Home Theater Master® LCD Screen Preprogrammed and Learning Remote Control

MX-500™ Operating Manual

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1. Introduction

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 45 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!

2. Batteries

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 45. However, you should replace the worn batteries with a fresh set as soon as possible. Do not mix new and used batteries.
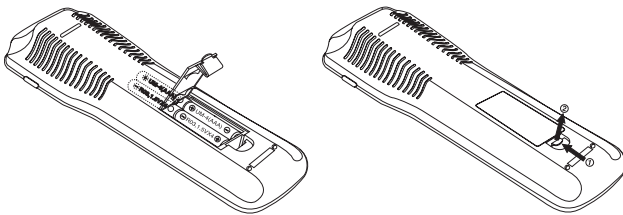
3. Summary of Operations

A. Description of Devices

The MX-500™ is designed to operate up to ten components including **Audio Receivers, Cable and Satellite Boxes, TV1, TV2, DVD (LD), VCR, 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 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 38 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 11 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 18 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 25 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 23 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 31 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 38 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 42 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 41 and 43 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

J. LCD Screen And Button Layout
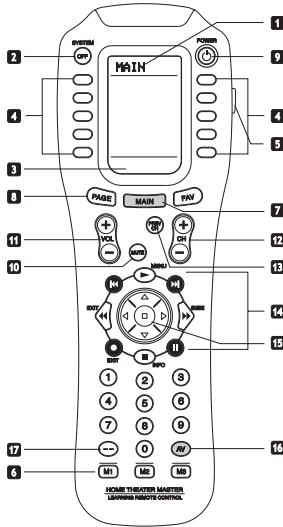
■1 Displays the name of the device selected.

■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 AV

■17 - -

K. System Settings

All programming is done by first entering the SETUP mode in the remote control. Press both the MAIN and AV buttons simultaneously for **three seconds** to enter the SETUP mode. SETUP will be shown at the top of the LCD screen.
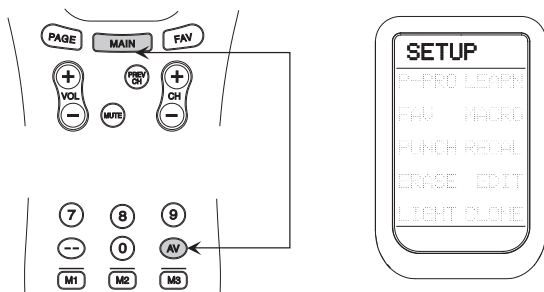
You exit the SETUP mode by simply pressing the MAIN button.
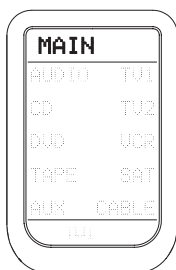
Important: When using the Preprogramming method starting on page 12, always use the appropriate button as shown in the illustration above when asked "FROM TABLE". You may have already changed the labels of the buttons, but the code tables are in the positions as shown. For example, the AUDIO Code Table (refer to pages starting at 57) 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 52, 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 31 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 38) 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 AV 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.
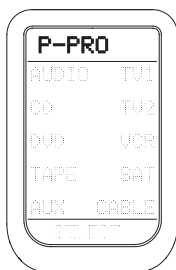
4. The remote will be flashing "SELECT BUTTON". Press the button for the device you wish to program. (For example, to program TV, press the TV button.)

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 TV1, not TV2, to access the TV code library.

6. The remote will be flashing "ENTER NUMBER". Refer to the tables starting on page 57in 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 AV buttons simultaneously for **three seconds**.
3. Press the P-PRO button next to the LCD screen.
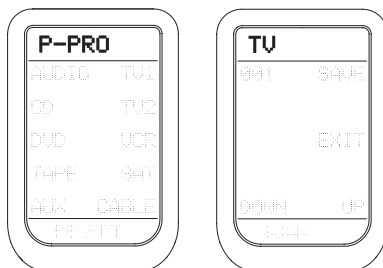
4. The remote will be flashing "SELECT BUTTON". Press the device you wish to program. (For example, to program TV, press the TV button.)

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 10 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.
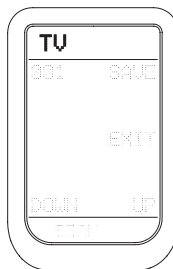
7. Release the UP or DOWN button you were pressing as soon as the device is turned off. If you should happen to go past the one that turned off you device, just manually turn

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 AV buttons simultaneously for **three seconds**.
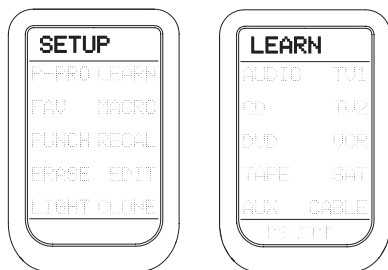
2. Press the LEARN button next to the LCD screen.
3. Select the DEVICE that contains the function button you wish to program.
4. Press the PAGE button to go to page 2 of the device if you need to.
5. Place your original remote control head to head with the MX-500™ about 2 inches apart on a flat surface as illustrated below.
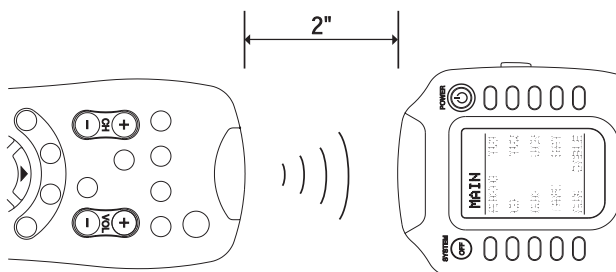
6. Press the button on the MX-500™ you wish to program. Only the three MAIN, PAGE and FAV buttons cannot be programmed.

