

MX-350



Owner's Manual

Thank You!

Thank you for purchasing the MX-350™ Pre-Programmed and Learning Remote Control. This manual is designed to assist you step-by-step as you setup the MX-350 to replace all of your remote controls and automate your home entertainment system.

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The MX-350

Getting Started

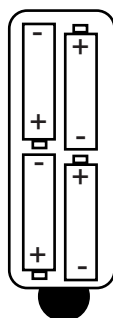
Congratulations!

You've purchased one of the most advanced and easy to setup control systems available. The MX-350's built-in library includes thousands of different brands and models of remote controls. In most systems, all you have to do to setup the MX-350 is enter which brands and models you own. If you own a component too new to be in the library, the MX-350 uses advanced learning technology to quickly set each MX-350 button, one at a time. Setting up your MX-350 to replace all your existing remote controls can be done in a few minutes. Basic Setup is described on pages 5 to 13.

The MX-350's exciting advanced features automate and customize operation in many ways. You could use Macro Setup to power on all of your components and start the show with the press of one button! With the MX-350's unique Favorite Channel capability, you can tune in a channel with the press of one button instead of entering the entire channel number. Any of the button names on the display can be edited as you like. It is best to delay any Advanced Setup (described on pages 14 to 36) until after you finish Basic Setup.

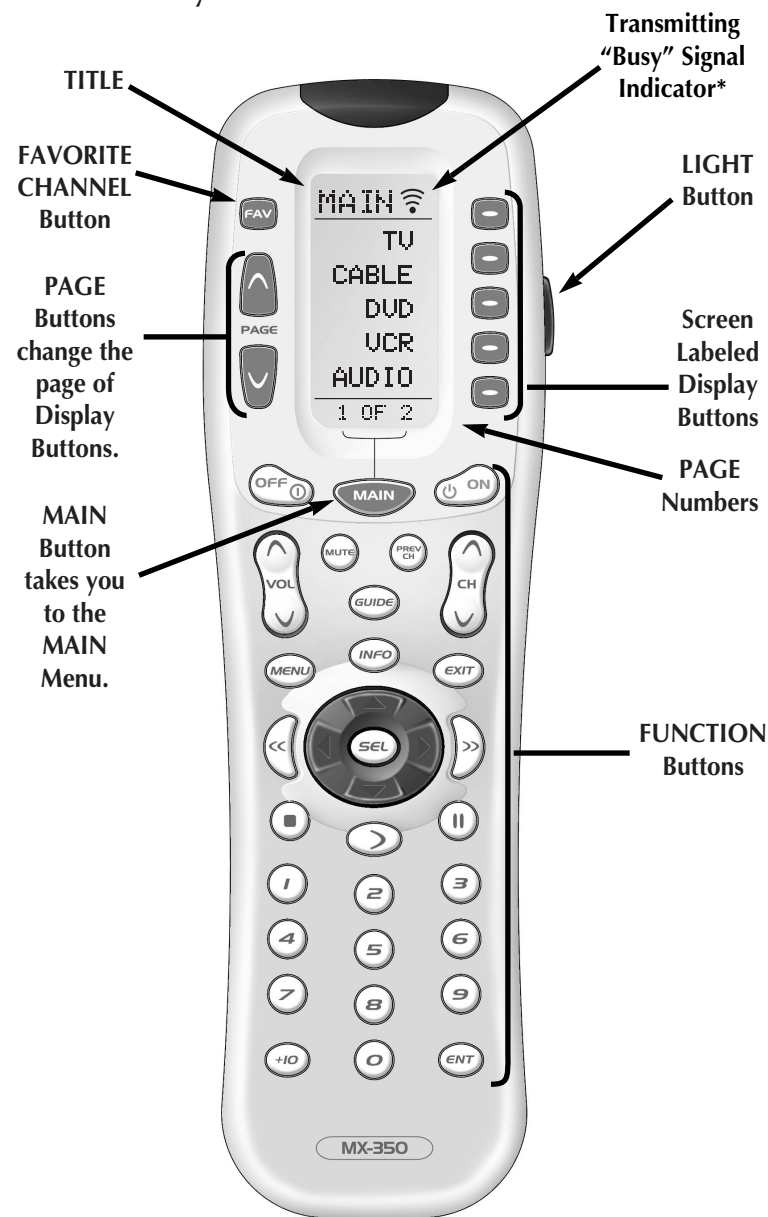
Battery Installation

Remove the battery compartment cover by pressing up the cover lock. Insert four AAA batteries into the battery compartment as shown in the diagram.



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Button Layout



*Note: When a command, macro or favorite channel is being transmitted, an icon will appear in the top right corner of the display. While the MX-350 is "busy", it will ignore a button push.

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Selecting a New DEVICE Changes All Button Commands Instantly

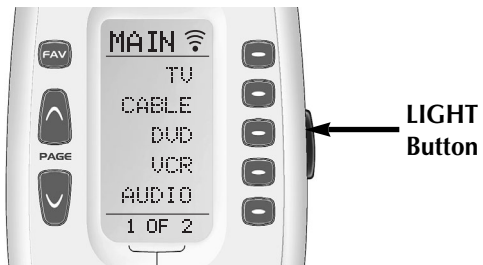
The MX-350 can operate ten different devices even though it is only one remote control. Let's try it now! Press the MAIN button, then press the TV DEVICE button.



The top of the screen changes from MAIN to TV. Now all of the buttons change their function to operate a TV. Press the page buttons. Watch the labels of the display buttons change with each press. There are eight pages of display buttons already labeled for TV operation. To operate another component (e.g., VCR, DVD etc.), press the MAIN button to return to the MAIN menu. The MAIN menu displays five of your Devices on the screen. Simply press one of the screen-labeled Device buttons to operate another device. If you don't see the device name you want, then use the PAGE buttons to display the remaining five devices on page 2 of the MAIN menu.

Light Button

Press the LIGHT button to backlight all the buttons. To turn off the backlighting, press the LIGHT button again, or just wait ten seconds (the backlighting automatically shuts itself off).



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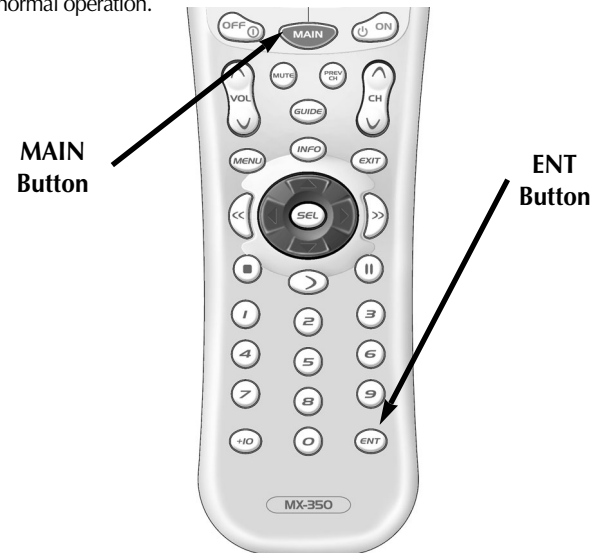
Basic Setup

You can start setting up your MX-350 using either the Pre-Programmed Method or the Learning Method. However, all the buttons of the MX-350 are setup at once with the Pre-Programmed Method, so it is usually faster than the one-button-at-a-time Learning Method.

Pre-Programmed Method

- 1 Power on the A/V component you wish to setup, so that you can test codes by sending power off commands.
- 2 Refer to the pre-programmed code tables on pages 38 - 59 and write down the code numbers listed for your A/V component. The code numbers are listed by categories of devices, then by brand. See page 37 for a category list.
- 3 Press and hold both the MAIN and ENT (Enter) buttons for approximately three seconds. The top of the display will show "SETUP". You are in SETUP mode now.

Note: You have 30 seconds to perform a step while you are in SETUP mode. If you don't press a button within that time, the MX-350 will time out and return to normal operation.



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- 4 Press the P-PRO button to select the Pre-Programmed Method.



The display changes so that you can select which Device button to setup.



Press a Page button to display the other five Device names.

- 5 In this step you choose the name of the device you'd like to setup. Use the cursor UP or DOWN buttons to change the flashing name. When it is correct, press the SELECT button.



For Example: I wanted to setup the TV Device button first, so I pressed the cursor UP or DOWN until "TV" was flashing in the display.

The bottom of the display will flash "FROM TABLE".

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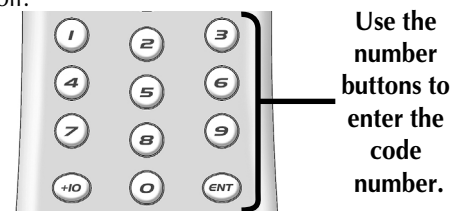
- 6 In this step you verify the type of component you plan to operate with this device button. If the flashing name is correct, press SELECT.



If the name flashing in the display is incorrect (for example, you are setting up AUX to operate a Laser Disc Player), use the UP and DOWN buttons to change the flashing name to the correct type of component.

Note: Each name that appears in the display may include several types of components. For example, the DVD category includes DVD players and Laser Disc Players. See page 37 for a list of component types each Code Table contains.

- 7 Point the MX-350 at the component, then enter the first three digit code number from your notes using the numbered buttons. After you enter each three digit number, look at the component to see if it turned off.

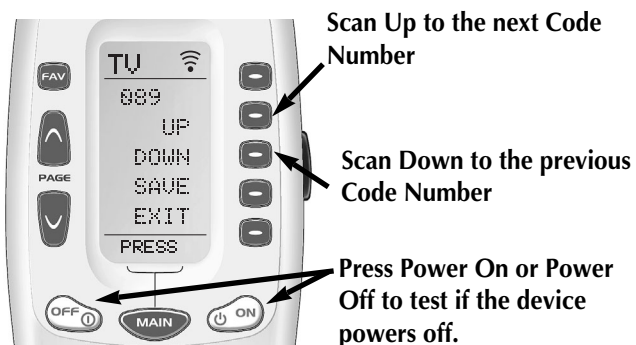


Continue to enter code numbers until the component powers off.

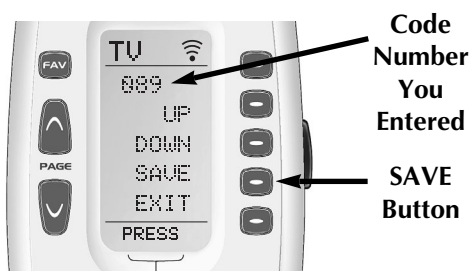
For Example: I have a Sony TV. I found the code numbers 070, 139, 147, 126, 185, 194 and 085 under Sony in the TV TABLE. Using the numbered buttons on the MX-350, I entered 070 and looked at the TV. It didn't turn off, so I entered 139, then 147 and so on, until I found the code that powered off the TV.

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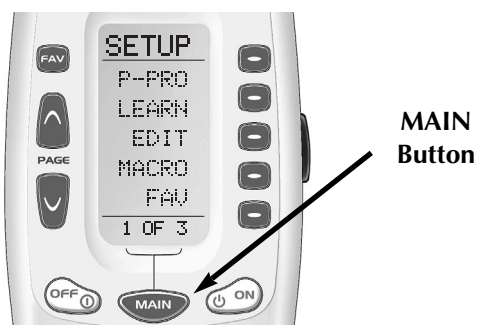
Note: If a component fails to turn off after you have entered all of the code numbers listed for your brand, you can scan through the other brands in the table using the UP and DOWN buttons (there is a chance that your component was actually manufactured by another brand). However, most of the code tables are so large it is usually faster to use the Learning Method on Page 9.



- 8 When the component turns off, save the code number you entered by pressing the SAVE button that appears on the screen.



- 9 Exit SETUP mode by pressing the MAIN button two times. When the display shows "MAIN", you are back in normal operating mode.



