

# KADEE® RC

## Transmitter User Guide



## Table of Contents

<b>Introduction</b> .....	4
<b>1 Getting Started</b> .....	5
1.1 Overview.....	5
1.2 Display .....	6
1.3 Quick Start.....	7
1.3.1 Setup.....	7
1.3.2 Wake System.....	7
1.3.3 Binding Receiver to Transmitter.....	7
<b>2 Basic Operation</b> .....	8
2.1 Wake System.....	8
2.2 Address a Receiver .....	8
2.3 System Sleep .....	8
2.4 Key Command.....	9
2.4.1 Standard Modes .....	9
2.4.2 List Modes .....	9
2.4.3 Group Modes.....	9
<b>3 Advanced Operation</b> .....	10
3.1 Modes Overview.....	10
3.1.1 Standard Modes .....	10
3.1.2 List Modes .....	11
3.1.3 Group Modes.....	11
3.2 Using Standard Modes.....	12
3.2.1 Delay Mode.....	12
3.2.2 Tandem Mode.....	12
3.2.3 Binding Mode.....	12
3.2.4 Unbinding.....	13
3.2.5 Send Wake Command .....	13
3.3 Using List Modes.....	14
3.3.1 Create, View and Edit Group List.....	14
3.3.2 Delete Groups.....	15
3.3.3 View Receiver and Group Lists .....	15
3.3.4 View list of Receivers with low batteries.....	16
3.3.5 View a list of missing Receivers .....	16
3.4 Using Group Mode .....	16

<b>4 Typical Application</b> .....	17
4.1 Operating a Servo .....	17
4.1.1 Connecting the Servo.....	17
4.1.2 Actuating the Servo .....	17
4.1.3 Set Servo Delay.....	17
4.1.4 Clear Servo Delay .....	17
4.1.5 Servo Reversal .....	17
4.2 Operating the Relay .....	18
4.2.1 Relay Overview .....	18
4.2.2 Connecting the Receiver Relay to a Circuit .....	18
4.2.3 Actuating the Relay .....	18
<b>5 Reference</b> .....	19
5.1 Trouble Shooting .....	19
5.1.1 Error Codes .....	19
5.1.2 Circuit Protection .....	19
5.1.3 Transmitter Problems .....	19
5.1.4 Transmitting Range Problems .....	19
5.2 Specifications .....	20
5.3 Firmware .....	20
5.4 Important Notice, FCC Licensing .....	20
5.5 Warranty .....	20
5.6 Index .....	22

## **Introduction**

Thank you for choosing Kadee® as your remote control system. We are sure that you will find the Kadee® Remote Control sophisticated but yet simple to use. Our goal from inception to completion has been to design a system that will be up and running in just minutes providing a user friendly device to help you accomplish your remote control requirements.

Kadee® chose to stay with our long tradition, keeping the design, manufacturing and assembly of this product entirely in the United States. This was not an easy accomplishment but we believed that the expense was necessary to provide you with the highest quality product that Kadee® can stand behind.

This User Guide provides you with instructions and recommendations to guide you through the startup and reliable operation of your Kadee® remote control.

Enjoy your new Kadee® Remote Control.  
We encourage you to use your imagination, where there are no limits...

### **Features:**

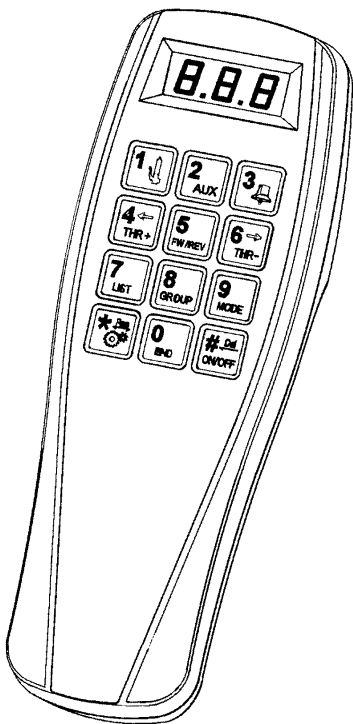
- Long battery life
- Large tactile keypad
- Simple Addressing & Binding
- Remote railroad uncoupling
- Accommodates standard hobby servos
- Receiver with On-board 250mA Relay
- Group operation
- Auto Receiver shutdown
- Battery monitoring
- Monitor Receiver status in LCD display
- Multiple operating Modes
- Stand Alone Operation
- Up to a 300' range
- Operate up to 99 Remote Devices

## 1 Getting Started

### 1.1 Overview

This section provides an overview of the Kadee® Remote Control and it's basic functions.

