

April 16, 1935.

O. H. ENGLEHART
WATER SPRINKLER
Filed Dec. 18, 1932

1,997,901

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

INVENTOR,
ORTON H. ENGLEHART
BY *Wm. B. Smith* ATTORNEY

RAIN  BIRD®

iQ4

IQ4 – Manual Ops (New Tab)

IQ4 – Manual Ops Tab

The Manual Ops tab is a feature that allows users to monitor and control all manual irrigation from one location

- Irrigation queue of operating, soaking or Pending stations
- Flow Alarms monitoring and healing
- Start Programs and/or Stations
- Cancel All irrigation
- Advance selected station
- Review Events for the controller
- Review and initiate Diagnostics for the controller
- Monitor status of Weather Sensors and Master Valves

IQ4 – Manual Ops Tab

ACTIVITY

CONTROLLERS

PROGRAMS

REPORTS

SYSTEM SETUP

Playground

← MALKIN RESIDENCE - TEST CONTRO...

Manual Ops

Programs

Dryrun™

Stations

Master Valves

Sensors

Edit

Logs

Sync

Reverse

More

Controller Settings

Flow

07.96

Actual Flow Rate: --

Expected Flow Rate: 3.98 gal/min

Name

Malkin Residence - Test Controller

Controller Type

IQNet Type

LXME

Direct Satellite

SIM Expires

-

Oro Valley, Arizona United States of America

Tue 11/16/2021 - 9:43 AM

62°F

Clear/Sunny

High 82° - Low 59°

Wed

71°F

Thu

80°F

Disconnect

Settings

Flow Alarms

Refresh

Start

Cancel All

Advance

<input type="checkbox"/>	#	Station Name	Status	Program	Source
<input type="checkbox"/>	1	Garage Shrubs	59 min 45 sec	--	Manual Program
<input type="checkbox"/>	2	Garage Trees	Pending	--	Manual Program
<input type="checkbox"/>	3	Entry Shrubs	59 min 45 sec	--	Manual Program
<input type="checkbox"/>	4	Entry Trees	Pending	--	Manual Program
<input type="checkbox"/>	6	Rear Pots	Pending	--	Manual Program
<input type="checkbox"/>	7	Pool Turf	Pending	--	Manual Program
<input type="checkbox"/>	8	North Turf	Pending	--	Manual Program
<input type="checkbox"/>	9	South Turf	Pending	--	Manual Program
<input type="checkbox"/>	10	Rear Raised Planter	Pending	--	Manual Program

Rain Bird Dashboard > Controllers > Malkin Residence - Test Controller

IQ4 – Manual Ops Tab

Setup items to complete before fully using the Manual Ops Tab

- Controller Setup
 - Flow Sensors
 - Master Valves
 - Stations
 - Programs
 - Controller Level SimulStations
 - FloManager
 - FloWatch
 - Controller parameters (Auto/Off, Auto Sync, Scheduled Sync, etc.)

IQ4 – Manual Ops Tab

- Program Setup
 - Start time(s)
 - Day(s) of operation
 - Program Level SimulStations
 - ET Adjust, Program Adjust
- Station Setup
 - Flow rate(s)
 - Manual
 - Learned flow (coming soon to IQ4)
 - Base Runtime(s)
 - Decoder/IVM addresses
 - FloZone assignments

IQ4 – Manual Ops Tab

Using the Manual Ops Tab

- The Manual Operations tab provides software tools to help you remotely control the operation of controllers using the IQ4 Software.
- Manual Operations include:
 - Managing the irrigation queue by starting a station or program, or by cancelling irrigation
 - Viewing and changing current settings
 - Flow Alarm identification and healing alarms
 - Using special commands: i.e. downloading updated firmware to satellite controllers and viewing controller event logs
 - *Tip: It is best to connect to the controller first, before attempting any manual commands*

IQ4 – Manual Ops Tab

Irrigation Queue Tab

The screenshot displays the Rain Bird IQ4 web interface. The top navigation bar includes tabs for ACTIVITY, CONTROLLERS, PROGRAMS, REPORTS, and SYSTEM SETUP. The main header shows the controller name 'MALKIN RESIDENCE - TEST CONTRO...' and the selected 'Manual Ops' tab. Below this, the 'Irrigation Queue' sub-tab is active, showing a table of irrigation events. The left sidebar contains 'Controller Settings' and weather information for Oro Valley, Arizona.

