



## BRIEF OF THE CASE

**Case Reference:** CF.No/ AIRHQ/S 59101/27/ACQT (MAKE) BM-I

1. **Service:** Indian Air Force
2. **Nodal Directorate:** Directorate of ASR(EW)  
**at SHQ**
3. **Name of the Case:** Design and Development of an **Airborne Standoff Jammer (ASOJ)** through private defence production industry.
4. **Case Brief.** The modern battlefield is characterized by asymmetric warfare and low intensity conflicts which require effective Electronic Warfare measures to degrade the capabilities of EW systems of the adversaries. There is a requirement of Airborne Stand Off Jammers (ASOJ) which will have Electronic Attack (EA) capability based on the ESM inputs received from various sources. The ASOJ capability on a transport class of platform would provide enhanced capability to degrade/suppress the enemy potential. It would permit attack aircraft to penetrate the dense Air Defence Network of enemy which may comprise of Air Defence radars and SAM systems. An ASOJ would protect the attack aircraft from detection by enemy search, acquisition and tracking radar systems.
5. **Proposal.** IAF intends to partner with indigenous defence production industry to undertake design, development and manufacture of Airborne Stand Off Jammer (ASOJ) under the **Make – I (Government Funded)** procedure as per Chapter III of DAP 2020.
6. **Broad Technical Parameters** of the equipment is **attached as Appendix A.** These are preliminary parameters. Detailed project specifications will be developed after industry interactions and feasibility study.  

Procurement of an airborne platform is beyond the scope of this proposal. For the purposes of design and development of such a system, the aircraft will be provided by the IAF.
7. **Indigenous Content (IC)/ Categorisation.** Successful development under **Make – I** category would result in acquisition from successful Development Agency (DA) through the **Buy Indian (IDDM)** category with indigenous design and development and a **minimum IC of 50%**.
8. **Industry Attributes:**
  - (a) Should be an Indian entity (as per provisions of Para 20, Chapter I of DAP 2020, including additional conditions at sub paragraphs (a) and (b)). **(Essential)**

**Note:** A copy of DAP 2020 is available on website of Ministry of Defence.



(b) Experience in manufacturing, maintenance, logistics, aviation related MRO (Maintenance, Repair & Overhaul) (**desirable**).

(c) Familiarity with QA processes of DGAQA and certification processes of CEMILAC (Centre for Military Airworthiness Certification) (**desirable**).

9. Interested **Indian** vendors may send their proposals by ~~30 June 2022~~. (**Based on Industry request the date has been extended to 30 Jul 22**)

It is requested that, answers to questions at **Appendix B** may also be dovetailed by the industry in their response.

Interested respondents are also urged to read the provisions of "Make-I" procedure at Chapter III of DAP 2020 as the project will be progressed as per these provisions.

10. **Contact Details.** Any queries/further details of the case may be obtained from the Nodal Dte at Air Headquarters (Vayu Bhavan). Interested Indian vendors may forward their responses through letter/fax/email to the Nodal Directorate as follows:-

**Nodal Directorate**

Gp Capt ASR (EW)  
Room No 449, Air HQ (VB)  
Rafi Marg, New Delhi – 110 106  
Tele/Fax: 23011753  
Email: [panther.449@gov.in](mailto:panther.449@gov.in)

A copy of all communication should also be addressed to:-

Make PMU (AF); Room No 413; Air HQ (VB);  
Telefax: 011-23013225  
Email: [makeind.af@gov.in](mailto:makeind.af@gov.in)

**Disclaimer**

This project brief is neither an agreement nor an offer by the MoD to the prospective bidders or any other person. The purpose of this brief is to provide interested vendors with information that could be useful to them in preparation and submission of their proposals related to this project. The questionnaire has been prepared to obtain initial information for screening of the vendors. Detailed questionnaire will be sent or further interactions will be held, to seek additional information for the feasibility study to assess the status of enabling technologies and capabilities of the Indian industry. The responding vendors will bear all costs associated with or relating to preparation and submission of their proposal related to this case. MoD reserves the right to amend, supplement or delete the information in this brief or questionnaire, as suited to the case. The MoD reserves the right to withdraw this project brief without assigning any reasons thereof. The issuance of this project brief and the questionnaire, or a response to the same, does not bound the MoD to shortlist/select the responding vendor for the project. The MoD reserves the right to disqualify any responding vendor, at any stage, on grounds of national security.



