Home Theater Master®
LCD Screen
Preprogrammed and Learning
Remote Control

MX-500™
Operating
Manual

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Congratulations! You have purchased one of the most sophisticated remote controls on the market.
The MX-500™ has been designed to provide a new standard in remote control technology offering a very powerful and flexible preprogrammed and learning product.

Setting up your MX-500™ to operate your components is easy. Please follow the instructions in the manual and retain the manual for future reference. If any words used are unfamiliar to you, please refer to page 46 for a **Glossary** of terms used in this manual.

Your MX-500™ can operate up to ten home entertainment and home automation components by using the preprogrammed code library in the remote control, by teaching up to 530 commands into the MX-500™ from your original remote controls, or a combination of both.

The MX-500™ has many additional operating features to add convenience and enjoyment to the operation of your home entertainment system. You can create your own labels of the buttons on the LCD screen; program 50 favorite channel buttons; operate the volume, channel and transport buttons from one device when you are in another device; and have multiple things done with one press of a button!

There is also a list of **Frequently Asked Questions (FAQ)** for the MX-500™ on the website that may prove to be helpful. Visit www.hometheatermaster.com for FAQs.

For any questions or comments about the MX-500™, please visit our website, www.hometheatermaster.com or contact us at:

Universal Remote Control, Inc.
500 Mamaroneck Avenue
Harrison, NY 10528
Tel: 914-835-4484

You can also e-mail us at service@urcmx.com.
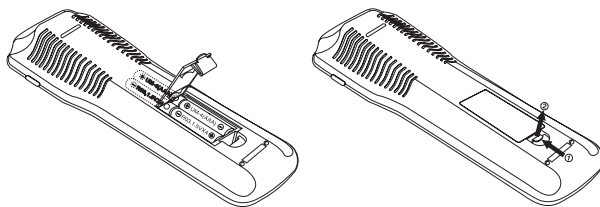Regular customer service hours are 9:00 AM to 6:00 PM EST, Monday – Friday.

A. Battery Installation

Before the remote control can be used, the batteries need to be installed. First, remove the battery cover on the back of the unit and install the four AAA batteries inside the battery compartment as shown. Make sure the batteries line up with the (**+**) and (-) markings. Improper installation could damage the remote control. When you're done, slide the battery cover back on. The remote control starts up automatically and the default devices will appear on the LCD screen.

B. Battery Life

Under normal operating conditions, the batteries will last approximately six months. If the batteries are running low, you will notice reduced range from the remote, commands that are not sent properly, or are not sent at all. You may also notice the backlighting of the LCD screen and the buttons is diminished. Should any of these occur, replace the batteries immediately. To ensure proper performance of the unit, use 4 new AAA alkaline batteries.

The remote control will retain the commands and settings in memory even after the batteries are low or become discharged. See Memory Lock on page 46. However, you should replace the worn batteries with a fresh set as soon as possible. Do not mix new and used batteries.

A. Description of Devices

The MX-500™ is designed to operate up to ten components including **Audio Receivers, Cable and Satellite Boxes, TV, DVD (LD), VCR1, VCR2, CD, Tape and AUX.** However, each of the device buttons and corresponding functions can be changed to meet your individual requirements. Almost any device that uses infrared commands can be controlled by the MX-500™, including Home Automation, Personal computers and more.

Tip: The auxiliary function (AUX) could be used to operate lighting controls; or the second VCR (VCR2) could be changed to operate a second TV,etc.

Each device button on the main screen contains two sub-pages of commands and you can change the name of any LCD button using up to five alphabet characters, numbers and symbols to customize the unit to fit your audio/video devices. Please refer to "LCD Button Editing" on page 39 for additional details.

B. Preprogrammed Codes

The MX-500™ comes with extensive preprogrammed IR codes for practically all major audio and video equipment. You can set up and operate all of your components with the MX-500™ by simply entering a three-digit code number assigned to your brand of component. The code numbers for the various brands of components are listed in the back of this instruction manual. Please refer to the programming instructions shown on page 13 for details.

C. Learning From Other Remote Controls

The MX-500™ can learn codes from your original remote controls. There are 26 LCD screens in the MX-500™. Each screen (page) has ten function buttons, including the ten device buttons on the main menu screen that can be taught. In addition, there are 31 buttons and a joystick (thumbpad) that can be taught for each of the ten devices. You can teach up to 530 new functions into the remote control. Please refer to page 19 in this instruction manual for details.

D. Macro Operations

A "macro" is a series of commands that you choose to be sent out with the push of one button. Any function available on your original remote control or in the preprogrammed database can be added to a macro to completely automate what you would normally do by pushing buttons one at a time. It can be as simple as turning on your TV and Cable Box, turning the TV to the appropriate channel for operation with the Cable Box, and changing the Cable Box channel to your favorite morning news. A macro can be configured to Power On your TV, DVD player and receiver, change to the appropriate inputs and outputs, dim your lights and start a movie. It can be as simple or as comprehensive as you want.
There are two types of macro buttons you can use for macro operations:

M1, M2, M3, POWER and SYSTEM OFF Buttons

The M1, M2, and M3 are called "system-wide" buttons because they send out the same signal no matter what device you are currently controlling. The POWER and

SYSTEM OFF buttons can be made "system-wide" if they are programmed with macros.
(*Note: Programming the POWER or SYSTEM OFF buttons with a macro overrides the preprogrammed or learned code on the button.*)
See page 26 of this manual for further information. Each of these five buttons is designed to be able to send out a series of up to 20 commands you program into the buttons. One common use is to turn on and turn off all of your A/V components with one button press, but the buttons can be programmed with whatever macro you desire.

Ten Device Buttons

There are ten device buttons and each of these device buttons can send out a series of up to 20 programmed commands when pressed for more than **one second.** These buttons are commonly used in sending audio input codes when you press the button to go to a device. The audio receiver would make an automatic input switch according to the device button you pressed. However, these buttons can be programmed with whatever macro you desire.

E. Favorite Channel Buttons

You can create up to 50 favorite channel buttons in the MX-500™ by programming the most frequently watched channel numbers into these buttons. Each of these buttons can send out up to 10 commands. Please refer to page 24 of the manual for Favorite Channel Programming.

F. Punch Through Operations

The MX-500™ can be set up to operate your audio component volume control buttons (VOLUME UP and DOWN and

MUTE) while all the other buttons control other equipment. You can also set up the remote to operate channel control and transport functions (PLAY, STOP, REWIND, FAST FORWARD, SKIP-, SKIP+, PAUSE and RECORD buttons) from VCR, DVD, LD, CD or any other mode while all other buttons in the remote control are controlling other components. Please refer to page 32 in the manual for details.

G. Editing LCD Text

You can write your own text on each of the twenty-six LCD screens. Please refer to page 39 in the manual for details.

H. Cloning The MX-500™

The MX-500™ is capable of sending all the programmed codes and operations from one MX-500™ to another MX-500™. Please refer to page 43 in the manual for details.

I. All Other Operations

You can set the duration of the backlight on time and change the LCD screen contrast. Please refer to pages 42 and 44 in the manual for additional details.

Note: The last Device selected will remain active when you are on the MAIN page and will be shown at the bottom of the LCD screen. For example, if you are using "TV" and then return to the MAIN page, the hard buttons remain in TV mode. The LCD buttons only change when you select another device.

J. LCD Screen And Button Layout
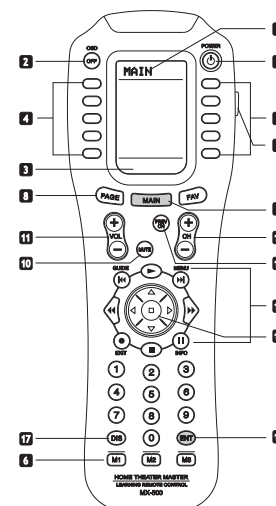
1 Displays the name of the device selected.
2 System off (Power off)
3 Displays page number.
4 Displays the device and function names.
5 LIGHT button.
6 MACRO buttons.
7 MAIN DEVICE menu button.
8 LCD Page change button.
9 POWER
10 MUTE
11 VOLUME
12 CHANNEL
13 Previous channel button.
14 TRANSPORT functions(PLAY, STOP, REWIND and FF) for VCR, CD and DVD etc.
15 JOYSTICK button(UP, DOWN, LEFT, RIGHT and ENTER) to move the cursor and enter the selection by pushing down the joystick in the center. Also called THUMBPAD.
16 ENTER
17 DISPLAY

K. System Settings

All programming is done by first entering the SETUP mode in the remote control. Press both the MAIN and ENTER buttons simultaneously for **three seconds** to enter the SETUP mode. SETUP will be shown at the top of the LCD screen.
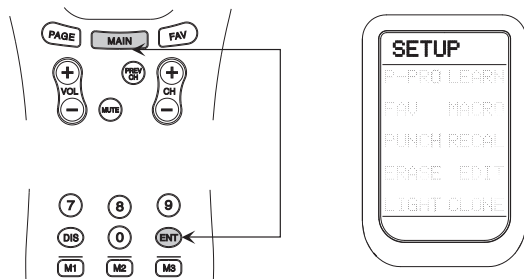
You exit the SETUP mode by simply pressing the MAIN button.
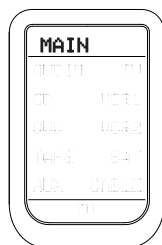
Important: When using the Preprogramming method starting on page 13, always use the appropriate button as shown in the illustration above when asked "FROM TABLE". You may have already changed the labels of the buttons, but the code tables are in the positions as shown. For example, the AUDIO Code Table (refer to pages starting at 58) will ALWAYS be the top-left button. The SAT Code Table will always be the 4th button down on the right side of the LCD screen, etc.

