KRAMER ELECTRONICS LTD.

USER MANUAL

MODELS:

SL-14RC/N
Master Controller

RC-3TB
Remote Control Panel (Optional)

RC-3TBU
Remote Control Panel (Optional)

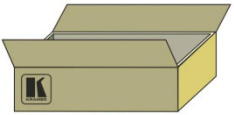
P/N: 2900-300178 Rev 2

SL-14RC/N Quick Start Guide

This page guides you through a basic installation and first-time use of your **SL-14RC/N**.
For more detailed information, see the **SL-14RC/N** User Manual.
You can download the latest manual at http://www.kramerelectronics.com.

Step 1: Check what's in the box

- **SL-14RC/N** Master Controller
- 1 Power cord
- 1 Set of rack "ears"
- 1 Quick Start sheet
- 1 User Manual
- 4 Rubber feet



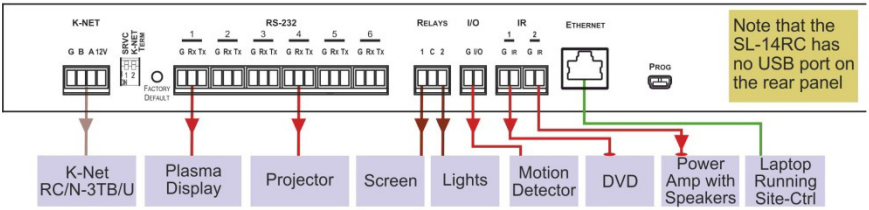
Save the original box and packaging in case your SL-14RC/N needs to be returned to the factory for service.

Step 2: Install the SL-14RC/N

Mount the machine in a rack (using the included rack "ears") or attach the rubber feet and place on a table.

Step 3: Connect the inputs and outputs

Always switch off the power on each device before connecting it to your **SL-14RCN**.



Always use Kramer high-performance cables for connecting AV equipment to the **SL-14RC/N.**

Step 4: Connect the power

Connect the power cord to the **SL-14RC/N** and plug it into the mains electricity.

Step 5: Configure the SL-14RC/N

Configure the unit using K-Config software - see the K-Config Configuration Guide.

Step 6: Operate the SL-14RC/N

Operate the unit via the front panel buttons, IR remote control, K-Net or Ethernet.

Contents

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1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront video, audio, presentation, and broadcasting professionals on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 11 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters and GROUP 11: Sierra Video Products.

Congratulations on purchasing your Kramer **SL-14RC/N** *Master Controller*, which is ideal for the following typical applications:

- Controlling multimedia rooms, such as classrooms, auditoriums, conference rooms, and so on, while enabling remote control and management of the AV equipment

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual

  Use Kramer high performance high resolution cables
  Use only the power cord that is supplied with this machine

Go to http://www.kramerelectronics.com to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

2.1 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Do not secure the cables in tight bundles or roll the slack into tight coils
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality
- Position your Kramer **SL-14RC/N** away from moisture, excessive sunlight and dust

3 Overview

The **SL-14RC/N** is a highly versatile master room controller that acts as an all-in-one extended remote control panel for control of A/V equipment—especially projectors and associated equipment—in any room (such as classrooms, boardrooms, or auditoriums). It streamlines operations and simplifies control by integrating audio, video, and computer-video sources into a centralized system. Optional 3-button remote control panels are available which enable you to remotely duplicate the functionality of front panel buttons.

The **SL-14RC/N** features:

- 12 configurable front panel buttons (configured using the **K-Config** Configuration software)
  Available on our Web site at: http://www.kramerelectronics.com/support/?soft=k-config
- One configurable rotary up/down controller with direction indicator LEDs (configured using the **K-Config Configuration** software)
- One general purpose I/O port that can be configured as an analog input, digital input, or digital output for interfacing with a variety of devices such as sensors, switches, LEDs, and relays
- Six bi-directional RS-232 ports that can control AV equipment such as projectors, LCD and PDP displays, power amplifiers, switchers and scalers
- Two relay contacts that can control other room items related to the AV system, such as, raising and lowering drapes, screen or projector
- IR control on two outputs (terminal blocks)
- A USB port for uploading a configuration file located behind the front panel of the **SL-14RC** and on the rear panel of the **SL-14RCN**
- IR Learning that learns commands from any IR remote
- Compatibility with Kramer **Site-CTRL** software for network remote control and management over the Ethernet port

- A **K-NET**™ control channel that can be used to connect to **RC-3TB** or **RC-3TBU** *Remote Control Panels*, or for connecting compatible user interfaces and supplies power and control data over a single cable
  K-NET™ is a proprietary Kramer protocol for interconnecting Kramer units
- Flexible control via Ethernet and **K-NET**

4 Defining the SL-14RC/N Master Controller

This section defines the **SL-14RC/N**.

