

# Ex. 4 - Taxiing



# What you will learn:

How to safely and efficiently maneuver the airplane on the ground, taking into account:

- surface condition
- wind speed and direction
- wingtip and propeller clearance
- other traffic, people and objects
- aerodrome markings and layout.

# Why learn all this: isn't it just like driving?

Planes are designed for flying, not driving → many things need to be considered and adjusted for to ensure safe ground handling

Careless taxiing could lead to:

- excessive wear and tear on the aircraft
- loss of control
- propeller and engine damage
- injury and damage to people and property on the ground

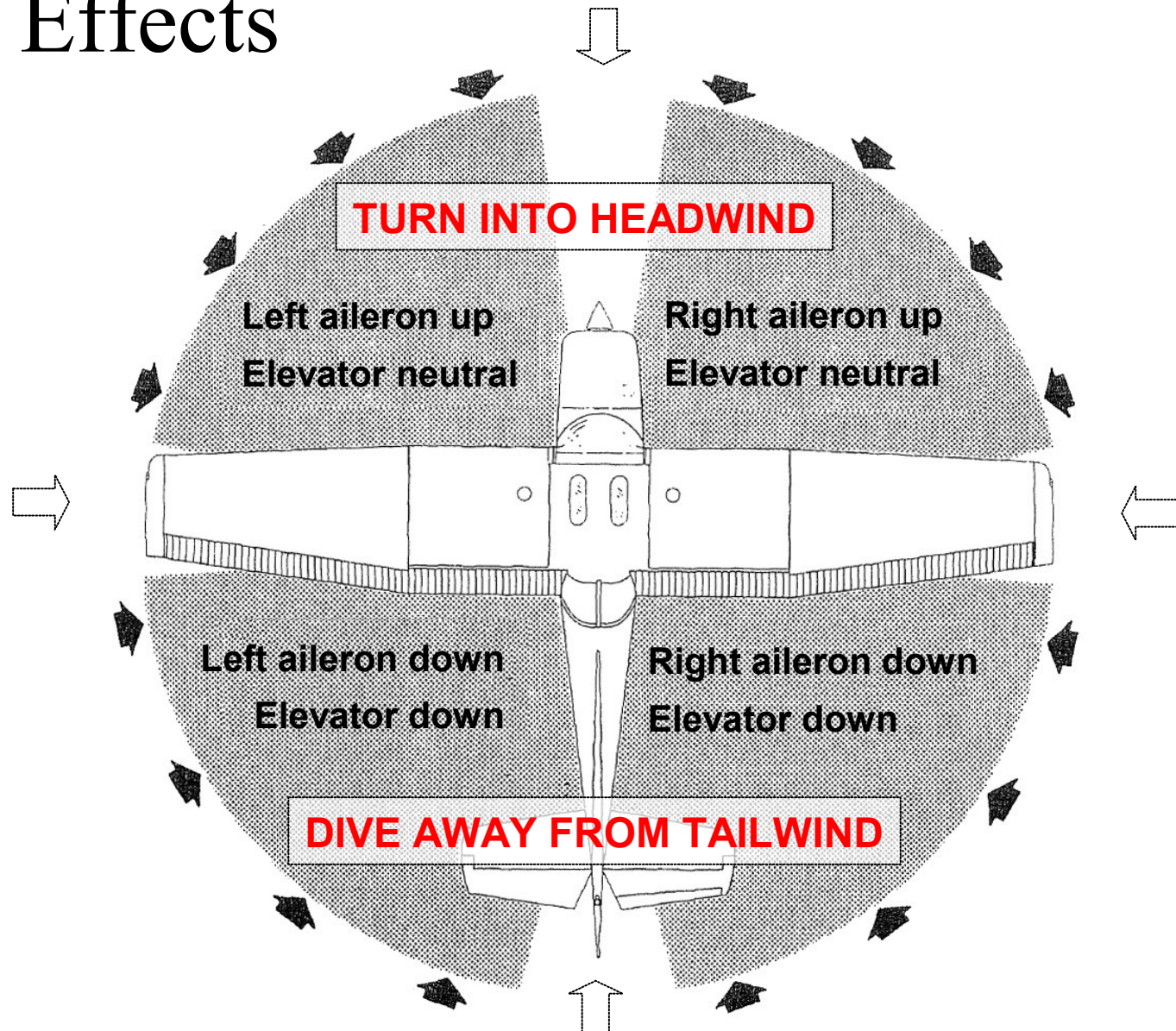
# Speed Control

- ✓ Test brakes as you start to taxi
- ✓ Taxi at the speed of a fast walk
- ✓ Adjust your speed primarily using the throttle, not brakes
- ✓ Before using brakes, reduce power to idle
- ✓ Return power to ~1000 rpm after plane has stopped.

# Directional Control

- ✓ Normal turns are made by stepping on left or right pedal
- ✓ Tighter turns can be made by stepping on the pedal and applying a brake on the same side (differential braking)
