



"We recommend Maxicom²® to our clients because the system is the most efficient and effective method for controlling individual zones within complex irrigation systems. Maxicom² analyzes weather conditions from the previous 24 hours and adjusts the amount of water needed for the conditions and for each specific zone. Our clients reap the benefits – lower costs for labor and water, plus healthier plants and turf."

*Ellen Beighley, President
Irrigation Management Systems*



Water Saving Tips

- Maxicom², SiteControl, and IQ™ Systems provide fully-automated ET (evapotranspiration) adjustment of irrigation programs for maximum water savings
- Maxicom² and IQ™ Systems provide the tools to efficiently water dozens or even hundreds of irrigation systems across multiple remote sites from a single computer
- Maxicom² and IQ™ FloWatch™ utility monitors and records real-time flow and automatically diagnoses and eliminates flow problems caused by broken pipes, vandalism or stuck valves

Major Products

Primary Applications	IQ™	SiteControl	Maxicom ² ®
Multi-Site Central Control	●		●
Single Site Central Control	●	●	
Satellite Controller System	●	●	●
Two-Wire Decoder System	●	●	
Hybrid Satellite/Decoder System	●	●	
Features			
Computer Programming	●	●	●
Computer Monitoring	●	●	●
Computer Manual Operation	●	●	●
Interactive Map Interface		●	
ET Programming	●	●	●
Automatic ET Adjustment	●	●	●
Smart Weather Reaction		●	
Programming Dry-Run	●	●	●
Flow Management	●	●	●
Flow Monitoring	●	●	●
Search/Eliminate Problem Flow	●	●	●
High Flow Shut-off	●	●	●
Low Flow Shut-off	●		●
Rain Watch		●	●
Rain Shutoff	●	●	●
Cycle + Soak	●	●	●
Hardware			
Computer Included with Software		●	●
CCU - ESP-SAT Interface			●
TWI - ESP-SAT Interface		●	
SDI/LDI - Decoder Interface		●	
FD-TURF Two-Wire Decoders	●	●	
ESP-SAT Satellite		●	●
ESP-SITE-SAT Site Satellite			●
ESP-MIB Upgrade Kit		●	●
ESP-SITE-U Upgrade Kit			●
ESP-LX Series Satellite	●		
IQ-NCC Upgrade Kit	●		
LINK Radio/Modem Kit		●	●
FREEDOM Remote Control		●	●
DEC Sensor-Pulse Decoders		●	●
RSD Rain Shut-off Device	●	●	●
FS Flow Sensors	●	●	●
WSPRO2 Weather Station	●	●	●
WSPRO LT Weather Station	●	●	●
RAINGAUGE Rain Sensor		●	
ANEMOMETER Wind Sensor	●	●	●

Central Controls

About Central Control Systems

Irrigation central control is computer-based and enables the programming, monitoring and operation of an irrigation system from a central location. Central control systems are designed to allow a single site (college campus, corporate headquarters) or a set of sites (school district, parks and recreation department) to control all their irrigation from one central computer. Central control can monitor and automatically adapt system operation and irrigation run-times in response to conditions in the system and surrounding area (weather change, pipe breaks, etc) as well as parameters defined by the operator.

Rain Bird Central Control

Rain Bird developed the original computer based central control system in the 1970s and today has thousands of systems installed worldwide.

Satellite Controllers and Field Decoders

Rain Bird offers a variety of systems to match the needs of the customer, budget, site or application. Select from systems designed specifically for single sites, multiple sites, small or large. Rain Bird central control systems can utilize satellite controllers, two-wire decoders, or a combination of both.

Key Features

Centralized Programming

A central control system allows programming from a single computer location, saving the time and money usually spent traveling to the controllers. Program changes to multiple controllers across multiple sites can be made in just minutes. Irrigation run-times can automatically be adjusted with the addition of a weather station or sensors.

System Communication

Communication options between the central computer, irrigation controllers, decoders, sensors and weather stations can include hardwire, direct-connect, phone, cellular, radio, fiber-optics, Ethernet, and Wi-Fi.

System Operation and Monitoring

The central control system monitors itself and can make use of flow, rain, wind, moisture and other sensors to adjust operation or take action in real time. System operational logs and any alarms for problems that occur are communicated back to the central computer, where reports can be generated.

Rain Bird Multi-Site Central Control Systems

Maxicom²®

Maxicom² is a feature-packed irrigation management tool for control of multiple, small to large, remote irrigation systems. Maxicom² offers superior water management features utilizing satellite controller technology. Maxicom² is the tool of choice for water managers, park and recreation departments, school districts and theme parks worldwide.

IQ™

IQ offers a simple, easy to learn modular software program and modular hardware for control of satellite controllers across multiple sites. IQ includes many water and time saving features that eliminate the need to travel to the site to reprogram or monitor the irrigation system. IQ is the ideal tool for a wide variety of commercial applications.

Rain Bird Single Site Central Control Systems

SiteControl

SiteControl offers powerful central control features for single, large, contiguous sites. SiteControl provides interactive map-based control and real-time communication between the field and the central computer. It can control two-wire decoders, satellite controllers or both for unmatched expandability and flexibility. SiteControl is ideal for property developments, sports field complexes, shopping malls, cemeteries, resorts and hotels.

IQ™ v2.0 Central Control Software



Modular Multi-Site Central Control

- State-of-the-art command and control features in an easy to learn and use interface
- Provides advanced water management features saving money and time
- IQ Software has modular satellite controller capacity and features. Purchase only what is needed and upgrade as needs change in the future

IQ provides remote programming, management, and monitoring of ESP-LX Series Controllers from the computer in your office. 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 and supports both ESP-LX Series traditionally wired and 2-wire decoder controllers.



IQ v2.0 Software

IQ v2.0 Software Package

- The IQSTARTCD Base Software Package provides 5-satellite controller capacity and a basic set of features. IQ software satellite controller capacity can be upgraded in 5-satellite increments with the IQ5SATSWU Upgrade to any total satellite capacity required. Advanced features are available in IQ Software Feature Packs. Feature Packs include a bundle of related features that expand the capabilities of the IQ Base Software Package.
- IQ Base Software and Feature Packs include a context-sensitive help system. Click on the help icon available in most screens and be taken directly to the help topic feature you are using. The software offers multiple language, date/time, and units support allowing the user to interface with the software in their primary language. User selectable languages include English, Spanish, French, German, Italian, and Portuguese.

Base Software Package Features

- Software 5-satellite controller capacity upgradable in 5-satellite increments
 - IQNet 5-satellite capacity upgradable in 5-satellite increments
 - Compatible with ESP-LXME & ESP-LXMEF traditionally-wired and ESP-LXD 2-wire decoder controllers
 - Site, satellite, and station names
 - Programming in seconds, minutes, and hours
 - Daily or Monthly Seasonal Adjust % or ET station run time adjustments by site
 - Dry-Run™ Graphical Program Review
 - User initiated Synchronize and Retrieve Logs communication
 - Manual Program, Test Program, Station starts
- Detailed logs and reports

How To Specify

IQ V2.0 SOFTWARE & FEATURE PACKS

IQSTARTCD:	Base Software Package, 5-Satellite Capacity
IQ5SATSWU:	Software 5-Satellite Capacity Upgrade
IQ5SATNCCU:	IQNet 5-Satellite Capacity Upgrade
IQACOMFP:	Advanced Communications Feature Pack
IQAPGMFP:	Advanced Programming Feature Pack
IQAETFP:	Advanced ET Feature Pack
IQAFSENF:	Advanced Flow Sensing Feature Pack



Evapotranspiration (ET) is the combination of water lost from the soil and the plant's use due to evaporation and plant transpiration. Total water use can be reduced by using ET feature on IQ to determine when and how much to irrigate.

