Instruction Manual

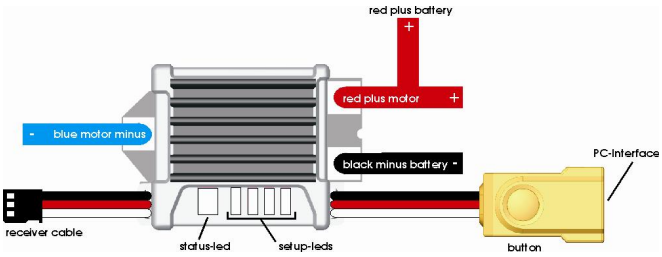
Dear Customer,
thank you very much for your trust in our products. You decided with the iCube for one of the most powerful and intelligent speedcontrollers on the market.

⚠ WARNING! ⚠

- Always make shure, that you connect the battery with the right polarity. The speedo is not reverse polarity protected, a wrong polarity will destroy the speedo.
- Never leave your RC model unsupervised with the battery connected. Disconnect the battery, as soon as the model is not in use.
- Always make shure, that enough fresh air can get to the speedo so that good cooling conditions are achieved.
- Do not touch the heatsink of the speedo after a run. It could be very hot.
- To avoid uncontrolled reactions of the model, please allways first switch on the transmitter and then the speedo. After the run first switch off the speedo and then the transmitter.

CE

Installation



- Securely mount the speedo in the chassis of your car using double sided tape. Make shure that enough fresh air can cool the speedo.
- To avoid disturbances please make shure to have enough space between the speedo and the motor or other electronic devices in the car.
- Connect motor, speedo and battery like in the drawing above. Make shure that you do not reverse connect the speedo.
- Connect the receiver cable (white/red/black) with your receiver.
- Mount the button with double sided tape inside your car where you can reach it easly.
- If there are no capacitors on the motor, please add them between + and case, - and case and + and -. This will reduce disturbances.
- To protect the speedo, you should solder a shottky diode between + and – on the motor. CAUTION: The white mark of the diode must be next to +! Wrong polarity destroys the shottky diode.
- If you want you can also use a power condensator between + and – of the speedo.

Radio – Setup

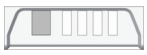
- Switch your transmitter on and adjust throttle and brake travel to 100%. Please switch functions like Exponential or ABS off.
- Make shure that a fully charged battery is connected to the speedo and the speedo is switched off. The throttle trigger must be at neutral position.
- Press and hold the button, as long as the first setup LED lights up and the red status LED flashes.

- After one moment the second setup LED should light up -> the speedo knows the neutral position.

- Turn now the throttle trigger on your transmitter to full throttle. The third setup LED should light up -> the speedo knows the full-throttle position.

- Move the throttle trigger now to full brake. After a moment the fourth setup LED lights up.

- After one second all four setup LEDs go out. The speedo has now stored the values and is ready to use.



- If the radio setup process don't work normally, the speedo switches automatically to the driving mode after about 12 seconds with alternating flash of the green and the red status LEDs. If this happens, please check all connections inside your model. Then disconnect the battery, wait a few seconds and repeat the whole procedure.

Switch On / Off the speedo

- To switch the speedo on, please press the button shortly. You can also configure that your speedo automatically switches on after a battery is connected. This feature is described a little bit later.
- To switch the speedo off, please press and hold the button, as long as all LEDs go out. You can also switch the speedo off by holding the throttle trigger of your transmitter in full-brake position for about 7 seconds. This feature can also be deactivated.

Status LEDs

- RED and GREEN
  ➔ There is no receiver signal
  Please check the connection to the receiver

- GREEN
  ➔ Green indicates neutral, full throttle or full brake

- RED
  ➔ Red indicates throttle or brake between 1% and 99%

Customize your iCube

- Make shure that the speedo is switched on
- Press and hold the button as long as the first green setup LED goes on.

- You are now in the main menu. By pressing the button shortly you can choose between the six different menu functions. They are described a little bit later.
- If you have found the desired function, press and hold the button as long as the status LED changes from green to red.

- You are now inside this function and the setup LEDs indicate the value of the desired function. By pressing the button shortly you can adjust this value.
- If you have choosen the desired value and you want to go back to the main menu, simply wait 4 seconds. The speedo switches automatically back to the main menu. This is also indicated by the change of the status LED from red to green.

- You can now choose another function or if you also wait 4 seconds, the speedo stores the changes and leaves the prgramming mode. It is now ready to use.

Functions

1) Program

With the Power-Program you can change the driving behaviour of your speedo. You can adapt the speedo for different classes or track conditions:

1	**Full Power**	**default, much punch, good efficiency**
2	Power Save	less power as 1, for lower grip conditions
3	Team	less power at beginning, good driving feeling
4	PC	program, adjustable with the PC-interface
5	Li-Po	special program for 2-cell Li-Po battery packs

2) Current Limit

With these function you can choose between 6 different current limitations:

1	40A	
2	50A	
3	60A	
4	80A	
5	120A	
6	**no limit**	**default**

3) Brake

With these function you can adjust the maximum brake power.

1	30%	
2	50%	
3	65%	
4	80%	
5	90%	
6	**100%**	**default**

4) Auto

With these function you can choose Auto-Brake or Auto-Roll.
Auto-Brake is for automatic braking before corners. If you move your throttle trigger from throttle to neutral, the speedo brakes with the adjusted value.
Auto-Roll is to remove the braking torque of the motor. The handling of the car especially in high speed curves becomes better.

1	**no function**	**default**
2	20 % Auto-Brake	
3	30 % Auto-Brake	
4	40 % Auto-Brake	
5	10 % Auto-Roll	
6	20 % Auto-Roll	

5) Braking frequency

With these function you can choose between 5 different braking frequencies. A lower braking frequency results in a agressive and strong brake. A higher braking frequency results in a smooth and good controllable brake.

1	500 Hz	
2	800 Hz	
3	**1000 Hz**	**default**
4	2000 Hz	
5	4000 Hz	

6) Switch On/Off function

Here you can choose between 3 different settings for on/off switching the speedo.

1	**Switch on with button, Switch off with button or transmitter**
2	Switch on with button, Switch off with button
3	Speedo switches on automatically, switch off not possible

CAUTION: If you want to use the Data Recorder, you should not use function 3. The Data Recorder works only normal if you switch the speedo off after a run.

Data Recorder

Your iCUBE has a built in Data Recorder which stores all important data like voltage, current, throttle-trigger position and so on. With the optional PC interface and the Windows program you can read out the data after a run and analyze it.
The storage capacity is about 14 minutes. The recorder starts to store data from the first time you go to throttle to the switching off of the speedo. For correct data it is vital to switch off the speedo with the button or the transmitter after a run. If you simply disconnect the battery and don't switch the speedo off, the data will not be strored correctly.
If you do not read out the data after a run, the next run automatically overwrites the last one. There is always the last run stored inside the speedo.

You find more information about the usage and functions of the Data Recorder in the instruction manual of the PC interface.

Optional parts

RS147	USB interface with Windows software
RS148	Spare interface cable
RS520	Shottky diode (2 pieces)
RS540	Powercondensator big
RS541	Powercondensator little

Technical data

No. of cells:	4-7 (4.8-8.4V)
Motor limit:	5 wounds
Frequency:	0.5-8 kHz
BEC voltage:	6.0V
BEC max. current:	3.0A
Weight without cables:	21g
Case size:	27x25x13.5mm

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