

ZcmdMotor Library

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1 Data Structure Index

1.1 Data Structures

Here are the data structures with brief descriptions:

CMDMOTOR	2
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2 File Index

2.1 File List

Here is a list of all files with brief descriptions:

ZCmdMotor.cpp	8
ZcmdMotor.h	9

3 Data Structure Documentation

3.1 CMDMOTOR Class Reference

```
#include <ZcmdMotor.h>
```

Collaboration diagram for CMDMOTOR:

CMDMOTOR
+ point + Input + Output + Kp + Ki + Kd + dpointMax + newPoint + pid + aTune
+ setPoint() + getEncoder() + CMDMOTOR() + setPin() + loop() + setup() + setPWMValue() + stop() + setSerialDebug()

Public Member Functions

- void [setPoint](#) (int [point](#))
- ZEncoder * [getEncoder](#) ()
- [CMDMOTOR](#) (int INCA, int INCB, int MP, int MM)
- void [setPin](#) (int INCA, int INCB, int MP, int MM)
- void [loop](#) ()
- void [setup](#) ()
- void [setPWMValue](#) (signed int td)
- void [stop](#) ()
- void [setSerialDebug](#) (Uart *SerialDebug)

Data Fields

- double [point](#)
- double [Input](#)
- double [Output](#)
- double [Kp](#)
- double [Ki](#)
- double [Kd](#)
- double [dpointMax](#)
- double [newPoint](#)
- PID * [pid](#)
- PID_ATune * [aTune](#)

3.1.1 Detailed Description

Definition at line 15 of file ZcmdMotor.h.

3.1.2 Constructor & Destructor Documentation

3.1.2.1 CMDMOTOR()

```
CMDMOTOR::CMDMOTOR (
    int INCA,
    int INCB,
    int MP,
    int MM )
```

Definition at line 67 of file ZCcmdMotor.cpp.

References [aTune](#), [dpointMax](#), [Input](#), [Kd](#), [Ki](#), [Kp](#), [Output](#), [pid](#), and [point](#).

3.1.3 Member Function Documentation

3.1.3.1 getEncoder()

```
ZEncoder * CMDMOTOR::getEncoder ( )
```

Definition at line 115 of file ZCcmdMotor.cpp.

Referenced by [loop\(\)](#).

Here is the caller graph for this function:



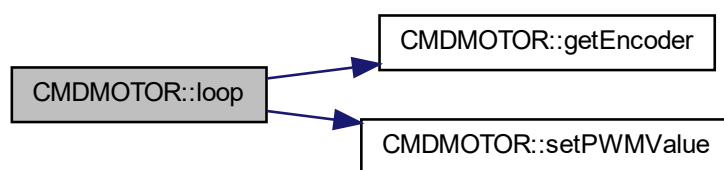
3.1.3.2 loop()

```
void CMDMOTOR::loop ( )
```

Definition at line 205 of file ZCmdMotor.cpp.

References aTune, dpointMax, getEncoder(), Input, Kd, Ki, Kp, MIN, newPoint, Output, pid, point, and setPWMValue().

Here is the call graph for this function:



3.1.3.3 setPin()

```
void CMDMOTOR::setPin (
    int INCA,
    int INCB,
    int MP,
    int MM )
```

Definition at line 106 of file ZCmdMotor.cpp.

3.1.3.4 setPoint()

```
void CMDMOTOR::setPoint (
    int point )
```

Definition at line 17 of file ZCmdMotor.cpp.

References dpointMax, MIN, newPoint, and point.

3.1.3.5 setPWMValue()

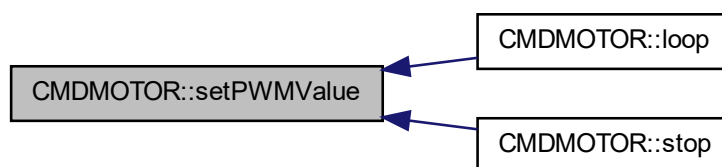
```
void CMDMOTOR::setPWMValue (
    signed int td )
```

Definition at line 165 of file ZCmdMotor.cpp.

References Output, and PWMMAX.

Referenced by loop(), and stop().

Here is the caller graph for this function:



3.1.3.6 setSerialDebug()

```
void CMDMOTOR::setSerialDebug (
    Uart * SerialDebug )
```

Definition at line 13 of file ZCmdMotor.cpp.

3.1.3.7 setup()

```
void CMDMOTOR::setup ( )
```

Definition at line 118 of file ZCmdMotor.cpp.

References pid.

3.1.3.8 stop()

```
void CMDMOTOR::stop ( )
```

Definition at line 157 of file ZCmdMotor.cpp.

References newPoint, point, and setPWMValue().

Here is the call graph for this function:



3.1.4 Field Documentation

3.1.4.1 aTune

```
PID_ATune* CMDMOTOR::aTune
```

Definition at line 30 of file ZcmdMotor.h.

