

RAIN MASTER®

CONTROL SYSTEMS

Quick Start Guide FOR THE DX3

POWERED BY LAGUNA 

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Irritrol®

Chapter 1: Introduction

Thank you for supporting Rain Master® and the Laguna™ / DX3™ central control platform. As the long-awaited successor to the Evolution™ DX2 controller, we hope the DX3 will exceed your expectations and contribute to Rain Master's legacy of innovation and service.

About the Controller

Rain Master believes in minimizing waste by maximizing water application efficiency. The DX3 provides precise control of irrigation delivery systems through a flexible network that could fit almost any application. DX3 will work with your Rain Master Laguna software to monitor, adjust, and report on irrigation schedules to your technical comfort level.

Hardware Features

Capacity:

- Up to 96 stations per satellite in conventional configurations, 200 stations per controller in two-wire (TWICE™) configurations.
- Up to 48 conventional stations + 100 two-wire stations in our hybrid models (for TWICE two-wire conversion projects).
- Three dedicated master valve (MV) outputs, either normally closed or normally open.
- Two auxiliary 24VAC relays for pumps, lights, etc.
- Up to Six inputs to connect flow sensors/meters or other pulse-data devices. Note that these devices would be independent of the optional LAGUNA wireless weather solutions, which are all wireless.
- Three alarm inputs

- An expansive, 4.4" LCD back-lit display with rapid menu navigation and "digital ink" for high visibility in the sun.
- Integrated cabinet access lighting or "fridge light" and pivoting brackets for improved setup and service access (select models)
- Transparent, custom – fit plastic covers for all circuit boards for added protection against the elements and pests (certain models).
- Many system communication options, including 3G cellular, UHF Radio, Ethernet-to-Radio, Ethernet, Hardwire, WiFi and more!
- Lightning protection up to 18kV
- Integrated amperage meter to enhance internal diagnostics and troubleshooting
- Up to nine simultaneous station-related operations (six valve and three MV)

Scheduling and Programming Features

- 16 conventional programs with up to 12 start times per program
- Exclusive DX series Individual Station Control (ISC™): Treat every active station as an individual program
- Customizable scheduling calendar with up to 48 exclusion days
- Programmable MV and Station Delay
- Global water window (ISC & Manual can override)
- English, Spanish and French language settings
- Imperial (Standard) or Metric standard units of measure

Program Setup Options

Setup Menu	Option	Default
Time/Date		12:00:00am
Language	English / Spanish	English
Flow		
Omit by Date		
Communication		
Current Checks		
Firmware Update		
Learn Flow / Current		
About		

Maintenance and Alarm Diagnostic Capabilities

- Flow monitoring. Overflow, underflow, unscheduled flow, and catastrophic occurrence monitoring and reporting.
- Electrical alarm with station shutdown and program advance for station/s over current, shorts, damaged wires, and/or faulty solenoids.
- Power outage restoration alarms.
- LED indication for station outputs.
- Electrical self diagnostic test to verify communication between the timing mechanism (TM) and all modules.
- Manual test mode that can advance stations while displaying valve electrical current and station flow data.

Communication Features

The DX3 is capable of communicating with the Central computer over a variety of communication technologies.

Cellular 3G	Optional accessory for Central to sub-master communication.
WiFi	“Short range” standard WiFi to Central, sold as an optional accessory.
Ethernet	Standard on all DX3 systems.
Ethernet-to-Radio	Sold as an optional stand-alone accessory.
UHF Radio	Sold as an optional stand-alone or embedded accessory.
Serial cable	Serial communication to Central or Diagnostic PC.

Icons Explained

A note to clarify.



Important



Warning! Risk of electric shock



Rotate the Control Dial.



Press the Control Dial.

Getting Help

Rain Master strives to build safe, durable, and easy to use product. If, however, you encounter a problem that referring to this manual cannot resolve, please contact an authorized Rain Master product expert for assistance via phone or email.

U.S./Canada:

Phone: 1-800-777-1477 (7:30 am–4 pm, M–F, PT)

E-mail: rm.techsupport@toro.com










Chapter 2: Overview

Because not all irrigation applications are identical, the DX3 controller has been designed to allow users to establish a wide variety of individual programmable options. These options include changing configuration of programs, Individual Station Control (ISC), irrigation stations, the controller, and sensors.

