





User Manual



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Please be sure to read through all the instructions before attempting to use your controller

Model no: KRX12

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- 1. MAIN DIAL
- 2. Indicator LED lights
- 3. **START** button
- 4. **STOP** button
- 5. **SENSOR** switch
- 6. START switch

▲ Do not disassemble this product. There are no serviceable parts inside. Some internal components can run at elevated temperatures and touching these could cause burns

Overview

Key Features

- Wi-Fi control with Holman Home via
 ★ iOS® or ★ Android®
- 12 ZONES can be added to the 4 START times
- Scheduling options:
 7 DAYS, INTERVAL DAYS,
 ODD DAYS incl. 31st,
 ODD DAYS excl. 31st,
 EVEN DAYS, with misting
- Max. 15 day watering delay
- ZONE and multi-zone (sequential)
 MANUAL control

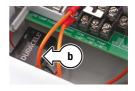
- On-board MANUAL controls: START and STOP, including shut-off with the MAIN DIAL
- M-205 fuse rated at 1A for power spike protection
- Memory backup power requires 9V battery (sold separately)
- IP54 rated housing with lockable door
- To drive a pump contactor, this controller must be installed with a low current relay-refer to PUMP CONNECTION to learn more

9V Battery

- Install a high quality 9V alkaline battery (sold separately) to ensure your programs are not lost during a power outage
- Open the controller housing door
- Remove the terminal cover using the two tabs on either side of the cover
- 3. Locate the 9V battery snap (a) below the terminal block



4. Connect a 9V battery to the snap, and fit below the terminal block (b)



5. Replace the terminal cover to house the battery

Power Supply

- ▲ Installation must be carried out in accordance with these instructions. If hard wiring the controller, an approved electrician must be used in accordance with all Local, State and Federal codes
- This unit runs off a 240V 50Hz single phase outlet, drawing 30W at 240V AC
- ✓ Internal transformer: Reduces 240V AC to extra low voltage supply of 24V AC
- Fully compliant with AS/NZS 61558-2-6
- 1.25A low energy, high efficiency toroidal transformer for long life

- ✓ Input: 24V AC 50/60Hz Output: Max 1 amp
- **To zones:**24V AC 50/60Hz.0.5 amp max
 - ★ To master/pump:
 24V AC 0.25, amp max
 - Transformer and fuse capacity must be compatible with output requirements



On-board Controls

- a) AP WI-FI for pairing your device to Holman Home app—refer to ADDING YOUR KRX12 TO HOLMAN HOME
- b) **OFF** globally disables all **STARTS**
- c) RUN globally enables all STARTS
- d) TEST ensures your watering programs are working as expected refer to TEST FUNCTION to learn more
- e) **ZONES (1–12)** to keep information for different watering areas separate—refer to <u>ZONE SETTINGS</u> for more information
- f) START button to activate ZONES/STARTS manually—refer to ON-BOARD START/STOP CONTROLS

- g) STOP button to disable ZONES/STARTS manually-refer to ON-BOARD START/STOP CONTROLS
- h) **SENSOR** switch allows you to attach a sensor (sold separately) which can be setup to disable scheduled watering. For an example of how to connect a rain sensor (sold separately) refer to RAIN SENSOR for installation instructions
- i) START switch (A-D), a START is a group of ZONES with common WATERING DAYS—refer to START SETTINGS to learn more about programming STARTS

On-board START/STOP Controls

- Use on-board controls to manually start/ stop ZONES or STARTS
- If MAIN DIAL is left in a ZONE position, it will not affect automatic programmed start times
- To turn ZONE/START on:
 - i. Press the **START**button (f) and the
 controller will
 activate the selected **ZONE/START** for
 the programmed
 run time and turn
 off after—refer to **ZONE SETTINGS** for
 more information
- 2. To turn **ZONE/START** off:
 - i. Turn MAIN DIAL to desired ZONE (e) or the START switch (i) to desired START
 - ii. Press the **STOP**button (g) and the
 controller will
 disable the selected **ZONE/START** for the
 programmed run time

