

Kramer Electronics, Ltd.



USER MANUAL

Model:

RC-53D

K-NET™ Auxiliary Control Panel



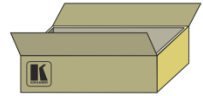
RC-53D Quick Start Guide

This guide helps you install and use your product for the first time. For more detailed information, go to http://www.kramerelectronics.com/support/product_downloads.asp to download the latest manual or scan the QR code on the left.

Step 1: Check what's in the box

- RC-53D
- Screwdriver

- 1 Quick start guide



Save the original box and packaging materials in case you need to return your product for service.

Step 2: Connect the RC-53D

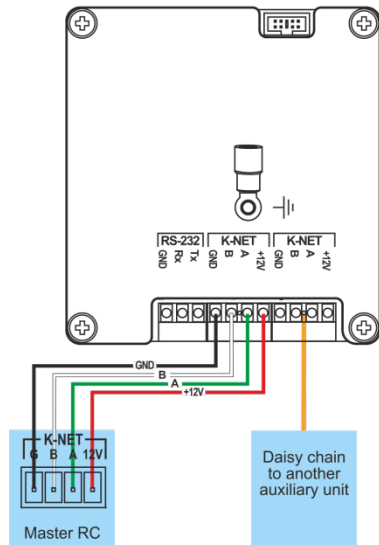
Always switch off the power on each device before connecting it to your **RC-53D**.

Connect a master room controller to one of the K-NET terminal block connectors.

Optionally connect another auxiliary device to the other K-NET terminal block connector.

Note that the RS-232 port is for factory use only.

Always use Kramer high-performance cables for connecting the **RC-53D**.



Step 3: Configure the system

Set up the labels on the buttons and configure the system via the K-Config software, using the Master room controller.

Step 4: Install the RC-53D

Mount the **RC-53D** in a suitable wall box

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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 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-53D K-NET™ Auxiliary Control Panel** which is available in European (80mm and 86mm height versions) and American versions, and can be used as a system controller when connected via K-NET™² to a Master room controller (for example, the SV-552 *SummitView™ Processor / Switcher* or one of the Kramer SL series controllers).

2 Getting Started

This user manual is written for the end user. Refer to the separate **K-Config** Configuration Guide (available online) for details of how to install and configure the Room Controller³

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



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).

1 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; GROUP 11: Sierra Products

2 K-NET is a proprietary Kramer protocol for communication between Kramer products

3 The guide provides information about how to set up the system and is updated on a regular basis. For the latest online guide, go to <http://www.kramerelectronics.com>

2.1 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution 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 **RC-53D** away from moisture, excessive sunlight and dust



This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

2.2 Safety Instructions



Caution: No operator serviceable parts inside the unit

Warning: Use only the Kramer Electronics input power wall adapter that is provided with the unit

Warning: Disconnect the power and unplug the unit from the wall before installing

2.3 Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer's recycling arrangements in your particular country go to our recycling pages at <http://www.kramerelectronics.com/support/recycling/>.

3 Overview

The **RC-53D** is an auxiliary remote control panel for Master Room Controllers¹ for control of A/V equipment in a room.

The **RC-53D**:

- Features six front panel, single color, backlit buttons designed in two groups; one group of two buttons, and another group of four buttons
- Has a digital volume control adjustment knob
- Is available as a 2 Gang wall plate for the USA or a 2 Gang wall plate for Europe²
- Does not require a separate power supply
- Includes an RS-232 serial port
- Includes two K-NET ports and a USB port for firmware upgrade
- Features two programmable LCD displays, one for each group

4 Defining the RC-53D

[Figure 1](#) and [Table 1](#) define the **RC-53D** front panel.

