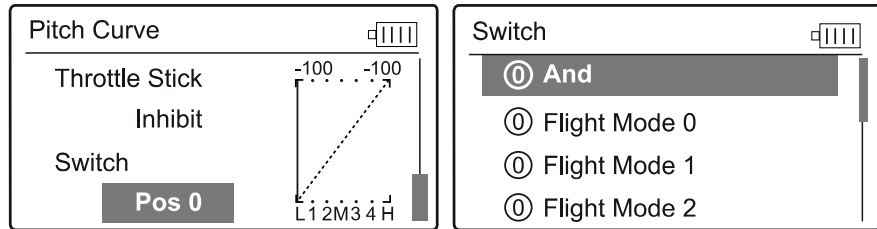**(5) Switch Selection**

When the item Throttle Stick is set in Inhibit, it is possible to switch between Pos 0 and Pos 1 by Switch. Press UP or DN to select "Switch". Press ENT to enter Switch interface, press UP or DN to choose desired item. Press ENT to confirm, the desired item whose left side will be changed into "1" from "0". If two or more items are selected, the item And should be selected, whose left side should be changed into "1" from "0". Press EXT after finished it.

```
Pitch Curve              ◁|||||
    Throttle Stick      -100   -100
          Inhibit
    Switch
        Pos 0           L 1 2M3 4 H
```

```
Switch                   ◁|||||
    ⓪ And
    ⓪ Flight Mode 0
    ⓪ Flight Mode 1
    ⓪ Flight Mode 2
```
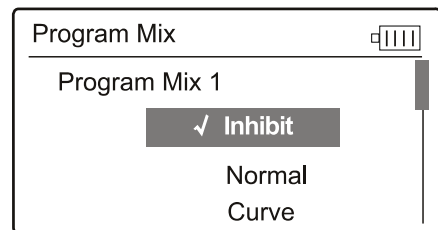
3.17 Program mix

There are 8 series of program mix, mix channels and values are adjustable.
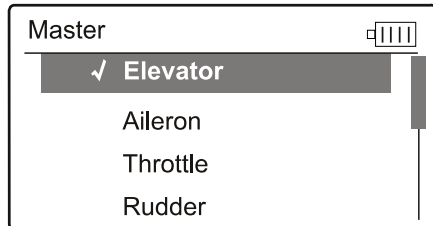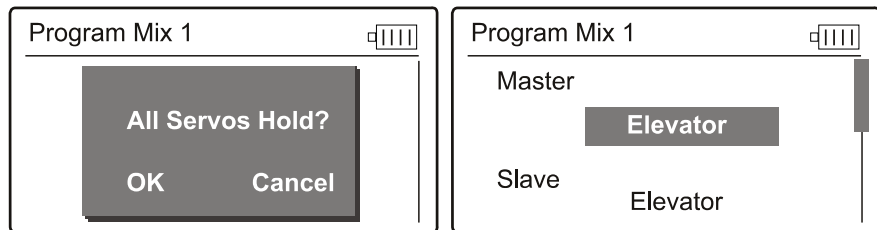
Setting Method:

Press ENT enter to Main Menu. Press UP or DN select function, press ENT to enter function menu, then press UP or DN select "Program Mix". And press ENT to program Mix setting and current status (default setting is "Inhibit") interface. Press R or L to choose Inhibit, Normal or Curve.

Take "program mix 1" for example, there are "Normal" and "Curve" setting.

```
Program Mix              ◁|||||
    Program Mix 1
        √ Inhibit
          Normal
          Curve
```

(1) The "Normal" setting of "program mix"

Press UP or DN select the "Normal"setting, Press ENT button then pop up "All Servos Hold?" Press R or L to choose OK or Cancel. If "OK" selected, all the servos will be locked in the current status, if "Cancel" selected, all servos are unlocked. Press ENT enter to Program mix setting interface.
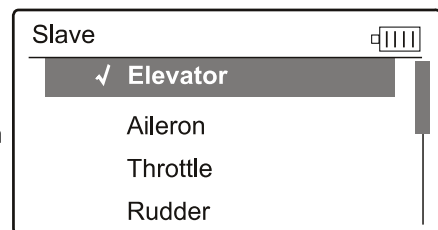
```
Program Mix 1            ◁|||||

        All Servos Hold?

        OK        Cancel
```

```
Program Mix 1            ◁|||||
    Master
            Elevator
    Slave
            Elevator
```

```
Master                   ◁|||||
    √ Elevator
      Aileron
      Throttle
      Rudder
```
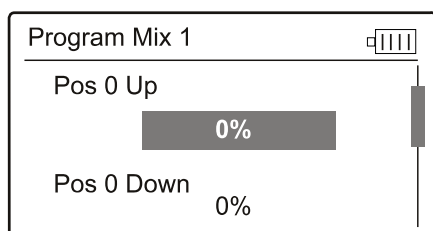
(1.1) Master channel setting

Press UP or DN to move the navigatioal mark to select Master option and press ENT to Master interface. Press UP or DN to select the desired channel and press ENT to make a "√". Press EXT to be back to Program Mix 1 interface.

(2) Slave channel setting

Press UP or DN to move the navigatioal mark to select Slave option and press ENT to Slave interface. Press UP or DN to select the desired channel and press ENT to make a "√". Press EXT to be back to Program Mix1 interface.

(1.3) Gain setting: Take Elevator at Master as an example.

```
Slave                    ◁|||||
    √ Elevator
      Aileron
      Throttle
      Rudder
```

```
Program Mix 1            ◁|||||
    Pos 0 Up
            0%
    Pos 0 Down
            0%
```

(1.3.1) Pos 0 UP:

Mix amount setting when elevator stick moved upward.

Press UP or DN to move the navigational mark to select "Pos 0 Up" item. Press R or L to increase or decrease, separately, the mix amount. It is possible to reverse mix direction through changing the plus or minus sign before amount. The adjustable range is ±125%.

