

# **BAILOY PRECISION IRRIGATION CONTROL SYSTEMS**

DESIGNERS AND MANUFACTURERS  
OF THE GTI GEMINI AND TRIDENT SYSTEMS

Precision irrigation control since 1975.





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Precision irrigation control since 1975.

**IT'S ABOUT APPLYING  
WATER IN MILLIMETRES,  
NOT MINUTES. IT'S ABOUT  
HYDRO-EFFICIENCY,  
WITHOUT THE WASTE.  
IT'S ABOUT FINE-TUNING,  
COST-SAVING, CONTROL-  
ENABLING TECHNOLOGY  
FOR BEAUTIFUL LANDSCAPES,  
WORLD-CLASS GOLF COURSES  
AND SPORTS VENUES.**

**IT'S ABOUT BAILOY  
PRECISION.**

Bailoy has been the forerunner in decoder-based irrigation control systems since 1975. We have designed, manufactured and constantly improved our products to bring maximum value and unbeatable performance to the greenkeeping and groundscape professions.



# FIND THE PERFECT BAILOY SYSTEM TO SUIT YOUR NEEDS

Our range of irrigation control systems is large enough to suit any type of landscaped garden, golf or sports facility, from sports grounds, football stadiums, training pitches and racing venues to larger golf courses with 36 or more holes. Below is a selection of our most popular installations to help you find the system relevant for you.



FOR

## SPORTS/ STADIUMS

THE GTI  
SC SYSTEM

For most stadiums and other sports grounds requiring turfcare irrigation with minimal fuss.

20/28

FOR

## 9-HOLE COURSES

THE GTI  
SC SYSTEM

For 9-hole golf courses and similar-sized venues needing precision irrigation with push-button control.

20/28

FOR

## LARGER GOLF COURSES

THE GTI  
PC SYSTEM

For large golf courses that need volume and precision control over a large land area.

16/24



FOR

## TRAINING PITCHES

THE GTI  
EC SYSTEM

For training pitches and other sports grounds requiring precision irrigation with simple control.

18/26

FOR

## LARGE GARDENS

THE GTI  
EC SYSTEM

For large gardens that need volume and precision control over a large land area.

18/26



### BAILOY IRRIGATION

SUITABLE FOR BOTH  
NEW AND  
EXISTING SITES

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# PROVIDING PRECISION CONTROL SYSTEMS FOR PRECISELY 39 YEARS

You may not be familiar with Bailoy irrigation control systems. But, chances are, you will be familiar with some of the products and personalities behind the name.

That's because Bailoy pioneered decoder-based irrigation technology in the late 70s, with its first system "The SC3000" snapped up by golfing giant Toro just a few years after its humble inception. Hence Bailoy irrigation products were branded Toro from between 1984 and 2006 which as well as the SC3000, also included the CDS-DIU hardware and the current range of GTI PC controllers.

The early engineering brain behind the first products, was Myke Baigent. Now in his 70s, Myke was a larger than life character whose passion for model railways had, unbeknown to him, made him an incredibly well connected man – including, as it would turn out, in golf. Myke and fellow former director Peter Lovejoy established Bailoy in 1972 simply because they were fed up working for other people. Myke, with his engineering background and inventive drive, was 'the brains' of the operation; methodical Peter was 'the business'.

Myke produced all sorts from his Aldershot workshop and via his contacts, he worked on Ministry of Defence weapon projects and held the worldwide patent as the inventor of the first "Baby in the womb" ultrasonic scanner.

Then, in the early 80s, came a call that was to change the company's trajectory. An Isle of Wight golf course manager, tired of walking

from green to green to irrigate, with the 'tap on, tap off' routine taking up a full day, asked Myke to think of a way to automate it.

Fast forward a year and Myke had incorporated new decoder technology into an irrigation controller and patented the SC3000 controller and three-wire decoder, the basis of which Bailoy still uses to this day. Within three years, the pair were selling to local golf clubs and once Toro stepped in, the company didn't look back.

In 2006 Bailoy and Toro amicably parted ways with Bailoy continuing to support the Toro CDS hardware and now supporting Toro-branded GTI systems back in-house, as well as the GTI range under their own branding.

With Myke then 66 and Peter 70, they were ready to pass the baton on to Frank Beks. Hailing from the Netherlands, Frank originally joined Bailoy in 1997 and was wholly responsible for Bailoy's GTI PC systems. He



SC3000 system

was responsible for the development of the GTI software and upgrading of Myke's original hardware, making him the natural successor. After Peter Lovejoy fell ill in January 2007 and died just two months later, Peter's son Adam Lovejoy joined the business and took over its general administration.

So today Adam and Frank mirror Peter and Myke's roles, acting as managing director and product development director respectively. So while Frank works on new products, Adam is busy building the Bailoy name, and after a complete rebrand in 2007, the company is now on the brink of launching new products and spreading the word about a host of high-profile users around the world.

With the appointment in 2011 of Phil Chadwick as technical sales manager, who joined from Toro and Bailoy distributor Lely UK and boasts 22 years' industry experience, including 18 on GTI, we have the ability to design, administer and support our range of products to the highest level.

With a network of distributors around the world Bailoy is able to supply and support its products and services to a range of sites both large and small and prides itself on its personal service.

**BAILOY  
IRRIGATION'S  
BEST KEPT  
SECRET**

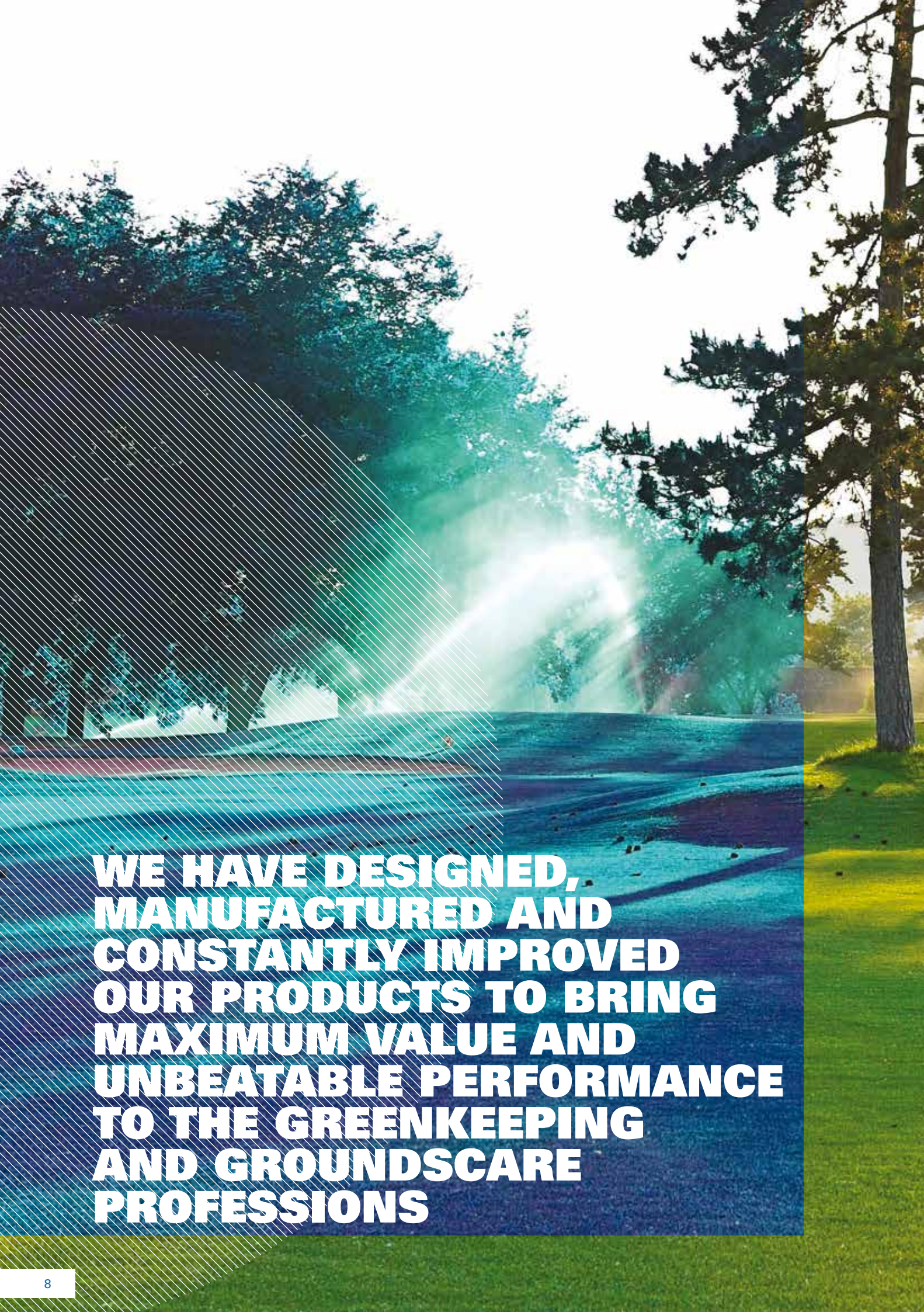
As a result, customers know they can speak to someone who knows the system inside-out, and who better to help you than the man who designed the product or the man who has worked with it for 18 years.

