

AIRMANSHIP

105 SQN

Content

- Introduction
- Air
- Man
- Ship



Introduction

- Rules & Regulations in the aviation
- The skill, knowledge and attitude (態度) of being an airman.
- A sound acquaintance (了解) with the principles of flight.



Air

- The environment
- Weather
- Airfield / Aerodrom / Airport

Environment

No tall building is allowed around the airport



Weather

Rainy



Snowy



Weather

Turbulence (亂流)



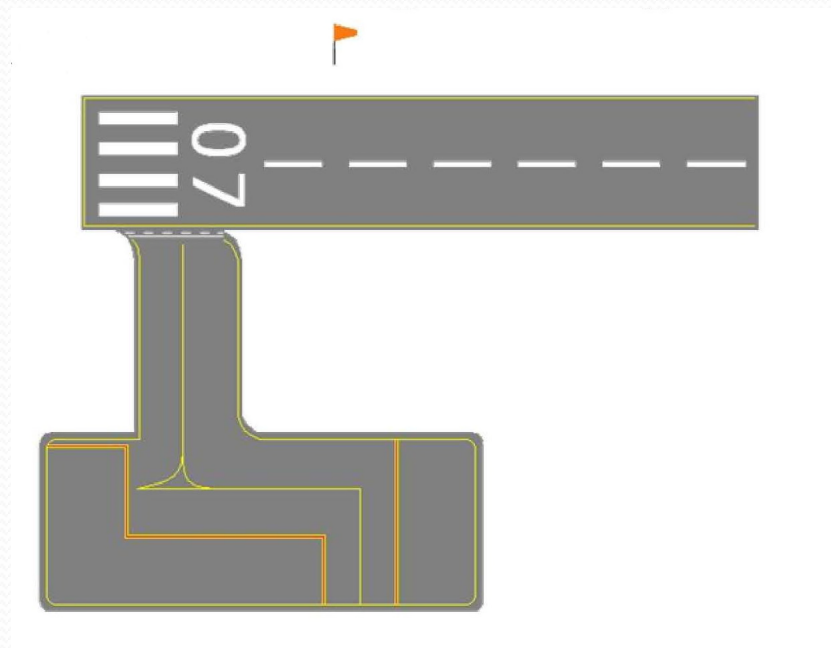
Thunder (打雷)



Airfield (小航空站)

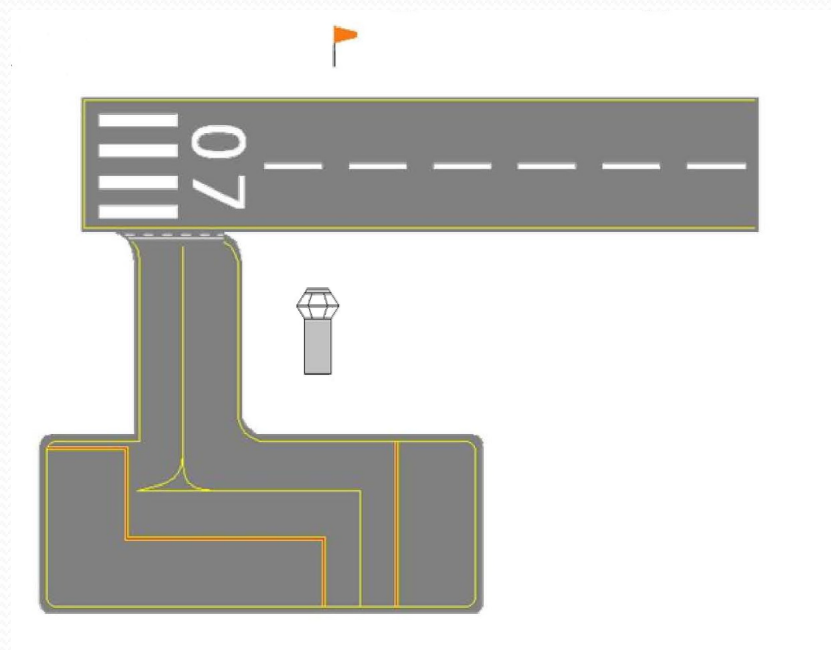
Used of take off & landing

Grass or soil paved runway



Aerodrome (航空站)

