MX-450 Programming Guide

URC®

Control the Experience.

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.

Table of Contents

Programming the MX-450

Decide on the position of each device on the remote's page(s).
Once a device is placed in a position, it may not be changed and must be deleted and recreated.

TV:
Sony KD-7FS170

Audio:
Denon AVR-2811

Cable:
AT-T Uverse

For the best chance of success, make sure you make a list of the devices that you want to control. This list should include the manufacturer, the model number of each device.

Make sure the batteries are fresh/new.

Unified Remote

Follow the steps in this guide to program up to 20 remotes into your new MX-450!
Instead of searching for the right remote, it'll be in your hand already!

One-Touch Activities

Easily record the steps it takes to perform your favorite activities and record them on a single button.
Next time you hit that button, like TV, all the steps happen automatically!

Single Button Press

5 Switch **TV** to HDMI 1
4 Switch **STEREO** to CaTV
3 Power **ON** Cable Box
2 Power **ON** Television
1 Power **ON** Stereo

Backlit LCD Buttons

Pressing ANY button, or the LIGHT button located on the right side of the remote) and both the screen and buttons illuminate!
Perfect for uninterrupted control, even when the lights are low!

Light Button

Favorites Pages

Make surfing the channels easier by creating up to 8 pages of channel icons that go directly to your favorite network!

Intuitive Commands

Ensure that device pages contain the commands necessary when performing that activity.
For example, make sure that when using the Cable TV page, the volume buttons control the correct device (usually the TV)

TV Page
Cable Page
Cable Page

TV Volume & TV Channel
Cable Volume & Cable Channel
TV Volume & Cable Channel
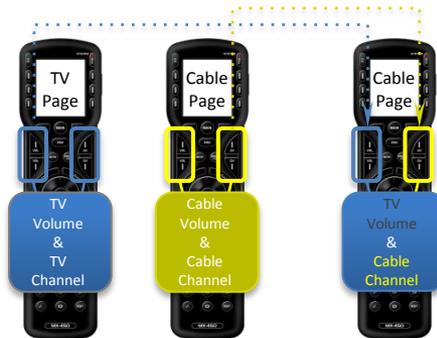
No PC Required

Computer programmed remotes can get complicated, and not everyone has a computer, or feels comfortable using one!
You have all the tools you need to program this remote…your hands!

No Rules Operation

Typically remotes use infra-red light for sending commands to devices, the problem is that this method requires "line-of-sight" to the device and DOES NOT work through walls, floors or cabinet doors.

Use an optional RF base station to eliminate the need to point the remote and the ability to control your gear through those cabinet doors…or from another room!!

Optional RF Base Stations

MRF-260   *MRF-350*
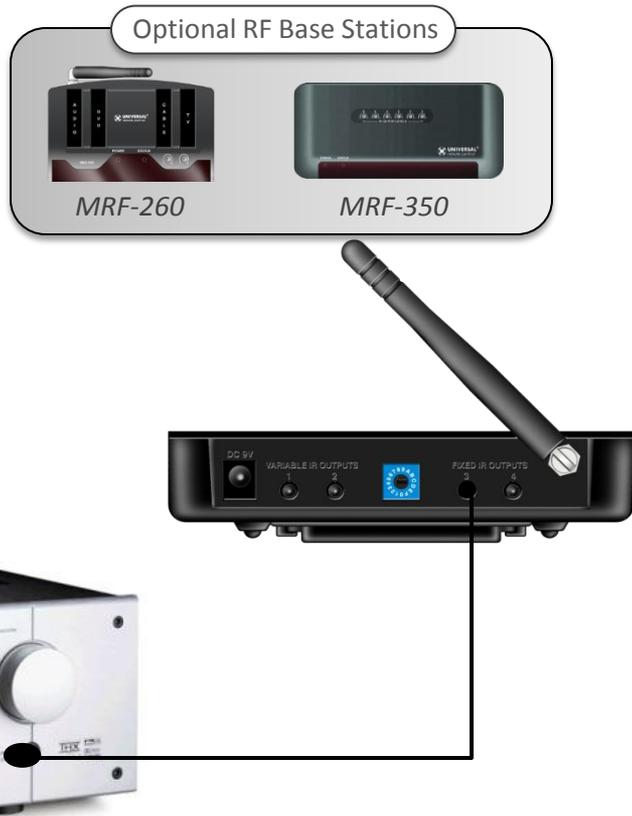
Lighting Control

Who watches television or movies with all of the lights ON? Are you the type of person that likes the lights to be OFF? Imagine that control, right at your fingertips with URC Lighting products; just replace your existing lighting with, easy to install, URC Lighting and you are ready.

