



IFF MKXII(S) TRANSPONDER





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The IFF MKXII Transponder (IFFT) supplied for fighter aircraft & ships is an airborne electronic identification equipment to identify friendly aircraft from enemy by assigning unique identifier code to friendly aircraft transponders. The system shall support Mode 1, 2, 3/A, C, IS1 and Civil Mode S Level 2 features as per STANAG 4193 and ICAO Annex-10 Standard.

IFFT for Reconnaissance Aircraft : After the threat detection, it is all the more necessary to find the target as friend or foe to take a final call for launching the weapon by pilot. In this connection, HAL has developed the latest IFF MKXII(S) Transponder which supports Mode 1,2,3/A,C,S-level 2 and IMS. This is the only Indigenized IFFT systems in Indian Defense which has been tested by Boeing (Defense sector) in USA for its performance with Traffic Collision Avoidance system (TCAS II) of US make as per RTCA DO 185B and successfully completed flight trials by Boeing. This has huge potential in Naval Defense applications and UAV in particular.

HAL has over 30 years experience in IFF Transponders MK X, MK XI & MK XII and our systems are successfully proven on various aircrafts like SU-30, MIG-29UPG, MIG-29K/KUB, IJT, MIG-21UPG (BISON), JAGUAR/DARIN-III, ALH, MIG 27, BOEING P8I, DORNIER, NAVAL/ COAST GUARD SHIPS etc.

Combination of our rich experience with latest digital technology makes HAL IFF MKXII(S) Transponder the affordable choice for users.

Key Features

- ✧ Interrogation/Response Identification system for MKXII, Mode S Level 2 as per STANAG 4193 and ICAO Annex-10 Standard.
- ✧ Frequency of Operation 1030 MHz on Receive, 1090 MHz on Transmit.
- ✧ Selectively Addressed Interrogation/Reply.
- ✧ Air Traffic Management through Elementary and Enhanced Surveillance.
- ✧ Acquisition Squitter Transmission for Aircraft Address Acquisition.
- ✧ Enhanced Surveillance provides Aircraft Vertical Intentions, Track and Turn Report, Magnetic Heading and Speed Report.
- ✧ Dual channel Digital Receiver for space diversity operation for active spherical coverage.
- ✧ Solid state L band transmitter with active wave shape control
- ✧ Pilot selectable operating modes through Mission Computer/ Display.
- ✧ MIL 1553 compatibility for both I/O functions
- ✧ ARINC 735A compliance for TCAS- IFFT interface
- ✧ BITE facility is available for checking the unit serviceability.
- ✧ Suppression IN/OUT for interface.



IFFT 2410A



RAM 2700A



VOR/ILS



ACS-235



TACAN



DACS



ADU

Specifications

PHYSICAL SPECIFICATIONS	
Dimensions	90 (W)X 383 (D) X 195 (H)mm (without mounting tray)
Weight	6.5 Kg (without mounting tray)
ELECTRICAL SPECS	
Power Supply	28 V DC
Power Consumption	125 W (Max)
INTERFACE	
Transponder interface to Mission computer	MIL-STD-1553B , ARINC 429
SYSTEM PARAMETERS	
Receiver Frequency	1030 $\pm$ 0.5MHz
Rx Sensitivity	-73dBm to -79dBm
Transmitter Frequency	1090 $\pm$ 0.5MHz
Transmitter Power output	500 W (peak)

Dynamic Range	MTL to -22dBm
Cooling	Solid cooling
Self test	POST, IBIT & CBIT
QUALIFICATION & COMPLIANCE	
EMI/EMC	MIL-STD-461 E
Power supply standard	MIL STD 704D
Environmental	MIL-STD 810F
Reliability	MIL-STD-217FN2
Software compliance	IEEE 12207
PLATFORMS Supplied to IAF	SU-30, MIG-29 UPG, MIG-29K/KUB, IJT, MIG-21UPG (BISON), JAGUAR/DARIN-III, ALH, MIG 27,
Supplied to IN & CG Ships	Boeing P8I, Pipavav



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