

speed.skydiving

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1. a little speed skydiving history

- **1996** - Ken Hansen from Norway coins the term '**speed skydiving**'
- **February 1999** - George Pilkington organizes the first Vertical Mile Race at Sebastian, Florida.
- **Easter 1999** - Ken Hansen organizes the first Speed Skydiving competition at Deland, Florida
- **August 1999** - George Pilkington organizes first annual Speed Freaks competition at Hibaldstow
- **September 1999** - Mike Brooke organizes the Millennium Speed Skydiving Competition at Gap, France.
- **November 1999** - Ken Hansen organizes first 'World Speed Skydiving' competition at Deland, Florida
- **in 2000** - formation of the ISSA (International Speed Skydiving Association)
- **since 2000** – ISSA organizes annually speed skydiving worldcup series and enhances the rules year by year

2. what is speed skydiving?

- Speed skydiving is a skydiving discipline with a definition as simple as it gets.
- It was developed in the last few years and represents the fastest non-motorized sport on earth.
- In the essence, speed skydiving is the discipline where the only one aspect of the skydiving counts: **free fall speed.**



3. the essence of speed skydiving

- To compete for the best Meet Result and set World Records.
- A Meet Result is made up of 3 jumps from “regular” skydiving altitude: 4.000 meters (13.124 ft).
- Meet Results and World Records can only be set during a sanctioned ISSA competition.
- Only regular skydiving gear in sale is allowed to be used. No extra weights are allowed!
- Two “hip-mounted” Larsen & Brusgaard Pro-Tracks measure the **average speed** between 2.700 meters (8.858 ft) and 1.700 meters (5.577 ft).
- Extracting the Pro-Track readings with Larsen & Brusgaard Jump-Track version 2.00.D.



4. what speeds are possible?

- In stable, belly to earth position, terminal velocity of the human body is about 200 km/h (~ 120 mph).
- Stable freely head down position has a terminal speed around 240-290 km/h (~ 150-180 mph).



4. what speeds are possible?

- Further minimizing body drag and streamlining the body position allows to reach higher speeds, near 480 km/h (~ 300 mph) and more.
- **Achieving and maintaining high free fall speed is the goal of speed skydiving.**
- Till today, only three skydivers broke the 500 km/h (~ 312 mph) barrier in a speed skydiving competition!



5. safety is an important point in speed skydiving

- the skydiving gear must according to actual TSO standards
- closing loops has to be tight and proper
- no visible velcro on the gear
- hand deploy BOC (pullout recommended)
- one audible altimeter is mandatory (two audible altimeters are recommended)
- no additional weights are allowed
- exit order: speeders in first group, fastest speeder goes first
- tracking during break off and slow down: 90° to the jumprun direction (1st left, 2nd right, ...)

6. measurement needs

- two “hip-mounted” Larsen & Brusgaard Pro-Tracks per skydiver in the air
- one Larsen & Brusgaard PC Interface for downloading the Pro-Track Data to a PC or Laptop
- Larsen & Brusgaard’s Jump-Track software, version 2.00.D, installed on a PC for analyzing the jumpdata



7. judging speed skydiving

- only 1 hour of speed skydiving introduction is necessary for judges from other disciplines
- this introduction contains: explanation of rules, safety reasons and Pro-Track workflow (handover, documentation, etc.)
- at Austrian Nationals one FAI judge is responsible for the judging



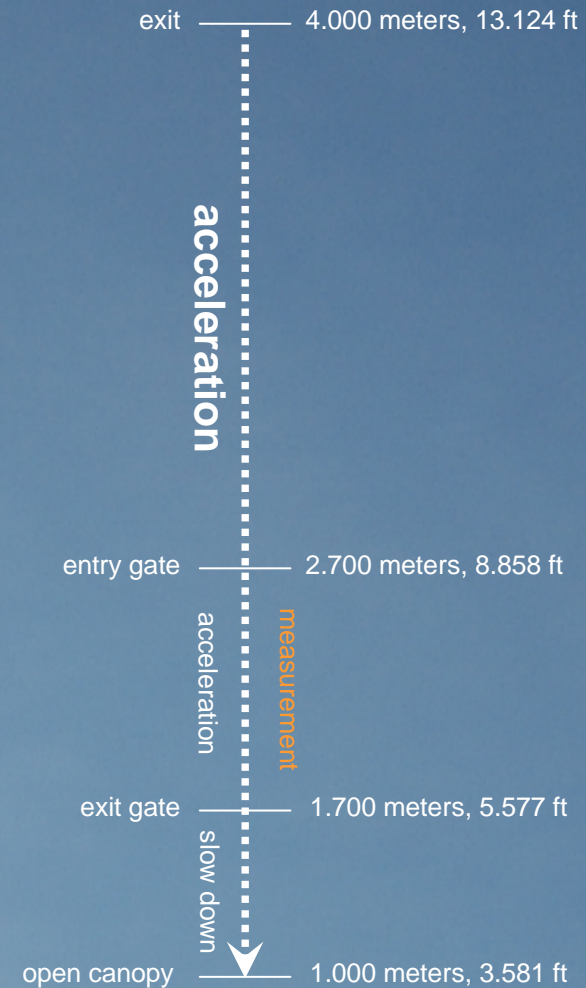
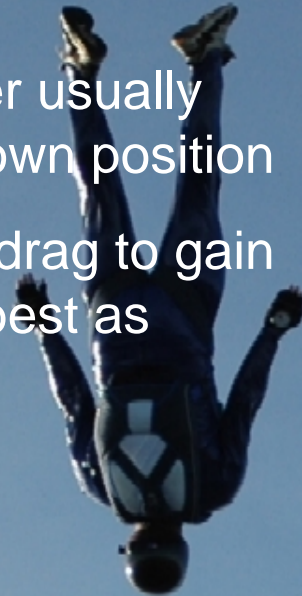
8. layout of a speed skydiving jump

