



# KX2

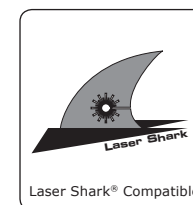
## In-Wall Controller

### Quick Reference Guide



### Features

- Fully customizable 2.8" touchscreen display and twelve assignable/programmable buttons.
- QVGA resolution (240w x 320h) TFT LCD to display custom buttons, text and graphics.
- Integrated 10/100Base-T Ethernet port with Power-over-Ethernet.
- IR output drives up to 1000 feet of wire.
- Proximity sensor automatically wakes the unit up when approached by the user.
- Ambient light sensor automatically adjusts the brightness.
- Integrated mounting wings for easy installation in retrofit installs.
- Fits in a 4"x4" square electrical junction box (See important information reverse side of this page).
- Ships with stylish, low-profile white bezel (Other bezel colors available also).
- Optional modules/processors for voltage sensing, relays and advanced two-way control.
- USB and Ethernet programming.



The KX2 hard buttons (12) may be custom laser etched using the RTI Laser Shark service.

### Description

The KX2 in-wall controller has a clean, sleek design with twelve programmable hard buttons and a 2.8" color touchscreen. The hard buttons and graphic interface are fully programmable using RTI's Integration Designer® software for full control of electronics throughout the building. A built-in infrared output port allows direct control or get two-way control when used with an RTI XP series control processor. In addition, the unit's integrated 10/100Base-T Ethernet port with Power-over-Ethernet (POE) provides the flexibility to accommodate any installation.

### Product Contents

Contents within the box include the following items:

- One (1) KX2 In-Wall Controller
- One (1) Bezel (White)
- Two (2) Mounting Wings
- Twelve (12) Replaceable Keypacs
- One (1) MAC Address Card
- One (1) Drywall Cutout Template
- 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 one (1) year (90 days only 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.

### Contacting RTI

For news about the latest updates, new product information, and new accessories, please visit our web site at: [www.rticorp.com](http://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 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.

**\*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](http://www.rticorp.com/declaration)

## MOUNTING

The KX2 is designed for flush-mount, in-wall installations.

### MOUNTING HEIGHT

The recommended mounting height for the KX2 is between 54 inches (1.37m) and 60 inches (1.52m) from the bottom of the faceplate.

### USING MOUNTING WINGS

Two mounting wings are located on the top and bottom of the KX2, which can be used to secure the KX2 to drywall in retrofit installations.

1. Use the included cardboard cut-out template to create the correct size opening in the wall.
2. Place KX2 in the opening in the wall and tighten the mounting wing screws located on the front of the KX2 (bezel removed).

### USING CONDUIT/BACK BOX

The KX2 uses a standard 4"x 4" electrical junction box. These should be available at most hardware stores or online electrical supply stores (ex. Granger.com).

### IMPORTANT NOTES:

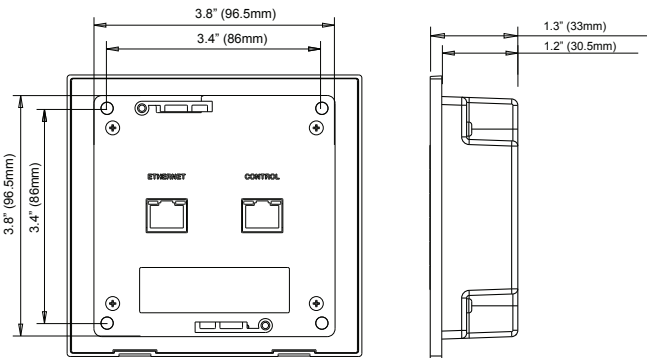
- A dual gang outlet box will NOT work.
- The KX2 has .38" thick corner tabs, making the KX2 protrude .38" from the front edge of the junction box. Therefore, the electrical box should be mounted flush with the wall stud. Typically wall sheeting materials like drywall are 1/2" or thicker, allowing the KX2 to be flush with the wall sheeting. If the wall sheeting is thinner than .38", the junction box will need to be mounted set back.
- Use #8 - 32 flat head screws.
- Box should be 1.5" minimum depth.



Electrical Junction Box  
4"h x 4"w x 1.5"d

## KX2 DIMENSIONS

Cutout (WxH): 3.8"(96.5mm) x 3.8"(86mm)  
Bezel (WxH): 4.6"(117mm) x 4.4"(112mm)  
Depth In-Wall: 1.2"(30.5)



## POWERING THE KX2

- 1) **CB8 Connecting Block:** Wire a Cat-5 cable from the KX2 Control Port to the CB8 Connecting Block (see diagram).
- 2) **Ethernet Port (Power over Ethernet):** Wire a Cat-5 cable from the KX2 Ethernet Port to an 802.3af compliant Power-over-Ethernet router/switch (Class #2).

