of the four splices needed for the decoder system. A satellite system has several more connection points.

Because there are fewer connection points for each mod-

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ule, there are fewer potential failures, Osley says.

The system requires as much as 90 percent less copper wire when compared to a satellite system, which equates to cost savings in raw materials and installation, Mikucki says. This also lessens the chance for vandalism because there's less copper, a popular commodity among thieves.

The system was also designed for simple installation, Mikucki says. Dale Kuehner, certified superintendent and director of golf maintenance at Colony West, upgraded the course's irrigation system with the IC System and says it "was amazing how easy the system went in" when his course was selected to serve as one of the

test sites.

Kuehner, 45, has been a superintendent long enough to remember quick-coupler irrigation systems.

"We took sprinkler cans and moved them around the green by hand," he says. "Going to this is a whole different level in terms of control and sophistication. And eliminating satellite controllers is a huge cost savings."

Osley says he's impressed with the IC's diagnostics,

Each rotor or valve is fastened with a small Integrated Control Module, which acts as a think center.

which can help him track any problems from his computer — meaning he doesn't have to involve his irrigation technician in a time-consuming troubleshooting process.

Mikucki says the idea was to create a system for a superintendent to do most troubleshooting from his office computer. "If there's a problem with the wire path or an individual unit, you can find it from the office before you have to dig it up," he says.

Watering wisely

The system fits well with Rain Bird's Intelligent Use of Water initiative. Just ask Kuehner, who is impressed with the system's irrigation efficiency. His previous system had heads that were paired together.

"That was a problem," he says. "There were heads in areas that might have needed more water paired with heads that should've probably been getting a little less water. This system is all individual head controls. You can dial in and change settings for each specific head on the golf course."

Osley likes that he can operate one irrigation head for five minutes and another head for 10 minutes.

"This system allows you to make those changes in the most efficient way possible," he says. "When you take that concept

and spread it over 1,800 heads, it can save you a lot of water."

Osley says the system is easily expandable. An irrigation technician can run pipe and wire and splice the ICM's into the system. "There's no need to run a wire all the way back to a satellite controller," he adds. "And you can do [that work] in-house."

Lyon is pleased there are no more controller boxes on the course that can get damaged after being run over by golf cars or struck by lightning. No more controller boxes also means less maintenance — for instance, no more cleaning up after mice that nested in the boxes over the winter.

Above all, Lyon says the system has helped improve the golf course's appearance.

"This has been a very good investment," Lyon says. "Our play went down during construction, but the conditions of the course improved significantly after construction. It's not that conditions were bad before — they just went from being very good to excellent. And our business has responded."

Osley says he's not afraid to try new technology and jumped at the chance to test the system. Osley jokes he had to phone Mikucki once or twice in the wee morning hours because of occasional minor glitches in the system.

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“He probably looked at his phone when I was calling and said, ‘Crimany, it’s Osley calling again,’” he says.

Mikucki laughs. “We can put it through all the tests in the world in the lab, but you won’t know everything about it until it gets into the hands of a real superintendent and on a real golf course,” Mikucki says. “It has been in the ground for two years here. We’ve learned a lot from Mike’s input and

Rain Bird’s Matt Mikucki (left) holds an Integrated Control Module in his hand and discusses its role in the IC System with Michael Osley.



from assistant superintendent Jeff Danaher and irrigation technician Blake Larsen.”

Osley says most golfers realize there’s something better looking about the course, but many of them can’t put their fingers on what’s missing.

“It doesn’t seem like a big deal, but there’s a different feel

to playing a golf course where there are no controller boxes,” Osley says. “And one of the best parts about being a superintendent is taking that morning drive around the golf course every day. I enjoy not having to see controller boxes.”