Installing Holman Home

 Download Holman Home to your mobile device via the Hop Store or Google Play



- 2. Open **Holman Home** on your mobile device
- You may be prompted to allow notifications—the app can still function if you choose to opt out
- For best results, allow Bluetooth and Location settings when prompted. This is an 'in app' permission. Allow only while using app

- 3. Tap SIGN UP
- Read our User Agreement and Privacy Policy and tap **AGREE** if you wish to proceed
- Follow the prompts to register a *Holman Home* account with your email address
- A Ensure your country details are correct at this stage
- This allows the app to discover local networks (for ease of pairing) and also allows the app to show weather information—it will still function if you choose to opt out

Adding your KRX12 to Holman Home

- Before attempting to connect your KRX12 to Holman Home, ensure:
 - Plug connected to power socket
 - 9V battery connected
 - KRX12 is close to your router
 - Bluetooth® on your smartphone is active
 - Ensure the MAIN DIAL is set to AP WI-FI for pairing



3. If your **KRX12** appears in the **DISCOVERING DEVICES...** section (c), tap **ADD** (d)



If your KRX12 does not appear here, press START until the red AP LED flashes quickly (5 seconds) or refer to EZ/AP Connection mode

Adding your KRX12 to Holman Home (continued)

4. In the following screen, tap

(e) next to your *KRX12*



• Holman Home will ask to access location data; tap SET NOW (f) to share this with Holman Home



- Alternatively, to connect without sharing location, tap MANUAL INPUT (g)—For best results, allow Bluetooth and Location settings when prompted. This is an 'in app' permission, allow only while using app
- 5. Enter the **Wi-Fi NAME** (h) and **PASSWORD** (i) of your Wi-Fi network as necessary and tap **NEXT** (i)



Adding your KRX12 to Holman Home (continued)

It may take a few minutes for your KRX12 to add to Holman Home; please wait for the progress dial (k) to finish

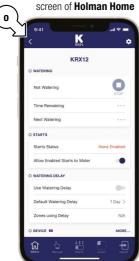


6. Once the connection process is complete, Holman Home will confirm it has successfully added your KRX12 (I); tap DONE (m) to access the main KRX12 A screen

On first use, the **KRX12** interface will need a moment to initialise (n)



Adding your KRX12 to Holman Home (continued)



- 8. Your *KRX12* will now be shown on the **HOME** screen under **ALL DEVICES** (p)
- ▲ Set the MAIN DIAL to the RUN position after pairing is completed



Adding your KRX12 using EZ Mode

- A Follow these instructions if your KRX12 does not appear in the previously mentioned DISCOVERING DEVICES... dialogue
- In the ADD DEVICE menu, tap
 K-RAIN PRODUCTS (a)



2. In the K-RAIN PRODUCTS menu, tap KRX12 (b)



 On the following connection screen, tap BLUETOOTH

(c) and select EZ MODE (d) from the subsequent drop-down menu



Adding your KRX12 using EZ Mode (continued)

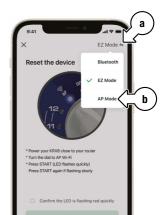
- Work through the following prompts in *Holman Home* to complete the **EZ MODE** connection process
- ▲ Set the MAIN DIAL to the RUN position after pairing is completed

Adding your KRX12 using AP Mode

- Ensure your smartphone mobile data is switched off before trying AP MODE
- In the connection screen, tap EZ MODE

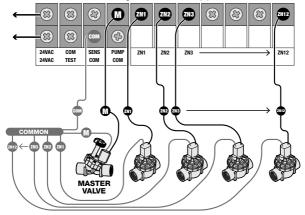
 (a) and select AP MODE (b) from the subsequent drop-down menu
- Work through the following prompts in *Holman Home* to complete the **AP MODE** connection process

