

Programming in CCP

(Based on the MX-880)



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Installing CCP on Vista or XP PCs

You Need a Personal Computer With a USB Port

CCP will run on any Pentium II or faster Windows PC. Your PC should be equipped with an adequate amount of RAM for the operating system you use. CCP is compatible with the Windows 2000, XP, Vista and 7 operating systems. It is not compatible with Windows ME, 98 or previous versions of Windows.

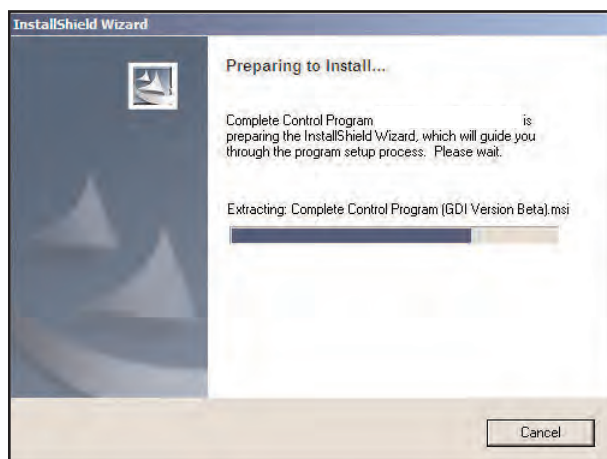
CCP is installed via a self extracting installer file downloadable from our installer only website:

www.urccontrolroom.com.

Installing CCP and the USB Driver

CCP installs with a companion program for communication, Microsoft ActiveSync. You must install both programs and if un-installing, un-install both programs. To install the two programs, follow these steps:

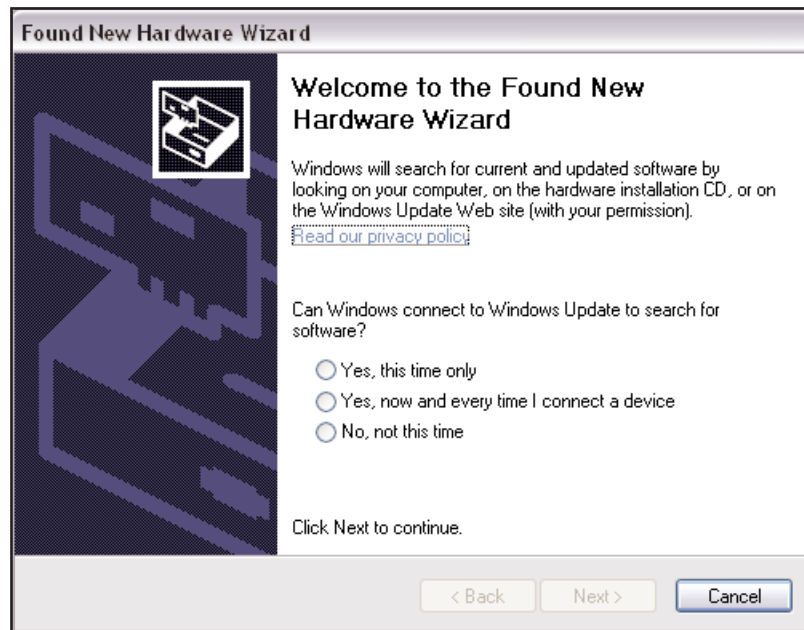
- 1 Connect to our installer only website www.urccontrolroom.com and navigate to Software Downloads, then select CCP to download.
- 2 A file download Window will open. Click on OPEN.
- 3 The InstallShield Wizard Window for the CCP will open. Click on NEXT



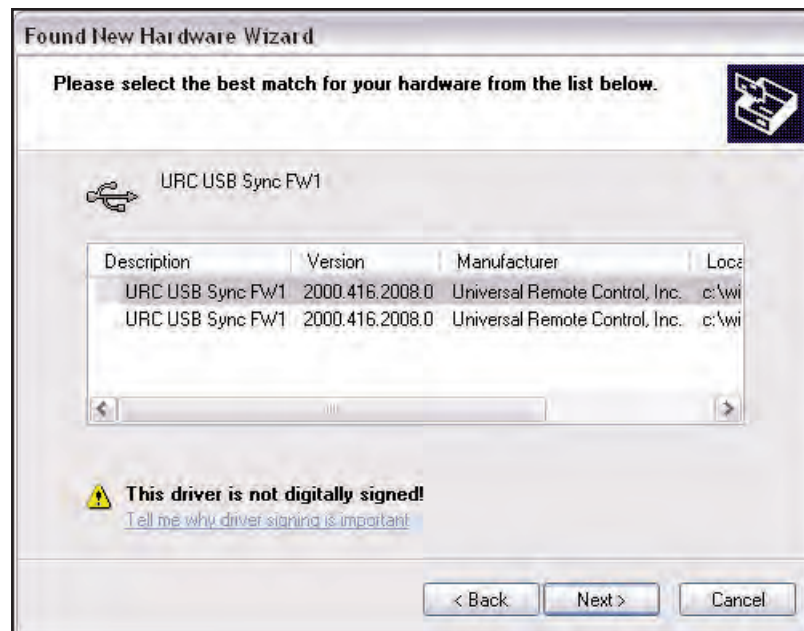
- 4 The Install Destination Window will then open. Click on NEXT.
- 5 The Ready to Install Window will open. Click on INSTALL.
- 6 The program will install and then show that installation has been completed. Click on FINISH.
- 7 Now plug in a remote to the USB port using the USB cable. A Found New Hardware pop up will appear in the lower right corner.
- 8 Click on the Found New Hardware pop up. The Found New Hardware wizard opens.



- 9 Select No, not this time when asked “Can Windows connect to Windows update to search for the software?” Click Next.



- 10 When prompted “What do you want the wizard to do?” Select install from a list or specific location. Click Next.
- 11 The next window will display “Please choose your search and installation options.” Select Don’t search and click Next.
- 12 Highlight the URC USB Sync FW1 driver. Click Next.



- 13 The Hardware Installation window opens with a message that this driver has not passed Windows Logo testing. Click Continue anyway.

- 14** Once the driver installs, click **Finish**.



Keep Your Database Up to Date — USE LIVE UPDATE

CCP includes a vast library of IR codes for hundreds of brands and models of A/V components. This database is constantly growing with the inclusion of new devices every month. Keep your software up to date by using the Live Update feature. Rather than un-installing and re-installing the software, you download updates to the software from the internet. Simply follow these steps:

- 1** Connect to the Internet normally.
- 2** Open CCP.
- 3** From the Communications Menu, select Live Update.
- 4** In the Live Update window, click on “OK” to start the update process. The process will automatically close CCP.
- 5** Wait for the progress window to indicate “Update Done”, then click on “OK”.
- 6** CCP is automatically restarted and ready to go. There is no need to restart Windows.

Introducing CCP - The Complete Control Program for MX-880 and more...



- A** Menus and Shortcut buttons for common tasks. The Program Menu activates each task in the correct order.
- B** Home Designer and Model Designer Tree Views of the MX-880 configuration. Double clicking on any page enables you to quickly display that page on the simulator view. Right clicking on a device or page activates a context menu.
- C** The MX-880 Simulate View is used to navigate and to select a button to program, edit or record a macro.
- D** Multi-tabbed Tool window allows access to the "IR Navigator", "Button, Page and Device Properties", "Image Gallery", "Sound Gallery" and "Serial Database".
- E** The tabs select whether you want Properties or one of the tools displayed in the window above.
- F** The Macro window is used to view and edit macros.

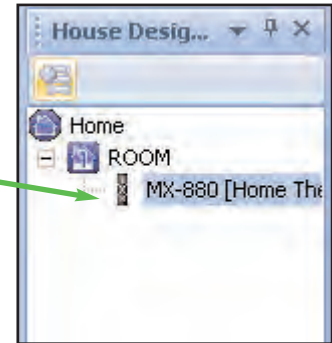
The important thing to remember as you program is that most Windows conventions hold true in all URC Editors. Explore the program menus. Hover your mouse over most of the buttons and controls and a balloon will appear with a hint as to it's purpose. Navigate around the program window and explore a little before you begin programming.

Programming in CCP features

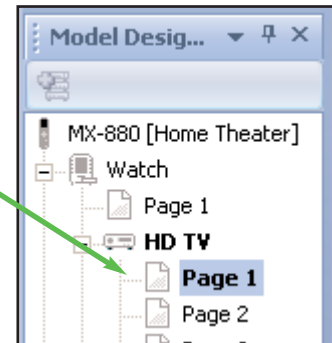
Complete Control Program represents a full house philosophy to programming, giving you tools to quickly program multiple remotes in one file. You'll find tree view is now split into two areas, one area called House Designer, which enables you to select remotes or base stations based on what room they are in.

Configure Home

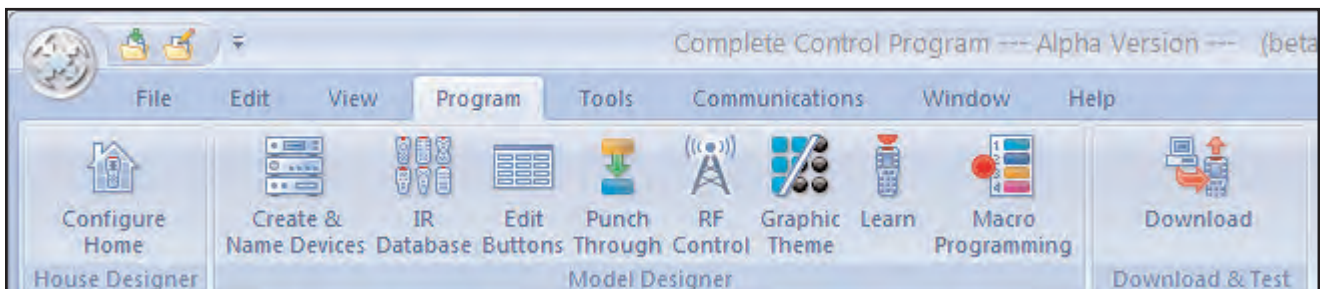
To configure a remote or a base station, you must **DOUBLE CLICK** it in Home Designer.



The selected remote or base station is then placed into the Model Designer tree view. To configure properties or a particular remote control page, **DOUBLE CLICK** it in Model Designer.



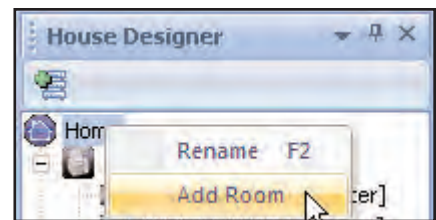
Once a remote is selected, clicking on the Program tab will reveal the standard URC programming steps. Simply move from left to right in sequence to program the remote completely.



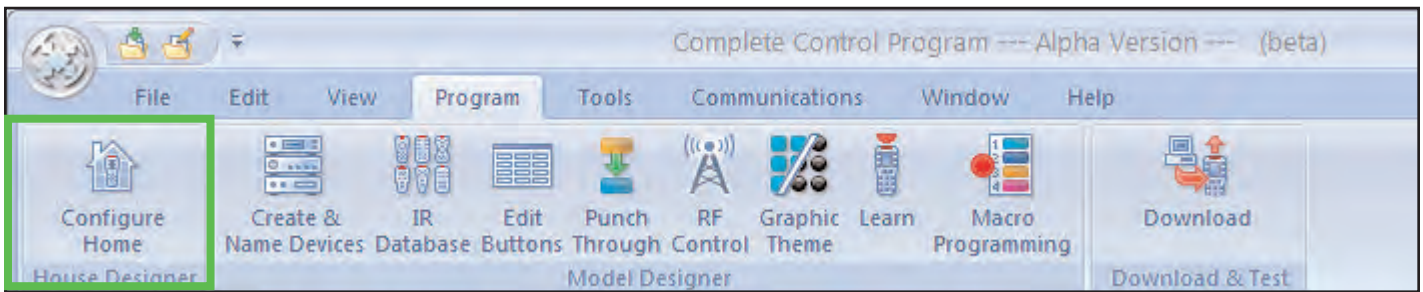
To add new rooms, remotes or basestations to your file, you can either:

- 1 Right Click on Home in House Designer and select Add Room. This will open the System Configuration window.

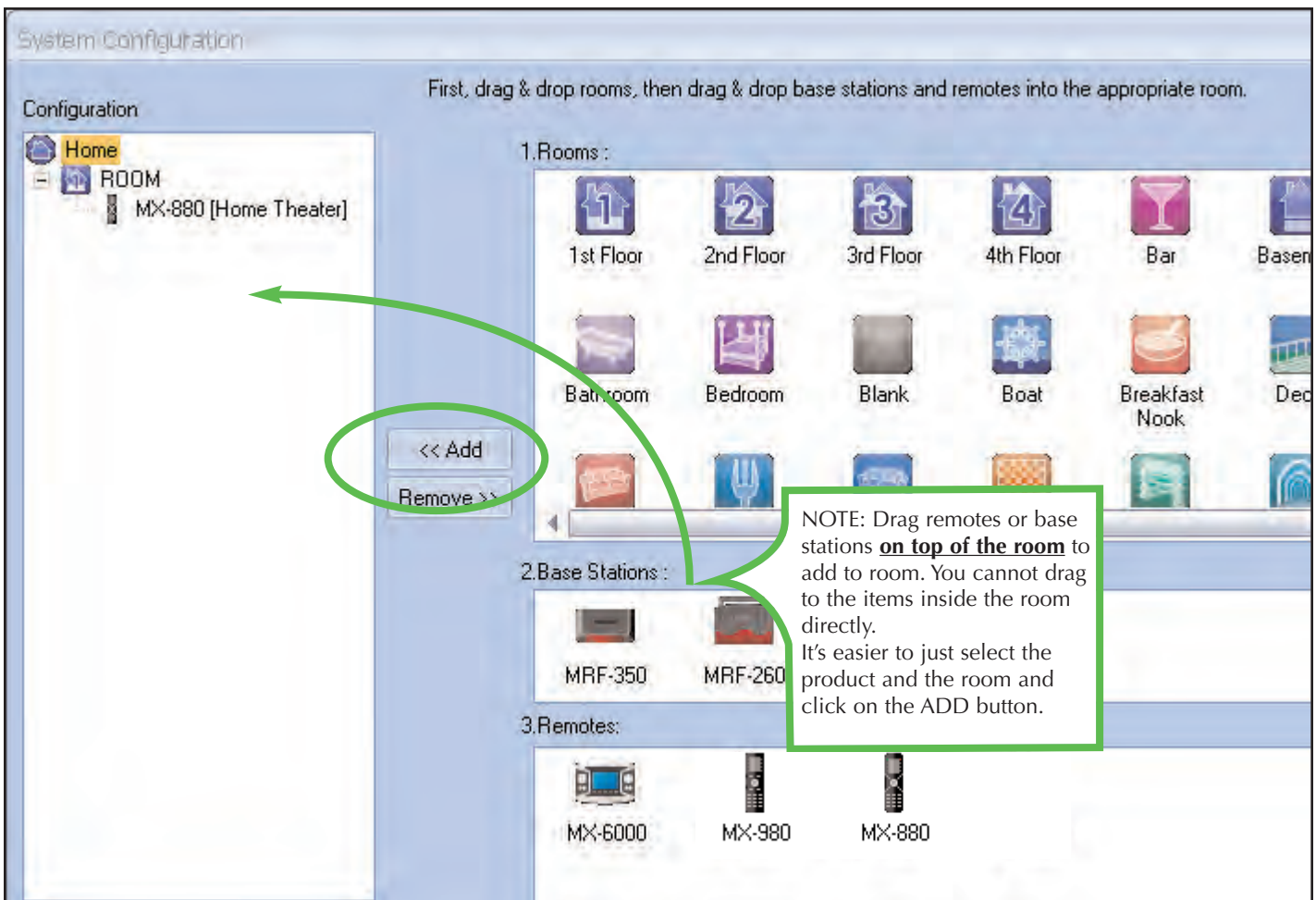
OR



- 2 Click on the Program tab and select "Configure Home" (House Designer) from the far left of the Program ribbon.



This will open the System Configuration window:



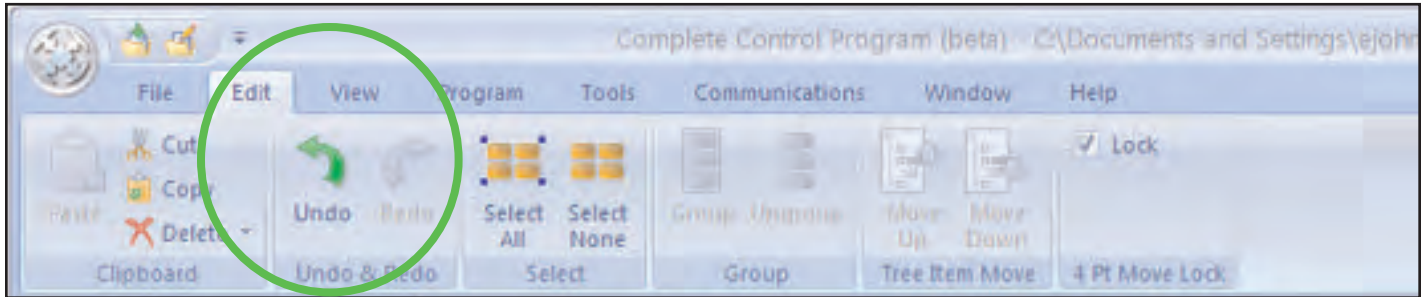
- 3 Once the House Designer window is open, simply drag rooms to "Home", then drag remotes and/or base stations to each room as needed.

TIP - Don't add remotes to rooms until your first remote is finished. When adding remotes, you can copy the first remote you've done, which will save effort on your second remote.

Undo via Control Z

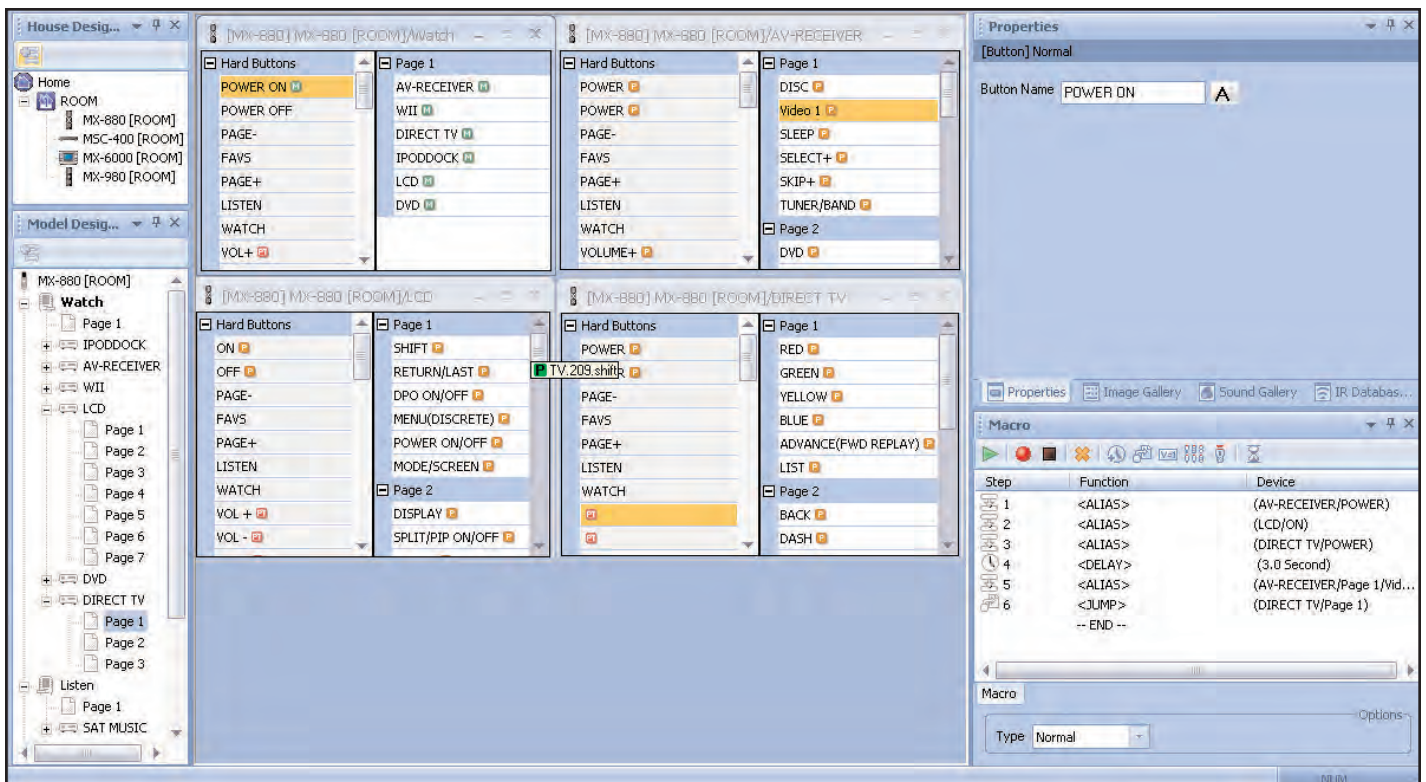
CCP offers the UNDO feature, particularly useful when you are arranging artwork. Before beginning a large amount of experimentation, click on save or save as. CCP will track all changes between saves or downloads unless your PC runs out of memory (that's probably too much experimentation between saves!).

