walkera
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WK-1001

Users Manual

8-CHANNEL DIGITAL TRANSMITTER

Contents

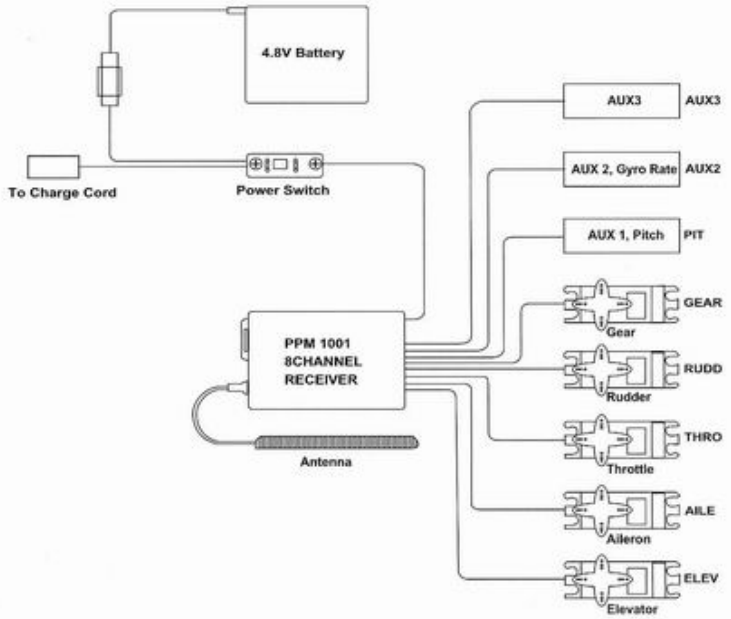
1.0 Foreword

Many hobbyists own many nice models, but are usually short of an elaborate transmitter. They are quite good at flying, but don't know how to set up their transmitters. When they want to adjust their aircraft, they have to ask someone to re-set up the parameters. The set-up, of course, is not exactly tailored for theirselves. The WK-1001 will meet all the demands. It is of powerful functions and of large LCD display and easy function menu with elegant blue backlight.

1.1 Control Identification and Location

1.2 Backboard Identification

Connections:



1.4 WK-1001 Input Key Function

There are six input keys on the WK-1001 panel. Below are the detailed functions:

EXT: Reset key. Press and hold the EXT key, and then press the ENT key to access the Function Menu mode.

ENT: Confirmation key. Pressing the ENT key may enter the system or function mode.

·UP: Up key of Function selection

·DN: Down key of Function selection

+R: Move the cursor rightward to increase the setting value

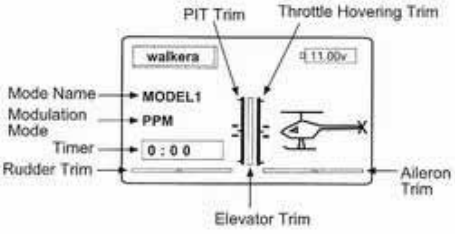
L-: Move the cursor leftward to decrease the setting value

1.5 Channel Assignment

Channel #	Tx Function	Airplane Function
1	ELEV	Elevator
2	AILE	Aileron
3	THRO	Throttle
4	RUDD	Rudder
5	GEAR	Gear
6	AUX1	Pitch/Aux1
7	AUX2	AUX 2
8	AUX3	AUX3
9	AUX3	Not Used
10	AUX3	Not Used

1.6 Home Screen

Here are the home screen and its descriptions.



2.0 Function Menu Mode

The WK-1001 offers the easy-to-control Function Menu. Switch on the power of the transmitter. Press and hold the EXT key and then press the ENT key to access the Function Menu (main menu) mode. Function Menu includes the following contents:

2.1 MODEL: model

2.2 MDLSEL:

MDLSEL: model selection. It can memorize 8 models' data. In order to avoid confusion, inputting model name for each model is strongly recommended.

2.3 NAME: model name

2.4 TYPSEL: type selection.

2.5 SWASH

SWASH: the types of swashplates include 1SERVO, 2 SERVOS, and 3 SERVOS.

2.6 STEP

STEP: trim set-up

2.7 COPY

COPY: the COPY function offers you to freely copy all of the settings of your current model to another memory within the same transmitter.

2.8 ALARM

ALARM: the WK-1001 offers the alarm function to set the flight time, battery low voltage and alarm tone.

2.9 DISP

DISP: Display function enables you to adjust the LCD contrast and to turn on/off the backlight.

2.10 RESET

RESET: Reset function helps you re-set the factory default settings.

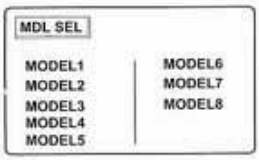
3.0 Function Mode Setting

3.1 MODEL

In the Function Menu, press UP or DN to select MODEL and access by pressing the ENT key to set the parameters.

3.2 Model Selection

In the Function Menu, press UP or DN to select the MDLSEL and access by pressing the ENT key. The WK-1001 is capable of memorizing 8 models' data. In order to avoid confusion, you are recommended to input names for each mode. The selected mode will be automatically marked with an asterisk "*".



3.3 NAME

In the Function Menu, select NAME and access by pressing the ENT key.

Press UP or DN key to move the cursor to the selected characters. Then press L – or + R to select the characters and press the ENT key to save.

