What is *iCentral*™?

Simply, *iCentral*™ is a comprehensive, web based water management system that allows remote control for one or more **Eagle-*i*** irrigation controllers. The *iCentral*™ website utilizes reliable 2-way wireless communications from the Internet to each field controller (US Patent No. 6,823,239). The *iCentral*™ system takes advantage of existing commercial wireless carrier infrastructures; therefore, the activation of the wireless service to your controller is performed directly from the Rain Master website hereafter described.

This central system provides total control and allows programs to be entered or modified from the website. The "Automatic Scheduler" feature provides individual station customization relative to plant and soil type, slope conditions, sprinkler precipitation rates, root zone depth and even allowable depletion. The website is intelligent and automatically informs you via email or text message to your cell phone with a "Smart Alert™" anytime a remote field change has occurred.   The website also allows you to initiate a rain shutdown command to one or more controllers, modify individual controller setup information and to turn on/off any station or program. The website has been designed for ease of use, and simplicity, so that little or no training is required.   If you should need help, Rain Master's support staff is available during normal business hours (8am to 5pm PT, M-F).

In addition to central control, the website has the ability to collect and disseminate daily weather information so that water savings can be maximized.   The system can be set up so that weather information (ET – EvapoTranspiration) is automatically sent to each controller every day with the use of *ZipET*™.   Once the weather information is received by the field controller it intelligently modifies scheduled station runtimes to meet plant demand. The website may also initiate a "rain shutdown" to each of your controllers if it has determined that rain fall in your area necessitates a shutdown.

The *iCentral*™ system, with additional options, can intelligently detect broken heads, pipes, and mainline faults when a flow sensor is connected to the controller. Additionally, the **Eagle-*i*** controller has the ability to detect wiring faults associated with station field wiring. All of the field alarms are processed thru the website as they occur, and notification is provided to the website, as well as via email or cell phone text message to the responsible manager. The **Eagle-*i*** is also available with the Rain Master TWICE (2-wire) option.

Finally, you can manage your entire system with Rain Master's *iCentral*™ web services. Reports are available to show all web and field activity. Additionally, all monthly billing/payment can be reviewed and performed on-line via the Rain Master *iCentral*™ website.

iCentral™ Frequently Asked Questions

1. ***What is iCentral™?***

   iCentral is the Worlds First Internet based Central Control Irrigation System. By logging on to Rain Master's ***iCentral*** website, users may control, monitor, setup automatic weather-based irrigation scheduling and manage their irrigation needs via the Internet from anywhere in the world.

2. ***What specific functions can iCentral™ perform?***

   - **Automatic Scheduler & Command Control**.
     - Using an Internet connection, users may enter, modify, or view irrigation schedules for any ***iCentral*** enabled Rain Master Eagle-i controller.
     - The Automatic Scheduler provides the means to fine tune the irrigation schedules, by station (zone), based on plant and soil type, sprinkler precipitation rates, slopes, allowable depletion and other site criteria.
   - **Water Conservation**.
     - ***iCentral*** monitors your local weather on a daily basis and automatically adjusts your controller's irrigation schedules based upon plant watering needs measured against the ET (EvapoTranspiration rate) value from the previous day.
     - When connected to a rain sensor or Rain Master weather station, ***iCentral*** monitors your local area rainfall and automatically performs a rain shutdown to your controllers. Similarly, ***iCentral*** intelligently restores your system back to the automatic watering mode when irrigation is required.
   - **Timely Maintenance**.
     - Automatically take appropriate corrective action if and when field anomalies occur (i.e. broken heads, pipes, faulty station wiring and flow problems.)
     - **Smart Alerts**™ provide immediate user notification via email to your cell phone, computer, or any email capable device. These notifications inform you where the problem is, what the problem is, and at what time the problem was detected.
   - **Irrigation Management Tools.**
     - Command a manual rain shutdown or resumption of automatic watering from the Internet or from a web based PDA device.
     - Start or stop irrigation of any station or program from the Internet.
     - Management reports include:
       - Water usage
       - System anomalies/alarms
       - Sensor and weather station reports
       - Irrigation Schedule reports
       - Operator scheduling and usage reports

