

# RC T2000

**Telemetry system for RC Altimeter #3 PRO with variometer function  
and voice announcements**



**Manual version: 1.0**

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# Introduction

RC T2000 was designed specifically for use with the RC Altimeter #3 PRO. It is telemetry system to track current altitude, climb/sink speed, maximum altitude achieved in flight, temperature, glitches, GPS data and battery voltage of yours radio controlled (R/C) aircraft in real time. All flight data is displayed on high contrast LCD display and voice announcements are possible when needed.

## How it works

The RC T2000 module uses 433MHz two way radio link to transfer data from yours R/C plane via the RC Altimeter #3 PRO module to ground. Data transfer is digital so there won't be any noise or wrong data reception. Vario works on principle that RC Altimeter #3 PRO logger detects small changes in altitude and transmits them to RC T2000, which converts them into a variable audio tone. Changes as small as 10 cm/s will be indicated by change in tone. Sinking produces a continuous tone which becomes deeper with increasing sink rate. Climbing gives a pulsed rising sound. The pulse frequency rises as the rate of climb increases. All the data is displayed on LCD display. If RC T2000 detects that battery in your R/C plane is low it alerts you with low battery announcement. If there is no reception ---- is displayed and audio is mute.

## Key features

- Voice announcements
- Variometer with audio tone for lift or sink
- Mute function – train your eye for weak thermals
- Alarm signal for low battery of yours R/C plane
- Onboard 350mAh LiPo battery for up to 8 hours working time
- Two way digital data transition at 70 channels
- Set RC Altimeter #3 PRO to zero and all settings via RF link
- Strong and durable casing
- Long range - more than 1 km

## RC T2000 module

Figure 1 shows the RC T2000 module. To turn ON the module press and hold the Left/ON button for 2 seconds. To turn it OFF, press and hold Right/OFF button for about 4 seconds. The module consists of LCD display, three pushbuttons, 3-pin connector that is used for charging, 4-pin connector used to interface to a PC for firmware updates and 3.5 jack phone connector for audio tone. For charging you will get 3-pin cable which has red wire soldered to middle pin and black wire soldered to side pins so it doesn't matter how you turn it when you charge RC T2000.