IQ™ v2.0 Central Control Software (cont.)

Recommended Computer Requirements

- Operating System: Windows® XP or 7 32-bit or 64-bit
- Processor: Intel I5-540M or equivalent
- RAM Memory: 3 GB minimum
- Available Hard Disk Space: 10 GB
- CD-ROM Drive: 8X speed minimum
- Display Resolution: 1024 x 768 minimum
- 56K Flex Phone Modem (Phone communication)
- Network Connection (for Ethernet, WiFi, GPRS communication)
- Serial Port or USB to Serial Adapter (for Direct Connect and External Modem communication)

Additional 5-Satellite Capacity Upgrade

- IQ Software and IQNet satellite controller capacity can be upgraded in 5-satellite increments
- Additional capacity is added through a purchased software activation keycode

IQ Feature Packs

- Feature Packs are enabled through a purchased software activation keycode
- Feature Pack features are enabled for all sites and satellites in the IQ Software

Advanced Communications Feature Pack

- Automated satellite Synchronize & Retrieve Logs and Weather Source Retrieve Weather Data communication
- Satellite IQ Call-in™ (satellite initiates communication, NCC-PH Phone Cartridge only)
- Automated Email Alarm/Warning and Satellite Station Run Time Reports

Advanced Programming Feature Pack

- Satellite PIN-Code Protection (4-digit PIN-Code required to make programming changes at the satellite)
- Satellite 2-Way Programming (changes made at the satellite can be viewed and accepted in the IQ software)
- Copy/Move Satellite Utility (copy or move a satellite to another site)

Advanced ET Feature Pack

- Automated MAD (Management Allowed Depletion) Irrigation Scheduling adjustments
- Software uses Irrigation Association terminology and formulas
- ET/Rainfall Weather Sources include:
 - CIMIS Internet Service (California only)
 - ETMI ET Manager Weather Reach Service (North America only)
 - Rain Bird WSPROLT Weather Station
 - Rain Bird WSPRO2 Weather Station
- 4 ET Checkbooks per satellite controller
- Export to Microsoft Excel® for customized reports

Advanced Flow Sensing Feature Pack

- Retrieves minute-by-minute flow logs from flow sensor equipped ESP-LXMEF and ESP-LXD Satellite Controllers
- Flow Logs vs. Projected Flow Graphical Report (identifies which programs & stations where running at any point in time)
- Actual Flow Totals added to Satellite Station Run Time Report (included in Automated Email Reports)

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 through 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



ESP-LXME Controller

8 to 48 Station Capable Commercial Controller



- 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



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

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 \pm 10%, 60Hz (International models: 230 VAC \pm 10%, 50Hz; Australian models: 240 VAC \pm 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)
- LXMPED: Powder-Coated Metal Pedestal for ESP-LX Modular (see page 115)
- ETC-LX: ET Manager Cartridge (see page 119)
- IQ Communication Cartridge (see page 120)

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 LXMPED
Metal Pedestal



ESP-LXD Decoder Controller



50 – 200 station capable Two-Wire Decoder
Commercial Controller



ESP-LXD Decoder
Controller

- 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
- Upgradeable to IQ™ Central Control Satellite Controller with IQ-NCC Cartridge

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



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)

• 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
- IQ-NCC: Network Communication Cartridge for ESP-LX Series Controllers

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

²Barcode 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

FD-TURF Two-Wire Decoders

SiteControl and ESP-LXD with Support for 1, 2, 4 or 6 Decoder Addresses

- Easy, cost-effective installation, expansion and upgrade between ESP-LXD and/or SiteControl systems
- Installed out of sight and protected from the elements and vandalism
- Enables advanced diagnostic and sensor features

Operating Specifications

Select different two-wire decoders to operate one, two, four, or six valves. Five different decoder options let you choose the precise amount of landscape irrigation control you need.

Decoders

- FD-101TURF Field Decoder interfacing signal line and valve
 - FD-102TURF Field Decoder interfacing signal line and valve or one pair of valves
 - FD-202TURF Field Decoder interfacing signal line and 2 valves or 2 pair of valves
 - FD-401TURF Field Decoder interfacing signal line and up to 4 individual valves
 - FD-601TURF Field Decoder interfacing signal line and up to 6 individual valves
 - LSP-1TURF Line Surge Protection
 - SD-210TURF Sensor Decoder interfacing signal line and analog or digital decoders
 - Pump Start Relay. Use Field Decoder to interface between pump relay and two-wire line
- **Output Power:** Adjustable from controller – Inrush and holding current values adjustable at controller.
 - **Encapsulation:** Fully waterproof
 - **Address:** Pre-coded from factory (i.e., no switches)
 - **Electrical Input:**
 - Nominal voltage: 34Vpp (24V AC) from two-wire line
 - Minimum voltage: 21 Vpp (15V AC)
 - **Standby Current:** FD-101TURF, FD-102TURF: 0.5 mA FD-202TURF, FD-401TURF and FD-601TURF: 1 mA
 - **Mounting:** In valve box (recommended) or direct burial
 - **Power Draw:**
 - FD-101TURF: 0.5 mA (idle) 18 mA (per active solenoid)
 - FD-102TURF: 0.5 mA (idle) 18 mA (per active solenoid)
 - FD-202TURF: 1 mA (idle) 18 mA (per active solenoid)
 - FD-401TURF: 1 mA (idle) 18 mA (per active solenoid)
 - FD-601TURF: 1 mA (idle) 18 mA (per active solenoid)



Decoders

How To Specify

FD - 101 - TURF

Application
TURF - for ESP-LXD
or SiteControl

Decoder Type

- 101: Single Address (1 solenoid)
- 102: Single Address (up to 2 solenoids)
- 202: Dual Address (up to 4 solenoids)
- 401: Four Addresses (up to 4 solenoids)
- 601: Six Addresses (up to 6 solenoids)

Model

FD - Field Decoder

• **Dimensions:**

- FD-101TURF: Length: 2.77 in. (70 mm), Diameter: 1.5 in. (40 mm)
- FD-102TURF: Length: 3.35 in. (85 mm), Diameter: 1.77 in. (45 mm)
- FD-202TURF: Length: 3.35 in. (85 mm), Diameter: 1.97 in. (50 mm)
- FD-401TURF: Length: 3.94 in. (100 mm), Diameter: 2.56 in. (65 mm)
- FD-601TURF: Length: 3.94 in. (100 mm), Diameter: 2.56 in. (65 mm)

• **Solenoids:**

- FD-101TURF: 1 with individual control
- FD-102TURF: 1 or 2 simultaneously
- FD-202TURF: 1 to 4 simultaneously
- FD-401TURF: 1 to 4 with individual control
- FD-601TURF: 1 to 6 with individual control

• **Wires:**

- FD-101TURF: Blue to cable, white to solenoid
- FD-102TURF: Blue to cable, white to solenoid
- FD-202TURF: Blue to cable, white and brown to solenoids
- FD-401TURF: Blue to cable, color-coded to solenoids
- FD-601TURF: Blue to cable, color-coded to solenoids

