APPENDIX H

: USER'S MANUAL

EUT Type: BASE STATION

FCC ID.: OZ5URCMRX4IR

MRX-4IR Network Base Station
Owner's Manual

URC™

Control the Experience.

URC™
Control the Experience.

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Introduction

Thank you for purchasing the MRX-4IR Network Base Station. The MRX-4IR requires a Total Control MRX Advanced System Controller and compatible interfaces, programmed by a Custom Professional, to control your home. Communicating over the network using Wi-Fi, or a wired LAN connection, the MRX-4IR receives commands from the System Controller and relays them, via IR, to four or more devices. Controlling your home is simple with the MRX-4IR.

Features and Benefits

- **IR Flasher Outputs**
  Control up to four of your components without ever getting up from your seat.

- **Front IR Blaster**
  Control IR devices where an IR emitter cannot reach the device's location, like a TV over a fireplace.

- **Network Connectivity**
  Receives commands over the network from an MRX Advanced System Controller and then sends IR signals to control your components.

- **Compact Size**
  The small size of the MRX-4IR allows it to easily fit behind devices or into places where a traditional base station would not.

Parts Guide

The MRX-4IR includes:

1 - MRX-4IR
1 - AC Power Adapter
4 - Mounting Screws

1 - Mounting Plate
4 - IR Emitters (3.5mm plugs)
1 - Owner's Manual

Front, Rear and Bottom Panel Descriptions

Front Panel

The front panel consists of 3 indicator lights and an IR Blaster.

IR Blaster

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

Status LED: When the MRX-4IR powers up, both the Status and Data LEDs blink. When a network connection is made, the Status LED color will vary depending upon its "connected state": good signal strength is represented by "Green", poor signal strength by "Orange" (which is only present when a wireless connection is used) and no connection is OFF.

Data LED: The Data LED flashes as the MRX-4IR transmits IR data.

IR Blaster: The front IR Blaster sends IR signals to one or more components placed in direct line of sight.

Rear Panel

The rear panel ports are:

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

IR Outputs: Connect an included 3.5mm IR emitter to each of the four IR outputs. Adjust the IR output signal strength for port 1 using the attenuator located on the bottom of the unit.

LAN Connection: If a wired connection is needed, this port uses a standard Ethernet (RJ-45) plug to communicate via the local area network.

Bottom Panel

The bottom panel consists of:

Reset Button: The Reset button is located on the bottom of the unit, and requires a stylus, or paper clip to press the button. Pressing the Reset button will cycle the MRX-4IR's power. (Unplugging the MRX-4IR's power cable and then plugging it back in, also performs the same function.)

Pressing and holding the Reset button for 15 seconds, will factory default the MRX-4IR, and return the unit back to its original unprogrammed state.

Mac Address Sticker: The MAC Address (12 numbers) identifies this wireless device when connected to the network.

IR Attenuator: Use the included adjustment tool (or a flathead screwdriver) to increase or decrease the intensity level for IR output #1.

Network Installation

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

The MRX-4IR is a network base station that allows full control of your components with the use of Total Control MRX Advanced System Controllers and compatible interfaces. Once installed on the network, and a button is pressed on an interface, a command is transferred over the customer's network to the MRX Advanced Network System Controller, which in turn is routed to the MRX-4IR and then sends IR commands to the components you specify.

1. Connect the MRX-4IR onto the network (wired or wireless).

2. Connect your laptop into the **same network** as the MRX-4IR.

MRX-4IR

Wi-Fi Router
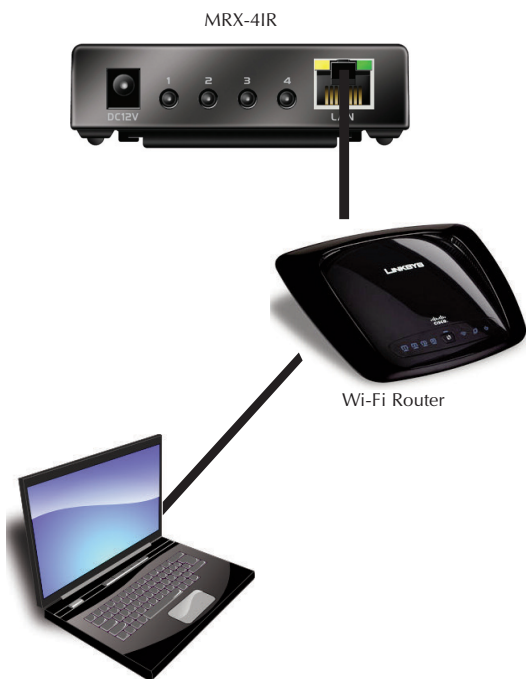
Network Discovery & Download

