



6 CHANNEL RADIO CONTROL SYSTEM

# INSTRUCTION MANUAL



**FS-CT6A**

DIGITAL PROPORTIONAL RADIO CONTROL SYSTEM



<http://www.exceedrc.com>

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## Introduction

Exceed-RC has been making RC products aimed at making our hobby fun and exciting with an affordable price. We are confident that your experience with our products will be positive. We highly recommend that you read this user manual thoroughly and carefully before assembling and operating. Please follow all precautions and recommendations located within the manual. Be sure to retain the manual for future reference, routine maintenance, and tuning.

Exceed-RC guarantees this product to be free of manufacturing faults and material defects. This product has been checked and fine tuned individually by professional pilot and quality control pilot. The warranty does not cover any component parts damaged by use and modification. Please visit <http://www.exceedrc.com> for updated product information.

This product is not a toy. It is not recommended for children under 14 years old and any minor should be accompanied by an adult when operating. This product is a precision machine that requires proper assembly and setup to avoid accidents. Failure to take caution when operating this product may result in serious injury or property damage. It is the owner's responsibility to operate this product in a safe manner. Manufacturer and its distributors are not responsible in any way for any and all bodily injury(s) and/or property damage that may occur from the use of or caused by in any way this product.

## Warnings

- The product is not intended for those under 14 years of age without proper adult supervision. The product is not a toy. It is a precision machine requiring proper assembly and setup to avoid accidents and it is the responsibility of the owner to operate this product in a safe manner as it can cause serious personal injury and damage to property due to carelessness or misuse.
- The spinning rotors on this product can be dangerous! When operating/flying, always be aware of the spinning rotors. Be careful not to let them come close to your body, other people or loose clothing. Keep your hands, fingers and any articles of clothing away from the rotors.
- Do not attempt to disassemble or modify any of the product components without the assistance of an experienced RC user.
- Only use the correct type of battery to operate. Using any wrong type of battery will damage the product and possibly make it dangerous to operate.
- The motor(s) may get hot during use. Always allow 10-15 minutes between each flight for the motor to cool down. This will prolong the life of your product.
- Choose an appropriate operating site consisting of flat, smooth ground, and clear open field. Do not operate near buildings, high voltage cable lines, or trees to ensure safety operation. Operate in safe area only, away from other people. RC models are prone to accidents, failures, and crashes due to a variety of reasons including, lack of maintenance, pilot error, and radio interference. Pilots are responsible for their actions and damage or injury occurring during the operation.
- Do not operate in inclement weather, such as rain, wind, snow and darkness.
- The product is composed of precision electrical components. It is critical to keep the product away from moisture and other contaminants. Do not allow them to get wet. Electrical damage may occur that could affect safe operation.
- After each use, always allow the battery to cool down before recharging. When charging the battery pack, do not overcharge! If batteries get hot during charging, discontinue charging immediately and disconnect the battery from the charger. Never leave battery unattended while charging. If you are unsure of how to charge this battery, please seek the advice of experienced RC users. Never let children charge the battery without adult supervision.
- Always turn on the transmitter before connecting the battery on the model. When turning off the model, always disconnect the battery first, and then turn off the transmitter. If the order is reversed, the model may become uncontrollable and cause serious damage.
- If you are in doubt of your ability to operate the model, we strongly recommend that you seek assistance from experienced RC users or join your local model flying club to gain the required knowledge and skill. As the manufacturer and distributor, we assume no liability for the use of this product.
- Before turning on your model and transmitter, please check to make sure no one else is operating under the same frequency. Frequency interference can cause your model, or other's models to crash. The guidance provided by experienced RC users will be valuable for the assembly, tuning, trimming, and actual first flight.
- Never allow batteries to run low or you might lose control of the model.
- You should complete a successful pre-flight check of your radio equipment and model prior to each flight.

