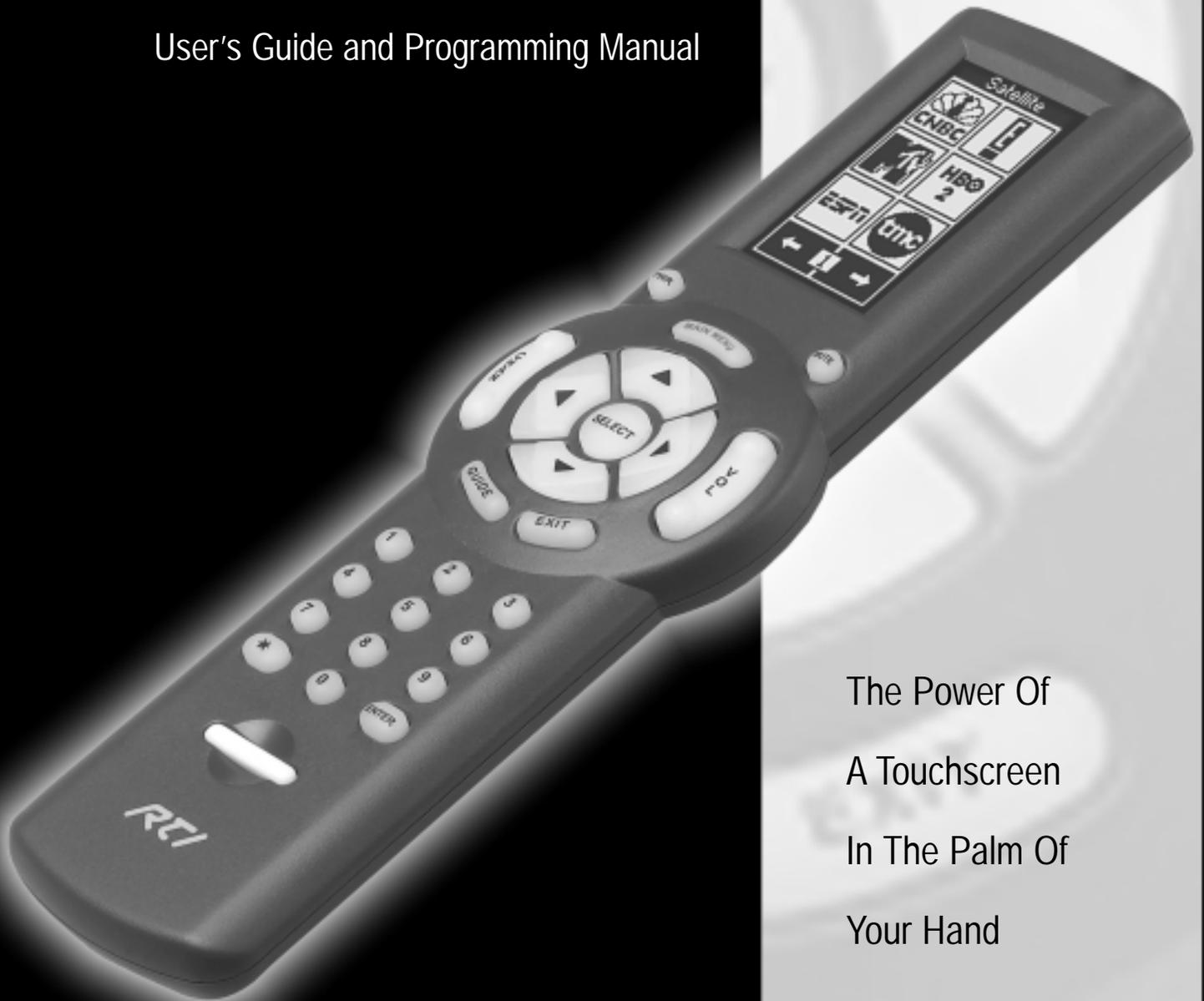


TheaterTouch™

MODEL T2 UNIVERSAL SYSTEM CONTROLLER

User's Guide and Programming Manual



The Power Of
A Touchscreen
In The Palm Of
Your Hand

RTI

FEDERAL COMMUNICATIONS COMMISSION NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.



For environmental reasons, your *TheaterTouch* universal system controller uses “environmentally sound” nickel metal-hydride rechargeable batteries. The batteries do not contain any poisonous heavy metals that can damage the environment.

In the interest of recycling, please do not dispose of these batteries in the household waste at the end of their useful life. Instead, dispose of them at an appropriate collection site.

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SAFETY SUGGESTIONS

Read Instructions. Read all safety and operating instructions before operating the unit.

Retain Instructions. Keep the safety and operating instructions for future reference.

Heed Warnings. Adhere to all warnings on the unit and in the operating instructions.

Follow Instructions. Follow operating instructions and instructions for use.

Heat. Keep the unit away from heat sources such as radiators, heat registers, stoves, etc., including amplifiers that produce heat.

Power Sources. Connect the unit only to a power supply of the type described in the operating instructions, or as marked on the unit.

Power Cord Protection. Route power supply cords so that they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to the cords at plugs, at convenient receptacles, and at the point at which they exit from the unit.

Nonuse Periods. Unplug the power supply from the outlet when the unit is to be left unused for a long period.

Water and Moisture. Do not use the unit near water—for example, near a sink, in a wet basement, near a swimming pool, near an open window, etc.

Object and Liquid Entry. Do not allow objects to fall or liquids to be spilled into the enclosure through openings.

Cleaning. The unit should be cleaned only as recommended by the manufacturer.

Servicing. Do not attempt any service beyond that described in the operating instructions. Refer all other service needs to qualified service personnel.

Damage Requiring Service. The unit should be serviced by qualified service personnel when:

- The power supply cord or the plug has been damaged.
- Objects have fallen or liquid has been spilled into the unit.
- The unit has been exposed to rain.
- The unit does not appear to operate normally or exhibits a marked change in performance.
- The unit has been dropped, or the enclosure damaged.

WARNING !

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE.

LIMITED WARRANTY AND DISCLAIMER

Remote Technologies Incorporated warrants its products for a period of one (1) year from the date of purchase from Remote Technologies Incorporated or an authorized Remote Technologies Incorporated dealer.

This warranty may be enforced by the original purchaser and subsequent owners during the warranty period, so long as the original dated sales receipt or other proof of warranty coverage is presented when warranty service is required.

Except as specified below, this warranty covers all defects in material and workmanship in this product. The following are **not** covered by the warranty:

Damage resulting from:

1. Accident, misuse, abuse, or neglect.
2. Failure to follow instructions contained in your User's Guide.
3. Repair or attempted repair by anyone other than Remote Technologies Incorporated.
4. Failure to perform recommended periodic maintenance.
5. Causes other than product defects, including lack of skill, competence or experience of user.
6. Shipment of this product (claims must be made to the carrier).
7. Being altered or which the serial number has been defaced, modified or removed.

Remote Technologies Incorporated is not liable for any damages caused by its products or for its failure of its products to perform, including any lost profits, lost savings, incidental damages, or consequential damages.

Remote Technologies Incorporated is not liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation, commercial loss, any claim made by a third party or made by you for a third party.

Remote Technologies Incorporated's liability for any defective product is limited to repair or replacement of the product, at our option.

If your *TheaterTouch* system controller needs service, please contact Remote Technologies Incorporated by telephone, fax or E-mail for return information (See **Chapter 9**). ***Please do not return products to Remote Technologies Incorporated without return authorization.***

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TheaterTouch, TheaterTouch Designer and the RTI logo are registered trademarks of Remote Technologies Incorporated.

Table of Contents

| | |
|--------------------------------------------------------|-----------|
| Federal Communications Commission Notice..... | III |
| Safety Suggestions | IV |
| Limited Warranty and Disclaimer..... | V |
| CHAPTER 1. WELCOME | 1 |
| Note | 1 |
| Unpacking and Inspection | 1 |
| Important..... | 1 |
| Product Contents | 2 |
| Software Requirements | 2 |
| CHAPTER 2. INTRODUCTION..... | 3 |
| Features..... | 3 |
| Important Notes | 4 |
| Cleaning..... | 4 |
| Batteries and Charger..... | 5 |
| Getting Started..... | 6 |
| Remote Reference..... | 7 |
| The Touchscreen Display | 8 |
| The Control Panel Page..... | 8 |
| CHAPTER 3. THEATERTOUCH DESIGNER™ SOFTWARE..... | 15 |
| Installing TheaterTouch Designer | 15 |
| Programming Overview | 15 |
| TheaterTouch Designer Screen..... | 16 |
| Touchscreen Grid | 17 |
| Design Hints..... | 17 |
| Getting Help | 18 |
| CHAPTER 4. THEATERTOUCH DESIGNER BASICS | 19 |
| How to Add a Page | 19 |
| How to Delete a Page | 19 |
| How to Add Buttons | 20 |
| How to Delete Buttons | 20 |
| How to Add Text to Buttons | 21 |
| How to Place a Bitmap..... | 22 |
| How to Link Pages | 23 |
| How to Remove Page Links | 24 |
| How to Add Commands to Buttons..... | 24 |
| How to Delete Commands from Buttons | 26 |
| How to Save a File..... | 26 |
| How to Open an Existing File..... | 26 |
| How to Preview your File | 27 |
| How to Setup Communications | 28 |
| How to Send a File to the TheaterTouch | 29 |

| | |
|-----------------------------------------------------------------|-----------|
| CHAPTER 5. THEATERTOUCH DESIGNER ADVANCED FEATURES | 31 |
| How to Rename a Page..... | 31 |
| How to Duplicate a Page | 31 |
| How to Merge Pages | 32 |
| How to Use the PageWizard..... | 33 |
| How to Change Button Styles | 33 |
| How to Select Buttons..... | 34 |
| How to Cut or Copy Buttons | 34 |
| How to Paste Buttons | 34 |
| How to Move a Button..... | 35 |
| How to Resize a Button | 35 |
| How to Place a Custom Button..... | 35 |
| How to Use the Macro Editor | 36 |
| How to Delete a Macro | 42 |
| How to Edit an IR Command in a Macro | 42 |
| How to Use the Channel Macro Wizard..... | 45 |
| How to Edit the Remote Properties..... | 48 |
| How to Edit Button Properties..... | 52 |
| How to setup RS-232 Communications..... | 57 |
| How to Edit the Properties of Multiple Buttons..... | 60 |
| How to Print Screenshots | 61 |
| How to Print System Configuration Reports | 61 |
| How to Check Memory Usage | 62 |
| How to Create a “Self-Downloading .EXE” | 63 |
| How to Use the “Send” Command..... | 63 |
| | |
| CHAPTER 6. IR LIBRARY MANAGER..... | 65 |
| Infrared Codes | 65 |
| How the <i>TheaterTouch</i> Learns IR Codes | 66 |
| Hints for Learning IR Codes | 67 |
| How to Open the IR Library Manager | 68 |
| How to Create a New IR Library | 68 |
| How to Open an Existing IR Library..... | 70 |
| How to Add a New Remote to an IR Library | 71 |
| How to Use the New Remote Wizard | 72 |
| How to Align a Donor Remote Control..... | 73 |
| How to Capture Infrared Commands..... | 75 |
| How to Test Infrared Commands..... | 77 |
| How to Edit Infrared Commands..... | 78 |
| | |
| CHAPTER 7. IMAGE EDITORS..... | 81 |
| The Difference Between Custom Buttons and Bitmaps | 81 |
| Button Bitmap Editor Screen..... | 82 |
| Custom Button Editor Screen | 83 |
| Toolbar..... | 84 |
| Tool Palette..... | 86 |
| Up Image-Down Image Tool (Custom Button Editor Only):..... | 88 |
| New Bitmap Size Dialog Box (Button Bitmap Editor Only):..... | 89 |
| | |
| CHAPTER 8. TROUBLESHOOTING | 91 |
| Display is Dim, Blank or Unreadable | 91 |
| Communication Problems..... | 91 |
| Infrared Problems | 93 |
| Unable to Learn Commands..... | 94 |
| Macro Problems..... | 94 |

CHAPTER 9. SERVICE AND SUPPORT 95
 Updates and New Products 95
 Contacting Remote Technologies Incorporated 95
 RTI Technical Support 95
 Shipment of Remote for Service 97

SPECIFICATIONS 99

APPENDIX 101
 Software License Agreement 101

INDEX 103

Chapter 1. Welcome

Congratulations on your purchase of the *TheaterTouch* universal system controller. The *TheaterTouch* combines the power and flexibility of a graphic LCD touchscreen with an ergonomic design that permits effortless one-handed operation. This design overcomes the need for compromise between form and function. Sleek and perfectly balanced, the *TheaterTouch* is infinitely flexible and expandable.

TheaterTouch takes complete control of the home theater, replacing all other remotes. It features an intuitive, easy to read LCD that can display custom buttons, text, graphics and symbols. In addition to the backlit display, 25 “Hard” keypad buttons allow easy access to frequently used functions.

Programming is easy and convenient thanks to the built-in infrared learning ability and the Windows® based software. *TheaterTouch* is capable of both infrared and radio frequency output. A separate RF to IR converter is available for transmission through walls and cabinets. The converter will also monitor the power status of most A/V equipment thru the use of voltage and video sensors.

NOTE

The *TheaterTouch* and *TheaterTouch Designer* software are compatible with infrared (IR) commands with carrier frequencies between 15kHz and 460kHz, as well as those commands that do not use a carrier. This covers the vast majority of remotes available to date, including Bang & Olufsen® (most of which use 455kHz) and Vidikron® (some of which use 333kHz).

Despite every effort to make the *TheaterTouch* universal system controller work with all IR-systems, some IR-controlled products are unable to be learned by the *TheaterTouch* due to incompatible frequencies or non-standard IR formats. The *TheaterTouch* cannot learn non-IR formats such as RF and ultrasonic.

UNPACKING AND INSPECTION

After unpacking your new *TheaterTouch* universal system controller, save all of the packing materials in case you ever have to ship the unit.

Thoroughly inspect the *TheaterTouch* and packing materials for signs of damage. Report any damage to the carrier immediately. Report any equipment malfunctions to Remote Technologies Incorporated or an authorized Remote Technologies Incorporated dealer.

IMPORTANT

After unpacking your new *TheaterTouch* universal system controller for the first time, charge each battery pack for at least 12 hours.

PRODUCT CONTENTS

Contents within the box include the following items:

- *TheaterTouch*TM System Controller
- Smart battery charger
- Two (2) rechargeable Nickel Metal-Hydride battery packs
- Wall-mount power supply for battery charger
- *TheaterTouch Designer*TM software CD-ROM
- Serial cable for programming
- Owner's Manual
- Warranty card
- Registration card

SOFTWARE REQUIREMENTS

TheaterTouch Designer software minimum system requirements:

- Windows 95, Windows 98, Windows NT 4.0 or higher operating system
- IBM or compatible PC with 486DX2/66Mhz or higher processor
- 16 Megabytes (MB) of RAM
- 8 Megabytes of free disk space for minimum installation (16 MB recommended)
- A mouse or other pointing device is required
- VGA monitor (256 color Super VGA recommended)
- CD-ROM drive
- Open RS-232 serial port
- Optional printer for printing setup reports

Chapter 2. Introduction

The *TheaterTouch* is a programmable touchscreen computer that is designed to provide wireless control of audio/video and automation systems. Like other “universal” or “learning” remote controls, the *TheaterTouch* allows you to consolidate the functions of many independent infrared remote controls into one unit. The *TheaterTouch* also incorporates a unique programmable user interface, allowing it to provide a simple, intuitive, and customized interface for any system. Before using the *TheaterTouch*, please read and follow all instructions in this manual.

FEATURES

The *TheaterTouch* provides superior quality and reliability as well as these specific features:

- A replacement for all of your system’s remote controls. The *TheaterTouch* can reproduce all of the commands of almost any other infrared remote control.
- A programmable graphic display. The *TheaterTouch* uses powerful Windows® based software that makes it easy to place buttons, text, graphics and symbols anywhere on the display.
- A backlit LCD with digital matrix touchscreen. When you want to perform a command, simply touch the display where that command is displayed. The touchscreen never needs calibrating.
- 25 backlit “hard” keypad buttons that allow easy access to frequently used functions.
- Two detachable, low-profile rechargeable battery packs. The *TheaterTouch* can run continuously for several hours between charges. Because the remote is normally used only a few minutes per session, the unit typically will run for a week or more between charges. A built-in low battery indicator warns you when it’s time to recharge the battery.
- A macro function. This feature allows the *TheaterTouch* to perform a series of commands by pressing a single button. For example, you can create a macro called “Movie” that turns on the TV, sets the correct channel, turns on the VCR, dims the lights, and starts playing a movie.
- Two output options for controlling your equipment: infrared (IR), radio frequency (RF), and the ability to use both in the same system.
- Automatic power on and off. The *TheaterTouch* turns itself off whenever it is not used for a pre-set amount of time. Touching any area of the display or a hard button will turn it on again, also a built in tilt sensor can turn the unit on when it is picked up.

- A serial port for communication with the *TheaterTouch Designer* programming software.
- Non-volatile flash memory. The *TheaterTouch* will not lose any programmed data when the batteries are exchanged.
- One-year parts and labor warranty.

IMPORTANT NOTES

Please read these important notes about the *TheaterTouch*:

- The *TheaterTouch* should be placed in an area where it is around normal room temperature (between 60°F to 90°F). If the temperature is too hot, the display appears dim. If the temperature is too cold, the display appears dark and may respond slowly.
- Do not use sharp objects on the touchscreen. It is designed to operate with a touch of your finger.
- Do not let the *TheaterTouch* get wet. It should not be handled with wet hands or placed in an area where it could get wet.
- Do not subject the *TheaterTouch* to smoke, dust, or vibrations. The display may be damaged from excessive shock or vibration.
- Use only the power supply that is provided with the *TheaterTouch*. Using the wrong type of power supply may result in battery leakage or other damage.
- Do not disassemble the unit. The *TheaterTouch* contains high voltage circuits that may cause injury if contacted.

CLEANING

Occasional cleaning may be required, depending on use.

To clean your *TheaterTouch*:

1. Remove the battery pack from the *TheaterTouch*.
2. Lightly dampen a lint-free cloth with water or mild detergent and wipe the touchscreen, keypad and outer surfaces.

BATTERIES AND CHARGER

The following recommendations will assure the best battery performance.

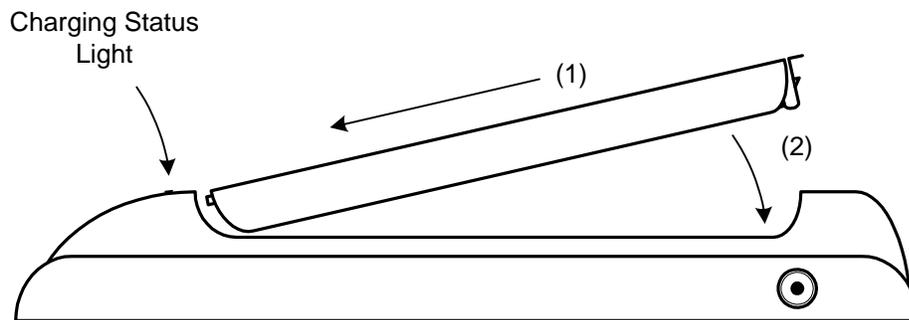
1. Operate the unit until you receive a Low Battery warning in the upper left hand corner of display.



2. At that point, you will have approximately 10 - 20 minutes of run time remaining before the unit shuts down. At any point after the **Low Battery** icon appears, you can exchange the depleted battery with a charged battery from the charger. If you operate the battery past a usable level, you will receive a warning stating **Battery must be recharged**.



To recharge a battery pack, insert the end of the battery with the contacts into the charger first, and then gently pushing the end with the clip until it snaps into place. The light on the charger will start flashing after a couple of seconds.



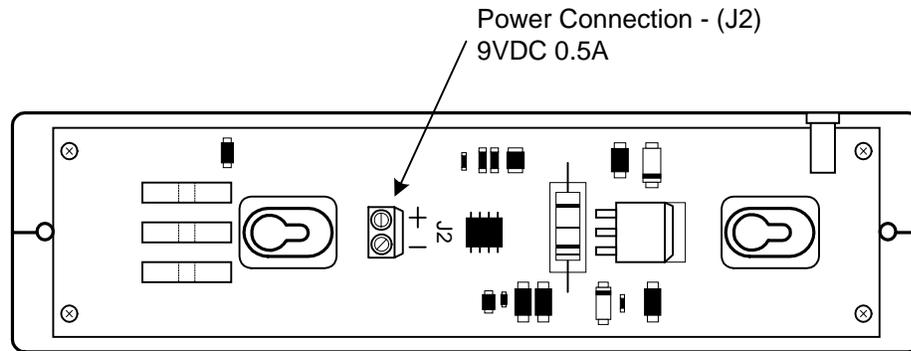
Recharge the *TheaterTouch* batteries for about 3-4 hours. (The light on the battery charger will stop flashing and stay on when the charge cycle is completed).

The batteries can remain in the charger indefinitely without damage to the batteries.

Custom Installation Note:

The *TheaterTouch* battery charger's power can be hardwired through the back of the charger for permanent mounting on a wall or other flat surface. This is done by removing the bottom plate of the charger and hard wiring the wall mount power supply directly to the terminal strip. Replace the bottom plate before mounting.

Use only the original power supply.

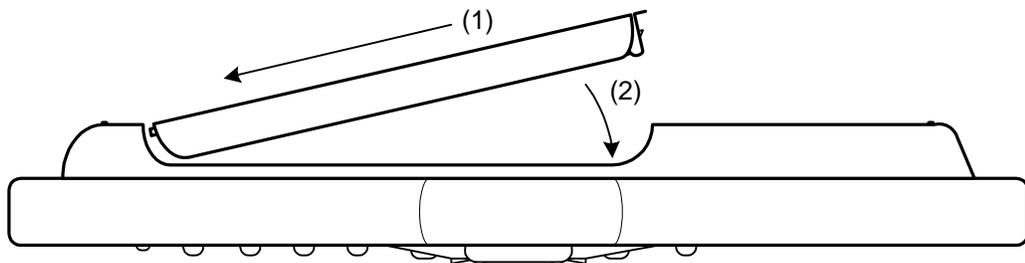


Battery Charger with bottom plate removed.

