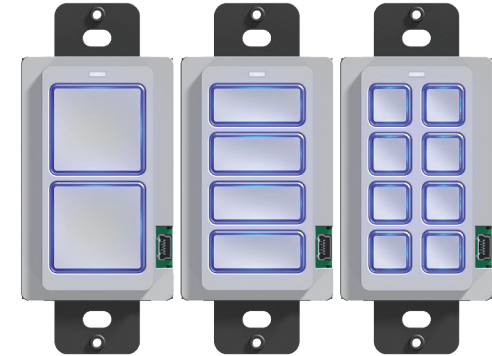




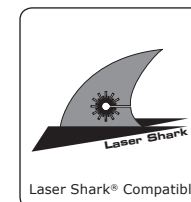
RK1+ In-Wall Keypad - 2/4/8 Button

Reference Guide



Features

- Two, four or eight assignable/programmable buttons.
- Ships with white, black and light almond faceplate/keycap kits.
- Ships with a certificate for one Laser Shark engraved button keycap set.
- User-programmable backlight color.
- Use any standard Decora® type wallplate.
- Primary/secondary configuration allows two keypads to work in conjunction.
- IR output drives up to 1000 feet of wire.
- Ambient light sensor adjusts the backlight brightness automatically.
- Completely customizable and programmable.
- Fits in a single gang electrical outlet box.
- Optional modules/processors provide expanded capabilities such as control via IR, RS-232 and IP.
- USB Programming.



The RK1+ keycaps may be custom laser engraved using the RTI Laser Shark service.

Contacting RTI

For news about the latest updates, new product information, and new accessories, please visit our web site at: www.rticorp.com
For general information, you can contact RTI at:

Remote Technologies Incorporated
5775 12th Avenue East, Suite 180
Shakopee, MN 55379
Tel. (952) 253-3100
Fax (952) 253-3131

Service & Support

If you are encountering any problems or have a question about your RTI product, please contact RTI Technical Support for assistance (see the Contacting RTI section of this guide for contact details).

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

Please do not return products to RTI without return authorization.

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. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

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.
2. This device must accept any interference received including interference that may cause undesired operation.



DECLARATION OF CONFORMITY (DOC)

The Declaration of Conformity for this product can be found on the RTI website at: www.rticorp.com/declaration

Description

Sized for a single gang electrical box, the RK1+ incorporates two, four or eight fully-programmable buttons. For easy integration into any decor, all RK1+ kits include white, black and light almond faceplates and keycap labels. To make the control experience even more intuitive, a certificate for one set of Laser Shark engraved buttons is also included and each button backlight color is configurable. The RK1+ has a built-in IR control system for direct control of electronic systems, while expanded control capabilities including two-way feedback (via button backlight color) are available when it is part of an RTI control system.

Product Contents

Contents within the box include the following items:

- One (1) RK-1+ In-Wall Keypad with White Faceplate (2/4/8 Button)
- Two (2) Additional Faceplates (Black and Light Almond)
- Three (3) Keycap Label Kits (White, Black and Light Almond)
- Two (2) Screws (#6-32)
- One (1) Laser Shark Custom Engraving Certificate
- One (1) Quick Reference Guide

Safety Suggestions

Read and Follow 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.

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.

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.

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:

- 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 has been damaged.

Limited Warranty

RTI warrants its products for a period of three (3) years (one year for included battery packs); or for a period of time compliant with local laws when applicable from the date of purchase from RTI or an authorized RTI 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. 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.

MOUNTING

The RK1+ is designed for flush-mount installations in walls or cabinets. It requires an available mounting depth of 2.0 inches (50mm) from the front surface of the wall. Normally, the RK1+ is mounted in a standard single-gang electrical box or mud-ring.

POWERING THE RK1+

The RK1+ is turned-on by simply applying power to it. The RK1+ will enter an idle mode after a programmed time of inactivity. After entering idle mode, the RK1+ is activated by touching any button. RTI provides two power supply solutions which are sold separately:

- 1) **CB8 Connecting Block:** Wire a Cat-5 cable from the RK1+ Control Port to the RTI CB8 Connecting Block (see diagram).

