ii.ri
Smart Control

BATTERY OPERATED SMART IRRIGATION CONTROLLER
INSTALLATION AND OPERATING INSTRUCTIONS

Bluetooth®

BACCARA   C€ FC Bluetooth®

BATTERY OPERATED SMART IRRIGATION CONTROLLER INSTALLATION AND OPERATING INSTRUCTIONS

1. GETTING STARTED

Please read carefully the operation and installation instructions in order to achieve a quick and successful set up for the ii.ri.

1.1. General description

The ii.ri is stand-alone smartphone operated irrigation controller with wireless operation capability and internal battery operated.

The ii.ri is compatible for smartphones or tablets with Bluetooth 4.0 and above. It may link older Bluetooth versions, however we cannot guarantee good connectivity performance.

1.2. Installation warning

Please follow carefully the installation instructions warnings in order to avoid any damage of the device and/or harming your hands. Make sure to firmly install the valve and identify the upstream and downstream ports of the valve prior to installation. Do not apply extreme force to clamp the ii.ri controller to the valve port on upper side of the valve. Too much torque may damage the thread or even break the plastics.

1.3. Warranty

This Limited Warranty applies to physical goods, and only for physical goods, purchased from one of BACCARA's authorized distributor or retailers. This Limited Warranty covers any defects in material or workmanship under normal use during the Warranty Period.

During the Warranty Period, BACCARA will repair or replace, products or parts of a product that proves defective because of improper material or workmanship, under normal use and maintenance.

BACCARA will either repair the product using new or refurbished replacement parts. The Warranty Period for physical goods purchased from BACCARA or its authorized distributor or retailers is 360 days (1 year) from the date of purchase. A replacement physical good or part assumes the remaining warranty of the original physical good or 360 days (1 year) from the date of replacement or repair, whichever is longer.

This Limited Warranty does not cover any problem that is caused by: conditions, malfunctions or damage not resulting from defects in material or workmanship.

To obtain warranty service, you must first contact us by applying at www.ii-ri.com/warranty

2. PARTS IDENTIFICATION

Irrigation Controller

Stand-alone version, suitable to install in most of the valves up to 2" size in the market.
For additional information www.ii-ri.com

Operation Button

Battery Cover

Base with solenoid

Port UNEF ¾"

Upstream port

Downstream port

IMPORTANT

Prior to installation process, we strongly recommend installation of a finger filter in the interior part of the valve upstream port.

3. ABOUT THE ii.ri

The ii.ri set up is simple and does not require any special practice or previous knowledge. However, we strongly recommend to read and follow carefully all the explanations in order to avoid damages and save time in the process.

3.1. INSTALLATION INSTRUCTIONS

Before starting the installation process, make sure to shut off the main irrigation system.

The ii.ri is suitable to be installed in a valve range from 1/8" up to 2", the ii.ri connection port features a UNEF ¾" thread. In case the controller is not assembled – sole unit purchase – make sure not to exceed the highest torque force while installing the controller on the valve, in order to avoid any damage to the connection areas between valve and device.

3.2. BATTERY SPECIFICATIONS

The ii.ri energy source complies to one standard CR123 battery type, already supplied with the controller. The battery is located inside the controller body and safely protected by a top cover. The battery supplied with the ii.ri is exchangeable, please refrain from changing the battery unless a "LOW BATTERY" alert has been shown on the smartphone screen.

3.3. CHANGING BATTERY

In case the "LOW BATTERY" alert appears after pairing the ii.ri with the smartphone, changing the battery is mandatory. During the battery exchanging process, note that the ii.ri will not erase existing data in the memory.

To change the battery, insert a coin in the top battery cover groove and turn it clockwise gently until it is released from the internal self-locking notches.

See figure below.

Battery Cover Clased	Battery Cover Opened

Proceed to take out the battery by turning the controller upwards or by extracting it with your fingers. Do not insert metal tools into the gap between battery and inner wall because this may damage the electronic systems inside the controller.

Make sure to insert the new battery correctly, the "+" nipple must always be upwards. Faulty battery installation may harm the electronics in the controller.

After the new battery has been inserted correctly into the body cavity, close it gently by turning the battery upper cover with the coin clockwise. Applying too much torque may damage the plastic groove.

4. ii.ri APP - DOWNLOAD AND INSTALLATION

The ii.ri app is available in APPLE STORE and GOOGLE PLAY, it is free and public. In order to pair the smartphone with the ii.ri controller it is mandatory to install the app.