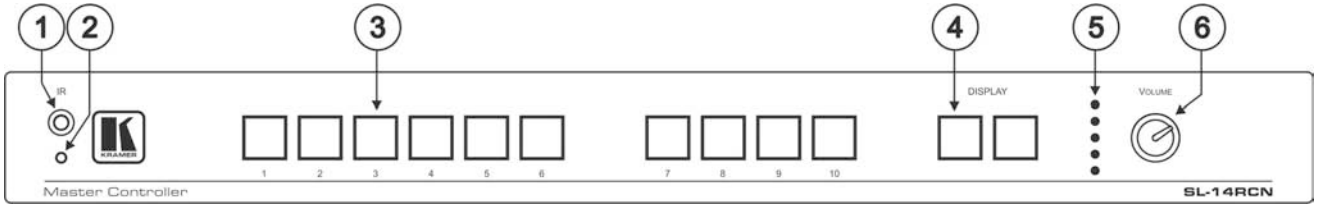


Figure 1: SL-14RC/N Master Controller Front Panel

#	Feature	Function
1	*IR* Receiver	Accepts IR control
2	ON LED	Lights during IR activity
3	Configurable Button Switches 1-10	Function is programmed by the K-Config Configuration software
4	*DISPLAY* Configurable Button switches 11 and 12	Function is programmed by the K-Config Configuration software
5	Rotary switch up/down LED indicator	Indicates the direction of travel of the rotary switch
6	*VOLUME* Rotary Knob	Function is programmed by the K-Config Configuration software

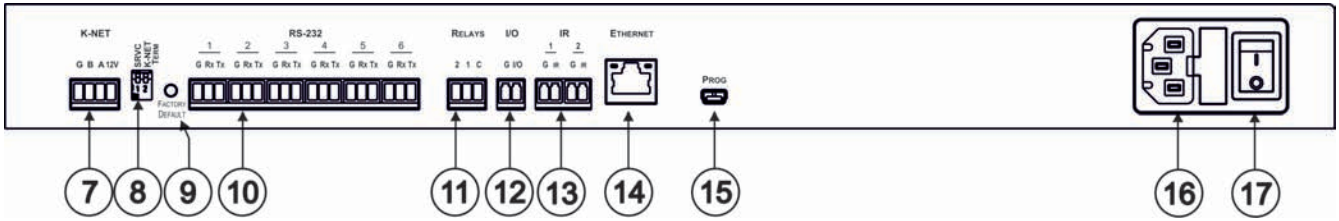


Figure 2: SL-14RC/N Master Controller Rear Panel

#	Feature	Function
7	*K-NET* Connector	Connect the GND pin to the Ground connection; pin B (-) and pin A (+) are for RS-485, and the +12V pin is for powering the unit The ground connection is sometimes connected to the shield of the RS-485 cable (in most applications, it is not connected)
8	*SRVC* and *K-NET TERM DIP*-Switches	For service use only. Slides down for K-NET termination, slides up for not terminated
9	*FACTORY DEFAULT* Button	Press to reset to factory default definitions (see Section 11) First switch off the unit and then switch it on while pressing the DEFAULT button. The unit powers up and loads its memory with the factory default definitions and erases all stored presets
10	*RS-232* Terminal Blocks	Connect to the RS-232 devices (from 1 to 6)
11	*RELAYS* Terminal Blocks	Connect to low-voltage relay-driven devices (from 1 to 2)
12	*I/O* Terminal Block	Connect to various analog and digital sensors
13	*IR* Output Terminal Blocks	Connect to IR emitter cables (from 1 to 2)
14	*ETHERNET* RJ-45 Connector	Connects to the PC or other serial controller through computer LAN
15	*PROGRAM* USB Connector (on the **SL-14RCN**)	Connects to a PC for software upgrading On the **SL-14RC** this USB port is located behind the front panel (remove it by opening the four hex screws)
16	Power Receptacle	Connects to mains power
17	Power ON/OFF Switch	Illuminated switch for turning the unit on and off

Note: In earlier versions (that is, with the **SL-14RC**) the USB connector is accessed via the front panel by removing the four front panel screws.

