

Reversible High Frequency Hyper Digital Electronic Speed controller

Please read this manual carefully for safe use of this product.

Note on Usage In this manual, warnings are classified into two levels depending on the severity of the danger posed by failure to observe the proper procedure, as follows

Warning! Failure to observe the matter discussed in such an item poses a serious threat of danger or severe injury.

•This product is only designed for use with radio controlled models. •Do not use for any other purpose. •Ensure all equipment is connected correctly. Loose connections may cause loss of control. •Ensure other users are not operating on your frequency before turning on the power switch. •Do not use the model during thunderstorms - there is a possibility of lightning striking the antenna. •Do not use the model in the rain or in a location where water might get on it. The unit may become wet and cause loss of control. •Do not run the model when you experience difficulties in concentration through tiredness, alcohol or medication. The misjudgment may result in an accident. •Ensure Ni-cd battery is disconnected after use. Accidental switching on of the unit may cause fire or cause the model to run out of control. •When storing the transmitter, batteries and model, ensure they are kept out of children. It may result in damage by chemicals.

Caution! Failure to observe the matter discussed in such an item poses a possibility of injury and a great likelihood of damage to the equipment of property.

•Do not short-circuit the battery terminals. It is dangerous and could cause a fire or explosion. •Ensure genuine KO Propo products are used e.g. transmitter, receiver, servo and other option parts. We cannot assume any responsibility for the use of other company's products with this unit. •Always switch on the transmitter first, then the ESC, when turning off after use, always switch off ESC first followed by the transmitter. •Do not touch the motor or ESC as heat is generated and may result in burning.

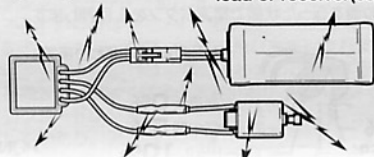
"From the view of quality for radio controlled model, we cannot assume any responsibility for the result by use of our products, please understand in advance."

Installation

Attach KSC1000FR(or 1100FR) to chassis plate using double sided tape.

In case of crash during use, always install the switch in a safe place

Caution! Install KSC1000FR(or 1100FR) away from antenna lead or receiver(especially crystal position).



Wiring diagram for the receiver, servo, Ni-cd and motor

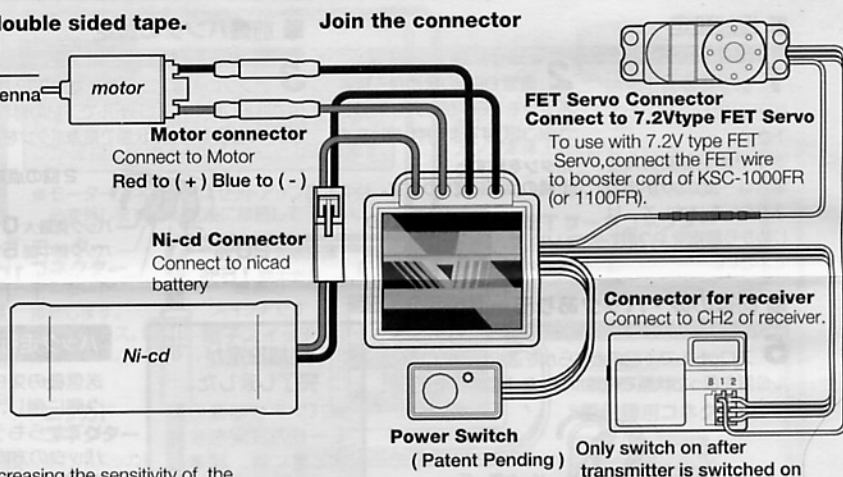
Note that where electrical currents that can cause noise exist i.e. motor, speed controller, Ni-cd, and cables, the antenna must be routed away from such devices to prevent possible interference. Location of a high frequency speed controller requires careful attention to these factors.

Install the unit away from receiver.

Do not bundle the aerial wire with silicone cables. This may result in decreasing the sensitivity of the receiver and could cause the model to run out of control.

Install the unit away from the receiver. If too close to the receiver it may be affected by noise and cause the model to run out of control.

Do not install the KSC-1000FR(or 1100FR) near to the antenna holder. It may cause the antenna to pick up noise and cause malfunction.

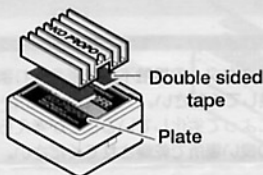


Warning!

Ensure all connectors for the receiver, servo and switch are plugged together correctly.

Overheating

High temperature will make speed controller inefficient. In order to ensure best conditions by controlling increased temperature, it may be necessary to install optional heat sink and to make a ventilation slot in the bodyshell.



Installation of Heat Sink (optionally available)

For safety, please disconnect Ni-cd battery. Remove dust and dirt from heat sink (using alcohol cleaner). Attach double sided tape to Heat Sink before attaching to plate.

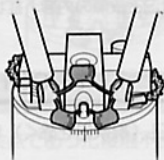
Heat by overload will activate the heat protector within the speed controller, which will stop operation to prevent further problems.

Motor Maintenance

Motor can cause 'noise' leading to misoperation.

Installation of noise filter condenser

KSC1000FR is a High Frequency Speed Controller. In order to control high frequency noise, install noise filter condenser to motor before use.



Cleaning Inside brush holders

Dirt inside the motor brush holders will not allow brush to move freely which may cause noise during operation. Clean inside the brush holder with a swab dipped in alcohol cleaner.

Caution!

Ensure diode and/or tantalum capacitor is removed before use if fitted to the motor operating with it may cause irreparable damage.

Caution!

KSC1000FR-Do not use with motor of less than 16 turns, KSC-1100FR-Do not use with motor of less than 10 turns. Overload will activate heat protector and stop operation.

KSC-1000FR Technical data based on standard data for each parts

Operation method: CPU control	Maximum peak current: Forward 400A/Reverse 200A
Operating input voltage: 7.2~8.4V	Continuous peak current: Forward 100A/Reverse 50A
Drive frequency: 1.8KHz	Suitable motor: a motor with 16 turns or above
BEC voltage: 6V	Dimension: 32.5x33x17.5mm
Maximum BEC current: 2A	Gross weight: 38g

KSC-1100FR Technical data based on standard data for each parts

Operation method: CPU control	Maximum peak current: Forward 800A/Reverse 400A
Operating input voltage: 7.2~8.4V	Continuous peak current: Forward 200A/Reverse 100A
Drive frequency: 1.8KHz	Suitable motor: a motor with 10 turns or above
BEC voltage: 6V	Dimension: 32.5x33x17.5mm
Maximum BEC current: 2A	Gross weight: 45.5g (Except for heat sink)