VICTORIA FLYING CLUB

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- Bookings, Questions

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Part I – Basic Climbing and Descending

- Review Attitudes and Movements
- **Basic Climbs and Leveling Off**
  - Attitude, Power, Trim (**APT**)
- **Basic Power-off Descents and Leveling Off**
  - Power, Attitude, Trim (**PAT**)
- **Instruments**
- Summary and Questions
- Pre-Flight Briefing

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Review

- How do we establish a nose-up/down **attitude**?
- What external **references** change how?
- Which **instruments** change how?
- How do we maintain **heading** in **straight** flight?
- How do we maintain **altitude** in **level** flight?

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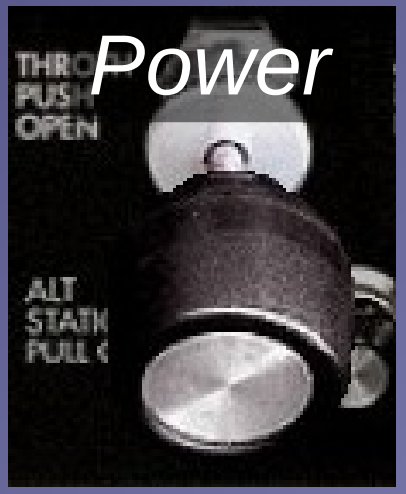
Establishing a Basic Straight Climb



- In cruise-attitude **lookout** ahead and above
- Establish a **nose-up attitude**
- Apply **full power** maintaining selected **nose-up attitude**
- Keep **straight** and control **yaw** with **rudder**
- **Trim** and continue to monitor **heading**, **airspeed** and **altitude**

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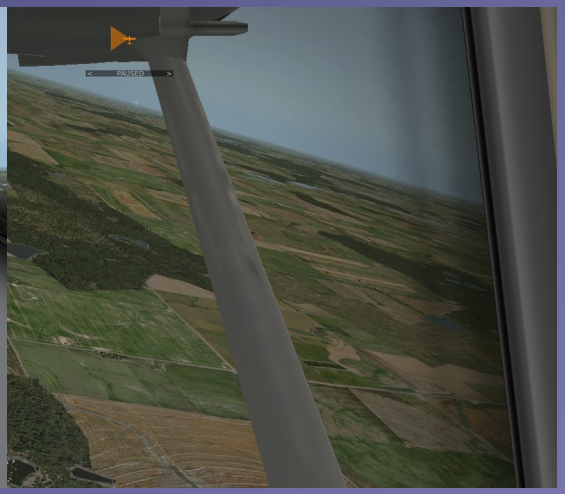
Maintaining a Basic Straight Climb



- Adjust **attitude** to attain desired **climb airspeed**
- Re-**trim** after complete attitude adjustment
- Continue to **lookout** and monitor **heading**, **airspeed** and **altitude**

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Leveling Off from a Basic Straight Climb

- Establish **cruise attitude** at desired target altitude
- Accelerate to **cruise airspeed**
- Reduce **power** maintaining **cruise attitude**
- Keep **straight** and control **yaw** with **rudder**
- **Trim** and continue to monitor **heading**, **airspeed** and **altitude**

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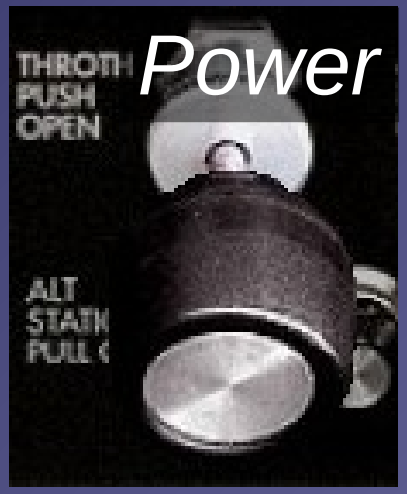
Establishing a Basic Straight Descent



- In cruise attitude **lookout** ahead and below
- Reduce **power** to **idle** (power-off descent)
- Keep **straight** and control **yaw** with **rudder**
- Decelerate to **descent airspeed** maintaining cruise attitude
- Establish **nose-down attitude** and **trim**

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Maintaining a Basic Straight Descent

- Adjust **attitude** to attain desired **descent airspeed**
- Re-**trim** after complete attitude adjustment
- Continue to **lookout** and monitor **heading**, **airspeed** and **altitude**

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Estimating the Power-Off Glide Path

