SKYHAWK 172N – Analog Panel – CHECKLIST *(September 2025 Revision)*

Preflight Exterior

Cockpit
A.R.O.W. documents – On board
Control lock – Out
Pitot Tube Cover – OFF
Fuel Selector – BOTH
Fuel Shutoff – IN
Master switch – ON
Avionics Fan – ON
Flaps – Fully extended
Fuel gauge – Check level
All lights – Check
Pitot Heat – Check if necessary
All switches – OFF

Empennage
Vertical stabilizer – Undamaged
Horizontal stabilizer – Undamaged
Elevator – Free and secure
Rudder cables – Good condition
Trim tab – Cotter pin secure
Tie-down – Remove

Antennas
Comm antennas – Secure
Transponder antenna – Attached
ELT antenna – Secure
GPS antenna – Secure
VOR antenna – Secure

Right Gear
Tire – Inflated, no bald spots
Wheel chocks – Remove
Brakes – No fluid leaks
Brake pads – Thickness sufficient
Gear leg – Good condition

Right Wing
Flap – Down & secure
Aileron – Free & secure
Light fixture – Secure
Wing tip – Undamaged
Wing leading edge – Undamaged
Tie down – Remove
Fuel in tank – Sufficient for flight
Cabin air vents – Not blocked
Fuel – Test quality (1)

Cowling
Oil – Check Level (6 - 7qt)
Fuel – Test Quality (1)
Prop blades – Good condition
Alternator Belt – Good condition
Air Intakes – Not blocked
Cowlings – Secure
Static Port – Clear

Nose Gear
Tire – Inflated, tread
Cotter pins – Check
Gear strut – Inflated

Left Wing
Fuel in tank – Sufficient for flight
Cabin air vents – Not blocked
Pitot tube – Clear & secure
Tie down – Remove
Fuel vent – Clear
Wing leading edge – Undamaged
Wing tip – Undamaged
Light fixture – Secure
Aileron – Free & secure
Flap – Down & secure
Fuel – Test quality (1)

Left Gear
Tire – Inflated, no bald spots
Wheel chocks – Remove
Brakes – No fluid leaks
Brake pads – Thickness sufficient
Gear leg – Good condition
360° Walk around, tie downs/chocks
Tow Bar/Baggage Door locked

Preflight Interior

Passenger Briefing
Seatbelt use • Exit procedure
Com use • Motion sickness
Look for traffic
Fire extinguisher use

Alternate Static – Check
Seat – Adjusted
Master – ON
Beacon – ON
Nav lights – ON (ADS-B)
Circuit breakers – IN
Fuel selector – BOTH
Insert key – Do not turn

Cold Engine Start

IF OIL TEMP NOT IN GREEN
Mixture – RICH
Carb Heat – Cold
Prime – AS REQUIRED (3 to 4 times)
Mixture – LEAN (1/2 full)
Throttle – 1/4 INCH
Check Surroundings
Shout – "CLEAR PROP!"
Starter – Engage (Max 10 Sec.)
Mixture-ENRICHEN(When Eng. Start)
Oil Pressure – Green
Throttle – 1200 RPM
Mixture – Lean for Max RPM
Throttle – 900 RPM
Avionics – ON • Headset – Check

Hot Engine Start

Throttle – Pump 2x
Check Surroundings
Shout – "CLEAR PROP!"
Mixture – HALF
Starter – Engage (Max 10 Seconds)
Oil pressure – Green
Throttle – 1200 RPM
Mixture – Lean for max RPM
Throttle – 900 RPM
Avionics – ON • Headset – Check

Pre-taxi/ Taxi

Flaps – UP (visually verify)
Transponder – Alt 1200
GPS – ON • ATIS – Copy
Altimeter – Set and verified
Contact ground control
Taxi Light – ON • Brakes – Test
Gyro Instruments – Check

KSMO ATIS	119.15
KSMO Ground	121.90
KSMO Tower	120.10
SOCAL Approach	125.20 or 124.30

Run-Up

Parking brake – Set
Fuel selector – BOTH
Trim – Set for takeoff

Pilot Briefing
Positive exchange of controls
Plan for power loss on takeoff
(see "Power Loss on Takeoff")
Route of flight (GPS Set)

Run-Up
Flight Controls – Free & Correct
Annunciator Lights – Check (N/A)
Instruments – Check
Oil Temperature – 100° F
Mixture – Best Power
Power – 1700 RPM
Magneto left – Check *
Magneto right – Check *
(*RPM Max drop 125/Max diff 50)
Suction – Green|Carb Heat – Check
Amps – Not discharging
Oil Temperature – Green
Oil Pressure – Green
Power – Idle check (575 - 625 rpm)
Power – 900 RPM
Mixture – Lean for taxi
Throttle friction
Transponder – Set
Contact ground control

Holding Short

Doors & Windows - Locked
Flaps – Set for takeoff
Trim – Set for takeoff
Carb Heat – Cold

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Taking the Active Runway

The following items should be done by memory every time pilots taxi onto a runway.

