



R-Tune+Driver Installation, Connecting to ECU and Commands

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Application information	Generic
Vehicle	Not Applicable
Model	Not Applicable
Year of manufacture	Not Applicable
PowerTRONIC application	All PowerTRONIC ECUs, From Version 2, Firmware version F.3.x onward

Note:

- Read through all instructions before installation and use.
- Ensure that the bike is switched off and the key is out of the ignition before proceeding with the installation.
- Some parts of the bikes might be hot/sharp and may cause burns/cuts. Proceed with extreme caution or wait until the bike has cooled down. Always wear safety gloves.
- When the installation is complete, make sure to secure the wiring loom away from the movable parts or components which tends to heat up during the normal operation of the vehicle at any chance.
- PowerTRONIC is intended for motorsport use on a closed course, please check with your local laws before using this product. Race Dynamics / PowerTRONIC is not liable for consequences arising out of using the product.

Support

Call/Whatsapp: +91 99162 29292 / +91 80409 29292 E-Mail: <u>support@powertronicECU.com</u> Website: <u>www.powertronicECU.com</u>





The PowerTRONIC is an open user tuneable piggyback ECU. You can either use the provided maps, download maps from our website or create your own maps using the R-Tune tuning software.



R-Tune user interface

Requirements

- 1) Minimum Recommended system configuration OPERATING SYSTEM: WINDOWS 7/8/10
- 2) Microsoft .NET framework latest version pre-installed
- 3) RAM 512 MB (minimum)
- 4) USB Type A port
- 5) Stable internet connection
- 6) Any file extracting software pre-installed (ex Winrar, Winzip, 7Zip)

General information:

- 1) Uninstall any previous versions of R-Tune before proceeding.
- 2) Microsoft .NET framework must be installed on the PC without which R-Tune cannot be installed.
- 3) PowerTRONIC is a USB powered device, so it does not need to be connected to a vehicle or specifically turned on to establish communication with the computer.
- 4) The setup automatically places a shortcut to R-TUNE on your desktop.
- 5) Refer R-Tune 'Tuning Manual' for more details.
- 6) Sometimes the system antivirus does not allow to download the software setup or the installation process. Temporarily disable the antivirus till the installation process is over.





Downloading R-Tune

To download and install R-Tune software, follow the instructions

1. Go to https://powertronicecu.com/ and select the Downloads option.

Pa	werthonic	Search by Title, Bra	nd, Category		E dynamics'
=	CATEGORIES Y	HOP V BLOG ABOUT US	DEALERS CONTACT US	WNLOADS DEALER LOGIN	SUPPORT ~
	Pluç	N Play F	erformanc	e ECU	
	A CONTRACT	Performance Engine I	Management System For	Bikes	
	1 Manufacturer	✓ 2 Model	✓ 3 Year	✓ Q SELECT	
T	op Selling	Summer Promo	New Launches	Accessories	
	POWERTRONIC \$299 KTM DUKE 390 (2017-2019)	Buy any PowerTRONIC with Quickshifter & get \$40 off	POWERTRONIC Royal Enfield Interceptor 650	QUICKSHIFTER for PowerTRONIC	Activate Windows Go to Strangs to activate Wint

2. Click on the Download R-Tune menu to download the latest version of **R-Tune** setup file.







To Download the R-Tune USB drivers, click on Download drivers.







R-Tune Installation

3. To install the software, double click on the set up file downloaded and follow the installation wizard to complete the installation process.

📝 📜 =		Manage	Downloads						
File Home	Share View	Application Tools							
Pin to Quick Copy access	Paste A Cut Paste Paste shortcut	Move Copy to • to •	Delete Rename	New i New folder	tem 🔻 access 🝷	Properties	 Open • Edit History 	Select all Select none Invert selection	
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🧢 This PC	*	PowerTR	ONIC_R-Tune_3.0	.5.5	30-09-	2019 11:36	AM A	oplication	8,804 KB
🧹 New Volun	ne (D:) 🕺	CP210x_V	Windows_Drivers		30-09-	2019 11:31	I AM W	inZip File	7,008 KB
E Desktop	A								
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5. Open/Extract (using winzip/winrar/7zip etc) the CP210x_Windows_Drivers file to a new folder

To install drivers, double click *CP210xVCPInstaller_x64* (for 64bit system) or *CP210xVCPInstaller_x86* (32bit system) *depending on your system configuration.*

