



2009-10 Yamaha R1 Installation Instructions



JUICEBOX PRO[®]
Premium Fuel Controller

PARTS LIST

- | | |
|---|----------------------------|
| 1 | Juice Box Pro [™] |
| 1 | USB Cable |
| 1 | Top Tune CD-ROM |
| 1 | Installation Guide |
| 2 | Velcro |
| 1 | Alcohol swab |
| 1 | Posi-tap |

FOR RACE USE ONLY

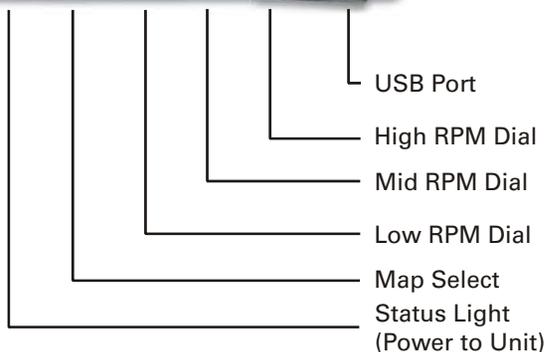
DOWNLOAD THE TOPTUNE SOFTWARE
AND LATEST MAPS FROM OUR
WEBSITE:
www.twobros.com

PLEASE READ ALL DIRECTIONS BEFORE STARTING INSTALLATION

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JUICEBOX PRO[®]

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Selecting the Map Position

The Juice Box Pro comes loaded with up to ten maps. Using a #1 Phillips screwdriver, turn the map select dial to toggle between the loaded maps. Refer to the map position table below for the maps included in your Juice Box Pro.

Using the RPM Range Dials

The Low, Mid, and High RPM Dials refer to the RPM range, in thirds, of your vehicle. Each dial allows +/- 10% fuel adjustment on top of what fuel changes are done in the map. With the dial facing straight up, there is no additional fuel change. For example, if your vehicle revs to 15,000 RPM:

- the low RPM dial will adjust 0-5000 RPM
- the mid RPM dial will adjust 5001-10000 RPM
- the high RPM dial will adjust 10001-15000 RPM

Using Top Tune

Take your tuning to the next level with the Top Tune software.

Installing the Top Tune Software

- 1 Insert the CD provided into your computer's cd-rom drive. The launch program will run automatically.
If auto-run is disabled, double-click the My Computer icon then double-click the CD drive icon. Double-click TBR TopTune.exe to manually start the CD.
- 2 Click Install Software and follow the on-screen instructions to install the Top Tune software. The Top Tune software and maps will be stored in C:\Program Files\TBR TopTune.
- 3 Click Map Database. All maps will automatically be installed to the C:\Program Files\TBR TopTune\maps folder.

Loading Additional Maps

- 1 Connect the USB cable from the computer to the Juice Box Pro. Verify the cable is fully seated in the Juice Box Pro.
- 2 Run the TopTune software by double-clicking the program icon installed on your desktop or on your start menu.
- 3 Click Open Map File and select a map file.
- 4 Click Send Map. You can send the map to any of the ten map positions.

Altering Maps Using Top Tune

The values in the map represent a percentage of fuel change over stock. A value of 10 in the map indicates at that throttle position and RPM range the vehicle will be 10% richer than stock. If the value is -10, then it would be 10% leaner than stock. You have the ability to fine tune your fuel curve by altering these values. The Top Tune software allows a value of +250 to -100 in each cell.

Position 0	Zero map	
Position 1	Stock exhaust Stock air filter	2009-2010 Yamaha R1
Position 2	Two Brothers slip-ons Stock or aftermarket air filter	2009-2010 Yamaha R1
Position 3	Two Brothers slip-ons with Y-pipe Stock or aftermarket air filter	2009-2010 Yamaha R1
Position 4	Two Brothers full exhaust Stock or aftermarket air filter	2009-2010 Yamaha R1



The ignition must be turned OFF before installation.

- 1 Remove the main seat.
- 2 Lift the front of the fuel tank up and use something to keep it propped up.
- 3 Remove the inner fairing on the left hand side of the bike as shown in Figure A.

- 4 Lay the Juice Box Pro near the battery and route the Juice Box Pro harness down the left hand side of the bike.
- 5 Route the harness underneath the battery bracket as shown in Figure B.
- 6 Attach the ground wire from the Juice Box Pro to the negative side of the battery as shown in Figure B.

- 7 Unplug the 3-pin and 4-pin green connectors from the throttle bodies to the main wiring harness as shown in Figure C.
These connectors are located to the inside of the frame on the left side.

