Training aid only, not flight instruction. Review it with your CFI and get their approval before you use it in training or in the airplane. Check every number against the POH and current FAA sources. Last reviewed Nov 17, 2026 against the 1975 172M Owner's Manual, the Private Pilot ACS and the Detroit TAC.

CHAIR-FLYING KONZ: CESSNA 172M

A whole training flight, one page at a time: out of KONZ, south to the practice area, the airwork, and back to the pattern.

HOW TO CHAIR-FLY

Ten minutes in a chair saves an hour of the airplane's time

FLY IT BEFORE YOU FLY IT

The night before the lesson, and again in the car before you go to the airport.

1 **Sit upright, feet on imaginary rudder pedals**
Right hand on an imaginary throttle, left hand on the yoke, as in the airplane.

2 **Picture the panel before you start**
Where the carb heat, throttle, flap switch, trim wheel and fuel selector are. Reach for each one.

3 **Fly in real time not faster**
If a stall setup takes a minute in the airplane, take a minute in the chair.

4 **Touch and say every bold line**
“Carb heat, ON.” Out loud. Your hands learn the flow, not just your head.

5 **See outside eyes closed**
The nose on the horizon, the shoreline, the Monroe stacks, the runway numbers.

6 **Make the radio calls word for word**
Fill in your call sign above and the cards say it for you.

7 **Add a what-if once it's smooth**
Each card ends with one. Fly the card clean first, then fly it again with the twist.

8 **Stop at the first stumble and do it again**
Three clean runs of one card beat one shaky run of all of them.

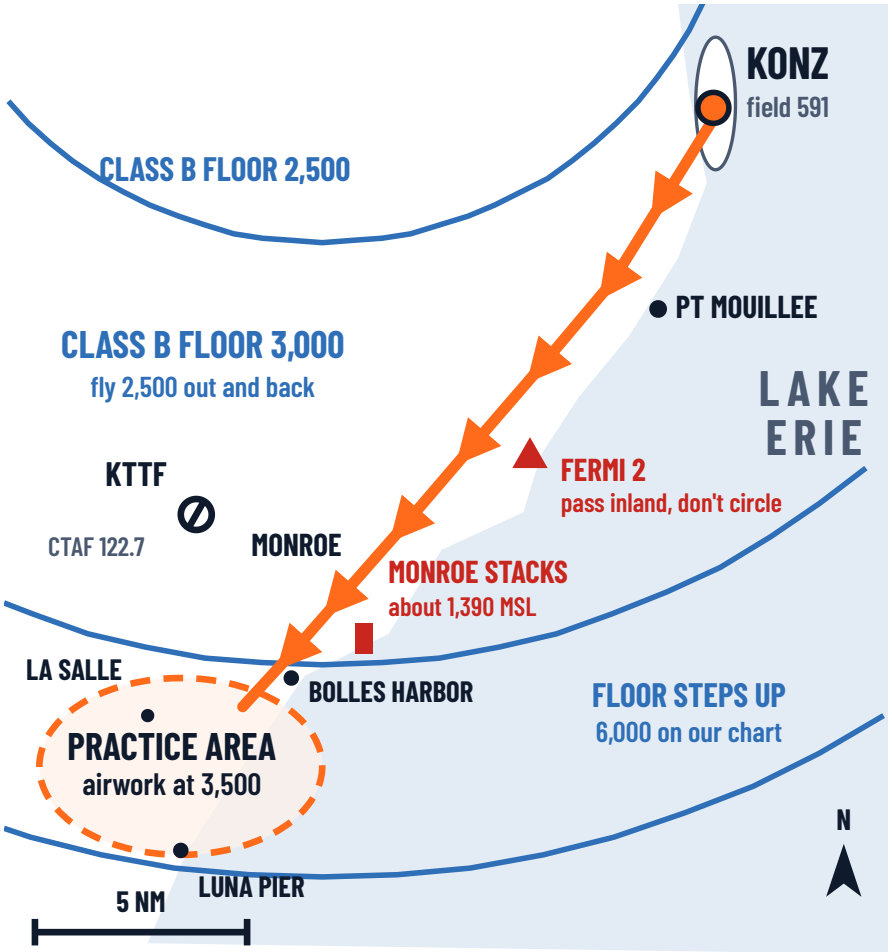
Remember **Real time, out loud, hands moving.**

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OUT TO THE PRACTICE AREA

KONZ CTAF 123.0 · AWOS 119.675 · KTTF CTAF 122.7 · Detroit 134.3

THE ROUTE ON ONE PAGE



Our sketch of the flight, roughly to scale. **Not for navigation:** read the Class B floors off the current Detroit TAC before you go. KONZ to the middle of the area is about 20 nm, some 14 minutes at 100 mph.

