"The Rain Bird ESP-SMT Smart Control System is the product our company has been waiting for. We are all about saving our customers money through real water savings. The ESP-SMT does that better than any previous innovation in the industry. We use this controller on every system we install. It allows us to offer something most other companies do not - and that sets us apart from the competition."

Jim Lewis, *President*
Lewis Landscape Services, Inc.

Water Saving Tips

- A Water Budget feature is available on all Rain Bird AC-powered controllers, allowing users to easily adjust irrigation schedules to changing seasonal landscape water requirements. The ESP-LX Series Controllers also feature an automated Monthly Seasonal Adjust feature to help save water through automatic adjustments every month of the year
- Water savings can also be optimized through daily irrigation schedule adjustments which fine-tune watering based on current weather. All schedule-based controllers can easily be upgraded to include smart weather-based/ET or soil moisture irrigation control capability by adding the Rain Bird ET Manager, or ET Manager Cartridge
- All Rain Bird controllers simplify conservation through a variety of flexible programming features. With the touch of a button, the ESP Modular can recall a previously saved "Contractor Default" irrigation schedule; the ESP-LX Series "Delayed Recall" feature automatically reverts to typical watering schedules after a user-set time period

Major Products

Primary Applications	STP Plus	ESP Modular	ESP-SMT	ESP-LXME	ESP-LXMEF	ESP-LXD	ESP-MC	TBOS™
Residential	●	●	●					●
Light Commercial		●	●	●	●	●	●	●
Commercial/Industrial				●	●	●	●	●
Type of Controller								
Hybrid	●	●	●	●	●	●	●	
Solid State								●
Battery Operated								●
Indoor Location	●	●	●	●	●	●	●	
Outdoor Location		●	●	●	●	●	●	
Features								
Stations (up to)	9	13	13	48	48	200	24	4
Programs (up to)	9	3	13	4	4	4	4	3
Station Timing (up to)	240 min[1]	6 hr[1]	weather-based	12 hr[1]	12 hr[1]	12 hr[1]	12 hr[1]	12 hr
Number of Starts per Program (up to)	4	4	N/A	8	8	8	8	8
Surge protection	●	●	●	●	●	●	●	
230VAC Option	●	●		●	●	●	●	
Master Valve/Pump Start	●	●	●	●[2]	●[2]	●[2]	●[2]	
Water Budgeting	●	●	●	●[6]	●[6]	●[6]	●	
Individual Program Shut-Off	●		●	●	●	●	●	
Rain Delay	●		●	●	●	●	●	
Battery Programmable		●	●	●	●	●	●	●
Sensor Terminals, Status Indicator and Override		●	●	●	●	●	●	
Delay Between Stations (up to)		9 hrs	9 hrs	0 - 10 min.	0 - 10 min.	0 - 10 min.	9 hrs	
Flow Sensing					●	●		
Simultaneous Multi-Station Operation				●	●	●	●	●
Cycle + Soak™			●	●	●	●	●	
Overlapping Programs				●	●	●	●	
Manual On/Off	●	●	●	●	●	●	●	●
Remote Control Compatible	●	●	●	●	●	●	●[5]	
Diagnostic Test			●	●	●	●	●	
Diagnostic Circuit Breaker	●	●	●	●	●	●		
Out-of-Valve Box Programming								●
Submersible (up to)								3.3 ft (1 m)
Vandal/Tamper Resistant								●
Self-Cleaning Solenoid								●
Low Battery Indicator								●
Programming Schedule								
7 Day-of-Week	●	●	●	●	●	●	●	●
2, 3, 5 Fixed Cycle								
1-7 Variable Cycle		●	●					●
1-31 Variable Cycle		●	●	●	●	●		
1-99 Variable Cycle			●				●	
Odd/Even Cycle	●	●	●	●	●	●	●	
Odd 31st	●	●	●	●	●	●	●	●
365-Day Calendar	●	●	●	●	●	●	●	
Event Day Off		●	●	●	●	●	●	
Central Control Compatibility								
Maxicom²® and SiteControl Upgradeable							●	
IQ™ Upgradeable				●	●	●		
Cabinet								
Plastic-Indoor	●	●	●					
Plastic-Outdoor		●	●	●	●	●		●
Powder-Coated Metal Outdoor				●	●	●	●	
Stainless Steel Pedestal							●	
Powder-Coated Metal Pedestal				●	●	●	●	
Hardware/Accessories								
Two-Wire Decoders and Accessories						●		
Rain Sensor	●	●		●	●	●	●	●
Flow Sensor					●	●		
ET Manager™ Cartridge				●	●	●		

[1] With water budgeting, timing can be extended [2] Programmable by station [3] Not compatible with Rain Bird remotes [4] Selectable for each program and by month

STP Plus Series Controller

NEW

4, 6, 9 Station Indoor Controller for Residential Use

- Easiest controller in the irrigation industry to program and operate. So easy to operate you won't even need to read the instructions
- Simple to use "At-a-Glance" programming allows you to see all of the irrigation schedule information for each specific zone at the same time on the controller face plate
- Independent zone control gives you the flexibility to easily accommodate the diverse watering needs of each zone

Features

- The STP Plus Controller allows you to select multiple start times per day on an individual zone basis, helping you maintain a healthier lawn and garden
- The Adjust Water feature enables you to easily increase or decrease the irrigation amount as needed
- In the event of a prolonged rain, you can easily suspend the irrigation schedule up to 72 hours using the controller's Rain Delay feature
- The Water Now features allow you to simply apply additional water to irrigate a single zone or all zones without impacting the previously set schedule
- To help manage water restrictions, the controller can be set to water on specific days of the week
- The irrigation schedule is stored in the event of a power outage using non-volatile memory
- Extra 24 volt terminals are available on the terminal strip to allow attachment of a Wireless Rain Sensor (not included) or other powered accessories

Operating Specifications

- Zone Timing:
  - 0 – 240 minutes in one minute increments
  - 0 – 480 minutes with Adjust Water feature activated
- Start Times:
  - Up to 4 start times (15 minute increments) can be assigned to each zone
  - Overlapping start times will stack to prevent two zones from operating concurrently
- Day Schedule
  - Each zone can water on any day combination (7 day week) or in ODD or EVEN day mode.
- Rain Delay
  - The entire irrigation schedule can be suspended up to 72 hours (12 hour increments).
- Water Adjust
  - The irrigation schedule for the entire controller can be increased by 100% or decreased up to 90% (10% increments).

Electrical Specifications

- Input Required:
  - 120 VAC ± 10%, 60Hz
  - 230 VAC ± 10%, 50Hz
- Output: 25.5 VAC, 0.65A
- Surge Protection:
  - Primary input has a built-in MOV (metal oxide varistor) to protect circuitry
  - Output has a built-in MOV for each station
- Power Outage Protection:
  - A lithium battery saves date and time for up to 7 days
  - Non-volatile memory saves all program information
- Valve capacity: one 24 VAC, 7VA solenoid per station plus a master valve

Dimensions

- Width: 7" (17.8 cm)
- Height: 6" (15.2 cm)
- Depth: 1¼" (3.2 cm)

Models

- STP4PL: STP Plus 4 station - 120V
- STP6PL: STP Plus 6 station - 120V
- STP9PL: STP Plus 9 station - 120V
- ISTP4PLROW: STP Plus 4 station - 230V
- ISTP6PLROW: STP Plus 6 station - 230V
- ISTP9PLROW: STP Plus 9 station - 230V

STP Plus

Water Saving

The STP Plus' independent zone control feature facilitates management of diverse watering needs to different zones, conserving water by allowing appropriate irrigation to different landscape areas

ESP Modular Series

4, 7, 10, 13 Station Indoor or Outdoor Controller for Residential and Light Commercial Use

- Modularity – Start with the 4-station base controller and easily expand to 13 stations. Minimize inventory and always have the right station count on hand
- Quality – Built-in reliability; designed with durable parts, superior surge protection and high temperature tolerance
- Easy-to-use ESP-style programming – Simple to set up, time tested and homeowner approved; you'll be on to the next job faster than ever

