



APPENDIX H
: USER'S MANUAL



MRX-5 OWNER'S MANUAL



TOTAL CONTROL 2.0

TABLE OF CONTENTS

Overview	1
Features & Benefits.....	1
Parts & Pieces	1
Front Panel Descriptions	2
Rear Panel Descriptions	3
Bottom Panel Descriptions.....	4
Installing the MRX-5	5
Network Installation.....	5
Connecting IR Emitters.....	6
Connecting RS-232 (serial).....	7
Specifications	8
Limited Warranty Statement.....	8
End User Agreement	10
Federal Communication Commission Interference Statement.....	11



Tech Support

Toll Free: 800-901-0800
 Main: 914-835-4484
techsupport@universalremote.com
 Hours: 9:00am - 8:00pm EST M-F

TOTAL CONTROL 2.0

Overview:

Thank you for purchasing the **MRX-5 Advanced Network System Controller** for your Total Control home automation system.

Press buttons on any Total Control interface to send commands to the **MRX-5** that turn off the lights in every room, watch a streaming series on Roku, or listen to a radio station on HEOS. Speak to your certified URC integrator for compatible two-way devices.

The **MRX-5 Advanced Network System Controller** can ONLY be configured using Total Control software that is ONLY distributed to certified URC integrators.

Features & Benefits:

- Stores the **Total Control system's programming** including device commands, macros, automated events, and much more!
- **Communicates** with Total Control **interfaces** and **auxiliary controllers over the local network** for expansion and control.
- Provide **two-way control and feedback on supported 3rd party devices** such as HEOS, SONOS, Roku, Lutron, and much more.
- Programming file can be modified/editing via **Offsite** by a certified URC integrator.
- **Mountable** via sliding mounting plate and supplied screws.



Parts & Pieces:

- MRX-5 Advanced Network System Controller
- DC 12V/1.0A Power Adapter
- 4x IR Emitters with standard
- Mounting Plate
- 4x mounting screws

Front Panel Descriptions:

The front panel of the MRX-5 Advanced Network System Controller displays the following information:

1. Power LED: Indicates three (3) possible states:

- **Solid Blue:** The device is receiving power and has successfully booted up.
- **Blinking Blue:** The device is receiving power, but is still initializing.
- **Off:** The device is not receiving power.

2. Network LED: Indicates three (3) possible states:

- **Solid Blue:** The device is connected to the network and has received an IP address.
- **Blinking Blue:** The device is connected to the network, but has not yet received an IP address.

This LED **blinks blue** after a Total Control configuration file has been downloaded to the device.

- **Off:** The device is not connected to the local network.



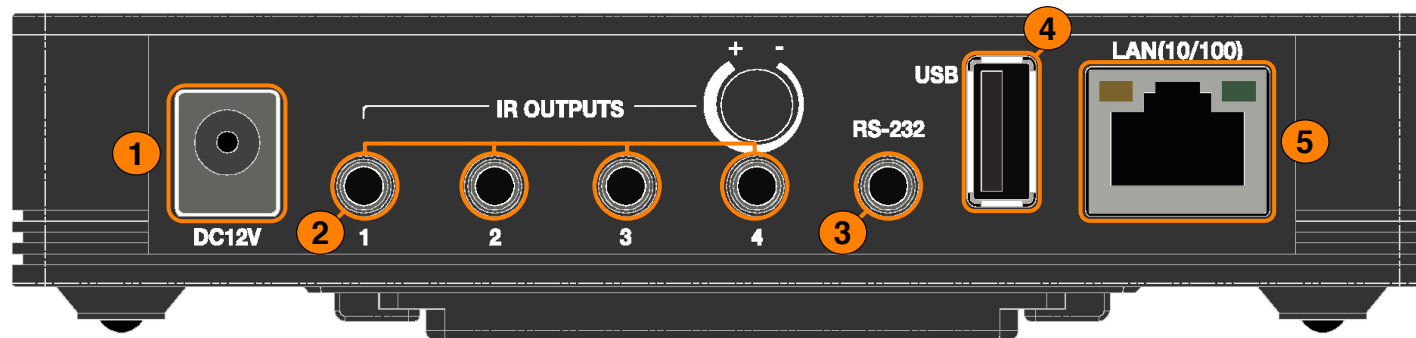
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Rear Panel Descriptions:

