# Notes on CAN bus

## Preliminary list of message IDs

#define ID\_INIT 404

#define ID\_brakes 1

#define ID\_H2 6

#define ID\_motorOnOff 7

#define ID\_ESOutside 8

#define ID\_ESInside 9

#define ID\_SDRelay 11

#define ID\_hallSensor 23

#define ID\_steeringWheel 31

#define ID\_screen 41

#define ID\_backCamera 42

#define ID\_GPS\_IMU\_SD 51

#define ID\_3G 61

#define ID\_lightShow 80

#define ID\_lightsFront 81

#define ID\_lightsBack 91

## Pitfalls

* Beware of sending the message itself and not it’s pointer.
* Remember to set global interrupts before going to sleep when receiving messages.
* Remember to clear global interrupts before transmitting a message.

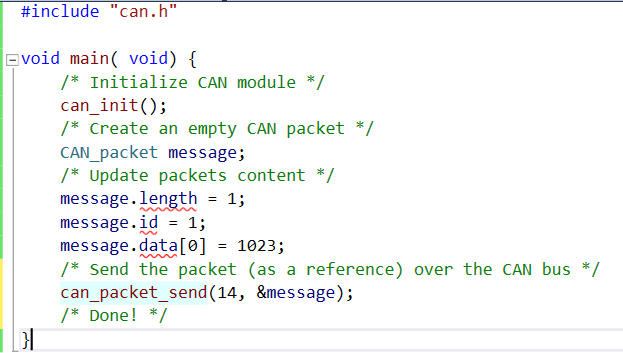
## prepare\_rx(char mob, unsigned id, unsigned idmask, CAN\_cbf callback)

Parameter *mob* (message object) is used to denote which CAN bus buffer to use when looking for the message particular message. Parameter *id* is used to identify the messages on the bus that are of interest for the particular module. The range is typically 0..2048. The complete list of IDs used is in the “can.h” header file. Parameter *idmask* is used to filter unwanted messages allowing only a single or a range of messages to pass. See example below. Parameter *callback* is a pointer to callback function when a message with “allowed” id is found.

Example of message filtering:

* *id* = 0b1100, *idmask* = 0b1000. Allowed message ids: 0b1xxx. That is 0b1000, 0b1001, 0b1010, 0b1011, 0b1100, 0b1101, 0b1110, and 0b1111. In decimal: 8..15.
* *id* = 0b1100, *idmask* = 0b1111. Allowed message ids: 0b1100. In decimal: 12.
* *Id* = 0b1100, *idmask* = 0. Allowed message ids: all.

## How to send a CAN message



## How to receive a CAN message