4.1. DOWNLOAD AND INSTALLATION

The app can be downloaded by scanning the following QR's, or visiting our website at

www.ii-ri.com

IMPORTANT NOTICE:

The ii.ri app is compatible with Bluetooth 4.0 version (minimum required iOS 7 or Android V4.3). In case your smartphone features a lower BT version, you may experience low performance or communication constraints.
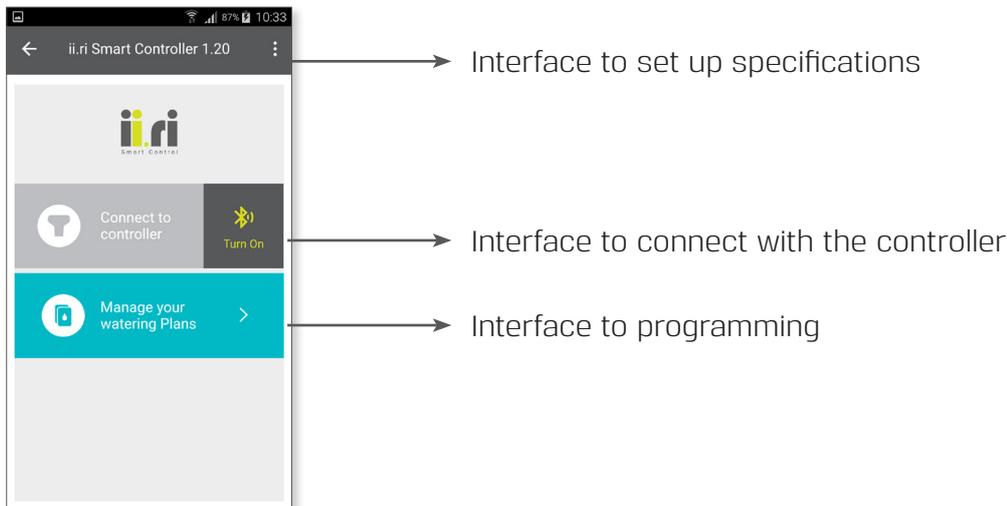
Download ii.ri App

Download on the App Store

Google play — ANDROID APP ON

IMPORTANT NOTICE

The ii.ri app is compatible with Bluetooth 4.0 version (minimum required iOS 7 or Android V4.3). In case your smartphone features a lower BT version, you may experience low performance or communication constraints.

4.2. MAIN SCREEN

The app main screen is simple and self-explanatory. It allows you to configure the main specifications of the ii.ri controller following direct steps.
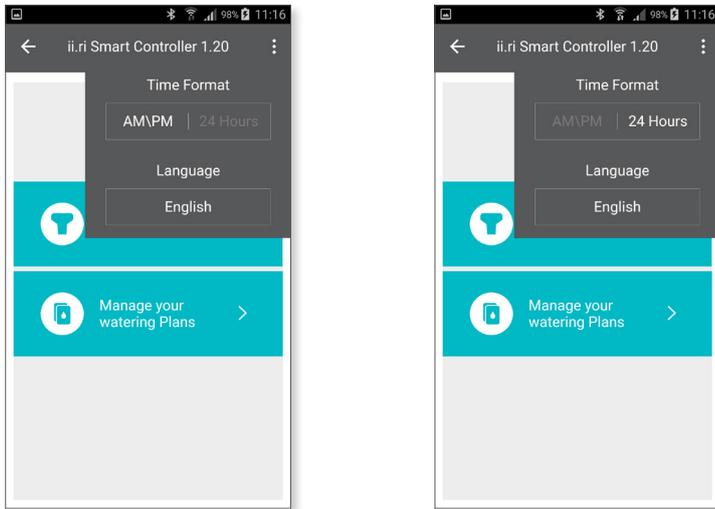
Interface to set up specifications

Interface to connect with the controller

Interface to programming

4.3. TIME FORMAT SET UP

The ii.ri app automatically synchronizes the time and date that the smartphone uses. Therefore, there is no need to set up the time and date once the app has been installed.

The time and date will also be automatically synchronized with the IIRI each time the smartphone links with the controller.
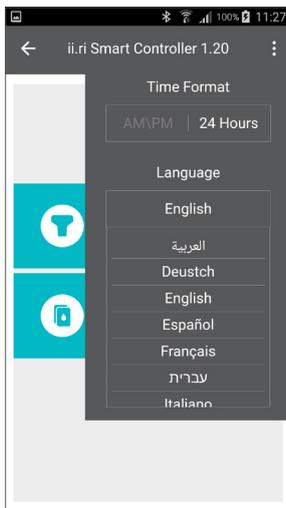
However, after installing the app, it is recommended to set up the desired time format. There are two options for this purpose: AM/PM and 24hrs.