You'll find Undo in the EDIT Menu, or you can use the keyboard shortcut Control Z.



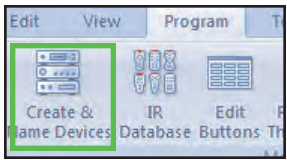
Function View for Macro Programming

You can really speed up macro programming for repeated Activity Macros or Favorite Channels that utilize the same devices over and over again. Simply choose Function View from the View Menu then click on the devices you use over and over again (i.e. AV Receiver and Flat Panel TV), then arrange them around your screen so that you can see the commands you'll need. Then start recording your macro. Instead of constantly going to tree view or the simulator to select the devices, you simply click on the command you need.

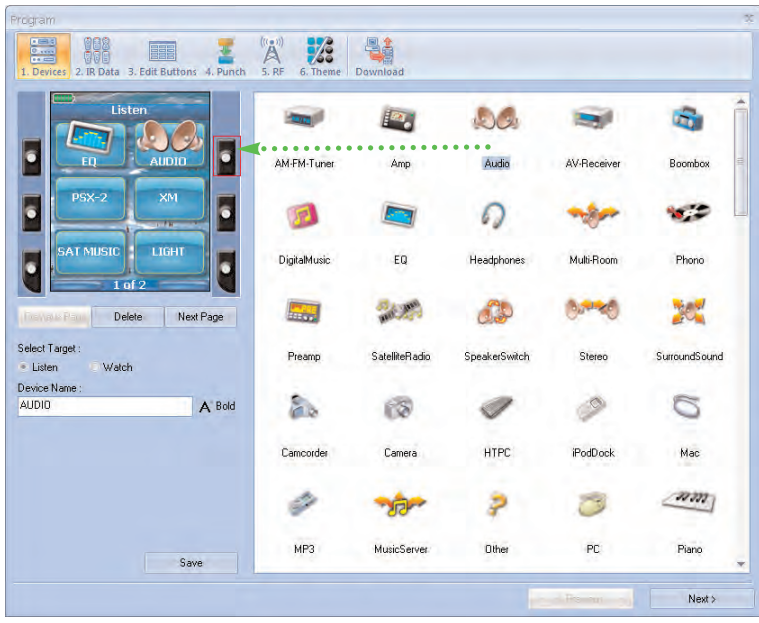


The Create and Name Devices Window

The new Create and Name Devices window is opened via the Program Menu and clicking on the icon on the left. Always work from left to right in the Program Menu.

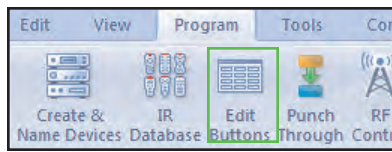


The key feature you'll use is the library of device icons on the right. Simply select the name of the icon you like and drag it to the page displayed on the left from the alphabetical list.

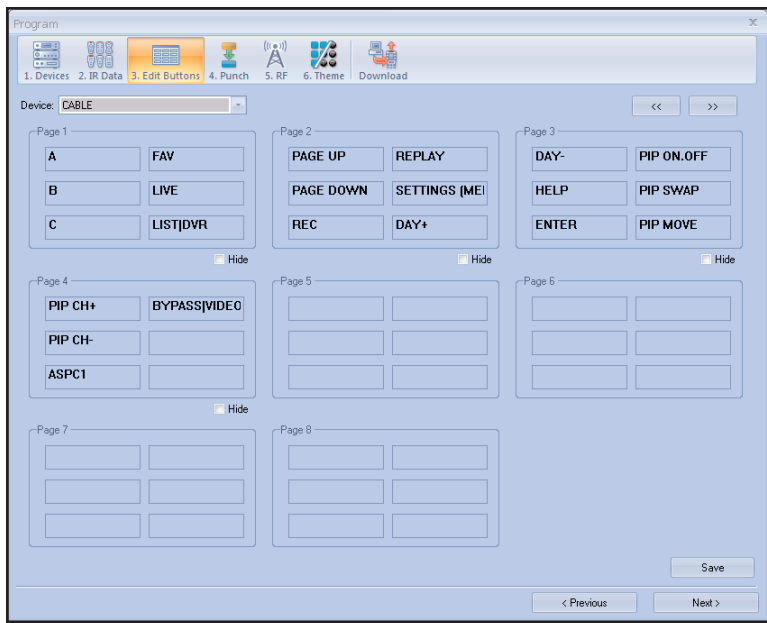


The Edit Buttons Window

The new Edit Buttons window is opened via the Program Menu and clicking on step three.



Select a device from the device drop down list, which then allows you to re-label and re-arrange a desired button. You complete the process by clicking on Save.



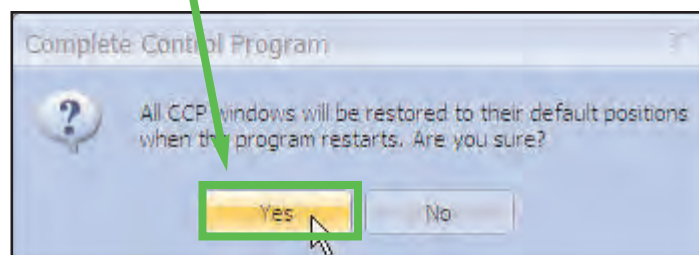
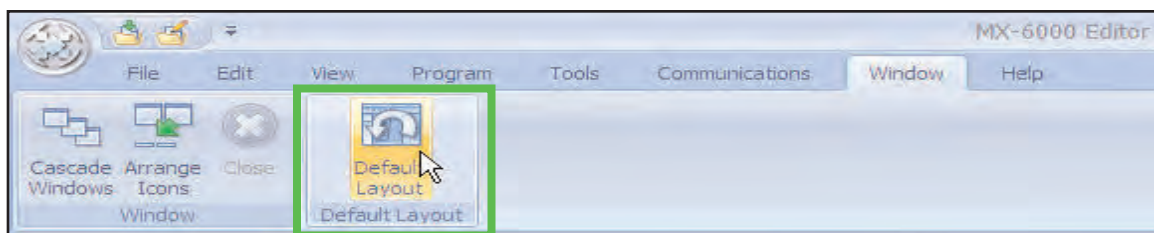
Customizing the Workspace

CCP has some unique layout features that allow you to customize your own personal layout.

Here is the default layout: Home and Model Designer are on the left, the Simulator is in the middle, the Button Properties window is in the upper right and the Macro window is in the lower right.

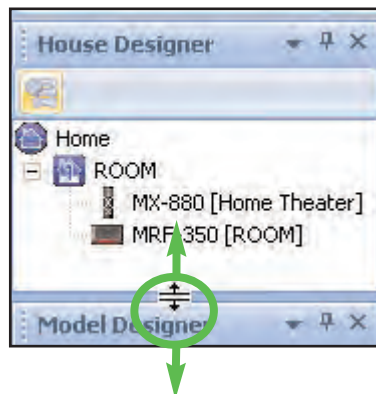
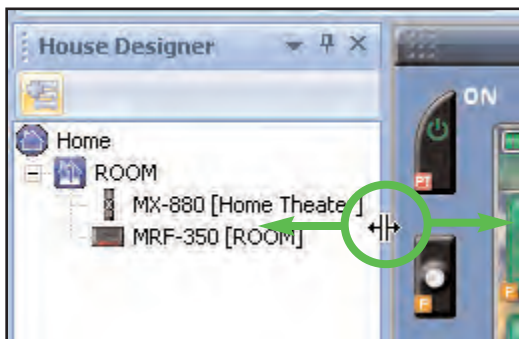


You can always get back to the default layout by using the “Default Layout” button in the “Window” tab.



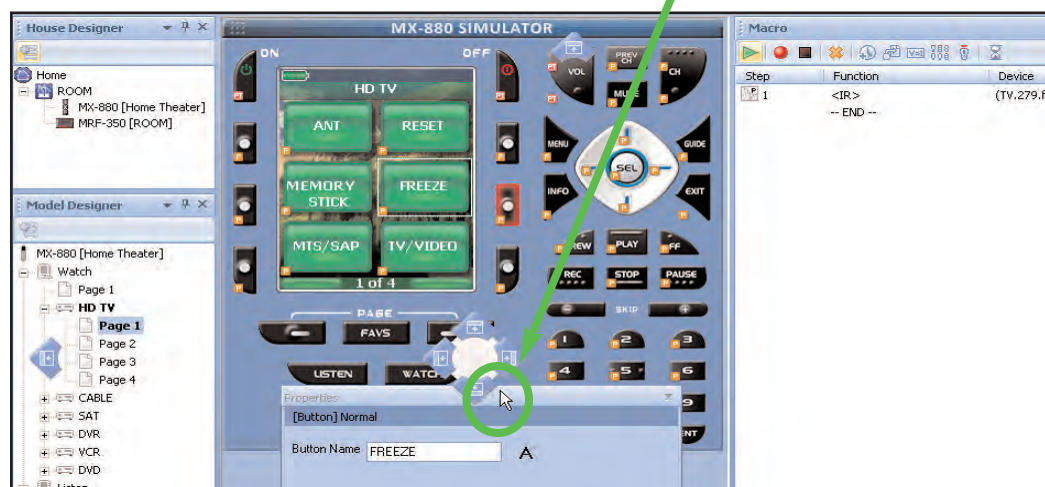
All Windows in the Default Layout can be resized

To resize a window, move the mouse cursor to the side, top or bottom edge of the window. When you're in the right place, the windows "Resize Window" icon will appear. Next, hold down the "Left Click" button on your mouse and drag the edge to make the window larger or smaller.



All Windows in the Default Layout can be Moved Around

To move a window to a new location, move the mouse cursor to the title bar of the window, hold down the "Left Click" button on the mouse and drag the window to a new location.

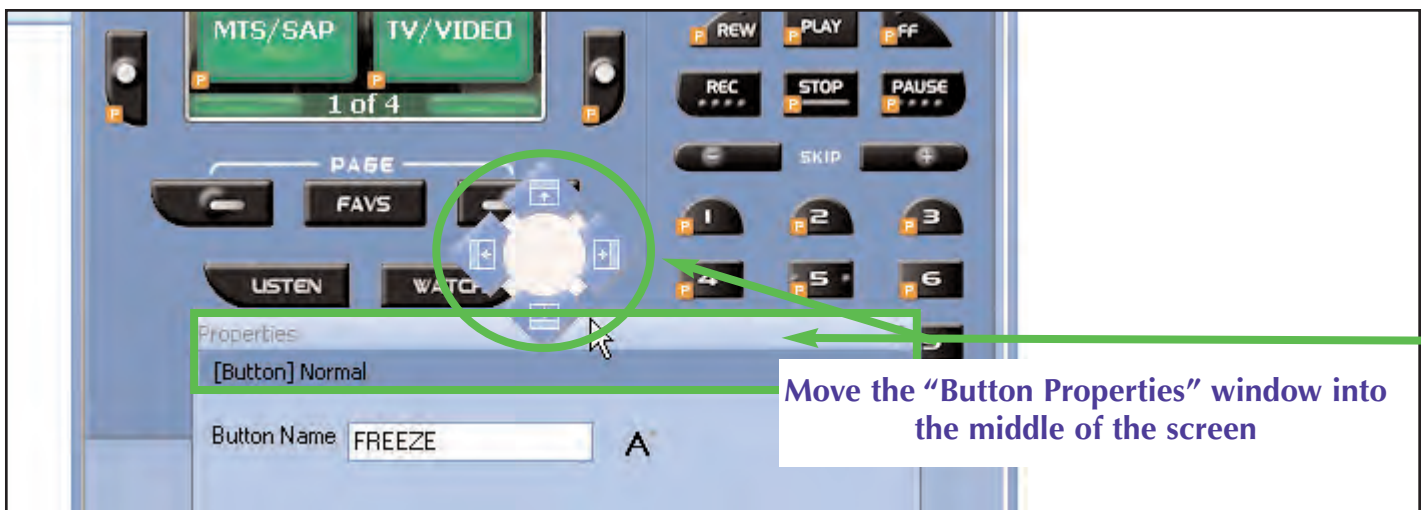


If you grab a window and drag it around the main layout, several new windows “Grouping/Placement Options” appear. In the example below, I have moved the “Button Properties” window away from its default position on the left side of the screen. Windows placement icons appear at the top, bottom, left and right side of the main window, along with a windows grouping icon for the Macro window.



If you move the “Button Properties” window to the middle of the screen, you’ll see a windows grouping icon for the middle section of the screen.

If you move the “Button Properties” window to the right side of the screen, into the Model Designer window, you’ll see a windows grouping icon for the Model Designer window.



Windows Grouping /Placement Icon

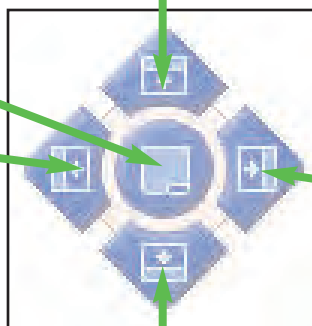
Windows snap into place when you drag the cursor / title bar of the window you want to move, into one of the five options in the Windows Grouping Placement Icon.



Place the new window **above** the existing window

Place new window into the **tabbed window grouping**

Place the new window to the **left** of the existing window

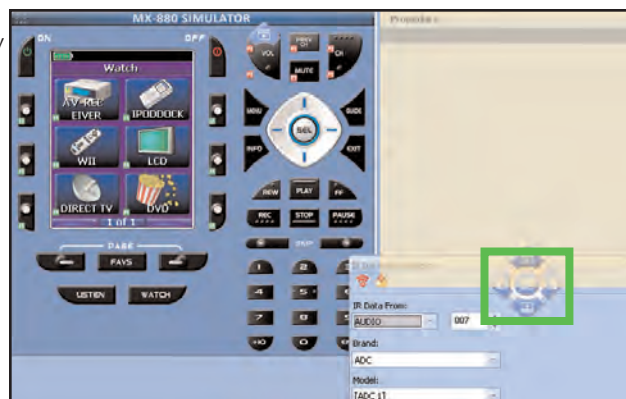


Place the new window to the **right** of the existing window

Place the new window **below** the existing window

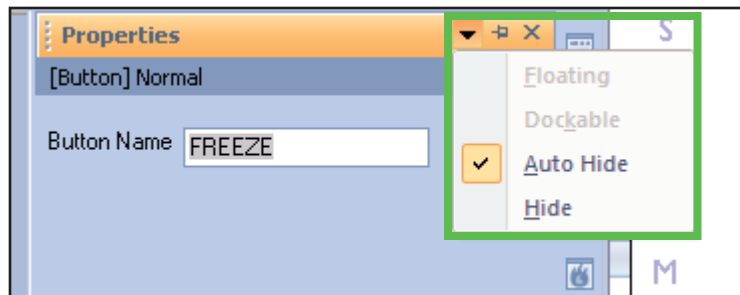
In the example to the right, the "Button Properties" window is being dragged into the "Place Above Existing Window" icon on the left side of the screen. This will place the Button Properties window above the Macro window.

Note: The yellow shaded area shows you where the new window will appear, relative to the existing window. In this example, it will appear above the Macro window.



Using the Window Auto-Hide Features

CCP has another layout feature that allows you to Float, Dock, Automatically Hide or Permanently Hide a window.



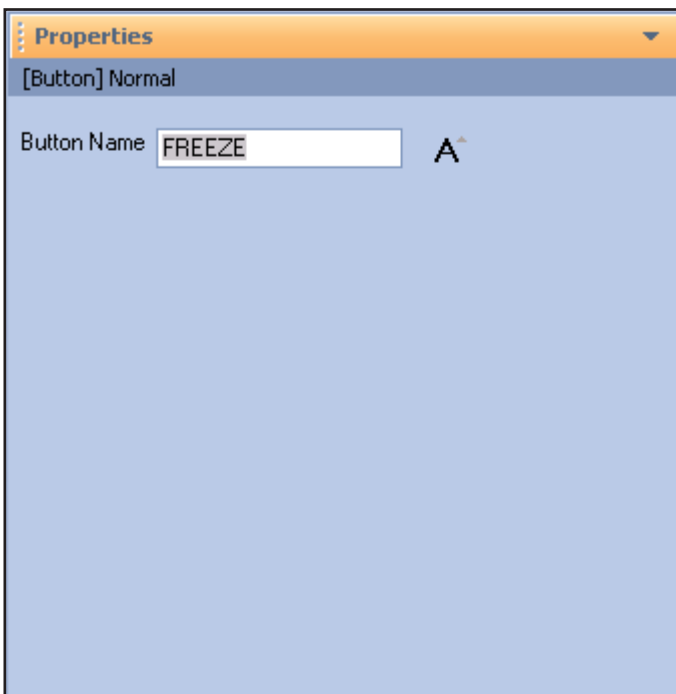
Right click on the down arrow in the window title bar, a drop down menu appears with the following choices: Floating, Dockable, Auto-Hide and Hide.

Floating: Allows the window to float anywhere on your computers screen. It's no longer confined to the CCP application window.

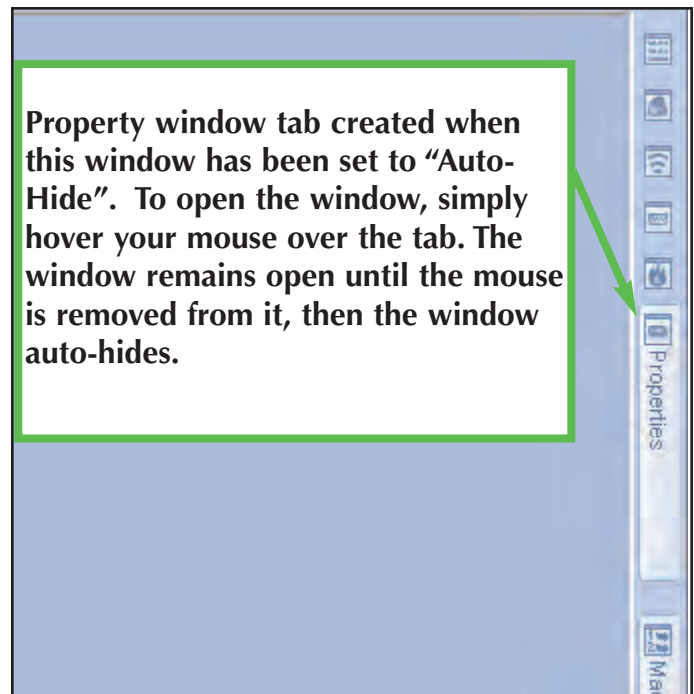
Dockable: Allows the window to snap to a location (Top, Bottom, Right, Left) within the confines of the CCP application window.

Auto-Hide: Automatically hides the window to a toolbar at the Top, Bottom, Right or Left side of the screen, depending where the window is docked and provides a tab to access the window. The windows "Pin" icon in the title bar is turned sideways conveying that the window is "No longer Pinned" in place.

Hide: Removes/ hides the window from the CCP application window. To restore the window, you must go into the main toolbar and select the window from either the "View" tab or the "Tools" tab.



The Properties window "docked".



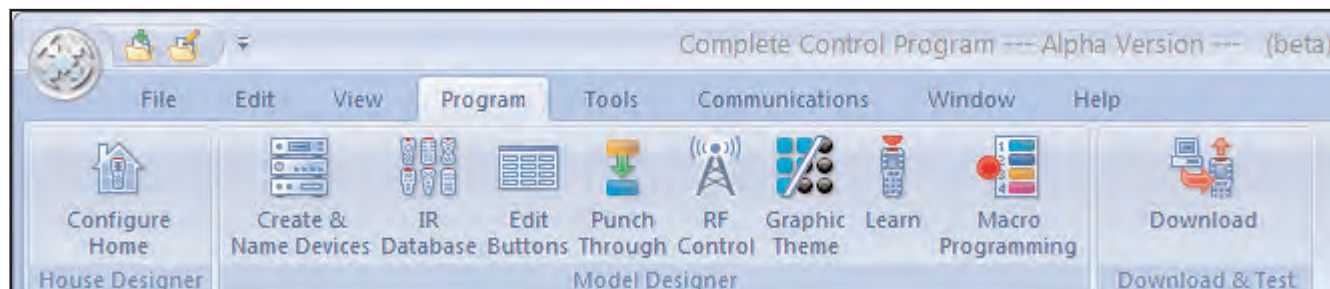
The Properties window "hidden".