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 31.)

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 AV 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.

```
LEARN
AUDIO    TV1
CD       TV2
DVD      VCR
TAPE     SAT
AUX    CABLE
SELECT
```
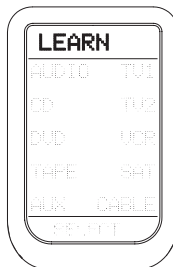
5. Select any of the **ten device buttons** you wish to program on the MX-500™. Press the button on your original remote control you wish to program into the Device button you have chosen on the MX-500™. Once the MX-500™ has received the signal, the MX-500™ will flash "Good" on the LCD screen, indicating 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.*

5. Programming Favorite Channels

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 AV 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.
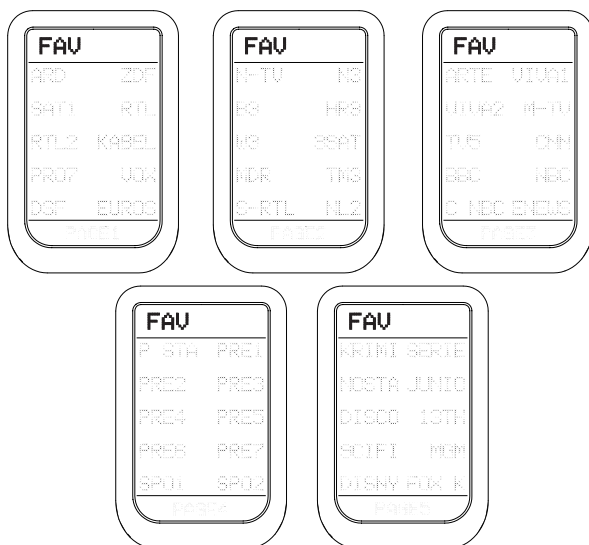
5. Programming Favorite Channels

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, AV, − −, 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, AV, − −, 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 AV code in order to change channels. For this, you could LEARN the proper code to the AV 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 AV button simultaneously for **three seconds**.
2. Press the MACRO button next to the LCD screen.

6. Programming Macro Buttons

3. Press one of the macro buttons, M1-M3, Power or System Off you wish to store your macro on.
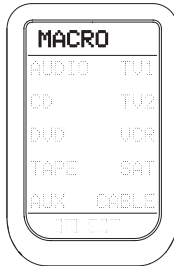
```
MACRO
AUDIO      TV1
CD         TV2
DVD        VCR
TAPE       SAT
AUX     CABLE
```

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.

6. Programming Macro Buttons

B. Programming Macro Functions To The Ten Device Buttons

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

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

3. Important: Press the PAGE button.

```
MACRO
AUDIO      TV1
CD         TV2
DVD        VCR
TAPE       SAT
AUX      CABLE
```
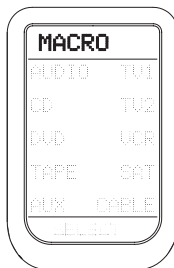
4. Press one of the ten device buttons you wish to store your macro on.

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.

6. Programming Macro Buttons

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 AV 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(AV) 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.

7. Programming Punch Through Functions

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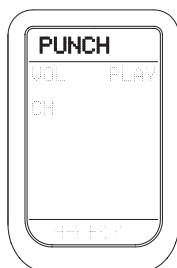
3. Press the VOL button on the LCD for Volume Punch Through, the PLAY button for Transport Punch Through and the CH button for Channel Punch Through.
4. Select the device you wish to punch through to (1st device example - Television or Cable box.)
5. Select the device you wish to punch through from (2nd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

8. Erasing Existing Programming

A. Erasing Learned Buttons

1. Go to the SETUP mode by pressing both the MAIN and AV buttons simultaneously for **three seconds**.
2. Press the ERASE button next to the LCD screen.
3. Press the LEARN button.
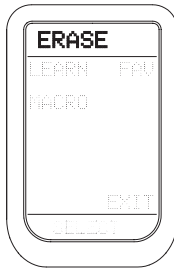
4. If you wish to erase all the learned functions in the MX-500™, press the ALL button and then press the SURE? button at the next LCD screen.
5. If you wish to erase all the buttons in a single device or an individual button in the device, press the DEVICE button.
6. Press the device button (TV, VCR, 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 AV 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 AV 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.

8. Erasing Existing Programming

2. Erase Macro Functions In The Ten Device Buttons

1. Go to the SETUP mode by pressing the MAIN and AV buttons simultaneously for **three seconds**.
2. Press the ERASE button next to the LCD screen.
3. Press the   MACRO button.
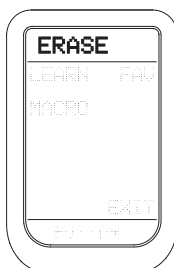
4. Press the KEY button.
5. Press one of the ten DEVICE buttons from which you wish to erase the macro function and then press the SURE? button at the next LCD screen.
6. Exit from Macro mode by pressing the MAIN button and then exit from SETUP mode by pressing the MAIN button once again.

D. Erasing Punch Through Functions

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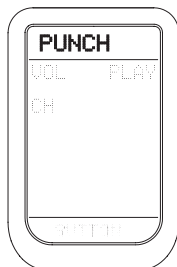
8. Erasing Existing Programming

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.

9. LCD Button Editing

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

1. Enter the SETUP mode by pressing the MAIN and AV buttons simultaneously for **three seconds**.

2. Press the EDIT button next to the LCD screen.
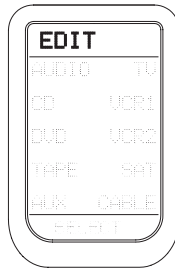
3. Press the DEVICE button to display the function buttons for that device.