Used of take off & landing
Including building



Airport (機場)

Handles international air traffic

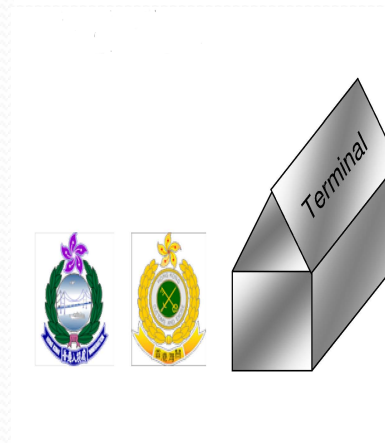
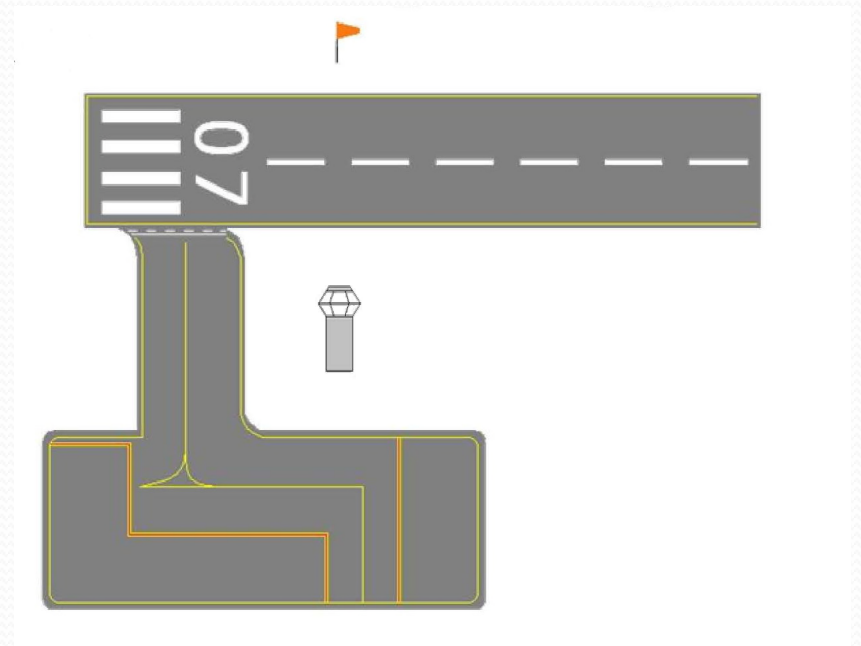
Including building

Custom

Passenger

Immigration

Baggage handling facilities



Airport Facility

- *Control Tower*
- *Wind sock*
- *Apron (停機坪)*
- *Terminal*
- *Re-fuelling station*

Control Tower

A building for air traffic controllers to ensure safe operations of aircrafts.

Towers handle all takeoff, landing, and ground traffic.



Wind sock

A vital indicator to the pilot of wind strength and direction.

When the sock is horizontal, the wind speed is approximately 20-25 knots.



Apron (停機坪)

- Adjoins the terminal and aircraft parking and servicing bays.
- For aircraft ground movement and parking.

