

Kramer Electronics, Ltd.



USER MANUAL

Models:

RC-2C, Wall Plate / RS-232 / IR Controller

RC-2, Wall Plate / RS-232 Controller

Contents

1	Introduction	1
2	Getting Started	1
3	Overview	1
4	Your RC-2C/RC-2	2
4.1	The RS-232 PINOUT	5
4.2	Connecting the IR-OUT (for the RC-2C Only)	5
5	Installing the Configuration Software	6
6	Configuring the RC-2C/RC-2 Buttons	6
7	Technical Specifications	7

Figures

Figure 1:	RC-2/RC-2C for Europe and the United States	2
Figure 2:	RC-2C Rear Panel	3
Figure 3:	RC-2 Rear Panel	4
Figure 4:	RS-232 PINOUT Connection	5
Figure 5:	IR Emitter Wiring	5
Figure 6:	RC-SV Configuration Window for RC-2C	6

Tables

Table 1:	Features and Functions of the RC-2C	3
Table 2:	Features and Functions of the RC-2	4
Table 3:	RS-232 PINOUT Connection	5
Table 4:	Technical Specifications of the RC-2C/RC-2 Wall Plate / RS-232 Controller	7

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 groups¹ that are clearly defined by function.

Congratulations on purchasing your Kramer **RC-2C Wall Plate / RS-232/ IR Controller** and/or the **RC-2 Wall Plate / RS-232 Controller** which are available in European (80mm and 86mm versions) and American versions.

The package includes the following items:

- **RC-2C Wall Plate / RS-232/ IR Controller** or **RC-2 Wall Plate / RS-232 Controller**
- RC-SV Configuration Software
- This user manual²

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 cables³

3 Overview

The **RC-2C/RC-2** is a 1 Gang 2-button controller⁴ with an RS-232 port, an IR OUT port (for the **RC-2C** only) and two backlit and label capable buttons. It sends an RS-232 command—with the push of a button—to a device (such as a projector, display or switcher) via serial control protocols.

Each button can be assigned with up to four macro sequences (each sent by the toggle of a button) containing up to four commands each.

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 Sealers; 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>

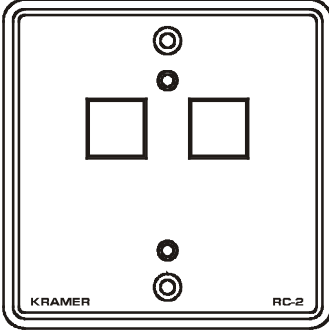
3 The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com>

4 Available as a 1 Gang wall plate for the USA or a 1 Gang wall plate for Europe (in two sizes: 8.6cm and 8cm)

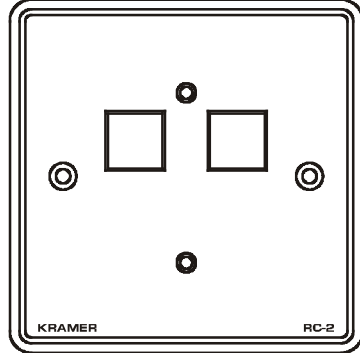
4 Your RC-2C/RC-2

The **RC-2C/RC-2** is available in three versions¹ (see [Figure 1](#)): one for Belgium and Germany, one for England and Europe (except Belgium and Germany), and one for the United States:

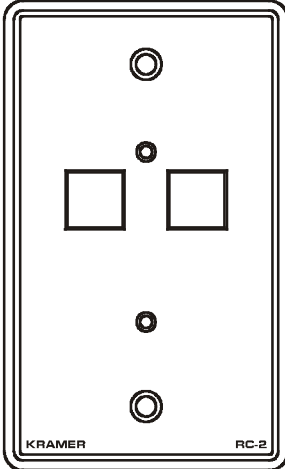
Destination: Belgium and Germany



Destination: England and Europe



Destination: United States



**Rear Panel Labels
for the RC-2C Only**

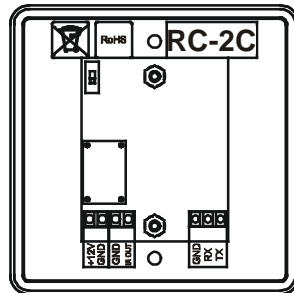


Figure 1: RC-2/RC-2C for Europe and the United States

¹ The RC-2C front panel has the same appearance as the RC-2 panel

[Figure 2](#) and [Table 1](#) define the RC-2C rear panel:

