Alpha firmware for Setting RateOfTurn Offset

Introduction

An Alpha firmware has been created which compensates for gyro drift. The compensation/offset can be set for each axis using a 'custom command' message. The format of this message is explained in the section below.

Messages

Request rate of turn offset.

byte #	value (hex)	description
0	0xFA	Message header.
1	0xFF	Message header.
2	0x78	Message ID
3	0x02	Length, total number of data bytes to come including Command ID, excluding CRC.
4	0x00	Command ID (MSB)
5	0x05	Command ID (LSB)
6	0x82	CRC

Set rate of turn offset.

byte #	value (hex)	description
0	0xFA	Message header.
1	0xFF	Message header.
2	0x78	Message ID
3	0x0E	Length, total number of data bytes to come including Command ID, excluding CRC.
4	0x00	Command ID (MSB)
5	0x05	Command ID (LSB)
6-9	0x--	Offset X axis, hexadecimal representation of floating point value. Unit is [degree/s]
10-13	0x--	Offset Y axis, hexadecimal representation of floating point value. Unit is [degree/s]
14-17	0x--	Offset Z axis, hexadecimal representation of floating point value. Unit is [degree/s]
18	0x--	CRC

Example

The following message will set the following offsets:

X-axis = 0.5 (0x3f000000)

Y-axis = -0.2 (0xbe4ccccd)

Z-axis = 0.3 (0x3e99999a)

FA FF 78 0E 00 05 3F 00 00 00 BE 4C CC CD 3E 99 99 9A 8A

Response

The response message is the same for both the request and the set-message and returns the offset values that are currently set.

It has the same format as the set-message except that the Message ID is 0x79 instead of 0x78 indicating it is a response.

Example

FA FF **79** 0E 00 05 3F 00 00 00 BE 4C CC CD 3E 99 99 9A 89