 **Warning!** Watch the polarity.

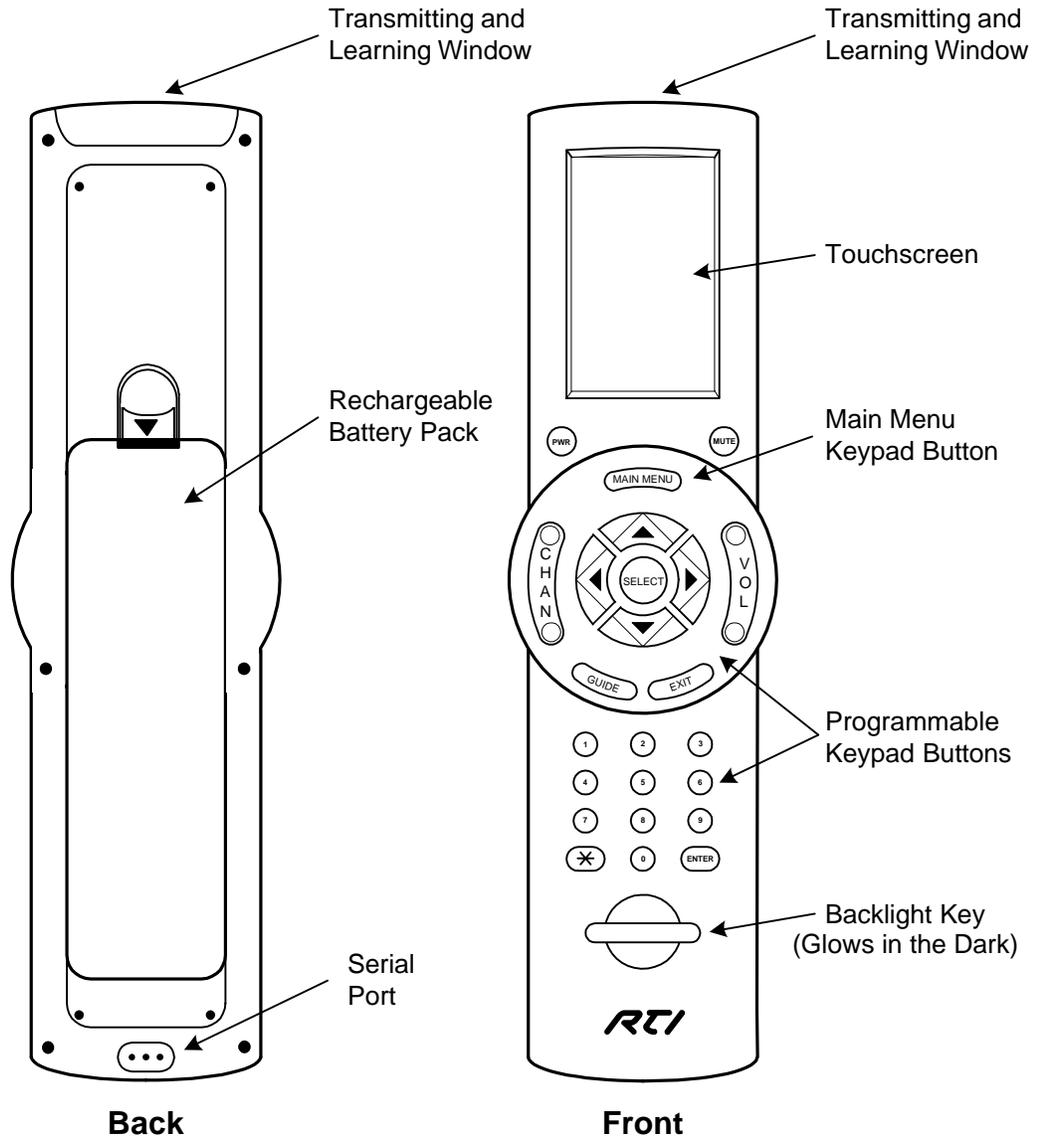
GETTING STARTED

Start by snapping a fully charged battery on the back of the *TheaterTouch*. This is done by inserting the end of the battery with the contacts in first, and then gently pushing the end with the clip until it snaps into place.



The *TheaterTouch* is powered-up by touching any area of the display or any keypad button as well as picking up the unit if the tilt sensor is active.

REMOTE REFERENCE



THE TOUCHSCREEN DISPLAY

The *TheaterTouch* touchscreen display is organized as a series of pages and frames. A page can consist of up to 12 frames of information having one frame displayed on the screen at a time.

Normally each frame on a page contains objects (buttons, text, graphics, and symbols) that are related in some way. For instance, they may all display information necessary for controlling a particular VCR.

By default, the *TheaterTouch* has one Main Menu page—all other pages are considered submenus. Any page can contain a button that will display any other page when selected.

Normally the Main Menu page is used to display the names of the submenus (e.g., the equipment being controlled). The submenus may consist of one or more pages. The *TheaterTouch* will support 63 pages plus the Main Menu page; each page can consist of up to 12 frames.

A representation of a programmed Main Menu page is shown below.



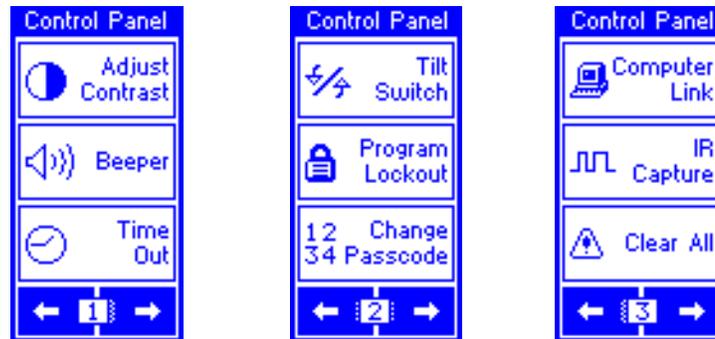
Pressing the **Main Menu** key at any time will return you to this page (unless a different page is assigned using the *TheaterTouch Designer* software).

THE CONTROL PANEL PAGE

The Control Panel page can be displayed by pressing and holding the backlight key for **at least 3 seconds**.

You can also access the Control Panel page by assigning a “Control Panel” page link to a button using the *TheaterTouch Designer* software.

The Control Panel consists of the following three frames:



To change frames, press the frame **Left**  or frame **Right**  buttons on the bottom of the touchscreen.

To return to your *TheaterTouch* program, press the **Main Menu** key.

ADJUST CONTRAST

This button displays a window that allows you to adjust the LCD contrast. Press the **Left Arrow** or **Right Arrow** keypad buttons to adjust. Press the **OK** button in the window to close.



BEEPER

This button displays a window that allows you to turn the audible beep on or off. The beeper provides feedback that a button was pressed. Press the **OK** button in the window to close.



TIME OUT

This button displays a window that allows you to adjust the amount of time the unit stays awake after the last button press. The time is variable from 1 second to 60 seconds (default is 10 seconds). Press the arrows to the left or right of the **Time Out** setting to adjust the time. Press the **OK** button in the window to close. During Sleep mode, the *TheaterTouch* uses virtually no battery power.



TILT SWITCH

This button displays a window that allows you to adjust the settings for the built in tilt switch, which is a device that turns the remote on when tilted past a 45 degree angle.

On means the tilt switch is active and will turn on display and backlight when picked up.

Off means the tilt switch is inactive.

Press the **OK** button in the window to close.



PROGRAM LOCKOUT

This button displays a window that allows you to turn the program lockout feature on and off. This is used to lockout un-authorized users from the **Computer Link** mode, so that the program cannot be altered.

If the **Lockout** feature is enabled, you will need to enter the current passcode before you can change this setting.

On means the **Computer Link** mode is locked and can only be accessed with the passcode.

Off means the **Computer Link** mode is unlocked and can be accessed without a passcode.

Press the **OK** button in the window to close.



CHANGE PASSCODE

This button displays a window that allows you to set the passcode that is used to limit access to the **Computer Link** mode and **Clear All** function on the control panel page, as well as the **Button Lockout** function that is available on all buttons.

When you press the **Change Passcode** button, the screen will prompt you to enter the **old** passcode using the hard keys, then press the **Enter** key on the keypad.

(The default code is 0000).



Now enter a **new** four-digit passcode, then press **Enter**.



You will be prompted to enter the **new** four-digit passcode again for confirmation, then press **Enter**.



When new code is entered successfully, the **Code Changed** window will pop up to let you know you have changed the passcode.



Do not forget the passcode!

COMPUTER LINK

This button displays a window that allows you to put the *TheaterTouch* into **Computer Link** mode.

This is used for RS-232 communications between a personal computer and the *TheaterTouch* for loading a program into the *TheaterTouch* or extracting a program from the *TheaterTouch*.

The two options available for the transfer of a program in the *TheaterTouch Designer* software are:

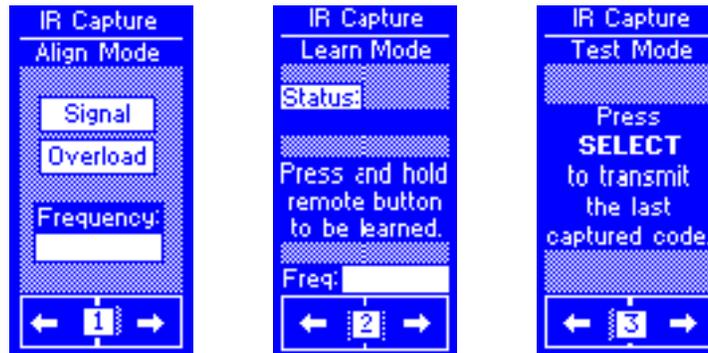
- ◆ **Send File to Remote**, which sends the new program from the software to the remote, overwriting the existing program.
- ◆ **Receive File from Remote**, which extracts a copy of the program from the remote to the software, leaving the program in the remote intact.

Press the **OK** button to close the window after the transfer is complete.



IR CAPTURE

This button displays a window that allows the *TheaterTouch* to align, learn, and test infrared commands from donor remotes. Used together with the *TheaterTouch Designer Infrared Library Manager* software you can create a custom database of infrared commands.



The use of the IR Capture command is described in chapter 6 “IR Library Manager”.

To exit **IR CAPTURE** mode, press the *Main Menu* button on the remote.

CLEAR ALL

This button displays a window that will allow you to erase the current program in the *TheaterTouch* remote. When the button is pressed, you will be prompted to enter the current passcode. If the proper code is entered, the entire program in the *TheaterTouch* will be erased.



Warning! This will erase the complete program in the *TheaterTouch* with no way to restore it, except by reloading the program from the *TheaterTouch Designer* software!

If you inadvertently press the **CLEAR ALL** button, simply press the **ENTER** button without entering the passcode and you will be returned to the Control Panel page.

Chapter 3. TheaterTouch Designer™ Software

TheaterTouch Designer allows you to create the entire graphical interface for an RTI *TheaterTouch* System Controller on your computer. Once the interface has been created, it is downloaded to the *TheaterTouch* using the included programming cable. Existing programming can also be extracted, modified, and re-sent to any *TheaterTouch* system controller.

Software updates will be available for download at www.rticorp.com

INSTALLING THEATERTOUCH DESIGNER

1. Close any open programs.
2. Place the *TheaterTouch Designer* compact disc into the CD-ROM drive.
3. If the installation doesn't appear automatically, click **Start** and choose **Run**, type **d:\setup\setup.exe** (For d, type the letter for your CD-ROM drive). Click **OK**.
4. Follow the on-screen instructions.

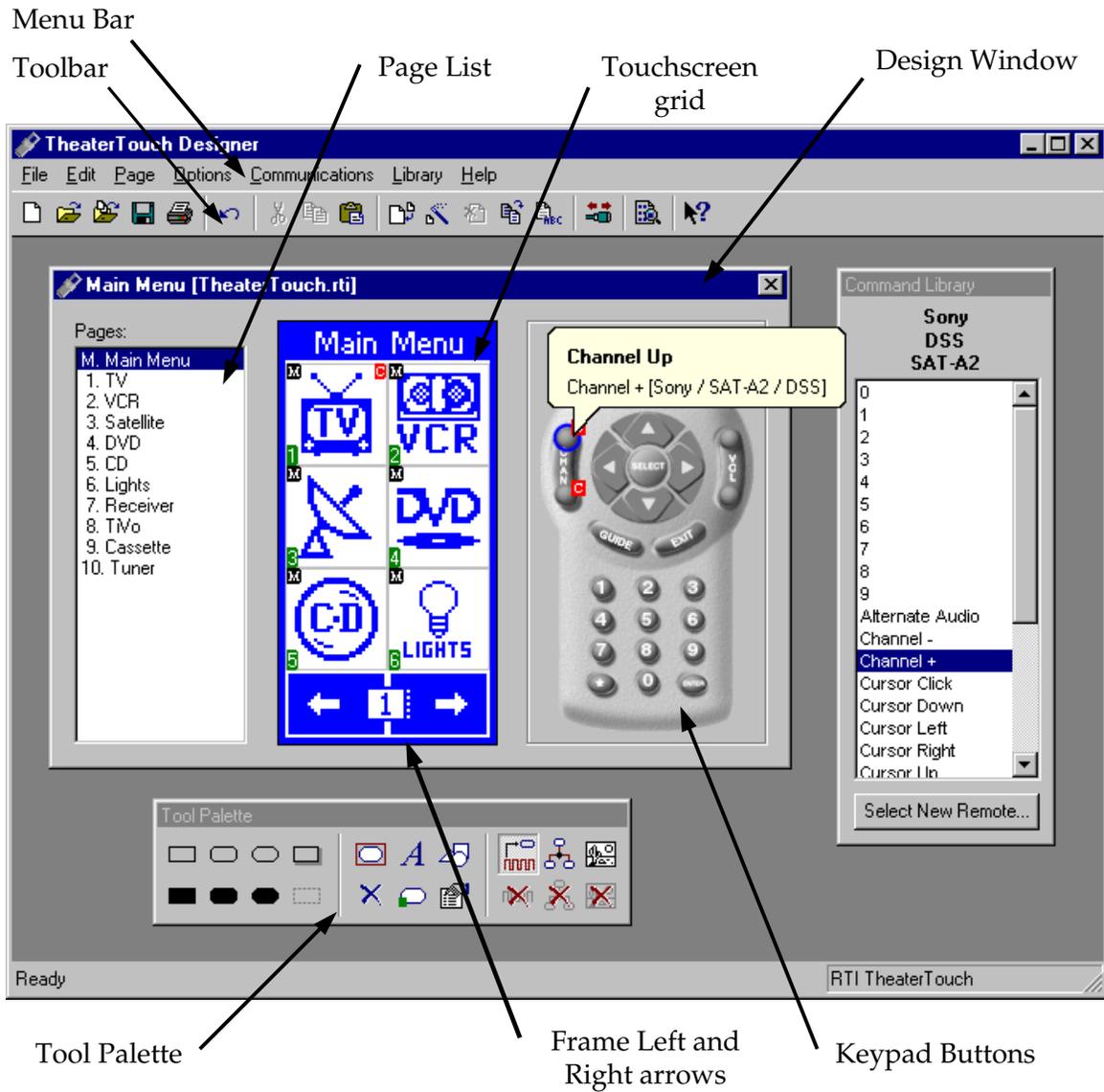
PROGRAMMING OVERVIEW

Here is an overview of the process of programming a *TheaterTouch* from scratch.

Instructions on carrying out these tasks can be found in chapters 4 and 5.

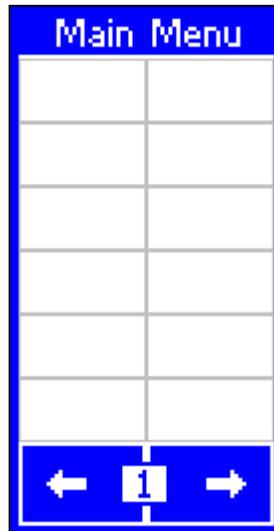
1. Create a new page and add buttons for each source component in a system.
2. Place a button on the main menu to access each one of the source components.
3. Use the Assign Page tool to link the buttons on the main menu to their respective source component pages.
4. Assign infrared codes and other commands to buttons using the Command Library.
5. Create macros using the macro editor (if needed).
6. Check the Remote Properties.
7. Save the file.
8. Send the file to the *TheaterTouch* using the communications commands.

THEATERTOUCH DESIGNER SCREEN



TOUCHSCREEN GRID

The touchscreen grid is where the buttons, text, graphics and symbols are placed. Click on the frame **Left** ← or frame **Right** → buttons at the bottom of the touchscreen grid to place buttons on other frames.



DESIGN HINTS

1. Be consistent with the location of similar buttons. For example, if you have a DVD player and a VCR in your system, try to make the transport controls (Play, Pause, Stop, etc.) on both pages look similar.
2. It's not necessary to re-create each donor remote in its entirety on the *TheaterTouch*. Think of the functions the user will be using daily.
3. Use macros to hide complex command sequences from the user. For example, instead of presenting the user with only the key pad for changing channels on their TV, make a set of macros for CBS, HBO, etc. that send the proper channel numbers automatically. The **Channel Macro Wizard** makes it easy to create this type of macro.

GETTING HELP

TheaterTouch Designer includes an extensive on-line help system. If you need help with any tool or command, click the **What's this?**  button on the **Toolbar**.

If you need an explanation of any item in a dialog box, click the **Help**  button in the dialog's title bar, and then click on the control you would like to learn about.

Chapter 4. TheaterTouch Designer Basics

The *TheaterTouch* system controller is divided into two sections: the touchscreen and the keypad. You can assign commands, macros and page links to any button you create on the touchscreen or on the keypad buttons.

The keypad button layout of the *TheaterTouch* follows the pages, not the frames, so all 12 frames of a page will have the same commands, macros and page links on the keypad buttons. Each frame of the touchscreen can have different commands, macros and page links.

PAGES

The individual screens on the *TheaterTouch* system controller are called pages. Pages on the touchscreen can contain buttons, links to other pages, a title, text, commands, and macros.

The page links, commands and macros associated with the keypad buttons on the TheaterTouch are also stored with each page.

Each page can have up to 12 frames on the touchscreen, and usually has the controls for just one component. Each frame is accessed by scrolling left and right with the arrows at the bottom of the *TheaterTouch* touchscreen. With *TheaterTouch Designer*, you can add and delete pages, duplicate pages, etc.

All *TheaterTouch* pages have a page title. The page title is the name that appears in the title bar above the touchscreen grid and in the Page List.

HOW TO ADD A PAGE

1. Click the **Create New Page Command**  on the **Toolbar**.
2. Enter a name for the page in the **New Page Title** dialog, this is usually the name of the component, such as: CD, Satellite, Lights and so on.
3. Click **OK**.

Repeat this procedure for each page you wish to add.

HOW TO DELETE A PAGE

1. Select the page to be deleted from the **Page List**.
2. Click the **Delete Current Page Command**  on the **Toolbar**.
3. Click **Yes** in the **Delete Page** confirmation box.

BUTTONS

Buttons are the functional elements of the *TheaterTouch* system controller. Each button can be associated with commands, macros, and page links. Creating buttons in the touchscreen grid consists of making the button itself and then adding text, bitmaps, or symbols to them.

HOW TO ADD BUTTONS

1. Select a page from the **Page List**, and then the frame on that page with the frame left and right arrows on the bottom of the touchscreen grid.
2. Select the style of button from the button drawing tools on the left side of the **Tool Palette**.
3. Place the mouse cursor over the cell in the touchscreen grid where one corner of the button will be.
4. Click and hold the left mouse button and drag the mouse to the opposite corner of where the button will be.
5. Release the left mouse button when the button has the desired shape and size.

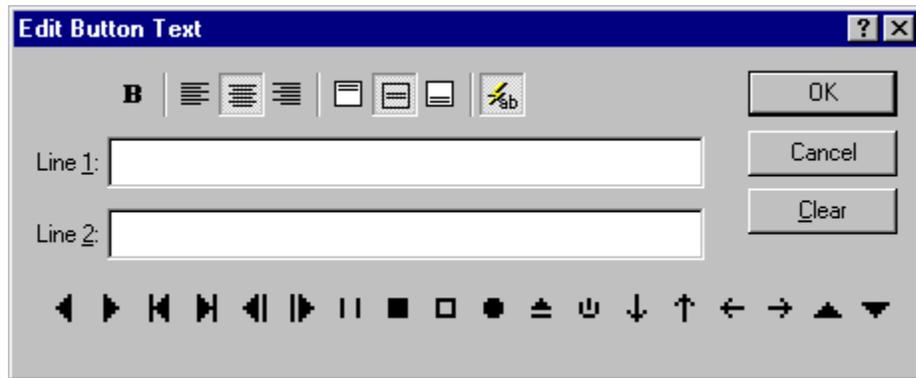
Repeat this procedure for each button you wish to add.

HOW TO DELETE BUTTONS

1. Select the **Delete Button** tool  from the **Tool Palette**.
2. Place the mouse cursor over the button to delete.
3. Click the left mouse button.

HOW TO ADD TEXT TO BUTTONS

1. Select the **Edit Text** tool  from the **Tool Palette**.
2. Place the mouse cursor over the button you want to add or edit text on.
3. Click the left mouse button.



4. Enter the text in the **Edit Button Text** dialog and click **OK**.

You can use any of the options in the **Edit Button Text** dialog to customize the button.

-  Make the text bold.
-  Justify the text to left side of the button.
-  Center the text horizontally in the button.
-  Justify the text to the right side of the button.
-  Shift the text to the top of the button.
-  Center the text vertically in the button.
-  Shift the text to the bottom of the button.
-  Enable the auto-complete feature, which will automatically finish typing the name for commonly used buttons.

Click on any of the symbols at the bottom the dialog box to insert them into the active line.

HOW TO PLACE A BITMAP

The **Bitmap Library** window allows you to assign bitmaps to buttons in your file or to create new bitmap buttons by dragging the bitmaps from the **Bitmap Library** to the touchscreen grid. Hold the mouse over any bitmap in the **Bitmap Library** window to see its title and the **Bitmap Library** it is stored in.

If you drop the bitmap onto an empty section of the touchscreen grid, a new button is automatically created with the default style, and the bitmap is placed on that button.

If you drop the bitmap onto an existing button, any text or bitmap already on that button is replaced with the bitmap that you drop.

1. Select the **Place Bitmap** tool  on the **Tool Palette**.
2. When the **Bitmap Library** window appears, drag any bitmap from the **Bitmap Library** onto the touchscreen grid.

HOW TO LINK PAGES

The *TheaterTouch Designer* software gives you the ability to link pages. When a button with a page link is pushed on the *TheaterTouch*, the linked page becomes active, in essence turning the page.

Page links are indicated by a small green box containing the number of the linked-to page in the lower left corner of the button.

1. Select the **Assign Pages** tool  from the **Tool Palette**.
2. Place the mouse cursor over the button to which you wish to assign a page.
3. Click the left mouse button.
4. Select the page name you wish to link to from the pop-up menu.



5. Notice the green square in the lower left corner of the button corresponds to the linked page in the list.

Two additional options are available for linking:

- ◆ **<previous>** will take you back to the last page that was displayed.
- ◆ **<control panel>** will switch to the built-in **Control Panel** page.

