Altitude Permit Manual

Altitude permit is a device to limited the altitude and motive power time. It was installed on the model to check the real time of altitude and motive power time. When the altitude and time arrival your setting, it will cut off the signal of throttle or make the throttle to the lowest.

The programmer unit used to read the data of altitude permit and change the setting of altitude permit. It was used big and backlit LCD screen, when the model down to the ground, please connect the altitude permit to programmer unit and read the maximum height of your last fight, launch altitude, and the data of time which arrivals at launch altitude or setting the parameter of altitude permit. USB adapter used to upload the flight data to PC and check the data from FD-A software.

Base Information：

Altitude permit	Altitude permit	Programmer unit
Dimensions	23*15*6mm	53*45*12mm
Weight	3g	23g
Packing	Thermal shrinkage	PVC
Operation	3.5V-8.4V\10mA	3.5V-8.4V\20mA
Working temperature	- 20℃～65℃	- 20℃～65℃
Altitude Permit Range	16m-2763m（51ft-9060ft）	
Time Permit Range	5s-9999s	

Install:

Used the velcro or double faced adhesive tape to make the altitude permit in the internal model plane, and keep it far away from the high temperature of the device, such as battery, ESC. Connecting the 3p JST wire (black red and white) with throttle channel, and connecting the ESC or throttle servo with 3pins on altitude permit, please notice plus-minus; put the four color data wires out of the model fuselage, convenient programmer to altimeter programming.
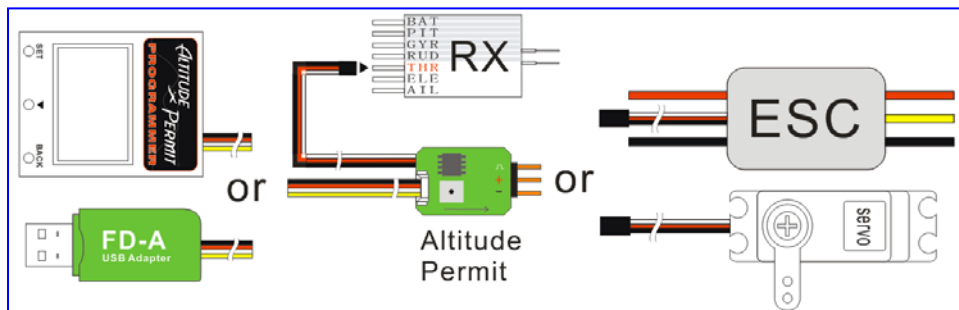
Instruction:

The function of limited altitude and timer are closed when out of factory. Connecting the altitude permit to throttle channel and turn on the transmitter, you can control the throttle channel as usual. Put the throttle channel to the lowest and supply power to model and then connecting the programmer unit with altitude permit. The LCD will displays like the P1, after 2 seconds, it displays as P2

Users press the button under the number corresponding; it will get into the function interface.

Press button 3 then connect 4p wire,the screen backlight will be opened.

 P1   P2

Users press the button under the number corresponding; it will get into the function interface.

1.   If user presses the button 1 and gets into the Read Data interface.

Read the current state of Altitude Permit and data of the last flight. Interfaces will cyclic display between the following four, press the button 2 to change the interface and press button 3 return to the main interface.
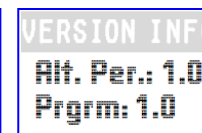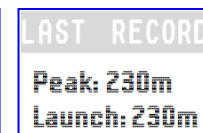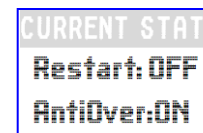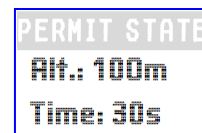
2.   If user presses the button2 and gets into the mode of programmer unit

It has 3 screens information, switch to another setting or next screen settings through the switch button, get into a certain setting by "ok" button and back to the main menu by "Back" button.

2.1. Throttle in idle and altitude at zero
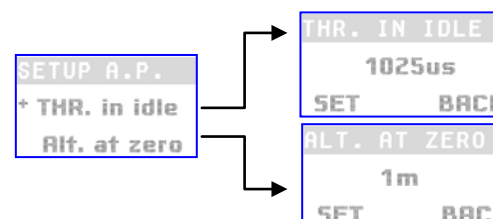
Choose different settings by the switch button and enter into through the "SET" button, when the throttle in the lowest position, the LCD will display the current throttle pulse width. When the throttle in idle press "SET" confirm; and press the "Back" button exit. If you didn't press "SET" button confirm, the

altitude permit will follow the throttle idle that last setting.