Terminal

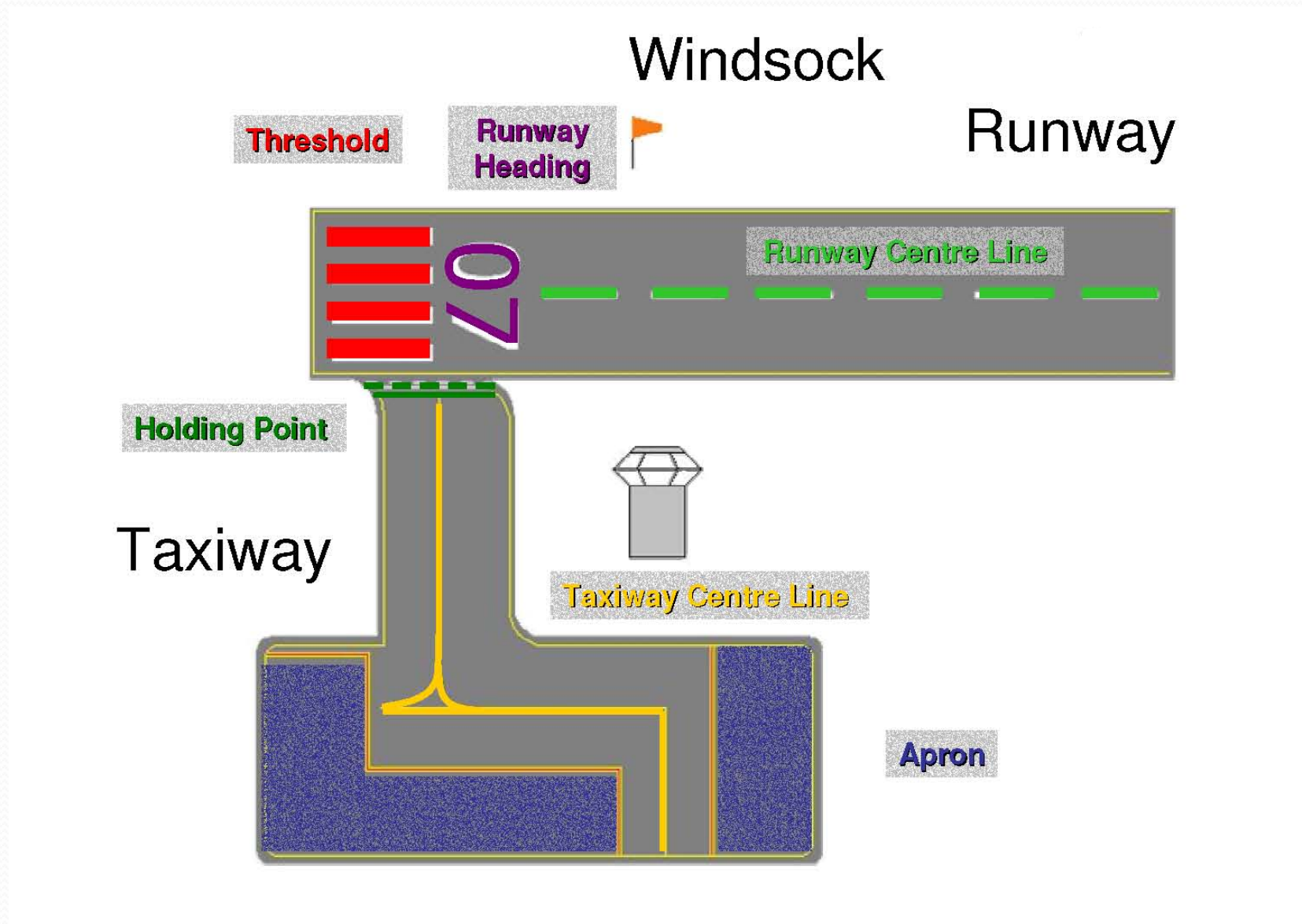
A building containing immigration, customs, restaurants, shops, and other facilities for international flights.





Re-fuelling station

- An optional facility in an aerodrome for a stop-hop-flight to re-fuelling.
- When refueling, the airplane must be positioned well away from other airplanes and from buildings.
- No smoking is allowed and passenger must be kept well clear.
- The airplane must be grounded before refueling to prevent the possibility of a spark of static electricity igniting the fuel vapour.