(1.3.2) Pos 0 Down:

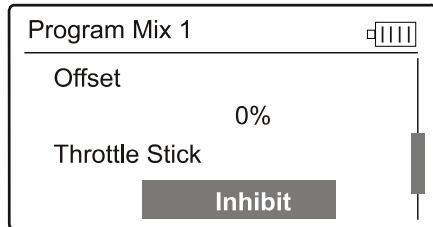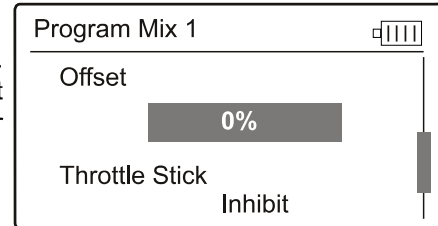Mix amount setting when elevator stick moved downward.

Press UP or DN to move the navigational mark to select "Pos 0 Down" item. Press R or L to increase or decrease, separately, the mix amount. It is possible to reverse mix direction through changing the plus or minus sign before amount. The adjustable range is ±125%.

(1.3.3) Pos 1 Up, Pos 1 Down setting method refer to (1.3.1) Pos 0 Up setting .

(1.3.4) Offset Setting

This function can make Slave begin to mix through the corresponding Lever switch from a certain point as the starting point.

Press UP or DN to move the navigational mark to select "Offset" item. Press R or L to increase or decrease, separately, the mix amount. It is possible to reverse Offset direction through changing the plus or minus sign before amount. The adjustable range is ±100%.

```
┌─────────────────────────────────┐
│ Program Mix 1           ⊲||||    │
│   Offset                         │
│            ┌──────────────┐      │
│            │     0%       │   █  │
│            └──────────────┘   █  │
│   Throttle Stick              █  │
│                 Inhibit          │
└─────────────────────────────────┘
```
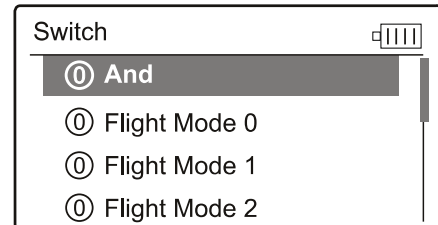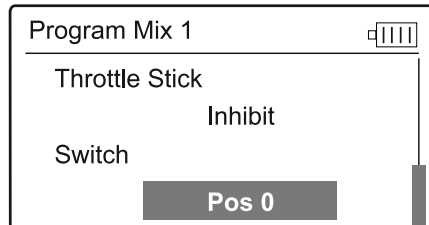
(1.4) Throtte Stick

The switch between Pos 0 and Pos 1 can be realized by setting the position of throttle stick. Press UP or DN to make navigation mark to select "throttle stick" setting, press R or L to change the value or inhabit. Change value can set throttle stick postion.The default setting is "inhabit". The adjustable range is from 0.0% to 100.0%

```
┌─────────────────────────────────┐
│ Program Mix 1           ⊲||||    │
│   Offset                         │
│              0%                  │
│   Throttle Stick              █  │
│            ┌──────────────┐   █  │
│            │   Inhibit    │      │
│            └──────────────┘      │
└─────────────────────────────────┘
```
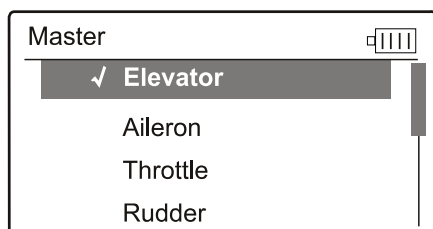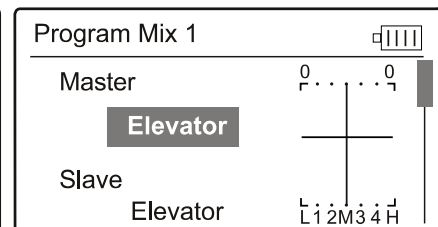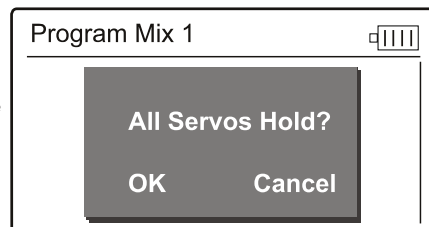
(1.5) Switch Selection

When the item Throttle Stick is set in Inhibit, it is possible to switch between Pos 0 and Pos 1 by Switch. Press UP or DN to select "Switch". Press ENT to enter Switch interface, press UP or DN to choose desired item. Press ENT to confirm, the desired item whose left side will be changed into "1" from "0". If two or more items are selected, the item And should be selected, whose left side should be changed into "1" from "0". Press EXT after finished it.

```
┌─────────────────────────────────┐
│ Program Mix 1           ⊲||||    │
│   Throttle Stick                 │
│                 Inhibit          │
│   Switch                      █  │
│            ┌──────────────┐   █  │
│            │    Pos 0     │      │
│            └──────────────┘      │
└─────────────────────────────────┘
```

```
┌─────────────────────────────────┐
│ Switch                  ⊲||||    │
│  ┌───────────────────────┐       │
│  │ ⓪ And                 │   █   │
│  └───────────────────────┘   █   │
│    ⓪ Flight Mode 0               │
│    ⓪ Flight Mode 1               │
│    ⓪ Flight Mode 2               │
└─────────────────────────────────┘
```

(2) Setting Method for Curve in Program Mix1

Press UP or DN to select Curve, press ENT to confirm. Then the interface pop up "All Servos Hold?", press R or L to choose OK or Cancel. If select OK, all the servos will be locked in the current status, if select Cancel, all servos are unlocked. Press ENT to setting interface of program Mix1.

```
┌─────────────────────────────────┐
│ Program Mix 1           ⊲||||    │
│      ┌──────────────────┐        │
│      │  All Servos Hold? │       │
│      │                   │       │
│      │  OK       Cancel  │       │
│      └──────────────────┘        │
└─────────────────────────────────┘
```

```
┌─────────────────────────────────┐
│ Program Mix 1           ⊲||||    │
│   Master          0·····0        │
│        ┌──────────┐  ┆           │
│        │ Elevator │──┼──         │
│        └──────────┘  ┆           │
│   Slave              ┆           │
│        Elevator   L1 2M3 4H      │
└─────────────────────────────────┘
```

```
┌─────────────────────────────────┐
│ Master                  ⊲||||    │
│   ┌──────────────────────┐       │
│   │ √ Elevator            │   █   │
│   └──────────────────────┘   █   │
│       Aileron                    │
│       Throttle                   │
│       Rudder                     │
└─────────────────────────────────┘
```
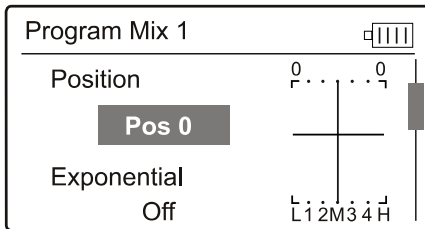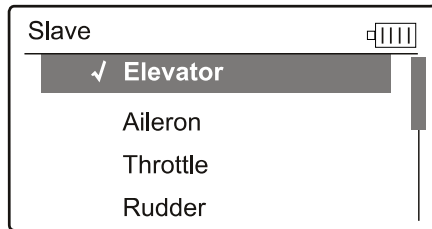
(2.1) Master channel setting

