

RAIN BIRD

ESP-9V Battery-Operated Controller User Manual

Introduction

Thank you for choosing Rain Bird's ESP-9V Battery-Operated Controller. The ESP-9V is designed to provide worry-free automatic irrigation in the absence of AC power or in areas where installing new field wires is not practical.

Operation and Setup

Contractor Rapid Programming™

At initial programming, the controller automatically copies the start times and watering days from Zone 1 to all other zones.

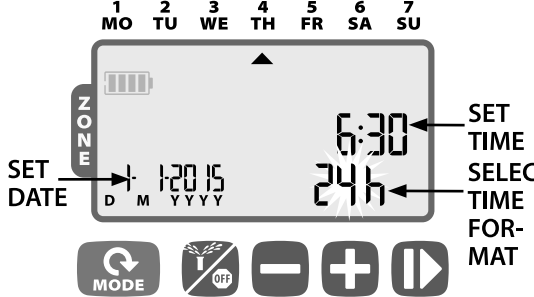
NOTE: If multiple zones have the same or overlapping watering times, the controller will water the zones in sequence (multiple zones will not run at the same time).

NOTE: Changes to a zone's schedule made after initial programming will only affect the zone being modified.

NOTE: You may re-activate the Contractor Rapid Programming™ feature by resetting factory defaults.

Set Date & Time

Press the **MODE** button until the **Set Date & Time screen** is displayed.



Press **+** or **-** to set the time format (12 hour or 24 hour); then press **▶**.

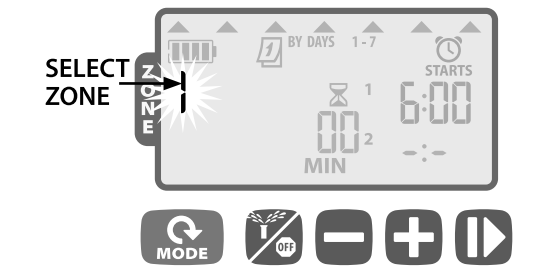
Press **+** or **-** to set the hour (ensure that AM/PM setting is correct when using 12 hour format); then press **▶** to set the minutes; then press **▶**.

Press **+** or **-** to set the year (YYYY); then press **▶** to set the day (D), then month (M). If 12 hour format is selected, the date format will be shown as M/D/YYYY.

Set Irrigation Schedule

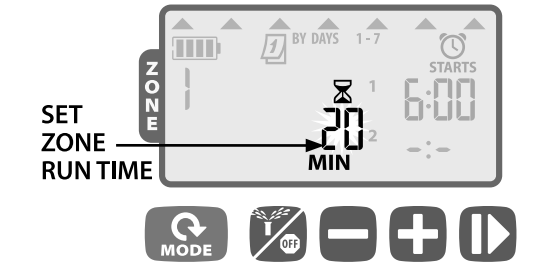
Press the **MODE** button until the **Set Irrigation Schedule screen** is displayed.

1. Select Zone



Press **+** or **-** to select the Zone Number; then press **▶**.

2. Set Zone Watering Run Times



Press **+** or **-** to set the Run Time (in minutes); then press **▶**.

NOTE: Run Times can be set between 1 to 240 minutes.

3. Set Zone Watering Start Times



Press **+** or **-** to set the 1st Start Time for the selected Zone (set to 06:00 by default); then press **▶**.

Press **+** or **-** to set the next Start Time, or press **▶** again to advance to Set Watering Days.

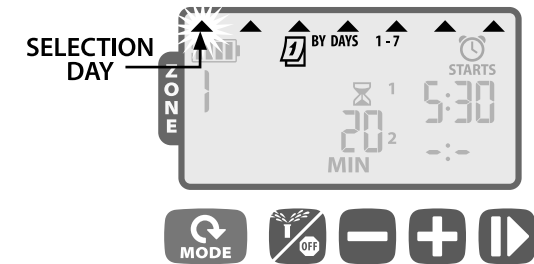
REPEAT to set additional Start Times, up to six for that Zone.

NOTE: Adjustments are set in 10 minute increments.

NOTE: To remove a Start Time, press **+** or **-** until **OFF** is displayed. **OFF** is not multiple 0:00 or 12:00 AM.)

NOTE: The controller will not water multiple zones at the same time. If two or more zones have the same (or overlapping) start times, the controller will wait until the first zone is finished watering before starting the rest of the zones in sequence. This method is called "start time stacking".

