



# Don't let it ■ **rain** on your parade

**In irrigation, the programme scheduling including start times, active days etc uses date as one of the essential input factors. With a PC date running out of synchronisation with real dates this can cause some obvious operational problems**

**Graeme Francis, Marketing Manager for  
The Hydroscape Group Limited and  
UK Distributors of Toro Irrigation Products,  
troubleshoots some potential problems  
which are facing greenkeepers and their  
computer-based irrigation systems**

There seem to be two things about the year 2000 that everybody hears about, the Millennium Dome and the Millennium Bug.

Both seem to bring out an opinion in most people, and whilst the Dome is of background interest, the Bug will potentially have a greater and more global impact.

We hear many stories about the failure of all kinds of systems and the foretellers of doom are having a great time predicting the chaos that will ensue when the clock rolls over from 31st December 1999 to 1st January 2000.

For us, the question that will arise is what will be the effect of entry into 2000 on the operation of equipment used for golf course management.

The whole scenario is encompassed by the term Year 2000 Compliant sometimes shortened to Y2K (no it doesn't involve changing every Y in the dictionary to a K, or New Year's Eve would become 1st Januark 2000!)

Year 2000 compliance is, however, not really to be seen as a joke, as it is important to greenkeepers. The reason for this is that any piece of equipment you use that has a microchip needs to be compliant. This is particularly relevant to the electronic technology used in irrigation control which probably represents the most sophisticated electronic equipment used in golf course management.

There are two types of irrigation systems that need Year 2000 compliance. The largest group is that of

controllers utilising microchips with embedded software and a control panel inputting format. These range from small residential controllers which can operate up to, for example, twelve control valves through to the extensive wall mounted golf course decoder systems which may operate up to four hundred stations.

Some of the decoder controllers may now be fifteen years old and consideration of Year 2000 compliance was not a major issue in the mid 1980's. Well it is now, and you should be checking with the supplier or contractor who installed or services the system as to whether the unit is affected and, if so, what can be done to overcome the matter. In many cases the corrective action will be an upgrade of the chip, however you will need to establish that this is possible and that the appropriate chip is available.

The second system type affected by the Year 2000 issue is that using PC based interfacing. More and more greenkeepers are using a PC as an aid to course management. In some cases the PC is being used for general administrative tasks including word processing, spreadsheet production, report generation etc. In many instances a PC is being used as the central component of the irrigation control system. In the UK today it is probable that as many as 75% of new irrigation systems use PC technology to allow the input, monitoring and adjustment of irrigation operations. The

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benefits of such control are well founded and make PC control a very serious and viable option when considering the specification for a new system to water the course.

With the increased use of PCs comes the necessity to ensure that all elements of their supply is undertaken correctly and that continuity of technical service support is provided. This support includes the ability to fight off the infamous Millennium Bug.

From a pure irrigation viewpoint the key area of attention is in date comprehension.

In the early days of computer development information storage space was both limited and expensive. As a result it was decided that a six digit date format would be used, i.e. the 1st January 1999 is shown as 01/01/99. This format became the standard, and whilst we are still in the 20th century it serves the purpose perfectly well. What has been created, however, is a situation whereby a computer, or

any software embedded in a microchip, has no understanding of a change in century. The machine will read any six digit date ending in 00 to be in 1900, and not in 2000. This problem was most highly demonstrated in the personal banking sphere where computers were voiding transaction made on credit cards with expiry dates ending in 00 because as far as the computer was concerned the card expired in 1900!

This is just one example of why Year 2000 compliance is important in computer systems. In addition, there are a number of crucial transition dates after New Year's Day 2000 which will cause date errors. These include 28th February to 29th February and 29th February to 1st March, which are significant because the first year of the third millennium is also a leap year.

Whilst it is almost certain that you will not be running irrigation on New Year's Eve 1999 or indeed for several months before or afterwards it doesn't mean that your

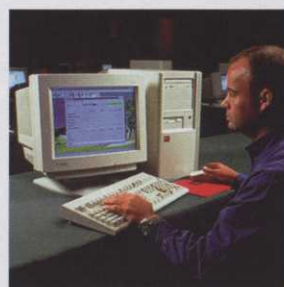
equipment can avoid being Year 2000 compliant.