**To discover more features including:** Relay Control, Turnout Control, Locomotive Control, Motor Control and many more functions and applications, go to [www.RemoteUncoupling.com](http://www.RemoteUncoupling.com).



The Kadee® Remote Control is comprised of a Transmitter that sends commands to a Receiver. After a Receiver successfully completes a command, the Transmitter Display will indicate that the command has been completed. (Sec. 1.2)

Before a Receiver can receive commands it must be Bound to a Transmitter and given a two digit address. (Sec. 3.2.3)

**A Receiver can carry out the following commands:**

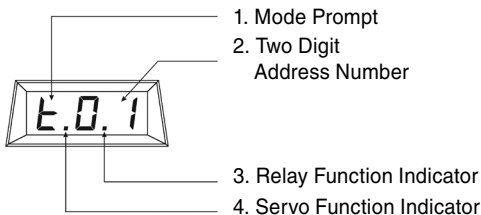
Operate a standard hobby servo (Sec. 4.1)

Actuate an “on board” Relay (Sec. 4.2).

Quick Start (Sec. 1.3) will get you up and running in no time and Typical Applications (Sec. 4) will guide you in some of the more common uses.

Advanced Operations (Sec. 3) will go more in depth into customizing the Kadee® Remote Control.

**1.2 Display**



- 1) The left “Mode Prompt” indicated the currently selected Mode.
- 2) The center and right digits indicate the Receivers Address.
- 3) The left “Servo Indicator” shows that the Servo is actuated.
- 4) The right “Relay Indicator” shows that the Relay is actuated.

**The above example shows that:** Receiver 01 is in Tandem mode with both the Servo and Relay actuated.

## **1.3 Quick Start**

**Before continuing:** Please read the entire "Quick Start Guide"

### **1.3.1 Setup**

- 1) Install two AA batteries into the Transmitter.  
*The display will show that the System is OFF.*
- 2) Connect the Wire Harness to the Receiver.  
***Do not force connector.***
- 3) Connect the Servo to the Wire Harness.  
*Match up yellow, red and black wires.*
- 4) Install batteries into the Receiver Battery Pack.

**Note:** *Do not connect the Receiver Battery Pack at this time.*

### **1.3.2 Wake System**

**Hold** the [On/Off] Key for at least three seconds until the Display shows "on".

Transmitter will turn on and search for any Bound receivers. When the Display shows that the System is Ready, the System is awake and ready to use.

**Note:** *If the Display turns off, press any key to turn the Display on.\**

### **1.3.3 Binding Receiver to Transmitter**

- 1) **Hold** the [MODE] Key for one second. Display will show "SEL", then press and release the [6] Key. Display will show "bnd".

**Note:** *The next sequence must be completed within 10 seconds. \*\**

- 2) Plug Battery Pack into the Wire Harness and press the [On/Off] Key.

**Note:** *Write down the address shown in the Transmitter Display. This address will be needed for future communication with this Receiver.*

Transmitter and Receiver are now Bound & ready to use.  
Press the [\*] Key to operate the servo.

**Note:** *The Receiver will stay addressed until another receiver is selected. To Bind another Receiver complete Binding steps. (Sec. 1.3.3)*

\* The Display will turn off after 5 minutes of no activity. Press any key to turn the Display on.

\*\* If the [On/Off] Key is not pressed within 10 seconds from applying power to the Receiver, the Bind process will fail. Remove power from Receiver and return to Binding Sec. 1.3.3.

## **2 Basic Operation**

### **2.1 Wake System**

**Hold** the [On/Off] Key for at least three seconds or until the Display shows "On". The Transmitter will turn on and search for any Bound receivers.

When the Display shows that the System is Ready, the System is awake and ready to use.

***Note:** The Display will turn off after 5 minutes of no activity. Press any key to turn on the Display.*

### **2.2 Address a Receiver**

***Note:** Before a Receiver can receive commands it must be addressed.*

Key in the Receiver's two digit address.

