

T1

Universal System Controller



T1

Operation Guide

v1.0



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.

FCC ID: MMURTI0200

CAN: 31661032251

BATTERY DISPOSAL



Li-ion

For environmental reasons, your *T1* universal system controller uses “environmentally sound” Lithium-ion rechargeable batteries. These 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.

SAFETY SUGGESTIONS

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

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

Power Sources. Connect the docking station only to the power supply that was included with the unit. Recharge the battery only with the docking station that was included with 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 power 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 in the operating guide.

Servicing. Do not attempt any service beyond that described in the operating guide. 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 does not appear to operate normally or exhibits a marked change in performance.

LIMITED WARRANTY

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 distributor.

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 this Guide.
3. Repair or attempted repair by anyone other than Remote Technologies Incorporated.
4. Causes other than product defects, including lack of skill, competence or experience of user.
5. Shipment of this product (claims must be made to carrier).
6. 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 T1 needs service, please contact Remote Technologies Incorporated by telephone, fax or e-mail for return information. *Please do not return products to RTI without return authorization.*

DISCLAIMER

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Chapter 1. Welcome

Thank you for purchasing the *T1* universal system controller. The *T1* provides the perfect selection of buttons to operate today's sophisticated home theaters. It is the ideal solution to enable easy control of any media system, no matter how complex, at an affordable price. The *T1* features the same programming power and flexibility as RTI's *T2+* controller, but replaces the touchpanel display with 21 additional keypad buttons.

The *T1* takes complete control of the home theater, replacing all other remotes. It features eight source buttons and four general purpose buttons with interchangeable keycaps. In addition to the 12 keycap buttons, 34 backlit keypad buttons allow easy access to frequently used functions.

Programming is easy and convenient thanks to the Windows® based *TheaterTouch Designer*™ software. Because RTI's remote control products are sold only through professional installers/programmers, and never directly to consumers, it is our philosophy to not incorporate programming capability directly into our products. Instead, we are committed to providing our dealers with the hardware and software tools that allow them to create re-usable programming databases and templates in the most efficient and reliable way possible.

The *T1* is capable of both infrared and radio frequency output. Optional RF receivers are available for transmission through walls and cabinets. The RF receivers connect to an RTI control system for the ultimate in control reliability and flexibility. RTI control systems provide many advanced features such as IR routing, local macro execution, power sensing, and RS-232 control.

COMPATIBILITY NOTE

The *T1* 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 virtually all of the remotes that exist to date.

UNPACKING AND INSPECTION

After unpacking your new *T1* universal system controller, save all of the packing materials in case you ever have to ship the unit.

Thoroughly inspect the *T1* 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 distributor.

PRODUCT CONTENTS

Contents within the box include the following items:

- One (1) *T1* universal system controller
- One (1) Docking station.
- One (1) Universal power supply for docking station
- Three (3) Rubber keycap keypads.
- One (1) Operation guide.

SOFTWARE REQUIREMENTS

The minimum system requirements needed to run the *TheaterTouch Designer* software are as follows:

- Windows 98SE[®], Windows ME[®], Windows 2000[®], Windows XP[®] or later version.
- A free USB port.
- At least 20 Megabytes of free disk storage.
- Screen resolution of 800x600 with 256 colors.
- A mouse is required.
- Optional printer for printing reports.

Chapter 2. Introduction

FEATURES

The *T1* provides superior quality and reliability as well as these specific features:

- A replacement for all of the remote controls in a home theater. The *T1* can reproduce all of the commands of almost any other infrared remote control.
- Customizable button keycap labels for eight source buttons and four general purpose buttons. The *T1* button labels can be changed to match each installation.
- 34 pre-defined keypad buttons that allow easy access to frequently used functions.
- A bright blue backlight. The keypad is easy to read in any lighting condition.
- A light-weight, low-profile Lithium-Ion rechargeable battery pack. The *T1* 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 *T1* 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 input, turns on the DVD player, dims the lights, and starts playing a movie.
- Both infrared (IR) and radio frequency (RF) output options. You can even use both options on the same unit.
- A built in motion sensor can automatically turn the unit on when it is picked up.

