Miltech Simulations U-2

Descent and Approach

From the cruise altitude to the traffic pattern.

Note
Sim values. Performance values are measured in the sim. They may not accurately represent (nor do they intend to accurately represent) the performance of the real aircraft.

DESCENT

Planning the descent from the cruise altitude.

1 DESCENT START - AS LATE AS THE PLAN ALLOWS Fuel burn is simulated and an idle descent uses little; plan the descent to use tailwinds

2 DESCENT MACH - 0.715 DOWN TO 53,000 FT

3 DESCENT SPEED - 160 KIAS BELOW 53,000 FT

4 SMOOTH AIR - 170 TO 180 KIAS Only with GUST CONTROL UP, and out of the PFD red bar

5 ROUGH AIR - 160 KIAS MAX; 120 TO 130 KIAS IN HEAVY TURBULENCE

Note
Note: Limits in the sim: the PFD / SFD red bar is at 181 KIAS from 43,000 to 49,499 ft whatever the gust switch; below 43,000 ft it is 181 KIAS FAIRED / 241 KIAS UP. The Mach bar is 0.751, or 0.651 from 30,500 to 42,999 ft.
AIRSPEED HIGH comes on above 180 KIAS FAIRED / 230 KIAS UP, MACH RATE when Mach 0.75 is less than 5 s away.

INITIAL DESCENT CHECK

Before you leave the cruise altitude.

BEFORE DESCENT

1 MISSION EQUIPMENT - AS REQUIRED MK IV MODE STBY when done: the camera closes, the ASARS-2 radar goes to STBY. Below 5,000 ft the SYERS-2A nose centers by itself and the OBC stops photographing → Mission Equipment (PME)

2 FOOD TUBE - STOWED Click a tube that is in use to put it back

3 TURBINE BYPASS - NORM OR NORM/9TH Beside the gear handle → Cabin, Oxygen and Hypoxia

4 CABIN HEAT (INNER KNOB) - AUTO, 65 OR 70 °F Click or wheel, 5 °F steps; cabin temperature on SYS > PERF

5 COCKPIT FAN - LOW OR HIGH Clears canopy fog faster

6 NAV LIGHTS - STEADY

7 ANTI-COLLISION LIGHTS - ON

8 WINDSHIELD ANTI-FOG - ON Right side wall; the windshield fogs in the descent without it

9 PITOT HEAT - ON

DESCENT CONFIGURATION

10 LANDING GEAR HANDLE - DOWN FORE and AFT gear indicators show down

11 THROTTLE - IDLE

12 SPEED BRAKE - OUT Throttle switch, hold OUT (left click) - spring-loaded to OFF, about 5 s for full travel, needs hydraulic pressure → Speedbrakes and Lift Spoilers

13 SPOILER SWITCH - ARM

14 LANDING SPOILERS - LET DN The lift spoilers rise and stay up; above 105 KIAS the airflow pushes them partly down

15 GUST CONTROL - UP Before 180 KIAS. Flaps 6.25° up (PFD flap symbol -7) and ailerons 7.5° up by themselves in 3-4 s, and the nose comes up; the flap lever is out of use. → Engine Start and Cockpit Controls

16 AFCS - AS REQUIRED Basic pitch hold or MACH → AFCS System (Autopilot)

Note
Note: From gear down until the flaps reach 24° the cyan STALL STRIP IN advisory shows. The stall strips are automatic, or on the handle with the EFB option Cockpit handle on Stall strip.

18,000 FT DESCENT CHECK

Passing 18,000 ft.

1 LANDING LIGHT - ON It only lights with the gear down

2 ALTIMETERS (PFD AND SFD) - SET LOCAL PFD R2 BARO and the UFCD knob; the SFD has its own baro knob - set both → Standby Flight Display (SFD)

3 FUEL BALANCE - CHECK The full check is in APPROACH TO FIELD CHECK

4 AOA VOLUME - SET Left-console volume panel; at the stop only the stall tone remains → Angle of Attack (AOA)

5 CABIN ALTITUDE - MONITOR SYS > PERF; CABIN ALTITUDE HIGH when it is above the schedule

Caution
Caution: There is no faceplate in the sim. Keep OXYGEN SYSTEM 1 and 2 ON until the engine is shut down: off, they give the red NO. 1 / NO. 2 OXY warnings, and above 8,000 ft cabin altitude the hypoxia simulation starts.

APPROACH TO FIELD CHECK

Before you enter the traffic pattern.

APPROACH SET-UP

1 MISSION EQUIPMENT - AS REQUIRED

2 LANDING SPOILERS - LANDING The lift spoilers retract; SPOILER SWITCH stays in ARM

3 GUST CONTROL - FAIRED 150 KIAS max. AIRSPEED HIGH now comes at 180 KIAS

4 FLAP POSITION - CHECK 0° PFD flap symbol. If the flaps do not stop at faired, GUST CONTROL back to UP

THRESHOLD SPEED

5 GROSS WEIGHT - CHECK EFB Aircraft tab, Zero fuel and Gross; fuel total on SYS > PERF

6 T-SPEED - COMPUTE 70 KIAS + 1 KT PER 100 GAL OF FUEL + 1 KT PER 650 LB OF ZERO FUEL WEIGHT ABOVE 18,700 LB

Note
Note: With flaps 35 the AOA reads about .80 at T-speed and the stall tone comes about 7 kt below it; with less flap, fly the AOA instead.

Note
Note: Touchdown weight above 24,300 lb: use the heavy-weight technique (see LANDING).

FUEL BALANCE CHECK

Note
Note: The cockpit has no per-tank fuel gauges; the yoke shows the heavy wing. In turbulence or IMC do the check higher up, and fly no steep or uncoordinated turns while you do it.

7 LANDING GEAR HANDLE - DOWN

8 SPEED BRAKE - IN Hold IN (right click)

9 FLAPS - UP (0°)

10 GUST CONTROL - FAIRED

11 AOA - BELOW .90 No touchdown tone (fast 700 Hz beeps); 1.00 is the stall

12 WINGS LEVEL, AUTOPILOT OFF - NOTE THE YOKE AND AILERON TRIM POSITION The deflection needed to hold the wings level points to the heavy wing

13 INBD XFER / OUTBD XFER - TO THE LIGHT WING, OFF WHEN BALANCED A click cycles OFF / TO RIGHT / TO LEFT; 7 gal/min → Fuel System

Note
Note: A cross-transfer does nothing while the SUMP TANK switch of the same pair (INBD / OUTBD SUMP TANK) is ON. FUEL XFER 2 MINUTES reminds you every two minutes; XFER PRESS LOW means nothing is flowing.

Related pages: Flying the U-2S · Speedbrakes and Lift Spoilers · Cabin, Oxygen and Hypoxia · Landing

Miltech Simulations U-2. SIMULATION USE ONLY. This documentation describes the simulated aircraft as delivered in the add-on and must not be used for real-world aviation.