

# AVIONIX

## AV-TH9B

instruction manual



<http://www.rcavionix.com>

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## **1. Introduction**

Thank you for purchasing the **AVIONIX** digital proportional remot control system. If this is your first computer radio, rest assured that it is designed to make initial setup and field-tuning of your more accurate than would be if using a non-computer radio. Although this is a beginner or sport system with the requirements of those flyers in mind, in order to make the best use of your **AVIONIX AV-TH9B** and to operate it safely, you must carefully read all of the instructions.

**Suggestion:** If, while reading the instructions, you are unclear of some of the procedures or functions and become stuck, continue to read on anyway. Often, the function or procedure will be explained again later in a different way providing another perspective from which to understand it. Another suggestion is to connect the battery, switch and servos to the receiver and actually operate the radio of your workbench as you make programming changes. Then, you'll be able to see the effects of your programming inputs.

## **2. Service**

If any difficulties are encountered while setting up or operating your system, please consult the instruction manual first. For further assistance you may also refer to your hobby dealer, or contact the **AVIONIX** Service Center at the web site.

**<http://www.rcavionix.com>**

## 3. Meaning of special markings

Pay special attention to safety where indicated by the following marks:



**DANGER**—Procedures which may lead to dangerous conditions and cause death/serious injury if not carried out properly.



**WARNING**—Procedures which may lead to a dangerous condition or cause death or serious injury to the user if not carried out properly, or procedures where the probability of superficial injury or physical damage is high.



**CAUTION**—procedures where the possibility of serious injury to the user is small, but there is a danger of injury, or physical damage, if not carried out properly.



=Prohibited



=Mandatory

**Warning:** Always keep electrical components away from small children.

## FLYING SAFETY

To ensure the safety of yourself and others, please observe the following precautions:



Have regular maintenance performed. Although our AV-TH9B protects the model memories with non-volatile EEPROM memory (which does not require periodic replacement) and not a battery, it still should have regular checkups for wear and tear. We recommend sending your system to the **AVIONIX** Service Center annually during your non-flying-season for a complete checkup and service.

### Ni-Cd Battery



Charge the batteries! (See Charging the Ni-Cd batteries, p. 9, for details.) Always recharge the transmitter and receiver batteries for at least 8 hours before each flying session. A low battery will soon die, causing loss of control and a crash. When you begin your flying session, reset your AV-TH9B built-in timer, and during the session pay attention to the duration of usage.



Stop flying long before your batteries become low on charge. Do not rely on your radio's low battery warning systems, intended only as a precaution, to tell you when to recharge. Always check your transmitter and receiver batteries prior to each flight.



Always pay particular attention to the flying field's rules, as well as the presence and location of spectators, the wind direction, and any obstacles on the field. Be very careful flying in areas near power lines, tall buildings, or communication facilities as there may be radio interference in their vicinity.

If you must fly away from a club field, be sure there are no other modelers flying within a three-to-five-mile range, or you may lose control of your aircraft or cause someone else to lose control.

### At the flying field



Before flying, be sure that the frequency you intend to fly with is not in use, and secure any frequency control device (pin, tag, etc.) for that frequency before turning on your transmitter. It is never possible to fly two or more models on the same frequency at the same time. Even though there are different types of modulation (AM, FM, PCM) only one model may be flown on a single frequency at any one time.



To prevent possible damage to your radio gear, turn the power switches on and off in the proper sequence:

1. Pull throttle stick to idle position, or otherwise disarm your motor/engine.
2. Turn on the transmitter power and allow your transmitter to reach its home screen
3. Confirm the proper model memory has been selected
4. Fully extend the transmitter antenna
5. Turn on your receiver power



**6. Test all controls** If a servo operates abnormally, don't attempt to fly until you determine the cause of the problem (For PCM systems only: Test to ensure that the FailSafe settings are correct by waiting at least 2 minutes after adjusting then, turning the transmitter off and confirming the proper surface/throttle movements, Turn the transmitter back on. )

**7. Start your engine**

**8. Complete a full range check** (see p.9)

**9. After flying, bring your throttle stick to idle position, engage any kill switches or otherwise disarm your motor/engine**

**10. Turn off receiver power.**

**11. Turn off transmitter power**

**If you do not turn on your system in this order, you may damage your servos or control surfaces, flood your engine, or in the case of electric-powered or gasoline-powered models, the engine may unexpectedly turn on and cause a severe injury**



**While you are getting ready to fly, if you place your transmitter on the ground, be sure that the wind won't tip it over. If it is knocked over, the throttle stick may be accidentally moved, causing the engine to speed up. Also, damage to your transmitter may occur**



**Before taxiing, be sure to extend the transmitter antenna to its full length .**

**A collapsed antenna will reduce your flying range and cause a loss of control. It is a good idea to avoid pointing the transmitter antenna directly at the model, since the signal is weakest in that direction**



**Don't fly in the rain! Water or moisture may enter the transmitter through the antenna or stick openings and cause erratic operation or loss of control. If you must fly in wet weather during a contest, be sure to cover your transmitter with a plastic bag or waterproof barrier. Never fly if lightning is expected**

### Transmitter controls



**MENU:** The function of the main menu for button

**EXIT:** Withdraw from the button

**UP:** The menu is chosen upwards

**DOWN:** The menu is chosen downwards

**+: Increase the value of the parameter**

**-: Reduce the value of the parameter**

#### NOTE:

**Press for short and long**

**1. Press long: Lasting button is more than 2 seconds**

**2. Press short: The lasting button does not exceed one second**



Carrying Handle

## CAUTION

① To remove, press the tabs together and gently pull rearwards. To install, Line up the connector pins with the socket in the rear of the module and gently snap into position.

RF module

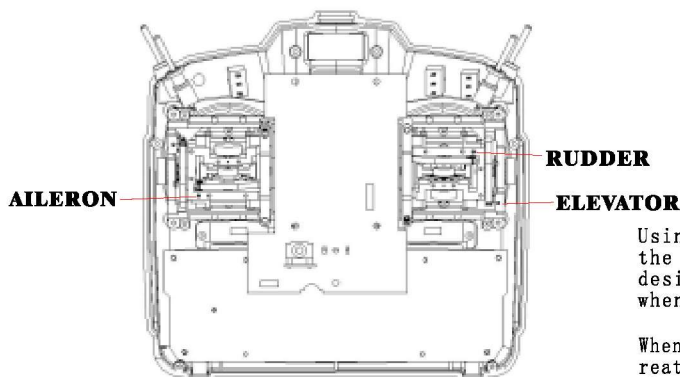
Trainer function /DSC function connector

Battery cover

**NOTE:** If you need to remove or replace the transmitter battery, do not pull on its wires to remove it. Instead, gently pull on the connector's plastic housing where it plugs into the transmitter.

## Stick lever tension adjustment:

You may change the length of the control sticks to make your transmitter more comfortable to hold and operate. To lengthen or shorten your transmitter's sticks, first unlock the stick tip by holding locking screw B and turning stick tip A counterclockwise. Next, move the locking screw B up or down (to lengthen or shorten). When the length feels comfortable, lock the position by turning locking screw B counterclockwise.



Mode 1 transmitter with rear cover removed.

You may adjust the tension of your sticks to provide the feel that you prefer for flying. To adjust your springs, you'll have to remove the rear case of the transmitter. First, using a screwdriver, remove the six screws that hold the transmitter's rear cover in position, and put them in a safe place. Gently ease off the transmitter's rear cover. Now you'll see the view shown in the figure above.

Using a small phillips screwdriver, rotate the adjusting screw for each stick for the desired spring tension. The tension increases when the adjusting screw is turned clockwise.

When you are satisfied with the spring tensions, reattach the transmitter's rear cover. Check that the upper PCB is on its locating pins, reinstall the rear cover and tighten the six screws.

## 5. Radio installation

Follow these guidelines to properly mount the servos, receiver and battery

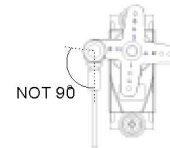
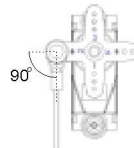
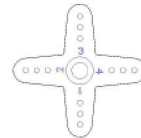
Make certain the alignment tab on the battery, switch and servo connectors is oriented correctly and "key" into the corresponding notch in the receiver or connectors before plugging them in. When unplugging connectors, never pull on the wires. Always pull on the plastic connector instead

If any servo wires are not long enough to reach the receiver, servo extension wires (available separately) may be used.

Always mount the servos with the supplied rubber grommets. Do not over tighten the screws. No part of the servo casing should contact the mounting rails, servo tray or any other part of the airplane structure. Otherwise, vibration will be transmitted to the servo causing premature wear and/or servo failure

Note the small numbers (1, 2, 3, 4) molded into each arm on the Futaba 4-arm servo arms. The numbers indicate how many degrees each arm is "off" from 90 degrees to correct for minute manufacturing deviations from servo to servo

To center the servos, connect them to the receiver and turn on the transmitter and receiver. Center the trims on the transmitter, then find the arm that will be perpendicular to the pushrod when placed on the servo



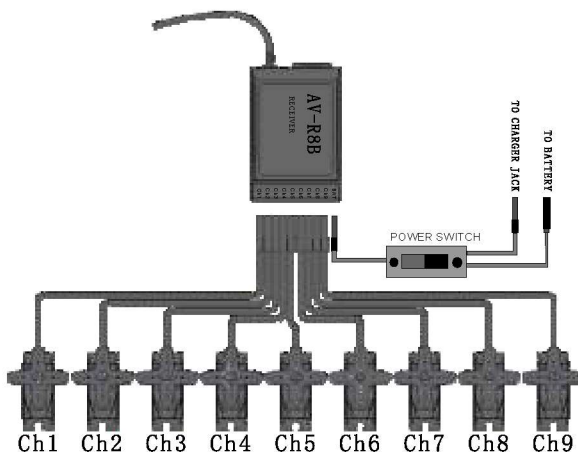
After the servos are installed operate each servo over its full travel and check that the pushrods and servo arms do not bind or contact each other. Also make sure the controls do not require excess force to operate. If there is an objectionable buzzing sound coming from a servo there is probably too much resistance in the control. Find and correct the problem. Even if there is no servo damage excess battery drain will result

Use the mounting plate from the receiver on/off switch as a template for the cutout and screw holes. Mount the switch on the side of the fuselage opposite the engine exhaust, and where it won't be inadvertently turned on or off during handling or storage. Be certain the switch moves without restriction and "snaps" from ON to OFF, and that the cutout allows full motion of the switch in both directions

**IMPORTANT:** NEVER cut the receiver antenna or mount it in the model folded back on itself. Doing so will change its electrical length, possibly reducing the distance from the model can be controlled ("range").