• **Surge Protection: One of the following is required every 500 ft. along two-wire path (40 V, 1.5 kW transil)**

- LSP-1 Line Surge Protector
- FD-401TURF with built in surge protection
- FD-601TURF with built in surge protection

• **Input Fuse (FD-401TURF and FD-601TURF only):** 300-500 mA, thermal

• **Electrical Input:**

- Maximum voltage: 36 Vpp
- Maximum load:
 - FD-101TURF: 1 Rain Bird solenoid (one per address)
 - FD-102TURF: 2 Rain Bird solenoids (two per address)
 - FD-202TURF: 4 Rain Bird Solenoids (two per address)
 - FD-401TURF: 4 Rain Bird Solenoids (one per address)
 - FD-601TURF: 6 Rain Bird solenoids (one per address)

• **Maximum Cable Runs:**

- 14 gauge
 - Star: 1.65 miles
 - Loop: 6.61 miles

• **Decoder/Solenoid Wires:**

- Electrical resistance: Max. 3 ohms

• **Maximum Distance Decoder/Solenoids:**

- Cable length: 14 gauge, 456 feet

• **Wiring:** MAXI-Cable 14-2UF double jacketed

• **Environment:**

- Working range: 32° to 122° F (0° to 50° C)
- Storage range: -4° to 158° F (-20 to 70° C)
- Humidity: 100%

Note: Rain Bird recommends using 3M DBR/DBY waterproof connectors for all connections.

Note: FD-Series Decoders are not compatible with residential valves like the Rain Bird DV, DVF, ASVF, JTV, & JTVF.

DPU-210 Decoder Programming Unit

For ESP-LXD, MDC/MDC2 and SiteControl FD-Turf Two-Wire Decoders

- Decoder Programming Unit tests and verifies operation of the ESP-LXD, MDC/MDC2, or SiteControl field decoders. Also allows for re-programming decoder addresses for maximum site set-up flexibility



DPU-210

SiteControl

A Full-Featured Central Control System for Single Site Applications

- Interactive, map-based software is easy to use and provides real-time decision making
- Unparalleled communications flexibility with decoders and/or satellites
- Advanced water management features maximize landscape conditions and water savings



SiteControl

Basic Control Features

- From the SiteControl Central Controller, the irrigation system can be scheduled for days to water, run-times, linking schedules, sensor starts, cycle and soak schedules, ET sensitized scheduling, etc
- Interactive map allows for maximum control yet easy programming, monitoring and troubleshooting for operator
- Verify programming down to station level with the intuitive dry run feature
- Manual operation of system from central computer via direct manual access (DMA)
- Operation of non-irrigation applications such as lighting, security gates, fountains, pumps, sensors, etc

Additional Features

Advanced Graphical Mapping

- Maps generated by GPS technology, AutoCAD or overhead photography recreate your site
- Interactive mapping and on-screen graphics show your complete site with location of individual valves and sprinklers. Extensive status reporting is a click away
- Map utilities software module allows you to measure distances and areas from your map

Hybrid System

- Expand your system with the purchase of the hybrid software module
- Same system can operate satellites and/or decoders

Smart Weather™

- Designed to take complete advantage of Rain Bird's most advanced line of weather stations
- Track ET rates with a weather station and react to current weather conditions through logical sequential steps
- Advanced warning system accepts user-defined sensor thresholds. System operator can be immediately alerted if thresholds are exceeded



SiteControl Smart Weather and RainWatch features allow the operator to configure pre-defined weather conditions and corresponding system reactions to save water with automatic program start, pause, resume, or cancel in reaction to wind, temperature, rain, solar radiation and humidity

Automatic ET Features

- Automatically adjusts run-times in relation to changes in evapotranspiration values
- Minimum ET (patent pending) allows setting threshold for irrigation to occur, promoting deep watering

RainWatch™ (Patent Pending)

- Provides rain shutdown and then adjusts run-times based on measured rainfall

Expanded System Capability

- Utilizing the most advanced software development tools in the industry SiteControl offers excellent performance and software/hardware compatibility
- System is modular. Buy only what you need; expand at a later date
- Increase wire-path capacity by simply purchasing modules

Remote System Control

- Take control of your system and operate SiteControl from anywhere on your site using the Rain Bird FREEDOM System. Available via phone, cellular phone or UHF radio

Superior Monitoring and Programming

- Flo-Graph™ provides real-time graphics with individual station information presented in colorful charts
- Flo-Manager™ balances system demands and maximum capacities with efficiency, helping to lower water demand, reduce system wear and tear, and save energy
- Cycle + Soak™ better controls the application of water on slopes and in areas with poor drainage
- QuickIRR™ and SimpleIRR™ provide quick and easy methods to build irrigation schedules and programs based on your parameters
- Print Office feature prints all monitor log and site information in a clean and concise format for easy site monitoring and troubleshooting
- SmartSensors™ allows monitoring flow and other conditions, as well as setting specific reactions selected by the user

Other Features

- Up to 200 points of connection
- Up to 200 pulse sensors
- Water usage logs
- Station run-time logs
- Posted and dry run logs
- ET spreadsheet
- 1 year Global Service Plan included

Models

- SCON: Desktop PC with SiteControl software, includes 1 year Global Support Plan (GSP)

Software Module Options

- Smart Weather
- Rain Bird Messenger (for Smart Weather)
- Automatic ET
- Hybrid Module
- Smart Sensor
- Map Utilities
- Freedom
- 8 Additional Locations
- Additional Wire-Path (2nd)
- Additional Wire-Path (3rd)
- Additional Wire-Path (4th)
- SiteControl Plus

GSP Features

- Toll-free phone support (see page 156)
- Remote system diagnostics
- Extended warranty
- Next business day hardware replacement
- Future upgrades to SiteControl software at no charge
- Training or on-site support rebates
- Incident and other support
- Board Exchange Program discounts

TWI Satellite Interface

Satellite Interface for SiteControl Only

- Allows real-time, two-way communication between SiteControl Central Controller and field satellites
- Allows use of advanced in-field capabilities of ESP-SAT two-wire or LINK versions
- Modular capacity can grow with the site

Features

- TWI operates up to 28 satellites (maximum of up to 672 satellite stations), pulse decoders or sensor decoders per wire-path
- Can be expanded to up to 112 ESP-SATs (maximum of up to 2,688 satellite stations), pulse or sensor decoders in a SiteControl system
- TWI comes standard with one wire-path, upgradeable to 4 wire-paths with the purchase of the Additional Wire-Path module
- SiteControl can be configured to operate 8 total Interfaces (Hybrid Software Module required)
- UL-Listed. Indoor use
- Wall mount: drawn steel, seamless, cabinet with hinged front panel
- Computer data path: RS-232 serial cable

Electrical Specifications

TWI Hardwire

- Input required: 120VAC \pm 10% @ 1.25A 60/50Hz or 220/230/240VAC \pm 10% @ 0.5A 50/60Hz
- Output: 2 x 26.5VAC @ 0.9A 60/50Hz or 4 x 26.5VAC @ 0.9A 50/60Hz
- Circuit breaker: NA (Autoresettable)

TWI Link

- Input required: 120VAC \pm 10% @ 1.25A 60/50Hz or 220/230/240VAC \pm 10% @ 0.5A 50/60Hz
- Output: NA
- Circuit breaker: NA