Referenced by `CMDMOTOR()`, and `loop()`.

3.1.4.2 dpointMax

```
double CMDMOTOR::dpointMax
```

Definition at line 27 of file ZcmdMotor.h.

Referenced by `CMDMOTOR()`, `loop()`, and `setPoint()`.

3.1.4.3 Input

```
double CMDMOTOR::Input
```

Definition at line 23 of file ZcmdMotor.h.

Referenced by `CMDMOTOR()`, and `loop()`.

3.1.4.4 Kd

```
double CMDMOTOR::Kd
```

Definition at line 24 of file ZcmdMotor.h.

Referenced by CMDMOTOR(), and loop().

3.1.4.5 Ki

```
double CMDMOTOR::Ki
```

Definition at line 24 of file ZcmdMotor.h.

Referenced by CMDMOTOR(), and loop().

3.1.4.6 Kp

```
double CMDMOTOR::Kp
```

Definition at line 24 of file ZcmdMotor.h.

Referenced by CMDMOTOR(), and loop().

3.1.4.7 newPoint

```
double CMDMOTOR::newPoint
```

Definition at line 28 of file ZcmdMotor.h.

Referenced by loop(), setPoint(), and stop().

3.1.4.8 Output

```
double CMDMOTOR::Output
```

Definition at line 23 of file ZcmdMotor.h.

Referenced by CMDMOTOR(), loop(), and setPWMValue().

3.1.4.9 pid

```
PID* CMDMOTOR::pid
```

Definition at line 29 of file ZcmdMotor.h.

Referenced by CMDMOTOR(), loop(), and setup().

3.1.4.10 point

```
double CMDMOTOR::point
```

Definition at line 23 of file ZcmdMotor.h.

Referenced by CMDMOTOR(), loop(), setPoint(), and stop().

The documentation for this class was generated from the following files:

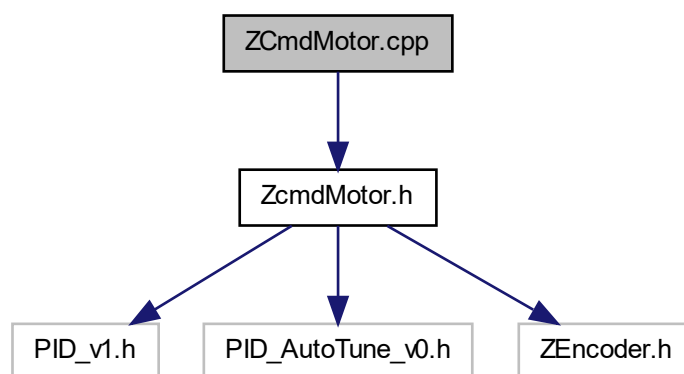
- [ZcmdMotor.h](#)
- [ZCmdMotor.cpp](#)

4 File Documentation

4.1 ZCmdMotor.cpp File Reference

```
#include <ZcmdMotor.h>
```

Include dependency graph for ZCmdMotor.cpp:



Macros

- `#define PWMMAX 4096`

4.1.1 Macro Definition Documentation

4.1.1.1 PWMMAX

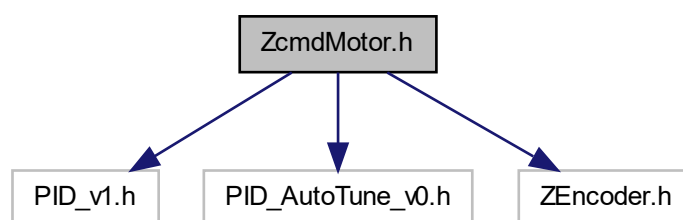
```
#define PWMMAX 4096
```

Definition at line 155 of file ZCmdMotor.cpp.

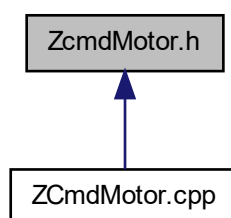
Referenced by CMDMOTOR::setPWMValue().

4.2 ZcmdMotor.h File Reference

```
#include <PID_v1.h>
#include <PID_AutoTune_v0.h>
#include <ZEncoder.h>
Include dependency graph for ZcmdMotor.h:
```



This graph shows which files directly or indirectly include this file:



Data Structures

- class [CMDMOTOR](#)

Macros

- `#define MIN(a, b) ((a<b)?a:b)`
- `#define MAX(a, b) ((a<b)?b:a)`

4.2.1 Macro Definition Documentation

4.2.1.1 MAX

```
#define MAX(  
    a,  
    b )  ( (a<b)?b:a)
```

Definition at line 13 of file ZcmdMotor.h.

4.2.1.2 MIN

```
#define MIN(  
    a,  
    b )  ( (a<b)?a:b)
```

Definition at line 12 of file ZcmdMotor.h.

Referenced by `CMDMOTOR::loop()`, and `CMDMOTOR::setPoint()`.

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