Imagine hitting a button on your remote and having the lights dim just as the movie starts; even if the phone rings or there is a knock on the door, a simple button press illuminates the surroundings.

Optional Lighting Products

In-Wall Dimmer   *Lamp Dimmer*   *In-Wall Switch*
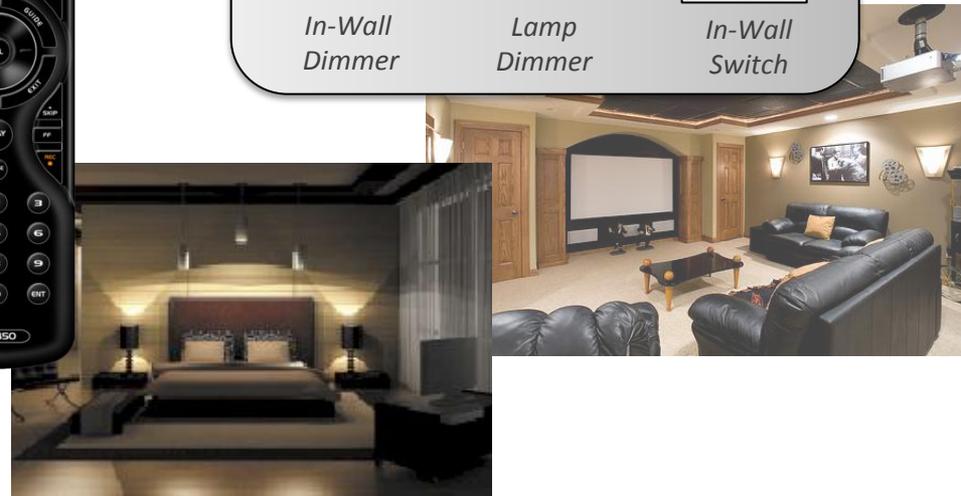
Navigating the MX-450

On/Off Buttons
By default, these will send an On/Off command to the device that is displayed

LCD Buttons
These on-screen icons are accessed by using the adjoining button

Volume & Channel Controls
Convenient volume access and easily scroll through channels with Up, Down, Previous or see a list of Favorites.

LCD Navigation
These will help you to navigate between pages (PAGE+, PAGE-) or return to the main menu (MAIN)

Transport Controls
All of the commonly used commands for controlling DVRs, DVDs and other recording devices

5-Way Cursor
Easy navigation for your device (Up, Down, Left, Right & Select)
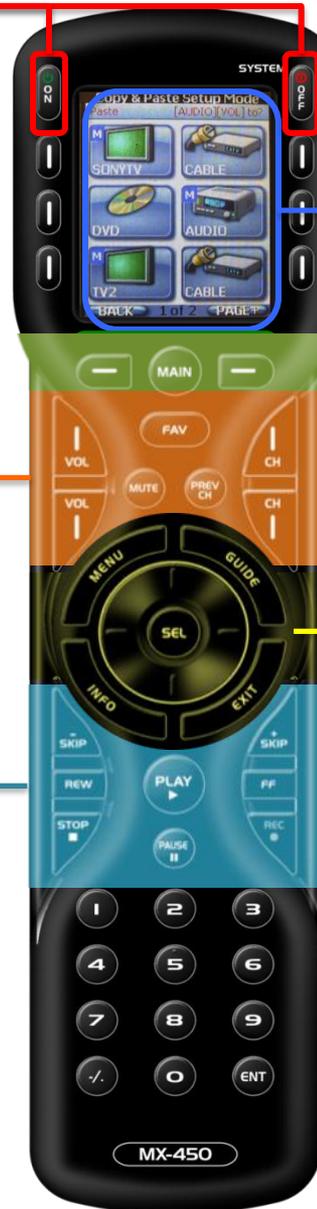
Set-Up Screen Overview

The **Main Setup Menu** of the MX-450 is the heart of the remote.

This menu will serve as your guide as you to add your TV, DVD, Satellite and other devices to the remote.

To enter the **Main Setup Menu**, press and hold the **MAIN** button for **3 seconds**.