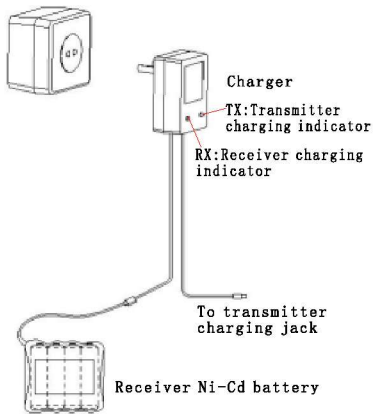
The receiver antenna may be mounted inside or outside the model

### 5.1 Receiver and servo connections





## 5.2 Charging the Ni-Cd batteries



The transmitter and receiver batteries included with you **AV-TH9B** system are rechargeable, Ni-Cd batteries. Ni-Cd batteries require special care and charging.

**NOTE:** The batteries are partially charged, but will require a full, overnight charge before the model may be flown.

1. Connect the transmitter charging cord coming from the A/C wall charger to the charge jack in the right side of the transmitter case. The receiver charging cord may be connected to the batteries two different ways: The charge cord may be connected directly to the battery pack, or to the vacant charge connector (lack) coming from the on/off switch in the model. Charging "through the switch" is preferred as there will be no need disconnect the battery.

2. Plug the A/C wall charger into a wall outlet. Note: If the wall outlet can be turned off by a switch in the room, be certain the switch remains on after leaving the room. Otherwise, the batteries will not be charged!

3. The LEDs (light-emitting diodes) should light red, indicating that current is flowing and the batteries are being charged. Discharged batteries will take about 15 hours to fully charge. If using an aftermarket fast charger, be certain to follow the manufacturer's instructions provided with the charger so you do not overcharge the batteries. NEVER charge the batteries at a rate higher than 1000mA. The batteries should also be discharged periodically to prevent a condition called "memory". If, for example, only two flights are made each time you go flying, the batteries will not have "reached" very far down into their full capacity. After doing this several times the batteries will "remember" and eventually "think" they can supply only enough power for two flights. After two flights the batteries may not provide enough power to operate the system, thus causing a crash. To erase any potential memory, cycle the batteries by discharging, then charging them with a commercial battery cycler, or leave the system on and exercise the servos by moving the transmitter sticks until the even during the winter or periods of long storage. If using a cycler with a readout, note the capacity after the batteries have been cycled. If there is a noticeable drop in capacity the batteries should be replaced.

**NOTE:** charging your batteries with the included **AVIONIX** A/C battery charger is always safe. However, fast-charging with an aftermarket charger is acceptable as long as you know how to properly operate the charger, NEVER charge at a rate higher than 1000mA. If not done correctly, fast-charging can damage the batteries.

## 5.3 Range Testing Your R/C System

Please note that different systems demonstrate different range checks and the same system will range check differently in different conditions. Also, the receiver antenna's installation affects the range test--extending the top of the model is ideal. This is a brief explanation of range test. For more in-depth specifics on receiver antenna mounting, additional checks if unsatisfactory range is demonstrated, range checking with gasoline powered engines, etc, please see our F.A.Q. page at [www.flyskychina.com](http://www.flyskychina.com).

. Leave the transmitter's antenna retracted and be sure both batteries are fully charged.

. Position the aircraft away from wires, other transmitters, etc.

Test one-engine/motor off, minimum of 100 ft. range:

. Have a friend view the model but not hold it, engine off. (People conduct signals, too!)

. Walk away from the model, working all controls constantly. Stop when the servos jitter significantly (a jitter here and there is normal), control movement stops (PCM), or you lose control altogether.

. Measure the distance. If greater than 100 feet, great! Proceed to Test 2. Less than 100 feet of range check means you need more information to determine if your system is safe to fly. Please see our web site or call support for additional tests to perform before flying your system.

. Repeat with friend holding the model. Note any differences.

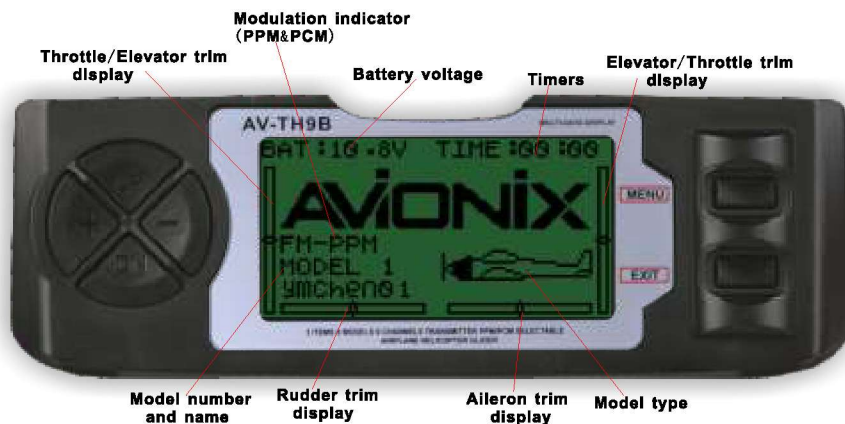


Test two-engine/motor on:

.Repeat the test with the model's engine running and with someone holding the model. If a decrease of more than 10% is noted, research and resolve the cause of interference prior to flying your model.

## 6. Multi LCD and Programming controls

## 6.1 DISPLAY



Battery voltage: Battery voltage display (If after the voltage of the battery is lower than 8.5V, Buzzer sends the suggestion sound through 5S once).

Modulation indicator: pulse position modulation & pulse code modulation select.

Model number and name: User's parameter serial number showing (8 groups can choose at most).

Rudder trim display: Rudder trim

Aileron trim display: Aileron trim

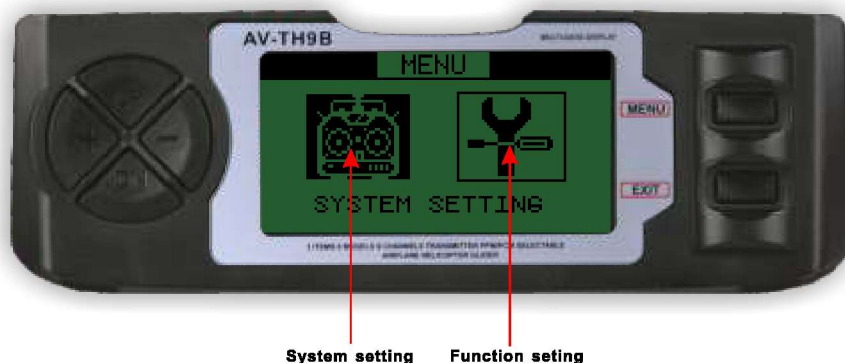
Elevator/Throttle trim display: Elevator/Throttle trim

Throttle/Elevator trim display: Throttle/Elevator trim

Timers: Competition count-down (99 minutes and 59 seconds for a long time most).

Model type: Ailplane Helicopter Glider select.

## 6.2 Main menu



**Under the state of the initial picture, press MENU key for long, access the main menu.**

System setting: Establish the initializing of the system.

**Function setting:** The function parameter of the mode type is established.

Press the **UP** or **DOWN** key to select the MENU screen.

Press the **MENU** key into next menu.

Press the **EXIT** key to return last menu

**NOTE:**

The menu acts once and BUZZER sends a sound.

If the parameter transfers after the maximum in the menu, continuing pressing the button, BUZZER will not be pronounced.

## 7 SYSTEM SETTING

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key for short and choose SYSTEM SETTING menu, press MENU key for short into next submenu.



Press the UP or DOWN key to select the SYSTEM SETTING screen.



Press MENU key for short into next submenu.



Press EXIT Key return last menu.



### SYSTEM SETTING:

**MODEL SEL:** This function selects which of the 8 model memories in the transmitter to set up or fly.

**MODEL NAME:** User name edit

**TYPE SELE:** Model type selects.

**MODEUAT:** PPM&PCM selects.

**STICK SET:** Stick model-4 selects

**COPY:** Model copy

Press the **UP** or **DOWN** key to select the SYSTEM SETTING screen.

Press the **MENU** key into next menu.

Press the **EXIT** key to return last menu.

### 7.1 MODEL SELE

### SYSTEM SETTING

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key select the SYSTEM SETTING menus, and press MENU key for short into next submenu.



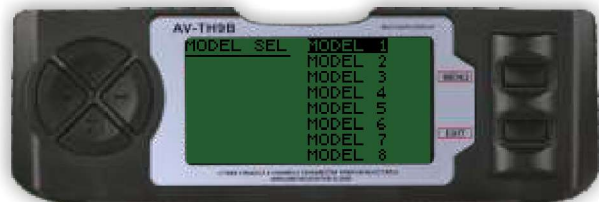
Press UP/DOWN key choose MODEL SELE menu, press MENU key for short into next submenu.



Press the UP or DOWN key to select the MODULAT screen.



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return last menu.



### MODEL SELECT:

This function selects which of the 8 model memories in the transmitter to set up or fly. For clarity the model's name and an image or its type are indicated after its number. (Each model memory may be of a different model type from the other memories.)

Press the **UP** or **DOWN** key to select the MODEL SEL screen.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and re-turn last menu.

## 7. 2NAME EDIT

## SYSTEM SETTING

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the SYSTEM SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key to select the NAMEEDIT menu, and press MENU key for short into next submenu.

Press the UP or DOWN key to move the cursor to the desired character's position.

Press the "+" or "-" key to select the desired character. Press the MENU key for long time enter.

Press MENU key for short to keep result and return last menu.  
press EXIT key for short to not keep and return to last menu.



### NAME EDIT:

The Model Name function is used to input and assign the model's name to a specific memory, allowing easy identification of each model's program. Each model's name is displayed on the main screen when that model is selected. Up to eight characters that include numbers and letters are available.

Press the **UP** or **DOWN** key to move the cursor to the desired character's position.

Press the "+" or "-" key to select the desired character.

Press the **MENU** key for long time enter.

Press the **MENU** key save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 7. 3TYPE SELE

## SYSTEM SETTING

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the SYSTEM SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key to select the TYPE menu, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the TYPE screen.

Press MENU key for short to keep result and return last menu.  
press EXIT key for short to not keep and return to last menu.