**"Bailoy customers can speak to someone who knows the system inside-out. Who better to help you than the man who designed the product?!"**

**Adam Lovejoy,  
managing director**







**WE HAVE DESIGNED,  
MANUFACTURED AND  
CONSTANTLY IMPROVED  
OUR PRODUCTS TO BRING  
MAXIMUM VALUE AND  
UNBEATABLE PERFORMANCE  
TO THE GREENKEEPING  
AND GROUNDSCAPE  
PROFESSIONS**

## **FIVE BENEFITS OF BAILOY PRECISION IRRIGATION**

### **Total control**

With water an increasingly costly and, on occasion, seemingly scarce resource, precision is everything. GTI's irrigation controller technology ensures greenkeepers and groundsmen can make optimum use of every last drop.

### **Two control cable options**

Bailoy's GTI irrigation control systems are designed to work with either 2- or 3-wire control cabling giving a new installation the choice of which cable to use. For retro sites, it means a GTI system can greatly reduce the installation cost by utilising the existing control cable.

### **Phased installation**

For those opting for a retro fit installation, GTI gives most users the added benefit of utilising the existing control cabling, decoders, solenoids and sprinklers. GTI also allows for a phased installation by allowing the site to replace the controller while still using original decoders, solenoids and sprinklers. Or equally the original decoders can be replaced, as they fail or budgets permit, with new GTI decoders and the controller changed at a later date.

### **Designed for use**

With the choice of 2- or 3-wire control cabling and three irrigation systems, for small to large applications, full PC control or simple pre-programmed push-button operation, there's a GTI solution designed for all uses.

### **Direct support**

For all technical assistance, whether pre-installation, during, or long after, customers can rely on direct support from the designer and manufacturer of the GTI irrigation control system.

**With the choice of 2- or 3-wire control cabling, three irrigation control systems, small to large applications, full PC control or simple pre-programmed push-button operation, there's a GTI solution designed for everyone**





# NEW OR RETROFIT INSTALLATION?

## New installation

With a new installation or a site that is going to install new control cabling you have the choice of either a Gemini or Trident controller. Use the comparison chart on page 13 to choose the best option for you.

## Retro installation

With a retro fit installation, your existing control cabling will dictate if you require a Gemini or a Trident controller. You have the ability to re-use your existing control cabling, solenoids, sprinklers and decoders. Please contact us for information and guidance on compatible decoders, or visit [bailoy.com](http://bailoy.com) for the latest technical bulletins.

### GTI GEMINI 2-WIRE

Typically used as a direct upgrade of the Watermation TW2 controller, the GTI Gemini systems are ideal for new or existing installations that wish to use 2-core control cables. The main benefit is that the customer can continue to use existing decoders and control cables. Another major benefit is the ability to run GTI Gemini decoders, as well as Watermation MK1 and MK2 and other compatible decoders on the same control cables. This means replacement of the low performance decoders can be done over time as they fail or as budgets permit.

### GTI TRIDENT 3-WIRE

GTI Trident controllers can be used to upgrade the SC3000 and Toro CDS-DIU controllers, both of which were designed and manufactured by Bailoy Products in an exclusive agreement with The Toro Company. Installing a Trident controller means minimal downtime as you can continue using the existing decoders and control cables, giving a seamless changeover from an older Bailoy-designed controller.



# NOW CHOOSE FROM THREE CONTROL SYSTEMS

Sophisticated yet simple to operate, the Gemini and Trident range of controllers – when used together with Gemini or Trident decoders – will enable you to achieve greater irrigation control and enhanced performance.

### GTI PC Control

GTI PC is a PC-controlled central controller with up to 16 control cables and the ability to run up to 114 stations per control cable on the Trident system and 109 stations per control cable on the Gemini system.

### GTI EC Control

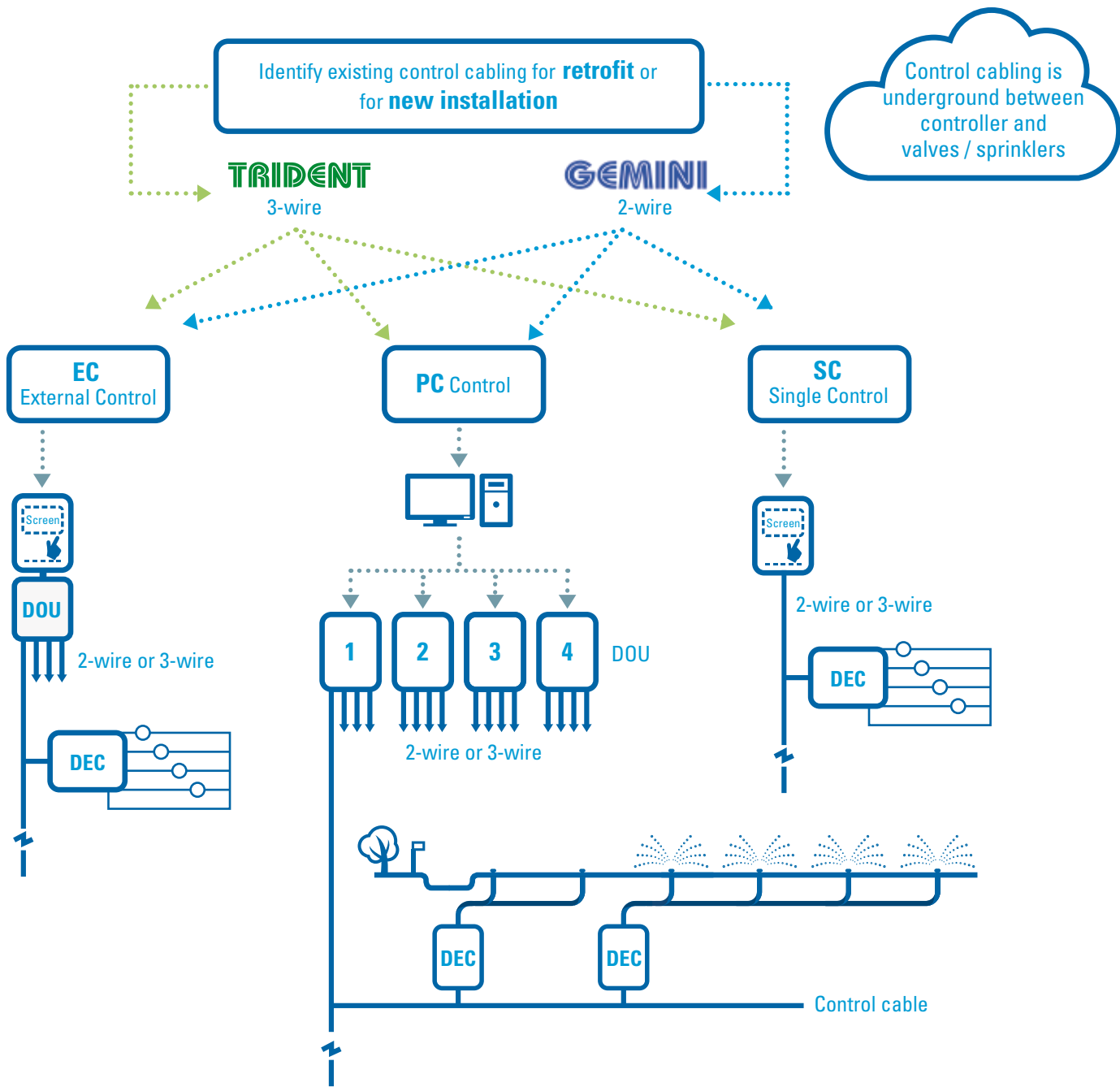
GTI EC is a stand-alone controller with up to four control cables and the ability to run up to 114 stations per control cable on the Trident system and 109 stations per control cable on the Gemini system.

