

## *Phonetic Alphabet*

A- Alfa  
B- Bravo  
C- Charlie  
D- Delta  
E- Echo  
F- Foxtrot  
G- Golf  
H- Hotel  
I- India  
J- Juliet  
K- Kilo  
L- Lima  
M- Mike  
N- November  
O- Oscar  
P- Papa  
Q- Quebec  
R- Romeo  
S- Sierra  
T- Tango  
U- Uniform  
V- Victor  
W- Whiskey  
X- X-Ray  
Y- Yankee  
Z- Zulu

1 – One  
2 – Two  
3 – Tree  
4 – Four

5 – Fife  
6 – Six  
7 - Seven  
8 - Eight

9 - Niner  
0 - Zero

# **COMMUNICATIONS**

**Remember: WHO – WHO – WHERE – WHAT – ATIS**

*WHO* they are... *WHO* I am... *WHERE* I am... *WHAT* I'm going to do... With *ATIS* Info

FIRST CONTACT:                    *CTAF 122.80 – Prior to taxi*

Pilot:                    “Great Bend traffic Cessna 9614H taxiing to runway \_\_\_\_\_ for a \_\_\_\_\_  
departure, Great Bend.”

SECOND CONTACT:                *CTAF 122.80 –After run-up is complete*

Pilot:                    “Great Bend traffic, Cessna 14H is departing runway \_\_\_\_\_ for a \_\_\_\_\_  
departure, Great Bend.”

Pilot:                    “Great Bend traffic, Cessna 14H is a left crosswind departure to the  
\_\_\_\_\_, Great Bend.

THIRD CONTACT:                 *Inbound for landing or touch-n-goes*

Pilot:                    “Great Bend traffic, Cessna 14H is 10 miles to the \_\_\_\_\_ inbound for a  
left downwind for runway \_\_\_\_\_, for full stop landing, Great Bend.”

Pilot:                    “Great Bend traffic, Cessna 14H entering midfield left downwind for  
runway \_\_\_\_\_, for full stop, Great Bend.”

Pilot:                    “Great Bend traffic, Cessna 14H turning left base for runway \_\_\_\_\_, Great  
Bend.”

Pilot:                    “Great Bend traffic, Cessna 14H final for runway \_\_\_\_\_, full stop, Great  
Bend.”

Pilot:                    “Great Bend traffic, Cessna 14H clear of runway \_\_\_\_\_, Great Bend.”

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FIRST CONTACT:                    *Ground Control – 121.90 – Prior to taxi*

Pilot:                    “Hutch Ground, Cessna 9614H, at Wells Aircraft, Request taxi, for south departure to the south practice area, with information \_\_\_\_\_.”  
Ground:                “Cessna 9614H, Hutch Ground, taxi to runway 13, via Bravo 1, Bravo and Alpha.”  
Pilot:                    “Taxi to 13 via B1, B, A, Cessna 14H”

SECOND CONTACT:                *Tower Control – 118.50 –After run-up is complete*

Pilot:                    “Hutch Tower, Cessna 9614H, at Runway 13, ready for takeoff.”  
Tower:                “Cessna 9614H, Hutch Tower cleared for takeoff, runway 13.”  
Pilot:                    “Cleared for takeoff, runway 13, Cessna 14H.”

THIRD CONTACT:

Tower:                “Cessna 14H, Hutch tower, frequency change approved.”  
Pilot:                    “Cessna 14H”  
*Switch to frequency 125.50 if desiring flight following*

FOURTH CONTACT:                *Inbound for landing or touch-n-goes*

Pilot:                    “Hutch Tower, Cessna 9614H is 11 miles west, inbound for landing with information\_\_\_\_\_.”  
Approach:            “Cessna 9614H, enter right base for runway 13, report a 3 mile base.”  
Pilot:                    “Right base for 13, report 3 mile base, Cessna 14H.”  
Pilot:                    “Hutch Tower, Cessna 14H is 3 mile base.”  
Tower:                “Cessna 14H, cleared to land runway 13.”  
Pilot:                    “Cleared to land 13, Cessna 14H.”  
Tower:                “Cessna 14H exit at the next taxiway, **then** contact ground on 121.90.”  
Pilot:                    “Contact ground, Cessna 14H.”  
*Switch to ground frequency 121.90*  
Pilot:                    “Hutch Ground, Cessna 9614H clear of 13, request taxi to Wells Aircraft.”  
Ground:                “Cessna 9614H, Hutch Ground, taxi to parking.”  
Pilot:                    “Taxi to parking, Cessna 14H.”

