



## APPENDIX H

### : USER'S MANUAL

# MRX-4SEN

## Sensor Extender

## Owners Manual



*MRX-4SEN Sensor Extender Owners Manual ©2013 Universal Remote Control, Inc.*

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## Introduction

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Thank you for purchasing the MRX-4SEN Sensor Extender. Expand your MRX Advanced Network System Controller sensor coverage beyond four ports by adding additional MRX-4SEN units throughout the home or office.

## Features and Benefits

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- **Expand Sensor Coverage**

Add one or more MRX-4SEN throughout your home or office to detect changes in a connected sensor, which may be used to trigger system events.

- **No Cables, No Mess, No Fuss**

Connect a MRX-4SEN virtually anywhere in the home or office without the mess of cables while communicating over URC's 2.4GHz wireless connection.

- **Compact Size**

The small size of the MRX-4SEN allows it to easily fit behind equipment or into places where a traditional base station would not.

## Parts Guide

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The MRX-4SEN includes:

1 - MRX-4SEN Sensor Extender  
1 - AC Power Adapter  
4 - Mounting Screws

1 - Mounting Plate  
1 - Owner's Manual

## Front, Rear, and Bottom Panel Descriptions

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### Front Panel

The front panel consists of 3 indicator lights:



**Power LED:** The Power LED illuminates when the unit is powered.

**Status LED:** The Status LED color will vary depending upon its connected state:

- **Connected:** Illuminates green
- **Low Signal:** Illuminates orange
- **Not Connected:** Not illuminated

**Data LED:** The Data LED flashes as the MRX-4SEN transmits data to a MRX Advanced Network System Controller.

## Rear Panel

The rear panel consists of:



**DC 12V Power:** Plug in the included 12V DC 1A power supply.

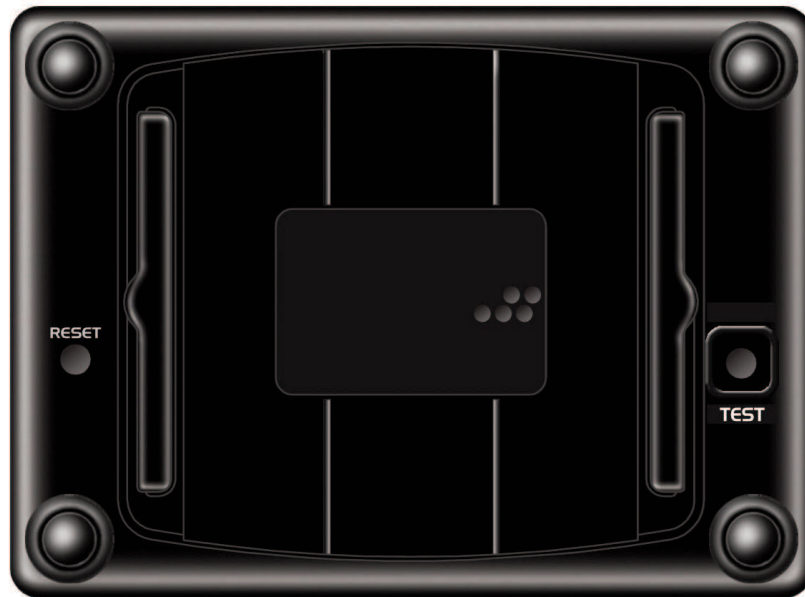
**Sensor Inputs:** Connect the sensor's 3.5mm plug to an available port. The following URC sensors, with their respective model numbers, are compatible with the MRX-4SEN:

- Voltage Sensor SEN-VOLT
- Video Sensor SEN-VID
- Contact Closure Sensor SEN-CCLS
- Light Sensor SEN-LITE
- Current Sensor (Magnetic Field) SEN-CMF
- Audio Sensor SEN-AUD

**Mini-USB connector:** For future firmware upgrade use!

## Bottom Panel

The bottom panel consists of:



**MAC Address Sticker:** The MAC Address (16 characters) identifies this wireless device when connected to the network.

**Serial Number Sticker:** The serial number, located at the bottom of the unit, uniquely identifies the product.

**Test button:** Press to test the signal strength between the MRX Advanced Network System Controller and the MRX-4SEN. While testing, the Status LED will update and display its current connection setting. (*Refer to page 2 for Status LED information.*)

