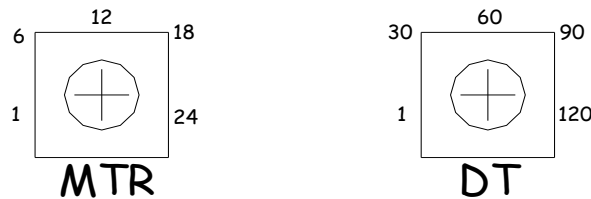


BSD E20 Timer v1

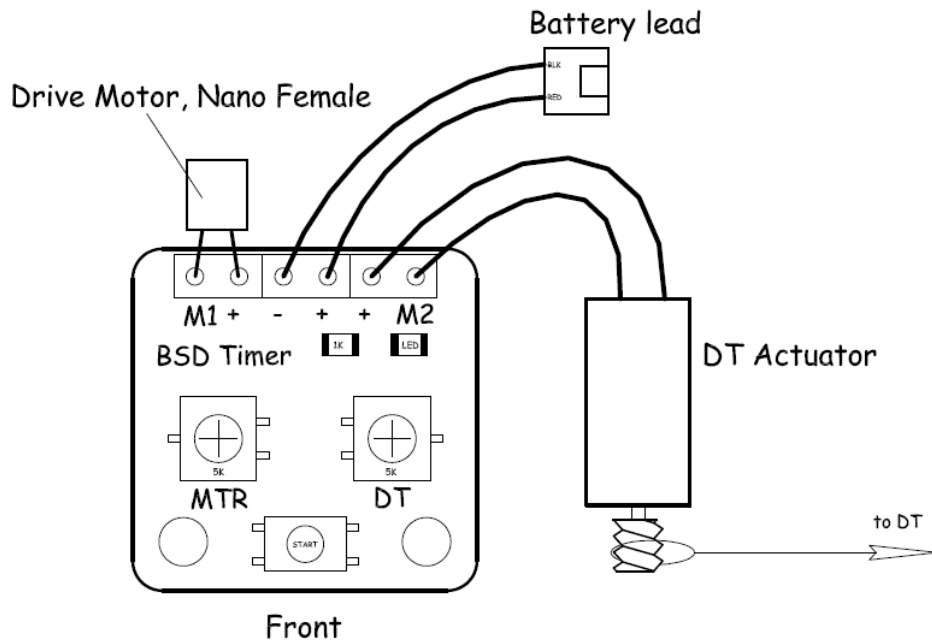
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The BSD E20 Timer is a two function timer designed specifically for the provisional E20 Free Flight event. The event requires a 20 second motor run and a 90 second max flight time for normal round flying. For fly offs, the motor run time reduces to 10 seconds and the flight time increases to 120 seconds. The timer is adjustable with two pots on the board. Below are the approximate settings for a guide. You will need to fine tune the settings to get what you want.