3.4 Type Select (no content)

3.5 Swashplate Type

In the Function Menu, press UP or DN to select the SWASH and access by pressing the ENT key. Then press UP or DN to select the type.

The WK-1001 provides three models to select: 1 servo (NORM), 2 servos (180 degree spacing helicopter), and 3 servos (120 degree spacing helicopter), respectively. 1 servo is a normal mode (non CCPM), and it is controlled by one servo.

3 servos are used to run CCPM mode (cyclic-collective-pitch-mixing mode). It utilizes three servos to operate the swashplate in the form of mixing manner to control over the functions of the aileron, elevator and pitch. CCPM is the most popular control

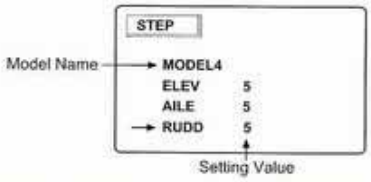
manner because the transmission structure is simplest and three servos simultaneously operated release the servos' load.

If 1 servo (NORM) is selected, it doesn't enter the swashplate mixing setting on the function mode.

3.6 Trim Step Setting

In the Function Menu, press UP or DN to select the STEP, and access by pressing the ENT key. Then press UP or DN to select the current model, and enter by pressing the ENT key.

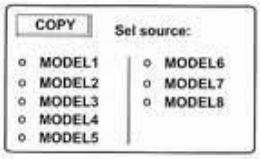
The trim step setting is ranged from 1 to 10. Press the UP or DN key to select the subject, and press L – or + R to modify the value.



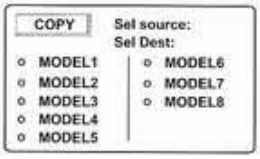
3.7 Copy Function

In the Function Menu, press UP or DN to select the COPY and access by pressing the ENT key. Then press UP or DN to select the model which you want to copy.

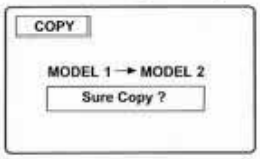
The WK-1001 offers the function with copying all the settings of your present model to another model within the same transmitter. It facilitates to set up one aircraft into several ways. The picture below shows the manner of copying model 1 to model 2. Press ENT key and access the COPY key, and press UP or DN to select the model 1 you want to copy.



Press the ENT key and appear "sel dest" in the top right corner of the screen.



Press UP or DN to select the MODEL 2 which the data will be saved in. Press the ENT key, and a dialogue box "sure copy" appears. Press the ENT key to save if you want to copy.



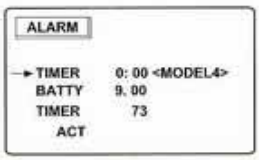
3.8 Alarm Setting

In the Function Menu, press UP or DN to select the ALARM and access by inputting the ENT key.

The WK-1001 offers the settings of the timer, battery low voltage and alarm tone.

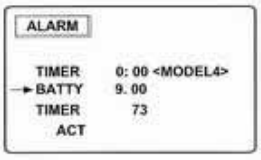
3.8.1 Timer

The WK-1001 offers the stopwatch timer function. Press UP or DN to move the cursor to the TIMER, and press L – or + R to set the data. The up count will up count to 59'50" (59 minutes 50 seconds).



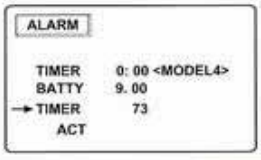
3.8.2 Battery Low Voltage Alarm

Press the UP or DN to move the cursor to the appointed BATTERY. Press L – or + R to adjust the settings. The alarm voltage level of the battery is from 7.30 to 10.30 V. 9.0V is commended to be set as the warning threshold.

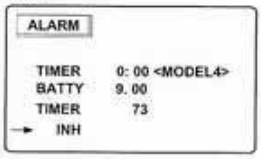


3.83 BUZER

Press UP or DN to move the cursor to the BUZER, and press L – or + R to adjust the setting. According to the personal hearing favor, the alarm sound can be set from 50 to 100.

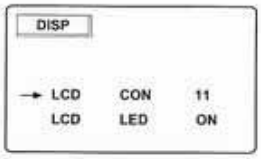


The WK-1001 provides the alarm cancel function. Press UP or DN to move the cursor to ACT key, and press L – or + R until ACT is changed into INH.



3.9 Display

In the Function Menu, press UP or DN to select DISP and access via pressing the ENT key.

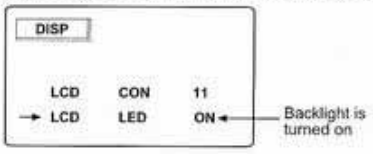


3.9.1 LCD Contrast

Move the cursor to select LCD CON and adjust the contrast by pressing L. – or +. R.

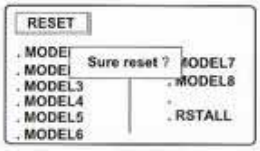
3.9.2 Backlight Adjustment

Press UP or DN and move the cursor to select LCD LED and press L – or + R to appear ON or OFF on the screen. ON means the backlight is turned on and OFF means the backlight is turned off.



