

SAMPLE CHECKLISTS

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- You must adapt them to your specific airplane and mission before using them.
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Home Simulator Setup



PREFLIGHT INSPECTION

► OUTSIDE

Fuel Collection Receptacle
Tie-downs and chocks
Pitot probe

PLACE under strainer; DRAIN
REMOVE ALL
REMOVE COVER, holes CLEAR

► COCKPIT

Hobbs and Tach gauges

Documents
Last VOR check
Windows
Seat belts inertial reels
seats
Flight Controls Full Travel
All Switches, Avionics
Mixture
Magnetos Switch
Fuel Strainer Drain
Master Switch
Fuel Gauges
Turn Coordinator Gyro
Electric Trimmer
Interior lighting
Electrical Fuel Pump

TAKE PHOTO

ON BOARD - ARROW
CHECK within 30 calendar days
CLEAN
TEST; also FASTEN empty

CHECK stickiness, noises
OFF
IDLE CUT-OFF
OFF, KEY REMOVED
DRAIN **OFF, LEFT, RIGHT** x 8s
ON
CHECK QUANTITIES
CHECK AUDIBLE SPIN UP
EXERCISE and CHECK
ON, CHECK
TEST

Autopilot

Pitot Heat
Stall horn
Landing and Nav Lights
All Elec Switches incl. Master
Flaps
Fire Extinguisher
Fuel Collection Receptacle

TEST ROLL & PITCH function
ON, CHECK WARM to the touch
TEST
CHECK
OFF
EXTEND FULLY, CHECK
CHECK GREEN ARC
CHECK water, sediment; STOW

► RIGHT WING

Surface
Flap, Ailerons, Hinges, Rods
Wing tip, Lights, Static Wicks
Fuel Tanks
External Fuel Level Gauge
Fuel Tank Vent
Fuel Tank Sump
Main Gear Strut
Tire
Brake block and disc
Fresh air inlet

CLEAR of ice, frost and snow
CHECK
CHECK NO DAMAGE
INSPECT quantity, SECURE cap
CHECK
CHECK CLEAR of obstructions
DRAIN, CHECK water, sediment
CHECK inflation 4.0 in ± 0.5 in.
CHECK cuts, wear, **38 PSI**
CHECK
CHECK CLEAR

► NOSE

General condition
Windshield
Cowling
Propeller and Spinner

CHECK; NO oil or fuel LEAKS
CLEAN
CHECK SECURE
CHECK no nicks, cracks

SPIN propeller to unstick

CHECK CLEAR of obstructions
CHECK inflation 2.6 in ± .25 in.
CHECK cuts, wear, **35 PSI**
CHECK integrity and tension
CHECK QUANTITY ≥ 6 Quarts
CHECK seated, SECURE
CHECK

Air intakes
Nose Gear Strut
Nose Wheel Tire
Alternator Belt
Engine Oil
Dipstick, Oil filler cap
Landing light

► LEFT WING

Surface
Fresh air inlet
Main gear strut
Tire
Brake block and disc
Fuel tank
External Fuel Level Gauge
Fuel tank vent
Fuel tank sump
Tie-downs and chocks
Wing tip and lights
Aileron, Flaps, Hinges, Rods
Back Seats Safety Belts

► EMPENNAGE

Antennas
General condition
Aft Baggage
Tail light(s)
Elevator, Rudder
Nose Baggage compartment

CLEAR of ice, frost and snow
CHECK CLEAR
CHECK inflation 4.5 in ± 0.5 in.
CHECK cuts, wear, **38 PSI**
CHECK
INSPECT quantity, SECURE cap
CHECK
CHECK CLEAR
DRAIN, CHECK water, sediment
REMOVE
CHECK
CHECK + hinges and rods
SECURED TIGHT

CHECK FIRM
CHECK
CHECK SECURED, LOCK
CHECK CLEAN, no damage
INSPECT, incl. tabs, hinges, rods
CHECK SECURED, LOCK