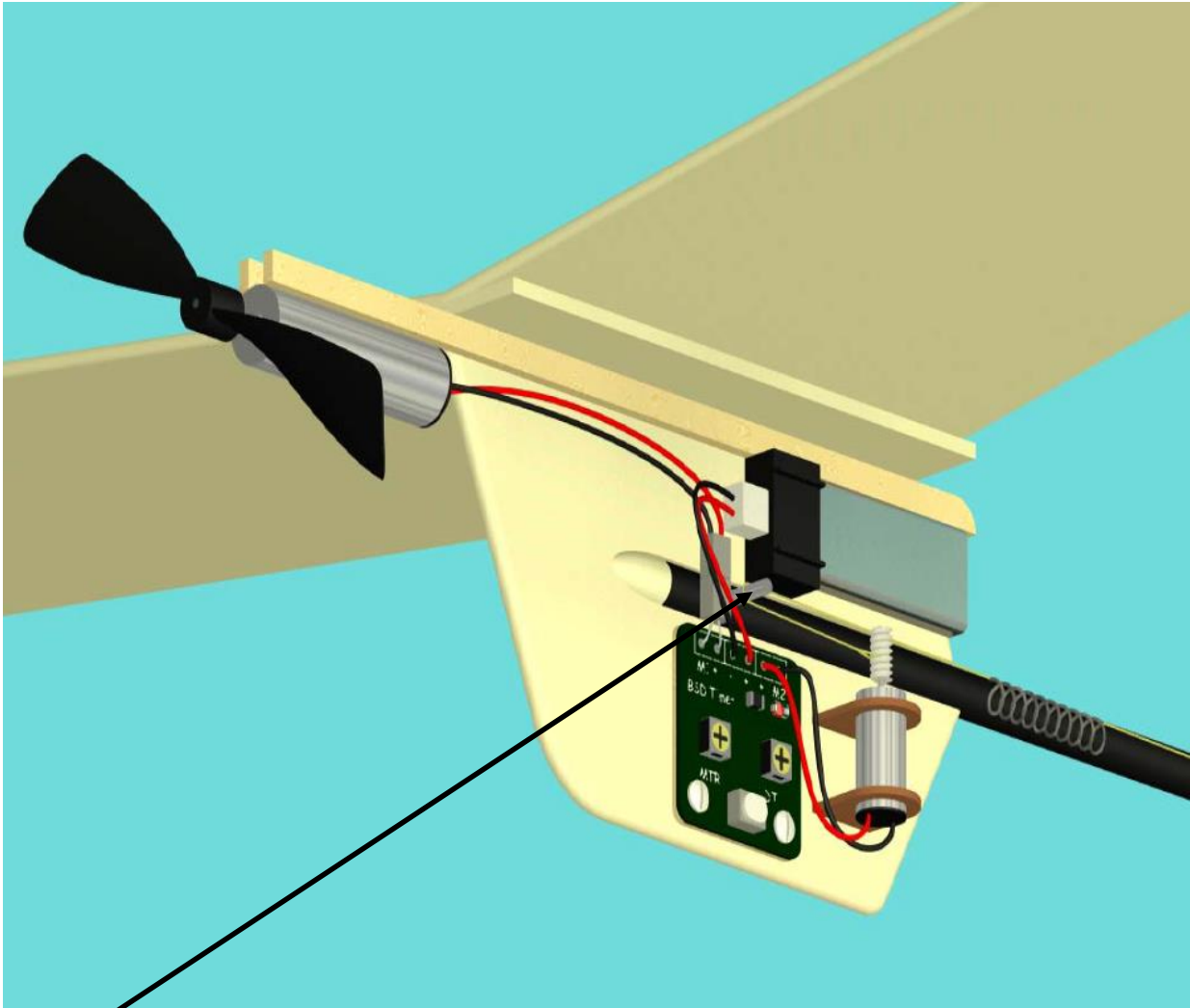


Approximate pot settings

To hook up the timer, plug the 8.5 mm motor into the Drive motor connector on the timer. Install the DT actuator so that the output shaft is 90° to the line direction for the DT system.



Here is a typical installation.



Note: Optional aluminum tube turnaround. This may be needed in some installations to ease the force on the DT actuator to allow it to operate.

Note: Consider mounting the battery on the opposite side of the pylon from the timer to help maintain lateral balance.

Here is a typical DT system hook up. The string holds the tail down until the DT actuator "spins off" the loop and releases the line. The rubber bands then pull the stab up to approximately 40°-50° to "stall" the model and cause it to start a parachute like decent.