- Exit
- According to the ISSA rules the exit altitude has to be within 13.000 ft (~ 3.962 meters) and 14.000 ft (~ 4.267 meters).



8. layout of a speed skydiving jump

- **Acceleration**
- After the exit the skydiver usually turns his body to headdown position
- and minimizes his body drag to gain an acceleration rate as best as possible.



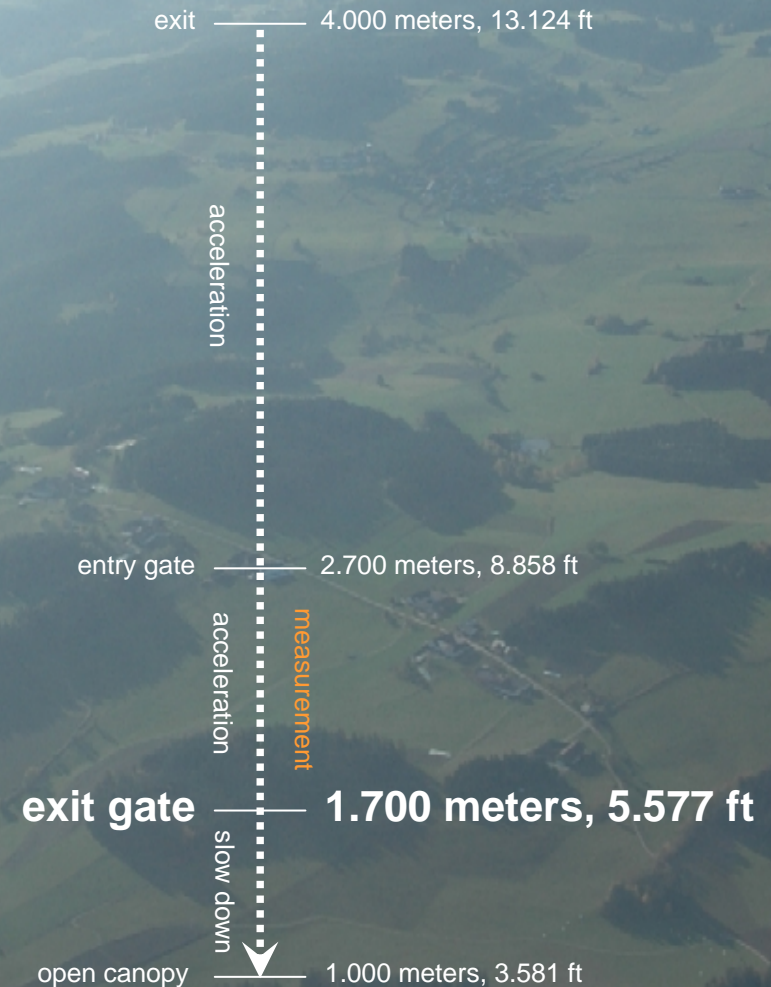
8. layout of a speed skydiving jump

- **Entry Gate**
- Entering the measurement zone in 2.700 meters (~ 8.858 ft).
- Continuous acceleration within the zone by holding a perfect body position.