WHERE DO I START?

First of all, get all of your original remote controls together. Find out what brands of components you have. You may have one or more components that do not have original remote controls, but can still be controlled by the MX-500™. You must use the preprogrammed method for those devices. For the rest, you can program the MX-500™ to make it compatible with your components by following the preprogrammed method instructions, by using your original remote controls to teach the MX-500™, or both methods.

Next, it is a good idea to decide whether you want a "Device-based" configuration, or if you want an "Activity-based" configuration.

A " Device-based" configuration centers on each Device with its two LCD pages controlling one component. All of the functions that your original remote control has on it would be put on to one device. The MX-500™ comes with the labels and preprogrammed codes in a "Device-based" setup.

If you go to the "List of Preprogrammed LCD Text by Device" on page 53, you will see diagrams of how the MX-500™ is set up at the factory. When you choose a preprogrammed code for a component from the "Setup Code Tables" in the Appendix of this manual, that code will be applied to one device only.

An "Activity-based" configuration centers on what you are doing at the time. If you are watching a DVD on your TV, and are using your Home Theater receiver to control the

sound, you may want to start by setting up the DVD Device using the preprogrammed method described below, and then add functions from the other devices you will be using while watching your DVD video to the DVD device.

For example, while playing a DVD, you will want to adjust the volume of your receiver. So, you would use the "Punch Through" method described on page 32 to put the Receiver's Volume control into your DVD Device. You may then want to adjust other functions of your Receiver while staying in the DVD device, so you would use the learning method described on page 19 to add those functions to your DVD device, such as surround sound controls, the receiver's DVD input code, the TV's power code, etc. Everything that you need for watching a DVD on your TV without having to jump back and forth from Device to Device.

You can decide where on the MX-500™ you want your functions to reside, relabeling the LCD screen buttons (explained on page 39) for those functions, and choosing preprogramming, learning, or a combination of both to fully customize your MX-500™ will give you a remote totally customized to your needs.

So, let's start with learning how to Preprogram the MX-500™.

A. Using Preprogrammed Codes

1. Three-Digit Code Number

You can program the MX-500™ to make it compatible with your components by using the preprogrammed method:

1. Manually turn on the device you wish to operate.
2. Go to the SETUP mode by pressing both the MAIN and ENTER buttons simultaneously for **three seconds** until SETUP appears at the top of the LCD screen.
3. Press the P-PRO button next to the LCD screen.
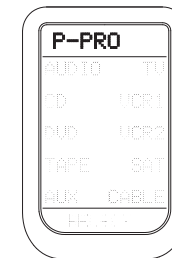
4. The remote will be flashing "SELECT BUTTON". Press the button for the device you wish to program. (For example, to program TV, press the TV button.)
5. The remote will be flashing "FROM TABLE". Select the device from which you want to access the code table.
Important: If you have already relabeled your device keys, your LCD screen will not look like the illustration above. Select the appropriate LCD button for the "FROM TABLE" using the labels **as shown in the illustration** on page 11 of this manual. For example, if you have relabeled AUX as LIGHTS, you would still push the bottom-left button to access the AUX Code Table.
Note: Use VCR1, not VCR2, to access the VCR code library.
6. The remote will be flashing "ENTER NUMBER". Refer to the tables starting on page 58 in the back of this manual and find the manufacturer of your device. (If you are programming the remote for the TV device, find the TV device code table.)
7. Point the remote control toward the device and enter the

first three-digit code number you selected for your device. There is no way of knowing which code is the one that will have the functions that more closely match your device than the others, so it is wise to try them all. See step #9 below.
(Please enter the code number within 20 seconds of beginning programming, otherwise the remote will revert to the SETUP menu, and then after a period of time, it will go back to the MAIN device page.)

If there is more than one code number assigned to your brand, try one code number at a time until you find the right code number (the number that **turns off** your device.)

If the device turns off when you enter the three-digit code, make note of the code. It will have at least some of the functions in it that are needed to control your device.

8. Confirm that it is the right code by pressing the Power button. The device should turn on. After you have confirmed that the right code is entered, save the code by pressing the SAVE button on the LCD.
9. At this point try ALL of the buttons on the remote, and see which ones work with your device. The majority of the buttons should work with your device. Make note of the code if it seems to be the right one, and try the next one. You are trying to find the one that has the most functions to operate your equipment. If there are any functions missing, you will learn them from your original remote in the "Learning Method" section on page 19.
10. Continue to program other components by repeating from Step 1 above.
11. You can press EXIT at any time if you do not wish to proceed.

12. When you are finished programming your remote, exit from the preprogramming mode by pressing the MAIN button and then exit from the SETUP mode by pressing the MAIN button once again.

Tip: You can change the preprogrammed code for each device at any time by following the steps above. The new code will override the old code. For example, this would be done if you replaced your old TV with a new one.

Tip: Please note that you use the code table from VCR1 for VCR2 setup. The code table for Laser Disc is stored under DVD. The code table for Tuner is stored under Audio.

2. Auto Scan With Three-Digit Number

You can also program your remote control by sending out a series of Power Off commands for different brands stored in the library by using the following steps. This is similar to the first method, except it is easier to move through all of the device codes for your device and make note of each one that turns your device OFF.

1. Manually turn on the device you plan to operate.
2. Go to the SETUP mode by pressing both the MAIN and ENT buttons simultaneously for **three seconds**.
3. Press the P-PRO button next to the LCD screen.
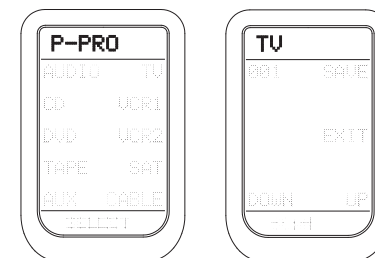
4. The remote will be flashing "SELECT BUTTON". Press the device you wish to program. (For example, to program TV, press the TV button.)

5. The remote will be flashing "FROM TABLE". Select the device from which the scanned code will be selected. (**Important:** If you have already relabeled your device keys, your LCD screen will not look like the illustration above. Select the appropriate LCD button for the "FROM TABLE" using the labels **as shown in the illustration** on page 11 of this manual. For example, if you have relabeled AUX as LIGHTS, you would still push the bottom-left button to access the AUX Code Table. *Note: Use VCR1, not VCR2, to access the VCR code library.*)

6. Point the remote control toward the component and press either the UP or DOWN button on the LCD. (It will send out a series of Power Off codes when the button is kept pressed and the code numbers that are being sent are shown on the LCD.) If the right code number is sent, the component will turn off right after the code number is transmitted.

```
TV
001        SAVE

           EXIT

DOWN        UP
    EDIT
```
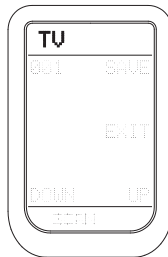
7. Release the UP or DOWN button you were pressing as soon as the device is turned off. If you should happen to go past the one that turned off you device, just manually turn

the device back on, and reverse your UP or DOWN one press at a time, until the unit turns off. There is no way of knowing which code is the one that will have the functions that more closely match your device than the others, so it is wise to try them all. See #9 below.

(Please press the UP or DOWN button within 20 seconds of beginning programming, otherwise the remote will revert to the SETUP menu, and then after a period of time, it will go back to the MAIN device page.)

If there is more than one code number assigned to your brand, try one code number at a time until you find the right code number (the number that **turns off** your device.)

If the device turns off when you enter the three-digit code, make note of the code. It will have at least some of the functions in it that are needed to control your device.

8. Confirm that it is the right code by pressing the Power button. After you have confirmed that the right code is entered, save the code by pressing the SAVE button on the LCD.

9. Confirm that you entered the right code number that matches your component by pressing other functional buttons. If any of the buttons do not operate, as they should, please repeat from Step 1.

10. Continue to program other components by repeating from step 1 above.

11. You can press EXIT at any time if you do not wish to proceed.

12. Exit from Preprogrammed mode by pressing the MAIN button and then exit from the SETUP mode by pressing the MAIN button once again.

B. Learning Method

You can program the MX-500™ to operate a device by "teaching" the correct commands to device buttons on the main screen menu, the two sub-pages within each device button, 31 buttons and the joystick located in the middle of the remote control. The MX-500™ learns these commands by receiving infrared signals directly from your existing remote controls. The MX-500™ receives these signals through its **learning eye**, located at the top of the unit.

Apart from the PAGE, MAIN and FAV buttons, which cannot be taught, the MX-500™ has the capability of learning up to 530 commands.

Tip: Function buttons are any buttons that can be assigned a command to control a particular action for your device. Commonly used function buttons include the two pages of sub-commands within each of the 10 devices, channel up and down, volume up and down, menu, guide, exit, info, 0-9, and the joystick.

Points to Remember

If the remote control fails to learn a function after the first try:
• Keep the remotes stable by placing them on a flat surface.
• Make sure the original remote is pointed at the learning eye at the top end of the case and is not at an angle.
• Make sure both remotes' batteries aren't low.
• Avoid programming the MX-500™ under bright lighting. It can interfere with the infrared signals.
• Try again. Sometimes the second or third attempt works.
• Some buttons require a single, short push of the original remote's button, other "repeating" buttons, such as the VOL button, require that you "press and hold" the original

remote's button until "Good" flashes twice on the LCD screen.
• Try varying the distance between the remotes until you find an optimal distance where the codes are learned on the first or second try.