**BROAD TECHNICAL PARAMETERS OF  
AIRBORNE STAND OFF JAMMER (ASOJ)**

1. Board parameters of Airborne Standoff jammer (ASOJ) is as follows:-
  - (a) System should be able to operate in a wide frequency range to counter various search & track radars of the adversaries.
  - (b) The jammer should be able to effectively counter the existing and futuristic Search/ Acquisition Radars and Missile Fire Control radars used by the adversaries.
  - (c) System should be adequate sensitivity to pick up, identify and jam low power hostile radars effectively from a range of approximately 400 Km.
  - (d) System should have high instantaneous bandwidth in reception as well as jamming.
  - (e) System should have capability to handle multiple ground based and Air borne radar threats simultaneously.
  - (f) System should have employ latest digital signal processing techniques to ensure quick response to hostile threats.
  - (g) System should have high good DF accuracy for selectable/ steerable AESA based narrow beam jamming.
  - (h) Should have 360<sup>0</sup> azimuth jamming coverage with selectable sector jamming through electronically steerable jamming beams (AESA).
  - (i) System should have sufficient elevation coverage.
  - (j) System should be capable of cued mode of operation with existing ESM systems.
  - (k) System should have its own receiver channel setup to detect the hostile radars and feed parameters to Jammer during independent mode of operation.
  - (l) System should have indiscriminate mode of jamming which can generate smart jamming techniques without any trigger from hostile emitters.
  - (m) System should be programmable for different jamming techniques and varied geographical threat scenarios.
  - (n) System should have onboard facility to optimize, correct and reprogram during airborne mission with manual intervention/override.



- (o) System should have sufficient jamming resources ie multichannel DRFMs, multi repeater channels to generate multiple deception techniques (DF error, multi targets, coordinated RGPO/RGPI with VGPO/VGPI etc) and multiple noise jamming techniques.
- (p) System should be capable of effectively jamming multiple Low Probability of Intercept (LPI), Pulse coded, mono pulse and un-trackable radars.
- (q) System should be capable to handle all types of ECCM (transmitter/ receiver based) techniques like pulse coding, pulse compression, side lobe suppression, polarization switching and radiation homing etc) employed by hostile radars. System should have capability to jam signals of various polarizations.
- (r) System should have capability to record the data on a removable Mass Storage Drive (MSD). The EW data analysis tool should be provided along with the system to analyze the data recorded on MSD.
- (j) System should be adaptable to all existing transport aircraft platforms of the IAF like AVRO, C 295 etc. with minimum modification on aircraft. System should have self-sufficient cooling sub-system independent of the mother aircraft and minimum requirement of coolant replenishment by the operations.
- (k) The provision to generate own power may also be factored to power the entire system. The integration of an additional auxiliary power unit may be considered.
- (l) System should be able to meet all Military standard requirements with respect to airborne avionics. Vendor should ensure certification of systems by relevant Certification Agencies.
- (m) Should fall under IRAN concept of maintenance. OEM should ensure life time product/repair support. Supporting GSE/GHE should be developed along with the EW equipment.
- (n) System should have minimum of two dedicated consoles inside the aircraft with Multi-Function Displays (MFD) to control the operation of the entire system. Console station should be independent of type/class of mother aircraft.
- (o) System should be controllable from control stations mounted inside the mother ac. Requirement Control station should be independent of type/ class of mother ac.
- (p) The EW system should be designed in the 'Mission Equipment' mode (Roll on – Roll Off concept).