### GTI SC Control

GTI SC is a one zone stand-alone controller ideal for smaller sites with only one control cable and the ability to run up to 114 stations per control cable on the Trident system and 109 stations per control cable on the Gemini system.

**IDEAL FOR  
RETRO FIT  
INSTALLS**

# CHOOSE FROM TWO WIRING SYSTEMS AND THREE CONTROLLERS



See comparison chart for full specifications of each system

Software Features	GTI-PC	GTI-EC	GTI-SC
Golf or landscape mode	Y	Y	Y
Max courses (site in landscape)	8	4	4
Max number of holes (sectors in landscape)	176	88	88
Max number of stations per hole	64	64	64
Max number of programmes	256	10	10
Irrigation schedule	12 months	7/14 days	7/14 days
Max number of scheduled programmes	4380	84/168	84/168
Programme starts per day	12	12	12
Percentage adjustment	0-600%	0-600%	0-600%
Longest station time (minutes)	999	99	99
Number of pump stations	8	1	1
Graphical projected flow	Y	N	N
Flow management	Full Tree	Y	Y
Electrical management	Y	Y	Y
Guided fault-finding features	Y	Y	Y
Flow managed manual irrigation	Y	Y	Y
Syringe cycling feature	Y	N	N
Scheduled pre-watering	Y	Y	Y
Station identification (user defined description)	Y	Y	Y
Diagnostic logbook (Archives errors recorded during diagnostic tests)	Y	Y	Y
Extensive diagnostic station test facilities	Y	Y	Y
Control cabling condition test	Y	Y	Y
Decoder Analyser (Identifies new decoders and gives backward compatibility with earlier Low Performance Decoders)	Trident & Gemini	Gemini	Gemini
Built-in decoder programmer, reader and tester	Y	Y	Y
Operational logbook (Records all events and completed programs)	Y	Y	Y
Printable reports	Y	PDF via Email	PDF via Email
Graphical water consumption records	Y	Y	Y
Compatible with Windows XP, Vista and Windows 7	Y	n/a	n/a
Visual Irrigation Programming (VIP)	Y	N	N
Real-time irrigation progress monitoring	Y	Y	Y
Email facility (can also send an email when a problem arises)	N	Y	Y
Languages	6	English	English
Remote control operation	Radio & Web	Web	Web
Hardware Features			
Max number of Decoder Output Units (DOU)	4	1	Built-in
CSGs (Control cable connection outputs) per DOU	2, 3 or 4	2, 3 or 4	1 Built-in
Max number of CSGs	16	4	1
Max stations per CSG	Trident (3-wire) 114 Gemini (2-wire) 109	Trident (3-wire) 114 Gemini (2-wire) 109	Trident (3-wire) 114 Gemini (2-wire) 109
Max running stations per CSG	Trident 10, Gemini 4	4	4
Decoder configurations (1 output can supply 2 coils)	1, 2, 3 & 4 outputs	1, 2, 3 & 4 outputs	1, 2, 3 & 4 outputs
CSG selectable output voltage (V <sub>AC</sub> )	30/40	30/40	TBC
Inputs to DOU	Rain & 2 alarms	Rain & 2 alarms	TBC
IP65 rated for pump station environment	DOU-Yes	Y	Y
Surge-protection	Y	Y	Y
Warranty and Support			
Controllers (DOUs) manufacturer's standard warranty	1 year	1 year	1 year
Controllers (DOUs) after year 1 (optional GTS support)	1 or 3 year	1 or 3 year	1 or 3 year
Remote "Log-In" diagnostic support by manufacturer	Y	Y	Y
Full independent CE approved	Y	Y	Y



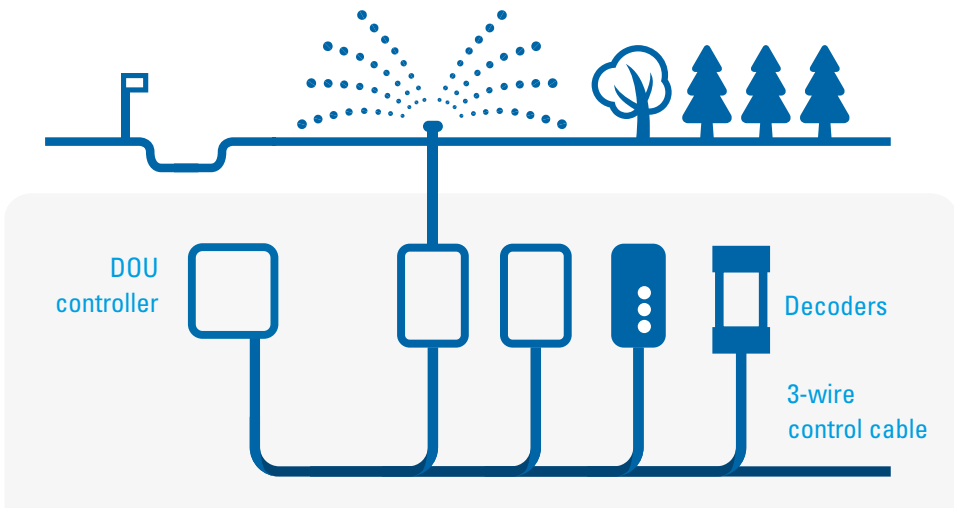


# EFFECTIVE AND ECONOMIC MANAGEMENT OF YOUR IRRIGATION SYSTEM

\ **TRIDENT 3-WIRE**

# TRIDENT 3-WIRE SYSTEM

What site would benefit from the installation of a 3-wire system?



GTI Trident controllers are ideal for new or existing installations that wish to use a three-core control cable and are designed to give you effective and economic management of your irrigation system as well as improved performance and lower water usage.

GTI Trident controllers can be used to upgrade the SC3000 and Toro CDS-DIU controllers, both of which were designed and manufactured by Bailoy Products in an exclusive agreement with The Toro Company.

Installing a Trident controller will also allow the user to continue using existing decoders and control cables, giving a seamless changeover from an older Bailoy-designed controller with minimal downtime.

**Mix-and-match decoders**  
As all GTI systems are backwards compatible, customers can mix and match older SC3000, CDS and Trident decoders with new Trident decoders on the same control cables. Upgrading

to newer Trident decoders will ultimately give enhanced control and benefits but this can be done over a period of time or as older decoders need to be replaced.



# GTI PC

## TRIDENT 3-WIRE SYSTEM

The GTI PC Trident system consists of a personal computer, GTI PC-based software, one to four DOUs and decoders.

The GTI PC Trident system has been designed to be installed into newly-designed courses, but it's also ideal to convert and upgrade existing controllers to a PC-based operation including Bailoy's EC and SC controllers if greater control or site expansion is required at a later date.

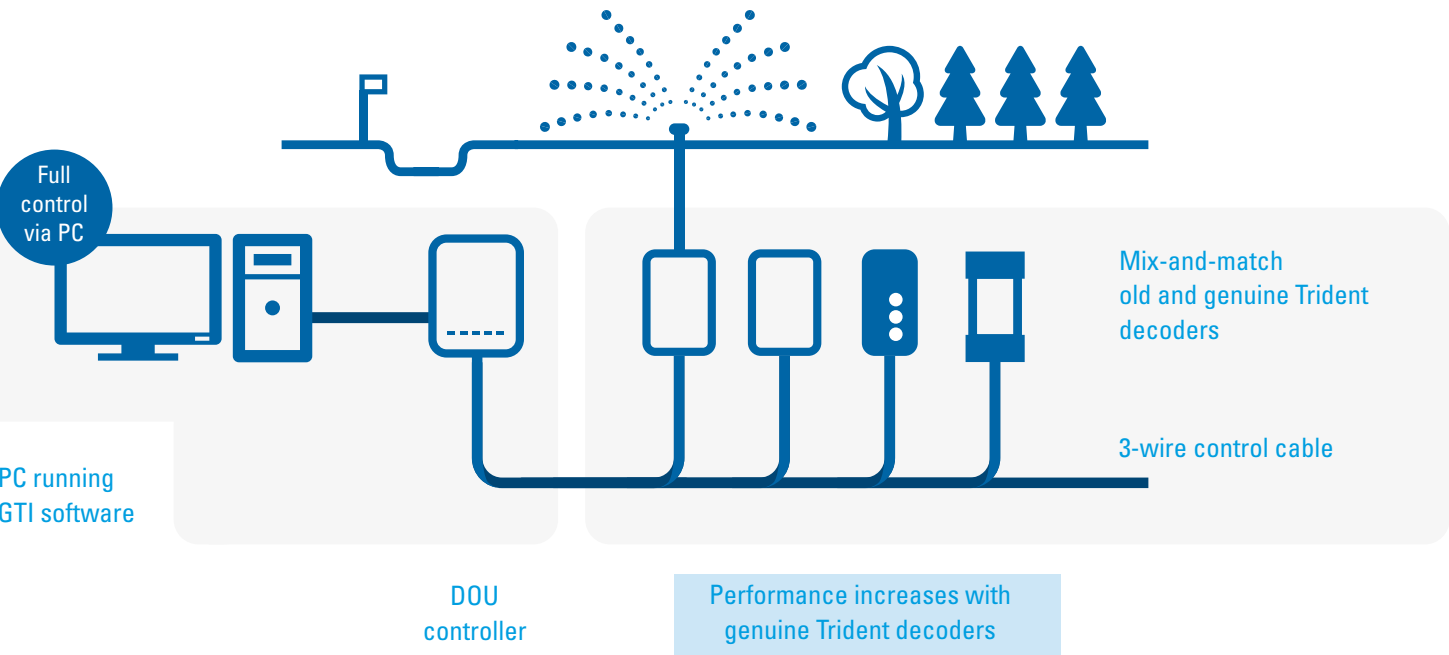
Upgrading to a GTI PC Trident system gives customers the ability to greatly improve the performance and reliability