**Example:** Key in (01). Receiver 01 will now accept commands.

Operate Servo by pressing the [\*] Key.

Operate the Receivers internal Relay by pressing the [#] Key.

***Note:** After one hour of no activity the Relays will go to sleep. (see Send Wake Command) Sec. 3.2.5*

### **2.3 System Sleep**

**To put the entire System to Sleep manually:**

**Hold** the [On/Off] Key for three seconds or until the Display shows "OFF".

***Note:** You must be in basic operation to put system to sleep.*

**Tip:** At any time you can **Hold** the [END] key for one second to clear the Display and return to basic operation.



## 2.4 Key Command

**Note:** To exit any Mode and return to basic operation: **Hold** the [END] Key for one second or until the Display clears.

### 2.4.1 Standard Modes (Sec. 3.2)

**Hold** the [Mode] Key for one second. Display shows "SEL".

**Key in the desired mode:**

0 = Delay mode **clear**\*

1 = Delay mode **set**\*

2 = Tandem mode **toggle on/off**\*

6 = Sequential binding

7 = User define binding

# = Send system wake command

\* Select the desired Receiver address prior to applying this Mode.

### 2.4.2 List Modes (Sec. 3.3)

**Hold** the [List] Key for one second. Display shows "LIS"

**Key in the desired List:**

0 = Create, View/Edit Group

1 = Delete Group

6 + [\*] Key (for Group List) or [#] Key (for Receiver List)

7 = View Low Battery List

8 = View missing Receiver List

**Hold** the [END] Key to exit List Mode.

### 2.4.3 Group Modes (Sec. 3.4)

**Hold** the [Group] Key for one second. Display shows "GrP"

Key in the desired **single digit** Group number: (0 - 9).

*Note: To exit Group Mode*

**Hold** the [End] Key to exit Receiver Group Mode.

### **3 Advanced Operation**

***Note:** We recommend reading this chapter before moving on to Section 4 Typical Application.*

#### **3.1 Modes Overview**

There are user Modes that enable you to uniquely setup and manage your system. (Standard, List & Group Modes)

##### **3.1.1 Standard Modes**

Standard Modes help you customize many of your system's operations.

**These Modes Are:** Delay, Tandem and Binding.

##### **With Standard Modes you can:**

- Send a command to a Receiver to be carried out immediately and remain in that state or (Delay) for 30 seconds before returning to it's original position. This feature is very useful when some extra time is needed to perform other operations without the need to manually re-address the Receiver and set it back to its original position.

**Example:** *A switch yard locomotive is a perfect example for Delay Mode. Opening the locomotives coupler(s) enables a car to be dropped, and locomotive control can resume without needing to manually close the coupler(s) in order to pick up another car.*

- Tandem offers more adaptation by enabling you to operate both the Receivers Servo (motor) and Relay simultaneously.

**Example:** *The Relay can be used to turn on an indicator light giving a visual indication that you have actuated a feature on your layout.*

- Binding receivers can be achieved Sequentially or by User Defined Binding. (*Binding is required for communication between the Transmitter and Receiver*) When Binding Sequentially, the Transmitter will automatically Bind the Receiver with the next available Address. User Defined Binding allows you to manually assign the Receivers Address.

### 3.1.2 List Modes

List Modes are used to Manage Receivers that are to be combined into Groups.

#### Use List Mode to:

- (Create), (View) and (Edit) list of Receivers to be used in a Groups.
- (Delete) Receiver Groups.

**Note:** *The following List are automatically created for viewing only.*

- Receivers that are Bound to the Transmitter. (Bound Receiver List).
- Receivers that have low batteries. (Low Battery List).
- Bound Receivers that have lost Communication with the Transmitter. (Missing List).

### 3.1.3 Group Mode

Group Mode enable you to operate a predefined List of Receivers as a Group. This feature is useful when you desire to operate multiple receivers at the same time.

**Example:** *You want to turn on only the lights in the rural area of your model town but not all the lights.*

#### Some features of Groups are:

- Send commands to multiple Receivers simultaneously.
- Create up to ten separate Groups.
- Assign Receivers to multiple Groups.

