SC 120A Electronic Speed Controller (SK300052)



SC120A Advanced Timing System

The Toro SC120 brushless ESC is a sensored speed control specifically designed to meet the rigors of short course racing. The built-in switching mode BEC has a powerful output to supply all electronic equipments even with 4S Lipo input.

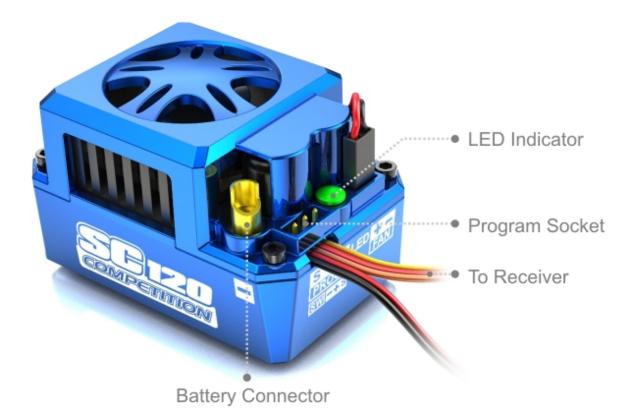
It comes with 3 running models and 9 start models from' soft' to Very aggressive' to suitable for different tracks, also comes with multiple protection features: Low voltage cut-off protection for lithium or nickel battery / Over-heat protection / Throttle signal loss protection / Motor blocked protection. The ESC firmware is updatable via an USB adapter.

It is easily programmed via the Advanced LCD Program Box and the major electronic

components are sealed against splashing water and dust.

Compact Design







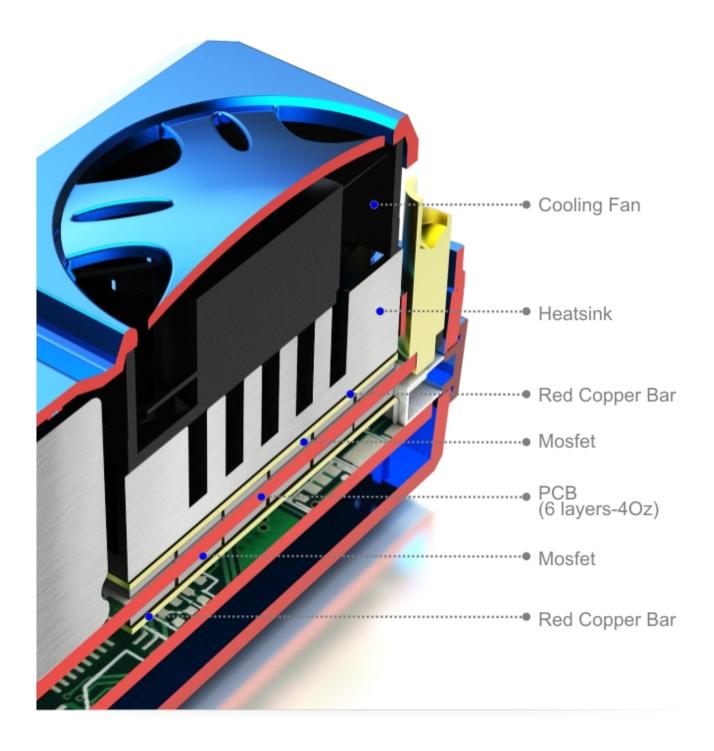
Electronic Power Switch

A simple push button operates the switch meaning to eliminate the problems associated with intermittent contact of an ordinary mechanical switch.





Less Resistance, Less Heat, More Efficiency

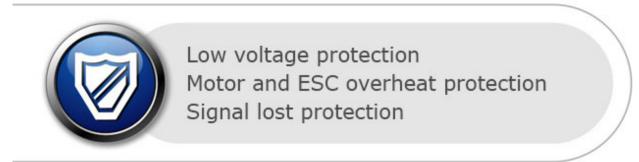


10 User Modifiable Profiles

The users could set and store 10 sets of profiles in the ESC. These data could be called out at any time without any special program setting. All the setting can be exported or imported so that the user could compare and analyze.