While Osley can’t see what’s going on underground with the system, he enjoys *that* aspect just as well. ■



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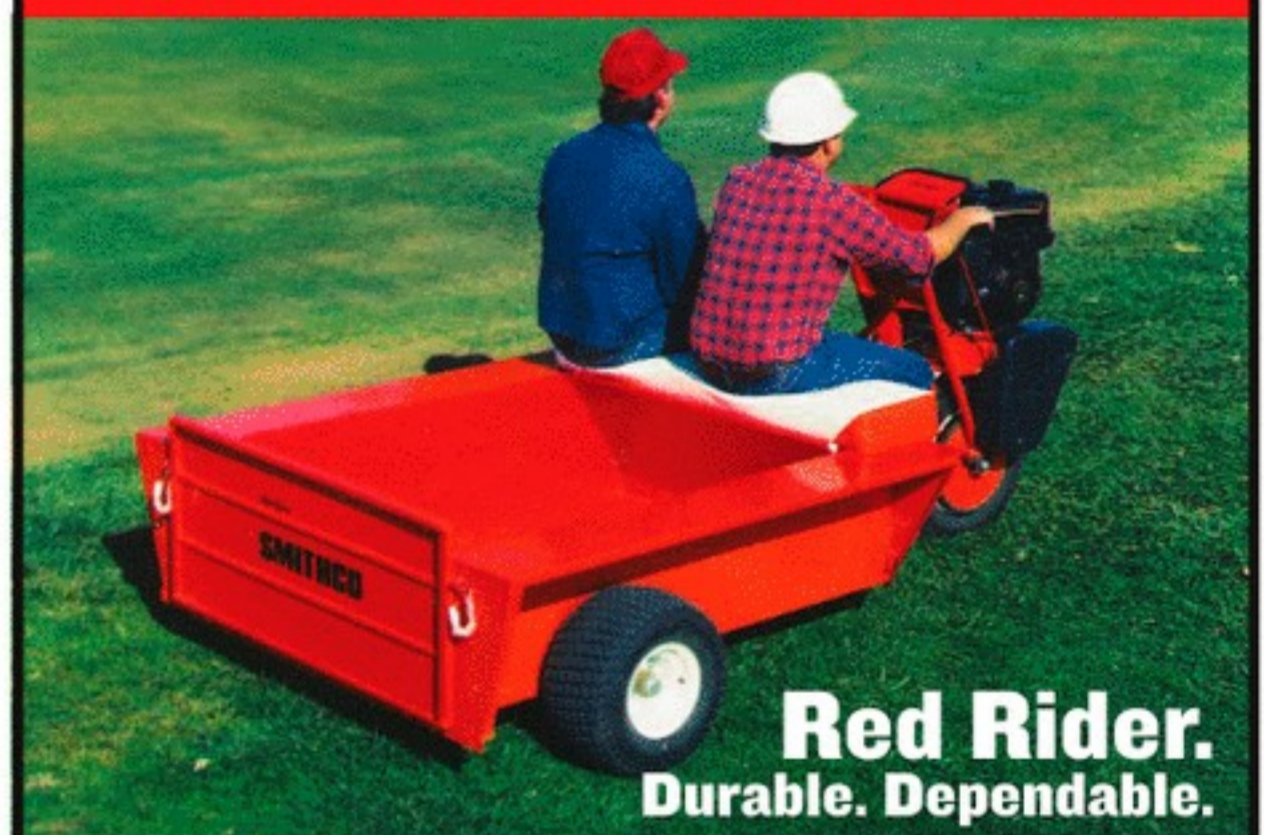
Heat stroke can kill or seriously injure your dog, but it can be easily avoided. Never leave dogs in cars on warm days, exercise them during the cool part of the day, and monitor them for rapid breathing, loud panting or staggering. Professional help might be needed if a dog is having a heat stroke. But one thing you can do is get your dog quickly to a shady and ventilated area and sponge with cool water.

Snickers. His owner is Ed Kirchenwitz, golf course superintendent of Sunset Hills Golf Course in Sheboygan Falls, Wis. (Photo by: Ed Kirchenwitz)



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