- A USB port for communication with the *TheaterTouch Designer* programming software.
- Non-volatile flash memory. The *T1* will not lose any programmed data when the battery is removed.
- One-year parts and labor warranty
- Available only to system integration professionals.

IMPORTANT NOTES

Please read these important notes about the *T1*:

- The *T1* should be placed in an area where it is around normal room temperature (between 60°F to 90°F).
- Do not let the *T1* get wet. It should not be handled with wet hands or placed in an area where it could get wet.
- Do not subject the *T1* to smoke, dust, or vibrations. The unit may be damaged from excessive shock or vibration.
- Only use the power supply that is provided with the *T1*. Using the wrong type of power supply may result in damage to the battery or electronic components.
- Do not disassemble the unit. The *T1* contains a high voltage backlight circuit that may cause injury if contacted.

CLEANING

Occasional cleaning may be required, depending on use. To clean the *T1*, lightly dampen a lint-free cloth with water or mild detergent and wipe the keypad and outer surfaces.

BATTERY AND DOCKING STATION

The *T1* uses a Lithium-Ion rechargeable battery. This battery does not exhibit any type of “Memory Effect” from being charged too often. Since the *T1* can safely be charged after each use, a docking station is included for convenience. If left out of the docking station, the *T1* will remain in sleep mode for 1 - 2 months before shutting down. At that point the battery must be recharged.

If the *T1* battery capacity is reduced to approximately one hour of remaining run-time, the Status LED will illuminate red while the unit is powered-up.

The *T1* Docking Station can be placed on a flat surface such as a shelf or table, or it can be mounted to a wall using the mounting holes on the back of the unit.

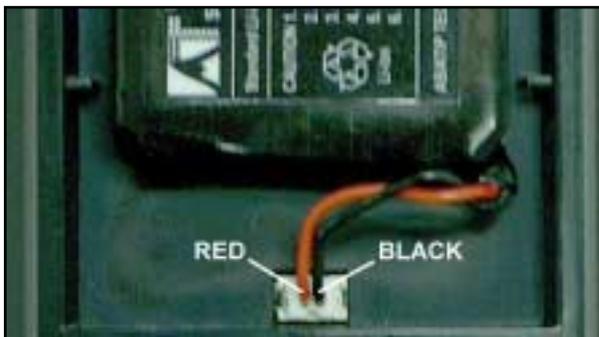
The docking station LED illuminates to indicate a charge in progress. The LED will turn off when the battery in the unit is fully charged.

A fully discharged battery will take approximately 2-4 hours to completely re-charge.

The *T1* can remain in the docking station indefinitely without damage to the battery.