Press UP or DN to move the navigatioal mark to select Master option and press ENT to Master interface. Press UP or DN to select the desired channel and press ENT to make a "√". Press EXT to be back to Program Mix 1 interface.
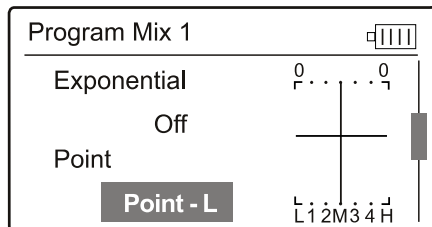
(2.2) Slave channel setting

Press UP or DN to move the navigatioal mark to select Slave option and press ENT to Slave interface. Press UP or DN to select the desired channel and press ENT to make a "√". Press EXT to be back to Program Mix1 interface.

```
Slave                    ⊲IIII
    √ Elevator
    Aileron
    Throttle
    Rudder
```

```
Program Mix 1            ⊲IIII
    Position        0 . . , . . 0
         Pos 0
    Exponential
         Off            L1 2M3 4 H
```

(2.3) Position

There have two options:Pos 0 and Pos 1.Press "UP" or "DN"to select the desired position.

(2.4) Exponential Curve

Press UP or DN to choose the setting item of "Exponential" .There are On or Off option when you press the R or L buttoms. Select On for smooth changes, and Off for changes in the form of fold ling in Exponential curve, respectively.

```
Program Mix 1            ⊲IIII
    Position        0 . . , . . 0
         Pos 0
    Exponential
         Off            L1 2M3 4 H
```

```
Program Mix 1            ⊲IIII
    Exponential     0 . . , . . 0
         Off
    Point
         Point - L      L1 2M3 4 H
```

(2.5) Point Setting

Press UP or DN to move the navigation mark of Point option. Press R or L, there are 7 piont options including "Point-L", "Point-1", "Point-2", "Point-M", "Point-3", "Point -4" and "Point-H". Select the point you want to set.
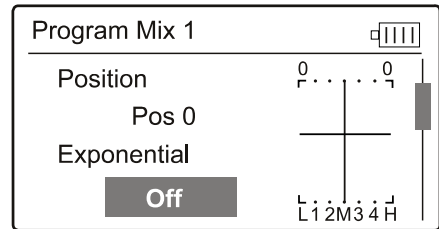
(2.6) Status setting

(There is no Status options when the piont is Point-L or Point-H) After selecting the point that you want to set, press UP or DN to move the navigational mark to Status item. Press R or L, there are two options of Inhibit and Active. Select Inhibit for unchanging the current amount (the default setting is Inhibit).

```
Program Mix 1            ⊲IIII
    Point           0 . . , . . 0
         Point - 1
    Status
         Inhibit        L1 2M3 4 H
```

```
Program Mix 1            ⊲IIII
    Output          0 . . , . . 0
         0%
    Switch
         On             L1 2M3 4 H
```
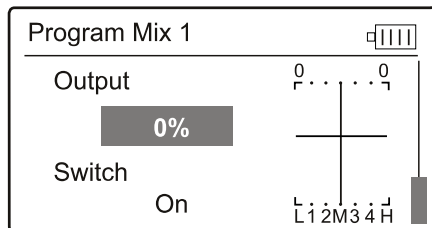
(2.7) output setting

When the Status option is Active, the Output option will be listed.Press UP or DN to move the navigational mark to Output. Press R or L to increase or decrease, respectively, the output amount. It is possible to reverse the mix direction by changing the plus or minus sign before the amount. The adjustable range is ±100%.
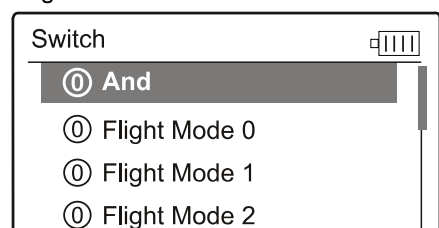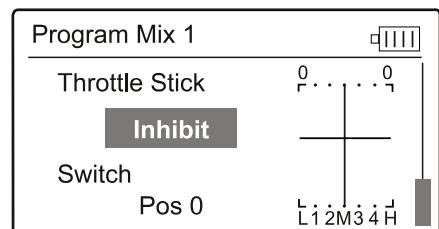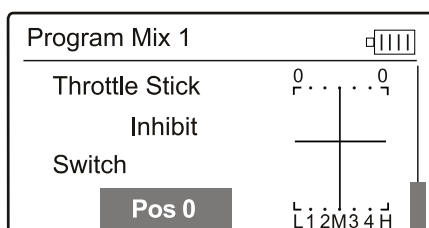
(2.8) Throtte Stick

The switch between Pos 0 and Pos 1 can be realized by setting the position of throttle stick. Press UP or DN to make navigation mark to select "throttle stick" setting, press R or L to change the value or inhabit. Change value can set throttle stick postion.The default setting is "inhabit". The adjustable range is from 0.0% to 100.0%

```
Program Mix 1            ⊲IIII
    Throttle Stick  0 . . , . . 0
         Inhibit
    Switch
         Pos 0          L1 2M3 4 H
```

(2.9) Switch Selection

When the item Throttle Stick is set in Inhibit, it is possible to switch between Pos 0 and Pos 1 by Switch. Press UP or DN to select "Switch". Press ENT to enter Switch interface, press UP or DN to choose desired item. Press ENT to confirm, the desired item whose left side will be changed into "1" from "0". If two or more items are selected, the item And should be selected, whose left side should be changed into "1" from "0". Press EXT after finished it.

```
Program Mix 1            ⊲IIII
    Throttle Stick  0 . . , . . 0
         Inhibit
    Switch
         Pos 0          L1 2M3 4 H
```

```
Switch                  ⊲IIII
    ⊚ And
    ⊚ Flight Mode 0
    ⊚ Flight Mode 1
    ⊚ Flight Mode 2
```

3.18 Monitor

This function can display the current status and positions of all the channels' outputs, and check the current working status of each channel.

