AKRX64-S Receiver Instructions

Description
The AKRX64-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 4 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 >=12VDC, 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, 4 or 6 button) transmitters. The table below shows all possible configuration options that can be set by selectively placing links across the **M1, M2** and **FF** pins.

The factory default setting of the AKRX64-S with all links removed is for the left hand button of an AKTX2 or top left hand button of an AKTX4 or button 1 of an AK2TX4 or AK2TX6 activating relay 1. The right hand button of an AKTX2 or the top right hand button of an AKTX4 or button 2 of an AK2TX4 or AK2TX6 activating relay 2. The bottom left hand button of an AKTX4 or button 3 of an AK2TX4 or AK2TX6 activating relay 3 and the bottom right hand button of an AKTX4 or button 4 of an AK2TX4 or AK2TX6 activating relay 4.

| Links | | | Operating Function | Output | | | |
M1	M2	FF		Ch 1	Ch 2	Ch 3	Ch 4
OFF	OFF	OFF	Momentary	1	2	3	4
ON	OFF	OFF	Pulse	3	4	5	6
OFF	**ON**	OFF	Hold Output	1	2	3	4
ON	**ON**	OFF		3	4	5	6
OFF	OFF	**ON**	Flip-Flop	1	2	3	4
ON	OFF	**ON**		3	4	5	6
OFF	**ON**	**ON**	Momentary	1 (mom)	2 (mom)	3 (FF)	4 (FF)
ON	**ON**	**ON**	& Flip-Flop	3 (mom)	4 (Mom)	5 (FF)	6 (FF)

For operations that describe a momentary output, the output relay is triggered for 300 milliseconds. Where the output is Flip-Flop, the relay will maintain it's new state indefinitely until triggered by another button press.
For Hold modes, the relay will remain active for up to 20 seconds as long as the button of the Airkey is held on and the Airkey is transmitting.
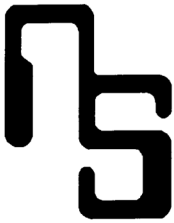
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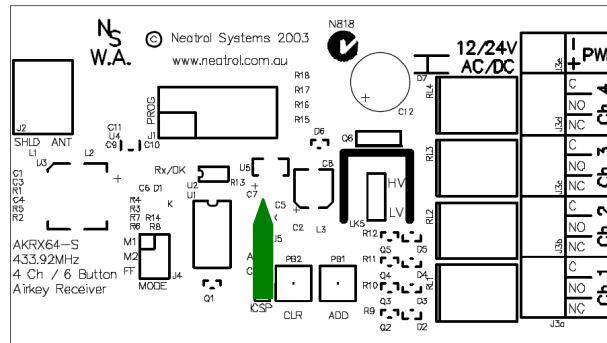
Programming

The AKRX64-S has 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 trans mitter can be added at any time by simply pressing the **ADD** button and one of the transmitter's buttons. An alternative method of 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.

Antenna

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