Expanded Flight Checklist Cessna 172 G1000

OUTSIDE CHECK

INSIDE CABIN

1 **Magnetos** ..... OFF
2 **Mixture** ..... IDLE CUT OFF
3 **Avionic Bus 1 + 2** ..... OFF
4 **Master switch** ..... ON
5 **PDF** ..... check ON
6 **Fuel quantity and low fuel warning** ..... CHECKED
5 **Master switch** ..... OFF
6 **Static pressure alternate source valve** ..... OFF

OUTSIDE CABIN

1 **Left wing** ..... CHECKED
- Surface condition
- Flap and aileron
- Wing tip with light
- Fuel and filler cap
- Drain wing tank
- Landing gear, strut, tires and brakes (no leaks)
- Pitot tube and fuel vent
- Stall warning opening

2 **Nose section** ..... CHECKED
- General condition
- Nose gear, strut and tire
- Prop and spinner
- Oil quantity
- Fuel drain
- Static port

3 **Right wing** ..... CHECKED
- Surface condition
- Flap and aileron
- Wing tip with light
- Fuel and filler cap
- Drain wing tank
- Landing gear, strut, tire and brake (no leak)

4 **Fuselage** ..... CHECKED
- General condition

5 **Empennage** ..... CHECKED
- Stabilizer and control surfaces
- Trim tabs

OUTSIDE CHECK COMPLETED

FLIGHT DECK PREPARATION

1 **Outside check** ..... COMPLETED

2 **Airplane papers** ..... ABOARD and CHECKED
- Papers, AFM and flight log / tech log

3 **Magnetos** ..... OFF

4 **Electrical switches** ..... OFF
- All switches off

5 **Circuit breakers** ..... CHECKED
- Check all circuit breakers in

6 **Avionic switches (BUS 1 + 2)** ..... OFF

7 **Master switch** ..... ON

8 **Primary flight display** ..... CHECK ON

9 **Fuel check**

- **Quantity and low fuel warning** ..... CHECK ENDURANCE
- **Fuel valve** ..... BOTH
- **Fuel shutoff valve** ..... ON (push full in)
- **Mixture** ..... LEAN

10 **Oil pressure and vacuum annunciators** ..... CHECK ON

11 **Forward and afterward avionics fan** ..... CHECK FUNCTION
- AV BUS 1, then 2: ON – OFF ..... CHECK NOISE 2 TIMES

12 **Master switch** ..... OFF

FLIGHT DECK PREPARATION COMPLETED

BEFORE ENGINE START

1 **Doors** ..... CLOSED
- Check all doors closed and locked

2 **Parking brake** ..... SET

3 **Seat belts** ..... ON
- Shoulder harness on and seat belts on, empty seats secured

4 **STBY BATT Switch** ..... TEST, then ARM
- green light ON for min. 20 sec, then on ARM

5 **Engine indication system** ..... CHECKED (no red “X”)

6 **BUS E Volts** ..... CHECK (min. 24 V)

7 **BUS M Volts**..... CHECK (1,5 V or less)

8 **BATT S Amps** ..... CHECK (discharge shown)

9 **STBY BATT Annunciator**..... CHECK (annunciator is shown)

BEFORE ENGINE START CHECK COMPLETED

ENGINE START

1 **External power** (if necessary)..... CONNECT

2 **Master switch** ..... ON

3 **Beacon light**..... ON

4 **Throttle**..... OPEN 5 mm

5 Cold engine only:

Fuel pump switch ..... ON
Mixture ..... RICH until stable fuel flow (3-5 s.), then LEAN (cut off)
Fuel pump switch ..... OFF

6 **Propeller area** ..... CLEAR

7 **Ignition key** ..... START

⚠
- **when engine starts, release starter immediately!!!**
- ***do not crank fore more than 10 sec, then wait for minimum 20 sec. to cool down! After 6 times, wait for 30 min.!***

8 **Mixture** ..... when engine starts, slowly to RICH

9 **Throttle**..... 1000 RPM

10 **Oil pressure and starter light**..... CHECK GREEN and OFF
- Check oil pressure indication within 30 sec.
- If starter light still ON: stop engine and contact maintenance!

11 **External power** (if necessary)..... DISCONNECT

12 **AMPS on M + S BATT** ..... CHECK (charging)

13 **LOW VOLTS Annunciator**..... CHECK (not shown)

Note: Starting engine when flooded:
Mixture..... IDLE CUT OFF
Throttle ..... OPEN ½ WAY TO FULL
Starter..... ENGAGE

When engine starts:
Mixture..... ADVANCE SLOWLY TO RICH
Throttle ..... SET 1000 RPM

ENGINE START COMPLETED

AFTER ENGINE START

1 **Avionic switches (BUS 1 + 2)** ..... ON

2 **Avionics and audio panel** ..... SET and CHECK
- Check and set all COM and NAV freq. for desired routing, transponder set 7000 (VFR) and check “GND”, set intercom

3 **Flight instruments** ..... SET
- Altimeter: set field elevation or QNH 3 times (PFD, AP, backup system)

4 **Lights** ..... AS REQUIRED
- Switch the NAV, strobe and internal lights as required

AFTER ENGINE START COMPLETED

TAXI CHECK

1 **Brakes** ..... CHECKED
- Check braking action after first movement

2 **Instruments** ..... CHECKED
- Check gyro instruments:
- Turning right: horizon stable, directional gyro is increasing, turn and bank indicator right, ball left
- Turning left: horizon stable, directional gyro is decreasing, turn and bank indicator left, ball right

