



DRDO

CURTAIN RAISER
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DRDO Contingent at the Republic Day Parade-2014

Tejas, the Indian 'Light Combat Aircraft', and a 'game changer' for India's air defence preparedness, will be leading the products displayed as part of DRDO's contingent that includes, besides Tejas, '**Arjun Mk-II**', the mark II version of Indian **Main Battle Tank**; a tableau displaying "**Astra**" and "**Helina**" missiles and another tableau displaying a wide range of unmanned systems. These products exemplify DRDO's strength in the wide areas of defence technology, in terms of design, development and leading to production state-of-the-art weapon systems and platforms for India's armed forces. Col Pankaj Chaturvedi, a qualified Ammunition Technical Officer from the 'Army Ordnance Corps', presently serving at DRDO's 'Centre for Fire, Explosive and Environment Safety' will command DRDO's contingent in RD parade 2014. Col Pankaj Chaturvedi was commissioned from Indian Military Academy on 17 December 1988.

Tejas, India's first indigenously designed and developed multirole Light Combat Aircraft is a 4th plus generation supersonic, highly maneuverable and contemporary combat aircraft. Highly maneuverable 'Tejas' is the smallest and lightest combat aircraft in its class and has been designed for the Indian Air force. It is equipped with state-of-the-art technologies like advanced composites, digital flight control, advanced digital avionics, glass cockpit, helmet mounted display & sight, lightning pod, radar warning receiver, multimode radar, and so on, making Tejas sorties a fighter pilot's delight. It can deliver air to air missiles, air to ground conventional bombs as well as laser guided bombs. 'Tejas' can effectively perform under all weather conditions including night. To extend its range of operation, Tejas can also carry external fuel tanks.

The aircraft on display in the Republic Day Parade 2014 is the historic aircraft that took to skies for the maiden LCA flight on 04 January 2001. Since then, various LCAs have together completed more than 2500 safe flights. Tejas, having received the Initial Operational Clearance certificate has been cleared for induction in Air force and is under production at the Hindustan Aeronautics Limited (HAL). The LCA program that has led to the development of 'Tejas' is spearheaded by Aeronautical Development Agency of the Department of Defence R&D, with HAL as its principal design and production partner and has participation of a number of DRDO laboratories, the Indian Air Force, Industries and academic institutions, making Tejas a truly Indian Aircraft.

Mark two version of **Arjun** the Indian Main Battle Tank, incorporating over seventy improvements over **Arjun Mark I**, has been developed by DRDO in a record time of just under three years. **Arjun Mark I** the 1st indigenous main battle tank, designed and developed to suit the Indian soldier and to perform in the toughest of Indian conditions of environment and terrain is fondly called a desert Ferrari for its excellent mobility. Two regiments of Arjun Mark I are already pride possession of Indian Army while Arjun Mark II is in final phase of user trials. Arjun Mark II incorporates enhanced firepower with *Automated Target Tracking and* greater variety of ammunition including "Gun-fired anti-tank missile" and the devastating "Thermo-baric ammunition"; enhanced protection that include "Explosive Reactive Armor", "*Laser Warning cum Countermeasure System*", a "*Mine Plough*", a "*Remotely operable Anti-Aircraft weapon*", "*a Roof mounted driving seat*"; "*Advanced Land Navigation System*" and "*Enhanced night vision capabilities*". The swift development of Arjun Mark II is a testimony to the skills and capabilities of India's DRDO scientists, technicians and maturity of industry.

'Astra', the first 'Beyond Visual Range' air to air missile developed in India, is a state-of-the-art weapon system comparable with the best. Capable of engaging targets decisively upto 100 km range, 'Astra' will go to arm Su30 and LCA Tejas aircraft of the IAF.

'Helina' is a third generation air launched anti tank missile, that can be fired in direct and top attack mode with capability to defeat even futuristic armours. Helina missiles are attached to helicopters with the aid of tube launchers.

The future battlefields on land, in skies and in water, are going to be dominated by unmanned systems deployed for offensive, defensive, and logistic roles, as well as for surveillance, reconnaissance and intelligence gathering. DRDO has been engaged in developing such technologies and robotic systems for present and future. Some of these are already employed by India's security forces. On the tableau titled "Unmanned Systems", '**DAKSH**' a Remotely Operated Vehicle will be seen defusing an Explosive Device and aiding a Bomb Disposal Squad. The tableau will also depict models of **Autonomous Underwater Vehicle (AUV)**, mini UAV '**NETRA**', 'Wheeled Surveillance Vehicle', Tracked Surveillance Vehicle **Muntra S**, Unmanned Aerial Vehicle '**NISHANT**', Mini Remotely Operated Vehicle, Confine Space Remotely Operated Vehicle and Gun Mounted Remotely Operated Vehicle.

DRDO, the R&D wing of Ministry of Defence, has a mission to empower India with self-reliance in defence technologies. Since its creation in 1958, DRDO's research, design and development efforts have led to production hundreds of products that include state-of-the-art weapons, platforms, equipment and life support systems for the Indian armed forces. Today, the production value of systems already approved for induction exceeds Rupees one lakh sixty thousand crore. Currently headed by Shri Avinash Chander, DRDO has been led over the years by illustrious scientists including Dr APJ Abdul Kalam, Dr V S Arunachalam, Dr Raja Ramanna and Prof. DS Kothari. DRDO's pursuit of self-reliance and indigenous development of strategic systems have given quantum jump to India's military might, generating effective deterrence and providing crucial leverage.

Jai Hind

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