WK-0703

Users Manual

7-CH MULTIFUNCTIONAL TRANSMITTER
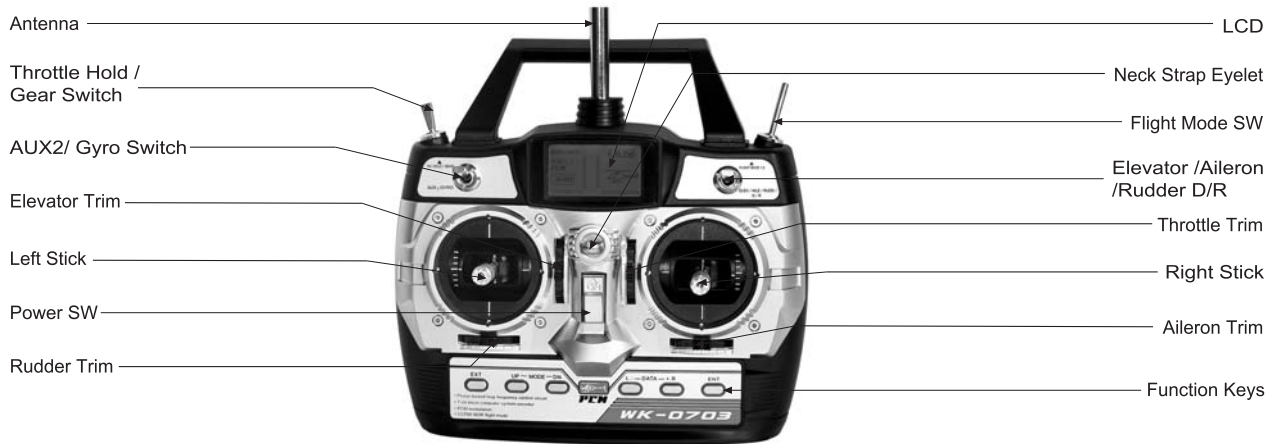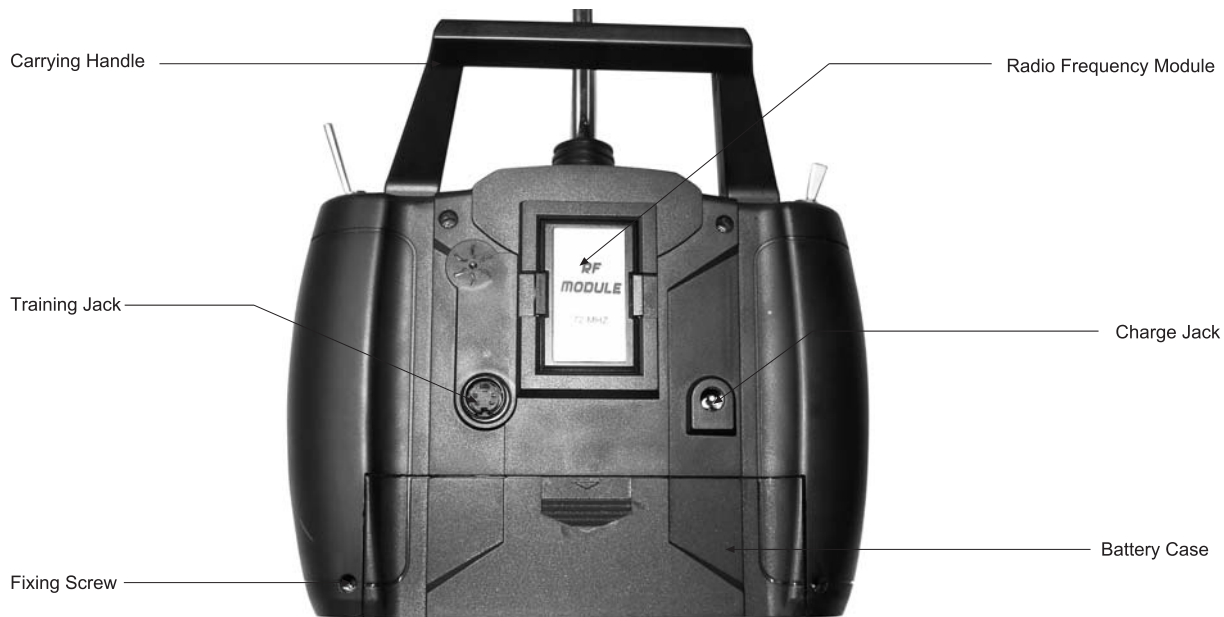
WK-0703