3.10 Display

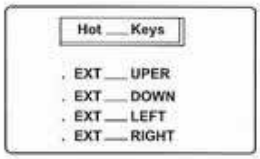
In the Function Menu, press UP or DN to select the RESET, and access by pressing the ENT key.
The WK-1001 offers the RESET function to reset the factory default setting.
Press UP or DN and move the cursor to select the model you want to reset, and access by pressing the ENT key. Then a dialogue box of "Sure Reset" appears on the screen. Press ENT to reset and press EXT to exit. If you want to reset all the models' data to the factory settings, press UP or DN to select the RSTALL and press the ENT key. Then a dialogue box of "Reset All" will show Press ENT to resume all the data and EXT to exit.
on the screen.



3.11 Hot-key setting

The WK-1001 offers the Hot-key function to handle the frequent setting pages as hot keys (shortcut key). If the pilot wants to set the servo Travel Adjustment (refer to Travel Adjustment) as the Hot Key, for example, he just presses the EXT key and the corresponding hot key to get the desired page after the servo Travel Adjustment is set up. The function is capable of setting up to 4 Hot Keys. Below is the concrete way to set the Travel Adjustment as the Hot Key:

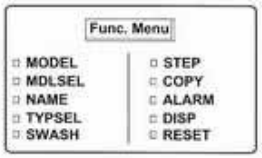
In the Function Menu, press UP or DN to select the MODEL and access by pressing the ENT key. Then press UP or DN to select the TRVADJ and enter by pressing the ENT key. Move the cursor to select the desired function such as AILE, press UP or DN to choose the value (the selected one will blink on the screen), and adjust the value one by one via pressing L. – or + R. Lastly press UP and DN simultaneously after the values have been adjusted. Press UP or DN to select one of the hot key combinations you prefer, e.g. EXT_LEFT. Press the ENT key to confirm the setup of the hot key.



When accessing the hot key setting, just simultaneously press the EXT key and the corresponding key. In the above sample, just simultaneously press the EXT and L. – keys to directly get the AILE page and facilitate to adjust the parameters.

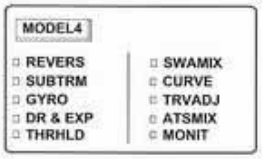
4.0 Function Set-up

Switch on the transmitter power. Press and hold the EXT key firstly, and then press the ENT key to access the Function Menu.



4.1 MODEL

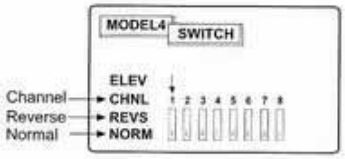
Press the UP or DN key to select MODEL, and access by pressing the ENT key.



4.1.1 REVERSE

Press the UP or DN key to select the REVERS, and press the ENT key to enter.

The REVERSE switch is an electronic means of reversing the direction of a given servo. All eight channels of the WK-1001 offer reversible servo direction. This will facilitate setup during servo installation in your aircraft.

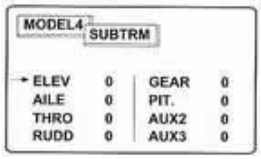


4.1.2 SUBTRM

In the Function Menu, press UP or DN to select the MODEL and access by pressing the ENT key. Then press UP or DN to select SUBTRM.

The SUBTRM allows you to digitally fine tune the centering of your servos. All the eight channels can be individually adjusted with a range of 250. You are recommended to set up the servo center via adjusting the bell crank's angle.

Note: excessive usage of the sub-trim adjustment will overrun your servo's maximum travel.



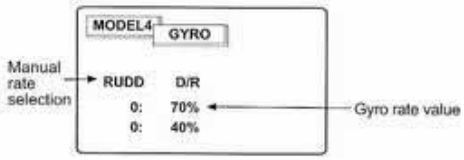
4.1.3 GYRO

In the Function Menu, press UP or DN to select the MODEL and access by pressing the ENT key. Then press UP or DN to select GYRO.

The WK-1001 offers you with two conversion modes of the gyro rate: manual and automatic. Manual conversion mode: to control gyro sensitivity via adjusting rudder dual rate. Automatic conversion mode: to adjust gyro sensitivity by automatically switching flight mode switch.

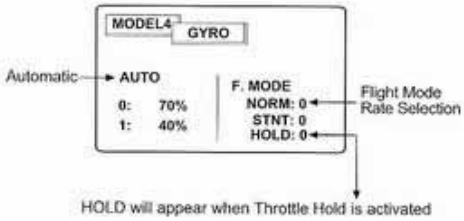
4.1.3.1 Manual Gyro Sensitivity Adjustment

Manual Gyro Sensitivity Adjustment allows the pilot to select from two different gyro sensitivities during all flight conditions (RUDD D/R will appear on the WK-1001). Position 0 is suitable for static flight, and its sensitivity is approximately 70%. Position 1 is suitable for altitude flight, and the sensitivity is approximately 40% (**Note:** the factory settings for the Position 0 and 1 are 50% individually).



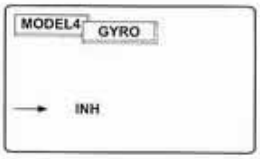
4.1.3.2 Automatic Gyro Sensitivity Adjustment

The Automatic Gyro Sensitivity Adjustment feature allows the pilot to automatically alter the sensitivity of the gyro from either two pre-determined settings through the use of the Flight Mode Switch. As different flight modes are selected (Normal, ST-1, ST-2, HOLD), the Gyro's sensitivity rate will switch to the pre-determined compensation rate for each particular flight mode in use.



