



APPENDIX H

: USER'S MANUAL

Owner's Manual

MX-990i

Universal Remote Control



For questions about your Custom Programming call:

Custom Programming of a complex home theater and/or a multi-room system is one of the most challenging tasks within an audio/video installation. It involves an intimate knowledge of how the components interact and exact details on the proper sequences of control.

Only a Complete Control dealer has the requisite experience and training to quickly and effectively customize a remote control for true automated operation.

Congratulations on your choice!

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Congratulations

Thank you for purchasing URC's MX-990i Universal Remote Control. This remote provides one-touch simplicity when using today's more complicated audio/video configurations. When used with an optional RF base station this remote can wirelessly control devices without needing line-of-sight throughout your home or small business. Controlling your system is simple with the MX-990i.

Features and Benefits

- **One-Touch Automation**

A series of commands may be programmed on a single button making it convenient and efficient to perform the most common activities. A single press can turn on your home theater, close the shades, dim the lights, and start your favorite movie. With this customizable remote, the possibilities are endless!

- **Wireless Control**

The MX-990i, when paired with an optional RF base station, allows for wireless control of your devices without the need for line-of-sight control (IR). This means your equipment can be housed separately (in a cabinet, another room or a different floor) and still easily controlled without the annoyance of aiming the remote. Your electronics can be completely out of sight, but still at your command!

- **Customizable User Interface**

The MX-990i's brilliant 2.4" color display is completely customizable by a URC Certified Professional Custom Integrator. With their expertise it is possible to add custom graphics, sounds, personalized layouts and themes to match your styles and tastes.

● Scheduled Event Timers

Use your MX-990i to help automate common activities and commands by scheduling events (programmed by your Custom Integrator) to execute on your schedule. Set a **Goodnight** event timer to turn off lights, TV's and music at your normal bedtime every night of the week. A **Good Morning** event timer could wake you up to your favorite news channel. Once your Custom Integrator programs the activity, it is up to you to enable or disable the event's execution at the scheduled time.

● Pick-Up Sensor

The MX-990i's integrated pick-up sensor allows the remote to come to life the moment its position is changed. Lift the remote and it immediately wakes up, turns on the backlight, illuminates the LCD screen, and is instantly ready to control your home.

Before Getting Started

For Use Exclusively With URC's CCP Software

The MX-990i is programmed via URC's Complete Control Software Suite. ***This software is available only to URC Certified Professional Custom Integrators.***

Parts Guide

What's included with your new product

- MX-990i Universal Remote Control
- Charging Base
- Lithium Ion Rechargeable Battery
- Room Labels
- USB Cable
- A/C Power Adapter
- Warranty Card

Installing The Battery Pack

- **Press** the spring lock down to unlock and remove the battery cover

The battery is included in the box when shipped from the factory



- **Place** the battery into the battery compartment, making sure to align the contacts on the battery to the contacts on the MX-990i.

The battery snaps into place when aligned properly.



- **Replace** the cover.

Using The Charging Base

- **Plug** the 5V AC adapter into a power receptacle
- **Insert** the adapter's mini connector into the bottom of the charging base
- **Gently place** the MX-990i into the cradle of the charging base.

The remote automatically aligns itself with the contacts on the charging base. The status indicator lights Red, indicating the battery is charging. The indicator then turns Blue, indicating a full charge.



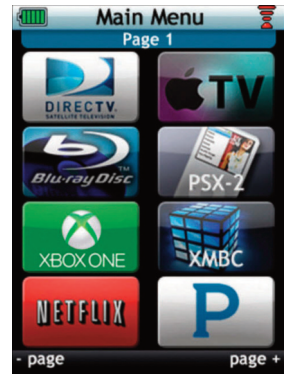
Button Layout



Using The MX-990i

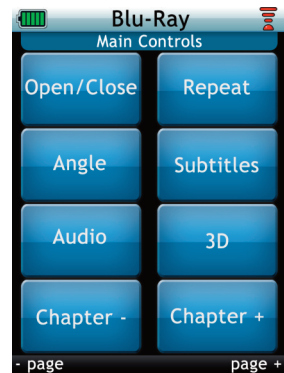
The MX-990i incorporates a custom user interface which may be modified (by your Professional Custom Integrator) to look many different ways. The use of this remote, in its basic configuration is described below.