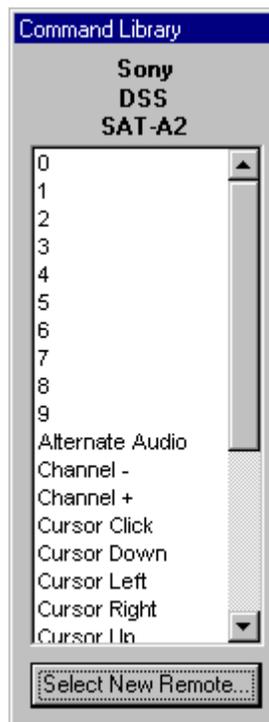
HOW TO REMOVE PAGE LINKS

1. Select the **Assign Pages** tool  from the **Tool Palette**.
2. Place the mouse cursor over the button from which you wish to remove the page link.
3. Click the left mouse button.
4. Select the **<none>** item from the bottom of the pop-up menu.

HOW TO ADD COMMANDS TO BUTTONS

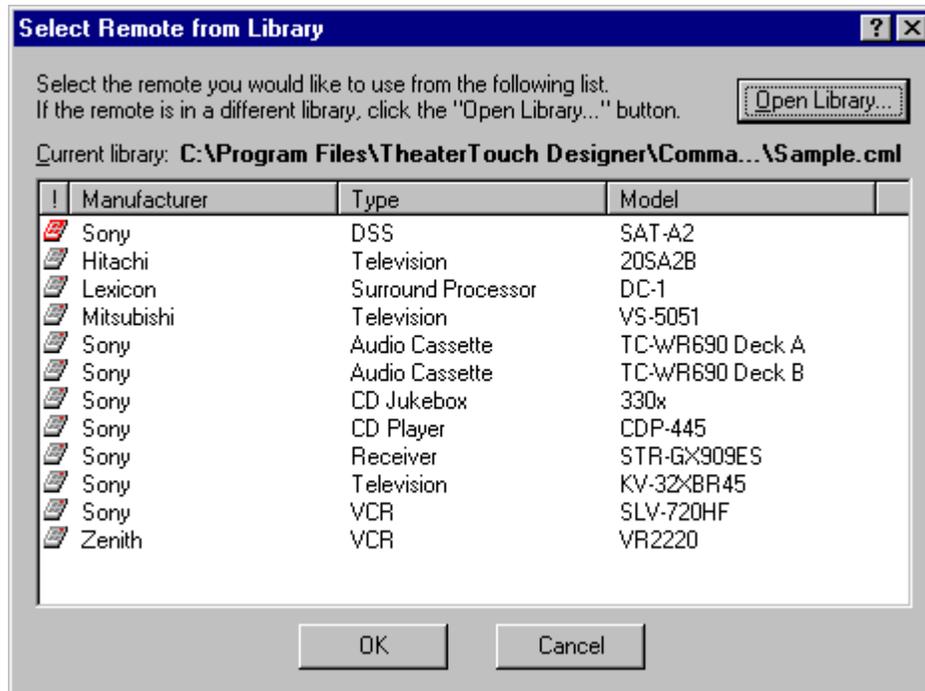
IR commands are indicated by a small red box with the letter 'C' in the upper right corner of buttons.

1. Select the **Command Library** tool  from the **Tool Palette**.
2. Click the **Select New Remote** button in the **Command Library** window to select a different remote than displayed.



Remotes are listed by manufacturer, type, and model in the **Select Remote from Library** window; use this to select the remote you would like to assign codes from.

Remotes that have already been used in the current remote file will be moved to the top of the list and their icon will turn red for easy identification.



3. If the remote is in a different library or no library is open, click on the **Open Library** button to find the library you are looking for.
4. Click on the remote you would like to assign codes from and the **Command Library** will open again.
5. Place the mouse cursor over the function in the **Command Library** that you want to assign.
6. Click and hold the left mouse button.
7. Drag the mouse cursor to the button on which you want to place the command.
8. Release the left mouse button.

If you drag a command to a spot on the touchscreen grid where there are no buttons, *TheaterTouch* Designer will automatically create a button and insert the text for that command.

HOW TO DELETE COMMANDS FROM BUTTONS

1. Select the **Delete Command** tool  from the **Tool Palette**.
2. Place the mouse cursor over the button with the command you wish to delete.
3. Click the left mouse button.

HOW TO SAVE A FILE

The files created with *TheaterTouch Designer* hold all the elements that make up an individual remote file. They have the extension **.rti** and may be stored in any directory.

Default directory is: [C:\Program Files\TheaterTouch Designer\My Remotes]

Note: If a file already exists on the disk, the current copy is backed up in a file with the extension **.rtb** and the new file is saved with the **.rti** extension.

1. Click the **Save File Command**  on the **Toolbar**.
2. Specify the name and directory for the file when saving for the first time and click **Save**.

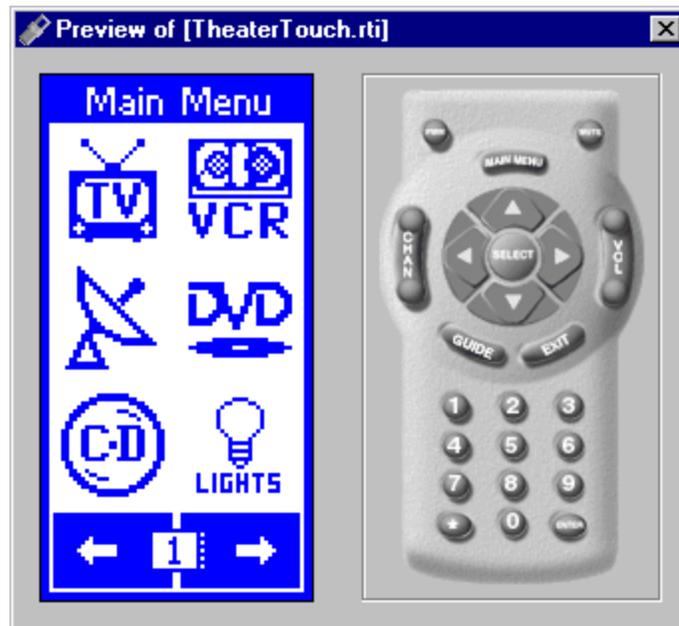
HOW TO OPEN AN EXISTING FILE

1. Click the **Open File Command**  from the **Toolbar**.
2. Click on the file you wish to open.
3. Click **Open**.

HOW TO PREVIEW YOUR FILE

The Preview mode in *TheaterTouch Designer* allows you to see exactly what your file will look like when it is sent to the *TheaterTouch* remote.

Click the **Preview Mode Command**  from the **Toolbar**.



Use the mouse to press the buttons in the preview window. The buttons will push-in just like they would on the *TheaterTouch*, and if they are linked to another page, the linked page will become the current page in the Preview Window.

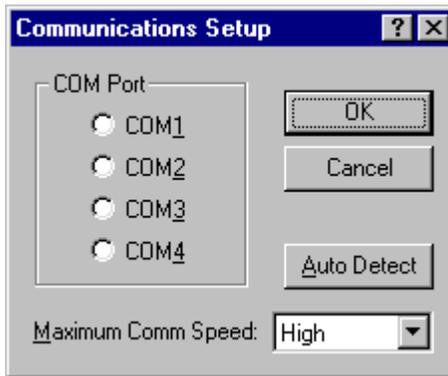
Click the **Preview Mode Command**  from the **Toolbar** again when you are finished testing your file.

HOW TO SETUP COMMUNICATIONS

The **Communications Setup** dialog box is for setting up communications between the *TheaterTouch* and your PC.

To open the **Communications Setup** dialog box:

Choose **Set COM Port** from the **Options** menu.



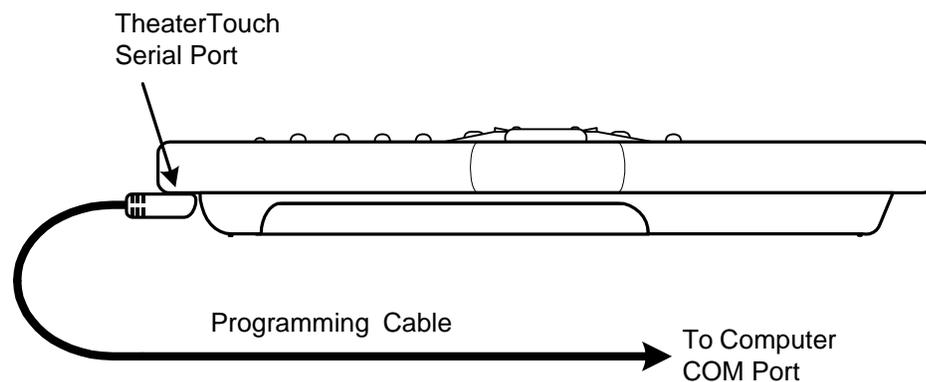
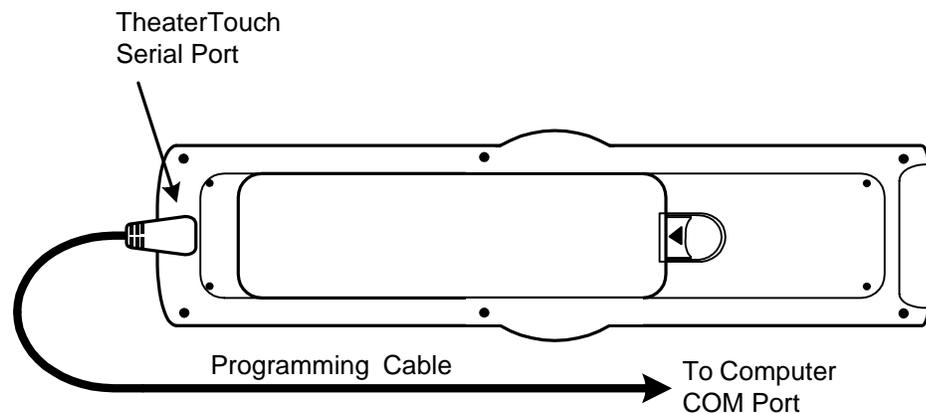
Com Port group box - Choose the COM Port that the *TheaterTouch* is connected to.

Auto Detect - Click this button to have *TheaterTouch Designer* attempt to automatically locate the correct COM port. The *TheaterTouch* must be connected to the computer with the programming cable and in **Computer Link** mode, if you need help with **Computer Link** mode see the Control Panel section on page 8.

Maximum Comm Speed - Choose a lower speed from this list if you are having problems communicating with the *TheaterTouch* system controller. The default is High.

HOW TO SEND A FILE TO THE THEATERTOUCH

1. Hook the Programming Cable from the *TheaterTouch* serial port to the desired COM port on your computer if you have not done so already. This should be the COM port you set up using the **Communications Setup** dialog.



2. Put the *TheaterTouch* in **Computer Link** mode. If you need help with **Computer Link** mode, see the Control Panel section on page 8.
3. Click the **Communications Command**  on the **Toolbar**.
4. Choose **Send File**.

All buttons, commands, bitmaps, and macros are sent. Any existing program in the *TheaterTouch* is replaced with the file you send.

All communications take place on the COM port selected with the **Set COM Port** command from the **Options** menu.

Chapter 5. TheaterTouch Designer Advanced Features

HOW TO RENAME A PAGE

1. Make sure the desired page is displayed in the touchscreen grid.
2. Select the **Edit Text** tool  from the **Tool Palette**.
3. Place the cursor over the page title area at the top of the touchscreen grid and click the left mouse button.
4. Specify the new page title and click **OK**.

HOW TO DUPLICATE A PAGE

Pages can be instantly duplicated. This is useful when pages share common buttons like channel macros or transport controls. One page can be created with these buttons and duplicated as many times as needed.

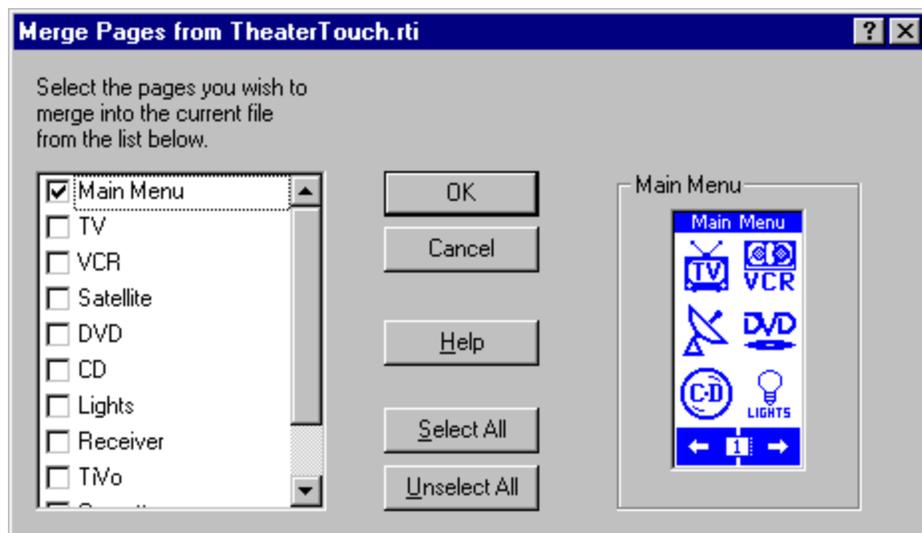
1. Make sure the desired page to be duplicated is displayed in the touchscreen grid.
2. Click the **Duplicate Page Command**  on the **Toolbar**.
3. Give the new page a different name and click **OK**.

The new page appears at the end of the page list.

HOW TO MERGE PAGES

The Merge Pages dialog makes it possible to move groups of pages from another .rti file to the current remote file.

1. Click the **Merge Pages** tool  on the **Toolbar**.
2. Select the remote file from which you wish to merge pages from. Choose from the list located in the **Select file to merge from** dialog box and click **Open**.



3. Place a check next to each page you would like to merge into the current file.
4. You can click the frame left and frame right arrows to see the individual frames on a page.
5. When finished selecting pages, click **OK**.

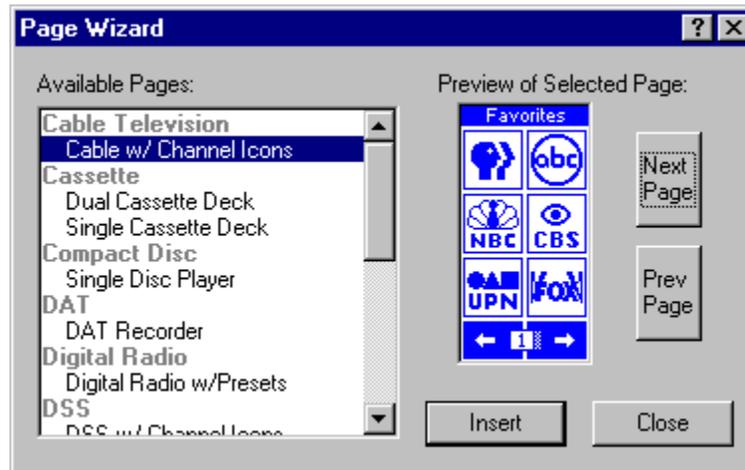
All of the marked pages in the list are placed at the end of the current file.

HOW TO USE THE PAGEWIZARD

TheaterTouch Designer comes with a library of pre-built pages for many common types of equipment that you can insert into your file and customize as desired. The page library is accessed through the **PageWizard** tool.

To add a pre-built page to your file:

1. Click the **Page Wizard Command**  on the **Toolbar**.



2. Scroll through the list of available pages and select the one you want. You can use the **Next Page** and **Prev Page** buttons to see previews of all the pages if there is more than one.
3. Click the **Insert** button to add the page(s) to your file.
4. Click the **Close** button to close the dialog box.

The new page(s) appear at the end of the page list.

Use the editing tools to customize the button style to fit the rest of your file and to place commands, page links and macros on the buttons.

HOW TO CHANGE BUTTON STYLES

1. Select the style of button from the **Tool Palette**.
2. Place the mouse cursor over the button you wish to change.
3. Click the left mouse button.

HOW TO SELECT BUTTONS

The **Select Button** tool  is used to select buttons for cutting, copying, moving, resizing, or property editing. When buttons are selected, they are painted in red.

To select a single button or a group of buttons next to each other:

1. Click the **Select Button** tool  on the **Tool Palette**.
2. Place the mouse over one corner of the button(s) and click the left mouse button.
3. Draw a rectangle around the buttons you wish to select in the design window (either in the touchscreen grid or the keypad buttons).

To select multiple buttons at one time that are not next to each other:

1. Click the **Select Button** tool  on the **Tool Palette**.
2. Hold down the **Ctrl** key on your keyboard.
3. Click the buttons you wish to select (either in the touchscreen grid or the keypad buttons).

Note: Many *TheaterTouch Designer* commands can be used on selections as well as individual buttons. Click the right mouse button on a selection for a list of available commands.

HOW TO CUT OR COPY BUTTONS

1. Use the **Select Button** tool  from the **Tool Palette** to select the button(s).
2. Choose either the **Cut Command**  or the **Copy Command**  from the toolbar.
3. The button(s) are now on the clipboard.

HOW TO PASTE BUTTONS

1. Select the page you want to paste the button(s) on from the page list.
2. Choose the **Paste Command**  from the **Toolbar**.
3. Drag the button(s) to the proper place on the page.

HOW TO MOVE A BUTTON

1. Use the **Select Button** tool  from the **Tool Palette**, to select the button(s).
2. Hold down the left mouse button to drag the selection to a new location.
3. Release the left mouse button to place the buttons.

HOW TO RESIZE A BUTTON

Existing buttons on the touchscreen grid may be re-sized using *TheaterTouch Designer*. The text on a button may be clipped if the size is reduced, but any associated command or macro will not be lost.

1. Use the **Select Button** tool  from the **Tool Palette** to select the button. Note that to resize a button, only one button can be selected. If the selection can be resized, small boxes will appear in the red border on all four sides.
2. Position the mouse over the edge of the button that you would like to resize.
3. Click the left mouse button.
4. Drag the mouse to change the size.
5. Release the mouse button when you have the desired size.

HOW TO PLACE A CUSTOM BUTTON

The **Custom Button Library Browser** allows you to select and place Custom Buttons onto the touchscreen grid.

1. Select the **Place Custom Button** tool  from the **Tool Palette**.
2. Select the library in which the custom button you want is located by clicking the **Open Library** button, selecting the library and clicking **Open**.

Default directory is: [C:\Program Files\TheaterTouch Designer\Custom Buttons]

3. Click on a button name and a preview of the button will appear in the **Custom Button Library Browser**.
4. Click **OK** to insert the custom button on the touchscreen grid and close the **Custom Button Library Browser**.
5. Drag the custom button to the proper place on the page.

HOW TO USE THE MACRO EDITOR

Macros are a sequence of commands placed on any single button. Macros are placed by using the **Edit Macro** command found on the **Tool Palette**.

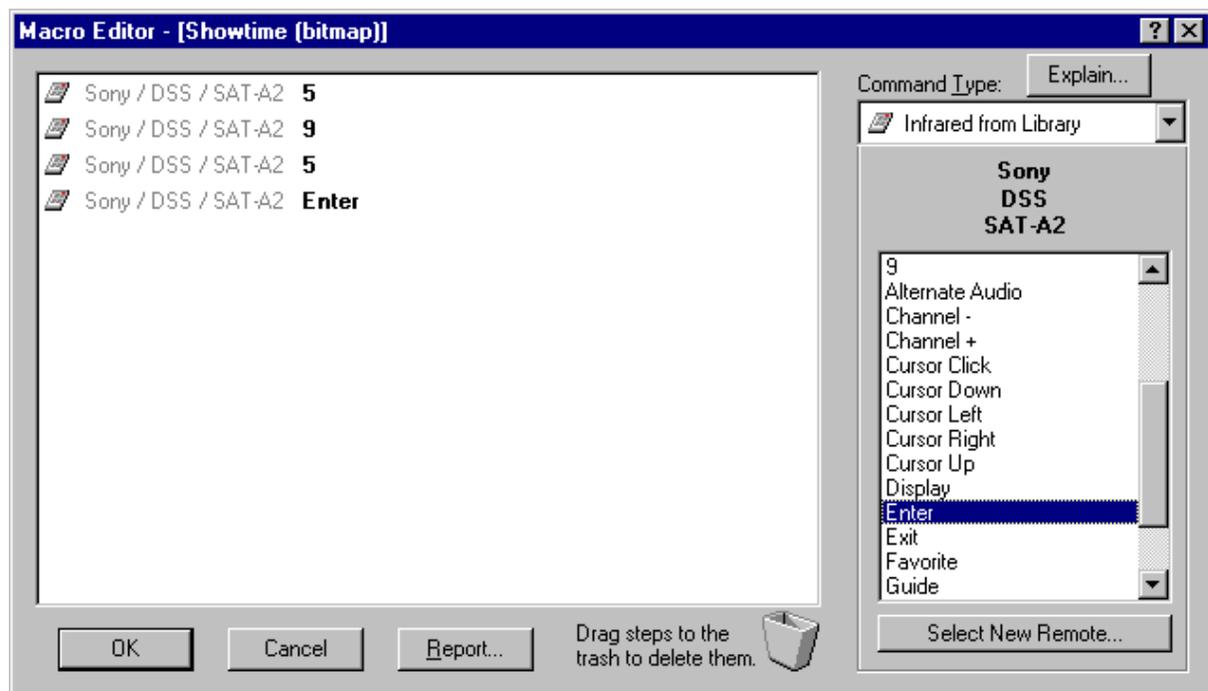
Buttons with macros can be moved, cut, copied, and pasted to other pages without discarding the codes attached to them.

Macros are indicated by a small black box with the letter 'M' in the upper left corner of buttons.

EDITING MACROS

To add a new macro or edit an existing macro on a button:

1. Select the **Edit Macro** tool  from the **Tool Palette**.
2. Click the button to which you would like to add a new macro or edit an existing macro.
3. Use the tools in the **Macro Editor** window to add, insert, and delete commands.
4. Click **OK** in the **Macro Editor** window to save changes to the macro, or click **Cancel** to discard them.



Report command – The **Report** command button at the bottom of the macro editor opens up your default web browser for viewing and printing of the open macro.

Trash Can – The **Trash Can** located at the bottom of the macro editor is used to delete commands from a macro. Left click and hold the command you want to delete and drag it to the **Trash Can** and release.



The **Infrared from Library** macro step type causes the macro to output an Infrared command. Any number of Infrared commands can be added to the macro by selecting the proper library and then dragging the desired function(s) from the list on the right side to the macro display on the left side of the Macro Editor.