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.
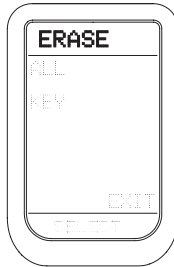
B. To Create Or Edit Text for Favorite Channel Buttons

1. Go to the SETUP mode by pressing the MAIN and AV 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

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 AV 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.
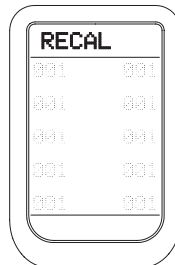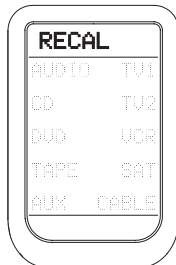
11. Setting Backlight

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 AV buttons simultaneously for **three seconds**.

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

```
   LIGHT
ON          10


            SAVE


            EXIT
      LIGHT
```
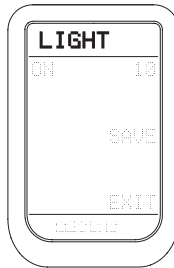
3. Using the number pad buttons, enter the desired backlight time (in seconds). It can go up to 99 seconds. Save the time by pressing the button at the right side of the time you just assigned.

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.

12. Cloning MX-500™

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

2. Press the CLONE button next to the LCD screen.
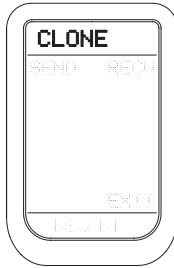
3. Press either the SEND or RECV button depending upon the role of the remote control. If the MX-500™ is to be copied from, press the SEND button. If it is to be copied to, press the RECV button.

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.
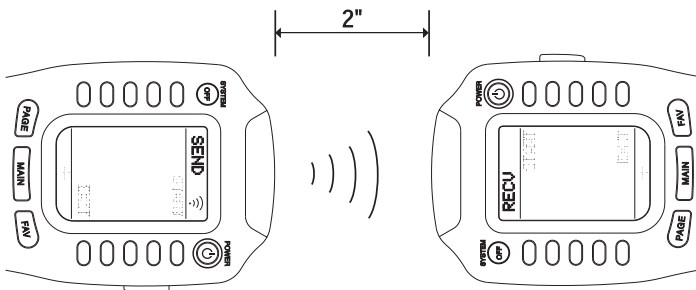
12. Cloning MX-500™

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 AV 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.

17. Glossary

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.

17. Glossary

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	AUDIO	SAT	SAT
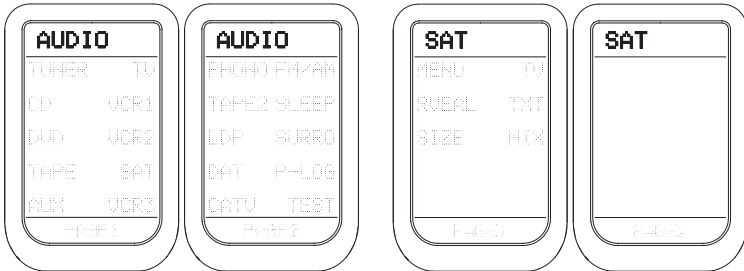
AUDIO

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	SLELCT
PLAY/ MENU	REAR UP
STOP/ INFO	REAR DN
REW/ EXIT	CENTER DN
FF/ GUIDE	CENTER UP
SKIP-/ RED	GUDIE/Center
SKIP+/ GREEN	MENU/Surr
REC/ YELLOW	EXIT/Delay
PAUSE/ BLUE	INFO
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
- -	DISPLAY
AV	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	N
UP	INDEX/PLAY
DN	HOLD/STOP
LEFT	CANCEL/REW
RIGHT	SUB PAGE/FF
SELECT	OK
PLAY/ MENU	
STOP/ INFO	INFO
REW/ EXIT	
FF/ GUIDE	
SKIP-/ RED	RED
SKIP+/ GREEN	GREEN
REC/ YELLOW	YELLOW
PAUSE/ BLUE	BLUE
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
- -	- -
AV	AV
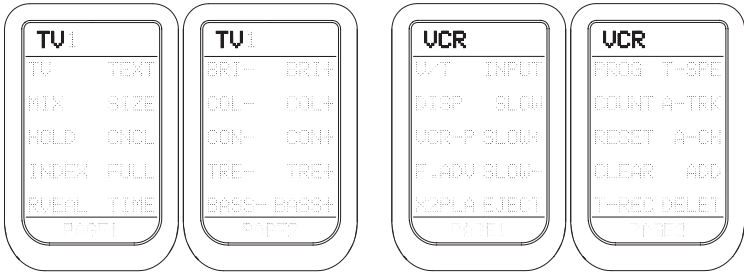
TV1/TV2

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	N
UP	UP
DN	DN
LEFT	TINT-
RIGHT	TINT+
SELECT	OK
PLAY/ MENU	INSTALL(MENU)
STOP/ INFO	I
REW/ EXIT	
FF/ GUIDE	MENO
SKIP-/ RED	RED
SKIP+/ GREEN	GREEN
REC/ YELLOW	YELLOW
PAUSE/ BLUE	BLUE
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
- -	- -
AV	AV

VCR

Button Name	Functions
System-OFF	OFF
POWER	ON/OFF
VOL UP	
VOL DN	
CH UP	CH UP
CH DN	CH DN
MUTE	
PRE-CH	
UP	
DN	
LEFT	
RIGHT	
SELECT	
PLAY/ MENU	PLAY
STOP/ INFO	STOP
REW/ EXIT	REW
FF/ GUIDE	FF
SKIP-/ RED	
SKIP+/ GREEN	
REC/ YELLOW	REC
PAUSE/ BLUE	PAUSE
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
- -	- -
AV	AV