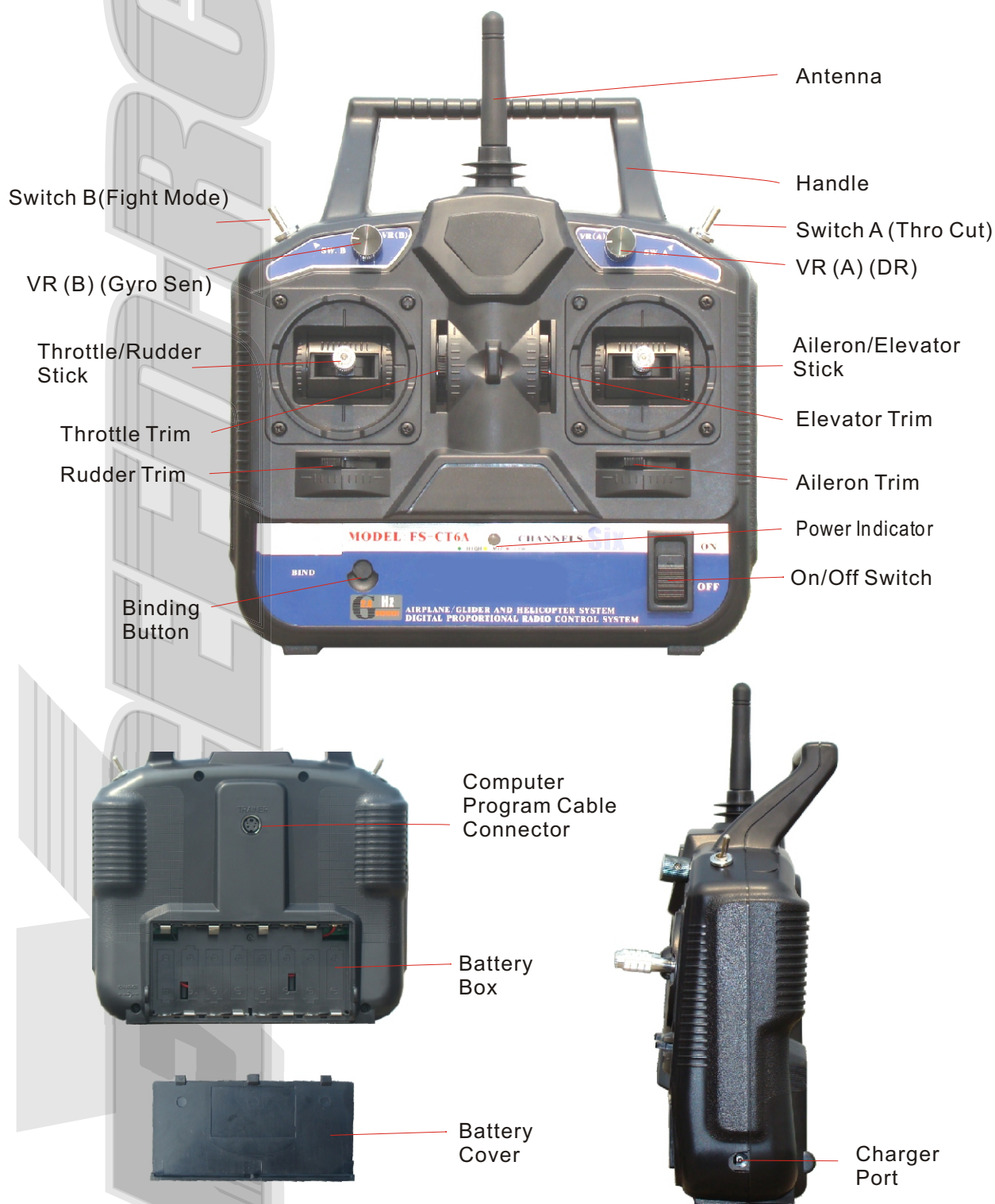


## Transmitter Parameters

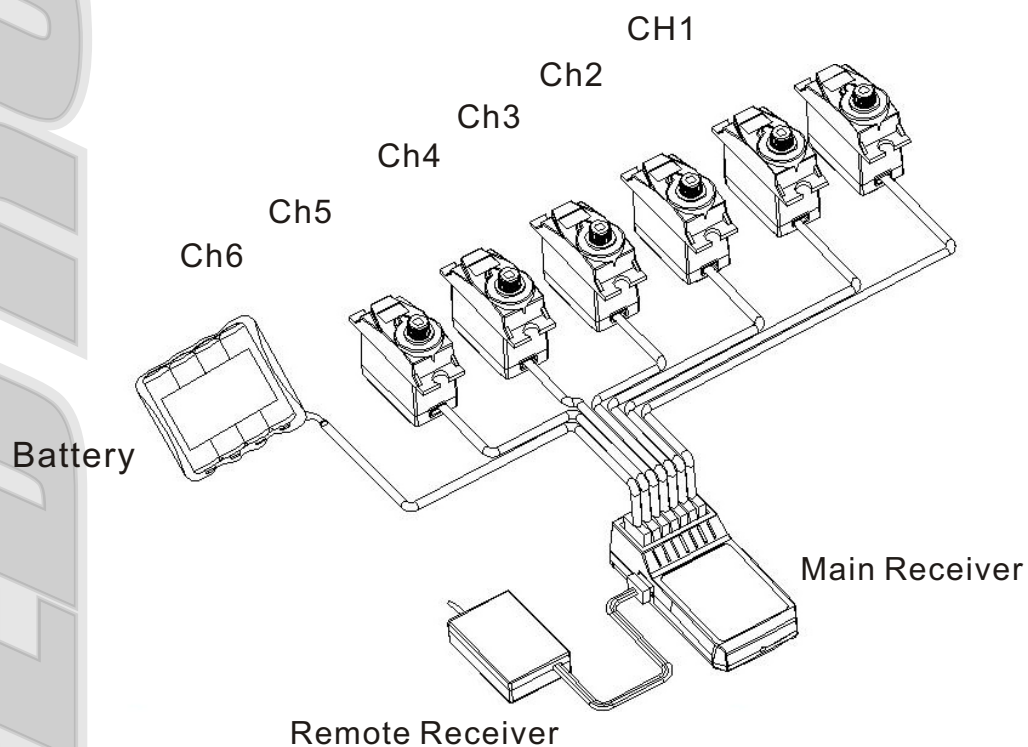
- Channel: 6
- Charger Port: Yes
- Frequency Band: 2.4GHz
- Simulator Port: PS-2
- Power Resource : 1.5V\*8 AA Battery
- Program Type: GFSK
- Modulation Type: FM
- RF power : 19db
- Static Current :  $\leq 250\text{mA}$
- Voltage Display Type : LED
- Size : 189\*97\*218mm
- Weigh: 575g
- Color: Black
- Antenna Length : 26mm
- Heli-140/Heli-120/Heli-90/Acro
- Sub Trim : Yes
- Thro Cuv: Programmable
- Pith Cuv: Programmable
- Support multiple user model

## Receiver Parameters

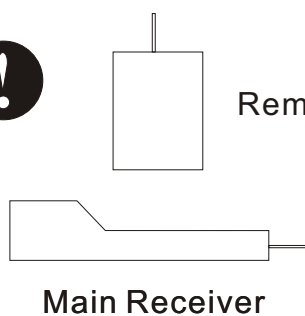
- Channel: 6
- Frequency Band: 2.4GHz
- Power Resource: 1.5V\*4 AA Battery
- Program Type: GFSK
- Modulation Type: FM
- RF Receiver Sensitivity:  $-76\text{db}$
- Static Current:  $\leq 85\text{mA}$
- Size: 45\*23\*13.5mm
- Size: 25\*16.8\*6.5mm
- Weigh: 12g
- Antenna Length: 26mm

**Control Identification And Location**

## Receiver And Servo Connectivity



When installing the receiver, please make sure the two receiver modules are positioned in 90 degree to each other.



Remote Receiver

Main Receiver

## Transmitter And Receiver Binding

The receiver must be bound to the transmitter before it will operate. Binding is the process of teaching receiver the specific code of the transmitter so it will connect to the binding transmitter. Once bound, the receiver will only connect the bound transmitter. The included transmitter and receiver are bound by the factory. If you need to re-bind the transmitter and receiver, please follow the following steps.

1. Install eight AA batteries to the transmitter.
2. Insert the bind plug to the battery channel port on the main receiver.
3. Connect the receiver battery to any channel port on the main receiver, Note that the LEDs on both receivers should be flashing, indicating that the receiver is ready to bind.
4. Press and hold the binding button on the transmitter while turning on the transmitter.
5. Within a few seconds (up to ten seconds) the system should connect. The LEDs on the receivers should go solid, indicating the binding process is completed.
6. Release the binding button on the transmitter, and remove the bind plug from the receiver.
7. Install servo and run a simple test, if the test fail, please repeat the binding process.