ENGINE START

Tow bar
Parking Brakes
Seats, Belts, Harnesses
Doors
Circuit Breakers
Avionics
Autopilot
Alternate Static Source
Fuel Selector Valve
Elevator Trim, Rudder Trim
Master Switch
Anti-Collision Lights
Alternate Air
Throttle
Propeller
Electric Fuel Pump
Mixture
Prop Area
Magnetos
When engine fires, Mixture

Throttle
Oil Pressure
Engine-on Time
Graphic Engine Monitor
Ammeter
Heat, Vents, Defrost
Avionics
Headsets
Garmin 530W
Transponder
A/P Nav Coupler
Garmin G5

STOWED and SECURE
SET
LOCK UP, SECURE, FASTEN
LOCKED x2, top NOT jammed
ALL IN
OFF
OFF
OFF

FULLEST TANK
NEUTRAL, NEUTRAL
ON
ON
CLOSED
OPEN 0.25 INCH
HIGH RPM
ON

FULL rich till flow, CUT-OFF
CLEAR
ENGAGE
FULL RICH.

DO NOT lean before warm
1000...1,200 RPM for warm-up
CHECK RISING, GREEN 30 sec
NOTE
CHECK all cylinders, temp diff
CHECK
AS REQUIRED
ON, **JPI SET FUEL** – right btn
ANR ON
ON, SET fuel, Tank Scheduler
SET VFR or ATC assigned
HDG mode
GPSS OFF

Heading Bug
iPad or tablet
Radio frequencies
Altimeter
Nav & Panel Lights
Parking Brakes

SET to dep heading
PAIR to XPDR via Bluetooth
SET per table below
SET ATIS or field elevation
AS NEEDED
RELEASE and **TEST**

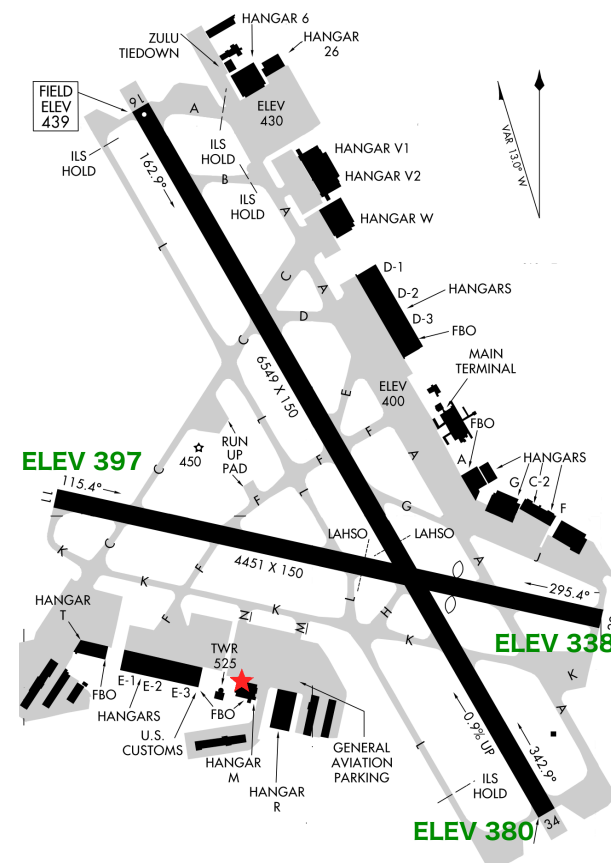
ENGINE START HOT
ENGINE START FLOODED
Mixture CUT-OFF ...

Same, AVOID Mixture prime
Throttle FULL, Pump OFF,

FREQUENCIES

	DXR	HPN
ATIS	127.75	133.8
CLNC DEL	= GND	127.25
	(126.4 TWR closed)	
GND	121.6	121.825
TWR/CTAF	119.4	118.575 (6...23)
NY DEP	126.4	120.55
Pattern Alt	1457 ft	1439 ft

Westchester Gnd, Saratoga N123AB with <info> at <...> taxi VFR east



PASSENGER BRIEFING

Safety belts: fasten/unfasten. Keep fastened during taxi, T/O & ldg.

