

BRONCO - LAST OF THE MOHICANS

FLYING BRONCO LAST OF THE MOHICANS IN EUROPE

The North American-Rockwell OV-10 Bronco is a special aircraft designed for a specific task. The idea was to operate them in the COIN concept. COIN means counter insurgency and proved to be a useful concept in the jungle war of Viet Nam. This conflict came in 1968 as a first test since the first flight on 16-07-1965. Not surprisingly the aircraft became after ending this war very popular in Asian countries like Thailand, Indonesia and the Philippines where export variants of the Bronco found their way. The aircraft can operate from small roads thanks to its excellent STOL capability and perform attacks on nearby locations such as guerrilla campsites. As a cause of several reasons the aircraft left active U.S. service and today only serves in Asian and South American countries, some examples in civilian use in the United States and very few are flown by hobbyist. This article is about one of them, but first some history.

USEFUL IN VIET NAM

When released and entering the conflict in Viet Nam, the Bronco turned out to be perfect as a Forward Air Controller (FAC) aircraft. When you are out there in the field and you are reaching enemy lines it feels comfortable to have such a FAC aircraft circling in your area. The Bronco was designed to stay comparatively long in the air as a weapon launching platform. It's loiter time is much more than that of a jet and speeds are from very low to medium. Even more important was the possibility to land on nearby roads and just after receiving new weapons and fuel turn back in the air in a short time. Only some hand tools were required as ground equipment. In emergency situations the Bronco could use high-octane or automotive fuel in place of jet fuel with only a slight degradation of power. After some time troops in Viet Nam began to ask specifically for the Bronco's which were often available 40 minutes or more before conventional fighters.

The wingspan is limited to 16 m. and a heavy trailing arm type landing gear with a tread of 6.5 ft was provided for operations from roads. The OV-10 was a proposal to the Light Armed Reconnaissance Aircraft (LARA) competition which was approved by the U.S. Navy, Air Force and Army. The LARA requirement was based on a perceived need for a new type of 'jungle fighting' versatile light attack and observation aircraft to replace existing obsolete O-1 Bird Dog and O-2 Skymaster. Faster and more tactically versatile than helicopters, and in the meantime slower but more manoeuvrable than jet fighters, the Bronco utilized tactics somewhere in between those capabilities. The Bronco can perform multiple tasks such as tactical air observation, gunfire spotting, forward air control, helicopter escort, armed reconnaissance, utility light air transport, medical evacuation, limited ground attack, close air support, airborne control of tactic air support operations, front line low-level aerial photography and even a small para-dropping of 5-6 paratroopers.

SPECIAL DESIGN

The Bronco is a rugged, simply designed twin engine aircraft with a bubble canopy providing extremely good visibility for pilot and co-pilot. The visibility was better than most of the helicopters in that time and ideal for observation. Each pilot is equipped with an LW-3B ejection seat system capable of zero-speed, zero-altitude ejections. The duo seat can also be manned by a FAC. Armour protection, a bullet-resistant windshield and self-sealing fuel cells were provided for operations in a hostile environment. The high-mounted, straight monoplane wing assembly has cut-off wing tips and the tail has a twin boom lay out with two tail fins joined by a high mounted horizontal tail plane. The construction providing much lift and agility at low altitudes and the aircraft uses only a minimum of 200 m runway to climb in the air. The Bronco, equipped with dual manual flight controls has responsive handling and can fly for five and a half hours with external fuel tanks.

When removing the second seat the Bronco can carry a load of 1500 kg or 5-6 paratroopers or two litter patients and an attendant. The bottom of the fuselage contains sponsons or 'stub wings' that improves flight performance by decreasing aerodynamic drag underneath the fuselage. The sponsons carried normally four .30 in (7.62 mm) Mauser M60C machine guns and four racks to carry bombs, pods or fuel. Two other racks were fitted on the outboard wings. Sponson accessibility provided rapid loading of stores and ammunition. The sponsons are easy to be removed when not operating in offensive tasks.