5 Defining the Remote Control Panels

The **SL-14RC/N** supports both the **RC-3TB** and the **RC-3TBU** *Remote Control Panels*.

The **RC-3TB** and the **RC-3TBU** buttons can be programmed to emulate the buttons on the **SL-14RC/N**. On the **RC-3TB**, the assignment of the button emulation is done using the rotary switch. On the **RC-3TBU**, the assignment is done using the **RC-3TBU** *Software Configurator*.

5.1 Defining the RC-3TB Remote Control Panel

Figure 3 defines the **RC-3TB**.

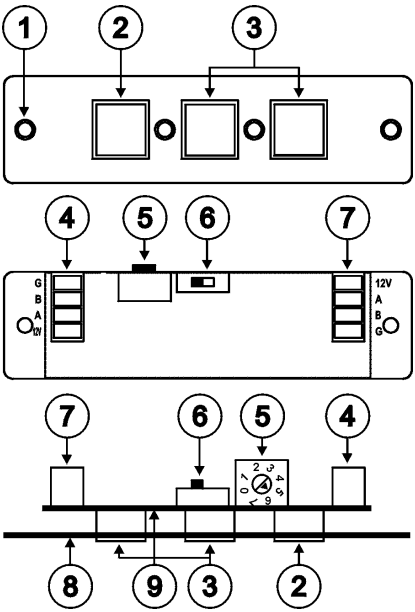


Figure 3: RC-3TB Remote Control Panel Components

#	Feature	Function
1	Mounting Holes	2 holes for mounting the RC-3TB to the PTBUS-3 or TBUS-6W
2	Button 1	Function is always assigned to button 12 on SL-14RC/N
3	Buttons 2 and 3	Function is assigned by the rotary switch position
4	K-NET Connector	Connects to either SL-14RC/N or additional RC-3TB

#	Feature	Function
5	8 Position Rotary Switch	For assigning which buttons on the SL-14RC/N are emulated by the buttons on the RC-3TB
6	K-NET Termination Switch	Terminates the K-NET to RC-3TB daisy-chain
7	K-NET Connector	Connects to either SL-14RC/N or additional RC-3TB
8	Front Panel	For mounting the RC-3TB
9	Printed Circuit Board	Contains the components of the RC-3TB

When configuring the **SL-14RC/N** with **K-Config** (version 1.0.1.X and up), you can choose to use the K-Net port for connecting K-Net compatible user interfaces (for example, **RC-62**/**RC-63**/**RC-53** series) or to connect to the **RC-3TB**.

If there is no K-Net auxiliary device specified in the **K-Config** control room tree, the **K-Net** port of the **SL-14RC/N** will be configured to connect to an **RC-3TB/U**.

When using the **RC-3TB**, button 1 is always assigned to the second DISPLAY button (button number 12) on the **SL-14RC/N**. The position of the rotary switch (in the following table) determines which of the 12 buttons on the **SL-14RC/N** are emulated by buttons 2 and 3 on the **RC-3TB**.

Rotary Switch Position	Button 1	Button 2	Button 3
0	12	7	8
1	12	7	9
2	12	7	10
3	12	8	9
4	12	8	10
5	12	9	10
6	12	7	9
7	Service use only		

For example, if the rotary switch is in position 4, the 3 buttons on the **RC-3TB** will duplicate the functions of buttons 12, 8, and 10 on the **SL-14RC/N**. That is, in this example, pressing button 1 on the **RC-3TB** has the same effect as pressing button 12 on the **SL-14RC/N**, pressing button 2 on the **RC-3TB** has the same effect as pressing button 8 on the **SL-14RC/N**, and pressing button 3 on the **RC-3TB** has the same effect as pressing button 10 on the **SL-14RC/N**.

Note: The rotary switch configuration is only read at switch on. Therefore, when changing the rotary switch position, you must switch off the **SL-14RC/N** and then switch it on again for the new settings to take effect.

For connecting the **RC-3TB**, see Section 7.3.

5.2 Defining the RC-3TBU Remote Control Panel

Figure 3 defines the **RC-3TBU**.