A Set the MAIN DIAL to the RUN position after pairing is completed



Field Wiring

- Disconnect all 240VAC power before commencing any field wiring or solenoid valve connection
- Strip approx. 6mm of insulation and place under the loosened screw, tighten gently and check the cable is firmly held
- Connect one cable from each solenoid valve to a zone terminal terminal. one to the C common terminal
- 2. Complete the circuit by *looping* a common cable to all valves and connecting to the COMMON (**C**) terminal



Setting up your KRX12 in Holman Home

- 1. Set up the **ZONES**
 - Name each ZONE
 - ii. Choose the

 WATERING MODE—

 NORMAL (default)

 or MISTING
- For MISTING, set the desired ON TIME and DELAY TIME
 - iii. Decide which **ZONES**are to be included in
 a **WATERING DELAY**(not included by
 default)—refer to
 ZONE SETTINGS for
 more information

- 2. Set up the STARTS
 - i. Enable each **START** to be programmed
 - ii. Choose the START TIME and WATERING ROSTER
- For INTERVAL DAYS, note the KRX12 home the next watering day (date). Further watering information is available via 'Device' at the bottom of the Screen, tap 'MORE...' to see full Device Information
- Select the appropriate ZONES and amend the RUN TIMES

Setting up your KRX12 in Holman Home (continued)

- 3. Set up the MANUAL WATERING run time for each ZONE
- This run time is used when you press START on-board the controller for each ZONE
- This run time is used in SCENE AUTOMATION when you switch a ZONE on

- Set the MAIN DIAL
 position—for STARTS
 to water, ensure it is
 set to RUN, otherwise
 ensure it is OFF
- Set up any INPUTS
 (sensors) including rain
 or humidity sensors—
 refer to INPUTS for
 more information
- Automations are required to enable the sensor to trigger the watering delay. Automations will not work without a consistent Wi-Fi signal.
- 6. Set up either

 TAP-TO-RUN or

 AUTOMATIONS to enable
 the WATERING DELAY
 where appropriate

Mounting the Unit

- Position the unit in a place that is convenient for valve wiring and near a power source
- ✓ Install near a 240V AC outlet
- We recommend mounting the unit at eye level
- Drive a #8 screw into the wall, leaving approx. 4mm exposed. Use a toggle bolt or masonry plug if necessary
- 2. Hang the unit from the key at the back, ensuring it is properly seated
- Optional: Remove the terminal cover to add additional screws through the holes in the lower corners for extra stability

Checking Connected Zones

- Open Holman Home, enable START A and select the ZONES to be tested
- 2. Turn the MAIN DIAL to TEST
- Press START on the controller
 - Activated ZONES in any START will run for 2 minutes, sequentially from ZONE 1 to 12
 - If no ZONES are activated in any STARTS, the test function will not run
- To skip a ZONE during the process, press START on the controller
- 4. Once completed, turn the MAIN DIAL to RUN or OFF

KRX12 Home Screen

- This page displays info for your *KRX12*, including **WATERING** status (b), **STARTS** status (c), **WATERING DELAY** settings (d), and **DEVICE** status (e)—note the icon will turn red when your battery needs replacing
- Enable or disable all STARTS by using the ALLOW ENABLED STARTS TO WATER switch (f)



All STARTS can also be globally enabled or disabled by setting the MAIN DIAL to RUN or OFF respectively

Start Settings

- Within the **KRX12** interface, tap **STARTS** in the main footer menu
- Tap the desired **START** (a) for the following settings:
 - ENABLE (b)
 - Set a START TIME (c)
 - WATERING
 ROSTER (d)
 - Activate a ZONE using the check box ✓ (e)
 - Set **RUN TIME** by tapping the **ZONE**
- If STARTS are queued for the same time, they will run sequentially from START A
- Queued STARTS will be skipped if they are run manually during the queue process



