

TCU SETUP

OUTPUT SETTINGS:

The TCU sender software is accessed via WEB interface. To reach this interface you need to start your board in "WEB BOOT" mode.

Connect a bridge between the "Web boot" pins on the board

(Or hold the button if mounted. See hardware documentation regarding this...)



LOGON

When the OFgear TCU is powered up, the board will start in "WEB server" mode and you will be able to login to the WIFI A.P using the following SSID and password.

SSID: OfgearConfig2025 Password: 123456789



WEB GUI

To reach the webpage you open your browser and enter the address: **192.168.4.1** and you will be presented with the "Start page" of the software.

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Gauge Controller	OFgear Setup	
The Gauge controller uses the OfGear TCU data to controll "DIY" gauges and instrument clusters. Using wireless connection from the OFgear TCU to the	OFpear the standalone 722.6 transmission controller!	
external insulation custor of opens up for a caute nee	experience with an outling-edge standarlone controller designed specifically for the 722.6 Mercedes Gearbox.	
For the instrument clustergauges we use a simple program running in an ESP8366 or ESP32 mcu unit.	Customize how your transmission works with the included OLED display or use this new web based setup direct via your browser.	
- Uses ESP-NOW protocol		
Low latency Hardcoded MAC addresses	Features:	
for secure and interference free	- No cables	
connection between Tcu and Receiver	Versatile:	
DIY	- Save differant settings	
Opensource receiver code Several code examples for.	and switsh between them by uploading it from	
* Stepper motor gauges	your phone as you need them.	
* Indicator lights	Works with: PC, Phone or tablet	
- Data ex. from TCU	Windows, Macos, Linux, Android, IOS, ChromeOS	
Speed		
Gear/gear mode Transmission Oil terms		
TPS, Boost, W/S	TCU Read/Write .	
And more		
	TCU Settings	
Select Outputs	Fiemanager	





SETUP IN THE SOFTWARE:

When the start page comes up there will be a separation between the "Output" part and the "TCU-setup" part of the software.

On the left side you will see the "Gauge controller" setup menu, and on the right side of the screen you will see the "OFgear Setup" part of the software.

In this documentation we will focus on the "Gauge controller" side of it, you will find a separate documentation that explain the "OFgear Setup" side of the software.

On the start page there will only be one button on the left side named "Select Outputs"