4.1.3.3 Inhibit

Press UP or DN and move the cursor to AUTO or RUDD D/R mode. Press L. - or +. R to change the AUTO mode into the INH.



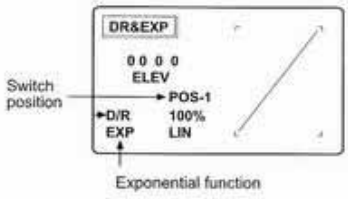
4.1.4 Dual Rate and Exponential

In the Function Menu, press UP or DN to select the MODEL and access by pressing the ENT key. Then press the UP or DN to select DR & EXP and then enter by pressing the ENT key.

Dual rates are available for the aileron, elevator, and rudder channels of your helicopter. The adjustable travel is ranged from 0 to 125%. Either the switch is at the position of 0 or 1, the factory setting, or default value, is 100%. Either switch position may be selected as the low or high rate by placing the switch in the desired position and adjusting the value accordingly. The exponential function (EXP) can be adjustable from 0% (LIN, Linear) to 100% in 1% increment. Exponential function only affects the sensitivity of the stick near the central location, but doesn't affect the travel amount. If the exponential function is set as positive value, the stick at the central location will be gentle.

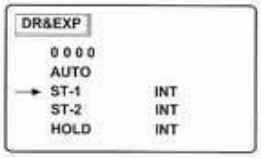
Dual Rate can be defined as the ability to alter the travel or throw

rate of a servo from a switch. Due to various travel rates, you will find the sensitivity of the stick will increase or decrease accordingly. When the dual rate is set high, the sensitivity will accordingly increase. Dual rate running in conjunction with the exponential function will help you more precisely tailor your control throws.



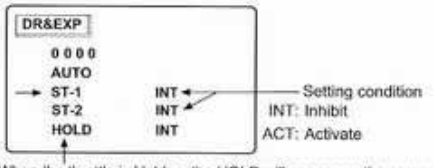
4.1.4.1 Automatic Dual Rate, Exponential Function

Move UP or DN to access the following graphics.



Given the Automatic Dual Rate function is activated (ACT). When switching the Flight Mode switch to ST-1, ST-2, or switching the Autorotation Landing to ON, the Dual Rates of the aileron, elevator and rudder should be switched to the Position 1. If the Automatic Dual Rate function is set as one flight mode, when you switch to the flight mode, the AUTO will appear on the D/R screen. Once the Automatic Dual Rate function is activated, the AUTO will appear on the DR/EXP screen.

Press UP or DN to move the cursor to the desired model, and press L – or + R to change the current status into ACT or IHN.



When the throttle is Holden, the HOLD will appear on the screen.

4.1.4.2 Rudder Automatic Dual Rate Setting

Typical dual rate setting is shown as below:

Positions of the dual rate: Position 0 (decreasing the servo travel for hovering flight); Position 1 (maximum servo travel for aerobatic flight).

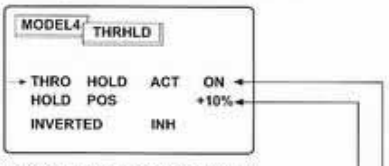
e.g.: the dual rate value at Position 0 is set as 80%, and the dual rate value at Position 1 is set as 100%.

4.1.5 Throttle Hold and Inverted Flight

In the Function Menu, press UP or DN to select the MODEL and access by pressing the ENT key. Then press the UP or DN key to select HLDINV and press the ENT key to enter.

4.1.5.1 Throttle Hold

The purpose of executing "THRHLD (Throttle Hold)" is to offer the pilot with Autorotation Landing protection. Switch THRHLD forward to ON and backward to OFF. The factory setting for the throttle hold is inhibited. It can be activated (ACT) by pressing L – or + R. Once the THRHLD is activated, HOLD Pos (Hold Position) will appear on the screen. That means the throttle is Holden at THIS position. The adjustable range is between – 20% and + 50%.



Adjustment Step

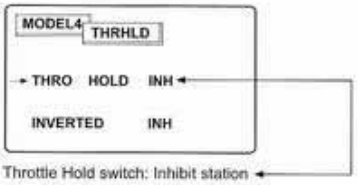
1). Start the engine, and leave your helicopter in the ground not to fly. Ensure the throttle stick is at the lowest position. The engine is running at idling speed and main rotor blade cannot rotate.

2). Switch the Autorotation Landing switch to ON position. If the flameout of the engine happens, please increase the value of HOLD Pos and repeat Step 1.

3). If the engine RPM at idling speed is too fast, please decrease the value of HOLD Pos.

4). The adjustment will be finished until no flameout happens and main rotor blades don't rotate.

5). If you want to cancel the Throttle Hold function, please alter ACT into INH.

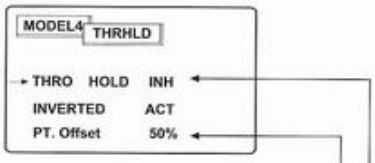


4.1.5.2 Inverted

When your helicopter is performing an inverted flight, the control directions of elevator, rudder and collective are exactly reversed to the normal flight. If you turn on the Inverted Switch, the WK-1001 will automatically reverse all the control directions of the elevator, rudder and collective, and make you fly your helicopter in a normal manner. The factory preset for the Inverted Switch is inhibited (INH). Inverted Switch can be activated (ACT) by pressing L – or + R.

