

## VESC Display Quick Start Guide



Key Features:

- USB-C connectivity
- Bluetooth connectivity
- WiFi (Access point & station)
- Fully programmable functions & user interface via LISP scripting
- Four tactile buttons
- RGB 320x240 Screen
- Adjustable user profiles
- Can be used to power on/off any Trampa VESC

# Please make sure to read and understand ALL THE INFORMATION included in this manual, before attempting to set up the display!

#### Connecting the Display to a VESC

Before connecting the Display to the VESC, ensure the VESC is unplugged from the battery and powered off.

The Display must be connected to the master VESC. \*The master VESC is the VESC which any inputs such as ADC throttles, brakes or the Trampa Wand are connected to.\*

A 6 Pin HIGO connector is used to connect the Display to the VESC. Included with the screen is a 6 pin breakout cable.

The diagram below indicates the function of each cable and which pin it should be connected to on the VESC:

Button (brown) does not need wiring in for the display to function.

	INPUT VOLTAGE +		
ORANGE	(12 - 100V)		
	GROUND		
BLACK			
	CANLOW		
GREEN			
	CAN HIGH		
WHITE			
	BUTTON		
BROWN	(NOT CURRENTLY USED)		
	SWITCH		
VIOLET	Switch		



#### Updating the VESC Tool to Version 6.05

The VESC Display is a new product and requires the VESC Tool to be updated to version 6.05.

#### Please update the VESC Tool to version 6.05 in order to configure the Display.

To find the latest version of the VESC Tool on a PC, Mac or Linux log into vesc-project.com and go to purchased Files.

Download and install the appropriate VESC Tool for your operating system.

The VESC tool on mobile devices can be updated via the App Store or Play Store.



#### File downloads

View Edit Files Orders File browser

Purchased	Filename	Description	Downloads	Addresses
2022-05-30	vesc_tool_mac.zip (expires on 2025-02-22)		2/Unlimited	1/Unlimited
2022-02-01	vesc_tool_BETA_ALL.zip (expires on 2025-02-22)		10/Unlimited	1/Unlimited
2020-12-15	vesc_tool_free_linux.zip (expires on 2025-02-22)		0/Unlimited	0/Unlimited
2020-12-15	vesc_tool_free_windows.zip (expires on 2025-02-22)		8/Unlimited	1/Unlimited
2020-12-15	vesc_tool_android.zip (expires on 2025-02-22)		0/Unlimited	0/Unlimited

Once your download is finished, you must refresh the page to download again. (Provided you have permission) Downloads will not be counted until the file is finished transferring, even though the number may increment when you click.

Do not use any download acceleration feature to download the file, or you may lock yourself out of the download.



#### Updating the VESC hardware to Version 6.05

The master VESC connected to the screen and any other VESCs connected via CAN need to also be updated to version 6.05.

This process can now be done via the USB-C on the rear of the Display or through your preferred method such as NRF or WiFi using a VESC Express.

1. Establish a connection by pressing the CONNECT button

File Edit Conflieckup Woards Terminal	Developer Help					
					<b></b> 8	*
Welcome & Wizarda     Connection						90 54 44
VESC Packages South Analysis Dete Analysis Dependent Plot			HOE	Devices Found	SCAN_	tA GA
<ul> <li>IMU Data</li> <li>BMS Data</li> <li>Log Analysis</li> </ul>	Welcome to	VESC® Tool		Swial ESP22	CONVECT	74 •8e
VESC Dev Tools     Terminal     Dr OML Scripting     Dis LisofM Scripting	To get started, you can use the Setup Wizards to configur can connect to your VESC in the Convection page and go	e the motor and app settings respectively. Otherwise, you through the motor and app configuration pages manually.				<b>8</b> 匹 四
G CAN Analyzar Display Tool						MU 845
C SWD Programmer C ESP Programmer						54 0
	Quick Configuration					
	AutoConnect	Setup Motors POC				
CAN-Devices	MU Setup MU	Setup Input				
	💀 Nulti Settings	NRF Quick Pair				
19 Scan C/W	Setup Bluetcoth Module	Ci Invest Motor Directions				
D & 20 E 10 u 5010		Firskey				
13.00 A 2 8 P 0.00	• : @ H0 3.00 A : 🖬 🕸 🤷 🚃	Current		0.00 A		
					Mail comm	





- 2. Check under CAN-Devices that the tool is currently connected to the VESC.
- 3. Click on the Firmware menu.
- 4. Click on the **Install All** button and wait until the firmware has completed downloading
- 5. The VESC will reboot, please wait 10 seconds and reconnect to the VESC to the VESC tool
- 6. Confirm the firmware has updated to version 6.05











#### Updating the Display and VESC Firmware

The display will come flashed but a new version may be released. Please complete this process regularly to enable the latest functions and features!

- 1. Check under CAN-Devices that the tool is currently connected to the VESC display labelled as **"VDisp"**.
- 2. Go to VESC Packages then press "Update Archive".











