Cirrus SR 20 Maneuvers

Steep Turns:

1. Pre-maneuver checklist complete (Fuel Fullest tank, boost pump on, mixture set, lights on, gauges green)
2. Clearing Turns
3. Set airspeed to 120 KIAS (approximately 60% power and 21” MP)
4. Roll into a coordinated 360 degree (45-degree bank for private/55-degree bank for commercial)
5. Maintain altitude, airspeed, and bank angle through the turn.
6. Roll out on desired heading

Steep Spirals:

1. Pre-maneuver checklist complete (Fuel Fullest tank, boost pump on, mixture set, lights on, gauges green)
2. Clearing turns
3. Select reference point or heading
4. Reduce throttle to idle
5. Adjust aircraft pitch to maintain altitude until glide airspeed is reached
6. Lower nose to maintain glide airspeed over the selected reference point
7. Adjust bank angle as necessary to fly a constant radius over selected reference point (clear the engine every 1,000 feet)
8. Complete a minimum of three 360 degree turns
9. Minimum recovery altitude of 500 feet AGL and limit bank angle to less than 60 degree

Chandelle:

1. Pre-maneuver checklist complete (Fuel Fullest tank, boost pump on, mixture set, lights on, gauges green)
2. Clearing turns
3. Maintain and note heading
4. Establish level flight at 120 KIAS (approx. 60% power and 21” MP)
5. Roll into a coordinated 30-degree level turn
6. Increase pitch at a constant rate to achieve max pitch halfway through the 180-degree turn while simultaneously adding full power
7. At the 90-degree point in the turn, maintain maximum pitch attitude while decreasing angle of bank at a constant rate to roll out wings level 180-degree from starting heading
8. Hold the maximum pitch attitude momentarily at the 180-degree point, then reduce pitch to maintain level flight
9. *Recovery:* Reduce power to normal cruise power setting once aircraft has accelerated as desired

Lazy Eights:

1. Pre-maneuver checklist complete (Fuel Fullest tank, boost pump on, mixture set, lights on, gauges green)
2. Clearing turns
3. Establish level flight at 120 KIAS (approx. 60% power and 21" MP)
4. Control the aircraft to achieve the following throughout the maneuver
   a. At the 45-degree reference, maximum pitch up and approx. 15-degrees of bank
   b. At the 90-degree reference, maximum bank of 30-degrees with level pitch
   c. At the 135-degree reference, maximum pitch down and approx. 15-degree bank
   d. At the 180-degree point, momentary level pitch and bank as the turn direction is changed
5. *Recovery:* Smoothly apply power as necessary to resume normal flight

Slow Flight:

1. Pre-maneuver checklist complete (Fuel Fullest tank, boost pump on, mixture set, lights on, gauges green)
2. Clearing turns
3. Reduce power to approx. 25% and 12" MP
4. Flaps full
5. Bank angle as necessary (no more than 20-degrees)
6. Maintain an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power would result in an immediate stall
7. Power as required for level flight or desired climb or descent rate
8. *Recovery:*
   a. Smoothly apply full power
   b. Reduce angle of attack and level wings
   c. Flaps 50%
   d. Accelerate to V_Y
   e. Flaps up after establishing a positive rate of climb and reaching a minimum of 85 knots

Power-Off Stalls:

1. Pre-maneuver checklist complete (Fuel Fullest tank, boost pump on, mixture set, lights on, gauges green)
2. Clearing turns
3. Configure the aircraft for a normal approach to land
4. Power to approx. 25% and 12" MP
5. Pitch down to a normal approach attitude
6. Smoothly raise the nose to induce a stall
7. *Recovery:*
   a. Reduce angle of attack and level wings
   b. Smoothly apply power
   c. Return to a specified altitude, heading, and airspeed

Power-On Stalls:

1. Pre-maneuver checklist complete (Fuel Fullest tank, boost pump on, mixture set, lights on, gauges green)
2. Clearing turns
3. Flaps: 50% below 150 knots
4. Slow to liftoff speed (Power to approx. 25% and 12" MP)
5. Establish a takeoff or climb configuration (71-75 Knots)
6. At lift-off speed, set power to no less than 65%
7. Transition smoothly to a pitch attitude that will induce a stall
8. *Recovery:*
    a. Reduce angle of attack and level wings
    b. Smoothly apply full power
    c. Return to a specified attitude, heading, and airspeed
    d. Flaps up after establishing a positive rate of climb and clear of obstacles

Instrument Approaches:

1. Load and activate approach in FMS
2. Bring up approach chart on MFD
3. Brief Approach
4. Speed 120 knots until final approach fix
5. Prelanding Checklist (Fuel Fullest Tank, Mixture set, boost pump on, Lights on, Landing Gear down, verify three green)
6. Flaps 50% and speed 100 knots established prior to Final Approach Fix (FAF)
7. Speed 100 knots until missed approach decision point

Landings:

1. Descent Checklist
2. Prelanding Checklist (Fuel Fullest Tank, Mixture set, boost pump on, Lights on, Landing Gear down, verify three green)
3. Seat Belts and Shoulder Harnesses – Advise passengers and crew per 91.107
4. Downwind: Power: approx. 40% Speed: 100 KIAS Flaps: 0%, then 50% abeam touchdown point
5. Base: Power: As necessary; Speed: 90 KIAS; Flaps: 100%
6. Final: Power: as necessary Speed: 75 KIAS; Flaps: 100%
7. Speed over Threshold: 75 KIAS
8. Touchdown: Speed: Just above stall

Airspeeds for Normal Operation

Unless otherwise noted, the following speeds are based on a maximum weight of 3150 lb. and may be used for any lesser weight. However, to achieve the performance specified in Section 5 for takeoff and landing distance, the speed appropriate to the particular weight must be used.

Takeoff:
- Normal, Flaps 50% ..... 71-75 KIAS
- Short Field, Flaps 50% ..... 71 KIAS
- Obstacle Clearance, Flaps 50% ..... 81 KIAS

Enroute Climb, Flaps Up:
- Normal, SL ..... 96 KIAS
- Normal, 10,000' ..... 92 KIAS
- Best Rate of Climb, SL ..... 96 KIAS
- Best Rate of Climb, 10,000' ..... 92 KIAS

Landing Approach:
- Normal Approach, Flaps Up ..... 89 KIAS
- Normal Approach, Flaps 50% ..... 84 KIAS
- Normal Approach, Flaps 100% ..... 78 KIAS
- Short Field, Flaps 100% ..... 78 KIAS

Go-Around, Flaps 50%:
- Full Power ..... 81 KIAS

Maximum Recommended Turbulent Air Penetration:
- 3150 Lb ..... 133 KIAS
- 2700 Lb ..... 123 KIAS
- 2300 Lb ..... 114 KIAS

Maximum Demonstrated Crosswind Velocity:
- Takeoff or Landing ..... 20 Knots

Airspeed Limitations

The indicated airspeeds in the following table are based on Section 5, *Airspeed Calibration - Normal Static Source* Table. When using the alternate static source, allow for the airspeed calibration variations between the normal and alternate static sources.

Speed	KIAS	KCAS	Remarks
V_{NE}	201	204	**Never Exceed Speed** is the speed limit that may not be exceeded at any time.
V_{NO}	164	166	**Maximum Structural Cruising Speed** is the speed that should not be exceeded except in smooth air, and then only with caution.
V_O 3150 Lb	133	135	**Operating Maneuvering Speed** is the maximum speed at which full control travel may be used. Below this speed the airplane stalls before limit loads are reached. Above this speed, full control movements can damage the airplane.
V_{FE} 50% Flaps 100% Flaps	 150 110	 152 111	**Maximum Flap Extended Speed** is the highest speed permissible with wing flaps extended.
V_{FD}	133	135	**Maximum Demonstrated Parachute Deployment Speed** is the maximum speed at which parachute deployment has been demonstrated.