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FIRST CONTACT: *Clearance Delivery – 125.70 – Prior to taxi*

Pilot: “Wichita Clearance, Cessna 9614H requesting VFR clearance for a west departure to Great Bend”  
Clearance: “Cessna 9614H, Wichita Clearance, upon departure fly runway heading at or below 4,500 feet, departure frequency is 126.70, squawk 3248”  
Pilot: “Wichita Clearance, Cessna 14H, upon departure fly runway heading at or below 4,500 feet, 126.7, squawk 3248.”  
Clearance: “Cessna 14H, read back correct.”

SECOND CONTACT: *Ground Control – 121.90 – Prior to taxi*

Pilot: “Wichita Ground, Cessna 9614H, at Yingling, Request taxi, for west departure, with information \_\_\_\_\_.”  
Ground: “Cessna 9614H, Wichita Ground, taxi to runway 1 Right, via Alpha and Bravo.”  
Pilot: “Taxi to 1R via alpha and bravo, Cessna 14H”

THIRD CONTACT: *Tower Control – 118.20 – After run-up is complete*

Pilot: “Wichita Tower, Cessna 9614H, at Runway 1R, ready for takeoff.”  
Tower: “Cessna 9614H, Wichita Tower cleared for takeoff, runway 1R.”  
Pilot: “Cleared for takeoff, runway 1R, Cessna 14H.”

FOURTH CONTACT:

Tower: “Cessna 14H, Wichita tower, contact departure.”  
Pilot: “Contact departure, Cessna 14H”  
*Switch to frequency 126.70- Contact departure*

FIFTH CONTACT: *Inbound for landing or touch-n-goes*

Pilot: “Wichita Tower, Cessna 9614H is 20 miles west, inbound for landing with information\_\_\_\_\_.”  
Approach: “Cessna 9614H, enter right base for runway 19L.”  
Pilot: “Right base, 19L, Cessna 14H.”  
Tower: “Cessna 9614H, cleared to land runway 19L.”  
Pilot: “Cleared to land 19L, Cessna 14H.”  
Tower: “Cessna 14H exit at the next taxiway, **then** contact ground on 121.90.”  
Pilot: “Contact ground, Cessna 14H.”  
*Switch to ground frequency 121.90*  
Pilot: “Wichita Ground, Cessna 9614H clear of 19L, request taxi to Yingling.”  
Ground: “Cessna 9614H, Wichita Ground, taxi to parking via November.”  
Pilot: “Taxi to parking via N, Cessna 14H.”

**Private Pilot Maneuvers –  
Cessna 172**

**Steep Turns**

1. Clearing turns
  2. Level @ 2200 RPM
  3. Bank 45 °
  4. Full power
  - 5. Eyes on Horizon**
  6. Roll out on heading
  7. Nose down slightly
  8. Power back 2200 RPM
  9. Stable & level
  10. Turn other direction
- +/- 100 ft altitude  
+/- 10 start/stop point  
+/- 10 kts

**Slow Flight / MCA**

1. Clearing turns
  2. 1800 RPM
  3. Flaps slowly 30°
  4. Slow to 55 kts
  5. 1900-2100 RPM
  6. Pitch = Airspeed
  7. Power = Altitude
- +/- 100 ft altitude  
+/- 10 heading  
+/- 10 kts

**Power Off Stalls**

1. Clearing turns
  2. 1800 RPM
  3. Carb heat on
  4. Flaps slowly 30 °
  5. Slow to 60 kt
  6. Power idle
  7. Pitch for stall
  8. Recover
- a. Full power
  - b. Carb heat off
  - c. Nose down
  - d. Flaps up

**S-Turns / Turns Around a Point**

1. 600-1000 ft AGL
  2. 2200-2300 RPM
  3. Clearing turns
  4. Enter with tailwind
  5. Correct for wind
  6. Tailwind = Steep bank
  7. Headwind = Shallow
- +/- 100 ft altitude  
+/- 10 kts

**Power On Stalls**

1. Clearing Turns
  2. 1600 RPM
  3. Carb heat on
  4. Slow to 60 kt
  5. Full power
  6. Carb heat off
  7. Pitch for stall
  8. Right rudder
  9. Recover
- a. Full power
  - b. Nose down