### TYPE:

Sets the type of programming used for this model.

Press the **UP** or **DOWN** key to select the TYPE screen.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

### NOTE:

Because ACRO and GLID have a kind of choice only, so, press the menu key to save and return last menu.

If choose helicopter mode, short to press MENU key enter down the first class menu, choose different connection methods of five kinds of the server, u.i..

## 7.3.0 HELI TYPE SELECT

## SYSTEM SETTING

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the SYSTEM SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key to select the TYPE menu, and press MENU key for short into next submenu.

Press UP/DOWN key for short and select HELI menu, and press MENU key for short into next menu.

Press the UP or DOWN key to select the HELI screen.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### HELI:

The AV-TH9B super radios support 5 basic swashplate setups, including "single servo" (SW1-most helicopters use this type) and 4 types of CCPM (cyclic and collective pitch mixing).

Press the **UP** or **DOWN** key to select the TYPE screen.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and re-return last menu.

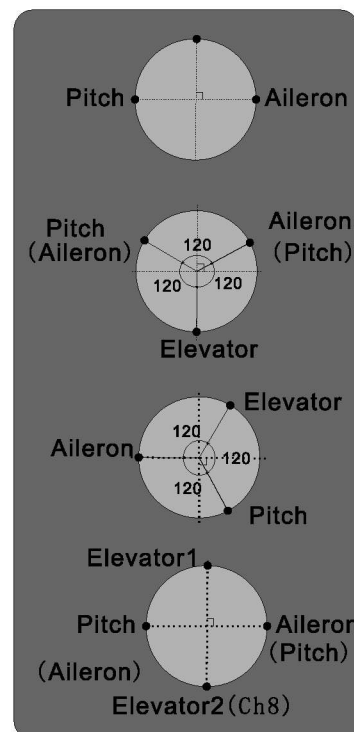
**HELI1:** Independent aileron, pitch and elevator servos linked to swashplate. Most kits are HELI1 type.

**HELI2:** Pushrods positioned as shown. Elevator operates with a mechanical linkage. With Aileron inputs, the aileron and pitch servos tilt the swashplate left and right; with pitch inputs, the aileron and pitch servos raise the swashplate up and down.

**HELI3-1:** Pushrods positioned as shown. With Aileron inputs, the aileron and pitch servos tilt the swashplate left and right; with Elevator inputs, the three servos tilt the swashplate fore and aft; with Pitch inputs, all three servos raise the swashplate up and down.

**HELI3-2:** Pushrods positioned as shown. With Aileron inputs, the three servos tilt the swashplate left and right; with Elevator inputs, the elevator and pitch servos tilt the swashplate fore and aft; with Pitch inputs, all three servos raise the swashplate up and down.

**HELI4:** Pushrods positioned as shown. With Aileron inputs, the aileron and pitch servos tilt the swashplate left and right; with Elevator inputs, the servos tilt the swashplate fore and aft; with Pitch inputs, all four servos raise the swashplate up and down.





## 7.4 Modulation selection

## SYSTEM SETTING

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key select the SYSTEM SETTING menus, and press MENU key for short into next submenu.



Press UP/DOWN key to select the MODULAT menu, and press MENU key for short into next submenu.



Press the UP or DOWN key to select the MODULAT screen.



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and treurn to last menu.



### Modulation select:

sets the type of modeulation transmittec.

Press the **UP** or **DOWM** key to select the MODULAT screen.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and re-turn last menu.

**PPM**:Pulse Position Modulation(also called FM)

**PCM**:Pulse Code Modeulation

## 7.5 Stick mode selections

## SYSTEM SETTING

### STEPS:

Under the state of the initial picture, press MENU key forlong, access the main menu.



Press UP/DOWN key select the SYSTEM SETTING menus, and press MENU key for short into next submenu.



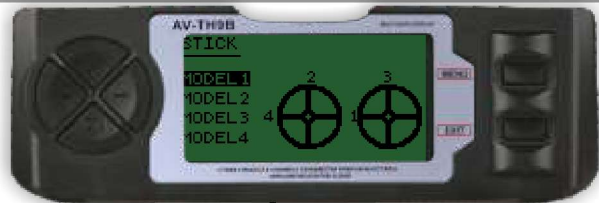
Press UP/DOWN key to select the STICK menu, and press MENU key for short into next submenu.



Press the UP or DOWN key to select the STICK screen.



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and treurn to last menu.



### Stick mode selections

To change the Stick Mode.

#### MODEL1

Right Stick UP and DOWN move IS Throttle Control  
Right and left move is Aileron Control  
LeftStick UP and DOWN move IS Elevator Control  
Right and left move is Rudder Control

#### MODEL2

Right Stick UP and DOWN move IS Elevator Control  
Right and left move is Aileron Control  
LeftStick UP and DOWN move IS Throttle Control  
Right and left move is Rudder Control

#### MODEL3

Right Stick UP and DOWN move IS Throttle Control  
Right and left move is Rudder Control  
LeftStick UP and DOWN move IS Elevator Control  
Right and left move is Aileron Control

#### MODEL4

Right Stick UP and DOWN move IS Throttle Control  
Right and left move is Rudder Control  
LeftStick UP and DOWN move IS Elevator Control  
Right and left move is Aileron Control

Press the **UP** or **DOWM** key to select the STICK screen.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and re-turn last menu.

## 7. 6COPY

## SYSTEM SETTING

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

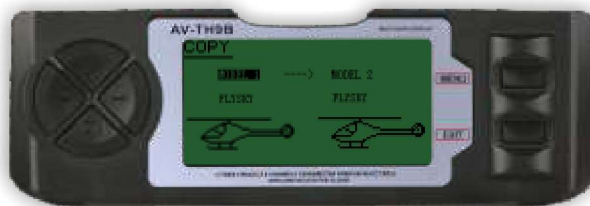
Press UP/DOWN key select the SYSTEM SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key to select the COPY menu, and press MENU key for short into next submenu.

Press UP/DOWN key choose to duplicate the source or duplicate the destination

Press "-" or "+" key choose to duplicate the source or duplicate concrete users of left and right sides of the destination.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### MODEL COPY:

Copies the current model data into another model memory. The name of the model memory you are copying into is displayed for clarity.

Press **UP** or **DOWN** key choose to duplicate the source or duplicate the destination

Press "-" or "+" key choose to duplicate the source or duplicate concrete users of left and right sides of the destination.

Press the **MENU** key to save and return last menu  
Press the **EXIT** key to not keep and return last menu

### NOTE:

Duplicate source includes to be as follows, MODEL1 ---- MODEL8, HEL1, ACRO

Duplicate the purpose to contain: MODEL1 ---- MODEL8, ALL

ALL, show duplicating by source with establishment copy to MODEL1 --- MODEL8,

## 7. 7LCD ADJUST

## SYSTEM SETTING

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the SYSTEM SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key to select the ADJ CONTRAST menu, and press MENU key for short into next submenu.

Press "-" or "+" key select to change the lcd value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### LCD ADJ CONTRAST:

The lcd adjust contrast function is used to adjust the lcd screen light.

Press the **UP** or **DOWN** key to select the D/R & EXP screen.

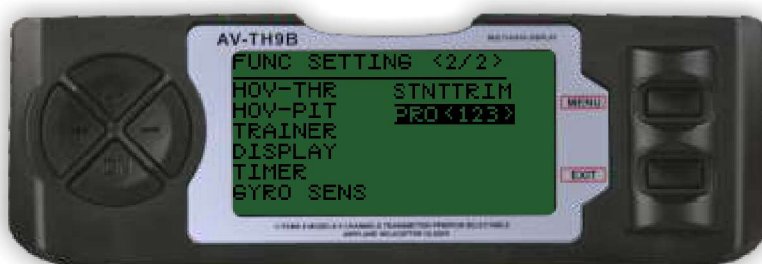
Press "+" or "-" key to change the lcd value.

Press the **MENU** key to save and return last menu  
Press the **EXIT** key to not keep and return last menu

## 8 FUNCTION SETTING (HELICOPTER)



Page1



Page2

### 8. 1 REVERSE

### HELICOPTER

#### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.



Press UP/DOWN key to select the REVERSE menu, and press MENU key for short into next submenu.



Press UP/DOWN key to choose the REVERSE screen.



Press "+" or "-" key to reverse the servo direction for that selected channel.



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



#### REVERSE:

The reverse switch function allows electronic means of reversing the servo's throw. Servo reversing is available for all 9 channels.

Press the **UP** or **DOWN** key to select the Reverse screen.

Press "+" or "-" key to reverse the servo direction for that selected channel.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu

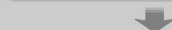
AIL:	Aileron
ELE:	Elevator
THR:	Throttle
RUD:	Rudder
GEA:	Retractable landing Gear
PIT:	Pitch (ch6)
AUX1:	Auxiliary1
AUX2:	Auxiliary2

## 8. 2THRO CURVE

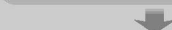
## HELICOPTER

### STEPS:

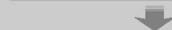
Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.



Press UP/DOWN key to select the THRO CURVE menu, and press MENU key for short into next submenu.



Press UP/DOWN key to choose the THRO CURVE screen.



Press "+" or "-" key to adjust the throttle value of the selected throttle position.



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### THRO CURVE:

The AV-TH9B offers three separate throttle curves with five adjustable points per curve. This function allows you to adjust the throttle curve to optimize engine rpm at a particular pitch setting. Once the throttle curves are established, each can be activated in flight using the 3-position flight mode switch. The flight mode switch offers three selectable curves: Normal, IDE1, IDE2.

Press the **UP** or **DOWN** key to select the THRO CURVE screen.

Press "+" or "-" key to adjust the throttle value of the selected throttle position.

Press the **MENU** key to save and return last menu

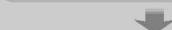
Press the **EXIT** key to not keep and return last menu

## 8. 3PITCH CURVE

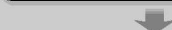
## HELICOPTER

### STEPS:

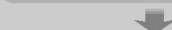
Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key choose the systematic function to establish menus, press MENU key for short and enter the next page to establish.



Press UP/DOWN key choose PITCH CURVE menu, press MENU key for short and enter the page to establish.



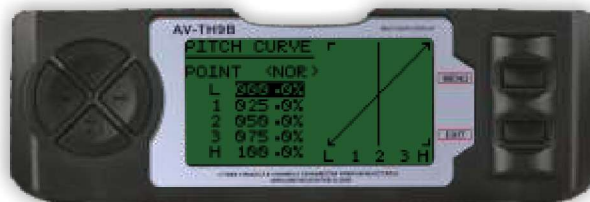
Press UP/DOWN key to choose the PITCH CURVE screen.