The following are descriptions of each of these submenus:

- **Basic Setup**: Add all of your devices to the remote by using the built-in library, or learning commands directly from the original remote. More information can be found…

- **Advanced Setup** (only used this section once Basic setup has been completed): in this section you can edit button names, hide pages, create one-touch activities (macros), etc. More information can be found…

- **Favorite Channels**: use this menu item to set icons and channel numbers for your favorite networks

- **User Settings**: this option allows you to make adjustments of the remote's operation like brightness, contrast, light duration, etc. More information can be found…

- **Display tips**: In this section you may enable or disable the Set-Up tips. Although they are convenient when programming without a manual, you will not need them for programming if you are using this documentation.

Adding Devices

Within the **Search the Database** section of Basic Setup, we will add each of your devices or components to the MX-450.

A.
Select **Search the Database** to search for device codes.

B.
Select an **Icon Position** to save your device by pressing a **screen button** to make your choice.

C.
Select the **type of device** by pressing the **UP** or **DOWN** buttons on the remote's 5-way cursor.

D.
Choose a **device icon** by pressing the **LEFT** or **RIGHT** buttons to see other icons. Press select when finished.

E.
Type in a name for the **device** using the **number** key's alphanumeric equivalent

5-way cursor
Use **Arrows** and **Select (SEL)** to navigate.

Adding Devices

When FINISHED adding devices, select **NO** then **NEXT** when asked to setup another device.

F.
Select the **Brand** of your device by pressing the **UP** and **DOWN** buttons.

G.
Turn ON your device and point the remote toward it.
Press the **UP** or **DOWN** buttons until the device turns OFF.
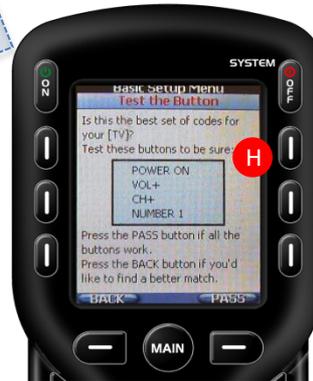
H.
Test the code by pressing the **Power On, Vol+ & Ch+**
If the device responds to this code, press **Pass**.
If not, press **Back** to find a better match.
(repeat step G.)
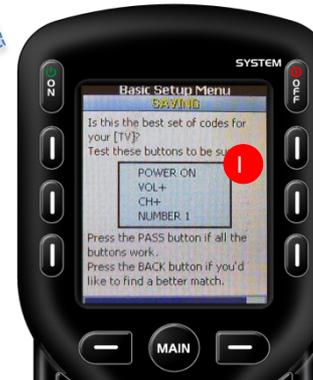
I.
When a device is **Pass**-ed the MX-450 will save the device
(blue progress bar at the bottom of the screen)

J.
Repeat this process to add more devices by selecting **Yes** then **Next.**

Can't find a code to control your device? Then learn the commands into the MX-450 from the original manufacturer's remote.

A.
From the **Basic Setup** screen use the 5-way cursor to select **Learn.**

Make sure to have the original remote near by with brand new batteries.

B.
Decide whether you want to save a single command or an entire device's command set.
Select **On the Main Menu** to learn commands to buttons like Power On or Off.
Select **Inside a Device** to learn an entire device or specific commands within the device.

C.
Select a button where you want to save a command or press a **Page** button to navigate to a different page to find a button there.

LEARN

D.
Screen will show **READY,**
indicating it is prepared to learn a
command.
*Note: if the button is an on-
screen button, it will also appear
darkened in its "ready" state.*

E.
Press the button on the original
remote that you would like to
"teach" to the MX-450.

F.
After the command is learned, the remote
indicates either:
SAVED: blue progress bar indicates saving
RETRY: command did not translate, try
again.

Place the remotes 2"-5" apart
from one another while learning.
*If unsuccessful, try lowering the
lights in the room*

3 Delete Device & Review Code Set

Delete a Device
If you want to delete a device use the 5-way cursor to select **Delete a Device**. Then press the **device's button** to delete it.

Review Code Set
If you would like to review the saved code for each device, use the arrows to select **Review Code Set**.

This feature is for custom install professional use only.

Copy & Paste

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Ever wish you could lower the volume or better yet change your television input without having to switch your audio receiver or television remote?   Now you can.

Groups

A.
From the **Advanced Setup** screen, use the 5-way cursor to select **Copy & Paste.**

B.
Select a group of commands to copy: **Volume, Channel, Play, Menu, Power ON** or **Power OFF groups.**
(in this example: Volume Group)

Power ON only

Power OFF only

Volume Group

Channel Group

Menu Group

Play Group

Copy & Paste

The process ends here if
To All Devices or **Main & Fav**
was chosen.
If **To One Device** was chosen go to Step E.