Features

- Contractor Default™ Program allows the contractor to save their default program and retrieve it with the push of a button. Easily reload a schedule that has been altered by a homeowner or replace a temporary schedule for new seed or sod
- Auxiliary Station™ (Station 13) can be set to bypass an active sensor to allow watering even if the other stations are disabled or can be set as a normal station. Ideal for covered patio watering or non-irrigation systems such as landscape lighting or fountains
- Programmable day off allows the user to set any day of the week as a non-watering day in any program or schedule, making it easy to comply with requirements such as weekly lawn care, maintenance or watering restrictions
- Global seasonal adjust (0-200%) allows the user to alter the run-time of all the valves in every program to meet changing seasonal needs
- Dedicated sensor terminals allow the user to easily connect a sensor to the controller for maximum water efficiency. A light (LED) and a message on the LCD indicates when a sensor is active
- Sensor bypass switch allows the user to override an active sensor
- Master valve/pump start circuit programmable by station allows operation of connected pump as needed
- Programmable delay between station allows additional time between zones for water well recovery or slow closing valves
- Enhanced Diagnostic Feedback™ alerts the user to conditions when watering is suspended due to an activated sensor, shorted stations or programming errors with a warning light and message on the LCD
- Fuseless, diagnostic circuit breaker identifies a station with valve or wiring problems and continues to water operable stations
- Valve Test Terminal allows the installer to test the valve wires during installation to determine the valve that each wire is connected to
- 365-day calendar with leap year intelligence ensures accurate Odd/Even day watering
- Non-volatile memory maintains the irrigation schedule indefinitely during a power outage
- Five-year lithium battery maintains the time and date for a cumulative life of 5 years during power outages

Operating Specifications

- Number of programs: 3 independent
- Automatic starts: 4 per program, 12 total
- Station timing: 0 to 6 hours for all stations
- Independent programming schedules:
  - Custom (water by day of the week)
  - Odd (water on odd days of the month except on the 31st and February 29th if a leap year)
  - Even (water on even days of the month)
  - Cyclical (1-31 days: water from every other day to once every 31 days)

Electrical Specifications

- Input required: 120 VAC ± 10%, 60Hz / 230VAC ± 10%, 50Hz / 240VAC ± 10%, 50Hz
- Output: 25.5 VAC 1A
- Surge protection: Primary input has 2 built-in MOVs (metal oxide varistor) to protect circuitry. Output has 2 built in MOVs for each valve station
- Power back-up: Lithium coin-cell battery maintains time and date while non-volatile memory maintains the schedule
- Multi-valve station capacity: Up to two 24 VAC, 7VA solenoid valves per station plus a master valve

Dimensions

- Width: 10.7" (27.2 cm); Height: 7.7" (19.5 cm); Depth: 4.4" (11.2 cm)

Models

- Controller Base Models
  - ESP-4Mi: 4 station - indoor 120V
  - ESP-4M: 4 station - outdoor 120V
  - IESP-4MEU: 4 station - outdoor 230V - Europe
  - IESP-4MCH: 4 station - outdoor 230V - China
  - IESP-4MAUS: 4 station - outdoor 240V - Australia
  - IESP-4MROW: 4 station - outdoor 230V - International (except Europe and China)
- Modules
  - ESP-SM3: Three station expansion module

ESP Modular

Water Saving

Three independent programs help conserve water by allowing easy programming of uique irrigation schedules for diverse landscape applications

ESP-SMT Smart Modular Control System

4 to 13 Station Indoor or Outdoor Smart Modular Control System for Residential and Light Commercial Use

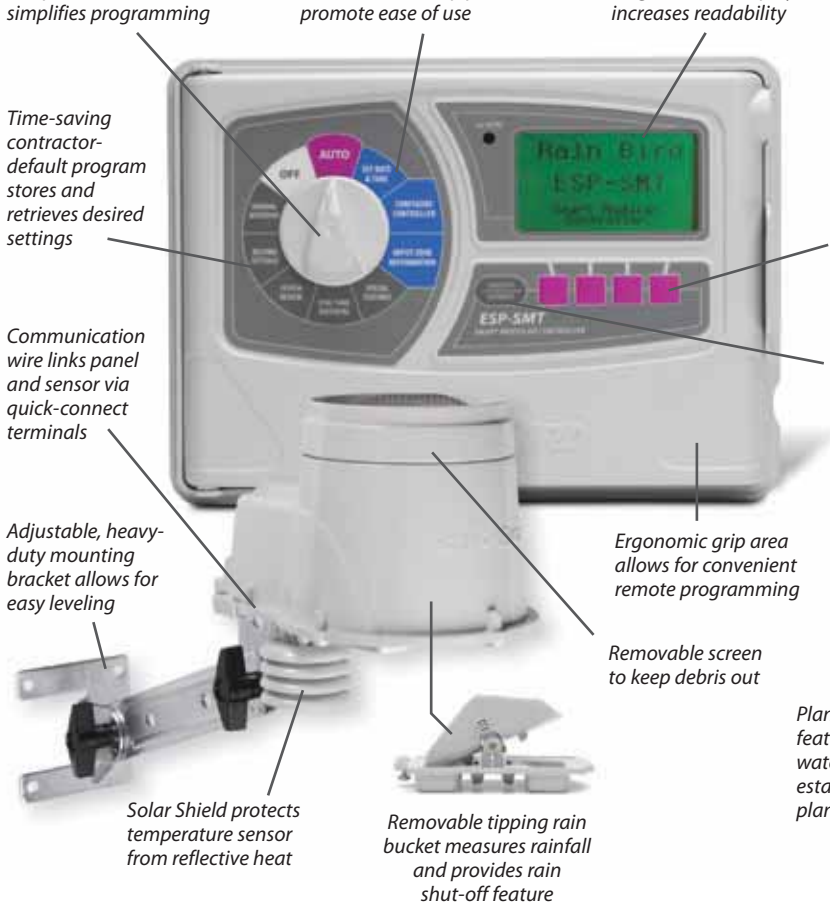
- The proven accuracy of weather–based scheduling – Builds on over 25 years of proven success that Rain Bird has had in employing weather-based scheduling on some of the world's most demanding commercial landscapes and golf course sites
- Quick and easy programming – Programming "wizard" technology walks you through each programming step to assure that the control system is set-up to optimize the irrigation schedule to provide healthy, vibrant plant material while saving water.
- Instant Rainfall and Usable Measurement – Not only does the ESP-SMT suspend irrigation when it rains, it measures useable rainfall. The result is virtually no under- or over-watering
- Zone-specific irrigation schedule calculations – Each zone's irrigation schedule is customized to meet that specific zone's unique watering requirements

Features

- Typically provides water savings of 20% to 50% over traditional time-based controllers
- Each zone's soil moisture balance is maintained at the optimum level using the proven Maximum Allowed Depletion (MAD) irrigation scheduling method
- The ESP-SMT saves water by making real time irrigation schedule adjustments based on a daily reference Evapotranspiration (ET) value that is determined by the weather parameters collected by the on-site weather sensor
- Separate grow-in period allows the user to set up an initial time-based program to establish the plant material for a pre-set number of days. Once this time period expires, the zone will automatically revert to weather –based scheduling
- Rain Suspend is activated when the tipping rain bucket has measured the user-set rain threshold, preventing irrigation from occurring during a rain event
- Tipping bucket rain sensor measures the amount of rainfall and the timing of the rain to account for usable rainfall, thereby preventing over-watering

ESP-SMT with three ESP-SM3 station expansion modules for a total of 13 stations

Hot-swappable three-station expansion modules



English text

Spanish text

Plant maturity selection feature ensures effective watering of both established and newly planted vegetation

ESP-SMT Smart Modular Control System (cont.)