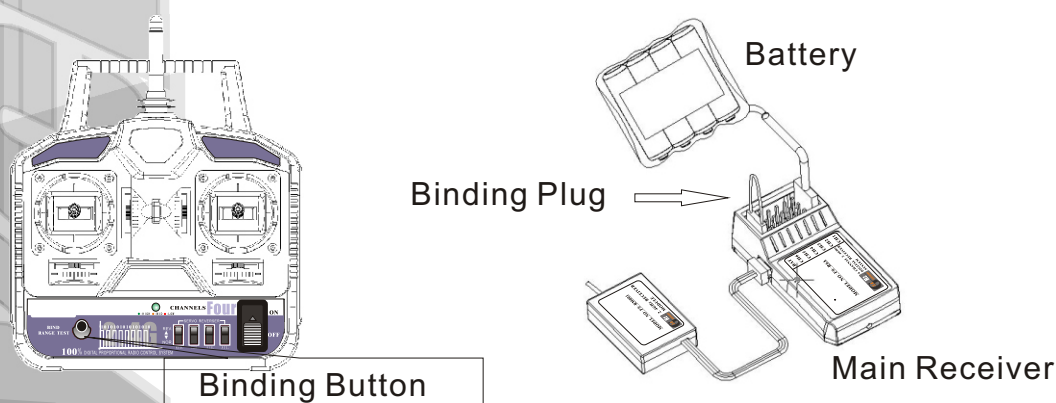
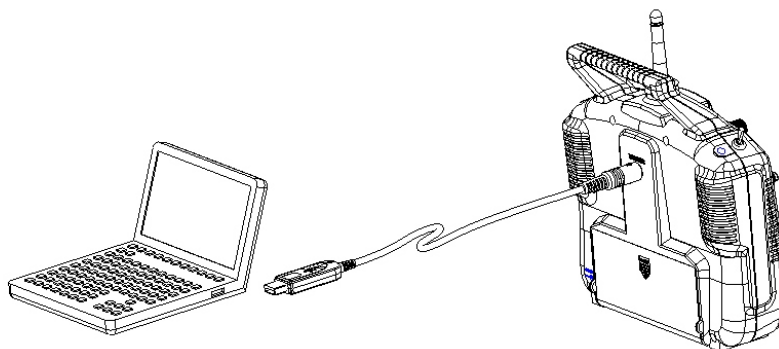


Figure 1

## Connecting To Computer

With the provided computer programming cable, you can reprogrammed the programming functions (i.e.) on the radio system with your personal computer. Please follow the following steps to reprogrammed your radio system.

1. Install 8 AA batteries into the transmitter and turn on the power switch.
2. Plug the provided computer programming cable to the connection port on the back of the transmitter.
3. Plug the USB head to your computer.
4. Launch the installed software program T6Config.exe (Detail on the following page)