Controller Settings

Flow: 0 to 7.16
Actual Flow Rate: --
Expected Flow Rate: 3.58 gal/min

Name: Malkin Residence - Test Controller
Controller Type: LXME
IQNet Type: Direct Satellite
SIM Expires: -

Oro Valley, Arizona United States of America
Thu 11/18/2021 - 6:52 AM

48°F
Clear/Sunny High 78° - Low 55°

#	Station Name	Status	Program	Source
1	Shrubs - Garage	45 min 55 sec	A	Manual Program
2	Trees - Garage	Pending	B	Manual Program
3	Shrubs - Entry	45 min 55 sec	A	Manual Program
4	Trees - Entry	Pending	B	Manual Program
6	Pots - Planters	-	C	Auto Program

Rain Bird Dashboard > Controllers > Malkin Residence - Test Controller

IQ4 – Manual Ops Tab

- Irrigation Queue Tab display
 - Connect/Disconnect button: Makes a manual connection to the controller
 - Settings button: displays (no editing) the controller settings
 - Flow Alarm button: If there are any flow alarms, a red exclamation point will be displayed. Clicking the button will open the Flow Alarm dialog box to disposition
 - Refresh button: Current settings and Irrigation Queue will update immediately
 - Start button: Starts Program(s) or starts station(s)
 - Manual Start Station — Activates one or more stations immediately
 - Manual Start Program — Starts one or more programs immediately
 - Cancel All button: Stops all irrigation on the controller immediately
 - Advance button: Stops the selected station and activates the next pending station immediately

IQ4 – Manual Ops Tab

- Irrigation Queue Tab
 - Once connected, the IQ Software retrieves Current Settings from the device:
 - Satellite Status — The satellite can be either Auto (automatic) or Off. If the satellite is Off, watering is suspended. It does not mean that there is no power to the device.
 - Rain Delay — The number of days remaining in a Rain Delay, as physically stored in satellite controller memory.
 - Sensor Switch Status — This indicates the position of the Sensor Switch
 - Sensor Status — Indicates the current status of watering based on the status of the installed sensor. The values are either Normal or Watering Suspended, along with the name of the sensor.
 - Mode - Current irrigation mode
 - FloWatch - Current state of FloWatch
 - FloManager - Current state of FloManager
 - 2-Wire Path (ESP-LXIVM/ESP-LXD only) - Current state of 2-Wire Path

IQ4 – Manual Ops Tab

Events Tab

The screenshot displays the IQ4 web interface for the 'Manual Ops' tab. The top navigation bar includes 'iQ4', 'ACTIVITY', 'CONTROLLERS', 'PROGRAMS', 'REPORTS', and 'SYSTEM SETUP'. The main header shows the selected controller 'MALKIN RESIDENCE - TEST CONTROLL...' with sub-tabs for 'Manual Ops', 'Programs', 'Dryrun™', 'Stations', 'Master Valves', and 'Sensors'. Below this, there are icons for 'Edit', 'Logs', 'Sync', 'Reverse', and 'More'. The 'Events' sub-tab is active, showing a list of events with columns for 'Date/Time', 'Description', 'Type', 'Site', and 'Source'. The events are filtered by a '1 week' range from '11/11/2021' to '11/18/2021'. On the left, the 'Controller Settings' panel shows the controller name 'Malkin Residence - Test Controller', type 'LXME', and location 'Oro Valley, Arizona United States of America'. The current temperature is 47°F, and the weather is 'Clear/Sunny'. A 5-day forecast is also visible. The bottom status bar indicates 'Rain Bird Dashboard > Controllers > Malkin Residence - Test Controller' and '0 / 779 Selected'.

Controller Settings

Name
Malkin Residence - Test Controller

Controller Type
LXME

IQNet Type
Direct Satellite

SIM Expires
-

Oro Valley, Arizona United States of America
Thu 11/18/2021 - 7:48 AM

47°F
Clear/Sunny High 78° - Low 55°

Fri		76°F
Sat		73°F
Sun		75°F
Mon		75°F
Tue		72°F
Wed		65°F

<input type="checkbox"/>	Date/Time	Description	Type	Site	Source
<input type="checkbox"/>	11/18/2021 7:20 AM	Central completed event log retrieval	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 7:20 AM	Central started event log retrieval	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 7:20 AM	Central completed event log retrieval	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 7:20 AM	Central started event log retrieval	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 6:37 AM	Flow detected during Manual MV Watering Window.	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 6:37 AM	Satellite Program A manually started by Central	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 6:37 AM	Program A started	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 6:37 AM	Station001 #001 turning on	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 6:37 AM	Station003 #003 turning on	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 6:35 AM	Central completed event log retrieval	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 6:35 AM	Central started event log retrieval	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 6:20 AM	Central completed event log retrieval	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 6:20 AM	Central started event log retrieval	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller
<input type="checkbox"/>	11/18/2021 6:20 AM	Central completed event log retrieval	Information	Malkin Residence - Test Controller	Malkin Residence - Test Controller

Rain Bird Dashboard > Controllers > Malkin Residence - Test Controller

0 / 779 Selected

IQ4 – Manual Ops Tab

- Events Tab display
 - Displays Events for the past 7 days for just this controller

IQ4 – Manual Ops Tab

Diagnostics Tab – ESP-LXME/ESP-LXME2

The screenshot displays the Rain Bird IQ4 web interface for the 'Malkin Residence - Test Controller'. The top navigation bar includes tabs for ACTIVITY, CONTROLLERS, PROGRAMS, REPORTS, and SYSTEM SETUP. The left sidebar shows the 'Manual Ops' tab selected, with sub-tabs for Irrigation Queue, Events, and Diagnostics. The main content area is divided into two sections: 'Controller Settings' on the left and 'Diagnostics' on the right.

