

RC T2020

Telemetry system



Manual version: 1.0

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Introduction

The RC T2020 was designed as telemetry system. It can receive the data transmitted by RC Multi 2 + RC TRX30 system. It is a telemetry system to track current altitude, maximum altitude, flight duration with integrated manual stopwatch function, climbing/descending speed (vario) and battery status of RC Multi 2 + RC TRX30 system (transmitter) and RC T2020 (ground unit), all in real time.

In combination with RC GPS module, system can also track distance between units (transmitter and ground unit), trip distance and geographic coordinates.

All flight data is displayed on high contrast LCD display.

Key features

- Altimeter.
- Variometer with climbing/descending indication.
- Stopwatch.
- Two-way data communication at 69 channels – possibility to monitor multiple RC Multi 2 + RC TRX30 systems.
- Long range – more than 1 km.
- Simple charging from USB port – no special charger needed.
- Strong and durable casing.

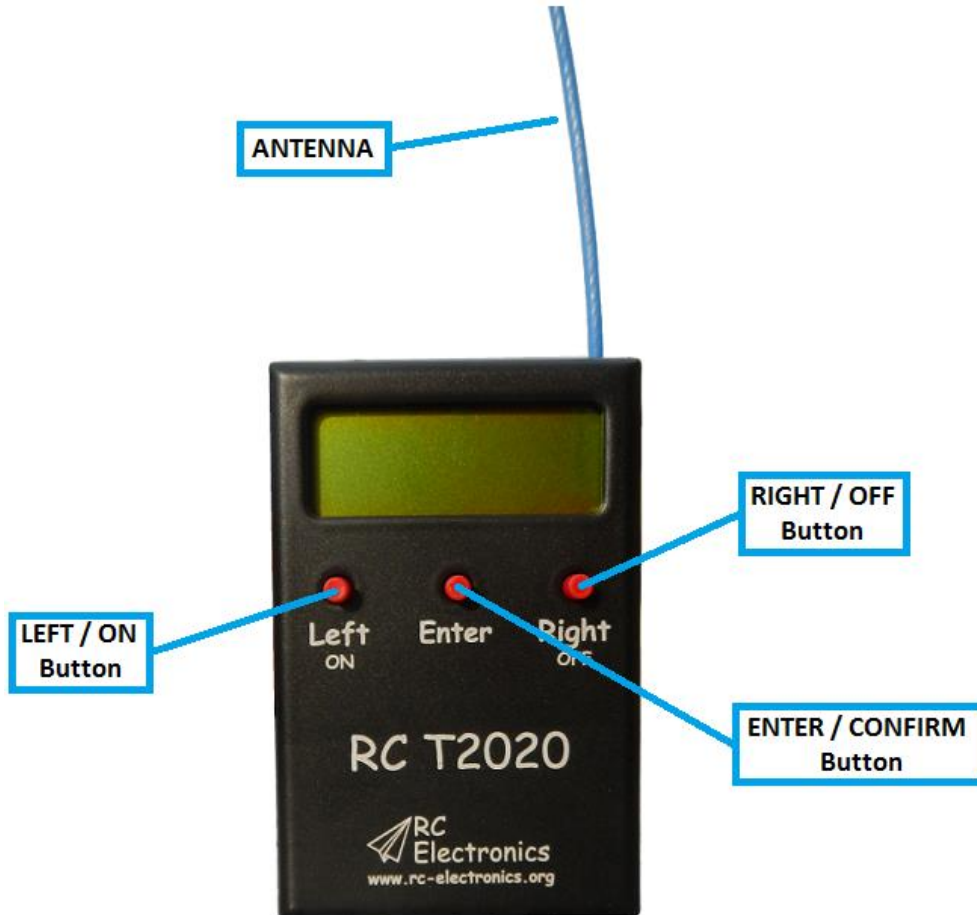
Specifications

Unit Dimensions	65 mm x 42 mm x 17 mm 2.56" x 1.65" x 0.67"
Weight	60 g
Temperature Range ¹	-10°C ~ +60°C
Onboard Battery	1 cell LiPo 3.7 V 250 mAh
Battery Duration	8 h
Displayed Altitude Resolution	1 m/ft
Displayed Battery Resolution	0.1 V
Displayed Vario Resolution	1 (m/ft)/s.