Grounding

- All TWI's shall be grounded to a 5 ohm or less earth ground

Dimensions

- Width: 15½" (39.4 cm)
- Height: 12½" (31.7 cm)
- Depth: 6" (15.2 cm)

Models

- TWISAT2: Two-wire (hard wire)
- TWISATL: Link (radio)



TWI Interface

LDI/SDI Two-Wire Decoder Interface

Decoder Interface for SiteControl Only

- Allows real-time, two-way communication between SiteControl Central Controller and decoders
- Connects the powerful capabilities of SiteControl with the ease of installation and security of a two-wire decoder system
- System can be set up and expanded according to project needs

Features

- Works with Rain Bird Turf field and sensor decoders (FD-101TURF, FD-102TURF, FD-202TURF, FD-401TURF, FD-601TURF, SD-210TURF)
- Two-wire communications path also allows advanced diagnostic and sensor features for the Central Controller
- SDI (Small Decoder Interface) can interface with up to 200 decoder addresses and can activate up to 400 solenoids
- LDI (Large Decoder Interface) can interface with up to 500 decoder addresses and can activate up to 1000 solenoids. Requires SiteControl Plus software module
- SDI and LDI come standard with up to 4 wire-paths possible
- SiteControl system can be configured to operate up to 8 total Interfaces (SiteControl Plus and/or Hybrid Software Modules Required)
- Computer data path: RS-232 serial cable
- Decoder data path: Two-wire Maxi cable
- Wall mount: Heavy-duty, plastic, cabinet with a key-lock door

Electrical Specifications

North America

- External transformer
- Input: 120 VAC \pm 10% @ 0.59A 60Hz
- Output: 24VAC @ 2A 60Hz
- Circuit breaker: NA (Autoresettable)
- UL listed, indoor use

International Recommended Specifications

- Transformer not supplied
- Model: ISDITURF and ILDITURF
- Input: 220, 230, 240VAC \pm 10% @ 0.36A 50Hz
- Output: 24VAC @ 2A 50Hz
- CE listed, indoor use

Grounding

- MSP-1 surge protector for each wire path
- All SDIs and LDIs shall be grounded to a 5 ohm or less earth ground

Dimensions (LDI and SDI)

- Width: 9½" (24.1 cm); Height: 10¼" (26 cm); Depth: 4¾" (11.1 cm)

Models

- SDITURF (w/ transformer): Controls 200 addresses
- LDITURF (w/ transformer): Controls 500 addresses



SDI Interface
(LDI not shown)

Maxicom²



Multi-Site Central Control Ideal for Large Commercial Systems

- Multi-site Central Control system for commercial or industrial irrigation applications
- Conserves water via advanced ET-based irrigation features
- Flexible programming allows system to react to sensors and work within watering restrictions

System Features

- Maxicom² Central Controller Package comes with Maxicom² software, pre-configured computer, Global Service Plan (GSP), and training
- Control hundreds of ESP-SITE-SAT Satellites (single controller sites) and Cluster Control Units (CCUs) which can each control up to 28 individual ESP-SAT Satellite Controllers on multi-controller sites
- Monitor dozens of Weather Sources including WSPRO2 Weather Stations, ET Managers, or rain counting sensors (Raingauge)
- Freedom Remote Control allows manual operation of system through a cellular phone or radio
- Multiple log and water usage reports are generated automatically to track system operation and water savings

Water Management Features

- Cross satellite schedule operation; 999 separate schedules per CCU provides precision watering of areas and microclimates
- ET Checkbook™ manages Evapotranspiration (ET) and automatically adjusts Satellite Controller station run-time or day cycle intervals to match the landscapes water requirements
- FloManager™ manages the total flow demand placed on the water source(s), optimizing both the available water and watering window
- FloWatch™ monitors flow sensors at each water source, records flow, and automatically reacts to problem flows by shutting down the effected portion of the system (individual valve or mainline)
- RainWatch™ monitors rain counting sensors, records rainfall, and automatically reacts to rainfall by interrupting irrigation, waiting to see how much rain has fallen, and determines if the irrigation should be resumed or cancelled

Operational Features

- Communication Control Engine automatically sends updated programming to sites before watering begins and retrieves logs after irrigation is completed; manual operation can be performed at any time
- Start day cycles: Custom (day of the week), Odd/Even, Odd31, or Cyclical and include Event Day Off Calendar scheduling
- Station run-times programmable from 1 minute to 16 hours
- Cycle + Soak™ optimizes water application to soil infiltration rate, reducing runoff and puddling
- Control non-irrigation functions such as lighting, fountains, door locks and gates

Maxicom² Communications Options

- Central Controller to CCU: Phone, direct connect, radio, cellular, network (Ethernet, wi-fi, fiber-optics)
- CCU to ESP-SAT2: Two-wire path
- CCU to ESP-SATL: Radio, MasterLink, network (Ethernet, wi-fi, fiber-optics)

Global Service Plan (GSP) Features (see page 156)

- Toll-free phone support
- Remote systems diagnostics
- Customer satisfaction policy on covered central control components and next business day hardware replacement
- Free software service packs
- Training and on-site support rebates
- Board Exchange Program discounts

Models

- MC2GOLD1: New System - Desktop PC with Maxicom software, includes 1 year Global Support Plan (GSP)
- GSPMCPL3: Current GSP Or Expired GSP Subscribers, Desktop PC with Maxicom software, includes 3 Years Platinum Plus Global Support Plan
- GSPMXPPCIA: Current GSP Subscribers, Desktop PC with Maxicom software, based on 3 Year Platinum Plus Global Support Plan, includes year 1 GSP, requires year 2 and 3 GSP to be purchased separately (M95543A2)
- GSPMXPPCIM: Current GSP Subscribers, Desktop PC with Maxicom software, based on 3 Years Platinum Plus Global Support Plan, includes month 1 GSP, requires month 2 - 36 GSP to be purchased separately (M95544M2)
- GSPMXPPNIA: New GSP or Expired GSP Subscribers, Desktop PC with Maxicom software, based on 3 Years Platinum Plus Global Support Plan, includes year 1 GSP, requires year 2 and 3 GSP to be purchased separately (M95541A2)
- GSPMXPPNIM: New GSP or Expired GSP Subscribers, Desktop PC with Maxicom software, based on 3 Years Platinum Plus Global Support Plan, includes month 1 GSP, requires month 2 - 36 GSP to be purchased separately (M95542M2)
- MC2UPG: Maxicom Upgrade Software - CD Only, upgrade existing Maxicom 1.X, 2.X and 3.X system to latest Maxicom Version



Maxicom²



Maxicom² ET Checkbook manages soil moisture in the same way you manage money in your checking account. Daily water loss from ET is a withdrawal while irrigation and rainfall are deposits of moisture into the soil.