- Automatic Cycle and Soak™ timing determined by the soil type and severity of the slope prevents surface run-off
- Contractor Default™ Program allows the contractor to save prescribed default program in the controller's memory and easily retrieve it with the simple push of a button if a homeowner has altered the contractor's original program
- Reduced irrigation system component damage and liability as the ESP-SMT controller will interrupt irrigation during freezing conditions at the site
- Non-volatile memory maintains the controller settings indefinitely even in the event of a prolonged power-outage
- Integral lithium battery maintains the current date and time for a cumulative life of 5 years during power outages
- Programmable delay between stations allows additional time between zones for water well recovery or slow closing valves
- Master valve/pump-start circuit programmable by station allows operation of connected pump as needed
- Each zone can be set to acknowledge or bypass the tipping rain bucket settings. This is ideal for irrigating plant material that is located under a covered patio or for non-irrigation functions such as landscape lighting
- Fuseless, diagnostic circuit breaker identifies a zone with wiring short problems and continues to water all operable zone while identifying the faulty zone
- Valve Test Terminal allows the user to test the valve wires during installation to determine the valve wire that corresponds to each zone
- Easily upgrades from a 4-station base model to 13 stations with the addition of 3 station expansion hot-swappable modules allowing for station expansion without disconnecting power to the controller
- Backlit graphic dot-matrix display is easy to read in dimly lit areas. The large display text is easy to read and can be changed from English to Spanish by the simple touch of the English/Spanish button located on the face of the controller
- Spacious, heavy-duty cabinet with internal junction box (outdoor model) provides lots of room for wiring. Outdoor model comes with a key locking cabinet

Electrical Specification

- Input Required: 120VAC +/- 10%, 60 Hz
- Output: 25.5VAC 1A
- Surge Protection: Primary input side has (2) built-in MOV's (metal oxide varistor) to protect circuitry. Output side has (2) built-in MOV's for each valve station
- Power back-up: Lithium coin-cell battery maintains time and date while non-volatile memory maintains the schedule
- Multi-valve station capacity: Up to two 24VAC, 7VA solenoid valves per station plus a master valve

Dimensions

- Controller
  - Width: 10.7" (27.2 cm)
  - Height: 7.7" (19.5 cm)
  - Depth: 4.4" (11.2 cm)
- Sensor *(Largest Area Across)*
  - Width: 6.0" (15.2 cm)
  - Length: 8.8" (22.4 cm)
  - Height : 5.9" (15.0 cm)
- Mounting Bracket
  - Maximum reach: 7.0" (17.8 cm)

Models

- Control System Base Models *(includes ESP-SMT controller & weather sensor)*
  - ESP-SMT4i – 4 station indoor* - 120V
  - ESP-SMT4 – 4 station outdoor* -120V
- Upgrade Model *(includes ESP-SMT controller panel & weather sensor)*
  - ESP-SMT-UPG – Kit to Upgrade existing ESP-Modular Controllers**
- Modules
  - ESP-SM3 – Three-station expansion module

** To expand up to 13 stations, use ESP-SM3 – Three Station Expansion Modules*
*** Applies to ESP-M controllers manufactured after April, 2005*

***Note:** All ESP-SMT models come with a heavy-duty adjustable bracket and 25 feet of communication wire for mounting and wiring the weather sensor*

Controller Panel Fits ESP-Modular Chassis For Easy Upgrades

In seconds, upgrade an existing ESP-Modular to the ESP-SMT Smart Control System just by switching panels.

ESP-LXME Controller

8 to 48 Station Capable Commercial Controller

NEW

Smart Approved WaterMark

- Simple - ESP Extra Simple Programming
- Modular - Easily expandable from 8 or 12 stations to 48 stations with 4-, 8-, and 12-station modules
- Upgradeable to Smart Controller or Central Control

ESP-LXME Controller

Features

- Large LCD display with easy to navigate softkey user interface
- Hot-swappable modules, no need to power down the controller to add/remove modules
- Dynamic station numbering eliminates station numbering gaps
- Weather Sensor input with override switch
- Master valve/pump start circuit
- 6 user-selectable languages
- Non-Volatile (100- year) program memory
- Standard 10kV surge protection
- Front panel is removable and programmable under battery power

Water Management Features

- Optional Flow Smart Module™ with Learn Flow utility and flow usage totalizer
- FloWatch™ protection for high and low flow conditions with user defined reactions
- FloManager™ manages hydraulic demand, making full use of available water to shorten total watering time
- SimulStations™ are programmable to allow up to 5 stations to operate at the same time
- Water Windows by program plus Manual MV Water Window
- Cycle+Soak™ by station
- Rain Delay
- 365-Day Calendar Day Off
- Programmable Station Delay by program
- Normally Open or Closed Master Valve programmable by station
- Weather Sensor programmable by station to prevent or pause watering
- Program Seasonal Adjust
- Global Monthly Seasonal Adjust
- Operates in order of station priorities to optimize watering efficiencies and decrease overall runtime.

12-Station, 8-Station, and 4-Station Modules

Water Saving

The Contractor Default Delayed Recall feature automates the change back to a normal irrigation schedule after heavier watering of new seed or sod – with no user input necessary

ESP-LXME Controller (cont.)

Diagnostic Features

- Alarm light with external case lens
- Electronic diagnostic circuit breaker
- Program summary and review
- Variable test program
- RASTER™ station wiring test

Operating Specifications

- Station timing: 0 min to 12 hrs
- Seasonal Adjust; 0% to 300% (16 hrs maximum station run time)
- 4 independent programs (ABCD)
- ABCD programs can overlap
- 8 start times per program
- Program Day Cycles include Custom days of the week, Odd, Odd31, Even, & Cyclical dates
- Manual station, program, test program

Electrical Specifications

- Input required: 120 VAC ± 10%, 60Hz (International models: 230 VAC ± 10%, 50Hz; Australian models: 240 VAC ± 10%,50Hz)
- Output: 26.5 VAC 1.9A
- Power back-up: Lithium coin-cell battery maintains time and date while nonvolatile memory maintains the programming
- Multi-valve capacity: Maximum five 24 VAC, 7VA solenoid valves simultaneous operation including the master valve, maximum two solenoid valves per station
- Certifications
  - UL, CUL, CE, CSA, C-Tick, FCC Part 15

Dimensions

- Width: 14.32 in. (36,4 cm)
- Height:12.69 in. (32,2 cm)
- Depth: 5.50 in. (14,0 cm)

Optional Accessories

- LIMR-Kit: LIMR remote control Kit for Rain Bird Controllers (see page 125)
- LXMM: Powder-Coated Metal Cabinet for ESP-LX Modular (see page 131)
- LXMMPED: Powder-Coated Metal Pedestal for ESP-LX Modular (see page 131)
- ETC-LX: ET Manager Cartridge (see page 119)
- IQ Communication Cartridge (see page 120)
- See page 152 for information on Rain Bird FS-Series Flow Sensors

Models

- Controller Base Models
  - ESP8LXME: 8-station, 120 VAC
  - ESP12LXME: 12-station, 120 VAC
  - I8LXME: 8-station for international markets, 230 VAC
  - I12LXME: 12-station for international markets, 230 VAC
  - I8LXMEEU: 8-station for Europe, 230 VAC
  - I12LXMEEU: 12-station for Europe, 230 VAC
  - I8LXMEAU: 8-station for Australia, 240 VAC
  - I12LXMEAU: 12-station for Australia, 240 VAC
- Models with Flow Sensing
  - ESP8LXMEF: 8-station, 120 VAC
  - ESP12LXMEF: 12-station, 120 VAC
  - I8LXMEF: 8-station for international markets, 230 VAC
  - I12LXMEF: 12-station for international markets, 230 VAC
  - I8LXMEEUF: 8-station for Europe, 230 VAC
  - I12LXMEEUF: 12-station for Europe, 230 VAC
  - I8LXMEAUF: 8-station for Australia, 240 VAC
  - I12LXMEAUF: 12-station for Australia, 240 VAC

Modules

- ESPLXMSM4: 4-station module
- ESPLXMSM8: 8-station module
- ESPLXMSM12: 12-station module
- FSMLXME: Flow Smart Module

ESP-LXME Controller in Optional LXMM Metal Cabinet

Optional LXMMPED Metal Pedestal

ESP-LXD Decoder Controller

NEW

Smart Approved WaterMark

50 – 200 station capable Two-Wire Decoder Commercial Controller

- Simple – uses the same proven Extra Simple Programming as other ESP-LX controllers
- Flexible – easily expandable from 50 – 200 stations with support for 5 Master Valves, 5 flow sensors, 4 weather sensors and a variety of upgrades
- Proven Technology – uses the same FD-TURF two-wire decoders used by the MDC and MDC2 controllers with more than half a million decoders installed worldwide over the past 20 years

