

Installation Tips for Best Performance

To ensure best performance from this product DO NOT install the receiver on or next to a metallic surface. If this is unavoidable then the antenna will need to be brought clear of the metal via a coaxial cable (RG58). This cable should terminate at a 434Mhz antenna. Circuit Level makes a suitable external antenna (ANT-01). The Antenna BNC connector (ANT-01) should be wrapped in self amalgamating tape or the internal pin coated with silicone grease if installed near SALT WATER. If range is poor and interference from another source has been eliminated try moving or re-orientating the receiver.

Specifications

Operating Voltage	9 to 24VDC, 9 to 24VAC
Current Consumption @ 12VDC	Standby 14mA, All relays 56mA
@ 24VDC	Standby 28mA, All relays 75mA
@ 16VAC	Standby 28mA, All relays 73mA
Physical Dimensions	Bulkhead case 108x70x34
Case Material	ABS plastic
Output Channels	4
Output Ratings	SPDT relay 1 Amp switching maximum @ 24VDC. Contacts are voltage free.
Reverse Polarity Protection	Yes (diode)
RF Operating Frequency	433.92mhz
RF Signal Type (Data Transfer)	On Off Keying (OOK)
Coding Combinations	Keeloq™ Code Hopping
Learning Capacity (RF Devices)	4.2 billion
Country of Manufacture	170 fobs Australia

Warranty

Circuit Level Electronics (Aust) Pty Ltd warrants this product to be free from defects in materials and workmanship for a period of **2 Years** from date of purchase. We will in the event of failure repair or replace the product at our sole discretion. This warranty does not apply in the event of accidental damage, abuse, misuse, non approved purpose or act of God. This warranty is given in addition to any rights allowed by New South Wales law.

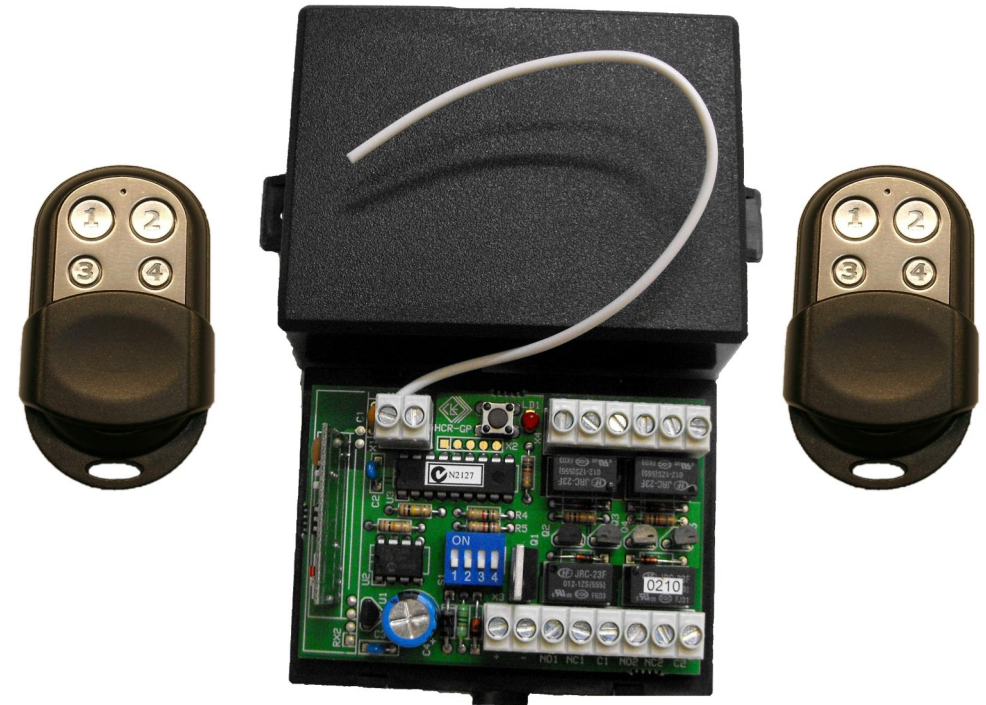
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Circuit Level Electronics reserves the right to change specifications without notice in the interest of product development.