CABLE	CABLE		DVD	DVD
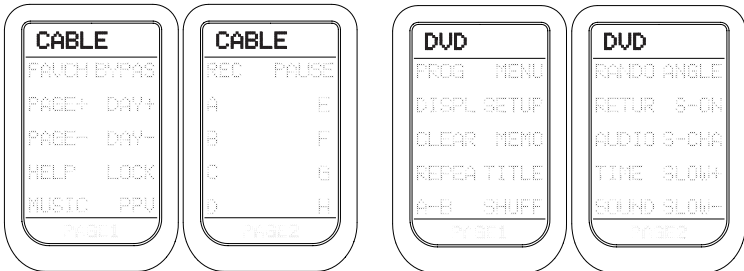
CABLE

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	SLELCT
PLAY/ MENU	PLAY
STOP/ INFO	STOP
REW/ EXIT	REW
FF/ GUIDE	FF
SKIP-/ RED	GUIDE
SKIP+/ GREEN	MENU
REC/ YELLOW	EXIT
PAUSE/ BLUE	INFO
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
- -	DISPLAY
AV	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	SLELCT
PLAY/ MENU	PLAY
STOP/ INFO	STOP
REW/ EXIT	REW
FF/ GUIDE	FF
SKIP-/ RED	I<<
SKIP+/ GREEN	>>I
REC/ YELLOW	EJECT
PAUSE/ BLUE	PAUSE
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
- -	DISPLAY
AV	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/ MENU	PLAY
STOP/ INFO	STOP
REW/ EXIT	REW
FF/ GUIDE	FF
SKIP-/ RED	I<<
SKIP+/ GREEN	>>I
REC/ YELLOW	EJECT
PAUSE/ BLUE	PAUSE
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
- -	
AV	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/ MENU	PLAY(A)
STOP/ INFO	STOP(A)
REW/ EXIT	REW(A)
FF/ GUIDE	FF(A)
SKIP-/ RED	R-PLAY(A)
SKIP+/ GREEN	Rec-MUTE(A)
REC/ YELLOW	RECORD(A)
PAUSE/ BLUE	PAUSE(A)
1	
2	
3	
4	
5	
6	
7	
8	
9	
0	
- -	
AV	

20. APPENDIX
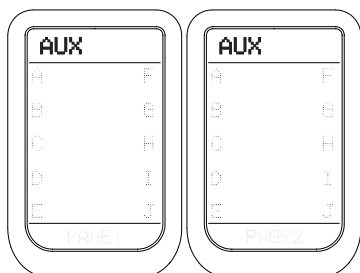
AUX

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/ MENU	
STOP/ INFO	
REW/ EXIT	
FF/ GUIDE	
SKIP-/ RED	GUIDE
SKIP+/ GREEN	MENU
REC/ YELLOW	EXIT
PAUSE/ BLUE	INFO
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0
- -	DISPLAY
AV	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.

Set-up Code Table

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

Set-up Code Table

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	048 067 010 117 156
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	026 253 169 067 173 205 232 089 264 274 285
ZENITH	143 210

Set-up Code Table

Manufacturer/Brand	Set-Up Code Number
ABSAT	111
AEGIR	123
AKAI	013 031 064 055 069 072 099 100
ALBA	013 016
ALDES	054 055 069 099 123
ALLSAT	043 044 064 081 082 099 109
ALPHA	064
ALTECH	072
AMITRONICA	072
AMPERE	105 107
AMSTRAD	003 006 008 009 062 072 084 105 113 116
ANGLO	072
ANKARO	042 054 055 072
ANTTRON	082 100
ARCON	042 073 107
ARMSTRONG	064
ASA	024 060
ASAT	064 073
ASLF	072
ASTRA	028 020 073 079 114 121
ASTRO	077 100 101 123
AUDIOTON	100 109
AUSTAR	066 083
AXIS	078 079 102
BEST	042
BLAUPUNKT	020 021 022
BLUE SKY	072 116
BOCA	105 121
BROCO	072 079
BSYSB	045
BUBU SAT	072
BUSH	039 069 081 082
CAMBRIDGE	013 077
CANAL SATELLITE	065
CARAT.SOM	078
CHANNEL MASTER	034 069
CHESS	056
CITYCOM	014 070 103 104
CLARK	100
CLEMENS KAMPHUS	091 102
CNT	123
COMMLINK	054
COMMUNICADO	078
COMTEC	054 078
CONRAD	077 103
CONTEC	078
COSAT	109
CROWN	011 114
DAEWOO	072 073
DANSAT	043 081 082
D-BOX	061 124
DDC	069
DEW	073 078
DISCOVERER	056
DISK EXPRESS	042
DISTRATEL	116
DISTRISAT	064
DNT	010 032 064
DUAL	073
ECHOSTAR	010 065 072
EINHELL	011 054 072 077 105 114 121
ELEKTA	123