SUCCEEDED BY A-10

The type does have its characteristics. Bronco pilots in the USAF were fond of pulling up next to F-4 Phantoms on the beginning of the runway, while the F-4 ran up its engine during pre-flight checkout and then turning their propellers slightly in reverse, so the Bronco would drift backwards. Often the F-4 pilots would think their brakes had failed, and panicked, what a laugh ! However when during take-off of the Bronco itself an engine failure occurs it can cause the other engine to spin the whole aircraft a couple of times. An immediate ejection is recommended when this happens. One of the pitfalls of the type is the under powering and in combination with the lack of effective infra-red countermeasures in the OV-10A Bronco with his slow climb rate the type is extremely vulnerable to IR-guided rockets fired from the shoulder. The USMC experienced this in 1991 during Desert Storm in Irak when one of its Bronco's was shot down and two pilots were made prisoners of war.

Because of this reason the OV-10 was succeeded by the A-10 Warthog and the Bronco left service with the USAF an USMC in 1993-1994. Attempts to put in service an OV-10D night observation version with the USMC were never a great success and the interest for further development in the Bronco fade away. The benefits of the COIN concept were not always recognized by the U.S. command in charge but this is different with countries in Asia as mentioned before and also in Southern America in Colombia and Venezuela. In those countries exists interest for a replacement of the Bronco, perhaps by an armed version of the PC-9, Tucano or South Korean KT-1 Wong Bee, en it pushed Boeing by the idea even to revive the Bronco in a modernised improved outfit. Boeing bought most of North American/Rockwell

aviation activities and when export sales are beneficial enough it might be not a bad idea at all. The new version should have at least a glass cockpit with intelligent avionics and smart bomb dropping capabilities.

In the meantime the USAF sticks by its A-10 as the best available FAC platform and for some other previous tasks of the Bronco the focus is on unmanned Predators which are safe and cheaper to operate.

BRONCO ASSOCIATION

In military operations, the Bronco's outstanding capability to find and hit battlefield targets close to friendly troops made this an aircraft effective against conventional and guerrilla forces and for this purpose it is still active in some countries. The effective application of the Bronco's versatility, however, did not end with purely military functions. The cost-effectiveness of this aircraft was a reason to find civil applications such as the war on drugs or fire observation in the United States. Ex-USAf examples find their way to civil organisations. For peacetime operations the guns, bomb racks and armour could be removed quickly resulting in a high-performance STOL utility vehicle. Germany found another task for the type and the German Air force used the OV-10B version for target towing. On the outside this version is recognizable by a glass greenhouse dome at the rear. Through this glass structure the tow operator sitting backwards facing the cargo bay could watch the target. The aircraft were partly OV-10B and partly OV-10B(Z), the latter with an external jet engine mounted on top of the fuselage but were not successful and reconverted to OV-10B.

After retirement in 1990 two examples of this aircraft became a heritage to the German Wing of the OV-10 Bronco Association (GWOBA). They were acquired from the Technische Schule der Luftwaffe 3 (TSLw3). Formal 99+26 was flown from Fassberg to Duxford in the United Kingdom in 2001 and received the serial G-BZGL. The second bronco 99+32 became G-BZGK and is currently the only Bronco flying in Europe. The pilot of this aircraft is Tony DeBruyn of Eureka Aviation in Kortrijk Belgium. Tony is also chairman or wing commander of the German Wing of the OV-10 Bronco Association and he flies the OV-10 G-BZGK in about 5-10 air events a year in Europe. He is very welcomed with his unique aircraft. Tony spent a great deal of his time to keep the Bronco alive. In his opinion The Bronco is a fantastic airplane, simply to fly and with really nice characteristics very direct in aircraft handling and very reliable. It is also an economic airplane to fly and he hopes to go on some time with his Bronco. He is supported by the OV-10 Bronco Association (OBA) in the United States a sister organisation and because of the well organised back up which consist also of sponsoring there is good supply of spares and know how available. Luckily we still have the chance to meet the Bronco on an air fete in Europe.

Kees Otten & Wim Das

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