

Velleman K8057

Velleman K8057 Two-Channel RF Remote Control Receiver User Manual

Model: K8057

1. INTRODUCTION

The Velleman K8057 is a two-channel RF remote control receiver kit designed for various control applications. This receiver features two relay contact outputs, offering both toggle and pulse functions, selectable per output. It is capable of learning unique 32-bit codes from compatible Velleman transmitters such as the K8059, VM108, and VM130T. The K8057 can store up to 31 transmitters and provides full software control without requiring hardware settings. Its code memory can be erased for security purposes, and LED indicators provide feedback on output status and functions.

2. SAFETY INSTRUCTIONS

- Always disconnect power before making any connections or performing maintenance.
- This product is a kit and requires assembly. Ensure all components are correctly installed according to the separate assembly instructions.
- Do not expose the device to moisture, extreme temperatures, or direct sunlight.
- Ensure proper ventilation to prevent overheating.
- Only use the specified power supply voltage. Incorrect voltage can damage the unit.
- Keep out of reach of children.

3. PRODUCT FEATURES

- Two-channel RF remote control receiver with random code.
- Two relay contact outputs.
- Toggle or pulse function selectable per output.
- Pulse function with adjustable switch-off timer.

- Learns unique 32-bit codes from compatible transmitters (K8059, VM108, VM130T).
- Stores up to 31 transmitters.
- Full software control; no hardware settings required.
- Code memory can be erased for enhanced security.
- LED indicators for output status and functions.
- Special pulse mode: both outputs can be activated simultaneously by pressing two transmitter buttons.
- Suitable for various control applications including garage doors, home doors, lights, and car systems.

4. PACKAGE CONTENTS

The Velleman K8057 kit typically includes:

- K8057 Receiver PCB (Printed Circuit Board)
- Electronic components for assembly
- Assembly instructions
- User manual (this document)

Note: Transmitters (e.g., K8059, VM108, VM130T) are sold separately.

5. SETUP

5.1 Assembly

Before proceeding, ensure the K8057 kit is fully assembled according to the provided assembly instructions. Proper soldering and component placement are crucial for correct operation.

5.2 Power Connection

Connect the appropriate DC power supply to the receiver's power input terminals. Refer to the assembly instructions for the exact voltage requirements and polarity. Incorrect power supply can damage the unit.

5.3 Output Wiring

Connect your desired devices (e.g., garage door opener, lights) to the two relay contact outputs. The relays provide potential-free contacts, allowing them to switch various loads. Ensure the load's voltage and current ratings do not exceed the relay specifications.

5.4 Learning Transmitters

To enable the receiver to respond to a transmitter, you must 'learn' its unique code:

1. Press and hold the 'Learn' button on the K8057 receiver. An LED indicator will illuminate or flash.
2. While holding the 'Learn' button, press a button on your compatible transmitter (e.g., K8059, VM108, VM130T).
3. The LED on the receiver will change its state (e.g., flash rapidly, turn solid) to indicate successful learning.
4. Release both buttons.
5. Repeat this process for any additional transmitters or buttons you wish to program, up to a maximum of 31 transmitters.

5.5 Setting Output Modes (Toggle/Pulse)

The K8057 allows you to configure each of its two outputs independently for either toggle or pulse operation. Consult the detailed assembly manual for specific jumper settings or software configuration steps to select the

desired mode for each output. The pulse function may also have an adjustable switch-off timer.

5.6 Erasing Memory

To erase all learned transmitter codes from the receiver's memory for security or reprogramming purposes:

1. Ensure the receiver is powered on.
2. Press and hold the 'Learn' button for an extended period (e.g., 10-15 seconds) until the LED indicator confirms the memory has been cleared (e.g., a specific flash pattern).
3. Release the button. All previously learned codes are now deleted.