The rear panel of the MRX-5 Advanced Network System Controller displays the following information:

1. **DC 12V:** Connect the supplied power adapter to this port, the Power LED becomes solid blue when the device has received power.
2. **IR Outputs:** Four (4) standard 3.5mm IR emitter ports. IR Output 4 provides variable level adjustment.
3. **RS-232 Port:** One (1) RS-232 ports support Tx(Transmit), Rx(Receive) and GND(Ground) connections for two way communication.
4. **USB Port:** Designed for future use.
5. **LAN Port:** RJ45 standard 10/100 Ethernet connection to the local network.

Compatible with URC cables RS232F and RS232M.

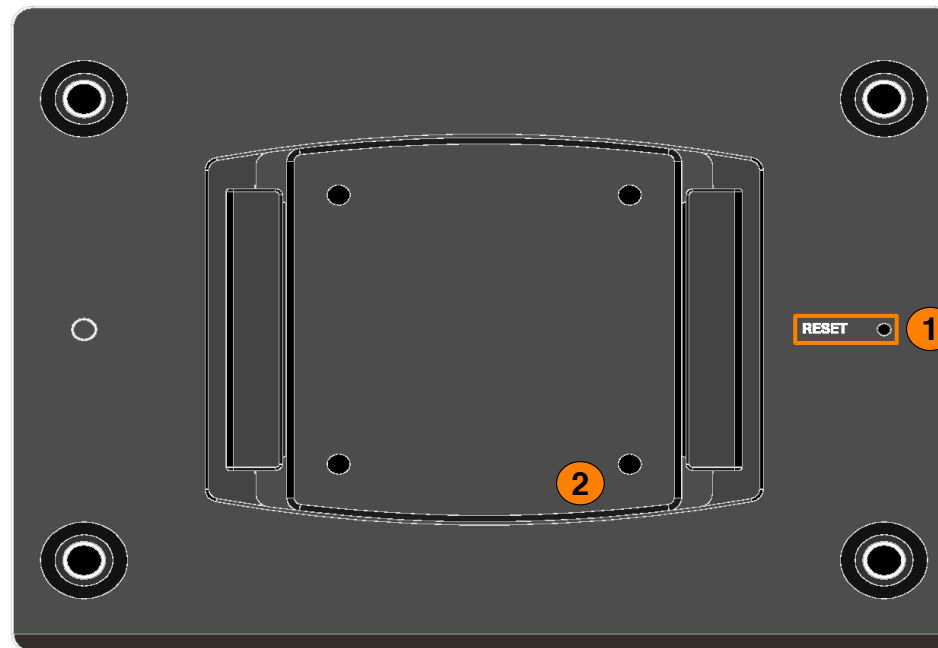


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Bottom Panel Descriptions:

The bottom panel of the MRX-5 Advanced Network System Controller displays the following information:

1. **Reset Button:** Located at the bottom of the device and requires a stylus or paper clip to press. Performs two (2) possible actions:
 - **Single Tap:** Power cycle the device.
 - **Press-N-Hold:** Press this button for 15 seconds to restore the device to its factory settings. This action cannot be reversed and the device **REQUIRES** re-programming with the Total Control software.
2. **Mounting Plate:** Slide the mounting plate up or down to remove it from the device. Use the four (4) supplied mounting screws to mount the MRX-5 on a wall, ceiling, or any other convenient location.