1. Programming The Function Buttons

1. Go to the SETUP mode by pressing both the MAIN and ENT buttons simultaneously for **three seconds**.
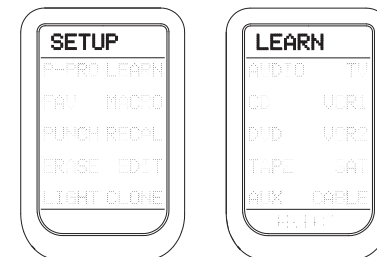
2. Press the LEARN button next to the LCD screen.
3. Select the DEVICE that contains the function button you wish to program.
4. Press the PAGE button to go to page 2 of the device if you need to.
5. Place your original remote control head to head with the MX-500™ about 2 inches apart on a flat surface as illustrated below.
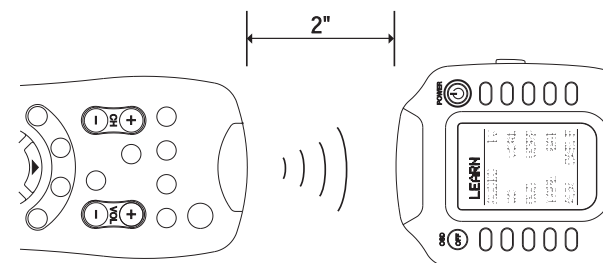
6. Press the button on the MX-500™ you wish to program. Only the three MAIN, PAGE and FAV buttons cannot be programmed.
7. Press the button on your original remote control that you wish to program onto the MX-500™. Once the MX-500™ has received the signal, the MX-500™ will flash "Good" on the LCD screen, indicating it learned the code correctly.

(Please do Step #6 within 20 seconds of Step #5, otherwise the remote will revert to the SETUP menu, and then after a period of time, it will go back to the MAIN device page.)

If it flashes "Fail", repeat from Step 4 until it learns successfully.
8. Return to Step #3 until you have programmed all of the buttons that you require.
9. Once you complete the programming and wish to exit the LEARNING mode, press the MAIN button. Exit from the SET UP mode by pressing the MAIN button once again.

Tip: Learning to VOL, CH and Transport buttons: If you are having problems learning to the Volume, Channel and Transport buttons, it may be that you have previously assigned a "Punch Through" from another device to that device. To remove a Punch Through, just punch through the device to itself. For example, to erase a punch through from a TV to an Audio Device, just punch through the TV to the TV.
(See "Programming Punch Through" functions on Page 32.)

2. Programming The Ten Device Buttons

This will program ONE learned code onto the Device button, so that when you select that Device, it will send out the learned signal as it changes to that Device's function pages.

1. Go to the SETUP mode by pressing both the MAIN and ENT buttons simultaneously for **three seconds**.
2. Press the LEARN button next to the LCD screen.
3. Important: Press the PAGE button.
4. Place your original remote control head to head with the MX-500™ about 2 inches apart on a flat surface.
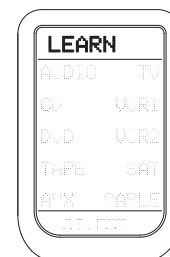
5. Select any of the **ten device buttons** you wish to program on the MX-500™. Press the button on your original remote control you wish to program into the Device button you have chosen on the MX-500™. Once the MX-500™ has received the signal, the MX-500™ will flash "Good" on the LCD screen, indicating it learned the code correctly. If it flashes "Fail", repeat from Step 4 until it learns successfully. (Please enter the code signal within 20 seconds of programming.)
6. Return to Step #5 until you have programmed all of the Device buttons that you require.

7. Once you complete the programming and wish to exit the Learning mode, press the MAIN button. Exit from the SETUP mode by pressing the MAIN button once again.

Tip: Only follow these instructions if you actually want a code sent when changing devices. Some users do not want a Device to send out a code when changing to that device.

For example: You program the AMP's TV input code on the TV device, and are in the DVD device pages because you are controlling the DVD player. The AMP's input is set to DVD. Now you want to quickly adjust the picture on the TV. If you push the TV Device button, it will change the input on your AMP to TV and you will not be able to adjust the picture for your DVD. In this case, it would be better not to program a code to the TV device. However, your circumstances may be different.

You can create and program up to 50 Favorite Channel buttons. Each favorite channel button can send out up to 10 commands with one button press.

1. Go to the SETUP mode by pressing both the MAIN and ENT buttons simultaneously for **three seconds**.
2. Press the FAV button next to the LCD screen.
3. Press the device button that corresponds to the component that your FAV channel will control. For example, pressing the TV device will only send out the type of code that the TV responds to. Pressing the Cable device will only control the cable box.
4. Press the LCD button you will be assigning to the favorite channel and enter the channel number you wish to store in the FAVORITE channel button. You can store up to 10 digits.
5. Press the favorite channel button you selected in step 4 again to store the channel you programmed.

5. Programming Favorite Channels

Tip: If you press a wrong channel number, move the cursor by using the left or right button of the joystick and then reassign the correct channel number.

6. Return to Step #3 until you have programmed all of the FAV channel buttons that you require.
7. Once you have completed the programming and wish to exit from the Favorite Channel mode, press the MAIN button. Exit from the SETUP mode by pressing the MAIN button once again.
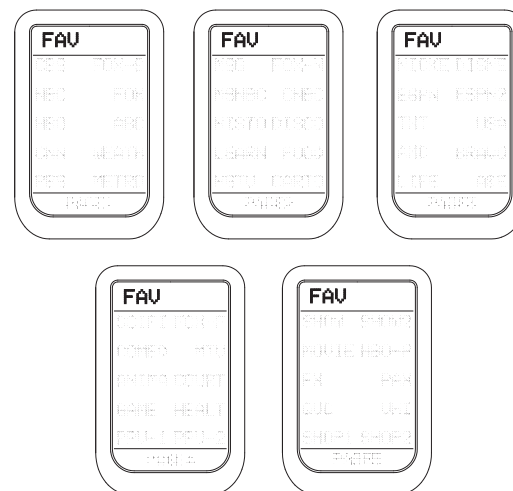
Tip: There are five pages of LCD screens for favorite channel programming. You move to other pages by pressing the PAGE or FAV button.

Tip: You can use the following buttons: 0-9, ENTER, DISPLAY, POWER, SYSTEM OFF, and INFO/PAUSE in your FAV macro.

Tip: (For Advanced Users) To make even more powerful FAV macros, you can learn codes from your original remote(s) to the 0-9, ENTER, DISPLAY, POWER, SYSTEM OFF, and INFO/PAUSE buttons in any device, and use them in your FAV macros. (This will not work if you have already applied a preprogrammed device code to those buttons.)

For example: Some televisions require you to send out a code after the digits other than the ENTER code in order to change channels. For this, you could LEARN the proper code to the ENTER button from your original television remote, and use that in your FAV macro. If you are creative, you can learn any codes to these buttons and make your FAV macros do almost anything!

6. Programming Macro Buttons

A "macro" is a series of commands that you choose to be sent out with the push of one button.

There are **two types of macro functions** you can program with the MX-500™:

The **M1, M2, M3, POWER** and **SYSTEM OFF** buttons are designed to send out up to twenty commands from each of the five hard buttons. The **ten device buttons** can each send a macro of up to 20 commands **when the device button is pressed for more than 1 second** while on the MAIN page of the remote control.

Important: If you program the POWER or SYSTEM OFF buttons with a macro, they will no longer function as ON and OFF buttons for your components. Just erase any macros you have programmed on to these buttons if you want to restore the original ON and OFF function.

See the "Tips" at the end of this section for help on programming macros.

A. Programming Macro Functions To M1, M2, M3, POWER And SYSTEM OFF Buttons

1. Go to the SETUP mode by pressing the MAIN and ENTER button simultaneously for **three seconds**.
2. Press the MACRO button next to the LCD screen.

3. Press one of the macro buttons, M1-M3, Power or System Off you wish to store your macro on.
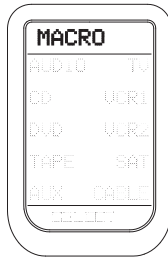
```
MACRO
AUDIO      TV
CD        VCR1
DVD       VCR2
TAPE       SAT
AUX      CABLE
```

4. Press the functional buttons you wish to store in the device macro button you selected, in the order you want them stored. You can store up to 20 commands.

Important: Do not press the MAIN button at the beginning of your macro, or it will not work. You can use the MAIN button at any other step in your macro.
5. Be sure to end your macro on the Device page that you would like it to remain on when the macro is sent in normal use.
6. Store the commands you programmed into the macro button by pressing the Channel Up button.
7. Return to Step #3 until you have programmed all of the Macros that you require.
8. Once you have completed the programming and wish to exit from this mode, press the MAIN button. Exit from the SETUP mode by pressing MAIN button once again.

Tip: The M1, M2, M3, POWER and SYSTEM OFF macros are "system-wide", meaning they will function the same no matter what device you are in when you use them.