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

Physical overview

Front view



Bottom view



Operating instruction

Starting the RC T2020

Turn the RC T2020 ON by pressing the “LEFT/ON” button.



On start up unit model and firmware version are shown for 1 second.

Menu & functions overview



Current altitude of the model is shown.



Maximum altitude reached in current flight, transmitted to RC T2020.



Current climbing/descending speed (vario).



The RC Multi 2 module voltage.



LEFT ↓ RIGHT



Ground speed, the number displayed in the top right corner is the number of visible satellites.
(Available only when option GPS data is set to **yes.**)

LEFT ↔ RIGHT



Distance between power up point of Multi 2 unit and current position of T2020 unit (first coordinate detected) with number of satellites in use.
(Available only when option GPS data is set to **yes.**)

LEFT ↔ RIGHT



Trip made in current flight with number of satellites in use.
(Available only when option GPS data is set to **yes.**)

LEFT ↔ RIGHT



Geographic coordinate of the Multi 2 & GPS unit – latitude.
(Available only when option GPS data is set to **yes.**)

LEFT ↔ RIGHT



Geographic coordinate of the Multi 2 & GPS unit – longitude.
(Available only when option GPS data is set to **yes.**)

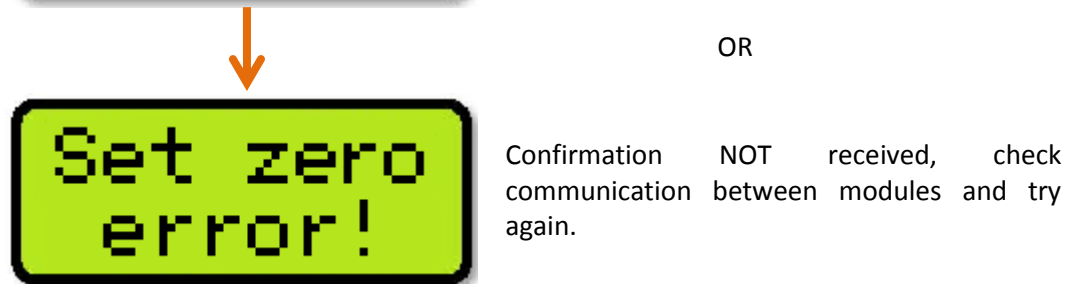
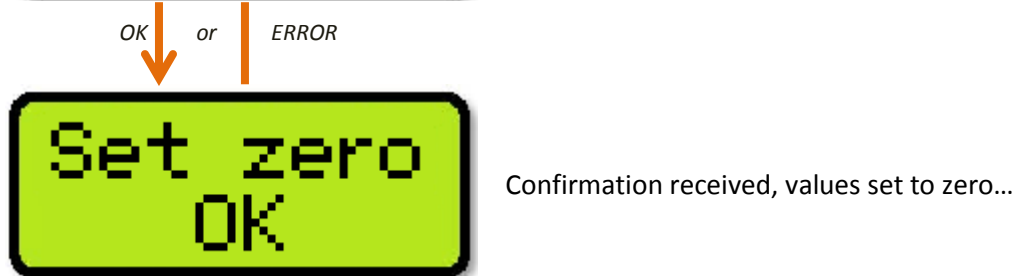
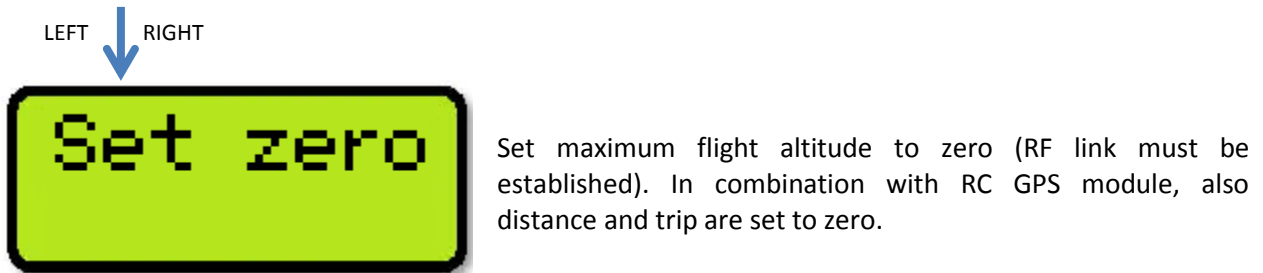
LEFT ↔ RIGHT