TOTAL CONTROL 2.0

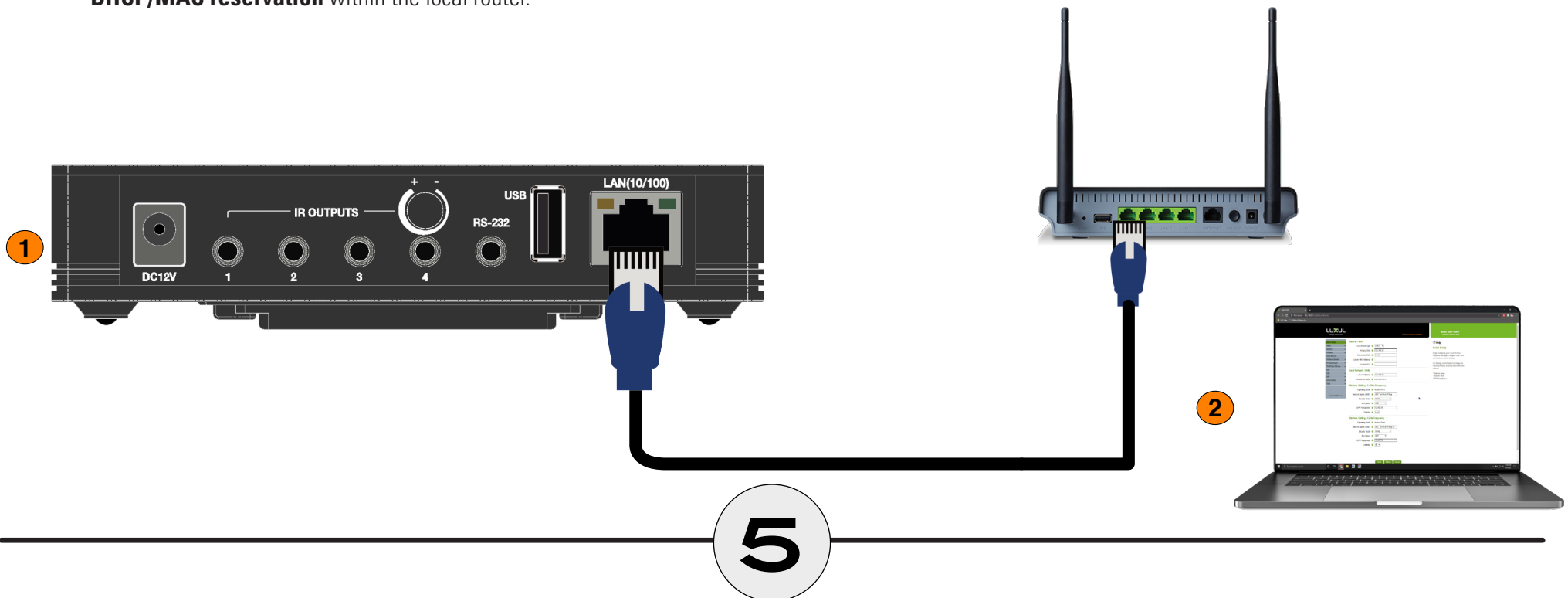
Installing the MRX-5:

The MRX-5 Advanced Network System Controller can be installed almost anywhere in the home or business.

Once physically installed, it **requires programming by a certified URC integrator** in order to operate local equipment using IP (network), RS-232 (serial), IR (infrared), or relays. All cables must be connected to their respective ports at the rear of the device.

Network Installation:

1. Connect an **Ethernet cable** (RJ45) to the rear of the **MRX-5** and the onto an available LAN port of the network's **local router** (Luxul preferred).
2. A certified URC integrator is required for this step, configure the MRX-5 to a **DHCP/MAC reservation** within the local router.



TOTAL CONTROL 2.0

Connecting IR Emitters:

IR emitters are used to communicate to AV devices such as cable boxes, televisions, blu-ray players and more.

1. Plug IR Emitters into any of the four (4) IR outputs available on the rear of the MRX-5.

IR Output 4 includes an adjustable sensitivity dial. Turn this dial to the right to increase the gain and to the left to decrease it.

2. Remove the adhesive covering from the emitter and place it over the **IR receiver of the 3rd party device** (cable box, television, etc.).