The altitude permit on environment with the pressure value to a height of zero , when connecting power, the zero may be float as the flying time .You can check the drift through the altitude zero interface , press the button below 'SET" to get the altitude to be zero and press the BACK button exit.

2.2. Limited altitude and time setting
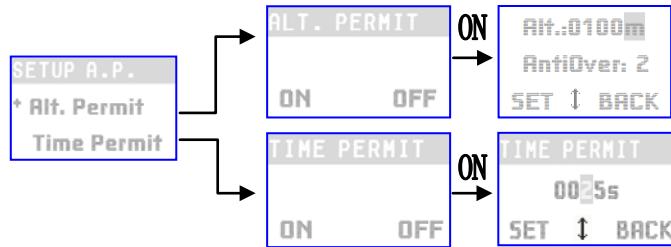
In the limit altitude interface, press the button bellow "OFF" close the limited altitude function and back to the front menu; press the button bellow "ON" enters the limit altitude setting. LCD screen display the current and real limited altitude. During the limit altitude setting, the numerical inverse show, informs the current setting .Change the setting contents by the button bellow " $\updownarrow$ " and switch to another setting by the button bellow "SET". After finished, press the button bellow "BACK" and programmer unit will save setting and exit to 2.2 interfaces.

When your plane reaches the altitude you set, maybe it will not stop climbing instantly. It will overshoot your permit by some amount. The AntiOver setup reduces overshoot by triggering the altitude permit sooner. You can set AntiOver: OFF or 1-9.

Set the limit time interface in the same way.

If opened the limited altitude and time at the same time, first come first served.

2.3. Recontrol and clear the report

If opened the limited altitude and time at the same time, whichever first.
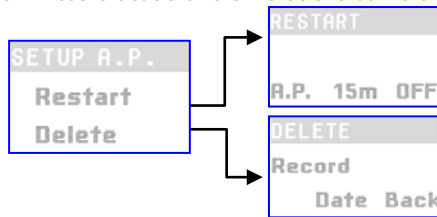
Control interface allow users to set the restart motor altitude as limited, means that it is less than the limit altitude and throttle in idle, then you can get the right to control the throttle again, also user can set 15m or 50ft to restart, the altitude is the minimum height of safe flight; Users can also closed the restart, and model will get control until the ground.

The clear interface is very important in some place, especially in the competition. The organizer will clear all data of competitor's to make it is fairness. There are 3 choices in clear interface, one is to clear the data, including flight maximum height, launch maximum height value, and achieve maximum height duration; the other is to clear all height value relative time, these values used on PC to check the specific flight curve ; the last choice is " Back", not to do anything to exit.

For example: If users open the restart function and the restart setting is A.P. During flight, the model arrivals in the limited altitude, the throttle will be cut off, and if you want to regain the control to motor, you must meet the two conditions:

a.   The flight altitude must less than limited altitude

b.   THR in idle

The aim is to avoid the unpredictable risk that the accelerator suddenly from the lowest to the largest. If you cannot re- control of engine, don't worry, this means at least one of above conditions is not satisfied.

3.   If user press the 3 button and get into1-8s battery test interface

User press the 3 button again and back to the main interface.

Notice:

At the first time use altitude permit, please make sure the current state of altitude permit and read it through the programmer unit. Reference 2.2 project,

Make sure the limited altitude value is OFF, limited time value is OFF, and restart value is OFF; then string the altitude permit into throttle. Check the throttle channel operation is the same or not as normal operation without string altitude permit into throttle. If the operation anomaly, please check the altitude permit setting state is OFF or not. If everything is normal, go to the next step.

Reference 2.1 projects, setting throttle in idle. This is very important，When the permitted height and power time arrived, the throttle signal will output the lowest signal automatically, so as to achieve limited altitude and time. If you open the restart function, after lost the motive power and want to restart it, you must meet the throttle in idle position, and height below the A.P. After the success of the set, then the next step.

Reference 2.2 project setting needed limited altitude and motive power time, reference 2.3 set restart options

LED lamp meaning

In programmer mode, the blue LED of altitude permits light on and red LED will flash once each 3 second, when receive the altitude permit instruction, the red LED will also flash once.

In using mode, the blue LED will flash once when the altitude permit record two time height information, when the altitude permits storage capacity is insufficient, red LED will blink to inform. When the storage capacity is full, the red LED will light on.