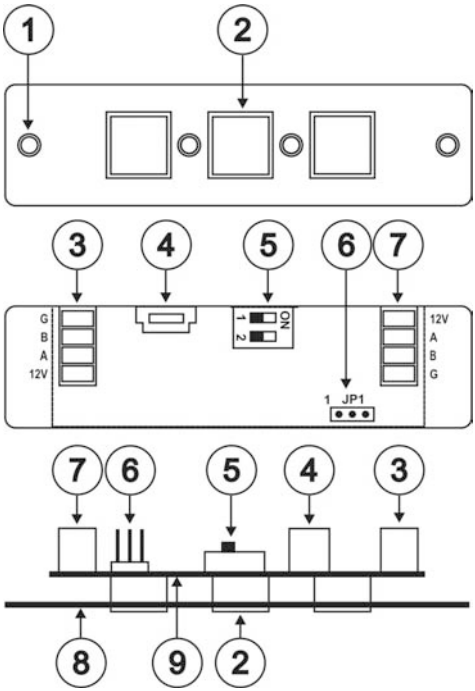


Figure 4: RC-3TBU Remote Control Panel Components

#	Feature	Function
1	Mounting Holes	2 holes for mounting the RC-3TBU to the PTBUS-3 or TBUS-6W
2	Buttons 1 to 3	Function assignment is performed using the configurator software
3	K-NET Connector	Connect to either SL-14RC/N or additional RC-3TB/U devices
4	USB Connector	For connecting to the programming PC

#	Feature	Function
5	2 Position Dip-switch	Dip-switch 1: Sets the K-NET termination. Down is on and up is off Dip-switch 2: For upgrading the device firmware. Down is program enable and up is program disable
6	JP1 3-pin Connector	RS-232 serial connector. Not for customer use.
7	K-NET Connector	Connects to either SL-14RC/N or additional RC-3TB/U
8	Front Panel	For mounting the RC-3TBU
9	Printed Circuit Board	Contains the components of the RC-3TBU

When configuring the **SL-14RC/N** with **K-Config** (version 1.0.1.X and up), you can choose to use the K-Net port for connecting K-Net compatible user interfaces (for example, **RC-62**/**RC-63**/**RC-53** series) or to connect to the **RC-3TBU**.

If there is no K-Net auxiliary device specified in the **K-Config** control room tree, the **K-Net** port of the **SL-14RC/N** will be configured to connect to an **RC-3TBU**.

The **RC-3TBU** *Configurator Software* is used to program the buttons of the device (see Section 9).

For connecting the **RC-3TBU**, see Section 7.3.

6 Installing in a Rack

This section provides instructions for rack mounting the unit.

Before installing in a rack, be sure that the environment is within the recommended range:

OPERATING TEMPERATURE:	0º to +55ºC (32º to 131ºF)
STORAGE TEMPERATURE:	-45º to +72ºC (-49º to 162ºF)
HUMIDITY:	10% to 90%, RHL non-condensing

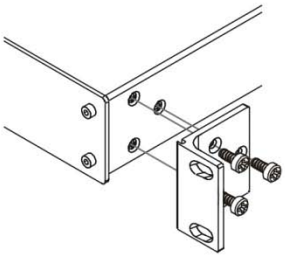
CAUTION!

When installing on a 19" rack, avoid hazards by taking care that:

1. It is located within the recommended environmental conditions, as the operating ambient temperature of a closed or multi unit rack assembly may exceed the room ambient temperature.
2. Once rack mounted, enough air will still flow around the machine.
3. The machine is placed straight in the correct horizontal position.
4. You do not overload the circuit(s). When connecting the machine to the supply circuit, overloading the circuits might have a detrimental effect on overcurrent protection and supply wiring. Refer to the appropriate nameplate ratings for information. For example, for fuse replacement, see the value printed on the product label.
5. The machine is earthed (grounded) in a reliable way and is connected only to an electricity socket with grounding. Pay particular attention to situations where electricity is supplied indirectly (when the power cord is not plugged directly into the socket in the wall), for example, when using an extension cable or a power strip, and that you use only the power cord that is supplied with the machine.

To rack-mount a machine:

1. Attach both ear brackets to the machine. To do so, remove the screws from each side of the machine (3 on each side), and replace those screws through the ear brackets.



2. Place the ears of the machine against the rack rails, and insert the proper screws (not provided) through each of the four holes in the rack ears.

Note:

- In some models, the front panel may feature built-in rack ears
- Detachable rack ears can be removed for desktop use
- Always mount the machine in the rack before you attach any cables or connect the machine to the power
- If you are using a Kramer rack adapter kit (for a machine that is not 19"), see the Rack Adapters user manual for installation instructions available from our Web site

7 Connecting the SL-14RC/N

Always switch off the power to each device before connecting it to your **SL-14RC/N**. After connecting your **SL-14RC/N**, connect its power and then switch on the power to each device.