C.
Decide where you want to paste the commands.
Select **To One Device** to use the commands in one device.
Select **To All Devices** to use the commands throughout every device.
Select **To The Main & Fav** to save the commands only to the main page or

D.
Select a **device to copy** the desired group FROM.
(in this example: Volume Group FROM Audio)

E.
Select a **device to paste** the desired group TO.
(in this example: Volume Group FROM Audio TO Cable)

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One-Touch Activities (Macros)

One touch activities allow you to "record" multiple steps on a single LCD button, like all of the commands necessary to watch TV. Once programmed, a single button press will execute all of the commands to complete the activity.

What's an ACTIVITY?
an action the end-user wants to perform but requires multiple steps to accomplish

What's an MACRO?
programming these steps, in advance, so the activity requires a single button press

example:
Watch Cable
TV ON
TV to HDMI 1
Cable Box ON
AVR ON
AVR to SAT/TV

A.
From the **Advanced Setup** screen use the 5-way cursor to select **Macros.**

B.
Select whether you would like to **Setup a New Macro** or **Test/Edit Existing Macro.**

One-Touch Activities (Macros)

Add Delays
Pressing the **Pause** button inserts a **.5 sec delay** between commands.

End On A Page?
A recorded macro will also save its last location. So, make sure you hit DONE on the page where you want the macro to end.
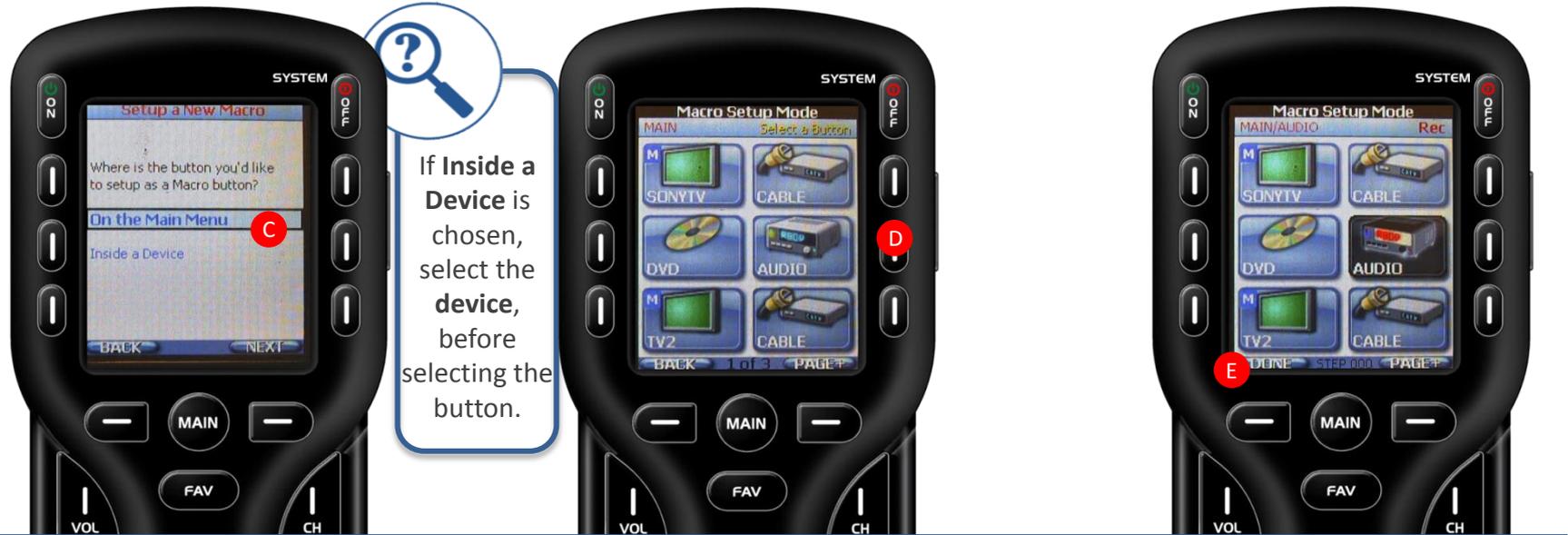
If **Inside a Device** is chosen, select the **device**, before selecting the button.

C.
Decide where you would like the macro button:
On the Main Menu
or
Inside a Device
Press **Next.**

D.
Select the button where you want to **RECORD** the macro.
This starts the recording process

E.
Record each step by navigating to the command (using the **MAIN** button) and PRESSING it.

When finished recording the macro, save it by pressing **Done**.