In irrigation, the programme scheduling including start times, active days etc uses date as one of the essential input factors. With a PC date running out of synchronisation with real dates this can cause some obvious operational problems.

Year 2000 compliance applies to both hardware and software. A PC may be compliant, but some of the software programmes it is using may not. The opposite is also true, and this hardware compatibility can extend beyond the PC.

As has already been mentioned it is not just the PC itself, but any other peripherals or specialist hardware components of the system which may be affected. Decoder interface units, field interface modules and radio communication elements could all encounter problems if the manufacturer has not had the foresight to build compliance into them.

In essence you need to have an



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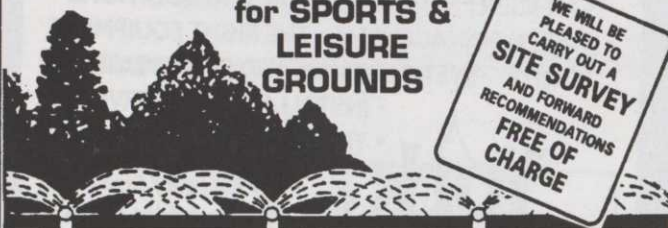
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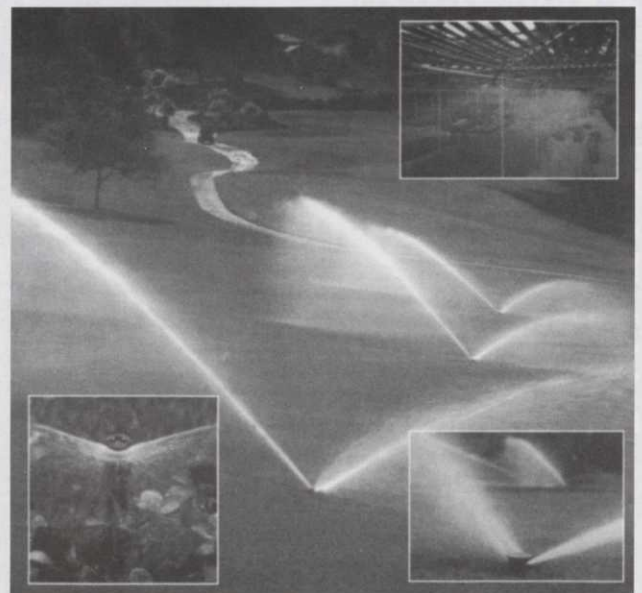


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irrigation system that is fully compliant. Most that have been installed in recent times will be, but it is worth confirming this with the supplier or installer. Any that are not will need to be upgraded to meet the compliance criteria and the sooner this is done the better, as the pressure on manufacturers and installers will increase as the end of 1999 gets nearer.

The best action to take is to first establish exactly what equipment you have on the course. Get the details of the product type, model, serial numbers and installations dates and then contact the system installer or service company. Some companies such as Toro have worked to ensure that their products, such as Toro's SitePro, meet the demands of this once-in-a-thousand-years scenario. With its NSN Service it has an extensive PC irrigation support service in place, which operates at national, regional and global levels using dedicated staff, who will provide all the

answers you require. Other major manufacturers have also been aware of Year 2000 compliance requirements and all products recently and currently sold, should be fully compliant.

Don't forget, however, that any software that has been installed on the PC such as word processing, spreadsheet or database packages need to be evaluated as they may require individual fixes, "patches" or upgrades to bring them up to specification.

In summary if you have an electronic controller or a PC based system, gather the equipment information and contact the provider who will be able to confirm your particular status and provide any upgrade or replacement service you need. If the original supplier cannot help, there are several companies who can provide alternative and compatible equipment.

As with all irrigation purchasing decisions the reliability of the



equipment, its suppliers, its installers and the long term support they provide are crucial if you are to get the best value for money. Their performance in dealing with Year 2000 compliance will be a measure of how good they really are.

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