3. Click on the **"VDisp"** package followed by pressing **"Install"**.







- 4. Connect to the master VESC by selecting it from the list of CAN-Devices.
- 5. Under Applications click on "VDisp ESC" followed by pressing "Install".
- 6. The display should now be displaying real time data from the VESC.







### Turning the Display On & Off

To power **ON** the display, hold down the first button for 1-2 secs until the VESC logo appears on the screen.

To power **OFF** the display, hold down the first button for 1-2 secs until the screen goes blank.



## Using the Display to Power On & Off a VESC

PLEASE NOTE: This feature has only been tested on Trampa VESCs.

If the SWITCH cable (Violet) is connected to the switch pin on a Trampa VESC this will power off both the display and VESC.

If the SWITCH cable is NOT connected this will power off the display ONLY.

- 1. Connect to the master VESC by selecting it from the list of CAN-Devices.
- 2. Go to the "General" app settings menu.
- 3. Change the shutdown mode to "ALWAYS\_OFF".
- 4. Press the write app configuration button.

• N.N. 198					
File 68t Confleckup Waards Terminel	Developer Help				
	General Controls				1
				· 1 8 0	1.00
SECOND TOOL				1.6.0	
Si FOC MOTOR *				:160	514
PID Controllers MOTOR				180	234
Additional Info Morda	C44 and Res	CAN_BAUD_SOOK		- 1 6 0	
Comparison Motor	ating Date			· 1 6 0	
App Settings	Crubic Permanent BART			- 1 8 0	6A
E General APP		ALWAYS_OFF		- 1 6 0	ŦA
TRAU D				الم يترو.	
N VESC Remote MP				1 8 0	
IS INU APP		Current Control		- 1 6 0	æ
🛪 Deta Analysis		50000		180	12
🐮 Realtime Data				- 1 & O	55
SS Sampled Data				- 1 B O	MU
5/ Experiment Piot				- 1 8 0	845
BMS Data			CAN Messages Rate 1		ö
🗊 Log Analysis				. 1 6 0	-
V VESC Dev Tools					
E Terminal		Status 3	Status 4	160	
ElisaBM Solicing		Status 5	Status 6		
On CAN Analyzer			CAN Messages Rate 2		
Dtsplay Tool	Carilladus Rate 2	SHZ		; 1 6 0	
as Debug Console		3130,61	5191/6 2 Status d	- 10 M	
C SWD Programmer	Can we say to have a	Status 5	Status 4 Status A	T 6 0	
CAN Devices					
D Device (Vbisp): Jeest					
- 1MERC 40 75 MR2 15					
© Scan CAN					
D 0.20 5 8 u 5000	8PM 2 09 18 3.4	8.4. E <b>1</b> .	Data		
13.00 A 5 69 P 0.00		• • • • •	Eastern Castrant	0.00 4	
			current.	Dereverted (agrin) to C	100405
				connected (antal) to c	Concession in which the

General			•
AUMAYS_OFF			•
VESC			•
	Default		
			+
	Default	Help	
Current Control			•
	Default	Help	
- /	50000		+
Write	Read		-
Connected	(BLE) to C7.38.4P.0	123.53	CAN
111	0	<	



#### Wi-Fi® Setup

The Wi-Fi® on the VESC Display has 2 modes, Station mode and Access point. Station mode will connect to your router at home (access through any device with the VESC-Tool connected to WLAN/LAN) and Access point will generate a Wi-Fi® Hotspot you can connect to.

- 1. To configure the Wi-Fi® settings connect the Display by selecting it from the list of CAN-Devices
- 2. Click onto the VESC Express Menu. Here the Wi-Fi® can be configured to your preference.

**Station mode** requires you to enter your router SSID and Wi-Fi® password, these are usually found on a sticker on the router. Once this is entered into the VESC-Express settings you should make sure Wi-Fi® mode is set to 'Station mode' and then click write to save .

Access point only requires you to select Wi-Fi® mode 'Access point' and then click write to save. You can change the SSID and password to whatever you like but remember to write to save the setting. Once access point is active go to Wi-Fi® settings on your device and look for the access point SSID. Once found click connect and enter your chosen password.





#### LISP Code

The display uses LISP code which can be customised by the user if they wish to do so.

LispBM scripting can be found under the VESC Dev Tools Menu on the left side of the screen.

To read or edit the code select read at the top of the screen.

VDisp ESC package contains all the real time data being sent to the display

VDisp package contains all the code which the display renders such as: user interface, gauges, colours etc.





### Contact

Our emails are checked regularly, however if your problem is urgent or you feel you need to speak to us in person then please WhatsApp or call 7am - 4pm, Monday - Saturday. Please remember if you are not in the UK then there is a time difference to consider.

Email: <u>support@trampaboards.com</u> Phone: 0044 7734 905883 Website: <u>trampaboards.com</u>

Address:

We DO NOT ACCEPT RETURNS without first speaking with our customer support team.

Trampa Boards Unit 16, Centre Court 33 Little Tennis Street Colwick, Nottingham NG2 4EL, United Kingdom