4. Set Zone Watering Days



Custom Days

Press **+** (to enable) or **-** (to disable) the blinking Selection Day. The cursor will automatically advance to the next Selection Day.

REPEAT to set each day of the week as desired.

REPEAT Steps 1-4 for additional Zones as desired.

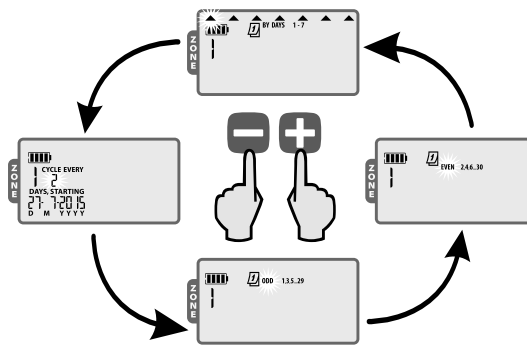
When programming is complete, press the **MODE** button until the **AUTO RUN** screen is displayed.

Watering Day Options

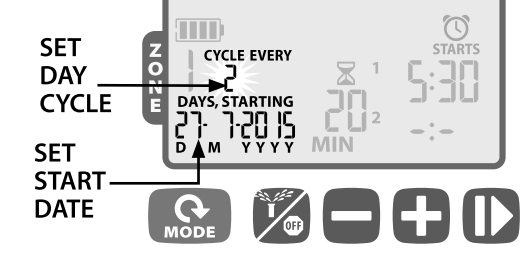
Additional Watering Day options are also available:

- Cyclic Days** (1-30)
- Odd Days** (will NOT water on the 31st of the month)
- Even Days**

To change zone's watering day type, simply pressthe **+** and **-** buttons at the same time while setting Zone Watering Days.



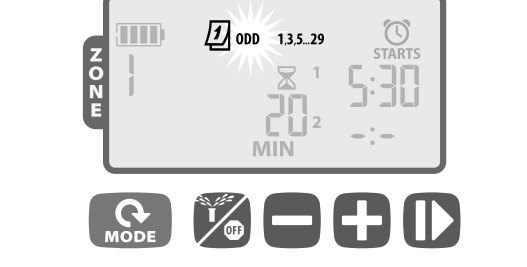
Cyclic Days



Press **+** or **-** to button to set the number of days in the watering cycle; then press **▶**.

Press **+** or **-** to set the next Watering Day; then press **▶**.

Odd Days / Even Days



When **ODD 1,3,5...29** (or **EVEN 2,4,6...30**) is blinking, press **▶**.

NOTE: ODD schedules will not water on the 31st of the month.

Auto Run

Press the **MODE** button until the **AUTO RUN screen** is displayed.

Press **+** or **-** to set the hour (ensure that AM/PM setting is correct when using 12 hour format); then press **▶** to set the minutes; then press **▶**.

Press **+** or **-** to set the year (YYYY); then press **▶** to set the day (D), then month (M). If 12 hour format is selected, the date format will be shown as M/D/YYYY.

In **AUTO RUN** mode, the ESP-9V will irrigate each zone per its programmed schedule. If any zones are scheduled to run at the same time and day, your controller will place those zones in a queue and irrigate one valve at a time, starting with the lowest number zone first.

NOTE: After 5 minutes of inactivity, the controller will revert to **AUTO RUN** mode (unless the controller is in **OFF**) and turn off the display. Press any key to turn the display back on.

Off

Press the **OFF** button until the **OFF screen** is displayed.



Selecting the **OFF** mode will cancel any active watering and prevent any irrigation from starting automatically.

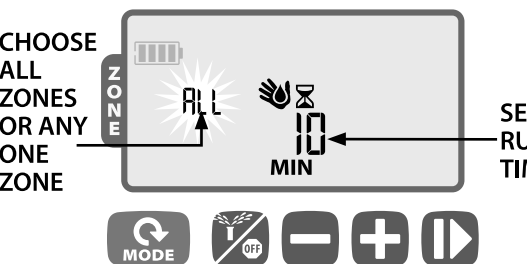
NOTE: Select the **AUTO RUN** mode to resume normal operation. Programmed irrigation schedules will NOT run if the controller is left in **OFF** mode.

