

Aeris

Free Flight RDT system

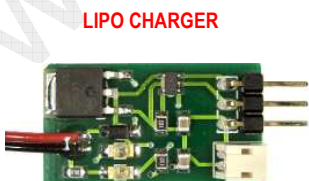
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The **Aeris RDT** system makes it possible to add remote dethermalizing (RDT) to any Free Flight model of any class. The option to force model landing is a significant advantage in numerous situations like engine overrun, model trimming and strong wind or thermals

System Components



TRANSMITTER

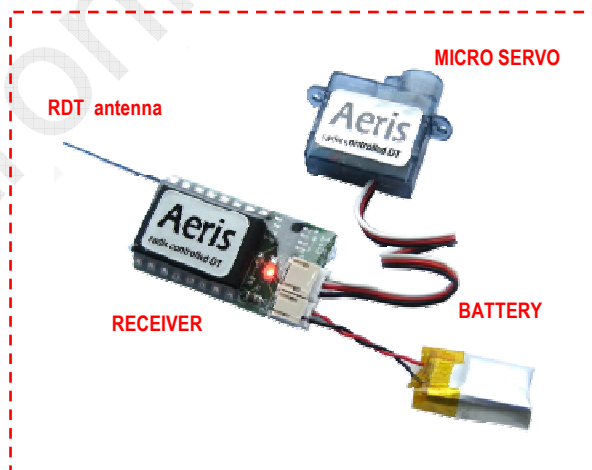


LIPO CHARGER

'SA'

STAND ALONE VERSION

fits any model of any class with or without clockwork timer



RDT antenna

MICRO SERVO

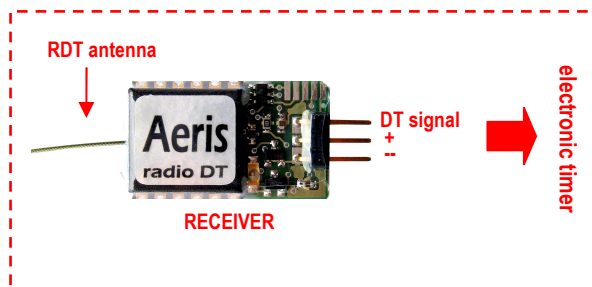
RECEIVER

BATTERY

'HT'

HOST TIMER VERSION

*fits models already provided with electronic timer (mostly **Black Magic WHobby** or **MTK e-Timers**)*



RDT antenna

RECEIVER

electronic timer

Getting Started

Stand Alone (SA) Receiver

Connect the micro servo (3 pin socket) first, then connect the battery (2 pin plug) to the **Aeris** receiver: the micro servo arm is moved to a neutral position and the red led starts blinking. When the RDT command is received, the micro servo arm rotates of an angle, keeps this position for a short time and then turns back to the neutral position. By doing that, the micro servo will activate the DT line release mechanism (not included). The **Aeris** receiver draws a little current while the battery is connected. An onboard circuitry protects the battery from deep discharging, however it must be disconnected at the end of a flight session.

Host Timer (HT) Receiver

The receiver draws a little current from the host timer and will provide the RDT signal to it (open-drain output, 100mS duration negative going pulse). Refer to the host timer instructions to make sure that it is enabled to handle the RDT signal. Connect the receiver plug to the RDT input plug of the host timer according to the pinout given in the picture above. Switch on the host timer and check that the red led light on the **Aeris** receiver blinks.

Transmitter

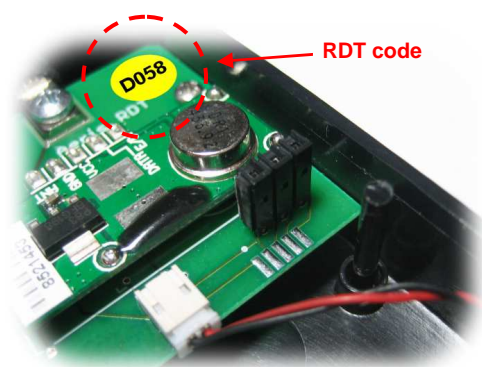
Press the RDT pushbutton to transmit a DT command. A short 3-tone sound is also audible. The transmitter draws power only when the pushbutton is pressed, therefore it is not necessary to disconnect the internal battery.

Installation

All the onboard components (**Aeris** receiver, micro servo and battery) can be placed anywhere in the pylon with the RDT antenna completely leaning out of it. Pictures at the end of the document show how to make simple release mechanisms (not included) to have the DT line released either by the clockwork timer (if any) or by the **Aeris** SA micro servo.

Installing the RDT on more models

One additional **Aeris RDT** receiver with the same **Aeris** transmitter RDT code is required to provide another model with RDT. The RDT code is unique for each modeller to allow all his Aeris RDT receivers to be used with a single RDT transmitter. In addition it makes it possible to use the **Aeris RDT** system simultaneously with other modellers having the same or other systems. The assigned RDT code can be retrieved from a yellow label pasted to the RDT transmitter control board (see picture).



Charging the batteries

A micro 12Vdc LiPo battery field charger/adaptor is provided with the system to be easily powered by the car lighter plug through a red / black cable (connector not included).



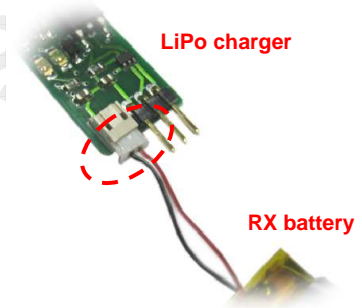
Only use the battery charger provided with the system. Do not use a battery if it shows bulges or scratches. Never leave a battery unattended while charging. Charge must take place in a safe place and always far from flammable materials.