Be sure to tap SAVE (f) after finalising your START settings

Zone Settings

- Within the **KRX12** interface, tap **ZONES** (a)
- Tap the desired **ZONE** for the following settings:
 - ZONE NAME (b)
 - WATERING DELAY on or off (c)
- Also includes MISTING:
 - WATERING MODE (d)
 - ON TIME (e)
 - DELAY TIME (f)
- RUN TIMES for each START (g)
- Be sure to tap SAVE (h) after finalising your ZONE settings



Manual Watering

- Within the *KRX12* interface, tap **MANUAL** (a)
- Use the selector (b) to select a START to water
- Tap START ► (c) to begin watering as per the pre-set START settings
- **1** Tap **STOP** (d) to end the watering session
- Tap ZONES (e) to water ZONES individually
- Tap a ZONE (f) to access its manual controls
- Tap a check box (g) to activate a ZONE for your manual watering session



Manual Watering (continued)

- If multiple ZONES are selected they will water sequentially starting with ZONE 1
- 20NES will run as NORMAL or MISTING watering depending on pre-set ZONE settings
- It is not possible to choose multiple **STARTS** for manual watering
- If your KRX12 is already watering a schedule, you will need to stop this to be able to water manually

Device Information

- To access **DEVICE INFORMATION**, tap **MORE** (a) next to **DEVICE** (b) in the **KRX12** page—this contains the following:
 - WATERING QUEUE (c) it is possible to have zones in all the queues. Your KRX12 will water in order of the queues shown on screen
 - ii. WATERING HISTORY (d)
 - iii. INTERVAL WATERING ROSTER (e)—if a START uses INTERVAL DAYS, it displays how many days until the next watering
 - iv. 9V battery level (f)



App Integration

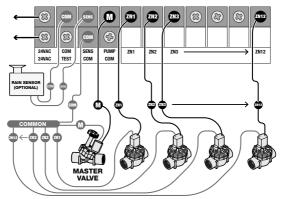
- Within the **KRX12** interface, tap **INPUTS** (a)
- Refer to the **INPUTS** screen for details on this function
- ▲ Disconnect all 240VAC power before commencing any field wiring or solenoid valve connection



Rain Sensor

- A rain sensor suspends watering during rainfall, resuming after the sensor dries out
- This is only available once a rain sensor has been added and SCENE AUTOMATIONS have been set—smart automations will not run
 - automations will not run if Wi-Fi signal is absent

- ▼ To install a rain sensor, wire as shown below— when installing, remove metal bridge between C and SENS. The AP light on the controller will flash green LED to confirm the rain sensor.



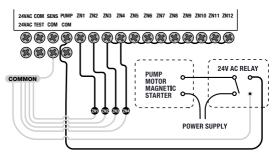
Pump Connection

- This controller does not provide mains power to drive a pump—a pump must be driven via an external relay and contactor (pump start) setup
- The controller provides a low voltage signal that actuates the relay which in turn enables the contactor and finally the pump
- Although the controller has permanent memory and thus a default program will not cause erroneous valve actuation, it is good practice to connect unused zones on the unit back to the last used zone

- This in effect, inhibits the chances of the pump ever running against a closed head
- ☑ In some circumstances not all operational zones may be hooked up—for example, your *KRX12* is capable of running 12 zones but there were only 4 field wires and solenoid valves available for connection
- This situation can pose a risk to a pump when the system test routine for the controller is initiated

Pump Connection

- In the above example this would mean zones 5 through to 12 would become active and would cause the pump to operate against a closed head
- ▲ This could possibly cause permanent pump, pipe and pressure vessel damage
- It is mandatory if the system test routine is going to be used, that all unused, spare zones, should be linked together and then looped to the last working zone with a valve on it
- It is recommended
 to always use a relay
 between the controller and
 the pump starter for single
 phase pump installation



Offline Device

- A warning message (a) will be displayed if your KRX12 is not connected to the internet
- If your KRX12 still has a connection to power, it will still water the saved STARTS despite being offline from Holman Home—it will still be possible to water manually using the on-hoard controls.