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- *Threshold* (出發點) - A series of white strip like 'piano keys' indicating the beginning of the runway that is available for landing.
 - *Centerline* - A white broken line at the centre of the runway. / A yellow solid line at the middle of the taxiway. Aircraft should maintain at the centerline during taxi to ensure wing-tip clearance.

- 
- *Runway Number* - A runway designator showing the runway direction rounded off to the nearest 100.
 - *Holding point* - A double solid line and double dash line in yellow across the width of the taxiway indicated that the aircraft should request clearance before passing through this point.

Man

- Light signal
- Marshaling signal

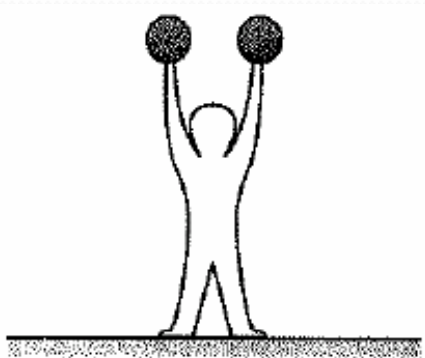
Light signal

If you experience radio communications failure, Air Traffic Controllers may use light signals originating in the control tower communicate basic commands.

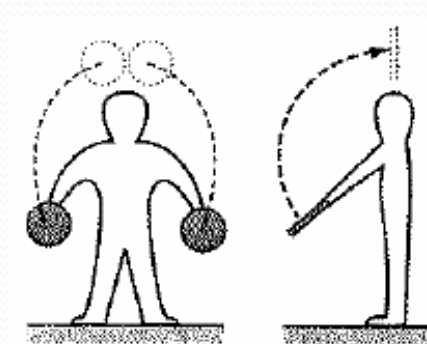
Light Signal	Aircraft on the Ground	Aircraft in flight
<i>Steady Green</i>	Cleared for takeoff	Cleared to land
<i>Flashing Green</i>	Cleared to taxi	Return for immediate landing
<i>Steady Red</i>	Stop	Give way to other aircraft and continue circling
<i>Flashing Red</i>	Taxi Clear of the runway in use	Aerodrome unsafe- do not land
<i>Flashing white</i>	return to starting point on airport	Not applicable
<i>Alternation Red/Green</i>	Exercise Extreme Caution	Exercise Extreme Caution