The Faceplate



The Buttons

Button	Function
	Control Dial Rotate to switch between fields on a screen and change values within those fields. Press to enter a desired field and to save the value.
	Left, Right, and Back buttons To navigate screen and menu selections.
	“A” button To...
	“B” button To...
	Command button To execute the on-screen command closest to that particular command button.
	All Stop To stop all current irrigation activity.
	Manual To manually operate the controller.
	Dashboard To return the controller to the “Dashboard” screen.
	Review To review irrigation program settings.

The LEDs

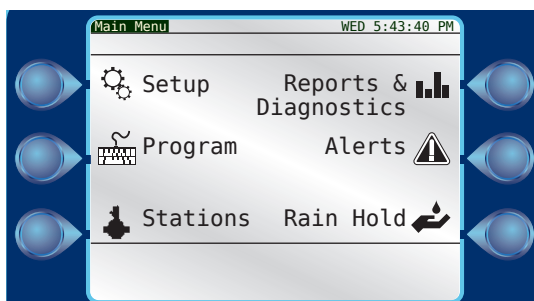
The DX3 has three LEDs beneath the main LCD screen. Each LED illuminates for a specific reason:



Rain Off (blue)	Illuminated when the Rain Off command is active. All irrigation activity is suspended when this light is on.
Alert (red)	Illuminated when a user alert for the operator has been triggered, such as after a loss of power or loss of pressure. Alerts must be manually cleared in the Alert submenu.
Irrigation (green)	Illuminates when irrigation is actively in operation. If no sprinkler or station is running, the irrigation LED will be off.

The Screen

The Liquid Crystal Display (LCD) screen on the DX3 controller is 4.4" QVGA monochrome display screen capable of 320x240 pixels.



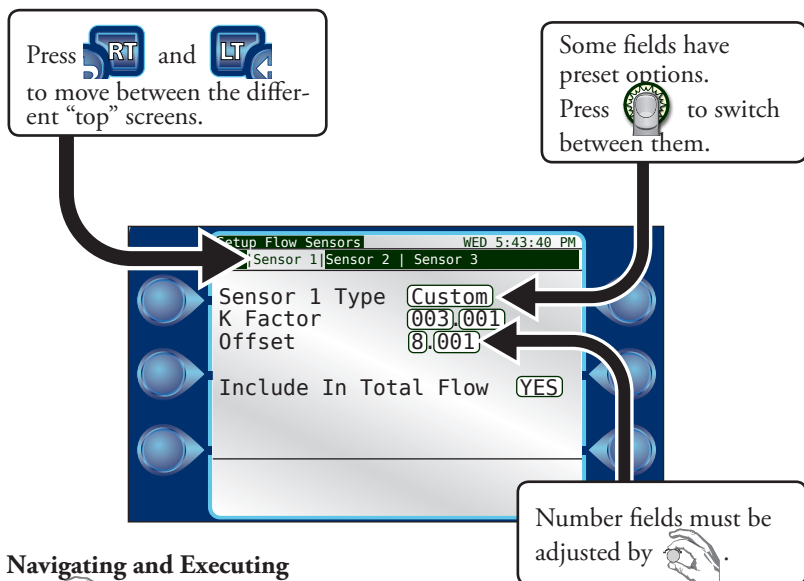
The main menu

On both sides of the screen are three command buttons for quick and easy execution of the button's assigned command.

Menu Navigation

Navigating menus and executing commands in the DX3 is easy with the various buttons and the Control Dial.

To navigate the typical DX3 screen, we will use the below as an example.



Navigating and Executing

1. to navigate between adjustable fields.
The “active” field will have a black box around it.
2. to enter the “active” field.
3. to adjust the value.
 Some fields have preset options like “Custom” vs. “Data Ind”. Other fields are numeric and are adjusted incrementally.
4. to set desired option.
5. Repeat steps 1 - 4 for all adjustable fields.

Chapter 3: Quick Start



This chapter is a step-by-step tutorial for rapid and basic controller setup. For the demonstration, we will set up an irrigation schedule with 2 start times: 6:15am and 8pm daily, 1 cycle at 10 minutes per station.

