

TORO

Lawn Master™ II Landscape Timer

Models: 53805 (4-Zone) & 53806 (6-Zone)

Installation & Programming Guide

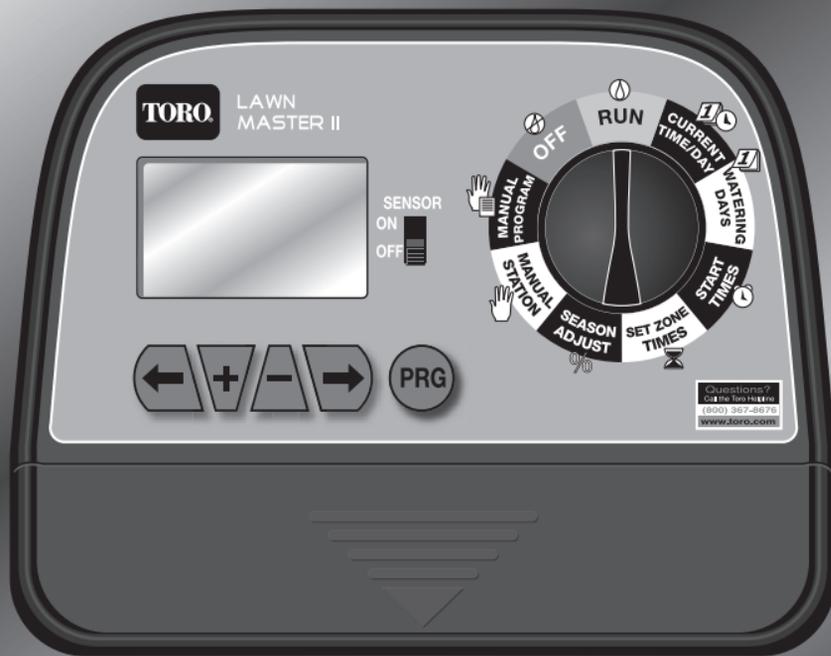
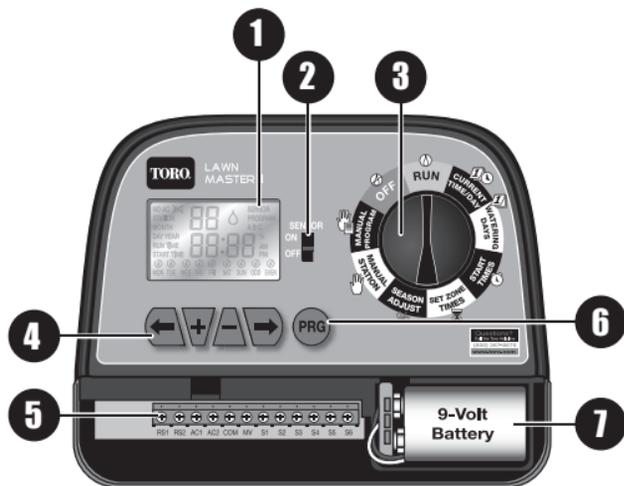


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Components Overview



- 1** LCD Display (See “LCD Display Overview” for details)
- 2** Sensor Switch – Use to Enable or Disable the optional rain sensor.
- 3** Function Dial – Select from the controller functions. (See “Function Dial Overview” for details)

- 4** Navigational Buttons – Use to navigate through the function menus.

- ← – Navigate to the previous menu item.
- – Navigate to the next menu item.
- + – Adjust/Increase the selected value.
- – Adjust/Decrease the selected value.

- 5** Terminal Block

RS1 & RS2 – Sensor
AC1 & AC2 – AC Power
COM – Valve Common
MV – Master Valve

S1 through S6 – Stations 1–6
(Station count will depend on 4-Zone or 6-Zone model)

- 6** Program Button – Press to select from Program A, B or C.

- 7** 9-Volt Battery (not included) – Install to retain date, time and scheduled programs into the memory.

Function Dial Overview

RUN ☹ – Select to operate scheduled programs.

CURRENT TIME/DAY 📅🕒 – Select to adjust the current date and time.

WATERING DAYS 📅 – Select to set the days to activate the scheduled programs. You can set the programs to operate on selected weekdays, ODD days or EVEN days schedule.

START TIMES 🕒 – Select to set the time to activate the scheduled programs. Lawn Master II provides three start times to each of the three programs.