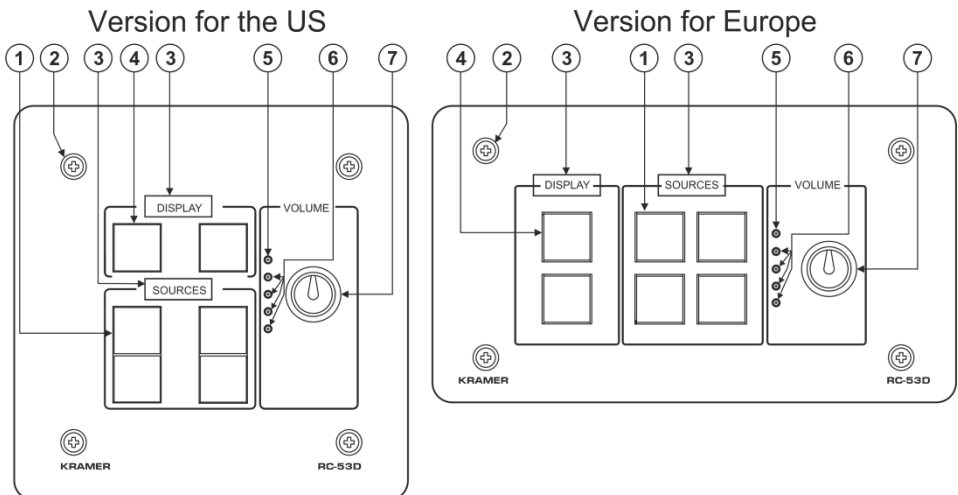


Figure 1: RC-53D K-NET™ Auxiliary Control Panel – Front Panel

¹ Such as the Kramer SummitView System or the SL-1 Master Room Controller

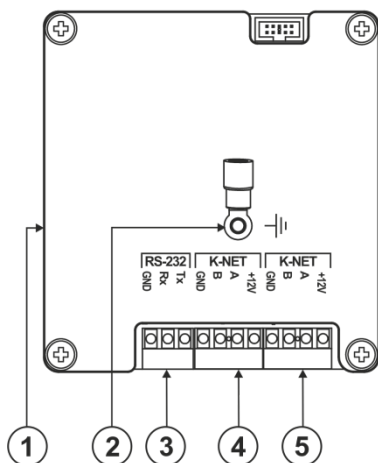
² Available in two height sizes: 8.6cm and 8cm

Table 1: RC-53D K-NET™ Auxiliary Control Panel – Front Panel Features

#	Feature	Function
1	SOURCE Buttons	Group of four programmable, backlit buttons ¹
2	Faceplate Screws	Four screws connecting the faceplate to the Rear Box
3	“DISPLAY” and “SOURCE” Labels	Programmable, 8 character, LCD displays on a blue background
4	DISPLAY Buttons	Group of two programmable, backlit buttons
5	Maximum VOLUME LED	Lights red, indicating maximum volume
6	VOLUME LEDs	Light green, indicating volume level
7	VOLUME Knob	Rotate clockwise to increase volume level

Figure 2 and Table 2 define the RC-53D rear panel.

Version for the US



Version for Europe

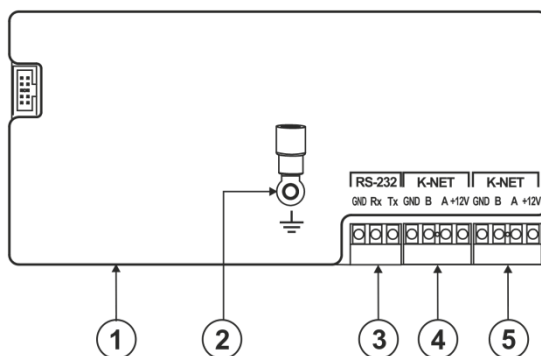


Figure 2: RC-53D K-NET™ Auxiliary Control Panel – Rear Panel

Table 2: RC-53D K-NET™ Auxiliary Control Panel – Rear Panel Features

#	Feature	Function
1	Program USB Connector	Connect to a computer for firmware upgrade ²
2	Grounding Screw	Connect to grounding wire
3	RS-232 Terminal Block	For factory use only
4	K-NET Terminal Block	Connect the GND to the Ground connection ³ , connect B (-) and A (+) to RS-485, and connect +12V to +12V on the companion unit
5	K-NET Terminal Block	

¹ By the system integrator only

² When the unit is connected via K-NET to a Master Room Controller, you can upgrade the firmware via the USB or ETH ports of the Master Room Controller

³ The ground connection is sometimes connected to the shield of the RS-485 cable (in most applications, it is not connected)

4.1 Grounding the RC-53D

The grounding screw is used to earth the chassis of the unit to the building ground preventing static electricity from impacting the performance of the unit.

[Figure 3](#) and [Table 3](#) define the grounding screw components.