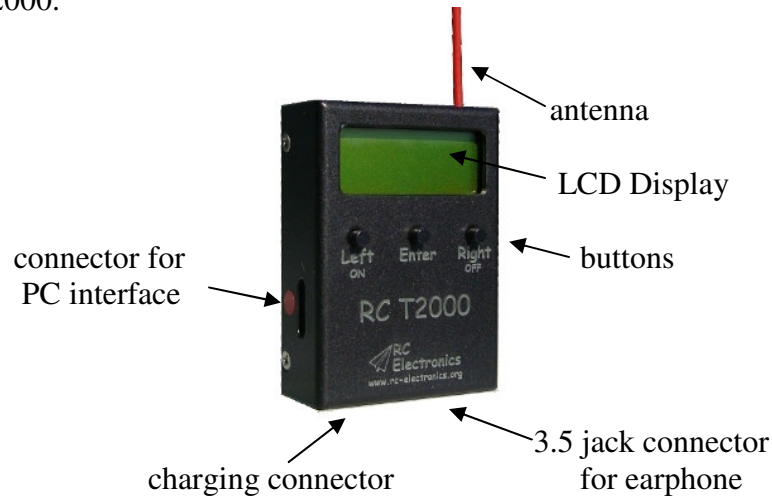


Figure 1. The RC T2000 module

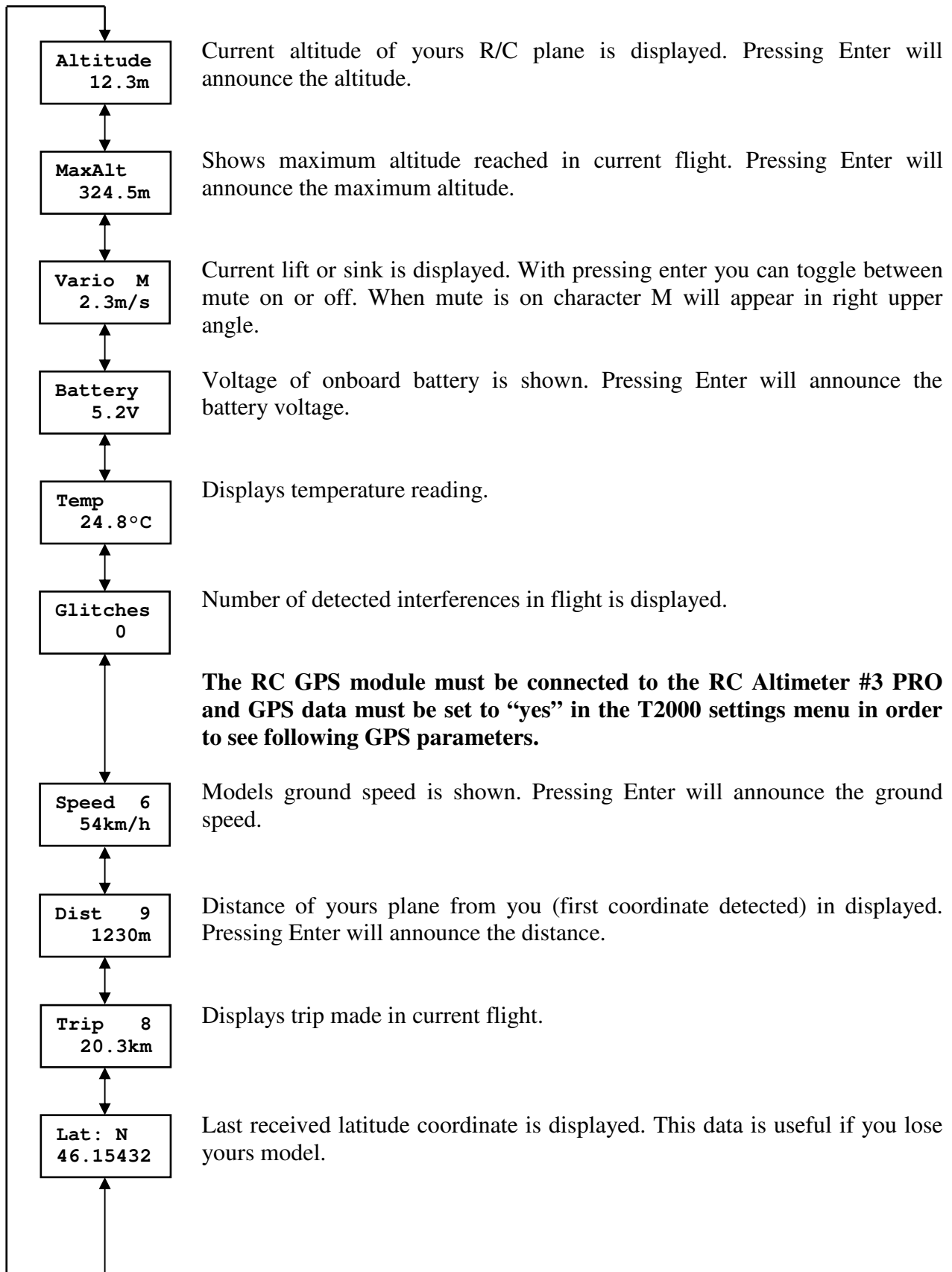
## Specifications

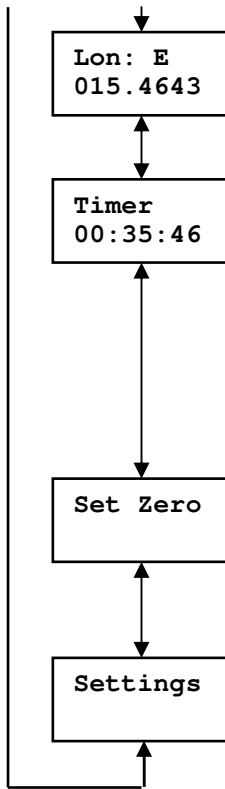
Board Dimensions	59 mm x 42 mm x 17 mm 2.32" x 1.65" x 0.67"
Weight	63 grams
Temperature Range <sup>1</sup>	-10°C...+60°C
Onboard battery	1 cell Kokam LiPo 3.7 V 350 mAh
Duration	8 hours
Displayed altitude resolution	0.1 meter.
Displayed battery resolution	0.1 volts.
Displayed vario resolution	0.1 m/s.

<sup>1</sup> Specifications are taken from component ratings and system limits and may not have been tested to the full extent of the specified ranges.