Press "+" or "-" key to adjust the throttle value of the selected throttle position.



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### PITCH CURVE:

The AV-TH9B offers four independent pitch curves, each with up to five adjustable points. This function allocates a separate pitch curve setting during Normal, IDL1, IDL2 and Throttle hold modes. Once the pitch curves are adjusted, each can be activated in flight using the three-position flight mode and throttle hold switches. Each of the five points of the pitch curve are independently adjustable from 0-100%. These five points correspond to low, 25%, 50%, 75% and high stick positions.

Press the **UP** or **DOWN** key to select the PITCH CURVE screen.

Press "+" or "-" key to adjust the throttle value of the selected throttle position.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu



## 8. 4SUB TRIM

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose SUB TRIM menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the SUB TRIM screen.

Press "+" or "-" key to adjust the sub-trim position for that selected channel.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### SUB TRIM:

The SUB-TRIM function allows you to electronically adjust the centering of each servo. Sub trim is individually adjustable for all 8 channels, with a range of +or-120%.

Press the **UP** or **DOWN** key to select the SUB TRIM screen.

Press "+" or "-" key to adjust the sub-trim position for that selected channel.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

**NOTE:** Do not use excessive sub-trim values as it is possible to overdrive the servo's maximum travel.

## 8. 5END POINT

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose E.POINT menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the E. POINT screen.

Press "+" or "-" key to adjust the E. POINT position for that selected channel.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### END POINT:

The most flexible version of travel adjustment available. It independently adjusts each end of each individual servo's travel, rather than one setting for the servo that affects both directions. Ranges from 0% to 120%.

Press the **UP** or **DOWN** key to select the E. POINT screen.

Press "+" or "-" key to adjust the END POINT position for that selected channel.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

**NOTE:** Do not use excessive E. POINT values as it is possible to overdrive the servo's maximum travel.



## 8. 6THRO HOLD

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.



Press UP/DOWN key choose THRO HOLD menu, press MENU key for short and enter the page to establish.



Press UP/DOWN key to choose the THRO HOLD screen.



Press "+" or "-" key to select the state (INT or ACT) and change the throttle hold value..



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### THRO HOLD:

The Throttle hold function is used to practice autorotation and is often use as a safety switch for electric helicopters, olding the throttle in the off position. When the throttle hold switc is activated the throttle hold function holds the throttle servo/ESC in a specific position (normally low or off throttle) while all other servos function normally.

Press the **UP** or **DOWM** key to select the THRO HOLD screen.

Press "+" or "-" key to select the state (INT OR ACT) and change the throttle hold value..

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 8. 7AUX-CH

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.



Press UP/DOWN key choose AUX-CH menu, press MENU key for short and enter the page to establish.



Press UP/DOWN key to choose the AUX-CH screen.



Press "+" or "-" key to select input channels..



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and treurn to last menu.



### AUX-CH:

Defines the relationship between the transmitter controls and the receiver output for channels 5-9. Also, the ch9 servo reverse is used to change the ch9 servo direction.

Press the **UP** or **DOWM** key to select the AUX-CH screen.

Press "+" or "-" key to select input channels.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu

**Note** that the ch9 functions are only visible in the AUX-CH screen when PCM modulation is selected. The ch9 is not supported in PPM modulation.

## 8. 8SWASH MIX

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

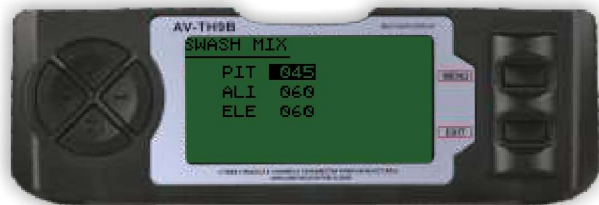
Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose SWASH MIX menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the SWASH MIX screen.

Press "+" or "-" key to change the selected swashplate mix value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### SWASH MIX:

Swashplate function rate settings (SWASH MIX) reduce/increase/reverse the rate (travel) of the aileron, elevator (except heli2) and collective pitch functions, adjusting or reversing the motion of all servos involved in that function, only when using that function. Since these types utilize multiple servos together to create the controls, simply adjusting a servos reverse or end point would not properly correct the travel of any one control. Since heli1 uses one servo for each function, there is no need for SWASH MIX in heli1.

Press the **UP** or **DOWN** key to select the SWASH MIX screen.

Press "+" or "-" key to change the selected swashplate mix value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu

## 8. 9D/R&EXP

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose D/R&EXP menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the D/R&EXP screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### D/R&EXP:

The Dual Rate and Exponential function allows two control rates to be programmed and selected with a switch. Dual rates and expos are available on the aileron, elevator and rudder channels. Changing the dual rate value not only affects the maximum control authority but also affects the overall sensitivity of control. A higher rate yields a higher overall sensitivity. The sensitivity around center can be tailored using the Exponential function to precisely adjust control feel.

Press the **UP** or **DOWN** key to select the D/R & EXP screen.

Press "+" or "-" key to change the select D/R & EXP value.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu

## 8. 10TRIM

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose TRIM menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the TRIM screen.

Press "+" or "-" key to change the selected TRIM value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### TRIM:

The AV-TH9B super has digital trims which are different from conventional mechanical trim sliders. Each trim lever is actually a two-direction switch. Each time the trim lever is pressed, the trim is changed a selected amount. When you hold the trim lever, the trim speed increases. The current trim position is graphically displayed on the start up screen. The trim submenu includes two functions that are used to manage the trim options.

Press the **UP** or **DOWN** key to select the TRIM screen. Press "+" or "-" key to change the selected trim value.

Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 8. 11REVO CURVE

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose REVO CURVE menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the REVO CURVE screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### REVO CURVE:

This 5-point curve mix adds opposite rudder input to counteract the changes in torque when the speed and collective pitch of the blades is changed.

Press the **UP** or **DOWN** key to select the REVO CURVE screen. Press "+" or "-" key to change the select REVO CURVE value. Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

**Note:** The REVO CURVE only used with non-heading hold gyros helicopter.

## 8. 12 FAIL SAF

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose FAIL SAF menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the FAIL SAF screen.

Press "+" or "-" key to change the selected (NOR or F/S).

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### FAIL SAF:

Sets responses in case of loss of signal or low rx battery (PCM mode only).

Press the **UP** or **DOWN** key to select the FAIL SAF screen.

Press + / - key for short and regulate the parameter (when showing for F/S XXX% for parameter, Press **MENU** key for short and see that reads the output of the corresponding passway, regard value read as the establishing value)

Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 8. 13 HOV THR

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose HOV THR menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the HOV THR screen.

Press "+" or "-" key to change the select STATE (INH or ACT).

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### HOV THR:

Hovering throttle are fine-tuning adjustments for the throttle curves individually, affecting performance only around the center point and only in the normal condition. The allow in-flight or ideal setup.

Press the **UP** or **DOWN** key to select the HOV THR screen.

Press "+" or "-" key to change the select STATE (INH or ACT).

Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.



## 8. 14HOV PITCH

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose HOV PIT menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the HOV PIT screen.

Press "+" or "-" key to change the selected (INH or ACT).

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### HOVERING PITCH:

Hovering pitch are fine-tuning adjustments for the collective pitch curves individually, affecting performance only around the center point and only in the normal condition. The allow in-flight or ideal setup.

Press the **UP** or **DOWN** key to select the HOV PIT screen.

Press "+" or "-" key to change the selected (INH or ACT).

Press the MENU key to save and return last menu. Press the EXIT key to not keep and return last menu.

## 8. 15TRAINER

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose TRAINER menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the TRAINER screen.

Press "+" or "-" key to change the select CHANNEL (NORM or FUNC).

Press MENU key for short to keep result and return last menu. Press EXIT key for short to not keep and return to last menu.



### TRAINER:

For training novice pilots with optional trainer cord connecting 2 transmitters. The instructor has several levels of controllability.

**NORM:** When the trainer switch is ON, the channel set to this mode can be controlled by the student. The set channel is controlled according to any programming set at the student's transmitter.

**FUNC:** When the trainer switch is ON, the channel set to this mode can be controlled by student, controlled according to any mixing set at the instructor's transmitter.

Press the **UP** or **DOWN** key to select the TRAINER screen.

Press "+" or "-" key to change the select channel (NORM or FUNC).

Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.



## 8. 16DISPLAY

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose DISPLAY menu, press MENU key for short and enter the page to establish.

Press the UP or DOWN key to select the TEST (ON or OFF).

Press MENU or EXIT key return last menu.



### DISPLAY:

Display radio's output to channels 1-8.

The servo submenu includes two features:

Real-tune bar-graph display to demonstrate exactly what commands the transmitter is sending to the servos. (This can be particularly handy in setting up models with complicated mixing functions, because the results of each stick, lever, knob, switch input and delay circuit may be immediately seen.)

Servo cycle function to help locate servo problems prior to in-flight failures.

Press the **UP** or **DOWN** key to select the TEST (ON or OFF).

Press the **MENU** key to return last menu.

Press the **EXIT** key to return last menu.

## 8. 17TIMER

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose TIMER menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the TIMER screen.

Press "+" or "-" key to change the select CHANNEL (INT or ACT).

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### TIMER:

The time-recorder is used calculating comparable to stipulated time unexpectedly, or the possible time of flight under the state that the fuel fill it up with, it is very convenient. The pattern of the time-recorder is the count-down. Pour time-recorder from set for time is it is it count to change, show surplus time at interface to begin. The time-recorder can set for the settlement time of 99 minutes and 59 seconds altogether at most.

**START:** Press TRN switch. **STOP:** Press trn switch. **REST TIMER:** Press EXIT key for long time of the initial picture.

**STANTE:** INH forbids this function, ACT launches the function.

**Warn the sound:** After establishing time for less than 59 seconds, warning sound appears in one second in every interval [Bi]: It sets for time to finish long and loud.

Press the **UP** or **DOWN** key to select the TIMER screen. Press "+" or "-" key to change the select channel (INT or ACT).

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 8. 18GYRO SENS

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose GYRO SENS menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the GYRO SENS screen.