If you do not have access to the Command Library with the desired function, but it is assigned to a button in the current file, use the **Infrared from Page** step type to add it to the macro.

Double-click the infrared command step in the macro if you need to edit any of the parameters or to change which *IRF-6* the command is output if you are using more than one.



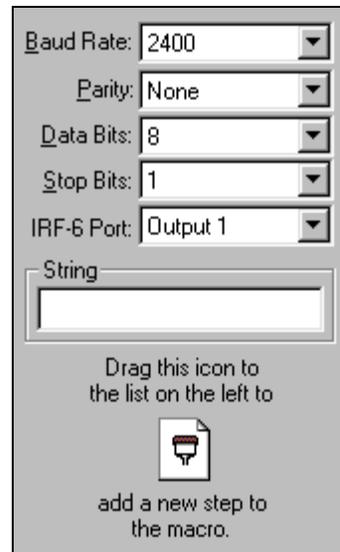
The **Infrared from Page** macro step type causes the macro to output an Infrared command. The command is taken from a button in the current file. Select the page containing the desired code, and then drag the code from the **Available Buttons** list on the right to the macro display on the left.

This should be used for maintaining files for which the Command Library is not available. If the desired command is in a Command Library, use the Infrared from Library step type.

Double-click the infrared command step in the macro if you need to edit any of the parameters or to change which *IRF-6* the command is output if you are using more than one.



The **RS-232 Command** step causes the macro to output an RS-232 command when the *TheaterTouch* is used in RF mode with an optional *IRF-6* System Interface Module and an optional RS-232 Communications Module. The command structure (Baud Rate, Parity, Data Bits, Stop Bits, *IRF-6* output, and Command String) is created for the particular piece of equipment with the editing tools provided. The command structure information should be in the equipment owners manual or contact the equipment manufacturer.



The screenshot shows a configuration window with the following settings:

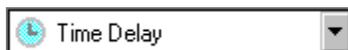
- Baud Rate: 2400
- Parity: None
- Data Bits: 8
- Stop Bits: 1
- IRF-6 Port: Output 1
- String: (empty text box)

Below the settings is a text box containing the instruction: "Drag this icon to the list on the left to" followed by an icon of a computer monitor with a plug, and the text "add a new step to the macro."

The default settings for Parity, Data Bits and Stop Bits should work in most cases if not listed in the equipments owners manual. However, you will need at least the Baud Rate and Command String for that particular piece of equipment and the command you are to execute.

After you have set the desired parameters and entered the command string, drag the **RS-232** icon from the lower right to the macro display on the left. Release the mouse button at the location where you would like to add the RS-232 step.

Double-click the **RS-232** command step in the macro if you need to edit any of the parameters or to change which *IRF-6* the command is output if you are using more than one.



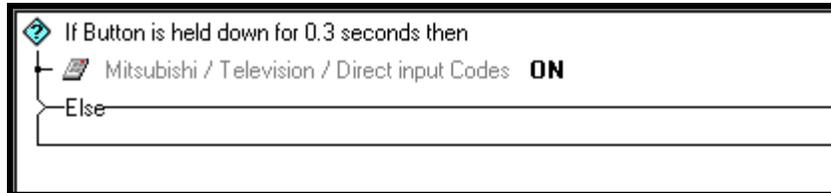
The **Time Delay** step causes the macro to pause for the time specified by the **Delay Time** spin box. The time can be adjusted from 0.1 to 9.9 seconds. After you have set your desired delay time, drag the **Time Delay** icon from the lower right to the macro display on the left.

Release the mouse button at the location where you would like to add the time delay step.



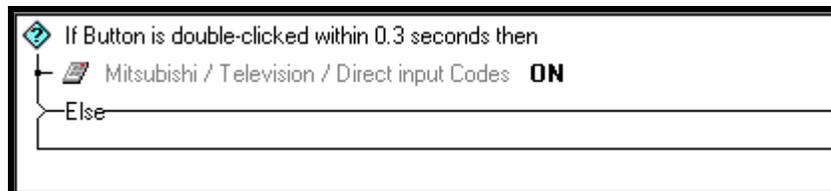
The **Button Test** step causes the macro to execute the following steps **ONLY IF** the button that the macro is attached to is Held Down for a specified amount of time or Double-Clicked within a specified amount of time, depending on the option selected.

The **Button Test** steps are conditional statements or “Else” commands meaning that if the condition is met the first command will be sent and if the condition is not met the second command will be sent.



Held Down - In the example above, if the button is held down for 0.3 seconds, the **ON** command will execute. If the button is not held down for 0.3 seconds, the command will not execute.

This can be used to make a source button that switches pages if pressed briefly, or switches pages and turns equipment on if held down for the specified amount of time. This can also be used to send a command when pressed briefly, or send a different command when held down.

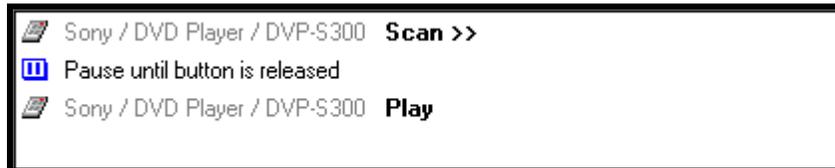


Double-Clicked – In the example above, if the button is double-clicked within 0.3 seconds, the **ON** command will execute. If the button is not double-clicked within 0.3 seconds, the command will not execute.

This can be used to make a source button that switches pages if pressed once, or switches pages and turns equipment on if double-clicked within the specified amount of time. This can also be used to send a command when pressed once, or send a different command when double-clicked.



Button Pause – The Button Pause step causes the macro to stop executing until the button it is attached to is released. This essentially sends a command(s) when the button is pressed and another command(s) when the button is released.



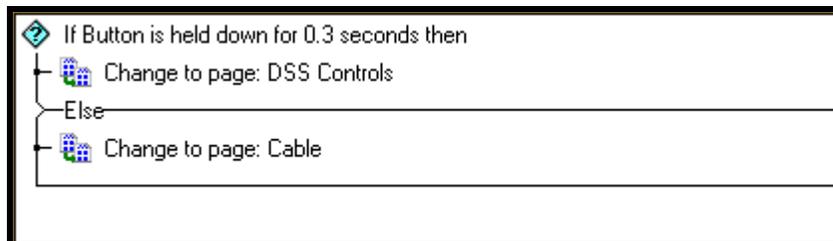
In the example above, if you press and hold the button that the macro is attached to, the macro will execute the first command and pause until the button is released, then execute the rest of the commands in the macro. This works well for commands like Scan on some VCR's and DVD players, which you need to send the Play command to stop the Scan function. This also works well for RS-232 commands, having the option of a command on the button press and another command on the button release.



Page Link – The Page Link step causes the macro to change the currently displayed page to the page you have selected from the drop-down list. The displayed page does not change until the macro has finished.

If you put multiple Page Link steps in a macro, only the last Page Link step will be displayed. With the exception of the <previous> page step, there is no need to put multiple Page Links in a macro. Each <previous> step will cause the macro to go back one previously displayed page.

If you have put a Page Link on a button as well as in a macro, the Page Link on the button will be the last visible change, making the Page Links in the macro useless.

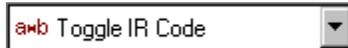


Shown in the example above is one way you could make one button go to two different pages using the Page Link step with the Button Test step in a macro.

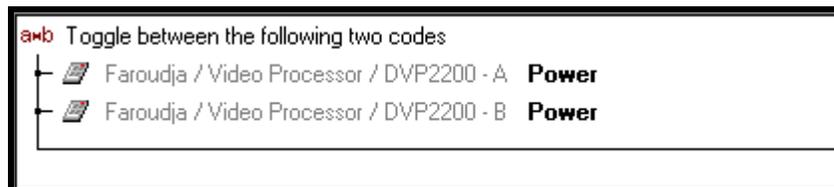


Stop Macro - The Stop Macro step causes the macro to stop executing at the point where it is inserted.

Macros automatically stop when they reach the end, so you should not normally need to insert a Stop Macro step. It is intended for use in conjunction with the Button Test step, where you can have the macro stop if a condition is met.



Toggle IR Code - The Toggle IR Code step causes the macro to alternate between two different IR codes every other time the button is pressed.



In the example above, each time the button that the macro is attached to is pressed, the commands alternate. The initial button press executes the **A** command and the second button press executes the **B** command.

If you have equipment that uses toggle codes, you must learn each code twice, and then place the two codes within the Toggle IR Code step. Every time the macro is run, it will send out only one of the two codes inside of the Toggle IR Code step, switching back and forth each time the button is pressed.

The **Toggle IR Code** command is an advanced feature. If you have trouble with this feature, contact Technical Support for help.

HOW TO DELETE A MACRO

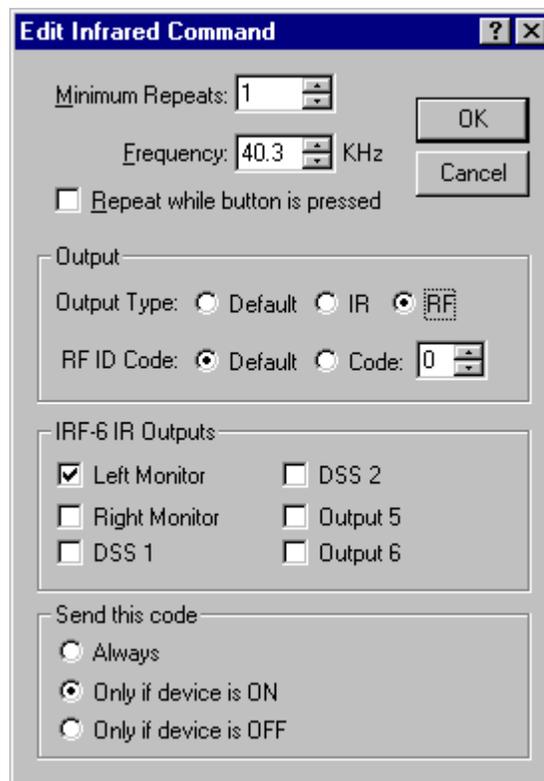
To delete a macro from a button:

1. Select the **Delete Macro** tool  from the **Tool Palette**.
2. Place the mouse cursor over the button with the macro you wish to delete.
3. Click the left mouse button.

HOW TO EDIT AN IR COMMAND IN A MACRO

1. To edit an individual command in a macro you must have the macro displayed in the Macro Editor.
2. Double click on the command in the macro you want to edit to open the **Edit Infrared Command** dialog box.

Note: Not all of the controls will be available simultaneously. Only the options relevant to the default settings and command being edited will be shown.



The **Edit Infrared Command** options are:

Minimum Repeats - Enter in this box the number of times that the repeating part of the IR code is sent by the remote. Some infrared receivers need a command to be repeated a certain number of times to work properly, and some may not work properly if the command is repeated at all. Even if a command works properly, increasing the number of repeat times may be necessary if the command is to be used in a macro. Since macro commands are not automatically sustained while a button is pressed, they may need to automatically repeat more times to be recognized.

Frequency – Shown in this box is the carrier frequency of the IR code, this is set automatically. You should not need to change this value unless directed to do so by Technical Support.

Repeat while button is pressed - Check this box to cause this IR code to be repeated for as long as the button is held down.

Note: Only one command in any macro can have this property set.

Output Type:

Unless the system contains a mixture of direct IR and IRF-6/RF commands, this option will not normally need to be changed.

Default - Check this option to set the default output type for this command to the button default. The button default is the option selected on the **Output** tab of the **Edit Button Properties** command.

IR - Check this box to force this command to transmit IR directly out the infrared window on the front of the remote, regardless of the system setting.

RF - Check this box to force this command button to transmit IR via RF through the IRF-6, regardless of the system setting.

RF ID Code:

Unless the system contains more than one IRF-6, this option will not normally need to be changed.

Default - Check this option to set the default RF ID code for this command to the button default. The button default is the ID code selected on the **Output** tab of the **Edit Button Properties** command.

Code - Check this option and enter an ID Code in the box to force this command to transmit a specific RF ID code when in RF mode, regardless of the system default setting.

IR Outputs group box:

Check the box(s) that corresponds with the output(s) you wish to send the command(s) on this button out of the IRF-6. Note that the labels for the output can be changed with the **Edit Remote Properties** command on the **Edit** menu.

The default is to have the command(s) come out of all of the outputs on the IRF-6. This option will not normally need to be changed unless you have multiple identical components or are using one of the power sensor modules.

Send this code group box:

The options in this section require that a power sensor module be plugged into the appropriate port on the IRF-6.

Always - Check this option to send the IR code regardless of the power sensor state. This option should also be checked if no power sensor is connected to the selected IR output.

Only when device is ON - Check this option to send the IR code only if the power sensor in the specified port detects that the equipment it is monitoring is ON.

Only when device is OFF - Check this option to send the IR code only if the power sensor in the specified port detects that the equipment it is monitoring is OFF.

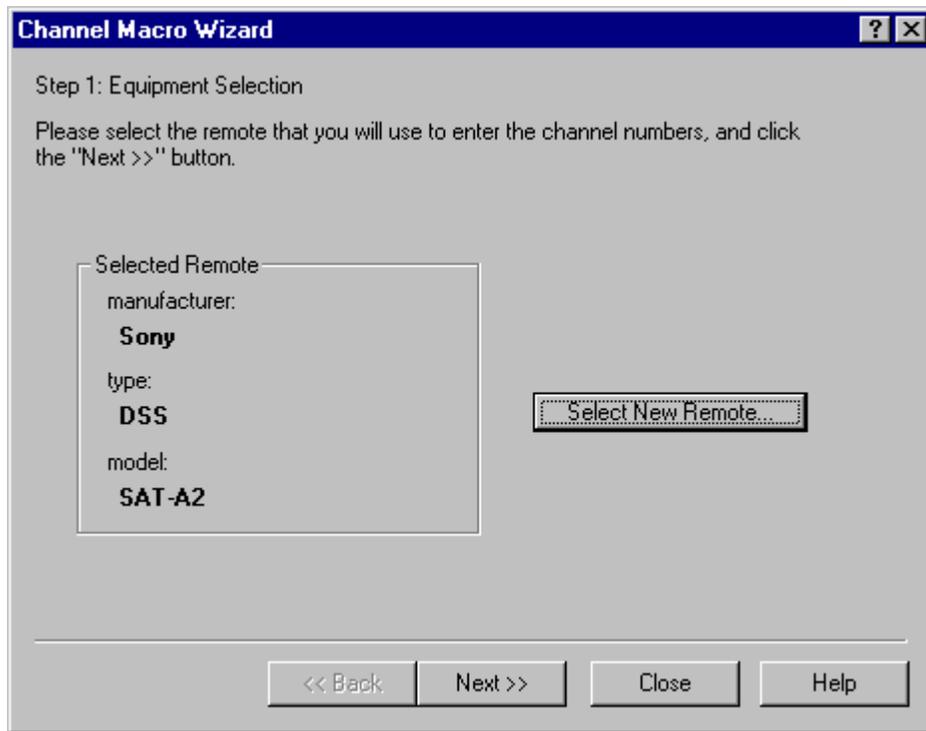
Note: In order to use the power sensor options, exactly one IR output must be selected in the IRF-6 IR Outputs box, and the power sensor must be plugged into that IR output port.

HOW TO USE THE CHANNEL MACRO WIZARD

TheaterTouch Designer comes with a feature called the Channel Macro Wizard. The Channel Macro Wizard allows you to quickly and easily create macros for satellite and cable channel presets.

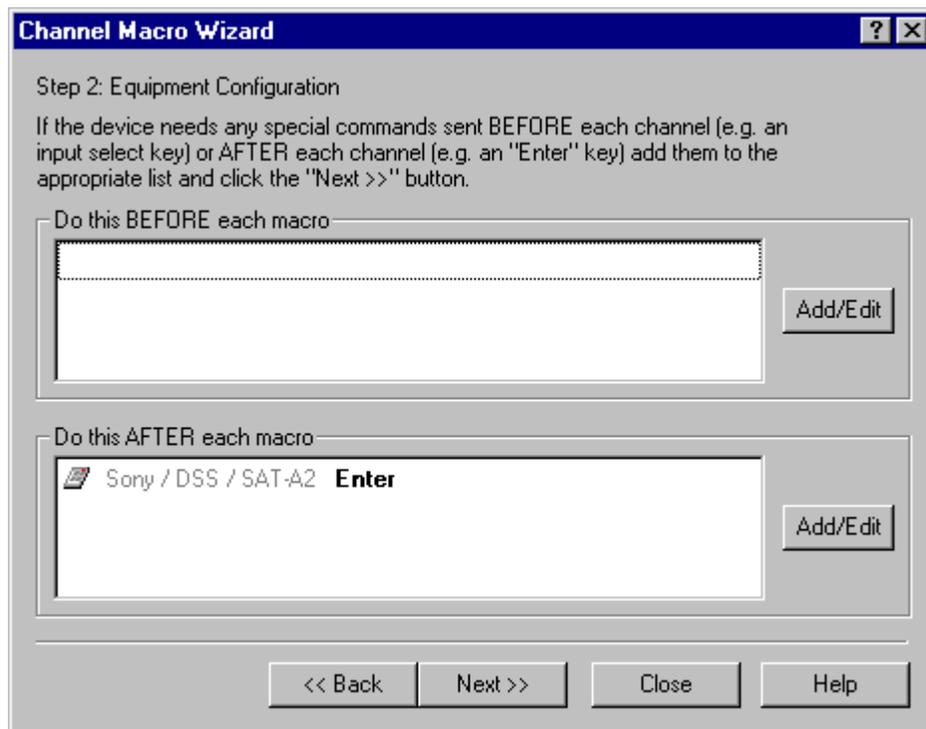
To start using the Channel Macro Wizard:

1. Select **Channel Macro Wizard** from the **Edit** menu.
2. Click the **Select New Remote** button to select the remote that you will use to enter to enter the channel numbers and click the **Next >>** button.

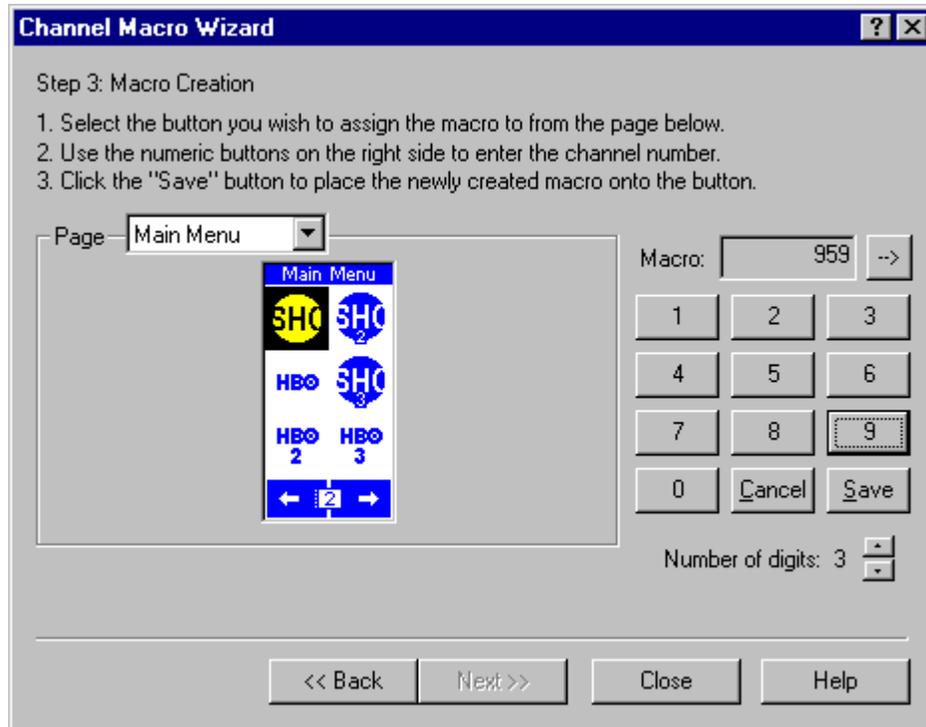


3. You have the option of adding commands before and/or after each macro for things such as an IR router before each command or an Enter command after.

4. Click the **Add/Edit** in the BEFORE or AFTER section if choose to add commands. This will open the **Macro Editor** where you can select the commands using the **Macro Editor** commands. If you need help with these commands, see the “**How to Use the Macro Editor**” section.



5. Click the **Next >>** command button.
6. Select the page you wish to place macros on from the **Page** drop-down list and then select the frame by clicking on the Left and Right frame arrows.



7. Select the number of digits in the channel macro from the Spin box in the lower right corner. If you enter more digits than selected the numbers will wrap around.
8. Click the first button from the touchscreen grid on which you want to place a macro.
9. Enter the channel numbers by either clicking the numbers in the **Channel Macro Wizard** with the mouse or you can enter them with the numbers on the keyboard.
10. Click **Save** after you enter each macro.

Click **Close** when finished with all your channel macros.

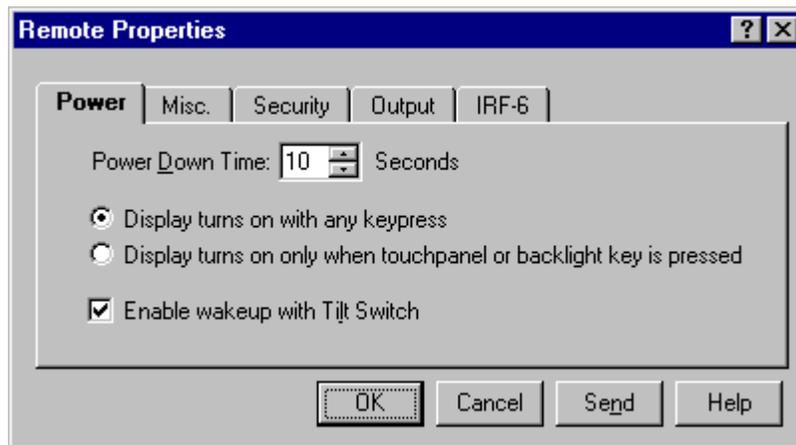
HOW TO EDIT THE REMOTE PROPERTIES

The **Remote Properties** dialog box allows you to change settings that affect the entire remote.

To open the **Remote Properties** dialog box:

Choose **Edit Remote Properties** from the **Edit** menu.

POWER TAB



The **Power** tab options are:

Power Down Time: This allows you to adjust the time the unit stays awake after the last button press. The time is variable from 1 second to 60 seconds (default is 10 seconds). During sleep mode, the *TheaterTouch* uses virtually no battery power.

