



# Golf Decoder Control System (GDC)

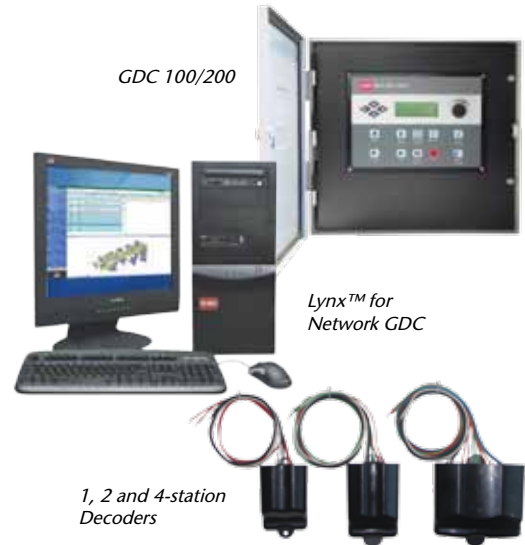
GOLF CONTROL SYSTEMS

The Toro GDC uses innovative technology to provide an irrigation solution that is reliable, easy to operate and saves money. The GDC system's advanced electronics allow for longer wire runs, smaller gauge wire sizes, and more simultaneous valves in operation.



## Water Management Highlight

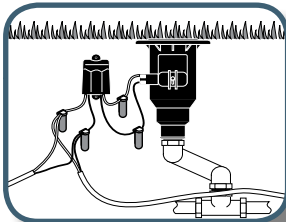
With the ability to operate up to 400 stations simultaneously, GDC with Lynx™ is one powerful water management system. ET based runtimes and station-based flow management keep the system running at optimum efficiency, while extensive handheld radio controls allow you to effectively manage your watering while on the course.



## Features & Benefits

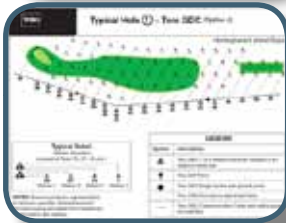
### ELIMINATE COSTS

Using a two-wire path to communicate to buried decoders, the GDC system eliminates costs associated with traditional valve wire bundles and provides a solution that is vandal-resistant, easy to install and easy to expand. Class 2 power supply permits burial depths consistent with traditional low-voltage field wires.



### FLEXIBLE SYSTEM CONFIGURATIONS

GDC systems can be configured with the decoders located in valve boxes outside of the playing area for easy access and lower cost, or with the decoder integrated with the sprinkler to reduce wire and splices.



### INTEGRATED SURGE PROTECTION (ISP)

Improved reliability in lightning prone areas. ISP decoders are rated at 20 KV surge protection—the highest in the industry. With installations in some of the most active lightning areas of the world, the GDC system provides rock-solid performance year after year.



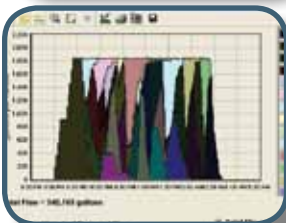
### UP TO 3200 STATIONS

Whether you have 100, 800, or 3200 stations, the GDC system will meet your needs. Systems can be expanded by simply extending the communication wires and adding decoders.



### STATION-BASED FLOW MANAGEMENT

Reduces nighttime water window and optimizes pump capacity. Central irrigation programs are available from the hand held radio for manual watering.



## Typical GDC Hole Layout



- A** 1 Station Decoder
- B** 2 Station Decoder
- C** 4 Station Decoder
- D** Sensor Decoder
- E** 2-Wire Cable
- 220G Brass Valve
- 700 or 800S Sprinklers
- 810G Sprinklers

### 3200 Total Stations Per System

- Up To Two Interfaces Per System With 1600 Stations Per Interface
- Big Enough To Accommodate The Largest Systems

### Latching Solenoid

- Operates More Stations
- Reduces Water Window
- Special Application
  - Syringes
  - Wash-ins

### Integrated Surge Protection

- Improved System Up-Time
- Lower Installation Cost

### Poly Fuse Circuit Protection

- Protects Downstream Decoders
- Prevents "Christmas Light" Effect

### Improved Diagnostics

- Shorts
- Opens
- Lost Communication

### Operates From

- Lynx™ Central
- GDC 100/200 Stand-Alone Interface

### 800 Stations Per Wire Path

- Fewer Wire Paths
- Lower Cost
- Increased Flexibility

### Additional Specifications

- Maximum number of wire paths:
  - 8 per gateway
- Maximum stations per gateway:
  - 200 on stand-alone
  - 1600 on Lynx™ Central
- Maximum stations per system:
  - 200 on stand-alone
  - 3200 on Lynx Central
- Simultaneous stations per output:
  - 20 on stand-alone
  - 100 on Lynx Central
- Maximum distance from central to decoder (using 14 gauge wire): 2.6 miles
- Maximum distance from decoder to sprinkler (using 14 gauge wire): 400 ft.
- Solenoids per output: 2 DCLS-P
- Stations per decoder: 1, 2 or 4
- Operating temperature: 32°F to 140°F (0°C to 60°C)
- Storage temperature: -22°F to 212°F (-30°C to 100°C)

### Additional Features

- Toro® Lynx Central
  - Integrated mapping
  - Remote hand-held operation
  - Weather station integration
  - Pump station integration
- Enhanced diagnostics
  - Communication
  - Electrical shorts/opens
  - Solenoid check
- No holding power required to operate stations
- Class 2 power supply permits wire paths to be installed at industry standard low voltage burial depths per National Electric Code.
- Non-corrosive lockable wall mount cabinet, indoor/outdoor installation

### Electrical Specifications

- Input Power:
  - 100 V ac, 50/60 Hz
  - 120 V ac, 50/60 Hz
  - 220-240 V ac, 50/60 Hz
- Gateway output voltage: 38 V ac max
- Gateway output power: 98 VA max (Class 2)
- Decoder wiring: 14 gauge

### Warranty

- 1 Year

### Specifying Information—Decoder

DEC-ISP-XXX		
Type	Configuration	
DEC	XX	
DEC-ISP—Decoder	1—1-station	2—2-station
	4—4-station	
Example: A 2-station GDC Decoder would be specified as: <b>DEC-ISP-2</b>		

### Specifying Information—Decoder

DEC-SA-200		
Type	Communication	Sta. Count
DEC	SA	200
DEC—Decoder	SA—Stand-alone	200—200 Stations

### Specifying Information—GDC System

LX-0X-X-0X			
Type	Computer Hardware	Service	Field Hardware
LX	0X	X	0X
LX—Lynx	0—Synergy 1—Standard Computer 4—Premium Computer	1—1-year NSN 5—5-years NSN	8—GDC System 18—GDC Synergy
Example: A Lynx Central standard computer with 1-year of NSN and GDC System field hardware would be specified as: <b>LX-1-01-08</b>			