SKYRC USB Link V1.07		x
About General Setti:	ng Throttle Control Brake Control Turbo Firmware Upgrade	
Pre Setting	Nedify Rename Default	
Running Mode	Profile 1 Profile 2 Profile 3 Profile 4	
Motor Direction	Profile 5 Profile 7 Profile 7 Profile 9 ve W	
Reverse Speed	25% 100% 25% (*)=25% @	
Voltage Cutoff	6.0V 25.0V 9.6V [✓ Auto (*)	
ESC Overheat Protection	105°C/221°F (*) • • • • •	
USB Connected	ESC Connected 2 Load From PC Save To PC ESC Default ESC Read Save To ESC	
Get Data from ESC Success	;	

Safety Features



Firmware Update

The firmware can be updated by connecting the ESC to a PC or a smart phone.

SKYRC USB Link V1.07	x
About General Setting Throttle Control Brake Contro	ol Turbo Firmware Upgrade
ESC Upgrade	ProgramBox Upgrade
Information: Upgrade 👔	Information: Upgrade 👔
1	ProgramBox Soft V1.01
Device Name ESCO8	Device Name BOX10
Software Version 1.01	Software Version 1.01
Hardware Version 1.00	Mardware Version 1.00
	Upgrade Version 1.01
Upgrade Version 1.01	Upgrade Version 1.01
USB Connected ESC Connected 🥑 🖉 Loa	ad From PC Save To PC ESC Default ESC Read Save To ESC
Get Data from ESC Success	

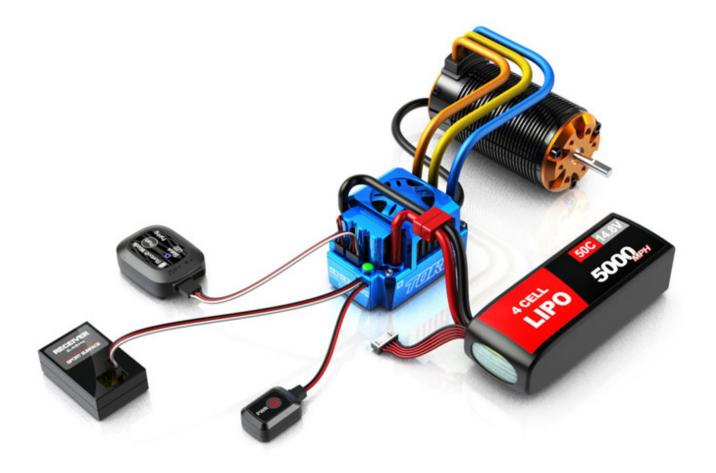
Programming Methods

The ESC can be programmed with a PC connected with SKYLINK (SK-600013)

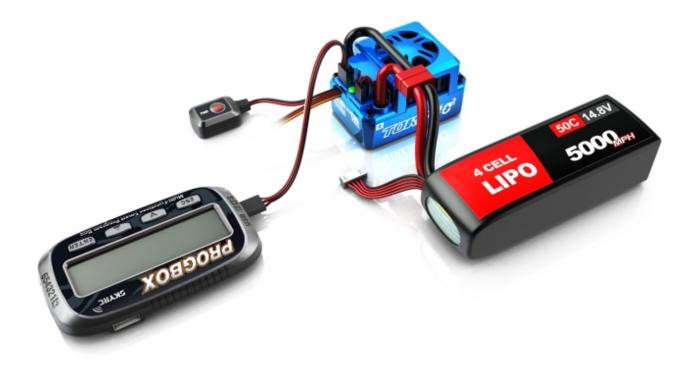


SKYRC USB Link V1.07		x
About General Settin	ng Throttle Control Brake Control Turbo Firmware Upgrade	
Pre Setting	Nodify Rename Default	
Running Node	Forward/Brake (*)	
Motor Direction	(* Bornal (*) C Reverse 🕑	
Reverse Speed	25% 100% 25% (*)=25%	
Voltage Cutoff	6.0V 25.0V 9.6V 🖓 Auto (*)	
ESC Overheat Protection	105°C/221°F (*)	
USB Connected	ESC Connected Load From PC Save To PC ESC Default ESC Read Save To ESC	
Get Data from ESC Success		

The ESC can be programmed with a smart phone via Bluetooth Module (SK-600058)



The ESC can be programmed with the PROGBOX (SK-600046)



Precise Programmable Items

Advanced Timing System

Users could set the turbo and boost timing which can improve the motor RPM to get its best performance.