Press ENT to enter Main Menu, and then press UP or DN to move the navigational mark to select Function Menu.Press ENT to enter the Function Menu and then press UP or DN to select servo Monitor and press ENT to enter the monitor interface for checking the current working status of each channel. Press EXT to exit .
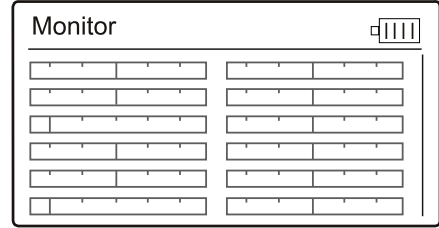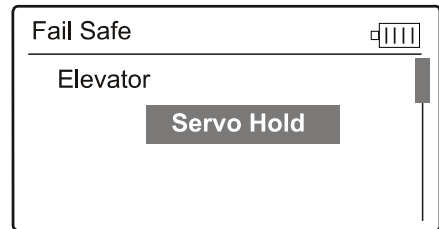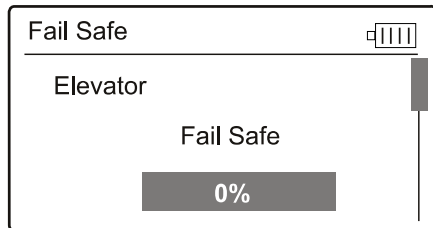
3.19 Fail safe

There are two possibilities for use if the transmission signal is under abnormal condition. The first one is to lock the last action data received; the second one is to execute the pre-set data which is pre-set. The default setting is Servo Hold.

Setting method:

Press ENT to enter the Main Menu, and then press UP or DN to move the navigational mark to select Function Menu. Press ENT to enter the Function Menu then press UP or DN to select Fail Safe and press ENT to enter the Fail Safe interface.Take the item Elevator as an example to explain.

Press UP or DN to select Elevator on the Fail Safe interface, then press R or L to change the status of Servo Hold into Fail Safe(If you want to keep Servo hold status, there is no need to re-set). There is a expanded sub-item blow. Press UP or DN to select 0%, then press R or L to increase or decrease, respectively, the position amount which centers on the neutral point of servo. The available value is 125%, respectively. 0% is the neutral point of servo.

The setting methods for other channels are same as above.

Press EXT to exit after finished.

Note: checking whether all the actions when fail safe happened are correct, is a must after the setting is finished. It is dangerous to use full throttle, especially after fail safe taken place.

3.20 Sensor View

Setting method:Press ENT to enter the Main Menu and press UP or DN to move the navigational mark to select Function Menu.Then press ENT to enter the Function Menu and press UP or DN to select Sensor View, then press ENT to enter the Sensor View interface, like below pictures. If all the sensors disconnect, telemetry signal lost, there will be inhibits shown on the view. If all work normal, all the measured data will be shown.
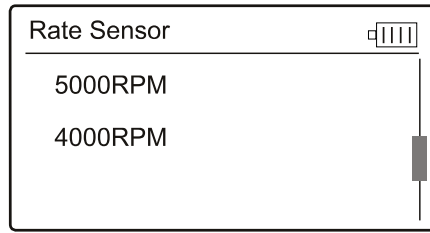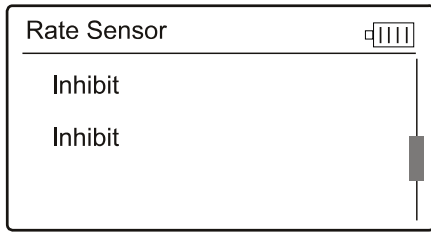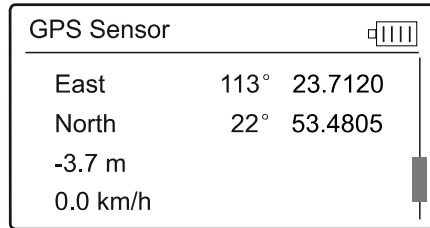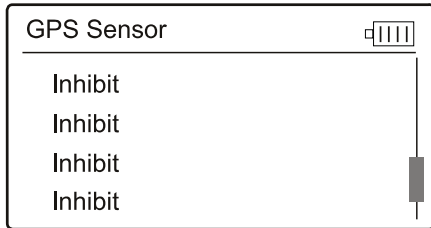
(1) Voltage:Show 3 diffferent measured voltage value;
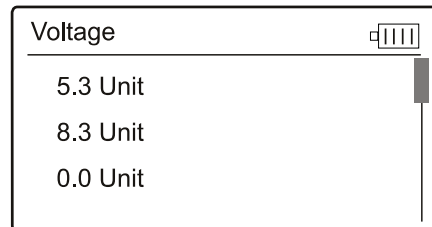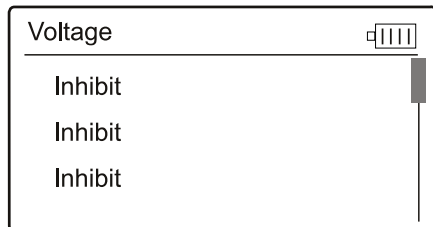
(2) Temperature: Show 4 different measured temperature value;
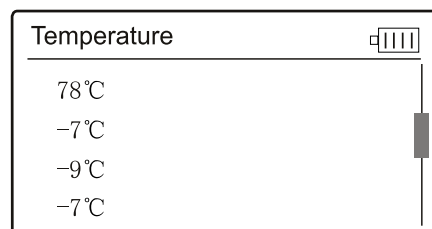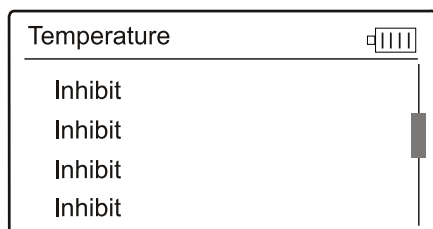
(3) Rate Sensor:Show 2 different measured RPM value;