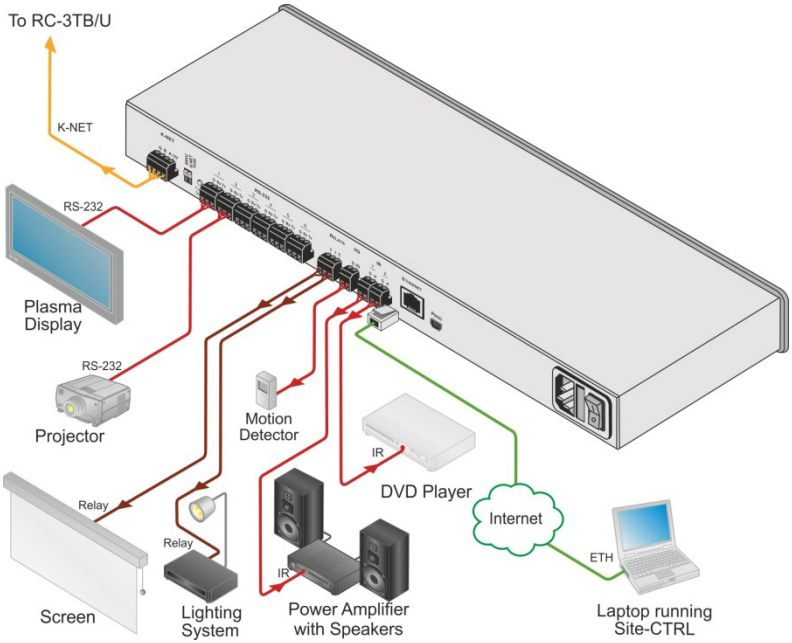


Figure 5: Connecting the SL-14RC/N Master Controller

To connect the SL-14RC/N as illustrated in the example in Figure 5:

1. Connect the RELAY terminal block connectors as follows:
   - Connect RELAY 1 to the lighting system
   - Connect RELAY 2 to the screen
2. Connect the I/O port to a motion detector.
3. Connect the IR outputs as follows:
   - Connect an IR emitter to IR OUTPUT 1 and attach the emitter to the DVD player

- Connect an IR emitter to IR OUTPUT 2 and attach the emitter to the power amplifier

4. Connect the RS-232 ports (see Section 7.1) as follows:
   - Connect RS-232 port 1 to the projector
   - Connect RS-232 port 3 to the plasma display
5. Connect the Ethernet port to a network (see Section 7.2).
6. Connect the **K-NET** port to the input of the first **RC-3TB/U** (see Section 7.3).
7. Connect the output of the first **RC-3TB/U** to the input of the second **RC-3TB/U** (see Section 7.3.2).

7.1 Connecting the RS-232 Interface

To connect an AV device to the **SL-14RC/N** using the RS-232 port, connect the RS-232 9-pin D-sub port on your AV device to the RS-232 terminal block on the rear panel of the **SL-14RC/N** as shown in Figure 6.

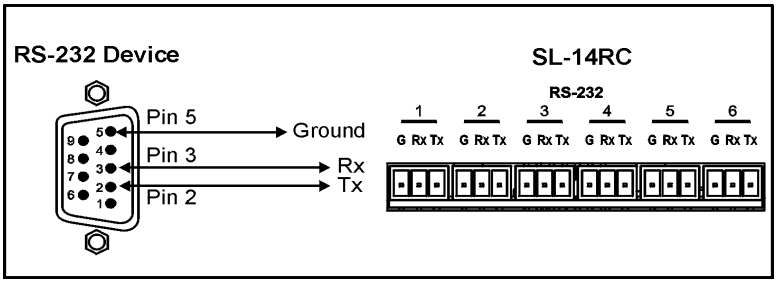


Figure 6: RS-232 Connection

7.2 Connecting the Ethernet Port

The Ethernet connection of the **SL-14RC/N** lets you perform all control functions of the **SL-14RC/N** over the Internet using a PC running the Kramer Site-CTRL control program.

To connect the SL-14RC/N to a network:

1. Connect the Ethernet port of the **SL-14RC/N** to the Ethernet port on a network hub or network router, via a straight cable with RJ-45 connectors.

2. At the other end, connect the Internet to a PC running **Site-CTRL**.

3. After connecting the Ethernet port, you have to install and configure it. For detailed instructions on how to install and configure your Ethernet port, see the *K-Config Software Guide* available from our Web site at www.kramerelectronics.com.