## **3.2 Using Standard Modes**

### **3.2.1 Delay Mode**

Receiver will pause for 30 seconds after receiving a command, then return to its original position. Either the Servo or the Receivers internal Relay can be set to Delay.

#### **Set Delay Mode on a Receiver:**

- 1) Select the Receiver you wish to set to Delay.
- 2) **Hold** the [Mode] Key until "SEL" appears in Display.
- 3) Press the [1] Key to select Delay Mode. Display shows "S?r".
- 4) Press the [\*] Key for Servo or [#] Key for Relay. Display flashes "SEt".

The servo (or) relay is now set to Delay and it's function indicator will blink, showing Delay is set.

**Tip: To set both the servo and relay to Delay: Use the Tandem Mode.** (Sec 3.2.2)

#### **Clear Delay Mode:**

- 1) Select the Receivers address.
- 2) **Hold** the [Mode] Key until the display shows "SEL".
- 3) Press the [0] Key. Display flashes "CLr".

Delay Mode is now cleared on the selected Receiver.

### **3.2.2 Tandem Mode**

Servo and Relay operate simultaneously with a push of either the [\*] or [#] Key.

#### **Toggle Tandem Mode ON or OFF:**

- 1) Select Receivers address.
- 2) **Hold** the [Mode] Key until "SEL" appears in Display.
- 3) Press the [2] Key.

"t" will appear in the Display showing that this Receiver is set to Tandem Mode.

**Note:** Repeat steps 1-3 to toggle Tandem Mode to OFF.

### **3.2.3 Binding Mode**

Bind Receiver to Transmitter and create Receiver Address.

#### **Bind Receiver Sequentially:**

- 1) **Hold** the [Mode] Key until "SEL" appears in Display.
- 2) Press the [6] Key. "bnd" will appear in Display.
- 3) Connect power to the Receiver you wish to Bind and press the [On/Off] Key.

**Note:** The [On/Off] Key must be pressed within ten seconds after connecting power to the Receiver.

The Display will show the Receivers Address that was Sequentially Bound.

### **User Defined Binding:**

- 1) **Hold** the [Mode] Key until “SEL” appears in Display
- 2) Press the [7] Key. (Transmitter now waits for a two digit Address to assign to the Receiver)
- 3) Key in an (unassigned) Address for the Receiver you wish to Bind.
- 4) Connect power to the Receiver you wish to Bind and press the [On/Off] Key.

**Note:** *The [On/Off] Key must be pressed within ten seconds after connecting power to the Receiver.*

The Display will show that the Receiver is Bound with the Address that you selected.

**Note:** *If an Address was previously assigned it must be Erased before a Receiver can use that Address. (see Unbinding) (Sec 3.2.4)*

### **3.2.4 Unbinding:**

- 1) **Hold** the [Mode] Key until “SEL” appears in Display
- 2) Press the [7] Key. Display shows “\_ \_”. (Transmitter waits for a two digit Address to Unbind)
- 3) Key in the Address you wish to Unbind.
- 4) Press the [On/Off] Key to Unbind the selected address.

The Display will show that the Receiver that you selected is Unbound. The Address will also be Erased from the “Bound Receiver List” but not from the “Receiver Groups List”. (for more on groups. see Using List Modes. (Sec 3.3)

**Note:** *Bound Receiver Addresses are available for review. (see Using List Modes: View Receiver and Group List) (Sec 3.3.3)*

### **3.2.5 Send Wake Command:**

After one hour of no activity receivers will go to sleep.

#### **To wake receivers:**

- 1) **Hold** the [Mode] Key until “SEL” appears in Display
- 2) Press the [On/Off] Key. The Transmitter will search for and Wake any Bound Receivers.

When the Display shows that the System is Ready, the Receivers are awake and ready to use.

## **3.3 Using List Modes**

### **3.3.1 Create, view and edit Group List**

***Note:** To create a Group you must make a List of at least one Receiver Address to add to the group.*

#### **Create a Group List:**

- 1) **Hold** the [List] Key for one second or until "LIS" shows in the display.
- 2) Press the [0] Key to Create, View or Edit a Group. Display will show "GrP"
- 3) Enter a single digit group number (0 - 9). Display indicates that you are creating a List and waits for a two digit Receiver address to add to this group. Display shows "L \_ \_".
- 4) Enter the two digit Receiver address to select and include in this group and press the [SEL] Key. The address is now included in the group. Display will show "L \_ \_" and wait for the next address.
- 5) To continue adding addresses: repeat step 4.
- 6) To complete the Group creation **Hold** the [END] Key until the display clears. The selected Group is now created and contains the list of Receiver Addresses that you entered.

