ACCESSORIES
Model RUC-4
Universal Remote Control

ANYWHERE YOU NEED...

- Remote Control of RDL Modules
- Remote Control of Industry Equipment
- Individually Programmable Pushbuttons
- Momentary, Latching or Interlocking Action
- LED Status Indicators
- Selectable Front-Panel Lockout
- Remote Control in *ULTRASTYLE* Design

You Need The RUC-4!

Additional *ULTRASTYLE* design options shown at www.rdlnet.com

The RUC-4 is a wall mounted remote control from Radio Design Labs offered in the *ULTRASTYLE*™ design. The complete all metal enclosure is attractively finished in two coordinated neutral colors to complement the broad range of decor encountered in commercial environments. The exclusive *ULTRASTYLE* products are intended for installations demanding the ultimate in professional styling combined with durability, longevity and value.

APPLICATION: The RUC-4 is an *ULTRASTYLE* wall control that is easily programmed to control a wide variety of RDL and other industry equipment. Four long-life keyboard style pushbuttons allow front-panel selection. Corresponding LEDs display the status of the associated function. The RUC-4 is programmed for the desired operation when it is installed. Each button can be set to produce a momentary output, a latched output, or can be set to interlock with any of the other buttons on the front panel. Four output terminals on the rear panel are individually programmable as open-collector, or may be set to produce +15 V when active. Four status input terminals on the rear panel are provided for LED control. Each LED can be programmed to respond to the rear-panel terminal, or to its corresponding button's function. The RUC-4 also has a selectable lockout mode that requires users to enter a 5 button sequence to unlock the normal button functions. After 10 seconds of inactivity, the buttons automatically relock. Two front-panel LEDs, **LOCKED** or **UNLOCKED**, indicate the status of the RUC-4. If the lockout feature is not programmed at installation, the green **UNLOCKED** LED is illuminated continuously. A non-volatile memory retains the programming settings when power is disconnected.

The complete programming flexibility allows any combination of button and indicator functions. Two buttons can interlock as source selectors while the other two may operate a remote VCA for level control. Two pairs of buttons can be independently interlocked. Three buttons could interlock while the fourth button toggles system power on and off. The combinations are nearly limitless when used with RDL modules.

Programming is simple. The installer enters a programming access code on the front-panel buttons, then selects one of 6 programming modes using buttons 1, 2, 3, 4, 1 & 2 or 3 & 4. The modes are: Interlocking or non-interlocking, Toggle or Momentary, LED Internal or External, Output +15 Vdc or open-collector, Lockout On/Off and Buttons Active or Inactive. Changes made to the settings in a mode are automatically stored after 10 seconds of button inactivity. Then the installer may select another programming mode. If another mode is not selected within 10 seconds, the RUC-4 resumes normal operation.

Used alone or in conjunction with other RDL RACK-UP®, STICK-ON®, TX™, or FLAT-PAK™ series products, the RUC-4 can be the foundation for many innovative audio systems!

ACCESSORIES

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Installation/Operation

Programming   *Read these instructions thoroughly before programming.*

1)   To enter the programming mode:
Press and hold buttons 1 and 4 for 5 seconds
Observe all four LEDs flash twice, then
Push in sequence buttons 1, 4, 2, 3, and 1
Observe all four LEDs flash in rotating pattern
Select a programming mode within 10 seconds

2)   Select a programming mode by pushing the buttons indicated:
Mode 1   Interlocking or noninterlocking: Button 1
Mode 2   Toggle or Momentary: Button 2
Mode 3   LED Internal or External: Button 3
Mode 4   Output +15 V or Open-Collector: Button 4
Mode 5   Front Panel Lockout On/Off: Buttons 1 & 2 (simultaneously)
Mode 6   Buttons Active or Inactive: Buttons 3 & 4 (simultaneously)
The LED associated with the button(s) pushed will flash twice when the selected programming mode is active. Begin programming the functions within 10 seconds.
(Note: If the wrong mode is selected, wait 10 seconds to automatically return to the programming mode.)

3)   Program the functions for each mode as described below. When you have completed a mode, wait 10 seconds and the RUC-4 will return to the programming mode (all four LEDs flash in a rotating pattern). If no further programming is desired, wait another 10 seconds and your settings will be saved as indicated by all four LEDs flashing twice simultaneously. The unit then enters the normal operating mode.