Air: show where, how to operate them. Use freely without asking.

Winter: when smelling exhaust, OPEN VENTS FULL

Fire extinguisher: show. On fire: unlatch, pull the pin and squeeze.

Exits. Show how to open. Push w/ feet against plexiglas to escape.

To gain leverage, **stay buckled** as you push the windows out.

Floatation vests are in each seats' back pocket.

Traffic and Talking. Report all traffic you see, as soon as you see it.

Maintain **sterile cockpit** during T/O & ldg.

ATC will not hear you. If I need silence, I will raise hand / isolation

ON FINAL: silence, no abrupt movements, no weight shifts.

Your questions?

IFR INSTRUMENT CHECK

Airspeed Indicator	ZERO
Attitude Indicator	0° PITCH, BANK < 5°
Altimeter	WITHIN 75'
Turn Coordinator during turns	BALL OUT, WING IN
VSI	NOTE 0 FPM REFERENCE
Magnetic Compass	SWING FREELY, HAS FLUID
Com 1/Com 2	OPERATIONAL
Clock	OPERATIONAL
VOR CDI	CHECK OBS
Marker Beacons	TEST LAMPS

RUN UP

Aircraft Heading	INTO THE WIND for cooling
Area behind prop blast	CLEAR
Parking Brakes	SET
Propeller & Mixture	FULL INCREASE – FULL RICH
Fuel Selector	FULLER TANK
Electric Fuel Pump	OFF
Throttle	2,000 RPM, CHECK NO falter
Magneto CHECK	DROP <175 RPM; diff<50 RPM
Instrument Vacuum	CHECK 4.9...5.1 inHg @ 2,000 RPMs
Alternate Electric Vacuum	CHECK
Oil Pressure, Temperature	CHECK GREEN, temp raising
Annunciator panel	PRESS-TO-TEST button
Alternate Air	TEST, then CLOSE
Propeller Control	EXERCISE x 3
Check < 500 RPM MAX DROP then FULL INCREASE	
Throttle at idle w/ alt heat	CHECK
Warm-up Throttle	1,000 ... 1,200 RPM
Circuit Breakers	ALL IN
Controls	CHECK direction & freedom
Annunciator Panel	PRESS TO TEST

BEFORE TAKEOFF

Electric Fuel Pump

Air conditioner
Trim
Flaps
Propeller Control
Mixture
Pitot Heat
Alternate Air
Flight Instruments
Autopilot
Windows and Doors
Seats, Belts, Harnesses
Engine Gauges
Parking Brake

ON

OFF
AFT of neutral
10° (25° short/soft field)
HIGH RPM
FULL RICH or best perf
AS REQUIRED
CLOSED
CHECK
OFF
CLOSED & LATCHED, HOOK
UP, FASTENED
CHECK GREEN
RELEASE

TAKE-OFF BRIEFING

- This is a { normal | rolling | short-field | soft-field | <-> } takeoff, with flaps < 10° normal | 25° short >
- We are departing from Runway <-> with initial altitude of <-> ft.
- Departure procedure is <Westchester 7>, which consists of ...
Rwy34: climb hdg 343° to 1000, then climb left turn 295° to 3000, maintain
Rwy29: climb hdg 295° to 3000, maintain
- **Wind** is from <-> at <-> kts. Ailerons to the < left | right >.
- Initial course after leaving the pattern will be <->.
- **SET HEADING BUG.**
- I will be flying the airplane and I expect you to [sight and report traffic,] [talk on radio] [<-> other tasks?].
- [We are picking up IFR clearance in the air {NY Dep 120.55}]
- Rotate and climb at: **BEST GLIDE**

