

A Phantom for the US Army?

HISTORICAL BACKGROUND

Ever since the Key West Agreement of 1948 (pet name for the policy paper titled “Function of the Armed Forces and the Joint Chiefs of Staff”), which limited Army aviation activities to reconnaissance and medical evacuation purposes and put severe weight restrictions on any aircraft, the Army has maintained that the Air Force was too strategic (ie nuclear) minded and not giving enough attention to the tactical and logistical needs of the Army. As a result the Army often pushed the envelope of the agreement limits, citing the need for better transport and close air support assets.

To try and smooth the troubled waters, in 1952 a memorandum of understanding was reached between USAF Secretary Thomas Finletter and US Army Secretary Frank Pace that removed all weight restrictions on helicopters operated by the Army. It did however; place an arbitrary 5,000 pound weight restriction on any fixed-wing aircraft.

During the late 1950s the Army Aviation Test Board and the Aviation Combat Developments Agency (ACDA) began to jointly explore the feasibility of using Army-operated fixed-wing jet aircraft in the artillery adjustment, tactical reconnaissance, and ground attack roles. In early 1958 three Cessna T-37As were borrowed from the Air Force for a one year evaluation program dubbed Project LONG ARM. The Army’s evaluation found the T-37 to be ideal for their needs, and the Aviation Board and the ACDA recommended quantity procurement of the type. But the Air Force, citing the Key West Agreement, put pressure on the Army and eventually the program was dropped.

But the Army wasn’t done, the battle may have been won by the Air Force, but the war had just begun. In 1961 the Army Aviation Test Board and the ACDA once again stirred the pot by trying not one, not two, but three jet aircraft types in a competitive “fly-off”. The aircraft chosen were the Northrop N-156 lightweight fighter prototype, The Douglas A-4 Skyhawk, and the Fiat G.91. Ostensibly these aircraft were to be used as tactical reconnaissance and target spotting and artillery adjustment roles, but it was hard not to notice that each of these aircraft had offensive weapons capability, which was clearly contrary to the Key West Agreement. Again the Army’s tests were in vain because Air Force pressure again forced the Army to scuttle its plans for jet fixed-wing aircraft.

Meanwhile the Army had acquired a fleet of fixed-wing aircraft ranging from the Piper L-4 (730 pounds empty) to the DeHavilland-Canada U-1 Otter (4,431 pounds empty). All of these aircraft easily fit under the limitations of the Pace-Finletter MOU of 1952. Air Force apprehension rose when the Army in 1962 awarded a contract to DeHavilland- Canada for the CV-2 Caribou (later the C-7). This aircraft was exactly what the Army wanted, a rugged and reliable aircraft that could haul nearly 4 tons of cargo or 40 passengers into and out of the roughest forward air fields. The Army quickly made it the poster child of Army Aviation. Oh, did I forget to mention that it weighed 16,920 pounds empty? Even though it was a tactical cargo aircraft, which was supposedly taboo, the Army justified it

by a new concept the Army was incorporating called “Air Mobility”.

By now you are wondering “what has all this got to do with the Phantom II?” Be patient, I’m almost there.

Naturally the Air Force was a bit peeved. The Army had not only purchased a tactical cargo aircraft, it had armed helicopters (which the Army was not supposed to do), and to add salt to the wound, the US Army talked the US Marine Corps into sponsoring a battlefield observation aircraft from Grumman, both sides knowing full well that the Navy would never buy it for the Marines. But as a result the Army “found” this nice “little” Marine aircraft that nobody wanted and decided to be nice and order a bunch. Enter the Grumman OV-1 Mohawk. A bit heavy at around 11,500 pounds empty, but it was the perfect battlefield observation aircraft and it was really needed in a hot spot that was heating up called Vietnam. It even had pylons which could carry fuel tanks (not to mention the odd gun pod or missile launcher). The Air Force was not amused.