#### **View the List of Addresses in a Group:**

- 1) **Hold** the [List] Key for one second or until "LIS" shows in the display.
- 2) Press the [0] Key to Create, View or Edit a Group. Display will show "GrP"
- 3) Enter an existing single digit Group number. Display shows the first address in the Group List.
- 4) Press the [6] Key to move forward through the List and [4] Key to move back through the List.
- 5) **Hold** the [END] Key to exit.

#### **Add Addresses to an Existing Group:**

- 1) **Hold** the [List] Key for one second or until "LIS" shows in the display.
- 2) Press the [0] Key to Create, View or Edit a Group. Display will show "GrP"
- 3) Enter an existing Group number. Display shows the first address in the Group List.
- 4) **Hold** the [SEL] Key for one second to insert a new Address. Display shows "L \_ \_".
- 5) Enter the Receiver address to include in this group, then press and release the [SEL] Key. The address is now select and included in the group. Display will show "L \_ \_" and wait for the next address.
- 6) To continue adding addresses: repeat step 5.
- 7) To complete the Group creation **Hold** the [END] Key to exit.

### **Delete an Addresses in a Group List:**

- 1) **Hold** the [List] Key for one second or until "LIS" shows in the display.
- 2) Press the [0] Key to Create, View or Edit a Group. Display will show "GrP"
- 3) Select an Existing Group Number.
- 4) Use the [4] and [6] arrow keys to select the address you wish to delete.
- 5) **Hold** the [Back] Key for one second to delete this address. Display shows the address to delete.

***Note:** If this is not the Address you wish to delete: Press the [Back] Key to step back and select another address.*

- 6) If you are sure you want to delete the address, press the [SEL] Key. The address is now deleted from the group.
- 7) To delete another address repeat step 4-5
- 8) **Hold** the [END] Key to exit.

### **3.3.2 Delete Group**

- 1) **Hold** the [List] Key for one second or until "LIS" shows in the display.
- 2) Press the [1] Key. Display will show that you have entered "Delete Group" then show "GrP".
- 3) Select the Group to delete. Display will ask if you are sure you want to delete the Group.

***Note:** If this is not the Group you wish to delete: Press the [Back] Key to step back and select another Group.*

- 4) If you are sure, Press the [SEL] Key. The Group is cleared from memory.
- 5) To delete another Group: Repeat steps 3 - 4.
- 6) **Hold** the [END] Key to exit.

### **3.3.3 View Receiver and Group List**

- 1) **Hold** the [List] Key for one second or until "LIS" shows in the display.
- 2) Press the [6] Key. Display will show "b?G".
- 3) Press the [\*] Key to display a list of bound receivers (or) [#] Key for the list of current groups.
- 4) Use the [4] and [6] arrow keys to move forward or back through a list.
- 5) **Hold** the [END] Key to exit.

### 3.3.4 View List of Receivers with Low Batteries

- 1) **Hold** the [List] Key for one second or until "LIS" shows in the display.
- 2) Press the [7] Key. Display will show a list of Receivers with low batteries.

**Note:** *If no low batteries are detected the display will show "non" and return to standard operating mode.*

- 3) Use the [4] and [6] arrow keys to move forward or back through a list.
- 4) **Hold** the [END] Key to exit.

### 3.3.5 View List of missing Receivers\*

- 1) **Hold** the [List] Key for one second or until "LIS" shows in the display.
- 2) Press the [8] Key. Display will show "Gon" while searching for missing Receivers that are Bound but not communicating with the Transmitter.

**Note:** *If no missing Receivers are detected the display will show "non" and return to standard operating mode.*

- 3) Use the [4] and [6] arrow keys to move forward or back through a list.
- 4) **Hold** the [END] Key to exit.

\* A bound Receiver could be missing due to: receiver has fallen asleep, insufficient battery power or the Receiver may be out of range.

