



## HOW TO AUTOMATE THE LONG AND HARD WAY

by BRAD KLEIN  
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This article is something both awesome Fred Anderson and myself have been working on for some time now. There was one delay in October when awesome Fred and three other creatures from the south came here to play golf and prod me along on the article. Fred thought he would leave with paragraphs in hand but all he came away with was my felt tip pen budget and lots of leaves and branches down his back. So no felt tip pen budget, no article. November started my '86 budget so no excuses. I now have one blue felt tip pen to last me until November of 86.

Detroit Country Club in Detroit Lakes is a 36-Hole resort course. The facility consists of two 18-Hole golf courses. The oldest and best known of the courses is called The Pine to Palm of which this article is concerned. The second 18-Hole course is the Lakeview Executive Golf Course. The Lakeview Executive was built originally as a full championship 9-Hole course in 1969 and then added 9-Holes more in 1979. It's a Par 64 course and has fully automatic irrigation system on greens, tees and fairways.

The Pine to Palm course was built in 1933 by the WPA and was one of the first courses in the mid-west to have a "hoseless" quick coupler irrigation system. This system is still intact today but with some improvements done over the years. Originally, there was one quick coupler by every green and tee. Dick Wise became superintendent here in 1966 and justifiably so decided he needed a better way to water his greens. He began the first step in eliminating the "hoseless" system on the Pine to Palm. Over a ten year period Dick installed Toro 630 normally open sprinklers on fifteen of the

greens. These were controlled by a 4 station selector valve by every green called a greenskeeper. Dave Dodds replaced Dick in 1976 and finished the last three greens. While Dave was here the second nine was built on the Lakeview Executive Golf Course. During its construction a fully automatic system was installed with the Toro Varitime II central mounted in the superintendent's office at the maintenance building. The maintenance building is one-half mile from the executive course but the one wire that controlled the executive's satellite ran through the middle of the Pine to Palm course.

I took over in March of 1981 with one fully automatic irrigation system on the executive course and one, as the job description read, semi-automatic system on the Pine to Palm. I still don't know what semi-automatic means and that scares me.

During the summer of 1982 we installed pop up sprinklers on ten remaining tees and began the first step in automating our irrigation system. During the fall of 1982 we plowed in 40,000 feet of hydraulic tubing and 8,000 feet of power and signal wires. During the spring of '83 we set our six satellites at their predetermined locations and made all hydraulic and electric connections. I spent one Saturday and Sunday morning doing this and that allowed us to go automatic Sunday night.

The beauty of this installation was that all I had to do at the central was install another central/syringe clock in it. I had already spliced into the signal wire crossing the Pine to Palm to the executive course so spring of '83 brought semi-automatic operation on the Pine to Palm course. I still had a manual pump station and quick couplers down the fairways but we were making progress. Before start up in April of 1984 we installed a new booster pump, clay valve and control panel so the pump house was fully automatic. The fairway night waterman no longer had to engage the booster pump.

During the summer of '84 we decided to try and begin automating our fairways. With MTI irrigation department we determined that our 1933 cast iron and steel pipe was sound and could be utilized. We determined to have complete coverage we

## KLEIN from Page 3

would have to go to a two row system tee to green or parcel on ten of the eighteen fairways. On the remaining eight fairways we would use existing quick coupler locations and snap Toro 670 electric sprinklers in their place. We decided to go with electric control on fairways because it would allow us the convenience of not having to make the electrical connections immediately but still utilize the sprinkler manually until we had the time.

Another problem that was undertaken the summer of 1984 was our numerous dead ends in the piping that had to be corrected. I started the fall of '84 on this and after two years have installed 1500' of pipe and eliminated about thirty of them.

I was to begin this three year project the spring of 1985 but between not enough money and more than enough rain, over 44 inches, normal here is 17, it was hard to convince my Board of Directors of the importance of this \$60,000 project. On that same note we only watered our fairways once over a ten day period in July.

In a sense I did begin the project because we got a new Vari Time 3 central with six clocks as compared to my 4 clock Vari Time II central. In 1984 we also began installing Toro 670 electric sprinklers whenever we had a sticky or leaking quick coupler on fairways.

Supposedly next spring I'll begin the project by doing the first five holes or numbers 1,5,7,8,9. Spring of '87 we'll do holes 2,3,4,10,11; Spring of '88 holes 12,13,14,15,16,17,18 & 6. I'm not done then because at that point we'll have to increase our pumping capacity from 600 gpm to 900 gpm.

To make a long drawn out process short, many people have contributed to this project which Dick Wise began in 1966, Dave worked on and I'm trying to finish. I'll be done, hopefully, by fall of 1989. Twenty-three years isn't really that long and who knows, by then maybe the weather patterns will change somewhat and turn the great white north into a tropical rain forest.



## EDITOR, S CORNER

RANDY NELSON

I am sure most of our maintenance buildings are buzzing with the sounds of mowers being sharpened or other machinery being repaired. Our club officials are scrutinizing our maintenance budgets for the coming season and the new club officials are anxiously waiting to take over their new areas of responsibility. This may be the time when we as superintendents can take time away from our jobs to pursue winter interests, vacation with our families, or just sit back and think about last season's accomplishments. But I also believe this is a good time to get to know our new greens chairman, if he is new. We have the opportunity this winter to educate this individual by explaining to him our maintenance practices and goals for which we are striving. I feel we should keep our greens chairman informed about things happening in our industry by providing him with information such as: the USGA Green Section Record, or the Golf Course Management Magazine. Being a national member of GCSAA has its benefits, and one benefit I use each year is to place my new green chairman's name on my second complimentary copy of the Golf Course Management Magazine. I have this copy sent directly to his home so he can read the same material I am reading and become more knowledgeable about the turf industry. By giving him this information, I feel my greens chairman becomes more attuned to the ideas I hope to implement and accomplish at Owatonna Country Club. If you aren't already taking advantage of this benefit from GCSAA, try it.

If you were one of our members who missed the fishing outing at Mille Lac's and meeting at Izaty's Lodge on January 6th you really missed a chance to catch - a cold. Weather conditions were perfect for severe frostbite, unfortunately, not fishbite. The fishing reports that circulated around the lodge were about the