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- 10 Repeat steps one through nine for each of your devices. If you are missing any commands, use the learning method, described next

Learning Method

The MX-350 can learn commands from your old remote controls one-button-at-a-time by following these simple steps:

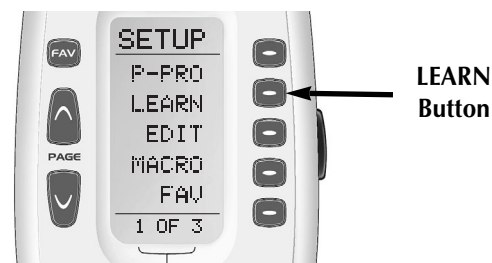
- 1 Line-up the MX-350 with your old remote control, head-to-head, one or two inches apart.



- 2 On the MX-350, press and hold the MAIN and ENT (Enter) buttons at the same time for approximately three seconds. The top of the display will show "SETUP". You are in SETUP mode now.

Note: You have 30 seconds to perform a step while you are in SETUP mode. If you don't press a button within that time, the MX-350 will time out and return to normal operation.

- 3 Press the LEARN button.



The top of the screen will change to "LEARN".

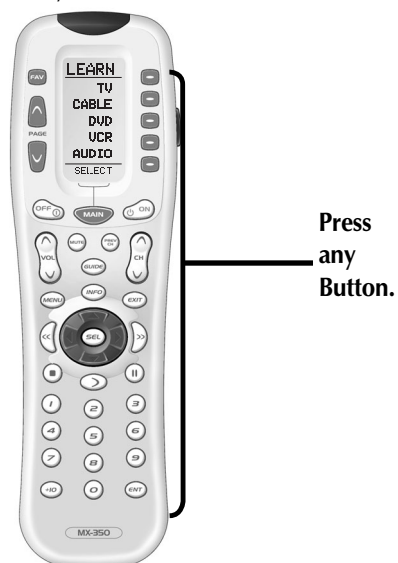


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- 4 The display will show a list of the first five devices.
- 5 Select the device you would like to teach commands to by pressing the Device button.



- 6 Now, press any button you want to teach a command to.



Note: If you don't see the display button you would like to teach, use the PAGE buttons. The only buttons you can't teach are the PAGE and MAIN buttons.

Once you press a button, the top of the display will change from "LEARN" to "READY".



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- 7 Press and hold the button you want on your old remote control until the display changes to either "GOOD" or "FAILED".

If the "GOOD" label appears on top of the display, you were successful. Now, press the next button you wish to teach. Keep repeating steps 6 through 7 until you have learned all the buttons you want.



If the "FAILED" label appears on top of the display, try to teach the same button in MX-350 once again by repeating steps 6-7.

- 8 Continue to teach any commands from any of your remote controls by repeating steps 5-7 (to go back to step five, press MAIN once).
- 9 Once you completed teaching all the buttons, return to normal operation by pressing the MAIN button twice. Test all your new commands. If any of them don't work, try learning again using these notes:

Move to another room. Plasma TVs, sunlight, halogen or quartz lighting can interfere with the learning process.

Although the old remote control seems to work fine, change the batteries to fresh alkaline batteries.

Vary the distance between the remote controls gradually. Try 1/4", 1", 2" and so on, up to 4 feet.

Tap the button on the original remote control instead of pressing and holding it during the learning process.

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Volume Control Punch Through

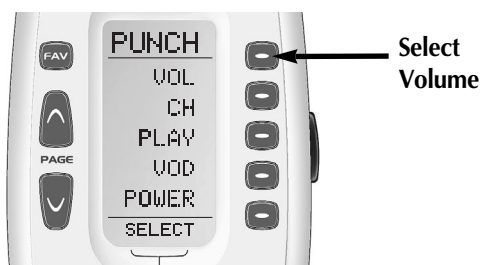
In most home entertainment systems, the sound volume is only controlled by one device. In some systems, it is the TV speakers that make the sound, so you would use the TV device on the MX-350 to raise and lower the volume. In another system, it might be a surround sound receiver and speakers that control the sound, so you would use the MX-350's AUDIO device to adjust the volume. Constantly switching the MX-350 to TV or AUDIO to adjust the volume is inconvenient in daily life.

You can use Punch Through to set the MX-350's volume buttons to always control the sound in your system. That way when the MX-350 is set to VCR or DVD, the volume up, down and mute buttons will work perfectly without switching back to AUDIO or TV. Here's how:

- 1 Enter Setup mode by pressing and holding both MAIN and ENT for three seconds. The top of the display show you are in SETUP mode now.

Note: You have 30 seconds for each step, otherwise the MX-350 will time out automatically.

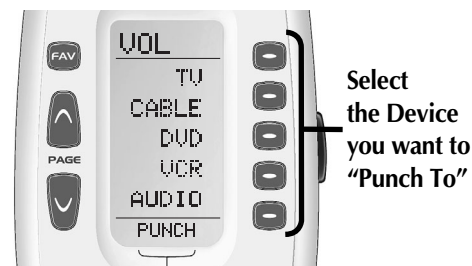
- 2 Press the PAGE UP button to get to page 2 of the SETUP menu. Press the PUNCH button.
- 3 Press the VOL button. The display confirms by displaying "VOL" at the top of the screen. This sets up the group of three buttons (Volume Up, Volume Down and Mute) in one action!



The bottom of the display flashes "PUNCH TO".

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- 4 Press the device button for the device that doesn't have volume control commands yet (i.e., DVD). This is the device you are going to PUNCH TO for the volume and mute commands.



Note: If you wish to PUNCH to the MAIN device, press the POWER OFF button at this time.

- 5 The bottom of the display will then flash "PUNCH FROM". Now you select the device that has the volume commands you want (i.e., TV for systems using the TV speakers, AUDIO for systems with surround sound receivers). The bottom of the display will flash "SAVED".
- 6 Repeat steps 3-5 until all your devices operate the volume perfectly. Press the MAIN button twice to return to normal operating mode and test your Punch Through settings.

Note: The Punch Through feature is not limited to volume and can also be applied to channel or other functions. If you find yourself switching to a particular device frequently to use a group of controls, consider using Punch Through for another group, as listed here:

VOL - Volume Up, Volume Down and Mute
CH - Channel Up, Channel Down, Prev. Channel and Number buttons (0-9, +10, ENT)
PLAY - Play, Stop, Pause, Rewind and Fast Forward
VOD - Guide, Menu, Info, Exit, Up, Down, Left, Right, Sel
POWER - Power On and Power Off

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Advanced Operation

Setting Backlight Options

You can adjust the amount of time that the MX-350 backlight stays on by entering the SETUP mode and proceeding to page two (using the PAGE UP button), then pressing the LIGHT button on the display (not the Backlight button). Then enter the amount of time you would like the light to stay on using the number pad (0-99 seconds). After making your selection, press the SAVE button.

If you don't want backlighting at all (this extends battery life), press the ON button that appears on the screen. The ON will change to OFF. Press the SAVE button. Exit the setup mode by pressing the MAIN button.

The FAV Button

When you press the FAV button, the display changes to a list of your favorite TV channels. Each button can be set to instantly select the channel on your TV. There are eight pages of five favorite channel buttons for a total of 40. Simply touch the PAGE buttons to display the other favorite channels. To return to the last device you viewed, press MAIN once (a second press will take you to the MAIN menu).

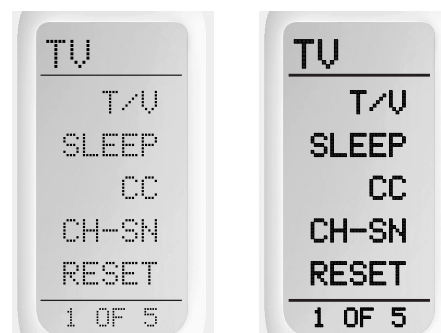
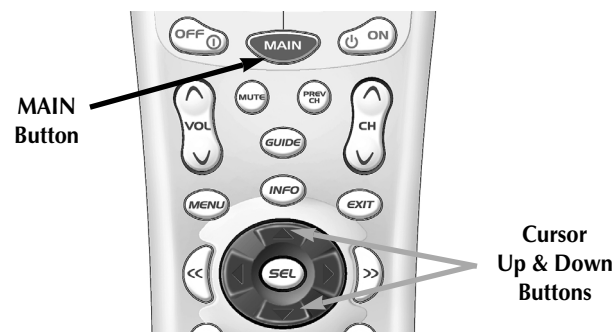


To setup your Favorite Channel buttons go to page 21.

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Adjusting Contrast

You can make the text darker by pressing both the MAIN and cursor UP buttons at the same time. To make the text appear lighter, press both the MAIN and cursor DOWN buttons at the same time.



Contrast set low.

Contrast set high.

Transmitting (Busy Signal) Icon

When a command is being transmitted, an icon will appear in the top right corner of the display. It is a useful aid when setting up Macros and FAVs, since it flashes with every step of a sequence of commands.



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Advanced Setup

After you've finished all your basic setup, you can choose to make operation easier by customizing the MX-350 just the way you want, using the Advanced Setup features described in this section.

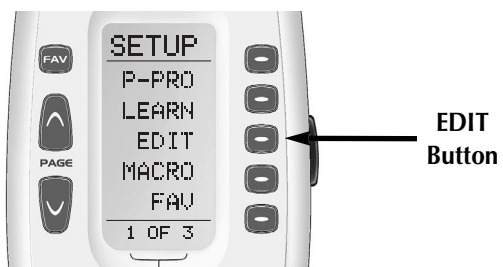
Editing Button Labels

You can change the name of any of the display buttons (including Favorite Channels) by following these steps:

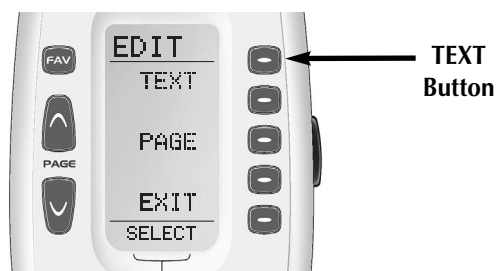
- 1 Press and hold both the MAIN and ENT (Enter) buttons for approximately three seconds. The top of the display will show "SETUP". You are in SETUP mode now.

Note: You have 30 seconds to perform a step while you are in SETUP mode. If you don't press a button within that time, the MX-350 will time out and return to normal operation.

- 2 Press the EDIT button.



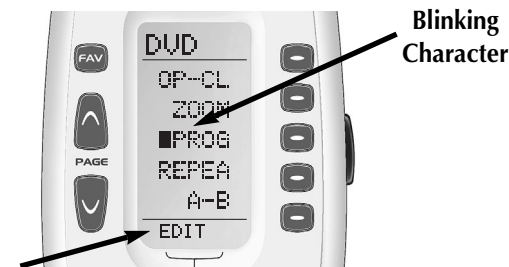
- 3 The display changes to the EDIT menu. Press the TEXT button.



- 4 The screen displays the list of devices and "EDIT" will appear at the top of the screen. Navigate to the device and page where there is a button label you want to EDIT, selecting between the FAV, MAIN, DEVICE, then using the PAGE button.

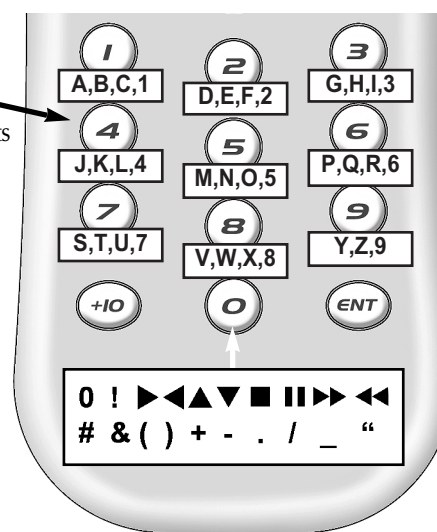
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- 5 Press the button you wish to edit. The first character of your button label blinks.