B. Programming Macro Functions To The Ten Device Buttons

1. Go to the SETUP mode by pressing the MAIN and ENTER buttons simultaneously for **three seconds**.
2. Press the MACRO button next to the LCD screen.
3. Important: Press the PAGE button.

```
MACRO
AUDIO      TV
CD        VCR1
DVD       VCR2
TAPE       SAT
AUX      CABLE
```
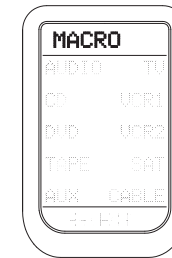
4. Press one of the ten device buttons you wish to store your macro on.
5. Press the functional buttons you wish to store in the device macro button you selected in the order you want them stored. You can store up to 20 commands.

Important: Do not press the MAIN button at the beginning of your macro, or it will not work. You can use the MAIN button at any other step in your macro.
6. Be sure to end your macro on the Device page that you would like it to remain on when the macro is sent in normal use.
7. Return to Step #4 until you have programmed all of the Macros that you require.
8. Save the commands you selected to the macro button by pressing the CH UP button.
9. Once you complete the programming and wish to exit from this mode, press the MAIN button. Exit from the SET UP mode by pressing the MAIN button once again.

*Tip: Remember that a single push of a Device Button that has a macro connected to it will take you to that device's function pages. You will need to hold the Device Button down for **1 second** in order to send out the macro that you have created for that Device Button.*

Tip: Pressing the PAUSE button (the key to the bottom right of the cursor pad) during the macro programming will add a time delay of 0.2 seconds between the commands. For example, pressing the PAUSE button three times will create a pause of 0.6 seconds between the commands where the delay was inserted. Pressing the PAUSE button does not count as a macro step.

Tip: When using a macro, remember to keep the remote pointed toward your components until the macro is finished being transmitted. You will notice the "Sending" icon flash in the upper right corner of the LCD screen as the macro is sending out each command. It will not show when a series of PAUSE commands are being executed. Wait until the icon finishes flashing before using other functions or putting the remote down.

Sample Macro: The following is a sample macro, to give you a quick idea of what a macro can do, in an easy step-by-step form. Please refer to "Programming Macro Buttons" above if you need to refresh your memory on programming macros. This example assumes you have not changed the names of the devices and that you have used "punch through" to assign the VOL to your receiver. If you have changed the labels, just insert your changed names in the example below.

In this case we are going to use the M1 button to turn on the TV, the receiver, the Cable box, choose the appropriate inputs, and tune in the channel where we normally watch the morning news.

1. Press MAIN and ENTER simultaneously for **three seconds**.
2. Press MACRO.
3. Press M1.
4. Press AUDIO. (*Takes you to the Audio device page.*)
5. Press POWER. (*The button on the top right of the remote.*)
6. Press TV. (*This takes you to the TV device page.*)
7. Press POWER.
8. Press MAIN.
9. Press CABLE. (*This takes you to the Cable device page.*)
10. Press POWER.
11. Press MAIN.
12. Press AUDIO. (*We are returning to this page because most receivers and amps take time to "cycle up" and can't receive any commands, such as input, until the device is ready. So we have had the other steps of the macro running while the Audio device is "cycling up".*)
13. Press PAUSE three times. (*The button on the bottom right of the joystick. We've done this since our particular receiver takes longer than normal to "cycle up", so we have pressed the PAUSE button to insert more time for the receiver to get to the point where it will receive another command. Pressing the PAUSE button three times allows for an extra. 6 seconds of wait time. 3 x .2 seconds per push=.6 seconds*)
14. Press CATV. (*Since you are in the Audio device, this selects the "CAbleTV" input on that device.*)

15. Press MAIN.
16. Press CABLE. (*Back to the this device to enter the appropriate channel*.)
17. Press 1, then 3, then 5. (*Then press the ENT button if your cable device requires it*.)
18. Press CH UP to save the macro.
19. Press MAIN twice.

Press M1 to test your macro.

It should turn on your Audio device (receiver for example), then your TV, then your Cable box, then change the input to Cable on your receiver, then change the Channel on your Cable box to 135.

Note: You can end your macro on any page you like, including the MAIN page. We deliberately ended our macro on the Cable page before we saved it, since that is where we wanted to be at the end of our macro.

You can use the audio receiver volume control in a different mode (for example, Audio receiver Volume Up and Volume Down and Mute in Satellite mode) using the volume punch through feature. You can also have channel punch through (Channel Up, Channel Down) as well as eight VCR (or DVD) transport buttons (Play, Stop, Fast Forward and Rewind, Skip-, Skip**+**, Pause, Record) operate in another mode such as in Satellite, Cable and Audio modes.

1. Go to the SETUP mode by pressing the MAIN and ENTER buttons simultaneously for **three seconds**.
2. Press the PUNCH button next to the LCD screen.
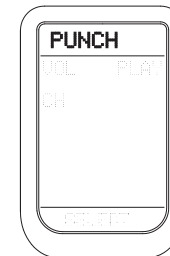
3. Press the VOL button on the LCD for Volume Punch Through, the PLAY button for Transport Punch Through and the CH button for Channel Punch Through.
4. Select the device you wish to punch through to (1st device example - Television or Cable box.)
5. Select the device you wish to punch through from (2nd device example - Audio receiver.)

You are punching through the controls of the second device to the device that is currently being controlled by any other buttons.

For example, for VOL you are punching through the controls of the Audio receiver's VOL to the TV or Cable box, enabling you to control the Audio receiver's VOL when in the TV or Cable box screen.

6. Punch Through is saved when the second device is pressed.

7. Repeat from Step #2 to program Punch Through for other devices.

8. Once you complete the programming and wish to exit from this mode, press the MAIN button. Exit from the SET UP mode by pressing the MAIN button once again.

Tip: When using Punch Through, think of the first Device you select as the Device that now controls the functions, and think of the second Device as the device that you want to control those functions. You are taking the controls of the second device and "punching them through" to the first device.

A. Erasing Learned Buttons

1. Go to the SETUP mode by pressing both the MAIN and ENTER buttons simultaneously for **three seconds**.

2. Press the ERASE button next to the LCD screen.

3. Press the LEARN button.
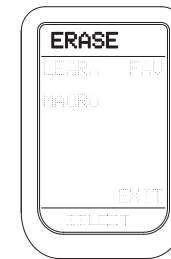
4. If you wish to erase all the learned functions in the MX-500™, press the ALL button and then press the SURE? button at the next LCD screen.

5. If you wish to erase all the buttons in a single device or an individual button in the device, press the DEVICE button.

6. Press the device button (TV, VCR, Audio, etc.) to erase the button(s) from the device.

Tip: Press the PAGE button and then press the DEVICE button (TV, VCR, Audio, etc.) to erase the learned function in the device button itself. Programming this learned function to the Device button was explained in "Programming the Ten Device Buttons" earlier.

7. Press the ALL button if you wish to erase all the learned buttons in the device and press the SURE? button at the next LCD screen.

8. Press a single button if you wish to erase individual buttons one at a time. This will show all the functions in the device. Press the button you wish to erase.

9. Repeat from Step #5 to erase any other devices or learned buttons you require.

10. Press the MAIN button to exit to main Erase mode. Press the MAIN button once again to exit the SETUP mode.

B. Erasing Favorite Channel Buttons

1. Go to the SETUP mode by pressing both the MAIN and ENTER buttons simultaneously for **three seconds**.

2. Press the ERASE button next to the LCD screen.

3. Press the FAV button.
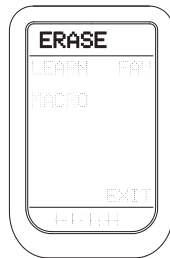
4. If you wish to erase all the favorite channel buttons in the MX-500™, press the ALL button and then press the SURE? button at the next LCD screen.

5. If you wish to erase one button, press the KEY button. Press the individual button you want to erase and continue with any other individual buttons you want to erase.

6. Repeat from Step #5 to erase any favorite channel buttons you require.

7. Press the MAIN button to exit to main Erase mode.

8. Press the MAIN button once again to exit the SETUP mode.

C. Erasing Macro Functions

1. Erase M1, M2, M3, POWER and SYSTEM OFF Buttons

1. Go to the SETUP mode by pressing both the MAIN and ENTER buttons simultaneously for **three seconds**.

2. Press the ERASE button next to the LCD screen.

3. Press the MACRO button.

4. If you wish to erase all of the macro buttons in the MX-500™, press the ALL button and then press the SURE? button at the next LCD screen.

5. If you wish to erase just one of the macros, press the KEY button at step 4 and then one of the M1, M2, M3, POWER or SYSTEM OFF buttons to erase the macro functions from that button.

6. Repeat from Step #5 to erase any other macro buttons you require.

7. Press the MAIN button to exit to main Erase mode. Press the MAIN button once again to exit the SETUP mode.

2. Erase Macro Functions In The Ten Device Buttons

1. Go to the SETUP mode by pressing the MAIN and ENTER buttons simultaneously for **three seconds**.
2. Press the ERASE button next to the LCD screen.
3. Press the MACRO button.

```
ERASE
LEARN   FAV
MACRO



        EXIT
    RETURN
```
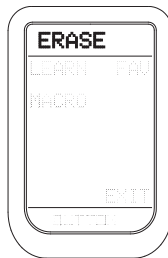
4. Press the KEY button.
5. Press one of the ten DEVICE buttons from which you wish to erase the macro function and then press the SURE? button at the next LCD screen.
6. Exit from Macro mode by pressing the MAIN button and then exit from SETUP mode by pressing the MAIN button once again.

