

# Pointing System Communication Protocol

The communication protocol used to communicate with the Arduino pointing system software over UART is 4 bytes. These 4 bytes inform the system of correction factors to the z-axis (or azimuth) servo angle. The protocol takes the following illustrated format:

$$\begin{array}{c} \text{---} \quad \text{---} \quad \text{---} \quad \text{---} \\ \text{S} \quad \text{V} \quad \text{V} \quad \text{V} \end{array}$$

Where S is a sign bit, and V is a value bit. There is technically no restriction to the values that can be sent, however sending nonsensical data will result in nonsensical behavior by the system.

**Note:** this protocol only allows integer value correction factors to be sent.

## Example 1

Rotate z-axis servo by -2 degrees

*1002*

## Example 2

Rotate z-axis servo by 43 degrees

*0043*

- Max Bowman, 5/07/17
- [maxabowman@gmail.com](mailto:maxabowman@gmail.com)