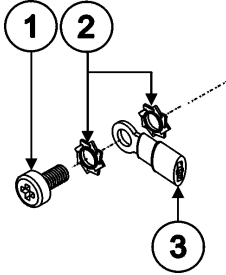


Table 3: Grounding Component Descriptions

#	Component Description
1	M3X6 screw
2	1/8" Toothed Lock Washer
3	M3 Ring Tongue Terminal

Figure 3: Grounding Connection Components

To ground the **RC-53DLC**:

1. Connect the Ring Tongue terminal to the building grounding point wire (it is recommended to use a green-yellow AWG#18 (0.82mm²) wire, crimped with a proper hand-tool).
2. Insert the M3x6 screw through the toothed lock washers and the tongue terminal in the order shown above.
3. Insert the M3x6 screw (with the two toothed lock washers and ring tongue terminal) into the grounding screw hole and tighten the screw.

5 Using the RC-53D K-NET™ Auxiliary Control Panel

The installation process is not detailed in this user manual. This user manual is applicable once the unit is installed and configured¹, and includes:

- Setting up the labels on the buttons, according to your specific requirements
- Configuration of the Master room controller via the **K-Config Windows**®-based configuration software

Since the auxiliary panel is used as a remote controller for Master Room Controllers via the proprietary communication channel K-NET (as illustrated in [Figure 4](#)):

- It requires only a K-NET connection to the Master Room controller
- A power supply unit is **not** required²
- The auxiliary panel can be programmed only via the Master Room controller (for example, the Kramer **SV-551 SummitView™ Processor/Switcher**)

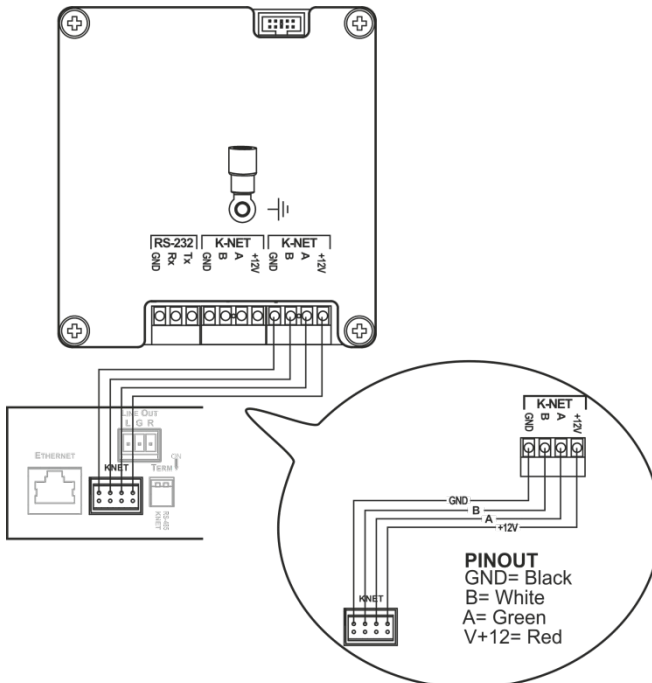


Figure 4: RC-53D connected to the SV-551 SummitView™ Processor / Switcher

¹ By authorized Kramer technical personnel or by an external system integrator

² Power supplies are sold separately. Consult your Kramer dealer for details

6 Installing the RC-53D Faceplate, Button Caps and Labels

This section describes how to install the faceplate, button caps and labels.

[Figure 5](#) illustrates a sample button label sheet.

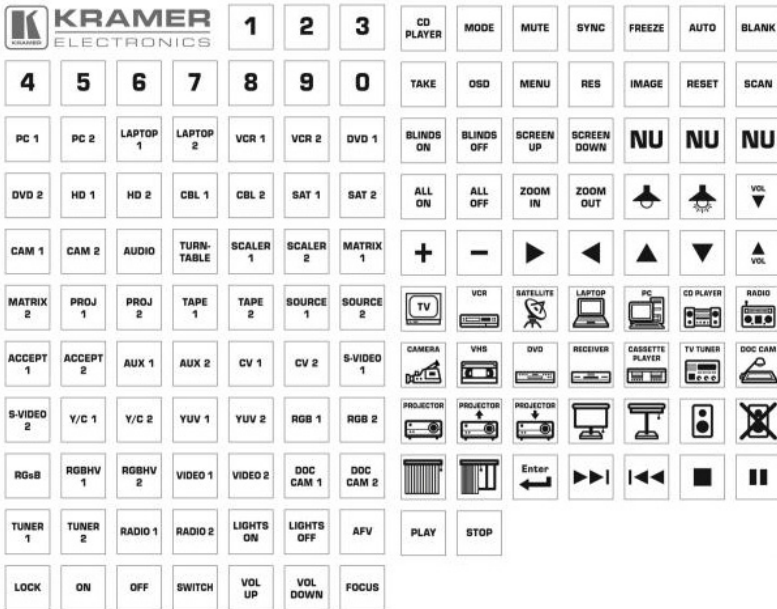


Figure 5: Sample Button Label Sheet

To install the faceplate, button caps and labels:

1. Remove the required labels from the supplied button label sheet.
2. Hold the button cap so that it is oriented as shown in [Figure 6](#) with the “wings” on the left and right sides.



Figure 6: Button Cap Orientation

3. Insert the label inside the cap



Figure 7: Inserting the Label

4. Repeat for all six caps.

- Retaining the orientation, place the six button caps on the buttons of the **RC-53D**.

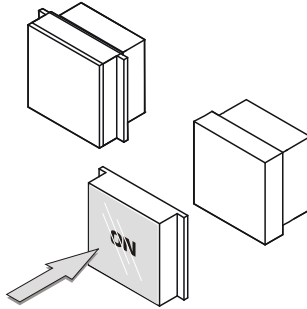


Figure 8: Placing the Button Cap

- Remove the protective foils from both sides of the Perspex (acrylic glass) windows.
- Remove the protective foils from both displays.
- Place the faceplate on the **RC-53D** so that the four screw mounting holes are aligned.
- Insert the four mounting screws and tighten with a screwdriver.
- Install the volume control knob.

7 Operating the RC-53D K-NET™ Auxiliary Control Panel

In the following example¹ (illustrated in [Figure 9](#)), the auxiliary control panel is labeled with specific functions and each button is programmed² to perform several tasks³ as defined in [Table 4](#).

Table 4: The Commands Configuration

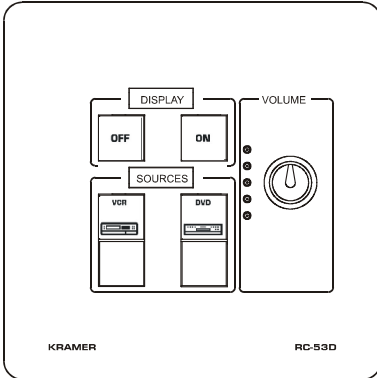


Figure 9: RC-53D Labels Setup

The Label	The Macro Sequence
ON	<ul style="list-style-type: none"> • Power up the projector • Power up the DVD player • Roll down the projector screen • 1 minute delay (for the projector to heat up) • The projector selects the DVD input
OFF	<ul style="list-style-type: none"> • Power down the projector • Stop the DVD player • Power down the DVD player • Stop the VCR • Power down the VCR • Roll up the projector screen
DVD	<ul style="list-style-type: none"> • Stop the video player • The projector selects the DVD input • Play the DVD
VCR	<ul style="list-style-type: none"> • Stop the DVD • The projector selects the VCR input • Play the VCR
VOLUME	<ul style="list-style-type: none"> • Use the VOLUME knob to adjust the audio level

¹ This is only one example among numerous possibilities, each button can be programmed as required. In this example, two buttons are not assigned

² By the technical installer

³ A macro sequence, including several commands per button, carried out one after the other

8 Technical Specifications

[Table 5](#) defines the technical specifications.

Table 5: Technical Specifications¹ of the RC-53D K-NET™ Auxiliary Control Panel

PORTS:	2 K-NET on terminal block connectors; 1USB connector, 1 RS-232 on terminal block connector (factory use only)
POWER SOURCE:	12V DC, 140mA over K-NET
FUSE:	500mA, FSMD 1812
DIMENSIONS:	For the USA: 11.4cm x 2.6cm x 11.4cm (4.49" x 1.02" x 4.49", W, D, H) For Europe: 15.2cm x 1.9cm x 8.6cm (5.98" x 0.75" x 3.39", W, D, H) or 15.2cm x 1.9cm x 8cm (5.98" x 0.75" x 3.15", W, D, H)
WEIGHT:	0.14kg (0.31lbs.) approx.
ACCESSORIES:	Screwdriver

¹ Specifications are subject to change without notice

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.

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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.

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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.

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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.



P/N: 2900-000567



Rev: 4



Kramer Electronics, Ltd.

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