Cessna 172 Private Pilot Procedures – (N950ME)

NORMAL TAKE-OFF & CLIMB

1. Flaps at 0 degrees.
2. Ailerons into the wind and elevator about ½" back from the gust lock hole.
3. Apply smooth full power, then check for at least 2300 RPMs and oil temperature and pressure in the green.
4. Maintain runway alignment with rudder (mostly right).
5. Slowly decrease aileron deflection as the airplane accelerates.
6. At 55KIAS pull elevator back to pull nosewheel off the ground and place the top edge of the cowling on the horizon.
7. Establish Wind Correction Angle to stay over the runway.
8. Keep the top of the cowling on the horizon and the wings level. Climb Speed 70-80 KIAS

LEVEL OFF

1. 20 feet before reaching desired altitude, reduce pitch to level attitude (increasing forward yoke pressure).
2. Accelerate to 100KIAS keeping level attitude.
3. Reduce power to 2400 RPM (throttle back).
4. Trim.
5. Check Heading Indicator.

DESCENT

1. Reduce power to 2000 RPM (throttle back).
2. Allow the cowling to lower and stabilize.
3. Adjust pitch for 110KIAS and 500ft per min. descent.
4. At 50 feet above desired altitude, increase power back to 2400RPM.

LEVEL TURN

1. Lift wing and check for traffic in direction of turn. (Use rudder to hold heading).
2. Smoothly apply aileron deflection and rudder pressure in direction of turn. (Slight left rudder pressure in left turn, more right rudder in right turn). Watch cowling/horizon in turn.
3. As airplane banks, apply slight elevator back pressure proportional to steepness of bank, to hold altitude.
4. When proper bank angle is established – neutralize ailerons to maintain bank.
5. 5 degrees before the desired heading, apply ailerons and rudder opposite the direction of turn, simultaneously reducing elevator backpressure.

STEEP TURNS

1. Ask instructor/examiner/passengers to help look for traffic.
2. Do one 180 degree or two 90 degree clearing turns.
3. When rolling in to the turn, dial in 2 full turns of nose up trim.
4. Establish a 40 to 45 degree banked turn, focusing on the cowling/horizon.
5. If low, rollout the bank slightly and increase the backpressure.
6. If high, roll in steeper and reduce backpressure.
7. 20 degrees before the desired rollout heading, begin a smooth rollout with rudder and ailerons. Hold pitch down and dial out the nose up trim.

SLOW FLIGHT

1. Carb Heat on.
2. Reduce power to 1500RPM, hold heading with rudder (left)
3. Hold altitude with backpressure and trim (three full turns) while decelerating.
4. At 70 KIAS, add power to1850RPM, adjust pitch and trim for 64KIAS.
5. Adjust altitude with power and maintain 64KIAS with pitch. REMEMBER: PITCH CONTROLS AIRSPEED, POWER CONTROLS ALTITUDE.
6.Maintain altitude while making shallow left and right turns.

SLOW FLIGHT TO CRUISE

1. Carb Heat off.
2. Smoothly add full power and forward elevator pressure to hold altitude.
3. Hold heading with rudder (right).
4. Accelerate to 100 Kias
5. Take out 3 turns of nose up trim and reduce power to 2400RPM

POWER OFF STALL (Straight ahead and turning)

1. Do one 180 degree or two 90 degree clearing turns.
2. Carb Heat on, power off, smoothly.
3. Hold altitude with pitch.
4. At stall buffet, simultaneously reduce pitch, level the wings, add full power, and Carb Heat off, right rudder pressure.
5. Smoothly raise the pitch to climb attitude.
6. Transition to cruise.

POWER OFF STALL WITH FLAPS (STRAIGHT AHEAD AND TURNING)

1. Do one 180 degree or two 90 degree clearing turns.
2. Carb Heat on, power to 1700RPM
3. Hold altitude with pitch.
4. Apply full flaps, holding altitude with forward elevator pressure as flaps come down.
5. At final approach speed (65KIAS) smoothly pull off power, establish a descent (as you would coming in for landing), and then raise pitch, simulating a landing stall.
6. At stall buffet, simultaneously reduce pitch, level wings, add full power, Carb Heat off, right rudder pressure.
7. Immediately after power is applied raise flaps to 20 degrees (2 seconds) and raise pitch to climb attitude.
8. As the airplane stabilizes, raise flaps to 10 degrees (2 seconds)
9. Flaps up and transition to cruise.

