



SPORTCRUISER MANEUVER GUIDE

Disclaimer: This guide is to be used as reference only and does not preclude checklist usage, pilot operating handbook or flight instruction

Normal Takeoff:

1. Takeoff Checklist
2. Perform Radio Communications
3. Line-Up on Runway
4. Full Power (Right rudder needed)
5. Rotate at **45 KIAS**
6. Pitch for Vy (**62 KIAS**, approximately 10° pitch) until traffic pattern altitude
7. At traffic pattern altitude, lower pitch for 70 KIAS for better cooling and visibility.
8. Perform Climb/Cruise checklist when appropriate

Private Standards	Airspeed: -5/+10 KIAS
Commercial Standards	Airspeed: ±5 KIAS

Normal Landing

1. Complete an Approach Checklist prior to pattern entry
2. Before Landing Checklist
3. Downwind: **4500 RPM; 85 KIAS**
4. Abeam TD Point (or 3nm final): **3000 RPM; 75 KIAS**
5. Base (or 2nm final): **12° Flaps; 70 KIAS**
6. Final (or 1nm final): **30°; 65 KIAS** (*note add ½ gust factor to airspeed)
7. Close Throttle prior to touchdown, maintain positive pitch attitude

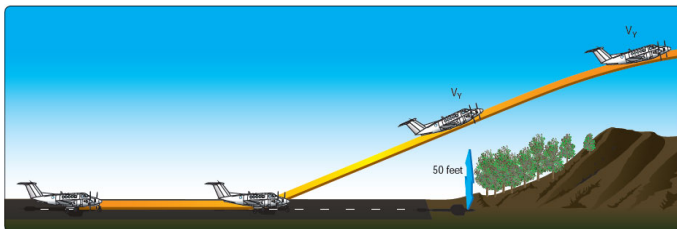
Private Standards	Airspeed: -5/+10 KIAS TD Point: -0/+400 FT
Commercial Standards	Airspeed: ±5 KIAS TD Point: -0/+200 FT



Revision 1/19/2021
 4700 Airport Parkway
 Addison, Texas 75001
 972.735.9099

Short Field Takeoff

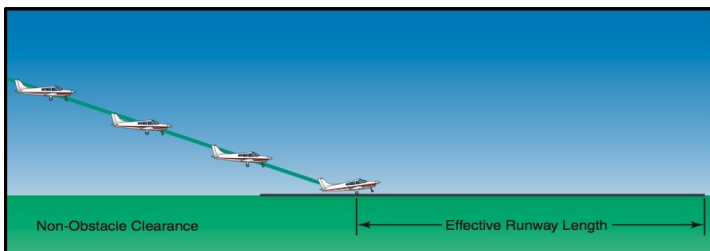
1. **Flaps 12°**
2. Takeoff Checklist
3. Perform Radio Communications
4. Line-Up on Runway using **max available runway**
5. **Hold Brakes**, Apply **Full Power** (Right rudder may be needed); **release brakes**
6. Rotate at **45 KIAS**
7. Pitch for **Vx 56 KIAS** (as specified) until over **50' obstacle**
8. Pitch for **Vy 62 KIAS** when **clear of obstacle**
9. Above 200ft AGL, Raise flaps
10. Perform Climb/Cruise checklist when appropriate



Private Standards	Airspeed: -5/+10 KIAS
Commercial Standards	Airspeed: ±5 KIAS

Short Field Landing

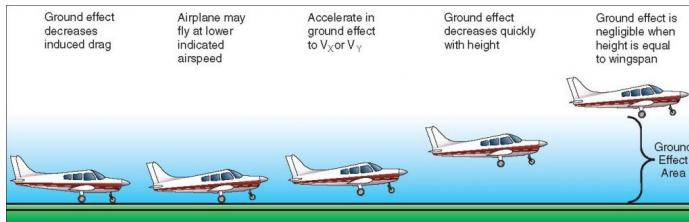
1. Complete an Approach Checklist prior to pattern entry
2. Before Landing Checklist
3. Downwind **4500 RPM; 85 KIAS**
4. Abeam TD Point (or 3nm final): **3000 RPM; 75 KIAS**
5. Base (or 2nm final): **12° Flaps; 70 KIAS**
6. Final (or 1nm final): **30° Flaps; 65 KIAS**
7. Short Final **55 KIAS** (to prevent floating *note add ½ gust factor to airspeed)
8. Close Throttle ~200ft prior to desired TD Point to minimize float, **land on TD Point**
9. Slowly bring nose to the runway, flaps up, “**maximum braking**”