Features

- **Rain Bird's Intuitive ESP (Extra Simple Programming)**
  - Uses the same programming interface as other ESP controllers
  - Six user-selectable languages, including English, Spanish, French, Italian, German and Portuguese
  - Two-wire diagnostics to simplify and expedite troubleshooting
  - Four independent programs with capability to overlap
- **Flexible Control**
  - Spacious case with eight lugs to support up to four two-wire paths (all managed as a single two-wire path)
  - UV-resistant, outdoor-rated plastic locking wall-mountable case
  - Uses the same decoder hardware as MDC/MDC2 and SiteControl. Supported decoders include FD-101TURF, FD-102TURF, FD-202TURF, FD-401TURF & FD-601TURF; also supports SD-210TURF sensor decoders and LSP-1 line surge protectors
  - Pre-coded decoder addresses eliminate confusion associated with user-defined decoder addressing; new barcode scanner-based decoder address input with the optional PBC-LXD cartridge
  - User-adjustable SimulStations™ at the program and controller level allows control of simultaneous station operation
  - ESP-LXD is compatible with the new LIMR remote control
  - Controller includes 50 stations; expandable to 200 stations by adding 1 – 2 ESPLXD-SM75 station expansion modules (each station expansion module adds an additional 75 stations)
- **Water Conservation and Management**
  - Cycle+Soak™ by station
  - Rain Delay and Calendar Day Off
  - Programmable Station Delay by Program
  - Program-level and monthly Seasonal Adjust
  - Up to 5 Master Valves/Pump Starts programmable by station plus up to 5 flow sensors
  - Up to 4 Weather Sensors programmable by station

ESP-LXD Decoder Controller

ESPLXD-SM75 Module

ESPLXD-M50 Module

How To Specify

ESP-LXD - SM75

Controller
ESP-LXD: 120V Outdoor
IESP-LXD: 230V International
IESPLXDEU: 230V European
IESP-LXDA: 240V Australian

Modules & Cartridges
SM75: 75-station expansion module
PBC-LXD: Program Backup Cartridge (see next page)

ESP-LXD Decoder Controller (cont.)

- **Flow Management**
  - FloManager™ for management of your system's hydraulic capacity (flow sensors not required)
  - FloWatch™ for SEEF (Seek and Eliminate Excessive Flow) and SELF (Seek and Eliminate Low Flow) for automatic diagnosis and management of mainline breaks or underflow
  - Learn Flow and User-Entered flow supports automatic learning or user-estimated flow rates
  - Flow logging for monitoring and conservation of water consumption
  - Supports English (GPM) and Metric (LPM, LPS, M3/s) flow rate measurement

Dimensions, Electrical Specifications & Certifications

- Dimensions (W x H x D): 14.32" x 12.69" x 5.5" (36.4 x 32.2 x 14.0 cm)
- Electrical input required: 120VAC +/- 10%, 60 Hz; International models 230VAC +/- 10%, 50 Hz; Australian models 240VAC +/- 10%, 50 Hz
- Certifications: UL, CE, CUL, C-Tick
- Lithium coin-cell battery and nonvolatile memory maintain date, time and programming
- Multi-valve capable: up to 2 solenoid valves per station (FD-102 or FD-202 decoders required) with user-adjustable simultaneous operation of up to eight valves and/or Master Valves

Model

- ESP-LXD: 50-station, 120 VAC
- IESPLXD: 50-station for international markets, 230 VAC
- IESPLXDEU: 50-station for Europe, 230 VAC
- IESPLXDAU; 50-station for Australia, 240 VAC

Optional Accessories

- ESPLXD-SM75: 75-station module for ESP-LXD
- PBC-LXD: Program Backup Cartridge for ESP-LXD
- LIMR-KIT: LIMR remote control kit for Rain Bird controllers
- FD-TURF: two-wire decoders
- SD-210TURF: two-wire sensor decoder
- LSP1TURF: two-wire line surge protection
- DPU-210: two-wire decoder programming unit
- LXMM: powder-coated metal cabinet for ESP-LX series controllers
- LXMMPED: powder-coated metal pedestal for ESP-LX series controllers
- ETC-LX: ET Manager™ Cartridge for ESP-LX series controllers (see page 119)
- IQ-NCC: Network Communication Cartridge for ESP-LX Series Controllers (see page 120)
- See page 152 for information on Rain Bird FS-Series Flow Sensors

[1]FD-TURF decoders include peel-off barcode address labels

[2]Barcode scanning pen not included – sold separately; Unitech MS100-2 recommended (www.ute.com)

PBC-LXD Programming Backup Cartridge for ESP-LXD

NEW

Provides program backup and restore and barcode scanning capability for the ESP-LXD controller

Upgrade Kit Features

- Provides 8 full backups, including all programs, flow information and decoder addresses – allows you to easily archive 8 different controllers – restoring all information typically takes two minutes or less
- Snaps into the back of the ESP-LXD front panel; installs without tools; no additional enclosures or external wiring required
- Kit includes cable for interface to barcode scanning pen (pen not included) – allows you to quickly scan decoder addresses into the ESP-LXD controller during installation to save you time

Model

- PBC-LXD (works with all versions of the ESP-LXD controller)

PBC-LXD Cartridge

ET Manager™ Cartridge

Upgrades Any ESP-LX Series Controller to an ET/Weather-Based Irrigation Controller

Features

Water Saving Benefits

- The ET Manager™ Cartridge saves water by making real-time adjustments to the irrigation schedule based on hourly weather information
- Water savings of 20% – 50% over traditional time-based irrigation control
- Measures the four key components of ET: solar radiation, relative humidity, wind, and temperature, as well as effective rainfall
- Adjusts program run-times and the frequency of irrigation
- Four separate moisture balances are maintained, one for each program or hydrozone to efficiently water varied plant types (example: turf, shrubs, trees, annuals, etc)

Easy Installation

- Installs in seconds with no tools into all ESP-LX Series controllers; snaps into a dedicated bay on the back of the controller faceplate
- Antenna mounts on NPS nipple
- Setup Wizard walks user through all key setup parameters

Reduced Liability

- Minimum temperature interrupt to prevent irrigation during freezing conditions reducing liabilities associated with walkway icing

Additional ETC-LX Features

- The ET Manager™ Cartridge uses the same Weather Reach™ signal as the Rain Bird ET Manager™ (ETMi)
- Eliminates the need to travel to controller sites to make adjustments or programming changes, contributing to significant labor savings
- Ribbon cable connects ETC-LX cartridge to the controller
- Antenna cable connects with snap in connector
- Status LEDs show current status of communication
- ETC-LX kit includes ET Manager™ Cartridge, receiver antenna, manual, and ET Manager™ Resource CD which will help schedule irrigation run times based on landscape parameters

Operating Specifications

- Electrical power is provided by the LX Controller
- Operating Temperature Range 5° F-149° F (Radio reception operating temperature: 32° F - 122° F)
- Tipping Rain Gauge wire: 18 – 26 AWG

Optional Accessories

- ETM-RMK: Remote antenna mount for ETC-LX*
- ETM-RG: Tipping Rain Gauge
- ETM-WRSS: Weather Reach Server Software
- ETM-PS: ET Manager Programming Software

** Allows the antenna to be remotely mounted for better signal reception. ET Manager™ has a built in antenna but locations with a weak paging signal may require an external antenna*

For more information call the ET Manager™ Hotline: 1-877-351-6588

ETC-LX
ET Manager™ Cartridge

IQ NCC Network Communication Cartridge

NEW

Upgrades any ESP-LX Series Controller to an IQ Central Control Satellite Controller

- IQ is the perfect irrigation control solution for parks departments, school districts, property managers, landscape maintenance contractors, and water managers
- IQ can manage small single-controller sites as well as large multi-controller sites
- IQ NCC cartridges are compatible with the ESP-LXME traditionally-wired controllers with 1 to 48 station capacity and ESP-LXD 2-wire controllers with 1 to 200 station capacity

Direct Satellites

- Single controller sites would use an IQ NCC cartridge configured as a Direct satellite. A Direct satellite has an IQ central computer communication connection but no network connections to other satellites in the system