Marshaling signal

This bay

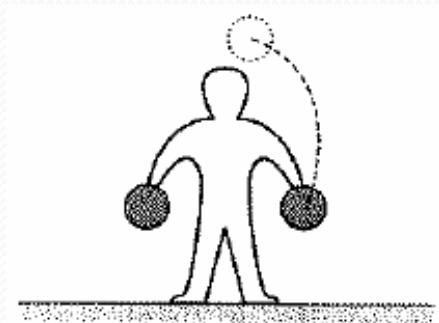


Move ahead

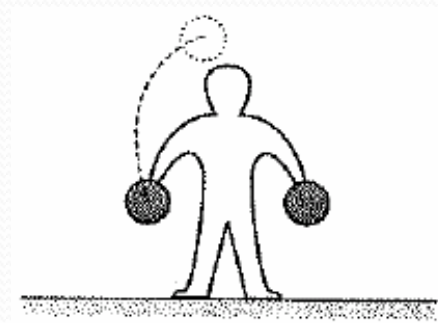


Marshaling signal

Turn to port

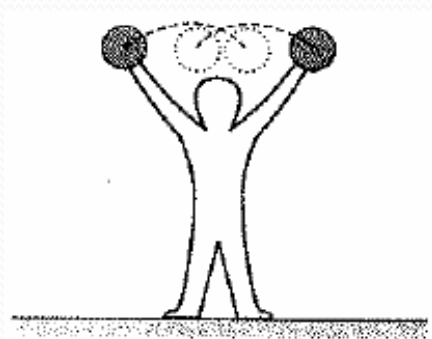


Turn to starboard

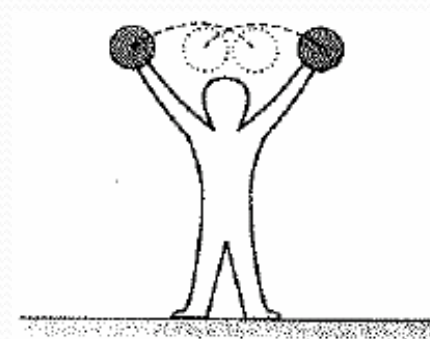


Marshaling signal

Stop

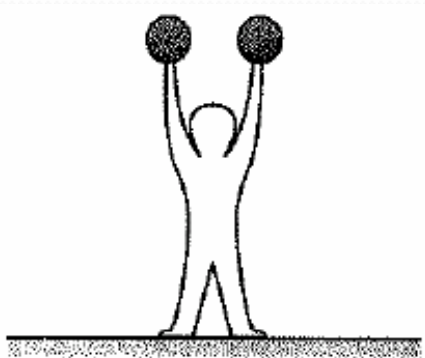


Start engine

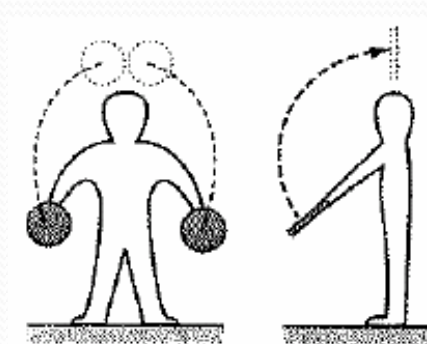


Marshaling signal

This bay

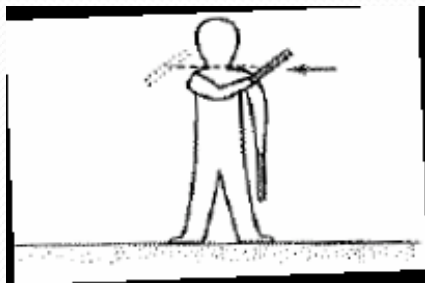


Move ahead



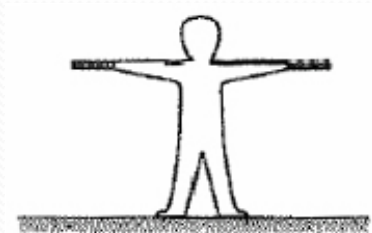
Marshaling signal

Cut engine

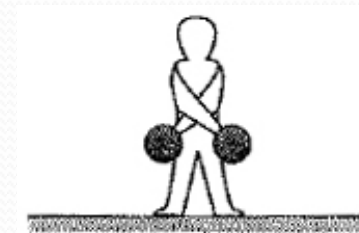


Marshaling signal (Helicopter operations only)

Hover (盤旋)

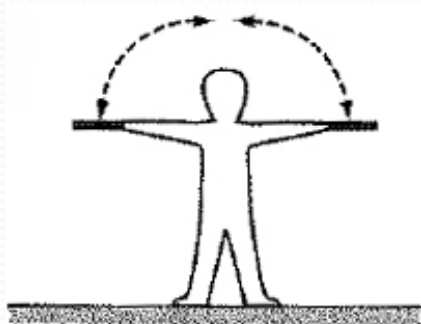


Land

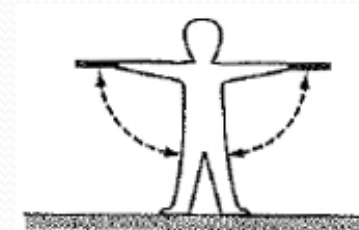


Marshaling signal (Helicopter operations only)

Move upwards

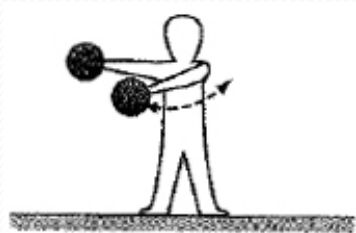


Move downwards



Marshaling signal (Helicopter operations only)

Move horizontally





Hong Kong International Airport

- Do not have marshalling man any more.
- Assisted by electronic board to allow pilots to read the stopping distance.
- Pilots can then decide what actions to take in order to park accurately.