Programming Tips

Move Left to Right on the Program Menu

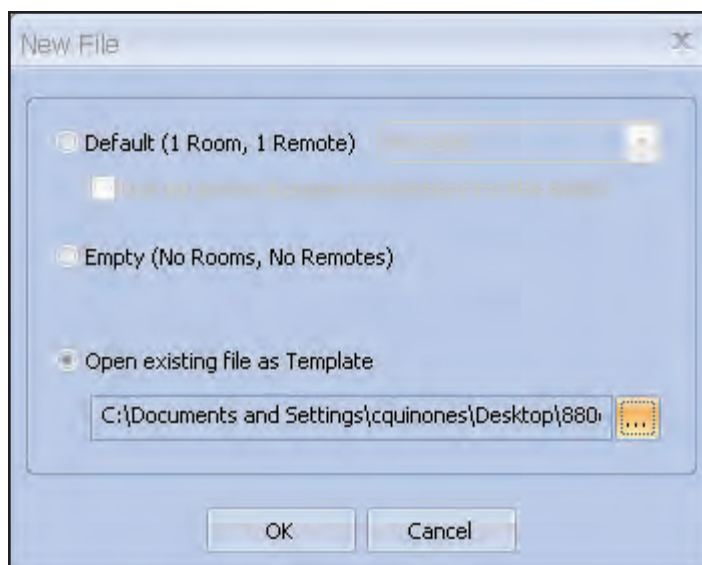
The Program Menu is your lifeline to a fast, easy programming experience. Follow the steps in the order shown in the Menu for best results. Download and Test has been added to the Program toolbar. Typically, you will download to the remote control several times throughout the programming process to test what you have done so far. You'll also need to download once you've completed all your final programming.

It is important to complete all of the tasks for each program step, before moving on to the next step, rather than jumping back and forth.



Save a Device file and Import for faster programming

Archive and save your customized device files. Programming systems with similar components gets even faster when you don't have to redo your work over and over. You have your own ideas about how buttons should be labeled and about how they should be arranged. You can save your work in a unique and time saving way if you save the customized device as a stand alone device file which you can import into any new configuration.



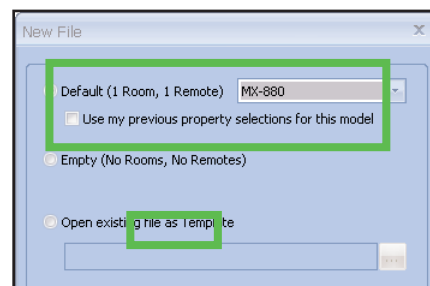
Creating a New System File

Options - New or Existing Files

- DEFAULT (1 Remote, 1 Room)- Opens your choice of remote such as the MX-880.
- EMPTY(No Rooms and No Remotes) - Opens a blank template
- OPEN EXISTING FILE AS TEMPLATE - Open a configuration that you have worked on before and saved onto the PC hard drive.

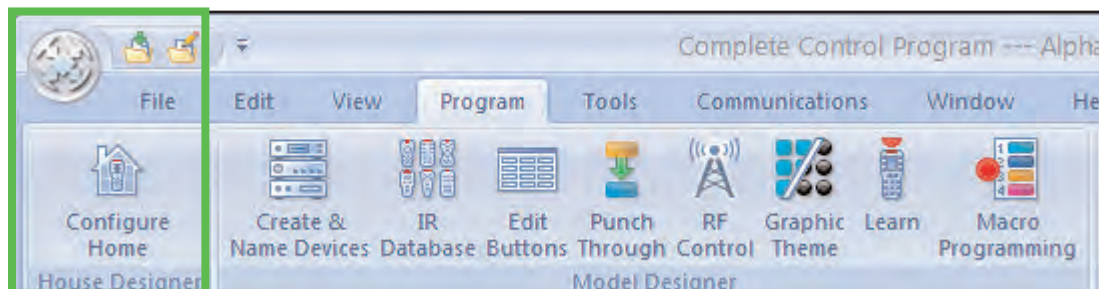
New File - Step by Step

- 1 Click on the File menu tab and select "New" in the toolbar.
- 2 The "New File" window appears: Select "Default", then select MX-980 from the list box, finally click "OK".

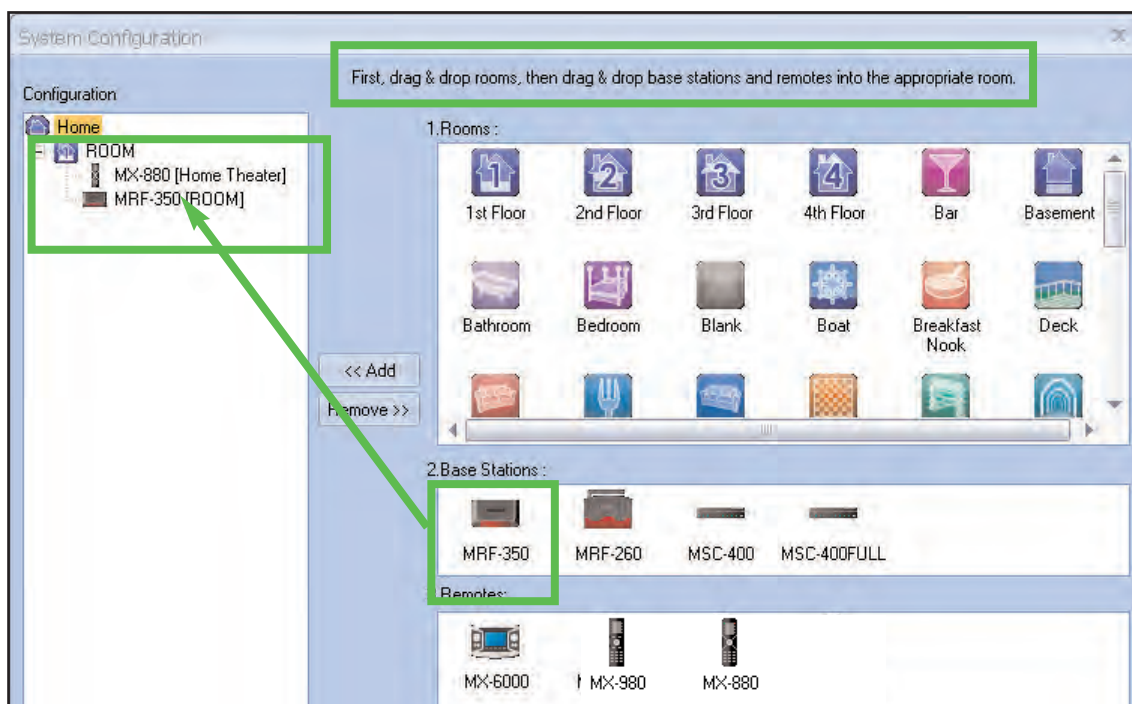


ex. CCP creates a new file with one room called "Home Theater" and one MX-880 remote control.

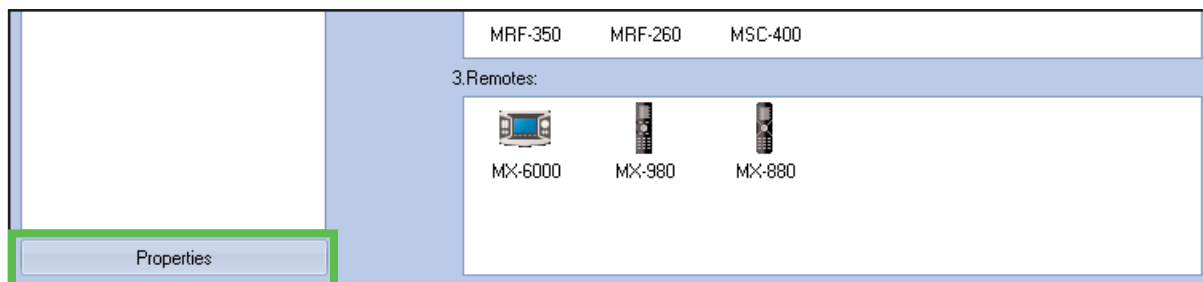
- 3 Click on the “Configure Home” icon to add rooms or a Base Station(s) to the Home Theater.



- 4 The “System Configuration” window opens



- 6 First, drag and drop a desired room, ie Home Theater, below “ Home” within the Configuration treeview.
- 7 Drag and drop a base station, such as the MRF-350, to the same room.
- 8 Highlight the MRF-350 base station then click on the properties button located at the bottom left, to appoint devices to port #'s.
- 9 Click on the “Properties” button, at the bottom left of the Configuration Tree, then set the MRF-350 Base Station properties.



10 The Base Station Model Properties window appears.

11 Select an RF ID from the RF ID drop-down list.

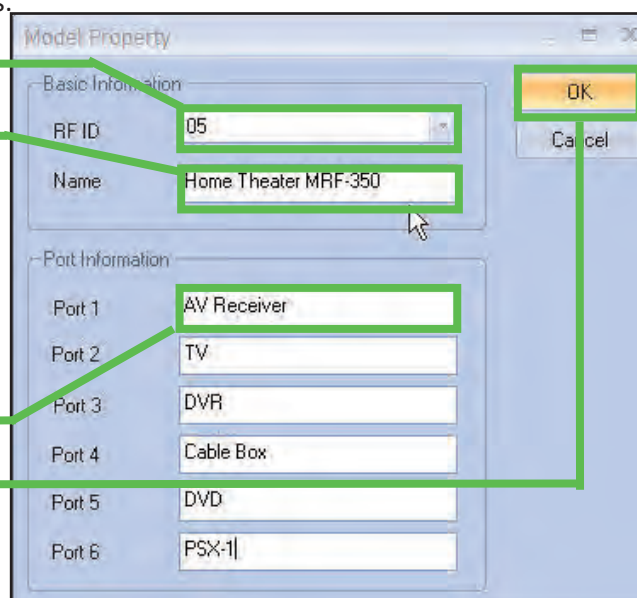
12 Name the Base Station.

Example: "Home Theater MRF-350".

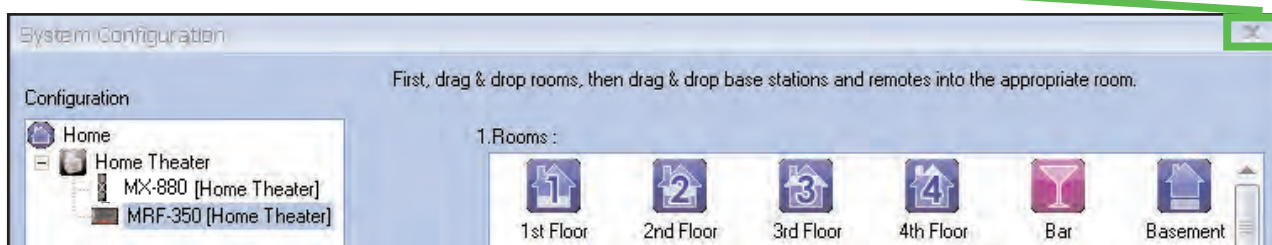
13 In the box to the right of each Flasher Port, enter the name of the piece of gear that the flasher will be controlling .

Example: Port 1 - AV Receiver

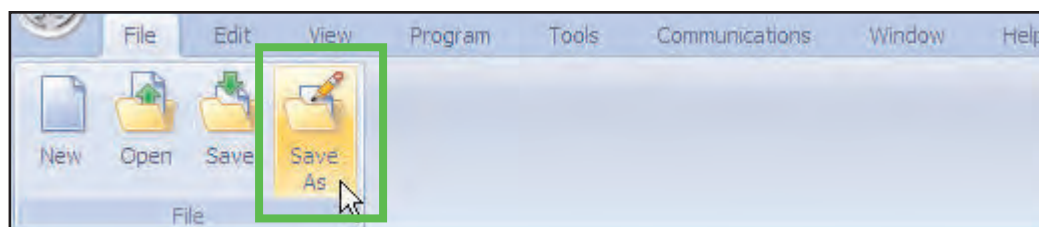
14 Click "OK".



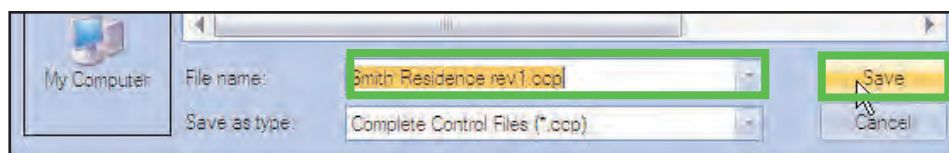
15 Close the System Configuration window by clicking on the "Close" icon in the upper right hand corner of the window.



16 Save the File. In the main toolbar, select "File" and then click on "Save As".



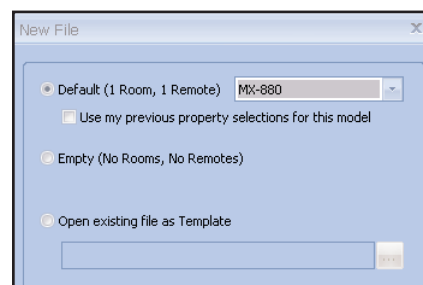
17 The "Save As" window appears. Enter a name for the new File, Example: "Smith Residence rev1" and then click on the "Save" button.



Programming Overview

A. New File, Existing File on PC or in Remote

- DEFAULT (1 Remote, 1 Room)- Opens the MX-880 with the option of other URC remotes.
- EMPTY(No Rooms and No Remotes) - Opens a blank template
- OPEN EXISTING FILE AS TEMPLATE - Open a configuration that you have worked on before and saved onto the PC hard drive.



B. Use SAVE AS

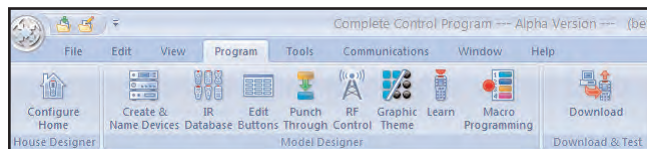
The templates files are simply configuration files that have been preprogrammed for you. They will keep any changes you make. Utilize **Save As** to make a new file with a new file name. All configuration files are saved with the file extension .mxa.

TIP — Always use File | Save As to rename the file before doing any programming!

Use the customer's name and a rev # (i.e. SmithTheaterRev1.mxa)

C. Use the Program Menu

The Program Menu is your lifeline to a fast, easy programming experience. Follow the steps left to right as shown in the Menu for best results. Typically, you will download to the remote control several times throughout this process and test what you have done so far. You'll need to download after finishing all programming. For macro playback to work, you need to have downloaded. These downloads are not listed in the steps here in the Program Menu and are not automatically done for you.



D. Save and Reuse Customer Files via Import Devices

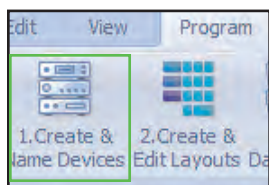
Archive and save your customer files. Programming systems with similar components gets even faster when you don't have to redo your work over and over. You have your own ideas about what buttons should be labeled and how they should be arranged. You'll save all of your work and reuse it on the next job with similar components and devices by using the Import Devices feature.

Creating, Naming and Arranging Devices

A device is the basic grouping of a set of hard buttons and as many LCD button pages as the MX-880's memory allows. You will need one device group for each remote control that the MX-880 is replacing. When you create devices in the Create and Name Devices window, every device is automatically linked with a jump-link to the device via either the WATCH or the LISTEN menu. If you create devices manually in tree view (by right clicking either Watch or Listen and selecting Add New Device) you have to create a jump link from either the WATCH or the LISTEN menu button to each device manually.

Create and Name Devices Window

You can open the Create and Name Devices window by clicking on the first item of the Program Menu:



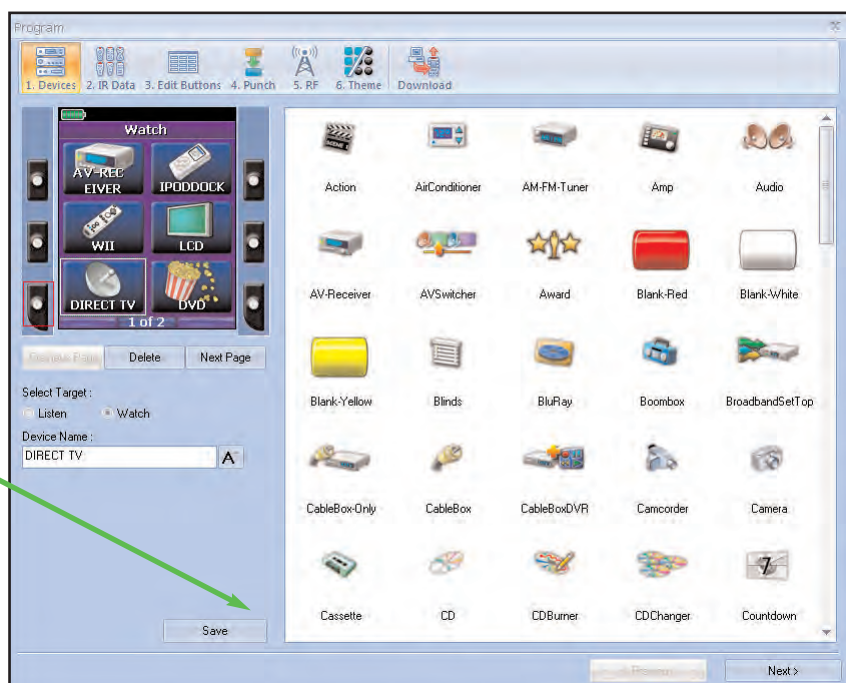
- 1 After the Create and Name devices window appears, select the WATCH or the LISTEN menu from the Target list box.



- 2 Use the alphabetical list to find the icon you want. Drag from the alphabetical list to the page on the left.

Use the keys on your keyboard to go to the icon you need (i.e. click on H to see the HDTV icon).

- 3 You must hit the SAVE button to create all the new devices.



Utilizing the IR Database

Applying a “Set” of IR Commands to each Device

U
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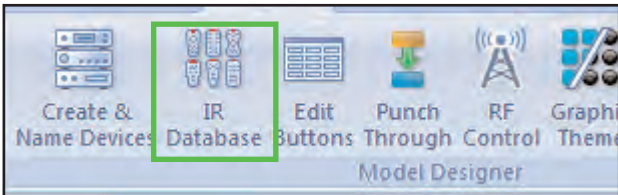
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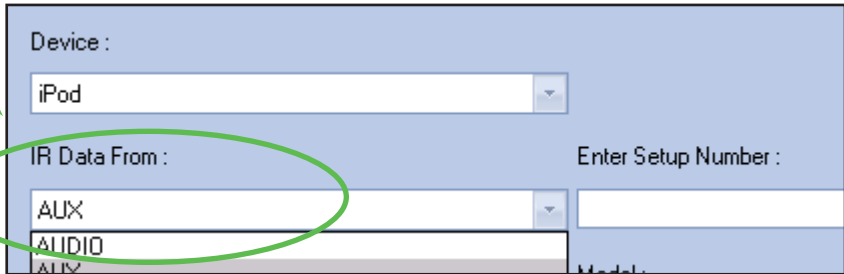
- 1 Open the Database Window - Select IR Database from the Program Menu.



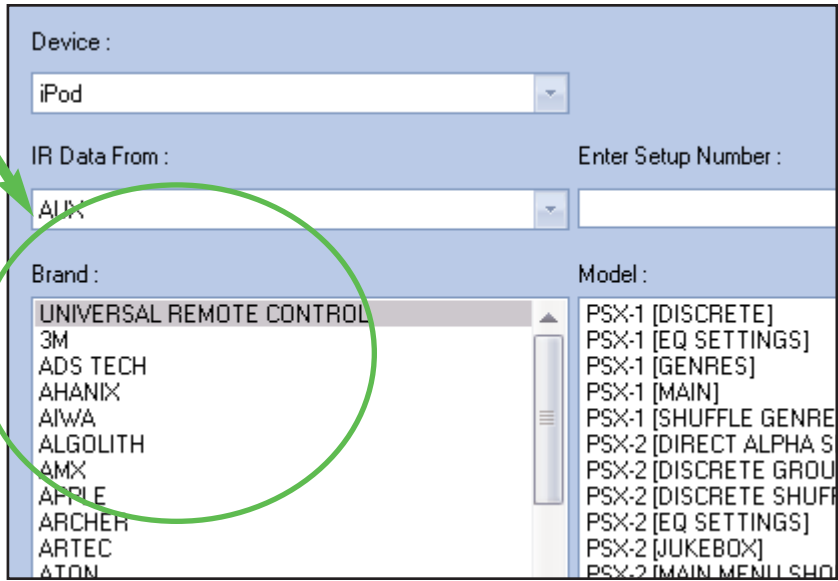
- 2 Device - In the first list box, MX-880 Editor lists the names of the devices you’ve created and named in your configuration. Select the device you would like to program from the list box.



