Tecnam Sierra
Standard Operating Procedures and Maneuvers Supplement

Normal Takeoff

Flaps Take Off
Trim set
Check for traffic
Line up on white stripe
Full power
Stick should be located in the middle of the travel space
Steer with feet only
Gradually apply back pressure to lift the nose off ground but leave the mains on the ground
Rotate 48kts
Climb out 68kts
Flaps up - 500 agl
Follow noise abatement procedures

Level Off

Lower nose to achieve level flight
Reduce power to 5100RPM
Reset trim to remain in level flight
Verify: flaps up, engine instruments green

Normal Landing

10nm from airport, landing light on, listen to AWOS and/or request airport advisory
5nm from airport begin self announcing position
Enter traffic pattern following noise abatement procedures
As you enter the pattern power back to 3,200 rpms to get the aircraft slowed down
Downwind leg 3,200 RPM, 65kts level flight, retrim
Abeam of numbers, reduce power to 2,800 rpms, add first notch of flaps (3 seconds), retrim for 60kt decent
Base, add landing flaps (3 seconds), adjust power/ power if need be for appropriate decent altitude and to maintain 60kt decent
Final, adjust power if need be for appropriate decent altitude and to maintain 60kt decent. Add final flaps if desired.
Once the runway is made, reduce power to idle
20 feet above runway, begin transition from maintaining airspeed to maintaining attitude. Focus eyes at far end of the runway. Gradually increase back pressure on stick to try and hold aircraft 2 feet off the runway as long as possible. Use your feet to point airplane down the runway and hand to maintain altitude and keep it over the centerline.
Once main wheels touch the ground, steer with feet. Gradually lower the nose wheel and begin applying brakes as needed
Clear runway
Make radio call
Reset trim, put flaps up.

Slow Flight

2 clearing turns
Reduce power to 3,000
Increase pitch attitude and trim to maintain altitude
Once within the white arc, bleed in flaps
Adjust pitch and power to maintain altitude at 48kts

Recovery

Full power
Pitch for level attitude
Bleed out flaps while in the white arc

Power Off Stall

2 clearing turns
Reduce power to 3200 rpm
Increase pitch attitude and trim to maintain altitude
Once withing the white arc, bleed in flaps
Adjust pitch and power to maintain altitude until 60kts
At 60kts, reduce power to idle and establish 65kt glide
Descend 300 feet and then gradually pitch back to maintain altitude and induce a stall.

Recovery

Simultaneously apply full power, right rudder as needed, pitch for level attitude, and remove first notch of flaps.
Once airspeed has increased to 60kts, establish 60kt climb
Bleed out flaps and climb to desired altitude.
Return to cruise flight

Power On Stall

2 clearing turns
Reduce power to 3000 rpm
Increase pitch attitude and trim to maintain altitude
Once within the white arc, add 1 notch of flaps
Adjust pitch and power to maintain altitude until 48kts
At 48kts, apply full power, right rudder, and immediately pitch back to further reduce airspeed until stall
Watch coordination and maintain heading

Recovery

Pitch for level attitude
Once airspeed has increased to 60kts, establish 60kt climb
Remove flaps and climb to desired altitude.
Return to cruise flight.

Steep Turns

4800 RPM - Establish cruise flight at or below 96kts rpm
2 clearing turns
Trim airplane for level flight
Choose landmark for entry heading
Begin roll to 45° bank
At 30°, add 100-200rpm and continue roll to 45° adjusting back pressure as needed
Maintain altitude
10° prior to roll-out heading, begin roll out and reduce power 100-200rpm.
Roll out at entry altitude and heading.

Turns Around a Point

Determine wind direction
Select a suitable site. Should have emergency landing areas and not disturb the neighbors.
Establish cruise flight at or below 96kts 4800 rpm
Select four points around the point that are equidistance from the center. These four points are your targets.
Enter maneuver at 800 feet on downwind
When point in abeam of wing begin turn
Steepest turn should be downwind. Shallowest upwind.
Keep object same distance from aircraft by adjusting bank angle. Steeper brings it closer. Shallower takes it further away.

S-Turns Across a Road

Determine wind direction
Select either Rt 50, Rt 404, or Rt 301. Winds should be perpendicular to road.
Establish cruise flight at or below 96kts 4800 rpm
Select target distance from road
Enter maneuver at 800 feet on downwind, perpendicular to road
When over the road begin turn
Steepest turn should be downwind. Shallowest upwind.
Airplane should be wings level only when crossing the road. Adjust bank angle accordingly.

Loss of Engine

Establish and trim for best glide speed 68kts
Select emergency landing site and head that way

IF there is time, try to restart engine
Work right to left
Throttle - Half Open
Fuel - Verify On Both
Fuel Pump - On
Magnetos - Check
Attempt re-start

IF there is time, call for help giving position
Radio 121.5 MHz
Transponder 7700

Secure Engine
If engine will not restart - Fuel Shutoff Up
Ignition Switches - Off
Flaps - as necessary
Master off after final flaps
Unlock and slide open canopy prior to touchdown

Go-Arounds

Apply full power
Reduce flaps to take-off setting
Pitch for level attitude until 60kts and then begin climb
Bleed out flaps

Short Field Takeoff

Take-off flaps
Stop aircraft at the very end of the runway
Hold brakes and apply full power
Release brakes
At 40kts rotate and climb out at 60kts
Above obstacle height, pitch for 68kts

Short Field Landing

Set up final approach at 55kts
Establish aim point prior to actual touch down point
After touch down, maintain full after elevator, retract flaps, apply brakes but do not skid!

Soft Field Takeoff

Inspect field condition checking for grass height, holes, debris, and wetness
Flaps - Take-off
Full aft pressure during taxi continuing through takeoff
Apply full power
As soon as main wheels leave the ground, lower nose to level attitude and fly aircraft 5 feet off the ground until 60kts
Climb out at 60-68kts

Soft Field Landings

Perform low pass to inspect field condition for grass height, holes, debris, and wetness
Set up normal approach to landing
Keep nose wheel off the ground as long as possible holding aft pressure as long as possible
Use minimal braking and keep aircraft moving until parked

Crosswind Takeoff

Modify appropriate takeoff procedures as such:

Begin ground roll with full aileron into the wind
Gradually take out most of the aileron as aircraft accelerates
Upon lift-off, establish coordinated crab into the wind

Crosswind Landing

Modify appropriate landing procedures as such

Add 5kts approach speed, especially in gusts
Apply rudder to point nose down the runway
Apply aileron to hold aircraft over the centerline

Net effect should be the aircraft slightly cross controlled with the wing down into the wind
Control input should be increased as aircraft decelerates and maintained until landing

Forward Slips

Add 5kts to approach speed
Apply full rudder in direction of crosswind
Apply enough opposite aileron to hold the aircraft over the centerline
Pitch to maintain airspeed

This is most effective with no power