Hide or Display Pages

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Want to hide a page of unnecessary commands?
What about hiding a device from a loved one?
Covert operation anyone?!

> If **Inside a Device** is chosen, the next screen will give a choice of **Hide or Display Pages** or **Hide or Display Buttons.**

A.
From the **Advanced Setup** screen use the 5-way cursor to select **Hide or Display Pages.**

B.
Decide where the page to be hidden is located:
On the Main Menu- go to Step C
or
Inside a Device- see tip, above.

C.
Select **Hide or Display Pages** or **Hide or Display Devices.**

D.
Navigate to the button, page or device to be hidden and select **YES** to hide.

Editing Labels

Make life easier by labeling buttons to say what YOU want! How about renaming a button to a newly created activity? (i.e. TV *to* Watch TV) Or, simply change the LOOK of an icon.

A.
From the **Advanced Setup** screen use the 5-way cursor to select **Edit Labels.**
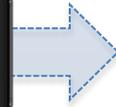
B.
Decide on the location of the button or device you would like to rename by selecting **On the Main Menu**, **Inside a Device** or **Edit Main Label** (*the title that appears on top of the MAIN menu*)**.**
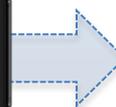
C.
Navigate to the button in the location provided in the previous step and PRESS it to rename.
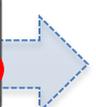
Editing Labels

*These steps are only available if **On the Main Menu** is selected in Step B.*

D.
Select a **device type,** for the icon, by using the 5 way cursor and select buttons.

E.
Change the device icon by pressing the **left** or **right** cursor. Press **Next** to move one.

F.
Type in a name for the **device** using the **number** key's alphanumeric equivalent. Press **Next** when done.

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Erasing

Quickly erase unwanted **activities** (macros) and **learned commands** anywhere on the remote.

A.
From the **Advanced Setup** screen use the 5-way cursor to select **Erasing.**

B.
Decide whether you want to erase **Macros** or **Learned Commands**.

C.
Select how you would like to erase : **One Button, All on 1 Device** or **All Everywhere.**

Erasing

If **Inside a Device** is chosen, select the **device** that contains the button to erase.

D.
Choose whether the location of the button is **On the Main Menu** or **Inside a Device.**

E.
Press a **hard or soft button** to erase.

F.
An **Erased** confirmation will indicate the macro or learned command is no longer programmed in the remote.

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RF Setup

Tired of leaving the cabinet doors open, just to control the cable box? RF travels right through those doors, and even floors and walls! Add an optional RF base station for "no rules" operation.

An optional RF base station such as a MRF-260 or MRF-350 is necessary for this option.

A.
From the **Advanced Setup** screen use the 5-way cursor to select **RF Setup.**

B.
Decide whether you would like to use RF control for EVERY device (**All Devices Set Same**) or decide IR or RF for each device (**Each Device Differs**)
*If IR routing (see glossary) is required, you must choose **Each Device Differs***

C.
These four options are important as they determine how communication occurs between the remote, your devices, and the RF base station. The next page has more details regarding each option.

RF Setup

To use a RF base station, the following options should be addressed:

IR or RF Signal: Turn **OFF** IR Signal (no need to point) and turn **ON** RF Signal (communicates with base station.)

RF ID# (Address): Select an ID# between 1-F. *The ID# identifies the base station to the remote. It is important to select the same # on the RF base station. DO NOT SELECT ID# 0, as any RF remote can control the base station. See next slide for further information.*

Emitter (IR) Routing: Select an individual emitter number, by pressing the UP or DOWN soft buttons, for each device selected. *If All devices were selected leave as All lines.*

Blaster On/Off: Decide whether the front-facing IR "blaster" should be ON or OFF. *The Blaster On option blasts the IR signal from the front of the RF base station.*

Press **Save** for each modified option.

IR/RF signal   **RF ID**   **Emitter**   **Blaster**

RF Setup (base station)

Adjust the RF ID# dial to reflect the selection made in the remote's **RF Setup**.

Note: DO NOT SELECT ID# 0, as any RF remote can control the base station.