## 3.4 Using Group Modes

**Note:** *Before a Group can be operated. You must create a group containing a list of receivers. (See Sec 3.3.1)*

### Select a Group

- 1) **Hold** the [GROUP] Key until "GrP" appears in the display.
- 2) Key in a single digit Group number. Display will show "G" preceding the selected Group number.

Operate Group Servos (motors) by pressing the [\*] Key.

Operate Group Receiver Relays by pressing the [#] Key.

- 3) To select another Group: simply Key in another single digit Group number.
- 4) To exit Group Mode: **Hold** the [END] Key for one second or until the Display clears. Display will show the last addressed Receiver.

**Note:** *If you select a non-existing group, the Display will show that there is no Group and return to the last selected Group.*



## **4 Typical Application**

### **4.1 Operating a Servo**

Setting up and operating a standard hobby servo with your KDRRC receiver is described below.

#### **4.1.1 Connecting the Servo**

Connect servo cable to the Receivers three conductor Wire Harness making sure that the yellow, red and black wires are aligned.

***Note:** Some servo connectors have a polarity tab that may need to be removed before inserting the connector into the wire harness receptacle.*

#### **4.1.2 Actuating the Servo**

Once the servo is properly connected, it can be actuated between a clockwise and counter clockwise position by pressing the Servo/Motor [\*] Key.

***Note:** The Transmitter and Receiver must be Bound together and the Receiver must be addressed by the Transmitter before commands can be sent to the Receiver. (see Sec. 3.2.3)*

#### **4.1.3 Set Servo Delay**

The servo can be set to delay for :30 seconds.

- 1) Select Receivers address
- 2) **Hold** the [Mode] Key until “SEL” appears in the Display.
- 3) Press the [1] Key The display will show “S?r”.
- 4) Press the [\*] Key to set the Servo Motor into Delay Mode, (or) the [#] Key to set the Relay into Delay Mode.

The display will show “Set” and return to the addressed Receiver. The indicator will be blinking showing that delay has been set for the Servo or Relay. (see Display Sec. 1.2)

#### **4.1.4 Clear Servo Delay**

- 1) Select Receivers address
- 2) **Hold** the [Mode] Key until “SEL” appears in the Display.
- 3) Press the [0] Key. Display will show “CLr” and return to the selected address.

#### **4.1.5 Servo Reversal**

By default the Servo Indicator will be visible when the Servo is in its clockwise position. This can be reversed if desired.

#### **To Reverse the Servo:**

- 1) Select desired Receiver address.
- 2) **Hold** the [\*] Key until “SEt” appears in the Display.

#### **To Clear Servo Reversal:**

**Hold** the [\*] Key until “CLr” appears in the Display.

## 4.2 Operating the Relay

Your Kadee RC receiver is equipped with an on-board relay that can be used to switch electronic devices on and off.

### 4.2.1 Relay Overview

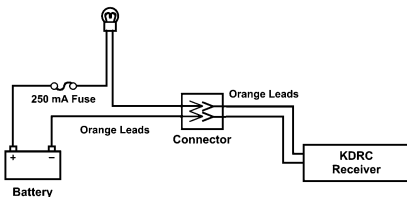
Please read this brief overview. A basic understanding of the on-board relay and its capabilities will benefit you in achieving reliable operation without damaging the on-board relay.

This (solid state) relay is optically isolated from the Receiver control circuitry to eliminate the possibility of permanent damage to the Receiver if an overload should occur. **Care should still be taken, not to overload the relay itself. Please observe the following conditions for reliable switching and long service life:**

Do not exceed 40 volts AC or DC at 250mA of load. It is highly recommended that you place a 250mA fuse in your circuit to protect the relay. Fuses and fuse Holders are available for purchase from Kadee® if you cannot find them locally.

### 4.2.2 Connecting the Receiver Relay to a Circuit

The Receiver Wire Harness has a two conductor plug with orange wires. There is also a receptacle connector with orange wires that you can utilize in connecting the Receivers Relay to a circuit.



Relay Wiring Diagram

Do not exceed 40 volts AC or DC at 250mA of load

### 4.2.3 Actuating the Relay

Once the Wire Harness is properly connected, the on-board relay can be actuated between an open and closed position by pressing the [On/Off] Key.