Press "+" or "-" key to change the selected GYRO SENS value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### GYRO SENS:

A gyroscope is an electronic unit that senses motion and corrects for it. For example, if the wind blows your helicopter's tail to the left, a gyro will sense that motion (and confirm that no input was given) and will correct for it.

Plug the gyro's sensitivity adjustment to channel 5 of the receiver.

Each gyro setting may be set from -100 to +100 gain.

INH: disable the function.

ACT: enable the function.

Press the **UP** or **DOWN** key to select the GYRO SENS screen.

Press "+" or "-" key to change the selected UPRATE or DNRATE value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 8. 19STNT TRIM

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose STNT TRIM menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the STNT TRIM screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### STNT TRIM:

It is used for finely tuning the aileron while flying in overhead skill that the stunt is finely tuned. The elevator and end rudder. This function is helpful only when in ID1, ID2.

INH: disable the function.

ACT: enable the function.

Press the **UP** or **DOWN** key to select the STNT TRIM screen.

Press "+" or "-" key to change the select AIL or ELE and RUD value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 8. 20PROG<123>

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose PROG<123> menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the PROG<123> screen.

Press MENU key for short into next submenu.

Press EXIT key to return last menu.



### PROG<123>:

In helicopter mode the AV-TH9B offer three programmable mixes that allow stick or switch inputs to control the output of two or more servos. This function allows mixing any one channel to any other channel or the ability to mix a channel to itself. The mix can remain ON at all times, or be switched OFF in flight using a number of different switches. (Refer to chart below.) Mix values are adjustable from 0 to 100%. Each channel is identified by a four-character name (i.e., Aileron-AILE, Elevator-ELEV, etc.). The channel appearing first is the master channel. The second channel is the slave channel. For example, AILE-ELEV would indicate aileron-to-elevator mixing. Each time the aileron stick is moved, the elevator will deflect, and the elevator will automatically move in the direction and to the position based on the value input in the programmable mix screen. Mixing is proportional, so small inputs of the master channel will produce small outputs of the slave channel. Each programmable mix has a mixing offset. The purpose of the mixing offset is to redefine the neutral position of the slave channel.

Press the **UP** or **DOWN** key to select the PROG<123> screen.

Press the **MENU** key into next submenu.

Press the **EXIT** key to return last menu.

## 8. 20. 1PRAGRAM MIXING1

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose PROG<123> menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the P. MIX1 menu, press MENU key for short into next submenu.

Press UP/DOWN key to choose the P. MIX1 screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key for short to not keep and return to last menu.



### P. MIX1 (PROGRAM MIXING1):

Mix purpose to accuse of form to get rid of little mistake of organism, make it is it can take the heart conveniently even more to have not to handle. The very wanton one mixes accusing of among the channel.

**INH:** disable the function. **ACT:** enable the function. **MASTER:** select input channel. **SLAVE:** select output channel.

**SW:** NOR/IDL1, IDL2, ON.

Press the **UP** or **DOWN** key to select the P. MIX1 screen.

Press "+" or "-" key to change the select value.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu



## 8. 20. 2PROGRAM MIXING2

## HELICOPTER

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose PROG<123> menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the P. MIX2 menu, press MENU key for short into next submenu.

Press UP/DOWN key to choose the P. MIX2 screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### P. MIX1 (PROGRMA MIXING2) :

Mix purpose to accuse of form to get rid of little mistake of organism, make it is it can take the heart conveniently even more to have not to handle. The very wanton one mixes accusing of among the channel.

**INH:** disable the function.

**ACT:** enable the function.

**MASTER:** select input channel.

**SLAVE:** select output channel.

**SW:** NOR/IDL1, IDL2, ON.

Press the **UP** or **DOWN** key to select the P. MIX2 screen.

Press "+" or "-" key to change the select value.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu

## HELICOPTER

## 8. 20. 3PROGRAM MIXING3

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose PROG<123> menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the P. MIX3 menu, press MENU key for short into next submenu.

Press UP/DOWN key to choose the P. MIX3 screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### P. MIX3 (PROGRMA MIXING1) :

Mix purpose to accuse of form to get rid of little mistake of organism, make it is it can take the heart conveniently even more to have not to handle. The very wanton one mixes accusing of among the channel.

**INH:** disable the function. **ACT:** enable the function.

**MASTER:** select input channel.

**SLAVE:** select output channel.

**SW:** NOR/IDL1, IDL2, ON.

**CURVE:** curves have five adjustable points-low, 25%, 50%, 75% and high.

Press the **UP** or **DOWN** key to select the P. MIX1 screen.

Press "+" or "-" key to change the select value.

Press the **MENU** key to save and return last menu

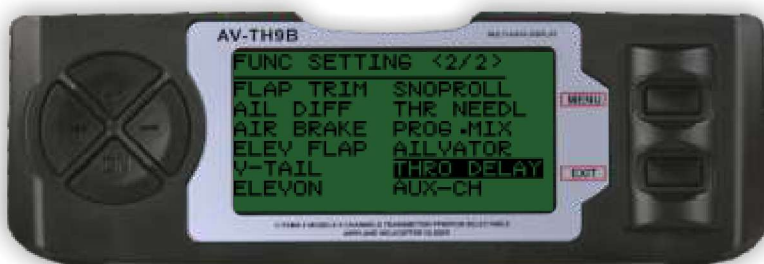
Press the **EXIT** key to not keep and return last menu



## 9 FUNCTION SETTING (FOR AIRPLANE)



Page1



Page2

### 9. 1 REVERSE

### AIRPLANE

#### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.



Press UP/DOWN key to select the REVERSE menu, and press MENU key for short into next submenu.



Press UP/DOWN key to choose the REVERSE screen.



Press "+" or "-" key to reverse the servo direction for that selected channel.



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



#### REVERSE:

The reverse switch function allows electronic means of reversing the servo's throw. Servo reversing is available for all 9 channels.

Press the **UP** or **DOWN** key to select the Reverse screen.

Press "+" or "-" key to reverse the servo direction for that selected channel.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu

AIL:	Aileron
ELE:	Elevator
THR:	Throttle
RUD:	Rudder
GEA:	Retractable landing Gear
PIT:	Pitch(ch6)
AUX1:	Auxiliary1
AUX2:	Auxiliary2

## 9. 2TRAINER

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the TRAINER menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the TRAINER screen.

Press "+" or "-" key to change the select CHANNEL (NORM or FUNC).

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### TRAINER:

For training novice pilots with optional trainer cord connecting 2 transmitters. The instructor has several levels of controllability.

**NORM:** When the trainer switch is ON, the channel set to this mode can be controlled by the student. The set channel is controlled according to any programming set at the student's transmitter.

**FUNC:** When the trainer switch is ON, the channel set to this mode can be controlled by student, controlled according to any mixing set at the instructor's transmitter.

Press the **UP** or **DOWN** key to select the TRAINER screen. Press "+" or "-" key to change the select channel NORM or FUNC). Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 9. 3SUB TRIM

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the SUB TRIM menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the SUB TRIM screen.

Press "+" or "-" key to adjust the sub-trim position for that selected channel.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### SUB TRIM:

The SUB-TRIM function allows you to electronically adjust the centering of each servo. Sub trim is individually adjustable for all 8 channels, with a range of +or-120%.

Press the **UP** or **DOWN** key to select the SUB TRIM screen.

Press "+" or "-" key to adjust the sub-trim position for that selected channel.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu.

**NOTE:** Do not use excessive sub-trim values as it is possible to overdrive the servo's maximum travel.

## 9. 4END POINT

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the END. POINT menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the E. POINT screen.

Press "+" or "-" key to adjust the E. POINT position for that selected channel.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### END POINT:

The most flexible version of travel adjustment available. It independently adjusts each end of each individual servo's travel, rather than one setting for the servo that affects both directions. Ranges from 0% to 120%.

Press the **UP** or **DOWM** key to select the E. POINT screen.

Press "+" or "-" key to adjust the END POINT position for that selected channel.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu

**NOTE:** Do not use excessive E. POINT values as it is possible to overdrive the servo's maximum travel.

## 9. 5THRO HOLD

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the THRO HOLD menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the THRO HOLD screen.

Press "+" or "-" key to select the state (INT or ACT) and change the throttle hold value..

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### THRO HOLD:

The Throttle hold function is used to practice autorotation and is often use as a safety switch for electric helicopters, olding the throttle in the off position. When the throttle hold switc is activated the throttle hold function holds the throttle servo/ESC in a specific position (normally low or off throttle) while all other servos function normally.

Press the **UP** or **DOWM** key to select the THRO HOLD screen.

Press "+" or "-" key to select the state (INT OR ACT) and change the throttle hold value..

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 9. 6FLAPERON

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the FLAPERON menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the HELI screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key to not keep and return last menu.



### FLAPERON:

The FLAPERON mixing function uses one servo on each of the two ailerons, and uses them for both aileron and flap function. For flap effect, the ailerons raise/lower simultaneously. Of course, aileron function (moving in opposite directions) is also performed.

Press the **UP** or **DOWN** key to select the FLAPERON screen.  
Press the "+" or "-" key to change the select FLAPERON value.  
Press the **MENU** key to save and return last menu.  
Press the **EXIT** key to not keep and return last menu.

## 9. 7D/R&EXP

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the D/R&EXP menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the D/R&EXP screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key for short to not keep and return to last menu.



### D/R&EXP:

The Dual Rate and Exponential function allows two control rates to be programmed and selected with a switch. Dual rates and expos are available on the aileron, elevator and rudder channels. Changing the dual rate value not only affects the maximum control authority but also affects the overall sensitivity of control. A higher rate yields a higher overall sensitivity. The sensitivity around center can be tailored using the Exponential function to precisely adjust control feel.

Press the **UP** or **DOWN** key to select the D/R & EXP screen.  
Press the "+" or "-" key to change the select D/R & EXP value.  
Press the **MENU** key to save and return last menu.  
Press the **EXIT** key to not keep and return last menu.



## 9. 8TRIM

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the TRIM menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the TRIM screen.

Press "+" or "-" key to change the selected TRIM value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### TRIM:

The AV-TH9B super has digital trims which are different from conventional mechanical trim sliders. Each trim lever is actually a two-direction switch. Each time the trim lever is pressed, the trim is changed a selected amount. When you hold the trim lever, the trim speed increases. The current trim position is graphically displayed on the start up screen. The trim submenu includes two functions that are used to manage the trim options.

Press the **UP** or **DOWN** key to select the TRIM screen. Press "+" or "-" key to change the selected trim value.

Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 9. 9IDLEDOWN

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the IDLEDOWN menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the IDLEDOWN screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### IDLEDOWN (ACRO only) :

Lowers the engine idle for: sitting on the runway prior to take off, stalls and spins, and landings. The normal idle setting is a little higher for easier starts and safe flights with less risk of dead sticks.

Press the **UP** or **DOWN** key to select the IDLEDOWN screen. Press "+" or "-" key to change the select IDLEDOWN value. Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 9. 10 FAIL SAF

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the FAIL SAF menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the FAIL SAF screen.

Press "+" or "-" key to change the selected (NOR or F/S).

Press MENU key for short to keep result and return last menu. Press EXIT key for short to not keep and return to last menu.



### FAIL SAF:

Sets responses in case of loss of signal or low rx battery (PCM mode only).

Press the **UP** or **DOWN** key to select the FAIL SAF screen.

Press + / - key for short and regulate the parameter (when showing for F/S XXX% for parameter, Press **MENU** key for short and see that reads the output of the corresponding passway, regard value read as the establishing value)

Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 9. 11 TIMER

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the TIMER menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the TIMER screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### TIMER:

The time-recorder is used calculating comparable to stipulated time unexpectedly, or the possible time of flight under the state that the fuel fill it up with, it is very convenient. The pattern of the time-recorder is the count-down. Pour time-recorder from set for time is it is it count to change, show surplus time at interface to begin. The time-recorder can set for the settlement time of 99 minutes and 59 seconds altogether at most.

**START:** Press TRN switch. **STOP:** Press trn switch. **REST TIMER:** Press EXIT key for long time of the initial picture.

**STANTE:** INH forbids this function, ACT launches the function.

**Warn the sound:** After establishing time for less than 59 seconds, warning sound appears in one second in every interval [Bi]: It sets for time to finish long and loud.

Press the **UP** or **DOWN** key to select the TIMER screen. Press "+" or "-" key to change the select TIMER value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 9. 12 DISPLAY

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the DISPLAY menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the TEST (ON or OFF).

Press MENU or EXIT key return last menu.



### DISPLAY:

Display radio's output to channels 1-8.

The servo submenu includes two features:

Real-tune bar-graph display to demonstrate exactly what commands the transmitter is sending to the servos. (This can be particularly handy in setting up models with complicated mixing functions, because the results of each stick, lever, knob, switch input and delay circuit may be immediately seen.)

Servo cycle function to help locate servo problems prior to in-flight failures.

Press the **UP** or **DOWN** key to select the TEST (ON or OFF).

Press the **MENU** key to return last menu.

Press the **EXIT** key to return last menu.

## AIRPLANE

## 9. 13 FLAPTRIM

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the FLAPTRIM menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the FLAPTRIM screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### FLAPTRIM:

FLAP-TRM assigns the primary flaperon control to allow trimming in flight of the flap action of flaperons. (Note: even if FLAP-TRIM is made active with AIL-DIFF, it will not have any effect. The ONLY function that allows control of the ailerons as flaps in the AIL-DIFF configuration is AIRBRAKE.) Most modelers use AIRBRAKE, or programmable mixes, to move the flaps to a specified position via movement of a switch.

FLAP-TRIM may also be used as the primary flap control in flight by doing so, you can assign CH6 to a 3-position switch, with a "spoiler on", neutral, and "flaperon" position, and even adjust the percentage traveled as flaperon/spoileron by changing the Flap Trim travel. (Note that there is only one setting not independent settings for up and down travel).

Press the **UP** or **DOWN** key to select the FLAPTRIM screen. Press "+" or "-" key to change the select FLAPTRIM value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.



## 9. 14AILDIFF

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the AILD DIFF menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the AILD DIFF screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### AILDIFF:

Aileron differential is primarily used on 3 or 4-servo wings with one servo(s) operating inboard flap(S) on CH6 or CH5 & CH6, and AIL-DIFF controlling proper aileron operation of 2 aileron servos plugged into CH1 and CH7. The ailerons can not be moved like flaps when using AIL-DIFF, except if using AIRBRAKE (Note that even if you make FLAP\_TRIM active while using AIL-DIFF, it will not have any effect, ONLY AIRBRAKE controls the ailerons as flaps in the AIL-DIFF configuration).

**NOTE:** When changing the polarity of a rate, "change rate dir?" is displayed for a check please set up after pressing DIAL for 1 second and canceling an alarm display (GLID only).

Press the **UP** or **DOWN** key to select the AILD DIFF screen. Press "+" or "-" key to change the select AILD DIFF value.

Press the **MENU** key to return last menu.

Press the **EXIT** key to return last menu.

## 9. 15AIRBRAKE

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the AIRBRAKE menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the AIRBRAKE screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### AIRBRAKE:

Like FLAPERON and AILEVATOR, AIRBRAKE is one function that is really made up of a series of pre-programmed mixes all done for you within the radio AIRBRAKE simultaneously moves the flap(s) (if installed) twin ailerons (if installed) and elevator(S), and is usually used to make steep descents or to limit increases in airspeed in dives.

This function is often used even on models without flaps as an easy way to use the flaperons and FLAP-ELEVATOR mixing together.

Press the **UP** or **DOWN** key to select the AIRBRAKE screen. Press "+" or "-" key to change the select AIRBRAKE value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.



## 9. 16ELEFLAP

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the ELEFLAP menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the ELEFLAP screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### ELEFLAP:

ELEV-FLAP mixing is the first pre-programmed mix we'll cover. This mix makes the flaps drop or rise whenever the ELEVATOR STICK is moved. It is most commonly used to make tighter pylon turns or squarer corners in maneuvers. In most cases the flaps droop (are lowered) when up elevator is commanded.

Press the **UP** or **DOWN** key to select the ELEFLAP screen.

Press "+" or "-" key to change the select ELEFLAP value.

Press the **MENU** key to return last menu.

Press the **EXIT** key to return last menu.

## AIRPLANE

## 9. 17V-TAIL

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the V-TAIL menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the V-TAIL screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### V-TAIL:

V\_TAIL mixing is used with v-tail aircraft so that both elevator and rudder functions are combined for the two tail surfaces. Both elevator and rudder travel can be adjusted independently on each surface.

NOTE: If V-TAIL is active you cannot activate ELEVON or AILEVATOR functions. If one of these functions is active an error message will be displayed and you must deactivate the last function prior to activating ELEVON.

NOTE: Be sure to move the elevator and rudder sticks regularly while checking the servo motions. If a large value of travel is specified when the sticks are moved at the same time the controls may bind or run out of travel. Decrease the travel until no binding occurs.

Press the **UP** or **DOWN** key to select the V-TAIL screen. Press "+" or "-" key to change the select V-TAIL value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 9. 18ELEVON

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the ELEVON menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the ELEVON screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### ELEVON:

Used with delta wings flying wings and other tailless aircraft that combine aileron and elevator functions using two servos one on each elevon. The aileron/elevator responses of each servo can be adjusted independently. This is also popular for ground model use such as tanks which drive two motors together for forward and one motor forward/one backward for turning.

#### Adjustability:

Requires use of CH1 and Ch2

Independently adjustable aileron travel allows aileron differential.  
Independently adjustable elevator travel allows for differential in up vs down travel.

Press the **UP** or **DOWN** key to select the ELEVON screen.

Press "+" or "-" key to change the select ELEVON value.

Press the **MENU** key to return last menu.

Press the **EXIT** key to return last menu.

## 9. 19SNOPROLL

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the SNOPROLL menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the SNOPROLL screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### SNOPROLL:

This function allows you to execute snap rolls by flipping a switch providing the same input every time. It also removes the need to change dual rates on the 3 channels prior to performing a snap as SNAP\_ROLL always takes the servos to the same position, regardless of dual rates inputs held during the snap etc.

Travel: Adjust the amount of elevator, aileron and rudder travel automatically applied.

Range: -100 to +100 on all 3 channels. Default is 100% of range of all 3 channels.

Directions: Up to 4 separate snaps may be set up one for each of the 4 direction choices (UP/right, down/right, up/left). Each snap is fully adjustable regarding travels and direction on each of the 3 channels.

Press the **UP** or **DOWN** key to select the SNOPROLL screen.

Press "+" or "-" key to change the select SNOPROLL value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 9. 20THRNEEDL

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the THRN EEDL menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the THRNEEDL screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### THRNEEDL:

THROTTLE-NEEDLE is a pre-programmed mix that automatically moves an in-flight mixture servo (CH8) in response to the THROTTLE STICK inputs for perfect engine tuning at all throttle settings. This function is particularly popular with contest pilots who fly in a large variety of locations needing regular engine tuning adjustments and requiring perfect engine response at all times and in all maneuvers. Also popular to minimize flooding at idle of inverted engine installations with a high tank position not needed for fuel injection engines which do this automatically.

Press the **UP** or **DOWN** key to select the THRNEEDL screen. Press "+" or "-" key to change the select THRNEEDL value. Press the **MENU** key to return last menu. Press the **EXIT** key to return last menu.

## 9. 21PROG. MIX

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose PROG. MIX menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the PROG. MIX screen.

Press MENU key for short into next submenu.

Press EXIT key to return last menu.



### PROG. MIX:

In helicopter mode the AV-TH9B offer three programmable mixes that allow stick or switch inputs to control the output of two or more servos. This function allows mixing any one channel to any other channel or the ability to mix a channel to itself. The mix can remain ON at all times, or be switched OFF in flight using a number of different switches. (Refer to chart below.) Mix values are adjustable from 0 to 100%. Each channel is identified by a four-character name (i.e., Aileron-AILE, Elevator-ELEV, etc.). The channel appearing first is the master channel. The second channel is the slave channel. For example, AILE-ELEV would indicate aileron-to-elevator mixing. Each time the aileron stick is moved, the elevator will deflect, and the elevator will automatically move in the direction and to the position based on the value input in the programmable mix screen. Mixing is proportional, so small inputs of the master channel will produce small outputs of the slave channel. Each programmable mix has a mixing offset. The purpose of the mixing offset is to redefine the neutral position of the slave channel.

Press the **UP** or **DOWN** key to select the PROG. MIX screen. Press the **MENU** key into next submenu. Press the **EXIT** key to return last menu.



## 9. 21. 1MIX1-5

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose PROG. MIX menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the MIX1 menu, press MENU key for short into next submenu.