## Computer Software Installation

### 12.01. OBTAINING THE SOFTWARE:

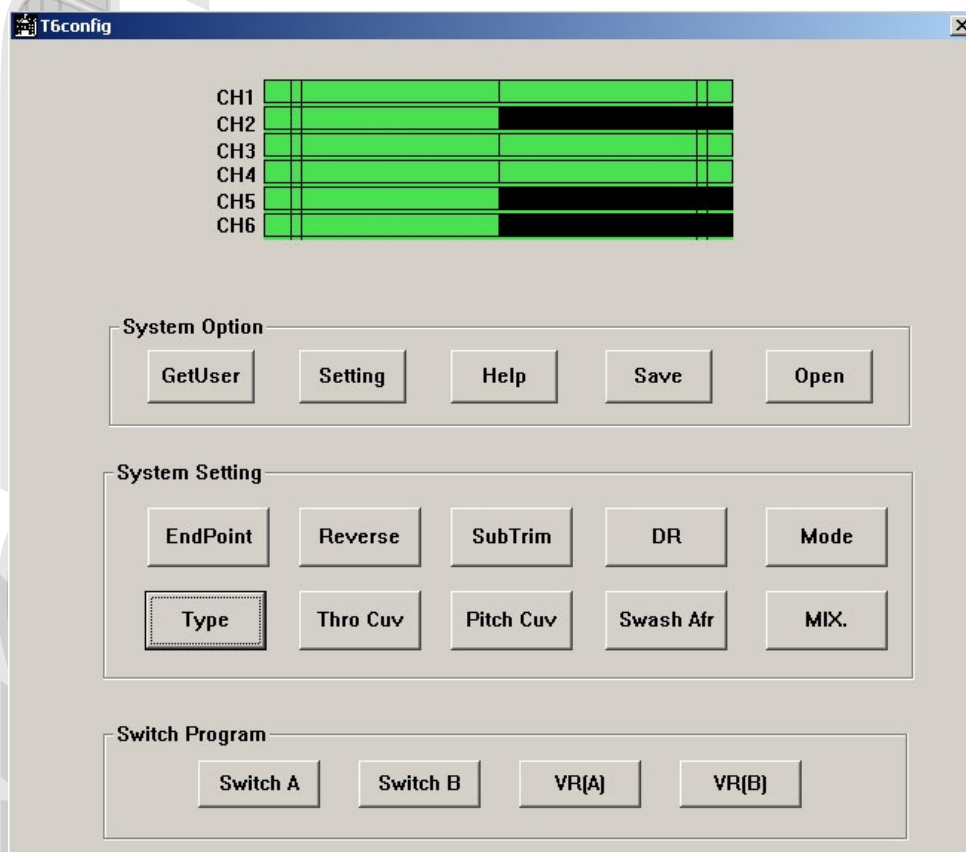
The programming software and driver can be found on the provided CD in the package.

### 12.02. SOFTWARE INSTALLATION:

1. Install the driver software : FS-CT6DRIVE001.EXE
2. Install the application software: FS-CT6SOFTWARE.EXE
3. Restart the computer

### 12.03. USING THE SOFTWARE APPLICATION:

1. Install 8 AA batteries into the transmitter and turn on the power switch
2. Connect the computer programming cable
3. Start the programming software (double click the T6Config.exe)



**Application Software Interface**



## Programming Guide

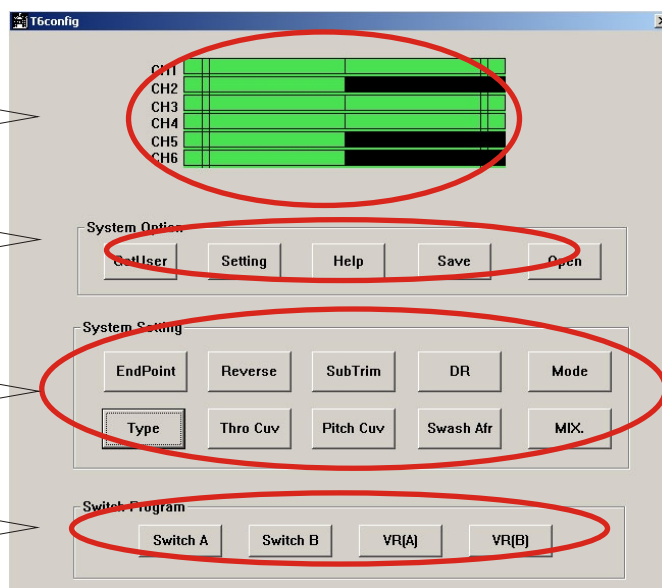
Computer programming software Interface Layout:

Channel Output  
Display

System Function  
Option

System Function  
Setting

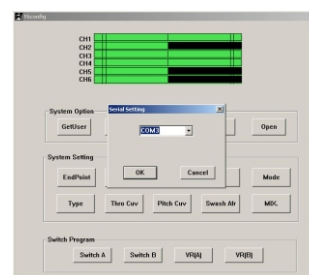
Switch Function  
Setting



### System Function Option

Left click the “Setting” button on the interface, the screen on the right should appear. You need to find out the COM port on the computer that your computer programming cable is connected to. Change to different COM port until the channel output display has movement according to your stick movement on your transmitter.

