

Operating Your System With the MX-450



**COMPLETE
CONTROL**™

 **Universal Remote Control®**

*This remote control was
Custom Programmed for you by:*

.....
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!

*MX-450 Owners Manual © 2008 Universal Remote Control, Inc.
Front Cover Photo courtesy of Robert Ridenour of Connected Technologies,
www.connected-technologies.com*

The information in this manual is copyright protected. No part of this manual may be copied or reproduced in any form without prior written consent from Universal Remote Control, Inc.

UNIVERSAL REMOTE CONTROL, INC. SHALL NOT BE LIABLE FOR OPERATIONAL, TECHNICAL OR EDITORIAL ERRORS/OMISSIONS MADE IN THIS MANUAL.

The information in this manual may be subject to change without prior notice.

*Complete Control is a registered trademark of Universal Remote Control, Inc.
Entertainment Made Simple is a trademark of Universal Remote Control, Inc.*

All other brand or product names are trademarks or registered trademarks of their respective companies or organizations.



*Universal Remote Control, Inc.
500 Mamaroneck Avenue, Harrison, NY 10528
Phone: (914) 835-4484 Fax: (914) 835-4532*

TABLE OF CONTENTS

<u>Introduction</u>	1
<u>Backlighting</u>	1
<u>Optional RF “No Rules” Operation</u>	2
<u>Replacing the Batteries</u>	3
<u>Programming the MX-450</u>	3
<u>Selecting a New “Activity”</u>	5
<u>Using the MX-450 to Control an “Activity”</u>	6
<u>USA Limited Warranty Statement</u>	7
<u>Specifications</u>	8
<u>Contact Us</u>	9
<u>Information to the User</u>	9
<u>Warning</u>	9

Congratulations!

You've purchased a unique synthesis of hardware and software engineering, the Complete Control MX-450. The MX-450 achieves a magnificent combination of power and flexibility, simplifying and automating operation of even the most complex system.

User Configurable Screen and Button Lighting

A dedicated LIGHT button enables the user to backlight the buttons at any time. User settings, accessible by pressing and holding the MAIN button for 3 seconds, enable you to adjust how long the MX-450 stays lit (5 to 60 seconds).

Fast Professional Setup

The MX-450 sets up quickly via on-screen setup. Your installer simply configures the remote for you using the MX-450 and his/her intimate knowledge of how your system is configured and operated to completely automate all operation and replace all of your A/V remote controls with the MX-450.

Backlit Color LCD Screen Buttons

When you press any button, the color LCD screen lights up, which labels the six buttons to either side of the screen. These button labels change based on what you are watching or listening to. Thus, if you have selected Watch TV, you will see a list of buttons that are useful to that activity, while if you select Watch DVD, the buttons will control the DVD.



LIGHT Button

Press the Light button on the side of the MX-450 to backlight all of the buttons.

Optional RF “No Rules” Operation

In combination with a Complete Control RF Base Station, the MX-450 can control your system without being in line-of-sight of the equipment.

To preserve good operation always utilize a Universal Remote Control brand RF Base Station with RF Addressing. RF Addressing gives you the ability to control equipment locations throughout your home, even if they are concealed in other rooms or are behind closed doors.

1. The MX-450 sends radio waves in every direction, so you don't have to point the remote anymore!



2. The RFX-250 RF Sensor can be freely positioned for optimal reception.



3. The MRF-350's built-in Front Blaster sends commands to components in the same cabinet space as the MRF-350.



4. Self-adhesive “Flashers” affix to the Infrared sensors on the front panels of your components. The Flashers relay commands to components out-of-sight of the MRF-350's Front Blaster. The flashers plug in to the MRF-350's rear flasher line outputs via their 10 foot cables. Uniquely, the MRF-350 can also connect to components with rear panel IR Inputs via

Replacing the Batteries

Open the battery cover by pressing the release and pulling back the cover on the back of the control. Remove the cover.

Observe the + and - polarity indications inside the battery compartment.

Place the four AA batteries into their positions in the battery compartment, observing the + and - polarity indicators on the batteries.

Now, replace the battery cover by inserting the hinged end in first, then snapping the cover back into place.