Controller Settings:

- Name: Malkin Residence - Test Controller
- Controller Type: LXME
- IQNet Type: Direct Satellite
- SIM Expires: -
- Location: Oro Valley, Arizona United States of America
- Time: Thu 11/18/2021 - 7:50 AM
- Weather: Clear/Sunny, 47°F, High 78° - Low 55°
- Forecast:

Day	Weather	Temp
Fri	Sunny	76°F
Sat	Partly Cloudy	73°F
Sun	Partly Cloudy	75°F
Mon	Sunny	75°F
Tue	Sunny	72°F
Wed	Sunny	65°F

Diagnostics:

Weather Sensor Status (Last Updated: 11/18/2021 7:50 AM)

Name	Status
Rain Bird WR-2	Monitoring

Master Valve Status (Last Updated: 11/18/2021 7:50 AM)

Name	Type	Status	MV Water Window
Mainline Master Valve - NC	Normally Closed	Open	Yes

Rain Bird Dashboard > Controllers > Malkin Residence - Test Controller

IQ4 – Manual Ops Tab

- Diagnostics display – ESP-LXME/ESP-LXME2
 - Displays the local sensor name and status
 - Displays the Master Valve name, type and status along with the Master Valve Water Window setup

IQ4 – Manual Ops Tab

Diagnostics Tab – ESP-LXD

The screenshot displays the Rain Bird IQ4 web interface. The top navigation bar includes tabs for ACTIVITY, CONTROLLERS, PROGRAMS, REPORTS, and SYSTEM SETUP. The main header shows the selected controller: ESP-LXD CLIENT CONTROLLER FOR Below this, the 'Manual Ops' tab is active, with sub-tabs for Irrigation Queue, Events, and Diagnostics. The left sidebar contains 'Controller Settings' with fields for Flow (0 to 10), Actual Flow Rate (0 gal/min), Expected Flow Rate (0 gal/min), Name (ESP-LXD Client Controller for ESP-LXME2), Controller Type (LXD), and IQNet Type (IQNet™ Client). The main content area shows three diagnostic sections: Weather Sensor Status, Master Valve Status, and Line Survey. Each section includes a table of data.

Weather Sensor Status (Last Updated: 11/18/2021 8:12 AM)

Name	Status
Local Sensor	Monitoring
Weather 1	Inactive
Weather 2	Inactive
Weather 3	Inactive

Master Valve Status (Last Updated: 11/18/2021 8:12 AM)

Name	Type	Status	MV Water Window
Master Valve 001	Normally Closed	Closed	No
Master Valve 002	Normally Closed	Closed	No
Master Valve 003	Normally Closed	Closed	No
Master Valve 004	Normally Closed	Closed	No
Master Valve 005	Normally Closed	Closed	No

Line Survey (Last Updated: 11/18/2021 8:12 AM)

	A	B
Voltage 1	15.9	15.8
Voltage 2	-20.5	-20.5
Milliamps	15	15

Temperature OK
Current OK
Overload Not OK

Rain Bird Dashboard > Controllers > ESP-LXD Client Controller for ESP-LXME2

IQ4 – Manual Ops Tab

- Diagnostics display – ESP-LXD
 - Displays the local and 2-wire sensor name and status
 - Displays the Master Valve(s) name, type and status along with the Master Valve Water Window setup
 - Displays the Line Survey Status including voltage and current

IQ4 – Manual Ops Tab

Diagnostics Tab – ESP-LXIVM/ESP-LXIVM Pro

The screenshot displays the Rain Bird IQ4 web interface. The top navigation bar includes tabs for ACTIVITY, CONTROLLERS, PROGRAMS, REPORTS, and SYSTEM SETUP. The main header shows the selected controller: ESP-LXIVM PRO CLIENT-ESP-LXME2. Below this, the 'Manual Ops' tab is active, with sub-tabs for Irrigation Queue, Events, and Diagnostics. The Diagnostics sub-tab is selected, showing a table of system metrics and a weather forecast sidebar.

Controller Settings

Name: ESP-LXIVM Pro Client-ESP-LXME2 Server
Controller Type: LX-IVM Pro
IQNet Type: IQNet™ Client
SIM Expires: -

Oro Valley, Arizona United States of America
Thu 11/18/2021 - 8:47 AM

50°F
Clear/Sunny High 78° - Low 55°

#	Path	Status	Notes
-	Controller Current	5 mA	(expected: 1 - 400 mA)
-	Controller Voltage	25.1 v	(expected over 23 V)
1	Path 1	OK	
2	Path 2	OK	
3	Path 3	OK	
4	Path 4	OK	

Rain Bird Dashboard > Controllers > ESP-LXIVM Pro Client-ESP-LXME2 Server 0 / 6 Selected

IQ4 – Manual Ops Tab

- Diagnostics display – ESP-LXIVM/ESP-LXIVM Pro
 - Displays the current and voltage for the 2-wire system
 - Displays the status of each 2-wire path

Frequently Asked Questions

FAQs

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