Server & Client Satellites

- Multi-controller sites would use one IQ NCC cartridge configured as a Server satellite and the other NCC cartridges configured as Client satellites. The Server satellite has an IQ central computer communication connection and shares this communication connection with the Client satellites though high-speed data cable or radios. The communication connection between Server and Client satellites is called the IQNet™
- Satellites on a common IQNet can share weather sensors and master valves
- Server and Client satellites using high-speed data cable for IQNet communication require installation of an IQ CM Communication Module. Server and Client satellites using radio communication for IQNet communication require installation of an IQSSRADIO radio. Each cartridge kit includes cables to connect the NCC cartridge to connection module and/or radio

IQ NCC-PH Phone Cartridge

- Includes embedded 56K Telco Analog Phone Modem with RJ-11 port
- Includes RJ-11 modular phone cable (analog phone line required)

IQ NCC-GP GPRS/Cellular Cartridge

- Includes embedded GPRS/Cellular Data Modem with antenna connector
- Includes internal antenna for plastic controller enclosures (optional external antenna available for metal case controller enclosures)
- Requires GPRS/Cellular data service plan with static IP address from Cellular Service Provider

IQ NCC-EN Ethernet Cartridge

- Includes embedded Ethernet Network Modem with RJ-45 port
- Includes RJ-45e patch cable (requires LAN network static IP address)

IQ NCC-WF WiFi Cartridge

- Includes embedded WiFi Wireless Network Modem with antenna connector, and internal antenna for plastic controller enclosures (requires LAN wireless network static IP address; optional external antenna available for metal case controller enclosures)
- WPA/WPA2 encryption supported

IQ NCC-RS RS232 Cartridge

- Includes RS-232 Port for IQ Direct Cable or External Modem communication connection to the IQ central computer, and external modem cable (IQ Direct Cable provided with IQ Software Package)
- Used for Direct or Server Satellite applications requiring direct cable connection or external modem (radio or other 3rd-party device) communication with the IQ central computer, and for Client Satellite applications requiring IQNet high-speed data cable or radio communication with the Server Satellite

IQ FSCM-LXME Flow Smart Connection Module

- Provides IQNet high-speed data cable connections for ESP-LXME Controller
- Includes Flow Smart Module and Base Module functions
- Replaces standard ESP-LXME Base Module

IQ CM-LXD Connection Module

- Provides IQNet high-speed data cable connections for ESP-LXD Controller
- Installs in ESP-LXD 0 (zero) module slot

IQ SS-Radio Radio Modem

- Provides IQNet wireless radio communication between Server and Client satellite controllers
- Can also be used with the IQ NCC-RS RS232 Cartridge for IQ central computer to Direct or Server satellite radio communication
- Includes power supply and external antenna (programming software and cable provided separately)

IQ NCC Network Communication Cartridge

ET Manager™

Upgrades Standard Irrigation Controllers to ET / Weather-Based "Smart" Controllers

- ET Made Easy - Compatible with virtually any irrigation controller, regardless of the number of stations - the ET Manager converts conventional irrigation controllers to weather-smart irrigation systems
- The Smart Choice - Uses an hourly (not just daily) wireless signal from local weather stations to measure evaporation and rainfall to automatically control watering
- Intelligent Water Management - ET Manager only allows watering when necessary according to local weather conditions promoting healthier landscapes and conservation of our most precious resource

Universal Compatibility

- Compatible with virtually any irrigation controller through the common wire, regardless of the number of stations
- Provides pulse output of ET to compatible controllers

Easy to Use

- Large graphical LCD display makes the ET Manager easy to read, program and understand
- Weather information and graphs are maintained from the last two weeks allowing quick viewing of rain, air temperature, wind speed, relative humidity and ET
- At-a-glance display shows the current landscape moisture level for valve groups "A" and "B"
- Easy to use intuitive menu allows the user to quickly access programming and system information
- "A" and "B" indicator lights let the user know whether watering will occur or not
- Override button allows the user to quickly override the ET Manager to permit manual watering

Maximum Flexibility

- Programmable delays for rain, temperature and wind allows irrigation to be interrupted until adverse conditions change
- Can receive signal to interrupt all irrigation for emergency management or drought restrictions
- Two independent ET-based irrigation schedules to accommodate differing plant types (ex. turf and shrubs)
- Daily watering window allows non-ET-based controller programs to operate normally
- Adjusts to any cycle mode (CUSTOM, ODD, ODD 31st OFF, or EVEN)
- Programmable landscape adjustment values based on plant type used to meet site specific watering needs
- Compatible with Rain Bird WS Pro Weather Station as well as other weather station networks through custom integration

ET Manager

Water Saving

The Rain Bird ET Manager measures evaporation and rainfall to automatically control watering cycles. The unit receives a wireless signal from local weather stations to calculate evaporation and adapts to any sprinkler controller to allow watering only when needed.

ET Manager (cont.)

Reliable Operation

- Power failure backup: A 9-volt alkaline battery is included to keep current time and date during a power outage
- UL listed; CUL, FCC approved
- User programmable 12-month historical ET database for backup in the unlikely event that the weather signal is interrupted
- A yellow LED indicates "Attention" conditions the user should be aware of
- Settings can be saved and later recalled for system restoration – "Contractor Default"
- Secure password protected system prevents unauthorized program changes

Healthy Landscape Through Precision Irrigation

- Hourly weather data adjusts the soil moisture balance used to control the watering frequency to meet the actual water needs of the landscape – never over-water or under-water again due to unpredictable weather
- The programmable irrigation amounts correspond to the irrigation controller settings and are linked to the soil moisture balance to allow watering once soil moisture settings are reached
- Optional tipping rain gauge can be used on site to replace rain information from the weather station
- Programmable effective rain settings, based on soil conditions, automatically limit the amount of rain used in the soil moisture balance

Save Time and Money

- Quick and easy installation allows users to realize savings and benefits faster
- Information log reports the date and time of the last watering, number of times watering occurred, and other events to track operation
- Reduce water costs dramatically through sustained conservation. Average water savings of 20%-50% are possible using the ET Manager™
- Reduce labor costs – scheduling changes are made automatically based on current weather conditions instead of manual seasonal adjustment

Dimensions

Width: 5.6 inches (14.2 cm)

Height: 6.5 inches (16.5 cm)

Depth: 2.0 inches (5 cm)

Weight: 15 ounces (435 g)

Programmable Schedule Options

Available watering days can be limited to accommodate site needs. The look-ahead feature may allow watering the day before a non-available watering day. ET Manager Scheduler Software provided FREE of charge on ET Manager Resource CD.

1. ODD day watering (per program)
2. EVEN day watering (per program)
3. CUSTOM (weekly schedule)
4. ODD 31st off (per program)

Electrical Specifications

- Power supply: 12 to 30 volts AC or 12 to 35 volts DC
- Operating temperature range: 5° F - 149° F (Radio reception operating temperature: 32° F - 122° F)
- Terminal wire gauge: 14 to 26 awg
- Ground lug wire gauge: 10 to 18 awg
- Serial communication: TTL 1x6 header
- Optional external antenna connection: BNC female, 930 MHz, 50 ohm
- Rain gauge sensor voltage: 3.3 volts DC
- Battery backup: 9-volt alkaline battery included for programming under batter power and maintaining program current time and date during power outages
- Three-year warranty

Optional Accessories

ETMi-ANT: ETMi Remote Antenna Kit*

ETM-RG: Tipping Rain Gauge

ETM-WRSS: Weather Reach Server Software

ETM-PS: ET Manager Programming Software

ETMi-OE: ETMi Outdoor Enclosure

** ET Manager has a built in antenna. Locations with a weak paging signal may require an external antenna*

Models

ETMi: ET Manager Control Device, indoor model only

For more information call the ET Manager Hotline: 1-877-351-6588

ESP-MC Series

12, 24 Station Outdoor Controller for Commercial Use

- ESP – Extra-Simple Programming with self-prompting large alphanumeric LCD display makes this controller easy to program, read, and understand
- Surge protection and contamination-resistant design make the controller reliable and robust under extreme field conditions
- Upgradeable to Maxicom²® and SiteControl satellite