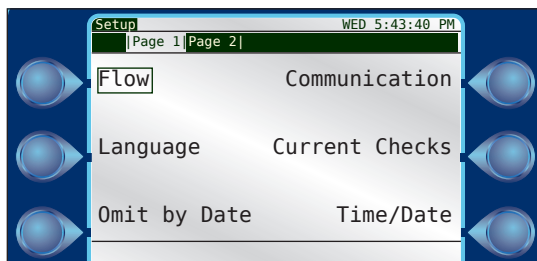


The Quick Start guide does not address advanced features such as sensors, flow, ET, or FLOWMAX. Please refer to the DX3 User Guide (373-0920) for complete operating instructions

Before we can program an irrigation schedule, we must enter the date and time.





To get to the Setup screen from the Dashboard, press

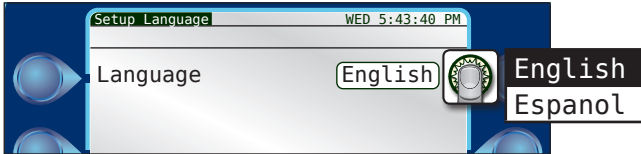
the Control dial  or any one of the Command buttons .



The Setup Screen

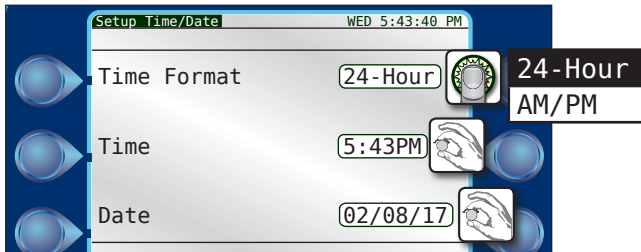
Setting the Language



- 1)  Setup
- 2)  Language
- 3)  to change language.
- 4) When done, press .



Setting Current Date and Time

- 1)  Setup
- 2)  Time/Date




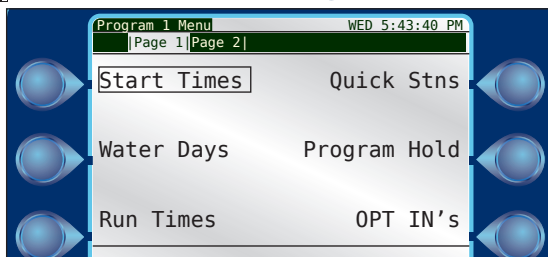
- 3)  Switch between the 3 time/date fields.
- 4) Using the navigation techniques from page 14, adjust fields as necessary.
- 5) Repeat as necessary for the other fields. When done, press .

Creating a New Irrigation Schedule

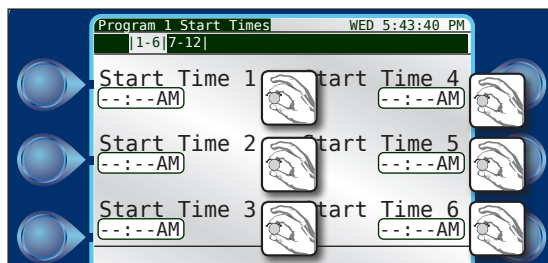
Now that the language and date and time are set, we can set up the irrigation schedule.

Program Start Time





- 1)   Program 2)  Program 1




- 3)  Start Times

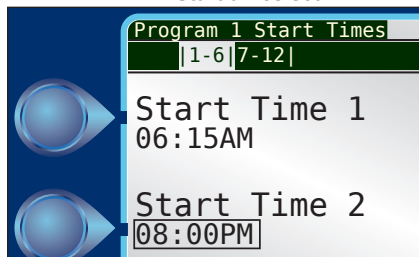



It is possible to have 12 start times per program.

- 4)  and  to adjust the first start time to 6:15am.
- 5)  and  to adjust Start Time 2 to 8:00pm.

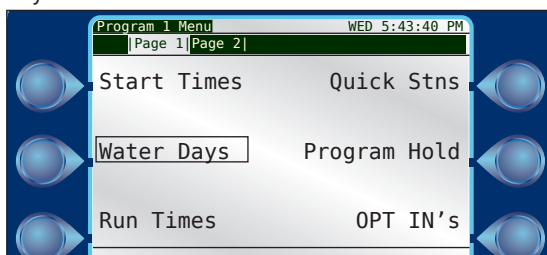
 Press 'A' to clear start times.

Start times set!