70 / 100 MPH **106** MPH

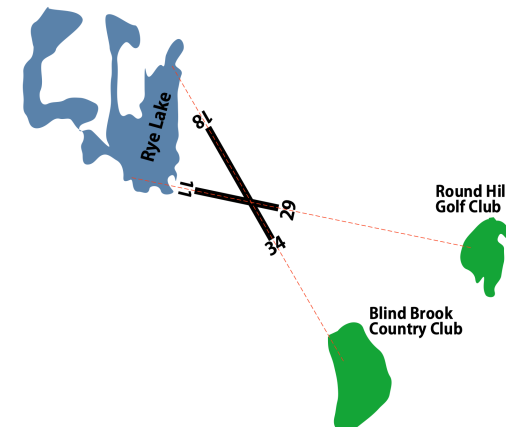
- Read MPH airspeeds on OUTER ring of ASI, big numbers.
- Power available check: 2,600 RPM or ABORT
- Take off power: full throttle 5 minutes
- Then **CLIMB 120 MPH, 25 squared**

► SHORT and SOFT FIELD TAKE-OFF

Flaps DOWN 25°
Rotate at Airspeed 46 ... **61** MPH dep on weight
At lift-off, ACCELERATE 60 ... **67** MPH best angle climb
Gear UP
Before the obstacle, if any 100 MPH (best angle of climb)
Accelerate 106 MPH
Flaps RETRACT in increments

ENGINE FAILURE BRIEFING

- Before **V_R** and with **enough runway** remaining, we **ABORT**
- **In the air, below min turnback alt** 1100ft AGL=**1500 ft** MSL, we land ahead
 - Rwy 29, Rye Lake slight right
 - Rwy 34, Rye Lake slight left
 - Rwy 11, Round Hill Golf club, straight ahead
 - Rwy 16, Blind Brook Country club, straight ahead
- **Above min turnback alt** we turn back {left|right}
- Turn back IS 45 DEGREES BANK **INTO WIND**, **best glide speed 106 MPH** stay coordinated



CLIMB CHECK

Engine Gauges	CHECK
Cylinder Temperature	KEEP < 500° F
Electric Fuel Pump	OFF
Landing Light	OFF or as necessary

CRUISE

Recommended power 65% for max service life.

CHT Temperature Check <435°F perf,
<400° F econ cruise, life

Throttle, Prop ADJUST PER TABLES
GPS Review NRST page
Lean: 100° F rich of peak EGT (perf) or peak EGT (economy)

Cheat sheet (data is for TAS at 8,000 ft, ISA)

55% 132 kts, 19.6 inHg MP, 2200 RPM, 11.9—14 Gph
65% 144 kts, 22.5 inHg MP, 2300 RPM, 13.8—16 Gph
75% 157 kts, 24.0 inHg MP, 2400 RPM, 16.0—18 Gph
ABOVE ISA: +0.18 in Hg MP/10°F
BELOW ISA: -0.18 in Hg MP/10°F

Press. Alt Feet	Std Alt Temp °F	135 HP – 45% RATED RPM AND MAN. PRESS. 2100 2200 2300 2400	165 HP – 55% RATED RPM AND MAN. PRESS. 2100 2200 2300 2400	195 HP – 65% RATED RPM AND MAN. PRESS. 2100 2200 2300 2400	225 HP – 75% RATED RPM AND MAN. PRI 2200 2300 2400	Press. Alt Feet
SL	59	19.0	18.0	17.6	25.8	SL
1,000	55	18.8	18.3	17.4	25.5	1,000
2,000	52	18.6	18.1	17.2	25.2	2,000
3,000	48	18.4	17.9	17.0	24.9	3,000
4,000	45	18.25	17.75	16.8	24.6	4,000
5,000	41	18.1	17.6	16.6	24.4	5,000
6,000	38	17.9	17.4	16.4	24.1	6,000
7,000	34	17.7	17.2	16.6	23.8	7,000
8,000	31	17.5	17.0	16.5	23.5	8,000
9,000	27	17.3	16.8	16.3	23.2	9,000
10,000	23	17.1	16.6	16.1	22.9	10,000
11,000	19	16.9	16.4	15.9	22.6	11,000
12,000	16	16.75	16.25	15.75	22.3	12,000
13,000	12	16.6	16.0	15.6	22.0	13,000
14,000	9	16.4	15.8	15.4	21.7	14,000
15,000	5	16.2	15.7	15.2	21.5	15,000