POWER ON STALL (Straight ahead and turning)

1. Do one 180 or two 90 degree clearing turns.
2. Carb Heat on, power to 1500RPM
3. Hold altitude with pitch, heading with rudder.
4. At 55KIAS Carb Heat off, full power, right rudder.
5. Gradually continue to increase pitch.
6. At stall buffet, lower pitch below the horizon, then smoothly raise pitch to climb attitude and transition to cruise.

EMERGENY LANDING

1. **A**irspeed – Adjust pitch with 3 turns nose up trim to hold 65KIAS.
2. **B**est place to land – select best site considering length, obstructions, surface, wind direction. If high, spiral down over approach end. If not, fly modified pattern.
3. **C**hecklist – Fuel shutoff valve – ON,
   - Mixture – RICH
   - Throttle – FULL
   - Carb Heat – ON
   - Mags – CHECK LEFT AND RIGHT
4. **D**eclare – Transponder – 7700, Current frequency or 121.5, Mayday X 3.
5. **E**xit – Just prior to landing –
   - Fuel shutoff Valve – OFF
   - Mixture – IDLE CUTOFF
   - Mags – OFF
   - Master switch – OFF (if you don't need radio, flaps or lights for landing)
   - Doors – POP OPEN
   - Execute soft field landing

NORMAL LANDING

1. On downwind, abeam the approach end, carb heat on, Power to 1500RPM
2. Hold altitude with pitch. Apply 10 degrees of flaps (within the white arc), and then reduce pitch to hold 75KIAS.
3. When threshold is 45 degrees behind A/C, turn base while applying flaps to 20 degrees. Hold 70KIAS with pitch.
4. Check altitude and adjust with power as needed.
5. Check extended final approach course for traffic and turn final. (Plan to roll out on extended centerline with wind correction angle. Make radio call.
6. Adjust pitch to hold 65KIAS and ajust position on glideslope with power and flaps.
7. Level off at 10ft AGL. Float dowl level to 5ft above the runway.
8. Pull back smoothly and hold A/C off runway as long as possible.
9. Report clear of the runway. Transponder to Standby, Carb Heat-Off, Retract flaps.

SOFT FIELD TAKE OFF

1. Flaps to 10 degrees.
2. Taxi with elevator full aft, keeping rolling if possible.
3. Line up on runway and smoothly apply full power.
4. Hold elevator backpressure to keep nose wheel just off the ground.
5. When main gear leaves the ground, briskly reduce backpressure to hold A/C in ground effect (10' AGL).
6. Accelerate to 70KIAS, then begin climb out and raise flaps.

SHORT FIELD TAKE OFF

1. Line up on runway as close to threshold as possible.
2. Hold elevator with gust lock hole 1" back from collar.
3. Hold brakes and apply full power. Check RPMs over 2300 and engine instruments in the green.
4. Release brakes. Accelerate to 55KIAS, and then firmly raise the pitch to climb and hold 59KIAS.
5. When clear of the obstacle, lower pitch to normal climb.

SOFT FIELD LANDING

1. Fly approach and landing as a normal landing.
2. On short final, push Carb Heat off.
3. In the landing flair add a little power to soften the landing.
4. At touch down – POWER OFF, hold full aft elevator.