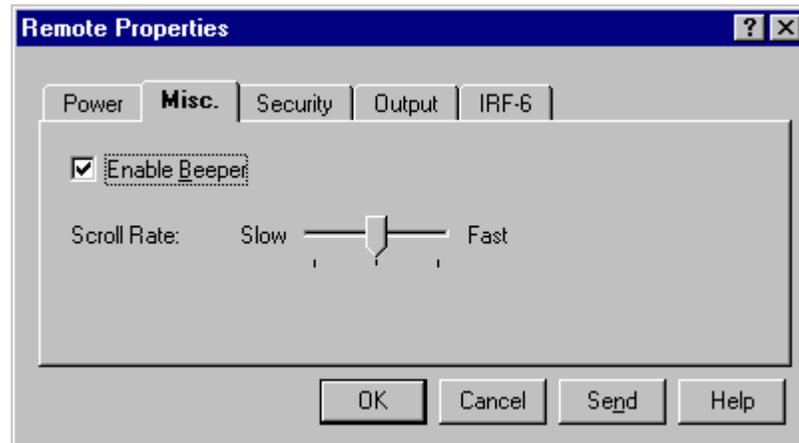
Display Mode: The option buttons allow you to adjust the settings of the display and keypad backlight.

The options are:

1. **Any keypress (default)**, which turns the display and button backlight on when any button is pressed.
2. **Touchscreen or backlight key**, which turns the display and button backlight on only when the touchscreen or backlight key is pressed. This allows the volume/channel/etc. keys to be used without turning on the display and backlight each time.

Tilt Switch: (default is: active) The Tilt Switch check box allows you to turn the tilt switch on or off. When the box is checked, it means the tilt switch is active and will turn on the display and button backlight when picked up.

MISC. TAB

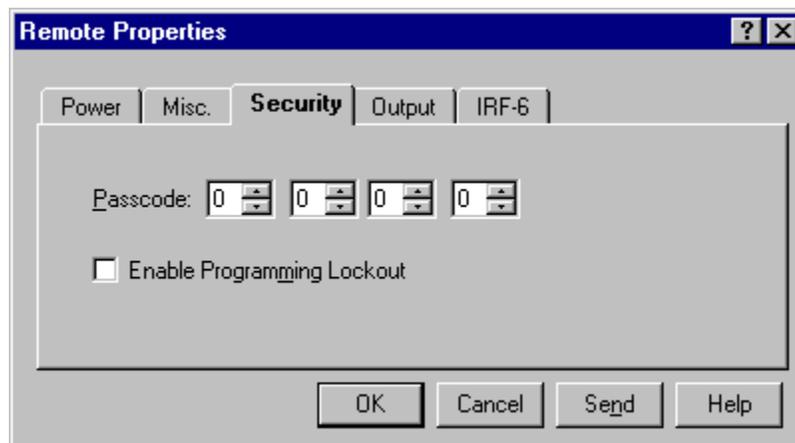


The **Misc.** tab options are:

Enable Beeper: Check the box to enable the beeper. If this box is checked, the *TheaterTouch* will beep every time a button is pressed.

Scroll Rate: Slide this control to set how fast the frames scroll left and right when the frame scroll arrows are pressed.

SECURITY TAB

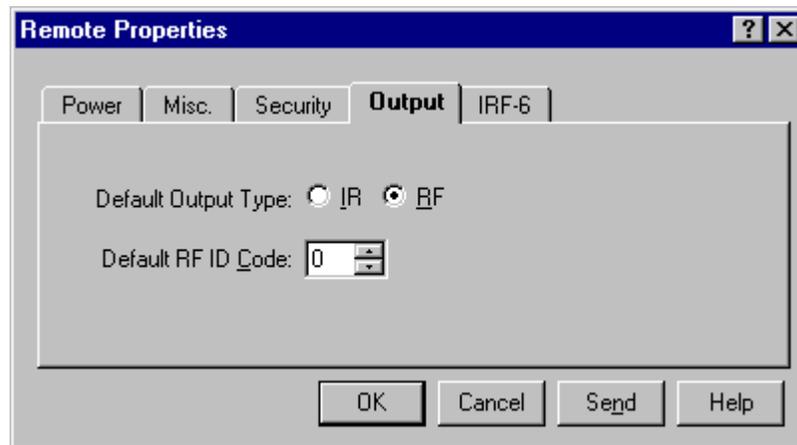


The **Security** tab options are:

Passcode: (default is 0000) That allows you to set the passcode that is needed to limit access to the **Computer Link** mode, the **Clear All** function on the control panel page as well as the **Button Lockout** function that is available on all buttons.

Enable Programming Lockout: Check this box to require that the passcode be entered before the *TheaterTouch* will go into **Computer Link** mode. This can be used to prevent unauthorized modifications to the *TheaterTouch* programming.

OUTPUT TAB



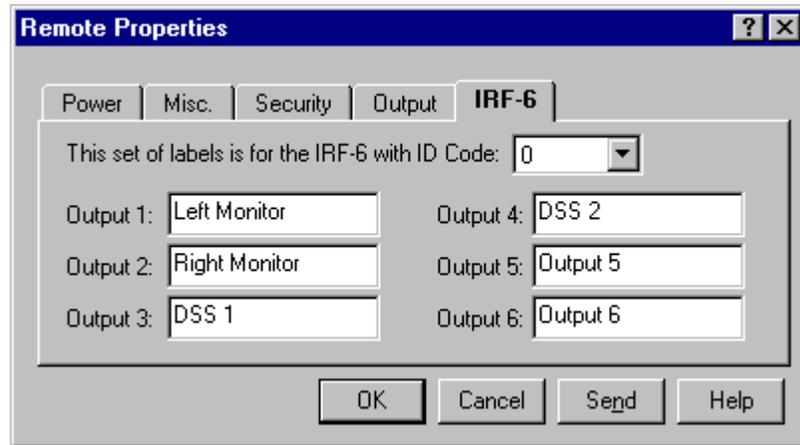
The **Output** tab options are:

Default Output Type:

1. **IR – (default)** Check this option to set the remote's default output to IR. Every key on the remote will output IR signals directly out the window on the front of the remote unless the button properties for the individual button are set to output RF.
2. **RF** - Check this option to set the remote's default output to RF. Every key on the remote will output IR signals via RF to the IR to RF converter unless the button properties for the individual button are set to output IR directly.

Default RF ID Code: Use this to set the default RF ID code. This RF ID code will be used for all RF buttons unless it is set differently in the properties for each button. The ID code switch on the back of the IRF-6 must also be set to this setting.

IRF-6 TAB



The **IRF-6** tab lets you label the outputs of the IRF-6. Use the pull down list to choose the IRF-6 ID code for which you wish to modify the labels. You can modify the labels of all ten possible IRF-6 ID codes independently. The labels are optional and are only used to make it easier for you to remember what equipment is plugged into each IRF-6 output.

Send - Click this button to send the current settings directly to the remote.

HOW TO EDIT BUTTON PROPERTIES

The **Edit Button Properties** dialog allows you to edit many different attributes of a button or a group of buttons.

To open the **Edit Button Properties** dialog box:

1. Select the **Edit Button Properties** tool  from the **Tool Palette**.
2. Click the button you want to edit, either touchscreen or keypad buttons

Note: Not all of the tabs and/or controls will be available simultaneously. Only the options relevant to the button being edited will be shown.

GENERAL TAB



The options on the **General** tab are:

Disabled - Check this box to prevent the button from responding (beeping or reversing/pushing in) when it is touched.

Note: Disabled buttons can still have commands, macros and page links. The disabled property refers only to the appearance of the button, not the functionality.

Reversed - Check this box to cause the button to be displayed in a reversed or pushed-in state when the button is not pushed and the normal state when the button is pushed. The reversed state is: filled in for Rectangular, Radius, Oblong and Borderless buttons; and Down for Custom Buttons.

Note: This property does not apply to 3D buttons.

Secured - Check this box to require that the security code be entered before the action (command, macro, or page link) associated with this button is run. The security code is set with the **Edit Remote Properties** command on the **Edit** menu.

Special Functions group box

None - Check this option to cause this button to have no special function.

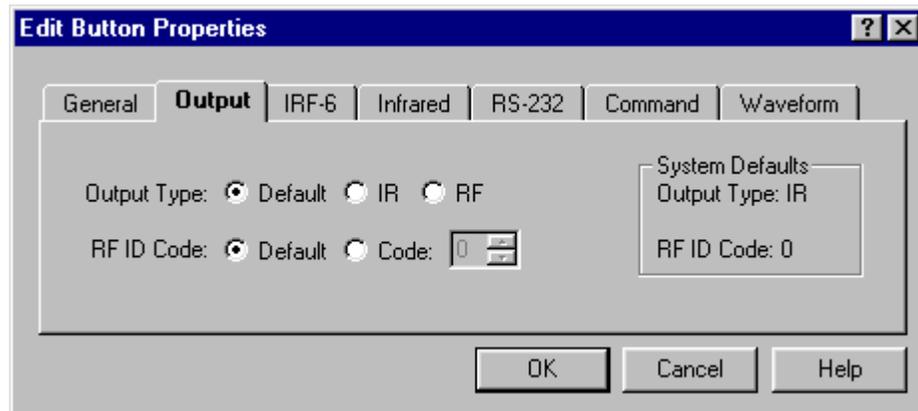
Power Down - Check this option to cause the remote to power down immediately when this button is pressed, instead of waiting for the timer to time out.

Contrast Up - Check this option to cause this button to increase the display contrast when it is pressed.

Contrast Down - Check this option to cause this button to decrease the display contrast when it is pressed.

Pause - Enter in this box the number of seconds for the remote to pause after the button is released. This value will not usually need to be changed from 0.

OUTPUT TAB



The options on the **Output** tab are:

Output Type:

Unless the system contains a mixture of direct IR and IRF-6/RF commands, this option will not normally need to be changed.

Default - Select this option to set the default output type for this button to the system default. The system default is the option selected with the **Edit Remote Properties** command on the **Edit** menu.

IR - Select this option to force this button to transmit IR directly out the infrared window on the front of the remote, regardless of the system setting.

RF - Select this option to force this button to transmit IR or RS-232 via RF through the IRF-6, regardless of the system setting.

RF ID Code:

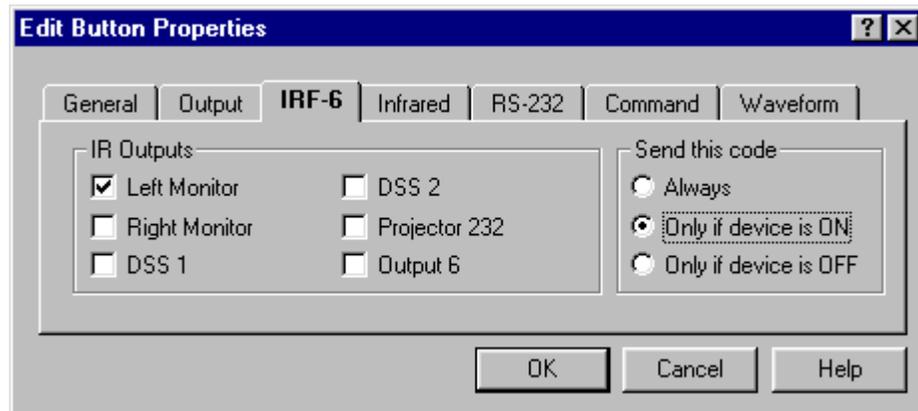
Unless the system contains more than one IRF-6, this option will not normally need to be changed.

Default - Select this option to set the default RF ID code for this button to the system default. The system default is the ID code selected with the **Edit Remote Properties** command on the **Edit** menu.

Code - Select this option to force this button to transmit a specific RF ID code when in RF mode, regardless of the system default setting.

System Defaults - This section shows the global defaults for the output type and RF ID code, for reference. If you wish to change these values, use the **Edit Remote Properties** command on the **Edit** menu.

IRF-6 TAB



The **IRF-6** tab options are:

IR Outputs group box:

Check the box(s) that corresponds with the output(s) you wish to send the commands on this button out of the IRF-6. Note that the labels for the output can be changed with the **Edit Remote Properties** command on the **Edit** menu.

The default is to have the commands come out of all of the outputs on the IRF-6. This option will not normally need to be changed unless you have multiple identical components or are using one of the power sensor modules.

Send this code group box:

The options in this section require that a power sensor module be plugged into the appropriate port on the IRF-6.

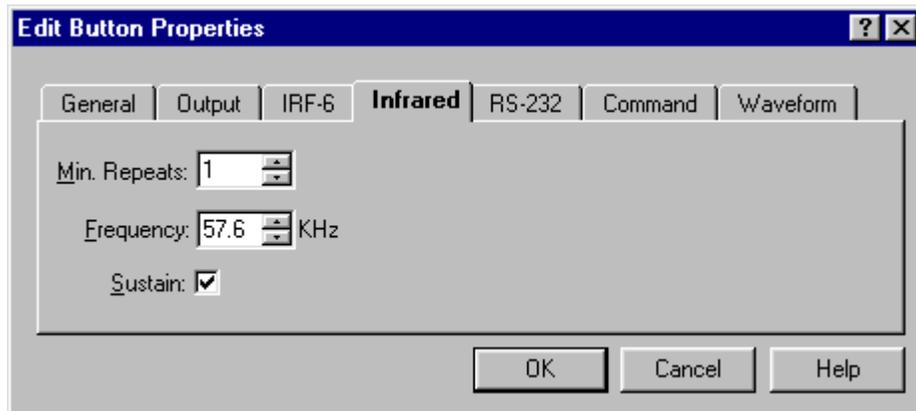
Always - Check this option to send the IR code regardless of the power sensor state. This option should also be checked if no power sensor is connected to the selected IR output.

Only when device is ON - Check this option to send the IR code only if the power sensor in the specified port detects that the equipment it is monitoring is ON.

Only when device is OFF - Check this option to send the IR code only if the power sensor in the specified port detects that the equipment it is monitoring is OFF.

Note: In order to use the power sensor options, exactly one IR output must be selected in the IRF-6 Output box, and the power sensor must be plugged into that IR output port.

INFRARED TAB



The **Infrared** tab options are:

Min. Repeats - Enter in this box the number of times that the repeating part of the IR code is sent by the remote. Some infrared receivers need a command to be repeated a certain number of times to work properly, and some may not work properly if the command is repeated at all. Change this setting only if you are having trouble with a command.

Frequency - This box shows the carrier frequency of the IR code. This is set automatically. You should not need to change this value unless directed to do so by Technical Support.

Sustain - Check this box to control whether or not the IR code should repeat if the button is held down. Most infrared codes will transmit continuously as long as the button is held down, but some infrared receivers may not work properly if the command is repeated at all. If the Sustain button is checked, the code will be transmitted for as long as the button is held down, or the Minimum Repeat times, whichever is greater. If the Sustain button is not checked, the code will be transmitted only the Minimum Repeat number of time regardless of how long the button is held down.

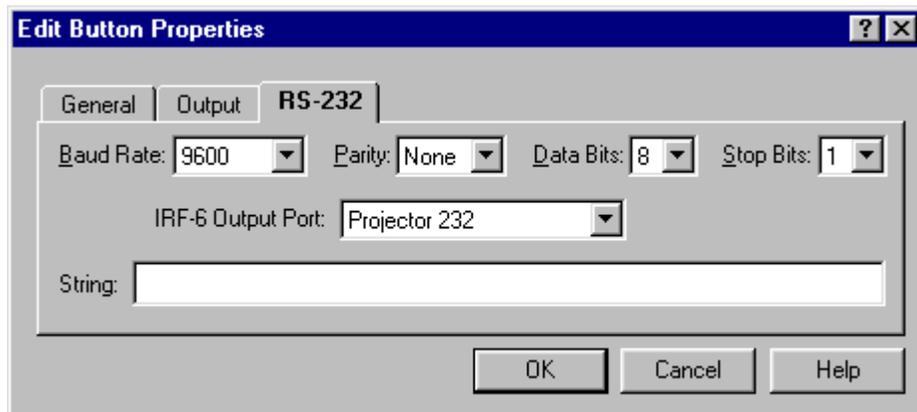
RS-232 TAB



The RS-232 function will only work if you are using the *TheaterTouch* in RF mode with an optional RTI System Interface Module, and an optional RS-232 Communications Module. You can use up to six (6) RS-232 Communications Modules with any one (1) System Interface Module. (See the instructions included with the RS-232 Communications Module for more on installation).

HOW TO SETUP RS-232 COMMUNICATIONS

The **RS-232** tab will appear as shown above the first time you attach an RS-232 command to the button. Click the **Create New RS-232 Code** button to open the RS-232 dialog as shown below.



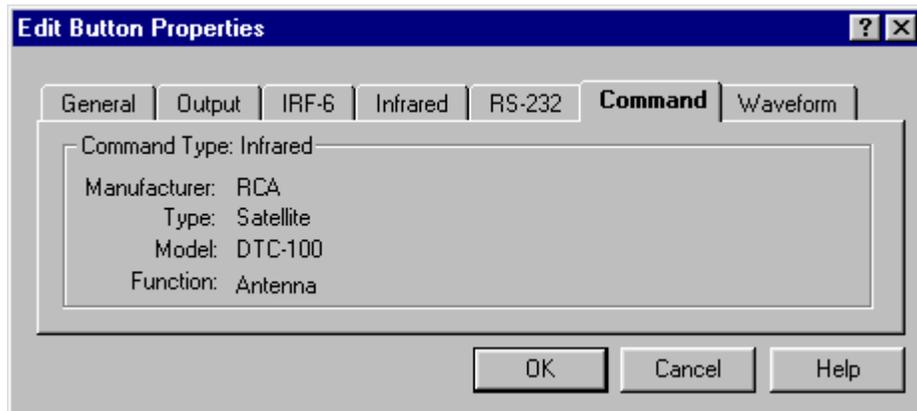
1. Select which IRF-6 you wish to send this RS-232 command string from if using more than one. This is done on the **Output** tab of the **Edit Button Properties** dialog.
2. Edit the communications settings (Baud Rate, Parity, etc.) to match that of the equipment that you are trying to control. This information should be in the equipment owners manual, if not contact the equipment manufacturer.
3. Select the output port on the IRF-6 that the RS-232 Communications Module you want to send this RS-232 string is attached.
4. In the **String** field, type in the RS-232 command string you wish to send when this button is pressed. The maximum number of characters is 60 in a single string.

Note: If you should need more than 60 characters in a command, you can make a macro with two or more command strings with no time delay between them.

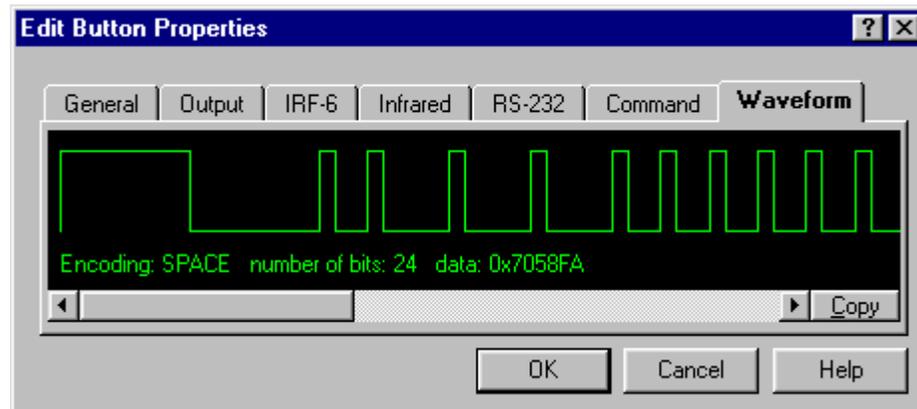
You can type plain text into this field, and you can use the following special characters (called "Escape Sequences"):

| | |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <code>\a</code> | Alert / Bell (Control-G) |
| <code>\b</code> | Backspace (Control-H) |
| <code>\e</code> | Escape (Control-I) |
| <code>\f</code> | Form Feed (Control-L) |
| <code>\n</code> | Line Feed (Control-J) |
| <code>\r</code> | Carriage Return (Control-M) |
| <code>\t</code> | Tab (Control-I) |
| <code>\v</code> | Vertical Tab (Control-K) |
| <code>\\</code> | Backslash |
| <code>\xHH</code> | Hexadecimal constant (where H is a hex digit from 0-9 or A-F) |
| <code>\dNNN</code> | Decimal constant (where N is a digit from 0-9). All three digits MUST be entered, so you may need to add leading zeros. |

Note: Because the backslash {`\`} character is used to introduce each Escape Sequence, you **MUST** use the `\\` form to enter a backslash character, if one is needed by your string.

COMMAND TAB

The **Command** tab displays the manufacturers name, type of equipment, model number and function of the command on a button.

WAVEFORM TAB

The **Waveform** tab displays the waveform of a command for advanced troubleshooting or if you would just like to see what Infrared data looks like.

HOW TO EDIT THE PROPERTIES OF MULTIPLE BUTTONS

The Edit Button Properties dialog allows you to edit many different attributes of a button or a group of buttons.

To edit the properties of multiple buttons at once:

1. Select the buttons using the **Select Button** tool  from the **Tool Palette**.
2. Click the right mouse button on one of the selected buttons, either touchscreen or keypad buttons and choose **Edit Properties**.

For an explanation of all the button properties, see the “**How to Edit Button Properties**” section.

Note: Not all of the tabs and/or controls will be available simultaneously. Only the options relevant to the button(s) being edited will be shown.

A note about Multiple Selections

If you have more than one button selected, it is possible that they will initially have different settings.

The following meanings apply to options with a check box:

- All buttons in the selection will retain their original values for the setting.
- All buttons in the selection will have the setting set to TRUE
- All buttons in the selection will have the setting set to FALSE

If options with numerical fields have different values, they will be left blank. If you DO NOT enter a number, all the buttons will retain their original setting. If you DO enter a number, all the buttons will be set to that value.

If options with radio buttons have different settings, NONE of the radio buttons will have a dot next to them. In that case, each button will retain its original function. If you do wish to assign the SAME function to EVERY button, select one of the functions from the dialog.

HOW TO PRINT SCREENSHOTS

TheaterTouch Designer comes with the ability to print screenshots of the individual frames of your remote file for reference purposes.

To print screenshots of the open remote file:

1. Choose **Print** from the **File** menu.
2. Choose whether you want to
 - a) **Print Current Page Only** – Prints a life-sized image of all of the frames of the currently displayed page.
 - b) **Print All Pages on One Sheet** – Prints all of the frames from all of the pages in the current file on a single sheet of paper, scaling them if necessary.
 - c) **Print All Pages, 1 Per Sheet** – Prints life-sized images of all of the pages in the current file, with all of the frames from each page grouped together on individual sheets of paper.
3. Click **OK**.

HOW TO PRINT SYSTEM CONFIGURATION REPORTS

TheaterTouch Designer comes with the ability to create System Configuration Reports. This report is for archival purposes as well as a visual reference guide of the system options and each *IRF-6* configuration.