Cluster Control Unit CCU Interface

CCU Interface for Maxicom^{2®} Only

- Runs real-time operations of a site consisting of up to 28 satellites
- Adapts station sequence to changing conditions for maximum efficiency
- Instantly responds to unexpected conditions and sensor inputs

Features

- Manages communication connections with the Maxicom² Central Controller
- Controls up to 28 Satellite Controllers (672 stations) and 56 sensor inputs as one dynamic control system
- Stores and executes schedule instructions from Maxicom² Central Controller
- Capable of real-time decision making to react to unexpected conditions such as broken pipes, stuck valves, rainfall, etc.
- Logs actual Satellite Controller station run-time and sensor activity

Water Management Features

- Cross Satellite schedule operation; 999 separate schedules per CCU provides precision watering of areas and microclimates
- FloManager™ manages the total flow demand placed on the water source(s), optimizing both the available water and watering window
- FloWatch™ monitors flow sensors at each water source, records flow, and automatically reacts to problem flows by shutting down the effected portion of the system (individual valve or mainline)
- RainWatch™ monitors rain counting sensors, records rainfall, and automatically reacts to rainfall by interrupting irrigation, waiting to see how much rain has fallen, and determines if the irrigation should be resumed or cancelled

Maxicom² Communications Options

- Central Controller to CCU: Phone, direct connect, radio, cellular, network (Ethernet, wi-fi, fiber-optics)
- CCU to ESP-SAT2: Two-wire path
- CCU to ESP-SATL: Radio, MasterLink, network (Ethernet, wi-fi, fiber-optics)

How To Specify

CCU - 28 - W

Mounting
W: Wall mount
S: stainless steel pedestal

Channels
6: 6 channels
28: 28 channels

Model
CCU

Example specifies a CCU with 28 channels, in a wall mount cabinet.

Electrical Specifications

- Input required: 117 VAC±10% @ 0.5A 60 Hz or 220/240/260±10% @ 0.5A 50 Hz
- Output: 26.5 VAC, 60Hz or 50 Hz, 0.5A
- Circuit breaker: NA
- Autoresettable poly switch 0.65A open (steady state) 1.3A open (surge)
- Single-point grounding bus bar

Dimensions

- Powder-Coated Metal Wall-Mount
 - Width: 11⁵/₁₆" (28.7 cm)
 - Height: 11¹/₂" (29.2 cm)
 - Depth: 6¹/₂" (16.5 cm)
- Stainless steel pedestal
 - Width: 11¹/₂" (29.2 cm)
 - Height: 30" (76.2 cm)
 - Depth: 11¹/₂" (29.2 cm)

Models

Channels (24 Station Satellites)	Metal Wall-Mount	Stainless Steel Pedestal	Maximum Satellite Stations	Maximum Sensor Inputs
6	CCU6W	CCU6S	144	12
28	CCU28W	CCU28S	672	56

Notes:

- Satellites with 24 stations or less require 1 channel
- Satellites with 28 stations or higher require 2 channels
- The sensor input capacity of a CCU varies CCU to Satellite communication option
- Metal wall-mount models available in 230VAC and 240VAC, 50HZ



CCU-6-W CCU-28-W

ESP-SAT Satellite Controller

12, 24, 32, 40 Stations Satellite Controller for Maxicom²® and SiteControl

- Field Satellite Controller for Maxicom² or SiteControl Central Control systems
- The power of an advanced water-management tool, in an easy-to-use package
- All the features and stand-alone capabilities of the Rain Bird ESP-MC Controller line

Features

- ESP-SAT is controlled through the Maxicom² CCU or SiteControl TWI
- Executes instructions issued from the central control system
- ESP-SATL models incorporates two sensor inputs
- See Maxicom² Central Control System (page 147) or SiteControl (page 144) for ESP-SAT features under central control
- ESP-SAT can also operate as a standalone controller, with identical features of the ESP-MC (see page 123 for features)

Options

- 12, 24, 32 and 40 station models
- Two-Wire (SAT2) or Link (SATL) secondary communication
- Metal, wall-mount enclosure
- Stainless steel pedestal

Maxicom² Communications Options

- CCU to ESP-SAT2: Two-wire path
- CCU to ESP-SATL: Radio, MasterLink, network (Ethernet, wi-fi, fiber-optics)

Electrical Specifications

- Input required: 117 VAC ± 10%, 60Hz (International models: 230 VAC ± 10%, 50Hz)
- Output 26.5 VAC, 2.5A
- Station load capacity: Up to two 24 VAC, 7VA solenoid valves per station plus a master valve or pump start relay
- Diagnostic circuit breaker skips and indicates stations with overloaded circuits
- Non-volatile, 100-year memory holds program, date, and time during power outages
- Battery backup: 9VDC, NiCad rechargeable for programming under battery power and for maintaining active program-in-progress during a power outage
- Heavy-duty electrical surge protection
- Single-point ground bus bar

Dimensions

- Powder-Coated Metal Wall-Mount
 - Width: 11⁵/₁₆" (28.7 cm)
 - Height: 11¹/₂" (29.2 cm)
 - Depth: 6¹/₂" (16.5 cm)
- Stainless steel pedestal
 - Width: 11¹/₂" (29.2 cm)
 - Height: 30" (76.2 cm)
 - Depth: 11¹/₂" (29.2 cm)

Models

Station	Two-Wire Metal Wall-Mount	Two-Wire Stainless Steel Pedestal	Link Metal Wall-Mount	Link Stainless Steel Pedestal
12	ESP-12SAT-2W	ESP-12SAT-2S	ESP-12SAT-LW	ESP-12SAT-LS
24	ESP-24SAT-2W	ESP-24SAT-2S	ESP-24SAT-LW	ESP-24SAT-LS
32	ESP-32SAT-2W	—	—	—
40	ESP-40SAT-2W	ESP-40SAT-2S	ESP-40SAT-LW	ESP-40SAT-LS

Notes:

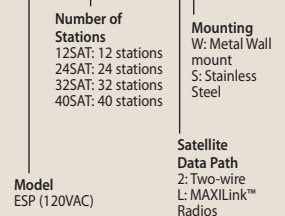
- If Link Radio communication is to be used between the CCU or TWI and the Satellites a Radio/Modem Kit must also be specified
- ESP-SAT field satellite controllers require a CCU to connect to the Maxicom² system
- ESP-SAT field satellite controllers require a TWI to connect to the SiteControl system
- The two-wire path is a hardwire communication path connecting the CCU or TWI and the Satellites
- Link Radio is wireless radio communication connecting the CCU or TWI and the Satellites
- 12 and 24 station Satellites occupy 1 channel on the CCU or TWI. 32 and 40 station Satellites occupy 2 channels on the CCU or TWI
- Link Radio communication satellites have 2 sensor inputs



ESP-40SAT-2W Satellite

How To Specify

ESP - 24SAT - 2W



ESP-SITE-SAT Satellite Controller

12, 24, 32, 40 Stations Satellite Controller for Maxicom²® Only

- Combines power of a Cluster Control Unit (CCU) with capabilities of a single ESP-Satellite controller for small Maxicom² sites
- Advanced water-management tool, in an easy-to-use package
- All the features and stand-alone capabilities of the Rain Bird ESP-MC Controller line

Features

- Combines function of a Cluster Control Unit (CCU) and ESP-SAT Satellite Controller in a single enclosure design
- Stores and executes schedule instructions from Maxicom² Central Controller
- Incorporates two Maxicom² sensor inputs
- See Maxicom² Central Control System (page 147) for ESP-SITE-SAT features under central control
- ESP-SITE-SAT can also operate as a standalone controller, with identical features of the ESP-MC (see page 123 for features)

Options

- 12, 24, 32 and 40 station models
- Metal, wall-mount enclosure
- Stainless steel pedestal

Maxicom² Communications Options

- Central Controller to ESP-SITE-SAT: Phone, direct connect, radio, cellular, network (Ethernet, wi-fi, fiber-optics)