SHORT FIELD LANDING

1. Fly a normal approach with a slightly extended downwind leg.
2. On final, set full flaps and add power to hold 60KIAS.
3. Power off and pitch down as soon as you can glide to the threshold.
4. Immediately after touchdown lower nose gear, apply brakes, retract flaps and pull yoke aft

CESSNA 400 APPROACH PROCEDURES

PRECISION APPROACH & APPROACH WITH VERTICAL GUIDANCE (WAAS)

1. Get ATIS/AWOS
2. Select and load Approach
3. Brief Approach
4. Baro Min – Set
5. Activate Approach (if not already past IAF) or Vectors to Final
6. When level outbound – 24" MP
7.
8. Fuel Selector to Fullest Tank
9. At turn to intercept FAC – 22" MP
10. If "Intercept the Localizer" Press NAV
11. When "Cleared for the Approach" Press APR and Taxi Light ON
12. When established inbound - 20" MP
13. Timer – Zero
14. Missed Approach Altitude – Set
15. Mixture – Forward
16. Prop – Forward
17. 1 Dot below GS – 15"MP and set T/O Flaps
18. GS intercept – 12" MP
19. At GS Intercept Altitude – Start Timer
20. Adjust Power for 110 KIAS
21. When Cleared to Land – Landing Light ON
22. Seat Belts – ON

MISSED APPROACH – GO AROUND

1. Go Around – Press
2. Power - Full
3. Pitch – Up to Command Bars
4. Flaps – UP
   Fuel Pump - Armed
5. Missed Approach Altitude – Set
6. FLC – Press
7. Nav – Press (If it was OFF)
8. A/P Modes – Verify GPS and FLC on PFD
9. A/P - ON
10. Adjust NOSE UP or DN to 130 KIAS
11. Report "Missed Approach" and intentions

NON-PRECISION APPROACH

1. Get ATIS/AWOS
2. Select and load Approach
3. Brief Approach
4. Baro Min – Set MDA
5. Insure FAC set on course needle
6. When level outbound – 24” MP
7. Activate Approach or Vectors to Final (If not already Past IAF)
9. Fuel Selector to Fullest Tank
10. At turn to intercept FAC – 22” MP
11. When “Cleared for the Approach” Press APR and Taxi Light ON
12. If ILS w/ GS Inop - Press NAV
13. When established inbound - 20” MP
14. Timer – Zero
15. Stepdown or MDA – Set
16. Mixture – Forward
17. Prop – Forward
18. 0.5 NM from FAF – 15” MP and set T/O Flaps
19. At FAF –press VS, set -800 FPM, 12” MP and Start Timer
20. Adjust Pitch for 800 FPM descent
21. Adjust Power for 110 KIAS
22. When Cleared to Land – Landing Light ON
23. Seat Belts – ON

LANDING FROM APPROACH

When Lights / Runway in sight:

1. A/P - Disconnect
2. Reduce Power and Lower Nose
3. Flaps – Landing
4. Pitch for 85 KIAS

Pre–Solo Stage Check Checklist

Student:	CFI:	Aircraft:

CFI Initial	**Oral**:	Great	Good	Needs Work
_____	Paperwork – Pre-Solo Exam	☐	☐	☐
_____	Emergency Landing Procedures	☐	☐	☐
	Flight:			
_____	Start-up – Passenger Brief	☐	☐	☐
_____	Taxi / Taxi checks – Minimal Brakes	☐	☐	☐
_____	Radio Usage	☐	☐	☐
_____	Run up – GPS Setup	☐	☐	☐
_____	Normal Take-off – Timer, Centerline, No Brakes	☐	☐	☐
_____	Climb – Pitch Control, Departure Procedure	☐	☐	☐
_____	Level Off – Altitude Control	☐	☐	☐
_____	Turns – Rudder	☐	☐	☐
_____	Steep Turn – Procedure, Altitude, Heading	☐	☐	☐
_____	Slow Flight – Procedure, Altitude	☐	☐	☐
_____	Power Off Stall – Procedure, Slow entry, Rudder	☐	☐	☐
_____	Power On Stall – Procedure, Slow entry, Rudder	☐	☐	☐
_____	Emergency Landing – Procedure, Pattern, Make TDZ	☐	☐	☐
_____	S-Turns across Tracks/Road – Altitude, Wind Correction	☐	☐	☐
_____	SFRA Re-entry – ATIS/AWOS, Radio	☐	☐	☐
_____	Normal Landing – Procedure, Pitch/Speed Control, Altitude/Power	☐	☐	☐
_____	After Landing Checks – Flow & Checklist	☐	☐	☐
_____	Shut Down – Checklist	☐	☐	☐

