



G1000 v2

PCB Instructions

For Parts list and Mobiflight configuration information:

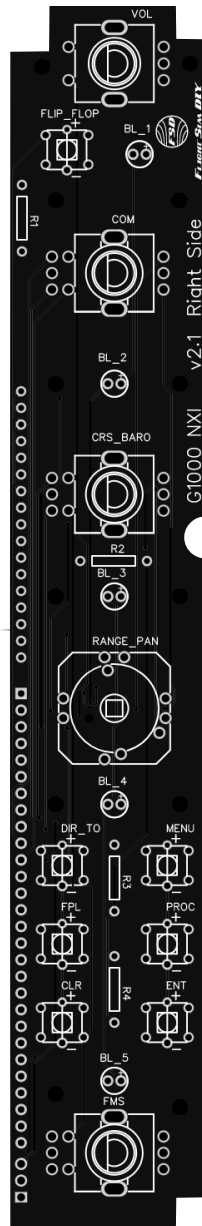
Please refer to the Parts list located on the Project resource page at FlightSimDIY.com

Important Notes:

The part numbers listed on the website are the parts that these PCB's as well as the 3D print files are designed to use. Please use caution when using other components as they may not fit properly.

Base PCB set (Faceplate)

Right Side



Resister Values

Please note that these values are based on using a 12v power supply.

Please double check based on the ratings of the LED's you are using

$$R = \frac{\text{PWR Volts} - (\text{LED Volts} * \# \text{ of LEDs})}{\text{Current rating of LED's in mA}}$$

R1 (3 LED's) = 150 ohm

R2 (3 LED's) = 150 ohm

R3 (3 LED's) = 150 ohm

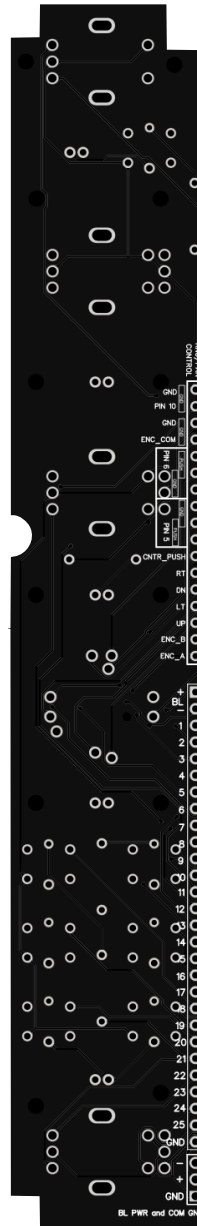
R4 (3 LED's) = 150 ohm

G1000 TBM 900 Mod:

Replace the CRS/BARO Dual encoder with a single encoder
Part # EC11E15244G1

Also, you will not need to connect pins 12 and 13 to your I/O board.

Set this encoder as BARO in your Sim.
And pin 14 to BARO STANDARD



These pins are for the jumper shunts. The standard configuration should be Pin 10 - GND, ENC_COM - GND, Pin 6 - PUSH, Pin 5 - GND. If needed, Pin 6 can be set to GND and pin 5 can be set to PUSH.

These pins should be wired to you Arduino or whatever I/O solution you have choosing.

Power input for Backlighting (connect to one side (left PCB or right PCB) to power source (12v).

1 - VOL Encoder A	17 - CLR
2 - VOL Encoder B	18 - MENU
3 - VOL PUSH	19 - PROC
4 - Flip-Flop	20 - ENT
5 - COM Inner A	21 - FMS Inner A
6 - COM Inner B	22 - FMS Inner B
7 - COM Outer A	23 - FMS Outer A
8 - COM Outer B	24 - FMS Outer B
9 - COM PUSH	25 - FMS PUSH
10 - CRS/BARO Inner A	GND - Connect to GND on I/O Board
11 - CRS/BARO Inner B	
12 - CRS/BARO Outer A	
13 - CRS/BARO Outer B	(only need to connect either the right or left PCB GND to your I/O board)
14 - CRS/BARO PUSH	
15 - DIR_TO	
16 - FPL	

These pins are connected to the same pins on the Bottom PCB, They pass the Backlight Power and the I/O GND along to the next PCB.