Electrical Specifications

- Input required: 117 VAC ± 10%, 60Hz (International models: 230 VAC and 240 VAC ± 10%, 50Hz)
- Output: 26.5 VAC, 2.5A
- Station load capacity: Up to two 24 VAC, 7VA solenoid valves per station plus a master valve or pump start relay
- Diagnostic circuit breaker skips and indicates stations with overloaded circuits

- Battery backup: 9VDC, NiCad rechargeable for programming under battery power and for maintaining active program-in-progress during a power outage
- Heavy-duty electrical surge protection
- Single-point ground bus bar

Dimensions

- Powder-Coated Metal Wall-Mount
 - Width: 11⁵/₁₆" (28.7 cm)
 - Height: 11¹/₂" (29.2 cm)
 - Depth: 6¹/₂" (16.5 cm)
- Stainless Steel Pedestal
 - Width: 11¹/₂" (29.2 cm)
 - Height: 30" (76.2 cm)
 - Depth: 11¹/₂" (29.2 cm)

Models		
Stations	Metal Wall-Mount	Stainless Steel Pedestal
12	ESP-12SITE-W	ESP-12SITE-S
24	ESP-24SITE-W	ESP-24SITE-S
32	—	ESP-32SITE-S
40	ESP-40SITE-W	ESP-40SITE-S

Note: Does not require a CCU to connect to Maxicom²

How To Specify

ESP - 24SITE - W

Mounting
W: Metal wall mount
S: Stainless Steel

Number of Stations
12SITE: 12 stations
24SITE: 24 stations
32SITE: 32 stations
40SITE: 40 stations

Model
ESP (120VAC)



ESP-28SITE-W Site Satellite

Packaged Systems

Pedestal and Wall-Mounted Solutions for Central Control Projects

- Weather-resistant stainless steel or powder coated enclosures
- Factory-assembled and tested
- Customizable to meet individual project needs

Features

- Robust, customized enclosures for controllers and components are specified to match project requirements and to arrive as "plug and play" assemblies – pre-assembled, factory-tested, and ready to install
- The enclosures are NEMA rated, ensuring a professional appearance while keeping the housed central control components safe from weather elements, vandalism, and pests
- Packaged system enclosures are available in wall-mount or pedestal versions for Maxicom², SiteControl™, IQ™ and other controllers

Standard Model Designations

- Choose from standard stainless steel or powder-coated enclosures to house from one to six controllers. Enclosures are available in a variety of front-opening or flip-top designs
- Packaged system enclosures are customizable to include central control components and ancillary items required for the application such as lightning protection, communications options, flow monitoring, relays, etc. Standard specifications, model configurators, and reference drawings are available upon request



Wall Mount with CCU and 3 ESP-SAT Controllers



Pedestal with ESP-SAT Controller



Pedestal with IQ™ Controller

Link Radio Modem Kits

Maxicom² or SiteControl

Features

- Allows wireless communication between CCU or TWI and satellite controllers
- Easy installation in CCU, TWI or ESP-SAT-Link controllers
- Available pre-programmed in private business or special frequencies

Models

- RMK406NARR (406-430 MHz - Government only)
- RMK450NARR (450-470 MHz - Commercial band)

License Requirements

- FCC frequency license required

Installation Requirements

- One Radio Modem Kit required at each CCU or TWI-Link interface and ESP-SAT-LINK Satellite Controller
- CCU (Cluster Control Unit) required for Maxicom²
- TWI-Link required for SiteControl
- Includes hardware for installation in wall-mount or stainless steel pedestal controllers
- Antenna required (sold separately)
- Radio Modem Kit can be shared by multiple ESP-SAT-LINK Satellites installed at a single location with use of cluster adapter modules

Freedom for Central Control

Maxicom²® or SiteControl

Features

- Uses standard telephone interface or radio repeater at computer
- Single cellular phone or radio can control entire central control system
- 2-way talk communication is available with radio system
- Standard land-line telephones can also control the system
- Password protected for security
- Start/stop stations, schedules, or site (rain shutdown)

Hardware

- Radio system – repeater, hand-held unit, antenna, cables
- Telephone system – DTMF module, power supply, cable

Electrical Specifications

- Input required: 117VAC 60Hz
- Telephone system: dedicated dial-up telephone line

License Requirements

- Telephone system: none
- Radio system: FCC frequency license required

Dimensions

- Telephone system: DTMF module: 6" x 7" x 2" (152 mm x 178 mm x 51 mm)
- Radio system:
 - Repeater: 16.38" x 9.63" x 4.50" (416 mm x 245 mm x 114 mm)
 - Hand-held: 3.0" x 8.0" x 1.5" (76 mm x 203 mm x 38 mm)

Models

- FREEDOMFOR (phone)
- FREERADNSP (radio, special frequency)



Freedom for Central Control - Radio

Flow Sensors and Transmitters

Maxicom²® SiteControl, ESP-LXD or IQ™

Features (Sensors)

- Simple six-bladed impeller design
- Designed for outdoor or underground applications
- Available in PVC, brass or stainless steel construction
- Pre-installed in tee or saddle mounted insert versions

Features (Transmitters)

- Reliable solid-state design, available with or without LCD display
- Easy-to-program, menu-driven design
- Programmable from a computer (PT322 only)
- Operates with MAXILink™, MAXI two-wire, and two-wire decoder systems
- Mounted in NEMA enclosure (optional in PT3002 only)

Operating Specifications (Sensors)

- Accuracy: ± 1% (full scale)
- Flow rate: 0.5-30 feet per second
- Pressure: 400 psi (max) on metal models; 100 psi (max) on plastic models
- Temperature: 221°F (105°C) (max) on metal models; 140°F (60°C) (max) on plastic models

Electrical Specifications (Transmitters)

- Input required: 9-35 VAC/VDC (322 Series); 12-24 VAC/VDC (PT3002 Series)
- Output: Pulse output
- Operating Temp: 32°F-158°F (0°C to 70°C)
- Units: Domestic and International units available on PT3002

Dimensions

- PT322: 3.65" x 1.75" x 1.00" (93mm x 44mm x 25mm)
- PT3002: 3.78" x 3.78" x 2.21" (96mm x 96mm x 56mm)
- FS100B: 5.45" x 4.94" x 2.21" (138mm x 126mm x 56mm)
- FS150P: 5.0" x 5.16" x 2.38" (127mm x 131mm x 60mm)
- FS200P: 5.63" x 5.64" x 2.88" (143mm x 143mm x 73mm)
- FS300P: 6.50" x 6.83" x 4.23" (165mm x 173mm x 107mm)
- FS400P: 7.38" x 7.83" x 5.38" (187mm x 199mm x 137mm)
- FS350B/SS: 7.13" x 3"(diameter) (181mm x 76mm (diameter))
- FS350SS: 7.13" x 3"(diameter) (181mm x 76mm (diameter))

Configuration

- **For (Hard Wire) Two-Wire Satellite Systems (Maxicom² and SiteControl)**, the Flow Sensor is installed with a Pulse Transmitter and a Rain Bird Pulse Decoder (DECPULLR)
- **For Link Radio Satellite Systems (Maxicom² and SiteControl)**, the Flow Sensor is installed with a Pulse Transmitter (no decoder required)
- **For ESP-SITE Satellite Systems (Maxicom²)**, the Flow Sensor is installed with a Pulse Transmitter (no decoder required)
- **For SiteControl Decoder Systems**, the Flow Sensor is installed with a Two-Wire Decoder Sensor Decoder (SD210TURF)
- **For ESP-LXD Decoder Systems**, the Flow Sensor is installed with a Two-Wire Decoder Sensor Decoder (SD210TURF)
- **For ESP-LXMEF Systems**, the Flow Sensor is attached to the FSM-LXME Flow Smart Module
- Surge protection (FSSURGEKIT) is recommended for Maxicom & SiteControl systems – One at the Pulse Transmitter, and if more than 50' of wire run, one at the Flow Sensor. FSSURGEKIT is not compatible with ESP-LXMEF and ESP-LXD Controllers