**NOTE:**  
**For charging RC T2000 set your charger for:**  
**1 LiPo cell 3.7V, charging current max. 350mA**

# Main menu





Last received longitude coordinate is displayed. This data is useful if you lose your model.

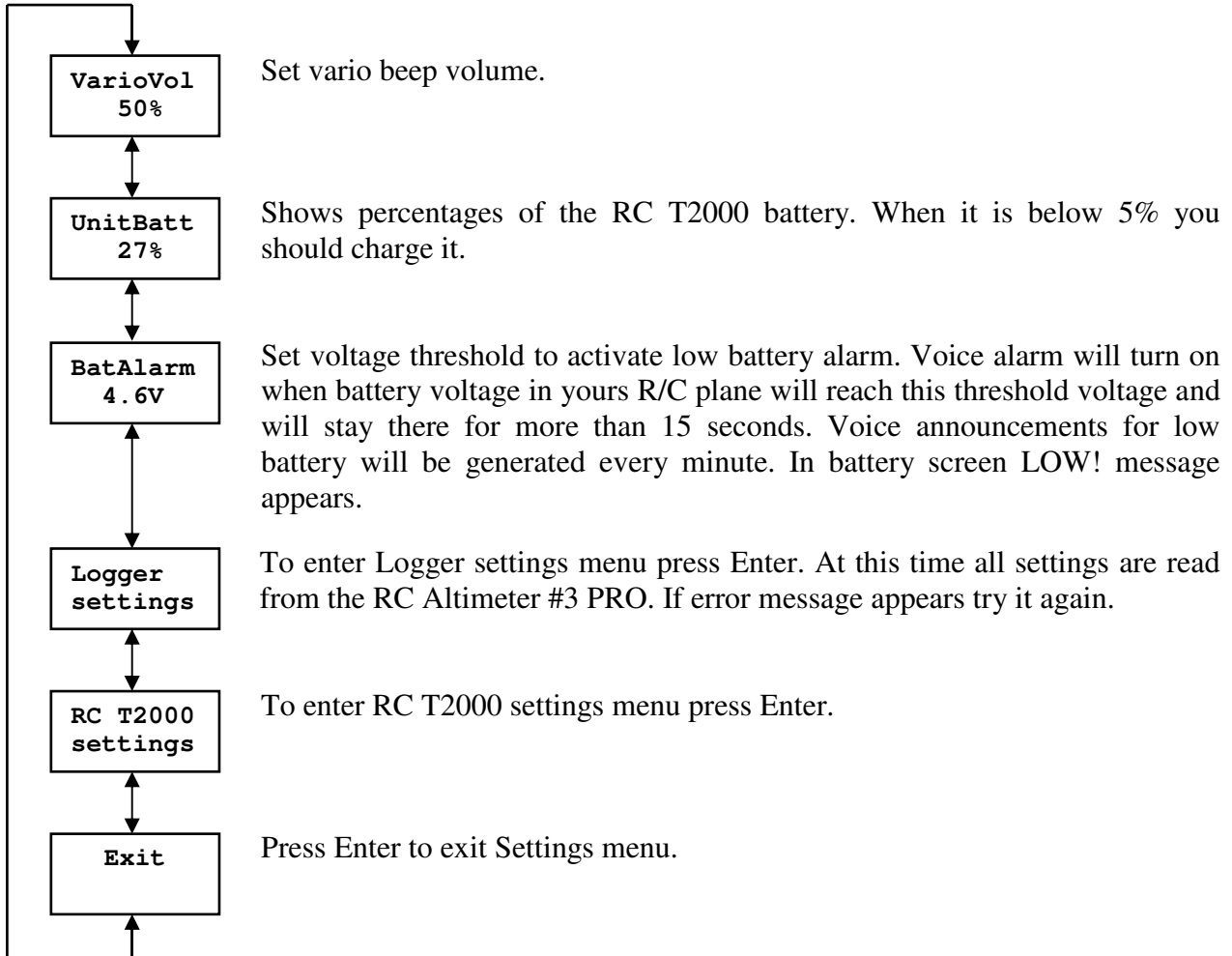
To start or to stop the stopwatch press enter. To reset it press and hold enter until it shows 00:00:00, or the time set in “TimCount” menu. Every time you turn on the RC T2000 module the stopwatch will reset to 00:00:00 or to the time set in “TimCount” menu. The stopwatch has a precision of 1s. When started a time announcement will be made every minute or if a time is set in “TimCount” menu, then the time will count down and the last 15s will be announced verbally. This function is used for F5J, F3K, F3J training.