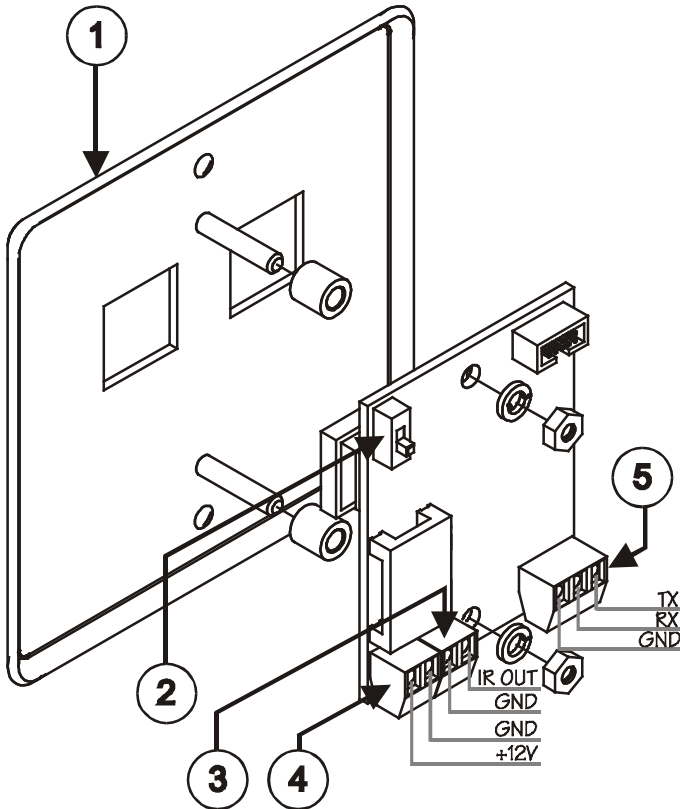


Figure 2: RC-2C Rear Panel

Table 1: Features and Functions of the RC-2C

#	Feature	Function
1	RC-2C Front Panel	Front panel, including two control buttons
2	PROGRAM ENABLE Switch	For technical support use only
3	GND PIN IR OUT PIN	Connect to an IR emitter cable
4	+12V PIN GND PIN	Connects (-) to the Ground Connects (+) to the connector for powering the unit
5	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 4.1

[Figure 3](#) and [Table 2](#) define the RC-2 rear panel:

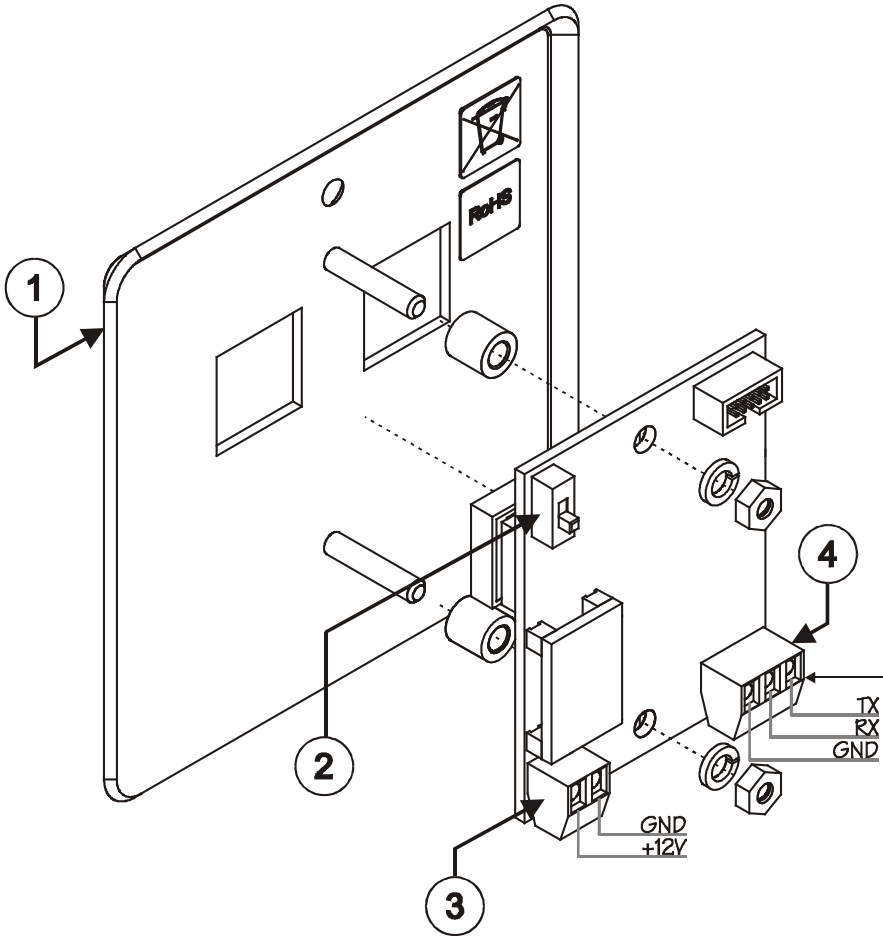


Figure 3: RC-2 Rear Panel

Table 2: Features and Functions of the RC-2

#	Feature	Function
1	RC-2 Front Panel	Front panel, including two control buttons
2	PROGRAM ENABLE Switch	For technical support use only
3	GND PIN +12V PIN	Connects (-) to the Ground Connects (+) to the connector for powering the unit
4	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 4.1

4.1 The RS-232 PINOUT

The RS-232 9-pin D-sub port PINOUT is defined in [Figure 4](#) and [Table 3](#):

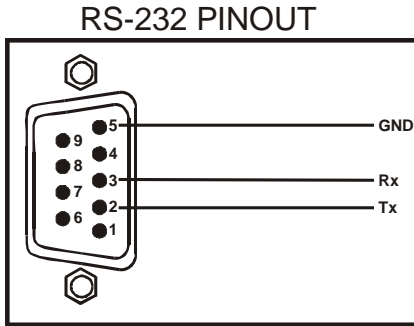


Figure 4: RS-232 PINOUT Connection

Table 3: 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

4.2 Connecting the IR-OUT (for the RC-2C Only)

[Figure 5](#) shows how to connect the IR emitter¹. 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.