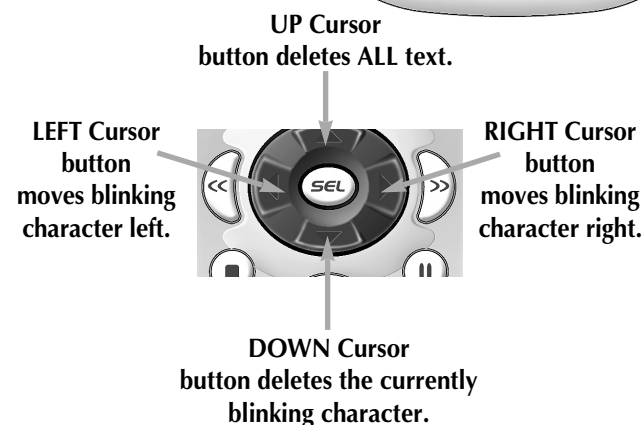


EDIT flashes at the bottom of the screen.

- 6 Change the character by using any of the number keys. Each press of the same number button selects the next character of that number's group, as shown here.



Once the character you want appears, move to the next space by pressing the RIGHT cursor button.



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- 7 When you are finished editing the button, press the button you edited and "SAVED" will flash at the bottom of the display.
- 8 To change any other button labels on the same device, press the next button, then repeat steps 6-8. If you wish to edit a button on another device, press the MAIN button once, then repeat Steps 4-8.
- 9 Once you've finished editing buttons, press the MAIN button four times to return to normal operation.

Edit the MAIN Menu Title or a MAIN Menu Device Label

You can change the title of the MAIN Menu or a MAIN Menu device label by following these steps after you've entered TEXT Edit mode (described in the steps one through four in the preceding pages).

- 1 Once you've entered TEXT Edit mode, the top of the screen displays EDIT and the first five devices of the MAIN Menu. There are five pages you can access via the Page UP or DOWN buttons. When the top of the screen says EDIT, pressing a device button jumps to the pages for that device so that you can edit a device's LCD buttons normally. However, if you continue to tap the Page button, the top of the screen will change from EDIT to MAIN. While it says MAIN, there are three pages of LCD buttons. The first two list the Devices of the MAIN Menu and enable you to change the device names when pressed. The third page titled MAIN has only one entry for the LCD buttons; "MAIN". When you press the corresponding hard button, you can relabel the MAIN title itself.
- 2 Select the title to edit by pressing the adjacent hard button.
- 3 Edit the text (described on steps 5 and 6 on page 17).
- 4 Press the button you edited to save the changes. Here's an example:

The MAIN Menu title has been changed to PATIO, so whenever the MAIN button is pressed, the user is reminded that this is the Patio remote.



Each of the MAIN menu device buttons has been custom labeled for the activities the user likes to use out on the Patio.

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Macro Button Setup

Imagine turning on your TV, your DVD player and your surround sound receiver by pressing a single button on your MX-350! What would normally take three remotes and three button pushes, the MX-350 can accomplish with the press of one button. We call that a "Macro". Any of the Display buttons, the Power On or the Power Off buttons (on any Device or Page) can be set to be Macro buttons!

To setup a macro button, follow these easy steps:

- 1 Enter the SETUP mode by pressing and holding both MAIN and ENT for three seconds.
- Note:** You have 30 seconds for each step, otherwise the MX-350 will time out automatically.
- 2 Press the MACRO button. The top of the display will show "MACRO". The bottom of the display will flash "SELECT".
- 3 Navigate to the Device and Page where there is a button you would like to set as a Macro button using the MAIN, DEVICE, and PAGE buttons.

Advanced Options:

If you wish to set one of the DEVICE buttons as a macro, on step 3, press the Page Up button twice. The top of the display changes to MAIN, and you can navigate to MAIN page 1 or page 2 before going on to Step 4.

Another option for DEVICE button macros is to only send the macro if the button is pressed and held. This is setup by entering a delay as the first step of the macro. The amount of delay determines how long the user must press the button before the macro is sent. The advantage of this option is that a normal press of the DEVICE button will simply switch devices without issuing the macro.

- 4 Press the button you want to set as a Macro button. The top of the screen will display the label of the button you selected. At the bottom of the screen it displays "STEP0", indicating that no macro steps have been entered yet.

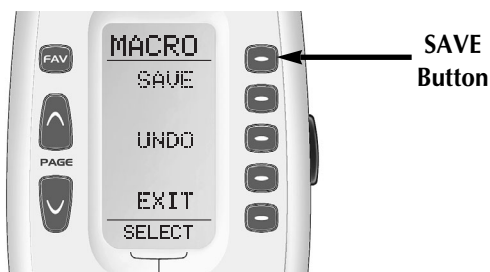
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- 5 Navigate to the Device and Page that has a button you want in your macro using the MAIN, DEVICE and PAGE buttons. Then press the button with the command you want. Whenever a button is pressed, another Macro step is counted and displayed at the bottom of the screen.

Don't worry about the number of steps. Each macro button can store up to 190 steps, so you are not likely to run out of steps!

Note: You can program delays in between commands by pressing the PAUSE button. Each press adds half a second to the delay.

- 6 Press the LIGHT button to end your macro. A new screen displays three choices:



SAVE — If you are happy with your macro, press the SAVE button.

UNDO — The UNDO button lets you erase the last step.

EXIT — The EXIT button erases all the macro steps.

- 7 Press the MAIN button twice to return to normal operation.

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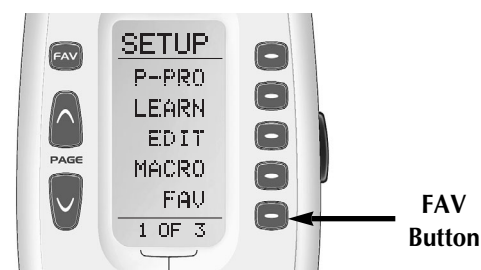
Favorite Channel Setup

Imagine surfing all your favorite channels, without ever typing in a channel number. By simply setting up each of the favorite channel buttons, you can make TV, cable or satellite operation fun and easy. To setup a Favorite Channel button, follow these steps:

- 1 Enter SETUP mode by pressing and holding both MAIN and ENT for three seconds.

Note: You have 30 seconds for each step, otherwise the MX-350 will time out automatically.

- 2 Press the FAV display button.



The top of the display will show "FAV". The bottom of the display will flash "SELECT".

- 3 Use the Page buttons until you can see the name (i.e., ABC, CBS, NBC) of the favorite channel you wish to setup.
- 4 Press the favorite channel button you wish to setup. The top of the screen changes to show the channel name. The bottom of the screen displays "STEP0", indicating that you have not entered the channel number yet.
- 5 Press either the TV, SAT or CABLE Device button (select the device you use to enter channel numbers).
- 6 Press each of the number buttons for the channel.

Note: Some brands of television require an ENT(Enter) command after the channel numbers.

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Note: If a number is repeated when setting the channel (for example, channel “33” or “522”) it is usually best to set a half second delay in between the identical numbers by pressing the PAUSE button. Each press of the PAUSE button increases the delay by a half second.



Use the PAUSE Button to set delays between steps, each press of the pause button increases the delay by a half second.

- 7 Press the LIGHT button after you enter the channel number. A new screen appears:



**SAVE
Button**

To save the channel you entered, press the SAVE button. The UNDO button lets you erase the last entry. The EXIT button erases all entries for this button.

- 8 When you are finished setting up Favorite Channel buttons, press the MAIN button twice to return to normal operation.

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Hiding and Adding Pages

Each of your MX-350 Devices contains up to eight pages (if a page has no IR data, it will be HIDDEN). However, you can HIDE any page from the users view. A hidden page still appears in SETUP modes, so can be used in macros. If you change your mind and would like the user to see a hidden page, you can ADD them. You can add or hide pages on devices, or on your favorite channel pages using this simple process:

Note: Be sure to program your Macros before you hide pages with a potential macro step in them. You can't access hidden pages during macro setup. However, after you finish Macro setup, you can hide pages without affecting operation of your macros.

- 1 Enter SETUP mode by pressing and holding both MAIN and ENT for three seconds.

Note: You have 30 seconds for each step, otherwise the MX-350 will time out automatically.

- 2 Press the EDIT button.



**EDIT
Button**

- 3 Press the PAGE button.

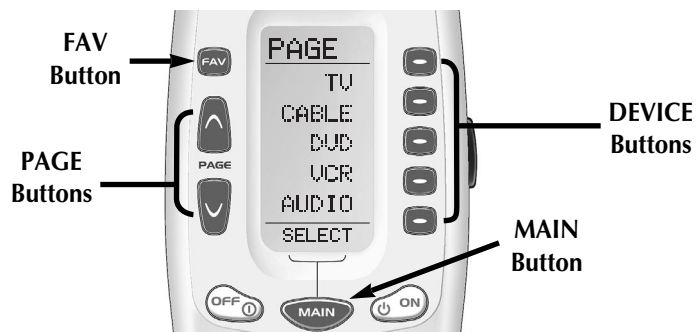


**PAGE
Button**

“PAGE” appears at the top of the screen.

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- 4 Navigate to any page, using the MAIN, DEVICE, FAV, and PAGE buttons.



- 5 When you select a page, the top of the screen indicates whether you want to “ADD?” or “HIDE?” the page displayed. When you would like to change a page’s visibility, press the LIGHT button.



This page is hidden.
To ADD it, press the
LIGHT button.



This page is visible.
To HIDE it, press the
LIGHT button.

- 6 You can continue to ADD or HIDE pages on other devices by repeating Steps 4 and 5.
- 7 When you are finished adding and hiding pages, press the MAIN button four times to return to normal operation.

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Erasing

You can erase an individual button with a learned command, a macro or a favorite channel. You can erase an entire Device’s learned command or macro buttons. You can also erase ALL your learned commands on all devices or all your macros or favorite channels everywhere. If you really want a fresh start, it is possible to reset everything to the factory default condition.

Erasing Learned Buttons, Macros or Favs

- 1 Enter SETUP mode by pressing and holding both MAIN and ENT for three seconds.

Note : You have 30 seconds for each step, otherwise the MX-350 will time out automatically.

- 2 Press a PAGE button to display page two of Setup.
- 3 Press the ERASE button.
- 4 Press either the LEARN, MACRO or FAV button.
The following screen appears:



ALL — If you press ALL, the MX-350 displays a SURE? button. After the SURE button is pressed, all the buttons will be erased.

DEVICE— If you press DEVICE, a list of Devices will appear. Press the device button that you wish to erase. The bottom of the screen will flash ERASE twice, then ERASED.

KEY— If you press KEY, you’ll have to navigate to the Device and Page you want using the MAIN, DEVICE and PAGE buttons. Press a button to erase it. The bottom of the display will flash ERASE twice, then ERASED.

To return to normal operating mode, press the MAIN button four times.

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Erasing the Entire MX-350

To erase EVERYTHING, press and hold both the MAIN and the STOP buttons for 15 seconds. After 15 seconds, the RESET screen appears. Press the SURE button to erase all of your settings and return to the factory default setup.



Cloning One MX-350 to Another

If you own two or more MX-350, you can copy and transfer all the setup from one MX-350 to another. Just follow these easy steps:

- 1 Enter SETUP mode by pressing and holding both MAIN and ENT for three seconds.

Note: You have 30 seconds for each step, otherwise the MX-350 will time out automatically.

- 2 Press a PAGE button to display page two of Setup.
- 3 Press the CLONE button.
- 4 Align the two MX-350 head-to-head, about an inch apart.



- 5 Press the RECV display button on the new MX-350 you would like to setup by cloning.
- 6 Press the SEND display button on the MX-350 you previously setup.
- 7 Press the START button on the new MX-350 and then press the START button on the MX-350 you previously setup.

Note: Cloning typically takes about 90 seconds.

After completion, the cloned MX-350 will flash "GOOD".

