

Please check the movement before use.



Put the name for Identified model memory

Back Key Enter Key JogDial Contemport Solution Solu

#### [How to open the set-up screen.]



From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.



Use "Jog dial" key or "+,-" keys. to choose the "MODEL.NAME" from Menu list.



Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value.



The letter which can input till 10 characters. Push enter after select.

#### An usable letter:

& '() \* +, -. / 0 1 2 3 4 5 6 7 8 9 :; < = > ?
ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz・
ファィゥェォャュョアイウエオカキクケコサシスセンタチツテトナニヌネノハヒフヘホ
マミムメモヤユヨラリルレロワン<sup>\*</sup> ° (Space)

When enter or edit the name. use Jog dial or +, - key to move the cursor to edit or enter the characters.

•Can use at initial screen and model select that model name.







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Usage of the transmitter

Main Menu

**Function Menu** 

escriptior



#### Set the direction of movement of each channel.

Can Set the direction of movement of each channel.

Use this function when the turing direction of servo is opposite to the wheel/trigger operation.

#### الله Back Key الله Enter Key الله JogDial الله +/- Key ق Reset

[How to open the set-up screen.]





From initial screen. use "Jog dial" key or "+,-" keys. to open Function menu.

Use "Jog dial" key or "+,-" keys. to choose the "REVERSE" from Menu list.

Push "Enter" key. to enter setup menu. use "Jog dial" key or "+,-" keys. to adjust the value. \* The menu for 3ch will display, when selected the CH.SELECT. (page 57)



•In an Electric car an ESC will adjust Throttle. When reverse isn't set up, it's not work normally at old ESC.

•A movement direction of steering are depend on each cars. Check the setup after mount to the car.



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Some of function assign at first. but they can change it to customize.

Assign the function to ET, BT

Can assign to ET or to BT Various functions.



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From initial screen open function menu by Jog dial or +, - keys.



From menu list select SETUP then push Enter key.



Select ET or BT to assign the function by Jog dial or +, - keys.



Use Jog dial or +, - key to set function name. if it is alredy assign.



Push back key: cancel the setup and return to Setup menu. Push Enter key: accept changees of setup and return toSetup menu.

## **UP TIMER**

#### Setup UP timer to use.

"UP TIMER" is Simple Timer that add the time. but Can set LAP navigation function also.



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**Function Menu** 

#### [How to open the setup menu]



## **DOWN TIMER**

● Back Key ● Enter Key ● JogDial

(⊕\_\_\_) +/- Key

**⊕⊙** Reset

#### Set Down timer

It is a timer subtracted from time set up.

Use When a timing of fuel refueling of an engine car is measured.

#### [How to open the set-up screen.]



•Use Auto set, then Run the car till empty the fuel. When set pre alarm, can usable as a refueling timer

•Need to assign any button to use this function.

Can assign the custom tone at alarm of Down timer function. (see page 29)

## DRAFT

## LAP TIMER

#### Can count the every lap by using Lap timer.

Set the Lap timer function and measurement point to record the lap. unestablished any key at an initial situation.



هَنا Back Key العنائية Enter Key العنائية JogDial

(⊕) +/- Key (⊕) Reset

### **Connecting the Receiver**



#### **KR-297FZ**

**KR-301F** 





With models of receiver to be used, the order of a row of each channel and a battery channel changes. Please connect a connector after a check of a display. Keep in mind that it does not operate even if it connects Servo and ESC to a battery channel.

#### About frequency change

• When the frequency to be used is exchanged in a frequency band.

The crystal of a transmitter and a receiver is exchanged for the thing of the frequency to be used.

• For changing the frequency band to be used.

Exchange of a frequency band is possible by exchanging RF module of use. An exchangeable frequency band is restricted to the frequency band permitted in each country which uses it.

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the receiver

Connecting

#### The Source of Noise and Electromagnetic Induction (Electric-powered car)

Assume that all areas where large currents are flowing are generating noise!

Locate antenna wires and receivers as far away from the motor, ESC, nicad batteries, and silicone wire as possible. Noise is a type of radio wave, and therefore is radiated (travel through the air) in the same fashion. Therefore, locating an antenna near a noise source increases the effect of the noise.





Metals and carbon can also conduct noise. As a result, you should never closely attach the antenna wire to the plate and carbon chassis.

#### Distance Between the Receiver and Antenna Holder

Install the antenna holder as near to the receiver as possible.

The easier it is for the antenna to pick up noise, the sensitivity of the receiver will decrease.