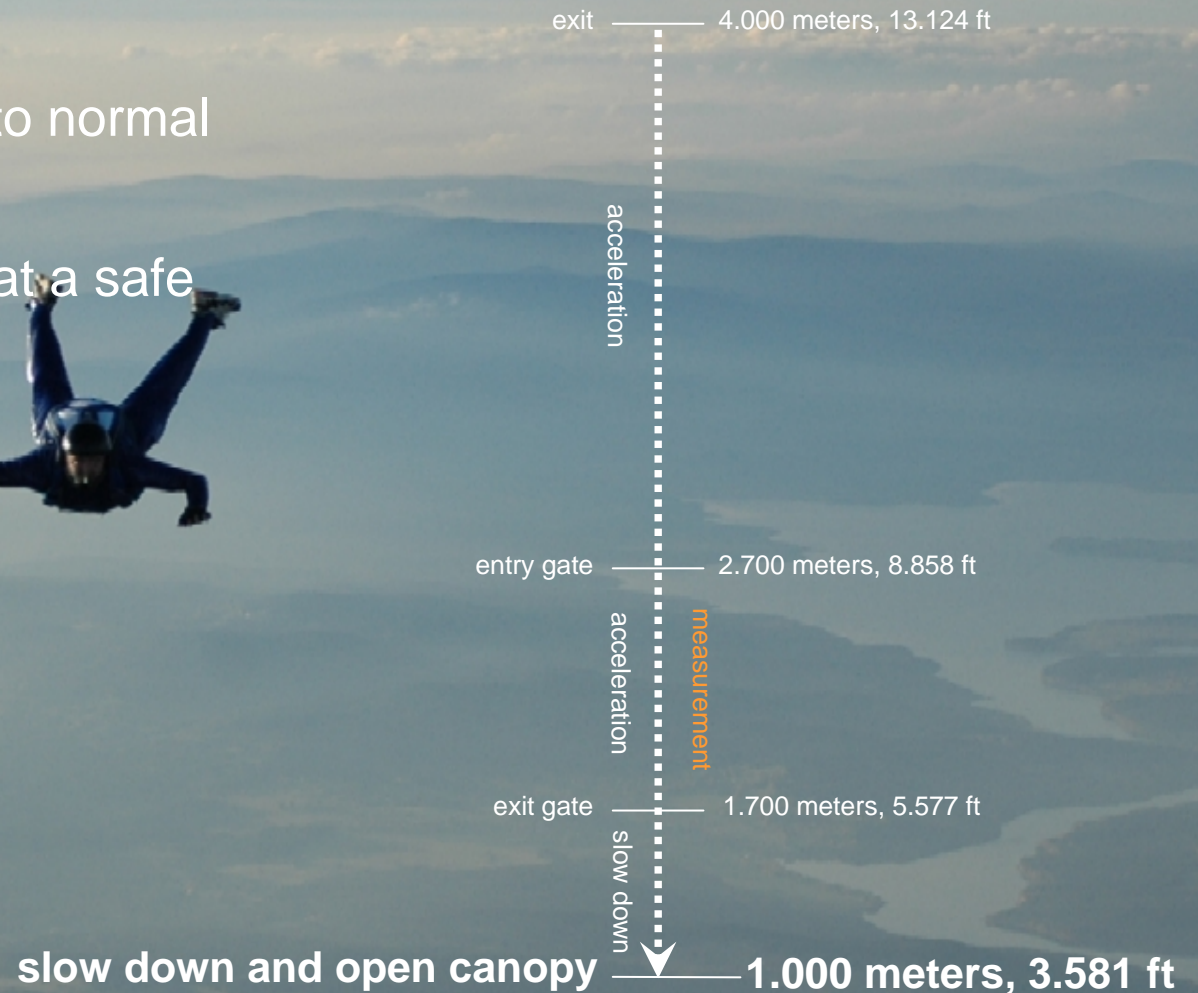
8. layout of a speed skydiving jump

- **Exit Gate**
- Leaving the measurement zone in 1.700 meters (~ 5.557 ft).
- Skydiver breaks off acceleration immediately and tracks 90° to the jumprun direction - as briefed.