NOTE: If you intend to stop automatic irrigation only for a few days, we suggest you use the 'Delay Watering' feature described in page 10.

NOTE: To re-initiate watering, press the **OFF** button again to return to **AUTO RUN** mode.

Manual Watering

Press the **OFF** button until the **Manual Watering screen** is displayed.



Press **+** or **-** to set the 1st Start Time for the selected Zone (set to 06:00 by default); then press **▶**.

Press **+** or **-** to set the next Start Time, or press **▶** again to advance to Set Watering Days.

REPEAT to set additional Start Times, up to six for that Zone.

NOTE: Adjustments are set in 10 minute increments.

NOTE: To remove a Start Time, press **+** or **-** until **OFF** is displayed. **OFF** is not multiple 0:00 or 12:00 AM.)

NOTE: The controller will not water multiple zones at the same time. If two or more zones have the same (or overlapping) start times, the controller will wait until the first zone is finished watering before starting the rest of the zones in sequence. This method is called "start time stacking".

One-touch Manual Start

Water ALL zones immediately according to their previously scheduled run times.

With the controller in **AUTO RUN** mode, press and hold **▶** for 3 seconds to begin watering all zones that have a programmed runtime.

Seasonal Adjust

Press the **MODE** button until the **Seasonal Adjust screen** is displayed.

The **SEASONAL ADJUST** mode allows you to increase or decrease the run times for all zones by a certain percentage (10% to 200%).

Press **+** or **-** to increase or decrease the setting.

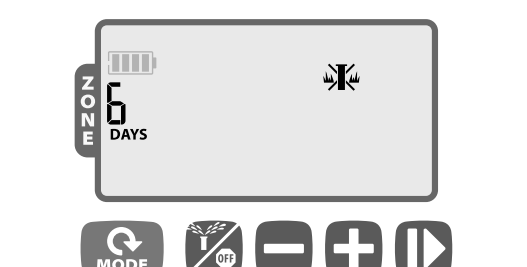
NOTE: **SEASONAL ADJUST** applies to ALL automatic watering.

Special Features

Delay Watering

Delay automatic irrigation for up to 9 days.

Press the **MODE** button until the **AUTO RUN** screen is displayed. (Unit must NOT be watering.)



Press and hold **▶** for 3 seconds, then press **+** or **-** to select the number of DAYS to delay irrigation, up to 9 days.

To cancel, press **-** until DAYS is set to 0. (Controller will revert to **AUTO RUN**.)

NOTE: **SYMBOL** and **DAYS** remaining are displayed while Rain Delay is in effect.

Contractor Default Save

Save irrigation schedules for future retrieval.

Press the **OFF** button until the **OFF screen** is displayed.

Press and release both **OFF** and **▶** buttons at the same time.

The "OFF" symbol will flash briefly to confirm schedules are saved.

Contractor Default Restore

Restore previously saved irrigation schedules.

Press the **OFF** button until the **OFF screen** is displayed.

Press and release both **+** and **▶** buttons at the same time.

The "OFF" symbol will flash briefly to confirm schedules are restored.

Factory Default Restore

Restore the controller's factory default settings.

CAUTION

All programmed irrigation schedules currently stored in memory will be lost. However, Contractor Default settings remain stored in separate memory and are not affected by Factory Default Restore, and can be recalled after restoring Factory Defaults.

Press the **MODE** button until the Seasonal Adjust screen is displayed.

Press and release both **OFF** and **▶** buttons at the same time.

Rain Sensor Bypass

Set sensor to **Active** or **Bypass** for all zones.

Press the **MODE** button until the **AUTO RUN** screen is displayed.

Press and release both **+** and **▶** buttons at the same time to toggle between **OBEY** and **IGNORE**.

SYMBOL is displayed when **IGNORE** is selected.

Set sensor to **Active** or **Bypass** for any individual zone.

Press the **MODE** button until the Set Irrigation Schedule screen is displayed.

Press **+** or **-** to select the desired zone.

Press and release both **+** and **▶** buttons at the same time to toggle between **OBEY** and **IGNORE**.

SYMBOL is displayed when **IGNORE** is selected.

