

Objective:

Navigation/timing.

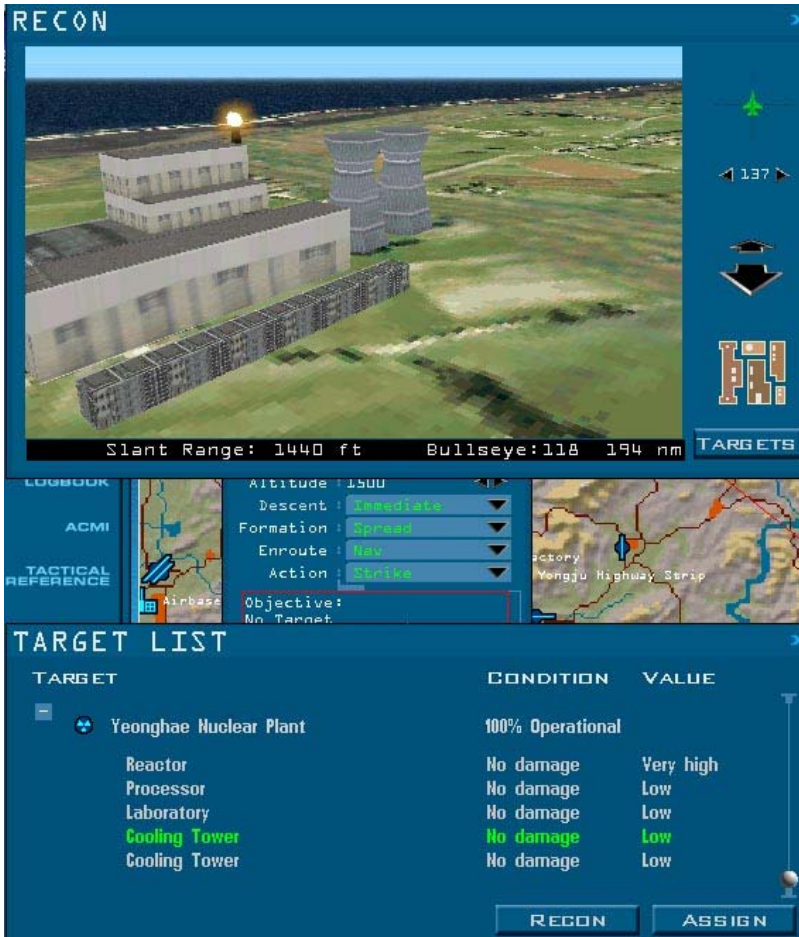
Low-level ingress with TF radar.

Low-level retarded CCRP bomb delivery.

Planning/preflight:



On this flight we will again be combining several concepts learned on previous training flights in an integrated lesson while introducing some new techniques. Today we will be flying a strike TE against the decommissioned South Korean Yeonghae nuclear facility. Our goal is to fly the strike profile hitting our navigation points on time and reaching the target at the designated time. Additionally we will fly the attack leg as a low-altitude route using the terrain following (TF) radar. We will take off and proceed north to the IP (WP #2) near an auxiliary air-base. At the IP we will engage the TF radar and fly toward the target (WP #3) on autopilot coupled to the TF radar.



Our target is the #1 cooling tower of the nuclear power facility. It is the ONLY target as follow on training flights will be conducting operations against other structures and buildings in the complex. The #1 cooling tower is located between the #2 cooling tower and the nuclear reactor building, so precision will be of utmost importance. Using the recon tool of the planning map is a good idea since we can tilt and pan the image to replicate the view we might expect to see on approach to the target from our planned heading.

We will be carrying 2 BSU-50 bombs for our attack. The BSU-50 is simply an Mk-84 2000 lb. bomb with an inflatable "ballute" air bag that deploys from the tail to retard the bomb and allow for low-altitude, high speed delivery without risk of fragmentation damage by the delivery aircraft. On that note I'd encourage all Falcon 4 pilots to check out Nick Antonizick's "Falcon Loadout Reference Manual" which is an outstanding PDF reference that explains some of the F-16's ordnance.

Debrief:

As I roar down the runway my wingman prepares to join me in a few seconds:



Pulling back the throttle I follow the airspeed timing carat to arrive over the IP on time:



At the IP I roll into a hard bank and prepare to go low-level:



I start by turning on the auto-pilot which simply holds my barometric altitude (well above the terrain).



Then I pull up the TF page on the right MFD and select TFR MODE from STBY to NORM, select HARD ride mode, 200' terrain clearance, and then engage the TF (ON).

My F-16 dips lower as the TF radar/autopilot takes me down for an exciting ride at 200 feet:



Flying down the valleys and across the ridge-lines at 200 feet and 500 knots is a rush!





While the TF radar/autopilot takes us toward the target, I divide my attention between making sure the aircraft doesn't accidentally fly into a mountain and setting up my weapons for the bomb run. I pull up the weapons MFD and simply select the right push-button that allows for the bombs to be dropped as a pair.

More scenery goes flashing by the cockpit.



About 60 miles from the target with my wingman tucked neatly on my wing.



Putting the A2G radar in Snowplow (SP) mode I figure (correctly) it will be quite awhile before I get a return on the target site since I'm flying so low.