TAXI CHECK COMPLETED

RUN UP CHECK

1 **Parking brake** ..... SET

2 **Run up**

a) Throttle ..... 1800 RPM
Check airplane not moving

b) Magnetos ..... CHECKED
Max. drop 150 RPM, difference L/R max. 50 RPM

c) Volts + amperemeter M + S ..... CHECKED

d) Vacuum ..... CHECKED
Indication in green arc

e) Throttle idle ..... CHECK RPM
Move throttle fully aft and check min. 500 RPM

f) Throttle ..... 1000 RPM

RUN UP CHECK COMPLETED

BEFORE DEPARTURE

1 **Flight controls** ..... FREE & CORRECT
– Check controls for full travel,
check surface movements outside

2 **Electrical and manual trim control** ..... CHECK and SET
– Check trim for free movement and set for T/O

3 **Flaps** ..... SET
– 0° to 10° (short field T/O = 10°)

4 **Fuel check**

- **Quantity** ..... CHECK ENDURANCE
  – Read actual fuel quantity and say endurance

- **Fuel valve** ..... BOTH

- **Fuel shut-off valve** ..... FULL IN

- **Mixture** ..... FULL RICH (or best power)

5 **Friction** ..... SET

6 **Doors and windows** ..... CLOSED

7 **Take off briefing** ..... COMPLETED
Call out for take off briefing:
- Runway in use and condition
- Vr, Vx, Vy
- Routing, altitude restrictions
- Engine failure or serious malfunction on ground, engine failure after take off

BEFORE DEPARTURE CHECK COMPLETED

LINE UP

1 **Approach** ..... CLEAR

2 **Wind** ..... CHECKED (TAIL, HEAD, X-WIND)

3 **Lights** ..... AS REQUIRED (Ldg. Lights ON)

4 **Transponder** ..... AUTOMATIC

5 **Time check** ..... PERFORM

LINE UP CHECK COMPLETED

TAKE OFF

1 **RWY heading** ..... CHECKED

2 **Full power** ..... SET AND CHECKED (2400RPM)

3 **Speed rise** ..... CHECKED

CLIMB CHECK

Perform, when workload is reduced and situation permits!

1 **Flaps** ..... UP

2 **Climb power** ..... SET
- Check full power

3 **Climb speed** ..... CHECKED

4 **Lights** ..... AS REQUIRED
- Landing lights off when leaving the circuit.
- Leave landing lights on within control zone and when visibility is bad

5 **Mixture** ..... SET
- Above 5000 ft, lean to best power according EGT (peak - 100°F)

CLIMB CHECK COMPLETED

CRUISE CHECK

1 **Altimeter** ..... SET
- When passing TA or min. 3000 ft AGL
  set altimeter to 1013 hpa

2 **Power** ..... SET
  Set cruise power according AFM

3 **Mixture** ..... SET
- Lean slowly to peak EGT and watch for smooth engine run

4 **Engine instruments** ..... CHECKED

5 **Fuel quantity** ..... CHECKED

CRUISE CHECK COMPLETED

DESCENT CHECK

A **Atis** ..... NOTED

B **Briefing** ..... COMPLETED
Call out for approach briefing:
- Runway in use
- Routing, altitude
- Missed approach
- NAV and COM frequencies preselected

C **Circuit breakers and cabin** ..... CHECKED AND SECURED
  Check all passengers secured and controls free

D **Directional gyro** ..... N/A

E **Electric equipment** ..... AS REQUIRED
- Switch landing lights on when entering a control zone or when approaching the traffic circuit

F **Fuel (mixture)** ..... SET FOR DESCENT
- Enrich mixture for descent

DESCENT CHECK COMPLETED

APPROACH CHECK

1 **Altimeter** ..... SET QNH (3times)

2 **Fuel check**

a) **Quantity** ..... CHECK ENDURANCE

b) **Valve** ..... BOTH

c) **Fuel shut-off valve** ..... FULL IN

d) **Mixture** ..... FULL RICH
except high field elevation (set best power)

3 **Landing light** ..... ON

APPROACH CHECK COMPLETED

APPROACH CONFIGURATION

1 **Speed** ..... CHECKED
- Reduce speed to V_{FE} (110 KIAS)

2 **Flaps** ..... 10° (recommended)

3 **Power** ..... SET
- Set power for level flight (approx. 2100 RPM)

FINAL CHECK

1 **Flaps** ..... SET
- Check flaps in the required landing position according RWY-length and wind conditions short field = 30°

2 **Speed** ..... CHECKED
- Normal APP = 65 KIAS
- Short field / no wind = 60 KIAS

FINAL CHECK COMPLETED

AFTER LANDING CHECK

Perform the after landing check only when runway is vacated and taxi speed is reached

1 **Transponder** ..... CHECK “GND”

2 **Flaps** ..... UP

3 **Lights** ..... AS REQUIRED
- Switch landing lights and strobe lights off,
- keep all other lights on.

4 **Time check** ..... PERFORM

AFTER LANDING CHECK COMPLETED

PARKING

1 **Parking brake** ..... AS REQUIRED

2 **Avionic (BUS 1 + 2) and all electrical switches** ..... OFF

3 **Throttle** ..... 1000 RPM

4 **Mixture** ..... IDLE CUT OFF

5 **Magnetos and master switch** ..... OFF
- Key out!

6 **STBY BATT switch** ..... OFF

6 **Flight log / tech log** ..... FILL OUT

PARKING CHECK COMPLETED

MISSED APPROACH PROCEDURE

Power ..... INCREASE TO FULL POWER

Flaps ..... RETRACT
Retract flaps step by step to the T/O position

Climb check ..... PERFORM