Troubleshooting

Problem	Possible Cause	Possible Solution
No Display	Display is in sleep/power save mode. Batteries are dead.	Press any key to wake up display. Replace batteries.
Automatic irrigation not starting	Missing start time, run time or watering days. Sensor wire loop cut but no rain sensor installed. Rain Delay is set.	Set start time, run time and watering days. Re-connect the sensor wires or bypass the sensor operation. De-activate rain delay.
Automatic irrigation started but no watering occurs	No water pressure. Faulty wiring. Faulty Solenoid. Incompatible Solenoid.	Turn on main water supply. Check for open/short circuits in wiring. Replace solenoid. Must use a 9V latching solenoid (Rain Bird KB9020) or other compatible DC latching solenoid.
Controller is watering more than expected	Excessive Start Times, Run Times or watering days. Seasonal adjust set. One or more zones don't have a programmed start time or run time.	Modify Start Times, Run Times or Watering Days as desired. Reduce the seasonal adjust value as needed. Program a start time and run time for all desired zones.
"Manual Watering ALL" is not watering some zones or isn't available as an option		

Installation

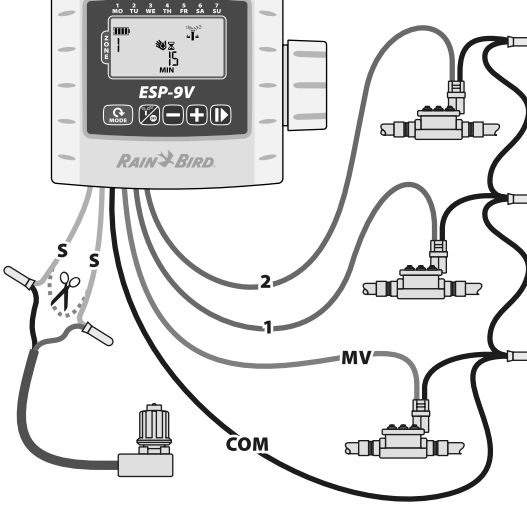
Valve Wiring

Wires may be extended up to 100 feet (30 meters) (18 AWG, 0.75 mm² minimum wire size) from the controller. All wire connections should be made using appropriate water-proof splice kits (not provided).

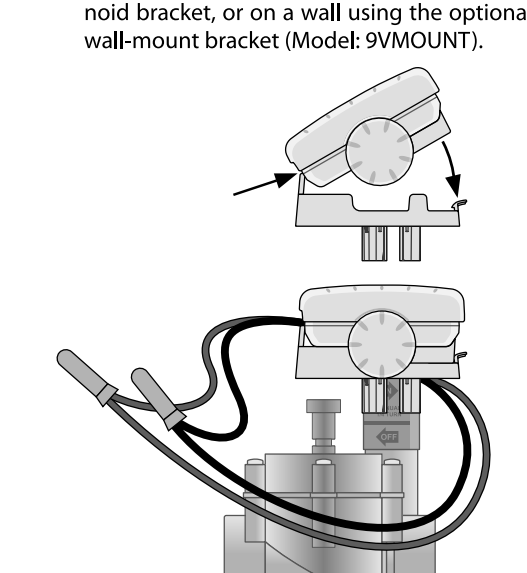
Attach the black wires from each solenoid to the black (common) wire(s) on the ESP-9V.

Attach one red wire from each solenoid to the appropriate zone wire on the ESP-9V.

Connect an optional Master Valve.



NOTE: The ESP-9V can be mounted on a DC latching solenoid using the included solenoid bracket, or on a wall using the optional wall-mount bracket (Model: 9VMOUNT).



Batteries

The Rain Bird ESP-9V uses two alkaline 9-Volt batteries to operate. Your controller will function using either one or two 9-Volt batteries. Under normal conditions, the expected life is 1 year for a single battery and two years when using two 9-Volt batteries.

Replacing Batteries

Remove the battery compartment cap.

Install one or two 9-Volt alkaline batteries on the battery clips provided.

Re-install the battery compartment cap.

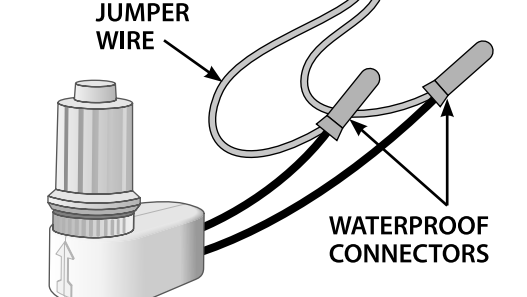
NOTE: Do not mix new batteries with old ones. Doing so could reduce the battery life and cause the controller to stop working prematurely.