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#### Notes on Installing the Receiver

#### Notes on Installing Position (Do not near the reciever item.)

The installation position should be as far as possible from the motor, ESC, nicad batteries, silicone wires or other noise sources. Especially, do not route the silicone wires next to the receiver. (must not be near to the crystal) FET servo blue wire (7.2V wire) and switches can also generate noise, position them as far away as possible from the receiver and the antenna.



#### Mounting the Receiver (Electric-powered car)

When fixing the receiver in place on the chassis or on the "mechanical plate", use two pieces of double-sided tape, one on top of the other, as that the receiver is cushioned somewhat.
Be sure that the crystal is on the high end when installing the receiver



#### Notes on Installing the Receiver (Gasoline-powered car)

Do not secure the receiver on the chassis or the "mechanical deck". Vibrations will cause the receiver to misfunction and may even cause internal damage to the receiver. Either use the bracket (receiver holder) provided with the kit, or else cushion the receiver with a sponge like material.





The exhaust gas of engine carries neither in this place nor the place which becomes high temperature. \* A receiver breaks down and it becomes the cause of a reckless run.

#### Notes on Antenna Installation

Please follow the instruction as in the illustration below when you mount the antenna holder to the metal or carbon chassis. When using on FRP or carbon hollow antenna on a racing car, etc., do not pass the antenna wire through the pipe, allow it to trail away loosely outside.



DRAFT



**Main Specifications** 

## Transmitter KT-303H

Operation method Number of channels Transmission Frequency

**Neutral pulse** 

Supply Voltage

**Current consumpion** 

Memory

Wheel+ Triger 3 Channels Any Band by changing crystals within the frequency range 1.5msec EEPROM 8x AA size dry cel or 8 cells Nicad Less than 250mA

## RF Module RF-501F for KT-303H

Transmission Frequency range	Any frequency range by
	switchung RF modules
Modulation method	FM-PPM

## **Receiver KR-302F**

Reception method Number of channels Reception frequency

IF frequency Supply voltage Dimentions Weigh FM-PPM 3 Channels Any Band by changing crystals within the frequency range 455KHz 3.5 6.5V  $29.3 \times 24.4 \times 16.4$ mm 12.0 (excluding crystal)

## **KO 77070**

#### LATEST LEADING RADIO CONTROL TECHNOLOGY

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## Description

# Terminology used in radio control mode usage.Please refer to the Index for theterminology or wording of this transmitter.

Analog Servo	The general term of a model of machines of the Servo which used a thing of an analog method for control IC of Servo
Alarm	A signal to be famous as a buzzer of a transmitter. When it is used for a meaning of warning.
Amplifier	ESC
ESC	Abbreviation of an electric speed controller. It is a speed controller of a motor to use by electric car. An amplifier is said.
EEPROM	A kind of memory. Contents written in aren't erased even if switched off. It is used for data pack in EEPROM others of memory in the main body
Internet	The network where the communication network where plural personal computers were connected to was connected to on a large scale more. Information dispatch by a homepage and an E-mail are depended on in the world, and communication can be done.
WEB Site	Home Page
АМ	An electric wave to send from a transmitter A signal form of an electric wave. There is FM as another method. AM is an abbreviated designation in English of an amplitude modulation method. When that is used, It is had to match a signal form of transmission and reception machine.
LCD	A cable address to mean liquid crystal indication device.
AC Chargor	It is used to display letters.
AC Charger	There are many situations to cut more than several hours in charge.
FM	A signal form of an electric wave to send from a transmitter. FM is an abbreviated designation in English of a frequency modulation method
FET	An electric field effect transistor. Loss resistance is small, and, in comparison with a normal transistor, a consumption electric current of oneself is small, too.
FET Servo	FET was used for a motor drive element instead of a conventional transistor, and it is being of high class Servo.
ET	An Abbreviation of electric trim. Besides, a button is abbreviated to BT.
Fast Charger	The Charger which charges a nickel-cadmium battery and a nickel metal hydride battery by a short time.
Carburetor	Fuel mixture device, turn number of engines are controlled.
Crystal	A component to set frequency of transmission and receiver, It is made from crystal.
Clutch	An output axis of an engine and the intermittent continuation device which there is between gearing devices.
High frequency ESC (an amplifier)	ESC of the method how frequency to drive a motor is high. Most are these systems, but the thing which isn't a high frequency system exists in past things.
High frequency (RF) module	An electric wave is made, and a circuit device to fire can be put on and off. When a frequency band to use (27MHz .40MHz) is changed, it is had to swap it.
Connector	Electric point of contact unit of putting on and off type.
Rubber Grommet	The rubber component which protects Servo from vibration, an edge of a Servo case can be possessed.
Servo	The device which converts a management signal of a transmitter into turn machine exercise. A Servo motor.
Cycle	It is space and period of repetition of a certain movement.
CPU	IC of a core of a computer used in various uses by digital operation processing. A microcomputer. It can be called MPU.
Frequency band	It is called the place that each frequency gathers, and shine, 27MHz zone (mega Hz), 40MHz zone.
Receiver (RX)	The device which an electric wave of a transmitter is received, and send a control signal forth in Servo and ESC.
Jog dial	A knob for data modification of a turn system not to have a stopper. If that is controlled every one click, by 1 point can do data modification, but is usable usefully when numerical value wants to be made a change in at a stretch
Speed controller	ESC
Swing	Campaign against coming and going between a certain set two points.
Spline	Exact location of the servo horn in to the neutral position.
Center Trim	Even if the trim is adjusted, overall turning angle point will not be changed.