Contents

1.0 Foreword

Many hobbyists own many nice models, but are usually short of an elaborate transmitters. 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 setup, of course, is not exactly tailored for theirselves. The WK-0703 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

Antenna

Throttle Hold /
Gear Switch

AUX2/ Gyro Switch

Elevator Trim

Left Stick

Power SW

Rudder Trim

LCD

Neck Strap Eyelet

Flight Mode SW

Elevator /Aileron
/Rudder D/R

Throttle Trim

Right Stick

Aileron Trim

Function Keys

WK-0703

WK-0703

1.2 Backboard Identification

Carrying Handle

Radio Frequency Module

Training Jack

Charge Jack

Battery Case

Fixing Screw

1.3 Connections:

4.8V Battery

To Charge Cord

Power Switch

RX703 Receiver

Antenna

AUX2

AUX1

GEAR

Gear

RUDD

Rudder

THRO

Throttle

AILE

Aileron

ELEV

Elevator
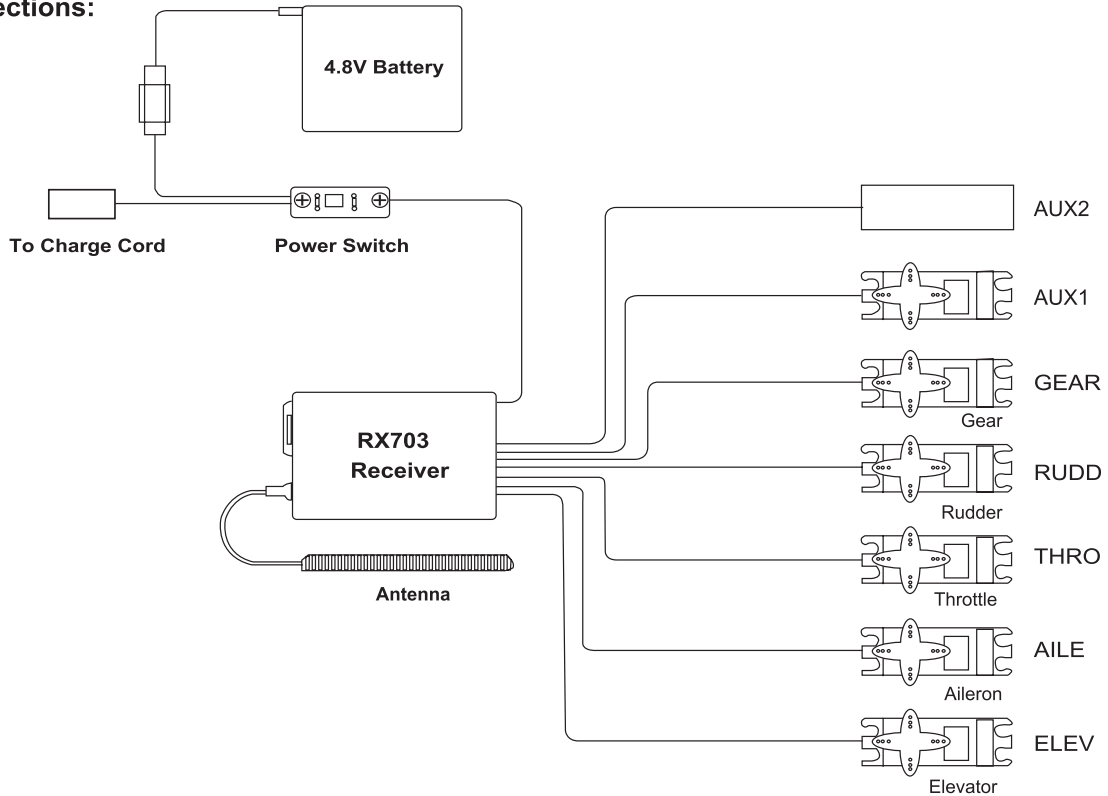
1.4 WK-0703 Input Key Function

EXT: Resetting key. Press the EXT and then press the ENT, you can enter or exit the main menu.

