



WP2P – Star System

Overview

Wireless Point to Point (WP2P) modules can be specially configured by QTech to provide a WP2P star system.

The WP2P star system comprises four WP2P modules. One module is configured as a *master*, and the other three as *slaves* numbered 1, 2 and 3.



The inputs are mapped to the outputs as shown in the table below:

Inputs		Outputs	
Master	INP1	Slave #1	RLY1
Master	INP2	Slave #2	RLY1
Master	INP3	Slave #3	RLY1
Slave #1	INP1	Master	RLY1
Slave #2	INP1	Master	RLY2
Slave #3	INP1	Master	RLY3

Note that on the slave devices INP2, INP3, RLY2, and RLY3 are not used.

Operation

WP2P Star systems operate differently to regular WP2P systems.

If the master detects that any of its inputs have changed state, it will immediately send a message to the corresponding slave informing it of the change. In addition, the master will poll each slave periodically, with a 10 second gap between polling each slave.



Similarly, if any slaves detect that their input (INP1) has changed state, they will immediately send a message to the master informing it of the change. Slaves do not normally poll the master, but they will reattempt sending the message periodically if they don't hear an answer back from the master.

If the master attempts to send a message to a slave but never receives an answer back, it will class the link to that slave as being *down*. The link state is used to set how many attempts the master will use to try and communicate with each slave. If the link to a given slave is *up* then the master will use 5 attempts. But if the link to that slave is down then it will only try once. This is to prevent one down slave from adversely affecting to performance of comms to the other slaves.

Output Hold and Repeater Operation

WP2P modules have two options that can be selected from DIP switches: "Output Hold" and "Talk via Repeater". See the *WP2P System User Guide* for details.

WP2P star systems support the Output Hold functionality, but the behaviour is slightly different to regular WP2P systems. The master will only begin blinking its comms link status indicator LED if the comms to ALL three slaves has failed. Slaves operate similarly to regular WP2P devices, in that if they do not hear an answer back from the master (after 5 attempts) they will go into link down state. Slaves do not normally do background polling, so link status detection only occurs following an input change message.

WP2P star systems also support the WP2P Repeater functionality, but the master and all slaves must be configured to use it. All slaves must be able to see the repeater as all communications will be via the repeater, even if a slave is close to the master module.