GETTING STARTED

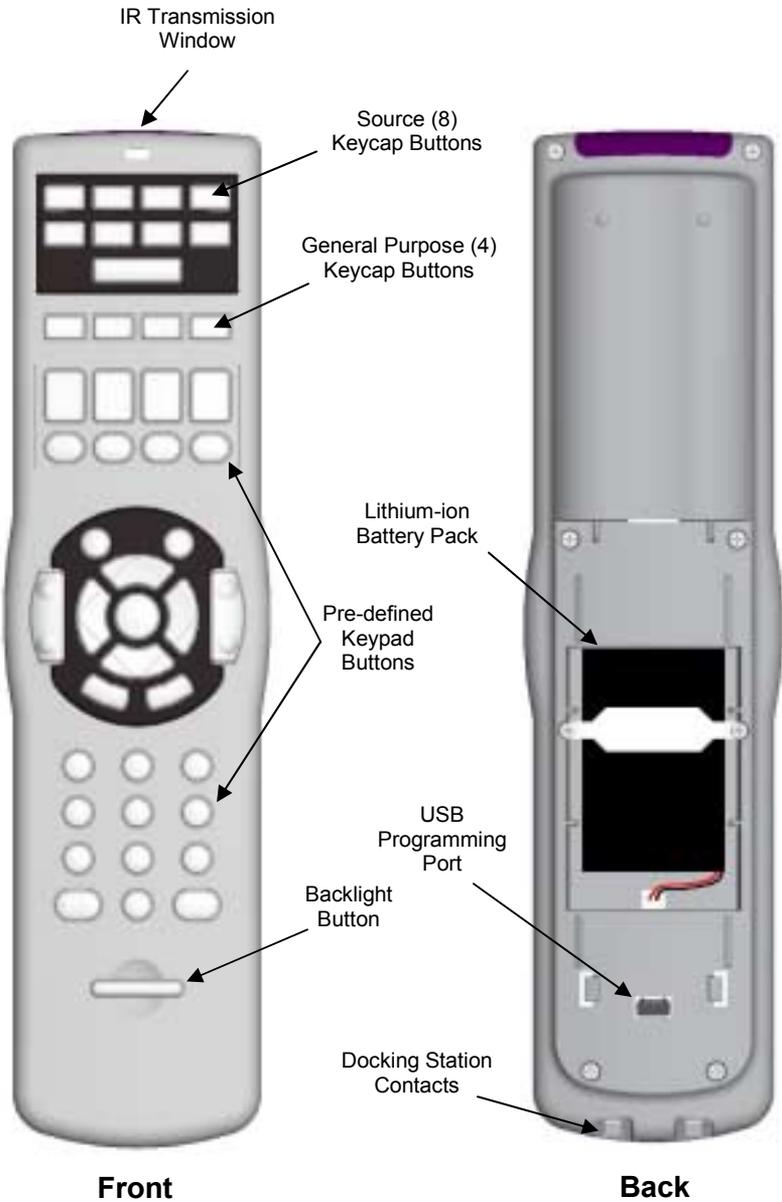
Start by inserting the battery connector into the mating plug on the *T1*. Make sure the connector is oriented properly before attempting to insert it.



T1 Universal System Controller

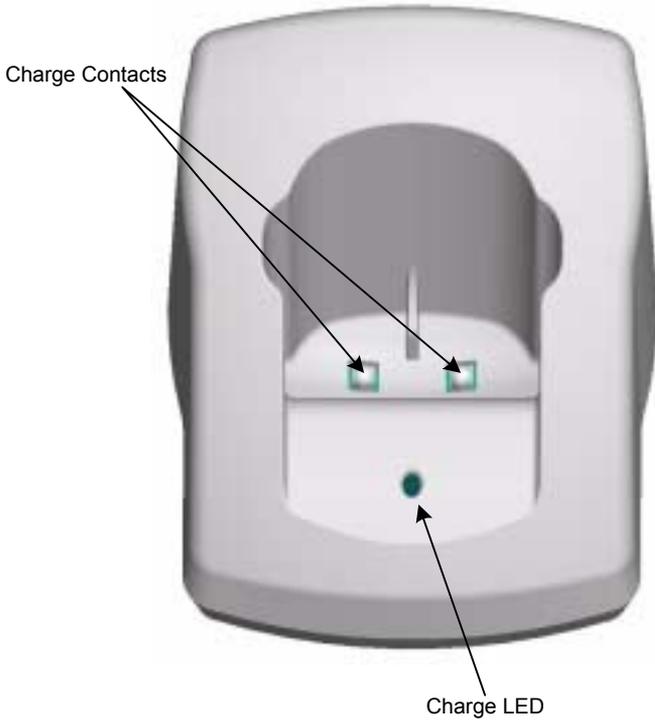
The *T1* is powered-up by touching any area of the display or any keypad button. If the tilt sensor is enabled, picking up the unit will also turn it on.