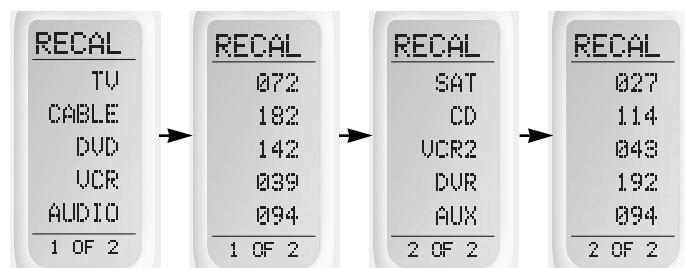
- 8 Return to normal operation by pressing the MAIN button twice.

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Recalling Pre-Programmed Settings

If you didn't write down the code numbers you setup your MX-350 with, you can recall them via this simple process:

- 1 Enter SETUP mode by pressing and holding both MAIN and ENT for three seconds.
- 2 Go to page two of the SETUP menu via the PAGE UP button.
- 3 Press the RECAL button. The display changes to the recall screens. The screen automatically switches between four screens, alternately flashing page one devices and code numbers then those for page two.



Note: Pay attention to the page numbers on the bottom of the screen. Page 1 code numbers are the ones setup for the Page1 Devices. Page 2 code numbers are the ones setup for the Page 2 Devices.

- 4 Write down the code numbers as they appear.
- 5 Return to normal operation by pressing the MAIN button twice.

The MX-350

Utilizing Optional RF Base Stations

You can use the MX-350 as you would your other remote controls. It transmits very powerful line-of-sight output using infrared light commands (invisible to the naked eye). When you point the MX-350 at the components, expect the range to be between 30 and 50 feet. When the remote is not pointed in the general direction of the components, the range will vary (depending on reflective surfaces, lighting, etc.).

However, the MX-350 also sends radio signals in every direction. By purchasing the MRF-100 or the addressable MRF-250 or MRF-350 base stations, you can operate your equipment with the MX-350 50 to 100 feet away (through walls, doors, cabinets, inside or outside). Since the RF Base Station picks up the MX-350's radio signals from any direction, regardless of distance, the MX-350 *doesn't have to be pointed!*

Using MRF-250 or MRF-350 Addressable Base Stations

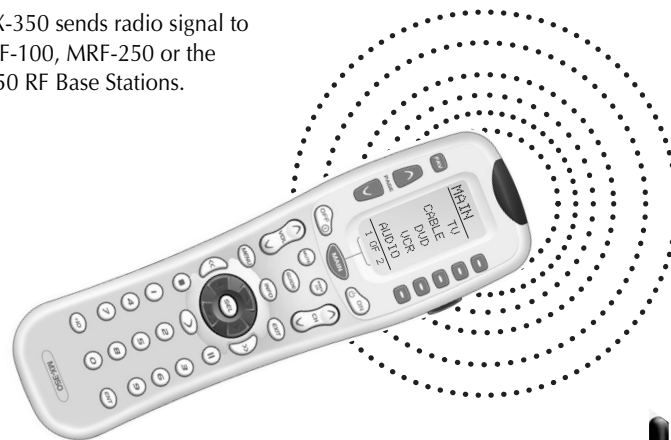
By installing an MRF-250 or MRF-350 base station you gain freedom from interference from a nearby room, house or condo where someone else might be using an RF remote control. Addressable base stations are assigned one of 15 unique ID#'s. This allows multiple equipment locations in one house to be controlled by any MX-350. In operation it's simple: when you select a device located in the Den, the MX-350 only talks to the base station in the Den. When you select a device located in the Family Room, the MX-350 only talks to it!

When used with an MRF-250 or MRF-350 base station, the MX-350 can be programmed to control identical components, for example, a media room array of TV's. The intelligent routing of the MRF-250 or the MRF-350 base station will send your commands only to the TV you want to control. The other identical TV's will not receive commands. Of course, if your system utilizes identical satellite receivers, cable boxes, VCR's or disc changers you can utilize IR routing just as easily for them. If you have more than six identical components, up to 15 addressable MRF-250's or MRF-350's can be installed to control them (thus allowing up to 90 identical components in one house).

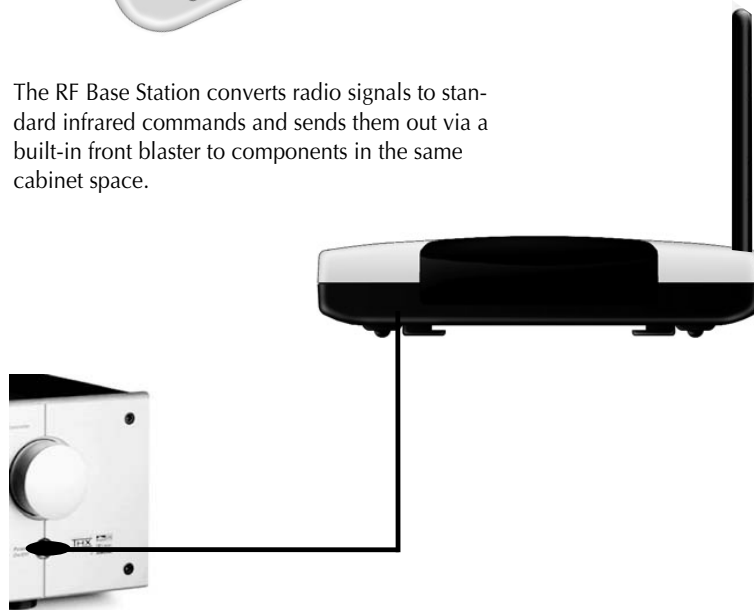
Note: The MX-350's radio signals will not control components directly. Components that came with "no pointing" radio remote controls cannot be operated by the MX-350 unless the component can be switched to standard

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The MX-350 sends radio signal to the MRF-100, MRF-250 or the MRF-350 RF Base Stations.



The RF Base Station converts radio signals to standard infrared commands and sends them out via a built-in front blaster to components in the same cabinet space.



Self-adhesive "flashers" (included with the MRF-250 or the MRF-350) affix to the front panels of your components. The flashers relay infrared commands to components out-of-sight of the front blaster. The flashers plug into the rear flasher line output jacks. Each flasher has a 10' cable to easily reach components on nearby shelves.

The MX-350

RF Settings Overview

The MX-350 is factory set to work out of the box with an MRF-100 base station, which is not addressable. The only setting that affects operation with an MRF-100 is the RF/IR setting (to operate, the MX-350 must be set to IR/RF or RF- it will not operate the MRF-100 in IR mode). The MX-350 will operate with an MRF-250 or MRF-350 base station set to ID#0 with the factory default settings. However, in order to gain the advantages of addressable base stations (no interference between systems within one house or a condo development with potential interference between two different condos, turning the front blaster on or off, or routing identical commands to a stack of identical televisions or satellite receivers etc.) you must reset the MX-350 and the Base Station ID# to any address other than ID#0. ID#0 is an "open door" to any RF signal, it is not a true address. It is extremely useful for testing whether any interference is present, since the base station's STATUS LED will flicker if interference is present. Once the base station is moved to a location where the LED does not flicker, the ID# can be changed to one of the other addresses.

Note that ID#0 does not allow any emitter or blaster configuration. Before changing any emitter or blaster settings, you must reset the ID# to an address other than 0. Here are the factory default RF settings of the MX-350:

IR/RF (Type of Signal) - All devices are factory set to send both an IR line of sight signal and an omnidirectional RF signal.

ID# (Base Station Address) - All devices are factory set with ID #0.

EMITT (IR Emitter Line Output) - All devices are factory set to output IR commands through ALL IR Emitter Line Outputs.

BLAST (Base Station Front Panel Blaster) - The blaster is factory set to be on.

Changing the RF Settings

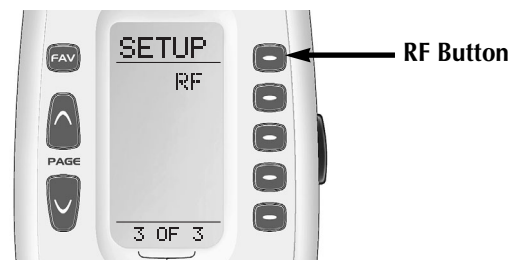
- 1 Enter SETUP mode by pressing and holding both MAIN and ENT for three seconds.

Note: You have 30 seconds for each step, otherwise the MX-350 will time out automatically.

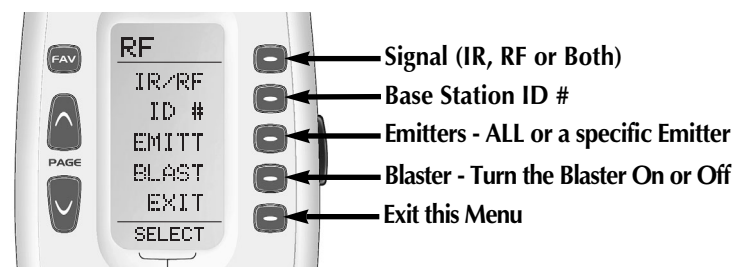
- 2 Press the PAGE buttons until page three of Setup is displayed (RF is the only choice on Page 3).

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- 3 Press the RF button.



- 4 The RF Settings Menu appears. See the notes on the following pages for more info on each option. Make your selection by pressing the button you want:



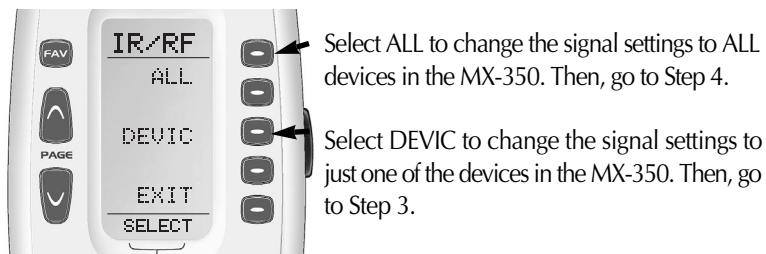
- 5 After you've made a new setting and SAVED your change, use the EXIT button to return to the RF settings menu to change any other setting. Once you are finished all settings, use the MAIN button to return to normal operation

IR/RF Signal Setting

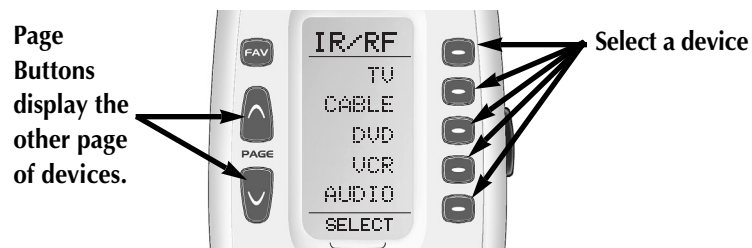
You can set the signal to be IR line-of-sight only, RF only or IR and RF simultaneously. Additionally, you can set the signal the same way for ALL ten of your devices OR you can set the signal differently for each device (the plasma TV could be set to be IR line-of-sight only, while the DVD player and the Satellite receiver are set to be RF only). A good reason to set the signal to RF only is to prevent too much IR being sent to a sensitive component from two arrivals at the front panel (one directly from the MX-350, one from the RF base station). A good reason to set the signal to IR only is that another room has an MRF-100 base station (no RF address) so it will receive commands from the MX-350 unless it is set to IR only.

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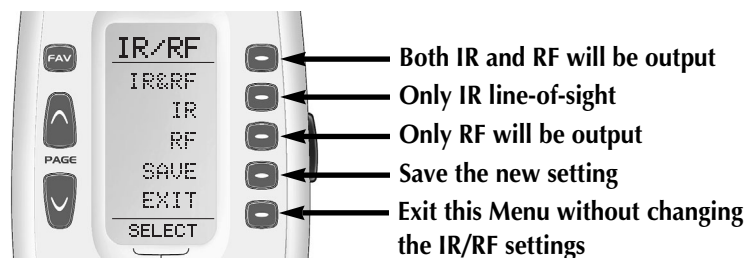
- 1 From the RF Settings Menu, select IR/RF.
- 2 Decide whether you are changing the Signal for all devices or just one of the devices of the MX-350.



- 3 The display changes to a list of the names of your devices. If you have two pages of devices, pressing either of the page buttons will display the other page. Select the device you would like to change IR/RF settings, then go to Step 4.