➢ **"Intelli-Sync™" Controls.**
  ▪ The Eagle-i controller and ***iCentral*** provides the capability to make programming changes in the field or on the Internet.   Intelligent Synchronization (Intelli-Sync™) notifies the user any time a field programming change has occurred at any controller. The user may then elect to accept or reject the field modifications from the ***iCentral*** website.
  ▪ Intelli-sync™ ensures that your controller's date/time is always correct by accounting for daylight saving time transitions, or inadvertent date/time adjustments at the controller.

3. *What do I need to use **iCentral**™?*

In order to use the ***iCentral*** system you need a Rain Master Eagle-i controller and a corresponding "***iCentral***" communication card (*iCard*). The controller and communication card may be purchased as a package or the *iCard* may be added to any existing Eagle controller at any time. The *iCard* includes a small antenna which mounts directly on the outside of the enclosure. Once an *iCard* is installed, proceed to the Rain Master website at www.rainmaster.com and click on the "***iCentral***" icon.   The website guides you through initial user account creation, and directs you how to "activate" your controller.   Once service activation is complete, the power and benefits of the ***iCentral*** system is at your fingertips.

4. *How exactly does **iCentral**™ save me money?*

The ***iCentral*** system saves water and money for municipalities, installation contractors, maintenance contractors, and end users in several ways:

➢ Because the iCentral system uses wireless technology, installation costs are minimal; there are no phone lines to install and/or no trenching for communications cables ***iCentral*** installations. A typical ***iCentral*** installation for a wall mount controller has three steps: (1) hang the controller on the wall (three screws) (2) mount the small antenna to the enclosure (an enclosure knockout is provided) (3) wire the AC power, ground, and station wiring connections in the traditional fashion.
➢ End users benefit from ***iCentral*** water savings capabilities. Water savings occur when ***iCentral*** is setup to adjust irrigation schedules using daily weather data (i.e. EvapoTranspiration or ET information as well as rainfall). Typical water savings can range from * 25 to as high as 40% depending on your current systems operating variables and your schedule adjustment practices.
(* Water savings will vary based on site parameters and irrigation system efficiency.)
➢ Maintenance contractors save money because minor adjustments and schedule changes can be made effortlessly from the office. Adjustments may include scheduling changes, rain shutdowns, and or manual irrigation cycles. Because control is provided through the Internet, maintenance contractors may instantly

respond to owners requests for field changes, thereby significantly reducing the need for physical on-site visits.

➢ Maintenance contractors may elect to "lockout" field programming changes at the controller in order to ensure that schedules are not mis-programmed in the field. Mis-programmed controllers may result in damage to a landscape as well as being a potential source for customer dissatisfaction.

➢ Both maintenance contractors and end users benefit from the 24 hour round the clock monitoring activity performed by *iCentral*. When connected to the proper sensor, the Eagle-i controller has the ability to respond to various field anomalies, i.e. broken heads, pipes, and mainlines in an immediate fashion, thereby eliminating runoff, damage to landscapes, and potential lawsuits. Once a problem area is detected, the controller takes the appropriate corrective action. Lastly an email is sent to your cell phone / PDA and / or PC in order to inform the user / maintenance contractor of the specific problem condition and time of occurrence.

5. ***What are the advantages of using the Internet over conventional central control systems?***

➢ **Affordable low-cost central.** The *iCentral* design utilizes one electronics card that plugs directly into your existing Eagle controller.   With a minimum of components to purchase, your capital equipment expenditures are minimized.

➢ **Installation simplicity**. Because *iCentral* utilizes existing infrastructures such as the Internet and wireless carriers, your installation is simple and inexpensive. There are no phone lines to install, no hardwire to trench, no expensive hardware investments in radio communication networks, repeaters or radio site surveys. (refer to: "How exactly does *iCentral* save me money?")