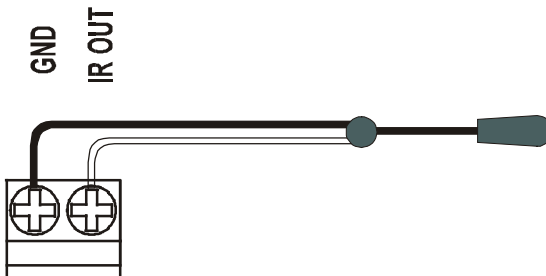


Figure 5: IR Emitter Wiring

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

5 Installing the Configuration Software

To install the RC-SV configuration software, refer to the RC-SV Configuration guide¹.

6 Configuring the RC-2C/RC-2 Buttons

To configure the **RC-2C/RC-2** buttons, refer to the RC-SV Configuration guide¹.

Before you configure the **RC-2C/RC-2** buttons:

1. Connect the power to the **RC-2C/RC-2** and connect the RS-232 terminal block connector on the **RC-2C/RC-2** unit to the 9-pin D-sub COM port on your PC as defined in [Section 4.1](#).
2. Open the Configuration program.
The main RC-SV Configuration window appears, see [Figure 6](#).

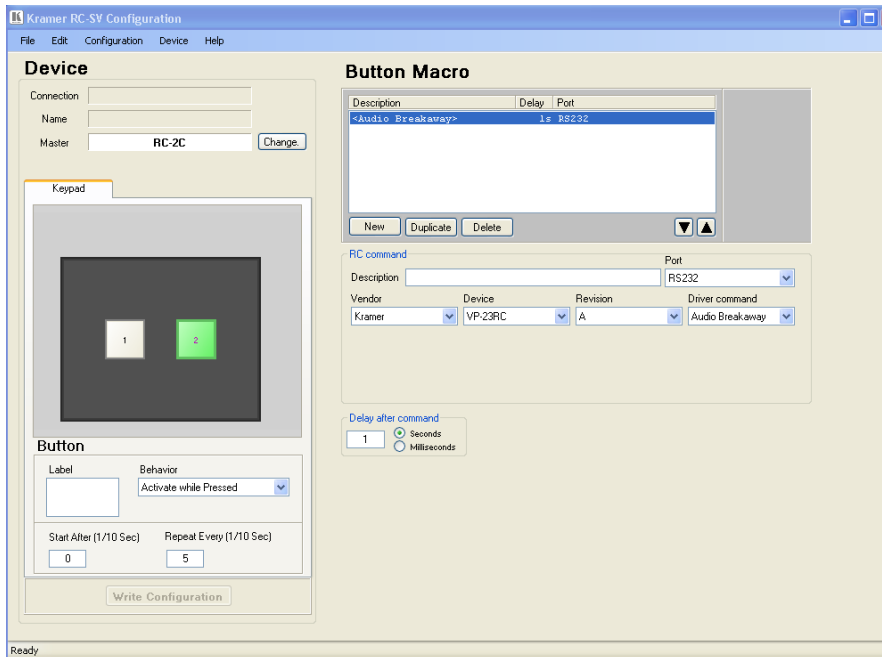


Figure 6: RC-SV Configuration Window for RC-2C

3. Follow the instructions in the RC-SV Configuration guide to configure the **RC-2C/RC-2** buttons.

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

7 Technical Specifications

[Table 4](#) defines the technical specifications:

Table 4: Technical Specifications¹ of the RC-2C/RC-2 Wall Plate / RS-232 Controller

PORTS:	1 RS-232 on a terminal block connector IR OUT on a terminal block connector (for RC-2C only)
POWER SOURCE:	12V DC/500mA adapter, 40mA
DIMENSIONS:	For the USA: 6.9cm x 1.6cm x 11.4cm (2.72" x 0.63" x 4.49", W, D, H) For Europe: 8.6cm x 1.6cm x 8.6cm (3.39" x 0.63" x 3.39", W, D, H), the "86mm version" or 8cm x 1.6cm x 8cm (3.15" x 0.63" x 3.15", W, D, H), the "80mm version"
WEIGHT:	0.3kg (0.67lbs.) approx
ACCESSORIES:	RC-SV configuration software
OPTIONS:	RS-232 9-pin D-sub port to 3-pin terminal block connector cable (C-D9F/3PM-0.6)

¹ 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 your 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.



Caution

Safety Warning:

Disconnect the unit from the power supply before opening/servicing.



Kramer Electronics, Ltd.

Web site: www.kramerelectronics.com

E-mail: info@kramerelect.com

P/N: 2900-000546 REV 2