Private Standards	Airspeed: -5/+10 KIAS TD Point: -0/+200 FT
Commercial Standards	Airspeed: ±5 KIAS TD Point: -0/+100 FT

Soft Field Takeoff

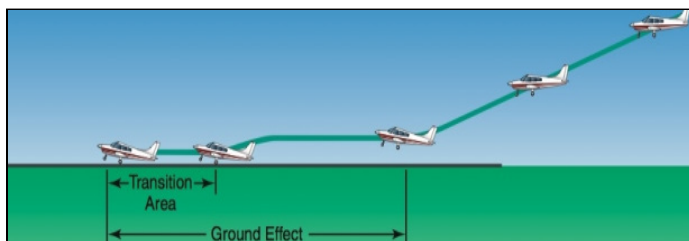
1. **Flaps 12°**
2. Takeoff Checklist
3. Perform Radio Communications
4. Line-Up on Runway with **FULL Aft Elevator**
5. Apply **Full Power** and Right rudder
6. As nose comes up relieve some backpressure, maintain nose high attitude
7. **Lift off at lowest possible airspeed**
8. Promptly reduce pitch to **maintain** <1 wingspan of ground (**Ground Effect**)
9. **Accelerate** to **V_y 62 KIAS**
10. Climb at V_y (approximately 10° pitch)
11. Above 200 ft AGL, Raise Flaps
12. Perform Climb/Cruise checklist when appropriate



Private Standards	Airspeed: -5/+10 KIAS
Commercial Standards	Airspeed: ±5 KIAS

Soft Field Landing

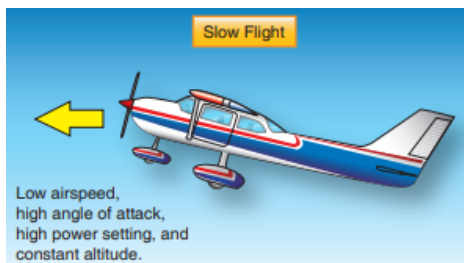
1. Complete an Approach Checklist prior to pattern entry
2. Before Landing Checklist
3. Downwind **4500 RPM; 85 KIAS**
4. Abeam TD Point (or 3nm final): **3000 RPM; 75 KIAS**
5. Base (or 2nm final): **12° Flaps; 70 KIAS**
6. Final (or 1nm final): **30° Flaps; 65 KIAS**
7. Short Final: **60 KIAS**
8. Transition the airplane attitude to ensure a **soft, nose high, touchdown**, throttle to or near idle
9. Slowly **increase back pressure** to full elevator authority
10. **Maintain** back pressure **until off "soft" surface**



Private Standards	Airspeed: -5/+10 KIAS
Commercial Standards	Airspeed: ±5 KIAS

Slow Flight

1. Perform **Pre-Maneuver Checklist**
2. Reduce throttle to **3400 RPM** (Pitch nose to maintain altitude)
3. Verify below **V_{FE} (75 KIAS)**; add Flaps 12°, add approximately **200 RPM**
4. Add Flaps 30°, Slow to just above stall horn **40 KIAS** Increase power to **4000 RPM**
5. **Pitch for Speed, Power for Altitude**
6. Perform level flight, turns, climbs and descents (may require significant power changes) (apply necessary rudder)
7. Recovery: Full power, flaps 12°
8. **Level and accelerate** to V_x **56 KIAS** or V_y **62 KIAS**
9. At V_y, Flaps 0°
10. Perform Climb/Cruise Checklist when appropriate



Private Standards	Airspeed: -0/+10 KIAS Heading: ±10° Altitude: ±100 FT Specified Bank: ±10°
Commercial Standards	Airspeed: -0/+5 KIAS Heading: ±10° Altitude: ±50 FT Specified Bank: ±5°