D. Erasing Punch Through Functions

1. Go to the SETUP mode by pressing the MAIN and ENTER buttons simultaneously for **three seconds**.
2. Press the PUNCH button next to the LCD screen.

```
PUNCH
VOL     PLAY
CH



    RETURN
```
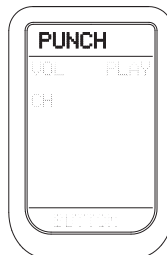
3. Press the VOL button on the LCD for Volume Punch Through, the PLAY for Transport Punch Through or the CH for Channel Punch Through depending upon which Punch Through you want to erase.
4. Press the DEVICE button from which you wish to erase punch through.
5. Press the same DEVICE button once again.
6. Punch through is erased when the same device button is pressed the second time.
7. Repeat from Step 2 to erase the Punch Through for other devices.
8. Exit from Punch Through mode by pressing the MAIN button and then exit from the SETUP mode by pressing the MAIN button once again.

A. To Create or Edit Text on Function and Device Buttons

1. Enter the SETUP mode by pressing the MAIN and ENTER buttons simultaneously for **three seconds**.
2. Press the EDIT button next to the LCD screen.

```
EDIT
AUDIO      TV
LD        VCR1
DVD       VCR2
TAPE       SAT
AUX      CABLE
```
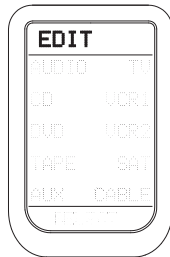
3. Press the DEVICE button to display the function buttons for that device.
4. Press the function button on which you wish to write or edit text. You can also go to the second page of the device by pressing the PAGE button.
5. To edit **DEVICE button text**, skip Steps 3 & 4 and press the PAGE button before selecting the Device button.
6. The character to be changed will blink and you can change the character using the number pad buttons on the remote control. The characters assigned to each number pad button are shown below. It will be rotated to a different character each time the same number pad button is pressed.

Tip: You move the cursor left or right using the joystick. You can also delete a current character by using the cursor down of the joystick. Using the "cursor down" technique is a quick way to delete all of the text on a label.

1.	A	B	C		2.	D	E	F		3.	G	H	I		4.	J	K	L
5.	M	N	O		6.	P	Q	R		7.	S	T	U		8.	V	W	X
9.	Y	Z	Blank		0.	+	-	<	>	etc

7. Save the text you completed by pressing the button you were writing on (the same function button you selected in step 3 or device button in step 4.)
8. Exit from Edit mode by pressing the MAIN button and then exit from the SETUP mode by pressing the MAIN button once again.
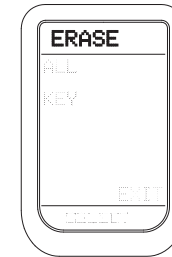
B. To Create Or Edit Text for Favorite Channel Buttons

1. Go to the SETUP mode by pressing the MAIN and ENTER buttons simultaneously for **three seconds**.
2. Press the EDIT button next to the LCD screen.
3. Press the FAV button and then the favorite channel button on which you wish to write text. There are five LCD pages of favorite channels. Select the page you wish to write on by pressing the PAGE button.
4. The character to be changed on the button you selected will **blink** and you can change the character using the number pad buttons on the remote control. The characters assigned to each number pad button are shown below. It will be rotated to different character each time the same number pad button is pressed.

Tip: You move the cursor left or right using the joystick. You can also delete a current character by using the cursor down of the joystick. Using the "cursor down" technique is a quick way to delete all of the text on a label.

9. LCD Button Editing

1. | A | B | C | 2. | D | E | F | 3. | G | H | I |
4. | J | K | L | 5. | M | N | O | 6. | P | Q | R |
7. | S | T | U | 8. | V | W | X | 9. | Y | Z | Blank |
0. | + | - | < | > | etc |

5. Save the text you completed by pressing the same function button you selected in step 4.
6. Exit from Edit mode by pressing the MAIN button and then exit from the SETUP mode by pressing the MAIN button once again.

10. Recalling the Preprogrammed Three-Digit Number

1. Go to the SETUP mode by pressing the MAIN and ENTER buttons simultaneously for **three seconds**.
2. Press the RECAL button next to the LCD screen.
3. The LCD display will alternately flash device names and the three-digit code number assigned to the device for 10 seconds and then exit to the SETUP mode.
4. Before the 10 seconds are up, pressing the MAIN button on the remote will stop the flashing and exit to the SETUP mode.
5. Exit from SETUP mode by pressing the MAIN button once again.
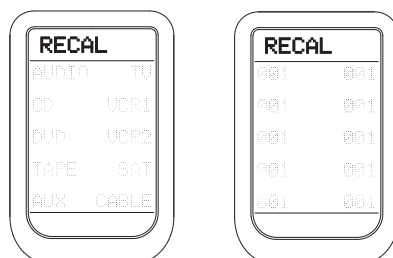
11. Setting Backlight

The Backlight can be toggled On and Off just by pushing the LIGHT button on the top right side of the remote. It can also be set to go off at a predetermined time, as shown below.
1. Go to the SETUP mode by pressing the MAIN and ENTER buttons simultaneously for **three seconds**.
2. Press the LIGHT button next to the LCD screen.
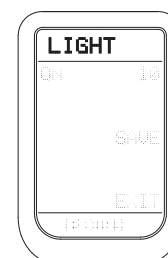
3. Using the number pad buttons, enter the desired backlight time (in seconds). It can go up to 99 seconds. Save the time by pressing the button at the right side of the time you just assigned.
4. Exit from the SETUP mode by pressing the MAIN button.

Tip: *Note that the time you've entered in SETUP for the Backlight to go off is extended each time you push a button. So the light will go off at the predetermined interval AFTER you have pushed the last button on the remote.*

1. Go to the SETUP mode by pressing the MAIN and ENTER buttons simultaneously for **three seconds**.
2. Press the CLONE button next to the LCD screen.
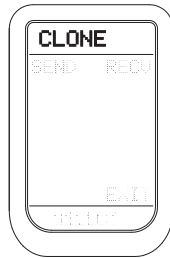
3. Press either the SEND or RECV button depending upon the role of the remote control. If the MX-500™ is to be copied from, press the SEND button. If it is to be copied to, press the RECV button.
4. If you wish to clone the entire device, press the ALL button. If you wish to clone only one device at a time, press the DEVIC button.
5. If you press the DEVIC button, it will show all the devices. Press the device button you wish to clone.
6. Set the MX-500™ head to head with another MX-500™ to be cloned from as shown below. Each unit should be in either cloning from or cloning to mode based on the above steps.
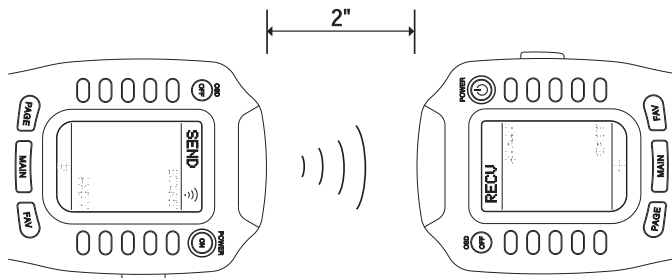
7. Press the START button on both units to begin cloning. It will take about 40 seconds to complete the cloning and it will flash " GOOD" upon completion of the cloning.
8. Exit from the Cloning mode by pressing the MAIN button and then exit from the SETUP mode by pressing the MAIN button once again.

13. Adjustment of LCD Contrast

Pressing the MAIN button and Up on the joystick simultaneously will make the LCD contrast darker and pressing the MAIN button and Down on the joystick simultaneously will make the LCD contrast brighter.

14. Caution On Handling LCD Screen

Please note the LCD screen is breakable glass. Please exercise the following precautions when using the MX-500™:

•Do not tap the LCD screen to active devices. Use the rubber buttons beside the labels on the screen.

•Keep the LCD screen dry. Wipe off any spill immediately. The MX-500™ is not waterproof. Never immerse it in water.

•Don't expose the MX-500™ to extreme temperatures. Keep it away from any heat sources.

•Avoid dropping the remote control.

•Clean the LCD screen with a soft cloth. Never use abrasives or cleaning solutions on the soft cloth.

15. Low Battery Message

If the batteries are running low, the LCD displays " LOW BATTERY" whenever you press the POWER button or you press the MAIN and ENTER button simultaneously.

16. Memory Lock

The MX-500™ has an internal memory lock system that retains all of the programs and learned functions for an extended period in the event of battery loss.

17. Glossary

Backlight: A feature that illuminates the LCD screen or keypad for use in low light or dark conditions.

Battery type: The MX-500™ uses 4 standard disposable alkaline AAA batteries, or the new rechargeable alkaline batteries.

Codes: Can refer to either the numeric codes needed to program a preprogrammed remote control, or the actual infrared signals transmitted by remote controls to devices.

Component: See device.

Contrast: Either an arbitrary description of how "clear" an LCD screen is for viewing, or a specific adjustment that allows you to customize the screen's visible characteristics.

Delay: Usually a pause placed between two steps in a macro. Delays may be required in order for some devices to properly sense two separate commands, or may be used to wait for a device to finish powering up. The MX-500™ allows you to change that delay.

Discrete codes: Versions of toggle codes that only perform one function. Some examples would be "POWER ON" and "POWER OFF" or "VCR," "TUNER" and "DVD" receiver inputs. These types of signals are most often used to ensure your home theater components stay completely in sync for powering on and off and changing device inputs. Some of the preprogrammed codes in the MX-500™ contain discrete codes. If your original remote contains discrete codes, these can be taught to the MX-500™ as well.