- References that **move** **up** cannot be overflown
- References that **move** **down** can be overflown
- References that **remain** **steady** are on glide path
- Farthest glide is achieved at **best glide** speed ***68 KIAS***

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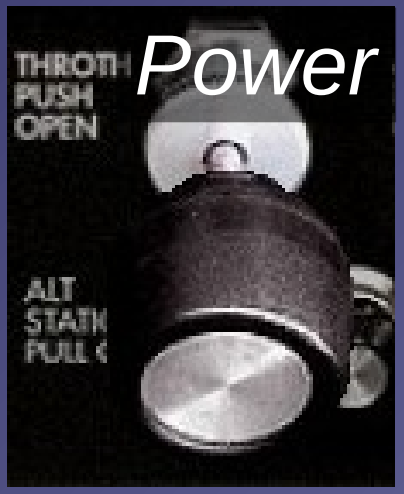
Leveling Off from a Basic Straight Descent



- In nose-down attitude **lookout** ahead and above
- Increase **power** to **cruise power** setting
- Establish **cruise attitude** and accelerate to **cruise airspeed**
- Keep **straight** and control **yaw** with **rudder**
- **Trim** and continue to monitor **heading**, **airspeed** and **altitude**

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Instruments

Airspeed Indicator

Vertical Speed Indicator

Altimeter

- **Airspeed** indicator is the main reference instrument
- Monitor **airspeed**, **vertical speed** and **altitude**

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Summary / Quiz

- Mentally perform a *basic* **climb** and **level off** and state all required actions. (**APT**)
- Mentally perform a *basic* **power-off descent** and **level off** and state all required actions. (**PAT**)
- How can we confirm the correct glide-path during a descent visually?

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Pre-Flight Briefing

- Exercise
- Training Area
- Departure and Arrival Procedures
- Weather Briefing / NOTAMs
- Aircraft and Documents
- Time and Fuel Requirements
- Safety Considerations and Responsibilities

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Additional Materials

- Additional materials for climbing and descending
- Flight Instructor Guide – Exercises 7 and 8
- Flight Instructor Guide – Lesson Plans 2, 3 and 4

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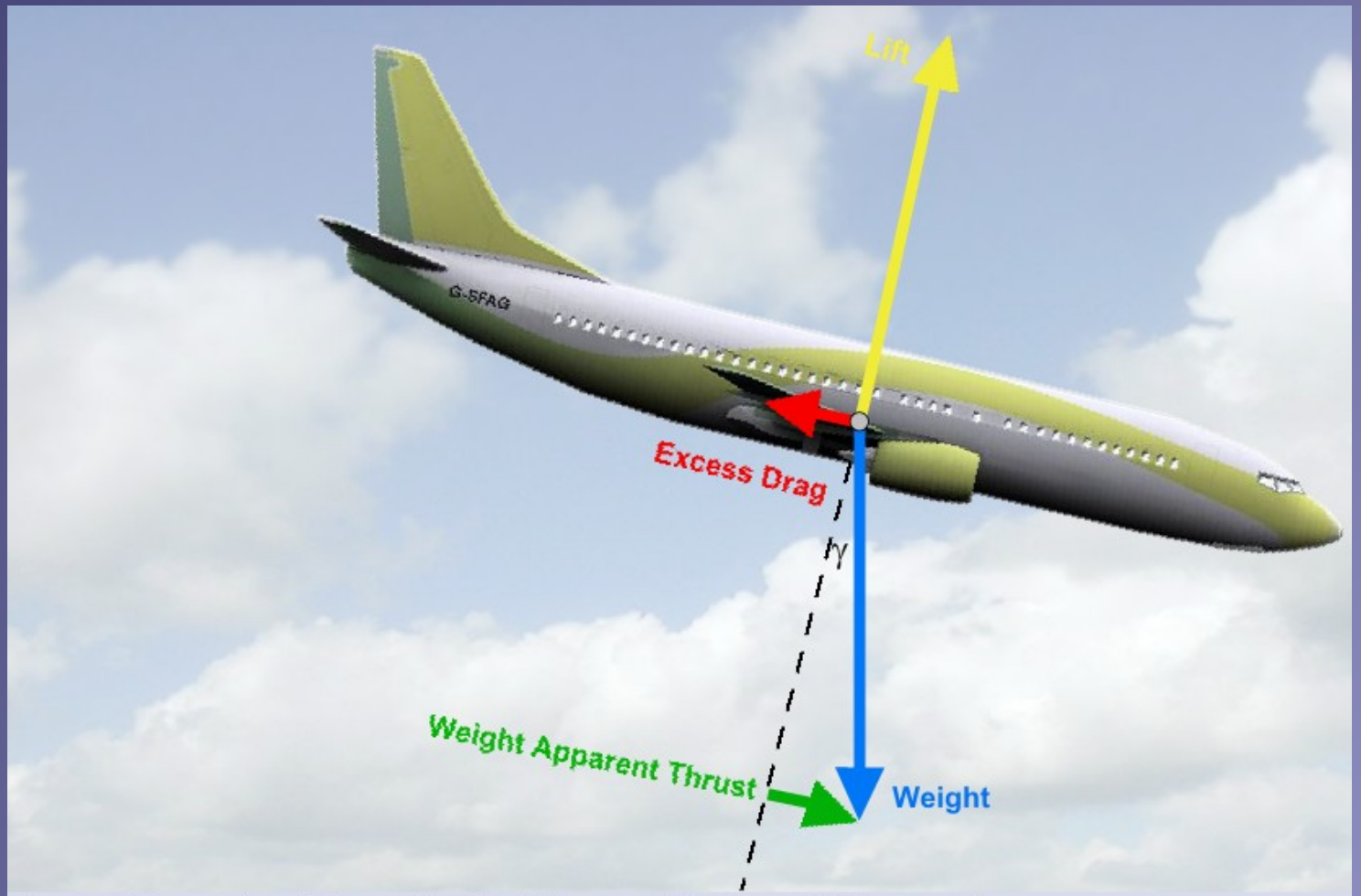
Minimum Glide Angle