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.

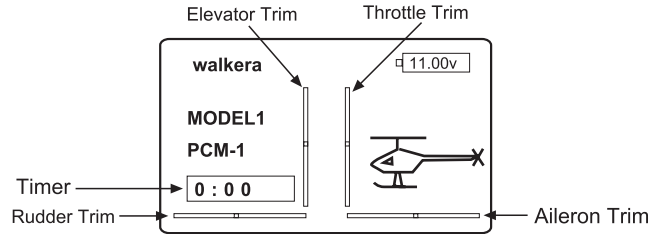**+R:** Move the cursor rightward to increase the setting value.

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	BATT	Battery

1.6 Home Screen

Here are the home screen and its descriptions.

Elevator Trim   Throttle Trim

walkera

MODEL1

PCM-1

11.00v

Timer

0 : 0 0

Rudder Trim   Aileron Trim

2.0 Function Menu Mode

The WK-0703 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 Chnmod: channel style.

There are six channels and two changed ways.

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 the settings of your current model to another memory within the same transmitter.

2.8 Alarm

ALARM: the WK-0703 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.
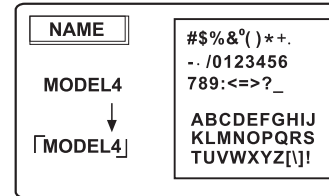
3.2 Model Selection

In the Function Menu, press UP or DN to select the MDLSEL and access by pressing the ENT key. The WK-0703 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 "*".

```
MDL SEL

MODEL1          MODEL6
MODEL2          MODEL7
MODEL3          MODEL8
MODEL4 *
MODEL5
```
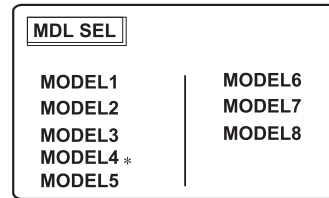
3.3 Name

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

```
NAME          #$%&°( )*+.
              -· /0123456
MODEL4        789:<=>?_

              ABCDEFGHIJ
⌈MODEL4⌋       KLMNOPQRS
              TUVWXYZ[\]!
```

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 Channel Type (CHNMOD)

First press the EXT and then press the ENT to enter the main Menu, Choose the CHNMOD after pressing the UP or DN, After pressed the ENT, then press UP or DN to move the cursor to choose the CHANNEL MODULAT, Press the ENT and then press UP or DN to move the cursor to choose the CHANNEL. Press L- or +R to choose the necessary frequency; Press the key of UP or DN move the cursor to choose the MODULAT, and then press the key of L. - or +R choose PPM or PCM; Press the key of ENT to save the changed datum.

CHNMOD

- CHANNEL
- ADDRESS

CHNMOD
FRQBAND   72M
CHANNEL   5 (72870Hz)
MODULAT   PCM
SETHAND   RIGHT

Frequency band

Frequency point

PPM or PCM mode

Left or Right hand throttle
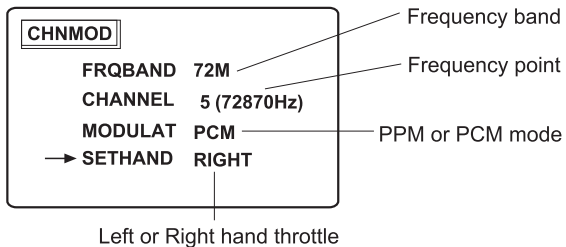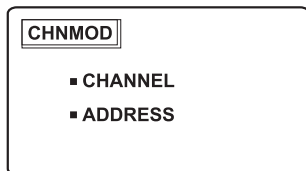
The trim way of WK-0703 shoot electric wave can choose PPM or PCM, but please you choose suitable trim way according to your using type of receiver, use PCM model when it is normal. Attention please, when you choose the new kind of model. You have to press the key of ENT to save; you can't turn off the power switch directly. Then close the power. Otherwise your operation will be failed to save.