- 4 Select the new setting by pressing the desired button, then press SAVE to save your new setting and return to the RF settings menu.



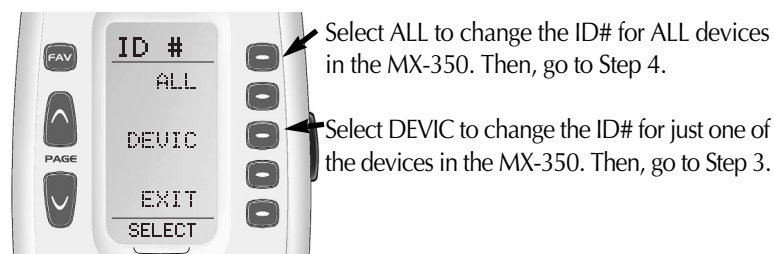
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ID # - Setting Base Station Address

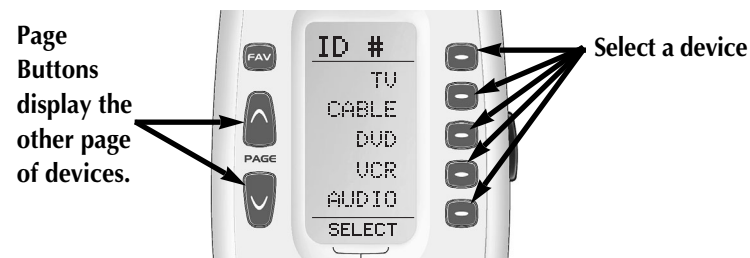
When you are installing a system within 100 feet of another equipment location in the same home OR near a home, condo, yacht or motor home that might potentially have an RF remote control of any kind, it is recommended that you use an addressable base station and set the address as described here.

You can operate up to 15 different equipment locations, each with an MRF-250 or MRF-350 assigned a unique Receiver ID#. You program each or all of your MX-350 devices to the appropriate equipment location by assigning the corresponding ID# in the RF Settings Menus.

- 1 From the RF Settings Menu, select ID#.
- 2 Decide whether you are changing the ID# for all devices or just one of the devices of the MX-350.

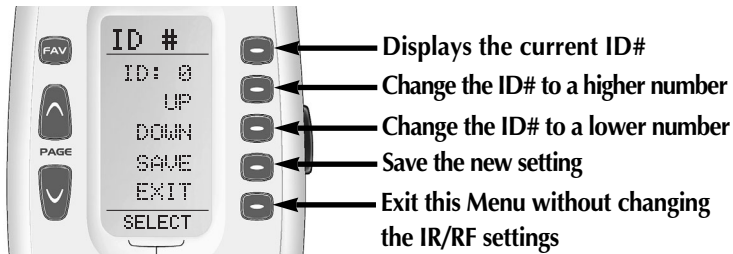


- 3 The display changes to a list of the names of your devices. If you have two pages of devices, pressing either of the page buttons will display the other page. Select the device you would like to change the ID#, then go to Step 4.



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- 4 Select the new setting by pressing the desired button, then press SAVE to save your new setting and return to the RF settings menu.



EMITT - Setting IR Emitter Outputs

The MRF-250 and MRF-350 Base Stations enable you to route or steer the IR commands from any Device to any or all of the IR Line Outputs. This allows you to control identical devices using the exact same IR commands (such as an array of television sets in a media room or a stack of identical satellite receivers installed in a central location with one satellite receiver dedicated to each room with a television). Each button push (or macro step) is routed to the specific IR Line Output you've assigned to a device. In the factory set default settings, the MX-350 is set to route IR commands from any device to ALL IR Line Outputs simultaneously. To change the MX-350 default settings follow these steps:

- 1 From the RF Settings Menu, select EMITT.
- 2 Decide whether you are changing the Emitter settings for all devices or just one of the devices of the MX-350.

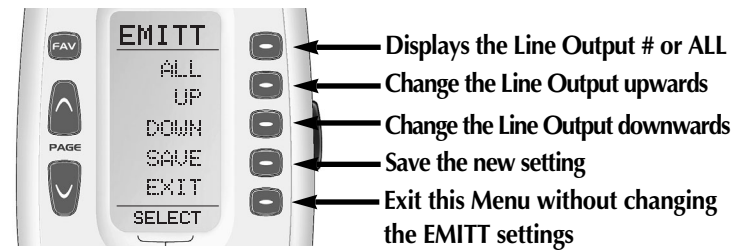


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- 3 The display changes to a list of the names of your devices. If you have two pages of devices, pressing either of the page buttons will display the other page. Select the device you would like to change the Emitter settings, then go to Step 4.



- 4 Select the new setting by pressing the desired button, then press SAVE to save your new setting and return to the RF settings menu.



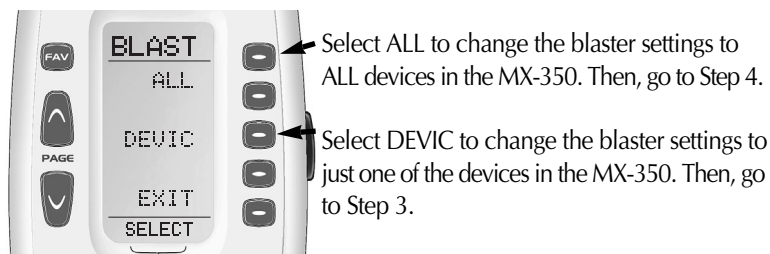
BLAST - Setting the Front Panel Blaster On or Off

The MRF-250 and MRF-350 Base Stations have a configurable front panel high power IR LED or "blaster" for controlling components in the same cabinet space without emitters attached to their front panel. The front panel blaster can overpower or saturate the sensors of some A/V components, so if intermittent operation occurs, the blaster should be turned off.

The blaster is incompatible with a stack of identical components, since all components will receive IR commands at once, no matter what device is selected. Turn off the front panel blaster by following the steps described on the next page:

The MX-350

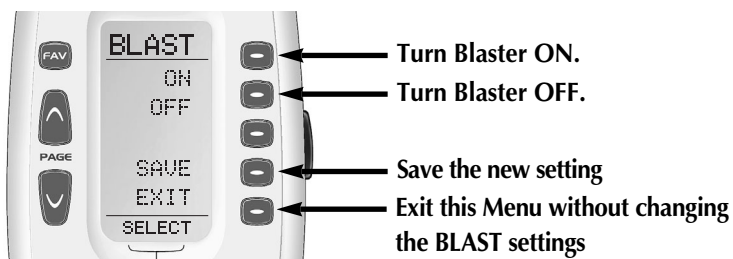
- 1 From the RF Settings Menu, select **BLAST**.
- 2 Decide whether you are changing the Blaster for all devices or just one of the devices of the MX-350.



- 3 The display changes to a list of the names of your devices. If you have two pages of devices, pressing either of the page buttons will display the other page. Select the device you would like to change IR/RF settings, then go to Step 4.



- 4 Select the new setting by pressing the desired button, then press **SAVE** to save your new setting and return to the RF settings menu.



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Pre-Programmed Code Tables

The MX-350's Pre-Programmed code library is divided into categories (TV, VCR, AUX, etc.). Each category actually includes many types of components. For example, the VCR category includes TV/VCR combo units.

Within each category, the code numbers are listed in rows by brand (Sony, Panasonic, B & K, etc.). Some brands have more than one three digit code for you to try. Just circle the correct row and refer to it while you setup (step-by-step instructions for using Pre-Programmed codes are found on page 5).

TV	TVs, Plasma/LCD TVs, Projectors and Monitors	Pages 38-41
CABLE	Cable TV Descramblers/Tuners and WEBTVs	Pages 41-43
DVD	DVD Players, TV/DVD Combos, TV/DVD/VCR Combos, DVD Recorders, and Laser Disc Players	Pages 43-46
VCR	VCRs and TV/VCR Combos	Pages 46-48
AUDIO	Amps, Preamps, A/V Receivers and XM Radios	Pages 48-52
SAT	Satellite Receiver	Page 52-53
CD	CD Players and Changers	Pages 54-55
DVR	Digital Video Recorders (TiVo, Replay)	Page 55-56
AUX	Media PCs, GAME Systems, iPod, TAPE Decks, Lighting Systems and Custom Installation Products	Pages 56-59

TV - TVs, Plasmas, Projectors and Monitors

BRAND	CODE NUMBERS
ADMIRAL	072 081 161 160
ADVENT	247 388
AKAI	197 146 248 404 405 458
AMARK	112 143
AMPRO	073 167 157 183
AMSTRAD	052
ANAM	043 054 056 080 112 131
AOC	197 004 112 058
APEX DIGITAL	006 310
AUDIOVOX	076 103 273 452 453 454
AVENTURA	401
AVION	441
BARCO	233
BENQ	423 443
BLAUPUNKT	088
BOXLIGHT	266
BROKSONIC	238
CAIRN	201
CANDLE	197 002 003 004
CAPEHART	058
CETRONIC	043
CITIZEN	197 002 003 004 043 101 103 143
CLASSIC	043
CONCERTO	004
CONTEC	043 050 051
CORONADO	143
CRAIG	043 054
CROWN	043 143
CURTIS MATHES	197 101 004 143
CXC	043
DAEWOO	004 016 043 044 076 103 114 125 127 143 269 369
DAYTRON	004 143
DELL	319 320 321
DIBOSS	329
DIGITAL PROJECTION	437
DREAMVISION	235 312 313 314 343 344 345
DURABRAND	401
DWIN	177 226 257
DYNASTY	043
DYNATECH	062
EIKI	187
ELECTROHOME	024 076 143 196
EMERSON	197 004 005 028 043 047 048 050 051 076 096 143 151 153 154 155 401
EPSON	324
ESA	323
FISHER	007 057
FUJITSU	198 223 219 246 299 346 396 410
FUNAI	028 043 052 401
FUTURETECH	043
GATEWAY	242 268
GE	197 008 009 034 056 073 074 130 144 155 160 161 165 004 091 157 183
GEM	391
GOLDSTAR	004 102 106 112 113 116 119 127 143
GRUNDIG	220 083
HALL MARK	004
HANNSPREE	381

TV (continued) - TVs, Plasmas, Projectors and Monitors

BRAND	CODE NUMBERS
HISENSE	419
HITACHI	411 004 009 010 011 012 023 075 143 158 163 166 072 221 250 311 361 380
	460
HP	421 316 327 378 379
HYUNDAI	337 338
INFINITY	164
INFOCUS	449 333 230 330 331 332 252 409
INSIGNIA	350 399 400 401 402 403
JBL	164
JCPENNEY	197 004 008 009 024 030 065 101 143 156 160
JENSEN	013
JVC	420 034 038 070 083 145 199 210 240 241 244 245 317 318 406
KEC	043
KENWOOD	197 070
KLOSS	002 059
KMC	143
KNOLL SYSTEMS	230 409
KTV	197 043 143 154
LG	363 365 243 284 283 286 364 366
LODGENET	072
LOEWE	222 223 224 164 322 422
LOGIK	072
LUXMAN	004
LXI	166 007 015 052 081 160 164
MAGNAVOX	197 003 004 022 059 060 061 063 064 127 160 164 094 226 390
MARANTZ	197 164 184 397 281
MATSUI	164
MAXENT	242
MEMOREX	007 072 004
METZ	088
MGA	197 004 024 028 042
MINERVA	088
MINTEK	362
MISAKAI	401
MITSUBISHI	450 004 024 028 040 042 109 124 146 191 225 237 267 300 348
MTC	197 004 062 101
NAD	015 025
NEC	272 448 132 130 134 197 040 016 024 056 019 236 237 262 281 428
NIKEI	043
NUVISION	351
OLEVIA	432 376 394
ONKING	043
ONWA	043
OPTOMA	249 265 270 360
OPTONICA	019 081
ORION	096
PANASONIC	429 034 056 080 092 164 208 261 296 295 297 298 359 377 383 430
PHILCO	197 003 024 056 059 060 063 064 164 004
PHILIPS	274 197 003 004 005 038 059 093 164 127 184 206 259 260 264 294 424 425
	431
PHILIPS/MAGNAVOX	294 239 260
PIONEER	459 447 197 018 023 025 116 135 190 203 204 209 234 237 334 335 336 374
	385 393 397 438
POLAROID	352 353 354 355 356 357 358 388
PORTLAND	004 143
PROJECTIONDESIGN	417 418