Plug the emitter for each device into its designated **IR OUTPUT.**

10
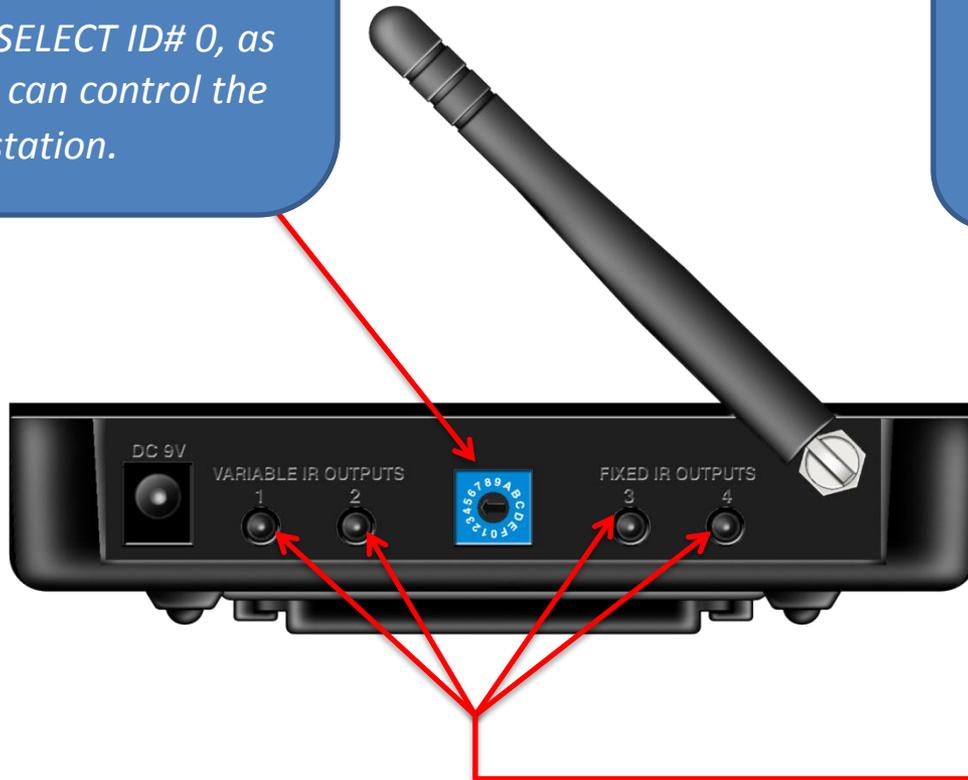
Favorite Channels

Hate relying on the cable channel guide to find your favorite channels. Have trouble keeping track of cable's ever-changing lineup? Use the **Favorite Channels** option to showcase multiple channels, up to six per page.

Favorite Channels

Create up to **8 pages** of favorite channel icons, each page holds up to **6 icons** each.

A.
From the **Main Setup** screen use the 5-way cursor to select **Favorite Channels.**

B.
Choose between **Adding/Edit Favs** or **Delete Favs** (previously created).

*Note: If **Delete Favs** is selected, you will have the option to delete **One Favorite Channel** or **All.***

C.
Select a **button position** then **favorite channel icon** to save the channel.

Favorite Channels
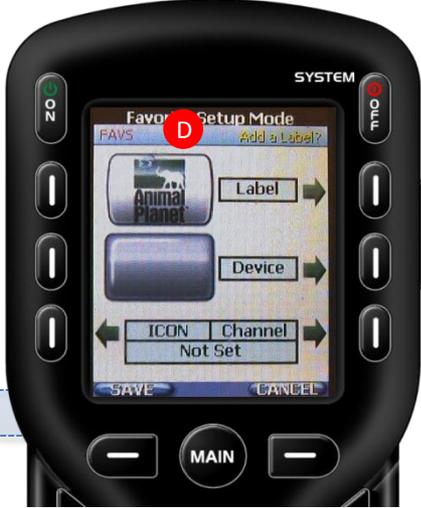
D.
Select for each category:
Label: rename the channel icon
Device: select the device where the favorite channel is found
Channel: enter the channel number
(See below for details of each)

Label

Enter the **channel name** using the alphanumeric keypad.
Press **Next** to return to Step D.

Device

Select the **source device** containing the channel to add.

Channel

Enter the channel number using the number pad.
Press **Next** to return to Step D.

User Settings

Like creature comforts? Modify your preferred settings with the **User Settings** option.

You are in Setup Mode
Main Setup Menu

Basic Setup must be finished before you setup anything else.

Basic Setup
Advanced Setup
Favorite Channels
User Settings A
Display Tips

EXIT

A.
From the **Main Setup** screen use the 5-way cursor to select **User Settings.**

You are in Setup Mode
User Settings

View or edit your screen and Button options.