4.1.5.2.1 Inverted Flight Offset Value

Compared with the Normal flight curve of main rotor pitch, the Inverted flight curve is reversed. If the main rotor pitch in normal flight is 6°, for example, the pitch in Inverted flight is - 6°. The Inverted Flight Offset Value is used to adjust the reflective point positions of the mirror reflection in collective pitch curve. The factory preset for the Inverted Flight Offset Value is 50%.



Inverted Flight Offset Value (0 – 125)

Inverted Switch is activated, and ON will appear in screen

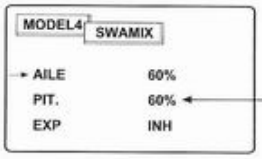
When switching the Inverted Flight switch, the Flight Mode switch should be in the Normal position. If you want to perform aerobatic maneuvers, we recommend you to adopt the ST-1 or ST-2 modes to set up the specific inverted flight pitch curve. Switching inverted flight mode doesn't put an effect on the throttle curve. **Note**: the priority of the Throttle Hold switch, when activated, is higher than that of the Inverted Flight and Flight Mode switches.

4.1.6 Switch Mixing

In the Function Menu, use UP or DN to select the MODEL and press the ENT key to access its submenu. And then move UP or DN to select SWAMIX and press the ENT key to access. **Note**: The function cannot be experienced unless 2 to 3 servos are previously selected in the SWASH in the Function Menu.

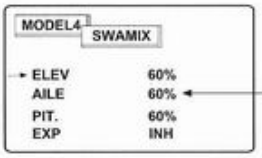
CCPM is a kind of pitch mixing type. Several servos connect to the swashplate and together drive the pitches. Three types of swashplate are available below:

1. **One servo (NORM):** It is the most popular type and is to use one servo to move the pitch. If 1 servo model is selected in the SWASH of the Function Menu, the SWAMIX will be forbidden to enter.
2. **2 Servos (180 degrees):** It uses two servos to move the swashplate to alter the pitch, spaced at 180 degrees.



The bigger the swash mixing value is, the bigger the movement is.

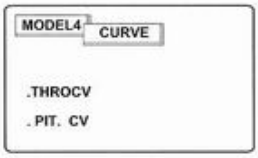
3. **3 servos:** This type employs three servos to move the swashplate, spaced at 120 degrees.



The bigger the swash mixing value is, the bigger the movement is.

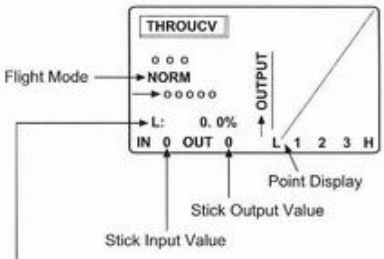
4.1.7 CURVE

In the Function Menu, press UP or DN to select the MODEL and access by pressing the ENT key. Then press UP or DN to select the CURVE and enter by pressing the ENT key.



4.1.7.1.0 Throttle Curve

Press UP or DN to select the THROCV



The WK-1001 offers three flight modes: N (Normal, suitable for hovering and static flight), ST-1 and ST-2 (ST-1 and ST-2 are suitable for altitude and aerobatic flights), respectively. Each flight mode is in possession of separate throttle curves with five adjustable points per curve: L (Low, the throttle stick is at the lowest position), Point 1, Point 2, Point 3, and H (High, the throttle stick is at the highest position). Press UP or DN to move the adjustable points, and press L – or + R to alter the setting value. The adjustable range is between 0 and 100%.

4.1.7.1.1 Throttle Trim Setting

The position of the Throttle Trim Setting is shown in the section of "1.2 Control Identification and Location" on page 2.

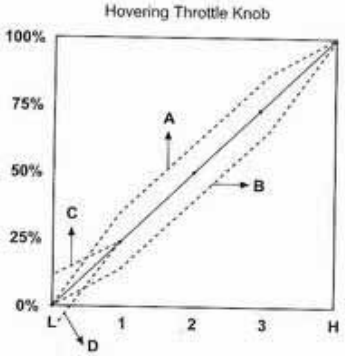
The function of the Throttle Trim is to adjust the engine at idling speed to reach stably running state. When adjusting, pull down the throttle stick to the lowest point, and then adjust the Throttle Trim and make the engine stably run at idling speed. The Throttle Trim lever is only active when the flight mode switch is in the normal position.

Using the Throttle Trim to adjust engine idling speed is not a good idea. The optimal manner is to keep the Throttle Trim lever at the neutral position and then to adjust the preset value of the throttle and make the engine running at stable idling speed.

4.1.7.1.2 Hovering Throttle Knob Setting

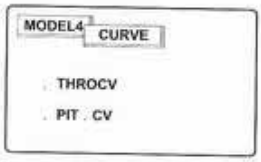
The position of the Hovering Throttle Knob Setting is shown in the section of "1.2 Control Identification and Location" on page 2.