IR EMITTER

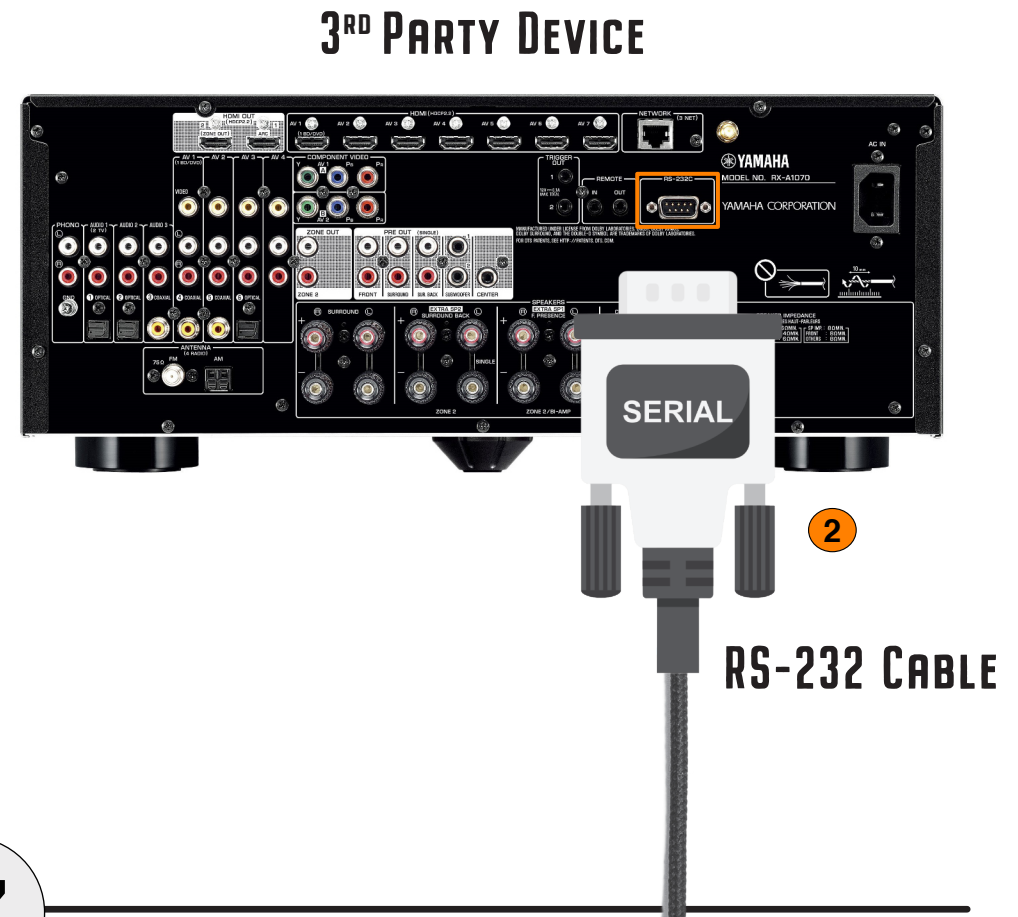
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Connecting RS-232 (serial):

The MRX-5 can operate equipment via RS-232 communication. This allows discrete serial commands to be triggered from the Total Control system.

Connect RS-232 device using URC's proprietary RS-232 cables. These use either male or female DB-9 connections with standard pin-outs.

1. Connect the **3.5mm** into the **RS-232 Output** available on the **MRX-5**.
2. Connect the **Serial connection onto the available port on the 3rd party device**, such as AVRs, Televisions, Matrix Switchers, and other devices.



TOTAL CONTROL 2.0

Specifications:

Network: One (1) 10/100 RJ45 Ethernet port (two LED indicators)

Processor: ARM9 Thumb Processor 400 MHz

RAM: DDR2 256 MB

Storage: e.MMC NAND 4GB

Weight: 6 oz

Power: DC 12V/1.0A

IR Outputs: Four (4) IR outputs (IR attenuator on output 4)

RS-232: One (1) RS-232 port

USB Port: For Future Use

Limited Warranty Statement:

1. Limited Warranty and Disclaimers

Universal Remote Control, Inc. ("URC") warrants that URC equipment purchased directly from URC or from an authorized URC dealer or distributor shall be free from defects in material and workmanship under normal usage for a period of one (1) year from the date of purchase of the product by the end-user, but no longer than thirty-six (36) months from the date of shipment of the URC equipment by URC to an authorized URC dealer or distributor, except that with respect to Total Control® whole-house products, the warranty extends for two (2) years from the date of purchase by the end-user, but no longer than forty-eight (48) months from the date of shipment of the URC equipment by URC to an authorized URC dealer or distributor.

