

Irrigation By The Book

A notebook of irrigation blueprints simplifies daily water management.

by MIKE HUCK

OVER THE PAST 20 YEARS the personal computer has significantly changed how golf course irrigation systems are managed. No longer must the superintendent, assistant, or irrigation technician visit every satellite controller throughout the golf course in order to make minor run-time adjustments. It is now possible for one individual to manage the operation of thousands of stations from one location with these computerized systems.

Modern systems offer the flexibility of globally adjusting every station on the property as a single group, fine-tuning an individual station, or operating the system via radio from anywhere on the property with just a few keystrokes. This increased control also has changed golfers' expectation levels of being provided a uniformly green golf course that is void of wet and dry spots!

This combination of computers and increasing player expectations has affected how irrigation systems are designed. Many new irrigation systems are now designed and installed with individual sprinkler control. Systems in the past would average 400 to 600 stations to control 1,500 to 2,400 sprinklers, with individual head con-

trol. In comparison, today these same systems now have 1,500 to 2,400 stations. Each sprinkler on every green, tee, fairway, and even in the rough now is becoming a controllable station to offer the ultimate in control capabilities to minimize wet and dry areas.

This increased level of control has led to additional management headaches. Although most computer control systems utilize weather stations to monitor environmental conditions and automatically adjust run times, occasional manual changes are still required to fine tune and adjust for localized soil, shade, or microclimatic conditions. Tracking the stations in need of adjustment can be cumbersome when several thousand individual sprinklers come into the picture. Pinpointing the exact area or station in need of adjustment is critical, and inputting bad data into the computer means the development of, as opposed to the elimination of, wet or dry spots. Or, as they say in the computer industry — *garbage in, garbage out!*

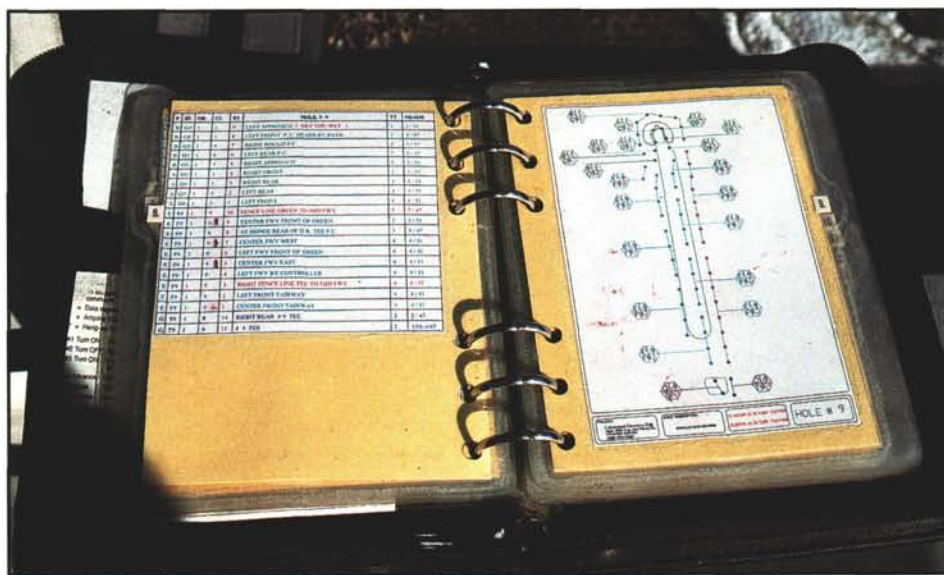
This is why several superintendents in the Southwest, such as Kent Davidson, CGCS, and Bert Spivey, CGCS, from the Industry Hills Resort Golf Courses

in the City of Industry, California, and Chris Swim from the Lakewood Country Club, Lakewood, Colorado, practice irrigation by the book. Each has developed a special irrigation notebook to better manage his day-to-day watering requirements. The irrigation blueprint has been reduced to conveniently sized individual pages that correspond with field controller stations. Each station is referenced to its corresponding computer assignment, so when a problem area surfaces, it can quickly be identified for adjustment or repair.

Bert and Kent use their irrigation books for both spot watering via their hand-held radio controllers and for noting daily station adjustments in the computer program. Chris took his irrigation notebook system one step further by laminating each page. This allows him to use dry markers to note directly on the page any areas in need of attention as he inspects the course each morning. He can then return to the irrigation computer and make any necessary adjustments, wipe the page clean, and be ready to go again the next day.

Other uses for the notebook include enhancing IPM programs by precisely locating weed, disease, or insect infestations so spot applications of chemicals can be made in place of large-scale treatments. Pages also can be photocopied to provide an accurate map for staff members to locate piping and wiring when performing new construction, installing drain lines, or planting trees.

The usefulness of the notebook is almost limitless as it saves time and allows the person in charge of irrigation adjustments to do a better job — when they perform irrigation by the book.



Laminating each page of the irrigation notebook allows using dry-type markers to note changes directly on the appropriate page while inspecting the golf course each day. When the superintendent returns to the office, he can make the necessary adjustments on the irrigation computer, wipe the laminated page clean, and be ready to go again the next day.

MIKE HUCK has been an agronomist in the Southwest Region since January of 1995. He grew up in southeastern Wisconsin and is still a loyal Green Bay Packer fan. When he is not watching Packer games, he makes Turf Advisory visits in Arizona, Nevada, Utah, and Colorado, as well as his current home state of California.