7.3 Connecting RC-3TB/U Remote Control Panels (Optional)

One or more **RC-3TB/U** panels may be connected to the **K-NET** port on the **SL-14RC/N** in a daisy-chain configuration.

The wiring from a **K-NET** port to a single **RC-3TB/U** is shown in Figure 7.

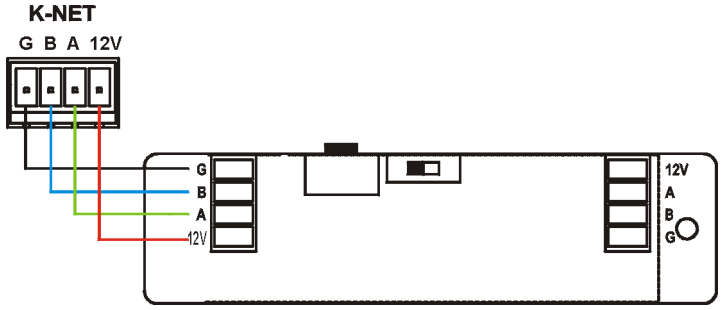


Figure 7: K-NET to RC-3TB/U Connection

7.3.1 Terminating RC-3TB/U Remote Control Panels

If only one **RC-3TB/U** is connected, it must be terminated and the termination on the **SL-14RC/N** is turned off (see Section 5). When viewed from above and the rotary switch is to the left of the termination switch, slide the termination switch to the left as shown in Figure 7.

Only the last **RC-3TB/U** in the chain should be terminated.

7.3.2 Daisy-Chaining Multiple RC-3TB/U Remote Control Panels

The wiring of two **RC-3TB/U** panels to the **K-NET** port on the **SL-14RC/N** is shown in Figure 7. Connection of more than two **RC-3TB/U** panels follows the same principle.

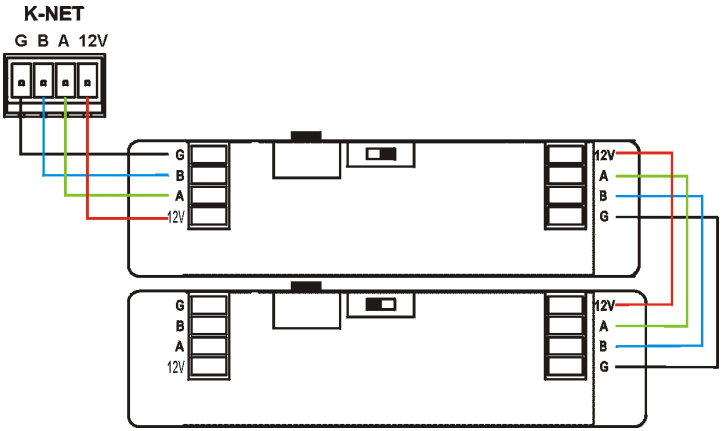


Figure 8: Daisy-chaining Multiple RC-3TB/U Panels

Note the position of the termination switch on the first **RC-3TB** (open, to the right), and that of the second **RC-3TB** (closed, to the left). When using the **RC-3TBU**, the same termination scheme must be used.

Connections to an **SL-14RC/N** or to another **RC-3TB/U** can be made to either connector block as the connector blocks are functionally identical.

8 Operating the SL-14RC/N

You can operate your **SL-14RC/N** using:

- Front panel buttons. These are configured using the **K-Config** software. For instructions on using the software, see the *K-Config Software Guide* available from our Web site at www.kramerelectronics.com
- **RC-3TB/U** Remote Control Panels (optional)
- A PC running **Site-CTRL** control software:
  To operate your device using **Site-CTRL**, see the *Site-CTRL User Guide* available at the Kramer Web site

9 Installing and Using RC-3TBU Configurator Software

Before installing the **RC-3TBU** *Configurator Software* you must install the latest version of the Kramer USB driver. Instructions for doing so can be found in the *Kramer USB Driver Installation Guide*.

The latest version of the **RC-3TBU** *Configurator Software* and the Kramer USB driver can be downloaded from http://www.kramerelectronics.com.

Note: The **RC-3TBU** does not need to be connected to a power supply in order to use the software to configure the device. Power to the **RC-3TBU** is provided by via the USB connection.

9.1 Installing the RC-3TBU Configurator Software

To install the RC-3TBU Configurator Software:

1. Download the latest version of the software from http://www.kramerelectronics.com.
2. Run the Setup.exe file and follow the instructions to install the software to the required location.