Ship

- Flight Instrument

Flight Instrument





Flight Instruments

- *Airspeed Indicator* (空速指示器) - It provides information about the speed of the aircraft relative to the air in knots.
- *Attitude Indicator* (地平儀) - It gives the positioning information of the aircraft in pitch and roll against the horizon.
- *Altimeter* (高度計) - It provides the height information to the specific datum ... e.g. mean sea level, airport ground level, in thousand of feet.



Flight Instruments

- *Vertical Speed indicator* (垂直速率表) - It provides the climbing or descending speed of the aircraft in thousand of feet per minutes.
- *Heading Indicator* (航向指示表)- It provides the directional information to the pilot.
- *Turn Coordinator* (轉彎協調表)- It provides information for the pilot to govern the rate and the balance of a turn.



Flight operation

- Checklist
- Before flight

Checklist

- Fuel - contents sufficient (足夠的) to continue flight, is consumption (消耗) correct of engine power setting, is fuel tank balance over
- Oxygen - contents sufficient to continue flight, are flow indicator showing positive flow
- Engine - RMP setting, are temperatures and oil pressures correct for RMP
- Altimeters (高度計) - are correct pressure settings selected
- Instruments(儀器) - are all instruments erect (直立的), are compasses synchronized



Before flight - *Pre-flight*

- A pre-flight inspection is a very important phase in the flight operation.
- All controls and equipment shall be inspected before the beginning of the flight to ensure that the plane is safe to fly.
- The map and weather shall be studied carefully and work out a planned route.



Before flight - *Taxi*

- Although taxiways are not as crowded as roads, pilots must keep a very good look-out for obstructions (障礙) such as other aircraft, workmen and station vehicles.
- The aircraft brakes should be tested as soon as possible after starting to taxi, and the taxi speed should be kept low.
- Pilot will stop at the holding position.
- Pilot should have a good view of the runway, and the final approach path.



Before flight - *Takeoff*

- Pilot then calls the control tower for permission to take-off.
- When this is given and he makes sure that the runway and its approach are clear of other aircrafts, his aircraft is taxied forward and lined up with the centre line of the runway.
- After a final check, the brakes are released , full power is applied and the aircraft starts its take-off run.



In the air - *Position check*

- It is important that a pilot always keeps a check on his position to prevent him getting lost.
- It is for this purpose that he carries maps for navigation.
- A good sense of location is also important in case a pilot has to divert to another airfield because of bad weather at his base.



After flight - *Post-flight*

- Once the pilot has landed the aircraft, he taxies off the end of the runway onto the taxiway.
- He then stops and completes his after landing checks, including such items as raising flaps, turning off necessary navigation equipment, and checking brake pressures.
- Once the aircraft is safe, the engine is shut down and the wheels are chocked.
- The pilot completes the log.



Approaching a helicopter

- Never approach the helicopter when its rotor blades are turning unless the pilot gives signal to do so.
- Always approach the helicopter from the front, generally in the direction at '2 o'clock' when approaching from the right or at '10 o'clock' when approaching from the left.



Approaching a helicopter

- At no time is anyone permitted near the tail of the helicopter, that is behind the aft semi-circle between the '3 o'clock' and '9 o'clock'.
- No loose object should be wear when approaching the helicopter.
- No running is permitted within 50 feet of the helicopter.

END