To print the Configuration Report of the open remote file:

1. Choose **System Configuration Report** from the **File** menu.
2. Click the **Print** command button.
3. Click **OK** to close.

To copy the Configuration Report of the open remote file to the Windows clipboard:

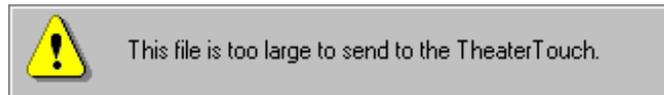
1. Choose **System Configuration Report** from the **File** menu.
2. Click the **Copy** command button.
3. The **System Configuration Report** is now on the Windows clipboard.
4. Click **OK** to close.

HOW TO CHECK MEMORY USAGE

It is possible, though not likely, to create a file in *TheaterTouch Designer* with more information than the *TheaterTouch* can hold. To make sure this does not happen, use the **Check Memory Usage** command on the **Edit** menu to see how large the current file is.

The **Remote Memory Used** dialog displays the amount of space that buttons, bitmaps, custom buttons, commands, and macros take up in the *TheaterTouch* system controller's 128KB of memory. The pie chart in the dialog represents the amount of memory that each of the object types uses.

If the memory is more than 100% full, the **Free** line will show a negative amount of memory, and will be flashing red. In this case, the following warning will be displayed in the dialog box:



You will have to delete enough objects so that the **Free** line is not flashing red before you can send this file to the *TheaterTouch*.

HOW TO CREATE A “SELF-DOWNLOADING .EXE”

This command creates an executable from the current file that will automatically download itself to the remote when run. These executables can be distributed to client sites to simplify the process of updating remotes in the field.

TheaterTouch Designer does not need to be installed for the self-contained executable to work.

To make a Self-Downloading .EXE of the current file:

1. Choose **Create Self-Downloading .EXE** from the **Communications** menu.
2. Choose the location you want to save the file in the **Save in** address box.
3. Enter the name of the file in the **File Name** box.
4. Click the **Save** button to save and close.

You can now put the .EXE file on a diskette or E-Mail it.

HOW TO USE THE “SEND” COMMAND

This command sends the current file through electronic mail. This command is only available if your computer has a properly configured e-mail client that is compatible with the Microsoft MAPI specification. Microsoft Exchange and Microsoft Outlook are two examples of MAPI-compliant e-mail clients.

TheaterTouch Designer does need to be installed for the file to work.

To send the current file via E-Mail:

1. Choose **Send** from the **File** menu.
2. The default E-Mail program will open with the current file inserted as an attachment with the extension **.rti**.
3. Send the E-Mail as required by you E-Mail program.

Chapter 6. IR Library Manager

The *TheaterTouch* reproduces the infrared commands of other remote controls. Each of these infrared commands must be captured (learned) and placed into the *TheaterTouch Designer* Command Library.

This is done by using the original remote control (*the donor*) from a piece of equipment to teach its commands to the *TheaterTouch*. The *TheaterTouch* then transfers the captured command to the Infrared Library Manager software through its RS-232 serial port. Once a command is placed in the infrared library, it never has to be captured again.

Before you can send infrared commands to the PC, you need to create a new remote file by going to the IR Library Manager in the *TheaterTouch Designer* software.

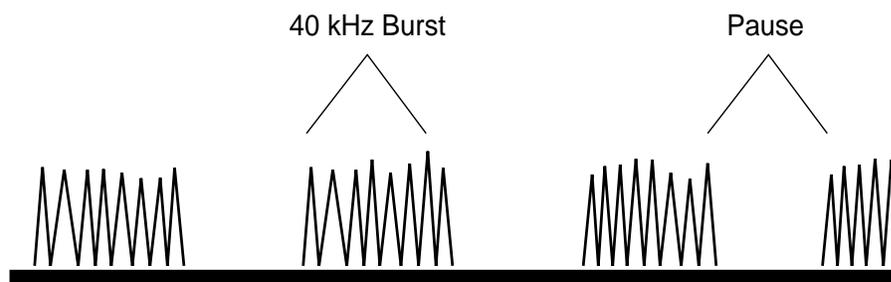
INFRARED CODES

There are two types of infrared codes that are commonly used for consumer electronics products: *Frequency Modulated* and *Pulsed*.

FREQUENCY MODULATED

This type of transmission modulates the IR energy at a fixed carrier frequency. The vast majority of consumer electronics remote controls use a carrier frequency around 40kHz, although the carrier can range from 15kHz to 455kHz or higher. The *TheaterTouch* is designed to reproduce carrier frequencies between 15kHz and 460kHz.

The actual code consists of bursts of IR energy modulated at the carrier frequency, separated by pauses.



The code is defined by the length of each burst and each pause, as well as by the carrier frequency.

PULSED IR CODES

This type of transmission does not use a carrier frequency.



Pulsed codes are common in cable TV converter boxes.

HOW THE *THEATERTOUCH* LEARNS IR CODES

There are many different encoding schemes used for IR codes. The burst and pause times have fixed lengths, variable lengths, or some combination of the two. To learn the code, the *TheaterTouch* “records” a sample of the code in a manner similar to the way a tape recorder records sound. Once a sample of the code has been taken, it is analyzed to find any repeating patterns.

Some codes continuously repeat themselves for as long as the button is pressed. Others send a code followed by a “keep alive” pattern. Some codes don’t repeat at all. Any of the above types of codes can also have some sort of preamble in front of them. It is very important to capture the preamble in this type of code. The IR learning buffer of the *TheaterTouch* is large enough to accommodate the preamble.

When a repeating pattern is found, extra repeats are stripped off before the code is stored in memory. The number of repeats is also stored so the code can be reproduced accurately.

If the buffer was filled up during learning, it is assumed that the pattern should be repeated for as long as the key is pressed. This is common for commands such as Volume, Balance, and Scan— functions that may need to be continuously repeated. For these types of commands, **Sustain** is set **ON** as the Edit IR default. If the buffer is not filled, **Sustain** is set **OFF** and the repeat pattern is displayed as the **Minimum Repeats**.

The default **Minimum Repeats** for a code with **Sustain ON** is one. This means the repeating pattern will repeat at least one time when the button is pressed. You can edit this if necessary, in the Edit IR mode of Infrared Library Manager software.

If the code uses a carrier frequency, that frequency is also stored with the code.

HINTS FOR LEARNING IR CODES

Always place the *TheaterTouch* and the donor remote control on a flat surface. You may find it necessary to elevate the donor or the *TheaterTouch* with a book or similar object to align them vertically.

Once you have learned and tested a code from a remote, try not to move it until you have learned all the codes. If you do accidentally move either remote, you should re-align them.

It is **VERY IMPORTANT** to make sure the donor remote is using fresh batteries. The *TheaterTouch* needs a strong IR signal to properly learn a code.

If the frequency read-out in the ALIGN mode is 0.0 kHz, then the code is a pulsed type. In this case, you should transmit the commands to the *TheaterTouch* from the longest distance you can without getting an error message.

If you always get an error message when trying to learn a code, you should try moving the donor remote up and down or back and forth. If this does not help, try tapping the buttons on the donor instead of holding them down.

Many commands can be made more reliable if the number of repeat times is increased. This is especially true for commands assigned to buttons that are likely to be briefly “tapped” or for commands that are part of a macro.

Increasing the number of repeat times increases the probability of the command “getting through.” This is essentially a trade-off between increased reliability and an increase in the length of time required to transmit a command. This can take a bit of fine-tuning on complicated macros.

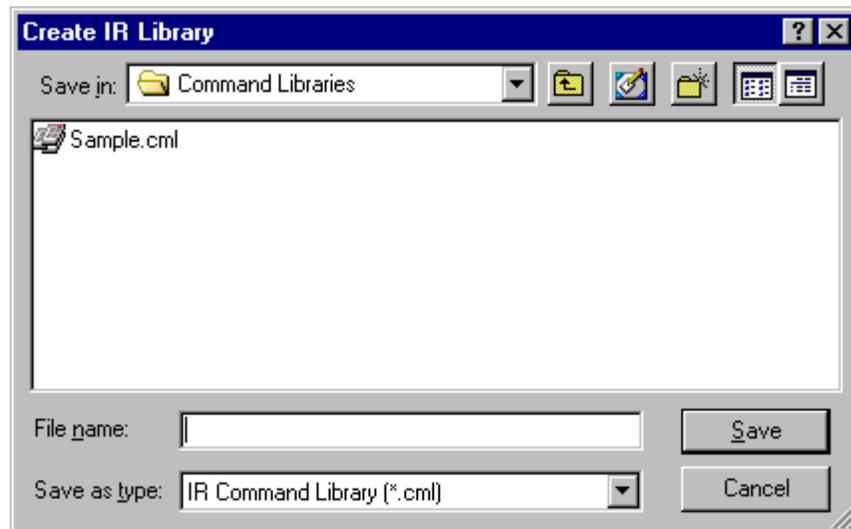
Keep in mind that the IR transmit LEDs may not be located in the center of the donor remote. It may be necessary to place the remote off-center to get a reliable capture.

HOW TO OPEN THE IR LIBRARY MANAGER

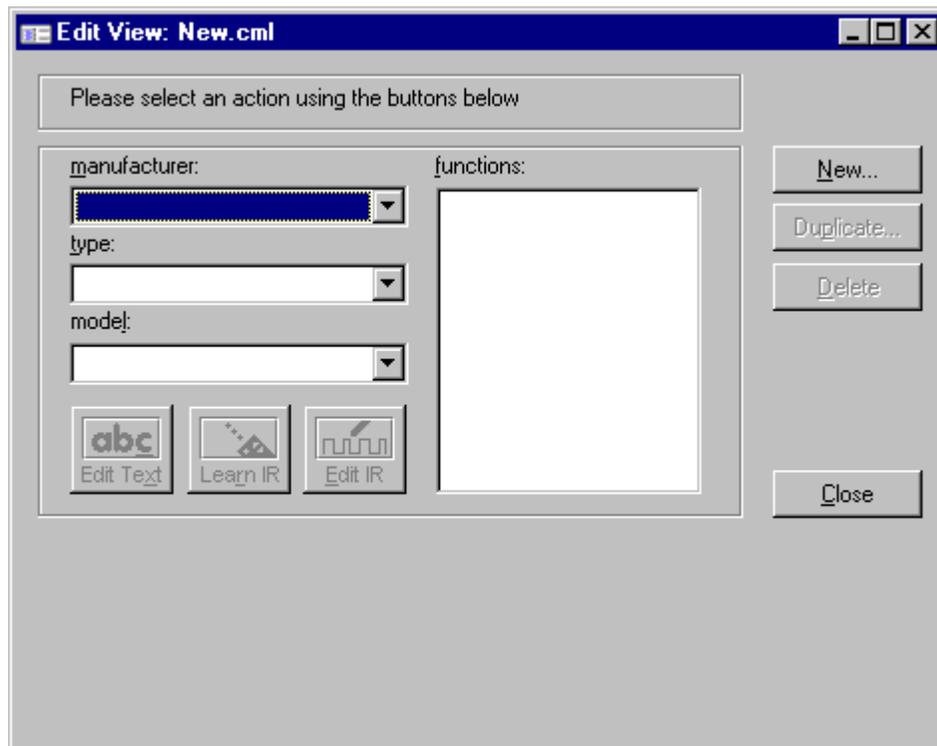
1. Choose **IR Library Manager** from the **Library** menu from the *TheaterTouch Designer* toolbar.
2. From here, you can decide to create a new library of commands or add to an existing library by choosing from the **File** menu either **New** or **Open**.

HOW TO CREATE A NEW IR LIBRARY

1. Choose **New** from the **File** menu, the Create IR Library dialog box will open.
2. Enter the name of the new library in the **File name** box.
3. Be sure to save your new file in the **Command Libraries** folder of the *TheaterTouch Designer* software folder.
4. Click the **Save** button to create the library.

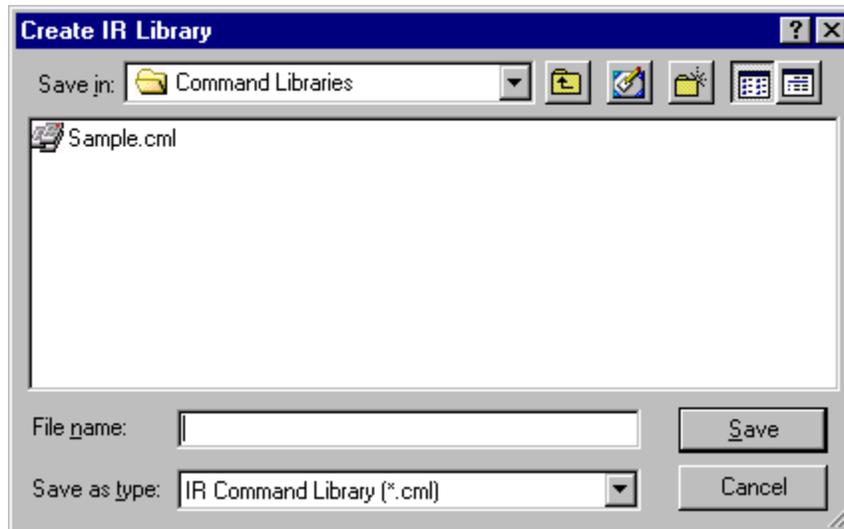


Once you click the **Save** button, the Edit View dialog box will open showing you the remotes that are in that particular library. If there are no remotes in that library, such as after creating a new library, the fields will be empty.

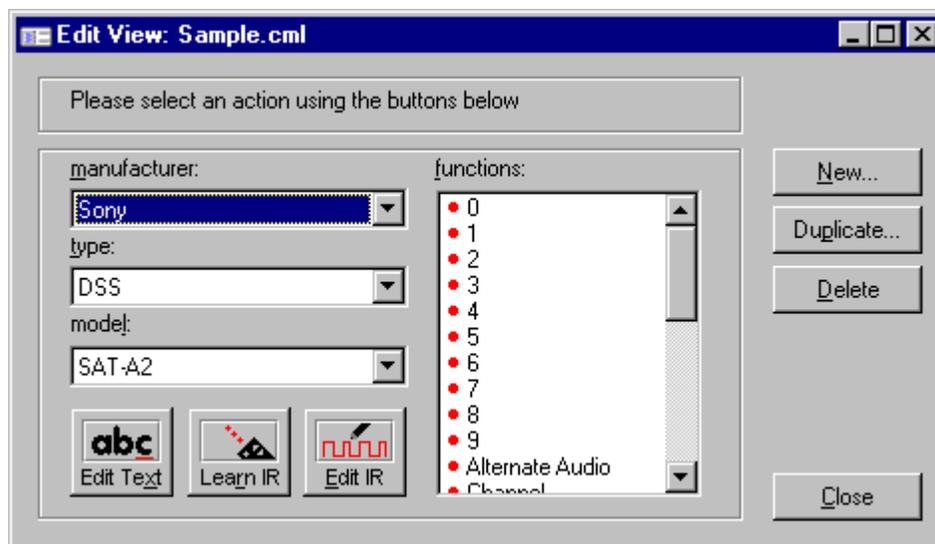


HOW TO OPEN AN EXISTING IR LIBRARY

1. Choose **Open** from the **File** menu.
2. When the Open IR Library dialog box opens, select the file you wish to open.
3. Click the **Open** button.

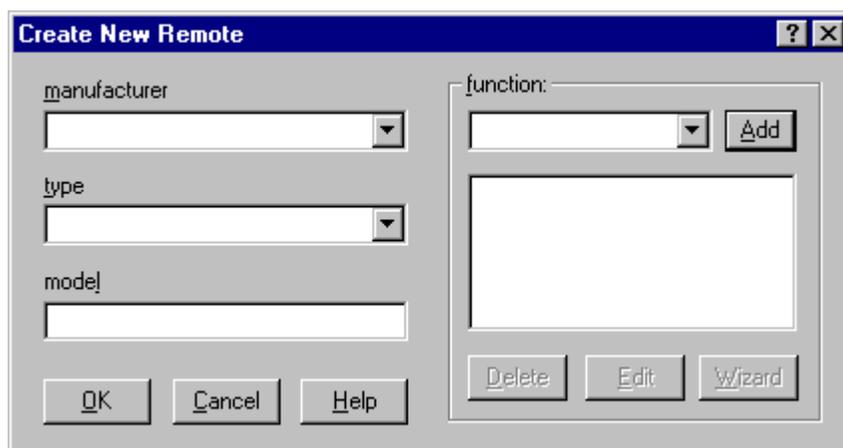


Once you click the **Open** button, the Edit View dialog box will open showing you the remotes that are in that particular library.



HOW TO ADD A NEW REMOTE TO AN IR LIBRARY

1. Click on the **New** button on the upper right hand side of the **Edit View** dialog box.
2. This will open the **Create New Remote** dialog box.

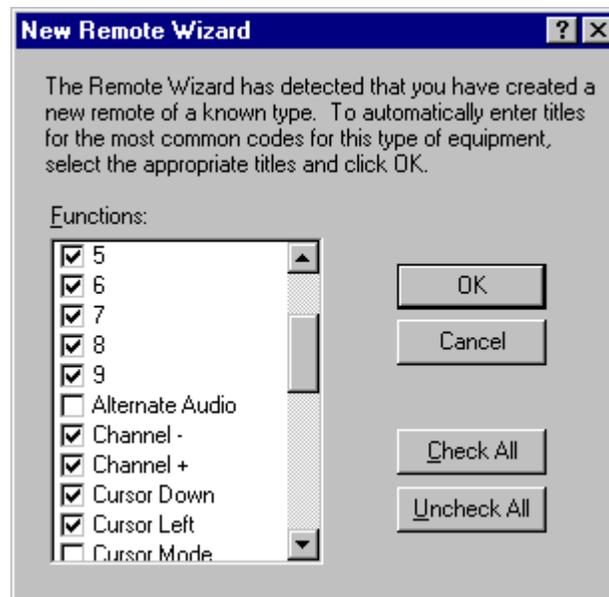


3. Enter the manufacturer's name, type of equipment, (such as TV, VCR, Drapes, Lights and so on) and model number of the component or remote in the appropriate fields.
4. In the function field, enter the name of the actual commands you are going to learn (such as Channel+, Channel-, Volume+, Volume-, Power, 1, 2, 3 and so on).
5. After you enter each function name click on the **Add** command button to save, you can always edit the name of a function later if you make a mistake or add a function.
6. Repeat steps 4 and 5 for each button on the remote.
7. When done entering information about new remote, click on the **OK** command button to save and close.

HOW TO USE THE NEW REMOTE WIZARD

If you are entering a commonly used component to the IR Library, you can use the **New Remote Wizard** to enter the titles of commonly use commands for that type of equipment.

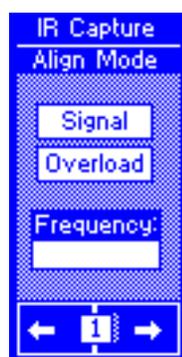
1. Open the **Create New Remote** dialog box.
2. Enter the information on the equipment you are about to learn commands from. The manufacturers name, type of equipment, (such as TV, VCR, Drapes, Lights and so on) and model number of the component or remote in the appropriate fields.
3. Click the **Wizard** command button; this will open the **New Remote Wizard** dialog box.
4. Check or uncheck the function titles you wish to insert and click **OK**.
5. You can always edit the name of a function later if you make a mistake or add a function.
6. When done entering information about new remote, click on the **OK** command button to save and close.



HOW TO ALIGN A DONOR REMOTE CONTROL

To ensure that a valid signal is being received, all donor remote controls must be properly aligned with the *TheaterTouch* learning window. This is the window located on the front of the unit.

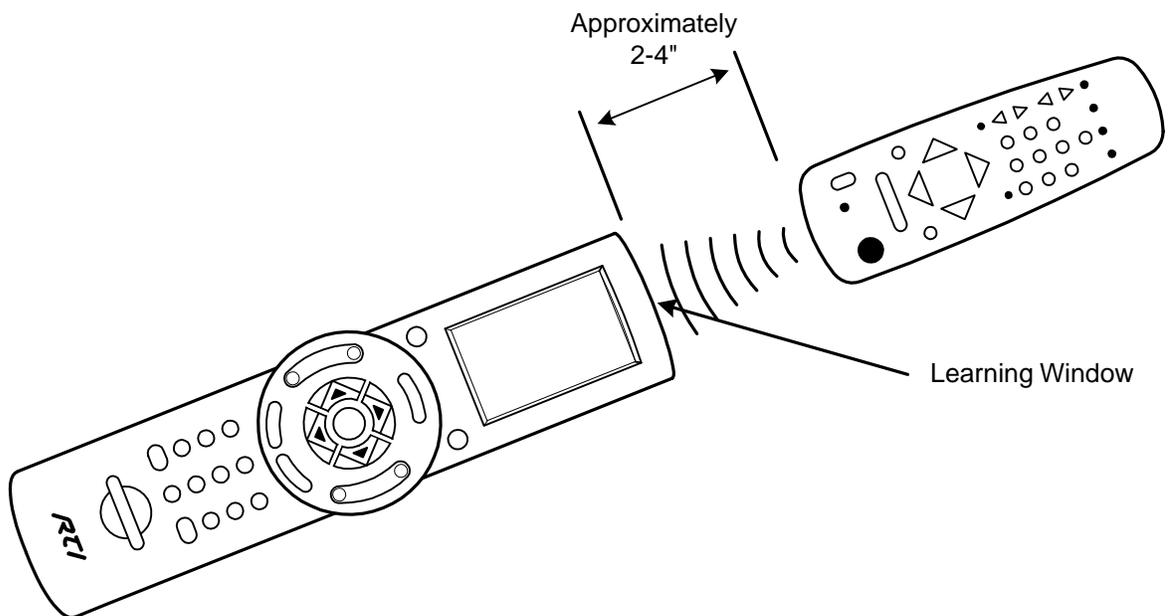
The *TheaterTouch* has an **ALIGN** function to help determine the correct position in front of the learning window, and determine the modulation frequency of the donor remote's infrared signal. This function is invoked upon entering the **IR CAPTURE** mode from the CONTROL PANEL page.



IMPORTANT: The Align function determines the modulation frequency of the donor remote's infrared signal; so all donor remote controls must be aligned before being captured.