Angle of Descent - Minimum Angle of Descent (Minimum Glide Angle)
Minimum angle of descent will be achieved when excess drag is minimum.

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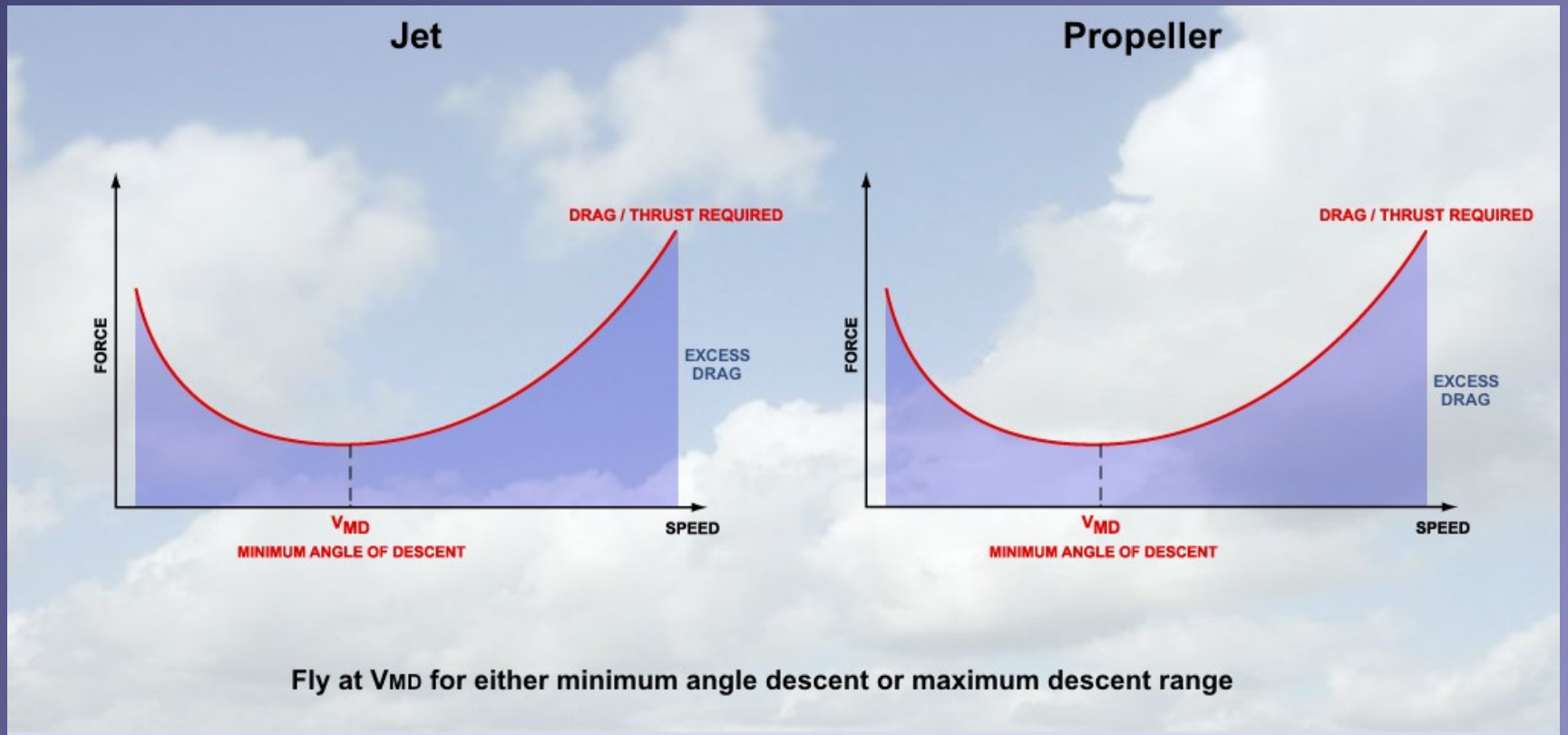
Minimum Drag