Pressing Enter command for setting to zero will be send to the RC Altimeter #3 PRO. It will set altitude and some other parameters to zero and create a new flight on SD card. If Error! message appears on screen please try it again.

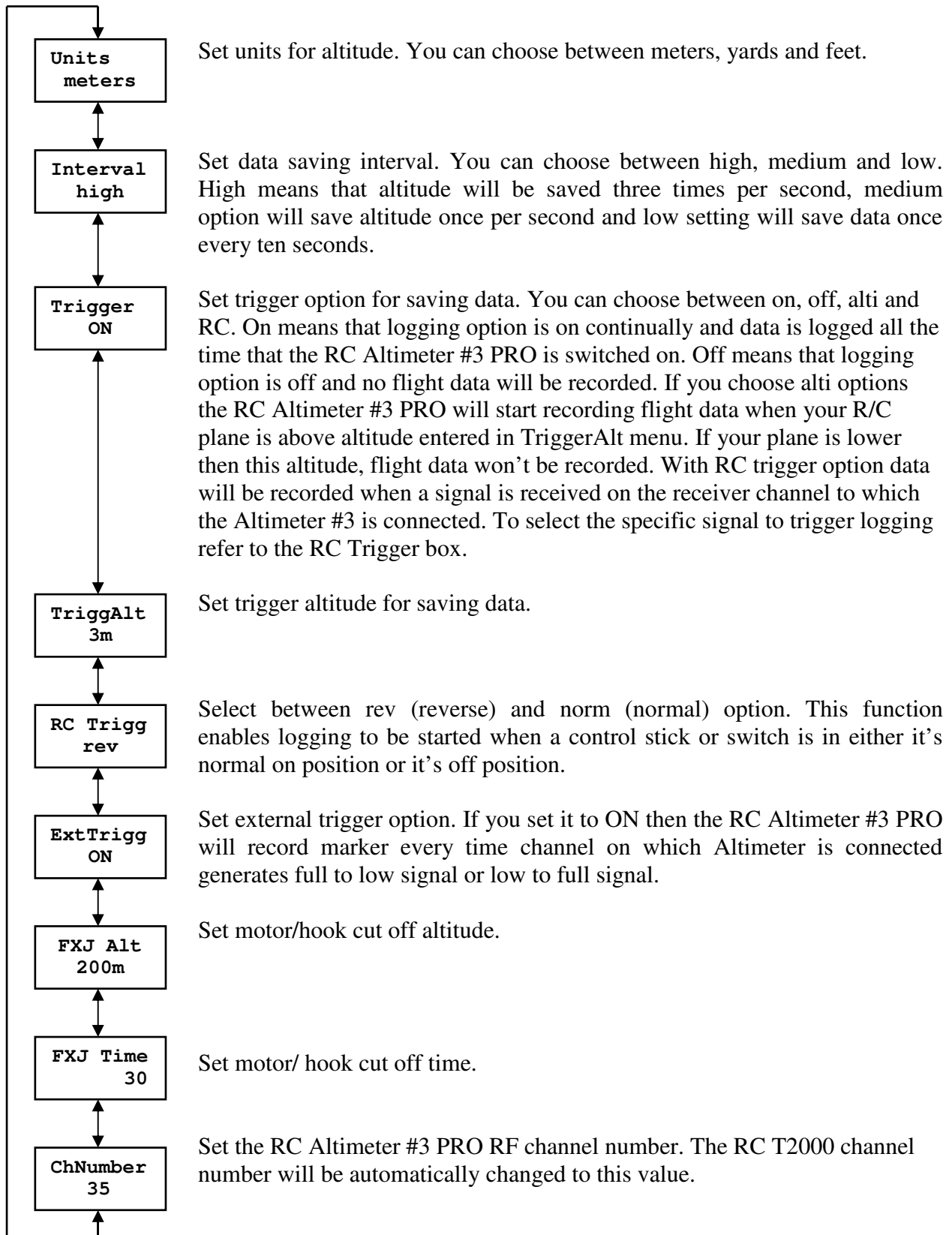
To enter Settings menu press Enter.