To properly align a donor remote control with the *TheaterTouch*:

1. Make sure the donor remote has fresh batteries then line up donor remote so that is at the same height as the learning window on the *TheaterTouch*. It may be necessary to place the donor remote control on a higher surface than the *TheaterTouch*, or vice-versa.
2. Press any key on the donor remote control, moving the remote back and forth in front of the learning window. The donor remote control is located at the proper distance from the *TheaterTouch* when the **Signal** box is on (darkened) and the frequency read-out is stable. The frequency readout should not be 0.0kHz if it is possible to get it to read any other number by moving the donor remote around. If the **Signal** box is off (white), the *TheaterTouch* is not detecting any infrared signal.
3. If the **Overload** box is darkened, the donor remote is too close to the *TheaterTouch*. Move the donor remote away from the *TheaterTouch* until the **Overload** indicator turns white.

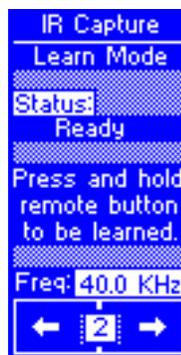


HOW TO CAPTURE INFRARED COMMANDS

Once a donor remote control is properly aligned, the *TheaterTouch* is ready to start capturing the IR commands and transferring them to the Infrared Library Manager Software.

1. Make sure the *TheaterTouch* is in the IR CAPTURE LEARN MODE on frame 2 of the IR CAPTURE page and says STATUS: **READY**.

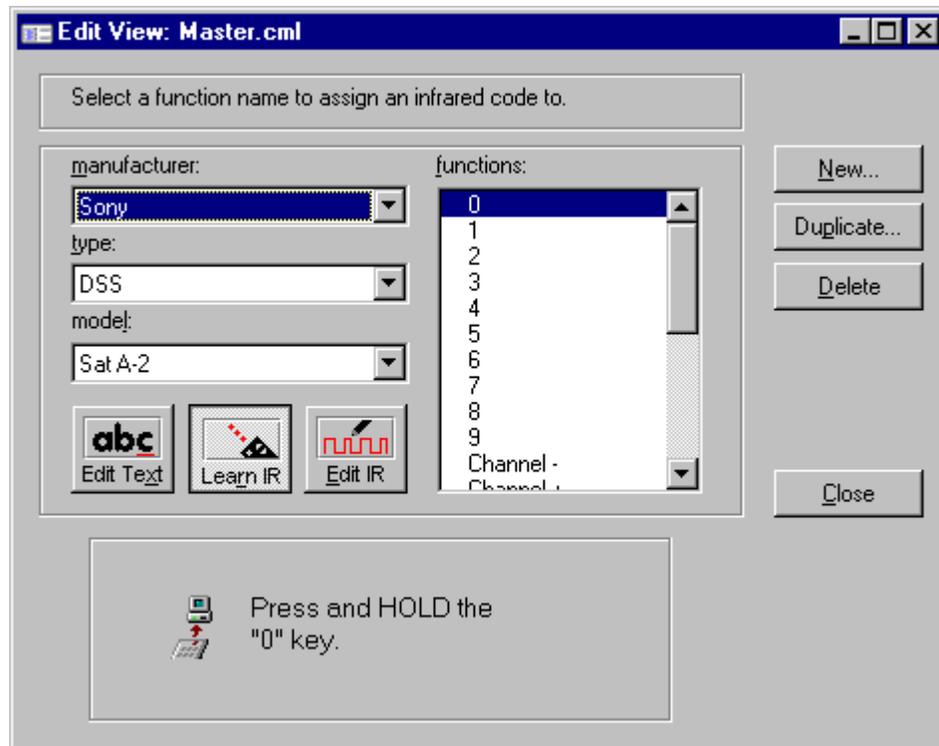
The last frequency measured with the ALIGN function should be displayed at the bottom of the screen. If it is not, you must go through the Align Procedure again.



2. The communications cable should be connected to the *TheaterTouch* and the PC. The *TheaterTouch Designer* software needs to be running with the **Infrared Library Manager** window open.

The dialog box should say **Edit View** on the title bar with the name of the infrared library you are working in after it.

3. Click on the **Learn IR** command button and if you are still properly aligned, you are ready to start capturing codes.



4. Now press and hold the key on the donor remote control that transmits the command that you want the *TheaterTouch* to learn. **Continue to hold the key down until the *TheaterTouch* displays OK.**

After the command has been processed, the *TheaterTouch* will display **Captured** then **Sending**. If an error message is displayed, realign the donor remote control and try again.

If the IR command was captured properly, it will be stored in a temporary memory buffer, and transferred to the Infrared Library Manager software automatically. A red dot will be placed in front of the function text to let you know that the function has been learned.

The command will remain in memory (for testing) until it is overwritten by the next captured command. The software will prompt you for each function command to be learned.

5. To close the **IR Capture** window in the software click on the **Close** button.
6. To close the **IR Capture** page on the remote, press the **Main Menu** button on the keypad. The remote will stay in the **IR Capture** mode until you manually press the **Main Menu** button.

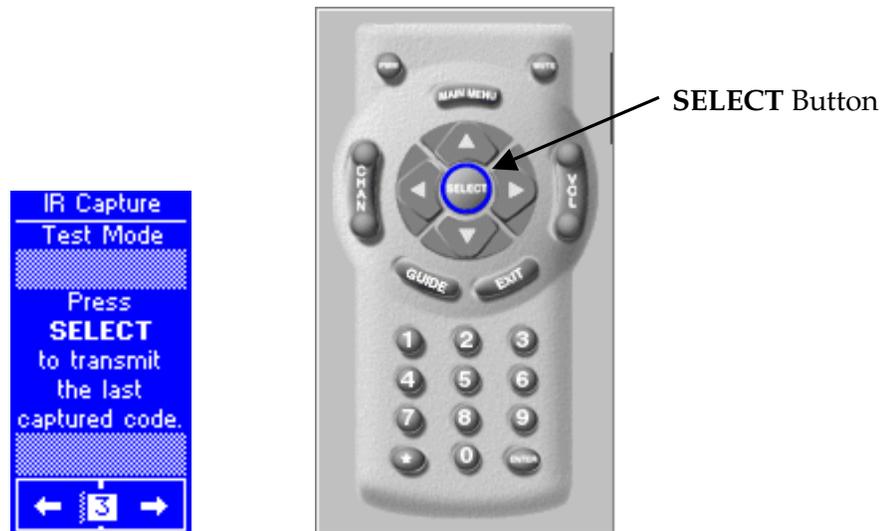
HOW TO TEST INFRARED COMMANDS

After the *TheaterTouch* has learned a command, you can test it to make sure it behaves properly.

1. Press the **SELECT** button while in the IR Capture Test Mode on frame 3 of IR Capture page, this will test the last captured IR command.

The command will remain in memory (for testing) until it is overwritten by the next captured command.

2. Make sure you point the *TheaterTouch* at the equipment to be controlled when you press the **SELECT** button.



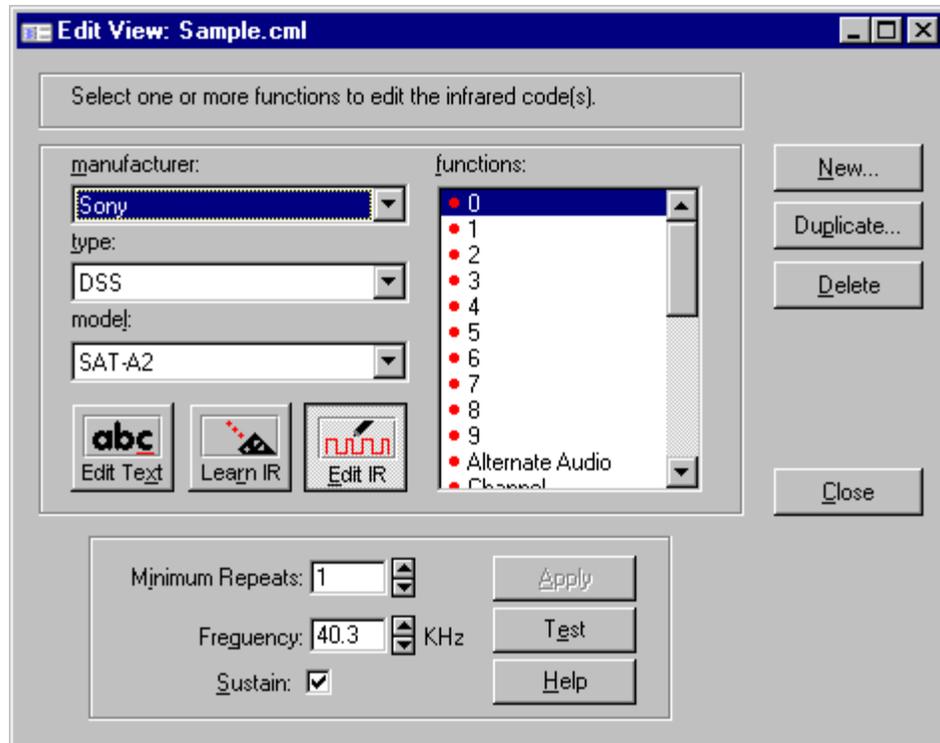
If the command does not work properly, it may need to be edited or re-learned.

3. To close the IR Capture window on the remote press the **Main Menu** button.

HOW TO EDIT INFRARED COMMANDS

Most infrared commands will transmit continuously as long as the remote control key is held down. This means that either the entire command or some part of it is being repeated over and over.

The Infrared Library Manager software allows you to adjust the number of command repeat times and to enable or disable continuous transmission.



Min. Repeats - Enter in this box the number of times that the repeating part of the IR code is sent by the remote. Some infrared receivers need a command to be repeated a certain number of times to work properly, and some may not work properly if the command is repeated at all. Change this setting only if you are having trouble with a command.

Frequency - This box shows the carrier frequency of the IR code. This is set automatically. You should not need to change this value unless directed to do so by Technical Support.

Sustain - Check this box to control whether or not the IR code should repeat if the button is held down. Most infrared codes will transmit continuously as long as the button is held down, but some infrared receivers may not work properly if the command is repeated at all. If the Sustain button is checked, the code will be transmitted for as long as the button is held down, or the **Minimum Repeat** times, whichever is greater. If the Sustain button is not checked, the code will be transmitted only the **Minimum Repeat** number of time regardless of how long the button is held down.

Apply – Use this to save any changes you have made.

Test – Use this to test any changes you have made to a command. Make sure to have the *TheaterTouch* hooked up to the computer with the serial cable and have the remote in **Test IR Mode** on frame 3 of the **IR Capture** page in the Control Panel.

Chapter 7. Image Editors

The *TheaterTouch Designer* software comes with two additional programs for creating custom graphics. These programs are very similar in appearance and functionality and both programs can be accessed from the **Library** menu within the *TheaterTouch Designer* program.

The **Button Bitmap Editor** is for creating and editing button bitmaps for such things as channel and transport icons.

The **Custom Button Editor** is for creating and editing custom buttons for such things as company logos or complex groups of controls.

THE DIFFERENCE BETWEEN CUSTOM BUTTONS AND BITMAPS

Custom Buttons have several fundamental differences from Bitmaps:

1. Custom Buttons must specify an image of the entire button. Bitmaps are smaller, and therefore can be placed on buttons with the standard border styles.
2. Custom Buttons can contain more than one active button area, so a whole group of related controls can be created as a single Custom Button. Bitmaps are indivisible, and must be placed separately onto individual buttons.
3. Custom Buttons must provide an image for both the Up (normal) and Down (pressed) states of the button. Bitmaps provide only the Up image. The Down image of a Bitmap is created by simply inverting it.
4. Custom Buttons can be any size, up to the entire display size. Bitmaps are limited to a handful of pre-defined sizes.

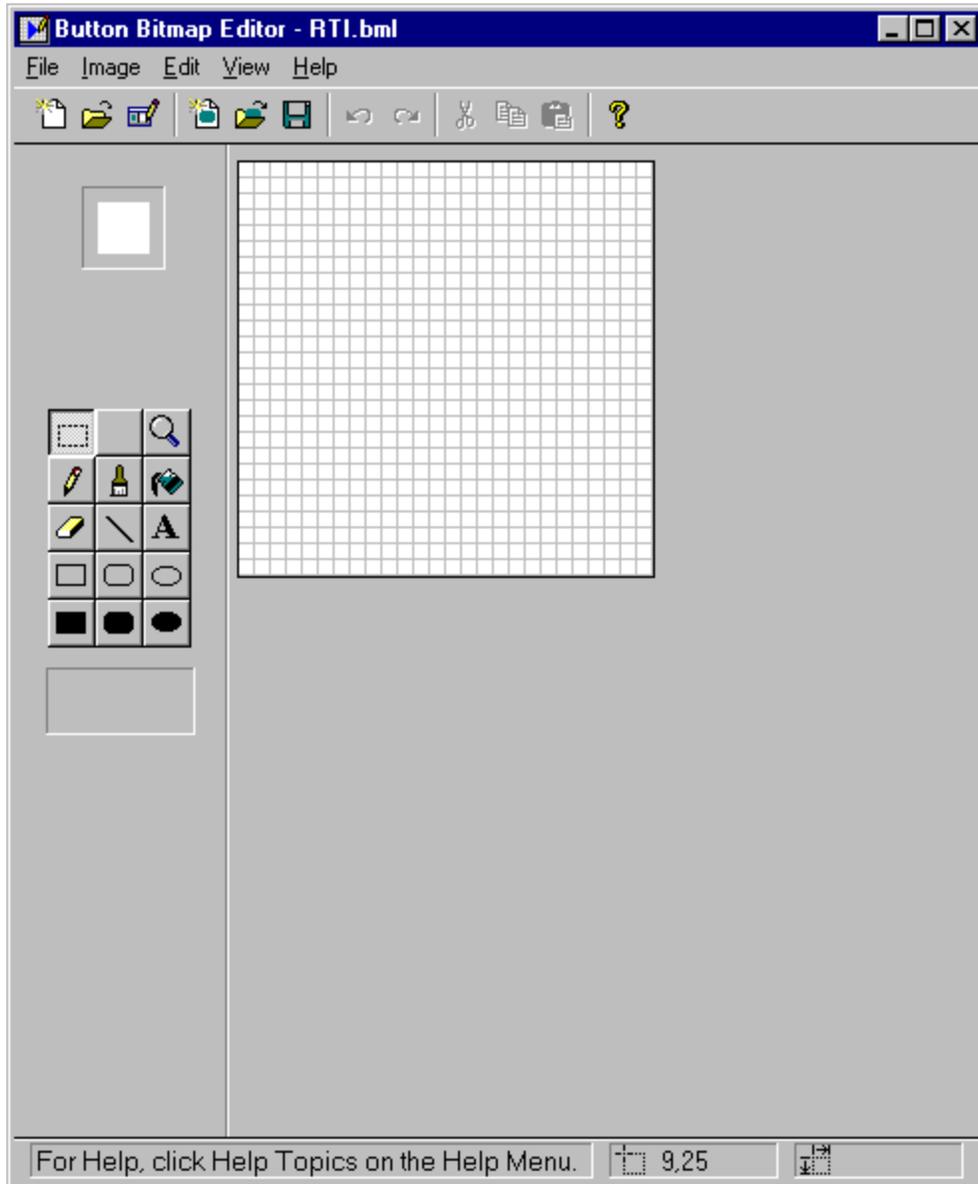
Given these characteristics, Custom Buttons are most appropriate for complex or large groups of controls, such as a customized set of transport controls for a VCR, or a large company logo.

Bitmaps are most appropriate for small pictures that don't need a full button to display, such as TV channel icons or small logos. Since Bitmaps don't have a Down image, they take half as much memory to store in the *TheaterTouch*, so more Bitmaps can be created.

Both Custom Buttons and Bitmaps are stored within Libraries, not as individual files. Before you can design your own Custom Buttons or Bitmaps, you must create a new library file using the **Custom Button Editor** or **Button Bitmap Editor**. The library file can have many Custom Buttons or Bitmaps within it.

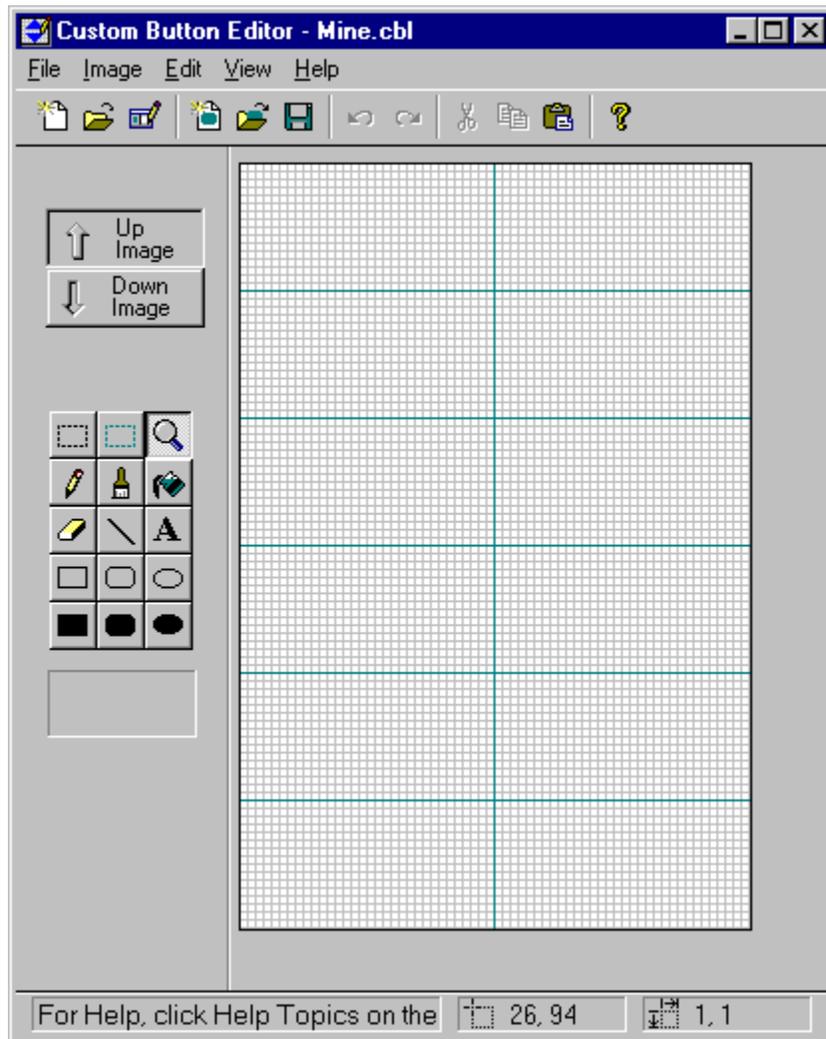
BUTTON BITMAP EDITOR SCREEN

To open the **Button Bitmap Editor**, select **Button Bitmap Editor** from the **Library** menu in the *TheaterTouch Designer* program.



CUSTOM BUTTON EDITOR SCREEN

To open the **Custom Button Editor**, select **Custom Button Editor** from the **Library** menu in the *TheaterTouch Designer* program.



TOOLBAR

The toolbar provides instant access to commonly used *Button Bitmap Editor* and *Custom Button Editor* functions.



Create New Library Command – Use this command to create a library to hold your custom buttons or bitmaps. The built in libraries that come with the software are read-only and new images cannot be saved to them. This command should only be used when a new library is desired. If you want to create a new image, use the **Create New Image Command**.



Open Library Command – Use this command to open existing libraries. The currently open library, if any, will be closed.



Edit Library Command – Use this command to rename or delete a custom button or bitmap in a library that you created. The built in libraries that come with the software are read-only and images cannot be edited. This command is not available unless a Bitmap Library is open.



Create New Image Command – Use this command to create a new image in the currently open library in the **Bitmap Editor**, the **New Bitmap Size** dialog will be displayed, where you can select the size for the new Bitmap. The built in libraries that come with the software are read-only and new images cannot be saved to them.



Open Image Command – Use this command to open an existing image in the currently open library for editing. When you choose the **Open Image** command, the **Open Image** dialog box is displayed to allow you to select which image to edit. This command is not available unless a Bitmap Library is open.



Save Image Command – Use this command to save the current image to the currently open library. If the image has already been saved, this command updates the existing version. If the image has never been saved before, this command is the same as the Image **Save Image As** command, and displays the **Edit Title** dialog for you to enter a name. This command is not available unless a library is open and an image is being edited.



Undo Command – Use this command to reverse the last change you made to the image. Choose the **Undo** command again to reverse the previous change. A maximum of 64 changes are reversible with the **Undo** command. The **Undo** command can only reverse editing changes to the current image. It cannot undo changes to a library, and the **Undo** information is destroyed when the image is closed or the view is toggled between the Up and Down images in the *Custom Button Editor*.



Redo Command – Use this command to cancel the effect of the last **Undo** command. Choose the **Redo** command again to cancel the next Undo. A maximum of 64 changes can be canceled with the **Redo** command. The **Redo** command can only cancel Undo commands to the current image. The Redo information is destroyed when the image is closed, when the view is toggled between the Up and Down images, or when other editing changes are made to the image.



Cut Command – Use this command to move the selected sections to the Clipboard, this replaces the selection with solid white. You can use this to move images between the Button Bitmap Editor and the Custom Button Editor.



Copy Command – Use this command to copy selected sections to the Clipboard. This command does not alter the current image. You can use this to move images between the Button Bitmap Editor and the Custom Button Editor.



Paste Command – Use this command to place previously cut or copied sections from the clipboard back onto the touchscreen grid and switches the Button Bitmap Editor or Custom Button Editor into **Selection** mode. You can drag the pasted sections to the desired position on the page. You can use this to move images between the Button Bitmap Editor and the Custom Button Editor. This command is not available if the data on the Clipboard is not in bitmap format.



Help Topics – Use this command to open the **Help Topics** dialog box for more help.

TOOL PALETTE

The Tool Palette provides access to all the drawing tools used by the *Button Bitmap Editor* and *Custom Button Editor*.



Selection Tool - The **Selection Tool** is used to define a rectangular selection region on the image. To define a selection, click the left mouse button in the Drawing Area where one corner of the selection rectangle should be placed, drag the mouse to the opposite corner, and release the mouse button.



Button Selection Tool (*Custom Button Editor* only) - The **Button Selection Tool** defines the active button areas on a Custom Button image. To define a button selection, click the left mouse button in the Drawing Area where one corner of the selection rectangle should be placed, drag the mouse to the opposite corner, and release the mouse button. To remove an existing button selection, place the mouse cursor inside of the selection you wish to remove and click the right mouse button.



Zoom Tool - The **Zoom Tool** is used to magnify portions of the image. Click the left mouse button over a spot in the Drawing Area to “Zoom In” (make the image larger) or click the right mouse button over a point to “Zoom Out” (make the image smaller). The **Zoom** commands on the **View** menu can also be used to change the Zoom level.



Pencil Tool - The **Pencil Tool** is used to color individual pixels on the image. Click the left mouse button in the Drawing Area to turn the pixel under the Pencil point black, and click the right mouse button to turn the pixel white.