Set-up Code Table

Manufacturer/Brand	Set-Up Code Number
ELTA	064 109
EMANON	016
EMME ESSE	091
ENGEL	072
EURIEULT	108 116
EUROPA	064 077
EUROSKY	092 103 105
EXATOR	013 100
EXTRA SAT	055
FAGOR	109
FERGUSON	039 043 044 076 081 082
FIDELITY	008 077 107
FINLANDIA	024
FINLUX	024 059
FLAIR MATE	072
FOXTEL	066
FRACARRO	093
FREECOM	099 122
FTE	072 085 086 089 090 095 107 110
FUBA	010 013 016 020 027 032 042 059
GALAXIS	054 065 078 079 083 102 109 110 117
GARDINER	070
GOLDBOX	065
GOLDSTAR	122
GRANADA	024 031
GRANDIN	108 066 113 116
GRUNDIG	019 020 022 023 039
G-SAT	044 082
HANSEATIC	056
HANTOR	016
HANURI	123
HARTING UND HELLING	091
HEIRU	020
HELIOCOM	107
HINARI	034 069 082
HIRSCHMANN	020 057 060 077 087 091 092 093
HITACHI	018 031 038
HNE	062
HUMAX	083
HUTH	011 054 078 091 105 106 109
HYPSON	108
IMEX	108
INTERNATIONAL	004 105
INTERVISION	109
ITT	032
ITT NOKIA	060 061
JOHANSSON	109
KAMM	072
KATHREIN	005 014 020 027 064 070 072 075 085 087 088 094 096 097 100 101 118 120
KENNEX	093
KITON	062
KOSCOM	102 087 091 122
KR	100
KREISELMEYER	020
K-SAT	072
KYOSTAR	100
LASAT	078 103 105 121 123
LATEST	017
LEMON	063
LENCO	016 068 072 073 079 103 122
LENSON	077

Set-up Code Table

SAT

Manufacturer/Brand	Set-Up Code Number
LEXUS	064
LG	122
LIFESAT	056
LORENZEN	062 105
LORRAINE	122
LUXOR	024 028 029 030 031 032 061 077
M ELECTRONIC	025
M&B1	056
MAESTRO	074
MANATA	072 108
MANHATTAN	068 102 109 123
MARANTZ	064
MASCOM	087
MASPRO	005 039 057 072 082
MATSUI	036 069
MB	056
MEDIABOX	065
MEDIASAT	065 077 079
MEDION	072
MEDISON	072
MEGA	064
MELECTRONIC	070
METRONIC	054 055 070 100 108 116 123
METZ	020 022 023 072
MICRO	100
MICRO ELECTRONIC	072
MICRO TECHNOLOGY	004 072 079
MICROTEC	072
MITSUBISHI	022 038 041
MITSUMI	121
MORGAN'S	011 064 072 105 109 121
MOSER	020
MULTICHOICE	066
MURATTO	122
MWC	020
MYSAT	072
NECKERMANN	023
NETWORK	044 082
NEUHAUS	072 077 079 102 110
NEUSAT	072 102
NEVELING	034
NIKKO	061 072 099
NLKIA	060 061 065
NOKIA	024 025 028 030 031 032 061
NOMEX	068
NORCO	068
NORDMENDE	016 034 069 076 123
NTC	091
OCEANIC	025 031
OCTAGON	073 078 100
OKANO	091
ONDIGITAL	098 112
OPTEX	109
OPTIMA	091
OPTUS	066
ORBIT	073
ORBITECH	012 058 077
ORIGO	068
OSAT	009 113
OTTO-VERSAND	009 015 022 023
PACE	009 017 033 039 040 043 044 081 082 112
PALCOM	069

SAT

Manufacturer/Brand	Set-Up Code Number
PALLADIUM	077 114
PALSAT	077
PANASAT	066
PANDA	081 102
PHILIPS	023 027 047 061 064 065 070 075 082 100 119 124
PHOENIX	078 082
PHONOTREND	054 091 109 110
PIONEER	065
PREISNER	105 121
PREMIER	091
PREMIERE	061 065
PRO VISAT	099
PROSAT	034 054 069
PROSONIC	062
PROVISION	123
PYXIS	102
QUADRAL	034
QUELLE	008 009 022 023 024 025 031 062 103
QUSDRAL	054 055 069
RADIOLA	064
RADIX	010 084
RAINBOW	100
REDPOINT	079
RFT	054 058 064
RITAR	030
ROADSTAR	072
ROVER	072
SABA	039 044 076 082 099 103 116 123
SAGEM	115 124
SAKURA	033 078
SALORA	024 025 028 030 031 032
SAMSUNG	065 092
SANYO	013
SAT	069 077
SAT PARTNER	091 099 100 122 123
SAT TEAM	072 107
SATCOM	056
SATEC	039 044 072 082
SCHACKE	100
SCHNEIDER	007 075 119
SCHWAIGER	014 039 044 056 082 116
SCS	103
SEDEA	093
ELECTRONIQUE	010 079
SEEMANN SEG	004 016 055 056 062 106 114
SEI-SINDUDYNE	007
SELECO	109
SERVI SAT	108
SIEMENS	021 022 023
SILVA	122
SINGER	007
SKANTIN	072
SKARDIN	079
SKINSAT	077
SKR	072
SKYMASTER	054 055 056 072
SKYMAX	064
SKYSAT	056
SKYTWIN	055
SKYVISION	109
SL	062 105
SMART	105

SAT

Manufacturer/Brand	Set-Up Code Number
SONOLOR	031
SONY	065 080
SR	121
STARLAND	072
STRONG	065 066 073 093 100 123
STVL	108
SUNSAT	072 079
SUNSTAR	105 121
TAGRA	109
TANTEC	082
TECHNILAND	109
TECHNISAT	012 015 058 077
TECO	073 121
TELASAT	056 103
TELECIEL	099 100
TELECOM	072
TELEDIREKT	082
TELEFUNKEN	039
TELEKA	077 087 100 102
TELEMASTER	123
TELESAT	056
TELESTAR	077
TELETECH	062
TELEVES	077
TELEWIRE	109 100
TENSAI	073 106
THOMSON	065 072 076 103 115
THORN	022 039
TOKAI	064
TONNA	072 077 102 109
TOSHIBA	098
TPS	115
TRENDLINE	121
TRENDPLAIN	121
TRIAD	122
TRIASAT	059 077
TRIAX	059 064 065 072 077 103
TRISTAR	073
UEC	066
UNIDEN	112
UNISAT	064 078
UNITOR	042 106
UNIVERSUM	060 062 103 110
VECTOR	114
VENTANA	064
VESTEL	062
VIPER	078
VISIONIC	093
VISIOSAT	072
VORTEC	016 092
VTECH	070
WELA	072 105
WETEKOM	056
WINTERGARTEN	054
WISI	010 020 035 039 071 077 102
WITTENBERG	006 044
WOORISAT	123
XCOM	111
XRYPTON	114
XSAT	072 111
ZEHNDER	035 062 070 103 114 123
ZETA TECHNOLOGY	064
ZODIAC	100