TV (continued) - TVs, Plasmas, Projectors and Monitors

BRAND	CODE NUMBERS
PROSCAN	144 160 161 165 167
PROTON	004 058 131 143 171 173 193 392
PROTRON	392 398
QUASAR	034 056 092
RADIO SHACK	019 043 143 004 127
RCA	333 160 161 165 065 156 144 197 004 023 024 056 074 152
REALISTIC	007 019 043 047
ROCTEC	186
RUNCO	168 169 178 179 180 181 182 183 073 157 340 341 342 395 414 415 416
SAMPO	197 058 004 202
SAMSUNG	463 004 050 089 101 105 127 143 160 211 228 229 253 254 258 275 309 375 384 427 434 461 462 464
SANYO	166 007 020 053 057 082 187 266 347
SCEPTRE	276
SCOTT	004 028 043 048 143
SEARS	015 030 004 007 028 057 143 094 160 082 165 166
SELECO	189 200 212 227 205
SHARP	326 170 081 019 028 029 014 004 022 143 175 214 251 306 307 308
SHERWOOD	349
SIEMENS	088
SIGNATURE	072
SIM2	205 200 313
SOLE	231 232
SONY	446 070 085 139 147 126 185 194 207 213 277 278 279 412 413 444 445
SOUNDESIGN	004 028 003 043
SPECTRICON	112
SSS	004 043
SUPERSCAN	401
SUPREMACY	002
SVA	328
SYLVANIA	197 003 059 060 063 064 164 044 160 127 052 401
SYMPHONIC	052 401
SYNTAX OLEVIA	376 394 432
TANDY	081
TATUNG	056 062
TCL	426
TECHNICS	034 080
TECHWOOD	004
TEKNIKA	002 003 004 024 028 043 072 101 143
TELEFUNKEN	037 046 086 087
TELERENT	072
TERA	172
THOMPSON	215
TMK	004
TOSHIBA	455 007 015 030 040 062 101 138 216 287 290 291 230 288 289 292 293 315 237 325 382 456 465
TOTEVISION	143
UNIVERSAL	008 009
VIDEO CONCEPTS	146
VIDIKRON	342 174 184 188 192 340 395 406 414 415 439 440
VIDTECH	004
VIEWSONIC	271 242 389 390 433
VIZIO	386 387
WARDS	004 008 009 019 028 060 061 063 064 072 074 143 164 034
WESTINGHOUSE	076 280 435 436
WINBOOK	339

TV (continued) - TVs, Plasmas, Projectors and Monitors

BRAND	CODE NUMBERS
YAMAHA	197 004 370 371 372 373 407 408 451
YORK	004
YUPITERU	043
ZENITH	363 072 073 095 103 157 183 217 243 282 283 284 285 286
ZONDA	112

CABLE - Cable Set Top Boxes

BRAND	CODE NUMBERS
ABC	103 003 004 039 042 046 053
ADELPHIA	043 074 110 111
ADVANCED NEWHOUSE	043
ALTRIO	043
AMERICAST	099
ANTRONIX	014
ARCHER	005 007 014
ARMSTRONG	074
AT&T BROADBAND	074
ATLANTIC BROADBAND	043 074
BELL SOUTH	099
BLUE RIDGE	043 074
BRESNAN	074
BUCKEYE COMM	074
CABLEVISION	108 043 074
CENTURION	092
CENTURY	007
CHARTER	043 074 110 111
CITIZEN	007
COGECO	074
COMBANO	080 081
COMCAST	110 043 074
COMSAT	074
COMTRONICS	030
COX DIGITAL CABLE	043 074
DIGICABLE	101
EAGLE	020 030 040
EASTERN	057 066
ELECTRICORD	032
GEMINI	008 054
GE	072
GENERAL INSTRUMENT	103 002 003 004 008 009 010 069 074 104
GNC	099
GOLDEN CHANNEL	030
HAMLIN	049 050 055
HITACHI	103 055
INSIGHT	074
JERROLD	103 002 003 004 008 009 010 069 074 104 109 110
M-NET	037
MAGNAVOX	010 012 064 079 094
MASSILLON	074
MEDIA ONE	107
MEDICOM	074
MEMOREX	052

CABLE (continued) - Cable Set Top Boxes

BRAND	CODE NUMBERS
MOTOROLA	103 002 003 004 008 009 010 069 074 104 109 110 111 112
MOVIE TIME	028 032
MOXI	111
NCTC	074
NOVAPLEX	092
NSC	015 028 038 071
OAK	031 037 053
PACE	043 074
PANASONIC	044 047
PARAGON	052
PHILIPS	006 012 013 020 085
PIONEER	103 034 051 063 076 105 043
PRUCER	059
PTS	011 071 074
PULSAR	052
QUEST	112
RCA	047
RCN	074
RECOTON	098
REGAL	049 050
REGENCY	057
RODGERS	043
SAMSUNG	030
SCIENTIFIC ATLANTA	003 011 041 042 043 045 046
SEREN	043
SERVICE ELECTRIC	074
SHAW	074
SIGECOM	043
SIGNAL	030
SIGNATURE	103
SL MARX	030
SONY	108
SPRUCER	047 078
STARCOM	002 004 008 009
STARGATE	008 030 097 104
SUSQUEHANNA	043 074
TADIRAN	030
TIMELESS	030
TIME WARNER	043 074
TOCOM	039 040 056
TOSHIBA	052
UNIKA	007 014
UNITED CABLE	004 053
UNIVERSAL	005 007 014 032 035
VIDEOTRON	043
VIEWSTAR	012 015 018 086 087 088 089
WIDE OPEN WEST	043 099
ZENITH	052 060 093 100

CABLE - WEBTVs

BRAND	CODE NUMBERS
ECHOSTAR	106

CABLE (continued) - WEBTVs

BRAND	CODE NUMBERS
MITSUBISHI	102
SONY	096
PHILIPS/MAGNAVOX	095

DVD - DVD Players

BRAND	CODE NUMBERS
ADCOM	157
AIWA	136 146
ALPINE	098
AKAI	281
APEX DIGITAL	087 111 112 115 116
ARCAM	122
AUDIOVOX	284
CALIFORNIA AUDIO	021 124
CAMBRIDGE AUDIO	215 216
CARY AUDIO DESIGN	174
CINEVISION	219
CLASSE	167
COBY	258 260
CYBER HOME	133 227 271
DAEWOO	132
DENON	173 181 007 080 138
DURABRAND	143
EMERSON	143
ESA	143
GATEWAY	175
GE	026 027
GRADIENTE	021
GRUNDIG	083
GO VIDEO	137 091 217 218 219 220 221 222 224
HARMAN KARDON	084 140
HITACHI	101
FUNAI	143
ILO	268
INSIGNIA	143
INTEGRA	142 180 192 280
JVC	012 168 203 212 257
KENWOOD	123 151
KISS	179 279
KLH	135
KRELL	104
LECSON	126
LEXICON	148
LG	091 057 074
LITEON	264 265
MAGNAVOX	096 066 143 282
MALATA	267
MARANTZ	201 202 083 105
MCINTOSH	125
MEMOREX	163
MERIDIAN	153
MINTEK	111 282

DVD (continued) - DVD Players

BRAND	CODE NUMBERS
MITSUBISHI	017
MYRYAD	134 102
NAIM	226
NAD	088 155 278
NAKAMICHI	103
ONKYO	076 035 180 274
OPPO	266
PANASONIC	199 259 285 021 042 138 139 144 150 198 205
PHILIPS	166 277 066 095 105 176 276
PIONEER	283 272 023 092 099 107 108 131 162 172 178 213 232
POLAROID	233 234 235 236 237 284
PRIMARE	193 194
PROCEED	086
PROSCAN	026 027
RCA	026 027 273
RJTECH	269
ROTEL	204
SAMSUNG	200 159 254 275 056 070 119 137 165 170
SANSUI	154
SANYO	147
SENSORY SCIENCE	217 222 223
SHARP	094
SHERWOOD	245 246 247 248 249 250
SONY	126 286 033 118 145 160 189 191 238 239 240 241 242 243 251 252 253 261 262 263
SV2000	143
SYLVANIA	143
SYMPHONIC	143
TAG MCLAREN	156
TEAC	270
THETA DIGITAL	023
THOMPSON	026 027
THULE	177
TOSHIBA	183 273 035 034 128 141 130 164 184 185 186 187 188 214
VENTURER	149
VINC	161
YAMAHA	197 196 195 042 089 066 158 166
ZENITH	057 074 091 182

DVD - TV/DVD Combos

BRAND	CODE NUMBERS
AIWA	146
AUDIOVOX	284
DURABRAND	143
EMERSON	143
ESA	143
FUNAI	143
INSIGNIA	143
POLAROID	284
SAMSUNG	165
SV2000	143
SYLVANIA	143

DVD (continued) - TV/DVD Combos

BRAND	CODE NUMBERS
SYMPHONIC	143
TOSHIBA	130

DVD - TV/DVD/VCR Combos

BRAND	CODE NUMBERS
DURABRAND	143
EMERSON	143
ESA	143
INSIGNIA	143
MAGNAVOX	143
PANASONIC	144
SV2000	143
SYLVANIA	143
SYMPHONIC	143
TOSHIBA	164

DVD - DVD/VCR Combos

BRAND	CODE NUMBERS
CINEVISION	219
GO VIDEO	137 217 218 219
PANASONIC	150
PHILIPS	105 (VCR Functions for VCR067)
PIONEER	232
POLAROID	234
SAMSUNG	137 159 254
SANSUI	154
SENSORY SCIENCE	217
SONY	145 238 239 240 251 252 253
TOSHIBA	141 187 214
ZENITH	091 (VCR Functions for VCR171)

DVD - DVD Recorders

BRAND	CODE NUMBERS
CINEVISION	219
GATEWAY	175
GO VIDEO	218 219 220 221 222
ILO	268
KISS	279
LITEON	265
PANASONIC	139 259
PHILIPS	277
PIONEER	232 272
SAMSUNG	254
SENSORY SCIENCE	222

DVD (continued) - DVD Recorders

BRAND	CODE NUMBERS
SONY	191 238 239 240 241 242 243 251 252 253
TOSHIBA	188

DVD - Laser Disc Players

BRAND	CODE NUMBERS
DENON	206 207
FUNAI	120
KENWOOD	152 013
MAGNAVOX	032 121
MARANTZ	211
MITSUBISHI	121
NAD	121
OPTIMUS	049 013
PANASONIC	113
PHILIPS	032
PIONEER	106 117 121
RADIO SHACK	120
RCA	002
REALISTIC	049
RUNCO	127
SANYO	075
SHARP	152 013
SONY	053 110
TECHNICS	113
THETA DIGITAL	032
TOSHIBA	152 106
YAMAHA	043 129

VCR - VCRs

BRAND	CODE NUMBERS
AIWA	034 161 169
AKAI	016 043 046 124 125 142 146
AMPRO	072
ANAM	031
AUDIO DYNAMICS	012 023 039 043
BROKSONIC	035 037 129
CANON	028 031
CAPEHART	108
CRAIG	003 040 135
CURTIS MATHES	031 041
DAEWOO	005 007 010 065 108 110 111 112 116 117 119
DAYTRON	108
DBX	012 023 039 043
DYNATECH	034 053
ELECTROHOME	059
EMERSON	005 006 017 025 027 029 031 034 035 036 037 046 101 116 129 131 138 153
	162
FISHER	003 008 009 010