**Note:** *The Transmitter and Receiver must be Bound together and the Receiver must be addressed by the Transmitter before commands can be sent to the Receiver. (see Sec. 3.2.3)*

It is highly recommended that you check the current (amps) being drawn through your circuit. This can be achieved with a Volt Ohm Meter (VOM).

**Note:** *please read your VOM user manual for the correct procedure of measuring current with your VOM.*

## **5 Reference**

### **5.1 Trouble Shooting**

#### **5.1.1 Error Codes**

In the event that an error occurs, a two digit code will be displayed briefly in the Transmitter Display.

- E.00 - Unrecognized command from keypad
- E.01 - Unrecognized response from selected Receiver
- E.02 - Communication Time-out
- E.03 - ID number not in list
- E.09 - No Receiver IDs available
- E.10 - CRC error
- E.11 - Receiver doesn't recognize command
- E.12 - Bind failed
- E.13 - Invalid Receiver ID
- E.15 - Receiver SN not initialized

If a particular error is happening repeatedly:

*check [www.RemoteUncoupling.com](http://www.RemoteUncoupling.com) for possible problem solving tips.*

#### **5.1.2 Circuit Protection**

When utilizing a Receivers on-board relay, protecting the circuit is highly recommended. Kadee Quality Products will not be responsible for damage to the Receivers Relay if it has been overloaded due to improper wiring or a short circuit.

*See section 4.2 Operating the Relay for proper wiring and circuit protection.*

#### **5.1.3 Transmitter Problems**

If the Transmitter should act abnormal or lock up: remove the batteries from the Transmitter for ten seconds. When the batteries are replaced the firmware version will be displayed for a moment and then show that the system is off. If this is not the case or the display is blank after inserting good batteries:

*check [www.RemoteUncoupling.com](http://www.RemoteUncoupling.com) for possible problem solving tips.*

#### **5.1.4 Transmitting Range Problems**

You could encounter range problems from a variety of reasons. Although the system will notify you of low batteries in a Receiver or your Transmitter, the maximum range will be obtained with fresh batteries.

If you are experiencing insufficient range, follow these tips for achieving maximum range:

- Make sure your Receiver Antenna is straight and vertical if possible.
- Mount your Receiver and Antenna as high as possible.
- Keep in mind that close proximity to other transmitters like wireless keyboard and mouse could affect range.

## **5.2 Specifications**

Solid State Relay:

Peak Voltage	40V AC/DC
Amperage	250mA (.25A)
Turn On Time	.15ms TYP
Turn Off Time	.04ms TYP
Isolation Voltage	500V AC
Temperature Limits	-40°F to +185°F

## **5.3 Firmware**

Registering your product will enable us to notify you of new features and accessories. To take advantage of firmware update notifications product registration is required.

*Check periodically with [www.RemoteUncoupling.com](http://www.RemoteUncoupling.com) for any updates and what's new.*

## **5.4 Important Notice, FCC Licensing**

This device complies with part 15 of the FCC rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

*Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 902GHz to 988GHz frequency range.

## **5.5 Warranty**

### LIMITED WARRANTY

Kadee Quality Products will repair or replace, at our sole option without charge, any Kadee Remote Control Product or Kadee Remote Control system products affiliated with Kadee Remote Control system (#11110, #11215, #11225, #11230) determined by Kadee to be defective, where such product fails due to a defect in material or workmanship within (1) Year following the initial consumer purchase. Kadee's responsibility and liability pursuant to this warranty is expressly and solely limited to the replacement and repair of the Kadee Product in accordance with this warranty.

This warranty is limited to the original "Purchaser" and is not transferable or assignable. This warranty covers only those Kadee Products purchased from an authorized dealer. Third party transactions (such as EBAY) are not covered by this warranty.

Proof of purchase or product registration reflecting a purchase within the warranty period is required for warranty claims. Further, Kadee reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

This warranty does not cover: normal wear and tear, cosmetic or physical damage to the surface of the product, including cracks or scratches. Any damage due to improper installation, operation, maintenance, handling, accident, fire, water or liquids, power changes, abuse, alteration, modification, negligence, battery leak, damage caused by third parties, damage due to attempted repair by anyone other than Kadee, acts of God, devices purchased from anyone other than an authorized retailer or distributor or devices that have been previously registered.

This warranty is considered void if the product case has been opened or the protective wrap has been removed by anyone other than Kadee.