Set-up Code Table

Manufacturer/Brand	Set-Up Code Number
ADMIRAL	137 204
ADYSON	159 219
AKAI	001 009 010 108 132 133 135 139 140 156 275
AKURA	064 086 108 110 155 171
ALBA	009 060 064
ALLSTAR	108
AMSTRAD	006 025 157
AMWAY	108
ANITECH	010 108 185 219 267
ANTECNO	064
ARC EN CIEL	173 179 239
ASA	087 102 108 235 236
ASBERG	185
ASORA	171
ATLANTIC	089 197
AUDIOSONIC	085
AUTOVOX	159 163 197
BANK	232
BEKO	085 086 108 250 263
BESTAR	086
BLAUPUNKT	091 092 096 097 098 099 210 253 256
BONDSTEC	163
BOSCH	210
BRANDT ELECTRONIQUE	173 179 225 239
BRIONVEGA	204
BSR	144
BUSH	009 136 139 144 232
CENTURY	165 204
CGE	139 165 210
CIE	025 108 170
CLATRONIC	009 010 064 108 144 149 159 164 165 171 185
CLARIVOX	258
CONDOR	108 149 191
CONIC	219
CONTEC	171 222
CONTINENTAL EDISON	173 179 225 239
COSMOS	108
CROSLEY	165 204
CROWN	085 086 108 144 171 185 274
CS-ELECTRONICS	064
DAEWOO	108 120 127 170 269
DANSAI	010 219
DE GRAAF	108 134
DECCA	070 108 159 161 162 184 189 190 206
DECCAVIDEO	108
DUAL	233
DUMONT	204
ELBE	058 144 157 160 192 246
ELBIT	108 248
ELECTROVENDA	108
ELEKTRONIKA	108
ELIN	108
ELITE	064 149
ELMAN	144
ELTA	010 171
EMERSON	108 204
ESC	108
ETRON	133
EUROPHON	144 159
EXPERT	089
FENNER	171
FERGUSON	078 079 080 160 182 195 198 199 200 201 202

TV

Manufacturer/Brand	Set-Up Code Number
FINLANDIA	194 195
FINLUX	008 087 102 104 105 107 108 140 144 159 161 189 235 236 275
FIRST-LINE	144
FISHER	086 208 222 233
FORMENTI	108 149
FRABA	108
FRONTECH	136 171 220
FUBA	073 109
FUJITSU GENERAL	088 159 197
FUNAI	010
GALAXIS	108 185
GALERIA	171
GBC	137 144 171
GEC	011 108 129 147 159 189
GELOSO	064 137 144 164 171
GENERAL	171
GENERAL TECHNIC	171
GOLDHAND	159 171
GOLDSTAR	038 108 110 136 144 159 163 166 171 191 219 237 268
GOODMANS	009 064 108 109 110 120 159 170 171
GORENJE	086
GPM	010 064
GRANADA	027 105 108 111 121 134 140 159 162 167 187 194 195 238
GRUNDIG	091 092 093 094 095 097 098 100 101 172 232 238
HCM	010 108 159 171
HIFIVOX	173 179 239
HINARI	010 064 108 133 171
HIT	204
HITACHI	011 013 015 017 021 022 023 024 028 029 030 035 039 040 041 053 054 055 056 057 120 127 128 129 134 135 140 143 145 147 151 156 159 266 173 193 219
HYPER	009 159 163 171
ICE	009 010 064 108 171
IMPERIAL	108 139 144 154 165 255 260 267
INGERSOLL	171
INNO HIT	159 189 237
INTERBUY	010
INTERCORD	233
INTERFUNK	108 109 113 130 133 134 135 137 141 146 147 148 165 179 210
INTERVISION	010 086 108 132 144 166
IRRADIO	163 235 237
ITC	144 159
ITS	009 010 064 171
ITT	141 151 186
JVC	009 169
KAIDO	136
KAPSCH	089 147 148 197
KARCHER	108 274
KATHREIN	109
KAWA	009
KENDO	060 108 137 157
KENNEDY	197
KNEISSEL	108
KONKA	009
KORTING	086 204 209
KUBA	233
KUBA ELECTRONIC	233
KURA	134
LENCO	108 170
LG	038 108 110 136 144 159 163 166 171 191 219 237 268
LIESENKOTTER	108 210
LIFETEC	010 064 108 170

