|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Barker | | | X value | | Y value | | Z value | C value | Integrity test |
| **M** | **B** | **T** | **X1** | **X2** | **Y1** | **Y2** | **Z** | **C** | **XOR** |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Explanation:

Barker – because we use in RF module (a noisy communication) we want that our module be able to identify that the message is our message. There for we use the barker **M**ounting **B**oard **T**eam.

X value – the value of the X Joystick. Can be from 0 – 1023 or from 0.0 – AREF depend on future code. In both cases it is need to bytes for this.

Y value – the same as X value but for the Y axis.

Z value – indicate if the Z button in the controller is pressed or not. If pressed equal 255 if not pressed equal 0.

C value – the same as Y value but for the C button.

XOR – because the communication is noisy and the data is important we check the data integrity. When we send we compute the XOR operation of all the bytes from 4 – 9 and then send it with the data. When we receive the packet we compute again the XOR of bytes 4 to 9 and check if the current XOR is identical to the XOR in byte 10. If they equal the data is OK and if they not our Packet is corrupted.