Rate Sensor	
Inhibit	
Inhibit	

Rate Sensor	
5000RPM	
4000RPM	

(4) GPS Sensor:Press UP or DN to turn to GPS function, show located date, time, longitude, latitude, altitude and speed;

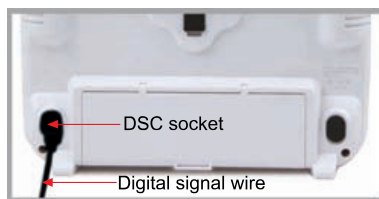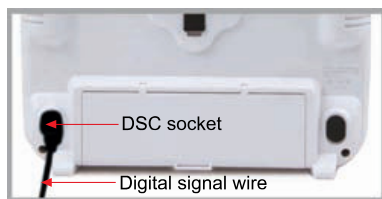| GPS Sensor	
Inhibit	
Inhibit	
Inhibit	
Inhibit	

GPS Sensor		
East	113°	23.7120
North	22°	53.4805
-3.7 m		
0.0 km/h		

3.21 Trainer

Two DEVO 12E transmitters working together can execute the training function to meet the requirements for the beginner. The setting method is shown as below:

(1) Data copy

First, use the wireless copy function between two DEVO 12E to copy the main transmitter's model data to the trainee's transmitter, this promise the model data between two transmitters is same. Refer the copy method to the second part of helicopter "2.4 model wireless copy" and do the following steps:

(2) Linkage

Linkage icon at trainee's DEVO 12E

Insert the signal wire from the trainer's transmitter into the DSC socket of the trainee's transmitter. Turn on the transmitter and a linkage icon will be shown on the boot screen.


DSC socket
Digital signal wire
DSC socket
Digital signal wire

deVention 2.4GHz 00:00 0.0%   Model 1
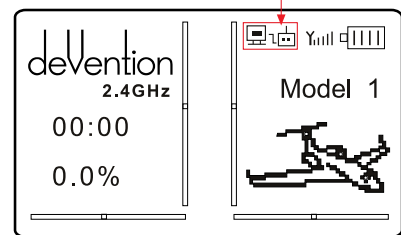
linkage icon

Turn on the power of the trainer's radio. Find out the trainee's model data, and then let the trainer's Radio bind with the aircraft model and fly it normally. Then turn off the power.Insert the other end of the digital signal wire into the trainer's DEVO 12E, and then turn on its power. A linkage icon will be shown as below:

Trainee is off and trainer is working

deVention 2.4GHz 00:00 0.0%   Model 1
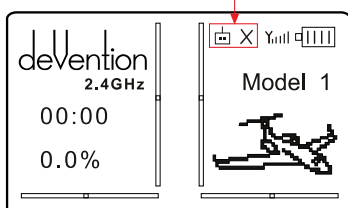
Trainee is working and trainer is off

deVention 2.4GHz 00:00 0.0%   Model 1
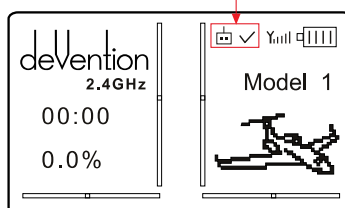
Trainer icon

Training status display: when the trainer's icon becomes into "X", the trainee stops flying and the trainer is working; when the trainer's icon turns into"✓", the trainee is flying and the trainer is in leisure.

(3) Usage method

The training switch can be freely switchable between Left trim and Right trim. The default setting is Right trim. See the right illustration:
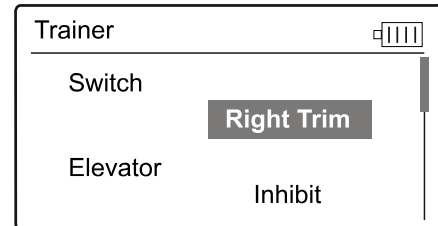
Left Trim   Right Trim
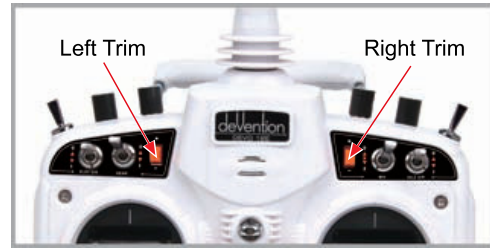
During flight, if the trainer pushes Right Trim once, the linkage icon will be shown as "√" that means the control right is moved to the trainee from Trainer. If trainer pushes Right Trim once again, the linkage icon will be shown as "X" that means the trainer takes back the control right from the trainee.

(4) Setting for training function channels

Trainee is available to get full or part of flight control power to the aircraft model via setting the training function channel in the trainer's radio. Below is the setting method:

Press the ENT to enter Main Menu, and then press UP or DN to move the navigational mark to select Function Menu. Then press ENT to enter the Function Menu and press UP or DN to select "Trainer" , then press ENT to enter the Trainer interface. The available channels are shown below, and the current status of trainer switch is also shown there.

Trainer

Switch

Right Trim

Elevator

Inhibit

Trainer switch selection:Press UP or DN to select the switch option; press R or L to select the switch which you want. It includes right and left trim.The default setting is Right trim.

Channel selection:Press UP or DN to select the channel option; Press R or L to select the channel(s) which you want to grant to trainee. The channel(s) you have selected will be activated as "Active". The channels which are not granted to trainee will be kept inhibited. The default setting is "Inhibit". Press EXT to exit.

3.22 Timer

There are two timers which can be set as stopwatch and countdown, respectively. Each timer can be operated by switch or by shortcut.

Press ENT to enter Main Menu, and then press UP or DN to move the navigational mark to select Function Menu. Then press ENT to enter the Function Menu and press UP or DN to select "Timer", then press ENT to enter Timer interface. The timing range of stopwatch is from 0 to 59:59 (59 minutes 59 seconds).The default setting is stopwatch.