Status of the charger leds

- 12V connected, no LiPo battery connected: GREEN led ON, RED led ON
- Charge in progress: RED led ON, GREEN led OFF
- Charge complete: RED led OFF, GREEN led ON

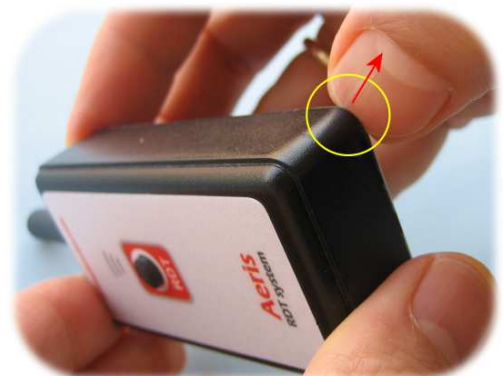
Charging the receiver battery (SA version only)

A fully charged receiver battery will guarantee operations for about 15 hours. Recharge the receiver battery before each flight session. Connect the charger to a 12Vdc power source and insert the battery plug into the 2 pin recharge socket. The red led on the *Charger* will stay ON until the recharge process is complete. When the process is complete the red led turns OFF and the green led turns ON.

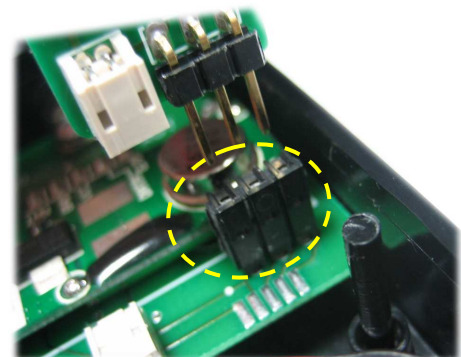


Charging the transmitter battery

The internal battery guarantees about 200 DT activations, therefore it is not needed to recharge it frequently. If the battery needs to be recharged, 3 identical beeps will be emitted when pressing the pushbutton. The recharge socket for the internal battery is accessible after removing the cover of the **Aeris** transmitter as shown in the picture: insert the thumbnail in the small notch located in the left bottom corner of the enclosure and pull as shown by the arrow until the cover unlocks.



Connect the charger to a 12Vdc power source and insert the battery plug into the 3 pin recharge socket. When the process is complete the red led turns OFF and the green led turns ON. The internal battery must remain connected.



Operations

Dethermalization

The flight can be terminated at any moment by pressing the RDT button on the **Aeris** transmitter. The receiver battery (SA version) should be connected to the **Aeris** receiver at the beginning of a flight session and disconnected at the end. A fully charged receiver battery will operate the receiver over all the day.

Recommendations (SA version)



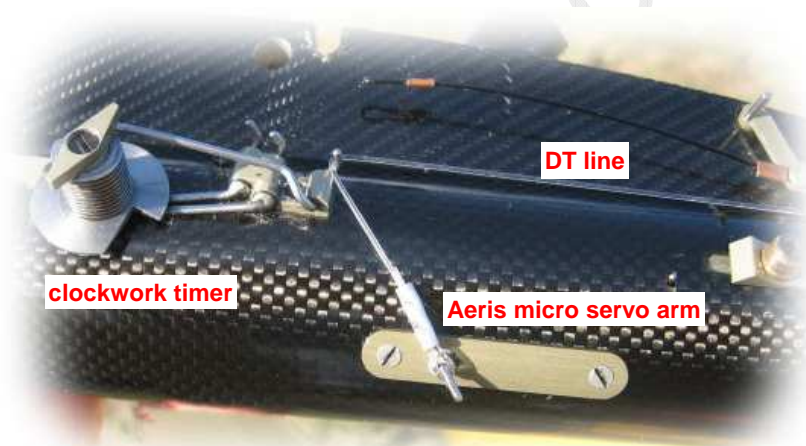
DO NOT PULL THE WIRES TO EXTRACT THE PLUGS

The connector plugs have small protruding edges that must be grabbed with the finger nails to gently pull them out of the socket as shown in the picture.

protruding edges: grab with nails and gently pull to remove the plugs



Installation examples (SA version)

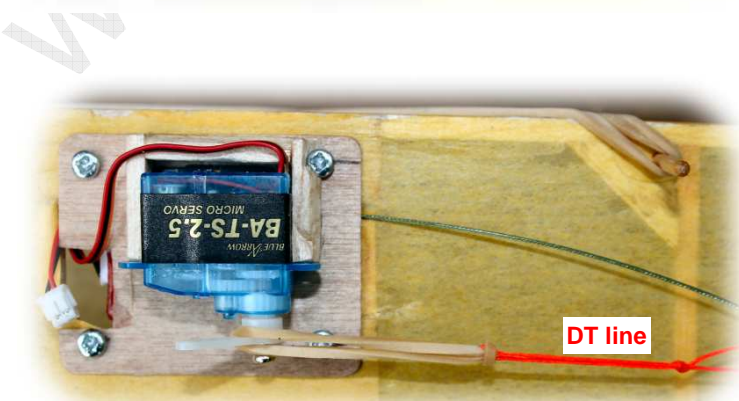


clockwork timer

DT line

Aeris micro servo arm

Example of a DT release mechanism in a F1C model. The DT line is released either by the timer or by the Aeris SA micro servo



DT line

Example of direct DT release mechanism in a Light model. The DT line is released directly by the Aeris SA micro servo