Cessna C-172N Checklist

Skyhawk G3X

LAKE ELMO AERO

INTERIOR PREFLIGHT

Required Documents	On Board
Fuel Selector	Cycle, then Both
Ignition Switch	Off
Master Switch	On
Hobbs/Tach Time	Check
Battery Volts	Min 22V
Fuel Quantity	Check
Flaps	Extend
Lights/Pitot Heat	Check
All Electrical Switches	Off

EXTERIOR PREFLIGHT

FUSELAGE/TAIL:

Baggage Door	Secure
Antennas	Check
Left Fuselage	Check
Left Elevator	Check
Rudder	Check
Right Elevator	Check
Trim Tab	Check
Right Fuselage	Check

RIGHT WING:

Flap	Check
Aileron	Check
Wingtip/Lights	Check
Leading Edge	Check
Fresh Air Inlet	Check
Main Wheel/Brakes	Check
Fuel Sump	Sample
Fuel Quantity	Check

NOSE:

Windshield	Check/Clean
OAT Probe	Check
Oil	5 Qts Min
Fuel Strainer	Drain (2 Secs.)
Cowling	Check Secure
Propeller/Spinner	Check
Alternator Belt	Check
Landing Light	Check
Air Filter	Check
Nose Wheel/Strut	Check
Static Port (left side)	Check

EXTERIOR PREFLIGHT (CON'T)

LEFT WING:

Main Wheel/Brakes	Check
Fuel Sump	Sample
Fuel Quantity	Check
Pitot Tube	Check
Fuel Tank Vent	Check
Stall Warning Vent	Check
Leading Edge	Check
Wingtip/Lights	Check
Aileron	Check
Flap	Check

BEFORE START

Preflight	Complete
Passenger Briefing	Complete
Belts/Seats	Secure
Circuit Breakers	Check/In
Avionics Master	Off
Fuel Selector Valve	Both

ENGINE START

Brakes	Hold
Master Switch	On
Aircraft Lights	Set
Nav Database Updates	Check
Throttle	¼" Open
Carb Heat	Off
Mixture	Rich
Prime	3-4 Cold 0-2 Hot
Propeller Area	Clear
Starter	Engage
Throttle	800-1,000 RPM
Oil Pressure	Check Positive

BEFORE TAXI

Avionics Master	On
Electrical	Check 28V
Flaps	Up
Mixture	Lean
Avionics	Set
Verify AHRS Calibration Complete	
Flight Instruments	Check
Transponder	Set Code/ALT
Aircraft Lights	Set
Brakes	Test

RUN UP

Brakes	Hold
Flight Controls	Free & Correct
Mixture	Rich
Oil Temp	>75 º
Throttle	1,800 RPM
Magnetos	Check
Max drop 125 RPM, Max Diff 50 RPM	
Carburetor Heat	Check
Ammeter	Check Positive
Oil Temp	Check Green (> 75)
Oil Pressure	Check Green (55-95)
Throttle	Idle Check
Throttle	800-1,000 RPM
Throttle Friction Lock	Adjust
Primer	In/Locked
Circuit Breakers	Check
Brake	Release

BEFORE TAKEOFF

Cabin Doors/Windows	Latched
Trim	Set for Takeoff
Flaps	Set
Magnetos	Both
Mixture	Rich
Carburetor Heat	Off
Aircraft Lights	Set
Flight Instruments	Check
Takeoff Briefing	Complete

TAKEOFF BRIEF

Runway	Verify
Flaps	Set
Reject Considerations	Brief

CLIMB

Flaps	Up
Aircraft Lights	Set

CRUISE

Throttle	Set
Mixture	Set
Aircraft Lights	Set

DESCENT

Weather	Check
Avionics	Set/Check
Carburetor Heat	Set
Mixture	Rich
Approach Briefing	Complete

BEFORE LANDING

Fuel Selector	Both
Aircraft Lights	Set
Carburetor Heat	On
Mixture	Rich
Flaps	Set
Approach Airspeed	55-65 KIAS

AFTER LANDING

Flaps	Up
Trim	Set for Takeoff
Aircraft Lights	Set
Carburetor Heat	Off
Pitot Heat	Off
Mixture	Lean

SHUTDOWN

Throttle	Idle
Magneto	Check
Mixture	Idle Cut-Off
Aircraft Lights	Off
Nav Light	**On**
Avionics Master	Off
Magnetos	Off
Tachometer Time	Record
Master Switch	**Off**
Flight Plan	Cancel
Brakes	Released

Important Speeds KIAS

Vs0	41 KIAS
Vs1	47 KIAS
Vrotate	55 KIAS
Vx	59 KIAS
Vy	73 KIAS
Vfe	85 KIAS
Va (maneuvering)	97 KIAS
Vno	128 KIAS
Vne	160 KIAS
Normal Approach	65 KIAS
Best Glide	**65 KIAS**