	***********************************	PROGRAM SECTIONS
Are-INC	Main Page	
Downcad PDF Coding manual		
Output Channels: Here we select what channel we like to send the data t	D.	The coffware has 2 parts:
we can use one or two channels independent of each or When you program the receiver you need to make sure use the correct address in your receiver. Having two dil	ither. I fhat you Toront	The software has 5 parts.
makes it possible to make ex. one stepper motor bases cluster and have a LCD driven cluster at the same time using two independent MCU's.	бананая. 5 1	
Activate Channel 1: (Mac Address: /0xC0, 0x49, 0xEF, 0xF0, 0x37, 0xA8)		- Output channels
Activate Channel 2: ((Mac Address: (bxC0, 0x49, 0x49; 0x70, 0x37, 0xA7))		- Output data
		- Test & Dobug
Output Data: When you use the data output to send values to your in it's vise to keep the data to a minimum at all times to so resources for the mou. Below you find a number of "ON When a "check box" is checket, that data will be sent o	strument/s) we eck boxes" followed by a short description. U is the receiver.	lest & Debug
SeristD	SerialD	
Speed2 Speed Int.	Speed1 Speed2 Speed Int.	Output channels:
Ok to shift Actual Gear Wanted Gear	Ok to shift Actual Gear Wanted Gear	Output channels.
Auto/Manual mode. TPS V1	 Auto/Manual mode. TPS V1 	
V2 V3 V4	- V2 - V3 - V4	The transmitter onboard is sending it's data via a
V6 Engine RPM	V6 V6 Engine RPM	protocol named ESP-NOW and it uses set channels
RPM G2 Boost	- RPM G2 Boost	for the transmissions. In this first section we set the
Cil Temp (Celsius) EGP	Citil Temp (Celsius) EGP	
Gear Lever Pos.	Gear Lever Pos.	way address of the receiver unit.
Coment Chr.1 value: 0 Save Settings ch.1	Current Offiz Value: 0 Save Settings cht2	There are 2 "hardcoded" addresses to choose from
Test and Debug:		CH1: 0xC0, 0x49, 0xEF, 0xF0, 0x37, 0xA8
Start sending test data to receivers for code testing. Select options to send for your test/debug. When restarted the TCU will send strings with data		and
To stop this test, Log in to this "Setup" and unselect the Speed sweep	"Activate Test/Debug mode".	
RPM sweep Temp sweep		CH2: 0xC0, 0x49, 0xEF, 0xF0, 0x37, 0xA7
- Boost Sweep Geer functions:		
Gear lever sweep WS loggle		
Gear Sweep Activate Test/Debug mode		You select what channel you like to use 1 or 2 or
Current selection value: 0		hoth It will could be date out to the channel of your
Save Settings		both. It will send the data out to the channel of your
		selection.
		Activate Channel 2:
		(Mac Address: {0xC0, 0x49, 0xEF, 0xF0, 0x37, 0xA7})
Footnote		
When you	n program the receiv	ver you need to
vvnen you		
make sure	e that you use the c	orrect address in your receiver. Having two different
addresses	s makes it possible	to make ex. one stepper motor based cluster and have a
I CD drive	n cluster at the san	ne time using two independent receiver MCII's
LOD UNVE	in chuster at the san	
4		

Are-INC

OUTPUT DATA

SerialID

Speed1

Speed2

TPS

V1

V2

V3

V4 V5 V6

Engine RPM

Oil Temp (Celsius)

Save Settings ch:1

Current CH:1 value: 16777216

Line Pressure Gear Lever Pos.

RPM G1 RPM G2

Boost

Load

EGP

Speed Int.

Ok to shift Actual Gear Wanted Gear

Auto/Manual mode.

When selected the channel you like to transmit on, your next step is to select the data you like to send from the OFgear TCU. There are 2 separate selection panels with

"Checkboxes" for each data value available from the OFgear TCU.

One is for Channel 1 and the other is for Channel 2.

You select the data values you are interested in sending to your receiver. It is smart to just send the data you need and save "bandwidth" for the transmitter MCU.

When you make a selection on one of the "Checkboxes" the number underneath the checkboxes will update with a binary number that will tell the receiver what Current CH:1 value: 16777216

data you have chosen.

Save Settings ch:1

You only need to make selection for the channel(s) you made active in the first section.

When you have selected the data you like the transmitter to send out for the receiver(s) you click on the "Save Settings ch: x" and the software will give you a small "popup" to acknowledge the data is saved to the memory.

TEST AND DEBUG:

This section is under development at the moment, but

will give you some tools to ease the setting process of your gauges/instrument cluster.

You will be able to run data sweep on the most common outputs, giving you a signal that goes from min. - max. and back to min. again. This will make it easier to see how the receiver handle the data, without the need of actually drive the car to get data output.

As a customer to our system, you are welcome to give us suggestions what tools you would like to add to this section of the setup software. Feel free to send us a message with your wishes and suggestions.

Test and Debu	g:
Start sending test da Select options to ser When restarted the for testing your recei To stop this test, Log	ta to receivers for code testing. nd for your test/debug. TCU will send strings with data ver code. g in to this "Setup" and unselect the "Activate Test/Debug mode"
Speed sweep	
RPM sweep	
Temp sweep	
Boost Sweep	
Gear functions:	
Gear lever sweep	
WS toggle	
Gear Sweep	
Activate Test/De	bug mode
Current selection va	lue: 0
Save Settings	