of their irrigation. Another major benefit is the ability to run GTI Trident decoders, as well the older Bailoy-designed SC3000, CDS and other low performance third-party decoders on the same control cables.

Tried and tested GTI software delivers optimum management and at-a-glance control of all your irrigation programmes.

It quickly and simply allows the user to view the following information:

- What do I want to water?
- When are my irrigation programmes scheduled to run?
- What is irrigating?
- Detailed logbooks and error reporting
- System diagnostics



  
**VISIT  
BAILOY.COM**  
**FOR TECHNICAL  
SPECIFICATIONS**

## FEATURES

- Supports up to 256 standard irrigation programmes
- Supports syringe cycles in irrigation programmes
- Potential to irrigate up to 10 simultaneous stations per control cable
- 12 programme start-times per day
- Up to 64 stations per hole
- Flow management based on a hydraulic tree configuration
- Visual Irrigation Programme (VIP) maintenance centre for stations or sprinkler head modification
- Water consumption records
- Full flow optimisation for all irrigation (for programmes, manual irrigation and remote control)
- Up to 114 stations per control cable
- Potential to add up to 512 stations per control cable with next generation decoders
- Features from 2-16 control cables
- Built-in decoder programmer
- Built-in pump-start contact. Optional remote start available
- One rain switch and two alarm sensor inputs per controller
- Online help for both software and hardware
- Available in multiple languages – English, French, German, Korean and Swedish
- MS Windows XP, Windows Vista and Windows 7 support

## ACCESSORIES

- Remote access
- DTMF interface
- VIP site graphics
- Decoder programmer

## SUPPORT

Your irrigation system is a vital component in the smooth running of your site and one in which you have invested a lot of time and money. But like all things in life, breakdowns can happen at the most inappropriate time.

- At Bailoy, we can support your system in various ways.
- GTS Support agreements – 2 levels available. See page 40
  - Replacement controllers (DOUs)
  - Loan controllers (DOUs)
  - Remote software support
  - On-site software and hardware support.

These services are carried out via our network of distributors and installers and all have direct access to Bailoy for further assistance and fault-finding if required.

For further information on support services, visit [bailoy.com](http://bailoy.com)



# GTI EC

## TRIDENT 3-WIRE SYSTEM

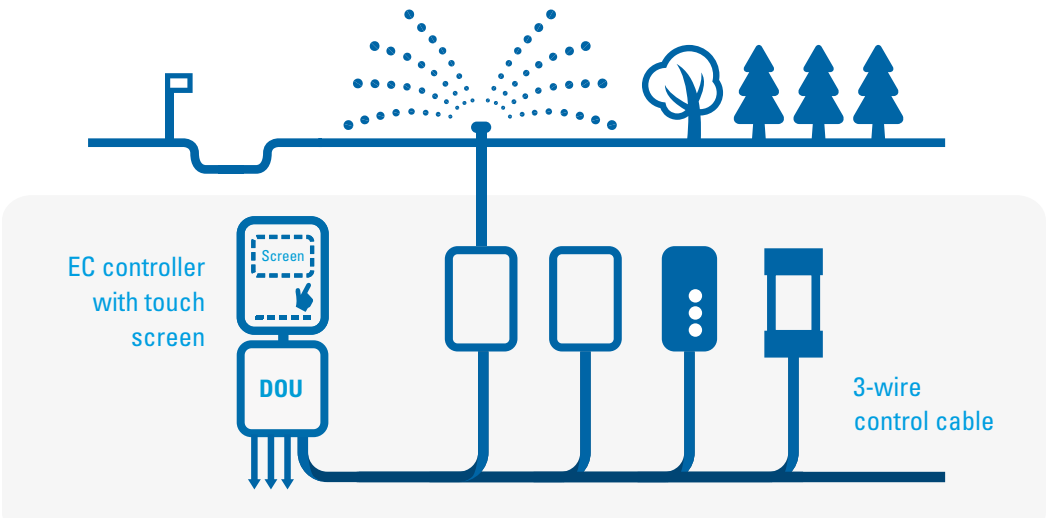
The GTI EC Trident system range consists of several state-of-the-art models, which all use embedded software and touch-screen programming.

They are ideal for a newly-designed or existing golf course, landscape or stadium project that requires more precise irrigation than a standard push-button controller. Although it offers the ability to precisely water, it is not as complex as a full PC system and, once initially configured, requires little interaction from the user.

The GTI EC Trident system provides optimum irrigation efficiency and gives the precision of a full PC system, without the cost or need for time-consuming customer interaction. This is ideal for smaller sites with limited manpower running on a tight budget.

The Trident EC controller range can also be used as a direct-swap upgrade of the SC3000 controller, which was also designed and manufactured by Bailoy Products in an exclusive agreement with The Toro Company.

This will allow the user to continue using the existing decoders and control cables, allowing for a seamless changeover from the older Bailoy system to the new EC controller.



### FEATURES

- 10-inch touch-screen colour LCD display provides intuitive interaction
- Presents all tasks in small steps, meaning anyone can operate the system
- Uses location names to identify stations, so forget all those hard-to-remember decoder numbers!
- Allows seamless control away from the controller location in the pump house when the optional web-based remote control is used
- Flow-management allows precise allocation of flow, to ensure uniform coverage for each irrigated area
- Maintains a logbook of all activities and any errors
- Automatically logs water consumption to ensure users keep within water budgets
- Allows optional worldwide access via an internet-enabled iPad, tablet or computer
- Controls up to four, typical 18-hole golf courses on one site
- Each controller supports up to 456 stations
- Creates up to 10 programmes to ensure watering only where needed
- Allows future upgrade to GTI PC system

### ACCESSORIES

- Remote access
- Decoder programmer

### SUPPORT

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### MODELS

Choose the version that best suits your requirements. Visit [bailoy.com](http://bailoy.com) for full details on the different versions available.

**THE GTI EC HAS BEEN DESIGNED AS THE PERFECT UPGRADE OR REPLACEMENT FOR EXISTING SC3000 AND TW2 WALLMOUNT CONTROLLERS.**



# GTI SC

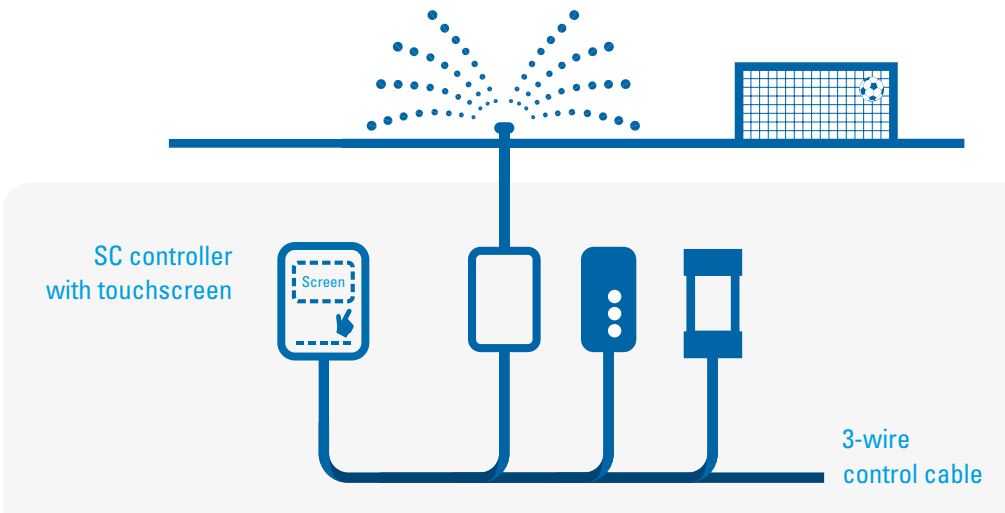
## TRIDENT 3-WIRE SYSTEM

The GTI Trident SC is a self-contained single CSG controller and is ideal for smaller sites, landscape or stadium projects that require more precise irrigation than a standard push-button controller.