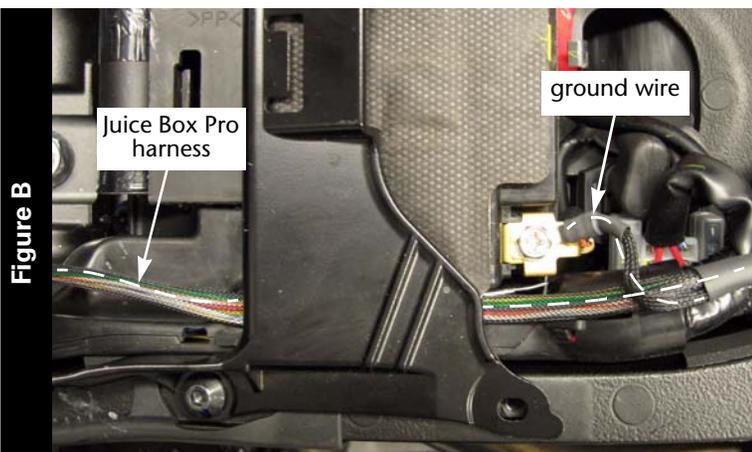
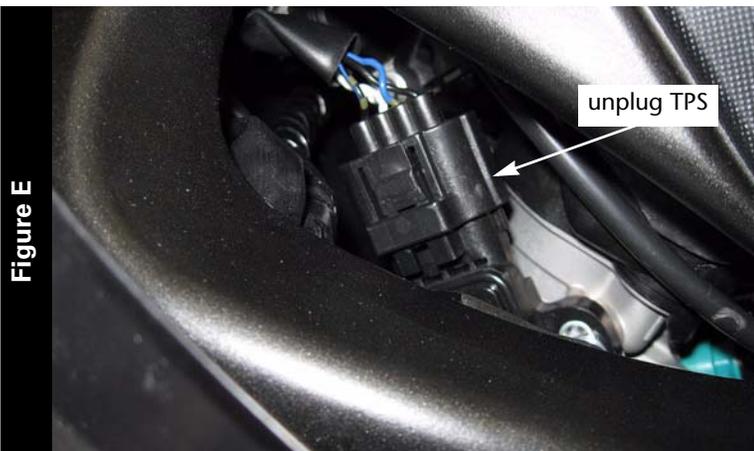


Figure D



8 Attach the Juice Box Pro connectors to the throttle bodies and stock wiring harness as shown in Figure D.

Figure E



9 Unplug the wiring harness from the throttle position sensor (TPS) as shown in Figure E.

The TPS connector is located on the left side of the throttle bodies underneath the inner fairing that was removed earlier.

Figure F



10 Using the supplied posi-tap, attach the grey wire from the Juice Box Pro to the white wire of the TPS wiring harness as shown in Figure F.

11 Attach the TPS back to the throttle bodies.

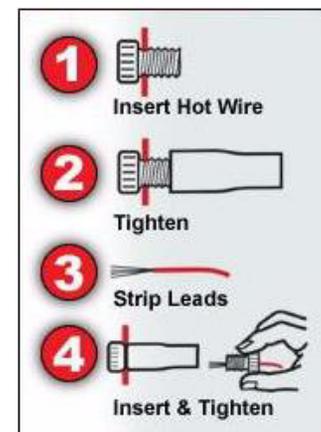


Figure G



- 12 Using the supplied velcro, secure the Juice Box Pro in the tail section of the bike as shown in Figure G.
Make sure to clean both surfaces with the alcohol swab before attaching.

Figure H



- 13 Locate the stock O2 sensor connector.
The O2 sensor connector is a black 4-pin connector located under the fuel tank near the right hand side of the frame.
- 14 Unplug the stock O2 sensor connection and plug the 4-pin connectors from the Juice Box Pro to the stock connector and harness as shown in Figure H.
- 15 Lower the fuel tank and verify the connectors and harness do not interfere with or get pinched by the fuel tank.
- 16 Reinstall the main seat.

Figure I

		MAP 1 - CYLINDER 1,2									
		THROTTLE (%)									
		0	2	5	10	15	20	40	60	80	100
ENGINE RPM	500	0	0	0	0	0	0	0	0	0	0
	750	0	0	0	0	0	0	0	0	0	0
	1000	0	0	0	0	0	0	0	0	0	0
	1250	0	0	0	0	0	0	0	0	0	0
	1500	0	0	0	0	0	0	0	0	0	0
	1750	0	0	0	0	0	0	0	0	0	0
	2000	0	0	0	0	0	0	0	0	0	0
	2250	0	0	0	0	0	0	6	3	-2	-3
	2500	0	0	0	0	0	0	4	-1	-6	0
	2750	0	0	0	0	0	0	4	-4	-14	1
	3000	0	0	0	0	0	0	0	-2	-15	1
	3250	0	0	0	0	0	0	6	4	-2	7
	3500	0	0	0	0	0	0	8	5	4	11
	3750	0	0	0	0	0	0	3	-1	-4	0
	4000	0	0	0	0	0	0	-1	-9	-5	-3
	4250	0	0	0	0	0	0	2	-2	1	-2
4500	0	0	0	0	0	0	8	2	2	-5	
4750	0	0	0	0	0	0	9	4	4	-1	
5000	0	0	0	0	0	0	13	7	7	3	
5250	0	0	0	0	0	0	15	10	5	3	
5500	0	0	0	0	0	0	15	8	6	2	
5750	0	0	0	0	0	0	17	8	5	3	
6000	0	0	0	0	0	0	13	9	7	3	

The Juice Box Pro for this model controls the stock closed loop area. This area is represented by the highlighted cells shown in Figure I. The Juice Box Pro is designed to achieve a target AFR of 13.6:1. To use this Juice Box Pro you must retain your stock O2 sensor.

It is not recommended to alter the values in the highlighted area unless instructed to do so by a Juice Box Pro technician.