

Scenario Description

In this tutorial you will deal with terrain masking, cloud cover and laser designated bombs. This can be a frustrating combination of factors and in some cases cloud cover will completely inhibit your ability to employ laser designated munitions. In this tutorial the cloud cover is permissive but does limit your options.

You have only two aircraft to play with today. A couple British Harrier GR.7's, nimble, rugged, and versatile. Your target is a large communications facility huddled into the Air mountains. Oh, and there are a couple very capable SAM systems protecting the target area.

Note: This tutorial should take about 20 min to complete.

Created by Gunner98 aka Bart Gauvin.

Scenario Briefing

You have two strike aircraft, a total of 4 bombs, and there are 4 targets but if you miss you can always use guns to sort things out.

Before we start you should make sure the following features are turned on:

- Relief Layer: View menu.
- Map Lat/Lon Grid: View menu.
- Illumination Vectors: Map Settings, Illumination Vectors, All.
- Targeting Vectors: Map Settings, Targeting Vectors, All.

This area of Saharan Africa is rather interesting, generally flat but several areas where very old volcanic activity has broken up the horizon. The Air Mountains have several key features but the ones relevant to this scenario are Mount Greboun, Mount Bagzane and the large caldera east of the two. So why is land geography important to an air mission? Because putting that terrain between you and enemy missiles or radar is a key element of the game.

Altitude is always important, often a problem. Mouse over the target area, you will notice that there are light clouds at 20-23K. Ok that is manageable, you will also note that the targets are at an altitude of about 2400 ft. Remember that weather is reported in distance ASL (Above Sea Level) but since you are operating over land you need to

account for ground altitude. So these clouds start at about 17,600 ft AGL (20K ASL, 2400 Alt). Still Ok.

Take a look at the database for your munitions: Minimum launch altitude is 2,000 ft AGL so you have a window of about 15,600ft of airspace to release your weapons in. Your maximum is 65000 ft AGL but your little harriers can't get that high anyway, and once you're over 17600 your laser will be fighting with the clouds. Buddy illumination is where one aircraft lases for another, allowing for very bad weather but it is tricky to do and can become frustrating.

Looking at your aircraft you note that you've got a couple of Harrier GR.7's, just the kit you need for getting down and dirty. Operating any aircraft at very low altitude is tricky business. The key thing is to prevent, and believe me this is a real term, *uncontrolled flight into terrain*. Command will not allow aircraft to fly into the ground and each aircraft type will have a minimum altitude. For most aircraft the minimum altitude is lower over water, certainly the larger the aircraft is the higher the minimum altitude. In this case your Harriers will be running at about 400 ft AGL, which is pretty low running at 480-600 knots of speed.

In this mission you need to do the following:

- Plan your approach.
- Conduct your attack.
- Egress safely.

Planning your approach is complicated by the presence of two high-end SAM systems, probably S-300's, which are protecting the lowlands on either side of the Air mountains.

Your best bet is:

- Drop down to minimum altitude, terrain following, as you pass 18 North. You don't want to go too low too early as that will burn more fuel than you can afford.
- Stay East of Mount Bagzane.
- Choose a low-level transit through the mountains to exit the target area using the terrain to mask you from the air defense radars.

Conduct the attack in the same way you have attacked other targets, using "SHIFT + F1" option to make sure you conserve your ammunition. I recommend that for this attack you break your two aircraft out of a group (Group view "V" or Num Pad "9", select each

aircraft in turn and hit "D" to detach it) to make sure you are not overexposing to the SAM systems. Keep one aircraft unengaged and at low altitude, assign one target to the other aircraft and order it to climb to launch altitude around 13000 ft AGL, then drop it down again once the bomb is launched. There should be a green dotted line from that aircraft to the target. If Buddy lasing is being used a yellow line will come from the other aircraft but this is unlikely in this situation. Proceed to destroy all four targets. Note that one aircraft can only guide one bomb at a time, if you launch two there is a very good chance the 2nd will either go blind and miss.

For egress, group your aircraft again (drag select, "G"), plot your course at low level back through the mountains. It is always a good idea to take a different route than the one you followed into the target area. Once you're south of 18 North you can resume normal altitude.

You will get some popup messages during the scenario.

Engage.

SAM Detected Message

You have detected a mobile ground system; this is probably one of the SAM systems your Intelligence staff warned you about.

At this stage it is probably yellow because you don't really know the identity.

There will be an odd shaped box or diamond around the unit and the location of the unit jumps around a bit. This is because you don't have a definite location for the unit, and it is ambiguous. The box or diamond will change shape as the ambiguity area changes. More time and sensors will tighten the location down some more but only one thing matters at the moment, it's not friendly so it's probably hostile!

Vampire Detected Message

You are probably hearing alarms and getting messages about Vampires. No Dracula is not modeled in the game, Vampire is a generic term representing incoming missiles.

You may note that one of the contacted units has gone red as well. This means you have identified it as the unit who fired the missile. If it did not go red, you did not see who shot the missile but are now only concerned about the missile.

Your best course of action is to: Drop to minimum altitude ("F2") fast, tick terrain following, adjust your course so you're in the valleys and not following the mountain tops.

Summary Message

As you're returning to base it is time to reflect on what you have learned. Terrain Masking is a very effective method of concealing your aircraft from enemy defenses; Cloud cover is a factor you will need to consider in most scenarios as it affects how you use your weapons and how your opponent will be able to use the airspace to focus you in a more predictable way; and finally, how use of laser designated weapons, very precise and in some timeframes the only precision munition you have.

See you in tutorial 5.