ESP-MC

Features

- **Rain Bird's Intuitive ESP (Extra Simple Programming)**
  - Water budget by program, adjustable in 1% increments from 0 – 300% (up to a maximum run-time of 16 hours)
  - Exclusive Rain Bird Cycle + Soak™ by station allows total station run-time to be split into usable cycles, minimizing puddling and runoff
  - Adjustable Delay Between Stations provides time for water well recovery or time for slow closing valves to turn off completely
  - 12-hour watering duration (Water Budget adjustable to 16-hours) for any or all stations to aid with drip compatibility
- **Rain Bird Reliability**
  - A removable battery-powered front panel makes programming prior to installation quick and easy
  - An additional lithium backup battery to maintain date and time for 10 years and user programs for 100 years
  - Dedicated sensor terminals with Sensor Bypass for manual override of an active sensor, plus programmable Sensor Override by station
  - Universal remote ready, with pre-installed remote control connectors
- **Time-Saving Troubleshooting**
  - RASTER™ wiring test quickly diagnoses field wiring and solenoid problems
  - Built in diagnostic functions let you confirm program information, calculate total program and valve run-times, and run a test program to operate all system valves sequentially
  - Diagnostic self-setting circuit breaker identifies valve or wire faults and continues to water operable stations ("FAULT" message appears on the LCD screen)

ESP-MC-SS

Water Saving

The Rain Bird Cycle + Soak feature maximizes efficient use of water by irrigating when irrigation zones are ready for additional water instead of adhering to a fixed irrigation schedule that may result in runoff

ESP-MC Series (cont.)

- **Robust Design**
  - Available in 12 or 24 station versions
  - Best in class surge protection – 5 times better than major competitors – provides peace of mind during brownouts and lightning storms
  - Available in a powder coated, wall-mount, metal cabinet with mounting plate and mounting bracket or a stainless steel pedestal
  - Two dedicated master valve/pump start circuits, one programmable by station, for optimal irrigation control
  - Quick connect terminal strip for fast installation

Operating Specifications

- Automatic starts: Four independent programs (A, B, C & D-drip) with 8 start times per program per day (32 total starts); program stack or overlap programmable by program
- Station timing: 0 – 12 hours for all stations (0 – 120 minutes selectable in 1 minute increments; above 120 minutes selectable in 10 minute increments)
- Built in support for a variety of programming schedules:
  - 365-day calendar with leap year intelligence
  - Even, Odd or Odd 31 day watering (per program)
  - Cyclical watering (1 – 99 days, variable per program)
  - Custom watering (day of the week by program)
  - Manual watering: single or multiple valve or entire program
- Variable 1 – 99 minute test program
- Programmable 1 – 99 day rain delay

Electrical Specifications

- Input required: 117VAC ± 10%, 60Hz (International models: 230VAC ± 10%, 50Hz)
- Output: 26.5VAC, 2.5A
- Station load capacity: Up to two 24VAC, 7VA solenoid valves per station plus a master valve or pump start relay
- Diagnostic circuit breaker skips and indicates stations with overloaded circuits
- Power supply overload, backup fuse: 3.0A SLO-BLO
- Battery backup: 9VDC, Ni-Cad rechargeable for programming under battery power and for maintaining active program-in-progress during a power outage
- Heavy-duty electrical surge protection for both input power and field outputs
- UL Listed; CSA, CE, C-Tick approved

Dimensions

- Powder-Coated Metal Wall-Mount
  - Width: 11 5/16" (28.7 cm)
  - Height: 11 1/2" (29.2 cm)
  - Depth: 6 1/2" (16.5 cm)
- Stainless Steel Pedestal
  - Width: 11 1/2" (29.2 cm)
  - Height: 30" (75 cm)
  - Depth: 11 1/2" (29.2 cm)

Models

- Powder-Coated Metal Wall-Mount
  - ESP-12MC: 12-station, 120 VAC
  - ESP-24MC: 24-station, 120 VAC
- Stainless Steel Pedestal
  - ESP-12MCSS: 12-station, 120 VAC
  - ESP-24MCSS: 24-station, 120 VAC

Optional Features

- Pedestal Mount (PED-DD16): Grey pedestal, mount wall mount version on top

Replacement Face Plates

- ESP-12MC-FPW: 12-station waterproof front panel face plate
- ESP-24MC-FPW: 24-station waterproof front panel face plate
- ESP-40MC-FPW: 40-station waterproof front panel face plate

ESP-MC Quick Connect Terminal Strip

Landscape Irrigation and Maintenance Remote (LIMR)

NEW

The Remote. Reborn.

The all-new Rain Bird® Landscape Irrigation & Maintenance Remote (LIMR) was designed for usability, performance and reliability. Every feature will save you time and money in maintaining efficient Rain Bird irrigation system operation and head alignment. Using less water while getting more done.

Irrigation remote compatible with the ESP-Modular, ESP-SMT, ESP-LX, ESP-LX+, ESP-LXME, ESP-LXMEF, ESP-LXD, ESP-LXDF, STPi, and STP Plus Controllers

- Permanently install the quick connect cable to quickly attach a receiver whenever you visit a jobsite
- For commercial applications, permanently mount a receiver and easily connect to it with your handheld transmitter
- Capable of operating multiple receivers simultaneously with the same handheld transmitter

Features

- Simple interface and easy-to-follow, on-screen instructions, such as:
  - Run a system test
  - Activate a zone
  - Run a program
  - Custom receiver naming
  - Skip to any zone by entering its number
- Save time and money as you maintain efficient Rain Bird system operation and head alignment
- Maintaining Rain Bird system operation and head alignment is easier and faster than ever because you no longer have to walk to the controller to turn zones on or off
- A single crew member can activate zones, blow out systems and perform other winterization or maintenance tasks reducing your cost of doing business
- Install the receiver in seconds with just one hand and operate up to 255 zones
- Skip to any zone by entering its number. No need to scroll through zones in consecutive order
- Run a system test, specifying how many minutes, which zone to start with and which zone to end with
- Two-way communication between the remote and the controller allows remote activity information to be displayed on the handheld device
- Custom names can be assigned to 20 different receivers for easy identification. Each handheld remote can control up to 128 different receivers simultaneously
- Operating range of up to 1.5 miles (2.4 km) line of sight
- Actual range will vary depending on site terrain and obstacles that block the line of sight. Obstructions such as buildings and walls as well as the strength of interfering signals can affect range

Specifications

- Operating range: Up to 1.5 miles (2.4 Km) line of sight
- Two-way communication using FCC certified 900MHz radios
- UL Recognized
- Zone capability: 1 to 255
- Battery type: 3 – AA Alkaline
- Custom names can be assigned to 20 different receivers for easy identification
- Each handheld remote can control up to 128 different receivers simultaneously

Dimensions

- KIT: 12" (30.5cm) H x 16.75" (42.5cm) W x 2.75" (7.0cm) D
- TX: 11.2" (28.5 cm) H x 3.6" (9.3cm) W x 1.6" (4.1cm) D
- RX: 6.2" (15.8 cm) H x 4.1" (10.5cm) W x 1.22" (3.1cm) D

Models (US and Canada only)

- LIMRKIT: includes TX, RX, QC603, QC503, batteries and a durable plastic carrying case
- LIMRTX: Transmitter
- LIMRRX: Receiver
- LIMRQC503: 5 pin Quick Connect, 3 feet long
- LIMRQC530: 5 pin Quick Connect, 30 feet long
- LIMRQC603: 6 pin Quick Connect, 3 feet long
- LIMRQC630: 6 pin Quick Connect, 30 feet long

Landscape Irrigation and Maintenance Remote (LIMR)

TBOS Control Module and Field Transmitter

TBOS™

Battery-Operated Controller for Commercial Use

- The TBOS battery-operated line of buriable controllers allows the use of automatic irrigation in the absence of AC power
- Rugged case, inside valve box installation, and separation of the transmitter from the control module avoid vandalism and tampering with your programs
- IP-68 rated waterproof case assures reliable operation under water and safeguards your investment

