Kramer Electronics, Ltd.

USER MANUAL

Model:

RC-52N

Room Controller

Contents

Figures

Tables

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 the video, audio, presentation, and broadcasting professional 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[1] that are clearly defined by function.

Congratulations on purchasing your Kramer **RC-52N**, which is available in European and American versions.

The **RC-52**N is designed to let you control an A/V system with ease, in a multimedia classroom or conference room.

The package includes the following items:

- **RC-52N** *Room Controller*
- This user manual[2]
- RC-SV Configuration Software
- Power adapter (5V DC input)

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

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1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; 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; GROUP 11: Sierra Products

2 Download up-to-date Kramer user manuals from the Internet at: http://www.kramerelectronics.com

3   Overview

The **RC-52N** is a room controller with an RS-232 port, an IR control port and six backlit[1] and label capable buttons. It sends an RS-232 or IR command—with the push of a button—to a device (such as a projector, display or switcher) via serial control protocols. The **RC-52N** includes a front panel built-in IR Receiver for IR-command learning and IR repeating. The IR commands that are learned are used for the customized control of external sources, receiving the IR commands from different remote transmitters without the need for an external IR remote control unit.

Each button can be assigned, via the USB port[2], with up to four macro sequences containing up to eight[3] commands each.

The **RC-52N** also features:

- Button lighting configuration
- A front panel lock that can be unlocked by a secret code which can be set by the configuration application

In addition, the **RC-52N** supports:

- Start up, timeout, and schedule macros
- Power supply over USB during configuration
- IR repeating through its IR receiver

To achieve the best performance avoid interference from neighboring electrical appliances and position your Kramer **RC-52N** away from moisture, excessive sunlight and dust.

> **Caution** – No operator-serviceable parts inside unit.
>
> **Warning** – Use only the Kramer Electronics input power wall adapter that is provided with this unit[4].
>
> **Warning** – Disconnect power and unplug unit from wall before installing or removing device or servicing unit.

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1 Three levels of lighting intensity available. Set via the RC-SV configuration application

2 Using the RC-SV configuration software (see Section 6)

3 Serial and/or IR and/or set light and/or lock (see Section 6.1)

4 For example, part number 2535-052002

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4 Your RC-52N

This section describes the front (see Section 4.1) and the rear (see Section 4.2) panels of the **RC-52N**.

4.1 The RC-52N Front Panel

The **RC-52N** is available in three versions (see Figure 1): 80mm and 86mm for Europe and a version for the United States:
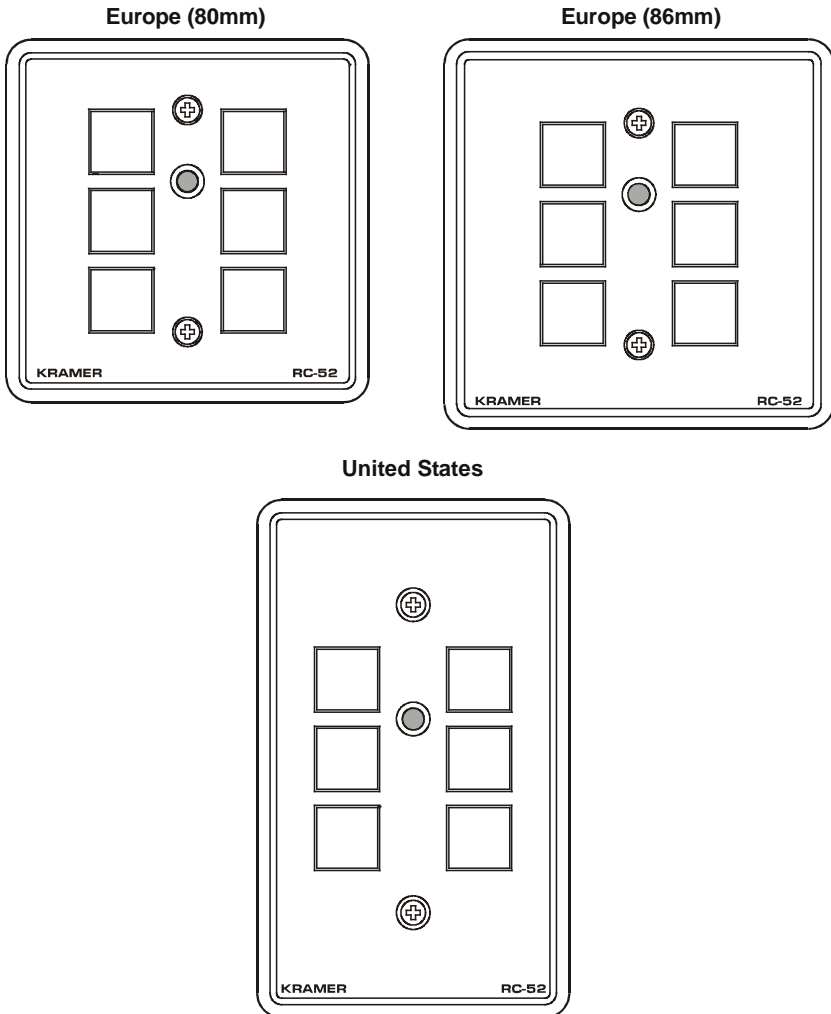
Europe (80mm)   **Europe (86mm)**