VCR (continued) - VCRs

BRAND	CODE NUMBERS
FUNAI	034
GE	031 063 072 107 109 144 147
GO VIDEO	132 136 155 040 115
GOLDSTAR	012 013 020 101 106 114 123
HARMAN KARDON	012 045
HITACHI	004 018 026 034 043 063 137 150 160 013
INSTANTREPLAY	031
JCL	031
JCPENNEY	012 013 015 040 066 101
JENSEN	043
JVC	012 031 043 048 050 055 060 130 150 152 166 172 173
KENWOOD	014 048 034 047
LG	171
LLOYD	034
LXI	003 009 017 034 106
MAGIN	040
MAGNAVOX	031 034 041 067 068 156 164
MARANTZ	012 031 067 069 156
MARTA	101
MATSUI	027 030
MEI	031
MEMOREX	003 010 014 031 034 053 072 101 102 134 139
MGA	045 046 059
MINOLTA	013 020
MITSUBISHI	013 020 045 046 051 059 061 142 151 049 168 174 175
MTC	034 040
MULTITECH	024 034
NEC	012 023 039 043 048
NORDMENDE	043
OPTONICA	053 054
ORION	025
PANASONIC	066 070 083 133 140 145 157 163 074 167
PENTAX	013 020 031 063
PHILCO	031 034 067
PHILIPS	031 034 054 067 071 101 156
PILOT	101
PIONEER	013 021 048
PORTLAND	108
PULSAR	072
QUARTZ	002 014
QUASAR	066 145 075
RADIO SHACK	123
RCA	013 020 041 107 109 140 144 145 147 034 040 158
REALISTIC	003 008 010 014 031 034 040 053 054 101
RICO	058
RUNCO	148
SALORA	014
SAMSUNG	032 040 066 102 104 107 109 112 113 115 120 122 125
SANSUI	022 043 048 135
SANYO	003 007 010 014 134 102
SCOTT	017 037 112 129 131
SEARS	003 008 009 010 013 014 081 101 017 073 112
SHARP	031 054 149 159 165
SHINTOM	024
SIGNATURE	034
SONY	003 031 052 056 057 058 076 077 078 149 154

VCR (continued) - VCRs

BRAND	CODE NUMBERS
SOUNDESIGN	034
STS	013
SYLVANIA	031 034 059 067
SYMPHONIC	034
TANDY	010 034
TATUNG	039 043
TEAC	034 039 043
TECHNICS	031 070
TEKNIKA	019 031 034 101
THOMAS	034
TMK	006
TOSHIBA	008 013 042 047 059 079 082 112 131 081 170
TOTEVISION	040 101
UNITECH	040
VECTOR RESEARCH	012
VICTOR	048
VIDEO CONCEPTS	012 034 046 141
VIDEOSONIC	040
WARDS	003 013 017 024 031 034 040 053 054 131
YAMAHA	012 034 039 043
ZENITH	034 048 056 058 072 080 101 171

VCR - TV/VCR Combos

BRAND	CODE NUMBERS
DAEWOO	005 117
EMERSON	153
FUNAI	034
GOLDSTAR	101 123
HITACHI	034
JCPENNEY	101
LG	101 123
LLOYD	034
MAGNAVOX	034 067
MEMOREX	101
PANASONIC	070 167
PHILIPS	034 067
RADIO SHACK	123
RCA	034
SEARS	101
SONY	057 154
SYLVANIA	067
SYMPHONIC	034
THOMAS	034
ZENITH	034

AUDIO - Amps, Preamps and A/V Receivers

BRAND	CODE NUMBERS
ADC	007

AUDIO (continued) - Amps, Preamps and A/V Receivers

BRAND	CODE NUMBERS
ADCOM	082 092 225 161 269 355 356 366
AIWA	018 104 170 202 203 213 211 188
AKAI	138 189
AMC	038 125 126 127 128 258 281 282
AMEND	054
AMX	196
ANGSTROM	142
ANTEX ELECTRONICS	588
ANTHEM	335 336 337 338 339
ARAGON	157 158 042 043 081 112
ARCAM	141 325 418 419 504 590 591 592 593 594
ATLANTIC TECHNOLOGY	342
AUDIO ACCESS	147
AUDIO ALCHEMY	135
AUDIO CONTROL	448 572 623
AUDIO DESIGN ASSOCIATES	194 221 011
AUDIO EASE	021 196 207
AUDIO FILE	071
AUDIO MATRIX	167
AUDIO RESEARCH	399 406 423 424 425 426
AUDIO SOURCE	273
AUDIO TECHNICA	134
B & K	096 097 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315
BOSE	409 460 548 070 170 224 347 459 532
BOSTON ACOUSTICS	447
BRIX	555
BRYSTON	023 551
CAMBRIDGE AUDIO	522 523 524 525 630 683
CARVER	006 027 028 061 071 201 214 226 180 185 022 029 077 284
CARY AUDIO DESIGN	443 519
CASIO	076
CHIRO	140
CINEMA SOUND	034 134
CITATION	148 272
CLASSE	410 411 484 537 538
CLARION	026
COLORADO VNET	539
COMPAQ	382
CURTIS MATHES	076
DELPHI	415 515
DENON	340 400 422 002 034 109 215 229 230 027 037 234 259 316 330 341 349 350 396 401 402 444 564 568 569 601 602 649 650 651 677 678 679 680 681
EIGER	149
ELAN	468 472 469 470 471 057 290 371 473 474 475 476 477 481 482 483 508 509
EAD	099 098 466 467
ESCIENT	368 381 393 451 452 453 454
FANFARE	352
FISHER	047 214 180 182 297
FLEXTRONICS	378
FOSGATE	062 231 342
GE	056 260
GOLDSTAR	008
HAFLER	174
HALCRO	596 597
HARMAN KARDON	318 231 233 254 153 154 118 121 227 277 317 329 365

AUDIO (continued) - Amps, Preamps and A/V Receivers

BRAND	CODE NUMBERS
HITACHI	020
IMERGE	371
INKEL	197
INSIGNIA	589
INTEGRA	486 441 570 354 371 438 439 440 442 487 586
JAMO	398
JBL	263 621 622
JCPENNEY	076 216
JEFF ROWLAND	206
JENSEN	058
JVC	279 240 163 191 114 266 291 389 390
KEF	530
KENWOOD	412 320 026 066 145 146 181 190 197 192 182 199 151 222 180 005 280 319 367 374 413 414 420 517 550
KINERGETICS	220 140
KLH	331
KLIPSCH	157 158 042 043 081 112
KNOLL	531
KOSS	216 573
KRELL	376 384 500 624 150 072 321 497 498 499 672 673 674
KYOCERA	007
LEXICON	357 360 120 235 236 237 324 358 359 361 362 363 364
LINN	124 377
LUXMAN	137 139 052 165 115 004 009
LXI	076 056
MAGNAVOX	086 164 152 208
MARANTZ	488 492 385 006 028 031 040 063 185 186 251 265 119 289 326 327 328 371 489 490 491 493 563
MARK LEVINSON	322
MCINTOSH	238 286 496
MCS	076
MERIDIAN	100 012 013 628
MICRO LAB	394
MICROMEGA	119
MITSUBISHI	242 243 204
MONDIAL	157 158 042 043 081 112
MOTOROLA	386
MUSICAL FIDELITY	407 408 647 648
MYRYAD	276 293 455 456 457
NAD	186 113 283 478 479 598 603 604 605
NAIM	533 534 535
NAKAMICHI	111 244 245 172 183 287 323 450 615
NEC	176
NETSTREAMS	616 617 618 619 620
NILES	403
NIRO	343
NUVO	404 405 606 607 608 609 610
OLIVE	584
ONKYO	486 441 017 046 064 107 108 187 079 080 090 179 209 270 275 438 439 440 442 486 487 536 552 586 629
OPTIMUS	026 041 138
OUTLAW	342
PANASONIC	032 195 219 177 292 383 516 626 627
PARASOUND	333 334 553 554 129 130 132 261 294 295
PASS LABS	431
PHAST	196

AUDIO (continued) - Amps, Preamps and A/V Receivers

BRAND	CODE NUMBERS
PHILIPS	249 250 251 063 119 296
PIONEER	480 542 014 033 039 044 045 050 069 159 168 116 035 078 198 397 513 518
	520 521 543 544 545 546 547 556
PLINIUS	458
POLKAUDIO	029 514
PRIMARE	461 462 463 464 465
PROCEED	144 268
QUAD	526
RCA	010 048 117 156 067 288 549
REALISTIC	019 056 073 075 095
REQUEST	351 511 611 612 613
ROKU	506 507
REVOX	162
ROTEL	501 502 503 074 083 085 654
RUSSOUND	379 391 392 445 446 527 528 529
SAMSUNG	016 571 653
SANSUI	040 048 110 119 065 228
SANYO	047 059
SCOTT	019 091
SEARS	076
SHARP	026 051 094 131 175 181 652
SHERWOOD	447 024 038 055 102 103 105 106 051 030 348 370 388 447 562 675
SIRIUS	585 555
SIMAUDIO	449
SLIM DEVICES	512
SONY	372 417 574 369 018 084 093 223 247 248 160 166 015 101 184 218 271 353 380 395 421 575 576 577 631 640 641 642 632 633 634 635 636 637 638 639
SOUNDESIGN	036
SOUNDSTREAM	084 088
SOUNDMATTERS	375
SSI	068
STS	007
SUGDEN	430
SUMO	171
SUNFIRE	344 345 346 494 495
TAEKWANG	138
TAG MCLAREN	387
TASCAM	625
TEAC	005 019 049 111 212 217
TECHNICS	122 176 193 219 178 177 200 257 262
THETA DIGITAL	136
THULE	505
TOSHIBA	060 087 198 278 510
TURTLE BEACH	416
WARDS	180
XANTECH	508 509
XM SATELLITE RADIO	415 514 515
YAMAHA	427 557 655 643 644 026 253 169 067 123 133 173 205 264 232 089 274 285 332 373 428 429 432 433 434 435 436 437 540 541 558 559 560 561 565 566 567 578 579 580 581 582 583 599 600 645 646 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 676
YBA	485
ZENITH	143 210
ZON	587

AUDIO - XM Radios & Tuners

BRAND	CODE NUMBERS
ANTEX ELECTRONICS	588
ARCAM	504 591
BOSE	170 532
DELPHI	415 515
FANFARE	352
KENWOOD	550
MYRYAD	457
NAD	113
NAIM	535
NUVO	404 405 606 607
MUSICAL FIDELITY	408 648
PIONEER	556
POLKAUDIO	514
PRIMARE	465
RUSSOUND	445 446
SIRIUS	585 555 550
SONY	380
TASCAM	625
XM SATELLITE RADIO	415 514 515

SAT - Satellite Receivers

BRAND	CODE NUMBERS
ALPHASTAR	123
AMPLICA	050
BIRDVIEW	129 113 051 126
BSR	053
CABLEVISION	148
CAPETRONICS	053
CHANNEL MASTER	013 014 015 018 036 055
CHAPARRAL	008 009 012 077
CITOH	054
CURTIS MATHES	050
DISH NETWORK	122 167 168 184 185 186 187 188
DIRECTV	173 193
DRAKE	005 006 007 010 011 112 116 141 052
DREAM MULTIMEDIA	191
DX ANTENNA	024 046 056 076
ECHOSTAR	038 040 057 058 093 094 095 096 097 098 099 100 122 167 168 184 185 186 187 188
ELECTROHOME	089
EURO PLUS	114
EUROSAT	114
EXPRESSVU	122
FORCE	176
FORTEC STAR	177 178
FUJITSU	017 021 022 027 133 134
GE	151 106 150
GENERAL INSTRUMENT	003 004 016 029 031 059 101 148
GOI	122
HITACHI	139 140
HIRSCHMANN	202
HOME CABLE	080 044 029