Programming the MX-450

To fully automate an audio/video system, the programmer must have a detailed knowledge of each component and how the system is connected and operated. We highly recommend that you use a professional audio/video installer to program your MX-450 so you will be able to enjoy all the benefits of the MX-450.

Programming Options

The MX-450 is programmed via on-screen setup menus. Simply press and hold the MAIN button for 3 seconds to view the menus:

- Basic Setup:** Selecting this option enables you to replace all your remotes by either searching the built in database or learning commands one at a time from the original remote for the device.
- Advanced Setup:** Do not attempt Advanced Setup until you have completed Basic. Advanced Setup enables you to copy and paste groups of commands like Volume and Mute, setup macros, customize labels, add/hide pages, erase and setup RF Addressing.
- Favorite Channels:** Do not attempt to setup Favorite Channels until you have completed Basic. Favorite channels are macros that enable you to tune to a channel with one touch.
- User Settings:** Selecting this option lets you adjust how long the screen or the buttons stay lit.
- Display Tips:** Select this option to turn on or off the built in Setup Tips. Setup Tips are the programming manual for the MX-450. They appear on the screen in context.

Programming Limitations

Before beginning Basic Setup, plan the layout of the MAIN pages. Create each device in the position you want. You cannot change the position later.

Copy and Paste enables you to copy a group of commands from one device and paste them into another device (or all your devices). Typically this is used to paste the Volume and Mute commands for your sound system into all of your other devices so that no matter what device you are controlling, you can always adjust the volume. If macros are programmed, it is recommended that you copy and paste the OFF macro into the OFF buttons on every device. That way, whenever you press the OFF button, the entire system will turn off.

Macro setup enables you to record a series of button pushes to any LCD button or to the ON or OFF hard buttons. None of the other buttons can be programmed with macros.

Add/Hide Pages and Buttons lets you hide any button or page of buttons you don't need.

Edit Labels provides you with the power to change any label to one that you find more to your liking.

Erasing lets you erase any Macro or Learned command. Commands from the database cannot be erased, only hidden.

RF Setup enables you to address each device to a particular RF base station and even a particular IR output. You can set the MX-450 to output only IR for testing, or only RF for operation (highly recommended to avoid oversaturating IR sensors on devices).

Favorite Channels let you setup macros to change channels only. They cannot record any button pushes besides the number keys, the -/. button or the ENT button. Do not attempt to record any other button.

User Settings control battery life. If you extend the time the buttons stay lit, you dramatically curtail battery life. There is some effect on battery life when you extend the LCD screen lighting, but it is not as dramatic.

Display Tips enables an experienced programmer to turn off the Setup Tips. If no tips appear when you attempt setup, you can turn the Setup Tips on again. Setup tips are the programming manual for the MX-450.

Selecting a New “Activity”

The MX-450’s MAIN button displays the activities you can control with your MX-450. When you want to watch something else (a DVD movie, a videotape or an HDTV broadcast), simply press the MAIN button and select the new activity.

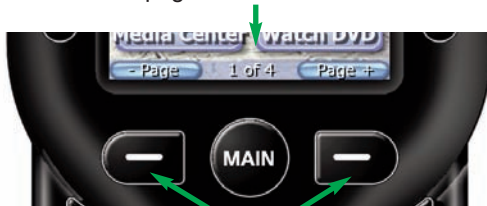
Your installer will have programmed the button you pressed to totally configure your system to watch or listen to whatever you selected. Now, the screen will change, and all of the LCD buttons will be reconfigured to give you full control of your system while watching or listening to your selection!

When you press the MAIN button, you can see the most frequently used activities for your home theater.



PAGE DISPLAY

At the bottom of the LCD screen, the page display informs you if there are other pages of buttons available.



Press either of the PAGE buttons to see any other available choices.