**Reset button:** Turns the unit OFF then ON again, and reconnects to the URC 2.4GHz RF signal.

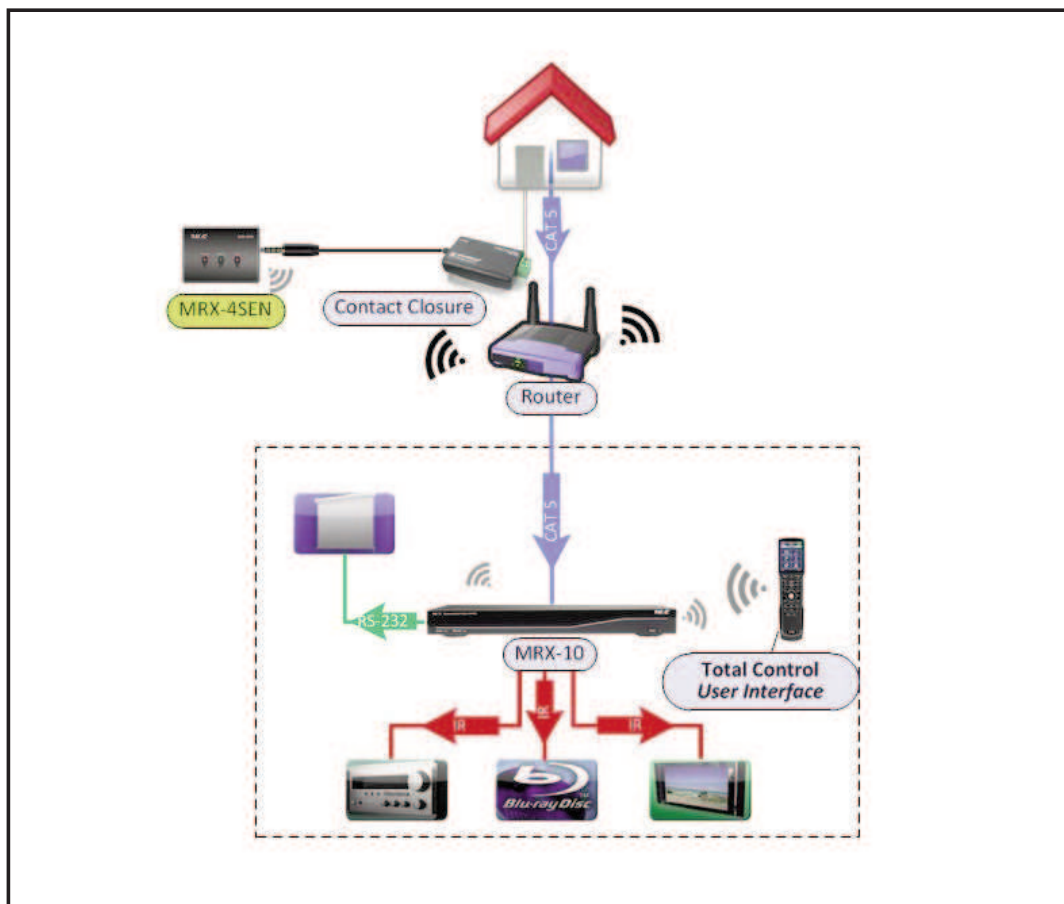


## Network Installation

**WARNING!!** Before proceeding, a Custom Professional is required to install and configure your MRX-4SEN.

Connect the 3.5mm sensor plug to the rear of the MRX-4SEN. When a change is sensor is detected, the MRX-4SEN sends a signal to the MRX Advanced Network System Controller and triggers a series of commands.

The example below showcases a voltage sensor connected to the home's front door and the MRX-4SEN. Whenever the door bell is pressed, a signal is sent over URC's RF 2.4GHz to the MRX Advanced Network System Controller. The MRX unit, previously programmed by the Custom Professional, will trigger a series of commands or an event to gain your attention. A programmed event, such as Watch Movie/TV, may pause the movie, mute the audio and display the front door's video camera.



## Specifications

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**Sensor :** Four sensor supports Video, Current, Contact Closure, Ambient Light, Audio, Voltage Sensing via URC sensors.