This limited warranty is valid only in the United States of America.

URC equipment purchased from other than an authorized URC dealer or distributor is without warranty.

URC warrants that the software will substantially conform in any material respect to its functional specifications at the time of delivery. URC SHALL NOT BE LIABLE FOR OPERATIONAL, TECHNICAL OR EDITORIAL ERRORS AND/OR OMISSIONS MADE IN THE URC DOCUMENTATION. URC DOES NOT WARRANT THAT THE URC SOFTWARE IS BUG-FREE OR ERROR FREE OR THAT THERE ARE NO ERRORS/BUGS IN THE URC SOFTWARE.

URC warrants that at the time of purchase the URC equipment and the URC software complied with all applicable regulations and policies of the Federal Communications Commission ("FCC") regarding electromagnetic interference caused by electronic/computing devices and to the extent that the URC equipment and/or the URC software fails to so comply, URC shall, at its own expense, take all reasonable measures to promptly cause such to comply.

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THIS LIMITED WARRANTY DOES NOT COVER TECHNICAL ASSISTANCE FOR HARDWARE OR SOFTWARE USAGE EXCEPT AS EXPRESSLY PROVIDED FOR HEREIN.

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EXCEPT AS EXPRESSLY PROVIDED FOR HEREIN, TECHNICAL SERVICES ARE SUPPLIED "AS IS", WITHOUT ANY WARRANTY, EXPRESS, STATUTORY OR IMPLIED, OF ANY KIND. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, URC EXPRESSLY DISCLAIMS ALL WARRANTIES RELATING TO TECHNICAL SERVICES, EXPRESS, STATUTORY OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF QUALITY OR REASONABLE SKILL AND CARE, OR OUTCOME OR RESULTS.

WITHOUT IN ANY WAY LIMITING THE GENERALITY OF THE OTHER PROVISIONS HEREIN, THIS LIMITED WARRANTY DOES NOT COVER: (I) DAMAGE FROM MISUSE, NEGLIGENCE OR ACTS OF NATURE, (II) MODIFICATIONS, (III) INTEGRATION WITH THIRD PARTY CONTENT, OR (IV) BEYOND THE WARRANTY PERIOD AND/ OR FAILURE TO FOLLOW URC WARRANTY CLAIM PROCEDURE.

The warranty limitations and warranty disclaimers may not apply to end user

in whole or in part, where such are restricted or excluded by applicable law, and such shall apply to the maximum extent permitted by applicable law.

In the event of any warranty claim, URC will, at its sole option, repair the URC equipment using new or comparable rebuilt parts, or exchange the URC equipment for new or rebuilt equipment. In the event of a defect, these are the end user's exclusive remedies.

All the URC equipment returned for service, exchange or repair require an RGA number. To obtain an RGA number, you must complete a Return Request Form which you may obtain by calling (914) 835-4484 or contacting URC at returnrequest@universalremote.com. To obtain warranty service, end user must deliver the URC equipment, freight prepaid, in its original packaging or packaging affording adequate protection to URC at 37 Ramland Road, Unit 104, Orangeburg, NY 10962. It is end user's responsibility to backup any macro programming, artwork, software or other materials that may have been programmed into the unit. It is likely that such data, software, or other materials will be lost during service and URC will not be responsible for any such damage or loss. A dated purchase receipt, bill of sale, installation contract or other verifiable proof of purchase is required. For the URC equipment support and other important information, please visit URC's website available at www.universalremote.com or call the Customer Service Center at (914) 835-4484.