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# Usage of the

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## Description

Servo Saver Horn	The shock absorbing device that is installed or in place of servo horn.	
Transmitter (TX)	Hand set that transmitter signal.	
<b>Turning Angle (Travel)</b>	Turning angle of the servo horn.	
Channel (CH)	Number of Servo which can be controlled with a transmitter one by one. Or it is a number of that individual signal	
Data Pack	It is the module which had memory for enlargement built-in. Usable model memory can be increased.	
Digital Servo	The general term of a model of machines of the Servo which used a thing of a digital system for control IC of Servo.	
Delay	Act slowly.	
DC Charger	The Charger which uses direct current for power supplies such as 12V battery or 12V stabilization power supply.	
Duty	It is the ratio of two movement.	
Travel	It is a rudder angle, movement volume.	
Trigger	Control mechanism of a transmitter. A piece pulled with a finger to control the speed or brakes.	
Trim	The device which adjusts a neutral position of each channel signal.	
7.2V Servo	The Servo that a motor becomes the other power supply. By a KO PROPO original system, it is expected that a power supply is taken out of a power supply for power (7.2V) in the case of an electric car	
NiCad (Ni-cd)	It is different from a dry cell, The battery which it is charged repeatedly, and can be used. There are NiMH or lithium ion as the battery which it is charged, and can be used repeatedly elsewhere	
Neutral	The situation that separated a hand from a stick of a transmitter or a position of Servo Horne at that time.	
27Mhz	It is for one of the frequency band that it can use by radio control, ground, water model, and there are 12 belts.	
Noise	An electric noise. For a kind of electric wave, it makes it jumps into a receiver and malfunction.	
Band plate	It is frequency and is selected with crystal glass. It can make a change by crystal glass exchange in the same frequency band.	
Band	It is frequency and is selected with crystal glass. It can make a change by crystal glass exchange in the same frequency band	
Backlight	Because themselves don't emit light LCD (a liquid crystal display), visibility isn't good by the time if it is dark. It is the lamp which is installed in the backside of liquid crystal to solve this (the emission of light source)	
Dead Band	The field where Servo doesn't react to even if it controls foil and trigger.	
VR	It means the volume that detects the position of the stick.	
Fail safe adaptor	When it receives an interference electric wave, it is the device which it fixes Servo Horne at the position that a computer set up beforehand, and prevent reckless driving.	
Push rod	The stick thing which is used for linkage.	
Preset	Will set up a position in advance	
PC interface	It is an adapter it converts a signal into, and to be connected to do setting of a transmitter with a PC.	
Discharger	The circuit device which makes you discharge a residual quantity of a charge type battery of NiCad forcibly.	
Wheel	Mechanism of the transmitter which it turns it from side to side, and control a steering.	
Pumping Effect	Intermittent breaking action.	
Home Page	It says the place where it mentioned a certain information in on Internet. It can look by software on a personal computer called a Web browser.	
Machine plate	The board which installs receiver Servo on a chassis of a car.	
Mega Hz (MHz)	1000Hz =1 KHz (a kilohertz) 1000KHz =1MHz.	
Memory	In a personal computer, it is used for a meaning called the preservation place in which information is stored temporarily. Although the information on the memory in this case will be lost if a power supply is shut off, the memory used for a transmitter etc. is called non-volatilized memory, and even if it shuts off a power supply, it holds information.	
40Mhz	One of the frequency band that it can use by radio control. Eight bands for ground model. There are five bands for sky model.	
Linkage	Servo and connection mechanism to connect each mechanism to of a model.	
Reset	Return setting contents of setting numerical value to an initial situation	
Regulator	The circuit which stabilizes the input voltage to the necessary voltage.	
Response	It is time before machinery of the receiver side reacting since it controls a transmitter.	
Width	The thing of width which operates by ABS or Throttle Acceleration.	



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Connecting the receiver