Device: The MX-500™ remote control is capable of controlling a certain number of devices, or pieces of equipment. Examples of devices would be televisions, DVD players, receivers or VCRs. Some devices, such as receivers or dual-cassette decks, may be treated by some remotes as more than one device. Also known as components.

Firmware: Indicates the programming software stored on the remote control. The MX-500™ remote can have its firmware flashed (upgraded) to a newer version.

Frequencies: The range of infrared carrier frequencies that a remote control is capable of learning or controlling. Most remotes operate between 30 and 60kHz, however some use higher and are thus known as high frequency.
The MX-500™ operates and can learn frequencies between 10 kHz and 100kHz.

Hard buttons: Refers to all physical (mechanical) buttons on a remote control.

High frequency: Indicates an infrared system that employs

frequencies higher than the industry standard. Some examples would be Bang & Olufsen, Kenwood (455KHz) and older Pioneer Elite (1.125MHz). Such devices are never preprogrammed into off-the-shelf remote controls and can generally only be used with very specific learning remote controls.

Infrared: "IR" A portion of the light spectrum below our visible range, used by many modern remote controls to transmit signals. The MX-500™ uses IR signals.

Infrared emitter: A light emitting diode used to transmit infrared signals from a remote control. Generally, the more and better the emitters, the stronger and wider the resulting signal. A remote with strong emitters can generally be used without pointing at the desired device. Emitters are also partially responsible for any limits on the range of frequencies that can be controlled. Emitters are always placed at the "top" of a remote control and are typically shielded by a red plastic window. The MX-500™ has 2 very strong IR emitters.

Infrared receiver: The portion of a device that receives infrared commands from a remote control. Since infrared is actually light, it requires line-of-sight visibility for best operation, but can still be reflected by items such as walls and glass. Poorly placed IR receivers can also result in what is called "tunnel vision," where they are set so far back into the chassis of a device that the operational range of any remote control is severely reduced.

Joystick: A feature on some remote controls, the joystick is a single pointer which replicates five functions for menu

control: up, down, left, right and enter. The Joystick on the MX-500™ can be programmed with other commands as well. The Joystick on the MX-500™ is sometimes referred to as a Thumbpad.

Keypad: Generally refers to all hard buttons on a remote control, or more specifically the numeric keypad (0 through 9).

LCD screen: The display device built into the MX-500™. The MX-500™ LCD screen displays mode and programming information, along with macro commands and soft buttons.

Learning: The process through which a remote control captures and stores infrared signals (codes) from other remotes for later use. Some factors which can affect the ability of one remote to learn another would be code length, signal frequency, type of signal and the amount of learning memory available. The MX-500™ is capable of learning to every button, including the joystick, except the Page, Main, Fav buttons.

Macro: Macros are sequences of infrared commands that are played back, in order, by a remote control at the push of a single button. Macros can be used to automate the powering on or off of your system, playing a movie or changing inputs, or in Home Automation.

Memory: The amount of space included on a remote control for storing all settings, such as preprogrammed codes, learned signals, macros, and more. The MX-500™ has a large memory reserve for learning new codes.

Memory backup: The MX-500™ can retain its programming information for an indefinite amount of time without batteries installed. Remotes that do not feature this may have their programming erased when changing batteries.

Operating distance: The distance from which a remote control can still reliably operate devices. The average infrared range is thirty feet, although the MX-500™ is capable of greater distances.

Page: Refers to a single screen of buttons or information displayed on the LCD panel.

Pause: See **Delay**.

Power off: A feature used by many LCD remote controls to save battery power, it represents entering a "standby" mode after a certain length of inactivity. The MX-500™ uses very little power with the LCD screen on, so the screen remains on at all times.

Preprogrammed: Indicates a library of infrared codes built in to a particular remote. This feature allows a remote to control your equipment without needing to learn individual signals, or replace a particular remote that is lost or broken. The database used for the preprogrammed Device codes may not be able to control all your devices. In this case you can simply use the learning capabilities of the remote.

Punch Through: A term coined to represent the ability to use certain functions from one device under another. For instance, when a remote is set to the "Television" device, the transport keys may be "punched through" to operate the

17. Glossary

VCR, while the volume keys may be "punched through" to operate the audio receiver.

Signals: See " codes" or " infrared."

Thumbpad: A feature on certain remote controls, the thumbpad is a single disc-shaped pointer which replicates five functions for menu control: up, down, left, right and enter. Also referred to as a " joystick."

Transport control: A common term for the group of VCR/LD/DVD media operation controls, such as fast-forward, rewind, play, stop, pause, etc.

Two-way: Some devices actually send information back to a remote control during use. This is known as 2-way communications. Most 2-way components can still be controlled via a 1-way remote, although certain workarounds must be used when learning signals. The MX-500™ is capable of controlling most 2-way components.

Glossary based, by permission, on the the General Glossary on Remote Central.com ©Daniel Tonks

18. Warranty

The MX-500™ is covered against any manufacturer's defects or workmanship for a period of one year from the date of purchase. The warranty does not cover the following items:

• Batteries or damage to the remote from faulty batteries.

• Damage from misuse, neglect, or acts of nature.

• Products that have been modified or incorporated into other products.

• Products purchased more than 12 months from the current date.

• Units purchased in "AS IS" condition or units purchased as " Distressed Merchandise."

19. Specifications

- Range: 40 to 60 feet, depending upon components
- Weight: 8 oz. (with batteries)
- Size: 9.0″ x 3.0″ x 1.3″
- Batteries: Four AAA Alkaline batteries
- LCD Size: 1.4″ x 2.1″

A. List of Preprogrammed LCD Text by Device
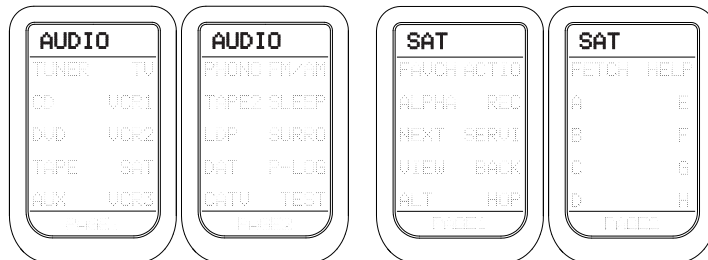
AUDIO

Button Name	Functions
System-OFF	OFF
POWER	ON/OFF
VOL UP	VOL UP
VOL DN	VOL DN
CH UP	PRESET+
CH DN	PRESET -
MUTE	MUTE
PRE-CH	SCAN
UP	UP
DN	DN
LEFT	LEFT
RIGHT	RIGHT
SELECT	SELECT
PLAY	REAR UP
STOP	REAR DN
REW	CENTER DN
FF	CENTER UP
I<<, MENU	MENU/Surr
>>I, GUIDE	GUIDE/Center
O, EXIT	EXIT/Delay
II, INFO	INFO
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
DISPLAY	DISPLAY
ENTER	SHIFT

SAT

Button Name	Functions
System-OFF	OFF
POWER	ON/OFF
VOL UP	VOL UP
VOL DN	VOL DN
CH UP	CH UP
CH DN	CH DN
MUTE	MUTE
PRE-CH	PREV CH
UP	UP
DN	DN
LEFT	LEFT
RIGHT	RIGHT
SELECT	SELECT
PLAY	
STOP	
REW	
FF	
I<<, MENU	MENU
>>I, GUIDE	GUIDE
O, EXIT	EXIT
II, INFO	INFO
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
DISPLAY	DISPLAY
ENTER	ENTER

TV

Button Name	Functions
System-OFF	OFF
POWER	ON/OFF
VOL UP	VOL UP
VOL DN	VOL DN
CH UP	CH UP
CH DN	CH DN
MUTE	MUTE
PRE-CH	PREV CH
UP	UP
DN	DN
LEFT	LEFT
RIGHT	RIGHT
SELECT	SELECT
PLAY	
STOP	
REW	
FF	
I<<, MENU	MEMU
>>I, GUIDE	GUIDE
O, EXIT	CANCEL
II, INFO	INFO
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
DISPLAY	DISPLAY
ENTER	ENTER

VCR1/VCR2

Button Name	Functions
System-OFF	OFF
POWER	ON/OFF
VOL UP	VOL UP
VOL DN	VOL DN
CH UP	CH UP
CH DN	CH DN
MUTE	MUTE
PRE-CH	PREV CH
UP	UP
DN	DN
LEFT	LEFT
RIGHT	RIGHT
SELECT	SELECT
PLAY	PLAY
STOP	STOP
REW	REW
FF	FF
I<<, MENU	I<<
>>I, GUIDE	>>I
O, EXIT	RECORD
II, INFO	PAUSE
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
DISPLAY	DISPLAY
ENTER	ENTER
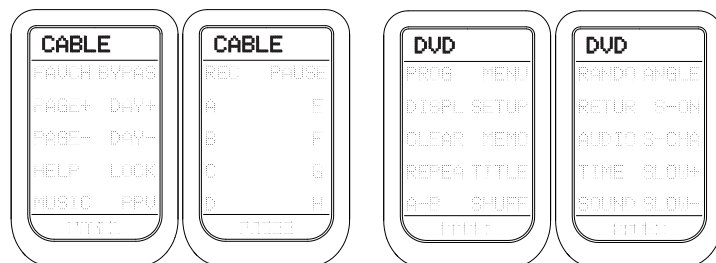
CABLE