Usage of the Hovering Throttle knob only changes the middle three points' values of the throttle curve and shifts the middle curve upward or downward. Operation of the hovering throttle knob does not cause any change to the low point and high point of the throttle curve. The Throttle Trim lever is only active when the flight mode switch is in the Normal position. When switching the Flight Mode to ST-1, ST-2, or Throttle Hold, the Hovering Throttle knob has no effect. The broken lines A&B in the following picture show the operating range affected by the Hovering Throttle Knob, and the broken lines C&D affected by the Throttle Trim.

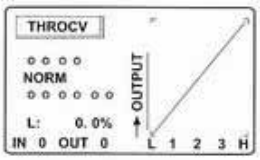


4.1.7.1.3 Exponential Throttle Curve Function

In the CURVE submenu, move UP or DN to select the THROCV and access via pressing the ENT key.



Press UP or DN until the current mode EXP OFF or EXP ON is appeared on the screen.



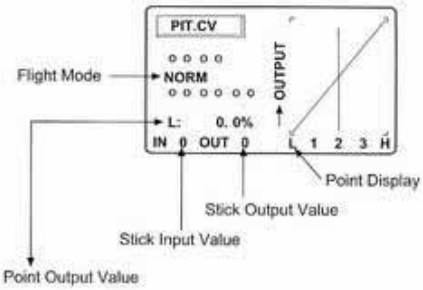
Then press L. - or +. R to change the EXP OFF into EXP ON.

The WK-1001 throttle curves are selectable to be either straight (LIN, Linear) or curved (EXP, Exponential). The characteristic of

4.1.7.2.0 Pitch Curve

In the Function Menu, press UP or DN to select the MODEL and access by pressing the ENT key. Then press UP or DN to select the CURVE and enter via pressing the ENT key. Press again UP or DN to select the PIT.CV and access by pressing the ENT key.

The method for setting Pitch Curve is very similar to the Throttle Curve. There are four flight modes: N (Normal), ST-1, ST-2, and THRO Hold (Throttle Hold). Every flight mode is in possession of separate pitch curve with 5 adjustable points: L (Low, the throttle stick is at the lowest position), Stunt 1, Stunt 2, Stunt 3, and H (High, the throttle stick is at the highest position). Use UP or DN keys to select Pitch Curve and access by pressing L- or + R. The adjustable range is from 0 to 100%. Note: when setting pitch curve for throttle hold, it is necessary for the throttle hold to be active. If the function is inhibited (INH), the throttle hold will be invisible on the screen.



4.1.7.2.1 Hovering Pitch Knob

Use of Hovering Pitch Knob only changes the three points' value of the pitch curve and shifts the middle curve upward or downward. Operation of the Hovering Pitch Knob doesn't cause any changes to the low point and high point of the Hovering Pitch Curve. Hovering Pitch Knob will be activated only when the flight mode is in Normal position. When switching the flight mode to ST-1, ST-2, or Throttle Hold, the hovering pitch knob will not put any effect.

4.1.7.2.2 Pitch Trim Knob

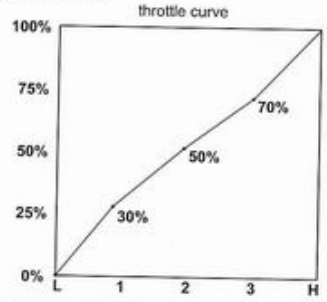
The position of the Pitch Trim Knob is shown in the section of "1.2 Control Identification and Location" on page 2.

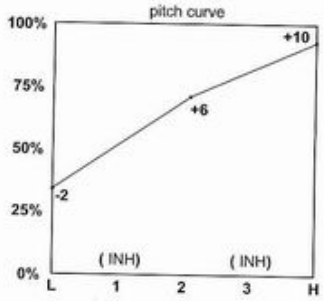
Usually, the Pitch Trim Knob should be set to 0 (neutral position). Turning the pitch trim knob right will shift the pitch curve upward (increase the pitch), and turning left will move downward (decrease the pitch). The purpose is to adjust the pitch of the main rotor. If the pitch curve is established properly, it is not necessary to adjust the knob.

4.1.7.3 Examples of the Throttle Curve and Pitch Curve

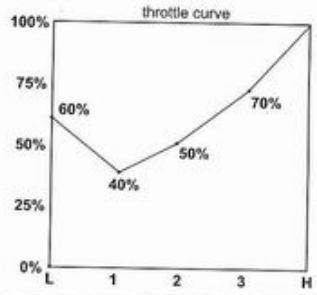
The examples of the throttle curve and pitch curve are just used for your reference. Adjustment to the actual flights is a must.