- ✓ Speed control is especially important in a turn – planes can swerve and tip!

# Wind Effects



# Instrument Check – Left Turn



# Instrument Check – Right Turn





# Parking

- ✓ Don't try to taxi the plane into a tight space between obstructions
  
- ✓ Good practice, especially in high winds, to use
  - control lock
  - wheel chocks

# Aerodrome Layout



# Apron

- ✓ Area intended to accommodate:
  - loading and unloading of cargo and passengers
  - fueling
  - servicing and maintenance
  - parking.
- ✓ Multiple aprons usually denoted by Roman numerals (I, II, III etc.)

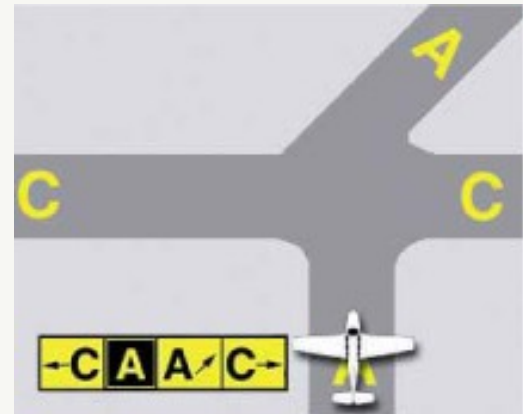
# Taxiways

- ✓ Strips connecting runways and aprons, hangars, and other facilities
- ✓ Usually denoted by letters (A, B, C etc.)
- ✓ Center line may be marked by continuous yellow line



You are on taxiway Foxtrot

intersection  
taxiway Delta  
coming up on the  
right



# Runways

- ✓ Strips intended for aircraft take-off and landing
- ✓ Denoted by their magnetic direction, rounded off to the nearest 10° and last zero removed (Runway 27)
- ✓ So every runway actually has two “names”... Why?

Q: Why 33-15, not 15-33?