CFI signature: _____ **Date:** _____/_____/_____

Notes:

☐ Cleared to Solo ☐ Fly w/ Instructor before Solo ☐ Work w/ Instructor, Schedule w/ Chief Instructor

Chief Instructor signature: _____ **Date:** _____/_____/_____

Twin Comanche Procedures

NORMAL T/O & CLIMB

Timer	Start
Brakes	Hold
Throttles	2200
Engine Instruments	“Engine Instruments Green”
Brakes	Release
Throttles	Full
80 MPH	Apply Back Pressure
“Positive Rate”	Tap Brakes “Gear Up”
Pitch	Glare shield on Horizon 125 MPH
400’ AGL or Clear of Obst	25” MP/2500 RPM/Pumps-off 1 at a time

CRUISE

100’ before level off	Cyl Head Temps Green then Cowl Flaps Closed
Power	24”MP/2400 RPM
Lean	1400 EGT / 50 Rich of Peak
Fuel Tanks	Aux tanks as required

DESCENT

Mixtures	Enrich slightly
Throttles	21” MP
50’ before Target Alt	24” MP

PRE-MANEUVER CHECKS

Area	Clear to left
Fuel Pumps	On
Fuel Selectors	Mains
Mixtures	Rich
Props	Forward

STEEP TURNS

Pre-Maneuver Checks	Complete, except props 2400 RPMs
Heading Bug	On start heading
Throttles	21” MP
Roll	Left 50 degrees
Throttles	23” MP
Elev. Trim	1.5 Turns Up
Altitude	Maintain with pitch
20 degrees before bug	Roll to 50 degrees right
Pitch	Forward pressure in transition

20 degrees before bug	Roll level on heading
Elev Trim	1.5 turns down
Throttles	Reduce 2” MP

SLOW FLIGHT

Heading Bug	On start heading
Throttles	21”, 15 sec, trim
	18”, 15 sec, trim
	15”, 15 sec. trim
	12”, 15 sec. trim
Pitch and Trim	To hold 100 MPH
Throttles	Adjust for target altitude, about 14”
Gear	Check under 140 MPH, Down
Throttles	Adjust for Alt, about 16”, trim for 100 MPH
Flaps	Half (5 sec)
Throttles	Adjust for Alt, about 18”, trim for 100 MPH
Flaps	Full (5 sec)
Throttles	Adjust for Alt, about 20”, trim for 100 MPH

POWER OFF STALL

Pre-Maneuver Checks	Complete
Throttles	Reduce in 3’ increments to 15”
Gear Speed	Gear down
Flap Speed	Flaps down
100 MPH	Begin descent
50’ Descent	Slowly raise pitch
Stall Light	“There’s the Stall”
	Level the wings
	Pitch down, slightly above horizon
	Full throttles
	Flaps up for 3 secs.
“Positive Rate of Climb”	Gear Up
Flaps	Up when climb established
At starting altitude	Level-off & cruise

POWER ON STALL

Pre-Maneuver Check	Complete
Throttles	Reduce in 3” increments to 12” MP
Gear Speed	Gear Down
120 MPH	21” MP
	Slow pitch up
Stall Light/Horn	“There’s the Stall”
	Level wings
	Pitch slightly above horizon
	Full throttles

"Positive Rate of Climb"	"Gear Up"
At designated Altitude	Level off and cruise

Emergency Descent

Throttles	Close
Clear and Turn	45 degrees Bank Left
Pitch	20 degrees down, not to exceed Vno (200MPH)

VISUAL APPROACH & LANDING

Descent	Adjust to enter pattern @ pattern altitude
Throttles	17"
Entering Pattern	G-Fuel Pumps On
	G-Fuel Selectors Main
Midfield	U-Check under 140 MPH, Gear Down, Gear Light, Mirror
Abeam Touchdown	-15" MP
	M – Mixtures Fwd
	P – Props Fwd
Under 125 MPH	Flaps 3 sec.
Pitch	115 MPH
Base Turn	Flaps 3 sec.
	110 MPH
Final turn	105 MPH then 90 MPH
Cowl Flaps	Open
Gumps Check	Complete