→ ENTER

Manual timer - press enter to start/resume or to pause timer, press enter and hold for 3 seconds then release to zero timer.

LEFT ↑ RIGHT




Note!
Stopwatch is not affected by this function, because it runs on the RC T2020! It will however reset to zero if the RC T2020 is restarted.




ENTER

ENTER




Change the RC T2020 channel (from 1 to 69).

LEFT ↔ RIGHT




Change the RC T2020 volume level.

LEFT ↔ RIGHT




Switch between metric and imperial units.

LEFT ↔ RIGHT



Make GPS data visible in the main menu.
You need RC GPS module for this function.

LEFT ↔ RIGHT



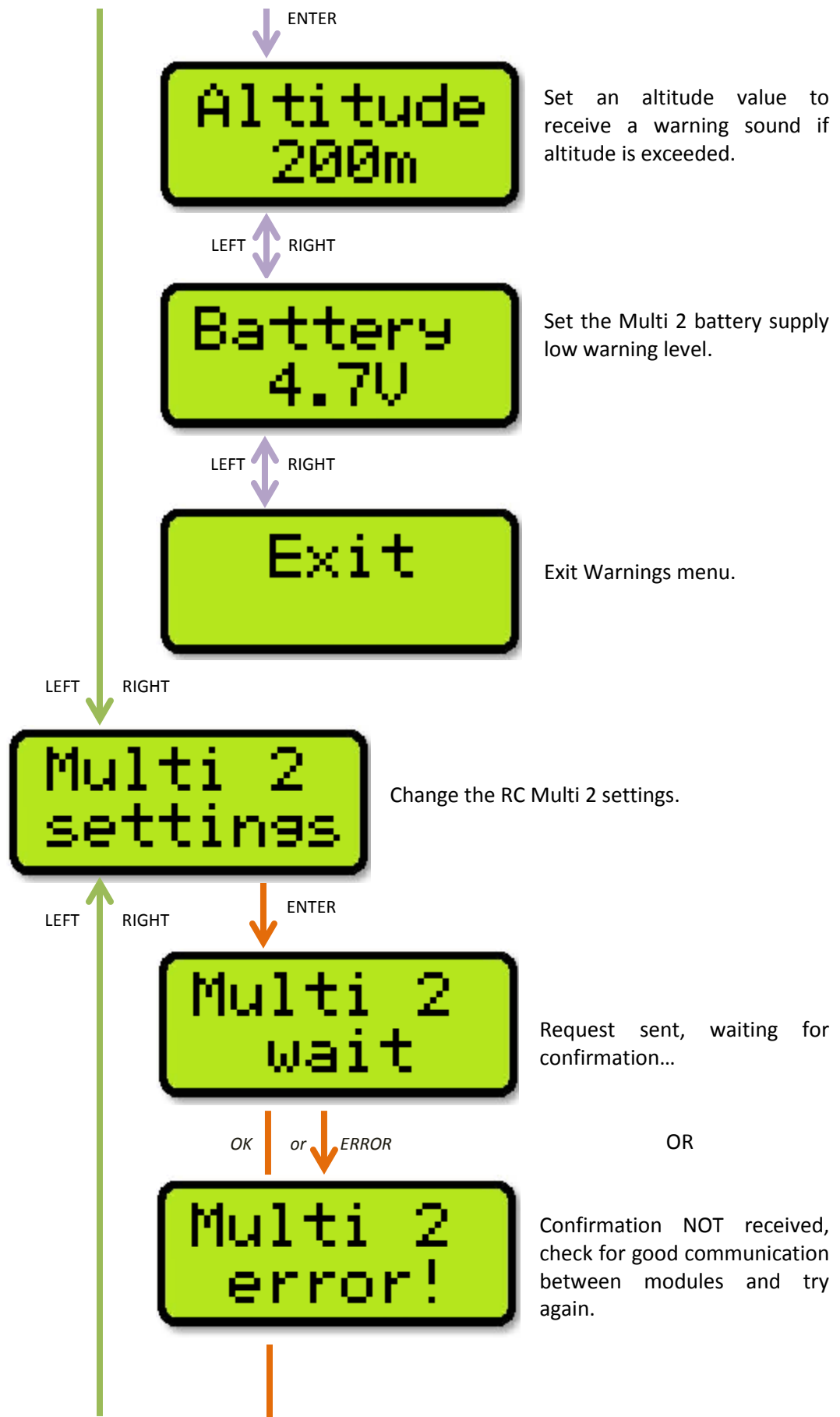
Voltage level of RC T2020 Hand unit (not configurable).