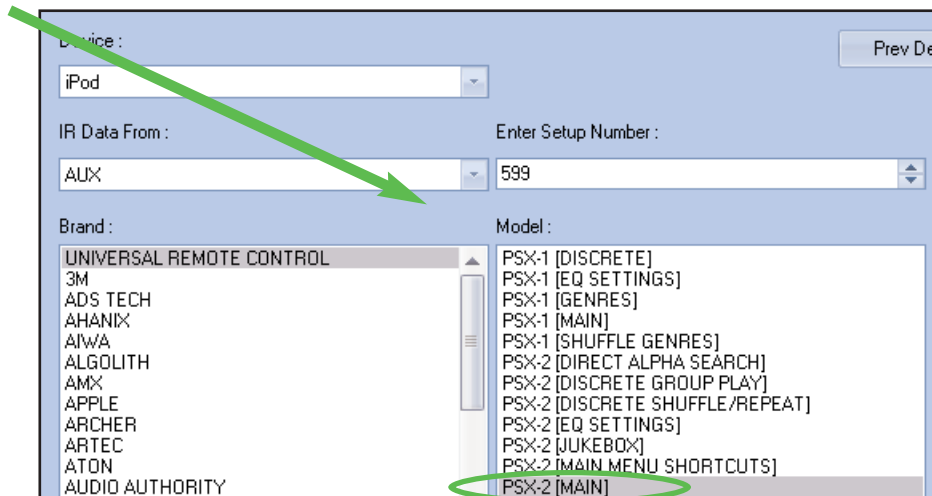
- 2 IR Data From - Select the type or category of component (i.e. TV, VCR or DVD player) via the “IR Data From” listbox.



- 3 Brand - Select the company that made the component (i.e. B & K, Sony, Krell) by clicking on the correct brand name in the scrollable Brand window.

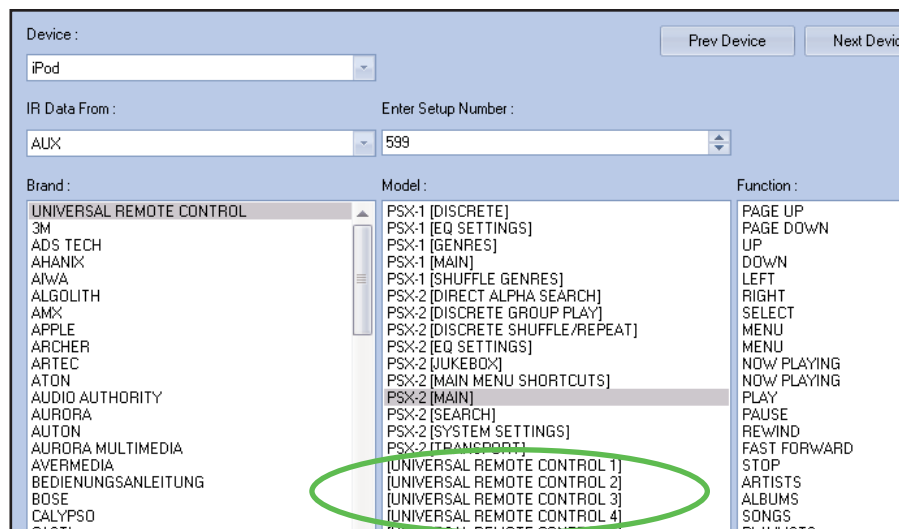


- 4 Model** - Select the exact model number from the scrollable Model window.



If the MODEL number isn't there, DON'T test the other model numbers! Instead...

Scroll to the bottom of the list of model numbers for your brand. There you will find a number of "Inclusive" Code Sets. These code sets are always labeled BRAND1, BRAND2 (i.e.. Motorola1, Motorola2). Each will operate many different model numbers. Generally speaking, if your component is a recent model, test the higher numbered Inclusive code sets first. Here's what the inclusive code sets look like:



5 Test the Code Set

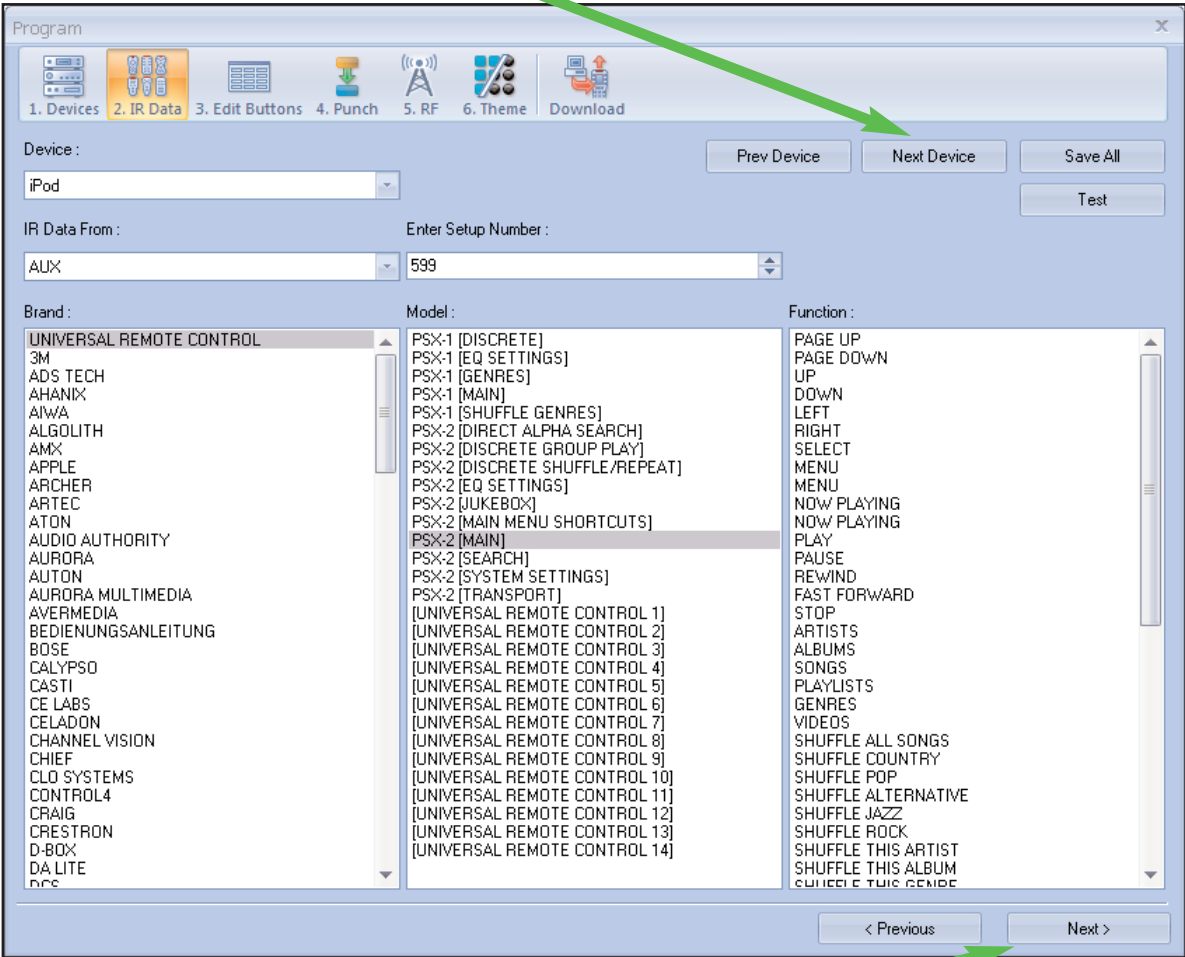
- Verify the MX-880 is charged and connect it to the PC via the USB port.
- Point the connected MX-880 so that it is in range and within line of sight of the component.
- Power On the component.
- Select the model number or the Inclusive Code set in the model window.
- Click on the **Test** button as shown above. The only code you can test is the Power command.
- If the component DOESN'T power off, try the next Inclusive code set.

- 6** Once the component powers off, click on the Save button.

TIP - If you'd like to drag one code to a button or test one code, use the IR Navigator, page .

- 7** Continue with the rest of the devices you need by clicking on the NEXT DEVICE button and repeat-

ing steps two through eight.



8 When you have finished all of your devices, click on the NEXT button for the LCD button editor.

Finding Discrete Commands for Reliable Macros

Discrete Commands versus Toggle Commands

When a remote control's only button to turn on and off a TV set is labeled Power, it is usually a "toggle" command. Test it by pressing the button twice. If the power button turns on the TV, then turns it off, it is a toggle command. You cannot predict whether the component will power on or not. That is a big problem when you are programming macros! Basically, your client will feel that the macro only works half the time, and will probably blame you for the problem.

Discrete means that the function of the command is "separate and distinct" from any other function. On a remote control with "discrete" power commands, there are two power buttons. One that only turns the component on, and another that only turns the component off.

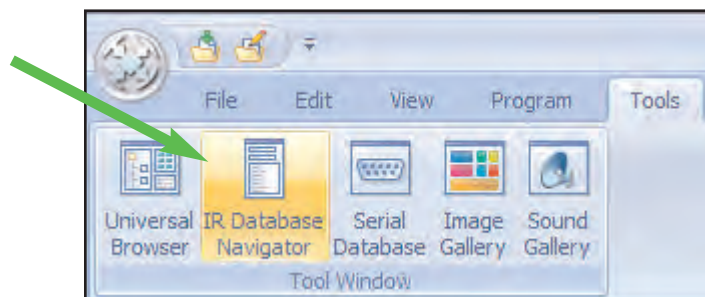
The most commonly sought "discrete" commands are for power on, power off and for TV and Surround Sound Receiver INPUT selection. These discrete commands will make your macros work every time for your customer.

"Secret" Discrete Codes exist for some components. Why are they secret? Because the manufacturer wants the remote control that accompanies the component to have the simplest appearance (fewest buttons). Since toggles reduce the number of buttons, they make the remote control appear easier to operate. Many manufacturers understand the needs of custom installers and build their components to also respond to discrete codes. They distribute the discrete codes via service remotes, etc. For the first time, those codes are collected and integrated into our database.

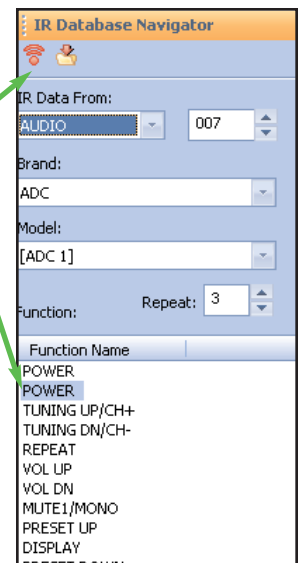
Not all components respond to the discrete codes in the Database. A component has to be BUILT to respond to discrete codes. The fact that other models from the same manufacturer do respond to discrete codes is the reason the codes are added to a code set. However, some models will not respond, because the manufacturer did not build it to respond through budgetary considerations, time constraints or a simple oversight.

Use the IR Database Navigator to Find Discrete Commands

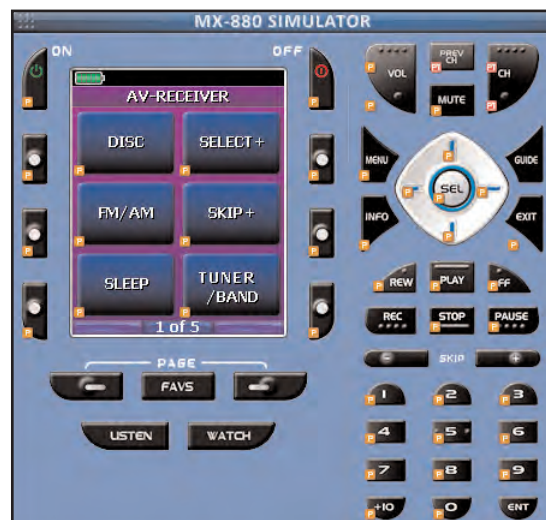
- 1 Click on the TOOLS menu then click on the IR Database Navigator.



- 2 Select the IR DATA FROM (category of component), then the BRAND, then the MODEL. If you do not see the model number, utilize the INCLUSIVE CODE SETS (i.e BRAND1, BRAND2, etc). Once you see a command that has a promising sounding name, click on it so that it is highlighted (selected), then click on the TEST button. You can test any IR command in the list.
- 3 When you find a command that you want, simply click and drag it to the button on the page or the simulator view.

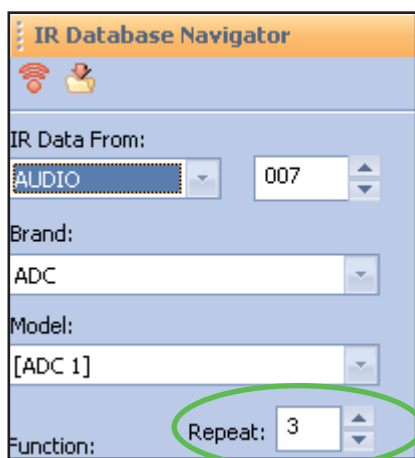


- 4 After you've dragged it to its new position, the new label and a pre-programmed code flag (the orange P) is placed on the button.



TIP - Vary the number of REPEATS to sustain an IR command for a few seconds.

Many projectors require a two or three second burst to power on or off. You can program this to occur without the customer having to press and hold the button for several seconds by utilizing the repeat window in IR Database Navigator. Simply experiment with different numbers of repeats and test the command until it works as you want it to. There is no predictable relationship between the number of repeats and seconds from one brand to another, so start experimenting with 10 repeats and time the burst. Once you've programmed a button with this extended IR command, you can use it in a macro. The timed burst will occur as a single macro step.

**Use the Universal Browser to find Discrete IR Commands**

Using the Universal Browser Window you can import LEARNED IR codes from a .ccf file, an .mxf file or an .rcc file. You cannot import any kind of Database codes, only LEARNED codes.

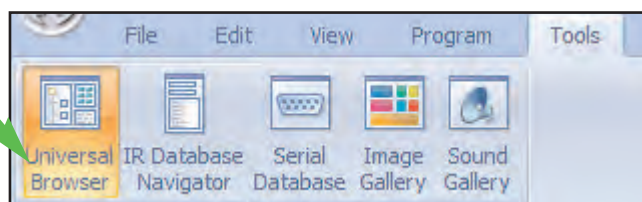
On the internet, you can find many unusual discrete codes by browsing the files section of a website popular with other custom installers:

www.remotecentral.com

You can often find discrete codes by posting at one of many other sites popular with custom installers by posting on an online bulletin board. If any other custom installer knows of a solution he/she will email a file to you. Whether you download a file or if you are emailed a file from another installer, the Universal Browser enables you to import learned codes into your MX-880 configuration.

After you've saved the file to your PC, you use the Universal Browser as follows:

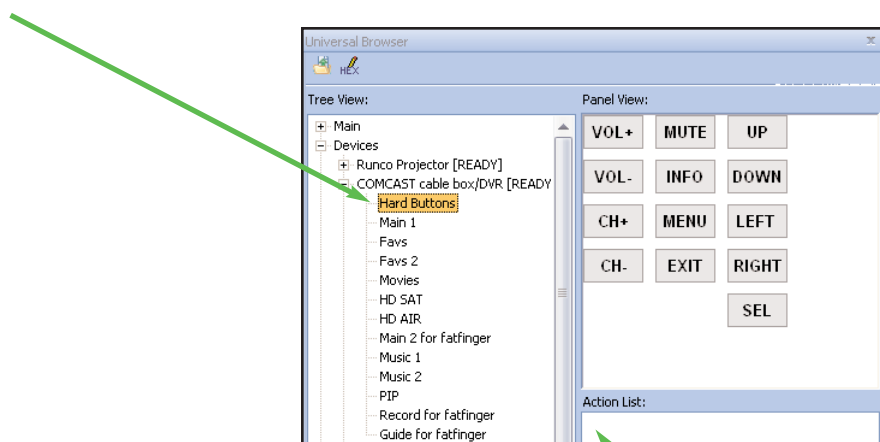
- 1 Open the Universal Browser by clicking on the Universal Browser icon in the TOOLS menu.



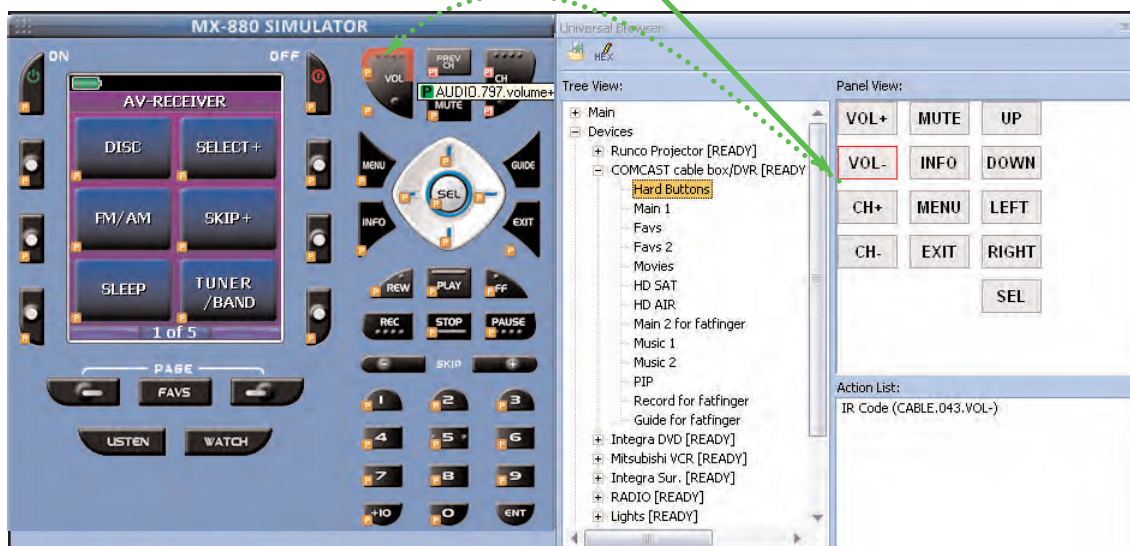
- 2 Click on the File icon to navigate to the folder that contains the file you'd like to get codes from.



- 3 Use Tree View to Navigate to the Panel containing commands you want. Click on the panel name in Tree View to make the panel appear in Panel View.

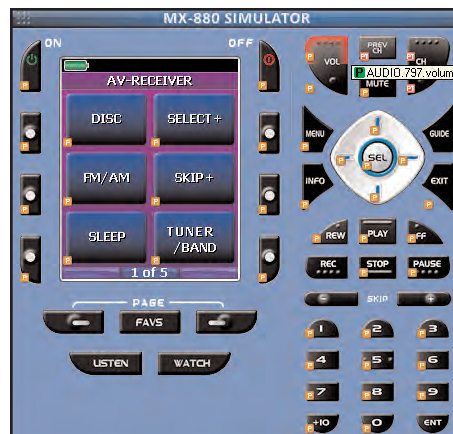


- 4 Click on a button in Panel View and the Action List view will reveal whether it has a Trigger code (MSC-400), Learned code or Pre-Programmed Data.
- 5 Click and drag the button to the MX-880 simulator.



- 6 After you've dragged a command from the browser, the button will change its name if it is a screen button. Both screen and hard buttons show the appropriate flag (Trigger, Learned or Pre-Programmed)

T - Trigger - Indicates an MSC Trigger Command
L - Learned - Indicates a Learned IR Command
P- Pre-Programmed - Indicates an IR command from the URC database.
M - Macro - Indicates a macro is programmed.
PT - Punch Through - Indicates that the button is "punched through" to another device.



Test All Commands and Relabel for Easy Operation

Before programming any further, you should rigorously test all of the codes you have programmed using the IR Database and label the buttons with names that the customer will find easy to understand. The best approach is to download, test all the commands, and as you test, use MX-880 Editor to modify labels, and hide or delete unnecessary commands.

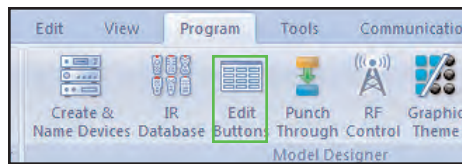
CCP MX-880 Editor enables you to use two methods to relabel, hide pages, create Favorite icon buttons and re-arrange commands and labels. Use the LCD Button Editor method for wholesale changes to labels, and the Page View method for multiple line labels so that you can judge your work as you do it.