APPROACH AND LANDING

Autopilot	ENGAGE and CHECK
Instrument approach	BRIEF, LOAD, ACTIVATE
ATIS / Altimeter	TUNE, LISTEN, SET
NAVAID identification	IDENTIFY MORSE CODE
CDI Selector	LOC or GPS as appropriate
Ground speed	ESTIMATE
Vertical descent speed 3°	EXPECT PER TABLE:
60 knots→318 fpm 70→371	80→424 90→477 100→530
COUNTDOWN TIMER	Load FAF-to-MAP time if appl.
Missed approach procedure	VERBALIZE

► 2 NM BEFORE the FAF

COM and NAV radios	SET AND CHECK
Garmin G5	GPSS OFF
Nav coupler mode	LOC NORM
GPS sensitivity	Verify APPROACH mode
Gear	DOWN below 150 MPH
Approach Airspeed	120 MPH
Flaps	DOWN one notch
At FAF	START TIMER

► BEFORE LANDING

Fuel Pump	ON
Landing Light	ON
Alternate Air	OFF
Air conditioner	OFF
Seats, Belts, Harnesses	UP & LOCKED, FASTENED
Intercom Isolation	ENGAGE if passengers noisy
Mixture	RICH
Propeller	HIGH RPM
Gear	CHECK DOWN
Flaps	CHECK DOWN
Establish airspeed	90 MPH, TRIM for 90 MPH
Flaps	UP at touchdn for best braking

► PATTERN AIRSPEEDS

Downwind / Base / **FINAL**

105 / 95 / **86** MPH

► SHORT FIELD LANDING

FLAPS DOWN 40°

► AFTER LANDING

Fuel Pump, Pitot Heat	OFF, OFF
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► ENGINE SHUTDOWN

Flaps	UP
Parking Brake	SET
Air conditioner	OFF
Avionics and Radios	ALL OFF
Propeller Control	FULL INCREASE
Throttle FULL AFT	Mixture IDLE CUT-OFF
Magnetos	then OFF, KEYS AWAY
All Electrical Switches	OFF
Headset ANR	OFF

► SECURING

Parking Brake	AS APPROPRIATE
Tach and hobbs time	TAKE PICTURE
Control wheel	PULL BACK and SECURE
Tie Downs / Chocks	SECURE
Pitot Cover	INSTALLED
Nose Plugs	INSTALLED
Baggage & Pax Doors	LOCKED
Cover	INSTALLED

V-SPEEDS in MPH – OUTER ASI RING

	V _X	V _Y	V _{SO}	V _{S1}	V _{LE}	V _{FE}	V _{NO}	V _{NE}	V _{BG}
↓gear	78	100	70	77	↓150	125	172	217	106
↑gear	100	106			↑125				

V_A: 125@MGW

Glide Ratio: 1.6 NM / 1,000 ft in Low-RPM prop setting

SPECIFICATIONS

Engine	Lycoming IO-540-K1G5D,
Power	300 HP @2700 RPM
Propeller	Hartzell HC-C2YK-1F F8475D-4
Fuel capacity (Gallons)	98 Total, 94 usable (47+47)
Fuel type	100 or 100LL
Oil capacity	12 Quarts, min 2.75
Brake fluid	Univis No. 40
Weight (lbs)	Empty=2,201 MTOW=3,600
Useful load	1,399 lbs
Demonstrated max x-wind	20 MPH
Max baggage	100 lbs + 100 lbs
Tire Pressure	35 PSI Nose 38 PSI Main

ENGINE FAIL TURNBACK CALIBRATION

ONLY PERFORM WHEN MORE HAZARDOUS NOT TO.

Study terrain around airport. Observed altitude loss (OAL): in a

180 deg turn e.g., 500 - use +50% safety factor

Be ⅓ of OAL at departure end of runway (400 on C172)

Drift with the wind, you have less to turn later.