Changing the Baud Rate and Parity on an R70SR BANNE Serial Data Radio



Change the Baud Rate and Parity

The R70 Serial Radios ship with the baud rate set to 19200 and the parity set to none. The baud rate can be changed to 9600 by moving DIP switch 1 to the ON position. If a different baud rate, or a parity other than none is needed, use the MultiHop Configuration software to make that change.

A BWA-UCT-900 cable is required to connect the R70SR to the computer with the software installed.

- 1. Verify all DIP switches on the R70SR are set to the default OFF position.
- 2. Plug the BWA-UCT-900 cable into power, the R70SR, and to a computer (USB connection) with the configuration software installed.
- 3. Launch the MultiHop Configuration Software.
- 4. On the configuration software: Go to the Device menu and select Connection Settings.
- 5. Check Serial. Select the correct Comm Port. Select Modbus ID and verify the Modbus ID is set to 1.
- 6. Expand the Advanced Options.

| Figure 1. | Connection | settin | gs po | p-up | screen |
|-------------------------------|------------------|---------|---------|------|--------|
| 🖓 Conne | ction Settings | | - | | × |
| Serial | O Modbus TCP | ◯ Ser | ial DXM | ⊖ тс | P DXM |
| C | omm Port COM | 14 | - | 3 | |
| Auto | detect | | | | |
| O Mode | ous ID | 1 💠 | | | |
| | Advanced (| Options | | | |
| | Baud rate | 1920 | 0)• | | |
| | Parity | None | •)• | | |
| | Line silence (ms |) | 55 🗢 | | |
| Modbus ID is Mulithop address | | | | | |
| | Timeout (s) | | 5.00 🗢 | | |
| | Retries | | 3 🗘 | | |
| Master ping address 0 🗢 | | | | | |
| | Use echo cance | llation | |] | |
| | F | orce | | | |
| | Co | nnect | | | |

- a) Verify the baud rate is set to 19200 and parity is set to none.
- b) Click Force to connect the R70SR Serial Radio to the software.
- 7. Go to the Settings screen.

Figure 2. Settings screen

| 👷 MultiHop Config | uration Software v2 | | | |
|-------------------|---------------------|-----------|---------------|----------|
| File Device | | | | |
| BANN | | | | |
| Network | Configuration | Reprogram | Register View | Settings |
| Settings | | | | |
| AT Commands | | | | |
| AT | Send AT con | nmand | | |
| Command seque | nce character # R | esponse | | |
| DXM ISM Radio S | ettings | | | |
| Current ISM radio | ID 0 | Get ID | | |
| New ISM radio ID | 0 | Set ID | | |
| | | | | |

If the radio is connected properly, the AT Commands are accessible to send commands to the radio to change the baud rate and parity.

8. To change the baud rate, enter BD into the first text box under the **AT Commands** section. Enter in the AT command value for baud rate in the second text box.

| AT Command Value for Baud Rate | Baud Rate |
|--------------------------------|-----------|
| 4 | 1200 |
| В | 2400 |
| 1 | 9600 |
| 0 | 19200 |
| 2 | 38400 |
| 5 | 57600 |
| 7 | 115200 |

9. Click Send AT command.



| 📲 MultiHop Config | uration Software v2 | | | |
|--|---------------------|-----------|---------------|----------|
| File Device | | | | |
| BANN | | | | |
| Network | Configuration | Reprogram | Register View | Settings |
| Settings | | | | |
| AT Commands | | | | |
| AT BD 2 Send AT command | | | | |
| Command sequence character # _ Response OK | | | | |
| DXM ISM Radio S | ettings | | | |
| Current ISM radio | ID 0 | Get ID | | |
| New ISM radio ID | 0 | Set ID | | |

The software sends the command to the R70 Serial Radio. After it is finished, the **Response** comes back as **OK**. To verify the baud rate change is successful, read the value from the R70SR Serial Radio. To read the baud rate from the R70SR, leave the second text box blank and click **Send AT Command**. The **Response** is the baud rate.

10. To change the parity, enter NB into the first text box under the **AT Commands** section. Enter in the AT command value for parity in the second text box.

| AT Command Value for Parity | Parity |
|-----------------------------|--------|
| 0 | None |
| 1 | Odd |
| 2 | Even |

11. Click Send AT command.

The software sends the command to the R70SR Serial Radio. After it is finished, the **Response** comes back as **OK**. To read the parity from the R70SR, leave the second text box blank and click **Send AT Command**. The **Response** is the parity.

12. On the R70SR Serial Radio, move DIP switch 1 to the ON position, then cycle the power. After the R70SR Serial Radio reboots, it will be using the new baud rate and parity that were configured using the AT Commands. When DIP switch 1 is in the OFF position, the baud rate and parity are set to 19200 and none.