Angle of Descent - Minimum Angle of Descent (Minimum Glide Angle)
Minimum angle of descent will be achieved when excess drag is minimum.
Fly at V_{MD} to achieve the minimum angle of descent.

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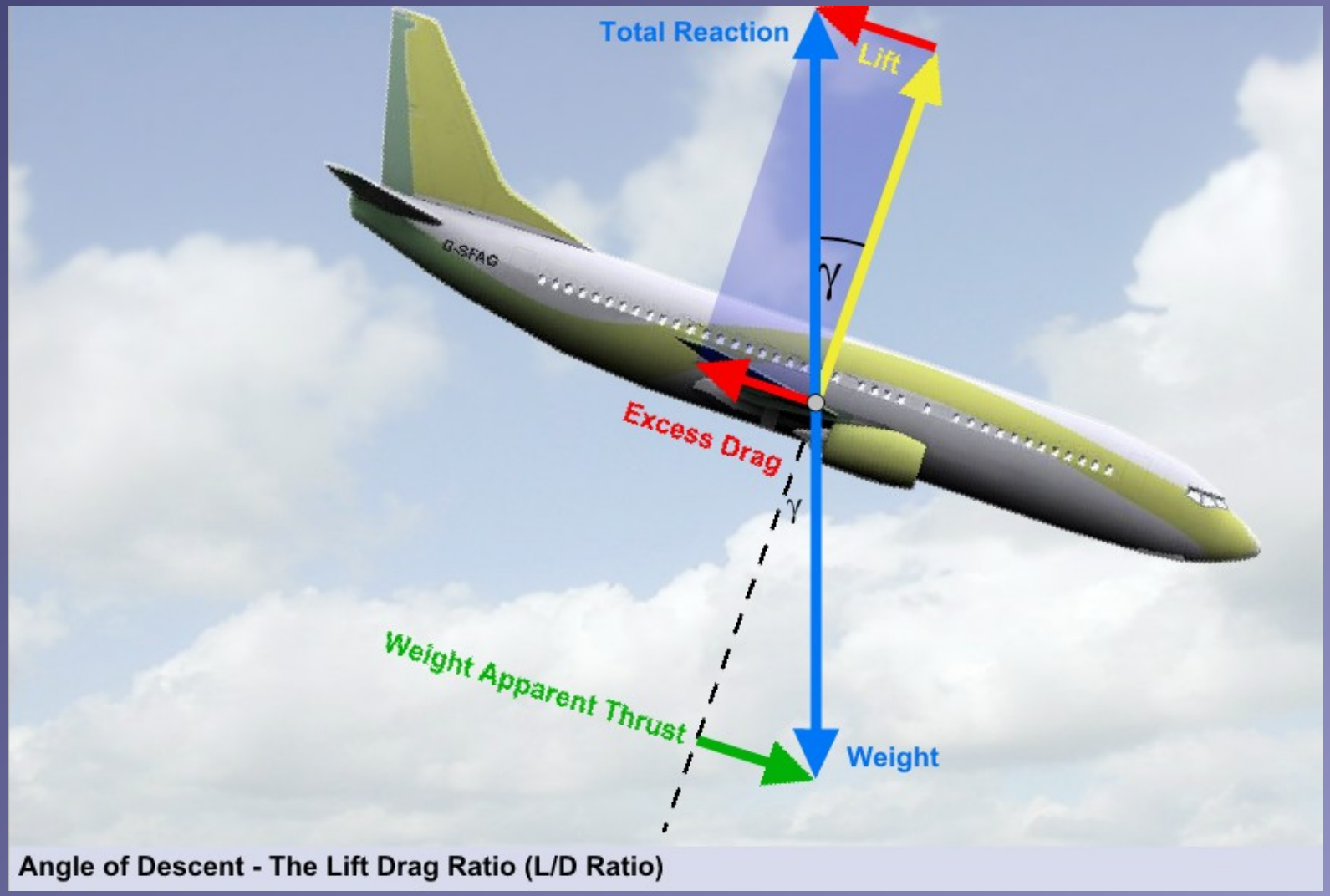
Lift to Drag Ratio