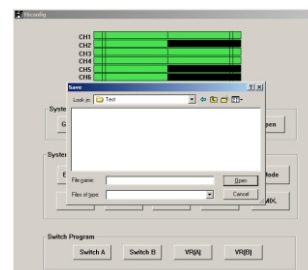
Press the “OK” button after the correct COM port selected



Left click the “GetUser” button on the interface to import the current settings on the transmitter to the computer program. **Please import the transmitter settings to the computer program immediately after the correct COM port is selected, or your settings on the transmitter will be overridden.**

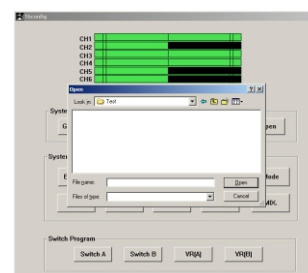
Left click the “Save” button on the interface, the screen on the right should appear. You can save your current parameter settings into a file and stored on your computer. You can save as many group of settings as your want.

Left click the ‘Save’ button to save the parameter settings.



Left click the “Open” button on the interface, the screen on the right should appear, This screen allows you to import the parameter settings from the opened file.

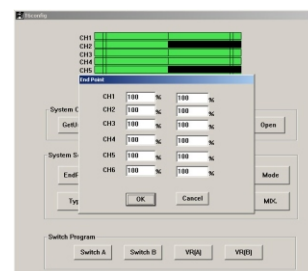
Left click the “Open” button to import the parameter settings.



### System Function Setting

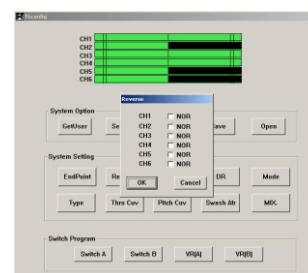
Left click the “EndPoint” button on the interface, the screen on the right should appear. this function allows the precision end-point adjustments of all six channels in each direction independently. It has two parts: left half part and right half part. The travel adjust range is from 0% - 100%.

Left click the “Ok” button to save the adjustment.  
Left click the “Cancel” button to cancel adjustment.



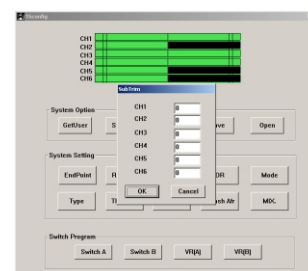
Left click the 'Reverse' button on the interface, the screen on the right should appear, this function provides an electronic means of reversing the servo throw. Servo reversing is available for all six channels.

Left click the channel you want to change.  
Click the “OK” button to save the adjustment.



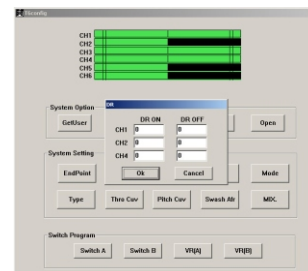
Left click the “Subtrim” button on the interface, the screen on the right should appear, this function allows you to electronically adjust the centering of each servo. Sub trim is individually adjustable for all channels, with a range from -120 to +120 (Do not use excessive sub-trim values as it is possible to overdrive the servo’s maximum travel).

Click the “OK” button to save the adjustment.



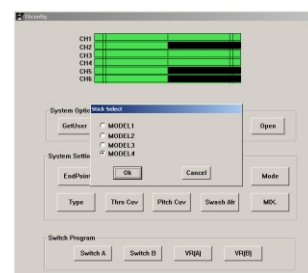
Left click the “DR” button on the interface, the screen on the right should appear. The DR(dual rates) function allows two control rates to be programmed and selected with a switch. Dual rates are available on the Ch1, Ch2 and CH4 channel. Adjustable value is from 0% to 100%.

Click the “OK” button to save the adjustment.



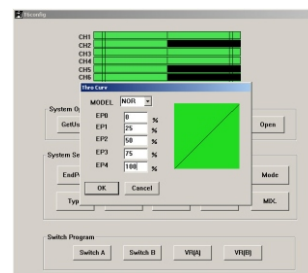
Left click the “Mode” button on the interface, the screen on the right should appear. This function is used for control mode adjustment according to the user preference. The system offers four different modes to choose.

Click the “OK” button to save the adjustment.



