Miltech Simulations U-2

NASA Grand Canyon Survey

A NASA survey of the Grand Canyon from Palmdale, home of NASA's ER-2s. One calibration line, then three science lines along the canyon from west to east, and back to Palmdale.

Item	Value
Start	Palmdale (KPMD), P 33, engine shut down
End	Full-stop landing at Palmdale (KPMD)
Time of day	09:00, set by the mission. Weather: live
Estimated duration	2 h 16 min
Route	32 waypoints, about 944 NM
Minimum altitude for the checks	Above 40,000 ft MSL
Recommended observation altitude	At least 60,000 ft MSL
Recording strips	4, held for 30, 45, 60, 60 seconds

Objectives

The objectives come one at a time, in this order. Each one shows its direction on screen. How the gates and strips work is under Missions.

1. **Take off**: met at liftoff, within 3 NM of the start.
2. **Climb toward Arizona**: fly within 16 NM of the point. Plan a sustained climb before the science area.
3. **Climb above 40,000 ft MSL**: stay above 40,000 ft MSL for 5 seconds. This objective runs beside the route: keep following the waypoints while you climb.
4. **Set up - Instrument calibration**: fly within 2 NM of the strip entry point, lined up on 070° true.
5. **Instrument calibration**: fly inside the strip, 20 × 4 NM on 070° true, above 40,000 ft MSL for 30 continuous seconds.
6. **Clear strip - Instrument calibration**: fly within 2 NM of the strip exit point before you turn.
7. **Set up - Western Grand Canyon strip**: fly within 2 NM of the strip entry point, lined up on 053° true.
8. **Western Grand Canyon strip**: fly inside the strip, 15 × 4 NM on 053° true, above 40,000 ft MSL for 45 continuous seconds.
9. **Clear strip - Western Grand Canyon strip**: fly within 2 NM of the strip exit point before you turn.
10. **Set up - Central Grand Canyon strip**: fly within 2 NM of the strip entry point, lined up on 062° true.
11. **Central Grand Canyon strip**: fly inside the strip, 20 × 4 NM on 062° true, above 40,000 ft MSL for 60 continuous seconds.
12. **Clear strip - Central Grand Canyon strip**: fly within 2 NM of the strip exit point before you turn.

13. **Set up - Eastern Grand Canyon strip**: fly within 2 NM of the strip entry point, lined up on 119° true.
14. **Eastern Grand Canyon strip**: fly inside the strip, 20 × 4 NM on 119° true, above 40,000 ft MSL for 60 continuous seconds.
15. **Clear strip - Eastern Grand Canyon strip**: fly within 2 NM of the strip exit point before you turn.
16. **Return west**: fly within 16 NM of the point. The altitude checks are finished. Plan a gradual descent to Palmdale.
17. **Return to Base**: land within 3 NM of the field. The mission ends 15 seconds after touchdown.

Tips

- A good mission for the ER-2 variant: it is a NASA flight from the ER-2 home base.
- The central and eastern lines need 60 seconds each inside the strip. The western line is only 15 NM long, so do not start late.
- Palmdale is a default MSFS airport: it is not part of the U-2 package.

Related pages: Missions · Sensors · Targeting Points

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.