Although it offers the ability to precisely water, it is not as complex as a full PC system and once configured by the installer requires little interaction from the user. The Trident SC controller can also be used as a direct-swap upgrade of a single CSG SC1000 controller, which was also designed and manufactured by Bailoy Products in an exclusive agreement with The Toro Company. This will allow the user to continue using the existing decoders and control cables, allowing for a seamless

changeover from the older Bailoy system to the new SC controller. It also allows for a phased replacement of the low performance decoders, which can be replaced with GTI Trident Decoders, as they fail, or as budgets permit.

As with all GTI controllers, sites are able to utilise any manufacturer's sprinkler heads using AC solenoids, allowing the user to mix and match the best the industry has to offer.



### FEATURES

- 10-inch touch-screen colour LCD display provides intuitive interaction
- Presents all tasks in small steps, so anyone can operate the system
- Uses location names to identify stations, so forget those hard-to-remember decoder numbers
- Allows seamless control away from the controller location in the pump house when the optional web-based remote control is used
- Flow management allows efficient and precise allocation of flow, to ensure uniform coverage for each irrigated area
- Automatically logs water consumption to ensure users keep within water budgets
- Maintains a logbook of all activities and any errors
- Allows local and worldwide system access via any internet-enabled iPad or computer (optional)
- The controller supports up to 114 stations
- Creates up to 10 programmes to ensure watering only where needed
- Allows future upgrade to GTI PC or EC system

### ACCESSORIES

- Remote access
- Decoder programmer

### SUPPORT

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IDEAL FOR  
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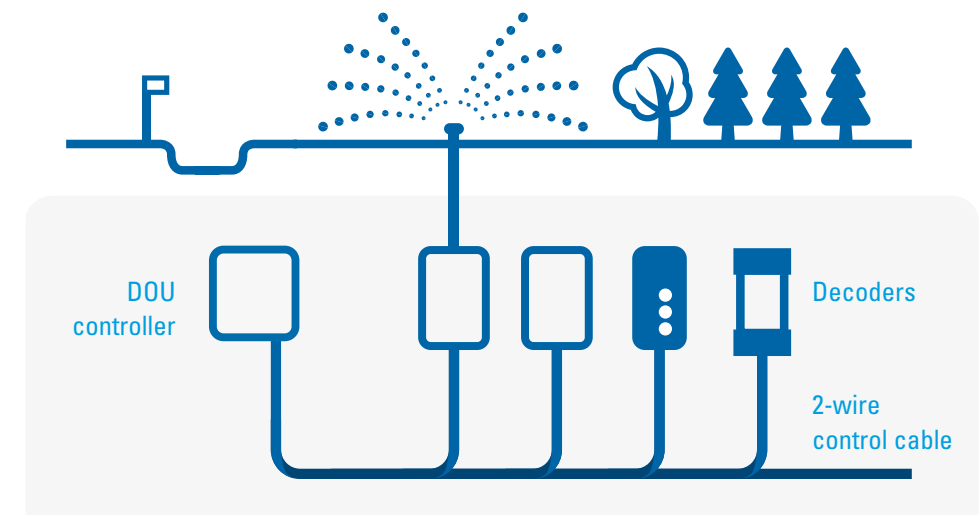
THE GTI GEMINI 2-WIRE  
SYSTEM ALLOWS CUSTOMERS  
TO CONTINUE TO USE  
EXISTING DECODERS AND  
CONTROL CABLES

# GEMINI 2-WIRE SYSTEM

What customers would benefit from the installation of a GTI Gemini system?

GTI Gemini systems are ideal for new or existing installations that wish to use 2-core control cable, but are typically used as a direct upgrade of the Watermation TW2 controller. The main benefit is that the user can retain the existing decoders and control cables.

Another major benefit is the ability to run GTI Gemini decoders, as well as Watermation MK1 and MK2 and other compatible decoders, on the same control cables. This means replacement of the low performance decoders can be done over time as they fail or as budgets permit.





# GTI PC

## GEMINI 2-WIRE SYSTEM

The GTI PC Gemini system consists of a personal computer, GTI PC-based software, one to four controllers (Decoder Output Units) and decoders.

It is designed to be installed at newly-designed courses as well as being ideal to convert and upgrade existing controllers to a PC-based operation. This includes our own EC and SC controllers if greater control or site expansion is required at a later date.

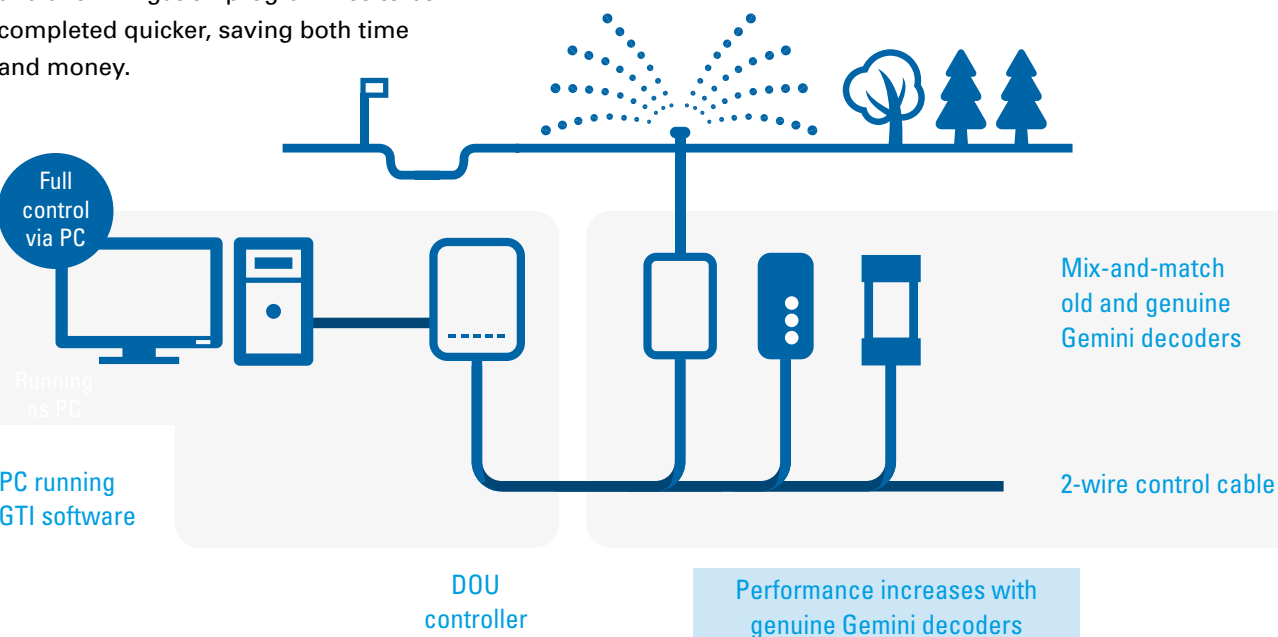
Upgrading to a GTI PC Gemini system will give users the ability to greatly improve the performance and reliability of their irrigation system by installing genuine GTI Gemini decoders. This way, Gemini can operate four decoders in each control cable simultaneously, compared to the TW2, which can only operate one decoder at a time. This will greatly increase system efficiency and allow irrigation programmes to be completed quicker, saving both time and money.

Another major benefit is the ability to run GTI Gemini decoders, as well as Watermation MK1 and MK2 and other compatible decoders, on the same control cables. This means replacement of the low performance decoders can be done over time as they fail or as budgets permit.