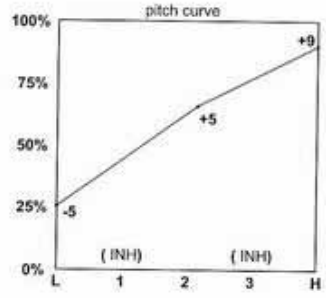
Flight Mode Normal



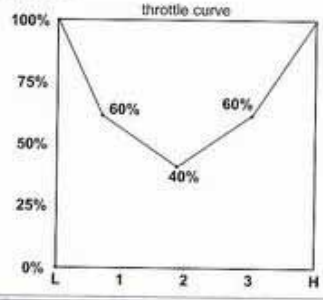


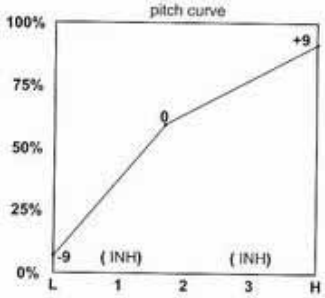
Flight Mode 1



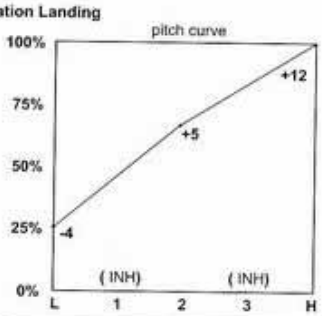


Flight Mode 2





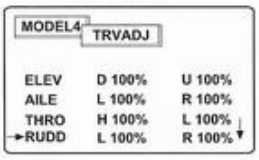
Autorotation Landing

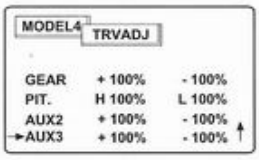


4.1.8 Travel Adjustment

In the MODEL menu, press UP or DN to select the TRVADJ and access by pressing the ENT key.

The purpose of the Travel Adjustment is to offer you precise servo control deflection. The range of the adjustable travel adjustment is from 0 – 150% (0°- 60°). It can be adjusted for the vertical and horizontal directions. All the factory settings are 100%. The settings for the travel adjustment occupy two pages of electronic paper. It can be turned by pressing UP or DN. When adjusting the travel value, please press UP or DN to select the position you desire, and press + R or L – to alter the setting value.





4.1.9.0 Revolution and Acceleration Mixing

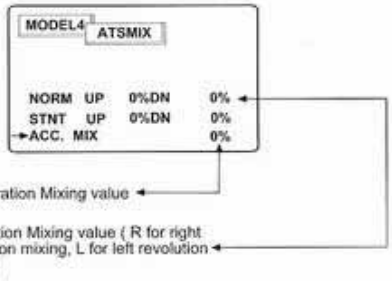
In the MODEL menu, press UP or DN to select the ATSMIX and access by pressing the ENT key.

The Revolution Mixing function mixes tail rotor input with the Throttle/ Collective function to counteract from the main rotor blades. If the function is set properly, the helicopter will not yaw during the process of ascent or descent. Because the changes of the main rotor RPM and the pitch will result in the torque change, the tail rotor pitch should be altered to compensate for the torque. There are two revolution mixing programs in the WK-1001: NORM and STNT. NORM is corresponding with the flight mode Normal, and STNT corresponding with the flight modes of ST-1 and ST-2. Each revolution mixing program offers with two adjustment points: UP and DN. UP is used for the tail rotor compensation for the throttle stick settings from middle to high. DN adjusts the tail rotor compensation for the throttle stick settings from middle to low. L and R show the direction of compensation.

4.1.9.1 Revolution Mixing Setup

The set-up manners below are used for the clockwise main rotor helicopter. The first step is to hover the helicopter in a neutral position with the tail rotor trim and revolution mixing at center. If the helicopter yaws, please adjust the length of the tail rotor ball linkage to a stable hover. Then gradually increase the throttle stick to make the helicopter vertically climb. If the helicopter (with the tail facing the pilot) yaws leftward, please increase the UP value. If the helicopter yaws rightward, please decrease the UP value. Repeat the step until the helicopter doesn't yaw. The second step is to hover the

helicopter at a safe altitude and pull down the throttle stick to the lowest position. During the descending process, if the helicopter yaws rightward, please increase the DN value. If the helicopter yaws leftward, please decrease the DN value. Repeat the step until the helicopter doesn't yaw. When attempting this procedure, throttle stick movement should be slow, and the initial acceleration and deceleration swings should be overlooked.



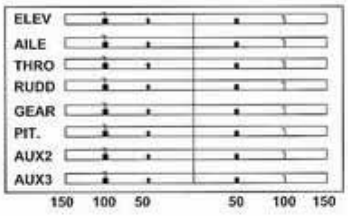
4.1.9.2 Acceleration Mixing

The WK-1001 offers the acceleration mixing function with compensations for the main rotor acceleration or deceleration torque. If quickly or slowly accelerating or decelerating the throttle, the torques from the main rotor is various. Under the help of gyro, the acceleration mixing setting is not necessary. Set the acceleration value at 0.

4.1.10 Servo Output Monitor

In the MODEL menu, press UP or DN to select the MONIT, and access by pressing the ENT key.

The WK-1001 offers the display function to show each servo's operating value. Each bar center displays the neutral position. Left or right dots indicate 50%, 100% and 150%.



5.0 WK-1001 Features

5.0 WK-1001 Features

Function menu of the WK-1001 is simple to understand and easy to set.

The transmitter case is ergonomically designed and the large LCD display is of elegant blue backlight with easy-to-read graphics.

Adjustable antenna angle facilitates to keep the relative stability of the signal receiving. Built-in antenna compartment can effectively protect the antenna from the damage during the storage and transportation. The control sticks provide adjustable tension and length.

The WK-1001 offers 3 flight modes. Each flight mode is capable of free setting and adjusting parameter in order to suit the various requirements for F3C or 3D aerobatic flights.

Eight model memory storage.

Capable of gyro rate adjustment by transmitter, and convenient to hover and fly 3D maneuver.

Adjustable four hot keys facilitate the pilot to enter the set menu.