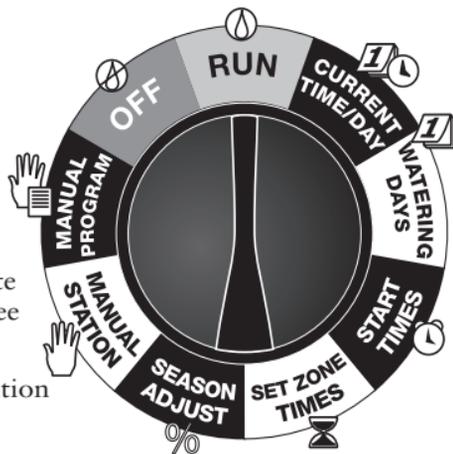
SET ZONE TIMES ⌚ – Select to set the time duration of the specified station to run. The run times can be set from one minute and up to six hours.

SEASON ADJUST % – Select to adjust the program's watering by percentage. You can decrease your irrigation system's watering down to 0% (System OFF) or increase watering up to 200% (double the scheduled watering time).

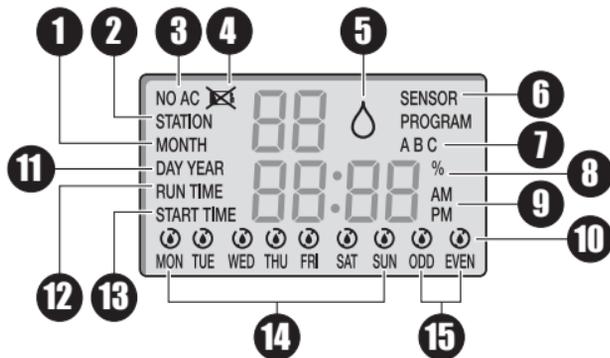
MANUAL STATION 🖐 – Select to activate a single station. You can specify the run time of the station without affecting any program.

MANUAL PROGRAM 🖐📅 – Select to activate a program regardless of its scheduled start time.

OFF ☹ – Select to turn off any operation currently in progress. Leave the function dial in the OFF position to shutdown the sprinkler system.



LCD Display Overview



- 1 MONTH** – The flashing 2-digit number indicates the current month.
- 2 STATION** – Indicates which station number is selected.
- 3 NO AC** – Flashes when the AC power source is not detected.
- 4 Low/No Battery**  – Indicates the need to install a new 9-Volt battery.
- 5 Active Watering**  – Indicates that a program or manual operation is currently active.
- 6 SENSOR** – Indicates that the sensor terminals have been activated. If a rain sensor (optional) is installed, SENSOR indicates that rain has been detected.
- 7 PROGRAM A, B or C** – Indicates which program is selected.
- 8 Season Adjust %** – Indicates that the automatic programs have been adjusted.
- 9 AM or PM** indicator.
- 10 Watering**  / **Non-Watering**  indicators.
- 11 DAY** – Indicates the current day.
YEAR – Indicates the current year.
- 12 RUN TIME** – Indicates the run time for the displayed station.
- 13 START TIME** – Indicates the start time number and duration.
- 14 Weekdays** – for selective watering schedule.
- 15 ODD or EVEN** watering schedule.

Controller Installation

For safe, reliable operation, select an installation site which is:

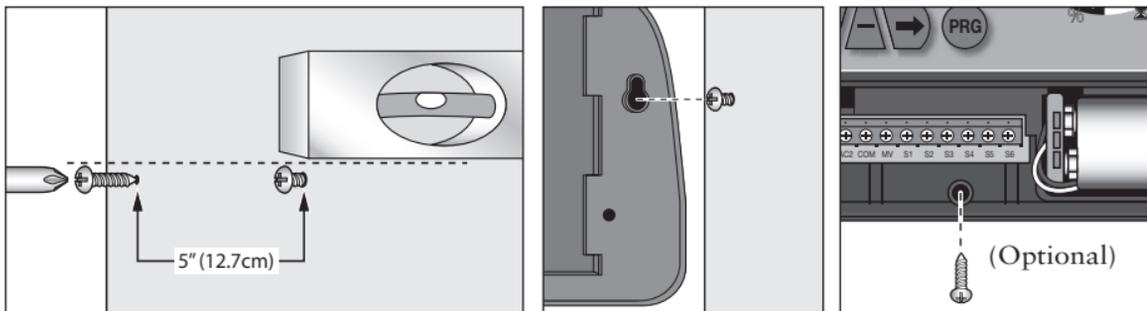
- Weather protected.
- Within 4 ft. (1.2 m) from a grounded 110 VAC, 60 Hz outlet which is not controlled by a light switch or utilized by a high current load appliance, such as a refrigerator, air conditioner or garage door opener.
- Accessible to the sprinkler control valve wiring and optional accessory wiring.