Features

- Ideal for commercial applications, including municipal parks, street and highway landscape projects and construction projects
- Convenient temporary option for providing uninterrupted irrigation while repairs are made to an AC-powered system
- 365-day calendar (adjusts for leap year)
- AM/PM or 24-hour display
- Run-time from 1 minute to 12 hours in 1-minute increments
- Basic programming (standard mode) includes 3 independent programs on a 7-day program cycle
- Additional cycles (turbo mode) include even, odd, odd-31 and 1-6 day program cycles for maximum flexibility
- 8 start times per program per day
- Battery indicator reports battery status in the TBOS Field Transmitter
- Independent station operation allows simultaneous start times or sequential start times based on system hydraulic capacity
- The TBOS field transmitter has a large Liquid Crystal Display (LCD) with self-explanatory function icons. Each function is indicated by an easy-to-understand symbol
- The 7-key keypad is equipped with a "beep" sound to confirm that a key has been pressed for fast and sure programming
- One TBOS field transmitter programs an unlimited number of TBOS Control Modules
- Field transmitter and control module have external optical connectors for easy plug-in
- It is possible to transmit information even if the module is under water
- TBOS potted latching solenoid is compatible with all Rain Bird valves in the DV, DVF, ASVF, PGA, PEB, PESB, GB-R, EFB-CP-R, BPE and BPES series
- The TBOS solenoid adapters will adapt the potted latching solenoid for use in retrofit applications with selected Irritrol® (Hardie/Richdel) and Buckner® valves or Champion® and Superior® valve actuators

Water Saving

TBOS offers both fixed and interval day watering schedules to facilitate both water conservation and adherence to municipal watering restriction schedules

TBOS Control Module

- Available in 3 models: 1, 2, and 4 stations
- Operates one valve per station
- Station timing: 1 minute to 12 hours in 1-minute increments with a 365-day calendar. Stations are assigned to a single program
- Active sensor connection accommodates Rain Bird® RSD-BEx Rain Sensor
- Operates with only one 9V alkaline battery (Energizer™ and Duracell™ are recommended) type 6AM6 (international standard) or 6LR61 (European standard): battery not included
- Battery life is one year with a high-quality 9V alkaline battery
- IP-68 rated waterproof case for reliable operation under water
- Dimensions: 3¾ x 5⅛ x 2 inches (9.5 x 13.0 x 5.3 cm)
- Weight: 17.64 ounces (500 g)
- Maximum wire run between the module and solenoid:

Wire Size	Maximum Distance
18 AWG (0.75 mm²)	32 ft (10 m)
16 AWG (1.5 mm²)	50 ft (15 m)
14 AWG (2.5 mm²)	80 ft (24 m)

- C-Tick approved

TBOS Field Transmitter

- Field transmitter required for programming control module
- Dimensions: 3½ x 7½ x 1⅞ inches (9.0 x 19.0 x 4.5 cm)
- Weight: 7.05 ounces (200 g)
- Operating temperature: 32° to 140° F (0° to 60° C)
- C-Tick approved

TBOS Potted Latching Solenoid

- Two 18 gauge (0.75 mm²) wires are supplied: 23.6 inches (60 cm) long
- Fits Rain Bird valves: DV, DVF, ASVF, PGA, PEB, PESB, GB-R, EFB-CP-R, BPE and BPES Series
- 150 psi (10 bar) maximum operating pressure
- Dimensions: 1⅜" x 2⅜" x 1½" (4.0 cm x 6.0 cm x 4.2 cm)

TBOS Solenoid Adapters

- Easy to install
- Black adapter for plastic valves allows the TBOS potted latching solenoid to be used with selected Irritrol (Hardie/Richel) and Buckner valves
- Brown adapter for brass valves allows the TBOS potted latching solenoid to be used with selected Champion and Superior valve actuators

Models

- TBOS-FTUS: Field Transmitter
- TBOS-1CMUS: 1-Station Control Module
- TBOS-2CMUS: 2-Station Control Module
- TBOS-4CMUS: 4-Station Control Module
- TBOS-PSOL: Potted Latching Solenoid
- TBOS-ADAPP: Solenoid Adapter for plastic valves
- TBOS-ADAPB: Solenoid Adapter for brass valves

TBOS Potted Latching Solenoid and Solenoid Adapters

WR2 Series Wireless
Rain/Freeze Sensors

WR2 Series Wireless Rain/Freeze Sensors

Smart Approved WaterMark

Saving water and so much more.

Rain and rain/freeze sensors are becoming "must have" components for irrigation systems these days. Rain Bird designed the new WR2 wireless sensor to exceed the standard. With revolutionary features, this sensor saves time, improves system performance and enhances your reputation as a water management expert. Reliable signal transmission and other innovations deliver superior responsiveness to rainfall and cold temperatures, while user-friendly features cut installation and programming time in half. Choose your own rainfall set points and save up to 35% on water usage while promoting lush, beautiful landscapes.

- Designed for 24 VAC residential and commercial irrigation systems, this high-quality product saves water and extends irrigation system life by automatically sensing precipitation and interrupting irrigation during rain and low temperature events
- Highly intuitive icon-driven controller interface simplifies programming
- Enhanced antenna array provides superior signal reliability that overcomes most line-of-sight obstructions

Features and Benefits

- Sensor signal strength indicator enables one person set up, reducing installation time
- Convenient adjustment and monitoring of rain or freeze settings at the controller interface
- Programming logic can suspend irrigation using the "Quick Shut Off" feature or when the amount of rainfall exceeds the rainfall set point
- Wireless Rain / Freeze Sensor will suspend irrigation when the system reaches a programmed low temperature set point
- Simple battery replacement requiring no tools or need to disassemble sensor
- Easy to install, self-leveling sensor bracket mounts to flat surfaces or rain gutters
- Antennas concealed within the units for greater visual appeal and product robustness

Electrical Specifications

- Application: suitable for use with 24 VAC controllers (with or without pump start / master valve)
- Electrical rating suitable for use with up to six 24VAC 7VA solenoids plus an additional master valve or pump start that does not exceed 53VA
- Controller Interface Wire: 30" (76 cm) length of #22 gauge (0.64 mm) UV resistant extension wire
- UL, cUL, CE, C-Tick, and WEEE certifications

How To Specify

WR2 - RC

Model
WR2

North America (916 MHz)
RC: Rain Combo
RFC: Rain/Freeze Combo
RS: Rain Sensor Only
RFS: Rain/Freeze Sensor Only
RFI: Rain/Freeze Controller Interface Only

- FCC approved spread spectrum 2 way radio transceivers with FCC Class B approvals
- Signal transmission distance of 700' line of sight
- Battery life: four or more years under normal operating conditions
- 6 KV surge / lighting protection

Mechanical Properties

- Adjustable rainfall settings from 1/8" – 1/2" (3 – 13 mm)
- Adjustable low temperature settings from 33°F – 41°F (0.5° – 5°C)
- Three irrigation modes to select: Programmed, Suspend Irrigation for 72 hours, Override sensor for 72 hours
- High-grade, UV resistant polymer units resist harmful environmental affects
- "Quick Shut Off" suspends active irrigation cycle within approximately two minutes

Dimensions

- **WR2 Controller Interface**
  - Width: 3.1" (7.9 cm)
  - Length: 6.8" (17.2 cm)
  - Depth: 1.7" (4.3 cm)
  - Distance between Mounting Holes: 6.25" (15.9 cm)
- **WR2 Sensor Assembly**
  - Sensor Length: 5.8" (14.7 cm)
  - Attachment Bracket Length: 4.6" (11.7 cm)
  - Distance between Mounting Holes: 4.25" (10.8 cm)
  - Horizontal displacement (bracket + fixed ball arm): 5.5" (14.0 cm)

Models

- WR2-RC: Rain Combo
- WR2-RFC: Rain/Freeze Combo
- WR2-RS: Rain Sensor Only
- WR2-RFS: Rain/Freeze Sensor Only
- WR2-RFI: Rain/Freeze Controller Interface Only