Bottom



Resister Values

Please note that these values are based on using a 12v power supply.

Please double check based on the ratings of the LED's you are using

$$R = \frac{(PWR \text{ Volts} - (LED \text{ Volts} * \# \text{ of LEDS}))}{\text{Current rating of LED's in mA}}$$

R5 (3 LED's) = 150 ohm

R6 (3 LED's) = 150 ohm

R7 (3 LED's) = 150 ohm

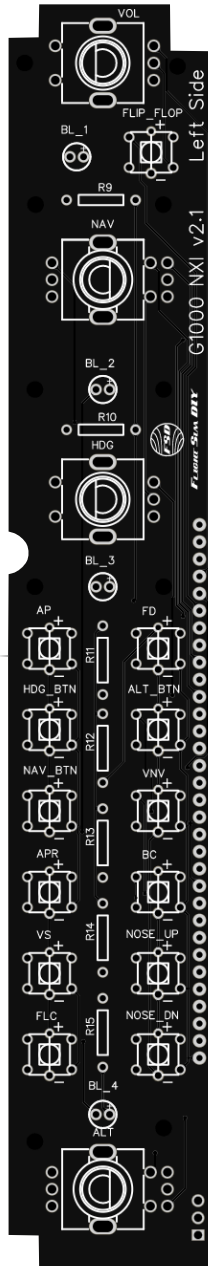
R8 (3 LED's) = 150 ohm

These pins are connected to the same pins on the Right & Left PCB's, They pass the Backlight Power and the I/O GND along to the next PCB. These should be connected if NOT using the Mobiflight control board.



- 1 - Soft Key 1
- 2 - Soft Key 2
- 3 - Soft Key 3
- 4 - Soft Key 4
- 5 - Soft Key 5
- 6 - Soft Key 6
- 7 - Soft Key 7
- 8 - Soft Key 8
- 9 - Soft Key 9
- 10 - Soft Key 10
- 11 - Soft Key 11
- 12 - Soft Key 12

Left Side



Resister Values

Please note that these values are based on using a 12v power supply.

Please double check based on the ratings of the LED's you are using

$$R = \frac{(PWR \text{ Volts} - (LED \text{ Volts} * \# \text{ of LEDs}))}{\text{Current rating of LED's in mA}}$$

- R9** (2 LED's) = 300 ohm
- R10** (2 LED's) = 300 ohm
- R11** (3 LED's) = 150 ohm
- R12** (3 LED's) = 150 ohm
- R13** (3 LED's) = 150 ohm
- R14** (3 LED's) = 150 ohm
- R15** (1 LED) = 450 ohm

G1000 TBM 900 Mod:

Do not install the following parts:

- HDG Encoder
- ALT Encoder
- BL_9
- 12 Autopilot switches
- Resisters R11,R12,R13,R14,R15

Note: you still need to install BL_8 to maintain the functionality of BL_7.

No Autopilot Mod:

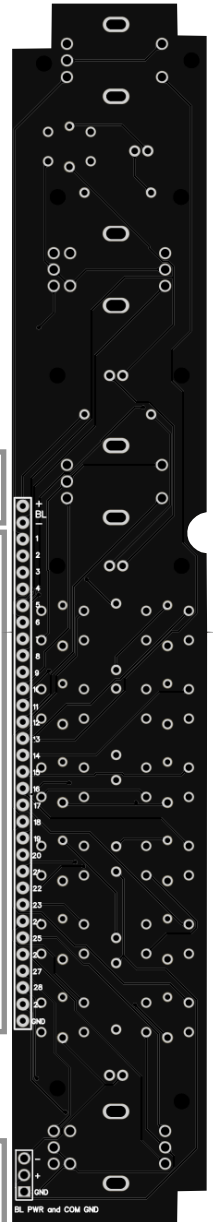
Do not install the following parts:

- 12 Autopilot switches
- Resisters R11,R12,R13,R14

Power input for Backlighting (connect to one side (left PCB or right PCB) to power source (12v).