Timer

Type

Stopwatch

Timer

Type

Countdown

Set Time

10:00
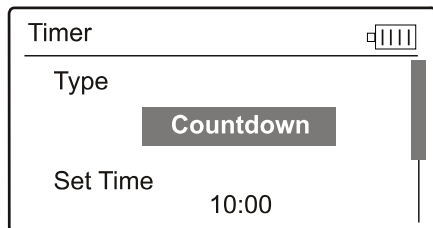
(1) Countdown setting

If you need countdown time manner, press R or L to select the countdown.There is an expand sub-menu set time item.Press UP or DN to move the navigational mark to select the option of Seting time item. Press R or L to set the countdown time. The settable countdown time range is from 00:05 to 59:55.

(2) Switch selection

Press UP or DN to move the navigational mark to Switch.There are Inhibit and available switch options, available switch can be selected by press L or R. It includes FMOD1,2, FMOD2, MIX1,2, MIX2, ELEV D/R,AILE D/R, RUDD D/R, GEAR SW, SPS0 SW, SPS1 SW, SPS2 SW and SPS3 SW. We can select the desired item except these items of SPS0 SW, SPS1 SW, SPS2, and SPS3 which should be previously set at Stick Position Switch at Model Menu(refer to "2.8 Stick Position Switch"). Press EXT to exit after finished.

(3) Usage of timer

Press UP or DN in main panela. It's possible to start Timers by pressing UP key for one time, and to pause it by pressing it the second time. Press DN to clear timer. It's ok to control time by Switch when time setting is finished on switch. Timer will be shown in main intereface, as right illustration:
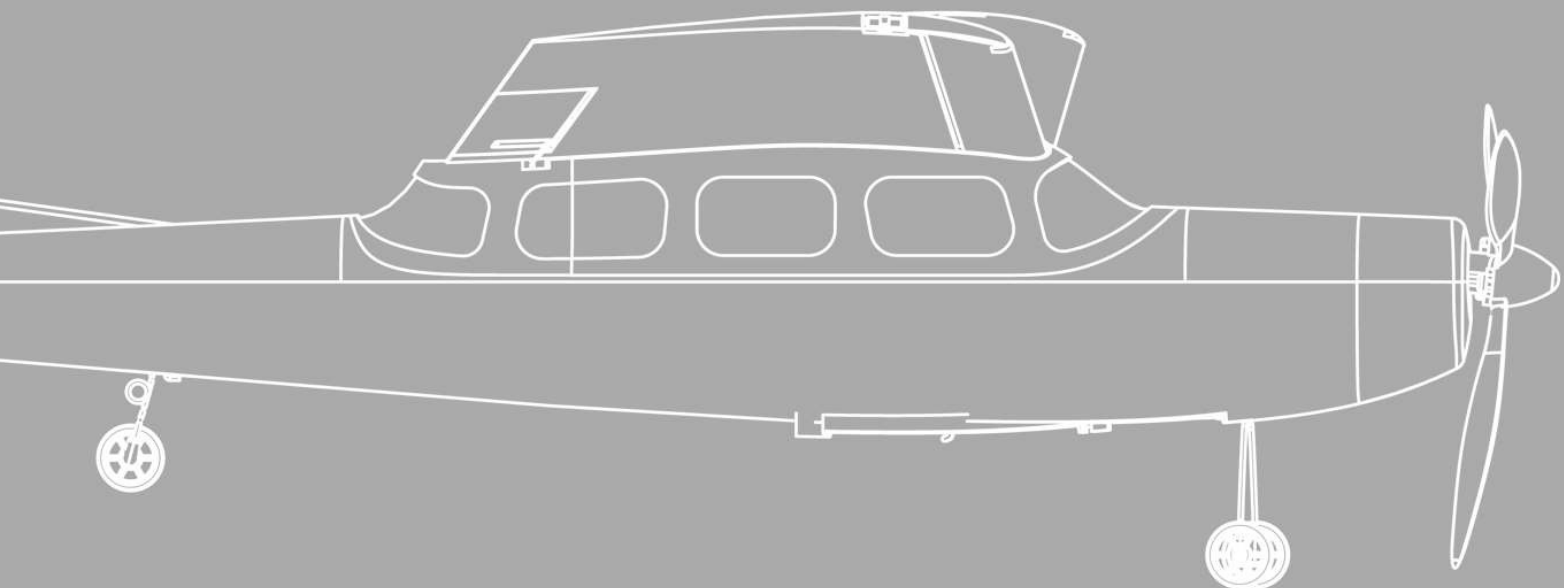
deVention
2.4GHz

00:00
↑Timer
0.0%

Y₀₁₁

Model 1
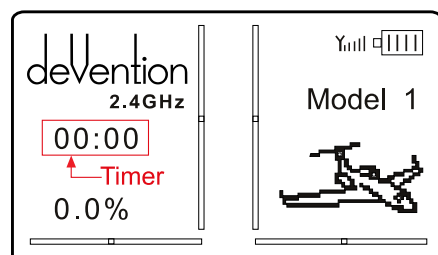
Part four
Glider

All the functional settings, which are relative to the operation system of DEVO 12E itself, are fully integrated in System Menu. They include Language, Display, Buzzer, vibrator, Stick Mode, Stick Direction, Stick calibration, Battery, and About.

1.0 System Menu

All the functional settings, which are relative to the operation system of DEVO 12E itself, are fully integrated in System Menu. They include Language, Display, Buzzer, vibrator, Stick Mode, Stick Direction,Stick calibration, Battery, and About.
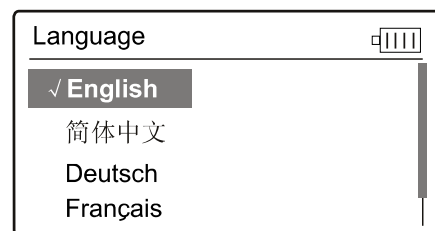
Below is the boot screen of Glider:
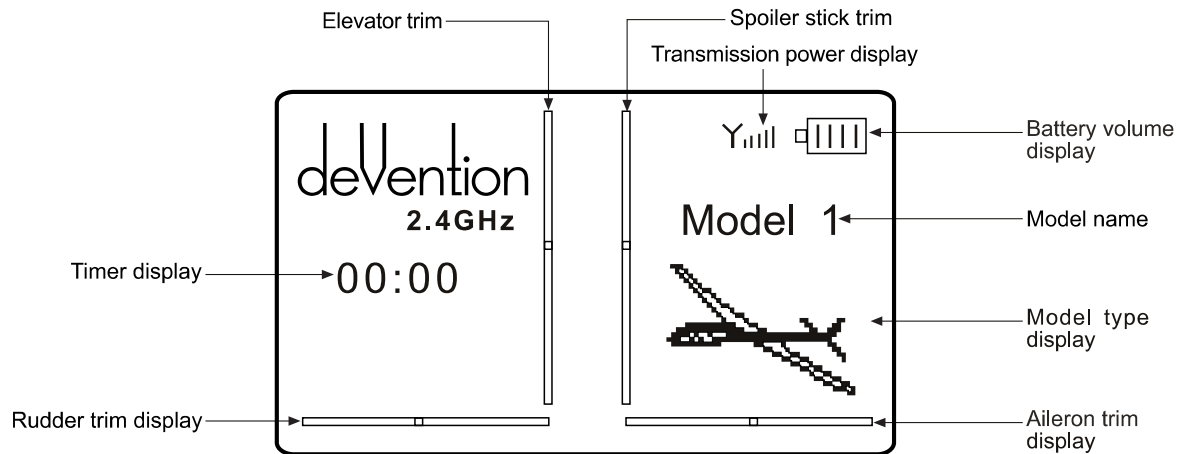