**Diversion**

1. Pick airport to divert to
  2. Estimate heading
  3. Use chart to determine
- a. Distance
  - b. Time
  - c. Fuel

**Emergency**

1. Aviate
2. Navigate
3. Investigate
4. Communicate
5. Shutdown

# EMERGENCY PROCEDURES C172

## ❖ AVIATE

- Pitch for Best Glide Airspeed – **65 knots**
- Trim Aircraft

## ❖ NAVIGATE

- Find place to land
  - Nearby airport
  - Nearby field – long and of the similar color
  - Avoid – power lines, roads with power lines, different color fields
- GO
  - Head towards place to land
  - Enter as if in a pattern
  - Spiral down

## ❖ INVETSIGATE

- If above 1,000ft. AGL RESTART procedure
  - Fuel Selector Valve – Check on both, try different tanks
  - Mixture - Enrich and/or lean
  - Throttle – Try different settings
  - Carb Heat – Pull on – if no change after a few moments turn off
  - Ignition Switch – Check on both, try left or right magneto only
  - Primer – Check in and locked
  - Engine gauges – Check for any abnormal indications (low fuel, no oil pressure)

## ❖ COMMUNICATE

- Call and declare an emergency
  - Current frequency – tower, practice area, approach
  - Emergency frequency – **121.5** – always monitored
- In emergency call give this information
  - Aircraft N# and type
  - Type of emergency
  - Souls on board
  - Location
  - Fuel on board
  - Color of the aircraft
  - Pilot intentions
  - Any other pertinent information
- Squawk Code
  - 7700 – Emergency
  - 7600 – Loss of Communications
  - 7500 – Hijacking

“Mayday, mayday, mayday, N9614H, Cessna 172, declaring an emergency due to loss of engine power, 15 miles W of GBD airport, just S of a lake, 2 souls on board, blue on white aircraft with half tanks. We intend on landing just south of our present position”

## ❖ SHUTDOWN

- If below 1,000ft. AGL SHUTDOWN procedure
  - Use flaps as necessary – master on
  - Fuel Selector Valve – Off
  - Mixture – Idle Cutoff
  - Throttle – Closed
  - Ignition Switch – Off
  - Master Switch – Off
- **Doors – Crack open**
- **Seatbelts - Secure**

## **Emergency Procedures Prior to Takeoff**

- If the engine quits prior to lift-off, close the throttle and apply brakes as required
- If the engine quits after rotation and there is runway left, land back on the runway, close the throttle, apply brakes as required
- If the engine quits after rotation, and there is no runway left:
  - Land straight ahead on taxi-way or in a field. If in a field we will land \_\_\_\_\_, which is within 45° of either side of the center of the windshield. (Specific to airport and runway)
- If in cruise we will perform engine failure checklist.

## **Best Glide Speed – 65 Knots**





## **VFR Required Equipment (FAR 91.205)**

### **Day**

- T-** Tachometer
- O-** Oil Pressure Gauge
- M-** Magnetic Compass
- A-** Altimeter
- T-** Temperature Gauge (Liquid Cooled Engine)
- O-** Oil Temperature Gauge
  
- A-** Anti-collision Lights (Beacon / Strobes)
  
- F-** Fuel Quantity Gauges
- L-** Landing Gear Position Indicator Lights
- A-** Airspeed Indicator
- M-** Manifold Pressure Gauge
- E-** E. L. T. (Emergency Locator Transmitter)
- S-** Seat belts / Shoulder Harnesses

### **Night**

- F-** Fuses (Spare set or three of each voltage regulator)
- L-** Landing Light
- A-** Anti-collision Lights (Beacon / Strobes)
- P-** Position Lights (Red, White, & Green)
- S-** Source of adequate electrical power (Alternator / Generator)

### **Required Equipment Inspections**

- A-** Annual Inspection
- 1-** 100 Hour Inspection
- T-** Transponder (24 Calendar Months)
- A-** Airworthiness Directives
- P-** Pitot / Static Inspection (24 Calendar Months)
- E-** E.L.T. (12 Calendar Months)

# LIGHT GUN SIGNALS

Far 91.125

<b>Color &amp; Type</b>	<b>Ground</b>	<b>Air</b>
Steady Green	Cleared for Takeoff	Cleared to Land
Flashing Green	Cleared to Taxi	Return for Landing
Steady Red	Stop	Give way/Keep Circling
Flashing Red	Taxi Clear of Runway	Airport unsafe/Don't Land
Flashing White	Return to Starting Point	N/A
Alternating Green/Red	Exercise Extreme Caution	Exercise Extreme Caution