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-0703 provides three modes 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.
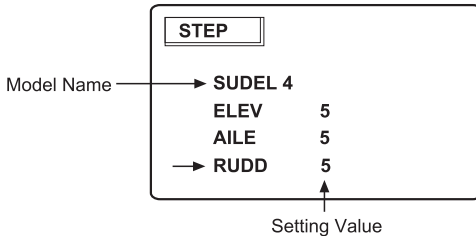
SWASH
SUDEL3   <1SERVO>
1SERVO   NORM
2SERVO   180°
3SERVO   120°
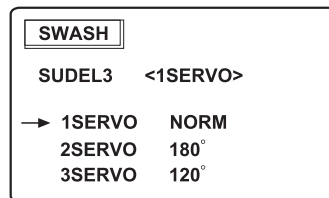
If 1 servo (NORM) is selected, it doesn't enter the swashplate mixing setting on the function mode.

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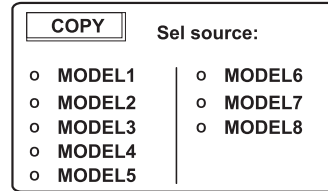
The trim step setting is ranged from 1 to 10. Press the UP or DN key to select the subject, and press L – or + R to modify the value.

```
  ┌─────────┐
  │  STEP   │
  └─────────┘
Model Name ──►  SUDEL 4
                ELEV      5
                AILE      5
            ──► RUDD      5
```
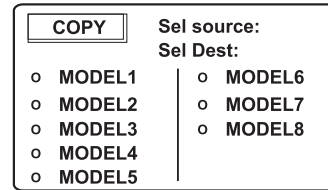
Setting Value

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.
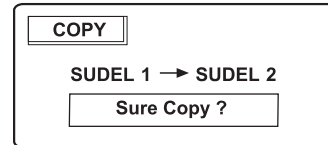
The WK-0703 offers the function with copying all the settings of your present model to another model within the same transmitter. It facilitates to set up one aircraft into several ways. The picture below shows the manner of copying model 1 to model 2. Press ENT key and access the COPY key, and press UP or DN to select the model 1 you want to copy.

```
┌──────────────────────────────┐
│ ┌────────┐    Sel source:     │
│ │  COPY  │                    │
│ └────────┘                    │
│  o  MODEL1      o  MODEL6      │
│  o  MODEL2      o  MODEL7      │
│  o  MODEL3      o  MODEL8      │
│  o  MODEL4                     │
│  o  MODEL5                     │
└──────────────────────────────┘
```

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

```
┌──────────────────────────────┐
│ ┌────────┐    Sel source:     │
│ │  COPY  │    Sel Dest:       │
│ └────────┘                    │
│  o  MODEL1      o  MODEL6      │
│  o  MODEL2      o  MODEL7      │
│  o  MODEL3      o  MODEL8      │
│  o  MODEL4                     │
│  o  MODEL5                     │
└──────────────────────────────┘
```

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.

```
┌──────────────────────────────┐
│ ┌────────┐                    │
│ │  COPY  │                    │
│ └────────┘                    │
│     SUDEL 1  ──►  SUDEL 2     │
│     ┌────────────────┐        │
│     │  Sure Copy ?   │        │
│     └────────────────┘        │
└──────────────────────────────┘
```

3.8 Alarm Setting

In the Function Menu, press UP or DN to select the ALARM and access by inputting the ENT key.
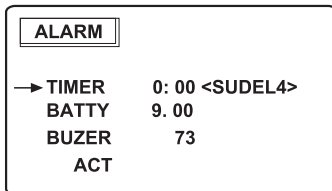
The WK-0703 offers the settings of the timer, battery low voltage and alarm tone.
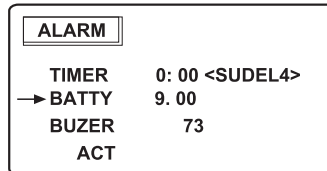
3.8.1 Timer