Using the MX-450 to Control an “Activity”

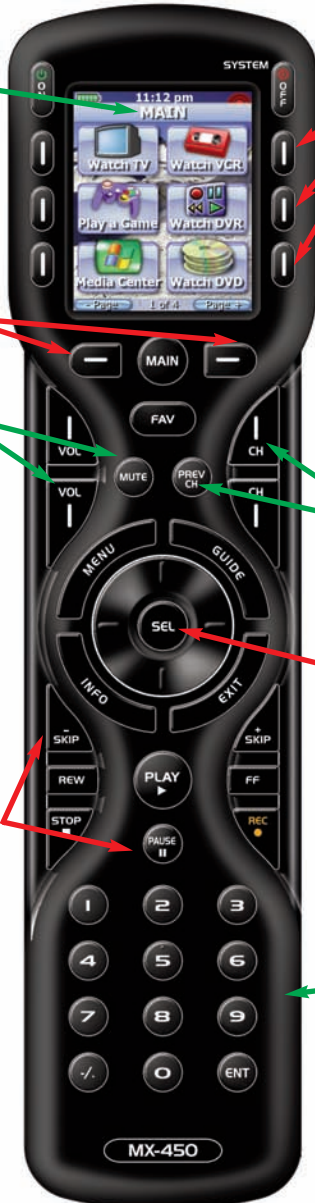
Once you’ve selected a new activity, the MX-450 displays the title of the activity at the top of the screen. Below the title, the LCD displays the customized names of any special features you need for the activity. All the hard buttons of the MX-450 have now changed to functions optimized for this activity.

The Title displays what activity you can control.

Press either of the PAGE buttons to see any other available choices.

The Volume and Mute buttons always control the sound regardless of what screen is displayed.

The transport buttons (Play, Stop, Skip-, Skip+, FF, REW and Pause) operate when the selected activity requires them (for example, if you watch CABLETV with a TiVo type of DVR, these buttons will control the built-in DVR, while if you are watching a DVD, these buttons will control the DVD player).



The LCD button labels describe special features for this activity.

The Channel and Previous Channel buttons will change channels when you have selected an activity like Watch CABLETV or Watch SAT TV .

The 4 way cursor buttons enable you to navigate on-screen guides and menus with ease.

The Number keypad will enter numbers for the activity you’ve selected. Thus, for watching Cable TV, you use the number keypad to enter channel numbers, while when listening to CD, the number keypad enters track numbers.

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.

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

CERTAIN IMPLIED WARRANTIES, INCLUDING AN IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, MAY BE AVAILABLE WITH RESPECT TO URC EQUIPMENT. IMPLIED WARRANTIES VARY FROM STATE TO STATE. URC EXPRESSLY LIMITS THESE IMPLIED WARRANTIES, TO THE EXTENT ALLOWABLE BY LAW, TO THE TIME PERIODS COVERED BY THE EXPRESS WRITTEN WARRANTIES PROVIDED HEREIN. OTHERWISE AND EXCEPT AS PROVIDED FOR HEREIN, URC EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, AND MAKES NO REPRESENTATIONS REGARDING THE USE OF, OR THE RESULTS OF THE USE OF, THE EQUIPMENT, SOFTWARE OR DOCUMENTATION IN TERMS OF CORRECTNESS, ACCURACY, RELIABILITY OR OTHERWISE.

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 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.

Specifications

Microprocessor - ARM 7

LCD Screen - 2" TFT Color LCD (176 x 220 Pixels)

Memory - 32 Megabits of Flash Memory

Total Customization Capability - Up to 18 devices on 3 Main pages with up to 8 pages for each device; plus up to eight pages of favorite channels for a total of 155 pages.

Learning Capability - Standard frequencies (15kHz to 460kHz)

Macro Capability - Up to 255 steps each

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

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

RF Frequency: 418MHz

Weight: 6.9 ounces (with battery loaded)

Size: 8" H x 2.25" W x 1.25" D

Batteries: Four AA Alkaline Batteries (included)

Battery Life: 18 Hours of continuous button pressing with backlighting and LCD ON (months of use for most users). Users should expect some variation based on the brand of alkaline batteries used.

Note: In actual use, the MX-450 protects itself if it gets stuck between couch cushions (with a button being continuously pressed). After 30

Contact Us

Need assistance or have questions?

Our Customer Service Support Center is here to help.

Call (914) 835-4484 to speak with a customer service representative or email us at techsupport@universalremote.com

500 Mamaroneck Avenue, Harrison, NY 10528

Phone: (914) 835-4484 Fax: (914) 835-4532

www.universalremote.com

Information To The User

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:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. 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.



 **Universal Remote Control®**

500 Mamaroneck Avenue, Harrison, NY 10528
Phone: (914) 835-4484 Fax: (914) 835-4532

OCE-0066A Rev 03_RH www.universalremote.com