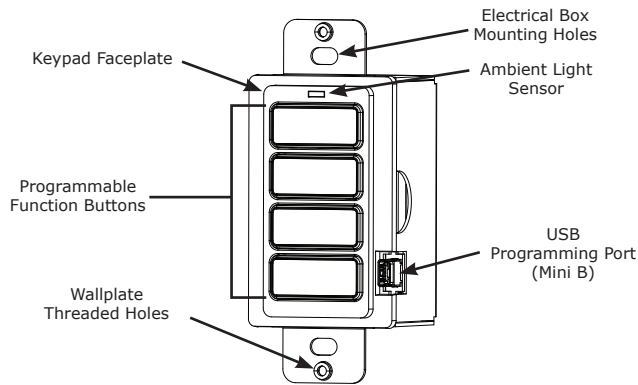
OR

- 2) **Power Supply:** Connect a power supply (+9VDC to +16VDC, .5A) to the "Ground" and "9-16VDC" pins of the Control Port (see diagram).

NOTE: The RK1+ should NOT be powered from an RTI control processor.

RK1+ KEYPAD REFERENCE

RK1+ Front



PROGRAMMING

THE RK1+ INTERFACE

The RK1+ is a flexible, programmable interface. In the most basic configuration, the RK1+ buttons can each be used to execute a single function or "scene". If more functionality is required, the buttons can execute complex macros, jump to other "pages", and change backlight colors to provide status feedback. This level of customization allows almost any type of user interface functionality to be created.

UPDATING FIRMWARE

It is highly recommended that this and all RTI products have the latest firmware installed. The firmware can be found in the Dealer section of the RTI website (www.rticorp.com). Install the firmware using a USB cable (USB A to Mini B).

UPDATING SOFTWARE

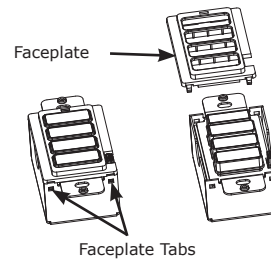
RTI's Integration Designer data files can be downloaded to the RK1+ using a USB cable (USB A to Mini B).

BUTTON LABELS

The RK1+ includes a set of labels for attaching to the face of each button. The label sheets include a wide variety of function names that are appropriate for most common scenarios. The RK1+ Kit also includes a certificate for one set of custom engraved Laser Shark button keycaps (find details on the rticorp.com dealer section).

THE PROCEDURE FOR ATTACHING LABELS AND KEYCAPS IS:

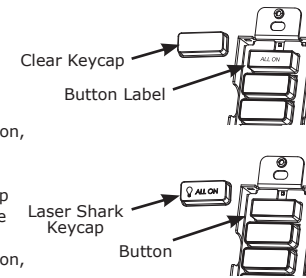
- 1) Use a small screwdriver to release the tabs (shown) and pry off the faceplate.



- 2) Remove the clear keycap.

USING BUTTON LABELS (INCLUDED)

- 3) Center the selected button label within the rubber pocket.
- 4) Replace the clear keycap.
- 5) Repeat the steps above for each button, and then replace the faceplate.



USING LASER SHARK KEYCAPS

- 3) Place the selected Laser Shark keycap over the button and press down. (The clear keycap may be discarded).
- 4) Repeat the steps above for each button, and then replace the faceplate.

CONNECTIONS

CONTROL PORT

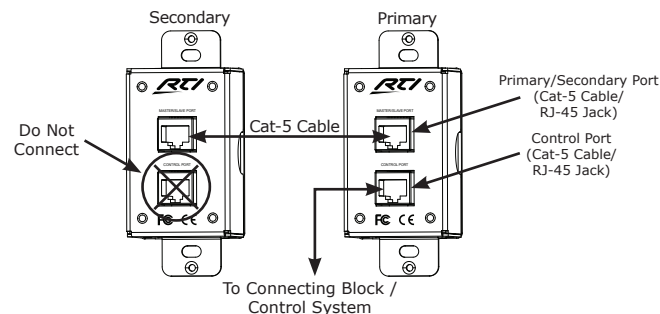
The Control Port on the RK1+ uses a Cat-5 cable with RJ-45 termination. When used in conjunction with an RTI control processor (e.g. RTI XP-6s) and an RTI connecting block (e.g. RTI CB-8), this port serves as the power source for the RK1+ in addition to infrared and RS-485 communication (see diagram for pinout).

USB PORT

The RK1+ USB port (located on the front of the unit beneath the bezel) is used to update firmware and the programming data file using a USB A to Mini B cable.

PRIMARY/SECONDARY PORT

Two RK1+ units can be connected together using a Cat-5 patch cable between the Primary/Secondary ports on each unit. This allows two keypads to sync with each other so they behave like one larger keypad. Any combination of two, four, or eight button RK1 or RK1+ units can be connected together. When configured in this way, only the primary unit should be connected via the Control port (for power, IR, etc.). The secondary unit will derive power and communications from the primary. Only the primary unit should be programmed.



RK1+ BASIC WIRING CONFIGURATIONS