Time Zones

When in a different time zone to your KRX12, Holman Home will highlight which time zone the KRX12 is using (b)



Holman Home Automations

- STARTS run from a
 Holman Home automation
 will behave the same as
 a manually run START
- WATERING DELAYS FROM A SENSOR-Zone settings are used to opt in or out of the delay. ZONES using the delay will be shown on the KRX12 page. After you have set the delay, go to SCENE at the bottom middle of the Holman Home app 🎓 page, you will find a recommended SCENE for the KRX12 to trigger the delay when your sensor is activated (opened/closed). This can be edited as required.
- Using this SCENE will automatically activate your sensor triggered
 WATERING DELAY
- Automations will not work without a consistent Wi-Fi signal.
- To exclude ZONES using the WATERING DELAY function, this will need to be set using two automations—for example:

Test Function

- 1. To test the KRX12 system, turn the MAIN DIAL to TEST
- 2. Press **START** on board the controller
- Activated ZONES in any START will run for 2 minutes, sequentially from ZONE 1 to 12
- If no ZONES are activated in any STARTS, the test function will not run
- To skip a **ZONE** during the process, press **START** on board the controller

Wi-Fi Signal Strength

- Wi-Fi SIGNAL STRENGTH can be accessed on the DEVICE INFORMATION page—refer to DEVICE INFORMATION on how to access this
- This signal (a) determines if your internet connection is reliable enough for your KRX12 to function correctly
- The stronger the signal, the more reliable your connection will be
- The higher the number the stronger the signal—for example; a signal strength of -30 dBm (decibel milliwatts) is considered a perfect signal. A Wi-Fi signal strength of -90 dBm is considered not connected.

 -60 dBm is considered the minimum connection strength



9V Battery Notification

- If the 9V battery needs to be replaced, a notification will display (a) in Holman Home in the device list—if the KRX12 interface is opened, this will be dismissed
- To review the notification:
 - i. Tap ME below the Holman Home device list (b)
 - ii. Tap MESSAGE
 CENTRE (c) and
 your Holman Home
 notifications will display
 as shown (d)
- To display these as notifications on your smartphone, ensure notification permissions are enabled for *Holman Home* in your smartphone system settings





Troubleshooting

Suggestion

Symptom

• •	
	When adding your KRX12 to Holman Home :
	. Confirm your <i>KRX12</i> is powered ON
3 4 5 6 KRX12 cannot connect to Holman Home 8 9	 Confirm both your <i>KRX12</i> and smartphone are within Wi-Fi range
	 Ensure Bluetooth[®] is turned on and permissions are approved for <i>Holman Home</i>
	 Make sure the network functions of your Wi-Fi router and smartphone are unblocked; firewalls can block certain po
	 Confirm your Wi-Fi network name (SSID) has been entered correctly, including spaces. Note this is case sensitive
	 Confirm your Wi-Fi network password has been entered correctly
	 Confirm your KRX12 is connected to a 2.4GHz Wi-Fi network (not 5GHz), enable the broadcast and do not allow the Wi-Fi network to be hidden
	 Confirm your Wi-Fi router encryption method is WPA2-PSK and authentication type is AES, or both are set to automatic
	If the number of connected devices to the Wi-Fi has reached the amount limit (usually 16 or 50 devices), turn off other Wi-Fi devices and configure again
	If your Wi-Fi router enables the MAC address filter, remove the device from MAC filter list and make sure the Wi-Fi router is allowing your <i>KRX12</i> to be connected
	11. Make sure that the Wi-Fi router has the DHCP service enabled. If it is not enabled, the address will be occupied
	Your Wi-Fi router may not compatible with your KRX12. It is recommended that you replace the Wi-Fi router and try aga
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Troubleshooting