Step 1 – Use the Screw Location Template on the back page to mark the screw locations. Use a level to align the two screws horizontally. Install two screws, 5 inches (12.7 cm) apart, into the wall at eye level. Leave the screw extended approximately 1/4 inch (6 mm) from the wall to accommodate the controller case.

Note: If installing into drywall or masonry, install proper screw anchors.

Step 2 – Hang the cabinet using the back panel's keyhole slot. Make sure the cabinet slides down securely onto the screws.

Step 3 – (Optional) Remove the controller's access panel and install a center mounting screw. Tighten securely.



Battery Installation

The Lawn Master II maintains the programmed schedule and its time and date by using a 9V battery backup. In the event of a power outage and the 9V battery is not installed or very low in power, the controller will reset the date and time to the default 01-01-2007 and 12:00am. Any scheduled watering that is programmed in the Lawn Master II will also be lost.

Note: Replace the 9V battery yearly to assure that the current time, date and scheduled programs are retained.

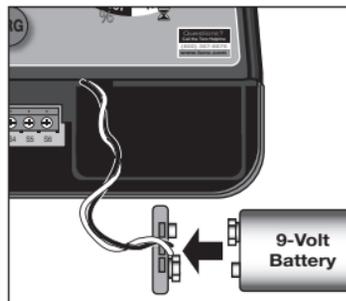
⚠ IMPORTANT! Check the controller's scheduled watering program after every power outage to prevent interruption to your irrigation system's activity.

Step 1 – Remove the controller's lower panel cover to access the battery compartment.

Step 2 – Install the 9V battery to the battery plug.

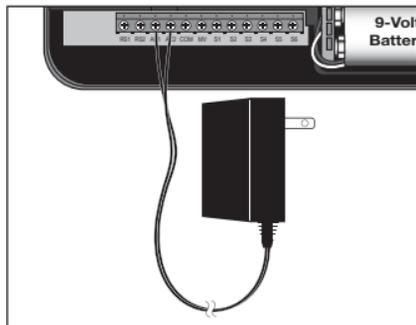
Step 3 – Secure the battery into the compartment.

Step 4 – Reinstall the lower panel cover.



Power Connection

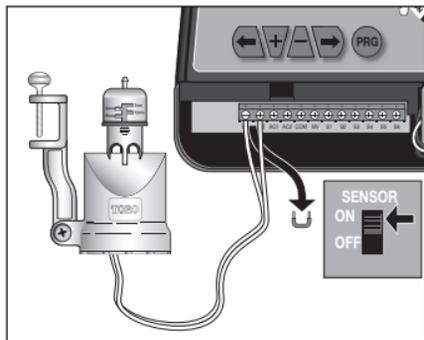
- Step 1 – Remove the controller's lower panel cover to access the power supply terminals.
- Step 2 – Connect the plug-in transformer cables to the terminals labeled “AC1” and “AC2”.
- Note:** Polarity is not observed in this connection.
- Step 3 – Replace the lower panel cover, making sure that the transformer cable is routed through the provided opening at the bottom of the controller.
- Step 4 – Plug the transformer into a 120 VAC, 60Hz wall outlet.



Rain Sensor Installation (Optional)

⚠ IMPORTANT! The sensor circuit is designed for a **NORMALLY-CLOSED** rain sensor. If a rain sensor is not connected, the sensor switch must be in the “OFF” position or the jumper wire must be installed.

- Step 1 – Remove the controller's lower panel cover to access the sensor terminals.
- Step 2 – Route the rain sensor's cable to the controller.
- Step 3 – Remove the jumper cable from the “RS1” and “RS2” terminals. Connect the sensor cables to the terminals.
- Step 4 – Replace the lower panel cover.
- Step 5 – Place the “SENSOR” switch to “ON” to monitor the sensor status.