Press UP/DOWN key to choose the MIX1 screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### MIX1-5:

Mix purpose to accuse of form to get rid of little mistake of organism, make it is it can take the heart conveniently even more to have not to handle. The very wanton one mixes accusing of among the channel.

**INH:** disable the function.

**ACT:** enable the function.

**MASTER:** select input channel.

**SLAVE:** select output channel.

**SW:** NOR/IDL1, IDL2, ON.

Press the **UP** or **DOWN** key to select the MIX1 screen.

Press "+" or "-" key to change the select value.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu

## 9. 21. 2MIX6-7

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose PROG. MIX menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the MIX6 menu, press MENU key for short into next submenu.

Press UP/DOWN key to choose the MIX6 screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### MIX6-7:

Mix purpose to accuse of form to get rid of little mistake of organism, make it is it can take the heart conveniently even more to have not to handle. The very wanton one mixes accusing of among the channel.

**INH:** disable the function. **ACT:** enable the function.

**MASTER:** select input channel.

**SLAVE:** select output channel.

**SW:** NOR/IDL1, IDL2, ON.

**CURVE:** curves have five adjustable points-low, 25%, 50%, 75% and high.

Press the **UP** or **DOWN** key to select the MIX6 screen.

Press "+" or "-" key to change the select value.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu



## 9. 22AILVATOL

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the VILV ATOL menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the VILVATOL screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### VILVATOL:

Many models use two elevator servos, plugged in separate receiver channels. (Flying wings without a separate aileron control use ELEVON. V-shaped tail models use V-TAIL, p36.)

#### Benefits:

Ability to adjust each servo's center and end points for perfectly matched travel.

Ease of assembly, not requiring torque rods for a single servo to drive 2 surfaces.

Elevators acting also as ailerons for extreme stunt flying or more realistic jet flying (optional). Redundancy, for example in case of a servo failure or mid-air collision.

Press the **UP** or **DOWN** key to select the VILVATOL screen.

Press "+" or "-" key to change the select VILVATOL value.

Press the **MENU** key to return last menu.

Press the **EXIT** key to return last menu.

## AIRPLANE

## 9. 23THRDELAY

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the THRD ELAY menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the THRDELAY screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### THRDELAY:

The THROTTLE DELAY function is used to slow the response of the throttle servo to simulate the slow response of a turbine engine. A 40% delay corresponds to about a one-second delay while a 100% delay takes about eight seconds to respond. For helicopters see DELAYS.

This function may also be used to create a "slowed servo" on a channel other than throttle. This is accomplished by plugging the desired servo (Ex: gear doors) into CH3 (THR) throttle into an auxiliary channel such as 8 and then using some creative mixes. Please see our Frequently Asked Questions area at [www.rcavionix.com](http://www.rcavionix.com) for this specific example.

Press the **UP** or **DOWN** key to select the THRDELAY screen.

Press "+" or "-" key to change the select THRDELAY value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 9. 24AUX-CH

## AIRPLANE

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the AUX-CH menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the AUX-CH screen.

Press "+" or "-" key to select input channels..

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and treurn to last menu.



### AUX-CH:

Defines the relationship between the transmitter controls and the receiver output for channels 5-9. Also, the ch9 servo reverse is used to change the ch9 servo direction.

Press the **UP** or **DOWN** key to select the AUX-CH screen.

Press "+" or "-" key to select input channels.

Press the **MENU** key to save and return last menu

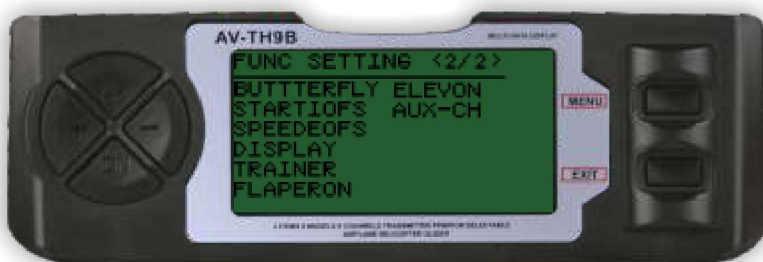
Press the **EXIT** key to not keep and return last menu

**Note** that the ch9 functions are only visible in the AUX-CH screen when PCM modulation is selected. The ch9 is not supported in PPM modulation.

## 10 FUNCTION SETTING (FOR GLID)



Page1



Page2

### 10. 1 REVERSE

### GLID

#### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.



Press UP/DOWN key to select the REVERSE menu, and press MENU key for short into next submenu.



Press UP/DOWN key to choose the REVERSE screen.



Press "+" or "-" key to reverse the servo direction for that selected channel.



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



#### REVERSE:

The reverse switch function allows electronic means of reversing the servo's throw. Servo reversing is available for all 9 channels.

Press the **UP** or **DOWN** key to select the Reverse screen.

Press "+" or "-" key to reverse the servo direction for that selected channel.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu

AIL:	Aileron
ELE:	Elevator
THR:	Throttle
RUD:	Rudder
GEA:	Retractable landing Gear
PIT:	Pitch(ch6)
AUX1:	Auxiliary1
AUX2:	Auxiliary2

## 10. 2SUB TRIM

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the SUB TRIM menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the SUB TRIM screen.

Press "+" or "-" key to adjust the sub-trim position for that selected channel.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### SUB TRIM:

The SUB-TRIM function allows you to electronically adjust the centering of each servo. Sub trim is individually adjustable for all 8 channels, with a range of +or-120%.

Press the **UP** or **DOWN** key to select the SUB TRIM screen.

Press "+" or "-" key to adjust the sub-trim position for that selected channel.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu.

**NOTE:** Do not use excessive sub-trim values as it is possible to overdrive the servo's maximum travel.

## 10. 3END POINT

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the END. POINT menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the E. POINT screen.

Press "+" or "-" key to adjust the E. POINT position for that selected channel.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### END POINT:

The most flexible version of travel adjustment available. It independently adjusts each end of each individual servo's travel, rather than one setting for the servo that affects both directions. Ranges from 0% to 120%.

Press the **UP** or **DOWN** key to select the E. POINT screen.

Press "+" or "-" key to adjust the END POINT position for that selected channel.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu

**NOTE:** Do not use excessive E. POINT values as it is possible to overdrive the servo's maximum travel.



## 10. 4D/R&EXP

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the D/R& EXP menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the D/R&EXP screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### D/R&EXP:

The Dual Rate and Exponential function allows two control rates to be programmed and selected with a switch. Dual rates and expos are available on the aileron, elevator and rudder channels. Changing the dual rate value not only affects the maximum control authority but also affects the overall sensitivity of control. A higher rate yields a higher overall sensitivity. The sensitivity around center can be tailored using the Exponential function to precisely adjust control feel.

Press the **UP** or **DOWN** key to select the D/R & EXP screen.

Press "+" or "-" key to change the select D/R & EXP value.

Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 10. 5TRIM

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

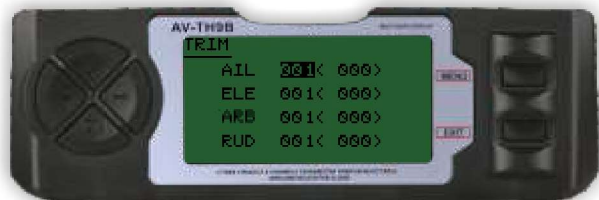
Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the TRIM menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the TRIM screen.

Press "+" or "-" key to change the selected TRIM value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### TRIM:

The AV-TH9B super has digital trims which are different from conventional mechanical trim sliders. Each trim lever is actually a two-direction switch. Each time the trim lever is pressed, the trim is changed a selected amount. When you hold the trim lever, the trim speed increases. The current trim position is graphically displayed on the start up screen. The trim submenu includes two functions that are used to manage the trim options.

Press the **UP** or **DOWN** key to select the TRIM screen. Press "+" or "-" key to change the selected trim value.

Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 10. 6 FAIL SAF

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the FAIL SAF menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the FAIL SAF screen.

Press "+" or "-" key to change the selected (NOR or F/S).

Press MENU key for short to keep result and return last menu. Press EXIT key for short to not keep and return to last menu.



### FAIL SAF:

Sets responses in case of loss of signal or low rx battery (PCM mode only).

Press the **UP** or **DOWN** key to select the FAIL SAF screen.

Press + / - key for short and regulate the parameter (when showing for F/S XXX% for parameter, Press **MENU** key for short and see that reads the output of the corresponding passway, regard value read as the establishing value)

Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 10. 7 TIMER

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the TIMER menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the TIMER screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### TIMER:

The time-recorder is used calculating comparable to stipulated time unexpectedly, or the possible time of flight under the state that the fuel fill it up with, it is very convenient. The pattern of the time-recorder is the count-down. Pour time-recorder from set for time is it is it count to change, show surplus time at interface to begin. The time-recorder can set for the settlement time of 99 minutes and 59 seconds altogether at most.

**START:** Press TRN switch. **STOP:** Press trn switch **REST TIMER:** Press EXIT key for long time of the initial picture.

**STANTE:** INH forbids this function, ACT launches the function.

**Warn the sound:** After establishing time for less than 59 seconds, warning sound appears in one second in every interval [Bi]: It sets for time to finish long and loud.

Press the **UP** or **DOWN** key to select the TIMER screen. Press "+" or "-" key to change the select TIMER value. Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 10. 8 FLAPTRIM

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the FLAPTRIM menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the FLAPTRIM screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### FLAPTRIM:

FLAP-TRM assigns the primary flaperon control to allow trimming in flight of the flap action of flaperons. (Note: even if FLAP-TRIM is made active with AIL-DIFF, it will not have any effect. The ONLY function that allows control of the ailerons as flaps in the AIL-DIFF configuration is AIRBRAKE.) Most modelers use AIRBRAKE, or programmable mixes, to move the flaps to a specified position via movement of a switch.

FLAP-TRIM may also be used as the primary flap control in flight by doing so, you can assign CH6 to a 3-position switch, with a "spoiler on", neutral, and "flaperon" position, and even adjust the percentage traveled as flaperon/spoileron by changing the Flap Trim travel (Note that there is only one setting not independent settings for up and down travel).