You are on taxiway Bravo



at the threshold of runway 31

You're on taxiway Delta



at intersection with runway 33-15

# Comparison

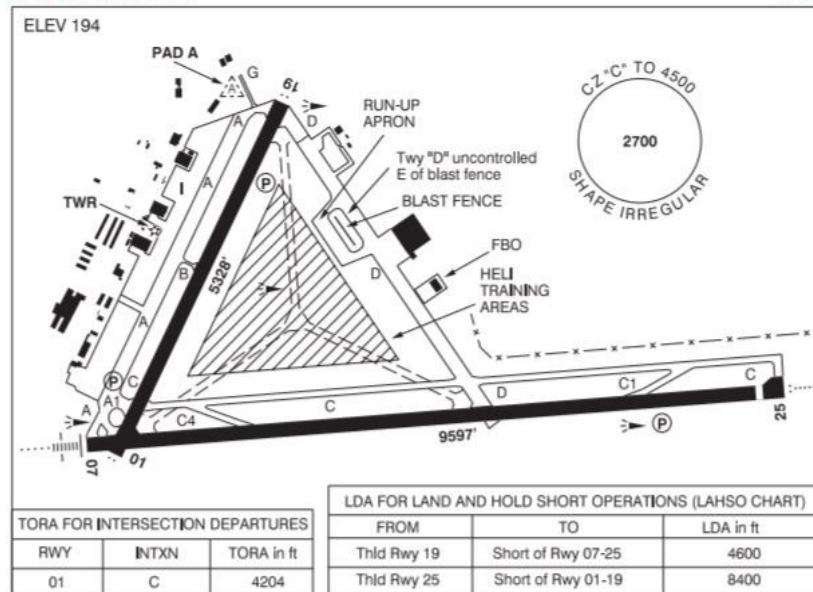
## CHILLIWACK BC

|                 |  |  |             |
|-----------------|--|--|-------------|
| <b>REF</b>      | N49 09 12 W121 56 21 Adj S<br>17°E (2012) UTC-8(7) Elev 32' VTA<br>A5004 LO2 T1  |  | <b>CYCW</b> |
| <b>OPR</b>      | Magnum Management Inc<br>604-792-3430 Cert   |  |             |
| <b>PF</b>       | A-1,2 15-03Z† C-3,4,5,6  |  |             |
| <b>FLT PLN</b>  | NOTAM FILE CYXX  |  |             |
| <b>FIC</b>      | Kamloops 866-WXBRIEF (Toll free<br>within Canada) or 866-541-4101 (Toll<br>free within Canada & USA)   |  |             |
| <b>SERVICES</b> |  |  |             |
| <b>FUEL</b>     | 100LL, JA  |  |             |
| <b>S</b>        | 1,2,3,4,5,6  |  |             |
| <b>RWY DATA</b> | Rwy 07(066°)/25(246°) 3986x75 ASPH<br>Depression in rwy aprx 1000' fr Thld 25.   |  |             |
| <b>RWY CERT</b> | Rwy 07/25 AGN II   |  |             |
| <b>TWY</b>      | Twy A, B   |  |             |
| <b>RCR</b>      | Opr Ltd win maint. PLR   |  |             |
| <b>LIGHTING</b> | 07-(TE ME) AP, 25-(TE ME) AP ARCAL-122.7 type K  |  |             |
| <b>COMM</b>     |  |  |             |
| <b>MF</b>       | tfc 122.7 3NM 2000 ASL (CAR 602.98)  |  |             |
| <b>PRO</b>      | Rgt hand circuits Rwy 07 (CAR 602.96). Procedures for crossing the southern Strait of Georgia within Tml Class C airspace refer to Vancouver Intl, VTPC for Crossing the Southern Strait of Georgia. |  |             |