Master Valve and Station Connection

Note: Using 18-gauge (maximum 14-gauge wire can be used), multi-strand, direct burial irrigation valve connection cable is recommended. Select a cable that provides at least one wire for each valve and one extra wire for the common connection.

⚠ IMPORTANT! To prevent corrosion and possible short circuit, use waterproof wire connectors on all splices.

Step 1 – To provide a valve common connection, splice one cable wire (generally the white wire) and connect it to one solenoid lead from each of the valves.

Step 2 – Connect a separate wire to the remaining solenoid lead from each valve.

Note: For reference, note the wire color code being used for each valve connection and the associated watering station.

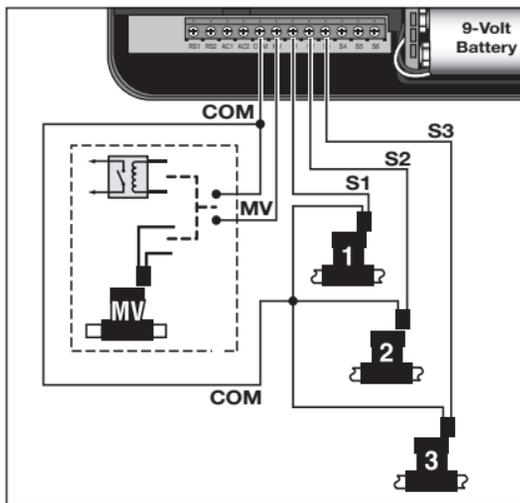
Step 3 – Remove the controller's lower panel cover to access the master valve and station terminals.

Step 4 – Route the wire cable into the controller through the opening at the base of the unit.

Step 5 – Secure the designated valve common wire to the “COM” terminal.

Step 6 – Secure the Master Valve to the “MV” terminal and the stations to their corresponding terminals (S1, S2, S3, ...).

Step 7 – Reinstall the lower panel cover.



RUN Position

Rotate the function dial to RUN  to enable the controller to operate as programmed.

Note: Lawn Master II will only operate scheduled programs while in RUN position.

CURRENT TIME/DAY Setup

- Step 1 – Place the function dial to the CURRENT TIME/DAY  position.
- Step 2 – With **YEAR** displayed, press  or  to adjust to the current year's value.
Press  to advance to **MONTH**.
- Step 3 – With **MONTH** displayed, press  or  to adjust the current month's value.
Press  button to advance to **DAY**.
- Step 4 – With **DAY** displayed, press  or  to adjust the current day's value.
Press  to advance to **AM/PM**.
- Step 5 – With **AM** or **PM** flashing, press  or  to select **AM** or **PM**.
Press  to adjust the **HOURL** value.
- Step 6 – With the **HOURL** value flashing, press  or  to adjust the hour to the current time. Press  to adjust the **MINUTE** value.
- Step 7 – With the **MINUTE** value flashing, press  or  to adjust the minutes to the current time. Pressing  will return you to the **YEAR** display (Step 2).
- Step 8 – Place the function dial to **RUN**  when finished.

WATERING DAYS Setup

The WATERING DAYS setup will dictate when to activate the selected watering program. Lawn Master II allows you to select Weekdays, ODD days only or EVEN days only watering schedules. When selecting Weekdays schedule, you can disable specific days.

Step 1 – Place the function dial to the WATERING DAYS  position.

Step 2 – Press  to select the program being modified. Select from **A**, **B** or **C**.

Step 3 – For Weekday scheduling, press  until MON–SUN is displayed. All weekdays with the  symbol are designated as an active watering day.

To disable a specific weekday, press  or  until the desired weekday is flashing. Press  to disable. The  icon will be displayed above the non-watering day.

To enable a non-watering day, press  or  until the desired weekday is flashing. Press  to enable. The  icon will be displayed above the active day.

Step 4 – For ODD scheduling, press  or  until ODD is flashing. Press the  button to activate. The  symbol should be displayed above ODD. By selecting ODD scheduling, Lawn Master II will only water on the ODD numbered days in the calendar month. ODD scheduling will not water on the 31st but resumes on the 1st.