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- [System diagnostics](#)



## FEATURES

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- Up to 64 stations per hole
- Flow management based on a hydraulic tree configuration
- Visual Irrigation Programme (VIP) maintenance centre for stations or sprinkler head modification
- Water consumption records
- Full flow optimisation for all irrigation (for programmes, manual irrigation and remote control)
- Up to 109 stations per control cable
- Potential to add up to 512 stations per control cable with next generation decoders
- Features from 2-16 control cables
- Built-in decoder programmer
- Built-in pump-start contact with optical remote start available
- One rain switch and two alarm sensor inputs per controller
- Online help for both software and hardware
- Available in multiple languages – English, French, German, Korean and Swedish
- MS Windows XP, Windows Vista and Windows 7 support.

## ACCESSORIES

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- DTMF Interface
- VIP site graphics
- Decoder programmer

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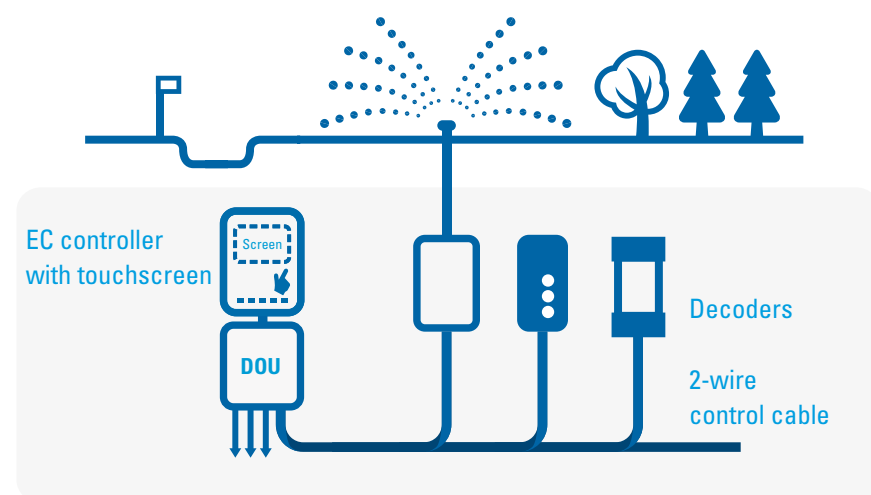
# GTI EC

## GEMINI 2-WIRE SYSTEM

The GTI EC Trident system range consists of several state-of-the-art models, which all use embedded software and touch-screen programming.

They are ideal for a newly designed or existing golf course, landscape or stadium project that requires more precise irrigation than a standard push button controller. Although it offers the ability to precisely water it is not as complex as a full PC system and once initially configured, requires little interaction from the user.

The Gemini EC controller range can also be used as a direct-swap upgrade of the Watermatation TW1 and TW2 controllers. This will allow the user to continue using their existing decoders and control cables meaning a seamless changeover from the older controller. It also allows for a phased replacement of the low performance decoders which can be replaced with GTI Gemini Decoders, as they fail, or as budgets permit.



VISIT  
**BAILOY.COM**

FOR TECHNICAL  
SPECIFICATIONS

## FEATURES

- 10-inch touch-screen colour LCD display provides intuitive interaction
- Presents all tasks in small steps, so anyone can operate the system
- Uses location names to identify stations, so forget all those hard-to-remember decoder numbers!
- Allows seamless control away from the controller location in the pump house when the optional web-based remote control is used
- Flow-management allows precise allocation of flow, to ensure uniform coverage for each irrigated area
- Maintains a logbook of all activities and any errors
- Automatically logs water consumption to ensure users keep within water budgets
- Allows optional worldwide access via an internet-enabled iPad, tablet or computer
- Controls up to four, typical 18-hole golf courses on one site
- Each controller supports up to 436 stations
- Creates up to 10 programmes to ensure watering only where needed
- Allows future upgrade to GTI PC system

## ACCESSORIES

- Remote Access
- Decoder Programmer

## SUPPORT

Your irrigation system is a vital component in the smooth running of your site and one in which you have invested a lot of time and money. But like all things in life, breakdowns can happen at the most inappropriate time.

At Bailoy, we can support your system in various ways.

- GTS Support agreements – 2 levels available. See page 40
- Replacement controllers (DOUs)
- Loan controllers (DOUs)
- Remote software support
- On-site software and hardware support.

These services are carried out via our network of distributors and installers and all have direct access to Bailoy for further assistance and fault finding if required.

For further information on support services, visit [bailoy.com](http://bailoy.com)

## MODELS

Choose the version that best suits your requirements.

Visit [bailoy.com](http://bailoy.com) for full details on the different versions available.



# GTI SC

## GEMINI 2-WIRE SYSTEM

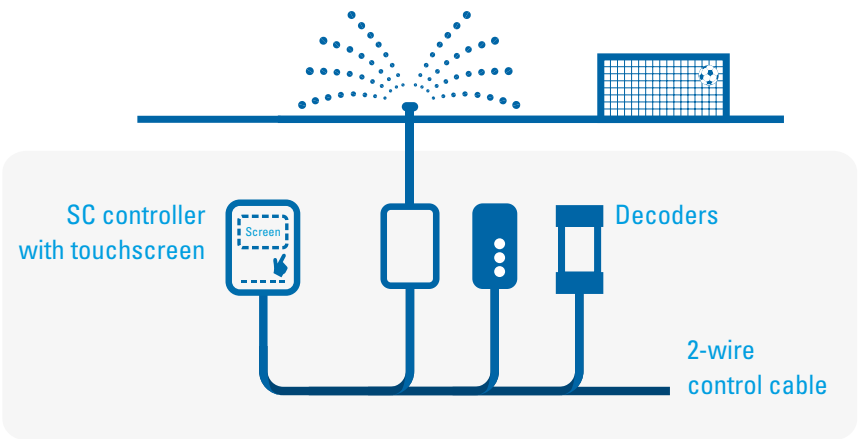
The SC Gemini is a self-contained single CSG controller and is ideal for smaller sites, landscape or stadium projects that require more precise irrigation than a standard push-button controller.

Although it offers the ability to precisely water it is not as complex as a full PC system and once initially configured requires little interaction from the user.

The Gemini SC controller range can also be used as a direct-swap upgrade of the Watermation single zone TW1 and TW2 controllers. This will allow users to continue using their existing decoders and course cables, meaning a seamless changeover from the older controller.

It also allows for a phased replacement of the low performance decoders, which can be replaced with GTI Gemini Decoders, as they fail, or as budgets permit.

As with all GTI controllers, sites are able to utilise any manufacturer's sprinkler heads using AC solenoids, allowing the user to mix and match the best the industry has to offer.



### FEATURES

- 10-inch touch-screen colour LCD display provides intuitive interaction
- Presents all tasks in small steps, so anyone can operate the system
- Uses location names to identify stations, so forget those hard-to-remember decoder numbers
- Allows seamless control away from the controller location in the pump house when the optional web-based remote control is used
- Flow management allows for efficient and precise allocation of flow, to ensure uniform coverage for each irrigated area
- Automatically logs water consumption to ensure users keep within water budgets
- Maintains a logbook of all activities and any errors
- Allows local and worldwide system access via any internet-enabled iPad or computer (optional)
- The controller supports up to 109 stations
- Creates up to 10 programmes to ensure watering only where needed
- Allows future upgrade to GTI PC or EC system

### ACCESSORIES

- Remote Access
- Decoder Programmer

### SUPPORT

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### MODELS

Choose the version that best suits your requirements.

Visit [bailoy.com](http://bailoy.com) for full details on the different versions available.



# SOFTWARE FOR GTI PC

GTI software has always been developed by our own development team in-house and the latest version is no exception.

It has an array of features that enable customers to get the most from their GTI irrigation system while keeping to the product's original concept, which is that it's simple to use and easy to understand.

It is also available in the following languages: English, German, French, Swedish and Korean.

Other languages are planned for release in the future, please ask for further details.