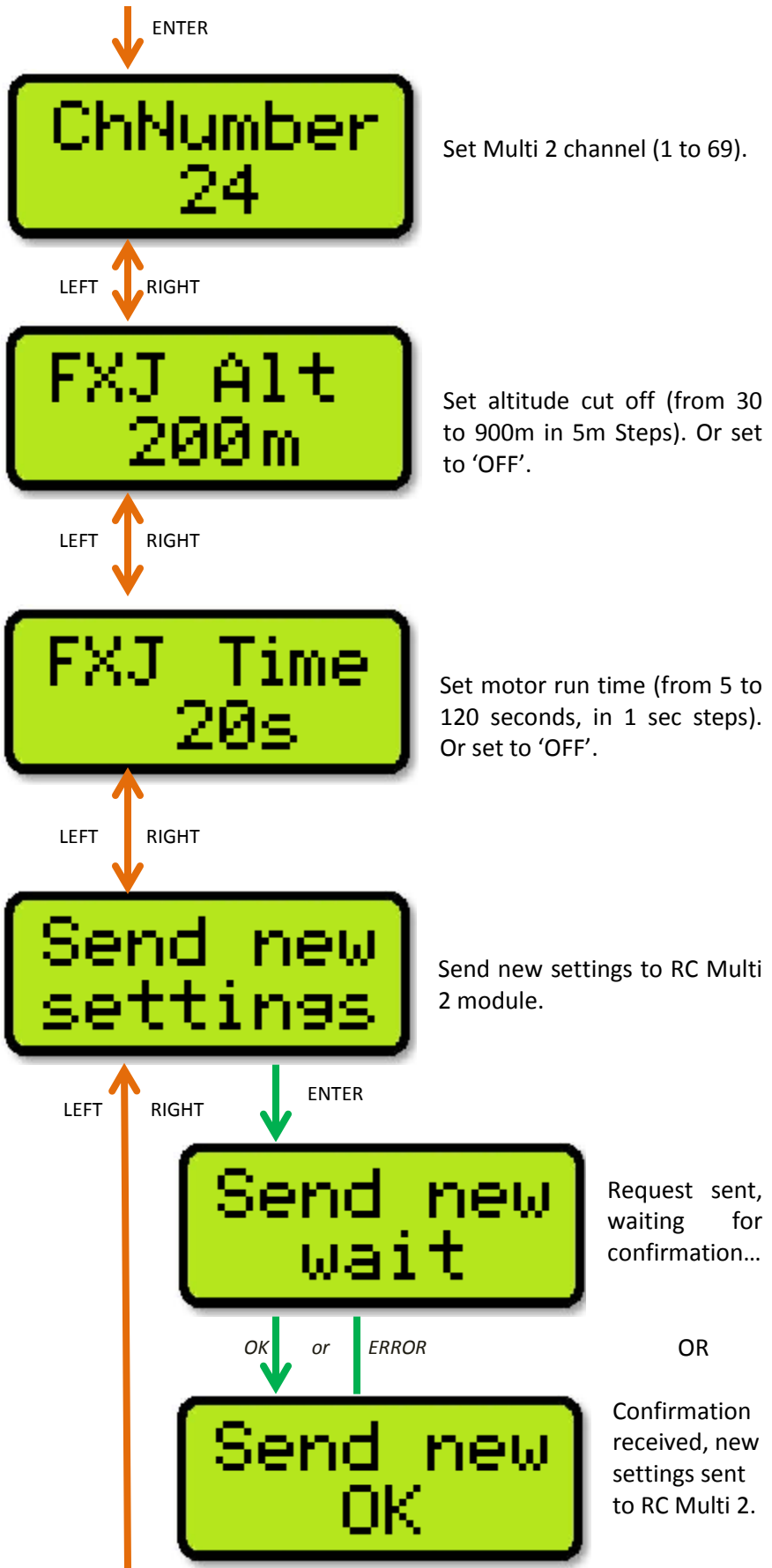
LEFT ↔ RIGHT

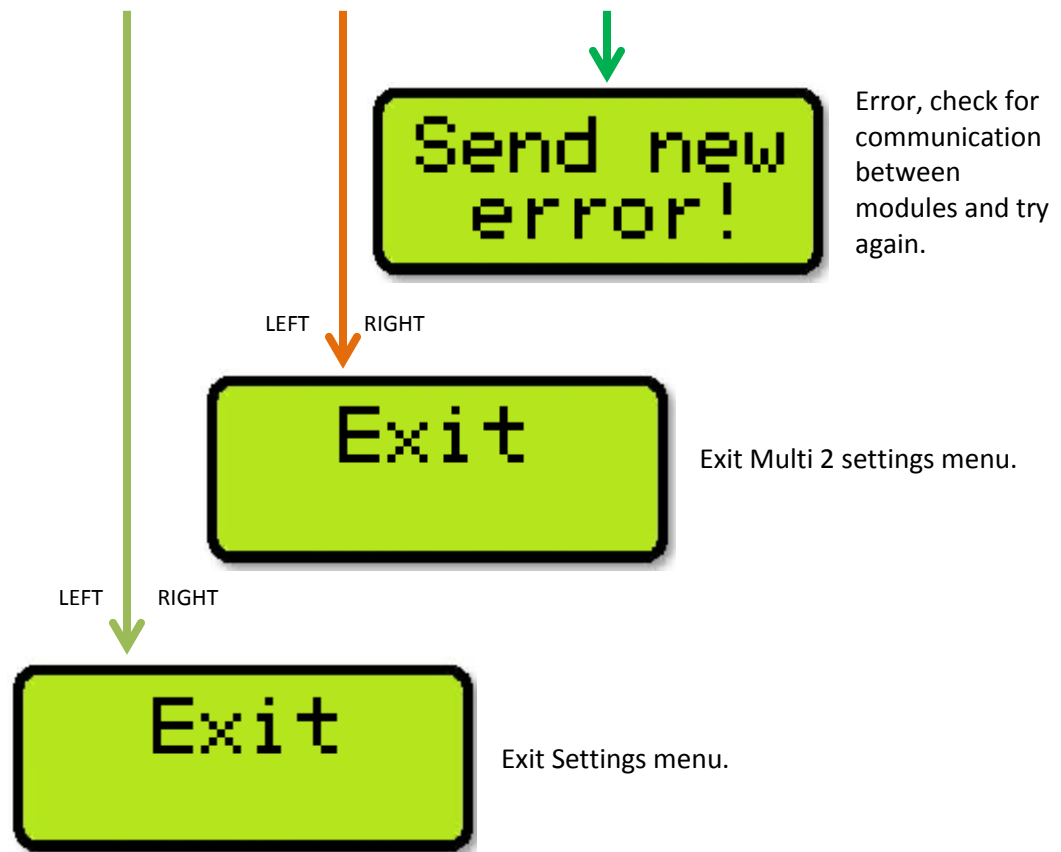


Set values for altitude or battery warnings.

LEFT ↑ RIGHT | ENTER







Note 1!

To make value changes (where available) press Enter. Arrows appear on both sides of the value:

GPS data
no

GPS data
> yes <

Set the desired value using Left and Right buttons and confirm with Enter.

Note 2!

If there is no RF link on the current channel, related values will be replaced by dashes.

With no unit connected and no user interaction, the RC T2020 will turn off after 2 minutes – battery saver function!

Altitude

Turning the RC T2020 OFF

To turn the RC T2020 unit OFF, the “RIGHT/OFF” button needs to be pressed for approximately 4 seconds.

Charging