Download and Test While Arranging Buttons

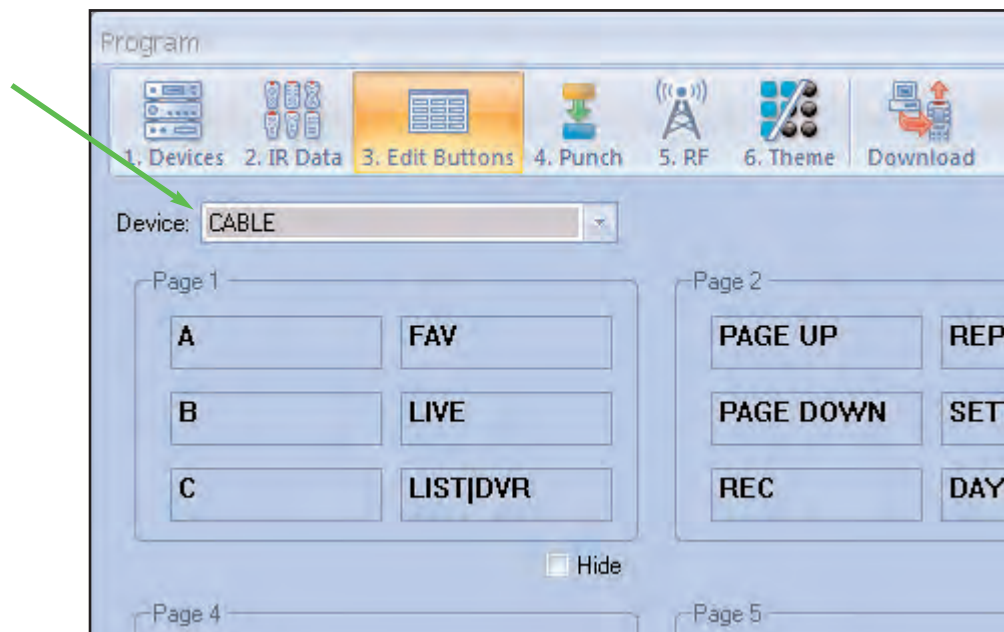
Begin testing the codes you downloaded to the MX-880. Make sure that you test all buttons (hard buttons and the LCD buttons on each page of every device). Don't try to learn new commands yet, wait until you can do all of them at once systematically. First you must delete commands that don't work and change the labeling so that your client instantly understands why you've made the button available to them. Good practice is to simply delete commands that the client will never use, or to arrange them on the last pages of a device. Certainly, your most important goal is to place the most useful commands on the first page of a device, so that the client has everything they need without pressing a PAGE button.

Using the LCD Button Editor to Relabel and Re-arrange Buttons

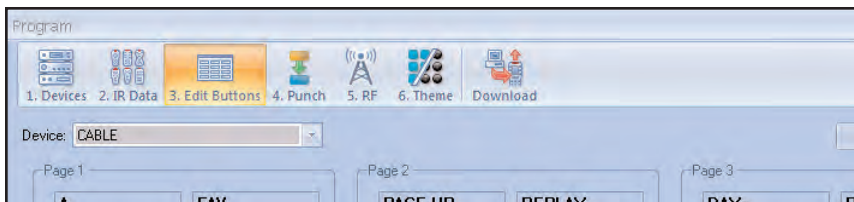
- 1 From the Program Menu, select Edit Buttons.



- 2 From the Device list box, select the first device you'd like to test and edit.



- 3 Now drag any unimportant commands from the first page to the last page of the device.

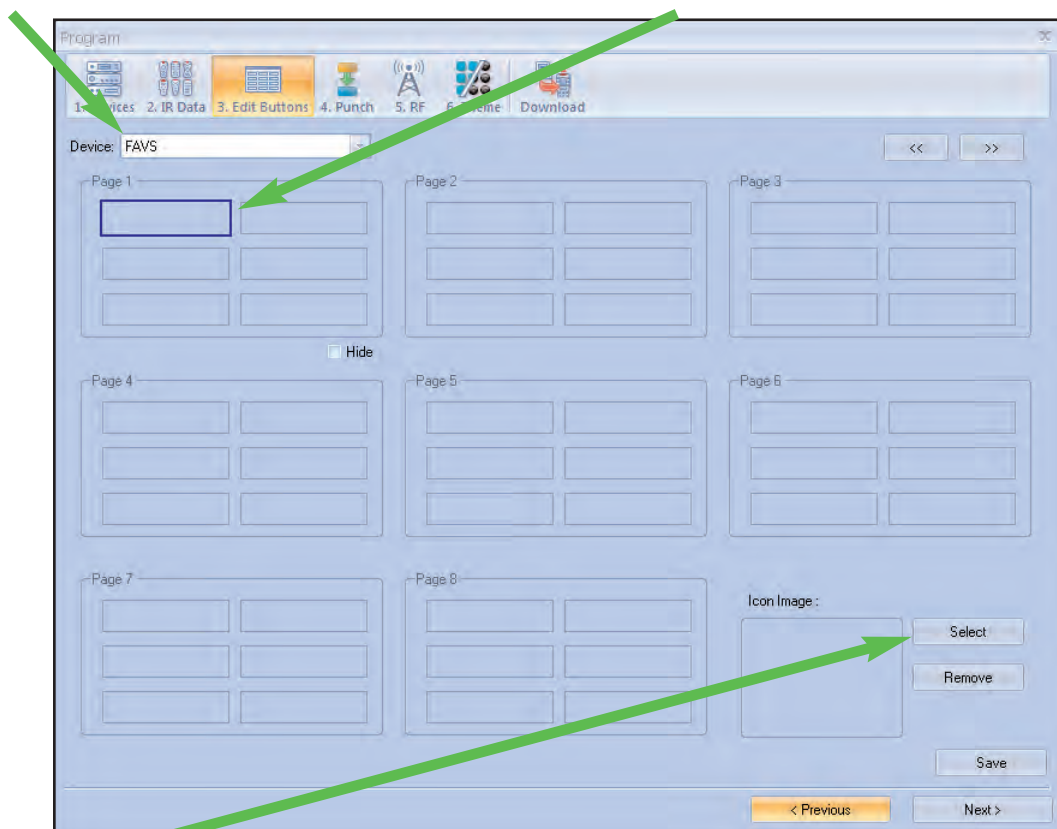


- 4 Take a look at all the other pages, drag any buttons you consider important to the first page.
- 5 Repeat Steps 2-4 and continue to test all commands for all of your devices by selecting a new device from the Device list box, then editing as needed. If you are missing a command and need to learn it, delete any buttons that you don't need and relabel to prepare for learning.

Tip - It's fastest if you don't click on SAVE until you have finished all testing and relabeling. SAVE exits the Edit and Label Buttons window, so you would have to reopen it if you haven't finished editing all your devices.

Using LCD Button Editor for FAVS

- 1 Select FAVS as the Device then click on an LCD button position.



- 2 Click on SELECT in the bottom right corner to open the Image Browser window.

- 3 From the Folder list box, select the gallery for the channel icons you want.



- 4 Once you see the icon you want, select it and click on APPLY then Close.



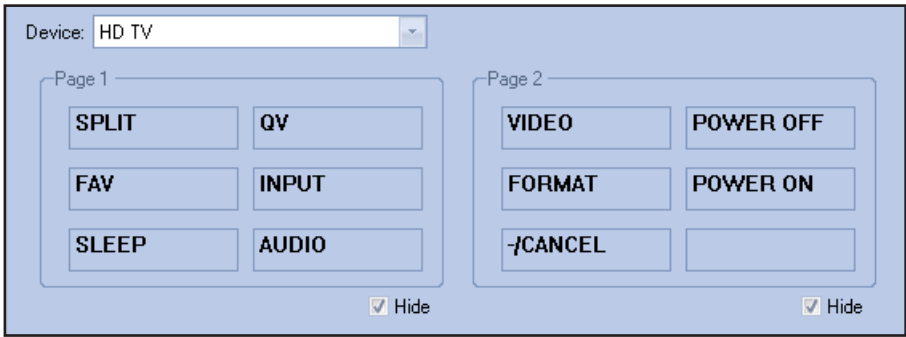
- 5 Repeat for all other channels, then Close LCD Button Editor. In simulator view, you can now see the icons applied.



Hiding Pages in LCD Button Editor

A hidden page is accessible during programming so you can teach commands to buttons on hidden pages and use them in macros. The interesting thing about hidden pages is that the end user cannot manually access the page using the PAGE button. You HIDE pages using the HIDE checkbox which appears at the bottom of each page in LCD Button Editor. Unlike MX-850 Editor, you can hide any page without hiding any other.

Tip - Remember to periodically SAVE your work. MX-880 Editor does not save automatically.



Hiding Pages in Tree View

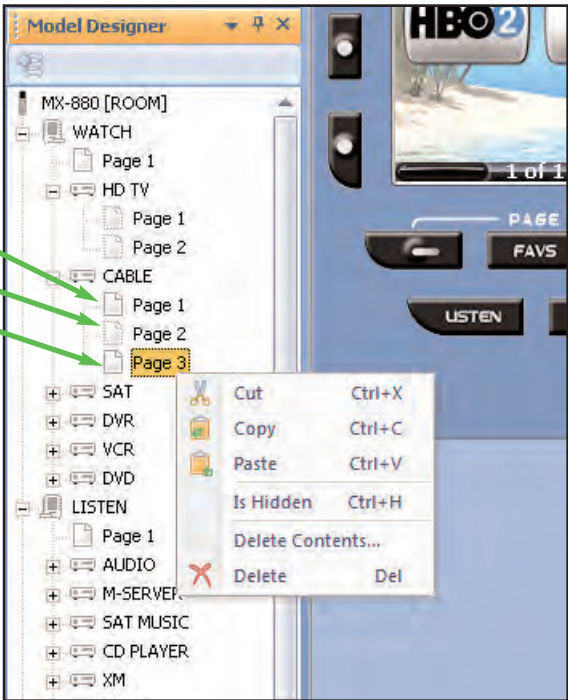
A hidden page is accessible during programming so you can teach commands to buttons on hidden pages and use them in macros. The interesting thing about hidden pages is that the end user cannot manually access the page using the PAGE button. You HIDE pages by right clicking on a device in Tree View, then selecting Hide from the context menu that appears.

After you've hidden a page, the page is greyed out in Tree View.

Page 1 is Not Hidden

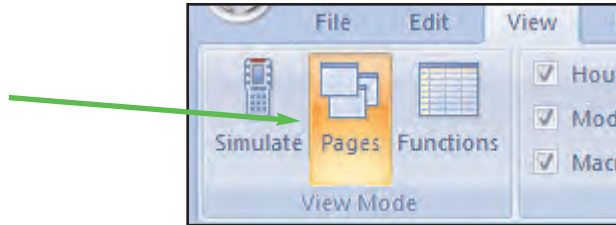
Page 2 is Hidden

Page 3 is about to be changed to Hidden via the right click context menu.

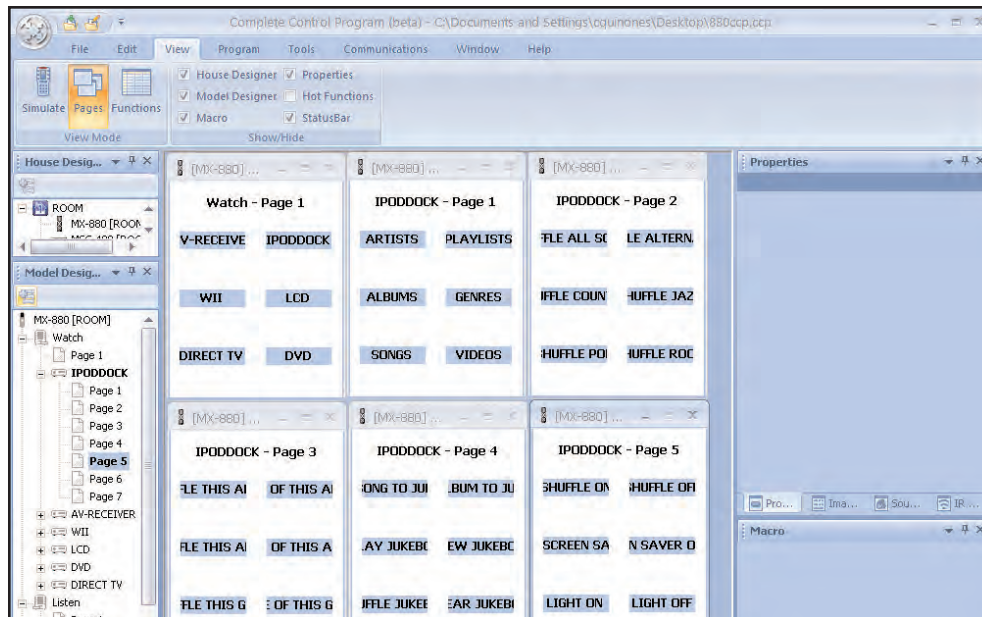


Using Page View to Relabel and Re-arrange Buttons

- 1 From the View Menu, select Page View Mode.



- 2 In Tree View, expand the device you would like to EDIT then Double Click on each page of the device to display them. You can have as many pages open as your screen size makes usable.



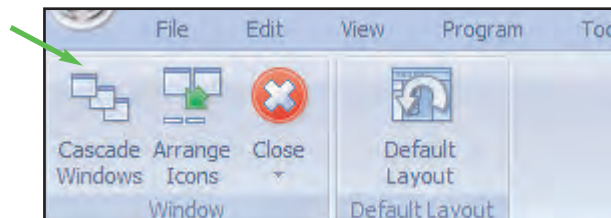
Tip - After you've opened all the pages you want to edit, drag them into the positions you like. Use the Window Menu to control the open page windows as follows:

Cascade - Arranges all open pages in the most compact stack (best for small screens)

Arrange Icons - Minimizes all open pages

Close - Closes the selected page

Close All - Closes all page views.



- 3 **Arrange Buttons by Dragging and and Swapping Button Labels and Commands**

Simply drag a button to swap to another on the same page or to another page and the button label and IR command will swap.

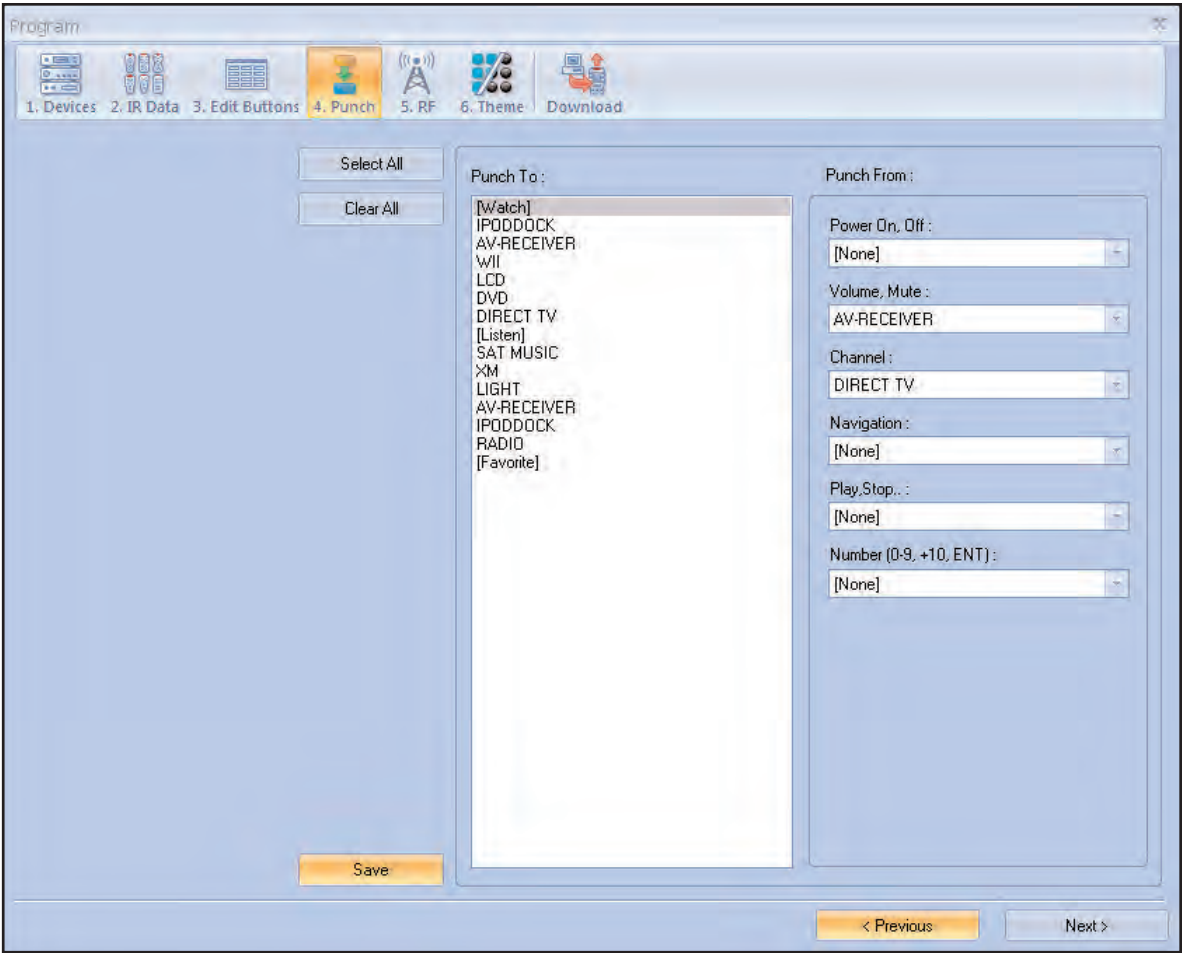
- 4 Repeat Steps 2-3 and continue to test all commands for all of your devices by double clicking in Tree View, then editing the pages as needed. If you are missing a command and need to learn it, delete any buttons that you don't need and relabel to prepare for learning.

Tip - Move important commands to the first page of the device/activity.

Programming Punch Through

Punch Through allows you to set the same functions on all devices very quickly. You can punch through any of the groups of buttons on the MX-880. In this example, the Power On and Power Off buttons on every page and every device are set to punch through to the WATCH Power On and Power Off buttons, thus the user can power off the system without returning to WATCH to press Power Off. Likewise, the Volume Up, Down and Mute have been set as a group to punch through to the surround sound receiver. After programming, flags remind the programmer that the buttons have been set to punch through.

- 1 Open the Punch Through window by selecting Punch Through from the Program Menu.
- 2 Select the devices which you want to change programming by clicking on them while holding down the CONTROL key on the keyboard. If you want them all selected (normal for Volume Up, Down and Mute), simply click on the Select All button. Any device you select will be HIGHLIGHTED in the "Punch To" list.



- 3 Select the device that has the codes you want used in the Punch From list.
- 4 Click on SAVE. Check the devices you programmed, you should see the red PT (Punch Through) flag on every button affected on all the devices you programmed:

The RF Control Window

Open the RF Control Window by clicking on the RF icon button on the Program Menu Toolbar (Step 5).

Overview of Basic RF Options

Using the RF Control Window you can modify the RF properties of an MX-880 as follows:

- 1 **Signals** from the Remote can be set to IR only, RF only or Network (For future use). The factory default is set to IR.

NOTE! This must be set for each device individually!

- 2 **Receiver** - If you have multiple MRF Base Stations in the system, you can select which receiver a device will be connected to. The factory default is set to Default.
- 3 **IR Output** - You can choose which of the emitter ports a device is connected to. This is vital when your system includes some identical components using the same IR code set. If you are installing a typical system with an assortment of unique components using different IR codes, you can leave the Flashers set to the factory default selection of ALL, however if operation is intermittent try routing to one flasher only.

Device	Signal	Receiver	IR Output
Main	RF	Home Theater MRF-350	ALL
HDTV	IR		
My Movies	RF	Home Theater MRF-350	Line 1
Cable Favs	RF	Home Theater MRF-350	Line 2
AV Receiver	RF	Home Theater MRF-350	Line 3
TiVo	RF	Home Theater MRF-350	Line 4
My iPod	RF	Home Theater MRF-350	Line 5
PSX-1 IR Codes	RF	Home Theater MRF-350	Line 6

Set each device's basic RF properties by clicking on the row and column you want. When you do, a combo box will display the choices available. Click on the option you want:

Device	Signal
Watch	RF
IPODDOCK	IR
AV-RECEIVER	RF
	IR & RF

Overview of Receiver RF Options

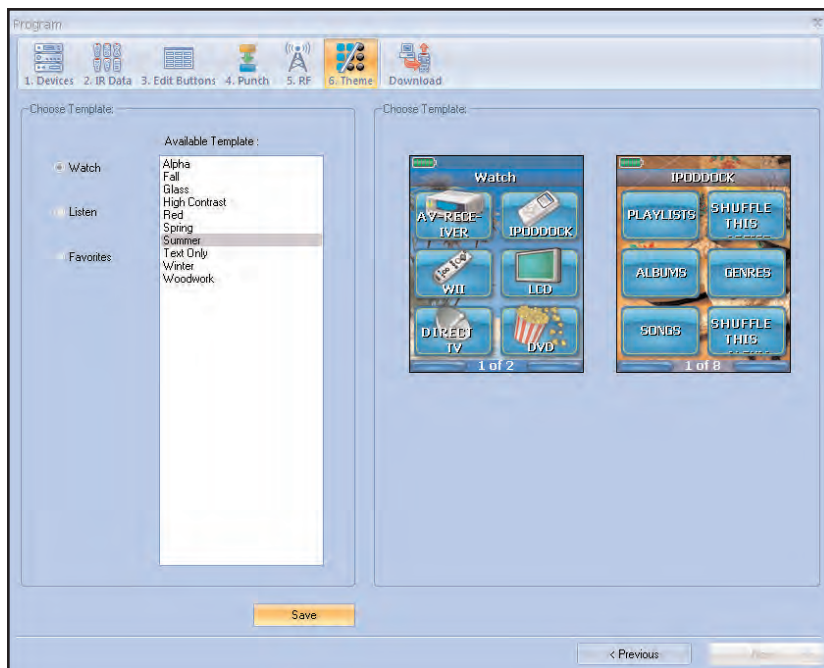
By clicking on the "Add a Base Station" button at the bottom of the window, you open the "House Designer" window where you can add a new base station by dragging it into the room name, in the configuration tree.