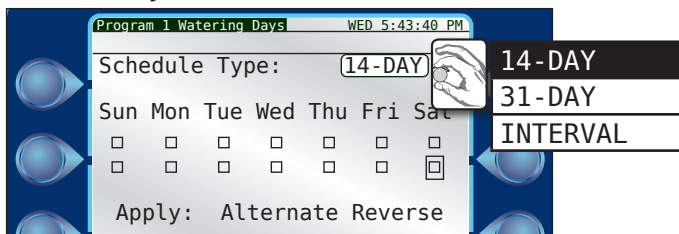


- 6) When done, press .

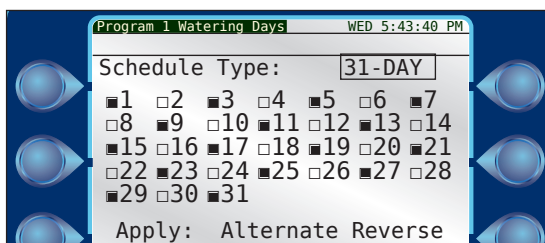
Water Days



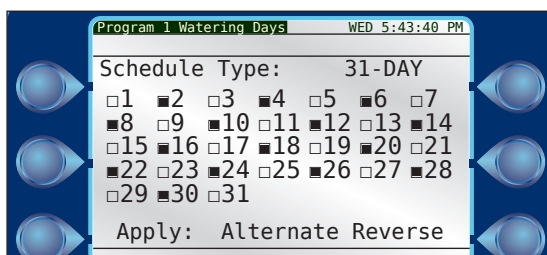
1) Water Days



- 2) Enter **Schedule Type** field. 3) Change to desired schedule. I chose 31-DAY.



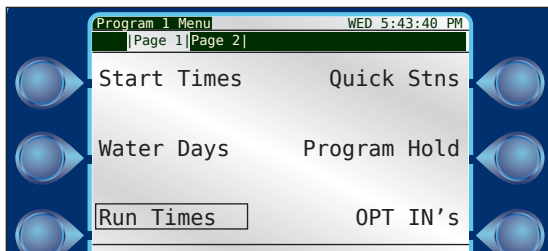
- 4) Set Schedule Type. 5) to Alternate.
- 6) Set Alternate. 7) When done, press .





Alternate days are active.


Station Run Times

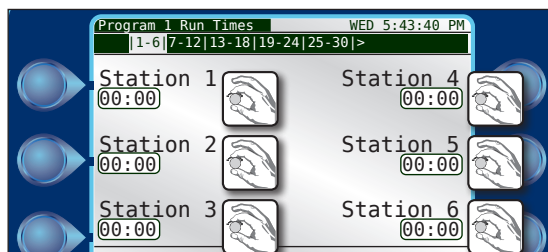
1) Run Times




2)  Enter **Station 1** hours field. Our run time will only be for ten minutes, so we can switch to the minutes field.

3)  Switch to minutes field.


4)  Adjust desired run time in minutes.

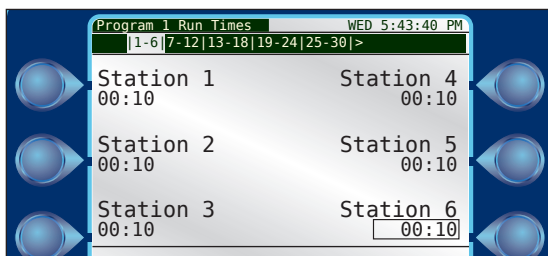


5)  Set Station 1 run time.

6)  Switch to next Station field.

7) Repeat steps 2-6 for as necessary for as many stations as desired.

 Press 'A' to clear run times.

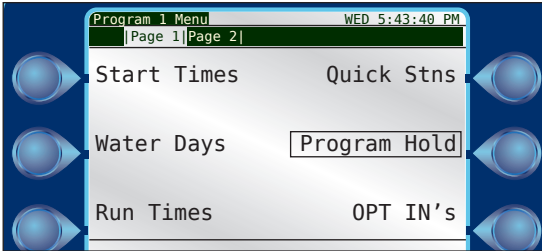



Stations 1 - 6 set with ten minute run-times.