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DEPARTING KONZ TO THE SOUTH

Run-up done, AWOS copied, altimeter set. Before you taxi onto the runway.

Brief it on the ground

1 **Route southwest along the shore at 2,500**
The Class B floor over KONZ and the shore is 3,000. 2,500 leaves a 500 ft buffer.

2 **Engine failure "straight ahead, glide 75"**
Say out loud what is off the end of the runway in use.

3 **Transponder ALT**
You are inside the DTW Mode C veil.

Runway 22

4 **Climb straight out 90 (78)**
Runway heading, 217°, already points down the shore toward Pointe Mouillee.

Runway 4

5 **Right crosswind, right downwind departure southwest**
Climbing, on the southeast side, as your CFI briefs. Don't turn east: the border runs down the river.

Climbing out

6 **Climb 80–90 (70–78), level at 2,500**
Mixture stays rich below 3,000 ft.

7 **Cruise about 2,300 RPM, trim**
Then look outside. Ultralights and other trainers use the shore too.

Say *"Grosse Ile traffic, **Cessna [tail]**, departing Runway 22, departing to the southwest, Grosse Ile."*

What if You find yourself climbing through 2,800 on the way south. Stop the climb now, down to 2,500.

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ALONG THE SHORE TO THE AREA

Level at 2,500, about 100 mph, heading southwest. Call out each landmark as it comes up.

1 **Pointe Mouillee** the marsh and dikes, off the left side
The first landmark after takeoff. Stay over the shoreline.

2 **Fermi 2** pass on the inland side
The plant on the shore, with the big cooling towers. Don't circle or loiter near it. Check the NOTAMs before the flight.

3 **KTTF** CTAF 122.7, listen
Custer is just west of your route. Know where its traffic is before you get there. Or use flight following with Detroit on 134.3.

4 **Monroe stacks** nearly 1,400 MSL, keep clear
The power plant at the mouth of the River Raisin. Tall, and hard to see in haze.

5 **Bolles Harbor** the line where the floor steps up
Only south of here may you climb above 3,000.

6 **Climb** to 3,500
Ground here is about 600 ft MSL, so 3,500 is about 2,900 AGL. Room to recover by 1,500 AGL.

7 **Check fuel and the time** both tanks, note the time
Plan how long you can work before you head home.

> **What if** The engine runs rough over Monroe. Carb heat ON, full throttle, and turn toward KTTF: it is right there.

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AIRWORK IN THE AREA

Start at 3,500 MSL · recover by 2,100 MSL (1,500 AGL) · KTTF is your glide-to field

BEFORE EVERY MANEUVER

Every time, not just the first one. It's also how you show an examiner you're ready.

1. **Height 3,500 MSL**
   Any stall or slow-flight recovery must finish by 1,500 AGL, about 2,100 MSL here.
2. **Area over open farmland, inland**
   Not over the lake, towns or the stacks. Pick a field you could land in.
3. **Security belts tight, loose items stowed**
   A stall break throws the headset bag and the iPad around.
4. **Engine fuel BOTH, mixture RICH, gauges green**
   Carb heat comes next, in each maneuver's setup.
5. **Lookout two 90° clearing turns**
   Left 90°, then right 90°, about 30° of bank. Lift the wing and look under it before each turn.
6. **Heading reference a landmark straight ahead**
   A road, a tree line, I-75 or the shoreline. Note the heading on the heading indicator too.

Remember **Height, area, security, engine, lookout.**

What if Traffic appears during the clearing turns. Point it out, keep it in sight, and pick another spot or wait for it to pass.

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SLOW FLIGHT: THE SETUP

From cruise at 3,500, clearing turns done, a landmark straight ahead.

1 **Carb heat ON**
Before the power comes back, every time.

2 **Throttle about 1,500 RPM**
The speed starts to bleed off.

3 **Hold altitude raise the nose bit by bit**
Eyes outside on the nose and the horizon; glance at the altimeter.

4 **Below 100 (87) flaps 10, then 20, then 30**
One step at a time. Each step pitches the nose up: hold it with forward pressure.

5 **Trim after each change**
Several turns nose-up by the end. Let the trim hold the yoke for you.