REMOTE REFERENCE

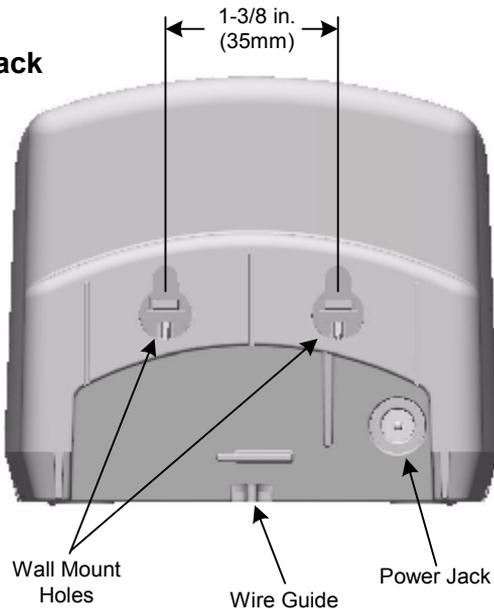


DOCKING STATION REFERENCE

Front



Back



Chapter 3. Operation

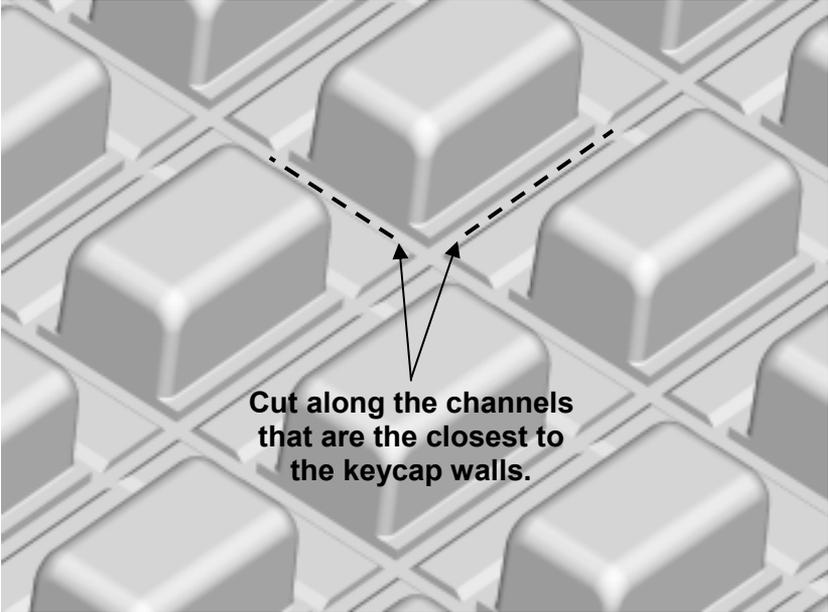
THE SOURCE BUTTONS

The eight source buttons at the top of the *T1* keypad have a special function, so they behave differently from the other buttons. These buttons are used to select the active source “page”. Whenever a source button is selected, all of the other buttons on the keypad will switch to the programming associated with that page. In order to indicate the active page, a blue LED is always illuminated behind one of the source buttons.

Despite their special function, the source buttons can be programmed to run commands or macros in the same way that the other buttons can.

USING THE KEYCAP LABELS

The *T1* includes three sets of 32 keycaps. One of the sets are labels for *Sources*, and two of the sets are labels for *Functions*. The desired keycaps should be individually cut-out with a scissors:



After the keycap is cut-out from one of the sets, simply press it over an empty keycap button. Make sure to press down firmly on the keycap until it is fully seated.

Note: The keycaps can be permanently secured by using an adhesive that bonds to silicon rubber. The following instant adhesive glue works well and is readily available:

Silicon Adhesive: Loctite PRISM® 401 (p/n 40104)

U.S. Resellers: Contact East: # 173-606
McMaster-Carr: # 74765A63
Grainger: # 3KE58

Follow these steps to apply the Loctite #401 adhesive:

1. Apply a thin layer of the adhesive to the entire top surface of the desired keycap button.
2. Press the desired keycap over the button.
3. Press down firmly on the keycap for 15 seconds.