Any device needing to be returned to Kadee must have a return merchandise authorization (RMA) number. Any device received at Kadee without a valid RMA number will be returned to the sender at sender's expense. RMA numbers are valid for (10) business days.

Kadee reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Kadee.

A technical representative will be able to determine if the device is defective and still under the limited warranty period. It also may be necessary for the device to be sent for evaluation to determine the validity of the warranty claim.

If the device is not deemed defective or is out of the limited warranty period, you may be given the option to repair the device for a fee or have the device returned as is at your expense.

#### DISCLAIMER:

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS YOUR EXCLUSIVE REMEDY. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. KADEE SHALL NOT BE RESPONSIBLE OR LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY LAW, ANY IMPLIED WARRANTY, INCLUDING THE WARRANTY OF MERCHANTABILITY OR THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE TERM OF THIS WARRANTY. Some states/countries do not allow limitations of how long an implied warranty lasts or the exclusion or limitation of such damages, so these limitations and exclusions may not apply to you. This warranty gives the consumer specific legal rights and you may also have other rights which vary from location to location. If any portion of this warranty is held to be invalid or unenforceable for any reason, such finding will not invalidate any other provision.

## **5.6 Index**

### **A**

Actuate .....	4.1.2, 4.2.3
Address .....	2.2
Amps (Amperes).....	4.2.3
Assign.....	3.2

### **B**

Battery Monitoring .....	(see List)
Bind & Binding .....	1.3.3, 3.2.3

### **C**

Clear .....	3.2, 4.1.4, 4.1.5
Circuit .....	4.2.2, 5.1.2
Code(s) .....	(see Errors)
Combine .....	(see List)
Commands.....	2.4
Connectors.....	4.1.1, 4.2.2
Create.....	3.3
Customize .....	3.1.1

### **D**

Define .....	(see Bind)
Delay .....	3.2.1, 4.1.3
Digit .....	(see Address)
Display.....	1.2

### **E**

Edit .....	3.1.2, 3.3.1
End .....	2.4
Erase(d) .....	3.2.3, 3.2.4
Errors.....	5.1.1
Exit.....	2.4

### **F**

Function .....	1.2
Fuse(s).....	4.2.1, 5.1.2

### **G**

Group(s).....	3.1.3, 3.3, 3.4
---------------	-----------------

### **H**

Harness.....	(see Wire Harness)
--------------	--------------------

### **I**

Indicator .....	1.2
-----------------	-----

### **K**

Key(s).....	2.4
-------------	-----

### **L**

List.....	3.3
-----------	-----

## **M**

Missing .....	3.3.5
Mode(s) .....	3
Motor .....	(see Servo)

## **O**

On Board Relay.....	(see Relay)
---------------------	-------------

## **P**

Pause .....	(see Delay)
Protection.....	(see Fuses)

## **R**

Receiver .....	1.3.3, 2.2, 3
Relay .....	4.2

## **S**

Select(ed) .....	3.2
Sequential .....	(see Bind)
Servo .....	4.1
Setup .....	1.3.1
Sleep .....	2.3

## **T**

Tandem .....	3.2.2
Toggle.....	3.2.2

## **U**

Unbind(ing) .....	3.2.4
User Defined .....	(see Bind)

## **V**

View .....	3.3
Wake (System).....	1.3.2, 2.1, 3.2.5

## **W**

Wire Harness .....	1.3, 4.1.1, 4.2.2
--------------------	-------------------

# KADEE® RC

## Features:

- Auto Shutdown
- Group Operation
- Long Battery Life
- Battery Monitoring
- Up to a 300' range
- Remote Uncoupling
- Large Tactile Keypad
- Stand Alone Operation
- Multiple Operating Modes
- Simple Addressing & Binding
- Operate up to 99 Remote Devices
- Receiver with On-board 250mA Relay
- Monitor Receiver Status in LCD Display
- Accommodates Standard Hobby Servos

visit [www.RemoteUncoupling.com](http://www.RemoteUncoupling.com) for new features

IC FC

Kadee® Quality Products Co.  
MODEL NO: 10100  
Contains FCC ID: YU310200  
& IC: 9074A-10200



**Kadee®**

Quality Products Co.

673 Avenue C,  
White City, OR 97503-1078