Press the **UP** or **DOWN** key to select the FLAPTRIM screen. Press "+" or "-" key to change the select FLAPTRIM value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

## 10. 9 AILDIFF

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the AILDIFF menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the AILDIFF screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### AILDIFF:

Aileron differential is primarily used on 3 or 4-servo wings with one servo(s) operating inboard flap(S) on CH6 or CH5 & CH6, and AIL-DIFF controlling proper aileron operation of 2 aileron servos plugged into CH1 and CH7. The ailerons can not be moved like flaps when using AIL-DIFF, except if using AIRBRAKE (Note that even if you make FLAP-TRIM active while using AIL-DIFF, it will not have any effect, ONLY AIRBRAKE controls the ailerons as flaps in the AIL-DIFF configuration).

**NOTE:** When changing the polarity of a rate, "change rate dir?" is displayed for a check please set up after pressing DIAL for 1 second and canceling an alarm display (GLID only).

Press the **UP** or **DOWN** key to select the AILDIFF screen. Press "+" or "-" key to change the select AILDIFF value.

Press the **MENU** key to return last menu.

Press the **EXIT** key to return last menu.



## 10. 10ELEFLAP

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the ELEFLAP menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the ELEFLAP screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### ELEFLAP:

ELEV-FLAP mixing is the first pre-programmed mix we'll cover. This mix makes the flaps drop or rise whenever the ELEVATOR STICK is moved. It is most commonly used to make tighter pylon turns or squarer corners in maneuvers. In most cases the flaps droop (are lowered) when up elevator is commanded.

Press the **UP** or **DOWN** key to select the ELEFLAP screen.

Press "+" or "-" key to change the select ELEFLAP value.

Press the **MENU** key to return last menu.

Press the **EXIT** key to return last menu.

## 10. 11V-TAIL

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the V-TAIL menus, and press MENU key for short into next submenu.

Press UP/DOWN key to choose the V-TAIL screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key go not keep and return last menu.



### V-TAIL:

V\_TAIL mixing is used with v-tail aircraft so that both elevator and rudder functions are combined for the two tail surfaces. Both elevator and rudder travel can be adjusted independently on each surface.

NOTE: If V-TAIL is active you cannot activate ELEVON or AILEVATOR functions. If one of these functions is active an error message will be displayed and you must deactivate the last function prior to activating ELEVON.

NOTE: Be sure to move the elevator and rudder sticks regularly while checking the servo motions. If a large value of travel is specified when the sticks are moved at the same time the controls may bind or run out of travel. Decrease the travel until no binding occurs.

Press the **UP** or **DOWN** key to select the V-TAIL screen. Press "+" or "-" key to change the select V-TAIL value.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.



## 10. 12PROG. MIX

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose PROG. MIX menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the PROG. MIX screen.

Press MENU key for short into next submenu.

Press EXIT key to return last menu.



### PROG. MIX:

In helicopter mode the AV-TH9B offer three programmable mixes that allow stick or switch inputs to control the output of two or more servos. This function allows mixing any one channel to any other channel or the ability to mix a channel to itself. The mix can remain ON at all times, or be switched OFF in flight using a number of different switches. (Refer to chart below.) Mix values are adjustable from 0 to 100%. Each channel is identified by a four-character name (i.e., Aileron-AILE, Elevator-ELEV, etc.). The channel appearing first is the master channel. The second channel is the slave channel. For example, AILE-ELEV would indicate aileron-to-elevator mixing. Each time the aileron stick is moved, the elevator will deflect, and the elevator will automatically move in the direction and to the position based on the value input in the programmable mix screen. Mixing is proportional, so small inputs of the master channel will produce small outputs of the slave channel. Each programmable mix has a mixing offset. The purpose of the mixing offset is to redefine the neutral position of the slave channel.

Press the **UP** or **DOWN** key to select the PROG. MIX screen.

Press the **MENU** key into next submenu.

## 10. 12. 1MIX1-5

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose PROG. MIX menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the MIX1 menu, press MENU key for short into next submenu.

Press UP/DOWN key to choose the MIX1 screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### MIX1-5:

Mix purpose to accuse of form to get rid of little mistake of organism, make it is it can take the heart conveniently even more to have not to handle. The very wanton one mixes accusing of among the channel.

**INH:** disable the function.

**ACT:** enable the function.

**MASTER:** select input channel.

**SLAVE:** select output channel.

**SW:** NOR/IDL1, IDL2, ON.

Press the **UP** or **DOWN** key to select the MIX1 screen.

Press "+" or "-" key to change the select value.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu

## 10. 12. 2MIX6-7

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose PROG. MIX menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the MIX6 menu, press MENU key for short into next submenu.

Press UP/DOWN key to choose the MIX6 screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### MIX6-7:

Mix purpose to accuse of form to get rid of little mistake of organism, make it is it can take the heart conveniently even more to have not to handle. The very wanton one mixes accusing of among the channel.

**INH:** disable the function. **ACT:** enable the function.

**MASTER:** select input channel.

**SLAVE:** select output channel.

**SW:** NOR/IDL1, IDL2, ON.

**CURVE:** curves have five adjustable points-low, 25%, 50%, 75% and high.

Press the **UP** or **DOWN** key to select the MIX6 screen.

Press "+" or "-" key to change the select value.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu

## 10. 13 BUTTERFLY

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the BUTT ERFLY menus, and press MENU key for short into next submenu.

Press UP/DOWN key to select the BUTTERFLY screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### BUTTERFLY:

Simultaneously moves the flap, twin ailerons and elevator, and is usually used to make steep descents or to limit increases in airspeed in dives.

Press the **UP** or **DOWN** key to select the BUTTERFLY screen.

Press "+" or "-" key to change the select value.

Press the **MENU** key to save and return last menu

Press the **EXIT** key to not keep and return last menu

## 10. 14STARTOFS

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose STARTOFS menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the STARTOFS screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### STARTOFS:

The start function is used to offset the aileron, elevator, and flap servos to the position that provides maximum lift during launch. Normally the ailerons and flaps are drooped about 20-30, with the flaps drooped slightly more to prevent tip-stalling on tow. The elevator can also be offset in order to trim out any pitch changes caused by the flap and aileron presets.

Press the **UP** or **DOWN** key to select the STARTOFS screen. Press "+" or "-" key to change the select value. Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 10. 15SPEEDOFS

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the SPEEDOFS menus, and press MENU key for short into next submenu.

Press UP/DOWN key to select the SPEEDOFS screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### SPEEDOFS:

The speed function is used to offset the aileron, elevator, and flap servos for minimum drag in cruise and high-speed flight. Normally the ailerons and flaps are raised about 3-5%.

Press the **UP** or **DOWN** key to select the SPEEDOFS screen. Press "+" or "-" key to change the select value. Press the **MENU** key to save and return last menu. Press the **EXIT** key to not keep and return last menu.

## 10. 16DISPLAY

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the DISPLAY menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the TEST (ON or OFF).

Press MENU or EXIT key return last menu.



### DISPLAY:

Display radio's output to channels 1-8.

The servo submenu includes two features:

Real-tune bar-graph display to demonstrate exactly what commands the transmitter is sending to the servos. (This can be particularly handy in setting up models with complicated mixing functions, because the results of each stick, lever, knob, switch input and delay circuit may be immediately seen.)

Servo cycle function to help locate servo problems prior to in-flight failures.

Press the **UP** or **DOWN** key to select the TEST (ON or OFF).

Press the **MENU** key to return last menu.

Press the **EXIT** key to return last menu.

## 10. 17TRAINER

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key choose TRAINER menu, press MENU key for short and enter the page to establish.

Press UP/DOWN key to choose the TRAINER screen.

Press "+" or "-" key to change the select CHANNEL (NORM or FUNC).

Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### TRAINER:

For training novice pilots with optional trainer cord connecting 2 transmitters. The instructor has several levels of controllability.

**NORM:** When the trainer switch is ON, the channel set to this mode can be controlled by the student. The set channel is controlled according to any programming set at the student's transmitter.

**FUNC:** When the trainer switch is ON, the channel set to this mode can be controlled by student, controlled according to any mixing set at the instructor's transmitter.

Press the **UP** or **DOWN** key to select the TRAINER screen.

Press "+" or "-" key to change the select channel NORM or FUNC).

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.



## 10. 18FLAPERON

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the FLAPERON menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the HELL screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key to not keep and return last menu.



### FLAPERON:

The FLAPERON mixing function uses one servo on each of the two ailerons, and uses them for both aileron and flap function. For flap effect, the ailerons raise/lower simultaneously. Of course, aileron function (moving in opposite directions) is also performed.

Press the **UP** or **DOWN** key to select the FLAPERON screen.  
Press the "+" or "-" key to change the select FLAPERON value.  
Press the **MENU** key to save and return last menu  
Press the **EXIT** key to not keep and return last menu

## 10. 19ELEVON

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.

Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.

Press UP/DOWN key select the ELEVON menus, and press MENU key for short into next submenu.

Press the UP or DOWN key to select the ELEVON screen.

Press "+" or "-" key to change the select value.

Press MENU key for short to keep result and return last menu. Press EXIT key to not keep and return last menu.



### ELEVON:

Used with delta wings flying wings and other tailless aircraft that combine aileron and elevator functions using two servos one on each elevon. The aileron/elevator responses of each servo can be adjusted independently. This is also popular for ground model use such as tanks which drive two motors together for forward and one motor forward/one backward for turning.

#### Adjustability:

Requires use of CH1 and CH2

Independently adjustable aileron travel allows aileron differential.

Independently adjustable elevator travel allows for differential in up vs down travel.

Press the **UP** or **DOWN** key to select the ELEVON screen.  
Press "+" or "-" key to change the select ELEVON value.  
Press the **MENU** key to return last menu.  
Press the **EXIT** key to return last menu.

## 10. 20AUX-CH

GLID

### STEPS:

Under the state of the initial picture, press MENU key for long, access the main menu.



Press UP/DOWN key select the FUNC SETTING menus, and press MENU key for short into next submenu.



Press UP/DOWN key select the AUX-CH menus, and press MENU key for short into next submenu.



Press UP/DOWN key to choose the AUX-CH screen.



Press "+" or "-" key to select input channels.



Press MENU key for short to keep result and return last menu. press EXIT key for short to not keep and return to last menu.



### AUX-CH:

Defines the relationship between the transmitter controls and the receiver output for channels 5-9. Also, the ch9 servo reverse is used to change the ch9 servo direction.

Press the **UP** or **DOWN** key to select the AUX-CH screen.

Press "+" or "-" key to select input channels.

Press the **MENU** key to save and return last menu.

Press the **EXIT** key to not keep and return last menu.

**Note** that the ch9 functions are only visible in the AUX-CH screen when PCM modulation is selected. The ch9 is not supported in PPM modulation.