SHORT FIELD TAKE OFF

Flaps	Half
Timer	Start
Brakes	Hold
Throttles	Full
Engine Instruments	"Engine Instruments Green"
Brakes	Release
65 MPH	Rotate to glare shield above horizon
"Positive Rate"	Tap Brakes & "Gear Up"
Pitch	90 MPH
100' AGL / Clear of Obst.	Glare shield on horizon
Flaps	Up
Climb out	Normal

SHORT FIELD LANDING

Normal Approach	
When Clear of Obstacles	Throttles just above idle
	Lower pitch to maintain 90 MPH

Mains Contact Ground	Max Braking (Simulated)
	Yoke Full back
	Flaps Up

AFTER LANDING FLOW / CHECKLIST

When clear of runway:	
Transponder	STBY
Flaps	Up
Cowl Flaps	Check Open
Mixtures	3
Lights	As required
Fuel Pumps	Off
Trims	Re-set
After landing checklist	Check

INSTRUMENT APPROACH NP = Non-Precision
P = Precision

Approach	Brief
Outboard Leg	21” MP
When cleared for approach	Right landing light on, also left on if non-towered field
Turning inbound	18” MP
	Pre-Maneuver Checks
	Zero Time
Half Mile/Half Dot from FAF	15” MP
	Gear Down
FAF / GS Intercept	12” MP for NP, 14” MP for P
	Flaps 3 sec.
	Pitch down
	Start time
	Radio Call
Cleared to Land	Left Landing Light On
	105 MPH
	700-800 FPM – NP
GUMPS Check	Complete
NP – 100’ before MDA	Throttles 18”
	Slow descent to MDA

MISSED APPROACH

At MAP	
Throttles	Full
Pitch	7-8 degrees up
“Positive Rate”	“Gear Up”
Flaps	UP
GPS	SUSP and GPS Nav
At initial alt	Turn on Course
Landing Lts	Off

At 400’ AGL	25” MP/2500 RPM/Fuel pumps off
Report to ATC	“Missed approach”

ENGINE OUT BEFORE VR

Anything not right prior to Vr

Throttle	Close
Brakes	As required
Directional Control	Maintain
Yoke	Back
Flaps	Retract
Announce to ATC	Aborted Takeoff on Runway ___

ENGINE OUT MEMORY STEMS

“Fly the Airplane”
“Mixtures Forward”
“Props Forward”
“Throttles Forward”
“Gear Up”
“Flaps Up”
“Fuel Pumps On”
“Check Mags”
“Check Fuel Selectors”
“Identify Right (or left) Engine.”
“Verify Right (or left) Engine”
“Feather Right (or left) engine”
“Trim”
“Shut down checklist.”
Declare emergency

ENGINE OUT AFTER Vr BEFORE CRUISE CLIMB.

“Fly the Airplane”
Continue memory items starting w/ ‘Identify’.
Return to Airport for Landing

ENGINE OUT AFTER CRUISE CLIMB

Memory Items
Land as soon as practicable
Crossfeed if more than 30 min to landing

Engine Out in Descent or Approach

Memory Items except throttles at 25” MP (normal plus 4”)
Land as soon as practicable

Single Engine Landing
Memory Items except increase MP on good engine by 4”
Normal landing profile

Vmc Demo

Pre Maneuver Checks	Complete
Throttle	Reduce 3” at a time
At 120 MPH	Close Left Throttle
	Full Right Throttle
	Right Rudder as needed
	5 degrees right bank
	Slowly pitch up
Stall or loss of directional control	Lower pitch below horizon
	Reduce right throttle to 1/2
Accelerating through Vmc	Full right throttle
	Right rudder
	Raise pitch to Vyse

Cessna 172 - N950ME, N80398, N26502, N2100S, N16789
Normal VFR Traffic Pattern