This limited warranty only covers the URC equipment issues caused by defects in material or workmanship during ordinary consumer use. It does not cover product issues caused by any other reason, including but not limited to product issues due to commercial use, acts of God, third-party installation, misuse, limitations of technology, or modification of or to any part of the URC equipment. This limited warranty does not cover the URC equipment sold as used, as is, refurbished, so called "B stock" or consumables (such as batteries). This limited warranty is invalid if the factory applied serial number

TOTAL CONTROL 2.0

has been altered or removed from the URC equipment. This limited warranty specifically excludes the URC equipment sold by unauthorized resellers.

With the exception of URC's IR-only, broad-based consumer remotes, none of URC's PC programmable remotes or any of our Total Control® whole-house equipment are authorized for online internet sales. Buying URC's PC programmable remotes or any of our Total Control® whole-house equipment online means buying equipment that does not have URC's limited warranty. Such equipment is not eligible for URC tech support or software support, either.

2. URC's Limitation of Liability

IN NO EVENT SHALL URC BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL, EXEMPLARY, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND OR LOSS OF PROFITS OR BUSINESS OPPORTUNITY, EVEN IF URC IS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

IN NO EVENT SHALL URC BE LIABLE FOR LOSS OF OR DAMAGE TO DATA, COMPUTER SYSTEMS OR COMPUTER PROGRAMS.

URC'S LIABILITY, IF ANY, FOR DIRECT DAMAGES OF ANY FORM SHALL BE LIMITED TO ACTUAL DAMAGES, NOT IN EXCESS OF AMOUNTS PAID BY END USER FOR THE URC EQUIPMENT.

IN NO EVENT SHALL URC BE LIABLE FOR ANY EVENTS BEYOND ITS CONTROL, INCLUDING ANY INSTANCE OF FORCE MAJEURE.

IN NO EVENT SHALL URC BE LIABLE FOR THE ACTS OR OMISSIONS OF END USER OR ANY THIRD PARTY.

THE LIMITATIONS OF LIABILITY MAY NOT APPLY TO END USER IN WHOLE OR IN PART, WHERE SUCH ARE RESTRICTED LIMITED OR EXCLUDED BY APPLICABLE LAW AND SUCH SHALL APPLY TO THE MAXIMUM EXTENT

PERMITTED BY APPLICABLE LAW.

URC SHALL NOT BE HELD RESPONSIBLE FOR THE STATEMENTS MADE BY OTHERS.

SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO END USER. THIS LIMITED WARRANTY GIVES END USER SPECIFIC LEGAL RIGHTS AND END USER MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE OR JURISDICTION TO JURISDICTION.

End User Agreement:

The terms and conditions of the End User Agreement are available at:

<https://www.universalremote.com/end-user-agreement/>

TOTAL CONTROL 2.0

Federal Communication Commission Interference Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning!

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Note: The manufacturer is not responsible for any Radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

Note : AC/DC adaptor which have been approved and complying with requirement of limited power source of Annex Q.1 in IEC/EN 62368-1 or clause 2.5 in IEC/EN 60950-1 will be supplied for the unit.

FCC Caution:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Federal Communication Commission (FCC) Radiation Exposure Statement:

This remote device is approved as a hand-held and hand-operated only portable (relative to hand) device which is normally operated at 5 cm from a person's body.

MRX-5



Overview

Total Control home automation system. Press buttons on any Total Control interface to send commands to the MRX-5 that turn off the lights in every room, watch a streaming series on Roku, or listen to a radio station on HEOS. Speak to your certified URC integrator for compatible two-way devices. The MRX-5 Advanced Network System Controller can ONLY be configured using Total Control software that is ONLY distributed to certified URC integrators.

Specifications

1. Product power : DC12V Adaptor
2. Product Current : 150mA ↓
3. Network: One (1) 10/100 RJ45 Ethernet port (two LED indicators)
4. Processor: ARM9 Thumb Processor 400 MHz
5. RAM: DDR2 256 MB
6. Storage: e.MMC NAND 4GB
7. Weight: 6 oz
8. Power: DC 12V/1.0A
9. IR Outputs: Four (4) IR outputs (IR attenuator on output 4)
10. RS-232: One (1) RS-232 port
11. USB Port: For Future Use