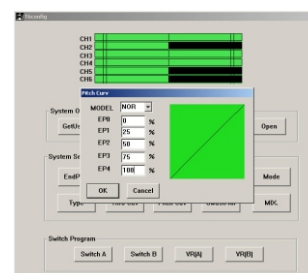
Left click the “Thro Cuv” button on the interface, the screen on the right should appear. This function offers two separate throttle curves with five adjustable points per curve. Each throttle curve can be activated in flight using the two position flight mode switch. The flight mode switch offers two selectable curves: NOR=Normal, ID=Stunt. Each of the five positions of the throttle curve are independently adjustable from 0% to 100%.

Click the “OK” button to save the adjustment (NOR and ID curves needed to be changed independently).



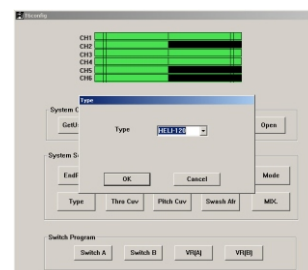
Left click the 'Pitch Cuv' button on the interface, the screen on the right should appear. This function offers two separate pitch curves with five adjustable points per curve. Each pitch curve can be activated in flight using the two position flight mode switch. The flight mode switch offers two selectable curves: NOR=Normal, ID=Stunt. Each of the five positions of the pitch curve are independently adjustable from 0% to 100%.

Click the “OK” button to save the adjustment (NOR and ID curves needed to be changed independently).



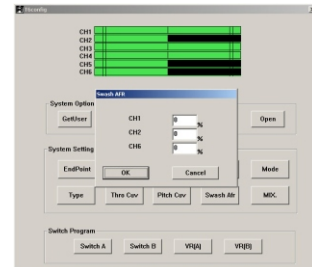
Left click the 'Type' button on the interface, the screen on the right should appear. This function is used for model type selection. The system offers four model types to select: ACRO, HELI-90, HELI-120 and HELI-140 (Interface should appear differently according to the type of model is selected).

Click the “OK” button to save the adjustment.



Left click the “Swash Afr” button on the interface, the screen on the right should appear. This function is used for the swash plate adjustment for CCPM helicopter. The function adjusts the amount of travel for channel CH1, CH2 and CH4 individually, Adjustable value is from 0% to 100%.

Click the “OK” button to save the adjustment.



Left click the “MIX” button on the interface, the screen on the right should appear. The function allows mixing any one channel to any other channel.

The system offers three programmable mixes

Mix Num: (MIX1/MIX2/MIX3)

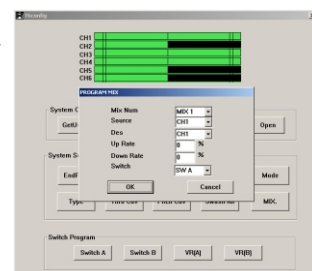
Source: Mix control source

Des: Mix control destination

Up rate: upper part's mixed control ratio (-100% to 100%)

Down rate: lower part's mixed control ratio (-100% to 100%)

Switch: Activation ways (OFF, ON, SWA, SWB)



### Switch Function Setting

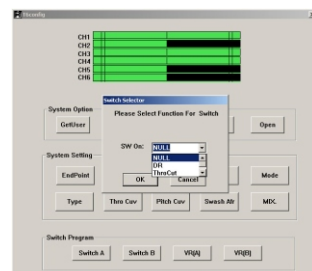
Left click the “Switch A” or “Switch B” button on the interface, the screen on the right should appear. This function is used for correspond function selection of “Switch A” and “Switch B”.

NULL: Not selected

DR: Dual rate

ThroCut: Throttle cut

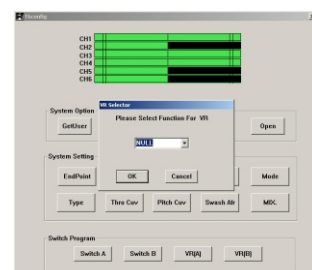
NOR/ID: Flight mode switch



Left click the “VR (A)” or “VR (B)” button on the interface, the screen on the right should appear. This function is used for correspond function selection of “VR (A)” and “VR (B)”.

NULL: Not selected

Pitch Adjust: Pitch adjustment





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