Models

Brass TEE's

- FS200B: 2" (50mm) Brass Tee Flow Sensor
- FS150B: 1 1/2" (40mm) Brass Tee Flow Sensor
- FS100B: 1" (25mm) Brass Tee Flow Sensor

Plastic TEE's

- FS400P: 4" (110mm) PVC Tee Flow Sensor
- FS300P: 3" (75mm) PVC Tee Flow Sensor
- FS200P: 2" (50mm) PVC Tee Flow Sensor
- FS150P: 1 1/2" (40mm) PVC Tee Flow Sensor
- FS100P: 1" (25mm) PVC Tee Flow Sensor
- FS075P: 3/4" (20mm) PVC Tee Flow Sensor
- FS050P: 1/2" (12mm) PVC Tee Flow Sensor

Inserts

- FS350SS: 3" and higher, Stainless Steel Insert
- FS350B: 3" and higher, Brass Insert
- FSTINSERT: Replacement insert for Tee type sensors

Pulse Transmitters

- PT322: Pulse Transmitter, no display
- PT3002: Pulse Transmitter, LCD display
- PT322SW: PT322 Pulse Transmitter programming software

Accessories

- PTPWRSUPP: Pulse Transmitter power supply
- NEMACAB: NEMA Enclosure for PT3002
- FSSURGEKIT: Flow Sensor surge protection kit
- DECPULLR: Pulse Decoder for two-wire satellites
- SD210TURF: Sensor Decoder for decoder systems
- FSM-LXME: Flow Smart Module for ESP-LXME Series Controllers

Rain Bird Flow Sensor Suggested Operating Range

The following table indicates the suggested flow range for Rain Bird Flow Sensors. Rain Bird Sensors will operate both above and below the indicated flow rate. However, good design practice dictates the use of this range for best performance. Sensors should be sized for flow rather than pipe size.

Model	Suggested Operating Range (Gallons / Minute)	Suggested Operating Range (Liters / Minute)	Suggested Operating Range (Cubic Meters / Hour)
FS050P	1.9 - 18.9	7.2 - 71.7	0.43 - 4.3
FS075P	3.3 - 33.2	12.6 - 125.8	0.75 - 7.5
FS100P	5.4 - 53.9	20.4 - 204	1.2 - 12.2
FS150P	5 - 100	18 - 378	1.1 - 22.7
FS200P	10 - 200	36 - 756	2.3 - 45.4
FS300P	20 - 300	78 - 1134	4.5 - 68.1
FS400P	40 - 500	150 - 1890	9.1 - 113.6
FS100B	2 - 40	6 - 150	0.5 - 9
FS150B	2 - 82.6	6.3 - 313	0.4 - 18.7
FS200B	4.9 - 294	18.5 - 1112	1.1 - 66.7
FS350B	12 - 45000*	48 - 168000*	2.7 - 10200*
FS350SS	12 - 45000*	48 - 168000*	2.7 - 10200*

* Depends on pipe size and material



Flow Sensors



Flow Sensor Transmitters and Accessories

How To Specify

FS - 100 - B (Flow Sensors)

FS = Flow Sensor
B = Brass
P = Plastic (PVC)
SS = Stainless Steel

050 = 1/2" (12mm)
075 = 3/4" (21mm)
100 = 1" (25mm)
150 = 1 1/2" (40mm)
200 = 2" (50mm)
300 = 3" (75mm)
400 = 4" (110mm)
350 = 3" (75mm) and higher

PT - 322 (Pulse Transmitters)

322 = No read out
3002 = Digital readout

PT = Pulse Transmitter

WS-PRO Weather Stations

Maxicom²® (WS-PRO2 only), SiteControl, IQ™, or Weather Reach Server

Features

- Scientific accuracy sensors located three meters above the ground for added vandal-resistance
- Powerful, internal micro-logger for climatic data collection, logging and analysis, constant communication with weather sensors, and storage of 30 days of data
- Rugged yet lightweight metal construction;
- Self-diagnostic test mechanisms: internal moisture, battery voltage level, test port for local sensor check, and simple-to-service sensors and internal components
- State-of-the-art weather software calculates ET values, stores daily and historic ET values, monitors and displays current weather conditions, and graphically displays weather parameters

SiteControl Features

- WS-PRO2 and WS-PRO-LT Weather Station compatibility is standard for SiteControl v3.0 or later software
- SiteControl can interface with up to 6 weather stations
- Automatic communication between Central Controller and Weather Station requires SiteControl Automatic ET Software Module
- SiteControl Smart Weather Software Module enables automatic, user defined reactions to weather events (rain, freeze, high wind, etc.)

IQ v2.0 Features

- WS-PRO2 or WS-PRO-LT Weather stations are compatible with IQ v2.0 or later software
- Automatic communication between the IQ v2.0 central and weather station requires the Advanced ET feature pack (IQAETFP)
- Weather data retrieval hourly up to 24 times a day or custom retrieval times up to 5 per day

Maxicom²® Features (WS-PRO2 only)

- WS-PRO2 Weather Station compatibility is standard for Maxicom² v3.6 or later software
- Each site can have its own Weather Station or can share between sites
- Automatic communication standard
- Up to 24 automatic weather data retrievals can be configured per day

Weather Station Sensors

- Air Temperature
- Solar Radiation
- Relative Humidity
- Wind Speed
- Wind Direction
- Rainfall

System Compatibility

- Maxicom² (WS-PRO2 only)
- SiteControl (requires Automatic ET Software Module)
- IQ v2.0 with Advanced ET Feature Pack
- ET Manager Weather Reach Server Software

Models

- WS-PRO2-DC Direct Connect model – 2-pair wire connection with Central Controller via short-haul modem
- WS-PRO2-PH Phone Connect model – dial-up phone modem for phone communication with Central Controller
- WS-PRO2-PHS Phone Connect, Solar Power model – dial-up phone modem for phone communication with Central Controller, solar powered
- WS-PRO-LT-SH Short Haul model – 2-pair wire connection with Central Controller via short-haul modem
- WS-PRO-LT-WL Wireless model – wireless connection with Central Controller via 916 MHz radio (only available in the U.S. and Canada)
- WS-PRO-LT-WLS Wireless model – wireless connection with Central Controller via 916 MHz radio, solar powered (only available in the U.S. and Canada)



WS-PRO2

RAINGAUGE Rain Sensor

Maxicom²® or SiteControl

Features

- Accurate rain counter switch counts rainfall in 1/100th inch increments
- Heavy-duty metal construction
- Mounting bracket
- Debris screen
- 4" diameter

Model

- RAINGAUGE



RAINGAUGE

ANEMOMETER Wind Sensor

Maxicom²® SiteControl, IQ™, ESP-LXME, ESP-LXD

Features

- Accurate wind speed measurement for high-wind shutdown or interrupt of irrigation programs
- Heavy-duty metal mounting bracket
- Requires PT322, PT1502 or PT3002 Pulse Transmitter for use with Maxicom² System
- Requires PT3002 Pulse Transmitter for use with SiteControl, IQ Systems, ESP-LXME, ESP-LXD