Cessna C-172 Maneuvers

LAKE ELMO AERO

Normal Takeoff

Before Takeoff Checklist Complete
Flaps ..... 0°
Power ..... Full
Engine Instruments ..... Verify Green
Rotate ..... 50-55 KIAS
Climb Out ..... Vx 59 KIAS
Vy 73 KIAS

Normal Landing

Before Landing Checklist Complete
Midfield Downwind ..... BCGUMPS
Abeam Touchdown….Throttle 1500 RPM
Flaps 10°
Airspeed 85 KIAS
Base – Flaps 20°
Airspeed 75 KIAS
Final – Flaps 30°
Airspeed 65 KIAS
Touchdown ..... Just above stall speed

Short Field Takeoff

Before Takeoff Checklist Complete
Flaps ..... 10°
Runway ..... Use All Available
Brakes ..... Hold
Throttle ..... Full
Engine Instruments ..... Verify Green
Brakes ..... Release
Rotate ..... 50 KIAS
Climb Out ..... 59 KIAS
When Clear of Obstacle
Accelerate to ..... 73 KIAS
At Vy – 73 ..... Raise Flaps
Climb Out ..... Vy - 73

Short Field Landing

Before Landing Checklist Complete
Midfield Downwind ..... BCGUMPS
Approach (Obstacle) ..... Steeper
Abeam Touchdown…..Throttle 1500 RPM
Flaps 10°
Airspeed 85 KIAS
Base – Flaps 20°
Airspeed 75 KIAS
Final – Flaps 40°
Airspeed 65 KIAS
Threshold 54-60 KIAS
Touchdown ..... Just above stall speed
Braking …. Apply Maximum Foot &Aero

Soft Field Takeoff

Before Takeoff Checklist Complete
Flaps ..... 10°
Yoke ..... Full Back
Engine Instruments ..... Verify green
Throttle ..... Full
Rotate ..... Min. Airspeed
Yoke ..... Slowly release to maintain
nose up until liftoff
Ground Effect ..... Remain in
Accelerate ..... Vy 73 or End of Runway
At Vy 73 ..... Normal Climb
Clear of Obstacles ..... Raise Flaps to 0°

Soft Field Landing

Before Landing Checklist Complete
Midfield Downwind ..... BCGUMPS
Midfield Downwind ..... BCGUMPS
Abeam Touchdown….Throttle 1500 RPM
Flaps 10°
Airspeed 85 KIAS
Base – Flaps 20°
Airspeed 75 KIAS
Final – Flaps 30°
Airspeed 65 KIAS

Touchdown ..... Just above stall speed
Yoke ..... Full Back
Wheel Brakes...Use Minimum Required

Go-Around

Throttle ..... FULL Power
Carburetor Heat ..... Off
Flight Controls ..... Start Climbout
Flaps ..... Retract to 20°
Airspeed……55 KIAS or greater
When clear of obstacles
Airspeed .....Vy 73 KIAS
Flaps ..... Raise to 0°

Steep Turns

Clearing Turns ..... Complete
BCGUMPS ..... Complete
Throttle ..... 2300 RPM
Airspeed ..... 95 KIAS
Bank ..... 45° Private
50° Commercial
Roll Out ..... Original Heading
Repeat ..... Opposite Direction

Slow Flight

Clearing Turns ..... Complete
BCGUMPS ..... Complete
Throttle ..... 1500 RPM
Flaps ..... 30° when in
white arc
Altitude ….. Maintain as Speed Decreases
Throttle .....Add power to
Maintain 45-55 KIAS
Banks ..... Shallow
Recover ..... Full Power, remove Flaps
and Carb Heat, Maintain Altitude

Power Off Stall

Clearing Turns ..... Complete
BCGUMPS ..... Complete
Throttle ..... 1500 RPM
Carburetor Heat……..On
Flaps ..... 30° when in
white arc
Airspeed .....Slow to 65 KIAS
Descent ..... Initiate 500 FPM to
simulate final approach
Throttle ..... IDLE
Pitch ..... Induce Stall
Stall Recovery:
Release back pressure, full power, and remove carb heat and one notch of flaps As decent stops, remove 2nd notch of flaps and accelerate to >70 KIAS and initiate climb.

Power On Stall

Clearing Turns ..... Complete
BCGUMPS ..... Complete
Throttle ..... 1500 RPM
Airspeed ..... Slow to 60 KIAS
Throttle ..... Full Power
Pitch ..... Induce Stall
Stall Recovery:
Release back pressure, ensure full power and stop descent. Accelerate to >70 KIAS and climb to a safe altitude

Rectangular Course

Clearing Turns ..... Complete
BCGUMPS ..... Complete
Throttle ..... 2000 – 2200 RPM
Airspeed ..... 85 KIAS
Altitude .....1000 ft AGL
Entry ..... 45° to Downwind
Ground track ..... Adjust for wind drift
to maintain a ¼ -½ mi distance

Turns Around a Point

Clearing Turns ..... Complete
BCGUMPS ..... Complete
Throttle ..... 2000 – 2200 RPM
Airspeed ..... 85 KIAS
Altitude ..... ……1000 ft AGL
Entry ..... On Downwind
Ground track ..... Adjust for wind drift
to maintain a ¼ -½ mi radius