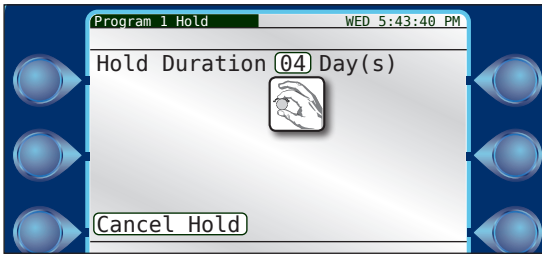
Program Hold





A storm is coming! Irrigation will not be needed for a few days.
Let's activate a Program Hold on Program 1.

- 1)   Program
- 2)  Program 1



- 3)  Program Hold



- 4)  Enter **Set Day(s)** field.
- 5)  Change to desired days. 4 days to dry out.
- 6)  Set value.
- 7) When done, press .

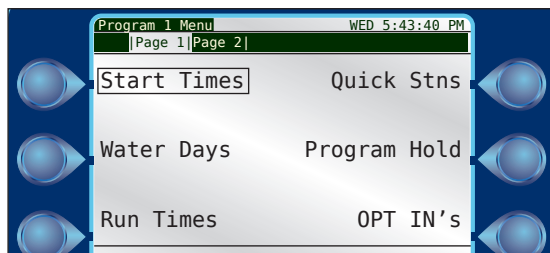
% Adjust

The weather overall is getting cooler.

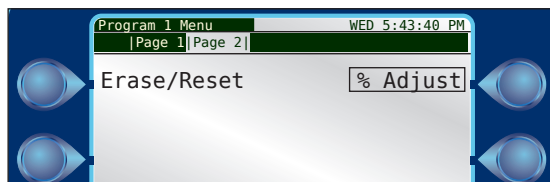
Let us decrease the overall amount of irrigation for this program.


1)   Program

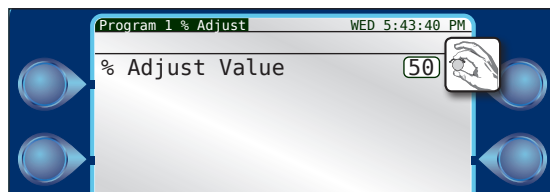
2)  Program 1





3)  to get to the Page 2 Program 1 Menu screen.





4)  % Adjust




5)  Enter % **Adjust** field.

6)  Change to desired %.
I reduced to **50%**.

7)  Set value.

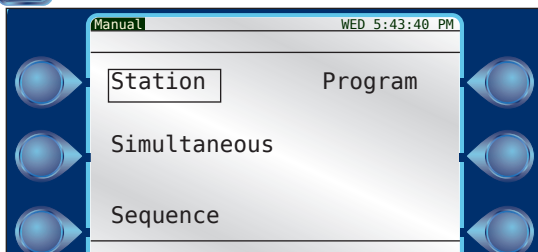
8) When done, press  .

 Above, we set our run times to ten minutes per station.
A 50% runtime would therefore cut that in half, to five minutes.

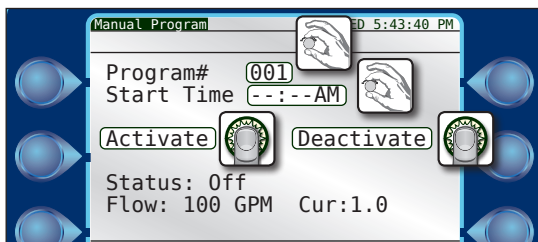
Manual Operation













The grass is a little dry. Let us run a manual program operation at 10pm to help keep that grass green.

- 1) Press the  Manual button.



- 2)  Program



- 3)  Enter **Program#** field.
- 4)  Select program to run. I chose 1.
- 5)  Set Program value.
- 6)  Navigate to **Start Time** field.
- 7)  Enter **Start Time** field. Hours field will flash.
- 8)  Change hour value to 10.
- 9)  Switch to minute field.
- 10)  Switch to AM/PM field.
- 11)  Change to PM.
- 12)  Set value.
- 13) When done,  to the **Activate** field and  .
The operation will execute this evening and save the grass.

Notes

WANT THE WHOLE ENCHILADA?

To download the complete DX3 User Guide, please visit our website.
For your free printed and bound copy, simply call or email us today.
We are happy to send one to you. Thank you for your support!

Website: www.rainmaster.com
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email: irrigationsupport@irritrol.com

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