Program Box Instructions

3-Axis gyro control menu

Basic setup

Menu items	Description
Monitor Showing information	Page 1: A: Aileron channel signal E: Elevator channel signal R: Rudder channel signal C: Pitch channel signal Page 2 : G: Tail rotor transmitter sensitivity values. If the display shows "A", the gyro is working in the lock tail mode. If it shows "N", the gyro is working in the non-lock tail mode. Condition: Gyro current parameters. Each gyroscope has two sets of parameters to choose from. They are just displayed here, so the parameters cannot be changed. Page3 : Version of gyro: Firmware version

Installation direction	Gyro installation position selection Three position options 0,1,2 (top, top across, side)
Load model	Download the model parameters stored within the controller to the gyro. 1-5 is stored in the factory with five groups of model parameters. 6-10 are reserved for user data stored in 5 groups (see controller instructions in the advanced menu in the Model save and Model rename). You can start with 1-5. Select the desired feel, by choosing Beginner etc.

Tail servo type	Rudder servo type selection “1520us 72Hz” All servos are analog servos “1520us 250Hz” Rudder servo is Broadband digital (Futaba S9253, S9254, S9257…) and some of the common digital servos. CCPM servos are analog “1520us 333Hz” Rudder servo is Broadband digital (Futaba S9253, S9254, S9257…). CCPM servos are analog “760us 400Hz” Rudder servo is Narrowband digital (Futaba S9251, S9256, BLS251, MKS DS8910, BLS980…). CCPM servos are Broadband digital “960us 333Hz” Rudder servo is a digital servo (LogicTech6100G, 3100G, Hitec5083MG…). CCPM servos are Broadband digital

Model type	Model swashplate type selection “Heli nomal” : Mechanical mixing type “Heli 120” : CCPM 120 “Heli 135” : CCPM 135 “Heli 140” : CCPM 140 “Heli 90” : CCPM 90
Servo trim	1-4 Adjust the servo neutral points

Servo reverse	1-4 Servo reverse
Servo limit	Tail limit A：Rudder servo “L” end position limit Tail limit B：Rudder servo “R” end position limit Aileron limit：Aileron end position limit Elevator limit：Elevator end position limit

Collective range	Direction and total pitch angle for maximum positive and negative collective
Gyro direction	Correct direction of the gyro Yaw:Rudder Roll: Aileron Pitch:Elevator

Gyro total gain	The total gyro sensitivity Yaw total gain: Tail rotor sensitivity. (Sensitivity of transmitter gyro gain and the Yaw total gain, combined) Roll total gain： The total roll sensitivity Pitch total gain： The total pitch sensitivity
Pirouette optimization	Optimal rotation direction selection Enter the menu. The swashplate will tilt at an angle. Pick up the helicopter and rotate the tail 360 degrees. Check that the swashplate stays tilted in the original direction. If the direction changes, change the optimization direction and try again

Tail tuning

Menu items	Description
Yaw P gain	P feedback factor Feedback factor equal to the angle error. If too high the tail will overcorrect. If too low it will not correct enough
Yaw I gain	I feedback factor Feedback factor equal to the angle error over time. The higher the value the more responsive. If too high the tail will overcorrect
Yaw D gain	D feedback factor Feedback factor equal to the rate of change of the angle error. The higher the value the faster the reaction to a change. If too high the tail will oscillate

Acceleration L	Left rotation acceleration The greater the value the faster the acceleration to speed
Acceleration R	Right rotation acceleration The greater the value the faster the acceleration to speed
Deceleration L	Left rotation deceleration The greater the value the faster the deceleration
Deceleration R	Right rotation deceleration The greater the value the faster the deceleration
Tail deadband RC	Tail rotor stick deadband
Tail deadband gyro	Tail rotor gyro sensor deadband
Pirouette speed L	Left rotation maximum angular rate

Pirouette speed R	Right rotation maximum angular rate
Tail compensate Zero value	Torque compensation for zero pitch This value should be 0 for helicopter stunt flying
Tail compensate Col>tail	Torque compensation for the collective Compensation factor for positive and negative collective
Tail compensate Cyc>tail	Torque compensation for the cyclic Compensation factor for roll and pitch

Swash tuning

Menu items	Description

Roll P gain	Roll Proportional feedback factor Feedback factor equal to the angle error. If too high the helicopter will overcorrect. If too low it will not correct enough
Roll I gain	Roll Integral feedback factor Feedback factor equal to the angle error over time. The higher the value the more responsive. If too high the helicopter will overcorrect
Roll D gain	Roll Derivative feedback factor Feedback factor equal to the rate of change of the angle error. The higher the value the faster the reaction to a change. If too high the helicopter will oscillate
Pitch P gain	Pitch Proportional feedback factor Feedback factor equal to the angle error. If too high the helicopter will overcorrect. If too low it will not correct enough

Pitch I gain	Pitch Integral feedback factor Feedback factor equal to the angle error over time. The higher the value the more responsive. If too high the helicopter will overcorrect
Pitch D gain	Pitch Derivative feedback factor Feedback factor equal to the rate of change of the angle error. The higher the value the faster the reaction to a change. If too high the helicopter will oscillate
Acceleration	Roll and pitch acceleration to the desired speed
Deceleration	Roll and pitch deceleration to the desired speed or stop
Swash deadband RC	Aileron and elevator stick deadband
Swash deadband gyro	Roll and pitch gyro sensor deadband

Roll agility	Roll agility Maximum roll rate control
Pitch agility	Pitch agility Maximum pitch rate control

Advanced menu

Menu items	Description
Data reset	All parameters back to default values
Model save	Store the current gyro data to the controller. You can choose 6-10 to store up to five models

Model rename	Modify the names of the five models 6-10. Each name consists of 8 letters, numbers or symbols. Press the OK button to move the cursor up and down, and the cursor keys to change the character