S-Turns Along a Road

Clearing Turns ..... Complete
BCGUMPS ..... Complete
Throttle ..... 2000 – 2200 RPM
Airspeed ..... 85 KIAS
Altitude .....1000 ft AGL
Entry ..... On Downwind
Ground track ..... Adjust for wind drift
to maintain a ¼ -½ mi radius

Cessna C-172
Emergencies&Abnormals
LAKE ELMO AERO

Engine Failure-*Takeoff*

Pitch……Nose down immediately
Airspeed .....Maintain Safe (65 KIAS)
Land ..... Straight Ahead

If time and altitude permit, proceed to
ENGINE FAILURE - FLIGHT

Engine Failure-*Flight*

Airspeed……65 KIAS
Best Landing Site…….Locate
Carburetor Heat …..... On
Fuel Selector……Both
Mixture ..... Rich
Magnetos ..... Both
Primer ..... In/Locked
Engine Gauges ..... Check

*If power is **not** restored proceed to*
POWER OFF LANDING

Power Off Landing

Airspeed …..... 65 KIAS
Best Landing Site..... Locate
Passengers …..... Prepare

If time and altitude permit:
Transponder …..... 7700
Radios …..... Transmit 121.5
ELT …..... On
When committed to landing:
Throttle …..... Idle
Mixture …..... Idle Cut-Off
Fuel Selector …..... Off
Magnetos …..... Off
Flaps……Extend (time/altitude permitting)
Master Switch …..... Off
Belts/Shoulder Harness …..... Secure
Doors……..Open
Approach Speed …..... 65 KIAS

Engine Fire-*Start*

Starter …..... Continue Cranking
If engine starts:
Power …..... 1700 RPM
Run engine for approximately one minute
Engine .... Shutdown and Have Inspected
If engine does not start:
Starter …..... Continue Cranking
Mixture …..... Idle Cut-Off
Throttle …..... Full Open
When fire extinguishes…
Magnetos …..... Off
Fuel Selector……Off
Master Switch …..... Off

If fire continues;
***EVACUATE AIRCRAFT** and extinguish fire*

Engine Fire-*Flight*

Mixture …..... Idle Cut-Off
Fuel Selector …..... Off
Throttle …..... Idle
Heater/Defroster Vents.....Close

If fire continues, leave Mixture at Idle Cut-Off and proceed to:
EMERGENCY DESCENT

If fire appears out, proceed to:
POWER OFF LANDING

Electrical Fire

Batt/Alt Master Switch …..Off
Radio Master and All Electrical…….Off
Overhead Fresh Air Vents/Windows...Open
Panel Cabin Air/Heat/Defrost……...Closed

If fire appears out and electrical power is necessary:
Batt/Alt Master Switch …..... On
Circuit Breakers …..... DO NOT RESET
Radio/Electrical Equip---ON one at a time
Land As Soon as Practical

Emergency Descent

Throttle …..... Idle
Mixture …..... Rich (unless fire)
Bank …..... 30º – 45º
Airspeed……...128 KIAS

Engine Roughness

Carburetor Heat …..... On
Throttle……2500 RPM
If roughness continues after 30 sec:
Fuel Selector …..... Switch Tanks
Check each tank for 30 sec
Mixture …..... Full Rich
Engine Gauges …..... Check
Magneto Switch …..... Check Individually
If operation is satisfactory on either magneto, continue on that magneto at reduced power and Full Rich mixture. Land as soon as practical.

If roughness continues, land as soon as possible.

High Oil Temperature

Altitude……Level (stop climb)
Throttle……..2200 RPM
If temp does not go down, or continues to rise, land as soon as practical.
*Prepare for **POWER OFF LANDING***

Alternator Failure

LOW VOLTAGE light may be illuminated
*Prepare for **ELECTRICAL FIRE***
All Non-Required Equipment……Off
12V Charging Socket……..Unplug
Circuit Breakers……Check
If no circuit breakers popped…
Alternator Master Switch……Cycle Off/On
If circuit breakers popped, reset them only if absolutely necessary for safety of flight.

If Alternator is not restored, land as soon as practical.

Complete Electrical Failure

Battery Master Switch …..... Off
Alternator Master Switch..... Off
Radio Master and All Electrical……. Off
*Prepare for **ELECTRICAL FIRE***
Battery Master Switch……On
If electrical power is not restored, stop this checklist and land as soon as practical.
If electrical power is restored…
Alternator Master Switch……On
If alternator Over-Voltage light illuminates, turn off Alternator Master, stop this checklist, and land as soon as practical.
Electrical Components…..On, one at a time
Land as soon as practical.

Spin Recovery

Throttle …..... Idle
Ailerons …..... Neutral
Rudder …..... Full opposite
(to the direction of rotation)
Yoke …..... Full forward
Rudder …..... Neutral
(when rotation stops)
Yoke …..Recover from dive
Throttle …..... Do not exceed 160 KIAS