IROQUOIS DEFENSIVE WEAPONRY
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Bravo Model Doorgun Armaments

Helicopter weaponry mainly evolved during the Vietnam War. Production of UH-1B Iroquois aircraft by Bell Helicopter began in 1959 and they were introduced to US Army service in Vietnam in 1960. But Bell did not manufacture various weapons systems that subsequently emerged for adaptation to Iroquois aircraft versions.

When the US Army recognized need for an Iroquois doorgun mount, an order was placed with Sagami in Japan for 1,000 kits. This was a quite primitive steel structure that enabled mounting of an M-60 7.62mm GPMG weapon for flexible movement.

9SQN could not formally acquire Sagami mounts for fitment to Bravo model Iroquois before or soon after arrival in Vietnam, but an enterprising crewman bartered and/or recovered sufficient mounts from dumped hardware at US Army aircraft graveyards within 2 weeks of unit arrival in country.

These mounts were largely discarded by US Army Iroquois units in Vietnam due to undesirable features and use of unsafe rubber bungee suspension for M-60 machine guns became commonplace. I observed a US Army Iroquois where a round from a bungee mounted M-60 had impacted the rear of a pilot's armoured seat.

Armoured pilot seats had been requisitioned in Australia and began progressively arriving at Vung Tau soon after unit arrival.

Soon after deployment to Vietnam in June 1966 and before involvement in the Battle of Long Tan on 17Aug66, 9SQN aircraft were involved in several close quarters encounters with enemy (contrary to Army assertions) during SAS related operations. This became more frequent, also during casevacs, ammunition resupplies, people sniffer missions, etcetera. **Reliability of defensive armaments was thus imperative.**

Hotel Model Armaments

I was appointed unit Air Weapons Officer on arrival Vietnam 8Mar68 and within 24 hours, Sergeant Ernie Moore, then NCO in charge of 9SQN Armament Section, informed me of serious unreliability of aircraft defensive weaponry.

The unit began receiving the first tranche of 8 x UH-1H model Iroquois in February 1968 with another 8 aircraft due in July. These aircraft were equipped with the XM-23 armament sub-system mounting M-60D machine guns with a spade grip firing mechanism.

XM-23 Armament Sub-system - note the fixed ammunition bin and the bent pintle post

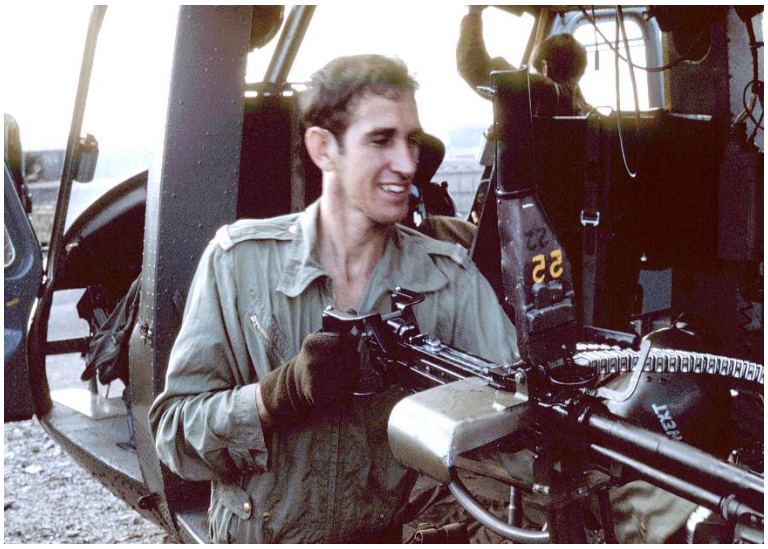
This drawing not to scale - note the short ammunition chute that was subject to twisting

This system had a fixed ammunition bin of 600 rounds capacity with a somewhat short feed chute connected to the gun. The gun could be traversed near 180 degrees

fore and aft and depressed to fire almost vertically, but this caused twisting of the short ammunition feed often causing stoppages due to belted ammunition jamming.

An invaluable engineering component of 9SQN was the Aircraft Metalworking Section able to straighten the pintle post and fit a rotatable cage for the ammunition bin, thus eliminating chute flexing extremes. Safety stop limits were adjusted to optimize gun fields of fire.

Note the straightened pintle post and rotating caged ammo bin



Slipstream deflector on port doorgun

Note the rotating caged ammo bin and airflow deflector on the M-60D at far right of the image

Airflow deflectors were devised to shield against expended brass and link blowback in the slipstream during forward flight and later, attachments to smooth ammunition feed for twin doorgun configurations on Bushranger gunships.

These modifications greatly enhanced doorgun reliability and all ammunition bins were loaded with 100 percent tracer ammunition for quick aim correction in close quarters engagements.

Auxiliary Weaponry

The earlier unreliability of doorgun systems necessitated carriage of auxiliary weapons at each of the rear crew stations, also as more effective weaponry than aircrew 9mm pistols if an aircraft was downed and the crew had to fight.

These were 5.56mm AR-15 and the origin of these weapons acquired by 9SQN is unknown. But they were clapped out early versions of the common US Army M16 that had jamming issues due to incompatibility with a certain brand of ammunition and were very prone to stoppages in dusty conditions created in Iroquois operations.

We decided to substitute robust 7.62mm SLRs, the Australian Army's primary infantry weapon that performed reliably in adverse environmental conditions. But the overall length of an SLR at 1,143mm (45ins) was too awkward for operation in Iroquois rear crew stations.

We opted to remove the flash suppressor which shortened the weapon by around 150mm and our armourers manufactured some thread keeping ferrules on the USS Corpus Christie Bay floating engineering workshop in Vung Tau Harbour. The Australian SAS liked this idea so we provided them with some ferrules.

USS Corpus Christie Bay engineering workshop moored in Vung Tau harbour

With the flash suppressor removed, the SLR barked like a 0.5 inch calibre round emitting a 300mm ball of flame when fired.

We manufactured magazine containers for fitment to the bulkhead at rear crew stations each holding 2 x 30 round magazines of 7.62mm 100 percent tracer ammunition.

When 9SQN had fully re-equipped with 16 x UH-1H model Iroquois in July 1968, we had implemented modifications to overcome defensive armaments deficiencies.