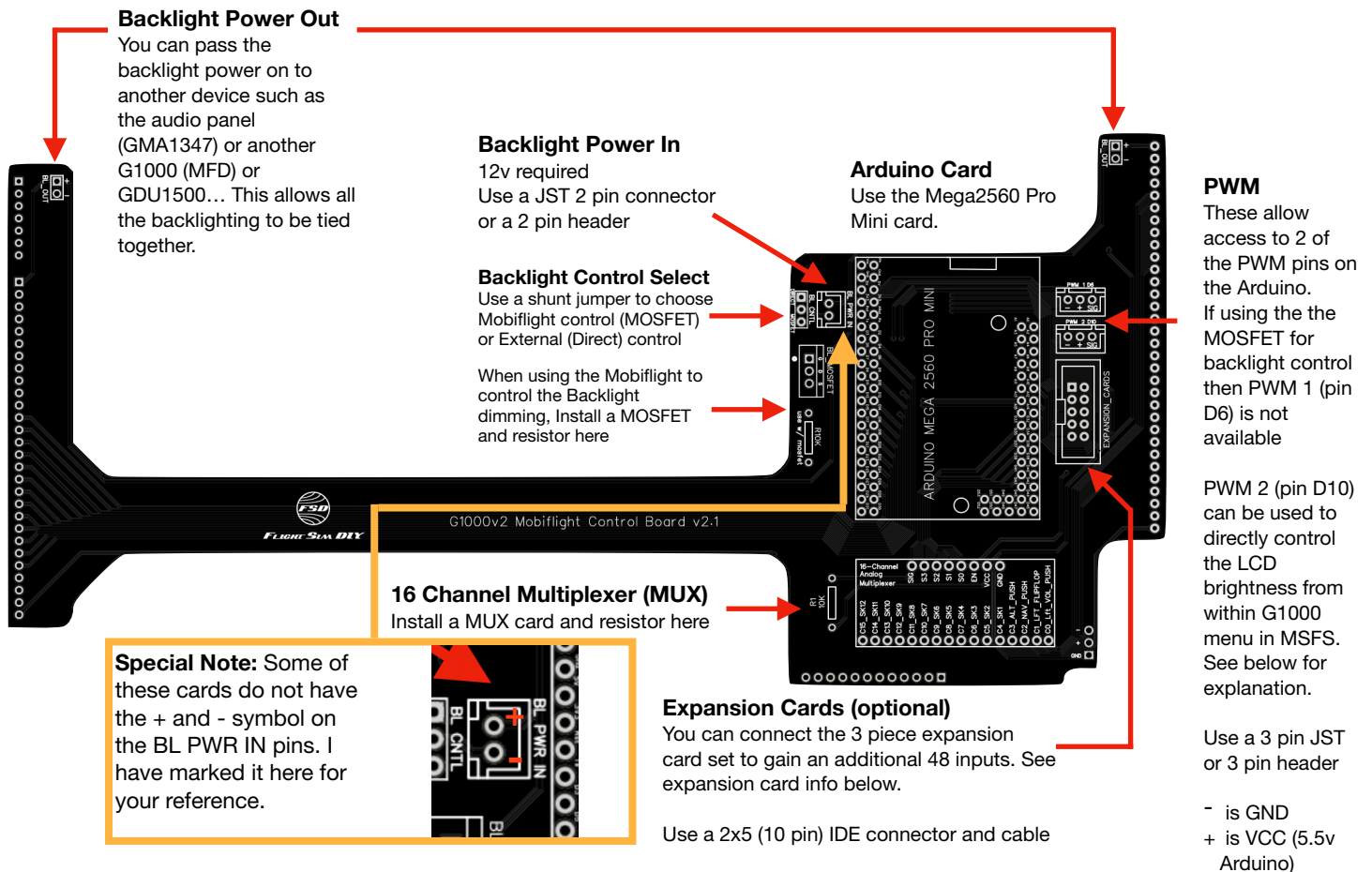
- | | |
|--------------------|---|
| 1 - VOL Encoder A | 19 - FD |
| 2 - VOL Encoder B | 20 - ALT |
| 3 - VOL PUSH | 21 - VNV |
| 4 - Flip-Flop | 22 - BC |
| 5 - NAV Inner A | 23 - NOSE_UP |
| 6 - NAV Inner B | 24 - NOSE_DN |
| 7 - NAV Outer A | 25 - ALT Inner A |
| 8 - NAV Outer B | 26 - ALT Inner B |
| 9 - NAV PUSH | 27 - ALT Outer A |
| 10 - HDG Encoder A | 28 - ALT Outer B |
| 11 - HDG Encoder B | 29 - ALT PUSH |
| 12 - HDG PUSH | GND - Connect to GND on I/O Board |
| 13 - AP | |
| 14 - HDG | |
| 15 - NAV | (only need to connect either the right or left PCB GND to your I/O board) |
| 16 - APR | |
| 17 - VS | |
| 18 - FLC | |