6 **Power in early, about 2,000 RPM or more**
Slow, with full flaps, takes more power than you expect. Add it before the speed gets there.

7 **Right rudder ball centered**
More power and less speed: the nose wants to go left.

8 **Pitch just above the stall horn**
The horn sounds 5 to 10 mph above the stall. Find the speed where it stays quiet.

Remember **Heat, power, hold it, flaps, trim, power, rudder.**

My slow-flight speed in our 172M: _____ mph, flaps _____

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SLOW FLIGHT: FLY IT AND RECOVER

Stable at your slow-flight speed, level, trimmed, the horn quiet.

Fly it

1 **Pitch for speed, power for altitude**
Sinking? Add power, don't pull. Too slow? Lower the nose a touch and add power.

2 **Turns gentle, as briefed**
A turn needs a little more power. Lead with rudder; the ailerons are soft at this speed.

3 **Climbs and descents power first**
Power changes the vertical speed; pitch keeps the airspeed.

Recover

4 **Throttle FULL, carb heat COLD**
Smoothly. Right rudder as it comes in.

5 **Pitch lower, to hold altitude**
The airplane wants to climb. Don't let it.

6 **Flaps 20, then 10, then up**
Slowly, as the speed builds. Each step sinks the airplane a little: hold altitude.

7 **Cruise power back, trim**
Back to your heading and 3,500.

> **Standard** Altitude ±100 ft, heading ±10°, airspeed +12/−0 mph (+10/−0 kt), bank ±10°, no stall warning.

> **What if** The horn sounds in a turn. Ease the back pressure and add power. Don't level the wings with aileron alone.

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POWER-OFF STALL: THE SETUP

The stall you could meet turning base to final. Set up a final approach at altitude.

1. **Clearing turns done, landmark ahead**
   Start at 3,500.
2. **Carb heat ON**
   Before the throttle comes back.
3. **Throttle about 1,500 RPM**
   Hold altitude while the speed bleeds off.
4. **Below 100 (87) flaps 10, then 20, then 30**
   Landing configuration, as your CFI briefs.
5. **Pitch for 70 (61), descending**
   Like final: about 500 fpm down, on speed.
6. **Trim for 70**
   A stable, trimmed descent is the starting point. Don't rush it.
7. **Heading straight, or a 20° bank turn**
   Whichever is briefed. Ball centered.

Remember Heat, power, flaps, seventy, trim.

What if You're below 3,000 by the time you're set up. Go-around power, climb back to 3,500 and set it up again.

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POWER-OFF STALL: STALL AND RECOVER

Stable at 70, landing flaps, trimmed, descending.

The stall

1 **Throttle IDLE**
As if crossing the fence.

2 **Pitch up smoothly, a landing attitude and beyond**
Keep coming back as the speed falls. Wings level, ball centered.

3 **Cues horn, mushy controls, buffet**
Call each one out loud as you notice it.

4 **The break nose drops, yoke well back**
That's the stall. Recover now.

Recover

5 **Yoke FORWARD, unload**
Lower the angle of attack first. This is what breaks the stall, not the power.

6 **Throttle FULL, carb heat COLD**
Right rudder with it.

7 **Wings level, coordinated**
Rudder and aileron together.

8 **Flaps 20 at once**
From 30 or 40, as in the go-around.

9 **Climb 75 (65), flaps up slowly, then 90**
Back to 3,500, your heading and cruise.

> **Standard** Heading ±10° straight, or bank 20° ±10° turning. Recover promptly at the stall, without a secondary stall.

> **What if** The right wing drops at the break. Unload first, then level with coordinated rudder and aileron.

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POWER-ON STALL: THE SETUP

The stall on a climb-out: too steep, too slow, full power. Set up a takeoff at altitude.

1. **Clearing turns done, landmark ahead**
   Start at 3,500. This one gains height, then loses it.
2. **Flaps UP**
   Or takeoff flaps, if your CFI briefs them.
3. **Carb heat ON**
   The power is coming back to slow down.
4. **Throttle about 1,500 RPM**
   Hold altitude. Trim as the speed falls.
5. **Slow to 60 (52), lift-off speed**
   Hold altitude all the way down.
6. **Carb heat COLD**
   Full power needs cold air.
7. **Throttle FULL**
   Or the departure power your CFI briefs. Smoothly.
8. **Right rudder lots of it**
   Full power, slow, nose coming up: the nose wants to go left.

Remember **Flaps up, heat on, slow to sixty, heat off, full, rudder.**

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POWER-ON STALL: STALL AND RECOVER

Full power, 60 mph, right rudder in.

