New Indigenous UAVs in Pakistan's Inventory

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Pakistan inducted two indigenously developed Unmanned Aerial Vehicles (UAVs), the Burraq and Shahpur, in November 2013 in its Army and Air Force. The Pakistan Army has been using the German built Luna X-2000 and British Banshee UAVs whereas the Pakistan Air Force has the Italian Falco UAVs and indigenously built SATUMA Jasoos Bravo+ and Mukhbar UAVs. The earlier indigenous UAVs being used had limited range and payload capacity, with the Jasoos Bravo+ having a range of 80-100 km and the Mukhbar, an operational range of 50 km. Both Burraq and Shahpur have a higher payload capacity, flight ceiling and operational range. As China has been actively providing military hardware and technology to Pakistan, it is likely that the latest UVAs have been built with its support.

The Burraq is a UCAV (Unmanned Combat Aerial Vehicle), named after the mythical steed in Islamic traditions and has been developed by the National Engineering and Scientific Commission (NESCOM), Islamabad, a civilian research facility which functions under the Strategic Plans Division. The Burraq is likely to have a 100 kg payload and an endurance capability of 12 hours. The Burraq is believed to be a variant of the Chinese Rainbow-3 (CH-3) UCAV, which is armed with two AR-1 Air-to-Surface Missiles (ASMs) or two FT-5 small diameter bombs[1]. China had reportedly transferred 20 kits of 75 kg FT-5 bombs to Pakistan in 2011.[2] The Burraq has been under testing since 2009 and is likely to be armed with laser guided ASM missiles also developed by NESCOM.

The Shahpur is a medium range tactical UAV developed by Global Industrial Defence Solutions (GIDS), a state owned consortium of seven firms engaged in defence research and production. The Shahpur has a canard pusher[3] configuration, a wing span of 6.22 m and weighs 480 kg. Having a flight ceiling of 17,000 ft, it has an endurance of seven hours and can carry a 50 kg payload.[4] With a cruising speed of 150 km/hr and a data link range of 250 km, the Shahpur has day and night surveillance capability.

Pakistan has been intensifying plans to acquire armed UAVs and the induction of the Burraq is an important step, especially with the planned US drawdown in Afghanistan in 2014. It will enable the Army to have an offensive capability of its own in the restless region bordering Afghanistan. In India, the Defence Research and Development Organisation (DRDO) has also been carrying out extensive research on the stealth UCAV named AURA which is likely to undergo its first flight in 2015.[5] The first flight of another Indian UCAV, the RUSTOM-2, is likely to take place in February 2014.[6] According to the Director, Aeronautical Development Establishment, the RUSTOM-2 has a payload capacity of 350 kg and endurance of 24 hours[7], which is double the estimated endurance capability of the Burraq. The Indian answer to the Burraq will be two indigenous UCAVs higher in payload capacity and weapon capability.

Fig 1

Image of Burraq UAV with Underslung Missiles

Fig 2

Shapur UAV

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Notes

1. The AR-1 ASM missile weighs 45 kg, has a shaped head charge of 10 kg and a range of 8 km. The FT-5 bomb has a warhead of 35 kg and a Circular Error Probable (CEP) of 15 m.
2. http://www.janes.com/article/30929/pakistan-inducts-first-indigenous-uavs
3. In the Canard Pusher design, a smaller set of wings is present in the front of the aircraft.
4. http://gids.com.pk/shahpur
5. http://www.indianexpress.com/news/diat-to-provide-eyes-and-ears-for-country-s-first-armed-war-bird/939976/
6. http://www.thehindubusinessline.com/industry-and-economy/drdo-to-step-up-development-of-unmanned-aerial-vehicles/article4657850.ece
7. http://www.rediff.com/news/report/first-flight-of-uav-rustom-2-scheduled-in-feb-2014/20130204.htm