**USB :** Mini\_USB for future firmware upgrade use.

**RF Range(radio frequency) :** 50 to 100 feet, depending upon the environment

**RF Frequency :** 2.405 ~ 2.480 GHz

**Weight :** 2.98oz

**Size :** 3.74" X 2.7" X 1.1"

**Power :** 12V DC 1A

## USA Limited Warranty Statement

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Your Universal Remote Control, when delivered to you in new condition, is warranted against defects in materials or workmanship as follows:

**UNIVERSAL REMOTE CONTROL, INC.** warrants this product against defects in material or workmanship for a period of one (1) year and as set forth below. Universal Remote Control will, at its sole option, repair the product using new or comparable rebuilt parts, or exchange the product for a comparable new or rebuilt product. **In the event of a defect, these are your exclusive remedies.**

This Limited Warranty covers only the hardware components packaged with the Product. It does not cover technical assistance for hardware or software usage and it does not cover any software products whether or not contained in the Product; any such software is provided "AS IS" unless expressly provided for in any enclosed software Limited Warranty.

To obtain warranty service, you must deliver the product, freight prepaid, in its original packaging or packaging affording adequate protection to Universal Remote Control at the address provided in the Owner's Manual.

**It is your responsibility to backup any macro programming, artwork, software or other materials that may have been programmed into your unit. It is likely that such data, software, or other materials will be lost during service and Universal Remote Control 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 product support and other important information visit Universal Remote Control's website: <http://www.UniversalRemote.com> or call the Customer Service Center (914) 835-4484.

This Limited Warranty only covers product 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 Universal Remote Control product. This Limited Warranty does not cover Universal Remote Control products 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 has been altered or removed from the product. This Limited Warranty is valid only in the United States of America. **This Limited Warranty specifically excludes products sold by unauthorized resellers.**

**LIMITATION OF REMEDIES**

UNIVERSAL REMOTE CONTROL SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY OR CONDITION ON THIS PRODUCT. IN NO EVENT SHALL UNIVERSAL REMOTE CONTROL BE LIABLE, WHETHER IN CONTRACT OR IN TORT (INCLUDING NEGLIGENCE) FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT, ACCESSORY OR SOFTWARE, OR FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF INFORMATION OR DATA, SOFTWARE OR APPLICATIONS OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONNECTION WITH THE ABILITY OR INABILITY TO USE THE PRODUCTS, ACCESSORIES OR SOFTWARE TO THE FULL EXTENT THESE DAMAGES MAY BE DISCLAIMED BY LAW.

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, THERE IS NO OTHER WARRANTY EXPRESSED OR IMPLIED. UNIVERSAL REMOTE CONTROL WILL NOT BE HELD RESPONSIBLE FOR STATEMENTS MADE BY OTHERS CONCERNING THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT. 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 you. This Limited Warranty gives you specific legal rights and you may have other rights which vary from state to state or jurisdiction to jurisdiction.

REV020708

## Federal Communication Commission Interference Statement

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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 into 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.

### 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.

### Federal Communication Commission (FCC) Radiation Exposure Statement

The device and the antenna for this device must be installed to ensure a minimum separation distance of 20 cm more from a person's body. Other operating configurations should be avoided.



# Declaration of Conformity

Company Name : OH SUNG ELECTRONICS CO., LTD.  
 Company Address : #181 GONG DAN-DONG, GUMI, GYEONG BUK,  
 REPUBLIC OF KOREA  
 Contact Information : Phone: +82-54-468-7281, Fax: +82-54-461-8368  
 Brand Name : UNIVERSAL remote control  
 Product Name : Sensor Extender  
 Model Name : MRX-4SEN

This product herewith complies with the requirements of EMC Directive (2004/108/EC) and R&TTE Directive(1995/5/EC) issued by the Commission of the European Community

Compliance with these directives implies conformity to the following European Community

- EMC Directive
  - EN 55022 (2010)
  - EN 55024 (2010)
  - EN 61000-3-2 (2006) + A1 (2009) + A2 (2009)
  - EN 61000-3-3 (2008)
- R&TTE Directive
  - EN 60950-1 (2006) + A11 (2009) + A1 (2010) + A12 (2011)
  - ETSI EN 301 489-1 V1.9.2 (2011), ETSI EN 301 489-17 V2.1.1 (2012)
  - ETSI EN 300 328 V1.7.1 (2006)

List of test reports and/or certificate verified compliance with the standards above

- EMC Directive
  - Report No.
  - Testing Laboratory : Gumi College EMC Center
- R&TTE Directive
  - Certificate No.
  - Certificate Body : SIEMIC (No. 2200)

Date of issue : March 1, 2013

Name and signature of authorized person : Hak-Ki Kim  
 General Manager  
 OH SUNG ELECTRONICS CO., LTD.









**Control the Experience.**

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