4.4. LANGUAGE SET UP

The default language of the app is English, however, it is possible to configure the app in different languages.
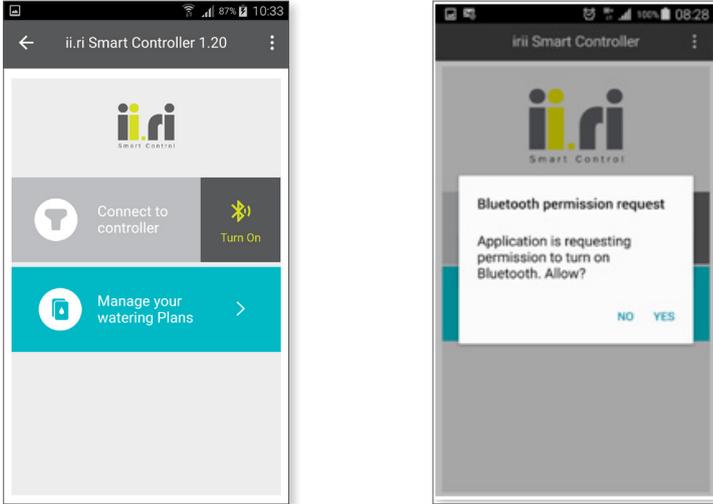
Setting up the desired language is simple. On the main app screen touch the line-up dots, a small window will scroll down, after touching the "language" option a list of available languages will be shown, select the best option as desired.

After setting up the TIME FORMAT and LANGUAGE, proceed to close the window by touching the three lined up dots again. The window will not close automatically.

4.5. BLUETOOTH CONNECTION

In case the Bluetooth connection on the smartphone is closed, a light-grey color will appear in the main app screen. To open the Bluetooth connection, press the yellow "Turn On" icon. During the process, a pop-up window will appear requesting permission to turn on the Bluetooth. Press "YES" to allow permission.
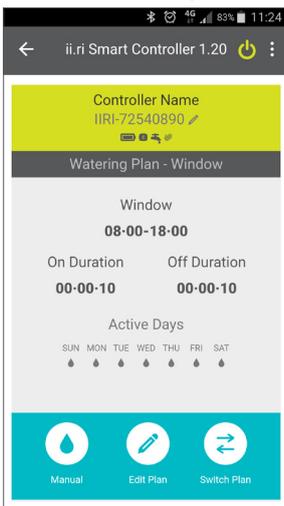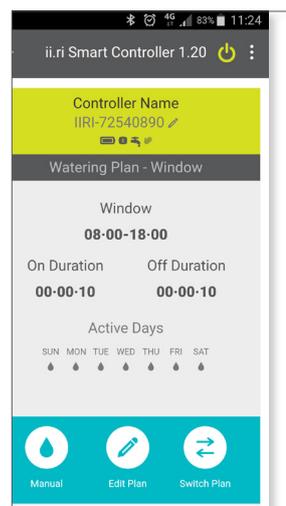
IMPORTANT NOTICE:

- The ii.ri app is compatible with Bluetooth 4.0 version.
- Smartphone requirements - iOS 7 or Android V4.3
- In case your smartphone features a lower BT version, you may experience low performance or communication errors.

4.6. Turning the IIRI controller ON/OFF

By default, the ii.ri smartphone operated irrigation controller is supplied in OFF condition in order to save battery energy. When the IIRI controller is OFF the colors of the screen are different as shown in the picture below.
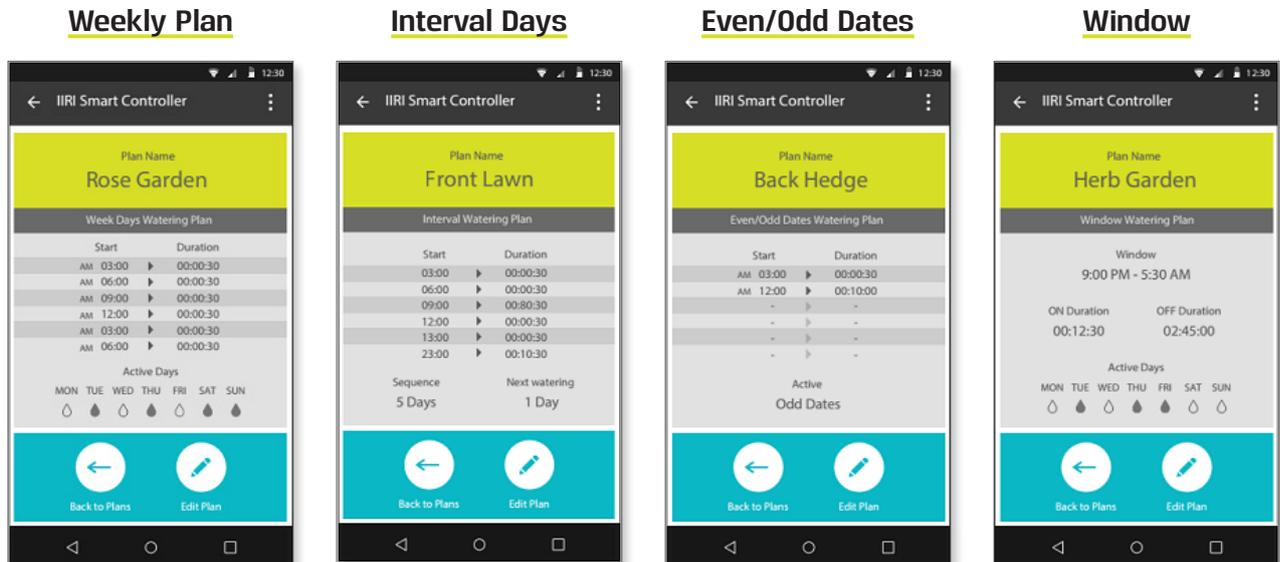
In order to turn it ON, touch the SWITCH icon on the top right, then the colors on the screen will change as follows:

5. PROGRAMMING THE ii.ri

The ii.ri smartphone irrigation controller features four different built-in plans that address most of the automatic irrigation needs.