If you have the ground radar on and slew the cursors, your slant range/ETA/actual range data will be based upon the designated radar cursor location.

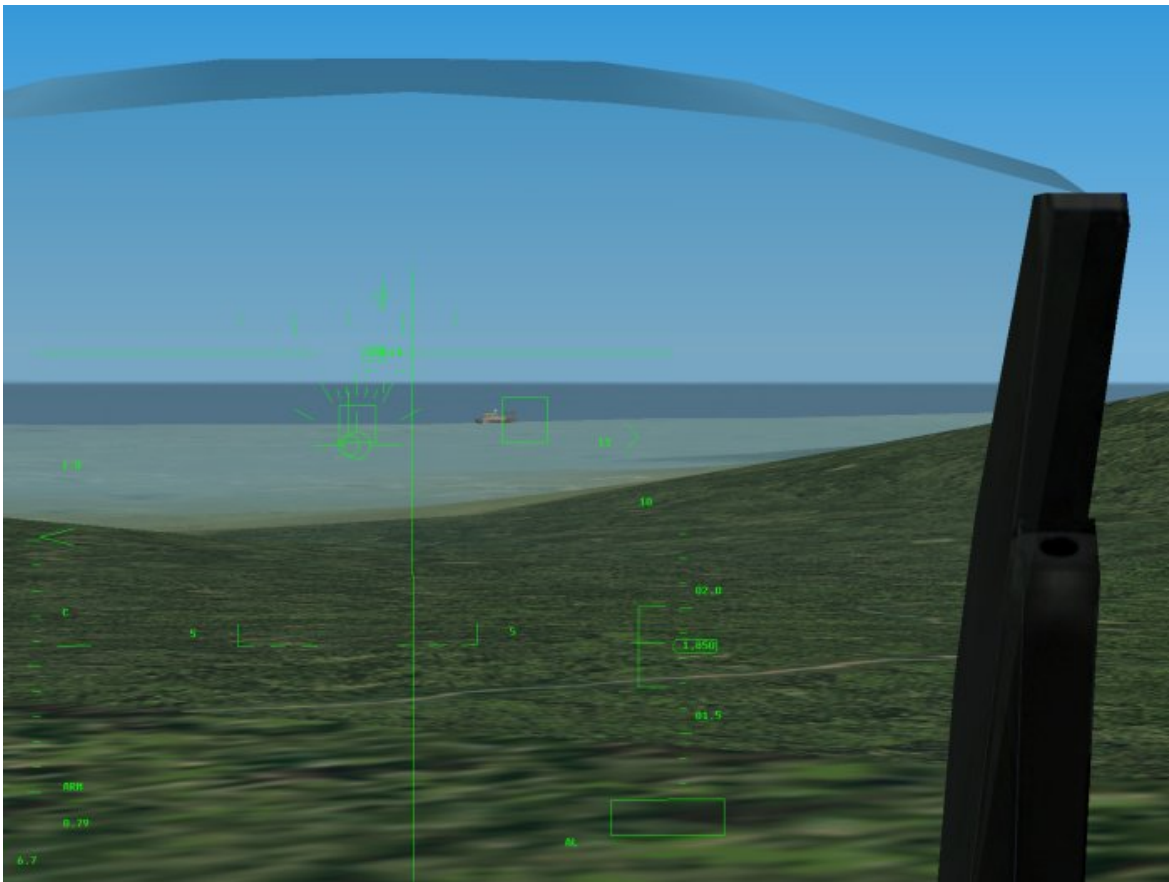


If you stay in navigation mode, the data will reflect the slant range/ETA/actual range to the selected NAV waypoint.

About 15 miles from the target we crest the last ridge as the coastal plains lie before us:



Peering though the HUD (with my binoculars right?) I can see the different targeting boxes for the radar and the waypoint (right and left respectively) as well as the nuclear power plant coming into view:



Slewing the radar cursor over the target I select the DBS1 resolution, although the cluster of buildings is too tight to discriminate individual structures.



I turn off the autopilot and make a small correction to the right to line-up on the target.

One last small correction to the radar cursor places the TD box directly over the left cooling tower and I press and hold my pickle button and wait for the computer to release my weapons:



With a thunk the bombs release from my aircraft:





A fraction of a second later the ballutes inflate on the end of the Mk-84.



With a "crump" the bombs hit the correct cooling tower (I was worried for a second).

As the tower crumbles and flames shoot from the impact site I zip across the site at 500 knots:



A second or two later my wingman comes across but with the target already destroyed his weapons are not needed:



Turning toward the egress waypoint the timing carat shows we are right on time.



Over home base we turn onto the downwind.

Success!



FLIGHT STATISTICS:			
Callsign	Status	Ordnance Fired	Results
Rider11	Functional	2 x BSU-50	2 hits (100%)
Rider12	Functional	none	

Conclusions:

Low level attacks are exciting in Falcon 4. The TF radar is a blast to use and I'll be curious how well it works (tactically) in the campaign. Finding nice valleys to roar down will be fun when doing the detailed planning for campaign missions. Were this a real mission I probably would have selected a more formidable weapon than the BLU-50; something with more kinetic energy and probably something with more precision (GBU). The mission was an excellent review of timing, navigation and TF radar and we got to experience level low-altitude CCRP bombing and use of retarded weapons.

BeachAV8R