All new GTI PC controllers are supplied with the latest software version and a more comprehensive list of features can be found on [bailoy.com](http://bailoy.com)

Existing users are able to upgrade to the latest version of software and Bailoy offer various options and packages to achieve this. For further information on upgrading along with details on new features visit [bailoy.com](http://bailoy.com)

## Features of GTI PC software

- Supports up to 256 standard irrigation programmes
- Supports syringe cycles in irrigation programmes
- Potential to irrigate four (up to 10 for Trident) simultaneous stations per control cable
- 12 programme start-times per day
- Up to 64 stations per hole
- Hydraulic tree for hydraulic configuration
- VIP Graphical Interface (based on colour maps/pictures of your site)
- VIP Maintenance Centre for stations or sprinkler heads modification
- Radio remote control for manual watering
- Water consumption records
- Flow management
- Full flow optimisation for all irrigation (for programmes, manual irrigation and remote control)
- Trident supports up to 114 stations per control cable
- Gemini supports up to 109 stations per control cable
- Potential to add up to 512 stations per control cable with next generation decoders
- 2-16 control cables
- Built-in decoder programmer
- Built-in pump-start and optional remote start
- One rain switch and two alarm sensor inputs per controller
- Available in multiple languages – English, French, German, Korean, and Swedish



TO REQUEST  
A DEMO CD

VISIT [BAILOY.COM](http://BAILOY.COM)  
OR CALL  
0208 897 0125

## Demonstration – Full Version

- An ideal version for a customer who wants to practise with the software prior to the installation of a new GTI irrigation system or an existing customer who wants to view or practise prior to the installation of an upgraded software version
- Available in English, French, German, Swedish and Korean.
- Compatible with Windows XP, Vista and Windows 7
- Please call or complete our online form at [bailoy.com](http://bailoy.com) to request a copy of the full Demonstration CD



DEMO  
AVAILABLE

## Demonstration – Interactive Version

- An ideal version for a potential new user or for a dealer or installer to distribute with GTI sales literature
- Contains interactive training and sample programs for GTI operating software and VIP applications
- Compatible with Windows XP, Vista and Windows 7
- To download the interactive version visit [bailoy.com](http://bailoy.com)



DEMO  
AVAILABLE



# SOFTWARE

## COURSE AND HOLE VIEWS

### Visual Irrigation Programme (VIP)

The Visual Irrigation Programme (VIP) allows your Gemini or Trident irrigation system operator to review, revise and programme quickly and easily. The use of colour-coded symbols gives the user an immediate system status at a glance.

#### Course View

This view shows all station locations relating to the selected course. The VIP adds square symbols to the image, one for each station. Note that the sprinkler locations only become visible in the Hole View.



Two picture types are used for VIP. This is the course view.

#### Hole View

This view shows the sprinkler heads belonging to the stations of the selected hole.

The VIP adds sprinkler symbols over the images and the designer can decide how many sprinklers are used to represent each station.

Call for further information or view the demonstration video at [bailoy.com](http://bailoy.com).



Two picture types are used for VIP. This is the hole view.

#### Features for VIP:

- Write and review irrigation programmes
- View the progress of running irrigation programmes
- Manual station operation
- Advanced diagnostic tests
- Instant graphical overview of all the station issues detected within a user-selectable period
- Real time course or hole view of stations currently being irrigated
- Real time course or hole view of all station issues
- Individual station statistics for accumulated water application and running time
- View scheduled irrigation sequence with an accelerated simulation shown on the VIP images



# DECODERS FOR GTI SYSTEMS

## Gemini and Trident Decoders

### Gemini decoders

GTI Gemini decoders can be used with all Gemini systems and are capable of controlling up to 109 different decoders per control cable.

Gemini decoders can also be used in conjunction with Watermation TW2 MK1 and MK2 decoders and subsequent replacement or replica TW2-based decoders. This allows for gradual replacement of non-Gemini decoders, reducing the initial capital cost with phased replacement and better cost management.

When a site wishes to upgrade from an older Watermation TW2 controller to one of the GTI Gemini controllers, Gemini decoders can be installed prior to the controller, at the same time or after the controller has been installed. This allows for further planned and phased replacement, especially if the site later requires additional irrigated areas.

### Features for Gemini decoders

- Built-in surge protection
- Multi-way decoders available
- Suitable for two-core control cable set-up
- Compatible with Watermation TW1 and TW2 controllers
- Regulated outputs ensure the attached solenoids are supplied with the voltage specified by the manufacturer. Without the regulation, the lifespan of the solenoids is sharply reduced. This feature also reduces potential volt drop over the control cable.
- Can be installed with, or to replace, Watermation MK1 and MK2 and Tonick decoders

### Trident decoders

GTI Trident decoders can be used with all Trident systems and are capable of controlling up to 114 different decoders per control cable.

When an older SC3000 or CDS-DIU course is upgraded to a GTI Trident system, new Trident decoders can be used in conjunction with existing SC3000 and CDS decoders. Similarly to the Gemini decoder, this allows for gradual replacement of non-Trident decoders, reducing the initial capital cost with phased replacement with better cost management.

### Features for Trident decoders

- Built-in surge protection
- Multi-way decoders available
- Suitable for 3-core control cable systems
- Compatible with SC3000 and CDS DIU decoders
- Regulated outputs ensure the attached solenoids are supplied with the voltage specified by the manufacturer. Without the regulation, the lifespan of the solenoids is sharply reduced. This feature also reduces potential volt drop over the control cable.
- Can be installed with, or to replace, SC3000, CDS DIU and Tonick decoders

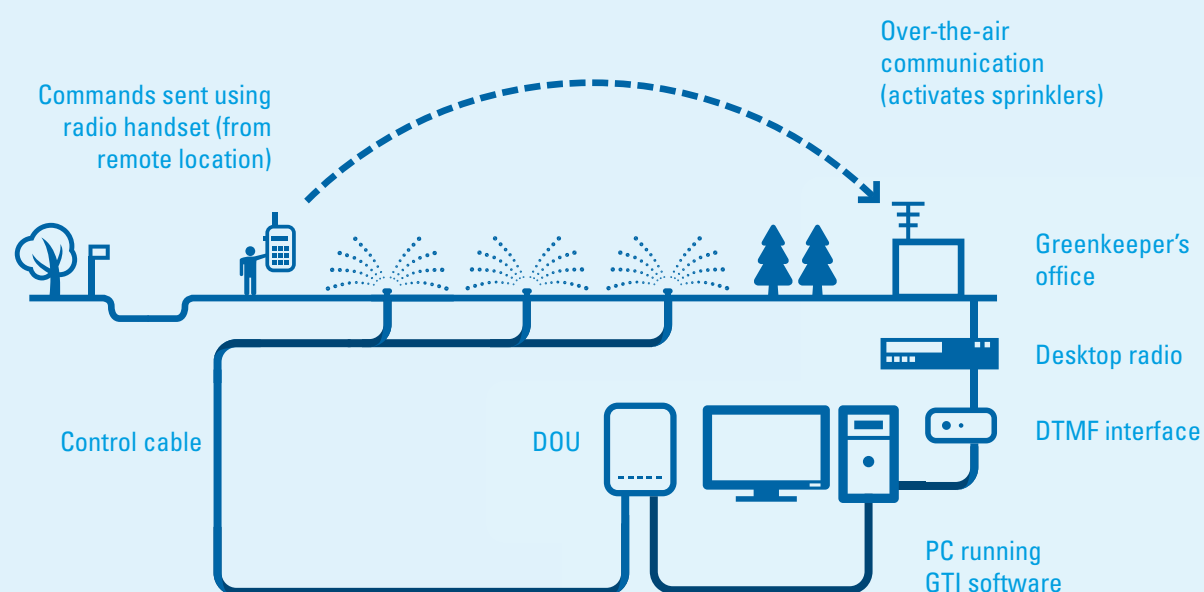




# ACCESSORIES FOR GTI SYSTEMS

## Remote Access

### GTI PC Radio Remote Interface



#### DTMF interface

The DTMF interface is used as part of a long range radio remote controller for both GTI PC Trident and GTI PC Gemini systems. They are designed to accept commands from radio handsets while away from the computer running the GTI software. This allows the user to control the irrigation system from any site location in real time.



AS MUCH  
CONTROL  
AS YOU  
NEED

#### Radio handsets, base units and aerials

It is very likely a radio licence is required in your country prior to being allowed to use radio equipment. Please contact your local radio agency.

#### Features for DTMF interface

- Commands are entered on the handset's keypad from any on-site location, for example a 'green' or 'tee' on a golf course
- Commands are then passed on to the GTI software through the DTMF interface, which is attached to the computer running the GTI software
- All station dial codes are translated by the GTI software into their corresponding location names
- Additional commands are available to cancel, suspend and resume the selected stations with simple codes

#### Models

There are two versions of DTMF interfaces manufactured by Bailoy.

The DTMF External and DTMF Internal:

**The GTI DTMF External uses a third-party radio transceiver**

- The External version requires a desktop radio connected to DTMF interface. A separate radio handset is also required

**The GTI DTMF Internal uses an internal radio receiver**

- The Internal version requires a radio handset only. The desktop radio is integrated in the DTMF interface.



