Miltech Simulations U-2

NASA Terrain Study - Groom Lake

A NASA science flight from Groom Lake to the Colorado Plateau. You fly a calibration line, then three terrain lines over Monument Valley and the San Juan area, one of them a crossing line that records the same ground from a second direction.

Item	Value
Start	Groom Lake (KXTA), P 1, engine shut down
End	Full-stop landing at Groom Lake (KXTA)
Time of day	08:00, set by the mission. Weather: live
Estimated duration	2 h 8 min
Route	25 waypoints, about 1,209 NM
Minimum altitude for the checks	Above 35,000 ft MSL
Recommended observation altitude	At least 60,000 ft MSL
Recording strips	4, held for 30, 45, 45, 45 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 4.5 NM of the start.
2. **Clear Groom Lake**: fly within 6 NM of the point. Climb clear of the terrain and follow the route east.
3. **Climb above 35,000 ft MSL**: stay above 35,000 ft MSL for 5 seconds. This objective runs beside the route: keep following the waypoints while you climb.
4. **Set up - Plateau calibration**: fly within 2 NM of the strip entry point, lined up on 090° true.
5. **Plateau calibration**: fly inside the strip, 20 × 4 NM on 090° true, above 35,000 ft MSL for 30 continuous seconds.
6. **Clear strip - Plateau calibration**: fly within 2 NM of the strip exit point before you turn.
7. **Set up - Monument Valley mesa strip**: fly within 2 NM of the strip entry point, lined up on 180° true.
8. **Monument Valley mesa strip**: fly inside the strip, 20 × 4 NM on 180° true, above 35,000 ft MSL for 45 continuous seconds.
9. **Clear strip - Monument Valley mesa strip**: fly within 2 NM of the strip exit point before you turn.
10. **Set up - San Juan terrain strip**: fly within 2 NM of the strip entry point, lined up on 270° true.
11. **San Juan terrain strip**: fly inside the strip, 20 × 4 NM on 270° true, above 35,000 ft MSL for 45 continuous seconds.

12. **Clear strip - San Juan terrain strip**: fly within 2 NM of the strip exit point before you turn.
13. **Set up - Crossing verification strip**: fly within 2 NM of the strip entry point, lined up on 090° true.
14. **Crossing verification strip**: fly inside the strip, 20 × 4 NM on 090° true, above 35,000 ft MSL for 45 continuous seconds.
15. **Clear strip - Crossing verification strip**: fly within 2 NM of the strip exit point before you turn. All lines are recorded. Return to Groom Lake and keep terrain clearance.
16. **Return to Base**: land within 4.5 NM of the field. The mission ends 15 seconds after touchdown.

Tips

- The four lines sit within about 30 NM of each other. The route has extra waypoints for the turns between them: follow them, because the U-2 turns wide at altitude.
- At 60,000 ft and 410 kt a 15° turn has a radius of about 9 NM: plan each turn early. See Flying the U-2S, High-Altitude Handling.
- Groom Lake is at 5,895 ft: expect a longer takeoff roll and a higher true airspeed on the approach.

Related pages: Missions · Groom Lake · Sensors · Mission Equipment (PME)

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.