Step 5 – For EVEN scheduling, press  or  until EVEN is flashing. Press the  button to activate. The  symbol should be displayed above EVEN. By selecting EVEN scheduling, Lawn Master II will only water on the EVEN numbered days in the calendar month.

Step 6 – Repeat Steps 2–5 for the remaining programs as necessary.

Step 7 – Return the function dial to RUN  when finished.

START TIMES Setup

The START TIMES setup will instruct the controller the time to activate the selected program during an active watering day. Lawn Master II provides three start times per program to accommodate all your irrigation needs.

Step 1 – Place the function dial to the START TIMES  position.

Step 2 – Press  to select the program being modified. Select from **A**, **B** or **C**.

Step 3 – Press  or  to select the START TIME number (1, 2 or 3) being modified.

Step 4 – Press  or  to adjust the time to the desired START TIME. For unused start times, make sure **OFF** is displayed. OFF is located between 11:45pm and 12:00am.

Note: Each key-press will increase or decrease the start time by 15 minutes.

Step 5 – Repeat steps 2–4 for the remaining start times and programs as necessary.

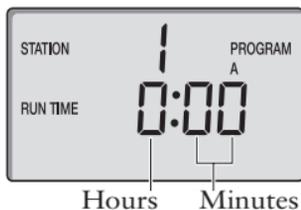
Step 6 – Return the function dial to **RUN**  when finished.

⚠ IMPORTANT! A program which is set to start while a watering cycle is in progress will be delayed (stacked) until the current watering cycle is completed. Any stacked programs that are delayed past midnight will be canceled.

SET ZONE TIMES Setup

The SET ZONE TIMES setup tells the controller how much time each station will be activated (runtime).

- Step 1 – Place the function dial to the SET ZONE TIMES  position.
- Step 2 – Press  to select the program being modified. Select from **A**, **B** or **C**.
- Step 3 – Press  or  to select the Zone (station) number (1–6) being modified.
- Step 4 – Press  or  to adjust the desired time duration (runtime) you want the station to be active. Each station can have a runtime of one minute and up to six hours. For unused stations, adjust the runtime to **0:00**.



- Step 5 – Repeat steps 2–4 for the remaining stations and programs.
- Step 6 – Return the function dial to **RUN**  when finished.

SEASON ADJUST Setup

SEASON ADJUST enables you to conveniently decrease or increase the ZONE TIME (run time) currently set for each of the programs. The adjustment can be made in 10% increments from 0% (OFF) to 200% of the normal (100%) run time.

Note: SEASON ADJUST is a universal setting which will affect all three (A, B and C) programs.

Step 1 – Place the function dial to the SEASON ADJUST  position.

Step 2 – Press  or  to adjust to the desired adjustment percentage; i.e., 90% equals 10% reduction of station run time and 200% will double the station run time.

Step 3 – Return the function dial to RUN  when finished.

MANUAL STATION Operation

MANUAL STATION operation enables you to activate any station and give a temporary run time duration. Only one station can be activated by the MANUAL STATION operation. Any run time adjustment made in MANUAL STATION is temporary and will not affect the actual run times in the programs.

Step 1 – Place the function dial to the MANUAL STATION  position.

Step 2 – Press  to activate MANUAL STATION operation.

Step 3 – Press  or  to select the Station number being activated.

Step 4 – Press  or  to adjust the desired run time duration.

Step 5 – Turn the function dial slowly to the RUN  position to activate. The selected station will be activated until the set run time expires, then the controller will revert to normal operation.

MANUAL PROGRAM Operation

MANUAL PROGRAM operation enables you to activate any of the three (A, B or C) programs, regardless of their set START TIMES. Only one program can be activated by the MANUAL PROGRAM operation. Any run time adjustment made in MANUAL PROGRAM is temporary and will not affect the actual run times in the programs.

Note: Rain sensor does not affect Manual Program and Manual Station operations.

- Step 1 – Place the function dial to the MANUAL PROGRAM  position.
- Step 2 – Press  to activate MANUAL PROGRAM operation.
- Step 3 – Press  to select the program being modified. Select from A, B or C.
- Step 4 – To modify the station run times temporarily, press  or  to select the Station number being modified. Press  or  to adjust the desired run time duration.
- Step 5 – Turn the function dial slowly to the RUN  position to activate. The selected program will be activated until all programmed stations are cycled, then the controller will revert to normal operation.