9.2 Using the RC-3TBU Configurator Software

To use the RC-3TBU Configurator Software:

1. Run the software by clicking on the icon.
   The Kramer RC-3TBU Configurator window appears.
2. Click on the Connect button.
   The Connection Method window appears as shown in Figure 9.

Figure 9: RC-3TBU Connection Method Window

3. Click the Refresh Ports button.
4. Click to open the USB ports drop-down list.
5. Select the required port.
6. Click Connect.
7. Click to open one of the switch drop-down lists as shown in Figure 10.

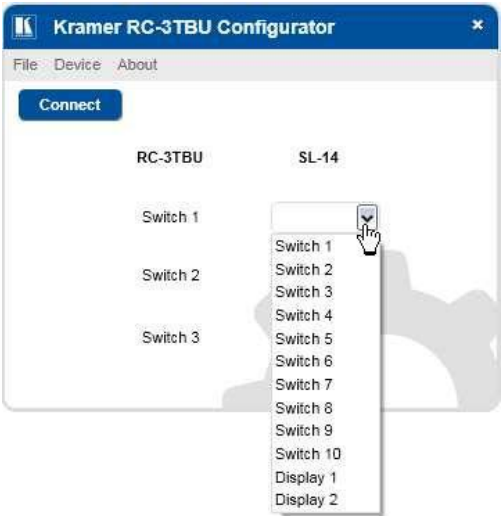


Figure 10: RC-3TBU Configurator Software Switch Drop-down List

8. Select one of the switches or displays to emulate on the **SL-14RC/N**.
   The selection is implemented immediately and stored on **RC-3TBU**.

9.3 Saving and Loading a Configuration

You can save the current configuration for later retrieval and load previously saved configurations.

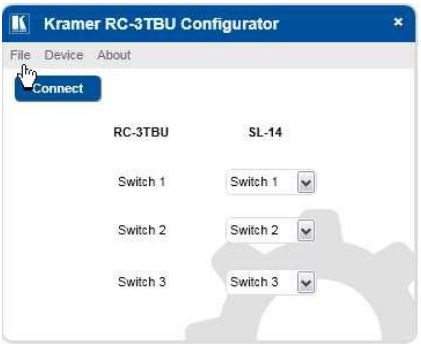


Figure 11: Saving and Loading Projects

To save the current configuration:

1. Click File on the menu bar.
   The drop-down list appears.

2. Click on Save Project.
   The Save Project dialog box appears.
   Enter the required file name and folder.

3. Click Save.
   The current configuration is saved.

To load a previously saved configuration:

1. Click File on the menu bar.
   The drop-down list appears.

2. Click on Open Project.
   The Open Project dialog box appears.
   Navigate to the required folder and select the file.

3. Click Open.
   The saved configuration is loaded.

10 Front Panel Button Caps and Labels

The **SL-14RC/N** is supplied with a button label sheet and 12 clear, button caps to house the labels. Figure 12 illustrates a sample button label sheet.

Figure 12: Sample Button Label Sheet

10.1 Installing the Front Panel Button Caps and Labels

To install the button caps and labels:

1. Remove the required labels from the supplied button label sheet.
2. Remove the supplied button caps from the bag and insert the labels into the button caps.
3. Taking care that the button is oriented correctly, gently press the button cap on to the required button of the **SL-14RC/N**.
4. Repeat for all the button caps.

10.2 Replacing the Front Panel Button Labels

Note: The button caps are a press fit on the buttons and must be removed carefully or the buttons may be damaged. Remove the button caps only with the supplied button cap suction removal tool.

To replace the front panel button labels:

1. Using the supplied button cap suction removal tool, gently pull the button cap away from the button. Do not use excessive force.
2. Remove the required labels from the supplied button label sheet.
3. Remove the old label from inside the button and insert the new label into the button cap.
4. Taking care that the button is oriented correctly, gently press the button cap on to the button of the **SL-14RC/N**.