Refer figure below. Follow the instructions by Driver Installer Wizard

Manage drivers			
View Application Tools			
PC > New Volume (D:) > Sw > drivers			
Name	Date modified	Туре	Size
🧵 x64	15-06-2018 08:43	File folder	
📜 x86	15-06-2018 08:43	File folder	
Second CP210xVCPInstaller_x64	27-09-2017 11:28	Application	1,026 KB
Second Se	27-09-2017 11:28	Application	903 KB
🖹 dpinst	27-09-2017 11:15	XML Document	12 KB
SLAB_License_Agreement_VCP_Windows	27-09-2017 11:16	Text Document	9 KB
slabvcp	02-06-2018 02:05	Security Catalog	11 KB
slabvcp	02-06-2018 02:05	Setup Information	8 KB
v6-7-6-driver-release-notes	16-06-2018 12:21	Text Document	16 KB



PowerTRONIC

Note: To check whether your computer is 32 or 64 bit configuration, right click on *My Compute*r and click on *Properties* and check *System type*.(Refer image below)

System	
Processor:	Intel(R) Core(TM) i7-2820QM CPU @ 2.30GHz 2.30 GHz
Installed memory (RAM):	16.0 GB (15.9 GB usable)
System type:	64-bit Operating System, x64-based processor
Pen and Touch:	Touch Support with 2 Touch Points

Computer name, domain, and workgroup settings -





Connecting R-Tune to ECU

- 6. Open the R-Tune software by double clicking the icon on the desktop of the PC.
- 7. With the PowerTRONIC connected to your bike, use the USB cable and connect it to the PC
- 8. Identify the correct COM Port in Device Manager and locate the same COM Port in the RTune software

before clicking on Connect. Refresh the list if necessary by clicking the Refresh button [[]]. Refer Figure below

													- D X
				Map Des	cription		CON	13		~ P			RPM
р	0						÷	Con	nect		Discon	nected	
ttck	Quick S	hift. (Config	Calib	Tab	Graph	Dia	als F	irmware				Throttle Position
1000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	Throade F obliadh
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	Injector Ref Load
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	
1	0	0	0	0	0	0	0	0	0	0	0	0	Load Input
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	Load Input %
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	RPM Extend
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	CoProcessor Present
	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	

(To check your com port number, go to **Device Manager**, Select **Ports (COM & LPT)** and note the number on the **Silicon labs CP210x USB to UART Bridge**. Refer figure below)







9. Once the appropriate COM Port number is selected, Click on *Connect*.

File Tools												Map De	cription		COM	3		~ 0	I		RPM
Powe	rta	onic	7				Active M	Лар	0						Ĵ	Con	nect		Discon	nected	
Eucl1	lani	tion1	Euol		aition?	Tro S	an Tr	n Attek	Ouick	shift	Config	Calib	Tab	Graph	Dia	le t	aware			_	
Tuerr	Eco	11000	11500	1 2000	10002	12000	19500	Lance	Lisoo	15000	LEEGO	Leono	Leson	12000	17600	Leoor	500	10000	10500	110000	Throttle Position
▷ 100%	0	0	0	0	0	0	0	0	0	0	0	0	0			0		0	0	0	
93%																				0	Injector Ref Load
86%																				0	
73%																				0	Load Input
66%																	0			0	
60%																				0	Long to the W
46%																				0	Load input %
40%																				0	
33%																				0	RPM Extend
26%																				0	
13%																				0	CoProcessor Present
6%																				0	
0%																				0	Crank Signal Type
FTC [%] :		0.0 🗘			÷		0 ≑		0.0 ≑		TC [dg] :		0 🛟		0 🗦		3. 0	÷	4. 0	÷	Noise Capture
			iginal Inj F	PW F	uel Trim	(%) Ig	nition Adv	(deg)		Injector D	luty (%)		Injecto	r Status	Ignition	Status	Tractic	n Status	TrcRP	M Status	
Cylin	dor-1							i													Stock Fuel Cut
Cuti-	d							_												_	
Cym								_												_	Stock Ign Cut
Cylin	der-3																		-		
Cylin	der-4																				Traction Counter
Sand	Rec	nive	Burn	Inch	+ Burn	State	18.														Traceon Counter
Sena	Nec	6146	Dalli	1 100		June															