The MX-990i's Main pages display the activities and devices in your system. Press the **Main** button to view the activities and devices available in the system. Large systems may have more than one page. Press either of the **Page** buttons to view additional options. Press any LCD button to select that activity or device.



Once an activity is selected the on-screen icons change to display the commands available for the activity chosen. The Page buttons reveal even more buttons for most devices and activities.

To control a different device (or select a new activity) press the **Main** button and select a new activity or device from the Main page.



Settings Menu

The Settings menu is where options such as screen brightness, button sound and more can be adjusted. Information on the hardware and software configuration can also be accessed from this Settings menu.

Accessing the Settings Menu

The Settings menu is accessed by pressing and holding the **Main** and **Enter** buttons simultaneously for three seconds. Once the Settings menu appears, the next action must be made within 60 seconds, after which time the remote reverts back to the Main screen.

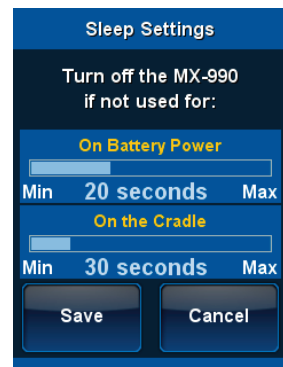
The available selections of the Settings menu extend beyond what is visible on the initial screen; use the navigation pad in the center of the remote to move up and down the list, highlighting available selections. To select an item, highlight the desired item, then press the **SEL** (Select) button in the center of the navigation pad. To go back a step or to exit the settings screen, press the **Main** button.



Sleep Timers

Adjust the amount of time that the remote's LCD screen and button backlight remain lit. Reducing sleep timers improves battery life.

*Once the Sleep Timers are adjusted, press the **Save** button. Pressing the **Cancel** button reverts to the remote's last saved setting.*



Event Timer

Timed events can be programmed (by your Professional Custom Integrator) to perform any number of tasks. Anything your remote is capable of doing can be set to happen automatically (on a certain day of the week, time of day, or calendar date). You the user can activate or deactivate these events anytime, through this menu. Checking the box corresponding to an event enables it. Un-checking a box leaves the event disabled.

Event Timers	
power on	
Daily	☒
5:47pm	
power off	
Weekly	☒
Thursday 5:47pm	
energy saving	
Monthly	☒
29th 5:47pm	
Save Cancel	

Once the Event Timers are adjusted, press the **Save** button. Pressing the **Cancel** button reverts to the remote's last saved setting.

Date and Time

The MX-990i's date and time have been previously set (when programmed). If needed, you can adjust the date and time by changing the settings on this screen.

Note that the date and time must be set correctly for Event Timers to take place at the desired times.

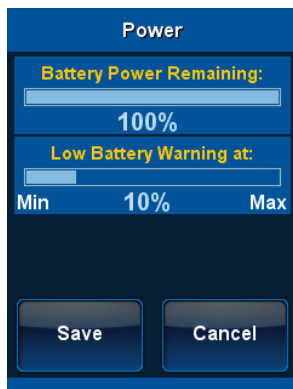
Date & Time		
Change Date		
Year	Month	Day
2015	10	29
Change Time		
Hour	Minute	AM/PM
5	28	PM
Daylight Saving Time		
Enable Daylight Saving Time		☐
Save		Cancel

After adjusting the date and time, press the **Save** button. Pressing the **Cancel** button reverts to the remote's last saved setting.

Power

You can display the remaining battery level by selecting Power. You can also adjust when the Low Battery warning screen appears.