Landing Light – ON
Strobe Light – ON
Check final – Clear
Check runway – Clear
Check doors & windows – Locked
Fuel Selector – BOTH
Mixture – RICH
Engine Gauges – Green

Power Loss on Takeoff

On Ground
Throttle – Idle
Brakes – Apply
Flaps – Up
Aircraft – Stop
Master – OFF

Below 800 Feet AGL
Lower nose abruptly - Pitch 65 kts
Fuel Selector Valve – OFF
Mixture – Cutoff
Ignition – OFF
Flaps – Full or as required
Master – OFF
Land straight ahead
Do not attempt to return to Runway

Above 800 Feet AGL
Note winds/ MSL altitude
Land on runway or golf course

Climb

Pitch for airspeed (75 - 85kts)
Power – FULL
Trim – Relieve control pressure
Engine Instruments – Monitor
Flaps – Up
Passing 3000 MSL – Lean

Cruise

Power – 2200 – 2400
Trim – Relieve control pressure
Temps and pressures – Monitor
Mixture – Lean
H.I. – Aligned with Compass

Pre-maneuver

Performed prior to every maneuver. Memorize this checklist.

C.E.R.R.C.A.
Clearing turn(s)
Emergency landing area
Radio – Announce position
Reference point -Airspeed, heading, altitude
Configure **A**ircraft – Appropriate for maneuver

Descent

Power – Set for descent rate
Carb Heat – As required
Pitch – Constant airspeed
Strobe Lights – ON
Landing Light – ON
ATIS – Copy
Mixture – Enrichen as desired

Pre-Landing

Fuel Selector – BOTH
Mixture – RICH
Landing Light - ON
Strobe Lights – ON
Power – 1500 | Carb Heat – ON
Pitch – To slow to Vfe (110 Kts for 10°)
Flaps – As necessary
Pitch for approach speed of 65 Kts
Trim to relieve control pressures

Go-Around

Power – Full | Carb Heat – OFF
Flaps – Retract to 20° immediately
Then retract in stages w/ pos. rate
Pitch for best climb (Vy) – 73KIAS
Announce – "Going around"

Clear of Runway

Trim – Set for takeoff
Transponder – 1200
Flaps – Up
Mixture-LEAN for taxi|Carb Heat-OFF
Landing Light – OFF
Taxi Lights – As required
Strobe Lights – OFF
Contact ground control

Shut Down

Avionics – OFF
Throttle – 1000RPM
Ignition – Cycle • Mixture – Cutoff
Mags – OFF • Key – OUT
Master + Lights OFF EXCEPT Beacon
Fuel Selector – Right or Left
Hobbs & Tach record

Tie Down/Secure

Chocks – Replace
Tie downs – Attach
Controls – Secure
Pitot tube cover – ON

V Speeds (w/ STC SA2196CE + SA4428SW)

Vso – 40
Vs1 – 50
Vr – Variable
Vx – 62
Vy – 73
Vfe – 110 (10°) • 85 (20° – 30°)
Va – Low weight (1750 lbs) – 85
Va – Max weight (2550 lbs) – 105
Vno – Max cruise – 127
Vne – 158
Best glide (max weight) – 68

Emergency Procedures

Power Loss in Flight

Airspeed – Best glide: 68 KIAS
Best Field – Choose, fly towards plan approach (based on wind)
Checklist – 7 Up:
- Fuel Selector – BOTH
- Carb Heat – ON
- Mixture – As required
- Throttle – Cracked
- Primer – IN and LOCKED
- Master – ON
- Ignition – Attempt restart if prop stopped / Cycle mags

Declare:
- Squawk – 7700 IDENT
- Mayday – 121.50 or current frequency

Engine – Shutdown
- Fuel Selector Valve – OFF
- Mixture – Full Lean
- Ignition – OFF

Flaps – As required
Get Ready
- Seatbelts – Tighten
- Sunglasses, headset – Remove
- Doors – Unlatch prior to touchdown
- Passenger – Secure
- Master switch – OFF (Final)

Warning: A, B, C **much** more important than D, E, F, G. Fly the Plane first. Always assume engine will not restart.

Electrical Fire

Master – OFF
All switches – OFF
Cabin heat / air – OFF
Air vents – Closed
Fire Extinguisher – As required
Cabin – Ventilate
Land – As Soon as Practical

Engine Fire

Mixture – Full Lean
Fuel Selector Valve – OFF
Master – OFF
Cabin Heat and Air – OFF
Airspeed – 100 KIAS/Vne, wx permitting
Forced Landing – Execute

Comm Failure

Troubleshoot
Squawk – 7600 (If able)
Proceed to nearest suitable airport
Enter pattern normally
Look for light gun signals, proceed to land when cleared