Color Screen B
Button Lighting
System & Battery info
Factory Reset

BACK   NEXT
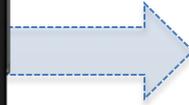
B.
From the **User Settings** screen use the 5-way cursor to select a preference.

Color Screen
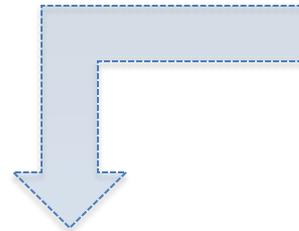
User Setup Mode
Color Screen

Brightness

Current Level : 80 %

Auto Turn Off Timing

Auto Turn Off = 5 seconds

BACK   CANCEL

Brightness: Change the level between 0% - 100%
Auto Turn Off Timing: How many seconds the light stays ON.

Button Lighting
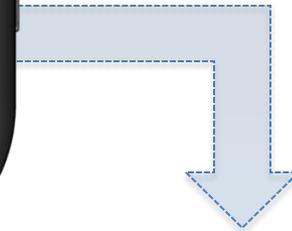
User Setup Mode
Button Lighting

Automatic On

Automatic On is Active

Auto Turn Off Timing

Auto Turn Off = 5 seconds

Button lighting affects battery Life MORE than the color screen. To Save battery life reduce usage.

BACK   CANCEL

Automatic On: ON when LCD is ON, or Always OFF
Auto Turn Off Timing: How many seconds the light stays ON.

User Settings

You are in Setup Mode
User Settings

View or edit your screen and Button options.

Color Screen

Button Lighting

System & Battery info

Factory Reset

BACK   NEXT
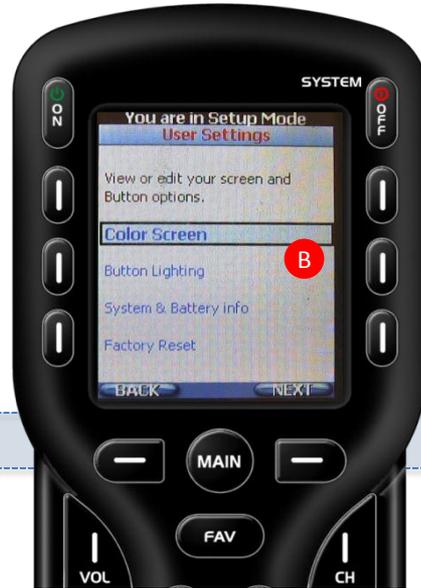
B.
From the **User Settings** screen use the 5-way cursor to select an option, one at a time.

System & Battery Info.

User Setup Mode
System & Battery info

Power Remaining

Low battery warning at : 20 %

System Info

Memory used : 49%

BACK   CANCEL

Power Remaining: Change the level between 0% - 100% **System Info:** Displays the memory usage.

Factory Reset

User Setup Mode
Factory Reset

Do you really want to erase All your work and reset the Remote to the factory demo Configuration?

Warning! This remote will No longer operate your system!

BACK   NEXT

Factory Setup Mode
Factory Default

Are you sure You want to erase EVERYTHING?

Yes   Cancel
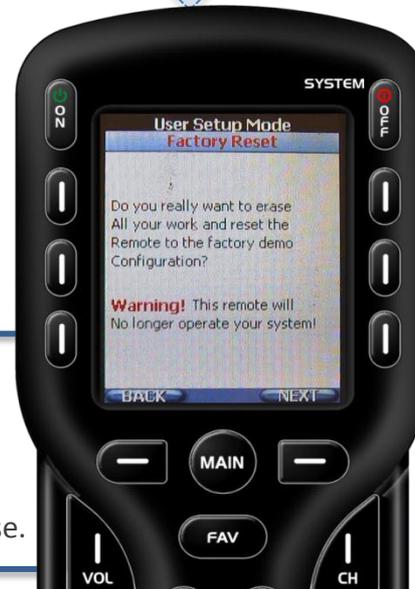
This option sets the remote to the original factory program. (All programming will be lost!)

Press **Next** then select **Yes** to erase.

Display Tips

The Display Tips is your personal MX-450 programming tutorial.