➢ **High reliability.** Since the system components are minimal, there are fewer components to fail, less cables to get inadvertently unplugged, and greater system uptime.

➢ **No software required.** Because your central is Internet based, there is no software to purchase or load. Software upgrades are no longer an issue. You receive the latest features and capabilities each time you logon to the website.

➢ **No software backups or lost irrigation schedules.** No need to worry about software backups, crashed disk drives, or lost irrigation schedules. Your irrigation schedules and all your account information is maintained indefinitely by the Rain Master *iCentral* web servers. Your irrigation schedules are also resident at your Eagle controller in non-volatile memory.

➢ **No training required.** The *iCentral* website has been designed to be an intuitive learning experience. Simple screens with explanatory text ensure that you will be using your *iCentral* capability from the moment that you first "logon".   Should you have a question, your Rain Master support team is a toll-free call away.

➢ **Smart Alerts™.** You receive irrigation maintenance notifications via email on your PDA, cell phone, and/or PC, at the time that any system anomalies occur. These messages inform you where the problem is, what the problem is, and at what time the problem was detected.

> ➢ **Unlimited access/availability**. Manage your irrigation system from work, home, or anywhere you have an Internet connection.
> ➢ **No radio license required.** No need to worry about license fees, applications, availability of spectrum, and lengthy license turnaround time.

6. *I am apprehensive about using new technologies. How can I be assured that this really works?*

Rain Master has specialized in irrigation control systems since company inception in 1981. At Rain Master, irrigation control is our only business. Through the years Rain Master has developed a reputation as *the* industry leader for innovative central control technology. The Eagle-i with *iCentral* is no exception. The Rain Master Eagle intelligent water management controller was first introduced on April 15, 2002. The *iCentral* Internet communications capability was released after the successful completion of six months of extensive beta testing which culminated on June 1, 2003. The *iCentral* website was officially launched on June 9th, 2003.

7. *What if I lose connectivity to the Internet or the wireless service to my controller is temporarily interrupted or lost? Will my controllers still irrigate?*

Absolutely! The Eagle controller is not dependent upon the Internet or the wireless service to irrigate. All of the irrigation schedules are executed from the controller. The controller can continue to operate with its present schedule indefinitely. If you were using daily weather information sent via the Internet and communications were lost, the controller will utilize historic weather information from its non-volatile memory in order to intelligently irrigate your landscape. When service is restored the controller will automatically resume usage of the daily weather information sent via the Internet.

8. *I do not have much computer knowledge and I am concerned that I will not understand how to use the iCentral™ website. Is this technology difficult to learn?*

The *iCentral* website has been designed for the novice. The site has been designed so that no training is necessary. Navigation is simple and explanatory "help" text is located throughout the programming screens and drop down menus.

When it comes to programming any "stand-alone" controller, virtually all manufacturers' controllers have a learning curve of some type. When using the *iCentral* website, the learning curve is virtually eliminated because the website operations are both intuitive and simple. All of the controller functions are actually much easier to use on the website than from the controller panel.

If for some reason you have ANY question, you can always call the Rain Master *iCentral* Technical Support team at (800-777-1477) and get your question(s) answered by factory trained personnel.

9. ***How much does an iCentral™ System cost?***

iCentral was designed to be an affordable central system alternative for budget constrained irrigation contractors and end users who require the most fundamental central control capabilities without the complexity presented by larger more comprehensive systems. *iCentral* requires three components:

➢ The Rain Master Eagle controller. The Eagle is an intelligent water management controller that is competitively priced at the same price point as a typical "stand-alone" commercial timer.

➢ The *iCentral* Communications card. In order to communicate with the Internet, a wireless communications card must be added to the Eagle controller.

➢ *iCentral* Service. Users can sign up for one of three monthly Service Plans which always includes 2-way wireless service and access to the *iCentral* website. Additional options, such as ZipET and Automatic Scheduling, each add a minimal amount to the monthly charges. Experience all the benefits of *iCentral* for a nominal fee per month (the minimum payment is based on an annual amount).

