



Count on it.

Gemini Trident Control Systems



CONTROLLERS

The Toro Gemini/Trident

Toro Gemini and Trident are computerized central control systems that use decoder field hardware. Both convert and upgrade existing systems to PC-based operation, giving you far more flexibility with enhanced irrigation system monitoring and control.

We took all of the complexity and sophistication of the irrigation process and made it as simple as asking:

1. What?
2. When?
3. How Much?



What do I want to water?

Program the way you think. These Windows®-based programs use a mouse for simple point-and-click programming and day-to-day operation. There are no spreadsheets to decipher and very little typing required. Gemini and Trident work the way you do, allowing you to identify stations/zones by location (i.e., "tee," "fairway," "green," etc.), not with arbitrary labels.

Cut-and-paste operations and built-in, pre-set station/zone times speed up programming. Rapid Programming allows you to set watering times by station/zone type (i.e., "all greens" or "greens and tees") instead of programming individual stations/zones — saving you valuable time. Gemini and Trident store up to 60 irrigation programs in memory, allowing quick, accurate changes. With one-off programming you can write special programs without affecting your normal schedules. Built-in, on-screen decoder programming lets you make changes right at your computer.



Day-to-day scheduling is easy. And you decide how to set your schedule — by application amount or by time, it's your choice.



When is irrigation scheduled to run?

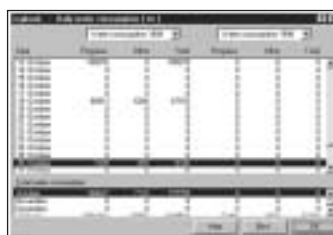
A single screen gives you an at-a-glance view of your irrigation schedule for a two-week period. Click anywhere within your schedule and make adjustments right on the screen. Station/zone run-time adjustments of 10-600% allow quick run-time modification to accommodate your water budget.



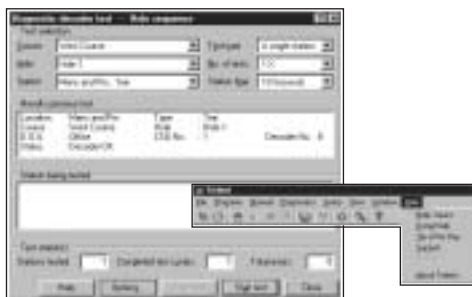
How much water am I using?

An on-screen flow gauge provides continuous system monitoring against pump capacity. Water and electrical current optimization reduces overall run times.

Full manual override allows manual operation of stations/zones and programs while using full flow and electrical capabilities, preventing system over-load and poor hydraulic performance. To begin watering, simply select the number of the hole and station/zone type.



Reporting keeps you informed. Gemini and Trident record water use for a full ten years, logging all operations, including water use and faults. Accurate water monitoring assists you in developing a complete water audit against your budget.



System diagnostics and on-line Help put you in charge.

The Auto-Diagnostic Cycle conducts a full station/zone test at program start for rapid troubleshooting — saving time and money. Controller diagnostics test all central control system components and produce a thorough report of the findings. Testing individual and groups of stations/zones can be done directly from the computer.



Only Toro offers on-line Help screens. Hot keys move you quickly through Help, making suggestions so you can be sure you're optimizing your system.

Using a standard mapping program to produce high-quality graphics as good as those found in systems that cost thousands more, Gemini and Trident are capable of displaying a map of your course (not the standard graphics used in other irrigation control systems). The resulting graphics let you review and revise on-screen schedules and programs — quickly and easily. Color-coded indicators give you system status at a glance:

- blue indicates running stations/zones
- black signals no activity
- yellow notes stations/zones irrigating next
- red warns of an error

Unlike some software that only reports status graphically at the program level, Gemini and Trident give you critical, at-a-glance, graphical system status at the station/zone level. All running irrigation programs can be displayed, so you can monitor the progress of irrigation across your entire course. There's no need to go back to the database to see how long a particular station/zone will run, it's shown right on the map. Best of all, you can program your system directly from the map (automatic and manual). Simply select the irrigation function you desire, click on the sprinkler or series of sprinklers, and make the adjustment.

Features

- Gemini operates two-wire systems and Trident operates three-wire systems
- Gemini can be installed to replace Watermation TW2, and works with MK1 and MK2 decoders, and Trident can be installed with SC 3000 decoders, allowing gradual replacement of existing decoders for phased replacement with reduced initial capital investment and better cost management over time
- 1-, 2-, 3- and 4- station/zone output available for lower initial cost per station/zone
- Up to 60 programs
- 12 starts per day
- Up to 12 cable paths (95 stations/zones per path)
- Up to 64 stations/zones per hole
- Built-in pump start
- 2 sensors per field interface
- Decoders are programmed at the controller – separate programming unit not necessary – reducing costs and speeding programming
- Two-way communication between the controller and Toro decoders allows rapid and accurate system testing and troubleshooting, and reduced maintenance time and costs
- Surge and lightning protection reduces component damage, spare holding, reprogramming and replacement costs
- Multiple languages
- On-line help
- Contact your local Toro representative for current computer specifications
- Radio remote for manual watering

Specifying Information

Model Number	Type	Voltage	Zones
GEM—2 Wire TRI—3 Wire	CEN—Complete Central EXP—Expansion Unit	120—120 V.a.c. 50/60 Hz 230—230 V.a.c. 50/60 Hz 240—240 V.a.c. 50/60 Hz	02—2 Zones 03—3 Zones 04—4 Zones

For Example:
When specifying a 2-Wire, complete,
220-230 volt central with 4 zones, you would specify:

GEM-CEN-230-04

Specifying Information

Model Number	Description
GEM—DEC—01	Gemini 2-Wire Decoder, 1 Station
GEM—DEC—02	Gemini 2-Wire Decoder, 2 Station
GEM—DEC—03	Gemini 2-Wire Decoder, 3 Station
GEM—DEC—04	Gemini 2-Wire Decoder, 4 Station
TRI—DEC—01	Trident 3-Wire Decoder, 1 Station
TRI—DEC—02	Trident 3-Wire Decoder, 2 Station
TRI—DEC—03	Trident 3-Wire Decoder, 3 Station
TRI—DEC—04	Trident 3-Wire Decoder, 4 Station

Specifying Information

Model Number	Description
GTI—DTMFREC—EXT—01	Gemini/Trident DTMF remote control interface
GTI—DOUBOOST—01	Communication Booster



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