



## Dedenbear Products, Inc. STSK Stepper Throttle System

[www.dedenbear.com](http://www.dedenbear.com)

- Highly configurable Base Plate Throttle Stop and Delay Box Controller Assembly
- Unmatched repeatability regardless of changes in system voltage or barometric pressure.
- Built-In Starting Line Control Functionality
- For single carbureted engines displacing less than 555 cid (9.1L)

The Dedenbear STSK combines the consistency of an electric stop with the tunability of a CO2 stop, with enhanced controls and configurability previously unavailable in super class racing. Open and close the stop blades up to 8 separate times during a run, all at different speed and different angles of closing. Starting line control is included standard for the ultimate in launch consistency. Even better, every adjustment can easily be accomplished right from the driver's seat, including stop RPM providing the ability to make last minute adjustments before a run.



### Application

- Engine Displacement: 555 cid (9.1L) or smaller
- Engine Compression: 14.5:1 or less
- Carburetor Style: 4BBL, 'Dominator'
- Carburetor Bore: 2.125" or less
- Carburetor CFM: 1250 or less
- 4 Modes of Delay

- **Delay:** A simple delay used for pro tree classes and leaving off your top amber for full tree classes. This mode delays for the time set and releases the transbrake.
- **Crossover:** Used in full tree bracket racing for launching off your opponent's top bulb when you are the faster car. This mode calculates the handicap and adds it to your delay time.
- **Crosstalk:** For the cross talk bracket tree, this mode enhances the interface features, detailed below, allowing you to take two hits at your tree, one off your top amber, and one off your second amber. Like Interface, this mode will choose the quicker of the two reaction times.

## Application Cont.

- **Interface:** This mode enhances the Crossover features above allowing you to take two hits at the tree. You leave off the opponent's top bulb, press the transbrake button again, then release off your own top bulb. The box will release the transbrake on the quicker of the two releases. This means if your release on the opponent's top bulb gives you a .520 light and the release on your top bulb gives you a .505 light, the box will launch the car on the .505 light. Remember, the interface always chooses the quicker light and will choose a .490 over a .500.

• Two 4-Stage Timers rated at 15A ea. suitable for controlling:

- Throttle Stops / Linkage Stops
- Shifters
- Nitrous Oxide Systems
- Ignition retards
- Lean Outs
- Etc.

• 2 Delay and Stop Control Setting Groups

- Pro/Full switch allows users to toggle between 'Super' and 'Bracket' setups

• Stepper Throttle Stop Specific Controls

- 8 Movement / Stage Timers
  - Move to and stop at any position between closed and full open.
    - 100 different positions (0.9° increments) across 81° of stop blade rotation.
  - Move to different positions during the same run.
  - Variable open and close rates, even within the same movement
  - Repeatable to within 1/20th of a degree and one one-thousandth of a second
  - Pre-stage with different modes and varying positions.
  - Full movement of blades at slowest rate is 2 seconds and quickest is 0.2. Each increment/decrement of the setting will change the rate by 0.2 seconds
- Starting Line Control & Super Start System
- Utilize the stop to control staging RPM
  - Enable Super Start to stage with the throttle pedal to the floor

## Mechanical

• Dimensions:

- L-STS Delay Box: 9" W x 3" H x 1.85" D
- STS Controller: 9" W x 3" H x 1.25" D
- L-STS & Controller: 9" W x 3" H x 3.1" D

• Dimensions Continued:

- STS Stop Base: 6" L x 6" W† x 2" H\*
  - †10" Incl. motor & linkage
  - \*2.75" w/ blades open

• Mounting:

- L-STS & Controller: 2" x 8.12" on center
- STS Stop: 5.450" x 5.450" on center.
- Aluminum Housing and Stop Base

## Electrical

- Supply Voltage: 10-18V
- Typical Power Consumption: 1.5A (3A Peak)

## Display

- Backlit dot matrix LED
- Dimensions: 3.85" W X 0.975" H