Repeat these steps for each keycap on the *T1*.

PROGRAMMING THE T1

The *T1* is programmed using RTI's *TheaterTouch Designer* software. RTI dealers can download the software for free at:

www.rticorp.com/dealers

A PC running Windows® 98SE or higher with a USB port is required. The required USB cable is included with the RTI *IR-PRO* dealer kit.

Note: The *T1* will not operate normally while connected to a PC's USB port. Make sure you disconnect it from the PC to navigate pages or transmit commands. In addition, the *T1* will not be able to sync with a PC's USB port while it is transmitting a command or running a macro.

Chapter 4. Troubleshooting

If you are having problems with your *T1*, please read these troubleshooting tips before contacting technical support.

If you continue to have problems, see Chapter 5 for more information on contacting RTI technical support.

USB COMMUNICATION PROBLEMS

Verify that your PC is using Windows 2000® or higher. The *TheaterTouch Designer* software requires a USB device driver that may not be installed on earlier versions of Windows.

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

Make sure the PC detects the presence of the T1. If it doesn't, unplug the USB cable, wait for about ten seconds, and plug it in again.

If the download fails after some data has been transferred, try re-sending the program.

IR CODE PROBLEMS

If you are using an IR repeater system, make sure it is working correctly with the original OEM remote. If not, you will need to troubleshoot the IR repeater system.

If you are still having problems, try adjusting the IR code "Minimum Repeats" value in the *TheaterTouch Designer* programming software.

If the IR code is executed inside a macro which contains multiple IR codes, try inserting a small time delay before the problem code. If there already is a delay, try increasing it.

Chapter 5. 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.rticorp.com

CONTACTING REMOTE TECHNOLOGIES INCORPORATED

For general info, you can contact RTI at:

Remote Technologies Incorporated

Tel. (952) 253-3100

Fax (952) 253-3131

info@rticorp.com

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, please note the equipment in your system, a description of the problem, and any troubleshooting you have already tried.

If you are having a problem with software, please note what version you have installed, the operating system on your PC, a description of the problem, and any troubleshooting you have already tried.

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

For **Technical Support** or assistance with your RTI product, contact RTI at:

(952) 253-3137

support@rticorp.com

www.rticorp.com/support

For questions regarding **Service or Repair** of your RTI product, contact RTI at:

(952) 253-3136

service@rticorp.com

www.rticorp.com/service

Please do not return products to RTI without return authorization.

Specifications

Power	3.6 VDC, 1050 mAH Li-Ion Battery Pack
Power Management	Automatic On/Off (tilt switch)
Infrared Control Range	30 Feet (9.1m) @ 60 Degrees
Infrared Frequency Range	15kHz - 460kHz
Radio Frequency Control Range	Up to 100 Feet (30.5m) (with optional receivers)
Radio Frequency Carrier	433MHz
Operating Temperature	+32°F to +122°F (+0°C to +50°C)
Operating Humidity	5% to 95% Non-condensing
Backlight	Blue EL
Nominal Run Time on Full Charge	20 hours continuous use (20 - 30 days average use)
Standby Time on Full Charge	30 Days
Battery Charge Time	3-4 Hours
Total System Memory	256K Bytes Flash (non-volatile)
Device Capability	Total number of devices limited only by memory

Macro Capability	Up to 64 steps per macro Total number of macros limited only by memory Macros allowed on every button
Communications	USB programming port
Dimensions	Length: 9.3 in. (235mm) Width: 2.5 in. (64mm) Height: 1.1 in. (28mm)
Enclosure	High-impact molded ABS plastic.
Weight	7 oz. (200g) with battery pack
Warranty	One Year Parts & Labor (90 days on battery pack)

All specifications are subject to change without notice.

It's Under Control®



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