- 1 **RF ID** - To prevent all MRF Base Stations from receiving RF commands, you may opt to set a unique ID# to each. This is useful when identical components are installed in different locations. If your system has an assortment of unique components using different IR code sets, you may leave the receiver ID # set to the factory default of ID 1.
- 2 **Name** - Give the MRF Base Station a unique name, like "Home Theater MRF-350".
- 3 **Port Information** - Name the component connected to each emitter port.

Selecting a New Graphic Theme

At any time in the programming process you can select a new graphic theme for Listen, Watch and/or FAVS. Each can have a different theme if you wish. To set a new theme:

- 1 From the Program Menu, select step #6, Graphic Theme.
- 2 Once the Graphic Theme window opens, select the group you'd like to change themes for via the radio buttons for Watch, Listen or Favorites.



- 3 Select from the available templates and preview them on the right. Click on Save then close the window when done.

Learning

Learning should be a last resort for professional installers. We make every effort to provide you with any codes you need via our database. If they are not, please make a note to email us at the first chance with the learned file you created, the type of device it is and the Brand and Model Number. If it is not a current model component, we would still like to add it to the database, but please note in your email the approximate age of the component. Please address your emails to:

IRDatabase@universalremote.com

Tips for Learning from Unusual Devices

When you have difficulty successfully teaching codes to the MX-880, always try these tips in the order below:

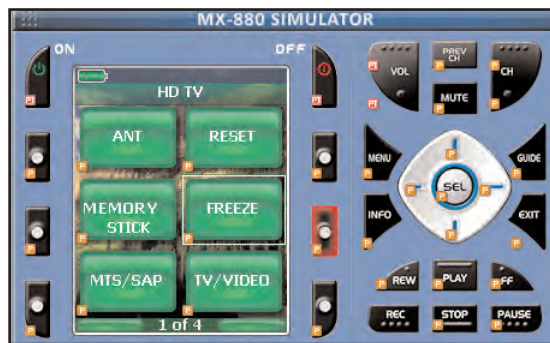
- 1 Fresh Batteries in the Original Remote Control** - Weak batteries will cause MX-880 Editor to fail to correctly learn. Note that EVEN if the original remote still operates the component, the batteries can be too weak to produce a strong enough carrier for any learning remote control to detect!!!! When a code fails, replace the batteries FIRST!
 - 2 Tap instead of Pressing and Holding** - With buttons that the client will only tap when using, this may produce better results. Normally, you should press and hold.
- OR
- 2 The "Flutter" Technique** - If you are having problems with a Code that has to be sustained (like volume up or down), sometimes fluttering the button on the original remote at least seven times while you are learning will successfully teach the code.
 - 3 Vary the Distance between the Remote and the Learning Sensor** - We recommend that you start with a distance of half an inch between them. If no other technique works, try varying the distance by doubling it each attempt. Keep trying until you are at least 5 feet away.
 - 4 Call our technical support department at 1-800-901-0800** to see if they have a cross reference for the brand and model you are using. If there isn't a cross reference, they will ask you to ship the remote to our engineers so the codes can be added to the database.

Learning IR Codes One at a Time

When all you need is a code or two, this is the method to use. If you need to teach an entire set of codes from a remote control, skip to the Batch Learning section on page 39.

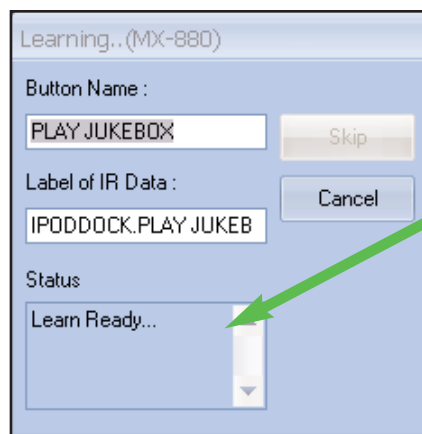
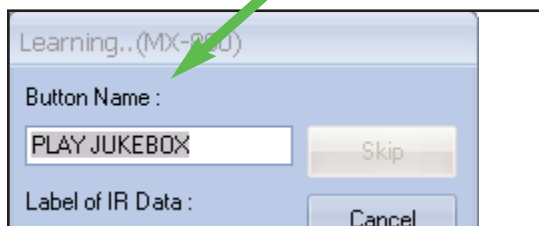
- 1** Connect the MX-880 to your PC

- 2 Select the button that you want to teach to by single clicking it on the simulator view.



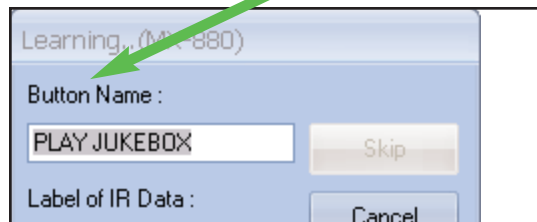
- 3 Click on the LEARN Tab or choose Learn from the Program. There will be a pause, while the PC communicates with the MX-880, then the info window will display "Ready".

The Learn Button re-activates the Learning process when it automatically times out or if you want to re-learn a command.



The Learning Information window prompts you when the system is Ready to learn a new command and when a learned command is Good, or if it Fails.

- 4 Press and hold the corresponding button on the original remote control while pointing it at the top of the MX-880 (head to head) with the remotes approximately a half inch to an inch apart. When the code is successfully learned, the window will say GOOD, confirming that the code learned "correctly." Actually, the GOOD means that the code might be good.... You need to test it. Select the code in the Current Learned IR List, then click on the TEST button while pointing the MX-880 at the device.



TIP - Always POWER OFF the RF Base Station when testing Learned Codes. Test line-of-sight only!

If there is any interference or IR saturation, your tests will fail, not because of learning issues but because of RF setup issues. Don't waste time, test your codes now, test RF setup later.

- 5 If the code doesn't operate the component you can try the DoubleTap learning method. This is particularly useful for components using the Philips RC5 'togglebit' protocol. Many high end audio companies use these codes. Just click on the 2 Time Learn radio button and you will be prompted to learn every code twice.



- 6 Click on **SAVE** - You must click on SAVE to save the LEARNED command. The blue "L" learned flag appears on the button you taught the command to.



Learning a Batch of Buttons Quickly

Using this method, MX-880 software will automatically save and select the next button, saving lots of time when you are learning an entire remote control. Key to your success are two tips:

Tip #1 - Always label all your buttons before beginning

Tip #2 - Verify with one button that the codes from the new remote learn normally.

Once you've prepared, batch learning goes very quickly:

- 1 Select the STARTING Button** - Select the button that is the top left of the buttons you want to teach to. When MX-880 Editor automatically saves and selects the next button it moves left to right, unless it is learning a group of buttons with similar functions. When you are batch learning the Volume Group, MX-880 Editor first learns Volume Up, then Volume Down, then Mute, then advances to the next group.
- 2 Select both the LEARN and the CONTINUE button** - The combination activates the batch learning capability of MXEditor. It is normal for MX-880 Editor to time out after learning the LCD page, and again after learning the hard buttons. The CONTINUE button remains selected, but you must restart the batch learning by selecting a new starting button on another LCD page or device, then selecting LEARN again.



- 3 Watch the LEARNING Window** - When the info window says READY, press and hold the button on the original remote control. When it says GOOD, release the button. If it says FAIL, reteach the same command. When you see that a new button has been selected and the LEARNING window says READY, then teach the new command from the original remote control.

Tip - To skip a buttons in the automatic sequence, select the next button you want.

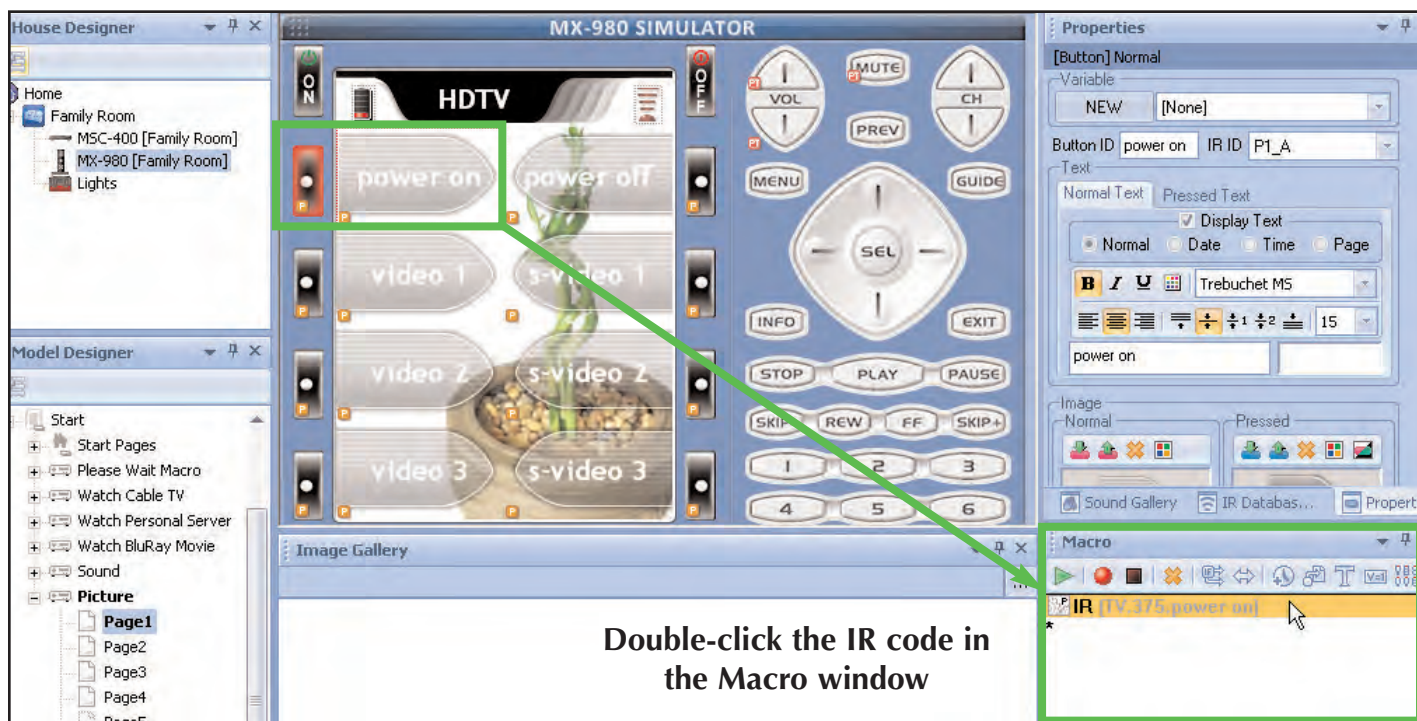
Tip - You can test any code by selecting it on the simulator and clicking on the TEST button.

- 4** Remember to save your work, go to the File menu and select SAVE.

Advanced IR Code Manipulation

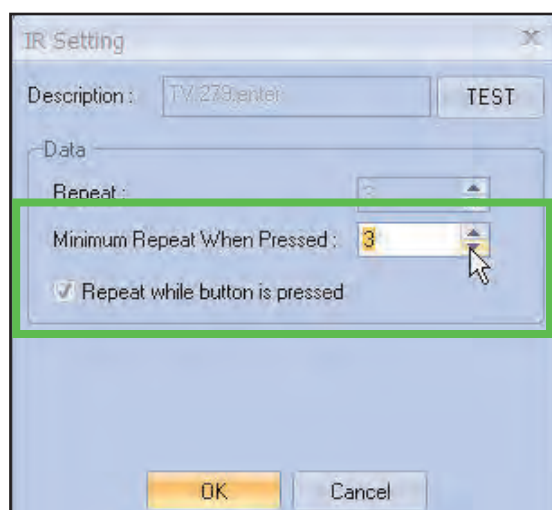
After learning of IR codes is complete, it's time to download to the remote control and test all the learned codes. Test, test, test Then you know it works, or not. If a code isn't working one hundred percent of the time you can either re-learn it or try to manipulate the IR code to get it to work.

To enter "Advanced IR Settings" select a button on a page and then double-click on the IR code in the "Macro" window.



Adjusting the "Minimum Repeat When Pressed" setting

Minimum Repeat When Pressed: No matter how quick a button is pressed it will output "3" repeats at a minimum. If you psychically press and hold the button, it will output commands until the button is released. "3" is the standard repeat value for our remotes. If you are getting double commands for an IR code, ("22" instead of "2"), lower the repeat value to "2" which will resolve this issue. Normally you would not go higher.

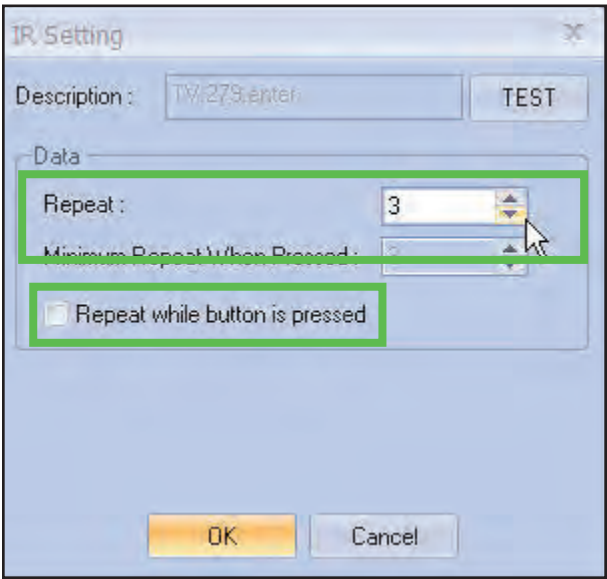


Creating a Sustained IR Command in a Macro - Adjusting the “Repeat”

Unchecking the “Repeat while button is pressed” box opens up the “Repeat” adjustment setting.

The “Repeat” adjustment setting will *only* output the specified number of repeats listed in the box no matter how long the button is pressed for. This feature can be used with a component like a Projector, that need “2 seconds” of continous IR output to turn on or off. You would uncheck the “Repeat while button is pressed” box and set the “Projector On button” to repeat. Typically, most IR commands are about 7-15 repeats in one second. You’ll have to experiment to find how many repeats equal how many seconds with each new component you try this with.

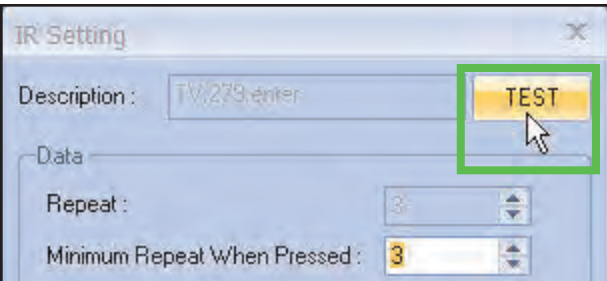
When the button is pressed, this macro step will output a string of 20 repeats and reliably turn on/off the projector. Essentially, you are creating sustained burst (as if you were Pressing & Holding the Projector On button) when you this advanced IR code manipulation feature.



Testing IR Codes after changing the Repeats

When you start changing IR Repeats, you must test to see if you’ve resolved the problem or made it worse. Connect the MX-880 to your computer, via the USB cable and click on the “Test” button to test the new IR code.

Experimentation will teach you what works best for different problem components. Make shure you add problem compnents like projectors to your “Device Library”, so you only have to go through this process one time.



Macro Programming

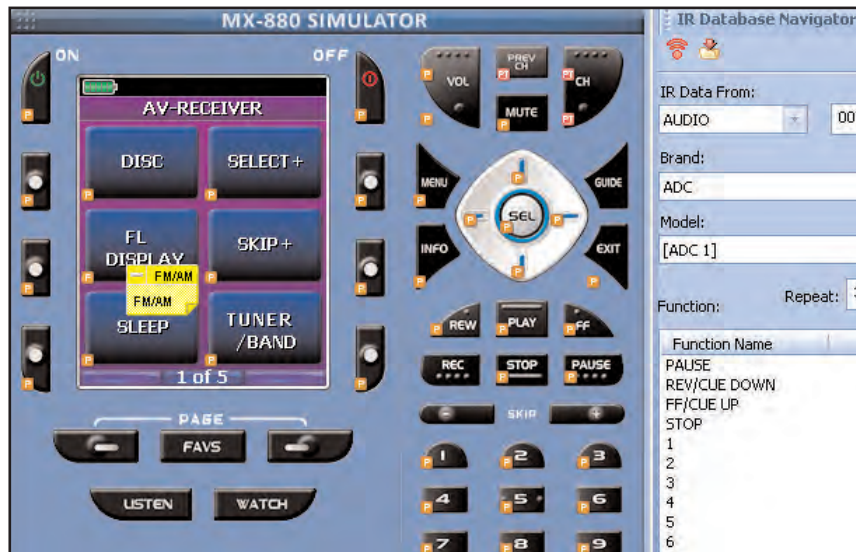
Bullet Proof Macros or Point N Pray?

Professional Installations Require “Bullet-Proof” macros (all discrete codes or workarounds, no toggle commands). A Point and Pray macro is created when you place a toggle command in the macro (like a TV Power command). The use of Point & Pray macros that only work if the customer follows strict rules will create service calls and a lot of bad will (for example, you force the customer to verify that the system is completely off before using the TURN ON macro). When you cannot find discrete power commands, create an extra device called “POWER” or “SYSTEMPOWER” and give your client one place to find all the power commands. Instruct them to power on their system manually from this easy, convenient page, then return to WATCH or LISTEN to use the automated input switching Macros for the ACTIVITIES like Watching CABLE, Watching a DVD movie etc.

In this example, the programmer has created a device called SYSTEMPOWER. The client has one convenient page to power up their system manually.

Each button is labeled for the power command the programmer has placed via the IR Database Navigator.

This is much better technique than programming a Point N Pray Macro that will result in much customer frustration.



Finding Workarounds When There Are NO Discrete Codes

By creatively experimenting you may find that you can workaround the lack of discrete codes. This takes time and there is no guarantee that you will find a workaround for any given component. Here are some common examples:

DVD and VCR Power Workaround

Most DVD players will turn on when off when they receive a Play command. Thus you can workaround like this:

DVD ON = 1) Play
2) DVD Stop

DVD OFF = 1) Play
2) A delay of 2 to 4 seconds
3) DVD Power (toggle command)

TV scrolling “INPUT” Workarounds

Many televisions respond to a channel up or a channel number command by changing to the Antenna input regardless of what input was last selected. This creates an “anchor” action that puts the television in a known input. Thus you can create a workaround as follows:

EXAMPLE - CH Up takes TV to the ANT A input (and the TV has 5 inputs -Ant A, Ant B, EXT1, EXT2 and EXT3)

- TV to EXT3 = 1) Ch Up (takes TV to ANT A regardless of what input was last selected)
2) Input (takes TV to next input - ANT B)
3) Input (takes TV to next input - EXT 1)
4) Input (takes TV to next input - EXT 2)
5) Input (takes TV to desired input - EXT 3)

Using the Macro Window

The Macro Window controls macro recording as follows:

Record- Starts the macro recording process. This enables you to simply navigate to any page and click on a button to create an "Alias" to it. An "Alias" is a copy of the button's IR command(s).

Stop - Click to stop Macro Recording and save your work.

Delete - First select the step you want to delete, then click on this button (or the Delete key on the keyboard).

Test Macro - Play back your macro by following these steps:

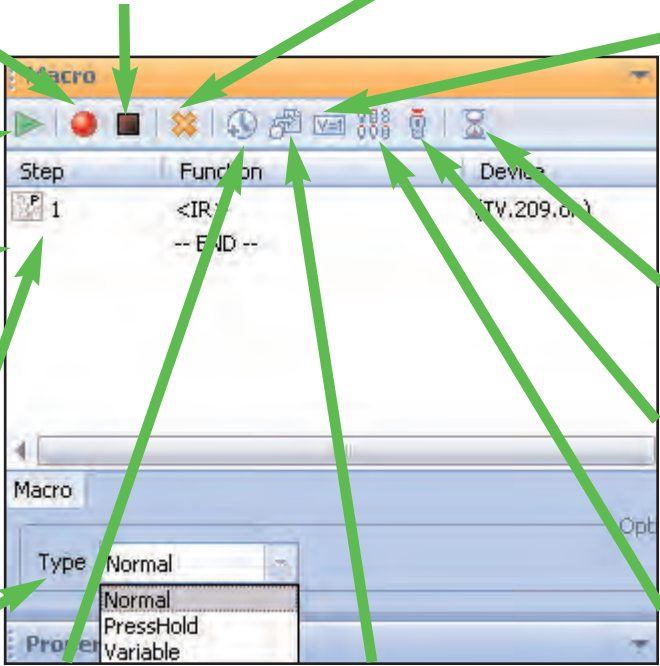
- 1) Select the first step in the macro.
- 2) Connect to an MX-880
- 3) Click on the TEST button.