United States

Figure 1: RC-52N Front Panel for Europe (80 and 86mm) and the United States

4.2 The RC-52N Rear Panel
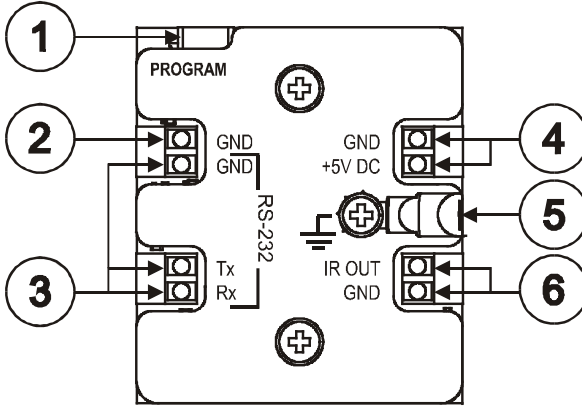
Figure 2 and Table 1 define the **RC-52N** rear panel:

Figure 2: RC-52N Rear Panel

Table 1: Features and Functions of the RC-52N

#	Feature	Function
1	Program USB Connector	Connect to a computer for unit configuration
2	*GND* PIN	Not used
3	*RS-232* Terminal Block Connector	Connect to the RS-232 connector on the A/V equipment or a PC or other Serial Controller, see section 4.3
4	*GND* PIN	Connects (-) to the Ground
	+5V PIN	Connects (+) to the connector for powering the unit
5	Grounding Screw	Connect to grounding wire
6	*IR OUT* PIN	Connect to an IR emitter cable
	GND PIN	

4.3 The RS-232 PINOUT

The RS-232 9-pin D-sub port PINOUT is defined in Figure 3 and Table 2:

Figure 3: RS-232 PINOUT Connection

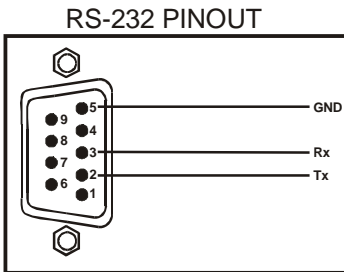*Table 2: RS-232 PINOUT Connection*

Connect this PIN on the Terminal Block Connector:	To this PIN on the 9-pin D-sub Connector
Tx	PIN 2
Rx	PIN 3
GND	PIN 5

4.4 Connecting the IR-OUT

Figure 4 shows how to connect the IR emitter[1]. The white striped side connects to IR OUT, the black side connects to the Ground, and the LED Emitter Shell is affixed to the IR sensor window with the adhesive layer.
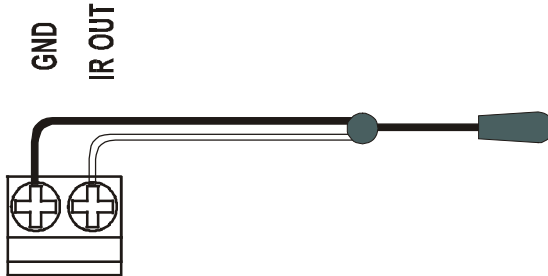

Figure 4: IR Emitter Wiring

4.5 Using the RC-52N as an IR Repeater

Once the **RC-52N** is mounted and powered, and the IR emitter is connected to an A/V equipment machine (for example, a DVD), you can use it as an IR signal repeater, to extend the IR signal to that machine, which has no direct line-of-sight (see Figure 5).
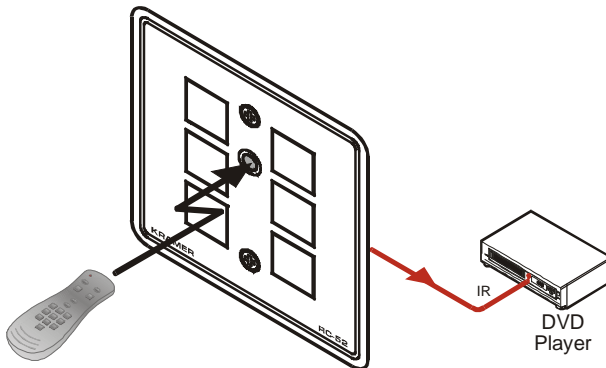

Figure 5: IR Repeater Operation

5 Installing the Configuration Software

To install the RC-SV configuration software, refer to the RC-SV Configuration guide[2].

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1 Using the Kramer 3.5mm to IR Emitter Control Cable (C-A35/IRE-10)

2 Download up-to-date Kramer user manuals and guides from the Internet at this URL: http://www.kramerelectronics.com

6   Configuring the RC-52N Buttons

To configure the **RC-52N** buttons, refer to the RC-SV Configuration guide[1].

