

# SIMULATED TEST & INTERROGATOR KIT (STIK) FOR TANK T-90



## INTRODUCTION

The Simulated Test and Interrogator Kit (STIK) for Tank T-90 will be used to check the readiness of Guided Weapon System of Tank T-90 in the field. It runs a diagnostic test to assess and validate the health as well as performance status of the systems involved in the missile firing. It consists of three sensors; a) CCD camera for checking the alignment of laser beam projected from the Guided weapon system and recording the flight trajectory of the missile, b) Laser power meter for measuring the power of laser beam and c) Laser Receiver for checking the beam modulated frequencies. STIK will be transported in cased condition to the field by the designated TSVs and will be powered by re-chargeable battery source.

IRDE has designed and developed STIK for T-90 tank.

## FEATURES

- Compact, light weight and portable
- Ease of alignment and integration on Tank
- Checks the parameters of Guided Weapon System
- Measured parameters stored for fault diagnosis
- GO/ No GO results indicated by LEDs
- Powered by re-chargeable battery
- Test units for individual modules
- Involvement of less manpower during testing

## TECHNOLOGIES INVOLVED

The development of indigenous test equipment, STIK involves the development of following technologies –

1. **Compact Optical module** - It involves selection of camera, power meter and detector suitable for detecting the laser beam. The optical design caters for the collection of laser beam, having variable divergence and then focusing on to the sensors for meeting the requirements. The opto-mechanical design then caters for mounting of the optical elements with mechanical components of required tolerances and accuracies.
2. **Electronic module** - This unit is integrated with the optical unit using cables. It stores and analyses all the information collected by the optical unit. It compares the measured value with the nominal value for each test and gives pass/ fail information by glowing Green/ Red LED. The stored values can easily be retrieved for further analysis and record keeping.
3. **Variable Intensity Light source** - This unit illuminates the reticle of the day sight for viewing it through camera. The self powered compact device is fitted on the eye piece of the day sight and intensity of light can be varied using keys.
4. **Test unit for Automatic control unit** – This unit checks various parameters of Automatic Control Unit of Tank T-90 for the diagnosis of fault.
5. **Test unit for Voltage Converter** – This unit checks the required currents and voltages of Voltage Converter of Tank T-90.

*All the above technologies have successfully been developed at IRDE (DRDO) Dehradun.*

Interested industry may write to Director, IRDE, Dehradun on the following address –

1. Director, IRDE  
DRDO, Min. of Defence,  
Raipur PO  
Dehradun – 248008  
Fax: 0135-2787161/ 2787128
2. Director, DIITM, DRDO HQ,  
Min. of Defence, DRDO Bhawan,  
Room No. 447, B Block,  
Rajaji Marg, New Delhi - 110011  
Fax: 011-23793008
3. Mr Sushil Kumar, Dy. Director (Technology)  
Phone: 0135-2782126

## **Format for Seeking Expression of Interest (EOI)**

- (a) Memorandum and Articles of Association (Should be incorporated as per Indian Companies Act, 1956)
- (b) Certificates of registration as a manufacturing unit, if any.
- (c) Balance Sheet for the preceding three years.
- (d) Income Tax returns for the preceding three year period
- (e) Details of shareholding/ownership pattern especially foreign partners/ shareholders, foreign employees, directors, etc. The company must adhere to the prevailing Govt of India policies and regulations on Foreign Direct Investment (FDI)/DIPP norms as applicable.
- (f) Annual budget for R&D during last three years.
- (g) Numbers and details of IPR or patents, etc., held by the company.
- (h) Number of technically or professionally qualified personnel.
- (i) Record of past performance (e.g., Supply orders executed against of Ministry of Defence orders, Public Sectors and Paramilitary Forces, if any).
- (j) Availability of adequate infrastructure (List of machines and their production capacities) and technical expertise.
- (k) List of Testing and Support equipments
- (l) ISO/ ISI certification or any other certification
- (m) Relevant clearances form the authorities/ ministries (if any)
- (n) Capacity and capability to undertake developmental work and to accept attendant financial and commercial risks.
- (o) Capacity/capability to market the product through the marketing network, sales and service network, reliability to maintain confidentiality.