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AKRX42-S Receiver Instructions

Description

The AKRX42-S is a self-contained 433.92MHz rolling key receiver designed to be directly interfaced with any devices or controllers able to utilise a dry contact relay signal. With it's 2 on-board 1 Amp (max resistive) 125 VAC rated dry contact relay outputs, this receiver can be connected across existing push buttons connected to various door and gate controllers or used to switch power directly to a vast number of electrical or electronic products.

Power Supply Configuration

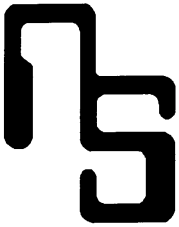
This receiver is capable of being powered with voltages ranging from 12 – 28 volts AC or DC. To operate receiver on 12-28VAC or ≥ 12 VDC, place the power link (near the heatsink) on **HV**. To operate on a 12V battery, place the power link on **LV**. This will enable the relays to continue operating with a supply voltage down to 10V.

Channel Setting

The receiver can learn up to 340 unique (2 or 4 button) transmitters and can be used in either a one or two output configuration. The table below shows all possible configuration options that can be set by selectively placing links across the **L1**, **L2**, **L3** and **L4** pins.

Links				Relay Output				Description
L1	L2	L3	L4	Button 1	Button 2	Button 3	Button 4	
OFF	OFF	OFF	OFF	Left	Right			Buttons 1 & 2, 2 Relays
ON	OFF	OFF	OFF	Left				Button 1 only, 1 Relay
OFF	ON	OFF	OFF		Left			Button 2 only, 1 Relay
ON	ON	OFF	OFF	Left	Left			Buttons 1/2, 1 Relay
OFF	OFF	ON	OFF			Left	Right	Buttons 3 & 4, 2 Relays
ON	OFF	ON	OFF			Left		Button 3 only, 1 Relay
OFF	ON	ON	OFF				Left	Button 4 only, 1 Relay
ON	ON	ON	OFF			Left	Left	Buttons 3/4, 1 Relay
OFF	OFF	OFF	ON	Left	Right	Left	Right	Buttons 1/3 & 2/4, 2 Relays
ON	OFF	OFF	ON	Left		Left		Button 1/3, 1 Relay
OFF	ON	OFF	ON		Left		Left	Button 2/4, 1 Relay
ON	ON	OFF	ON	Left	Left	Left	Left	Buttons 1/2/3/4, 1 Relay
OFF	OFF	ON	ON	Left	Left	Right	Right	Buttons 1/2 & 3/4, 2 Relays
ON	OFF	ON	ON	Left	Left			Button 1/2, 1 Relay
OFF	ON	ON	ON			Left	Left	Button 3/4, 1 Relay
ON	ON	ON	ON	Left	Left	Left	Left	Buttons 1/2/3/4, 1 Relay

Example: If the fourth last option (OFF, OFF, ON, ON) were selected, then buttons 1 and 2 of the Airkey would trigger the left relay on the receiver, while buttons 3 and 4 of the Airkey would trigger the right relay on the receiver.



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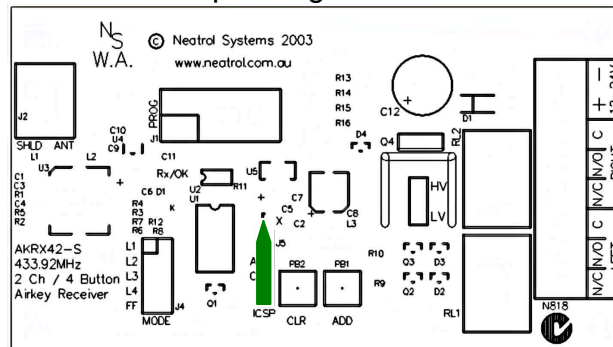
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Relay Operation

This receiver can be configured to either activate the on-board relay(s) for half a second each time a valid transmitter is activated or alternatively cause the relay to change state from either currently on-to-off or currently off-to-on each time a valid transmitter is activated. The latter function is commonly known as flip-flop and is activated by installing the link that is labelled **FF**. If this is not present, the receiver will revert to its standard (momentary) mode of operation.

Programming

All Airkey receivers with date codes from 1st June 2008 have been enhanced with a remote learning function allowing users to add new Airkeys into a receiver without direct access to the receiver itself. This function is invoked when the 5 pin green socket is plugged into the 5 pin ICSP header with the bevelled end pointing towards the centre of the receiver as below:



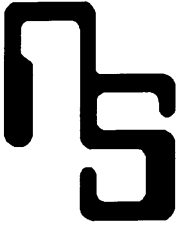
The remote learning socket must be removed before connecting an Airkey Programmer, Airkey Manager or using the manual ADD or CLEAR buttons.

The remote learning socket comes pre-fitted in the factory and can be removed at any time to either disable the remote learning feature of the Airkey receiver or when connecting other peripherals. The learning socket should be fitted when power to the receiver has been disconnected. If this is not convenient, simply press and hold the ADD button while carefully installing the remote programming socket.

Local programming with the remote learning socket removed

Before any transmitters are learnt into the receiver for the first time, press and hold the **CLR** button on the receiver for about 5 seconds. The red light on the receiver will illuminate to indicate that all memory locations have been cleared and the receiver is ready to accept transmitters.

Next press and hold the **ADD** button. The red light will illuminate for as long as the **ADD** button is depressed. To learn in transmitters, simply press one of the buttons of the transmitters to be added. If the transmitter is newly learnt, the red light will blink off for half a second to indicate a successful learn. If the transmitter has already been learnt or is faulty, the light will not blink and that transmitter will not be added. Up to 340 transmitters in total can be added if and when required. A new transmitter can be added at any time by simply pressing the **ADD** button and one of the transmitter's buttons. An alternative method of



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adding transmitters is to fit a jumper or dry contact switch across pins 2 and 3 (labelled **A**) on the **ICSP** connector.

Remote programming with the remote learning socket fitted

Once at least one Airkey has been learnt into the receiver by the local programming method as above, it and any other learnt Airkeys can be used to facilitate the learning-in of additional Airkeys without having to gain direct access to the receiver.

While within the operational range of the Airkey receiver, simultaneously (and briefly) press buttons 1 and 2 of an already learnt Airkey and then press any one button of a new Airkey within 2 seconds to learn the new key into the receiver. If further Airkeys need to be programmed, simply repeat the fore mentioned procedure until all the Airkeys are learned.

Automatic Replace *

If an Airkey has been lost or stolen, a replacement can be ordered provided the serial number of the original Airkey is known. A near identical Airkey can then be supplied such that when it is used, it will automatically replace the lost Airkey and continue to operate without loss of continuity and without needing to access the receiver. After being automatically replaced, the lost Airkey is permanently deleted from the receiver memory and cannot be re-used.

Antenna

An ideal antenna for this receiver is an insulated wire 160mm in length connected to the **ANT** terminal of the receiver.

* Available as a standard feature for all receivers manufactured from 1st October 2005.