

Mark B. Foxwell



Armament Firing System & Bay Door Operations



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By Pilot Mark B Foxwell, LtCol USAF (Ret)

On the **F-106 Delta Dart** all weapons were carried internally in the Armament Bay; two radar missiles were on a pair of launcher rails in the front of the bay, two IR (infrared) missiles were on a pair of launcher rails in the rear of the bay, and the AIR-2A Genie was loaded on an ejector rack in the center of the bay. In flight, the missile bay doors were closed and the jet flew clean without any drag from externally carried arms.

The armament bay doors were rapidly blown open by a high pressure stored pneumatic system (at 3000 PSI); then either the selected missile rails were extended by high pressure air or else the AIR-2A was ejected. After the selected arms were fired the armament bay doors were rapidly closed. All this sequencing was automatic depending on the pilot's armament selection and trigger firing.

On the ground, a control handle in the main gear bay behind the armament bay could be used to slowly open the armament bay doors and missile rails could be slowly extended for missile loading, then slowly retracted. The main landing gear doors could be manually closed to allow room for the AIR-2A to be loaded on the ejector rack; the AIR-2A had to be loaded from a special Loading Dolly.

When all armament was loaded the missile bay doors were then manually "slow-closed" with lower pressure pneumatics.

MSRs and WSEMs

The Six's weapons system was used on almost every training flight as "evaluator" practice Weapons System Evaluator Missiles (WSEMs) and/or an MSR Genie system evaluator were regularly loaded and fired at practice airborne targets so that the entire weapons system firing sequence, including all missile lock-on, tracking and firing signals were tested, recorded and, if necessary, could be fixed.

One time, I was preparing to fly a cross-country from Loring to California on a weekend, and the squadron Maintenance Officer, Maj. Ken Nelle, asked me to stop at Colorado Springs on my way out to drop off a steamer trunk of clothes for his son who was a student at the USAF Academy. He had the steamer trunk strapped to the missile rails. When I pre-flighted the A/C before leaving I noticed on my walk-around that the armament bay doors were not completely closed. So Maj Nelle came out with an armament tech and slow-opened the bay doors. The steamer chest was blocking full closure of the doors. Well, we had the option on the ground to select the fast, high pressure method to close the doors that was used when airborne. This method was rather scary because those heavy doors then closed very rapidly with a loud thump.

So, Nelle and the tech fast-closed my doors and they were then completely closed, the A/C was clean and I flew to Colorado Springs. After I landed, I asked the crew chief who parked me to stand by and help me unload the steamer chest. When I slow-opened the doors, all of his kid's clothes fell out on the ramp, as his steamer chest was completely destroyed.

I suspect that Maj Nelle also had a pair of missile rails that needed replacing when I got back to Loring. - **Mark**