10. The connection between ECU and R-Tune is established.

										Map D	escription	l.	COM	12		- 0		RPM
Powern	neoni	-			A	ctive Ma	ъp	1						Disco	onnect	(Connected	2200
Fuel1	Ignition1	Fuel2	: 1	gnition2	Tim Sei	1 Tim/	Attck:	Quick Shif	t. Config	Calib	a Tab	Graph	Dia	ls i	Firmware	1		
50	1000	1500	2000	2500	3000	3500	4000	4500 8	5000 5500	6000	6500	7000	7500	8000	8500	9000	9500 10000	Theothe Position
100% 0	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0	0 0	10
93% 0								0 0									0 0	Injector Ref Load
000 0							0	0 0									0 0	0
73% 0							0	0 0									0 0	Load input
66% 0																	0 0	Throttle Positio
60% 0							0	0 0									0 0	Loudleout Si
46% 0							0	0.0									0 0	0
40% 0																	0 0	
33% 0																	0 0	RPM Extend
26% 0	0						0	0 0									0 0	No
13% 0							0	0 0								0	0 0	CoProcessor Pres
6 0																	0 0	CKP Decode
0% 0																	0 0	Crank Signal Typ
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rc (%)		÷		0 🗧		0		0.0	ITC [dg] :		0	2	0 🚦		3.0		4.0 🗧	Noise Canture
																		23
		Orginal Inj F	w.	Fuel Tress	(%) Igni	ion Adv(de	NG)	inge	ctor Duty (%)		injoc	lor Status	Ignition	Status	Traction	Status	TrcFGPM Status	French Front Cont.
Cylinder																		ON COL
Cylinder											N						0	
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cyander		0.000		, v	-										-		Go Ro Setting	Traction Counter
Sand	Pacalua	Burn	10	urk + Rurn	Status	Connec	ted to	ECU									1000	

11. Click on *Receive* to read the data. Now you can see the contents on the ECU

										Map Des	cription		COM	22		0			RPM
ower	TH	onic	7		Ac	tive Map							0	Disc	onnect				2200
	lgn			Ignition2															Throffia Dosition
0	1	2200	2500 3	500 4500	5500	6000 62	6400	860	0033 0	7000	8000	9000	10000	1100	0 12000	13000	1350	0 14000	10
100% 0																		-5	
0																		-5	Injector Ref Load
0																			0
/3% 0																			Load Input
0 616			0 3						2									-6	Throttle Position
0																		0	The second second
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13% 0																		0	RPM Extend
6% 0																		0	No
0% 0																		0	CoBroomeror Brac
3% 0																		0	GOPTOGESSOT PTIES
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		Ork	anal Ini PW	Fuel Trim	(%) laniti	m Adv(dea)		Injector	Duty (%)		Inject	or Status	Ignition	Status	Traction	Status	TrcR	PM Status	
																			Stock Fuel Cut
Cylinde	H-1					0) SKi		516			-	•	ON
Cylinde	H-2		0.000	0		0					N	o_sig	NO.					0	Stock Ign Cut
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	-				Internation of														CONTRACTOR OF A DESCRIPTION OF A DESCRIP



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R-Tune commands

1) Send Command

Sends the content of the maps on the PC to device

Note: All maps sent to device are temporary, they are erased and previously stored maps on the device are loaded on every power on sequence. "Burn" has to be clicked to make any map sent to the device permanent.

2) Receive Command

Reads the contents on the device and displays on the PC.

3) Burn Command

Used to store the map permanently on the device

Important note: Please turn off the bike before clicking Burn command.

4) Lock + Burn Command

If you press Lock+Burn, the values and parameters are read-protected for confidentiality purposes. The values on the fuel and ignition table will automatically appear as 0 so that the values are not visible to any other.

Important Note: Before enabling the Lock+Burn feature, make sure you have saved the map in your computer file folder. If you want to see the values back on the ECU, you need to reload the same map

(which you have saved in your file folder), but this time you need to SEND and BURN instead.

		Original Inj PV	V Fuel Trim (%	6) Ignition Adv(deg)
Cylind	er-1			
Cylind	er-2			
Cylind	er-3			
Cylind	er-4			
Send	Receive	Burn	Lock + Burn	Status :



	Original Inj PV	N Fuel Trim (%)	Ignition Adv(deg)
Cylinder-1			
Cylinder-2			
Cylinder-3			
Cylinder-4			
Send Rec	eive Burn	Lock + Burn	Status :



Burn Lock + Burn Status :

Cylinder-3 Cylinder<u>-4</u>

Send Receive