The stall

1 **Pitch up smoothly, past a climb attitude**
Steeper than feels right. Hold it there.

2 **Heading hold it with rudder**
Ball centered, wings level, or a 20° bank as briefed. Uncoordinated stalls are where spins start.

3 **Cues horn, buffet, rudder getting heavy**
Call them out loud.

4 **The break nose drops**
Often with a wing. Recover now.

Recover

5 **Yoke FORWARD, unload**
Lower the angle of attack first.

6 **Wings level, coordinated**
Rudder to stop any yaw.

7 **Power FULL, check it**
It's already in. Make sure.

8 **Climb 75 (65), then 90 (78)**
Back to 3,500, your heading and cruise.

> **Standard** Heading ±10° straight, or bank 20° ±10° turning. Recover promptly at the stall, with the least altitude loss.

> **What if** The nose falls through the horizon after the break. Unload, wings level, and let the speed build before you pull. Pulling too soon stalls it again.

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STEEP TURNS

At 3,500, clearing turns done. Pick a landmark on your entry heading.

1. **Speed 95–100 (83–87)**
   Below Va: 112 at 2,300 lb and lower when lighter.
2. **Roll in 45° bank**
   Smooth and coordinated. Left first, as briefed.
3. **Back pressure as you pass 30°**
   Hold the nose where the cowling meets the horizon.
4. **Power add about 100–150 RPM**
   Makes up for the extra drag.
5. **Hold altitude, bank, ball**
   Eyes outside. Quick glances at the altimeter.
6. **Roll out lead by about 20°**
   About half the bank angle. Release the back pressure as you roll out, or you'll climb.
7. **Reverse straight into the other way**
   If your CFI asks. Right turns need less right rudder than you think.

Standard Altitude ±100 ft, airspeed ±12 mph (±10 kt), bank 45° ±5°, roll out ±10°.

What if The nose drops and the speed climbs. Shallow the bank first, then raise the nose, then roll back in.

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SIMULATED ENGINE FAILURE

Your CFI pulls the throttle somewhere in the area. Say each step; touch the controls, but don't actually shut anything off.

1. **Pitch 75 (65), trim**
   Best glide, flaps up. This comes first.
2. **Field pick one, turn toward it**
   Into the wind if you can. KTTF may be within reach: check.
3. **Restart carb heat ON, fuel BOTH, mixture RICH**
   The 172M restart flow, from the checklist.
4. **Ignition BOTH**
   Primer in and locked.
5. **Radio "Mayday" on 121.5, squawk 7700**
   Say it in training; don't set it unless your CFI tells you to.
6. **Plan key point, base, final**
   Arrive high. Flaps and a slip take height off; nothing gives it back.
7. **Secure mixture, fuel, ignition, master**
   Touch each one: idle cut-off, OFF, OFF, OFF once the flaps are set.
8. **Doors unlatch before touchdown**
   Simulated. Then go around at the height your CFI briefs.

> **Standard** Best glide ±12 mph (±10 kt), a field within gliding distance, checklist from memory.

> **What if** It happens on the way home over Fermi. Which way do you turn?

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BACK TO KONZ

AWOS 119.675 about 10 miles out · CTAF 123.0 · pattern 1,600 MSL

HEADING HOME

Airwork done. Head northeast back along the shore.

1. **Descend to 2,500 before Bolles Harbor**
   Below the 3,000 floor before you reach its edge, not after.
2. **Descent check mixture RICH, carb heat as needed**
   Low power in a descent is carb ice weather.
3. **Stacks and Fermi clear, on the inland side**
   The same landmarks, in reverse.
4. **AWOS 119.675, about 10 miles out**
   Around Fermi. Pick the runway: 22 or 4.
5. **Call on 123.0, about 10 miles out**
   Then listen for who else is in the pattern.
6. **Down to 1,600 before you join**
   Plan the 45° entry to midfield downwind, at pattern altitude.
7. **Before landing fuel BOTH, mixture RICH, light ON**
   Belts tight. Done before the 45°.

Say *"Grosse Ile traffic, **Cessna [tail]**, ten miles southwest, inbound to land, will enter left downwind Runway 22, Grosse Ile."*

What if The AWOS gives a strong crosswind. KTTF is behind you, and its runway runs 3/21. Decide now, not on short final.

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RUNWAY 22: LEFT TRAFFIC

Downwind on the southeast side, 1,600 MSL, half a mile out. All turns left.