Power Off Stall

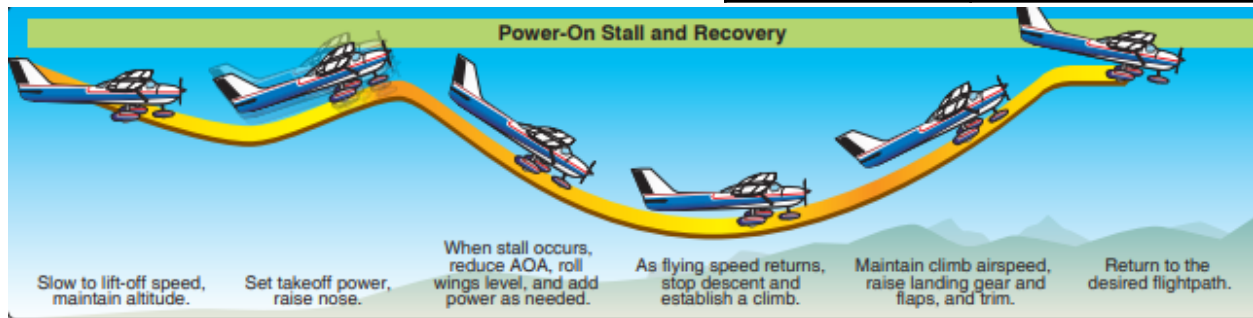
1. Perform **Pre-Maneuver Checklist**
2. Reduce throttle to **3400 RPM** (pitch nose maintain altitude)
3. Incrementally add flaps below **V_{FE} (75 KIAS)**; verify **landing configuration**
4. Initiate **stabilized descent @ 60 KIAS**
5. Throttle **idle**, increase **pitch to maintain altitude** (apply necessary rudder)
6. At stall/buffet/horn: **Reduce AoA** and apply **Full Power, Flaps 12°**
7. **Level and accelerate** to V_x **56 KIAS** or V_y **62 KIAS**
8. At V_y, Flaps 0°
9. Return to starting altitude
10. Perform Climb/Cruise Checklist when appropriate

Private Standards	Heading: ±10° Specified Bank(if any): ±10°
Commercial Standards	Heading: ±10° Specified Bank(if any): ±5°

Power On Stall

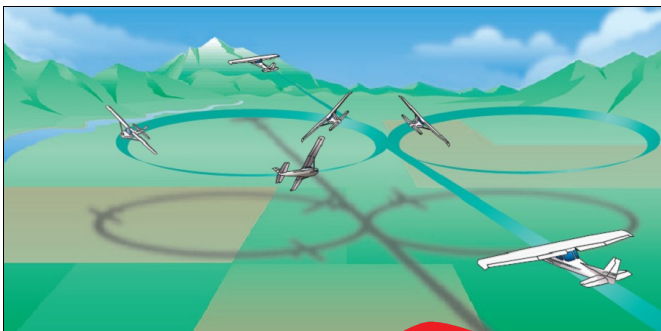
1. Perform **Pre-Maneuver Checklist**
2. **3400 RPM** (maintain altitude) to slow to just above Vr **50 KIAS**
3. **Increase Pitch (20-25°) & Full Power** simultaneously (apply right rudder)
4. At stall: **Reduce AoA**
5. **Accelerate** to Vx or Vy (as necessary)
6. Perform Climb/Cruise Checklist when appropriate

Private Standards	Heading: $\pm 10^\circ$ Specified Bank(if any): $\pm 10^\circ$
Commercial Standards	Heading: $\pm 10^\circ$ Specified Bank(if any): $\pm 5^\circ$