Before you configure the **RC-52N** buttons:

1. Connect the **RC-52N** to your PC with the USB cable[2].

2. Open the Configuration program.
   The main RC-SV Configuration window appears, see Figure 6.

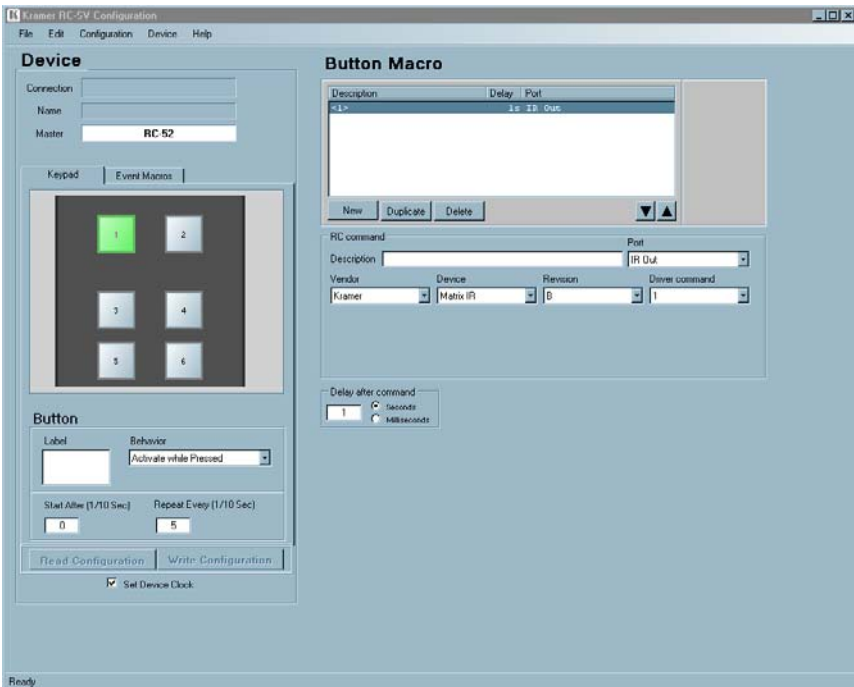*Figure 6: RC-SV Configuration Window for RC-52N*

3. Follow the instructions in the RC-SV Configuration guide to configure the **RC-52N** buttons.

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1 Download up-to-date Kramer user manuals and guides from the Internet at this URL: http://www.kramerelectronics.com

2 There is no need to connect the RC-52N to a power supply for configuration since power is supplied over the USB cable

6.1 Locking and unlocking the RC-52N

You can lock the front panel buttons by pressing a predefined[1] button on the front panel. Pressing the lock button initiates a macro sequence (a series of commands, which can include the dimming of the lights, shutdown of the A/V machines and so on).

You can unlock the front panel buttons by pressing a predefined sequence of four buttons.

The locking procedure can be configured as a part of the timeout or scheduling event macros.

> You can consult the installer of your unit regarding the specific configuration of the locking and unlocking feature on your system.

7 Technical Specifications

Table 3 defines the technical specifications:

Table 3: Technical Specifications[2] of the RC-52N Room Controller

INPUT:	1 IR Receiver
PORTS:	1 RS-232 on a terminal block connector 1 IR OUT on a terminal block connector 1 USB port
POWER SOURCE:	5V DC, 150mA
DIMENSIONS:	1 gang (Europe and USA)
WEIGHT:	0.3kg (0.67lbs.) approx
OPTIONS:	RS-232 9-pin D-sub port to 3-pin terminal block connector cable (C-D9F/3PM-0.6)

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1 Via the RC-SV configuration application

2 Specifications are subject to change without notice

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

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

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
3. Damage, deterioration or malfunction resulting from:
    i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
    ii) Product modification, or failure to follow instructions supplied with the product
    iii) Repair or attempted repair by anyone not authorized by Kramer
    iv) Any shipment of the product (claims must be presented to the carrier)
    v) Removal or installation of the product
    vi) Any other cause, which does not relate to a product defect
    vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

EN-50081:	"Electromagnetic compatibility (EMC); generic emission standard. Part 1: Residential, commercial and light industry"
EN-50082:	"Electromagnetic compatibility (EMC) generic immunity standard. Part 1: Residential, commercial and light industry environment".
CFR-47:	FCC* Rules and Regulations: Part 15: "Radio frequency devices Subpart B Unintentional radiators"

CAUTION!

⊠ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.

⊠ Use the supplied DC power supply to feed power to the machine.

⊠ Please use recommended interconnection cables to connect the machine to other components.
    * FCC and CE approved using STP cable (for twisted pair products)

**For the latest information on our products and a list of Kramer
distributors, visit our Web site: www.kramerelectronics.com,
where updates to this user manual may be found.
We welcome your questions, comments and feedback.**

Safety Warning:
Disconnect the unit from the power supply before
opening/servicing.

Caution

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