Using a DX85 with a MultiHop Radio

Overview

Use the MultiHop Configuration Tool to map a push button input on a DX85 to an EZ-LIGHT output on a MultiHop radio.

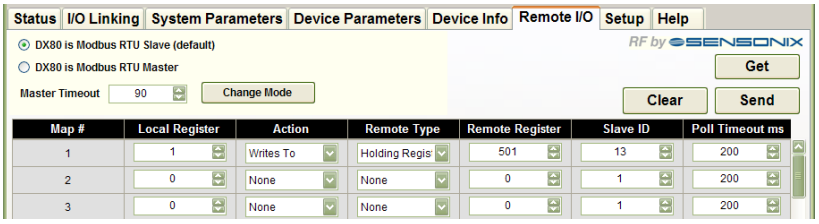
DX85s and MultiHop Radios

In this example, a push button input on a DX85M6P6 DX85 Modbus RTU Remote I/O device is connected to a DX80DR9M-H MultiHop Data Radio (without I/O) and mapped to an EZ-LIGHT output on a DX80DR9M-H1 MultiHop Radio with I/O.

	Switches							
Device Settings	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Serial Line Baud Rate 19200	OFF*	OFF*						
Serial Line Baud Rate 38400	OFF	ON						
Serial Line Baud Rate 9600	ON	OFF						
Serial Line Baud Rate Reserved	ON	ON						
Parity: None			OFF*	OFF*				
Parity: Even			OFF	ON				
Parity: Odd			ON	OFF				
Disable Serial (Low Power Mode)			ON	ON				
Transmit Power**: 1.00 W / 30 dBm					OFF*			
Transmit Power**: 0.25 W / 24 dBm					ON			
Application Mode: Modbus						OFF*		
Application Mode: Transparent						ON		
Data Radio Setting: Repeater							OFF*	OFF*
Data Radio Setting: Master							OFF	ON
Data Radio Setting: Slave							ON	OFF
Data Radio Setting: Reserved							ON	ON

* Default setting

** Disabled for 2.4 GHz. The transmit power for 2.4 GHz is fixed at 0.063 W/18 dBm



1. Connect the DX85 to your computer using the USB to RS485 converter cable and launch the MultiHop Configuration Tool software.
2. Verify the DX85's rotary dials are set to 0 (left dial) and 1 (right dial).
3. Set the DX80DR9M-H rotary dials to 1 (left dial) and 1 (right dial), for a MultiHop Radio ID of 11.
4. Using DIP switches 7 and 8, set DX80DR9M-H to be a radio master.
5. Set the DX80DR9M-H1 rotary dials to 1 and 3 (MultiHop Radio 13).
6. Using DIP switches 7 and 8, set DX80DR9M-H1 to be a radio repeater or slave. Cycle power after changing any DIP switches.
7. Using the MultiHop Configuration Tool, select the MultiHop Radio ID to be 01 (as set on your DX85) and configure the Remote I/O screen parameters as shown.

   The Local Register shown above is the register from the DX85. The push button in this example is wired to DI1.

   The Remote Register is the output register on the MultiHop radio. In this example, DO1 on the DX80DR9M-H1 is used.
8. Click on the Send button to save these changes to the device.
9. Using the radio buttons, select DX80 is Modbus RTU Master and click the Change Mode button.
10. Disconnect the DX85 from the USB to RS-485 converter cable. Use a splitter cable to connect the DX85 to the DX80DR9M-H.

Outputs

Register	Output #	Output Type	Units	Range		Holding Register Representation		Terminal Block Labels
				Min. Value	Max. Value	Min. (Decimal)	Max. (Decimal)	
40501	1	Discrete OUT 1	-	0	1	0	1	DO1
40502	2	Discrete OUT 2	-	0	1	0	1	DO2
40503	3							
40504	4							
40505	5	Switch Power 3						SP3
40506	6	Switch Power 4						SP4

Note, you can also use the DX80 User Configuration Tool (UCT) to map the I/O. When using the UCT, verify the DX85 is set to slave ID 01. The UCT defaults to Slave ID 01 and cannot be changed.