Weekly Plan	Interval Days	Even/Odd Dates	Window

In this section, we will describe and explain the Programming Steps: for simple and advanced irrigation as well as the unique features of the ii.ri smartphone operated irrigation controller.

5.1. HOW TO START

The ii.ri smartphone operated irrigation controller is simple and intuitive for programming, nevertheless it requires a little know-how in order to familiarize yourself with it. Follow the steps in the list below:

Programming Principles:

- It is recommended to define the irrigation areas by using the table to assist the irrigation plans provided with this guide. It will aid an easy and fast implementation of the controller's irrigation plans.
- The ii.ri smartphone operated irrigation controller can actuate one valve each time, therefore, one controller would be used for each irrigation area.
- There is no need to connect the ii.ri smartphone operated irrigation controller to the smartphone during the programming process.
- The irrigation specifications depends on the type of field crops, flowers, trees, etc and may vary depending on the seasons.
- The ii.ri smartphone operated irrigation controller it is self-energized by an internal battery. Is does not require any additional wiring or power supply.
- The ii.ri app must be installed and running on the smartphone. Please refer to "IIRI APPLICATION DESCRIPTION" in chapter 4 for further details regarding app download and installation.

5.2. SETTING TIME AND LANGUAGE

The ii.ri app automatically synchronizes the time and date that the smartphone uses. Therefore, there is no need to set up the time and date once the app has been installed.

The time and date will also be also automatically synchronized with the ii.ri each time the smartphone links with the controller.

However, after installing the app, it is recommended to set up the desired time format. There are two options for this purpose: AM/PM and hrs.
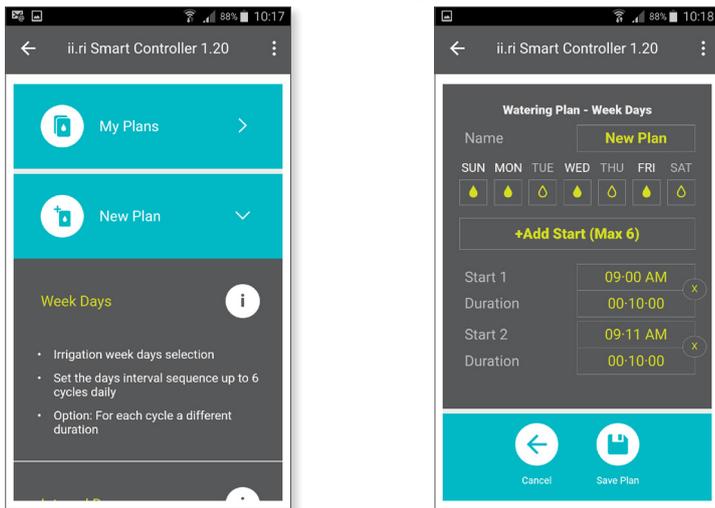
The default language of the app is English, although it is possible to configure the app in different languages.

For further details in this process, please refer to "TIME FORMAT and LANGUAGE" in chapter 4.3 and 4.3

5.3. WEEKS DAYS PLAN

The weekly plan allows your irrigation system to work on a daily basis 365 days of the year. By default, this plan will first be shown on the ii.ri app at the first time you connect it to the controller.
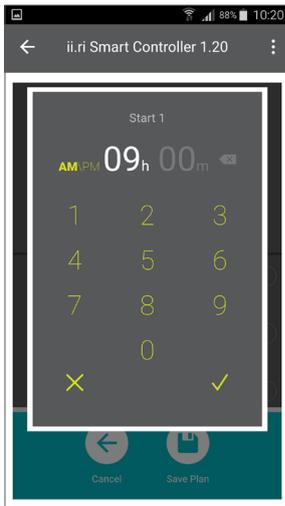
It is possible to add up to 6 irrigation cycles per day. For each cycle you will need to set the desired start hour and the length of irrigation.
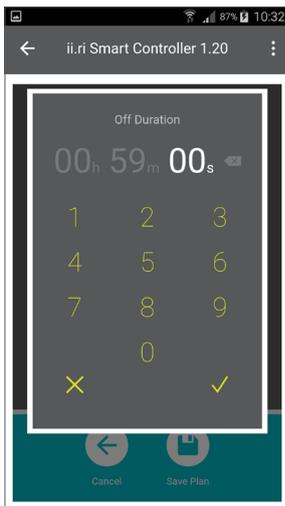