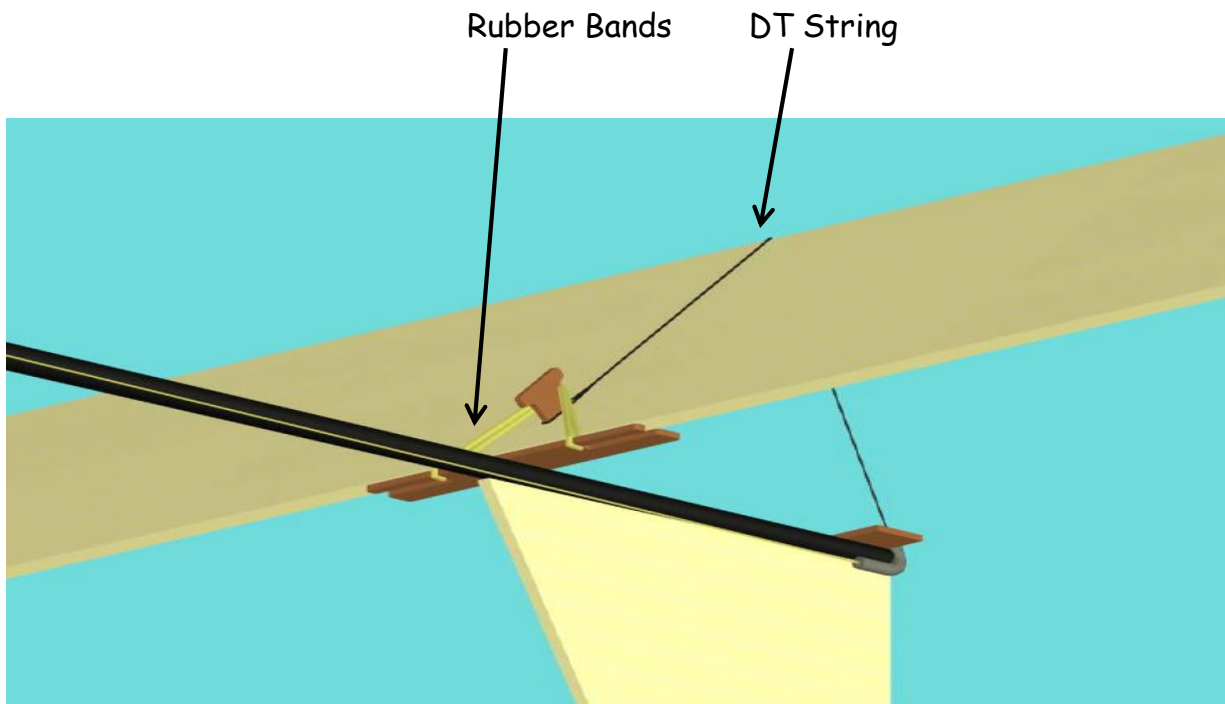
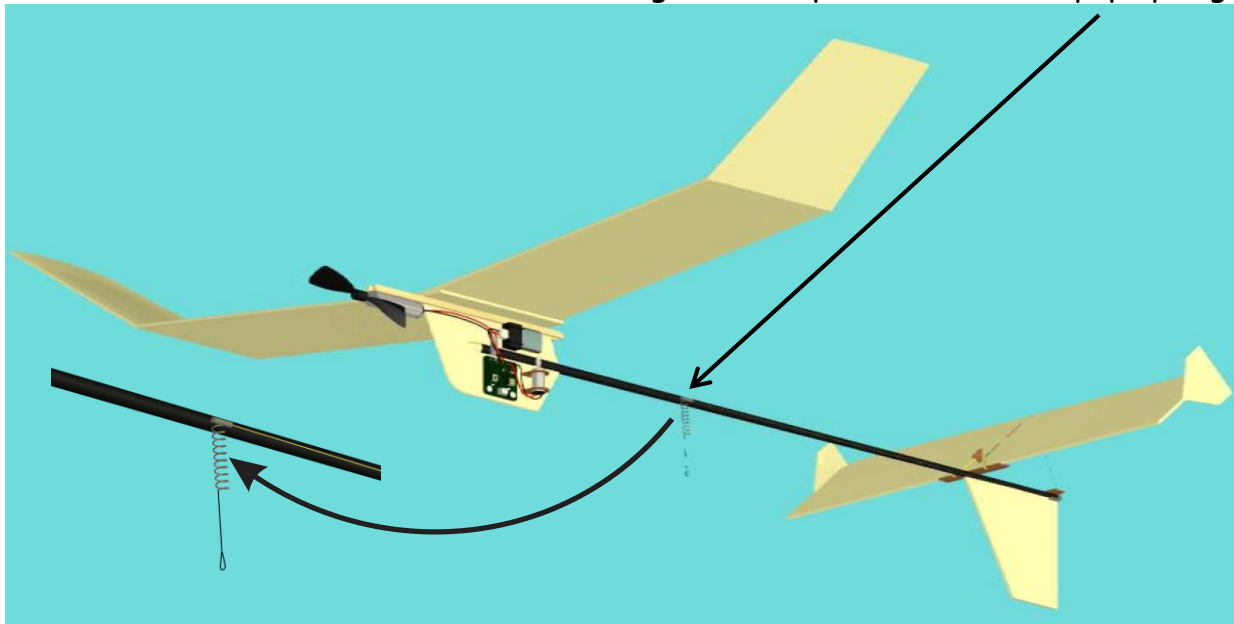


Illustration of the DT'd stab. The DT string has a stop to set the stab pop up angle.



Note: 3D Illustrations by Paul Bradley.

Operation: Plug in the battery to the battery lead. Normal operation is indicated by a flashing LED on the timer board. Attach the DT line to the DT actuator output gear. To start the motor, press and hold the START button until the LED goes to a solid ON and the motor starts (~two seconds.) The motor will start and continue to run as long as you hold down the button. When you release the button, the motor will continue to run for the length of time determined by the MTR pot setting. After the motor quits, the DT time will start and at the end of the time determined by the DT pot setting, the DT actuator will run for about 0.2 seconds to spin off the DT line.

Notes: After the motor is running and the START button has been released, the cycle can be reset by momentarily pressing the START button. This will shut the motor down if it is running and/or abort the DT function.

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Specs:

Size	20mm x 20mm
Weight	2.54 grams w/DT Actuator
Max voltage	5.1 volts
Max motor current	3 amps
Low Voltage Cutoff	2.9 volts

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