## BRITISH COLUMBIA

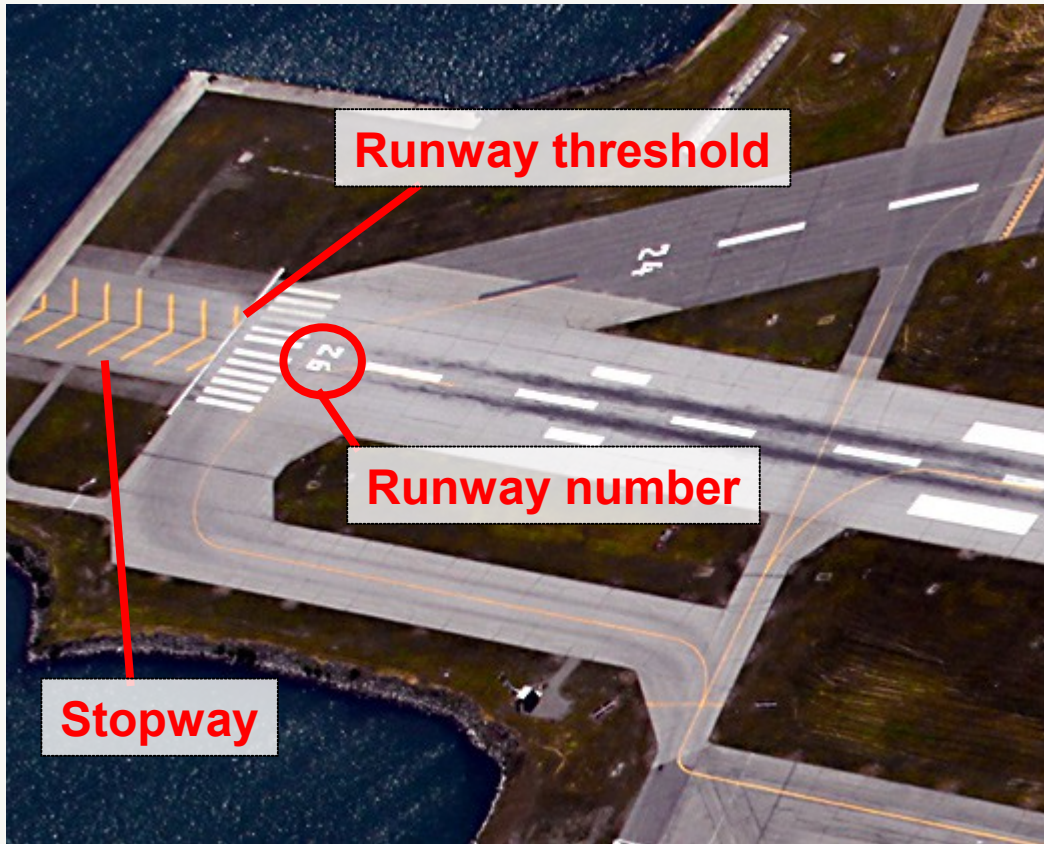
## AERODROME/FACILITY DIRECTORY

## ABBOTSFORD BC

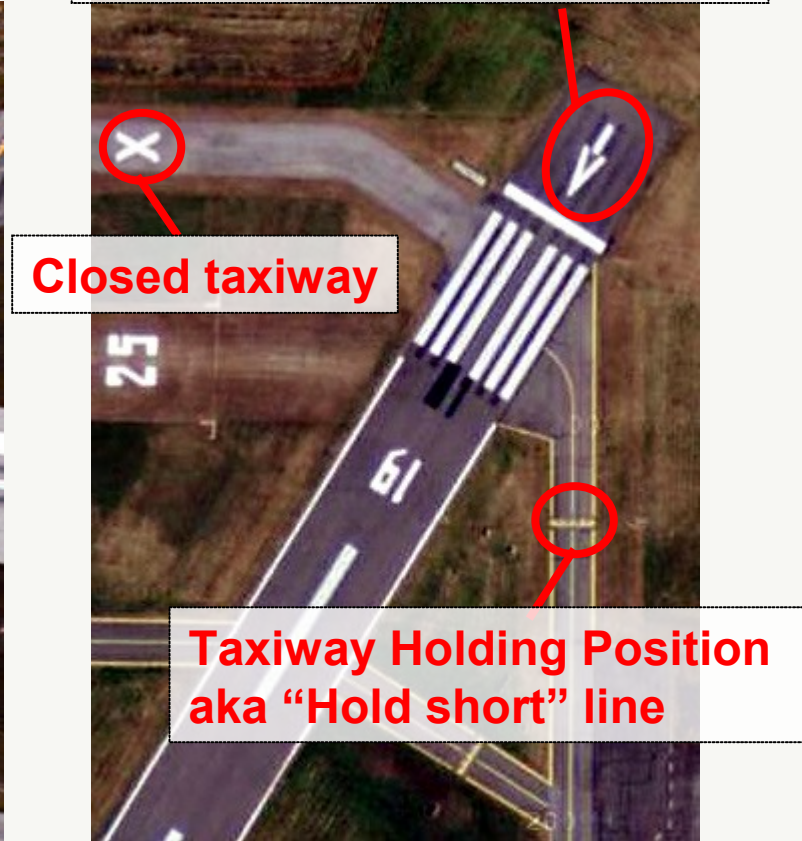
**CYXX**


|                 |   |
|-----------------|---|
| <b>REF</b>      | N49 01 31 W122 21 36 2.2SW 17°E (2014) UTC-8(7) Elev 194' VTA A5004<br>LO2 HI3 T1 CAP RCAP                                    |
| <b>OPR</b>      | City 604-855-1001 Cert  |
| <b>PF</b>       | A-1,2,3,6 C-4,5   |
| <b>CUST</b>     | AOE/15 888-226-7277 16-08Z†   |
| <b>FLT PLN</b>  | Pilots are to open/close VFR Flt Pln with Kamloops FIC via phone or Pacific rdo 122.5<br>when practicable.<br>NOTAM FILE CYXX |
| <b>FIC</b>      | Kamloops 866-WXBRIEF (Toll free within Canada) or 866-541-4101 (Toll free within<br>Canada & USA)                             |
| <b>ACC</b>      | Vancouver IFR 604-586-4590/4591 or 800-668-1333; IFR tng flts PPR ctc<br>604-586-4592 or 800-668-1333                         |
| <b>WX</b>       | METAR H24.<br>TAF H24, issue times: 00, 06, 12, 18Z.  |
| <b>SERVICES</b> | Abbotsford Shell Aerocentre   |
| <b>FUEL</b>     | MG-1, 100LL, JA (CON S IP JA-1, FSII) 604-854-1964 by truck, 604-854-0887<br>self-serve VISA & Mastercard only.               |
| <b>OIL</b>      | All   |
| <b>S</b>        | 1,2,3,4,5   |
| <b>ARFF</b>     | DESIGNATED CAT 6 for all sked acft 20 seats and abv, all other acft 2 hr PN. Ctc<br>604-864-5544.                             |
| <b>JASU</b>     | AC/DC 28V 400 amp min   |
| <b>PVT ADV</b>  | Abbotsford Shell Aerocentre 122.95 604-854-1964 or 877-270-2010   |
| <b>MIL CON</b>  | Abbotsford Shell Aerocentre 604-854-1964  |