Model

- ANEMOMETER



ANEMOMETER

Sensor-Pulse Decoders

For Maxicom²® or SiteControl Two-Wire Satellite Systems

Features

- Complete feedback system
- Extends central control system versatility
- Color-coded wire leads for ease of installation
- Programmable address codes for individual operation
- Encapsulated in moisture- and UV-resistant case for use in outdoor conditions

Functions

- Sensor Decoder: Monitors dry contact switches (moisture sensor, pressure switch, security systems, etc.) for open or closed conditions and informs the system of switch status
- Pulse Decoder: Reads pulses from monitoring devices, such as flow sensors and rain gauge, and sends the information to the system for analysis and action

Electrical Specifications

- Input required: 26 VAC (provided by the two-wire communication path. No separate power supply required)

Dimensions

- Top: 3¼" diameter (8.3 cm); Height: 8" (20.3 cm); Bottom: 2½" diameter (6.4 cm)

Models

- DEC-SEN-LR Sensor Decoder (for switch sensor)
- DEC-PUL-LR Pulse Decoder (for pulse sensor)

Note: All decoders function with the satellite two-wire communication path only. They are not required for the MAXILink™ communication path or ESP-SITE Satellites



DEC-SEN-LR DEC-PUL-LR

Maxi Interface Boards

Upgrades any ESP-MC Controller to a Maxicom²® or SiteControl Central Control Satellite Controller

Upgrade Kit Features

- Upgrades an ESP-MC Controller (wall mount or pedestal) to an ESP-SAT or ESP-SITE Satellite Controller
- No additional enclosures or external wiring required
- Installs on stand-offs on controller output board
- Link and Site Kits include replacement transformer
- Upgrade Kit includes connection cables and manuals

Models

- ESP-MIB2 Two-Wire secondary communication
- ESP-MIBL Link secondary communication
- ESP-SITEU Site Satellite (Maxicom² only)



ESP-MIB-TW

MSP-1 Surge Protection

Maxicom²®, SiteControl, or ESP-LXD Surge Protection for Two-Wire Satellite and Two-Wire Decoder Systems

Features

- Protects central control components from electrical surges on a two-wire communication path
- Can be installed in satellite or CCU pedestal or underground in conjunction with MGP-1 (Maxicom²® Grounding Plate)

Model

- MSP-1



MSP-1

MGP-1 Surge Grounding Plate

Maxicom²®, SiteControl or ESP-LXD Surge Protection for Two-Wire Satellite and Two-Wire Decoder Systems

Features

- Provides a mounting location for MSP-1 or other grounding wires directly to a grounding rod or pipe
- Installed on grounding rod or pipe

Model

- MGP-1



MGP-1

Central Control Global Service Plans

Scalable Service Packages For Your Central Control System

- GSP members enjoy a host of benefits such as special discounts on GSP services like the Board Exchange Program, lower cost of maintaining their Rain Bird Central Control System with our Platinum level hardware support feature, and expert remote technical support from our GSP engineers for troubleshooting assistance or when learning how to maximize the performance of their system
- Scalable service plans give you more choices when deciding which plan is best for your needs and budget. Choose from:
 - Platinum Plus (3 years) • Platinum (2 or 3 years)
 - Gold (1, 2 or 3 years) • IQ and ESP-LXD (2 years)

Features

• Maxicom²® and SiteControl Service Plans

- Gold Level Service Plan

- Software and hardware troubleshooting
 - Toll-free support, 8am - 5pm, local business hours, normal business days
- Remote software assistance support
 - Symantec pcAnywhere® or GoToAssist™ software allows support engineers to remotely access your central control system when issues can not be resolved over the phone
- Board Exchange Program Discounts
 - Provides you with the opportunity to obtain selected replacement hardware at a discounted price.
- Software point releases
 - Provides you with the newest central control service packs for your level of service at no extra charge!
- Central Control training or on-site support rebates
 - Rebates are available for the purchase of Central Control training courses or on-site support by a Rain Bird Authorized Service Provider

- Platinum Level Service Plan

All of the features of the Gold Service Plan plus:

- Software enhancements and major new releases
 - Reduces the expense of adding new features and functions and upgrading your system to the newest versions of your central control software
- Hardware loaner program*
 - Ensures that if any Rain Bird Central Control hardware component covered under the Global Service Plan becomes inoperable, a loaner will be shipped to your site via a next business day delivery service at no extra charge!

- Platinum Plus Level Service Plan

All of the features of the Platinum Service Plan plus:

- PC Upgrade
 - Reduces the expense of upgrading your system to the latest Rain Bird Central Control computer system

• IQ and ESP-LXD Service Plans

- Hardware loaner program*
- Software enhancements and major new releases
- Software point releases
- Central Control training or on-site support rebates
- GSP software and hardware troubleshooting

• Incident and Other Support

- For non-GSP customers, Rain Bird offers telephone support services which are charged per incident. Call us at 1-866-GSP-XPRT for more information

* **Note:** Hardware Loaner Program requires you to obtain a Rain Bird Central Control installation verification audit. Platinum and Platinum Plus loaner programs are limited to 5 registered sites (based on CCU, Site-SAT, TWI, LDI, or SDI serial numbers). Loaner privileges for additional sites may be purchased for an additional fee

If you would like to know more about our Central Control Global Service Plans contact your local Rain Bird Central Control Distributor or call GSP at (866) GSP – XPRT.

Renewal Options (Lump Sum Plans)

Model	Subscription	Part #
Maxicom²® Platinum/ Platinum Plus		
Standard	2 Year	M95520
Standard	3 Year	M95530
Plus: Standard + Computer	3 Year	M95540
Maxicom²® Gold		
Trial	1 Year	M95560
Standard	2 Year	M95570
Standard	3 Year	M95580
SiteControl Platinum/ Platinum Plus		
Standard	2 Year	M97520
Standard	3 Year	M97530
Plus: Standard + Computer	3 Year	M97540
SiteControl Gold		
Trial	1 Year	M97560
Standard	2 Year	M97570
Standard	3 Year	M97580
ESP-LXD		
Standard	2 Year	M001351
IQ™		
Standard	2 Year	I95200

Renewal Options (Payment Plans)

Model	Payment Frequency	Subscription	Part #
Maxicom Platinum Plus			
New or Expired Subscribers	Annual	3 Year	M95541A1
	Monthly	3 Year	M95542M1
Current Subscribers	Annual	3 Year	M95543A1
	Monthly	3 Year	M95544M1
Maxicom Platinum			
Current Subscribers	Annual	2 Year	M95520A1
	Monthly	2 Year	M95520M1
	Annual	3 Year	M95530A1
	Monthly	3 Year	M95530M1
SiteControl Platinum Plus			
New or Expired Subscribers	Annual	3 Year	M97541A1
	Monthly	3 Year	M97542M1
Current Subscribers	Annual	3 Year	M97543A1
	Monthly	3 Year	M97544M1
SiteControl Platinum			
Current Subscribers	Annual	2 Year	M97520A1
	Monthly	2 Year	M97520M1
	Annual	3 Year	M97530A1
	Monthly	3 Year	M97530M1

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 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'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

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 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