Brush Tool - The **Brush Tool** acts like the Pencil Tool, but colors a larger portion of the image. The Brush Size, the size of the shape that the Brush draws, can be changed by clicking on a different sized brush in the rectangular area below the drawing tools, or by choosing a size from the Brush Size menu under the View menu. Click the left mouse button in the Drawing Area to turn the pixels under the Brush black, and click the right mouse button to turn the pixels white.



Fill Tool - The **Fill Tool** is used to color large portions of the image. Several Fill Patterns are available in the rectangular area below the drawing tools. To use the Fill Tool, choose the desired Fill Pattern, and then click the left mouse button inside of the area to fill. The Fill Tool will color the image with the Fill Pattern in all directions until it encounters a black line or the edge of the image. If the fill is to be contained to the inside of a shape, be sure that there are no gaps in the shape's border.



Eraser Tool - The **Eraser Tool** is identical to the Brush Tool except that clicking the left mouse button draws in white, and clicking the right mouse button draws in black.



Line Tool - The **Line Tool** is used to draw straight lines on the image. To draw a black line, click and hold the left mouse button in the Drawing Area where one end of the line should go, move the mouse to the other end of the line, and release the mouse button. To draw a white line, follow the same steps but click the right mouse button instead of the left.



Text Tool - The **Text Tool** is used to place text on the image. To place text, click the left mouse button in the Drawing Area, and the **Place Text** dialog will appear. Enter the desired text in the dialog and click OK. The text will appear in a blue selection rectangle, where it can be placed precisely on the image.



Rectangle Tool - The **Rectangle Tool** is used to draw rectangles on the image. Click the left mouse button in the Drawing Area where one corner of the rectangle should be placed, drag the mouse to the opposite corner, and release the mouse button. To draw a white rectangle, follow the same steps but click the right mouse button instead of the left. The portions of the image in the center of the rectangle are not affected by this tool.



Rounded Rectangle Tool - The **Rounded Rectangle Tool** is used to draw rectangles with rounded corners on the image. The radius of the corners is the same as that of "Radius" buttons on the *TheaterTouch*. Click the left mouse button in the Drawing Area where one corner of the rounded rectangle should be placed, drag the mouse to the opposite corner, and release the mouse button. To draw a white rounded rectangle, follow the same steps but click the right mouse button instead of the left. The portions of the image in the center of the rounded rectangle are not affected by this tool.



Circle Tool - The **Circle Tool** is used to draw circles and ovals on the image. Click the left mouse button in the Drawing Area where one corner of the imaginary rectangle that bounds the circle should be placed, drag the mouse to the opposite corner, and release the mouse button. To draw a white circle, follow the same steps but click the right mouse button instead of the left. The portions of the image in the center of the circle are not affected by this tool.



Filled Rectangle Tool - The **Filled Rectangle** Tool is used to draw rectangles filled with a Fill Pattern on the image. Several Fill Patterns are available in the rectangular area below the drawing tools. To use the **Filled Rectangle** Tool, choose the desired Fill Pattern, click the left mouse button in the Drawing Area where one corner of the rectangle should be placed, drag the mouse to the opposite corner, and release the mouse button. To draw a solid white rectangle, follow the same steps but click the right mouse button instead of the left.



Filled Rounded Rectangle Tool - The **Filled Rounded Rectangle** Tool is used to draw rectangles with rounded corners filled with a Fill Pattern on the image. Several Fill Patterns are available in the rectangular area below the drawing tools. To use the **Filled Rounded Rectangle** Tool, choose the desired Fill Pattern, click the left mouse button in the Drawing Area where one corner of the rectangle should be placed, drag the mouse to the opposite corner, and release the mouse button. To draw a solid white rounded rectangle, follow the same steps but click the right mouse button instead of the left.



Filled Circle Tool - The **Filled Circle** Tool is used to draw circles and ovals filled with a Fill Pattern on the image. Several Fill Patterns are available in the rectangular area below the drawing tools. To use the **Filled Circle** Tool, choose the desired Fill Pattern, click the left mouse button in the Drawing Area where one corner of the imaginary rectangle bounding the circle should be placed, drag the mouse to the opposite corner, and release the mouse button. To draw a solid white circle, follow the same steps but click the right mouse button instead of the left.

UP IMAGE-DOWN IMAGE TOOL (Custom Button Editor Only):



Click on the **Up Image** button to display the Up Image in the Drawing Area, or click on the **Down Image** button to display the Down Image.

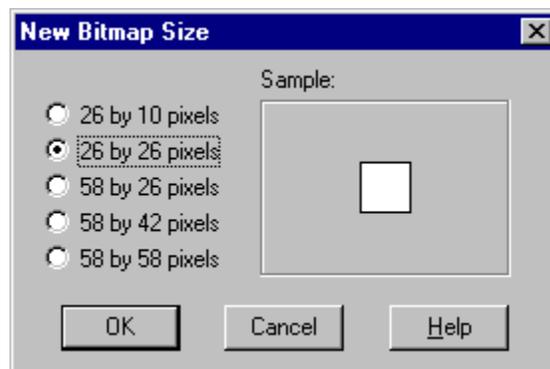
All Custom Buttons have two totally separate images, an Up image, which represents the button in its normal state; and a Down image, which represents the button in its pressed state. The Up image is the picture that is normally displayed by the *TheaterTouch*, unless the button has its **Reversed** property set, in which case the Down image is normally displayed.

In most cases, you will find it easiest to create the Up image first. As a starting point for creating the Down image, you may want to select the whole Up image, copy it to the **Clipboard**, switch to the Down image, and paste the image from the **Clipboard**.

At this point, you can use the editor to modify the image you pasted to make it the Down image. If a simple reversal is all you need, the **Invert Selection** command on the **Edit** menu will do the trick.

NEW BITMAP SIZE DIALOG BOX (Button Bitmap Editor Only):

The **New Bitmap Size** dialog box opens when you select the **Create New Image** command. You can choose from the five sizes listed in the dialog box, a sample of the size will be displayed in the **Sample** section.



26 by 10 pixels = 1 section wide by 1 section high, which is the smallest button bitmap size.

26 by 26 pixels = 1 section wide by 2 sections high, which is the standard channel icon size.

58 by 26 pixels = 2 sections wide by 2 sections high, which is one-third of the touchscreen

58 by 42 pixels = 2 sections wide by 3 sections high, which is half of the touchscreen.

58 by 58 pixels = 2 sections wide by 4 sections high, which is two-thirds of the touchscreen.

Chapter 8. Troubleshooting

If you have difficulty with your *TheaterTouch* universal system controller, read through these troubleshooting tips and common questions before contacting technical support.

If you continue to have difficulties, do not hesitate to contact technical support. See **chapter 9** for more information on contacting RTI.

DISPLAY IS DIM, BLANK OR UNREADABLE

Make sure the battery pack is snapped on the remote properly and that the battery is charged.

Try adjusting the contrast of the touchscreen on the **Control Panel** page of the remote. By nature, the contrast of an LCD screen changes with temperature, so if the remote is cold the display will be dark and will lighten as it warms. (Refer to Chapter 2 for more details)

The remote may have timed out, turning off the display. You can change the **Time Out** time on the **Control Panel** page of the remote to your liking. (Default time is 10 seconds) (Refer to Chapter 2 for more details)

COMMUNICATION PROBLEMS

Make sure the **Computer Link** button on frame 3 of the **Control Panel** page of the *TheaterTouch* is pressed before beginning the communication operation.

Make sure you are using the programming cable that was supplied with the unit and that both ends are connected securely.

If the only serial port on your computer has a serial mouse plugged into it, you can disconnect the mouse and use that port with the *TheaterTouch Designer* software. If you do this, you **MUST** restart Windows with the mouse unplugged before *TheaterTouch Designer* will be able to use the port.

If the serial port you are trying to use is COM 3 or COM 4, make sure that it is not sharing an interrupt request (IRQ) line with COM 1 or COM 2. The default configuration for COM 1 and COM 3 both share IRQ 4, and COM 2 and COM 4 both share IRQ 3. Contact your computer manufacturer for more information on configuring your serial ports.

If you are trying to use the second serial port on your computer, it is possible that it is disabled in the computer's CMOS (or BIOS) setup. Consult your computer's documentation or contact your computer manufacturer for more details.

If your computer is a notebook or laptop, be sure that the external serial port is enabled properly. Some laptops, especially (but certainly not limited to) IBM ThinkPads, have their external ports disabled by default.

- If your computer has an IrDA infrared port, there may be a setting where you can choose between the infrared port and the serial port.
- Some portable computers with Advanced Power Management disable the external serial ports to conserve battery power.
- Some with PCMCIA card sockets reserve the COM 2 connector for use with a PCMCIA card.
- You may need to run your computer's setup or configuration program to enable the port. Consult your computer's documentation or contact your computer manufacturer for more details.

Make sure no other software running on your computer is trying to access the serial port. If you have a PDA (such as a 3COM Palm Pilot or Apple Newton), scanner (such as a Visioneer PaperPort), graphics tablet, fax modem or other serial devices that plug into the same serial port, you need to disable its software and restart Windows before *TheaterTouch Designer* can use that serial port.

If you have an internal modem and an external COM port at the same address, the external COM port will not work and must be reconfigured. For example, if the internal modem is set to use COM 2, the computer's built in COM 2 port will not function correctly.

Use the **Auto Detect** option in the Communication Setup dialog box. Use the **Set COM Port** command on the **Options** menu to display the Communication Setup dialog box and then click the **Auto Detect** command button to determine which serial port the remote is connected to. The serial port on your computer may be mislabeled.

If you are communicating with the *TheaterTouch* and the transfer fails **after** some data has been transferred, your computer may not support *TheaterTouch Designer's* high-speed communication protocol. Use the **Set COM Port** command on the **Options** menu to display the Communication Setup dialog box and select the "Medium" or "Low" communication speed.

INFRARED PROBLEMS

The *TheaterTouch* and *TheaterTouch Designer* software are compatible with infrared (IR) commands with carrier frequencies between 15kHz and 460kHz. This covers the vast majority of remotes available to date, including Bang & Olufsen® (most of which use 455kHz) and Vidikron® (some of which use 333kHz).

However, some older Pioneer® Elite remotes have a carrier frequency of 1.125MHz and are not compatible with most IR products, including the *TheaterTouch* and *TheaterTouch Designer* software. You can however use IR commands from regular (non-Elite) Pioneer® remotes, which have a carrier frequency of 40kHz. These regular Pioneer® IR commands operate the basic functions of the Elite products.

When learning IR commands, use fresh batteries in the donor remote. Even if the donor remote still operates the equipment, using fresh batteries will ensure good, strong, clean signals.

- Keep ambient light to a minimum. Avoid bright overhead lighting such as fluorescent and neon lighting or direct sunlight.
- Make sure the donor remote is positioned properly. The *TheaterTouch* has a signal level display that indicates when the donor remote is too close or too far away from the learning window. Just the **Signal** box should light (go dark) when you have the proper level.
- Once you have proper alignment, do not move either the *TheaterTouch* or the donor remote until done learning all the commands you wish to learn.
- Because every remote is different, you must go through the alignment procedure every time you learn any new commands to insure the best possible range and consistency of each IR command.

If a learned command is not working properly, try relearning the command making sure to go through the entire alignment procedure.

If you are using an IR repeater system, make sure it is working flawlessly with the donor remote, if not you need to fix or repair the IR system. The *TheaterTouch* remote even with its advanced features cannot overcome these kinds of problems.

If you are still having problems, try using the **Edit IR** function in the **Infrared Library Manager** to adjust the frequency up or down in small steps you should retest the command after each change. This can be done by clicking on the **Test** command button on the bottom of this page.

UNABLE TO LEARN COMMANDS

If for some reason you are unable to learn commands into the *TheaterTouch*, or you cannot get commands to work, contact Technical Support to see if we can help you.

You may wish to check our web site to see if the codes are already available.

If need be we can try to learn the commands for you at our factory by sending us the donor remote.

If successful, we can send you the commands via E-Mail or on diskette so you can insert them into your remote file. It will also be posted on our web site for others to use.

MACRO PROBLEMS

If you are having problems with missed commands in macros but the IR commands work fine when placed on individual buttons try editing the **Minimum Repeats** in the **Macro Editor** to increase the number of times the command is repeated.

Click on the **Edit Macro** tool from the **Tools** dialog box on the bottom of the main screen, click on the button on which the macro you are having trouble with is. When the **Edit Macro** dialog box opens, double-click on the specific IR command you are having the trouble with, when the **Edit Infrared Command** dialog box opens, change the number of repeats to 4 or 5 to start with and if that doesn't work, bump it up to 7 or 8.

As always, when you make any changes to your file, be sure to send the new file to the remote and thoroughly test your changes.

Minimum Repeats is usually set between 0 and 3, but some commands may need to be repeated more times. You can set the number of repeats as high as you need to get consistent results.

Chapter 9. Service and Support

UPDATES AND NEW PRODUCTS

For news about the latest updates, new product information and accessories, please visit our web site at:

www.TheaterTouch.com

CONTACTING REMOTE TECHNOLOGIES INCORPORATED

For general info, you can contact RTI at:

Info@rticorp.com

Remote Technologies Incorporated

Tel. (612) 253-3100

Fax (612) 253-3131

www.rticorp.com

RTI TECHNICAL SUPPORT

At RTI, customer service and satisfaction is an utmost priority. If you are encountering any problems or have a question about your RTI product, please contact RTI Technical Support for assistance.

RTI provides technical support by telephone, fax or E-mail. For the highest quality service, please have the following information ready, or provide it in your fax or E-mail.

- ◆ Your Name
- ◆ Company Name
- ◆ Telephone Number
- ◆ E-mail Address
- ◆ Product model and serial number (if applicable)

If you are having a problem with hardware-note the equipment you are using, what the problem is you are having and any troubleshooting you have tried.

If you are having a problem with software-note what version software you are using, the operating system on your PC, what the problem is you are having and any troubleshooting you have tried.

If you are calling in regards to a software or programming question or problem, please be at you computer when you place your call, this will considerably speed up the troubleshooting process.

For technical support or assistance with your *TheaterTouch* remote, software or accessories, contact RTI at:

(612) 253-3137

support@rticorp.com

www.rticorp.com/support

For questions regarding service or repair of your *TheaterTouch* remote control, contact RTI at:

(612) 253-3136

service@rticorp.com

www.rticorp.com/service

Please do not return products to Remote Technologies Incorporated without return authorization.

SHIPMENT OF REMOTE FOR SERVICE

Remote Technologies Incorporated will pay all labor and material expenses for all repairs covered by this warranty. If necessary repairs are not covered by warranty, or if a unit is examined which is not in need of repair, you will be charged for the repairs or examination.

If it is necessary to ship the *TheaterTouch* system controller for service:

Please pack it securely and we suggest that it be insured.

Do not include accessories such as power cords or manuals.

Please back up your internal program. Although every effort is made to save this data and reload it after repair, Remote Technologies Incorporated is neither liable for its loss, nor responsible for providing a back up for you.

You must pay any shipping charges incurred in getting your *TheaterTouch* system controller to Remote Technologies Incorporated. Remote Technologies Incorporated will pay reasonable return shipping charges via a carrier of our choice to any destination within the United States if the repairs are covered under warranty.

A copy of the original dated sales receipt must be provided whenever warranty service is required. You will need this receipt to establish the date of purchase.

Specifications

| | |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Power: | 4.8 VDC, 900 mAH NiMH Battery Pack |
| Power Management: | Automatic on/off (tilt switch) |
| Infrared Control Range: | 30 Feet (9.1m) @ 60 Degrees |
| Infrared Frequency Range: | 15kHz – 460kHz (learning and transmission) |
| Radio Frequency Control Range: | Up to 100 Feet (30.5m) (with optional IRF-6 System Interface) |
| Radio Frequency Carrier: | 418MHz (U.S. Model) |
| Operating Temperature: | +32°F to +122°F (+0°C to +50°C) |
| Operating Humidity: | 5% to 95% Non-condensing |
| Touch Panel Display: | High-resolution STN LCD Digital Matrix 128 x 64 pixels (Blue on Paper White) Touchscreen never needs calibrating |
| Display size (HW): | 2.4 in. x 1.3 in. (61mm x 33mm) |
| Backlights: | White EL (Display), Blue EL (Keypad) |
| Nominal Run Time on Full Charge: | 6.5 hours minimum, continuous use (10 to 15 days on average use) |
| Standby Time on Full Charge: | 30 Days |
| Battery Charge Time: | 3-4 Hours |
| Total System Memory: | 128K Bytes Flash (non-volatile) memory |
| Device Capability: | Total number of devices is limited only by memory |
| Macro Capability: | Up to 64 steps in a single macro -Total number of macros is limited only by memory -Macro capability on every button |

TheaterTouch System Controller

| | |
|-------------------------------------|----------------------------------------------------------------------|
| Communications: | PC compatible RS-232 port |
| TheaterTouch Device ID: | 10 unique ID codes available |
| Optional IRF-6 System Interface ID: | 10 unique ID codes available |
| Dimensions- Length: | 9.9 in. (251mm) |
| Width: | 2.4 in. (61mm) body, 2.9 in. (74mm) center |
| Height: | 1.1 in. (28mm) |
| Enclosure: | High impact molded ABS with textured finish |
| Weight: | 11 oz. (312g) with battery pack 8 oz. (227g) without battery pack |

All specifications subject to change without notice.

Appendix

SOFTWARE LICENSE AGREEMENT

This is a legal agreement between you (either an individual or an entity) and Remote Technologies Incorporated. By installing the software accompanying this guide you are agreeing to be bound by the terms of the agreement. If you do not agree to the terms of this agreement, promptly return the software CD-ROM and the accompanying items to the place you obtained them for a full refund.

GRANT OF LICENSE. This License Agreement permits you to use one copy of the Remote Technologies Incorporated software program (the "SOFTWARE") on a single computer. The SOFTWARE is in "use" on a computer when it is loaded into temporary memory (i.e. RAM) or installed into permanent memory (e.g. hard disk, diskette, CD-ROM or other storage device) of that computer. However, installation on a network server for the sole purpose of internal distribution shall not constitute "use" for which a separate license is required, provided you have separate license for each computer to which the SOFTWARE is distributed.

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Index

—A—

adjust contrast. *See* control panel

—B—

batteries

- charging, 5
- installing, 6
- using, 5

beeper. *See* control panel

bitmaps

- placing, 22

Bitmaps

- difference from Custom Buttons, 77

Button Bitmap Editor

- creating a new bitmap, 85
- screen, 78

Button Bitmas Editor. *See* Image Editors

button properties

- disabled, 51
- editing, 51
- editing multiple, 57
- Infrared frequency, 55
- Infrared minimum repeats, 55
- Infrared sustain, 55
- IRF-6 IR outputs, 54
- IRF-6 Send this code, 54
- output type, 53
- pause, 52
- reversed, 51
- RF ID code, 53
- secured, 52
- special functions, 52

buttons

- adding, 20
- changing styles, 33
- copying, 34
- cutting, 34
- defined, 20
- deleting, 20
- editing text, 21
- moving, 35
- pasting, 34
- resizing, 35
- selecting, 34

—C—

change passcode. *See* control panel

Channel Macro Wizard. *See* macros

charger. *See* batteries

- permanently mounting, 6

cleaning the TheaterTouch, 4

clear all. *See* control panel

COM Port. *See* communications

commands

- adding to buttons, 24
- removing from buttons, 26

communications

- sending, 29
- setting up, 28
- troubleshooting. *See* troubleshooting

computer link. *See* control panel

contacting RTI

- general, 91
- service, 92
- technical support, 91

contents, 2

contrast. *See* control panel

control panel, 8

- adjust contrast, 9
- beeper, 10
- change passcode, 12
- clear all, 14
- computer link, 13
- IR capture, 14
- program lockout, 11
- tilt switch, 11
- time out, 10

Custom Button Editor. *See* Image Editors

- changing the active image, 84
- defining buttons, 82
- screen, 79

custom buttons

- placing, 35

Custom Buttons

- difference from Bitmaps, 77

—E—

e-mail

- sending the current file, 60

—F—

features, 3

file

- opening, 26
- previewing, 27
- saving, 26

—I—

Image Editors

- copying, 81
- creating new images, 80
- creating new libraries, 80
- cutting, 81
- drawing, 82
- drawing circles, 83
- drawing filled circles, 84
- drawing filled rectangles, 84
- drawing filled rounded rectangles, 84
- drawing lines, 83
- drawing rectangles, 83
- drawing rounded rectangles, 83
- editing libraries, 80
- erasing, 83
- filling areas, 83
- getting help, 81
- opening images, 80
- opening libraries, 80
- overview, 77
- painting, 82
- pasting, 81
- placing text, 83
- redoing changes, 81
- saving images, 80
- selecting, 82
- Tool Palette, 82
- toolbar, 80
- undoing changes, 81
- zooming, 82

IR capture. *See* control panel

IR Learning

- aligning the donor remote, 69
- capturing codes, 71
- hints, 63
- overview, 62
- testing captured codes, 73
- troubleshooting. *See* troubleshooting
- types of codes, 61

IR Libraries

- adding a new remote, 67
 - creating, 64
 - editing commands, 74
 - opening, 66
 - opening the IR Library Manager, 64
 - using the New Remote Wizard, 68
- IR Library Manager
- overview, 61

—M—

macros

- Button Test step, 38
- Channel Macro Wizard, 44
- defined, 36
- deleting, 40
- editing, 36
- editing commands in, 41
- Infrared from Library step, 37
- Infrared from Page step, 37
- Time Delay step, 37
- troubleshooting. *See* troubleshooting

memory usage

- checking, 59
- defined, 59

—P—

page links. *See* pages, linking

pages

- adding, 19
- defined, 19
- deleting, 19
- duplicating, 31
- linking, 23
- merging, 32
- PageWizard, 33
- removing links, 24
- renaming, 31

printing

- screenshots, 58
- system configuration reports, 58

program lockout. *See* control panel

—R—

remote properties, 47

- beeper, 48
- display mode, 47
- IRF-6 output labels, 50
- output type, 49

passcode, 48
power down time, 47
programming lockout, 48
RF ID code, 49
scroll rate, 48
tilt switch, 47

—S—

Self-Downloading .EXE, 60
specifications, 94
System Configuration Report. *See* printing

—T—

technical support. *See* contacting RTI
TheaterTouch Designer
 design hints, 17
 installing, 15

overview, 15
requirements, 2
screen, 16
updates, 15
tilt switch. *See* control panel
time out. *See* control panel
touchscreen
 Main Menu, 8
 overview, 8
troubleshooting, 87
 communications, 87
 display, 87
 IR codes, 89
 macros, 90

—U—

unpacking, 1



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