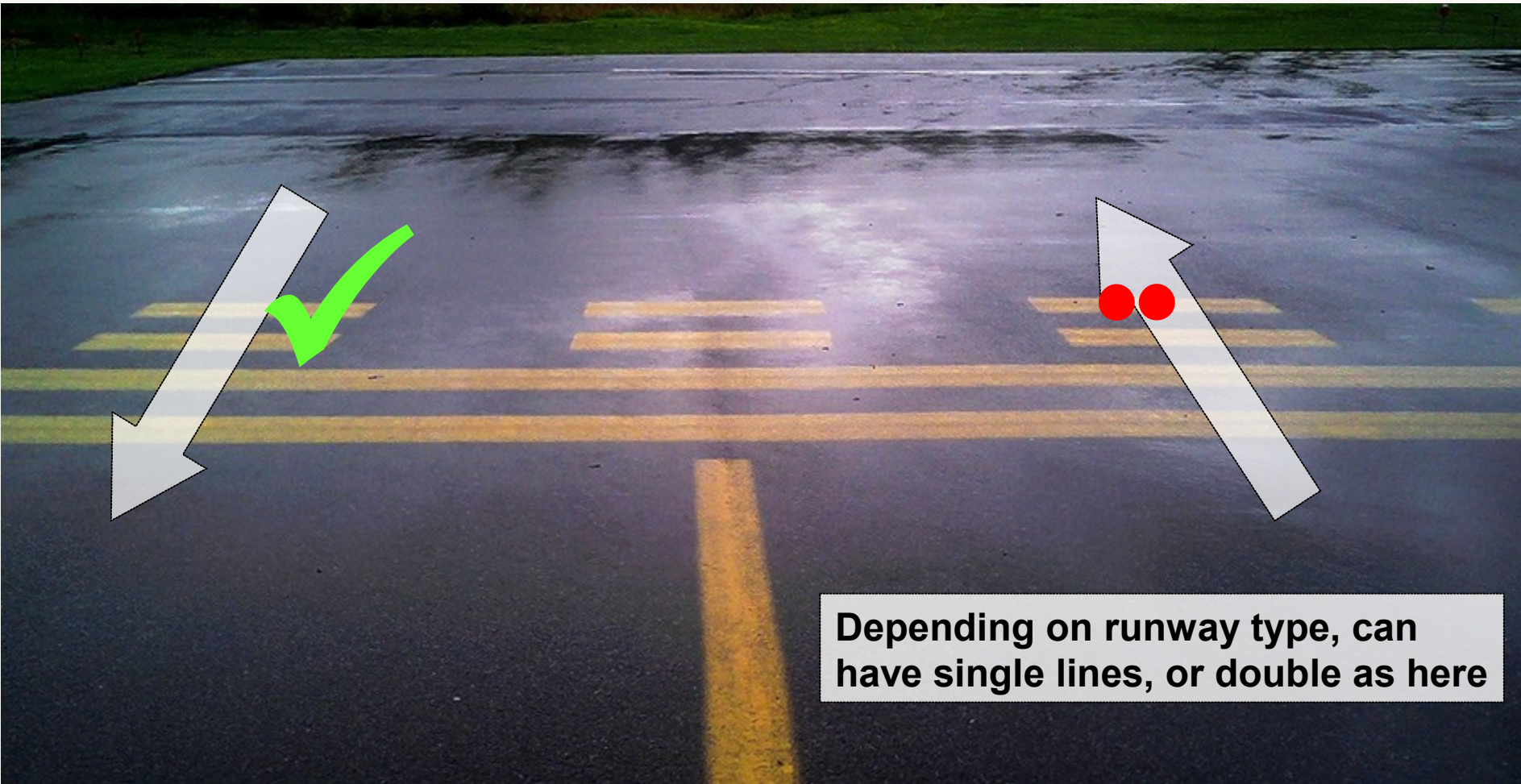
# Runway & Taxiway Markings



**Displaced threshold marking**



# “Hold Short” Line





Depending on runway type, can have single lines, or double as here



# Communication Procedures

## Controlled Airport - General

1. Listen to ATIS (Automatic Terminal Information Service) and record ATIS name, weather and other info  

2. Make initial contact with Ground Control  

3. Inform controller- position and intention, request taxi. No control? Broadcast on mandatory frequency.
4. Acknowledge instructions. **MUST** read back any “hold short” instruction, good idea to read back any instruction concerning crossing or entering runways

# Communication Procedures:

## Controlled airport – Entering and crossing runways

- ✓ You must never enter or cross a runway without an explicit permission to do so (“Taxi Alpha, cross runway 15”)
- ✓ If no permission was given, you must hold short at the hold short line (or 200’ from the edge of runway if no hold short line) and request crossing or entering it as appropriate
- ✓ When permission is granted, check for taking-off/landing traffic before proceeding.

# Communication Procedures:

## Uncontrolled airport/aerodrome

- ✓ Use published Mandatory Frequency (MF) or Aerodrome Traffic Frequency (ATF) to communicate with ground specialist and/or other traffic
- ✓ Always check for taking-off/landing traffic before entering or crossing a runway.

# Review

- ✓ ENGINE START
  - evaluate starting position
  - give verbal warning (“CLEAR!”)
- ✓ SPEED CONTROL
  - taxi at fast walking speed
  - avoid brakes overuse
- ✓ DIRECTIONAL CONTROL
  - differential braking = tighter turns
  - slow down to turn
- ✓ WIND
  - “turn into headwind, dive away from tailwind”
- ✓ COMMUNICATION WITH ATC
  - use standard sequence and terminology for radio calls
  - read back all “hold short” instructions
  - never cross/enter runway without explicit permission

# Conclusion

- ✓ Every flight you do will start and end with taxiing:  
now you know how to do it like a pro