5.2 Receiver RX 801

Thanks to the usage of twice frequency conversions, the RX-801 is of high sensitivity and anti-jamming function; due to use of the CPU (central processing unit), it is capable of changing the frequency by altering the crystal oscillator, and of ultra decoding action.

6.0 Transmitter Specifications

6.1 Transmitter Specifications:

Encoder	8-channel micro computer system
Modulation	PPM
Output Power	750Mw
Current drain	200mA
Power Source	12x8 NiCad (9.6V 600 mAh) or 1.5Vx8 ΛΛ dry batteries
Output Pulse	850 – 2050 Ms (1450 Neutral)

6.2 Receiver Specifications:

Type	8-Channel PPM/ FM
Sensitivity	0.5μV (minimal)
Selectivity	8KZ/50db
Weight	28g
Dimension	52X38X16mm
Receiver Length	1 m
Receiver Battery	4.8V1100mAh

6.3 Servo Specifications:

Type	WK-40-1
Torque	3.0Kg.cm
Speed	0.22sec/60°
Weight	43g
Dimension	41x2.0x35.5mm

7.0 Charger

Please fully charge the battery packs of the transmitter (if a rechargeable battery pack used) and the receiver before flight. The average charging time is about 12 hours. If the battery pack is brand new, the fully charging time for the first time will reach 15 hours. The WK-1001 original charger offers the transmitter battery pack with 50 - 100mAh current and the receiver battery pack with 120mAh current when charging. Ensure to use the proper charge rate before charging. **Note:** the central pin of the WK-1001 original charger's polarity is positive.

7.1 Charging Method:

Plug the charger into the electrical outlet of your local power and insert the input plug of the adapter into the output end of the charger. While inserting the round pin of the adapter into the charge jack of the transmitter, the TX LED indicator in the adapter will be red; while inserting the battery connector of the receiver in a correct direction into the flat pin of the adapter, the RX LED indicator of the transmitter will be red. During charging, maybe the charger and adapter become warm. This is a normal phenomenon. The voltage shown on the adapter is a little higher than the rated voltage of the battery pack in use. **Note:** When charging, the voltage of the electric supply must be accorded with the nominated voltage of the charger. Pay attention to the polarities when charging. Never use the after-market chargers other than WK-1001 originals to charge.

8.0 Control Stick Adjustment

The length and tension of the control stick are adjustable.

8.1 Control Stick Length Adjustment

To adjust the stick length, use the 1.5 mm Allen Wrench to unlock the set screw, and then turn the wrench clockwise or counterclockwise to adjust the stick length. After the stick length has been adjusted to suit your flying style, tighten the set screw.

8.2 Control Stick Tension Adjustment

Remove the RF module, battery pack and 7 back cover screws, and then remove the transmitter back case. Be careful not to damage or bend the RF module pins. Remove the PCB board (don't

touch or break the wires), and adjust each screw for the desired tension (**Note:** clockwise to tighten stick and counterclockwise to loose the stick).

9.0 Neck Strap Usage

There is a Hook on the face of the WK-1001 transmitter. The neck strap can be hooked on the eyelet. The Hook located at the center is helpful to getting the optimal balance of the transmitter.

10.0 Radio Frequency

The WK-1001 adopts a plug-in module system for transmitter frequency changes. There are two options to change the radio frequency:

1. To change the frequency points within the same frequency band such as changing the 72.810 into 72.790 or 72.870, the crystal oscillator of the transmitter and that of the receiver have to be simultaneously changed.

2. To change the frequency points in different frequency bands such as changing 72M into 35M or 40M, the RF module, and the matched receiver have to be simultaneously substituted. **Note:** don't use the transmitter to fly your aircraft if another model is on the same frequency as yours.

11.0 Installation Requirements

It is important to correctly mount your radio system in your mod Below are some advices on how to install your WALKERA equipment.

1. Installations of rubber grommets and copper sleeve to isolat the vibration are musts. The mounting screws cannot b over-tightened. Otherwise, the rubber grommets will b distorted and decrease the vibration absorption effect.

2. When mounting the servos, please make sure they can freel move over their whole travel ranges and ensure the contro linkages don't touch or impede the movement of the servo

3. Install various switches far away from the engine tuned pip and far away from the high vibration area, and ensure al the switches move freely over their whole ranges.

4. When mounting the receiver antenna, please make sure tha the main rotor and tail rotor blades or the propellers cannot entangle it.

5. Transmitter Battery Mounting: Please note the polarities when inserting the plugs.

WK-1001

Caution

- Any unauthorized adjustment on this product could result in a violation of part 95 of the FCC Rules, Please have a person certified as technically qualified to perform transmitter maintenance and repair duties in the private land mobile services and fixed services by an organization or committee representative of users of the services,
- Replacement of any transmitter component (crystal, semiconductor, etc) could result in a violation of part 95 of the FCC Rules. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.
- The antenna provided is a unique antenna. By installation of unauthorized antenna to this equipment, such unauthorized installation could void the user's authority to operate the equipment.
- A license may be required to operate this product in some countries. Consult about the license issue from the radiology department of the country.
- Changes or modifications to this unit not expressly approved by the party responsible for compliance will void the user's authority to operate the equipment. Any change to the equipment will void FCC grant.

Note

This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 95 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or TV which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
-Consult the dealer or an experienced radio/TV technician for help.