Angle of Descent - The Lift Drag Ratio (L/D Ratio)

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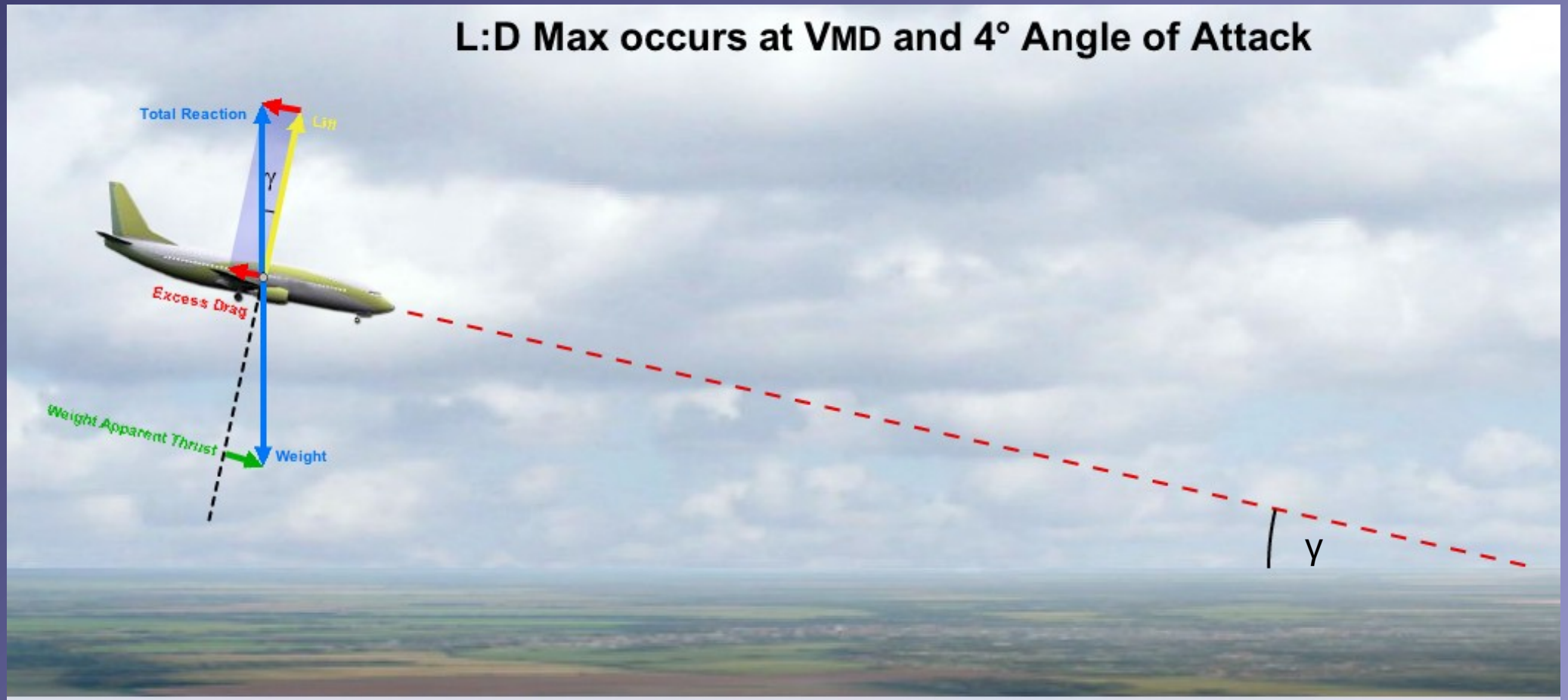
Maximum Lift to Drag Ratio



Angle of Descent - The Lift Drag Ratio (L/D Ratio)

The Lift/Drag ratio determines the aeroplane glide angle.

The greater the L/D ratio, the smaller the glide angle and the greater the descent range.