## MINIMUM SAFE ALTITUDES

FAR 91.119

Except for takeoff and landing, no person may operate below these altitudes:

- a) *Anywhere*: An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.
- b) *Over congested areas*: 1,000ft above the highest obstacle within a 2,000ft horizontal radius of the aircraft.
- c) *Over other than congested areas*: 500ft above the surface or 500ft away from any person, vessel, vehicles, or structure.

## **I'M SAFE**

Are you safe to fly? If you answer yes to any of these questions you should not be flying.

I – Illness

M – Medicine

S – Stress

A – Alcohol

F – Fatigue

E – Emotion

## **PREFLIGHT ACTION**

These items need to be reviewed before each flight per FAR 91.103.

All available information.

F – Fuel Requirements

A – Alternates

T – Takeoff and landing distances

W – Weather reports and forecasts

A – Known ATC delays

R – Runways lengths on intended use

# Cross Country Flight Planning

Gather the following items:

1. Charts
2. Plotter
3. Flight computer / E6B
4. Nav logs
5. POH
6. Airport facility directory

1. Plot course on chart. Consider: terrain, airspace, winds, obstructions, landmarks.
2. First checkpoint will always be TOC – Top of Climb
3. Determine other checkpoints. Each should be between 15-25 miles apart. Use towns represented in yellow on the chart, lakes, highways, VOR's, railroad tracks
4. Determine the TC – True Course for each leg. This will be accomplished by using the plotter.
5. Determine the VAR. – Variation for each leg. This is done by finding the isogonic line on the chart – a dashed magenta line running from the bottom of the chart to the top of the chart with a number at the bottom. E is a negative and W is a positive – “East is least, west is best”.
6. Determine the altitude you want to fly for each leg. Altitudes are based on magnetic course (TC +/- VAR +/- winds). Easterly heading = Odd thousand + 500ft (3500, 5500, 7500, 9500). Westerly heading = Even thousand + 500 ft (4500, 6500, 8500, 10500). On the leg to a airport for landing show a descent to pattern altitude (1000 ft above field elevation).
7. Determine the distances for each leg. The top of climb leg will be determined by the POH. Remember to measure with the plotter on the sectional side with nautical miles. To find TOC info use POH on the Time, Fuel, Distance to climb chart. Subtract beginning altitude from ending altitude in the following columns – fuel burned, distance, and time. Remember to read the notes section – for example the C172 also burns 1.1 gallons for start, taxi, and takeoff. (Add this to fuel burned in the TOC line)
8. Determine the TAS – True Air Speed for each leg. For climb TAS you will find an indicated airspeed on the Time, Fuel Distance to climb chart. Take that speed and convert it to TAS using the flight computer. Note in the notes section what IAS you should climb at in flight. Then go to the Cruise Performance chart to determine the other TAS's. Find the nearest altitude and temperature range and 2400 RPM to determine both TAS and fuel burn per hour. Note the fuel burn in the notes section.
9. Using the chart and your AFD – Airport Facility Directory, find the airport frequencies. Note frequencies for each airport you are landing at and any airports you may fly near by for reference if needed. Also draw the airport diagrams in the top box. Note the runways numbers and distances for each runway. It is also good to note where the buildings are in relation to the runways.

Call and get a weather briefing

10. Fill in the wind both direction and velocity. If the winds change along your course determine a good change over point. Also consider using surface winds if you are much closer to the surface than the aloft winds provided.
11. Calculate GS - groundspeed and WCA - wind correction angle using the back side of the E6B, flight computer. Remember that the mark you make for the wind goes over TAS, not the center hole.
12. Calculate ETE – estimated time enroute, using your new groundspeed and distance for each leg. Remember time is always on the two inside rings.
13. Calculate fuel burn using ETE and fuel burn per hour (from POH). You will set fuel burn per hour over the triangle and find the fuel burn actually used **over** the time. Remember time in always on the two inner rings.
14. Total the time, fuel burn and distance columns.
15. Complete the flight plan form on the back of your nav log. When entering total time add 15 minutes for each airport that requires a landing or touch and go. If going solo, put “Student Solo” in the remarks section.