**NOTE: Using a non-compliant PoE device may damage the KX2.**

- 3) **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 KX2 should NOT be powered from an RTI control processor.**

## CONNECTIONS

### CONTROL PORT

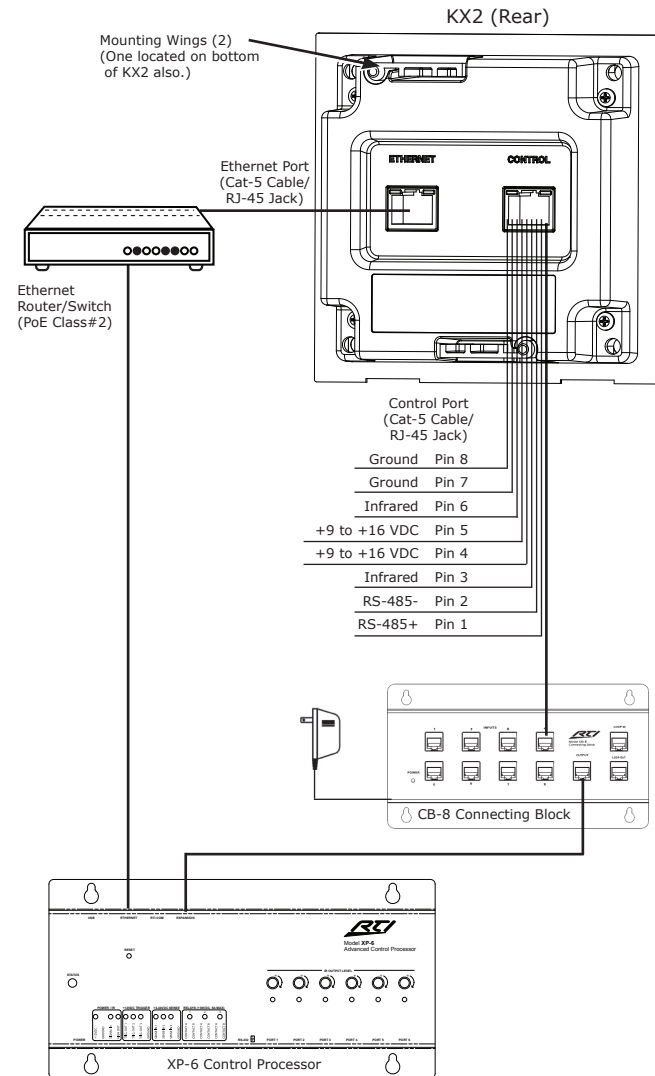
The Control Port on the KX2 uses a Cat-5 cable with RJ-45 termination. When used in conjunction with an RTI control processor (e.g. RTI XP-6) and an RTI connecting block (e.g. RTI CB-8), this port serves as the power source for the KX2 in addition to infrared and RS-485 communication (see diagram for pinout).

### ETHERNET PORT

The KX2 Ethernet Port is designed for connection to an Ethernet network (LAN) via Cat-5 cabling with RJ-45 termination. Additionally, the KX2 can be optionally powered using Power-Over-Ethernet, allowing the power to be extended to the KX2 over the same Cat-5 cable that carries Ethernet communication. When powering the KX2 using PoE, a 802.3af compliant Power-over-Ethernet router/switch (Class #2) must be used or damage to the unit may occur.

### USB PORT

The KX2 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.



## PROGRAMMING

### THE TOUCHSCREEN DISPLAY

The KX2 touchscreen display is programmed using the RTI Integration Designer Programming Software. Normally it is organized into a series of pages containing objects (buttons, text, graphics, etc.) that are related to each other. For example, they may all display information necessary for controlling a particular music server, room lighting, security system status etc.

### 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](http://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 KX2 using a USB cable (USB A to Mini B), or via the Ethernet network (LAN). If the KX2 is hard-wired to a LAN and the router has DHCP enabled, the initial data file can be downloaded over Ethernet.

## CONTROL PANEL

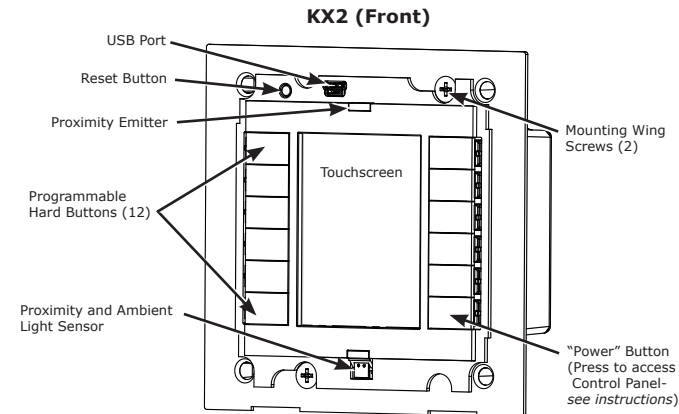
The KX2 has many settings that can be adjusted directly through the control panel. Please note that changes made directly in the KX2 control panel will be overwritten by changes made in Integration Designer.

### ACCESSING THE CONTROL PANEL

The Control Panel page can be displayed by pressing and holding down the button located in the lower right corner of the KX2 (default labelled with the power symbol), while applying power or resetting the KX2.

### ADJUSTABLE SETTINGS

- Backlight Level
- Time Out
- Sound
- Proximity Sensor
- Network Information



## HARD BUTTON REPLACEMENT

The KX2 hard buttons compatible with the RTI Laser Shark custom button etching program - find details on the [rticorp.com](http://rticorp.com) dealer section.

### REMOVING BUTTONS

1. Remove the KX2 bezel.
2. Using a fingernail or small screwdriver, gently pry up on the removal tabs along outer edge of the button.

### INSTALLING BUTTONS

1. Place the button at an angle into the button location, inserting the "alignment tab" into the KX2 first.
2. Gently press down on the outer edge of the button until it snaps into place.