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

1. Open a new or current project. In **Step 3: Add URC Devices**, add an **MRX-4IR** to a room included in your project which represents the physical location of the unit.

2. In **Step 6: Network Setup,** discover the MRX-4IR using the same process used for other Total Control network products in the project.
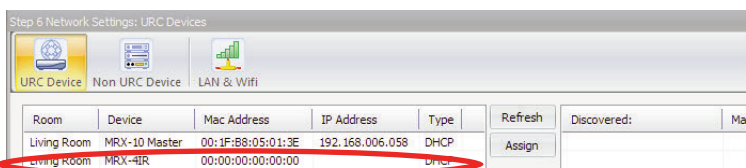
3. Press the **Download** button within the Program menu.

4. Make sure to check the MRX-4IR checkbox, then press the **Download to Selected Devices (Direct)** button.
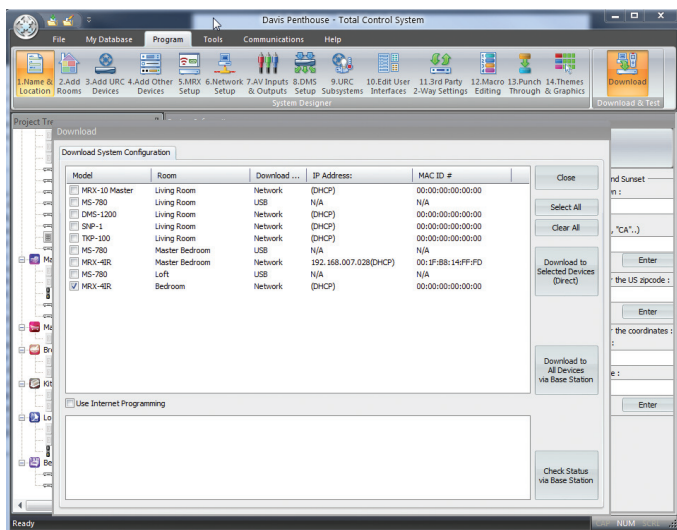
Optimizing IR Flasher Levels

Test a few commands for each component before fixing the flasher in place on the front panel of a device.

Since TiVo, Satellite Receivers and Cable Boxes are all extremely sensitive to IR overload or saturation, you should test them thoroughly. Put up the on screen guide and test the navigation arrows. If operation is inconsistent or sluggish, lowerthe IR line output for port 1 only and/or reposition the flasher.

If you still have sluggish operation, make sure IR routing is used rather than ALL. When IR commands are sent to all the flashers in a cabinet, you can have difficulty adjusting the IR Output. Program URC Accelerator to send IR commands only via a specific IR port (1-4), then readjust the IR Line Output level.

Connect an IR emitter to each IR output and run the emitter wire to the IR receiver of each component. DO NOT STICK the emitter in place yet. Adjust the LEVELon IR port 1 or adjust the emitter PLACEMENT for ports 2-4 until the component responds to IR commands then stick the emitter in place.

IR Outputs: These ports can be as discrete, 'routed' outputs that only send IR commands to the specific component that each emitter is attached. This assures accurate control in that a given component's commands are routed only to its dedicated IR output and emitter, preventing IR oversaturation from multiple emitters flashing at the same time.

POLARITY: Tip=IR data, Sleeve=GND.

Overview of IR Routing

There are several considerations to take into account when you are installing an MRX-4IR to control an array of components:

1. When connecting a flasher from the MRX-4IR to your component make sure to notate the IR outputs being used. Program the sameport designations into URC Accelerator.

2. Assigning each component with its own individualized port number helps to control multiple components eliminating interference.