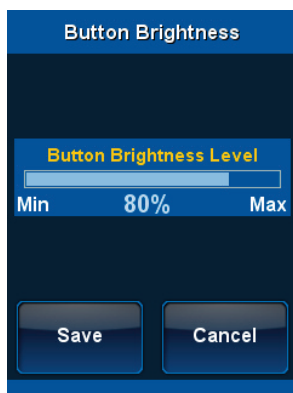
*Once the power is adjusted, press the **Save** button. Pressing the **Cancel** button reverts to the remote's last saved setting.*



Button Light

You can adjust the brightness of the LEDs that backlight the buttons of the MX-990i. Press the adjacent hard buttons to increase or decrease the button light level. Decreasing the brightness improves battery performance.

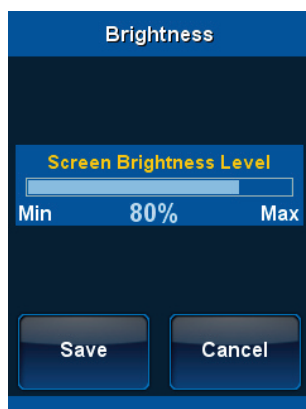
*Once the button light is adjusted, press the **Save** button. Pressing the **Cancel** button reverts to the remote's last saved setting.*



Brightness

Adjust the screen brightness by pressing the adjacent hard buttons to increase or decrease the brightness level. Decreasing the brightness improves battery performance.

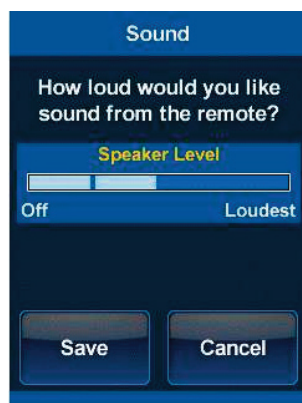
Once the brightness is adjusted, press the **Save** button. Pressing the **Cancel** button reverts to the remote's last saved setting.



Sound

You can adjust the volume of the MX-990i. Press the adjacent hard buttons to increase or decrease the volume level.

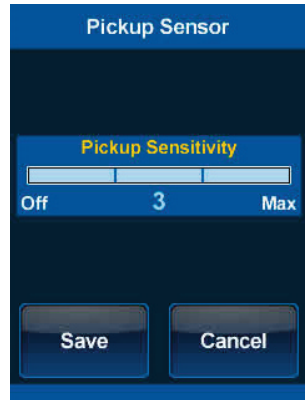
Once the sound is adjusted, press the **Save** button. Pressing the **Cancel** button reverts to the remote's last saved setting.



Pickup

You can set your MX-990i to turn on when the remote is picked up. Select a level of sensitivity between 0 and 3 (0 being off and 3 being the most sensitive). The more sensitive the setting, the less movement is needed to wake the remote.

*Once the pickup is adjusted, press the **Save** button. Pressing the **Cancel** button reverts to the remote's last saved setting.*



System

The System Information screen displays data about your MX-990i's Operating System, Memory etc.

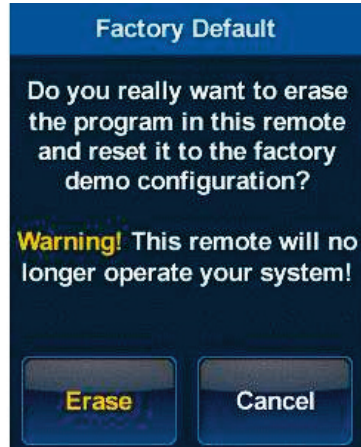
*When finished viewing this section press the **OK** button to return to the Settings Menu or the **Main** button to exit to the Main Menu.*



Factory Default

WARNING! Only use this button when instructed by Technical Support. It resets the memory of the MX-990i to the factory settings.

All your programming will be lost!



Exit

When you have finished adjusting Settings, press the Exit button to return to normal operation.