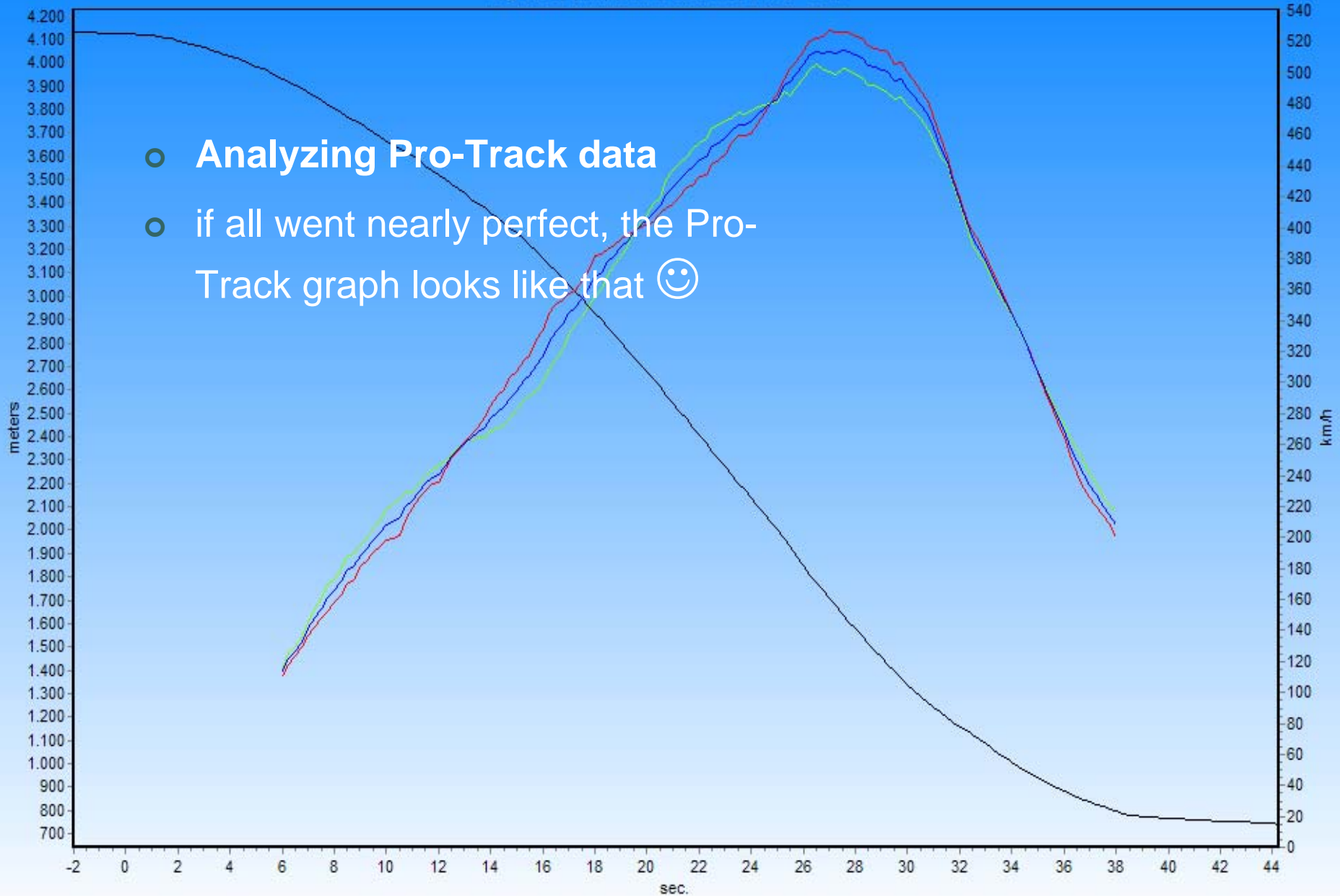


8. layout of a speed skydiving jump

- **Slow down**
- Skydiver slows down to normal freefall speed
- and open the canopy at a safe altitude.



Hohenegger Arnold
Jump2
Avg. Speed (kmh) (From 2700 to 1700 Meter): 503,37



- Analyzing Pro-Track data
- if all went nearly perfect, the Pro-Track graph looks like that 😊

9. official speed skydiving nationals

- Great Britain since 2004



- Sweden since 2005



- Austria since 2005



10. a short summary

- sophisticated technical measuring equipment is available
- the ISSA developed easy to use and clear rules
- no big personal effort to train speed skydiving judges,
- neither for judge-instructors nor the judges themselves
- no big technical and personal effort to organize a speed
- skydiving competition

last but not least

- because of the extreme speed a skydiver achieves, tv and print media are very interested to report about this discipline.

11. International Speed Skydiving Association ... ISSA

- ISSA members are representatives of their country
- they promote and organize speed skydiving in their countries
- ISSA members form the ISSA Board
- The ISSA board is responsible for speedskydiving rules and the yearly speed skydiving worldcup series

11. International Speed Skydiving Association ... the ISSA board

- Ken Hansen (SWE/NOR), chairman
- Marco Wiederkehr (LIE), assistant chairman
- Stan Snigir (USA)
- Arnold Hohenegger (AUT)
- Armando Guiseppe Bonatto Minella (ITA)
- Clare Murphy (GBR)
- Christian Labhart (SUI)
- Olli Eerola (FIN)

11. International Speed Skydiving Association ... Ressources

- ISSA homepage (check it for rules, schedule, news and events)

<http://www.speedskydiving.com>

- GSSDB Global Speed Skydiving Database (online database incl. all results and records)

<http://gssdb.speedskydiving.eu>

- Speed Skydiving Forum (official speed skydiving forum)

<http://speedskydiving.proboards19.com>