Programming Steps:

- **Plan Name –** The "New Plan" name can be modified, by slightly touching it, the smartphone keyboard will scroll up, and the cursor will appear. You can then edit the name as desired. The plan name will be editable at any time you touch back the "New Plan" option.
- **Week days selection –** Under each week day abbreviation name, there is a drop icon. By slightly touching it, the selected drop icon will change from "empty" to "full". The full drop icons indicate the days of the week selected for irrigation.
- **Add start –** as explained at the beginning of this chapter, the IIRI app allows up to 6 daily irrigation cycles. By default, the app will show only one (Start 1). There are two parameters to be set for each cycle. Starting time and Duration.

- **Start –** this parameter determines the exact hour that the ii.ri smartphone operated irrigation controller will start the watering. The ii.ri allows you to set time in Hours and Minutes as shown in the figure below.

- **Duration –** this specification determines the exact time for the watering cycle to run. It allows to set it up within Hours, Minutes and Seconds.
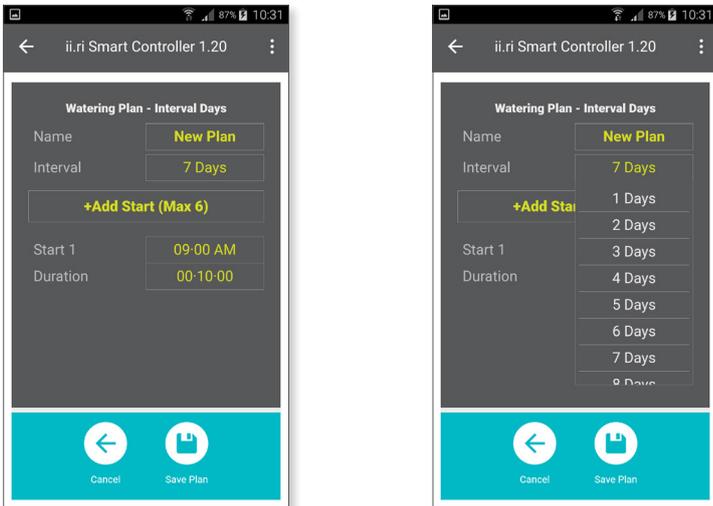

- **Hour format –** it is possible to set the starting time for watering from "00 to 23" when the time format has been set to hrs or from "00 to 11" when the time format has been set to AM/PM. For further details in of time format options, please refer to chapters 4.3 and 4.4 "TIME FORMAT and LANGUAGE".

- When you have finished setting the Week Days irrigation plan, click "✓" to save the plan. It is possible to save as many plans as required. The plans will be saved on the smartphone memory where the ii.ri app is installed.

5.4. INTERVAL DAYS PLAN

The INTERVAL DAYS irrigation plan allows your irrigation system to irrigate at interval days from 1 up to 98 days.
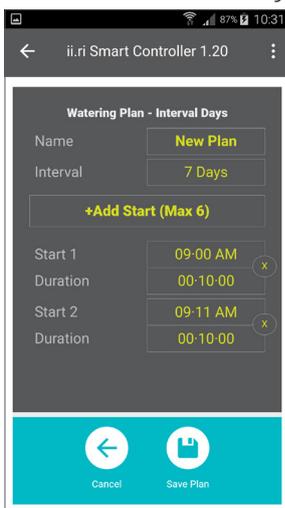
You can add up to 6 starts per day, for this purpose set the desired hour for the watering to start and the desired length of irrigation.

The plan will start counting the interval sequence for irrigation right after it is created, regardless of the specific calendar day.
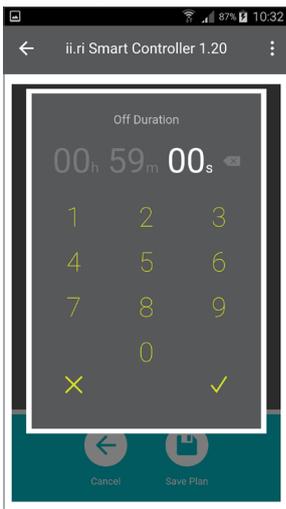

Programming Steps:

- **Plan Name –** The "New Plan" name can be modified, by slightly touching it, the smartphone keyboard will scroll up, and the cursor will appear. Then, you can edit the name as desired. The plan name will be editable at any time you touch back the "New Plan" option.

- **Intervals day selection –** it is possible to set interval frame-time from 1 up to 98 days. For example, if you want the ii.ri controller to start every 3 days, then choose 3 Days in the scroll down window.