A.
From the **Main Setup** screen use the 5-way cursor to select **Display Tips.**

B.
Use the 5-way cursor to turn the **display tips on** or **off**. Press **Save** when done.

Glossary

Term	Definition
"Hard" Button	A button that is physically ON the remote; it can be touched, pressed and is tactile
"Soft" Button	A button that is represented by an on-screen representation, making it customizable to various levels. This button may be activated by pressing it (if remote is a touchscreen) or the hard button that is adjacent to it (LCD, non-touchscreen)
Backlit LCD buttons	An Liquid Crystal Display (LCD) screen with "soft" buttons that are backlit for easy viewing in low light conditions
Code Set	A code set is a series of commands (usually using infra-red) put together to control a single device. The MX-450 will automatically assign all commands in a code set to the appropriate "hard" buttons and create "soft" buttons for the remaining commands in the code set.
Copy & Paste	Also called PUNCH THROUGH, this is the ability of a remote to allow the user to access commands from one device when on the page of another device. A common usge is to place the TV volume commands on the CABLE page to allow easy access of volume without returning to the TV page.
Delays (Pause)	When a one-touch activity is created, there may be reason to add a pause before the following command is sent; for example, when a Power ON command is sent to the TV, it may take 2-3 seconds for the TV to start and be ready to accept another command. Using the PAUSE button will add .5 seconds, per press, to the command string.
Devices (Components)	Devices, or components, are considered to be any object that is, or can be, controlled by a remote.
Display tips	Like an electronic assistant, Display Tips on the MX-450 will make suggestions or give instruction for certain steps of the programming process.
Edit Label	When a code set is programmed onto the remote, some of the buttons may be inexplicably named with unfamiliar terms. Use this feature to rename those buttons to more familiar sounding names.
Favorite Channels	An icon, or text field, that has the channel number of the network represented within it.
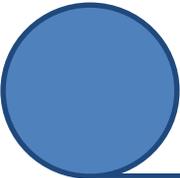
Glossary

Term	Definition
Favorite Pages	A page, or series of pages, with network names, or icons, representing favorite channels; when a channel is selected, the remote will automatically send out the numeric commands to switch to the chosen network.
Hide or Display Pages/Buttons	When a code set is programmed onto the remote, some of the buttons/pages may be deemed unnecessary. Use this feature to hide buttons, or pages of buttons, to the user.
Inside a Device	These are pages that are found inside a device that has been added to the remote. By default, these are populated by commands forTHAT device, however, with programming, these buttons can be made to perform macros or commands from other devices.
Intuitive Commands	Also called PUNCH THROUGH, this is the ability of a remote to allow the user to access commands from one device when on the page of another device. A common usge is to place the TV volume commands on the CABLE page to allow easy access of volume without returning to the TV page.
Infra-Red (IR)	IR, or Infra-red is a low frequency of the non-visible light spectrum. Even though it is not visible to humans, devices can "see" IR and be programmed to react to differennt IR strings.
Learn	The ability to record the infra-red (IR) signal from one remote (usually the manufacturer's) and place it on a button on the smart remote.
Macros	Also called One Touch Activities, these are buttons (hard or soft) that trigger a recorded sequence of commands; typically to perform a common function that would normally take many button presses (i.e. Watch TV, Watch DVD, Listen to CD)
On the Main Menu	The MX-450 has different screen views. On the Main Menu are the screens that show devices or activities. Once a device is chosen, the remote will typically jump to a page that is Inside a Device
One-Touch Activities	Also called MACROS, these are buttons (hard or soft) that trigger a recorded sequence of commands; typically to perform a common function that would normally take many button presses (i.e. Watch TV, Watch DVD, Listen to CD)
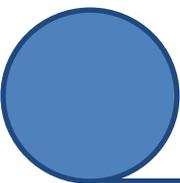
Glossary

Term	Definition
Page button	Some menus like the Main Menu, Device Menu and Favorites may have more than one page associated with them. These buttons, found to the left, and right, of the Main button will navigate between those pages
Ready	This statement will appear on the LCD when the remote is ready to move on to the next step in the action or programming
Record	The record function is the first step to creating one touch activities (macros). While in record mode, every button press is saved and added to the string of commands; once the SAVE/DONE button is pressed, the entire command string is stored in the location determined by you.
Retry	This suggestion appears when the action you just tried to perform has failed. Usually retrying the step will solve the problem
RF Setup	The MX-450 has the ability to control device via direct IR, or route the IR commands through an RF base station. Using an RF base station allows commands to be sent through walls, floors and doors. RF also allows for native command of URC lighting.
Saved	This acknowledgment will appear during some programming procedures to let you know that the action has been completed
Smart Remote	A unified remote that has capabilities to make its use more efficient, intuitive and automatic
Unified Remote	A single remote control that combines other controllers into a single interface. Does not imply any intelligent control, just combined control!