Symptom	Suggestion
KRX12 was connected is now not connecting after mounting in desired position	This indicates a lack of Wi-Fi signal. You will need to move your <i>KRX12</i> and Wi-Fi router closer to each other
No LED lights on	This indicates that there is no power to the unit. Your controller will not operate if there is an AC fault. Please check the power point. Check and replace the fuse if necessary
Single zone not working	Faulty solenoid coil, or break in field wire. Check solenoid coil (a good solenoid coil should read around 33Ω on a multi meter). Test field cable for continuity. Test common cable for continuity
No automatic start	Setup error, MAIN DIAL is in OFF position, blown fuse or power issue. If there are no lights on the controller check your fuse and then power point (refer to 'Fuse keeps blowing' below). If the unit works manually, check your program set up and dial position. The dial should be in the RUN position for regular use
Buttons not responding	Please contact our Customer Service team at info@k-rain.com.au
Multiple zones watering at once	Solenoids may be dirty: clean and flush solenoids to remove debris. Possible faulty driver triac, incorrect field wiring or broken or lost common wire in field. Check wiring and swap faulty valve wires on the controller terminal block with known working zones. If the same outputs are still locked on, please contact our Customer Service team

Troubleshooting

Symptom	Suggestion
KRX12 is not connecting in AP MODE	Ensure mobile data is switched off
Rain sensor not working	For third party sensors, this could be faulty wiring or sensor. Check rain sensor information on <i>Holman Home</i> and check the wiring on sensor
Fuse keeps blowing	The 1amp glass fuse is installed in the controller to protect the board from being damaged as a result of something wrong in the field wiring (this is the wiring from the solenoid to the controller).
	If your fuse has blown, check that your wiring on each station is in tack and not damaged in any way. If your fuse is continuously blowing, remove all wires from your zones. Reconnect each station one at a time to help determine which station is causing the fault.
	Our irrigation controllers use a 5mm \times 20mm 1amp glass fuse



For support email info@k-rain.com.au or contact the friendly Customer Service team at Holman Industries on 08 9416 9999

Supplied and Serviced by Holman Industries III 11 Walters Drive, Osborne Park WA 6017





Warranty

5 Year Replacement Guarantee



Holman Industries offers a 5 year replacement guarantee with this product.

In Australia our goods come with guarantees that cannot be excluded under the Australian Consumer Law, You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

As well as your statutory rights referred to above and any other rights and remedies you have under any other laws relating to your Holman product, we also provide you with a Holman guarantee.

Holman Industries guarantees this product against defects caused by faulty workmanship and materials for 5 years domestic use from the date of purchase. During this guarantee period Holman Industries will replace any defective product. Packaging and instructions may not be replaced unless faulty.

In the event of a product being replaced during the guarantee period, the guarantee on the replacement product will expire 5 years from the purchase date of the original product, not 5 years from the date of replacement.

To the extent permitted by law, this Holman Replacement Guarantee excludes liability for consequential loss or any other loss or damage caused to property of persons arising from any cause whatsoever. It also excludes defects caused by the product not being used in accordance with instructions, accidental damage, misuse, or being tampered with by unauthorised persons, excludes normal wear and tear and does not cover the cost of claiming under the warranty or transporting the goods to and from the place of purchases.

Should you suspect your product may be defective and need some clarification or advice please contact us directly:

1300 716 188

support@holmanindustries.com.au

11 Walters Drive, Osborne Park 6017 WA

If you are certain your product is defective and is covered by the terms of this warranty, you will need to present your defective product and your purchase receipt as proof of purchase to the place you purchased it from, where the retailer will replace the product for you on our behalf.



We really appreciate having you as a customer and would like to say thank you for choosing us.

We recommend registering your new product on our website. This will ensure we have a copy of your purchase and activate an extended warranty. Keep up to date to with relevant product information and special offers available through our newsletter.



Scan here, or visit k-rain.com.au/register for more info