Draggable Macro Steps - In this window, you can view all of your macro steps. You can click and drag any step to any position, changing the order of the macro.

Normal, Press and Hold and MX-880 ONLY -Variable List Box - A "Normal" macro has one sequence of steps that will always playback when the button is pressed.

A "Press and Hold" macro has two sequences, one sequence is played when the button is pressed normally. The other sequence is played when the button is pressed and held for longer than the specified time.

A "Variable" macro has two sequences. One sequence is played back when the selected variable=0, the other when the variable=1.



MX-880 - SET VARIABLE Opens the Set Variable window, which enables you to pick an already-created variable and set it to 0, 1 or to simply Invert its status.

Sleep Timer - Select this option to choose when to execute a macro. The window will display 15 min, 30 min, 60 min, 90 min, NOW, EXIT or CANCEL.

IR Setting - Allows Learning and increasing Repeats from this window.

IR Data - Click on this to open IR Database Navigator, then drag a code from the Navigator to a macro step.

Delay - Click to open the delay window. Any step can be a delay between .1 and 30 seconds. Longer delays can be created by using more than one delay.

Jump - As the last step in a Macro, you can specify a jump to any page of any device. You can program another jump in the macro to display a page with a status feedback message or image.

Tip - All Buttons Can Be Macros except the Watch, Listen and Page buttons.

What is an Alias?

An alias is a macro step that in one step, points to an entire macro programmed in another button.

If only one command is programmed in the other button, then the macro step will only perform that command. However, if the other button has multiple macro steps, the entire macro will be played back as one step in the new macro. Thus, the Alias feature not only saves memory (since it is not copying the IR commands, only pointing to them), but enables you to program macros nested inside other macros.

Recording Macro Steps

In the Simulator, click on the button that you want to contain the macro. Click on the “Record” icon in the Macro window toolbar to start the recording session. Next, click on the buttons you wish to add to the macro; TV Power On, Receiver Power On, TV input, Receiver Input etc.. When the macro is complete, click on the “Stop” icon to end the recording session.

Recording Other Types of Macro Steps

For any other kind of macro step (other than Aliases), you do not have to click on record. Simply select an IR command from the IR Navigator or a sound from the Sound Gallery and drag them into the Macro window.

Re-Arranging the Macro Step Order

You can drag any macro step to a new position by clicking, holding down the left mouse button and dragging it up or down the list.

Deleting a Macro Step

You can delete a macro step by selecting it first, then hitting the “Delete” key on your keyboard or by clicking on the Delete shortcut icon in the Macro window toolbar.

Tip - You can resize the Macro window by simply clicking and dragging the top of

Utilizing Function View to Program Activity Macros or Favorite Channels

You can really speed up macro programming for repeated Activity Macros or Favorite Channels that utilize the same devices over and over again. Simply choose Function View from the View Menu then click on the devices you use over and over again (i.e. AV Receiver and Flat Panel TV), then arrange them around your screen so that you can see the commands you’ll need.

Then start recording your macro. Instead of constantly going to tree view or the simulator to select the devices, you simply click on the command you need.


Programming a System Power On Macro

Set up your laptop and the connected remote within operational range of the home theater system while programming a macro. Macros that the client will use to turn the system on require extensive testing of delays and you can expect to do a lot of experimenting while programming.

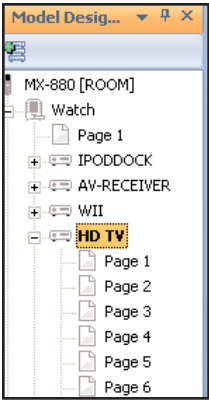
In this example, the WATCH device's ON button is programmed to turn on the system, configure all the Inputs and Modes for the client's favorite activity, watching HDTV Cable TV.

- 1 In Tree View, navigate to the WATCH device. On the simulator, select the On button.
- 2 Verify that the Type list box at the bottom of the Macro Window has the default NORMAL selected.

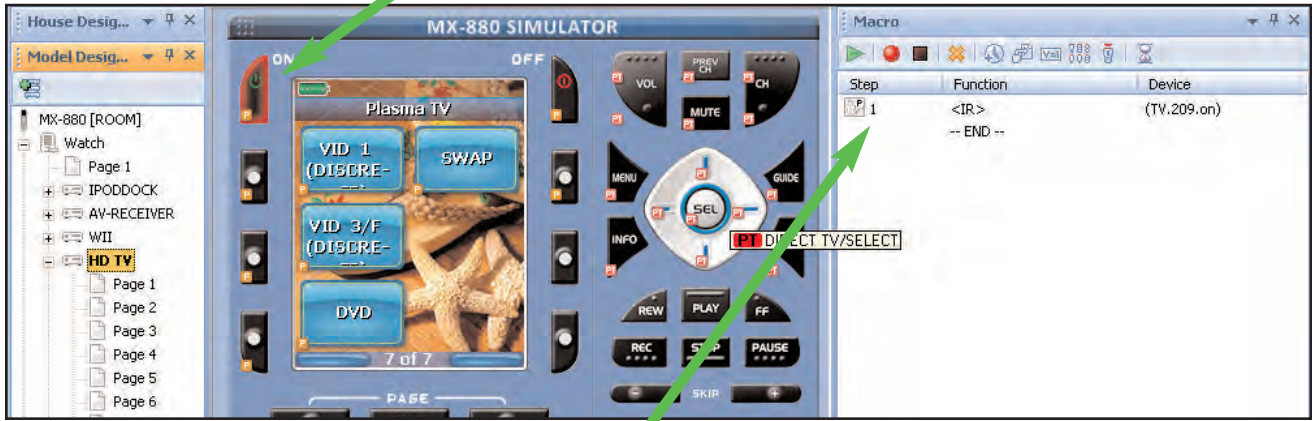


- 3 Click on the RECORD icon  or select Macro from the Program Menu.

- 4 In Tree View, expand all the pages of the devices you are going to power on. Navigate to the first device you'd like to turn on. Since the HD TV in the example system takes several seconds to warm up, it is the first device we'll turn on. With single clicks on the pages inside the HD TV device we find the P-On command on Page 3.



- 5 On the simulator, click on the button with the device's Power On command.

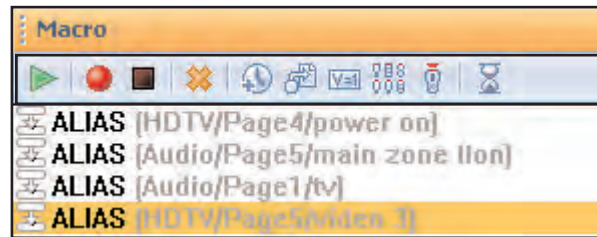


The new step appears in the Macro spread sheet:

- 6 Program steps to power on the other components in the system. In this example, the cable box is powered on all the time, since it is a DVR, so the only other component to power on is the surround sound audio receiver.



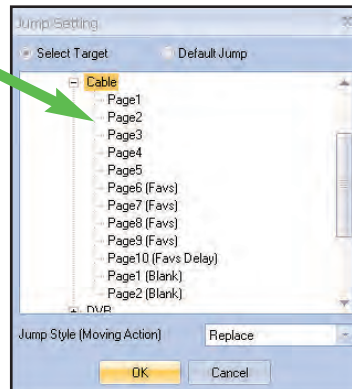
- 7 Program steps to select the correct TV and Receiver input for the client's favorite activity. In this example the client's favored activity is watching Cable TV. The cable box is connected to the TV input of the Surround Sound receiver and the component output of the cable box is directly connected to the HDTV's Video 3 input.



- 8 Program a jump to the Device and Page they use for their favorite activity. Click on the JUMP icon.




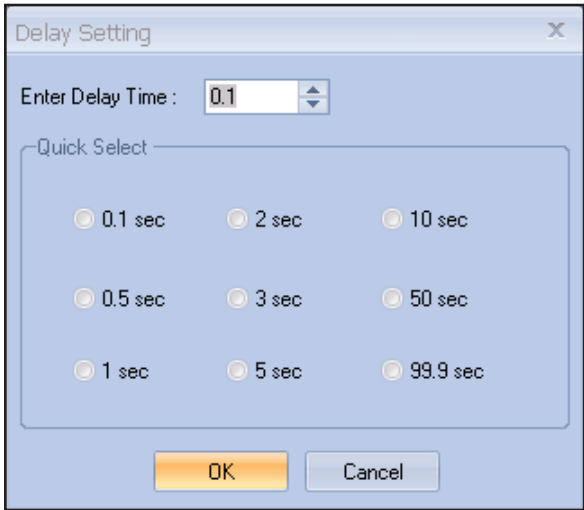
- 9 Select the correct device and page from the Jump window. The jump appears in the column under Jump in the Macro window.



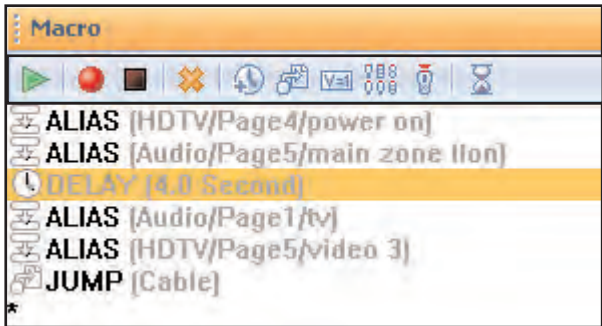
- 10 Now, test if delays are necessary in your macro. First, turn the TV and the Receiver to the wrong input, then turn off everything in the theater. Point the connected MX-880 at the system. Select the first step in the list by clicking on it. Now, click on the TEST button. Observe the television and the receiver. Did they both switch to the correct input?

In the example system, the TV requires four seconds of warmup before the Input will correctly change. The surround sound receiver requires two seconds, so we program a four second delay after the TV and the Receiver power on.

- 11 Select the Delay icon , then when the delay window opens, click on the preset amount of delay or enter any time between .1 second and 30 seconds.



- 12 The new step appears in the list. Now, drag the delay step to the correct location.



TIP - Sometimes a change in order can provide the delay you need.

Each IR command lasts approximately 1/3 of a second, so if you have 3 commands, one second has elapsed.

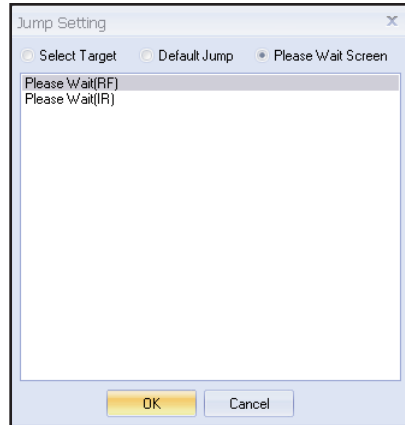
- 13 Again, turn the TV and the Receiver to the wrong input, then turn off everything in the theater. Point the connected MX-880 at the system. Select the first step in the list by clicking on it. Now, click on the TEST button. Observe the television and the receiver. Did they both switch to the correct input? Continue to revise the macro with delays or changes until the macro ALWAYS correctly turns everything on and switches the surround sound receiver and television to the correct input. When the macro is perfect, click on the STOP in the Macro Window.



- 14 Remember to save your work, click on SAVE in the File Menu.

Please Wait Screens in Macros

Note that if you'd like to jump to a Please Wait screen, two are built in for your convenience. One for IR systems that says Keep Pointing, and one for RF systems that says Please be Patient. To select one as a step in a macro (usually the first step), simply select Please Wait Screen from the device list box, then select Please Wait RF or Please Wait IR from the Page list box.

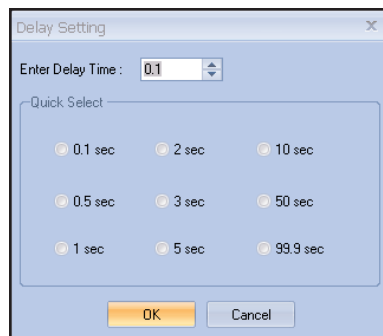


Delays in Macros

- 15** Now, test if delays are necessary in your macro. First, turn the TV and the Receiver to the wrong input, then turn off everything in the theater. Point the connected MX-880 at the system. Select the first step in the list by clicking on it. Now, click on the TEST button. Observe the television and the receiver. Did they both switch to the correct input?

In the example system, the TV requires four seconds of warmup before the Input will correctly change. The surround sound receiver requires two seconds, so we program a four second delay after the TV and the Receiver power on.

- 16** Select the Delay icon , then when the delay window opens, click on the preset amount of delay or enter any time between .1 second and 30 seconds in the "Customize" window.



- 17** The new step appears in the list. Now, drag the delay step to the correct location.

TIP - Sometimes a change in order can provide the delay you need.

Each IR command lasts approximately 1/3 of a second, so if you have 3 commands, one second has elapsed.

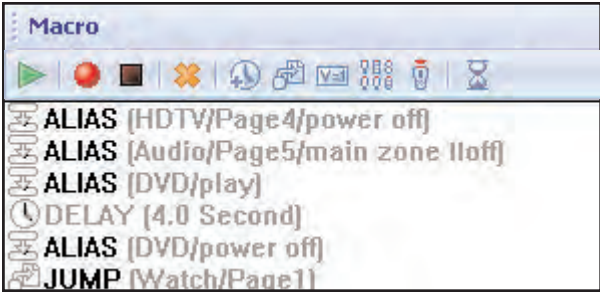
- 18** Again, turn the TV and the Receiver to the wrong input, then turn off everything in the theater. Point the connected MX-880 at the system. Select the first step in the list by clicking on it. Now, click on

the TEST button. Observe the television and the receiver. Did they both switch to the correct input? Continue to revise the macro with delays or changes until the macro ALWAYS correctly turns everything on and switches the surround sound receiver and television to the correct input. When the macro is perfect, click on the SAVE in the Macro Window.

19 Remember to save your work, click on SAVE in the File Menu.

Programming a Power Off Macro

A Power Off macro is much simpler than a Power On macro, since there are rarely any delays to test, etc. Usually, to give the client some feedback that the macro is working, the TV is turned off first.



When you are forced to “workaround” a DVD player or VCR without a discrete off command, you will make the macro more reliable if you place the time consuming anchor (the play command) at the beginning of the macro. Make sure that you turn the DVD player off before testing this kind of workaround. You are testing the worst case, you know that a toggle type power command will turn the DVD player off, you are concerned about an event that might happen. The DVD player is already off, but the client presses the MAIN Power Off to turn everything else OFF. If you only programmed a toggle Power command, everything else would turn off, but the DVD player would turn on. This “workaround” ensures that the DVD player turns off.

Finally, so that this macro will work correctly when you set up Punch Through, program a jump to the WATCH pages. Thus if the user presses OFF after watching a DVD movie, the MX-880 will jump to the WATCH device, perfect for picking up the remote tomorrow night!

Copying Macros for Activity Macros

You can often speed programming by instantly inserting all of the steps of a previously programmed macro as the starting point of a new macro. The inserted steps are completely editable, without changing the original macro.

1 First, highlight the button with a Macro and select Copy from the Edit menu.



- 2 Then highlight the button without a macro and select Paste from the Edit Menu.



Tip - Copy and Paste Macros

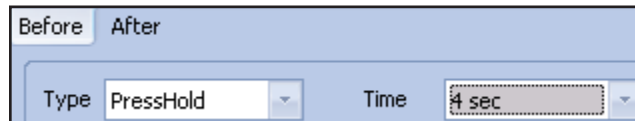
The keyboard shortcuts for Copy: Control+C, for Paste: Control+V.

Push and Hold Macros

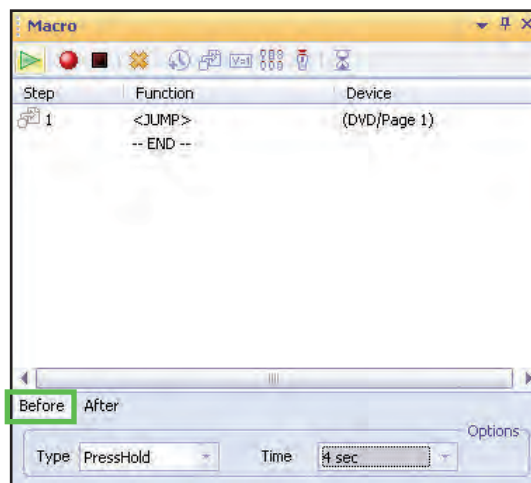
By selecting this option, you now have the ability for one button to issue two different macros. One macro is issued if the button is pressed briefly, another completely different macro is issued if the button is pressed and held. Here is a way to use Push and Hold macros that we think you might find useful for power user clients. Power users constantly switch devices and make adjustments to different components so waiting for the Activity macros to finish reconfiguring their system can be frustrating to them. By programming each of their activity macros to only issue when they press and hold the button for two seconds, you can program each button to simply Jump to the device when they tap the button.

Here's:

- 1 Select the button you'd like to program with two different macros.
- 2 Select Press-Hold Mode from the Type list box at the bottom of the Macro Window. Then, set the TIME in the Options window to 2 seconds. This ensures that the client will have to Press and Hold the button two seconds to issue the Macro.



3 Click on the Tab at the bottom of the Macro Window labeled BEFORE, then program a jump to the device only.



3 Click on the Tab at the bottom of the Macro Window labeled BEFORE, then program a jump to the device only.

When the client presses the button for less than 2 seconds, only the jump occurs.

- 4 Click on the Tab at the bottom of the Macro Window labeled AFTER, and program the full macro (in the example shown; everything this system needs to Watch a DVD).

Tip - Reverse priority for systems with both casual users and power users...

Program the simple jump to occur after a press and hold, while the Activity macros occur with a normal tap.

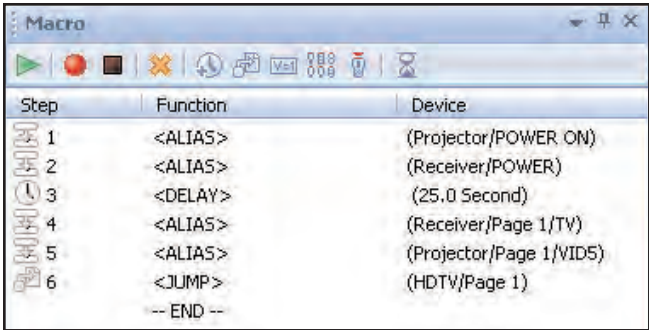
Variable Macros

This is another method for one button to issue two different macros. One macro is issued when the button is pressed and a particular variable is "0", another completely different macro is issued if the button is pressed and the same variable is now equals "1".

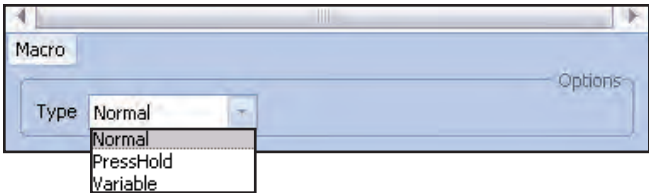
Variables allow you to track when a particular button has been pressed. Then when another button is pressed, you can do something different based on the previous button press.

Clever use of variables can enable you to add all kinds of elegant improvements to operation. Here's an example of variables, used in this case to remove the delays in the activity macros on the Watch page once the projector is on.

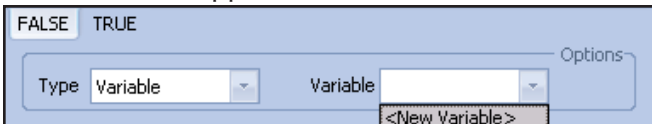
- 1 The macro to turn on the system and watch Cable TV is very long in this example system. The projector requires 25 seconds to warm up before the inputs can be changed.



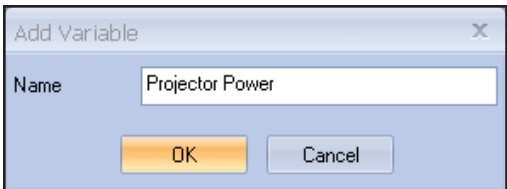
- 2 In the Type list box at the bottom of the Macro Window, select Variable as the type.



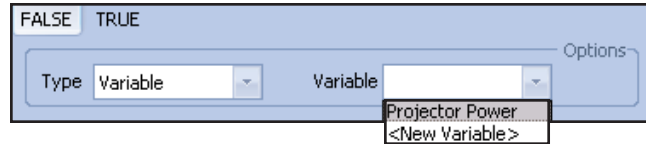
- 3 In the Variable list box that now appears, select New Variable.



- 4 In the New Variable window that opens, type in a descriptive name, then click on OK.