Steep Turns

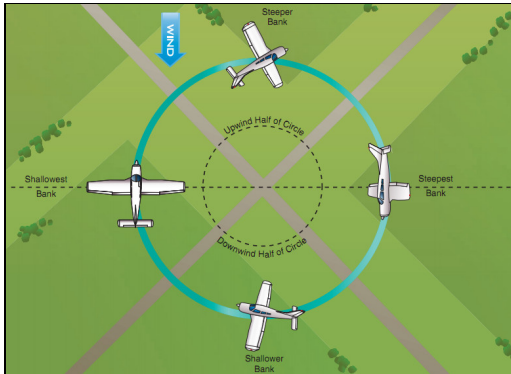
1. Perform **Pre-Maneuver Checklist**
2. Configure **88 KIAS; 4700 RPM**
 1. Bank **45°** for Private, **50°** for Commercial, Maintain Altitude and Airspeed, power to **5000 RPM**
 3. **Roll out 15-20° ahead** of entry heading
 4. Verify clear of traffic and roll into opposite direction (smoothly and immediately for commercial)
 5. **Roll out 15-20° ahead** of entry heading
 6. Cruise checklist when appropriate



Private and Commercial Standards	Airspeed: ± 10 KIAS Heading: $\pm 10^\circ$ Altitude: ± 100 FT Bank: $\pm 5^\circ$
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Turns Around a Point (Private only)

1. Perform **Pre-Maneuver Checklist**
2. Select **appropriate ground references** and emergency field(s)
3. Descend to 800ft AGL (ACS says 600 to 1000 AGL)
4. Configure **88 KIAS; 4700 RPM**
5. Enter maneuver on **downwind**, bug heading, use bank to correct for wind
(High Ground Speed = Steep, Low Ground Speed = Shallow)
6. Exit upon returning to entry heading
7. Cruise checklist when appropriate

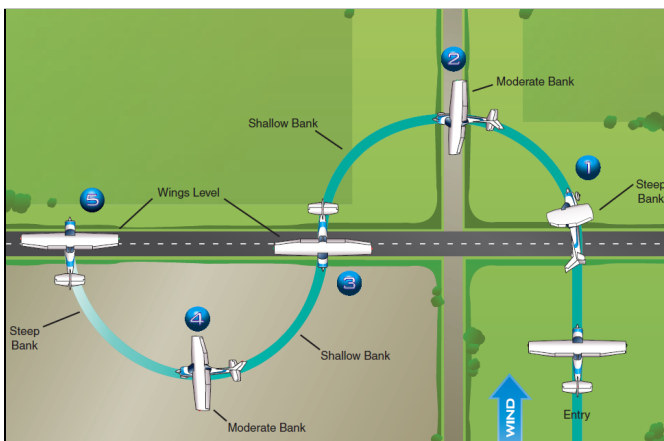


Private Standards

Airspeed: ± 10 KIAS
Altitude: ± 100 FT

S-Turns (Private only)

1. Perform **Pre-Maneuver Checklist** (Fuel Pump/Selector, Lights, Clear, Alt/Hdg Bugs)
2. Select **appropriate ground references** and emergency field(s)
3. Descend to 800ft AGL (ACS says 600 to 1000 AGL)
4. Configure **88 KIAS; 4700 RPM**
5. Enter maneuver on **downwind**, use bank to correct for wind
(High Ground Speed = Steep, Low Ground Speed = Shallow)
6. Exit on appropriate heading
7. Cruise checklist when appropriate



Private Standards

Airspeed: ± 10 KIAS
Altitude: ± 100 FT

Power Off 180 (Commercial Only)

1. Complete an Approach Checklist prior to pattern entry
2. Before Landing Checklist - Select Touch down Point
3. Abeam Touch down Point, throttle smoothly to idle, slow to Vg 60 KIAS
4. Configure aircraft and manage airspeed as necessary:
Anticipate earlier turn if in windy conditions
Flaps may be increased on approach to steepen descent
Forward slip may be used to steepen descent
5. Aim 100-200ft prior to Touch down point (go around may be initiated if necessary)
6. Land with no sideload and proper pitch attitude (crosswind correction as necessary)

Commercial Standards

TD Point: -0/+200 FT

Accelerated Stall (Commercial Only)

1. Perform **Pre-Maneuver Checklist**
2. Reduce throttle to **3000RPM**
3. Slow to **70 KIAS** (Use pitch to hold Altitude)
4. Bank to **45°** and add extensive back pressure
5. At first indication (Horn or Buffet): **Reduce AoA**, apply **Full Power** and **Level Wings**
6. Perform Cruise Checklist when appropriate