1. **Downwind** 100 (87), about 2,200 RPM
   Level and trimmed. Before-landing check done.
2. **Abeam the threshold** carb heat ON, 1,500 RPM
   Heat first, then power.
3. **Flaps 10** 80 (70)
   Below 100. Start down about 500 fpm.
4. **Base** flaps 20, 75 (65)
   Threshold about 45° behind you. Lift the wing and look first.
5. **Final** flaps 30, 70 (61)
   Lined up by 500 AGL. Stable by 300 AGL, or go around.
6. **Aim point** past the displaced threshold
   The landing threshold is 428 ft in from the end.
7. **Over the fence** 65–70 (56–61)
   Power off, hold the nose up, mains first.

Say *"Cessna [tail], left downwind Runway 22, full stop." Then base, final and clear of the runway.*

What if Someone calls a straight-in to 22 while you're on downwind. Find them, then extend or sequence behind them.

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RUNWAY 4: RIGHT TRAFFIC

Downwind on the southeast side, 1,600 MSL, half a mile out. All turns right.

1. **Downwind 100 (87), about 2,200 RPM**
   Level and trimmed. Before-landing check done.
2. **Abeam the threshold carb heat ON, 1,500 RPM**
   Heat first, then power.
3. **Flaps 10 80 (70)**
   Below 100. Start down about 500 fpm.
4. **Base flaps 20, 75 (65)**
   A right turn: the wing hides the runway and final. Look before you turn.
5. **Final flaps 30, 70 (61)**
   Lined up by 500 AGL. Stable by 300 AGL, or go around.
6. **Over the fence 65–70 (56–61)**
   Power off, hold the nose up, mains first.

Say *"Cessna [tail], right downwind Runway 4, full stop." Then base, final and clear of the runway.*

What if You overshoot the turn to final. Don't steepen the bank to fix it: go around and fly the pattern again.

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GO-AROUND

Not stable at 300 AGL, a bounce, traffic on the runway, or any doubt at all.

1 **Throttle FULL**
Smoothly, all the way in.

2 **Carb heat COLD**
Heated air costs power.

3 **Pitch stop the descent, 65 (57)**
Full flaps and full power pitch the nose up hard. Push, and trim.

4 **Right rudder as needed**
Full power and slow: the nose wants to go left.

5 **Flaps 20 at once**
From 40, hold the switch up about 2 seconds. Watch the indicator.

6 **Flaps up slowly once clear**
Accelerating to 80–90 (70–78).

7 **Sidestep to the pattern side**
Keep the runway and any traffic in sight.

Say *"Cessna [tail], going around Runway 22."*

What if You bounce and float with the speed falling. Don't try to save it: full power, go around.

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ENGINE FAILURE AFTER TAKEOFF

The engine quits on the climb-out, low. You have seconds. Brief this before every takeoff.

1. **Pitch DOWN, now, 75 (65)**
   In a climb the speed goes fast. 70 (61) with flaps down.
2. **Land nearly straight ahead**
   Small turns only, to miss things. There's seldom room to turn back.
3. **Mixture IDLE CUT-OFF**
4. **Fuel selector OFF**
5. **Ignition OFF**
6. **Flaps as needed, 40 recommended**
   Land as slowly as you can.
7. **Master OFF**
   Once the flaps are where you want them.

Off the end of Runway 22: _____

Off the end of Runway 4: _____

What if It quits at 1,000 ft on crosswind. Where's your field now? Walk it with your CFI.

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DEBRIEF

Five minutes after you tie down

AFTER THE FLIGHT

While it's fresh. Then pick the cards to chair-fly before the next lesson.

1. What went well **one thing**

2. What surprised me **one thing**

3. My CFI's main point **in their words**

4. Cards to drill **two at most**

5. Numbers I saw **slow flight, stall, pattern**

Remember **Drill the hard card the night before the next flight, in real time, out loud.**

Training aid only, not flight instruction. Our own chair-flying cards for a 1975 Cessna 172M with its original 150 hp engine, with speeds from the 1975 Owner's Manual and standards from the FAA Private Pilot ACS (FAA-S-ACS-6C), shown in miles per hour with knots in brackets. RPM figures are approximate. Fly every maneuver the way your CFI teaches it. The route sketch is ours and not for navigation: check the Class B floors on the current Detroit Terminal Area Chart, and the frequencies and NOTAMs (including Fermi) before you fly. Verify every number against the manual, supplements and placards in the airplane you fly.

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