3. Identical components must receive IR commands ONLY from a dedicated flasher affixed to its front panel or a rear panel direct IR input.

MRX-4IR

Wi-Fi Router
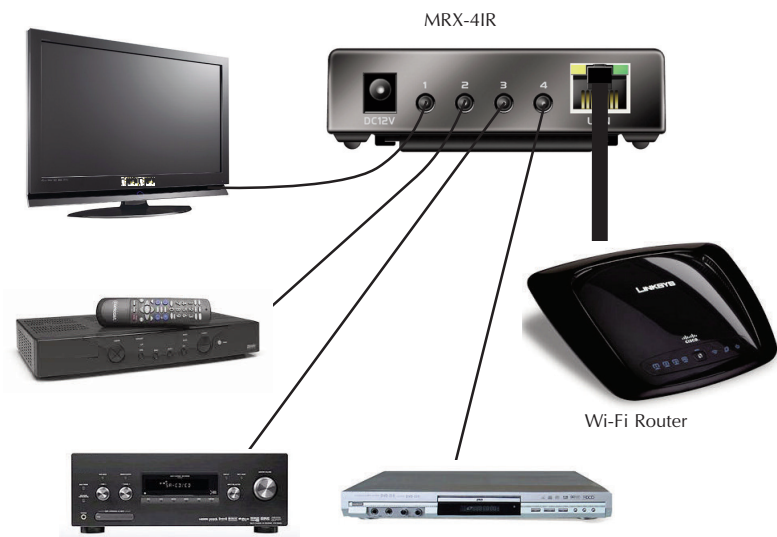
USA Limited Warranty Statement

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.**

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REV020708

Specifications

CPU : ARM 32-bit Cortex-M3(120MHz)

Memory : 128Kbyte SRAM, 768Kbyte Flash

Macro Capability : Up to 255 steps each

IR Range(Line of Sight via Infrared) : 30 to 50 feet, depending on the environment

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

Wi-Fi : IEEE 802.11 b/g/n

Weight : 3.0 oz

Size : 3.74" X 2.7" X 1.1"

Power : 12V DC 1A

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 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.

Regulatory Information to the user

■ CE conformity Notice

Products with "CE" marking comply with the R&TTE Directive
1995/5/EC, EMC Directive 2004/108/EC and Low Voltage
Directive 2006/95/EEC issued by the commission of the European
Community.

1) R&TTE Directive
- Safety   : EN 60950-1
- EMC   : ETSI EN 301 489-1,3, 17
- RF   : ETSI EN 300 220-1,2
                      : ETSI EN 300 328

2) EMC Directive
- Emission: EN 55022
- Immunity: EN 55024
- Power: EN-61000-3-2, 3

3) Low Voltage Directive
- Product safety: EN 60950-1

■ Safety instruction for charging internal rechargeable battery of remote control

Use only with EN60950-1 approved as Limited power source and
double insulation() marked power adaptor & same ratings
described on the product label (12V DC 1A).

■ Declaration of Conformity

"Hereby, Universal Remote Control Inc. declares that this MRX-4IR is
in compliance with the Essential requirements and other relevantpro-
visions of Directive 1999/5/EC."

Universal Remote Control®

Certification	CE 2200
Type No.(Model No.)	MRX-4IR
Batch/Serial No.	-
Power Rating	12V === 1.0A
Frequency band	Wi-Fi : IEEE 802.11 b/g/n

Declaration of Conformity

Company Name	:	Universal Remote Control Inc.
Company Address	:	500 Mamaroneck Avenue, Harrison, NY 10528, U.S.A
Contact Information	:	www.universalremote.com Phone: (914)835-4484 Fax: (914)835-4532
Brand Name	:	UNIVERSAL remote control
Product Name	:	Base Station
Model Name	:	MRX-4IR

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
  - EN 55024
  - EN 61000-3-2
  - EN 61000-3-3
- R&TTE Directive
  - EN 60950-1
  - ETSI EN 301-489-1,3,17
  - ETSI EN 300 220-1,2
  - ETSI EN 300 328-

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 Rheinland (No. 2200)

Date of issue	:	May 30, 2012
Name and signature of authorized person	:	James Novak

Senior Product Manager
Universal Remote Control Inc.

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