Commercial Standards

Complete no lower than
3000 AGL

Steep Spiral (Commercial Only)

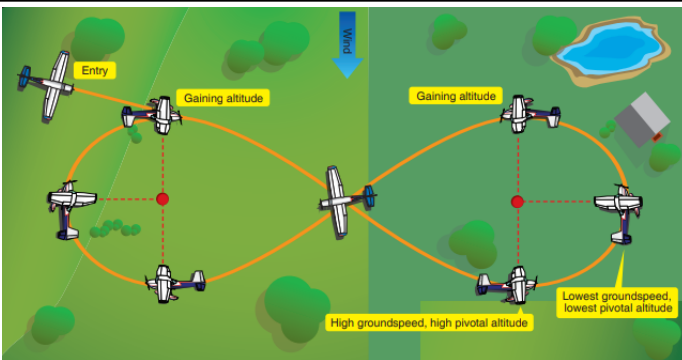
1. Perform **Pre-Maneuver Checklist**
2. Establish flight path into **Upwind**
3. Select ground **reference point**
4. When directly over the point, reduce **power to idle** and slow to **80 KIAS**
5. Adjust bank as necessary to keep **point at a fixed distance** up to 60° Bank
6. After completion of **each 360°** turn **Clear Engine** (power to 4000 RPMs momentarily)
7. Exit maneuver on specified heading, resume normal cruise
8. Perform Cruise Checklist when appropriate

Commercial
Standards

Bank: not to exceed 60°
Airspeed: ±10 KIAS
Specified Heading: ±10°
Complete no lower than 1500 AGL

8's on Pylon (Commercial Only)

1. Perform **Pre-Maneuver Checklist**
2. Establish flight path **45° left of downwind** (bug entry heading)
3. Throttle to **5000 RPM; 100 KIAS**
4. Establish **Pivotal Altitude**
5. Select ground **reference point** (road, barn, small pond)
6. Begin **bank** when point is abeam wing (no more than 40°)
7. Use **pitch to maintain point** on reference line (pitch smoothly)
8. After completion of a **left 270°** turn maintain straight and level flight
9. After **5-7 seconds**, perform steps 4-7 to the **right**
10. Roll out on bugged heading
11. Perform Climb/Cruise Checklist when appropriate



Commercial Standards

Bank: Not to exceed 40°
Avoid Slips and Skids

Chandelle (Commercial Only)

1. Perform **Pre-Maneuver Checklist**
2. Throttle to **4700 RPM, Airspeed to Va 88 KIAS**
3. Select **90° Reference**
4. **Establish 30° Bank** then apply **Full Power**
5. Slowly increase **pitch to 15-17°** (should reach max pitch and hold at 90° point)
6. **Maintain pitch** and slowly **reduce bank** angle to 0° at 180° point
7. Slowly **reduce pitch** to maintain level flight and accelerate to cruise
8. Repeat steps 3-6 to the **right** (If asked to demonstrate to right)
9. Perform Cruise Checklist when appropriate

Commercial Standards

Heading: 180° ±10
Airspeed: Just above stall;
Maintain momentarily while avoiding stall

Lazy Eight (Commercial Only)

1. Perform **Pre-Maneuver Checklist**
2. Select **45°, 90° and 135° References**
3. Verify configuration (maintain altitude, **Va 88 KIAS** and power **4700 RPM**)
4. **Increase pitch & bank 1-2° per second** (up to ~17° and speed should be near 55 KIAS)
 - 45°: 15° bank & max pitch up**
5. **Relieve back pressure, increase bank**
 - 90°: 30° bank, level pitch**
6. Let pitch decrease and slowly **reduce bank**
 - 135°: 15° bank & max pitch down**
7. Begin to add back pressure to Level off @ 180° from start at entry altitude, airspeed and reciprocal heading
8. Repeat steps 4-7 to the **Opposite direction** smoothly and immediately
9. Perform Cruise Checklist when appropriate

Commercial Standards

Bank: Approx 30° at Steepest
 At 180° Point:
 Airspeed: ±10 KIAS
 Heading: ±10°
 Altitude: ±100 FT