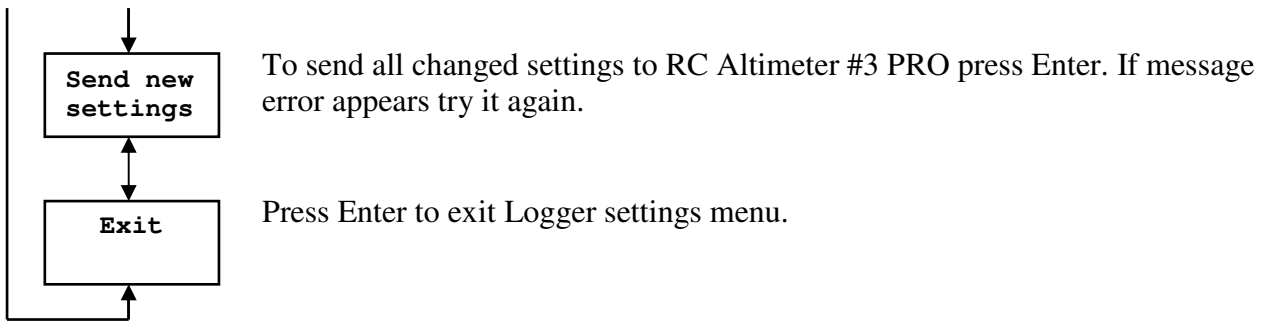
## Settings menu

You can change selected value by pressing Enter. When > < markers will appear you can change value with pressing Left and Right button. When you are finished press Enter button again and markers will disappear.