Charging of the RC T2020 is very simple and convenient as it can be charged using a common A to mini B USB cable. Because of well-designed built-in charger, there is no fear of overcharging the battery. Upon charging, the red LED near the mini USB connector on the bottom side of the RC T2020 housing is on. When fully charged, the LED is off.

Note!

Although the unit has sophisticated charger, it is strongly advised to disconnect the USB cable when charging is complete. This way, the battery lifespan will remain longer and the battery healthier. It is also important to check the unit’s battery and recharge it if needed. If battery gets discharged too much, it may become unusable. In such case, the unit must be sent to service center for battery replacement.

Firmware update

- Download the latest firmware for the RC T2020 unit from our web site. Firmware should start with name RC_T2020_vXXX.bin. XXX is version number (101 means v1.01).
- Connect the unit with a USB A to mini B cable to PC.
- Press right (OFF) button and hold it pressed. When OFF button is pressed, press and hold down left (ON) button. See figure 6.
- You can release OFF button, but ON button must be held pressed until the end of the firmware update.
- Wait for around 15 s and new disk drive (figure 7) will appear with firmware.bin file on it.
- Delete firmware.bin file and copy latest firmware file to this disk drive.
- When you see new FW file on this disk, you release the ON button and update is finished.
- Turn ON device and update is finished.

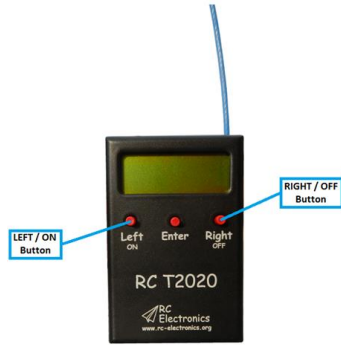


Figure 6: Left and Right buttons.

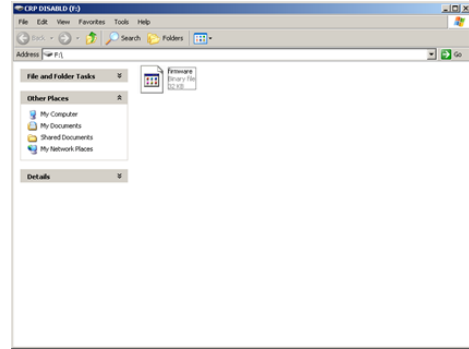


Figure 7: New disk drive.

Revision history

January 2013	Initial release of user manual.
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