Button Name	Functions
System-OFF	OFF
POWER	ON/OFF
VOL UP	VOL UP
VOL DN	VOL DN
CH UP	CH UP
CH DN	CH DN
MUTE	MUTE
PRE-CH	PREV CH
UP	UP
DN	DN
LEFT	LEFT
RIGHT	RIGHT
SELECT	SELECT
PLAY	PLAY
STOP	STOP
REW	REW
FF	FF
I<<, MENU	MENU
>>I, GUIDE	GUIDE
O, EXIT	EXIT
II, INFO	INFO
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
DISPLAY	DISPLAY
ENTER	ENTER

DVD/LD

Button Name	Functions
System-OFF	OFF
POWER	ON/OFF
VOL UP	
VOL DN	
CH UP	SKIP+
CH DN	SKIP -
MUTE	
PRE-CH	SEARCH
UP	UP
DN	DN
LEFT	LEFT
RIGHT	RIGHT
SELECT	SELECT
PLAY	PLAY
STOP	STOP
REW	REW
FF	FF
I<<, MENU	I<<
>>I, GUIDE	>>I
O, EXIT	EJECT
II, INFO	PAUSE
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
DISPLAY	DISPLAY
ENTER	ENTER

CD

Button Name	Functions
System-OFF	OFF
POWER	ON/OFF
VOL UP	
VOL DN	
CH UP	TRACK+
CH DN	TRACK -
MUTE	
PRE-CH	RANDOM
UP	
DN	
LEFT	SKIP -
RIGHT	SKIP +
SELECT	
PLAY	PLAY
STOP	STOP
REW	REW
FF	FF
I<<, MENU	I<<
>>I, GUIDE	>>I
O, EXIT	EJECT
II, INFO	PAUSE
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
DISPLAY	
ENTER	DISC

TAPE

Button Name	Functions
System-OFF	OFF
POWER	ON/OFF
VOL UP	
VOL DN	
CH UP	
CH DN	
MUTE	
PRE-CH	
UP	
DN	
LEFT	
RIGHT	
SELECT	
PLAY	PLAY(A)
STOP	STOP(A)
REW	REW(A)
FF	FF(A)
I<<, MENU	R-PLAY(A)
>>I, GUIDE	Rec-MUTE(A)
O, EXIT	RECORD(A)
II, INFO	PAUSE(A)
1	
2	
3	
4	
5	
6	
7	
8	
9	
0	
DISPLAY	
ENTER	
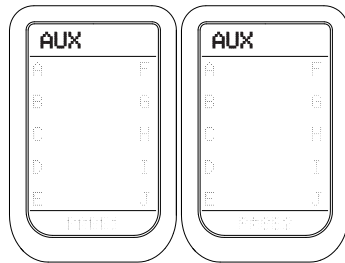
AUX

Button Name	Functions
System-OFF	OFF
POWER	ON/OFF
VOL UP	VOL UP
VOL DN	VOL DN
CH UP	CH UP
CH DN	CH DN
MUTE	MUTE
PRE-CH	PREV
UP	UP
DN	DN
LEFT	LEFT
RIGHT	RIGHT
SELECT	SELECT
PLAY	
STOP	
REW	
FF	
I<<, MENU	MENU
>>I, GUIDE	GUIDE
O, EXIT	EXIT
II, INFO	INFO
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
DISPLAY	DISPLAY
ENTER	ENTER

• Note : Because of the variety of function names for different components in this mode, we list them in A, B, C, D......on the LCD. Please write the appropriate names that apply to your components.

B. Three-Digit Preprogrammed Code Table   AUDIO

Manufacturer/Brand	Set-Up Code Number
ADC	007
ADCOM	082 092 225 161 269
AIWA	018 104 170 202 203 213 211 188
AKAI	138 189
AMC	125 126 127 128 258 281 282
AMEND	054
AMX	196
ANGSTROM	142
ARCAM	141
AUDIO ACCESS	147
AUDIO ALCHEMY	135
AUDIO DESIGN	194 221 011
AUDIO EASE	021 196 207
AUDIO FILE	071
AUDIO MATRIX	167
AUDIO SOURCE	273
AUDIO TECHNICA	134
B & K	096 097
BOSE	070 170 224
BRYSTON	023
CARVER	006 028 061 071 201 214 226 180 185 022 029 077 284
CASIO	076
CHIRO	140
CINEMA SOUND	034 134
CITATION	148 272
CLARION	026
CURTIS MATHES	076
DENON	002 034 109 215 229 230 027 037 234 259
EIGER	149
ELAN	057
ENLIGHTENED AUDIO	099 098
FISHER	047 214 180 182
FOSGATE	062 231
GE	056 260
GOLDSTAR	008
HAFLER	174
HARMAN KARDON	231 233 254 153 154 118 121 227 277
HITACHI	020
INKEL	197
JBL	263
JCPENNY	076 216
JEFF ROWLAND	206
JENSEN	058
JVC	240 163 191 114 266 279
KENWOOD	026 066 145 146 181 190 197 192 182 199 151 222 180 005 280
KINERGETICS	220 140
KOSS	216
KRELL	150 072
KYOCERA	007
LEXICON	120 235 236 237
LINN	124
LUXMAN	137 139 052 165 115 004 009
LXI	076 056
MAGNAVOX	086 164 152 208
MARANTZ	006 028 031 040 063 185 186 251 265
MCINTOSH	238
MCS	076
MERIDIAN	100 012 013
MITSUBISHI	242 243 204
MONDIAL	157 158 042 043 081 112
MYRYAD	276
NAD	186 113 283

AUDIO

Manufacturer/Brand	Set-Up Code Number
NAKAMICHI	111 244 245 172 183
NEC	176
ONKYO	017 046 064 107 108 187 079 080 090 179 209 270 275
OPTIMUS	026 041 138
PANASONIC	032 195 219 177
PARASOUND	129 130 132 261
PHAST	196
PHILIPS	249 250 251 063
PIONEER	014 033 039 044 045 050 069 159 168 116 035 078 198
PROCEED	144 268
RCA	010 048 117 156 067
REALISTIC	019 056 073 075 095
REVOX	162
ROTEL	074 083 085
SAMSUNG	016
SANSUI	040 048 110 119 065 228
SANYO	047 059
SCOTT	019 091
SEARS	076
SHARP	026 094 131 175 181
SHERWOOD	024 038 055 102 103 105 106 051 030
SONY	018 093 223 247 248 160 166 015 101 184 218 271
SOUNDESIGN	036
SOUNDSTREAM	084 088
SSI	068
SUMO	171
TAEKWANG	138
TEAC	005 019 049 111 212 217
TECHNICS	122 176 193 219 178 177 200 257 262
THETA DIGITAL	136
TOSHIBA	060 087 198 278
WARDS	180
YAMAHA	026 253 169 067 173 205 264 232 089 264 274 285
ZENITH	143 210

SAT

Manufacturer/Brand	Set-Up Code Number
ALPHASTAR	123
AMPLICA	050
BIRDVIEW	129 113 051 126
BSR	053
CAPETRONICS	053
CHANNEL MASTER	013 014 015 018 036 055
CHAPARRAL	008 009 012 077
CITOH	054
CURTIS MATHES	050
DRAKE	005 006 007 010 011 112 116 141 052
DX ANTENNA	024 046 056 076
ECHOSTAR	038 040 057 058 093 094 095 096 097 098 099 100 122
ELECTROHOME	089
EUROSAT	114
FUJITSU	017 021 022 027 133 134
GENERAL ELECTRIC	151 106 150
GENERAL INSTRUMENT	003 004 016 029 031 059 101 148
HITACHI	139 140
HOME CABLE	080 044 029
HOUSTON TRACKER	033 037 039 104 057 051
HUGHES	068 154
HYTEK	053
HYUNDAI	149
ICR	023
JANIEL	060 147
KATHREIN	108
LEGEND	057
LUTRON	132
LUXOR	144 062
MACOM	010 059 063 064 065
MEMOREX	057
NEXTWAVE	028 124 125
NORSAT	069 070
PACE	143
PANASONIC	142 060
PANSAT	121
PERSONAL CABLE	117
PHILIPS	071 152 153
PL	023 026
PRESIDENT	019 102
PRIMESTAR	110 030
PROSAT	072
PROSCAN	151 106 150
RCA	151 106 150
REALISTIC	043 074
SAMSUNG	123
SATELLITE SERVICE	028 035 047 085
SONY	103
STARCAST	041
SUPERGUIDE	020 124 125
TEECOM	023 026 075 087 088 090 107 130 137
TOSHIBA	002 127
TOWN & COUNTRY	023 026
UNIDEN	016 025 042 043 044 045 048 049 078 079 080 086 101 135 136
VIEWSTAR	115
WINEGARD	128 146
ZENITH	081 082 083 084 091 120