1.1 Language setting

Press ENT to the Main Menu, press UP or DN to select System Menu, then press ENT to System Menu.

Press UP or DN to select "Language" and press ENT to the Language setting interface. Press UP or DN to select the language that you want. A "√" will be shown on the screen after selected. Press EXT to exit.

1.2 Display

Press ENT to the Main Menu, press UP or DN to select System Menu, then press ENT to System Menu. Press UP or DN to select "Display" and press ENT to the Display setting interface.
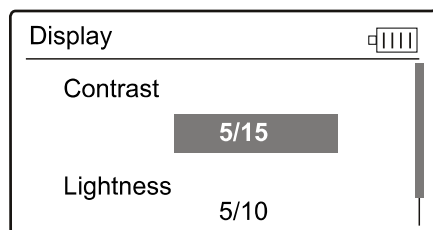
Three items are available to be set. Below are the setting methods for them:

(1) Backlight contrast: the backlight contrast is adjustable by pushing UP or DN to move the navigational mark to the digits after Contrast. Press R key to increase the backlight contrast, while press L to decrease it.

(2) Backlight lightness: the backlight lightness is adjustable by pressing UP or DN to move the navigational mark the digits after Lightness.The power consumption will be increased if the backlight lightness is too bright and the battery cruise duration will be shortened.Press R or L to increase or decrease the lightness. When the value is one means turn off the backlight.

(3) Backlight time out: it is possible to set the duration which LCD stays at highlight in the form of "Always on" or any period from 5 to 60 seconds with an interval of 5 seconds.Press UP or DN to move the navigational mark to select the digits after Timeout. Press L to short the time of backlight duration or keep it in the form of "Always on" while push R or prolong the time. The maxium is 60s.

Press EXT to exit.

1.3 Buzzer warning

Press ENT to the Main Menu, press UP or DN to select System Menu, then press ENT to System Menu.
Press UP or DN to select "Buzzer" and press ENT to the Buzzer setting interface.

```
Buzzer                    ◁|||||
    Status

              On

    Spoiler Stick
              Inhibit
```
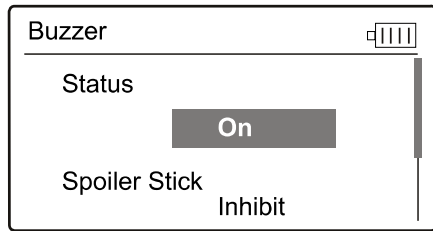
(1) Status:There are On and off two status on the Buzzer interface. Pressing UP or DN to move the navigational mark to the status option. Press R or L to change the On or Off status. It includes Spoiler stick,Knobs Midpoint and Tone items under the status is On.

(2) Spoiler Stick: Press UP or DN to move the navigational mark to "Spoiler Stick" item then press R or L to change the status from Inhibit to Active. When Buzzer is at the status of On, if Spoiler Stick is set as "Active", a relative musical scale will make response when moving the Spoiler Stick. You can judge the position of the Spoiler Stick according to the different musical scales. Also, it can be set as Inhibit.
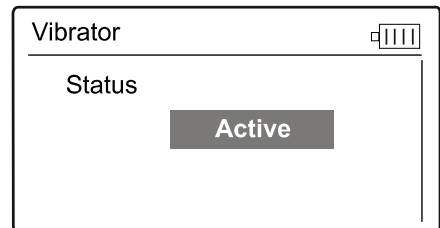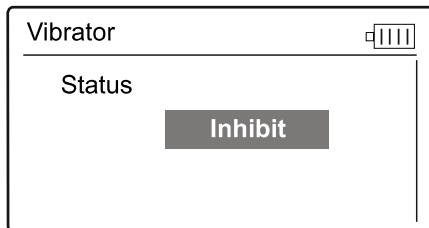
(3) Knobs midpoint: When Buzzer is at the status of On, if Knobs is set as "Active", there is buzzer sound when you turn the AUX4 and AUX5 to the midpoint. If you don't need the buzzer sound, please change the status to Inhibit.

(4) Tone: the tone is composed of 10 grades. You can choose the favorite one according to your interests. Press UP or DN to move the navigational mark to Tone item and press R or L to make a listening test. Press EXT to exit.
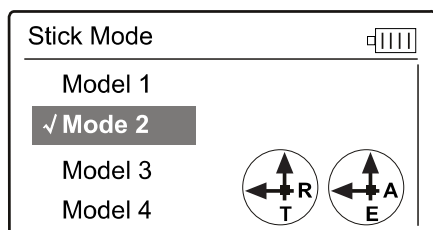
1.4 Vibrator

The vibrator used as an alarm function to remind the users.