The WK-0703 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).

```
┌──────────────────────────────┐
│  ┌─────────┐                  │
│  │ ALARM   │                  │
│  └─────────┘                  │
│                               │
│→ TIMER      0: 00 <SUDEL4>    │
│    BATTY     9. 00            │
│    BUZER        73            │
│       ACT                     │
└──────────────────────────────┘
```
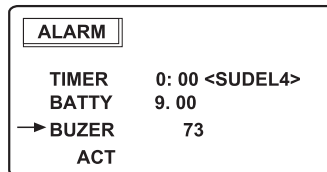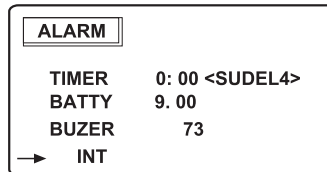
3.8.2 Battery Low Voltage Alarm

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.

```
┌──────────────────────────────┐
│  ┌─────────┐                  │
│  │ ALARM   │                  │
│  └─────────┘                  │
│    TIMER      0: 00 <SUDEL4>  │
│→ BATTY     9. 00              │
│    BUZER        73            │
│       ACT                     │
└──────────────────────────────┘
```

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.
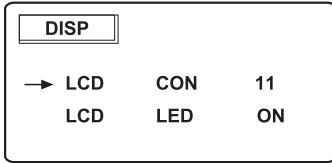
```
┌──────────────────────────────┐
│  ┌─────────┐                  │
│  │ ALARM   │                  │
│  └─────────┘                  │
│    TIMER      0: 00 <SUDEL4>  │
│    BATTY     9. 00            │
│→ BUZER        73              │
│       ACT                     │
└──────────────────────────────┘
```

The WK-0703 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.

```
┌──────────────────────────────┐
│  ┌─────────┐                  │
│  │ ALARM   │                  │
│  └─────────┘                  │
│    TIMER      0: 00 <SUDEL4>  │
│    BATTY     9. 00            │
│    BUZER        73            │
│→   INT                        │
└──────────────────────────────┘
```

3.9 Display

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

```
 DISP

  LCD      CON      11
  LCD      LED      ON
```
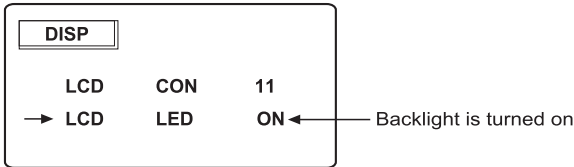
3.9.1 LCD Contrast

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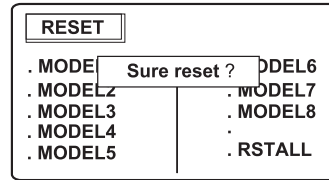
3.9.2 Backlight Adjustment

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.

```
 DISP

  LCD      CON      11
  LCD      LED      ON ←――― Backlight is turned on
```

3.10 Display

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

The WK-0703 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.

```
 RESET

  . MODE          ODEL6
  . MODEL2   Sure reset ?   . MODEL7
  . MODEL3          . MODEL8
  . MODEL4          .
  . MODEL5          . RSTALL
```

3.11 Hot-key setting

The WK-0703 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.

```
   ┌─────────────────┐
   │    Hot ── Keys  │
   │                 │
   │  . EXT ── UPER  │
   │  . EXT ── DOWN  │
   │  . EXT ── LEFT  │
   │  . EXT ── RIGHT │
   └─────────────────┘
```

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 Setup

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

```
   ┌──────────────────────────────┐
   │       ┌──────────┐           │
   │       │Func. Menu│           │
   │       └──────────┘           │
   │  □ MODEL        □ STEP       │
   │  □ MDLSEL       □ COPY       │
   │  □ NAME         □ ALARM      │
   │  □ TYPSEL       □ DISP       │
   │  □ SWASH        □ RESET      │
   └──────────────────────────────┘
```

