



# Takeoff and Landing Procedures

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## Piper Warrior/Archer

### Normal Takeoff

Flaps.....0°  
 Line up on runway centerline:  
 Brakes.....Hold  
 Rwy/Compass/DG.....Verify aligned (“33,33,33” etc.)  
 Brakes.....Release  
 Throttle.....Full Power  
 Engine Gauges.....Verify in the green  
 “Airspeed Alive”  
 “V<sub>R</sub>”.....”Rotate”  
 Pitch.....V<sub>Y</sub>  
 Trim.....Adjust for V<sub>Y</sub>  
 Above 1000’ AGL and Clear of Pattern.....Climb Check

### Soft-Field Takeoff

Before Taking Runway  
 Flaps.....25°  
 Flight Controls.....  
 ....Full Aft Line up on runway centerline without stopping  
 Rwy/Compass/DG.....Verify aligned (“33,33,33” etc.)  
 Throttle.....Full Power  
 Engine Gauges.....Verify in the green  
 “Airspeed Alive”  
 Lift-Off.....As soon as possible  
 Reduce Pitch to Remain in Ground Effect  
 Accelerate to V<sub>X</sub>.....Initiate Climb  
 200’ AGL.....Flaps 10°, Pitch V<sub>Y</sub>  
 300’ AGL.....Flaps 0°

### Short-Field Takeoff

Before Taking Runway.....Flaps 25°  
 Use maximum available runway, line up on centerline:  
 Brakes.....Hold  
 Throttle.....Full Power/ Verify Max. RPM  
 Engine Gauges.....Verify in the green  
 Brakes.....Release  
 “Airspeed Alive”  
**Warrior**  
 “50 Knots”.....”Rotate”  
**Archer**  
 “55 Knots”.....”Rotate”  
 Accelerate .....V<sub>X</sub>  
 200’ AGL (clear of obstacle).....Flaps 10°  
 Pitch.....V<sub>Y</sub>  
 300’ AGL.....Flaps 0°

### Soft-Field Landing

Final Approach Speed.....70 KIAS  
 Touchdown softly, while holding the nose wheel off the ground as long as possible. Avoid use of the brakes as it will cause weight to be transferred to the nose wheel.  
 Continue holding the controls full aft as if taxiing on a soft surface.

### Short-Field Landing

Final Approach Speed.....65 KIAS  
 Slow to 65 KIAS after turning final and adding full flaps. Keep a constant angle of descent to the touchdown point while slowing the airplane to allow for a touchdown with minimal floating. After touchdown, apply maximum effective braking. If simulating a short field, announce “Simulated Max. Braking” and apply normal braking.

### Traffic Pattern

Downwind --.....90 KIAS  
 Perform Memory Item.....BC-GUMPS  
 Before Landing Checklist.....Complete (Abeam the Landing Point):  
 Power.....1700 RPM Below  
 Below 103 KIAS.....Flaps 10°  
 Pitch & Trim for .....90 KIAS  
 Base.....Flaps 25°  
 Pitch & Trim for.....80 KIAS  
 Final.....Flaps 40°  
 Pitch & Trim for.....Final Approach Speed

### Go Around/Missed Approach

Cram.....Max Power  
 Climb.....Pitch V<sub>Y</sub> Clean  
 (when landing with use of flaps)  
 Flaps .....25°  
 Positive Rate at V<sub>Y</sub>.....10°  
 Flaps .....0°  
 Cool.....Carb. Heat Off  
 Call.....Go around/Missed Approach

## Piper Seminole

### Normal Takeoff

Flaps.....0°  
Line up on runway centerline:  
Brakes.....Hold  
Rwy/Compass/DG.....Verify aligned (“33,33,33” etc.)  
Throttles.....2000 RPM  
Engine Gauges.....Verify in the green  
Brakes.....Release  
Throttles.....Max Power  
“Airspeed Alive”  
“75 Knots”.....”Rotate”  
Positive Rate.....Gear Up  
Pitch.....V<sub>Y</sub>  
Trim.....Adjust for V<sub>Y</sub>  
After Reaching 500’ AGL  
    Throttles.....25” MP  
    Props.....2500 RPM  
Above 1000’ AGL and Clear of Pattern.....Climb Check

### Short-Field Takeoff

Flaps.....0°  
Use maximum available runway, line up on centerline:  
Brakes.....Hold  
Throttles.....2000 RPM  
Engine Gauges.....Verify in the green  
Throttles.....Max Power  
    .....Verify Max. RPM  
Brakes.....Release  
“Airspeed Alive”  
“70 Knots”.....”Rotate”  
Positive Rate.....Gear Up  
Pitch.....V<sub>X</sub>  
Clear of obstacle.....Pitch V<sub>Y</sub>  
Trim.....Adjust for V<sub>Y</sub>  
After Reaching 500’ AGL  
    Throttles.....25” MP  
    Props.....2500 RPM  
Above 1000’ AGL.....Climb Check

### Short-Field Landing

Final Approach Speed.....75 KIAS  
Slow to 75 KIAS on short final. Keep a constant angle of descent to the touchdown point while slowing the airplane to allow for a touchdown with minimal floating. After touchdown, apply maximum effective braking. If simulating a short field, announce “Simulated Max. Braking” and apply normal braking.

### Traffic Pattern

Downwind ..... 100 KIAS  
Perform Memory Item.....BCC-GUMPS  
Before Landing Checklist.....Complete  
Landing Point:  
    Power.....Reduce  
    Below 111 KIAS.....\*Flaps 10°  
    Pitch & Trim for.....100 KIAS  
Base.....\*Flaps 25°  
    Pitch & Trim for.....90 KIAS  
Final.....\*Flaps 40°  
    Pitch & Trim for.....Final Approach Speed  
500’ AGL .....Final Gear Check  
    (Announce Safe to Land)

### Single Engine Traffic Pattern (Simulated)

Downwind --- 100 KIAS (88 KIAS if needed)  
    Before Landing Checklist.....Complete  
    Above Landing Point.....Gear Down  
    Power.....Reduce/As Required  
    Pitch & Trim for.....100 KIAS  
Base.....\*Flaps 10°  
    Pitch & Trim for.....90 KIAS  
Final.....\*Flaps 25°  
    Pitch & Trim for.....90 KIAS  
500’ AGL .....Both props fwd. <sup>1</sup>  
Committed to Land and Runway Made  
Reduce power slowly and flare airplane.

### Go Around/Missed Approach (All Engines)

**Cram**.....Mixture, Prop, Throttle Full fwd.  
**Climb**.....Pitch for V<sub>Y</sub>  
**Clean**.....Flaps 25°  
    Positive Rate.....Gear Up, Flaps 10°  
    .....Flaps 0°  
**Cool**.....Cowl Flaps As Req./Carb. Heat Off  
**Call**.....Go around/Missed Approach

### Go Around/Missed Approach (Single Engine)

Above Committed to Land Altitude  
**Cram**.....Mixture/Prop/Throttle - Full Forward  
**Climb**.....Pitch for V<sub>Y</sub>  
**Clean**.....Flaps 25°  
    .....Positive Rate Gear Up  
    .....Flaps 10°  
**Cool**.....Cowl Flaps As Req./Carb. Heat Off  
**Call**.....Go around/Missed Approach

\*When adding flaps in the Seminole, the pilot will announce and verify:  
    “Three green, one in the mirror”

*1*: This is done in the event that an actual go-around using both engines becomes necessary while performing single engine approaches/landings for training purposes.

