

Modifying CCS USB driver to suit the GPS Car Computer

Due to licensing restrictions the library code for the USB driver is not included in this software distribution. When you install the CCS C Compiler for the PIC18Fxxxx series of chips you will also automatically install the USB driver code. You need to modify the CCS USB driver code as described below so that the GPS Display source code will compile correctly.

The CCS C Compiler is available for purchase from <http://www.ccsinfo.com>

1. Locate the file `usb_cdc.h` and copy it to the folder containing the GPS Display source files. The CCS setup normally installs this file in `C:\Program Files\PICC\Drivers`.
2. Locate the following section of code in the copied file and change the text to match the **bold and underlined** text below. This involves just changing the `<` and `>` characters to double quotes (`"`).

```
#include "usb_desc_cdc.h" //USB Configuration and Device descriptors for this UBS device
```

3. Locate the file `usb_desc_cdc.h` and copy it to the folder containing the GPS Display source files. The CCS setup also normally installs this file in `C:\Program Files\PICC\Drivers`.
4. Locate the following section of code in the copied file and change the text to match the **bold and underlined** text below. There is only one line that needs to be changed.

```
const char USB_DEVICE_DESC[USB_DESC_DEVICE_LEN] ={
    //starts of with device configuration. only one possible
    USB_DESC_DEVICE_LEN, //the length of this report ==0
    0x01, //the constant DEVICE (DEVICE 0x01) ==1
    0x10,0x01, //usb version in bcd ==2,3
    0x02, //class code. 0x02=Communication Device Class ==4
    0x00, //subclass code ==5
    0x00, //protocol code ==6
    USB_MAX_EP0_PACKET_LENGTH, //max packet size for endpoint 0.
    0xD8,0x04, //vendor id (0x04D8 is Microchip) ==8,9
    0x52,0xFD, //product id ==10,11
    0x00,0x01, //device release number ==12,13
    0x01, //index of string description of manufacturer ==14
    0x02, //index of string descriptor of the product ==15
    0x00, //index of string descriptor of serial number ==16
    USB_NUM_CONFIGURATIONS //number of possible configurations ==17
};
```

5. In the same file locate the following section of and change the text to match the **bold and underlined** text below. Note that there are 6 lines to be changed.

```
char USB_STRING_DESC_OFFSET[]={0,4,10};
```

```
char const USB_STRING_DESC[]={
    //string 0
    4, //length of string index
    USB_DESC_STRING_TYPE, //descriptor type 0x03 (STRING)
    0x09,0x04, //Microsoft Defined for US-English
    //string 1
    6, //length of string index
    USB_DESC_STRING_TYPE, //descriptor type 0x03 (STRING)
    'S',0,
    'C',0,
    //string 2
    30, //length of string index
    USB_DESC_STRING_TYPE, //descriptor type 0x03 (STRING)
    'S',0,'C',0,' ',0,'G',0,'P',0,'S',0,' ',0,
    'D',0,'i',0,'s',0,'p',0,'l',0,'a',0,'y',0
};
```

Note: Don't change anything else and make the changes exactly as depicted above