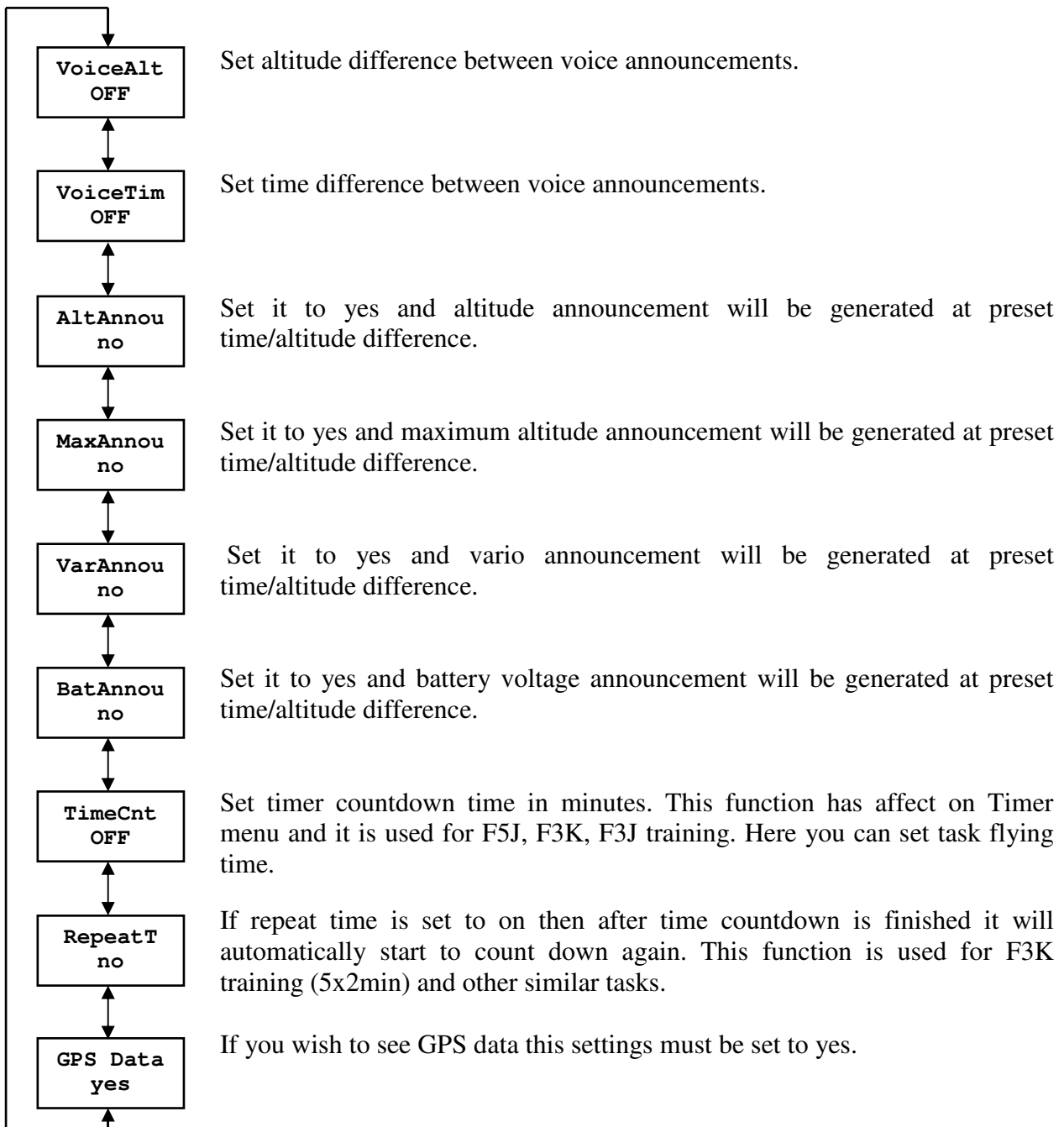


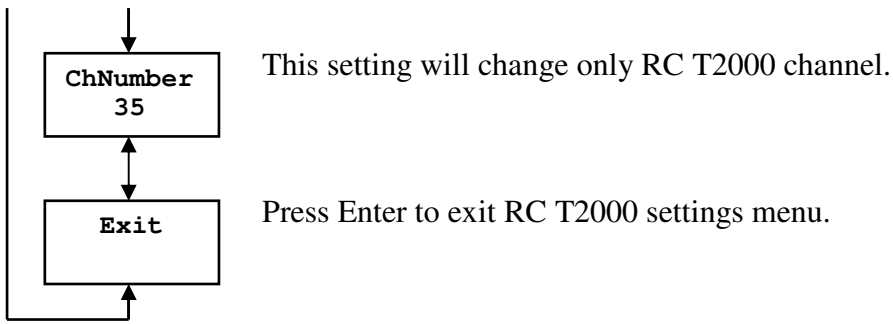
## Logger settings





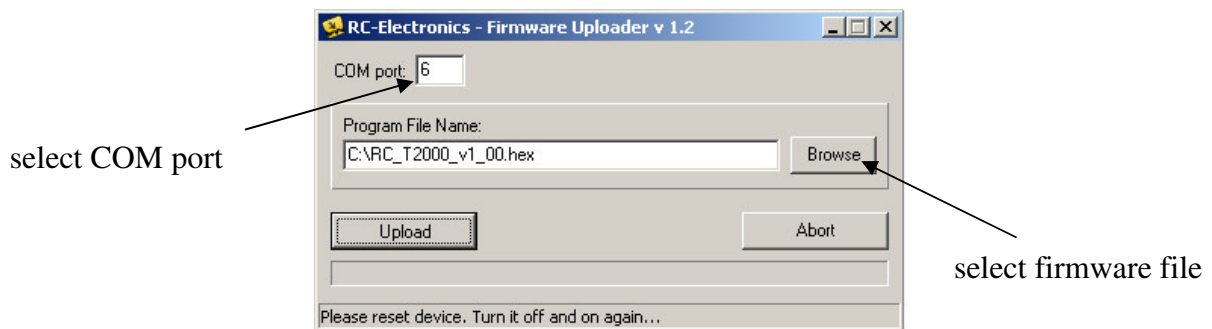
## RC T2000 settings





## Firmware upgrade

The RC T2000 module provides the ability to upload new firmware to the module. No installation is required for the Firmware Upgrade software. You can download it from [www.rc-electronics.org](http://www.rc-electronics.org). After downloading run the Firmware Uploader v1\_2.exe file. Select the correct COM port and then specify the new firmware file (RC\_T2000\_v1.xx.hex). After you have selected the firmware connect the RC T2000 module to USB interface and wait for about 4s and then file click the “Upload” button. After pressing the “Upload” button, the upload of the new firmware will start. You should only use a firmware update file specifically provided for the RC T2000 module. Using an incorrect update file will render the RC T2000 module inoperable.



**Figure 2. Firmware uploader**