Turning OFF Operation and Shutting Down Lawn Master II

Place the function dial in the OFF  position to turn off any operation currently in progress. While the function dial is in the OFF  position, any scheduled watering programs will be prevented from activating. For extended sprinkler system shutdown, leave the control dial in the OFF  position.

Place the function dial to RUN  to resume operations.

Troubleshooting Guide

Problem	Possible Cause	Correction
Some valves do not operate.	Defective solenoid. Loose wire connection.	Test and replace solenoid. Secure wire connections. Check for wire continuity.
No valves operate.	Function dial in OFF position. Start Times set to OFF. WATERING DAYS incorrectly set. SET ZONE TIMES set to off. SEASON ADJUST set to 0%. AC power source is not connected. NO AC is displayed.	Set switch to RUN or MANUAL position. Reprogram START TIMES. Reprogram WATERING DAYS. Reprogram SET ZONE TIMES. Readjust SEASON ADJUST. Check and reconnect the plug-in transformer.
Current time is wrong and flashing (after a power outage or after being unplugged).	Battery is weak or missing.	Replace battery and reprogram controller.
Valves won't turn off (function dial switch in OFF position).	Mechanical override (Valve's manual bleed is ON).	Turn the valve's solenoid fully clockwise.
Manual Station and Program Operations do not activate.	Function Dial was rotated too quickly to the RUN position.	Rotate the function dial slowly to the RUN position.

Specifications

Transformer: Energy Efficient Level IV, UL/cUL Listed, CSA Certified (or equivalent)

Input: 120 VAC, 60 Hz

Output: 24 VAC at 0.75A

Capacity: One Station plus Master Valve or 24 VAC Pump Start Relay Active at one time

Maximum Electrical Output: 350mA per Station

Operating Temperature: 32°F to 140°F (0°C to 60°C)

Storage Temperature: -4°F to 149°F (-20°C to 65°C)

Relative Humidity: 0–95% without Condensation

Limited One-Year Warranty

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly warrants, to the owner, against defects in material and workmanship for a period of one year from the date of purchase.

Neither The Toro Company nor Toro Warranty Company is liable for failure of products not manufactured by them even though such products may be sold or used in conjunction with Toro products.

During such warranty period, we will repair or replace, at our option, any part found to be defective.

Return the defective part to the place of purchase.

Our liability is limited solely to the replacement or repair of defective parts. There are no other express warranties.

This warranty does not apply where equipment is used, or installation is performed, in any manner contrary to Toro's specifications and instructions, nor where equipment is altered or modified.

Neither The Toro Company nor Toro Warranty Company is liable for indirect, incidental or consequential damages in connection with the use of equipment, including but not limited to: vegetation loss, the cost of substitute equipment or services required during periods of malfunction or resulting non-use, property damage or personal injury resulting from installer's negligence.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

All implied warranties, including those of merchantability and fitness for use, are limited to the duration of this express warranty.

Some states do not allow limitations of how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights and you may have other rights which vary from state to state.

The Toro Dedication to Quality – Lawn Master II Timer

Toro is committed to developing and producing the highest quality, best performing, most dependable products on the market. Because your satisfaction is our first priority, we have provided the Toro Helpline to assist you with any questions or problems that may arise. If for some reason you are not satisfied with your purchase or have questions, please contact us toll free at 1-800-367-8676.



Count on it.



Quick Reference Guide

Adjust CURRENT TIME/DAY

Place function dial to  position. Press  or  to select item being modified (YEAR, MONTH, DAY, HOUR or MINUTES). Press  or  to adjust parameter.

Set WATERING DAYS

Place function dial to  position. Press  or  to select the specific weekdays, ODD or EVEN. Press  to set as an active watering day or  to set as a non-watering day (OFF).

Set START TIMES

Place function dial to  position. Press  or  to select the start time number being set (3 start times per program). Press  or  to adjust the start time.

SET ZONE TIMES

Place function dial to  position. Press  or  to select the station number. Press  or  to adjust the station runtime.

Activate MANUAL STATION

Place function dial to  position. Press  to activate function. Press  to select the station to activate. Press  or  to adjust the station runtime. Place the function dial to  to execute.

Activate MANUAL PROGRAM

Place function dial to  position. Press  to activate function. Press  to select the program to activate. Place the function dial to  to execute.