10. ***I am a maintenance contractor and I intend to utilize iCentral™ on my customer accounts. What type of service contract am I obligated to sign up for?***

Rain Master's *iCentral* system does not require a term service contract. Users may elect to terminate service to one or more controllers at any time.

11. ***How does the iCentral™ website communicate with the Eagle controller?***

The *iCentral* website communicates with any Eagle-i controller by utilizing existing wireless networks throughout the continental United States. This keeps installation costs low while ensuring reliable communications are achieved.

12. ***How do I know if I have network coverage in my area?***

The "*iCentral*" communications network is available throughout most populated areas across the continental United States utilizing existing wireless technology. If you would like to check wireless coverage, email the physical address of the location to be irrigated to: icentral_support@rainmaster.com

13. *What types of field problems (faults) can the controller detect and how will I be notified?*

The Eagle with *iCentral* card will monitor for Wiring Faults, Mainline Flow limits, Unscheduled Flow, No Flow, and Upper Flow limit violation on a per station basis. You can configure the *iCentral* system to notify you in real time via email or text message to any capable PDA, cellular phone or email account. In addition to the email, the website will show an alarm icon on the *iCentral* home page indicating that field problems have been detected.

14. *The Rain Master "iCentral™" system can deliver site specific weather information to my controller. Where does this information come from?*

The daily weather information may come from a variety of sources depending on your location. The *iCentral* website allows for the selection of any one of the three options listed below.

➢ Users anywhere in the United States may use Rain Masters *ZipET*™ service. The *ZipET*™ service will automatically deliver Zip Code specific EvapoTranspiration (ET) data to your controller on a daily basis. (refer to FAQ 15)

➢ You may also purchase an "on-site" Rain Master weather station that connects directly to one of the Eagle-i controllers. Rain Master receives the weather stations information and then distributes the ET data to any of the "other" Eagle-i controllers automatically.

➢ California users may alternatively get daily ET data from any of California's CIMIS weather stations. Rain Master automatically downloads this information from CIMIS every day and re-distributes it to your controller.

15. *What is ZipET™ and how does it work?*

ZipET™ is a revolutionary ET (EvapoTranspiration) weather data collection and dissemination service provided for Rain Master *iCentral* Internet customers that uses "virtual weather station" technology. Using *ZipET*™ users can get site specific daily ET weather data (based on Zip Code) delivered to any controller located within the United States. Using daily ET, your Eagle controller automatically adjusts irrigation watering schedules based on daily weather conditions so you only replace water that has been depleted from the soil.

Unlike other ET-based irrigation programs that require you to have water audit expertise or to be a soil scientist, Rain Master's *ZipET*™ only requires you to enter a 5-digit Zip Code. The rest is automated! Your irrigation schedules adjust everyday based upon receipt of this daily information.

So how does it work? Rain Master receives reliable raw weather information on a daily basis from thousands of federally regulated FAA and NOAA weather stations throughout the United States. The weather information is validated, and converted as necessary in order to generate industry accepted ET values. The ET values are interpolated by Zip Code using a three-dimensional surface regression model. Site specific ET information is then delivered to your controller based upon your designated *iCentral* weather setup criteria.

16. *What sets Rain Master Irrigation Systems apart from the others?*

 ➢ For over 25-years Rain Master's product focus has been to continually add intelligence to its irrigation controllers.
 ➢ Its success has been based upon innovative technology that sets it apart from its competitors. The Eagle-i *iCentral* Internet system (U.S. Patent 6,823,239) sets the new standard in irrigation technology.
 ➢ Rain Master is a company with a proven track record and a name that you can trust. Reliable, rugged commercial grade controllers provide you with years of trouble free service. Should you ever have any question, please give our service department a call or contact your local sales representative.

Rain Master Products may be purchased from your local distributor. To locate the distributor closest to you, go to: www.rainmaster.com/location_wizard.asp