HCR-15

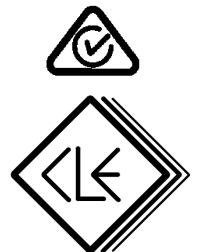
4 Channel Receiver Controller



HCR-15AF Kit shown above includes 2 x HCT-4P fobs



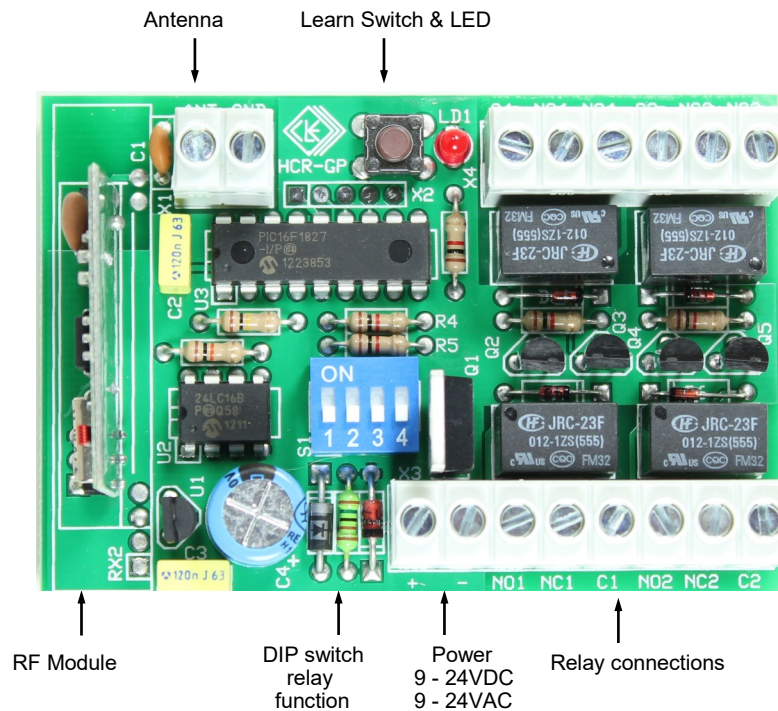
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Overview

The HCR-15 is a general purpose UHF receiver operating on 433.92mhz. Four single pole double throw (SPDT) outputs are available to control external devices. The receiver is designed for use with 4 channel keyfobs. This system uses code hopping technology for secure RF transmissions.

PCB Layout



HCR-15 Kit

The HCR-15AF is a kit containing a HCR-15 receiver and TWO (2) HCT-4P slide cover fobs. These fobs are already learned to the receiver with outputs relays set as momentary. ie: all DIP switches in the OFF position.

Learning Fobs

This receiver is code learning therefore making the addition of extra transmitters an easy task. Fobs supplied in kits are already learned to the receiver. In this case skip Step 1. The HCR-15 can learn up to 170 fobs.

1. If the receiver is being set up for the first time it is advisable to clear the EEPROM memory. To do this hold down the LEARN/DELETE switch on the PCB. The LED will light and then extinguish after 4 seconds. The EEPROM is now empty.
2. Press the LEARN/DELETE switch briefly. The LED will flash rapidly.
3. LEARN a fob to the receiver by pressing a button on the fob. The LED will stop flashing whilst a signal is received and then give ONE flash after you let go the button to indicate successful learning of the fob.
4. Learn additional transmitters or exit by pressing the LEARN/DELETE switch once. LED off. If you forget to exit learn mode (flashing LED) the receiver will do so automatically after 20 seconds of no activity.

Deleting Fobs

Press and Hold the Learn/Delete switch. The LED will come on. When the LED extinguishes (approx 4 seconds) all codes stored in the EEPROM memory have been erased. It is not possible to delete individual fobs.

Relay Setup

Each of the four relays can operate as either **momentary** (operates whilst a transmission is received) or **latching** (changes state with each transmission). The 4 way DIP switch is used to set operation. With the switch corresponding to the relay set to the ON position the relay will LATCH. With the switch in the OFF position (default) the relay will operate in momentary mode.

Power

The HCR-15 is designed to operate from 9 to 24VDC and 9 to 24VAC.

IMPORTANT NOTE:

The HCR-15 receiver should **NOT** be powered from 24VAC or 24VDC if any of the outputs are set to LATCH. The power drawn will exceed the rating for the on board transistor regulator. If latching functions are required at 24V then we recommend the HCR-100 receiver.