TV

Manufacturer/Brand	Set-Up Code Number
ADMIRAL	072 081 161 160
AKAI	197 146
AMARK	112 143
AMPRO	073 167 157 183
AMSTRAD	052
ANAM	043 054 056 080 112 131
AOC	197 004 112 058
AUDIOVOX	076
BLAUPUNKT	088
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
DAYTRON	004 143
DWIN	177
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
FISHER	007 057
FUJITSU	198
FUNAI	028 043
FUTURETECH	043
GE	197 008 009 034 056 073 074 130 144 155 160 161 165 004 091 157 183
GOLDSTAR	004 102 106 112 113 116 119 127 143
HALL MARK	004
HITACHI	004 009 010 011 012 023 075 143 158 163 166 072
INFINITY	164
JBL	164
JCPENNY	197 004 008 009 024 030 065 101 143 156 160
JENSEN	013
JVC	034 038 070 083 145 199
KEC	043
KENWOOD	197 070
KLOSS	002 059
KMC	143
KTV	197 043 143 154
LODGENET	072
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
MARANTZ	197 164
MATSUI	164
MEMOREX	007 072 004
METZ	088
MGA	197 004 024 028 042
MINERVA	088
MITSUBISHI	004 024 028 040 042 109 124 146 191
MTC	197 004 062 101

TV

Manufacturer/Brand	Set-Up Code Number
NAD	015 025
NEC	132 130 134 197 040 016 024 056 019
NIKEI	043
ONKING	043
ONWA	043
OPTONICA	019 081
ORION	096
PANASONIC	034 056 080 092 164
PHILCO	197 003 024 056 059 060 063 064 164 004
PHILIPS	197 003 004 005 038 059 093 164 127
PIONEER	197 018 023 025 116 135 190 203 204
PORTLAND	004 143
PROSCAN	144 160 161 165 167
PROTON	004 058 131 143 171 173 193
QUASAR	034 056 092
RADIO SHACK	019 043 143 004 127
RCA	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
SAMPO	197 058 004 202
SAMSUNG	004 050 089 101 105 127 143 160
SANYO	166 007 020 053 057 082 187
SCOTT	004 028 043 048 143
SEARS	015 030 004 007 028 057 143 094 160 082 165 166
SELECO	189 200
SHARP	170 081 019 028 029 014 004 022 143 175
SIEMENS	088
SIGNATURE	072
SONY	070 085 139 147 126 185 194
SOUNDESIGN	004 028 003 043
SPECTRICON	112
SSS	004 043
SUPRE MACY	002
SYLVANIA	197 003 059 060 063 064 164 044 160 127
TANDY	081
TATUNG	056 062
TECHNICS	034 080
TECHWOOD	004
TEKNIKA	002 003 004 024 028 043 072 101 143
TELEFUNKEN	037 046 086 087
TELERENT	072
TERA	172
TMK	004
TOSHIBA	007 015 030 040 062 101 138
TOTEVISION	143
UNIVERSAL	008 009
VIDEO CONCEPTS	146
VIDIKRON	174 184 188 192
VIDTECH	004
WARDS	004 008 009 019 028 060 061 063 064 072 074 143 164 034
WESTING HOUSE	076
YAMAHA	197 004
YORK	004
YUPITERU	043
ZENITH	072 073 095 103 157 183
ZONDA	112

VCR

Manufacturer/Brand	Set-Up Code Number
AIWA	034 161
AKAI	016 043 046 124 125 142 146
AMPRO	072
ANAM	031
AUDIO DYNAMICS	012 023 039 043
BROOKSONIC	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	006 017 025 027 029 031 034 035 036 037 046 101 129 131 138 153 162 116
FISHER	003 008 009 010
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
JCPENNY	012 013 015 040 066 101
JENSEN	043
JVC	012 031 043 048 050 055 060 130 150 152
KENWOOD	014 048 034 047
LLOYD	034
LXI	003 009 017 034 106
MAGIN	040
MAGNAVOX	031 034 041 067 068 156 164
MARANTZ	012 031 067 069
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
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
PENTAX	013 020 031 063
PHILCO	031 034 067
PHILIPS	031 034 054 067 071 101
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

VCR

Manufacturer/Brand	Set-Up Code Number
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
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
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

Tip: When programming VCR2, use this code table. When you are in P-PRO in SETUP mode, use the VCR1 button when "FROM TABLE" is flashing at the bottom of the LCD screen.

CABLE

Manufacturer/Brand	Set-Up Code Number
ABC	103 003 004 039 042 046 053
AMERICAST	099
ANTRONIX	014
ARCHER	005 007 014
BELL SOUTH	099
CENTURION	092
CENTURY	007
CITIZEN	007
COMBANO	080 081
COMSAT	074
COMTRONICS	030
DIGICABLE	101
EAGLE	020 030 040
EASTERN	057 066
ECHOSTAR	106
ELECTRICORD	032
GEMINI	008 054
GENERAL ELECTRIC	072
GENERAL INSTRUMENT	103 074 104
GNC	099
GOLDEN CHANNEL	030
HAMLIN	049 050 055
HITACHI	103 055
JERROLD	103 002 003 004 008 009 010 069 074
MAGNAVOX	010 012 064 079 095 094
MEDIA ONE	107
MEMOREX	052
MITSUBISHI	102
M-NET	037
MOVIE TIME	028 032
NOVAPLEX	092
NSC	015 028 038 071
OAK	031 037 053
PANASONIC	044 047
PARAGON	052
PHILIPS	006 012 013 020 085 095
PIONEER	103 034 051 063 076 105
PRUCER	059
PTS	011 071 074
PULSAR	052
RCA	047
RECOTON	098
REGAL	049 050
REGENCY	057
SAMSUNG	030
SCIENTIFIC ATLANTA	003 011 041 042 043 045 046
SIGNAL	030
SIGNATURE	103
SL MARX	030
SONY	096
SPRUCER	047 078
STARCOM	002 004 008 009
STARGATE	008 030 097 104
TADIRAN	030
TIME WARNER	043
TOCOM	039 040 056
TOSHIBA	052
UNIKA	007 014
UNITED CABLE	004 053
UNIVERSAL	005 007 014 032 035
VIEWSTAR	012 015 018 086 087 088 089
ZENITH	052 060 093 100

DVD

Manufacturer/Brand	Set-Up Code Number
APEX DIGITAL	087
DENON	007 080
GE	026 027
HARMAN KARDON	084
JVC	012
LG	091 057 074
MAGNAVOX	066
MARANTZ	083
MITSUBISHI	017
NAD	088
ONKYO	076 035
PANASONIC	021 042
PHILIPS	066
PIONEER	023 092 107 108
PROCEED	086
PROSCAN	026 027
RCA	026 027
SAMSUNG	056 070
SHARP	094
SONY	033
THETA DIGITAL	032
THOMPSON	026 027
TOSHIBA	035 034
YAMAHA	042 089
ZENITH	057 074 091

CD

Manufacturer/Brand	Set-Up Code Number
ADCOM	062 042
AIWA	059 065 088 089 105 122 170 187
AKAI	085 195 202
AMC	231 232
AMEND	118
ARCAM	238
AUDIO ACCESS	119 147
AUDIO EASE	165
AUDIO TECHNICA	046
BSR	037 057
CALIFORNIA AUDIO	103 008
CAPETRONIC	063
CARRERA	057 080
CARVER	185 041 044 050 086 107 130 134 135 138 139 203 204 167
CASIO	111 182
CLARINETTE	182
CREEK	159
CROWN	035
DENON	002 123
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
HITACHI	042 175
INKEL	130 143 144
JC PENNY	014 061 092 141
JENSEN	158
JVC	004 022 136 163 213 214 242 243
KENWOOD	185 007 023 055 071 072 142 137
KOSS	061
KRELL	241
KYOCERA	005
LOTTE	102
LUXMAN	011 028 070 076
LXI	059
MAGNAVOX	044 107
MARANTZ	027 041 044 051 077 107 209
MCINTOSH	212
MCS	014 073 092
MEMOREX	010
MISSION	044 107
MITSUBISHI	179
MITSUMI	153
MODULAIRE	182
MONDIAL	147
MYRYAD	244
NAD	006 005 067 178
NAKAMICHI	217 218 219 095
NEC	014 062
NIKKO	046
NSM	044 107
ONKYO	030 038 039 168 169
OPTIMUS	010 050 057 058 081 082 083 085 093 195
PANASONIC	103 201 172 008 068
PARASOUND	233
PHILIPS	041 044
PIONEER	010 020 025 056 174 175 176
PROCEED	239
PROTON	044 107 228

CD

Manufacturer/Brand	Set-Up Code Number
QUASAR	103 008
RADIO SHACK	182
RCA	017 042 150
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
SONY	048 081 097 126 133 177 225 226 164
SOUNDESIGN	251
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
TOSHIBA	006 067 091 160 148
VECTOR RESEARCH	080
VICTOR	004 022 114 124
WARDS	185 033
YAMAHA	024 046 054 186 183 245
YORX	182

Set-Up Code Table

Manufacturer/Brand	Set-Up Code Number
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

•**Note** : These codes are stored in DVD.

Set-Up Code Table

Manufacturer/Brand	Set-Up Code Number
AIWA	015 071 100 114
CARVER	006 008 027 024 036
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	009 059 212
TECHNICS	007 010 076 088 109 122 193
TOSHIBA	112
VICTOR	106
YAMAHA	021 026 031 067 040

Set-Up Code Table

• AUX - Light, Switch, Tivo, etc.

AUX

Manufacturer/Brand	Set-Up Code Number
3M	152
AIWA	164
ARCHER	155
AUTON	191
DMX	156
DRAPER SCREEN	204
DWIN	080
EVERQUEST	206
EXTRON	151
FAROUDJA	184
FUJI	209
JERROLD	153
JVC	185
KENWOOD	185
LITE-TOUCH	208
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