**Coilover Adjuster IIC Procedure**

**Version 1**

1. Initiate communication by sending the device address and a write bit.
   1. Write 1 byte of data, this sets the internal address. After 1 byte of data the slave will NACK and transmission will stop.
      1. This slave now hold that internal address.
2. To read or write from this address, start another transmission beginning with the device address and the preferred direction (read or write) immediately followed by sending data (write) or preparing to receive (read) the next byte(s).
   1. Refer to the table below for size of each internal address and read/write capability.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Address | Name | Direction | Size (bytes) | Description |
| 0x01 | MOTOR\_SETPOINT | R/W | 2 | First byte: LSB of setpoint.  Second byte: MSB of setpoint.  Setpoint is the actual damping setting multiplied by 10. Should be a multiple of 10 between 0 – 300. |
| 0x02 | MOTOR\_POSITION | R/W | 2 | **Only write on startup.**  First byte: LSB of position.  Second byte: MSB of position.  Position is the true position of the coilover times 10. |
| 0x03 | MOTOR\_SPEED | R/W | 2 | First byte: LSB of rotational speed in RPM.  Second byte: MSB of rotational speed in RPM. |
| 0x04 | MOTOR\_CURRENT | R/W | 2 | First byte: LSB of member from CURRENT\_LIMIT\_t.  Second byte: MSB of member from CURRENT\_LIMIT\_t. |
| 0x05 | MOTOR\_STEP\_MODE | R/W | 1 | Member of STEP\_MODE\_t. |
| 0x06 | MOTOR\_STATUS\_FLAGS | R | 1 | Returns 1 byte. STEPPER\_INFO.flags |
| 0x07 | BATTERY\_VOLTAGE | R | 2 | Returns the ADC result |
| 0x08 | GO\_TO\_ZERO | W | 1 | Any value written starts the go to zero process. |

**Version 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Offset | Name | Direction | Size (bytes) | Description |
| 0x00 | POSITION |  | 2 | First byte: MSB of position.  Second byte: LSB of set point. |
| 0x02 | SET\_POINT |  | 2 | First byte: MSB of position.  Second byte: LSB of set point. |
| 0x04 | STEP\_MODE |  | 1 | Member of STEP\_MODE\_t. |
| 0x05 | CURRENT\_LIMIT |  | 2 | First byte: MSB of member from CURRENT\_LIMIT\_t.  Second byte: LSB of member from CURRENT\_LIMIT\_t. |
| 0x07 | DECAY\_MODE |  | 1 |  |
| 0x08 | MOTOR\_SPEED |  | 2 |  |
| 0x10 | STATUS\_FLAGS |  | 1 |  |