# ACCESSORIES

## FOR GTI SYSTEMS

### continued

#### Web access

With the ever-increasing reliability of web-enabled communication, you can now access your GTI irrigation system from a web-enabled remote device(s) including iPad, iPhone, Android, laptop or desktop PC.

The GTI PC will require a web connection to allow incoming access from the remote device(s) and, once set up, will allow users to access and use their GTI irrigation system from any location.

Bailoy can supply iPad or iPad mini solutions combined with tough water/dust repellent cases suitable for the busy site manager.

Only available in the UK. Please visit [bailoy.com](http://bailoy.com) for options for users outside the UK.



#### Features for web access

- Instant access to your Bailoy controller from anywhere in the world
- Manual watering out on the site
- Amend programmes, remove wet spots and increase application to dry spots while walking around the site
- Reduced labour overheads with one person able to access diagnostic features directly
- Access weather data from either the web or your installed weather station
- Email on the go
- Remote video conferencing using Facetime/Skype
- Use the video/photo capability to monitor your course's conditions, plus any damage or signs of disease
- Use web mapping/GPS to aid location
- Access documents on your PC, even printout the daily work schedule for the day, while away from site
- Access your on-line manuals for your site equipment
- Eliminates the need to return to the site if/when you wish to adjust the irrigation

## Decoder Programmers

The new GTI decoder programmers are a simple to use low cost option suitable for installers and end-users.

Available in both Gemini (GEM-PRO) and Trident (TRI-PRO) versions, these programmers can be used on all decoders manufactured by Bailoy since 2002 including Bailoy branded GTI Gemini and Trident and Toro branded (under licence) CDS, Gemini and Trident.

The accompanying GTI-Pro software can be installed on any Windows based device (desktop, laptop, tablet or Ultrabook), provided it uses Windows XP, Vista, W7 or W8.

The device must also have one USB socket available to connect the programmer as they are powered via the USB connection. Consequently a power adapter is not required which allows decoders to be programmed on-site from a battery powered Windows device.

#### Features for both programmers

- Program single or multiple outputs in one operation. Typically 5 seconds
- Read all programmed decoder numbers, in one operation. Typically 10 seconds
- No charging required allowing for immediate use
- Suitable for service technicians
- Compact and portable
- Waterproof



# GTS SUPPORT FOR GTI SYSTEMS

## System Support

Your irrigation system is a vital component in the smooth running of your site and one in which you have invested a lot of time and money. But like all things in life, breakdowns can happen at the most inappropriate time.

Bailoy supports your system in various ways:

- GTS support agreements – 2 levels available
- Replacement controllers (DOUs)
- Loan controllers (DOUs)
- Remote software support
- On-site software and hardware support.

These services are carried out via our network of distributors and installers and all have direct access to Bailoy for further assistance and fault-finding if required.

## GTS Support

GTS support is available in two levels, Gold and Silver, tailored to suit different users. Both have been designed to protect your GTI controller (DOU), minimise your irrigation downtime and get you up and running again as quickly as possible. Its many valuable features protect both hardware and software, and include fast replacement of the DOU in the event of electrical failure or lightning damage.

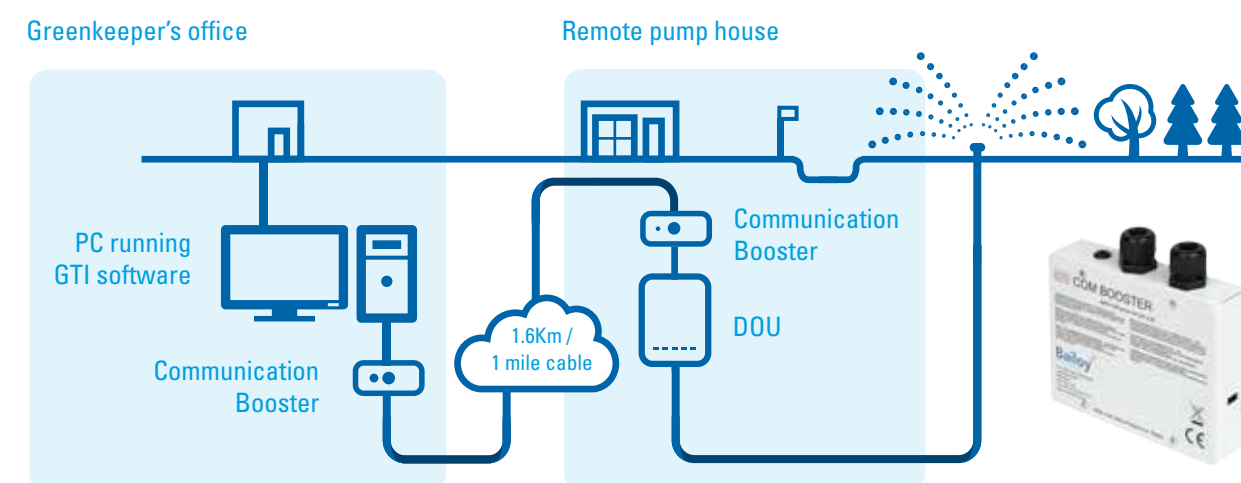
Below is an outline of the services and benefits available.

- Free replacement DOU shipped within one business day of failure or damage
- Free software updates
- Discount on future software upgrades
- Discount on future hardware upgrades
- Technical support via telephone or e-mail or remote access – unlimited
- Free database backup and restore in the event of computer failure
- Discount on selected additional services.

For more information and full terms and conditions of each level visit [bailoy.com](http://bailoy.com)

# DESIGN CONSIDERATIONS

## Extended Communication Link



### Communication Boosters

Communication Boosters are used to create a wired communication link between the central GTI computer and one or more remote DOUs.

Example applications for Communication Boosters include:

1. To create a connection between the central GTI computer and remote DOUs.  
A typical application is when the DOUs are installed in a remote pump station, while the computer needs to be located in the course manager's office.
2. Extending a sites irrigated areas. By installing the expansion DOU close to the new addition, it may be possible to make significant savings on the installation of control cables.
3. To help decentralise the control system by locating DOUs close to the area that needs to be irrigated. This situation can be considered when installing a new control system.

A low-cost 4 x 0.5mm<sup>2</sup> cable (typically an outdoor telephone cable) is laid between the two locations. The cable is terminated with a Communication Booster both ends. Therefore the Boosters are always ordered in pairs. Fibre-optic cables are used to connect the Communication Booster to the computer or DOU.

### Sub-pump decoder for Trident systems

This decoder switches on the output while stations operated from the same cable path are irrigating.

### Master valve decoder for Gemini and Trident systems

The master valve decoder is used to control a set of pumps installed remotely from the DOUs (these are the controllers associated with the GTI PC systems). It can be seen as a remote pump start relay contact as found inside the DOU.



# TRAINING

## FOR GTI SYSTEMS

In order to maintain an efficient irrigation system, it is essential that the customer is trained to the level at which they wish to use the system.

GTI systems are extremely simple to use but, as with anything, additional training means it's possible to further maximise the efficiency of the system for greater cost savings as well as making savings on electric and water.

### **End-user standard training**

Aimed mainly at new customers, this training provides familiarisation with the basic features of the GTI PC software. Key subjects covered are: manual operation, programme creation, programme scheduling and simple diagnostics. Armed with this operational knowledge, customers will be up and running with efficient irrigation practices in no time at all.

### **End-user advanced training**

Building on the standard level of training, this course is aimed at those who want to delve much deeper, with a view to saving costs by overseeing the irrigation system in-house. This becomes possible with the advanced diagnostic features of GTI PC and learning to make adjustments to the configuration of site-specific data.

### **Contractor Tech One**

Aimed at those responsible for all aspects of installing and maintaining a GTI PC system. Some prior control cabling and practical installation knowledge is recommended but not essential.

With field/infrastructure wiring, electrical test procedures, collection of site-specific data and detailed installation all the way from unboxing to training the end-user, this level has it covered.

### **Contractor Tech Two**

Advanced training for those who have a number of installations to commission, maintain and support, this level of training provides operational knowledge and procedures to create databases or Visual Irrigation Programme (VIP) graphics plus multiple database management, using our advanced Mapmaker Professional software package.

Bailoy provide full training on all of its irrigation control systems catering for all operational levels. This can be carried out at your site or at our training office in Harmondsworth, Middlesex, UK.

For further information on courses available, visit [bailoy.com](http://bailoy.com)

**WE PROVIDE  
FULL TRAINING  
ON ALL IRRIGATION  
CONTROL SYSTEMS**

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**FOR DIFFERENT  
LEVELS OF USER**





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