Optional Rain Sensor

Cut the yellow loop in half and remove about 1/2" of insulation.

NOTE: Cut the yellow wire loop only when installing a rain sensor.

Connect the sensor to the terminals with water-proof connectors.



Español

RAIN BIRD

Programador ESP-9V de batería Manual del usuario

Gracias por elegir el programador ESP-9V de baterías de Rain Bird. El ESP-9V está diseñado para el riego automático y sencillo sin necesidad de conexión a la red eléctrica o en áreas donde la instalación de nuevo cableado supone un problema.

Funcionamiento y configuración

Contractor Rapid Programming™

Después la programación inicial, el programador copia automáticamente las horas de inicio y los días de riego de la Zona 1 para los restos de zonas.

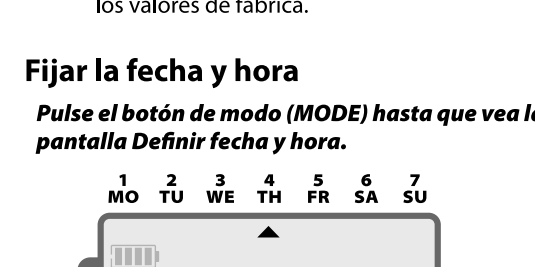
NOTA: Si hay varias zonas con horas de inicio idénticas o solapadas, el programador regará las zonas una a una (no habrá varias zonas en riego al mismo tiempo).

NOTA: Terminada la configuración inicial, los cambios que realice en la programación de una zona no afectarán al resto de zonas.

NOTA: Puede volver a activar la función Contractor Rapid Programming™ restableciendo los valores de fábrica.

Fijar la fecha y hora

Pulse el botón de modo (MODE) hasta que vea la pantalla Definir fecha y hora.



Definir hora (HORA) y definir formato de hora (FORMATO DE HORA).

Pulse **+** o **-** para definir el formato de hora (12 o 24 horas); a continuación, pulse **▶**.

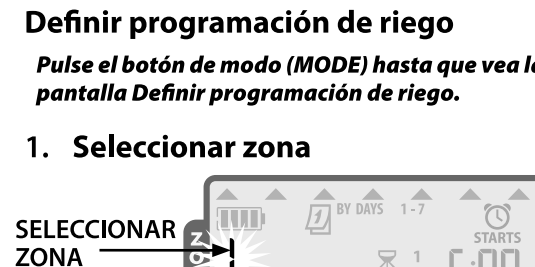
Pulse **+** o **-** para definir la hora (compruebe que la opción AM / PM es la correcta cuando use el formato de 12 horas); a continuación, pulse **+** o **-** para definir los minutos; a continuación, pulse **▶**.

Pulse **+** o **-** para definir el año (AAAA / YYYY); repita la misma acción **▶** para definir el día (D) y luego el mes (M). Si selecciona el formato de 12 horas, el formato de la fecha será M/D/YYYY (M/D/AAAA).

Definir programación de riego

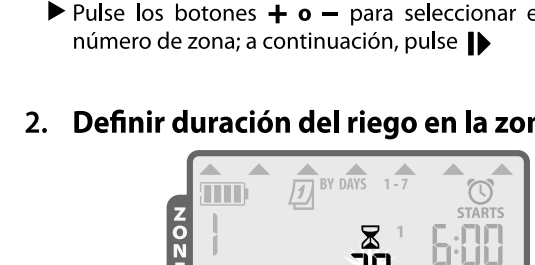
Pulse el botón de modo (MODE) hasta que vea la pantalla Definir programación de riego.

1. Seleccionar zona



Pulse los botones **+** o **-** para seleccionar el número de zona; a continuación, pulse **▶**.

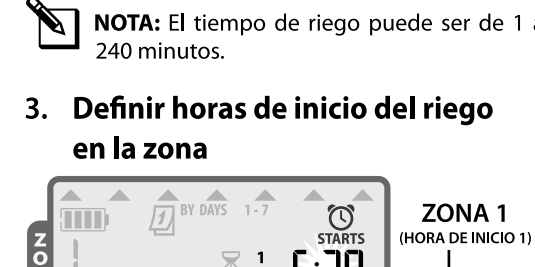
2. Definir duración del riego en la zona



Pulse los botones **+** o **-** para definir el tiempo de riego (en minutos); a continuación, pulse **▶**.