These pins are connected to the same pins on the Bottom PCB, They pass the Backlight Power and the I/O GND along to the next PCB.



Mobiflight Control Board

This control board is designed to plug into the Faceplate (Base set) PCB's. It creates a much cleaner setup and provides some additional functionality to your G1000.



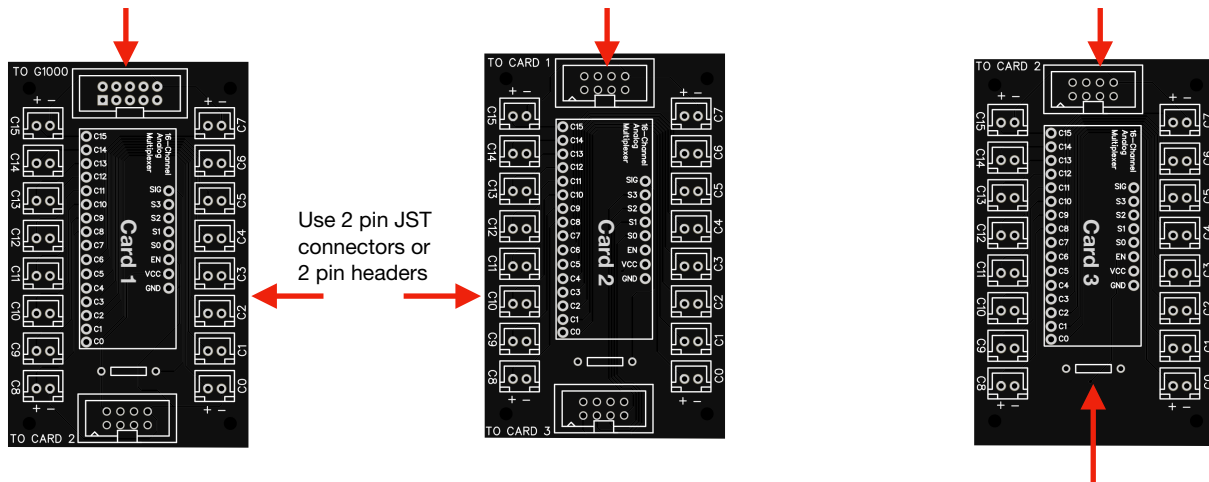
Mobiflight Expansion Cards

These expansion cards can be daisy chained together and allow for 48 additional inputs to the Arduino card. These are inputs only (buttons or switches). They are connected using IDE ribbon cables to allow flexibility in where you put them in your home cockpit.

2x5 (10 pin) IDE connector and cable.
Connects to Mobiflight control board

2x4 (8 pin) IDE connector and cable.
Connects to Card 1

2x4 (8 pin) IDE connector and cable.
Connects to Card 2



NOTE: The cards must be connected in this order...
MF Control Board > Card 1 > Card 2 > Card 3

16 Channel Multiplexer (MUX)
Install a MUX card and resistor onto each card