4.1.0 Model

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

```
   ┌──────────────────────────────┐
   │ ┌────────┐                   │
   │ │MODEL4  │                   │
   │ └────────┘                   │
   │ □ REVERS       □ SWAMIX      │
   │ □ SUBTRM       □ CURVE       │
   │ □ GYRO         □ TRVADJ      │
   │ □ DR & EXP     □ ATSMIX      │
   │ □ THRHLD       □ MONIT       │
   └──────────────────────────────┘
```

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 seven channels of the WK-0703 offer reversible servo direction. This will facilitate setup during servo installation in your aircraft.

```
   ┌──────────────────────────────────────┐
   │ ┌────────┐ ┌────────┐                │
   │ │MODEL4  │ │ SWITCH │                │
   │ └────────┘ └────────┘                │
   │            ELEV                       │
   │ channel ──▶ CHNL  1  2  3  4  5  6  7  8 │
   │ reverse ──▶ REVS                      │
   │ normal  ──▶ NORM  □ □ □ □ □ □ □ □      │
   └──────────────────────────────────────┘
```
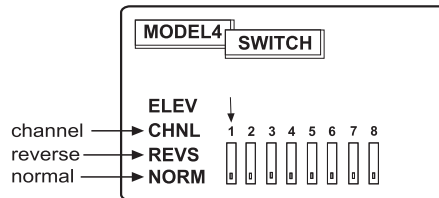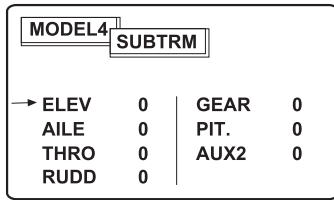
4.1.2 Subtrm

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 seven 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.

```
MODEL4
      SUBTRM

→ ELEV    0    GEAR    0
  AILE    0    PIT.    0
  THRO    0    AUX2    0
  RUDD    0
```
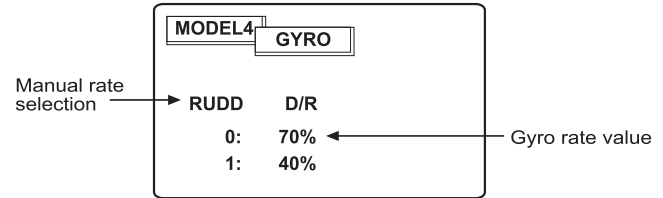
4.1.3 Gyro

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-0703 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.
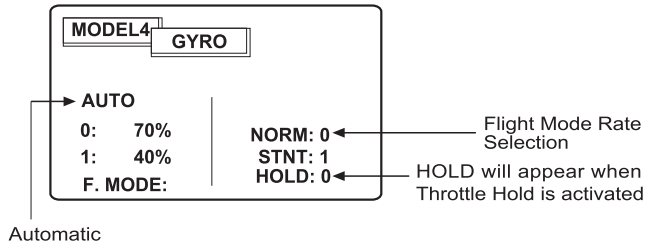
4.1.3.1 Manual Gyro Sensitivity Adjustment

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-0703). 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).

Manual rate selection
```
MODEL4
      GYRO

→ RUDD      D/R

    0:    70%          Gyro rate value
    1:    40%
```

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.

MODEL4 GYRO

AUTO
  0:    70%
  1:    40%
  F. MODE:

NORM: 0 ◄—— Flight Mode Rate Selection
STNT: 1
HOLD: 0 ◄—— HOLD will appear when Throttle Hold is activated

Automatic

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.

MODEL4 GYRO

    INH
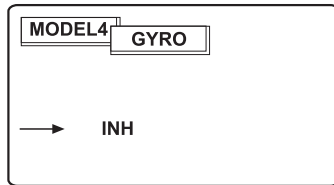
4.1.4 Dual Rate and Exponential

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.

DR&EXP

  0 0 0 0
    ELEV
              POS-1
  D/R   100%
  EXP   LIN

OUTPUT

Switch position ——►
Exponential function