

Technology In The Garden

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Whether you're looking to bring automated conveniences to your home landscape, or just want to make sure you can "check in" on your beach house even when you're stuck in traffic driving the kids to camp, new technologies for the landscape turn on the lights, water the plants, and more.



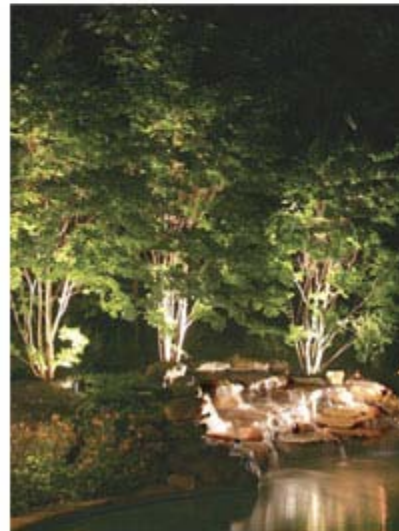
Today's "smart" sprinkler systems can be activated from your home or work computer. Courtesy Rainbird Corp.

In today's "smartest" homes, refrigerators are connected to Internet recipe libraries and the oven can be called from work and you can tell it start dinner. You can even "sign for" packages delivered to your front door while on the way to a meeting downtown. Now, technology is ubiquitous in the natural world as well. Is your outdoor kitchen too hot to handle? You can mist it down in minutes, light your garden walkways on command, scare away pesky deer, automatically water each area of your garden separately, and even thaw your driveway when blizzards hit.

With the latest automated lighting systems, your landscape can dim and brighten with the rhythms of the planets. Your home's longitude and latitude is programmed into a "smart timer" containing a flash drive the size of a digital calculator. The timer, enclosed inside a small box attached to the outside of your home or in a garage, computes the data and adjust the lights to coincide with the changing seasons and daylight savings time.

If setting your outdoor lights to the rising and setting sun is too cyclical for you, how about motion-sensitive lights that gradually "follow" your guests as they meander up your path? For unwelcome, furrier visitors, motion detector-based sprinklers may provide a suitable deterrent. When deer or rabbits munch on your prize-winning petunias or hostas, sprinklers will blast jets of water to scare them away. New home-security-system motion-detectors can be programmed to

send you an e-mail, if you're away from home. When you receive an e-mail alert, you can call a friend or neighbor to check things out or connect to your home security system through the Internet to have a look yourself. In fact, keep in mind that an array of home security systems, such as Motorola's Homesite and those by ADT, and Alarm Services of Maryland, offer hidden video cameras that you can monitor remotely by computer and mobile phone.



Top left: Fiber optic lighting adds drama and dimension to this poolscape. Top Right: Sensors hidden in the soil monitor moisture content and water as needed. Courtesy Salt Creek Gardens. Bottom Left and right: Automatic lighting systems can be programmed to create safety, ambience, and beauty. Courtesy Outdoor Lighting Perspectives.

Your home or vacation home can be programmed for "vacation mode" which means that your landscape, pool, deck, and outdoor kitchen lights will come on automatically at a certain time of day and increase in strength as night falls. To combat break-ins, David Wendkos, a lighting designer and owner of Outdoor Lighting Perspectives on the Eastern Shore, customized his system to create lights that blink. "If I hear a noise, I can push a button and turn all the lights on, indoors and out...I can push another button and can make the lights blink." He told his neighbors to call 911 if they see his lights blinking. And, he notes, "if thieves see blinking lights, they think it's freaky and get out...it's a great security factor."

With sophisticated technology and many options to choose from, outdoor lighting has become its own art form. Want sophistication and drama? Artful “scapes” can be created to cast angles and shadows, enhancing your home’s architecture. For parties, low ambient lights can be placed not only around your pool but also right inside of it—fiber optic stars and other shapes can be scattered at the bottom of your pool to create innovative designs. James Londot, a designer at Serene Ponds and Landscaping and Serene Pools and Spas, prefers the soft glow created by a fiber optic application. He uses fiber optics to light not only patios and pools, but also coping, stair treads, and especially waterfalls because “the water picks up the light so it seems like it’s running right down the waterfall.”

Also available are remote systems that operate anything in your pool or landscape with the touch of a button. With systems such as Pentair Pools’ “Intelli-gent” you can adjust not only the chlorine levels in your pool and hot tub but also the temperature, as well as dim your landscape lights and turn on your waterfall. You can remotely access the system from a cell phone or computer in case you want to heat the spa up on your drive home. Though the technology has been around for several years, it’s now easier to use and prices have come down, says Londot. “They’re getting better and better with the technology and they’re now less expensive to do.”