Press ENT to the Main Menu, press UP or DN to select System Menu. And then press ENT to t System Menu, press UP or DN to select Vibrator.Press ENT to Vibrator setting interface. There are two status as Inhibit and Active. Press R or L to select Active if need. Press EXT to exit after finished.

```
Vibrator               ◁|||||        Vibrator               ◁|||||
    Status                               Status

           Inhibit                              Active
```
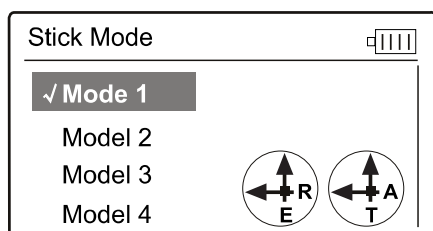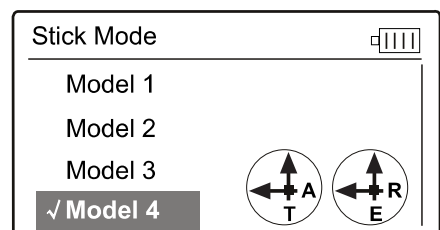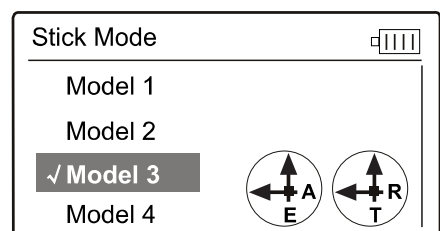
1.5 Stick Mode

Press ENT to Main Menu, press UP or DN to select System Menu, and then press ENT to the System Menu, press UP or DN to select Stick Mode, and press ENT to stick Mode setting interface.

```
Stick Mode             ◁|||||        Stick Mode             ◁|||||
    Model 1                              Model 1
  √ Mode 2                               Model 2
    Model 3        R      A              Model 3        A      R
    Model 4        T      E            √ Model 4        T      E
```

MODE 2 and MODE 4 are listed in left-hand throttle.

```
Stick Mode             ◁|||||        Stick Mode             ◁|||||
  √ Mode 1                              Model 1
    Model 2                              Model 2
    Model 3        R      A            √ Model 3        A      R
    Model 4        E      T              Model 4        E      T
```

MODE 1 and MODE3 are listed in right-hand throttle.

Select the stick mode according to the throttle mode showing on the screen. DEVO 12E offers 4 stick modes, please refer to "8.0 Switches exchange between left-hand and right-hand throttles. Press EXT to exit after finished.

1.6 Stick Direction

Press ENT to Main Menu, press UP or DN to select System Menu, and then press ENT to the System Menu, press UP or DN to select Stick Direction, and press ENT to stick direction setting interface.

Stick Direction:There are four items available as Elevator, Aileron, Spoiler and Rudder. Press UP or DN to select the stick which will change direction, and press R or L to change the direction. The factory setting is Normal.

| Stick Direction |
| --- |
| Elevator |
| **Normal** |
| Aileron |
| Normal |
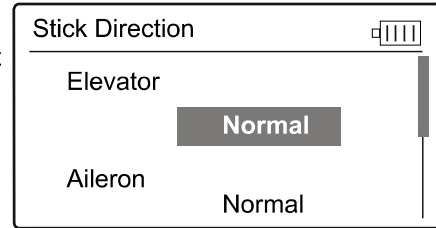
1.7 Stick Calibration

It is a function to re-calibration when stick unusual.

Calibration method:

Press "ENT" to the Main Menu, press UP or DN to select System Menu, then press ENT to System Menu. Press UP or DN to select Stick Calibration and press ENT to the Stick Calibration setting interface.Press ENT to enter Calibration,and see the left illustration:

Stick Calibration
ENT to Calibrate

Stick Calibration
ENT to Finsh

| Stick Calibration |
| --- |
| **ENT to Calibrate** |
| Calibration Success! |
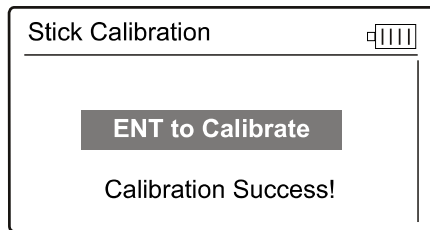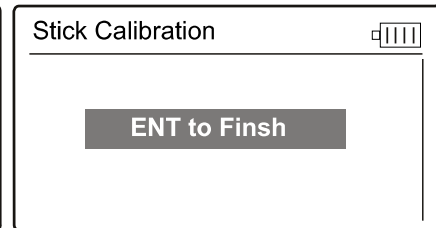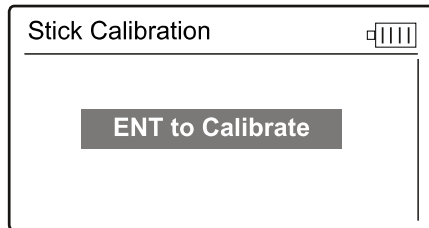
Clockwise or counter clockwise mechanically move the right stick and left stick from minimum levels to maximum levels several times, and then return the stick to the neutral positions, respectively.It will shows the calibration is successful after you press ENT to confirm.

Press EXT to exit after finished.

1.8 Battery

Battery voltage can set up the warning value for radio battery in lower voltage.

Press ENT to the Main Menu, press UP or DN to select System Menu, then press ENT to System Menu. Press UP or DN to select "Battery" and press ENT to the Battery setting interface. Warning voltage value can be changeable by R or L button.

Battery
Alarm Voltage
8.0V
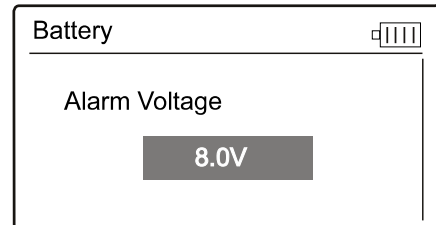
1.9 About

Press "ENT" to the Main Menu, press UP or DN to select System Menu, then press ENT to System Menu. Press UP or DN to select About and press ENT to the About setting interface.

Press EXT to exit after finished.

About
Software
Ver. 1.0A
Library
Ver. 1.0
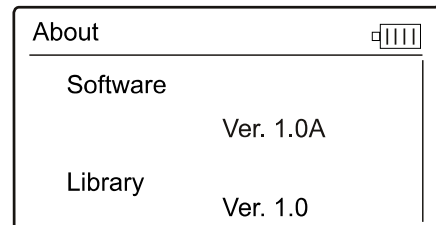
2.0 Model Menu

Model Menu manages all the model data saved in DEVO 12E. It includes Model Select, Model Name, Model Copy, Model Transmit, Model Receive, Model Reset, Type Select, Trim System, Stick Position Switch, Device Select, Device Output, Wing Type, Power Amplifier, Fixed ID and Sensor setting.