Replacement or Spare Parts

- WR2 Battery - #651009S
- WR2 Disk Assembly - #637810S

Step 1

Program in seconds

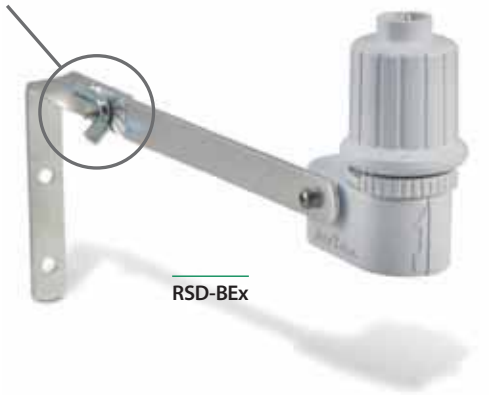
Step 2

Determine best sensor location

Step 3

Install sensor easily using mounting bracket

Latching Hinge Maintains Alignment



RSD-BEx

RSD-CEx

RSD-BEx / RSD-CEx

Rain Sensor

Smart Approved WaterMark

Features and Benefits

- Automatic rain shutoff prevents overwatering due to natural precipitation
- Robust, reliable design reduces service call backs
- Moisture sensing disks work in a variety of climates
- Different sensor mounts permit speed and flexibility on the job site
- Latching hinge maintains alignment

Mechanical Properties

- Multiple rainfall settings from ⅛"– ¾" (5 - 20 mm) are quick and easy with just the twist of a dial
- Adjustable vent ring helps control drying time
- High-grade, UV resistant polymer body resists the elements
- Available in rugged bracket version (RSD-BEx model comes with 5" latching aluminum bracket) or conduit version (RSD-CEx) for a clean and professional look

Electrical Specifications

- Application: Suitable for low voltage 24 VAC control circuits and 24 VAC pump start relay circuits*
- Switch electrical rating: 3A @ 125/250 VAC
- Capacity: Electrical rating suitable for use with up to ten 24 VAC, 7 VA solenoid valves per station, plus one master valve
- Wire: 25' (7.6 m) length of #20, 2 conductor UV resistant extension wire
- UL, cUL listed; CE, C-Tick approved

* *Not recommended for use with high voltage pump start, pump start relay circuits or devices.*

Dimensions

- RSD-BEx
  - Overall length: 6.5" (16.5 cm)
  - Overall height: 5.4" (13.7 cm)
  - Bracket hole pattern: 1.25" (3.2 cm)
- RSD-CEx
  - Overall length: 3" (7.6 cm)
  - Overall height: 2.75" (7 cm)

Models

- RSD-BEx: Rain sensor w/ latching bracket, extension wire
- RSD-CEx: Rain sensor w/ threaded adapter, extension wire

How To Specify

RSD - BEx

Extension Wire
25' (7.6 m) length

Mounting
BE: Metal Bracket
CE: Conduit Version

Model
RSD: Rain Sensing Device

Rain Check™

Automatic Rain Shutoff

Features

- Adjustable stainless steel sensing probes offer the flexibility of triggering the rain shutoff with as little as ⅛" (3.2 mm) of precipitation
- Water in the rain collector pan evaporates faster than soil moisture to permit watering if required
- Electronic design eliminates micro switches and water absorbing disks which may rust and/or wear out
- UV resistant plastic construction increases operating life in harsh environments
- Works with almost all 24 VAC controllers for maximum versatility

Specifications

- Input required: connects to valve common wire
- Fuse: 3 A
- Collector pan can be removed for cleaning
- Multi-valve capacity: Up to three 24 VAC solenoid valves per station
- Not recommended for use with direct acting (non-flow switch) pump start relays

Dimensions

- Length: 8" maximum (20.3 cm)
- Height 4" maximum (10.2 cm)
- Width: 2½" maximum (6.4 cm)

Model

- Rain Check

Rain Check

Controller Pedestals

Pedestals for ESP-MC, ESP-LX Series, ESP-SAT, and CCU

Features

- Includes all necessary mounting bolts, nuts, and washers

Specifications

- Material: Powder-coated steel
- Field wiring connection: In controller

Dimensions

Model	Height	Width	Depth
• PED-DD16	23½" (59.7 cm)	10½" (26.7 cm)	5" (12.7 cm)
• LXMMPED	28" (71.1 cm)	14¼" (36.2 cm)	7¼" (18.4 cm)
• LXMM	12⅞" (32.7 cm)	14½" (36.8 cm)	7¾" (19.7 cm)

Model

- PED-DD16: Pedestal for ESP-MC, ESP-SAT, and CCU
- LXMM: Metal Cabinet for ESP-LX Series Controllers*
- LXMMPED: Metal Pedestal for ESP-LX Series Controllers*

* ***Note:*** *Metal cabinets and pedestals are not standard on ESP-LX Series controllers and must be purchased separately*

PED-DD16 Shown with ESP-12MC

LXMMPED Shown with ESP-LXME in LXMM Metal Cabinet

DB Series Wire Connector

Direct Bury Twist-On Wire Connector with Strain Relief

Features and Benefits

- Easy to use single piece connector
- Strain relief to ensure wires are secure and won't pull apart
- UL 486D Certified for direct burial
- Waterproof silicon sealant protects against corrosion
- Recommended for two-wire decoder systems

Specifications

- Fits wires ranging from 22ga to 6ga
- Use on connections from 24 VAC to 600 VAC

Model

- DBTWC25

DB Series Wire Connector

Pigtail

Features

- 6-feet (1.8 m) long
- Three 16 gauge stranded conductor wires
- 90 degree molded plug type NEMA 5-15P
- Gray color

Model

- PIGTAIL

PIGTAIL

Rain Bird Controller Power Usage Summary (With a Master Valve)

	STP Plus	ESP-Modular	ESP-SMT	ESP-LX Series
Controller Standby Power	0.86W	2.62W	3.36W*	7.26W
Power Used by Master Valve	4.5W	4.5W	4.5W	5.0W
Power Used for Each Active Valve	3.40W	3.75W	3.75W	3.75W

** Controller with sensor attached*

	ZONE 1	2	3	4	5	6	7	8	9	10	
a) Master valve power from table (if applicable)											Watts
b) # of valves on this zone											
c) Valve power from table above											Watts
d) Total daily run-time for this zone											minutes
Daily valve power usage by zone = $\frac{(a+b*c)*d}{60,000}$											Kwh

Total Daily Valve Power Usage = Add the daily usage of all zones above _____ Kwh

Controller Daily Power Usage = Controller Standby Power * 24 / 1000 _____ Kwh

Yearly / Monthly Power Usage = (Controller Daily Power Usage * # days the system plugged in) + (Total Daily Valve Power Usage * Number of days the system irrigates) _____ Kwh

Facts About Rain Bird's Commitment to Support Water Conservation Efforts

Rain Bird has hosted 12 Intelligent Use of Water™ Summits since 2004

- Summits convene water, environmental and green industry experts from around the world to discuss strategies and initiatives in outdoor water conservation
- Past Summit locations: California; Arizona; Washington, DC; France; Spain; Australia
- View past Summit proceedings (via video and PDFs) at: http://www.rainbird.com/corporate/IUOW/summits.htm

Rain Bird presents The Intelligent Use of Water Film Competition

- Filmmakers and green industry professionals are invited to share their thoughts on responsible water use through the powerful medium of film
- The top short film submissions (1-10 minutes in length) are shown at a special screening event in LA
- Winners receive cash prizes
- To see past winning entries, go to: http://www.iuowfilm.com

Rain Bird educates our industry and our communities on water conservation

- Rain Bird has published four white papers that examine the global water crisis and explore potential solutions
- White papers available for free at: http://www.rainbird.com/corporate/IUOW/whitepapers.htm
- Rain Bird has published two educational curricula for elementary students and their teachers on water conservation
- Curricula available for free at: http://www.rainbird.com/corporate/IUOW/education.htm

Rain Bird sponsors National Public Gardens Day

- In partnership with the American Public Gardens Assoc. (APGA), Rain Bird seeks to raise awareness of the role botanic gardens, arboreta, conservatories and zoological gardens play as stewards of the environment
- National spokesperson Paul James (host of HGTV's Gardening by the Yard) conducts interviews with print, TV, radio and online outlets from across the country and hosts TV and radio public service announcements focusing on public gardens' educational activities in plant management and water conservation
- Celebrated the Friday before Mother's Day
- Visit http://nationalpublicgardensday.org to learn more

Rain Bird's Intelligent Use of Water Awards provide grants to promote outdoor water conservation

- The interactive grant program awards funds to water conservation and environmental sustainability projects that promote water conservation and green spaces in communities around the world.
- Visit http://IUOWAwards.com to learn more