- **Add start –** as explained at the beginning of this chapter, the ii.ri app allows up to 6 daily irrigation cycles. By default, the app will show only one (Start 1). There are two specifications to be set for each cycle. Starting time and Duration for each watering cycle.

- **Start –** this specification determines the exact hour that the ii.ri smartphone operated irrigation controller will start the watering. The ii.ri allows you to set time in Hours and Minutes as shown below.

- **Duration –** this specification determines the exact time for the watering cycle to run. The ii.ri allows you to set time in Hours and Minutes as shown below.
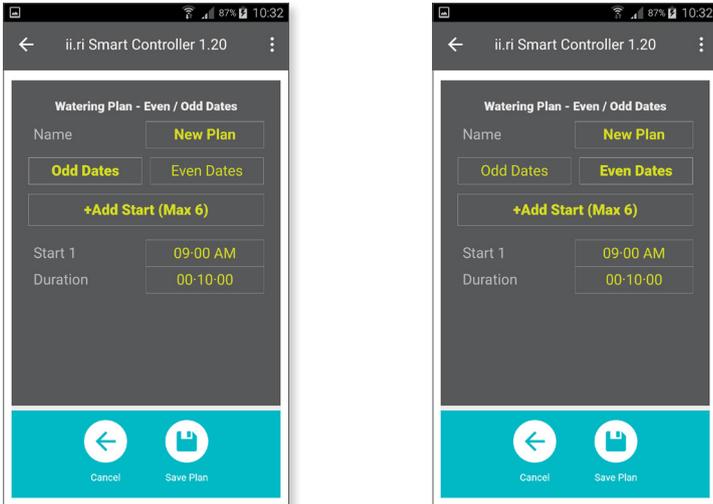

- **Hour format –** it is possible to set the starting time for watering from "00 to 23" when the time format has been set to 24hrs or from "00 to 11" when the time format has been set to AM/PM. For further details of time format options, please refer to chapters 4.3 and 4.4 "TIME FORMAT and LANGUAGE".

- When you have finished setting the Week Days irrigation plan, click "✓" to save the plan. It is possible to save as many plans as required. The plans will be saved on the smartphone memory where the ii.ri app is installed.

5.5. EVEN/ODD DAYS PLAN

The Even/Odd days plan will help you to set up your irrigation plan regardless of the calendar day the plan was created.
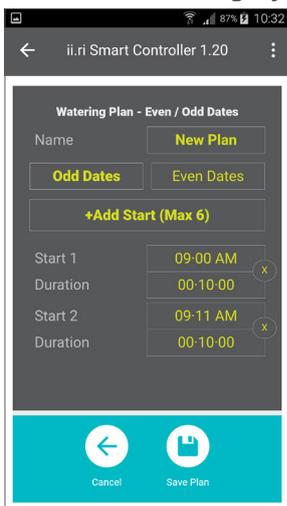
By default, the plan is set to ODD Dates, you can modify the selection by touching the EVEN Dates.

The app will automatically use the smartphone date parameters to set the ODD/EVEN dates, it is not possible to set these parameters manually through the application.
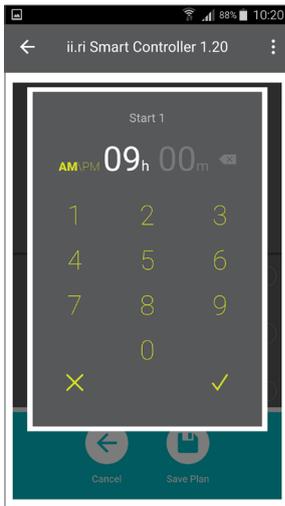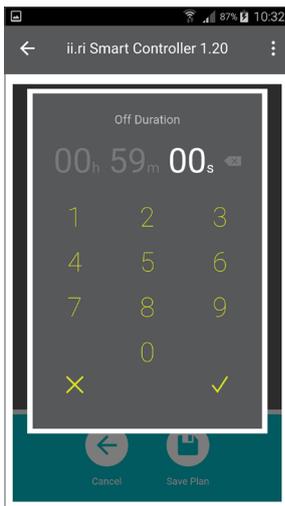

Programming Steps:

- **Plan Name –** The "New Plan" name can be modified, by slightly touching it, the smartphone keyboard will scroll up, and the cursor will appear. Then, you can edit the name as desired. The plan name will be editable at any time you touch back the "New Plan" option.
- **Even/Odd days selection –** By default, the plan is set to ODD Dates, however, it is possible to switch between Even to Odd days from the main screen.
- **Add start –** the ii.ri app allows up to 6 daily irrigation cycles. By default, the app will show only one (Start 1). There are two specifications to be set for each cycle. Starting time and Duration for each watering cycle.

- **Start 1 –** this specification determines the exact hour that the ii.ri smartphone operated irrigation controller will start the watering. The ii.ri allows you to set time in Hours and Minutes as shown below.