Finally we get the Johnson-McConnell Agreement of 1966, where the Army agreed to turn over its fleet of Caribous and the newer Buffalo, and pursue their development of VTOL aircraft on a joint basis with the Air Force. The Air Force agreed to let the Army continue to develop and operate rotary wing aircraft, without weight restrictions, and would not interfere with their tactical helicopter operations (even armed helicopters) in support of the Army’s mission. The one aircraft that was an exception was the Mohawk which the Army was permitted to continue to use (It really was a great battlefield observation aircraft with its side looking radar and other sensors).

Sorry for the history lesson, but it is necessary to understand the climate that the McDonnell proposed Phantom II ground support aircraft for the Army was introduced into.

THE PROPOSED MCDONNELL PHANTOM II GROUND SUPPORT AIRCRAFT FOR THE ARMY

In 1961 McDonnell drew up specifications for two attack aircraft based on the F-4H airframe. I don’t know if they ever were presented to the Army, but I assume they were because they are on the books as Models 98DA and 98DB with the US Army as the proposed customer. This would have been about the time of the evaluation fly-off of the N-156, A-4, and the G.91, so I imagine that McDonnell didn't want to get left out if the Army was going for jet aircraft.

MODEL 98DA

The Model 98DA was a model F4H-1 modified for the Army ground support mission. It was offered in two versions - G-1 and alternate G-1 with changes as follows:

1. Two place aircraft.
2. Remove all electronic equipment items and replace with close support equipment

- to provide visual delivery of ground support weapons and visual lay down capabilities.
3. Replace single main landing gear tire with dual 30 x 7.7 tires.
 4. Deactivate wing fold and remove catapult and arresting gear.
 5. Remove Sparrow III missiles and supporting equipment and electronics.
 6. Remove equipment refrigeration package for equipment cooling, utilizing cabin refrigeration unit to also cool equipment.
 7. Add cartridge starters and battery.
 8. Replace present arresting gear with lightweight hook.
 9. Add IFR boom receptacle.
 10. Powered by two General Electric J79-GE-8 turbojet or Allison AR-168-18 (Allison built Rolls Royce Spey RB-168) turbofan engines.
 11. (Alternate G-1 only) Add one M-61 Vulcan aircraft cannon with 930 rounds 20mm ammunition.

MODEL 98DB

The Model 98DB was the same as model 98DA but further modified for the Army ground support mission with changes as follows:

1. Single-seat Aircraft
2. Remove rear seat and all associated controls, instruments, and equipment. (Space available for equipment growth and/or reconnaissance capability)
3. Remove rear canopy glass and replace with sheet metal.
4. Remove rear canopy electrical and jettison equipment and modify manual controls to open and close hatch.
5. Eliminate Central Air Data Computer (CADC) and flight control group equipment.
6. Remove IFR Probe and all associated equipment.
7. Remove variable bellmouth from engine duct, keep bellmouth controller to control variable inlet ramps.
8. Powered by two General Electric J79-GE-8 turbojet engines.

THOUGHTS

It is evident that these proposed aircraft were clearly a much stripped-down attack version of the Phantom II. Almost all of the air-to-air capability has been stripped away. Some of the proposed changes indicate that this wasn't intended to be a high-speed aircraft. The dual main gear, obviously intended to help the aircraft operate out of rough, forward area airstrips, would have hung out into the airstream, and even if fairings would have been utilized to blend it into the wing, they would have had a performance hit. The elimination of the CADC and bellmouth would also have curtailed any high-speed / altitude flight. This aircraft was intended to be a mud-fighter— a low altitude, subsonic aircraft that could manually deliver an impressive load of munitions on a given target.

I am sure that the Army didn't show a lot of interest because, even in the stripped down state presented by these proposals, the F-4 was just too much of an aircraft both weight-wise and complexity to operate out of primitive forward area airstrips. Maintenance would have been a head ache, and even with the dual main wheels, I am sure it would sink into any soft soil it would come in contact with. The T-37, which was the early favorite, would have probably served the Army well in their intended role. But in the end the Army didn't pursue any jet aircraft, and the Air Force won the war in the end.

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