11 Technical Specifications

SL-14RC/N

INPUTS:	1 K-NET and 6 RS-232 on terminal block connectors 1 Ethernet on RJ-45 connector 1 Infrared
OUTPUTS:	2 Relays (36V AC or DC, 2A, 60VAC maximum on non-inductive load) 1 GPI/O 2 IR ports on terminal block connectors
DEFAULT IP SETTINGS	IP number – 192.168.1.39; Mask – 255.255.0.0; Gateway – 0.0.0.0
POWER CONSUMPTION:	100-240VAC 22VA
OPERATING TEMPERATURE:	0° to +55°C (32° to 131°F)
STORAGE TEMPERATURE:	–45° to +72°C (–49° to 162°F)
HUMIDITY:	10% to 90%, RHL non-condensing
DIMENSIONS	48.3cm x 11.5cm x 1U (19" x 4.5" x 1U) W, D, H (SL-14RC)
WEIGHT:	0.6kg (1.4lbs) approx. (SL-14RC)
ACCESSORIES:	Power cord, rack “ears”
OPTIONS:	RC-3TB, RC-3TBU Remote Control Panels, IR emitter cables
Specifications are subject to change without notice at http://www.kramerelectronics.com	

RC-3TB/U

POWER CONSUMPTION:	12V DC 150mA
DIMENSIONS	8.9cm x 2.1cm x 2.3cm (3.5" x 0.8" x 0.9”) W, D, H
WEIGHT:	0.1kg (0.22lbs) approx.

LIMITED WARRANTY

The warranty obligations of Kramer Electronics for this product are limited to the terms set forth below:

What is Covered

This limited warranty covers defects in materials and workmanship in this product.

What is Not Covered

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

Without limiting any other exclusion herein, Kramer Electronics does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

How Long Does this Coverage Last

Seven years as of this printing; please check our Web site for the most current and accurate warranty information.

Who is Covered

Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

What Kramer Electronics will do

Kramer Electronics will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Kramer Electronics will also pay the shipping costs necessary to return this product once the repair is complete.
2. Replace this product with a direct replacement or with a similar product deemed by Kramer Electronics to perform substantially the same function as the original product.
3. Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

What Kramer Electronics will not do Under This Limited Warranty

If this product is returned to Kramer Electronics or the authorized dealer from which it was purchased or any other party authorized to repair Kramer Electronics products, this product must be insured during shipment, with the insurance and shipping charges prepaid by you. If this product is returned uninsured, you assume all risks of loss or damage during shipment. Kramer Electronics will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

How to Obtain a Remedy under this Limited Warranty

To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, please visit our web site at www.kramerelectronics.com or contact the Kramer Electronics office nearest you.

In order to pursue any remedy under this limited warranty, you must possess an original, dated receipt as proof of purchase from an authorized Kramer Electronics reseller. If this product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be required. You may also be directed to an authorized reseller or a person authorized by Kramer Electronics to repair the product.

If it is decided that this product should be returned directly to Kramer Electronics, this product should be properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization number will be refused.

Limitation on Liability

THE MAXIMUM LIABILITY OF KRAMER ELECTRONICS UNDER THIS LIMITED WARRANTY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR THE PRODUCT. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

Exclusive Remedy

TO THE MAXIMUM EXTENT PERMITTED BY LAW, THIS LIMITED WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF KRAMER ELECTRONICS CANNOT LAWFULLY DISCLAIM OR EXCLUDE IMPLIED WARRANTIES UNDER APPLICABLE LAW, THEN ALL IMPLIED WARRANTIES COVERING THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY TO THIS PRODUCT AS PROVIDED UNDER APPICABLE LAW.

IF ANY PRODUCT TO WHICH THIS LIMITED WARRANTY APPLIES IS A “CONSUMER PRODUCT” UNDER THE MAGNUSON-MOSS WARRANTY ACT (15 U.S.C.A. §2301, ET SEQ.) OR OTHER APPICABLE LAW, THE FOREGOING DISCLAIMER OF IMPLIED WARRANTIES SHALL NOT APPLY TO YOU, AND ALL IMPLIED WARRANTIES ON THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR THE PARTICULAR PURPOSE, SHALL APPLY AS PROVIDED UNDER APPLICABLE LAW.

Other Conditions

This limited warranty gives you specific legal rights, and you may have other rights which vary from country to country or state to state.

This limited warranty is void if (i) the label bearing the serial number of this product has been removed or defaced, (ii) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics reseller. If you are unsure whether a reseller is an authorized Kramer Electronics reseller, please visit our Web site at www.kramerelectronics.com or contact a Kramer Electronics office from the list at the end of this document.

Your rights under this limited warranty are not diminished if you do not complete and return the product registration form or complete and submit the online product registration form. Kramer Electronics thanks you for purchasing a Kramer Electronics product. We hope it will give you years of satisfaction.

For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

We welcome your questions, comments, and feedback.
Web site: www.kramerelectronics.com
E-mail: info@kramerel.com

SAFETY WARNING
Disconnect the unit from the power supply before opening and servicing

P/N: 2900-300178 Rev: 2