- **Duration –** this parameter determines the exact time for the watering cycle to run. It allows you to set time in Hours and Minutes as shown below.
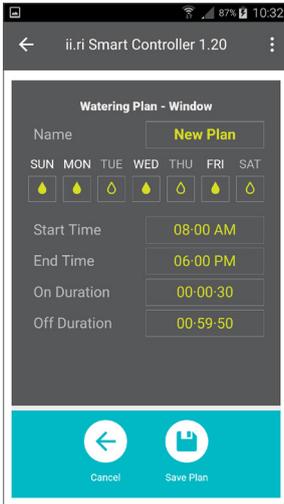

- **Hour format –** it is possible to set the starting time for watering from "00 to 23" when the time format has been set to 24hrs or from "00 to 11" when the time format has been set to AM/PM. For further details of time format options, please refer to chapters 4.3 and 4.4 "TIME FORMAT and LANGUAGE".
- When you have finished setting the Week Days irrigation plan, click "✓" to save the plan. It is possible to save as many plans as required. The plans will be saved on the smartphone memory where the ii.ri app is installed.

5.6. WINDOW PLAN

The WINDOW plan features an advanced irrigation plan which enables the user to set-up a cyclical watering within a defined time frame, repeating it several times during a specified part of the day.

The WINDOW plan can only be defined for an irrigation cycle that is shorter than a full day (up to 23:59 or 11:59PM).

This watering plan is very useful and standard for Baccara's controllers.
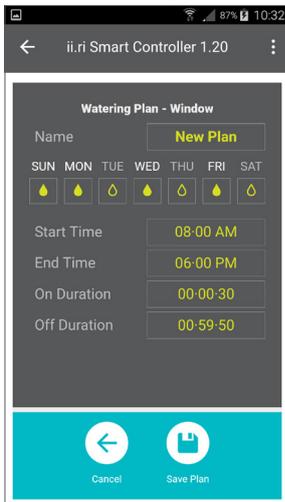

The app will automatically use the smartphone date parameters to set the time. It is not possible to set these parameters manually through the application.

However, it is possible to modify the Week Days for watering by touching the drop beneath the week day abbreviation name, as well as the ON and OFF duration for watering.
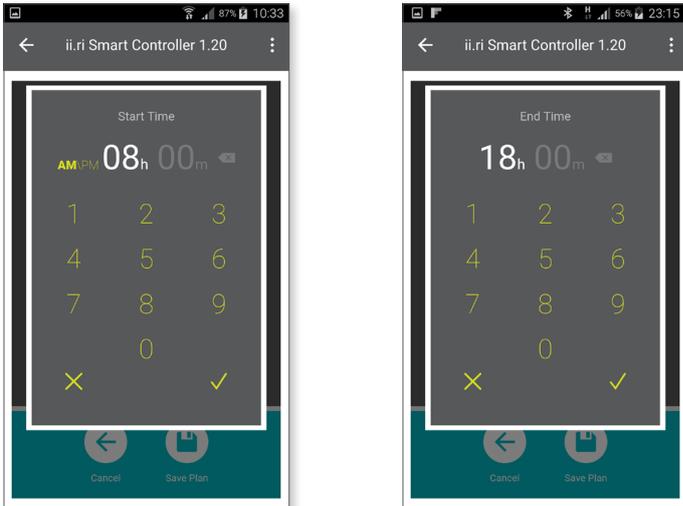
Programming Steps:

- **Plan Name –** The "New Plan" name can be modified, by slightly touching it, the smartphone keyboard will scroll up, and the cursor will appear. Then, you can edit the name as desired. The plan name will be editable at any time you touch back the "New Plan" option.

- **Window plan –** By default, the plan is set to start the watering at 08:00AM until 06:00PM (18:00) while the "ON DURATION" is 30 secs and "OFF DURATION" is 59 mins 50 sec. The app will automatically calculate the number of watering cycles within the given time frame.

- **Start Time –** Refers to the desired time of the day the first watering cycle will start. By default, the plan is set to start the watering at 08:00AM

- **End Time –** This specification sets the end of watering for the chosen days. By default, the plan is set to end the watering at 06:00PM (18:00)
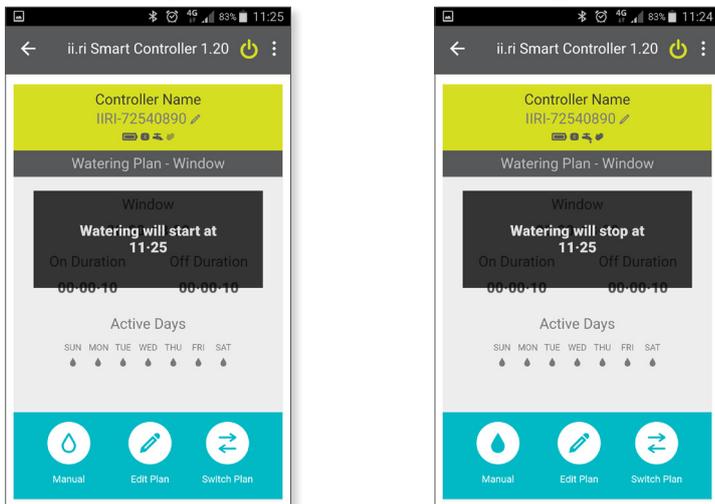

- **ON Duration –** this specification determines the time for the watering cycle to run, meaning it dictates how long the irrigation valve will remain open. By default, this specification is set to 30 secs, however, it can be modified as desired within Hours, Minutes and Seconds – the minimum ON Duration period is 10 secs.