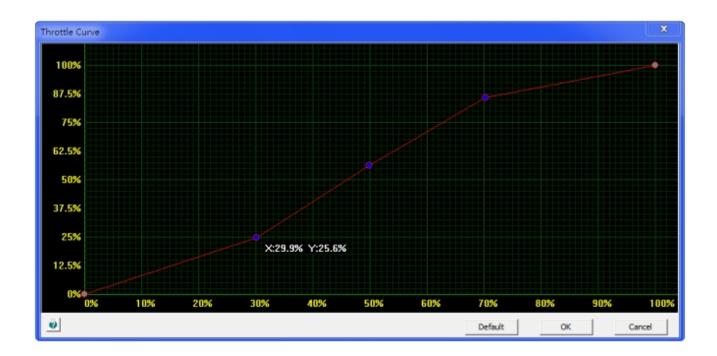
SKVRC USB Link V1.07	x
About General Setting Throttle Control Brake Control Turbo Firmware Upgrade	
Turbo Tining O deg (*)	
Turbo Full TM Delay 4 deg 5 deg 6 deg 7 deg	
Turbo Engage slope 7 deg 8 deg 9 deg 15 deg/0.1S (*) •	
USB Connected ESC Connected 🥑 🥑 Load From PC Save To PC ESC Default ESC Read Save To ESC	
Get Data from ESC Success	

Well-performed Throttle and Brake Control Function

Users could set the punch/brake control rate by point or customize the throttle/brake curve by themselves, and different customers' request for linear and power all can be met.

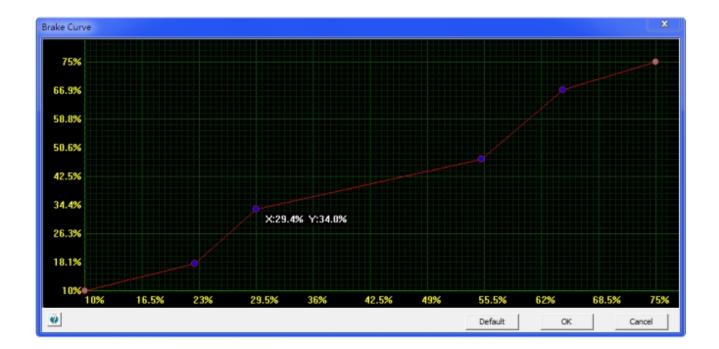
SKYRC USB Link V1.07		x
About General Settin	Throttle Statuz	
Punch Rate Switch Point	1% 99% 50% (*)=50% 2.000ms	
1st Stage Punch Rate	1 5 (*)=5 (*)	
2nd Stage Punch Rate	1 30 5 (*)=5 0 1.539ms -1.500ms -1.500ms -1.500ms	
TH Input Curve	(* Line (*) C Custon	
Throttle Dead Band	10us 150us 80us (*)=80us 🕑 1.000ms	
USB Connected	ESC Connected 🥥 🥥 Load From PC Save To PC ESC Default ESC Read Save To ESC	
Get Data from ESC Success		

Throttle Control Setting



SKVRC USB Link V1.07	x
About General Setting Throttle Control Brake Control Turbo Firmware Upgrade	
Drag Brake 10% (*) 💌 🕐 Brake Strength 75% (*) 💌 🔮	
Initial Brake =Drag Brake (*) 💌 💓 Brake Rate Switch 50% (*) 💌 💓	
1 20 1st Stage Brake Rate 10 (*)=10	
2nd Stage Brake Rate 16 (*)=16	
Brake Input Curve (* Line(*) C Custon	
USB Connected ESC Connected 🥑 🥥 Load From PC Save To PC ESC Default ESC Read Save To ESC	
Get Data from ESC Success	

Brake Control Setting



TECHNISCHE DATEN

Constant/Burst Current Motors Cars

Motor Limits

Resistance Battery Cell Count BEC Output Fan Weight Dimensions (LxWxH)

DOWNLOADS

120A / 760A Sensor & Sensorless Brushless Motors 1/10 Short Course or Monster, 1/8 Short Course or Buggy 6S NiMH or 2S LiPo: ≤6000KV 7-9S NiMH or 3S LiPo: ≤4000KV 10-12S NiMH or 4S LiPo: ≤3000KV 0.0003 Ohm 6-12S NiMH or 2-4S LiPo 6V 3A, Switched 6V 0.2A 76g (without wires) 57x38x35mm

¹ <u>SkyRC Toro SC 120A [SK300052] Manual (974.5 KiB)</u>

SkyRC UsbLink V1.07.zip (1.1 MiB)