RUC-4 REAR PANEL CONNECTIONS

RDL   FRONT VIEW   CE

1 2
3 4

BUTTON/LED PATTERN
UNLOCK CODE SEQUENCE 1, 3, 2, 4, 1   **POWER**

CONTROL OUTPUTS   **LED INPUTS**   GROUND   +24 VDC
1 2 3 4   1 2 3 4

Connections to RDL module slave terminals (open collector output mode) or to module positive pulse inputs (+15V output mode)   Connections from RDL module slave terminals or other equipment open collector outputs   24 Vdc Ground-referenced power source; Note: external modules or equipment must use same ground as RUC-4

Mode 1: Default is all buttons noninterlocking, as indicated by all LED indicators off. To make buttons interlock, press and hold one of the buttons that should interlock. While holding that button, press and release each other button or buttons that should interlock with the button being held. Then release the first button being held. The LEDs associated with the buttons you selected will flash twice to show your selection. Within 10 seconds, select the second set of interlocking buttons if desired and available. Note: You may select one group of 2, 3 or 4 interlocking buttons, or two groups of 2 interlocking buttons.

Mode 2: For non-interlocked buttons (set in Mode 1), push each button that should toggle on and off. The associated LED is on when toggle operation is selected, off when momentary operation is selected (default). For interlocked buttons (set in Mode 1), any button can be set to toggle off if it is pushed again while it is selected during normal operation. Otherwise, pushing a selected button has no effect. Push each button that should toggle on and off. The associated LED is on when toggle operation is selected, off when no toggle operation is selected (default).

Mode 3: The four LEDs associated with the four pushbuttons are normally activated by pulling the **LED INPUT** control terminals to ground (default). The LEDs can follow the action of the buttons, thereby ignoring the external input terminals. To set a particular LED to follow the action of the button (internal), push the associated button. The LED is on when internal control is selected, off when the LED is controlled from its external terminal.

Mode 4: The 4 **CONTROL OUTPUT** terminals normally pull to ground (open-collector) when active (default). Each terminal can be set to instead produce +15 Vdc when active. Push the button associated with the output that should output +15 V. The associated LED will be on when +15 V is selected, off when open-collector output is selected.

Mode 5: Activate Lockout of the front-panel buttons during normal operation by turning on the button 1 LED, set off by turning off the button 1 LED.

Mode 6: If desired, set each button active (default) or inactive. Button LED on indicates active. Inactive buttons are ignored during normal operation and the corresponding LED input terminals and control output terminals do not operate.

Labeling
Each button/LED is provided with a label pocket and tab. Add lettering to the label tab describing the button/LED function and place tab in pocket.

Operation
RUC-4 unlocked (UNLOCKED LED ILLUMINATED): Press the button corresponding with the desired function.
RUC-4 locked (LOCKED LED ILLUMINATED): To enable normal button operation, a code must be entered. The code consists of sequentially pushing five buttons: 1, 3, 2, 4, and 1. The UNLOCKED LED will illuminate. Press the button corresponding with the desired function. The RUC-4 remains unlocked until there is no activity on the buttons for 10 seconds, then returns to the locked state.
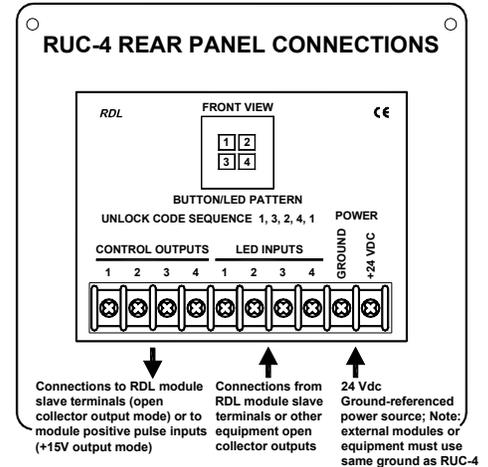
TYPICAL PERFORMANCE
Inputs (4):	Pull-to-ground, 0.5 mA (LED indicators)
Programming modes (6):	Buttons Interlocking or non-interlocking
	Buttons Momentary or Latching
	LED control: External or Follow Button Action
	Control outputs Open-collector or +15 Vdc
	Button lockout On/Off
	Buttons Active or Inactive
Control Outputs (4):	Programmable, Open-collector @ 25 mA
	or +15 Vdc max. (10Vdc @ 5 mA)
Power Requirement:	24 to 33 Vdc @ 60 mA,
	Ground-referenced
Dimensions:	

	Height:	4.07 in.	10.34 cm
	Width:	4.88 in.	12.40 cm
	Depth:	1.29 in.	3.28 cm