NOTA: El tiempo de riego puede ser de 1 a 240 minutos.

3. Definir horas de inicio del riego en la zona



Pulse los botones **+** o **-** para definir la primera hora de inicio del riego en la zona seleccionada. (No se indicará si se deja el programador en el modo APAGADO / OFF).

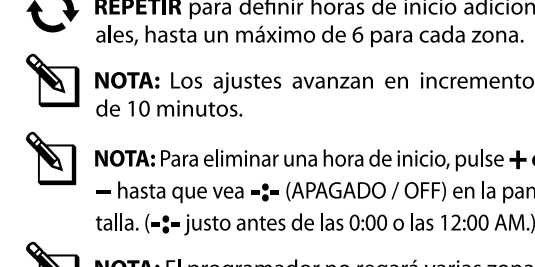
Pulse los botones **+** o **-** para definir la siguiente hora de inicio, o bien pulse **▶** de nuevo para avanzar a la pantalla donde configurar los días de riego.

REPEAT para definir horas de inicio adicionales, hasta un máximo de 6 para cada zona.

NOTA: Para eliminar una hora de inicio, pulse **+** o **-** hasta que vea **APAGADO / OFF** en la pantalla. **OFF** = Justo antes de las 0:00 o las 12:00 AM.)

NOTA: El programador no regará varias zonas al mismo tiempo. Si hay dos zonas con la misma hora de inicio (o que se solapan), el programador esperará hasta que la primera zona haya terminado de regar antes de comenzar con la siguiente zona de la secuencia. Este método se llama "riego secuencial".

4. Definir días de riego de la zona



Pulse **+** (para activar) o **-** (para desactivar) el día intermitente. El cursor avanzará directamente al siguiente día de la semana que quiera configurar.

REPEAT los pasos 1-4 para el resto de zonas que quiera configurar.

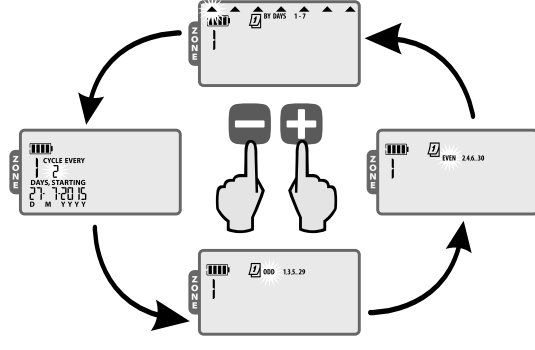
Cuando haya terminado la programación, pulse el botón de modo (MODE) hasta que se muestre la pantalla FUNCIONAMIENTO AUTOMÁTICO.

Otras opciones de ciclos de riego

El programador dispone de opciones de ciclos adicionales:

- Riego cíclico** (uno de cada 1-30 días)
- Días impares** (NO regará los días 31)
- Días pares**

Para cambiar el tipo de día cíclo de una zona, solo tiene que pulsar los botones **+** y **-** al mismo tiempo mientras configura los días de riego de la zona.



Riego cíclico

Definir ciclo de días (CICLO DE DÍAS) y definir fecha de inicio (FECHA DE INICIO).

Pulse el botón **+** o **-** para definir el número de días en el ciclo; a continuación, pulse **▶**.

Pulse **+** o **-** para definir el próximo día de riego; a continuación, pulse **▶**.

Mientras el retraso del riego esté en vigor, se mostrarán en la pantalla el símbolo de la izquierda y los días restantes.

Guarda el programa de riego para restaurarlo en el futuro.

Pulse el botón **+** hasta que se muestre la pantalla de APAGADO (OFF).

Pulse y suelte a la vez los botones **OFF** y **+**.

El símbolo "OFF" parpadeará varias veces para confirmar que se han guardado las programaciones.

Recuperación de programa predefinido del contratista

Recupere programas de riego guardados anteriormente.

Pulse el botón **+** hasta que se muestre la pantalla de APAGADO (OFF).

Pulse y suelte a la vez los botones **+** y **▶**.

El símbolo "OFF" parpadeará varias veces para confirmar que se han recuperado las programaciones.

Restauración de los valores de fábrica

Restaura la configuración predeterminada de fábrica del programador.

Funcionamiento Automático

Pulse