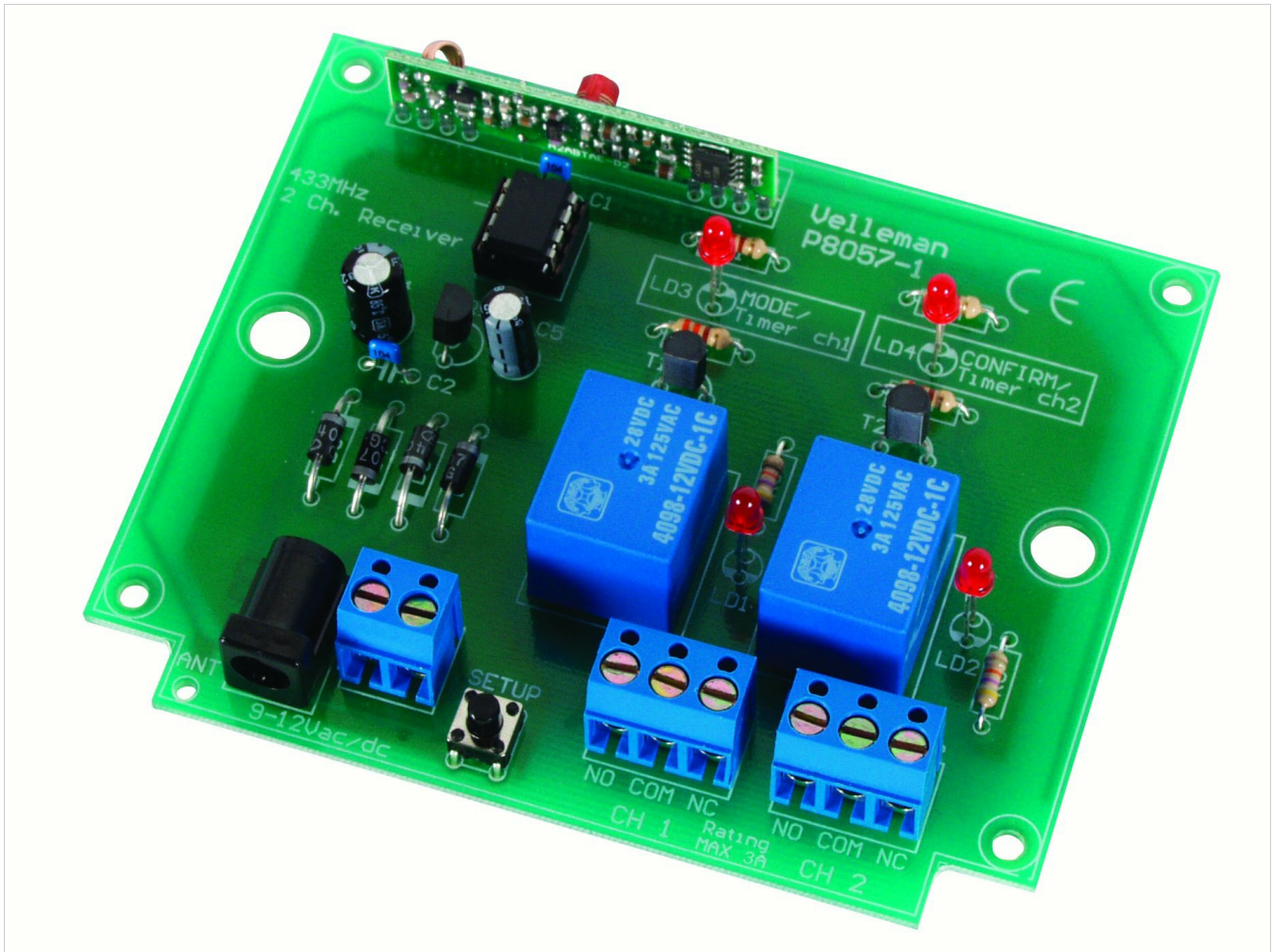


Figure 1: General view of the Velleman K8057 receiver board. This image illustrates the overall layout and components of the receiver, including connection terminals and control buttons.

6. OPERATING

Once transmitters are learned and output modes are set, operating the K8057 is straightforward:

- **Toggle Mode:** Pressing the corresponding transmitter button will switch the output relay ON. Pressing it again will switch the relay OFF.
- **Pulse Mode:** Pressing the corresponding transmitter button will activate the output relay for a preset duration (the switch-off timer). The relay will then automatically switch OFF.
- **Special Pulse Mode:** If configured, pressing both transmitter buttons simultaneously can activate both outputs in pulse mode, useful for specific applications.

The LED indicators on the receiver will provide visual feedback on the status of the outputs and any ongoing operations.

7. MAINTENANCE

- Keep the receiver clean and free from dust. Use a soft, dry cloth for cleaning.
- Do not use liquid cleaners or solvents.
- Periodically check all wiring connections to ensure they are secure.
- Ensure the operating environment remains within the specified temperature and humidity ranges.

8. TROUBLESHOOTING

- **Receiver not responding to transmitter:**
 - Ensure the transmitter has fresh batteries.
 - Verify the transmitter has been successfully learned by the receiver (refer to Section 5.4).
 - Check the distance and any obstructions between the transmitter and receiver.
 - Ensure the receiver is powered on.
- **Outputs not activating:**
 - Check the wiring to the connected devices.
 - Verify the output mode (toggle/pulse) is correctly set.
 - Ensure the load connected to the relay is within its specified limits.
- **Learning process fails:**
 - Ensure the transmitter is compatible with the K8057.
 - Try clearing the receiver's memory and re-learning the transmitter.
 - Ensure you are pressing the buttons correctly and within the specified time frame.
- **Short range:**
 - Check the antenna connection on the receiver.
 - Minimize sources of RF interference in the vicinity.
 - Ensure the receiver is not enclosed in a metal casing that could block RF signals.

9. SPECIFICATIONS

Manufacturer	Velleman
Model Number	K8057
Product Dimensions	2.5 x 12.1 x 20 cm
Weight	135 g
Number of Channels	2
Output Type	Relay Contacts
Transmitter Capacity	Up to 31 transmitters
Power Requirements	Refer to kit documentation for specific voltage and current details.
Batteries Included	No
Batteries Required	No (for receiver)

10. COMPATIBILITY

The Velleman K8057 receiver is compatible with the following Velleman RF remote control transmitters:

- **K8059:** 2-channel RF Code Lock Remote Control
- **VM108:** 2-channel Random Code RF Remote Transmitter
- **VM130T:** 2-channel RF Remote Control Transmitter

11. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or visit the official Velleman website. Keep your proof of purchase for any warranty claims.