Set-up Code Table

TV

Manufacturer/Brand	Set-Up Code Number
LOEWE	109 113 204 205
LOGIK	070 227
LUMA	137 197
LUXOR	102 104 132 133 134 135 138 140 143 145 153 156 186 237 275
M ELECTRONIC	103 104
MAGNADYNE	163 164 204
MAGNAFON	199
MAGNASONIC	108
MARANTZ	108
MARSHAL	064
MATSUI	009 016 025 060 061 062 063 070 108 131 136 152 154 159 171 172
MERRIT	132
METZ	092 097 098 100 101 108 204 207 254 265
MITSUBISHI	075 076 077 097 113 204 222 224 240
MIVAR	159 235 259 262
MNARTT	007
MTC	086 109 134
MULTITECH	136 159 171 185
MURPHY	232
NAONIS	137
NECKERMANN	037 059 060 092 098 100 101 108 109 113 115 118 119 134 135 137 143 157 159
NEI	064 108
NIKKAI	219
NIKKO	108
NOBLIKO	232 235
NOGAMATIC	173 179 239
NOKIA	014 019 032 102 103 104 108 132 133 134 135 138 140 141 145 1 46 147 148 156 275
NORDMENDE	129 173 179 180 181 193 195 225 226 228 239
NORMN	108
NOVA	087
OCEANIC	032 103 104 135 140 156
OKANO	108
ONWA	009 010 064
ORAVA	108
ORBITER	086
ORION	025 059 060 061 062 064 070 108 110 118 219
OSAKE	106
OTTO-VERSAND	002 005 009 014 059 060 081 082 083 085 092 097 098 100 101 108 109 111 113
PAEL	235
PANASONIC	002 003 005 167 168 229
PATHE CINEMA	144
PATHE MARCONI	173 179 225 239
PHILCO	090 108 139 144 148 165 204
PHILIPS	065 066 067 068 069 092 108 109 111 112 114 115 116 119 122 123 124 125 193 212 251 252
PIONEER	193
PRANDONI-PRINCE	137 235
PRIMA	219
PRO VISION	108
PROFEX	108 136 171
PROFITRONIC	108
QUELLE	001 002 010 014 019 025 059 060 072 086 087 088 092 097 098 100 101 102 274
RADIOLA	108
RADIOTONE	010 085 108 171
REDIFUSSION	187
REVOX	109
REX	088 089 137 157 158 164 197 246 247

Set-up Code Table

Manufacturer/Brand	Set-Up Code Number
RFT	064 085 135 204
RITAR	138
ROADSTAR	108
ROSITA	171
SABA	079 146 147 173 179 181 193 195 225 226 239
SAISHO	025 060 070 136 159
SAKIO	171
SALORA	019 032 103 104 132 133 134 135 137 138 140 142 143 145 150 156 237 241 275
SAMBERS	235
SAMSUNG	004 010 086 108 117 126 171 220 237
SANY	193
SANYO	014 018 019 020 032 034 071 086 087 189 218 221 222 223
SCHNEIDER	009 064 088 108 133 141 159 163 233
SEG	010 064 108 144 159 165 171 185 219
SEI-SINUDYNE	025 108 204 212
SELECO	088 089 137 157 197 222
SENTRA	064 133
SHARP	081 082 083 222
SHINTOM	108
SHINTOSHI	108
SHIVAKI	108
SIAREM	204
SIEMENS	092 096 097 098 100 101 108 210 218 219 221
SIESTA	085
SILVER	010 064
SINGER	108 164 204
SINUDYNE	118 131
SMARAGO	172
SOLAVOX	133
SONOLOR	140 156
SONTEC	108
SONY	072 074 211 212 213 214 215 216 217 222
SPECTRA	170
STARLITE	108 171
STARLUX	171
STERN	088 089 137 157 197
SUNSTAR	108 171
SUPERTECH	108 139 152 171
TADISTAR	108
TASHIKO	108
TASHIKO	159 218
TEC	108 139 144 159 170 171
TECHLINE	185
TECHNISAT	108 165
TECNISON	108 171
TEKON	171
TELEAVIA	173 178 179 225 239
TELEFUNKEN	079 177 179 181 193 195 200 210
TELEOPTA	171
TELERNT	109
TELETECH	165 171
TELETEXT	115
TELETON	088
TELETON	089 134 159 197
TENSAI	064 108 144 149 171 191
TENSON	171
TESLA	204
THOMSON	078 079 134 173 178 179 181 193 195 225 239 270
THORN	011 014 016 018 026 028 066 072 075 087 097 102 108 116 135 141 145 146 160
THORN-FERGUSON	160 188 200 227

Set-up Code Table

Manufacturer/Brand	Set-Up Code Number
TOSHIBA	012 016 026 036 037 222 232
TOWADA	144 185
TRISTAR	010 064
TRIUMPH	025 219 236
UHER	089 108 109 149 185 197 233
ULTRAVOX	108 164 185 204
UNIVERSUM	275
UNIVOX	204
VESTEL	108
VIDEOSAT	165
VIDEOTON	178 193
VIDEOWAY	230
VISION	108 149
VOXSON	137 204
WALTHAM	178
WATSON WEGA	064 108 149 171
WHITE	208 222
WESTINGHOUSE	108 110 149
YOKO	010 064 108 136 144 159 164 170 171
ZANUSSI	137 197
ZENITH	231