SAT (continued) - Satellite Receivers

BRAND	CODE NUMBERS
HOUSTON TRACKER	033 037 039 104 057 051
HTS	122
HUGHES	068 154 161 162 165 166
HYTEK	053
HYUNDAI	149
ICR	023
JANIEL	060 147
JERROLD	148
JVC	122
KATHREIN	108
LEGEND	057
LG	170
LUXOR	144 062
MACOM	010 059 063 064 065
MARANTZ	152 153
MEMOREX	057
MITSUBISHI	068 154
MOTOROLA	148 171
NEXT LEVEL	148
NEXTWAVE	028 124 125
NORSAT	069 070
NV	195 196 197
PACE	143
PANASONIC	142 060 160
PANSAT	121 172
PERSONAL CABLE	117
PHILIPS	071 152 153 068 154 156 201
PL	023 026
PRESIDENT	019 102
PRIMESTAR	110 030
PROSAT	072
PROSCAN	151 106 150
RADIO SHACK	148
RCA	151 106 150
REALISTIC	043 074
SAB	195 196 197 198 199 200
SAMSUNG	155 123 163 169 175 179
SATCRUISER	192
SATELLITE SERVICE	028 035 047 085
SKY	164 171 174
SONY	103 104
STARCAST	041
STAR CHOICE	148
SUPERGUIDE	020 124 125
TEECOM	023 026 075 087 088 090 107 130 137
TOSHIBA	002 127 157 158 068 154
TOWN & COUNTRY	023 026
UNIDEN	016 025 042 043 044 045 048 049 078 079 080 086 101 135 136
VIEWSTAR	115
VOOM	148
WINEGARD	128 146
ZENITH	081 082 083 084 091 120 159

CD - CD Players and Changers

BRAND	CODE NUMBERS
ADCOM	062 042
AIWA	059 012 065 088 089 105 122 170 187
AKAI	085 195 202
AMC	231 232
AMEND	118
ARCAM	238 275
AUDIO ACCESS	119 147
AUDIO EASE	165
AUDIO TECHNICA	046
BSR	037 057
CALIFORNIA AUDIO	103 008
CAMBRIDGE AUDIO	268
CAPETRONIC	063
CARRERA	057 080
CARVER	185 041 044 050 086 107 130 134 135 138 139 203 204 167
CASIO	111 182
CARY AUDIO DESIGN	261 262
CLASSE	267
CLARINETTE	182
CREEK	159
CROWN	035
DENON	002 123 281
EMERSON	042 069 102
FISHER	050 185 134 008
FRABA	111
GENEXXA	010 069 102
GOLDSTAR	080
HAITAI	093
HARMAN KARDON	018 033 047 208 272
HITACHI	042 175
INKEL	130 143 144
INTEGRA	030 273
JCPENNEY	014 061 092 141
JENSEN	158
JVC	004 022 136 163 213 214 242 243 286
KENWOOD	185 007 023 055 071 072 142 137 254
KOSS	061
KRELL	241 279 285
KYOCERA	005
LOTTE	102
LUXMAN	011 028 070 076 249 252
LXI	059
MAGNAVOX	044 107
MARANTZ	027 041 044 051 077 107 209 246 274
MCINTOSH	212 247
MCS	014 073 092
MEMOREX	010
MISSION	044 107
MITSUBISHI	179
MITSUMI	153
MODULAIRE	182
MONDIAL	147
MUSICAL FIDELITY	258 284
MYRYAD	244 265
NAD	006 005 067 178
NAIM	271

CD (continued) - CD Players and Changers

BRAND	CODE NUMBERS
NAKAMICHI	217 218 219 095
NEC	014 062
NIKKO	046
NSM	044 107
ONKYO	030 038 039 168 169 273
OPTIMUS	010 050 057 058 081 082 083 085 093 195
PANASONIC	103 201 172 008 068 248
PARASOUND	233 240
PHILIPS	041 044 107 246 253
PIONEER	010 020 025 056 174 175 176 257 263
PRIMARE	266
PROCEED	239
PROTON	044 107 228
QUAD	269
QUASAR	103 008
RADIO SHACK	182
RCA	017 042 150 276
REALISTIC	042 050 051 102 181 182 187
ROTEL	044 107 161 178 250
SAE	044 107
SANSUI	044 069 107 128 171 190 125
SANYO	050
SCOTT	069 102
SHARP	026 031 051 066
SHERWOOD	003 019 051 096 112 115 119 166
SIGNATURE	033
SIMAUDIO	280
SONY	048 081 097 126 133 177 225 226 164 229 230 259 260 277 278
SOUNDESIGN	251
SUGDEN	264
SUMO	155
SYLVANIA	044 107
SYMPHONIC	052 181
TAEKWANG	195 085
TANDY	010
TEAC	015 034 036 051 052 101 131 140 079
TECHNICS	060 103 200 172 184 008 068
TECHWOOD	076
THETA DIGITAL	234 235 270
TOSHIBA	006 067 091 160 148
VECTOR RESEARCH	080
VICTOR	004 022 114 124
WARDS	185 033
YAMAHA	024 046 054 186 183 245 282 283 287
YORX	182

DVR - Digital Video Recorders (TiVo, Replay)

BRAND	CODE NUMBERS
DIRECTV	117 121 122 123 124 125 126 127 128
HUGHES	117 121 122 123 124 125 126 127 128
HUMAX	118 121 122 123 124 125 126 127 128
PHILIPS	090 117 121 122 123 124 125 126 127 128

DVR (continued) - Digital Video Recorders (TiVo, Replay)

BRAND	CODE NUMBERS
PIONEER	117 118 121 122 123 124 125 126 127 128
RCA	109
REPLAY TV	075
SONY	104 105 131
TIVO	090 117 118 121 122 123 124 125 126 127 128

AUX - Custom Installation Products

BRAND	CODE NUMBERS
3M	152
ADS TECH	404
AHANIX	260
AIWA	164
ALGOLITH	415
APPLE	401 412
ARCHER	155
AUDIO AUTHORITY	427 428
AURORA	300
AUTON	191
AURORA MULTIMEDIA	220
BEDIENUNGSANLEITUNG	221
BOSE	409
CALYPSO	491 492 493 494
CE LABS	298
CELADON	211
CRESTRON	213 214 215 216 217 218
DA LITE	269
DDI	403
DELL	261 262 263 264 265 266 267 268
DLO	418
DMX	156
DRAPER SCREEN	204
DREAMVISION	097
DVDO	299 423
DWIN	080 253
ELAN	451 452 453 454 455 456 457 458
ELITE SCREENS	431 432
EVERQUEST	206
EXTRON	151
FARENHEIT	430
FAROUDJA	184 254
FUJI	209
GATEWAY	261 262 263 264 265 266 267 268
HAUPPAUGE	294 295
HP	252 261 262 263 264 265 266 267 268
HUNTER DOUGLAS	219
IOGEAR	407
IPOINT	419
JERROLD	153
JVC	185 416
KALEIDESCAPE	259 459
KENSINGTON	406
KENMORE	251

AUX (continued) - Custom Installation Products

BRAND	CODE NUMBERS
KENWOOD	185
KEY DIGITAL	273 274 275
KEYSPAN	297
KLIPSCH	425
LG	296
LINKSYS	270
LUTRON	417
LUXOM	424
MAKITA	186 201
MICROSOFT	107 252 261 262 263 264 265 266 267 268 408
MINDPATH	205
NILES	160 187 272
NSM	161
NTI	421
PIANO DISC	085
PINNACLE	405
POLK AUDIO	162
PRIMARE	402
RCA	258
RUSSOUND	081
SCIENTIFIC ATLANTA	156 163
SIMA	082 429
SOLO ELECTRONICS	207
SOMFY	078 079 411
SONANCE	419
SONY	164 165 166 271 261 262 263 264 265 266 267 268 414
STARCOM	153
TEN TECHNOLOGY	401
TOSHIBA	261 262 263 264 265 266 267 268 271
TURBOSCAN	167
VELODYNE	203 413
WINBOOK	261 262 263 264 265 266 267 268 271
WURLITZER	410
XANTECH	168 169 170 171 172 276 277 278 279 280 281 282 283 284 285 286 287 288
	289 290 291 292 293 420 426

AUX - Media PC Controls

BRAND	CODE NUMBERS
AHANIX	260
DELL	261 262 263 264 265 266 267 268
GATEWAY	261 262 263 264 265 266 267 268
HAUPPAUGE	294 295
HP	252 261 262 263 264 265 266 267 268
KEYSPAN	297
MICROSOFT	252 261 262 263 264 265 266 267 268
SONY	261 262 263 264 265 266 267 268 271
TOSHIBA	261 262 263 264 265 266 267 268 271
WINBOOK	261 262 263 264 265 266 267 268 271

AUX - GAME Systems

BRAND	CODE NUMBERS
MICROSOFT/XBOX	107 408
SONY	414

AUX - iPod Controls

BRAND	CODE NUMBERS
APPLE/iPod	401 412
BOSE	409
DLO	418
IPOINT	419
KENSINGTON	406
SONANCE	419
TEN TECHNOLOGY	401

AUX - Tape Decks

BRAND	CODE NUMBERS
AIWA	015 071 100 114
CARVER	006 008 027 024 036 137
DENON	105 227 229
FISHER	064
GOLDSTAR	011
HARMAN KARDON	233
JVC	106 116 239 240
KENWOOD	005 013 023 026 064 145 146 181 190
LINN	124
LUXMAN	035 137 139
MAGNAVOX	027
MARANTZ	014 027 056 065 087
MCINTOSH	238
MITSUBISHI	242 243
NAD	029 048
NAKAMICHI	244 245 025
ONKYO	002 012 016 017 018 019 115
OPTIMUS	026 054 055
PANASONIC	007 010 032 088 195
PHILIPS	027 087
PIONEER	003 039 047 050 066 098 222
QUASAR	007 088
SANSUI	027 113 119 224
SHARP	026 057 131 175 181
SHERWOOD	038 004 028 030 033 034
SONY	020 022 052 084 089
TEAC	009 059
TECHNICS	007 010 076 088 109 122 193
TOSHIBA	112
VICTOR	106
YAMAHA	021 026 031 067 040

AUX - Lighting Systems

BRAND	CODE NUMBERS
COLORADO VNET	311 312 313 314 315 316 317 318
X-10	093 183 257
LITE TOUCH	208 212
LIGHTOLIER CONTROLS	307
LUTRON	077 158 159 306 308 309
RAKO	301 302 303 304 305
XANTECH	188 189

The MX-350

Frequently Asked Questions

What is a “macro” button?

It is an MX-350 button you set to make a lot of things happen when you press it. For example, to watch a DVD in most home theaters requires several remote controls and many button presses (power up the TV, power up the surround sound, power up the DVD player, set the TV to the correct video input, set the surround sound to the correct audio input and finally; press play on the DVD player remote control).

Instead of pressing all of those buttons one at a time, the MX-350 enables you to setup one button that does it all automatically with one press. For more information on how and why you should setup macro and favorite channel buttons, read pages 19-22.

If the batteries run out, will I lose my settings?

No. The MX-350 stores all of your settings in non-volatile FLASH memory. You could remove the batteries for months, replace them at your convenience and the MX-350 would still remember your settings.

Who can I call for more answers?

The Universal Remote Control technical support and customer service staff are ready to answer any questions you might have.

*Call us at 1-914-835-4484
Monday - Friday, 9AM to 6PM (EST)*

Universal Remote Control, Inc.

Warranty

The MX-350 is covered against any manufacturers defects or workmanship for a period of one year from the date of purchase if purchased from an authorized Universal Remote Control dealer. Units purchased from online auction sites or other unauthorized resellers have no warranty. This warranty does not cover the following items:

- Damage from misuse, neglect, or acts of nature.
- Products that have been modified or incorporated into other products.
- Products purchased more than 12 months ago.
- Units purchased from unauthorized dealers or companies.

Specifications

Learning Capability - 784 IR commands at standard frequencies (15KHz to 455 KHz)

Macro Capability - 472 Macros of up to 190 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: 8 oz. (with batteries)

Size: 8.5" x 2 7/16" x 1"

Batteries: Four AAA Alkaline batteries included

LCD Size: approximately 7/8" x 1-7/8"



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