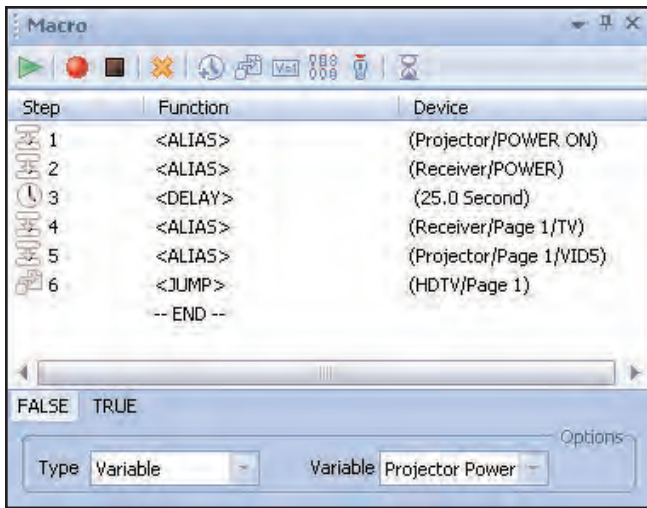


- 5 Verify that the new variable name appears in the Variable window as the selection.

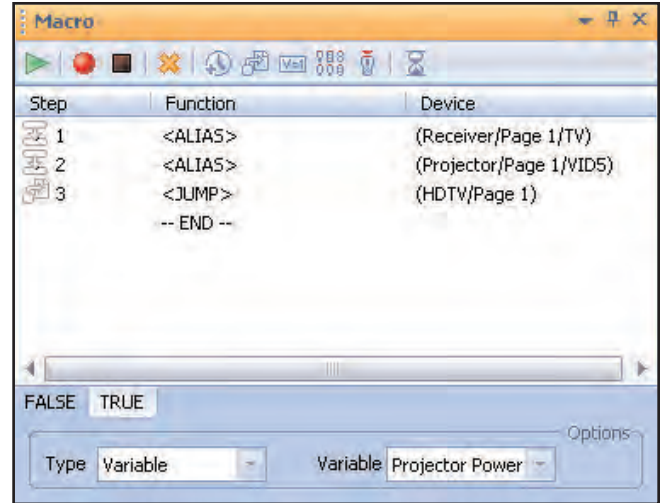


- 6 Now your macro window displays two different tabs. One is the macro that will be sent when the projectorpower variable = True, the other when the projector power variable = False. Program the macro in Variable=True with the Power On commands and the delay, while the macro in Variable=False does not.

ProjectorPower Variable = True



ProjectorPower Variable = False



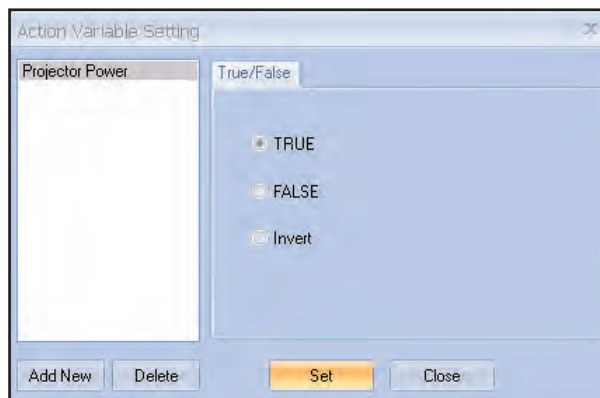
Tip - You must program all your activity and power macros to be Variable macros

Now, you must program all macros that the client might use to turn on the system with a variable change that changes the variable ProjectorPower to "False". Thus no matter what button you use to turn on the system, the MX-880 will know the true status of the projector is on. Likewise all macros that turn the system off must change the variable ProjectorPower to "True".

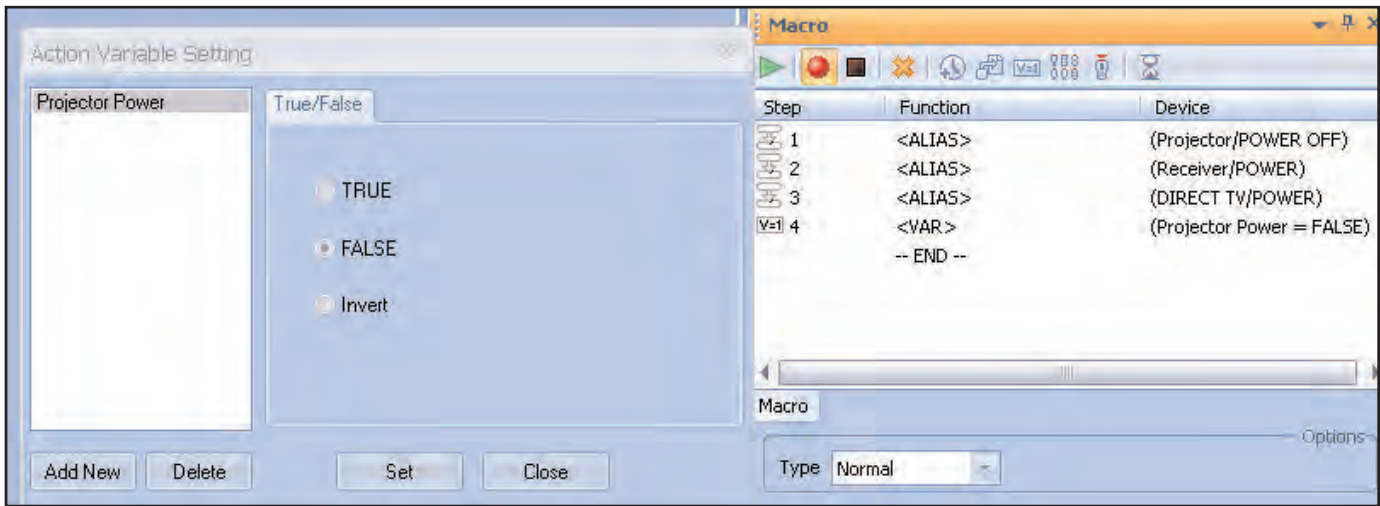
- 7 In all macros that power on the projector, repeat steps 1-7, then add a new step to all the macros. Click on the Set Variable button on the macro toolbar.



- 8 The Set Variable window opens. Select the ProjectorPower variable and set it to a state of 1 (indicating that the projector is now powered on). Afterwards, the new step appears in the macro list.



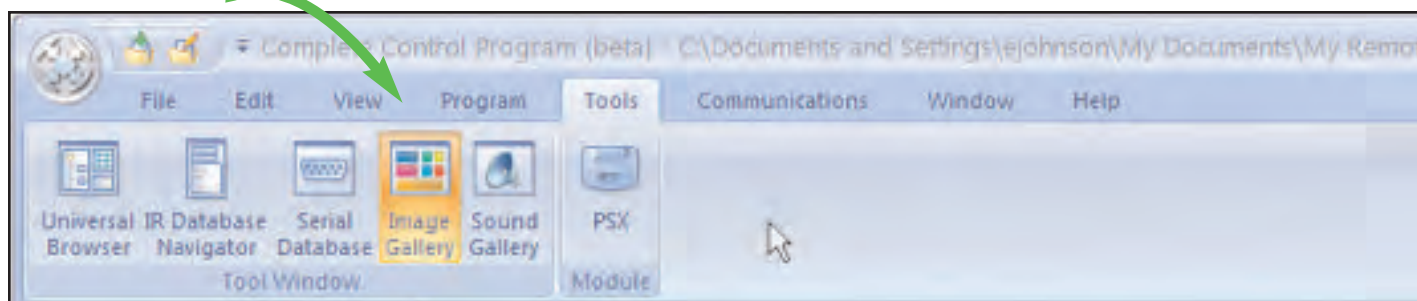
- 9 In all macros that power OFF the projector add a new step to the macros. Click on the Set Variable button and set the Projector Power variable to equal "0" after the projector is off.



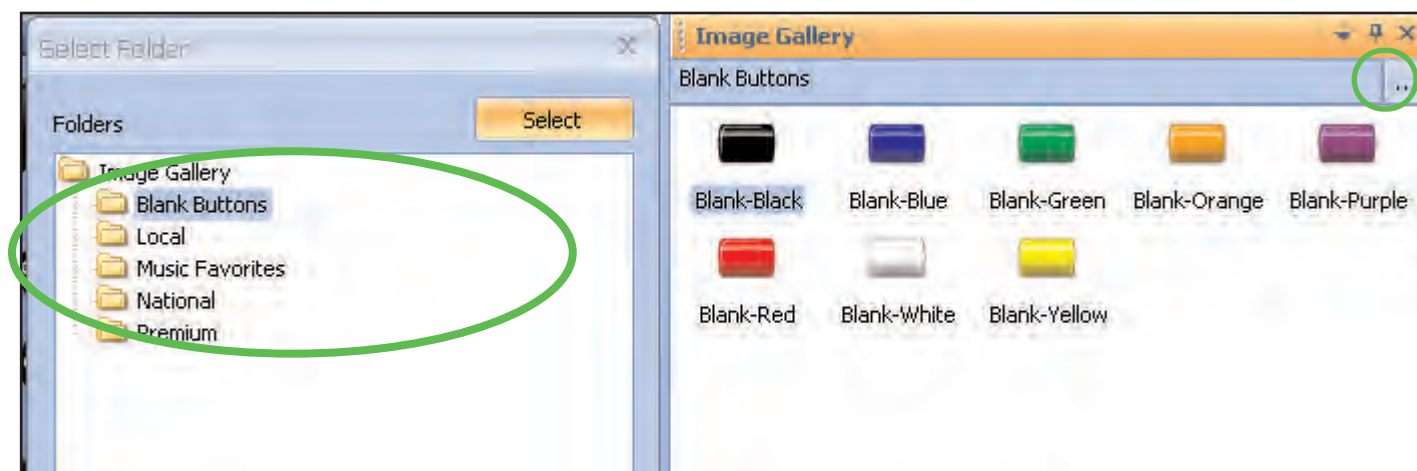
Using the Image Gallery

The MX-880 has a limited ability to use images instead of text.

- 1 First, make sure you are in Simulator or Page View mode, then double click on the page you want in Model View.
- 2 Now, from the tools menu, open the Image gallery.



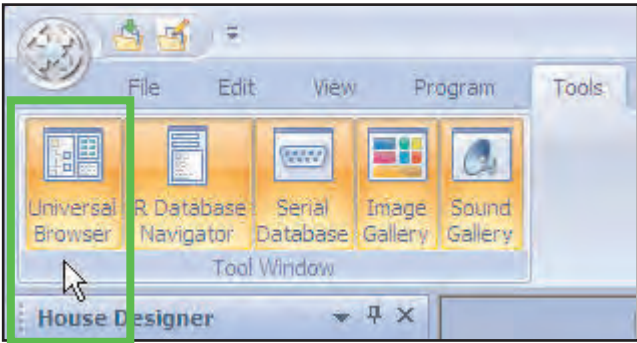
- 3 Double Click on your Favs Device within the Model Designer Treeview and highlight the first page. The simulator will display the first page.
- 4 Use the Blank buttons or Click on the browse button to select the folder of art you want.
- 5 Click and drag the image icon from the gallery onto a button simulator location.



Tip: The Image Gallery can only be used for the creation of favorite channels. If you would like to add gallery buttons to other pages, you can do so via the create and name devices window.

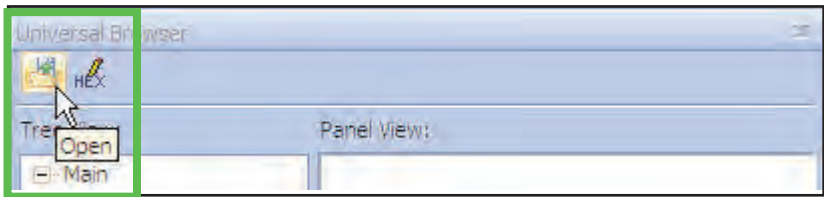
The Universal Browser Window


Open the Universal Browser Window by clicking on the Tools tab of the main menu toolbar, then clicking on the Universal Browser icon.

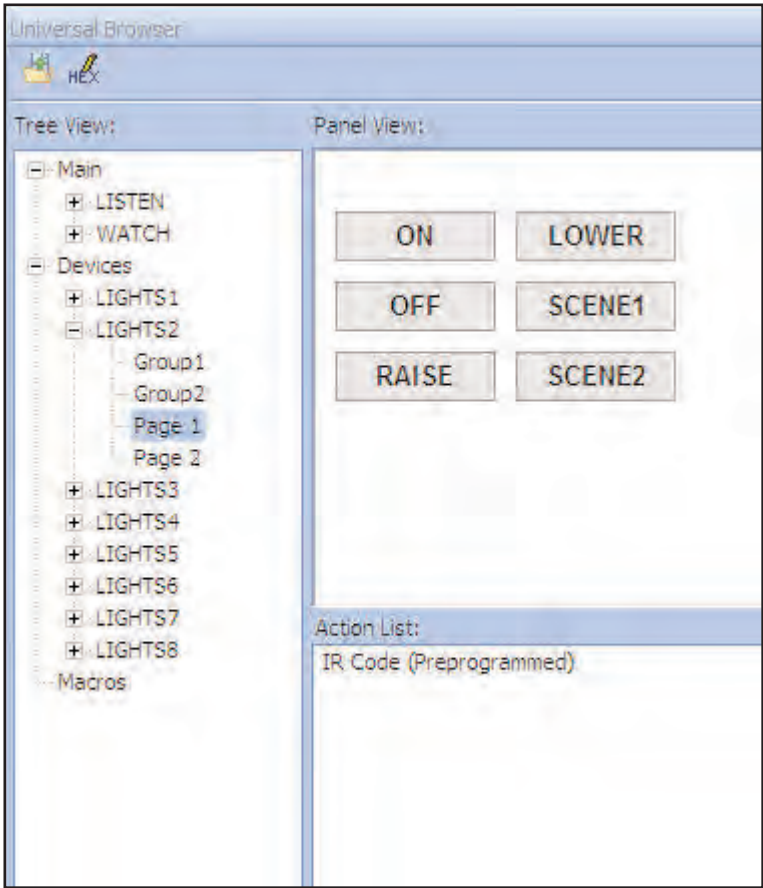


Overview

Using the Universal Browser Window you can import “Learned IR” codes and “Database codes” from any Universal remote control file. If you have Pronto .ccf files on your computer, you can import any “Learned IR” codes, but you cannot import generated RC5, Database or generated NEC codes. The browser works as follows:



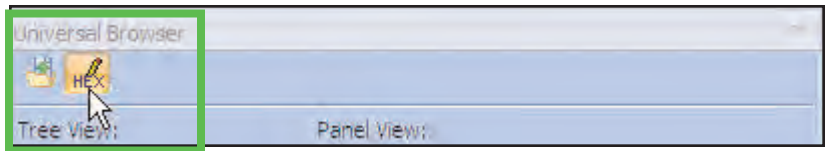
- 1 Click on the File icon to navigate to the folder that contains the file.
- 2 Use Tree View to Navigate to the Panel containing LEARNED IR codes you want.
- 3 Click on the panel name in Tree View to make the panel appear in Panel View.
- 4 Click on a button in Panel View and the Action List view will reveal whether it has Learned Data or not. Only buttons with Learned Data can be transferred.
- 5 Click and hold the left mouse button to drag a button with learned data to any programmable button on the MX-880 in Simulate View Mode.
- 6 When you release the mouse, the blue  indicating a Learned IR command is displayed on the simulate view of the button.



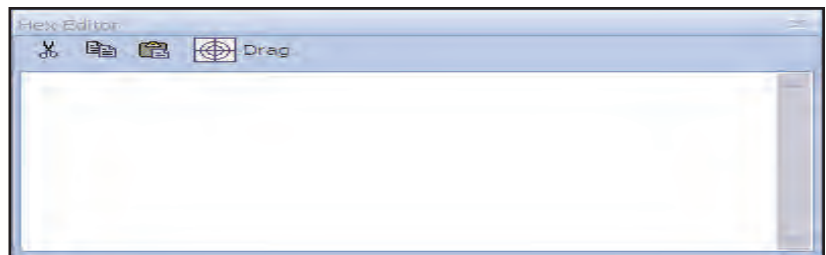
Working with Hex Codes

The Universal Browser also allows you to directly enter Pronto Hex Code into the "Hex" window and then drag it onto a button or into the Macro window of a button.

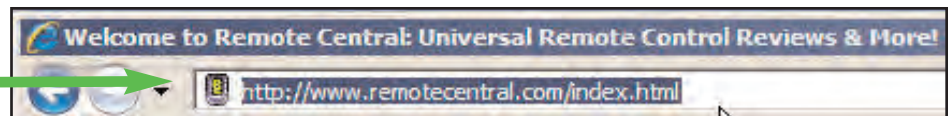
- 1 Click on the "Hex" icon In the Universal Browser toolbar.



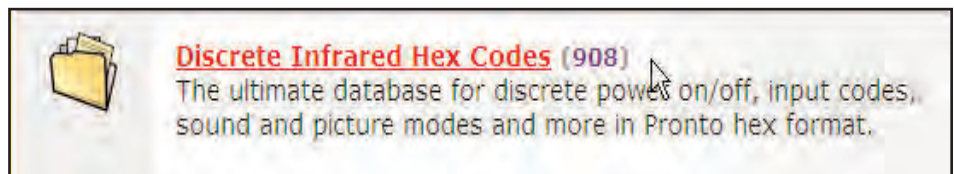
- 2 The "Hex Editor" window appears at the bottom of the Universal Browser.



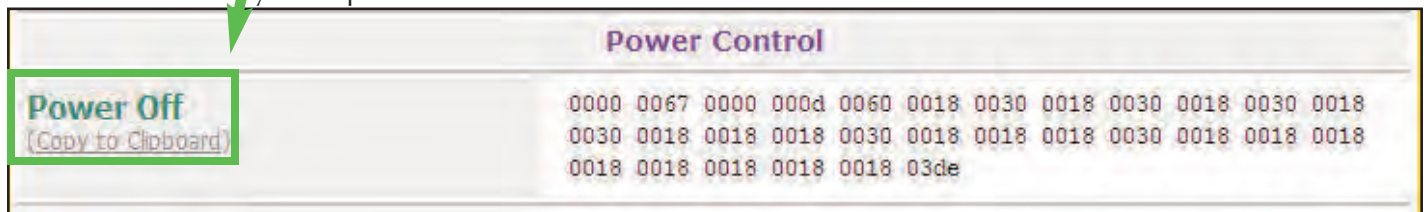
- 3 Use Internet Explorer to navigate to RemoteCentral.com.



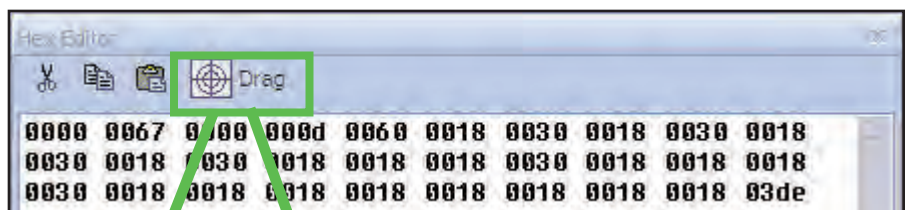
- 4 Navigate to the "Discrete Infrared Hex Codes" section, then find the code you want to copy.



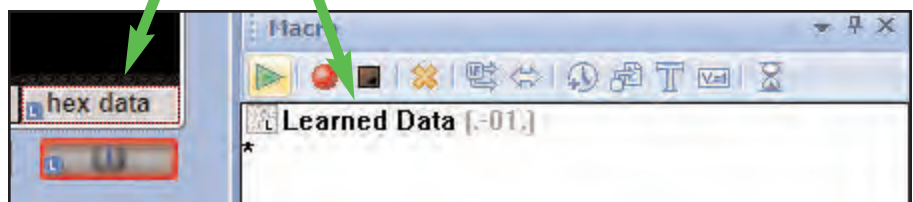
Select "Copy to Clipboard"



- 5 Paste the code into the Hex window using the shortcut (Ctrl + V).



- 6 Drag the code onto a button or into the Macro window of a button.



Downloading

You download to the remote control by:

- 1 Make sure the remote control has charged batteries.
- 2 Connect the cable between the PC and the remote control.
- 3 Verify that the file you have open in MX-880 Editor is the one you want to download to the remote control.
- 4 Click on the Download to Remote Control shortcut button on the toolbar or choose Download from the Communications Menu. Do not move the mouse or touch the keyboard during the download.

TIP - Make sure that the cable plug is solidly connected at both ends.

Using the Setup Menu

- 1 Press and Hold both the WATCH and the ENTER button for five seconds.
- 2 Once the Setup menu appears, you can browse between it's two pages via the PAGE buttons. It will automatically time out, or you can press the WATCH or the LISTEN button to exit.

COLOR SCREEN - Brightness, Pickup and Auto turn off timing

BUTTON LIGHTING - Pickup and Auto Turn Off Timing

SYSTEM - Battery and System information

BUTTON BEEP - Adjust how loud you would like the beep to play

DATE/TIME - Set Date, Set Time and Set which is displayed

ERASE AND RESET - Erase your configuration and reset the remote to the factory demo.



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