Lights can be mounted near and far, high and low. Wendkos recalls artfully lighting an outdoor kitchen for a residence in Crownsville. He placed low lights around the perimeter and added extras for cooking. “The grill in the kitchen has a spotlight above it with its own switch and beams right down on the grill.” Wendkos recalls another customer who was having trouble keeping his half-mile drive lit—his ground-level path lights were being run over by visitors who couldn’t see them or worse, were blinded by the glare. “We put lights in the trees, creating ‘moonlighting’ along the path. Now, the drive is softly illuminated... sometimes I like to drive by just to see it lit on a warm summer night.”



Monitor all your homes while away from home. Courtesy Xanboo.

If you want, technology exists not only to light your drive but also to heat it with hot water pipes or electrical wires that run underneath your pavers or asphalt. A thermostat automatically turns the system on when cold weather hits. Your drive will warm to melt ice and snow. Though you will no longer have to slip and slide to your car on a frosty morning, beware—this luxury is not cheap. Londot estimates that to install a heated 40 by 20 foot drive can cost between \$8,000 and \$12,000.

Not to be outdone by automated lighting systems in sync with the sunset are “smart” irrigation systems that “know” the weather and water only when your garden needs it.

Devices such as “WeatherTrak,” manufactured by the California-based Hydropoint Data Systems, transmit daily local satellite weather reports from the National Oceanic and Atmospheric Administration (NOAA). After factoring in rain, wind, humidity, and temperature, a “controller” computes a custom irrigation schedule based on your landscape’s needs. Many irrigation systems can be activated via computer. This means that the lawn on your vacation home need never turn brown and that you’re greeted by perky flowers rather than withering blooms.

Your landscape professional can help you divide your garden into different zones and ensure delicate or especially sensitive plants within those zone are nurtured. Sensors placed in the soil near individual flowers will monitor water content and water on demand. Brian Wiggins, landscape designer and owner of Salt Creek Gardens, relies regularly on this technology: “Our sensors will tell the computer to water that particular plant or that zone,” says Wiggins. “We just programmed window boxes and planters full of annuals for a client.” He notes this is far more preferable to the “old system” where you turn your sprinkler on manually or have a computer set it for a particular time of day.

While water is a necessity for the landscape, it can also be a relief for people trying to barbecue on a 100-degree day. New misting technology atomizes water under pressure to create a light mist that cools you without you ever feeling a drop. Mistifiers work by “flash evaporation.” The technology is simpler than it sounds—a nozzle ejects a high pressure “mist.” The natural heat in the air evaporates the water and, in turn, cools the surrounding air. This process can lower temperatures by as much as 25 degrees. Jerry Rike, owner of Rapid Cool Misting Systems, notes that outdoor kitchens often get too hot to enjoy—especially once the grill is fired up. “People spend thousands on an outdoor kitchen but when it’s too hot don’t want to go out there...this gives them their patio back.”



A patio misting system that pumps water at 1,000 pounds per square inch will produce a mist so fine that it's almost like a light fog. Courtesy Rapid Cool Misting Systems. Inset: A high-tech automated irrigation timer. Courtesy Rainbird Corp.

Realizing that it is important not to drench your friends, a misting system must be powerful enough to emit a “mist” rather than a “squirt.” The best misters have high-pressure pumps that create a fine mist. Rike suggests investing in a system that pumps at least a 1,000 pounds of pressure per square inch. The pressure will produce a mist so fine that it’s almost like a light fog.

In case you feel as if you're in a fog, trying to sort through the latest technologies on the market, rest assured—today's smart devices are so clever that, indeed, most of your thinking has been done for you. However, if you want to water your plants and not think at all, Rainbird Corporation makes something called "time release water." A thick green gel comes in a tube that you score with a knife and bury at the base of your plant. With the help of natural organisms in your soil, the gel is converted back into water. This technology is self-regulating and does not need a mini-antennae to connect it to satellites or complex software to translate data. "Slowly, naturally occurring microbes in the soil eat away at it; if it rains and the soil gets wet, the microbes don't like it and stop," explains Randy Hall, Product Manager for Rain Bird Consumer Products. "When it dries up, they move back in and start eating." Depending on local conditions and how much you use, the time release water could last anywhere from thirty to ninety days. That means you may not have to pick up a watering can all season long.

Kymerly Taylor is Assistant Editor of ChesapeakeHome.

Contacts:

ADT Systems: ADT.com

Alarm Services of Maryland: alarmservicesMD.com

Hydropoint Data Systems, Inc.: weathertrak.com

Motorola Homesite: motorola.com

Outdoor Lighting Perspectives: outdoorlights.com or 410-757-7515

Pentair Pools: pentairpools.com

Radio Shack: radioshack.com

Rainbird: rainbird.com

Rapid Cool Misting Systems: 800-573-4437

Salt Creek Gardens: saltcreekgardens.com

Serene Ponds and Landscapes, Serene Pools and Spas: sereneponds.net or 301-805-0119

Xanboo: xanboo.com