VCR

Manufacturer/Brand	Set-Up Code Number
ADYSON	017
AKAI	012 013 015 019 033
ALBA	029
ALLSTAR	051
AMWAY	051
ANITECH	017 030 051 055
ASA	050
AUDIOSONIC	064
AUDIOTON	029
BAIRD	039
BANG & OLUFSEN	038
BESTAR	029 064
BLACK PANTHER	064
BLAUPUNKT	046 047 048 085
BONDSTEC	017 029
BRANDT ELECTRONIQUE	037 039
CIE	017
CLATRONIC	029
CONDOR	029 064
CONTINENTAL EDISON	037 039
CROWN	017 030 064
DAEWOO	029 064 065
DAYTRON	029
DE GRAAF	051
DECCA	050
DECCAVIDEO	050
DUAL	037 039
ECONOMIC	010
EDISON	017
ELBE	064
ELTA	017 064
ESC	010 029 064
FERGUSON	001 039 073 074
FIDELITY	017
FINLUX	019 050
FISHER	016
FUNAI	017
GBC	029
GEC	050 061
GELOSO	029
GOLDHAND	017 030
GOLDSTAR	022 023 024
GOODMANS	017 029 064 065
GRANADA	019 050 053 062
GRUNDIG	044 045 046 047 048 049 084 085
HCM	017 029 030
HINARI	009 017 028
HITACHI	015 019 025 038 061
IMPERIAL	010 050
INNO HIT	064
INTERBUY	017
INTERFUNK	050 053 058 059 061
INTERVIDEO	029
INTERVISION	017
ITT	059
ITV	029
JVC	037 039
KAPSCH	061
KENDO	032 033
KENWOOD	039
KUBA	010 016 037 039
LG	022 023 024

VCR

Manufacturer/Brand	Set-Up Code Number
LIESENKOTTER	053
LOEWE	050 085
LOGIK	009
LUXOR	015 019 020
M ELECTRONIC	042
MAGNAFON	073
MARANTZ	050 053 085
MARQUANT	017 030
MATSUI	009 028 032
METZ	046 047 048 049 085
MITSUBISHI	040 041 047 048 050
MULTITECH	017 029
NATIONAL	006
NEC	037 039
NECKERMANN	009 010 014 015 031 039 046 047 049 050 053 054 055 064 079 080 081 082 083 085
NESCO	017
NIKKAI	029
NOBLIKO	084
NOKIA	010 015 018 019 020 037 039 042 059 061
NORDMENDE	037 039 069
OCEANIC	015 019 020 042
OKANO	017
OLYMPIC	029
ONNO HIT	010
ORION	009 028 031
OTTO-VERSAND	005 015 042 046 047 048 049 050 053 055 056 062 064 079 080 081 082 083
PANASONIC	004 005 006 008 062
PATHE MARCONI	037 039
PHILIPS	049 050 051 053 054 055 056 085
PROFEX	017 030 051
QUELLE	005 006 009 010 012 015 017 018 019 031 036 037 038 039 042 046 047 048 049 050 051 053 054 055 056 059 064 079 080 081 082 083 084 085
QUESTAR	029
RADIOLA	055
REX	037 039
RFT	017 029 030
ROADSTAR	017 065
ROYAL	017 029
SABA	001 037 039 061 069
SAISHO	009 032
SALORA	015 018 019 020 042
SAMSUNG	007 010 011
SANSUI	017 039
SANYO	015 018
SCHNEIDER	010 017 051 059
SEG	010 017 030
SEI-SINUDYNE	050
SELECO	037 039
SENTRA	029
SETRON	017 029
SHARP	042
SHINTOM	017
SIEMENS	015 046 047 048 049 085
SINGER	064
SOLAVOX	029
SONITRON	016
SONOLOR	015 019 020
SONY	036 079 080 081 082 083
TASHIKO	050 051

Set-up Code Table

Manufacturer/Brand	Set-Up Code Number
TEC	029
TECHLINE	017
TELEAVIA	037 039
TELEFUNKEN	001 037 039 069 074
TELERENT	006 039
TELETECH	017
TENSAI	017 030
THOMSON	001 037 039 069
THORN	014 015 036 038 039 040 047 048 050 053 059 070 074 079 084
THORN-FERGUSON	037 039 070 074
TOSHIBA	014 039
TOWADA	017 030
TVA	029
UHER	010 029 038 039
ULTRAVOX	064
VIDEOMASTER	029
WHITE WESTINGHOUSE	053
YOKO	010 017 029 030

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.

Set-up Code Table

CABLE

Manufacturer/Brand	Set-Up Code Number
ABC	103 003 004 039 042 046 053
ANTRONIX	014
ARCHER	005 007 014
CENTURY	007
CITIZEN	007
COMBANO	080 081
COMSAT	074
COMTRONICS	030
D-BOX	109 110
EAGLE	020 030 040
EASTERN	057
ECHOSTAR	106
ELECTRICORD	032
GEMINI	008
GENERAL INSTRUMENT	103 074
GOLDEN CHANNEL	030
HAMLIN	049 050 055
HITACHI	103 055
JERROLD	103 002 003 004 008 009 010 069 074
MAGNAVOX	010 012 095
MEMOREX	052
M-NET	037
MOVIE TIME	028 032
NOKIA	109
NSC	015 028 038
OAK	031 037 053
PANASONIC	044 047
PARAGON	052
PHILIPS	006 012 013 020 085 095 109 110
PIONEER	103 034 051 063
PTS	011 074
PULSAR	052
RCA	047
REGAL	049 050
REGENCY	057
SAGEM	110
SAMSUNG	030
SCIENTIFIC ATLANTA	003 011 041 042 043 045 046
SIGNAL	030
SIGNATURE	103
SL MARX	030
SONY	096
SPRUCER	047
STARCOM	002 004 008 009
STARGATE	008 030
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
ZENITH	052

Set-up Code Table

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
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

Set-up Code Table

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

LD

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

TAPE

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
EVERQUEST	206
EXTRON	151
FAROUDJA	184
FUJI	209
JERROLD	153
JVC	185
KENWOOD	185
LITE-TOUCH	208
LUTRON	077 158 159
MAKITA	186 201
MINDPATH	205
NILES	160 187
NSM	161
SCIENTIFIC ATLANTA	163
SONY	165 166
SOLO ELECTRONICS	207
STARCOM	153
TURBOSCAN	167
VELODYNE	203
X-10	093 183
XANTECH	168 169 170 171 172 188 189