- **Hour format –** it is possible to set the starting time for watering from "00 to 23" when the time format has been set to 24hrs or from "00 to 11" when the time format has been set to AM/PM. For further details in time format options, please refer to chapter 4.3 and 4.4 "TIME FORMAT and LANGUAGE"

- When you have finished setting the Week Days irrigation plan settings, click "✓" to save the plan. It is possible to save as much many plans as required. The plans will be saved on the smartphone memory where the ii.riI app is installed.

5.7. MANUAL OPERATION

The IIRI smartphone operated irrigation controller can be operated manually at any time after pairing it with the smartphone, regardless of the irrigation plan applied to the controller.

To operate the controller manually, press the drop icon located on the left bottom of the screen. If the drop icon is empty, it means the valve is closed, if the drop icon changes to be full, it means the valve is open.
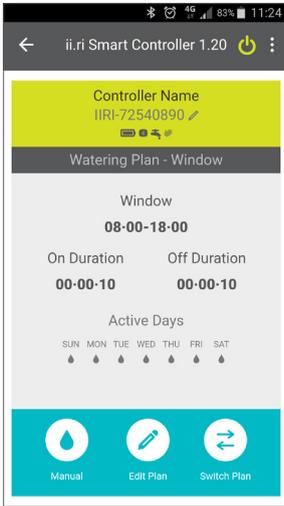
The Manual function operates the valve for the irrigation duration defined in the program, it will automatically close at the end of the irrigation duration.
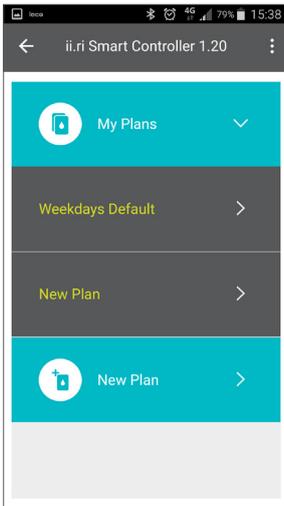
5.8. SWITCH BETWEEN PLANS

In order to switch the watering plan installed in the IIRI controller, first pair devices and link the controller with the app.

Make sure that the controller is "ON". Then, proceed to press the "SWITCH PLAN" icon on the bottom right side of the screen.

This action will allow you to choose the desired watering plan saved in "MY PLANS" options, or to write a new plan by accessing the "NEW PLAN" option.

6. MAINTENANCE

A filter must be installed in the upstream part of the valve and cleaned twice a year. Operating the valve without a filter may lead to faulty functioning.

Under normal usage, the battery supplied with the ii.ri controller should last at least three years.

Recommended water line pressure: 1 to 8 ATM (bar).

7. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION	COMMENTS
The valve does not open during automatic operation	Low Battery	Pair the smartphone with the IIRI controller and check battery status	In case the battery is totally empty, the controller will not open the valve
	Plan parameters	Pair the smartphone with the controller and check the watering plan parameters	
Slow pairing time between ii.ri controller and smartphone	Sometimes the pairing process take a long time and connection is lost	Wait for 60 secs, press the top button and try it again	
Bluetooth connection error	Communication interferences	Close the app, wait for one (1) minute and try to pair devices again	For energy saving purpose, the ii.ri app will automatically disconnect after 5 minutes
The ii.ri controller does not appear on the app	Communication interferences	Wait for two (2) minutes and repeat the process	Pressing the button on the top cover will wake up the controller. It will take less than 2 sec. to show the name of the controller on the smartphone screen
Minimum Watering Duration	The minimum duration between opening and closing is 10 secs	Adjust parameters accordingly	
Maximum Watering Duration	The maximum watering duration is 23:59:00 (11:59:00PM)	Adjust parameters accordingly	

8. Irrigation plans table

Please use the below table to assist you with your irrigation plans.   Date: ____/____/____

Daily Starts	Start 6						
	Start 5						
	Start 4						
	Start 3						
	Start 2						
	Start 1						
Irrigation Plans	Irrigation Duration (hr, min, sec)						
	Window						
	Even/Odd Days						
	Interval Days						
	Week Days						
Irrigation Area (Porch, Balcony, Trees, Garden, Greenhouse)							
Valve Name							