Precautions & Information: Rechargeable Lithium Ion Batteries

If you are not using your remote for an extended period of time, be sure to remove the battery from the remote. Do not attempt to disassemble, alter, or apply heat to the battery. Use care to avoid dropping the battery or subjecting it to severe impact that could damage the case. The battery should not be immersed in water. Lithium Ion batteries are recyclable; for the address of a recycle drop-off location near you call toll free: (800) 822-8837 or visit <http://www.rbrc.com>

Hardware Specifications

Microprocessor: ARM9 454MHz

RAM: 64Mbyte Mobile DDR

NAND: 128Mbyte

LCD: 2.4 Inch Screen (240 by 320) LCD

Backlighting by LED

Devices: Supports up to 255 Devices with text, less with heavy graphics

Usage Pages: Supports up to 255 Pages on each Device with text, less with heavy graphics usage

Macro Capability: Up to 255 steps each, however nesting is allowed

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

RF Range (Radio Frequency): 50 to 100 feet, depending on the environment

RF Frequency: 433.92MHz

Battery: Lithium polymer, 1330mAh

Battery Charging Time: 5 Hours

Size: 8.98"H x 2.32"W x .874"D

Battery Warranty: 1 Year

Weight (with battery loaded): 6.21oz

SMPS: 5V/1A

USB Connector

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.

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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.

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

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MX-990i Universal Remote

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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 420 Columbus Avenue, Valhalla, NY 10595. 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 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 LIMITATIONS 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 www.universalremote.com/eua.php shall apply.

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 on and off, the user is encouraged to try to correct the interference by one or 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.

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.

- **Caution**

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

- **Safety instruction for charging internal rechargeable battery of remote control Caution**

Use only with EN60950-1 approved as Limited power source and double insulation marked power adaptor & same ratings described on the product label (5Vdc, 1.0A).

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

Precautions and Information Concerning Rechargeable Lithium-Ion Batteries

- If you will not be using your remote control for an extended period of time, be sure to remove the battery
- Do not attempt to disassemble, alter or apply heat to the battery.
- Use care to avoid dropping the battery or subjecting it to severe impact that could damage the case.
- The battery should not be immersed in water. Lithium Ion batteries are recyclable. For the address of a recycle drop-off location near you call toll Free 1-800-822-8837 or visit <http://www.rbrc.com>

Declaration of Conformity

"Hereby, Ohsung Electronics co.Ltd, declares that this MX-990i is in compliance with the Essential requirements and other relevant provisions of Directive 1999/5/EC."

Declaration of Conformity

Company Name : Universal Remote Control Inc.

Company Address : 500 Mamaroneck Avenue, Harrison, NY 10528, U.S.A
www.universalremote.com

Contact Information : Phone: (914)835-4484, Fax: (914)835-4532

Brand Name : UNIVERSAL remote control

Product Name : RF Remote Controller

Model Name : MX-990i

This product herewith complies with the requirements of 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

- R&TTE Directive
 - ETSI EN 300 220-1 V2.4.1 (2012)
 - ETSI EN 300 220-2 V2.4.1 (2012)
 - ETSI EN 301 489-1 V1.9.2 (2011)
 - ETSI EN EN 301 489-3 V1.6.1(2013)
 - EN 55032 (2015)
 - EN 55024 (2010) + A1(2015)
 - EN 62479 (2010)
 - EN 60950-1 (2006) + A11 (2009) + A1 (2010) + A12 (2011)
 - EN 61000-3-2 (2014)
 - EN 61000-3-3 (2013)
- Test Report No.:
 - Radio : GETEC-E2-16-030
 - EMC : GETEC-E2-16-031
 - Heath : GETEC-E2-16-030
 - Safety : GETEC-E7-16-002

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

- R&TTE Directive
 - Certificate No. :
 - Certificate Body : TUV Rhineland (No. 0197)

Date of issue : March 11, 2016

Name and signature of authorized person : James Novak
Director of Product
Universal Remote Control Inc.

Certification	CE
Type No. (Model No.)	MX-990i
Manufacturer	Ohsung Electronics co.,Ltd.
Batch/Serial No.	
Power Rating	5.0V  1.0A
Frequency band	433.92MHz



500 Mamaroneck Avenue, Harrison, NY 10528
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