

BUILT-IN RADAR INTERROGATOR 69Π01 OF SYSTEM MK XA, MK XII AND RBS



BUILT-IN RADAR INTERROGATOR 69Π01
MEETS THE REQUIREMENTS OF NATO
(STANAG 4193) AND ICAO STANDARDS.

PRINCIPAL FEATURES

- High-stable solid-state transmitter with programmable output power
- Log receiver with amplitude characteristic of variable slope
- Line receiver with wide dynamic range
- Digital programmable in-built extractor
- Individual transmitters for main channel and side-lobe suppression channel
- Side-lobe suppression system for transmitting
- Programmable system of side-lobe suppression for receiving
- Programmable STC system
- Programmable one-turn and two-turn mode of interrogation interleaving
- In-built automatic control and diagnostic system

MODERN SYSTEM RADAR



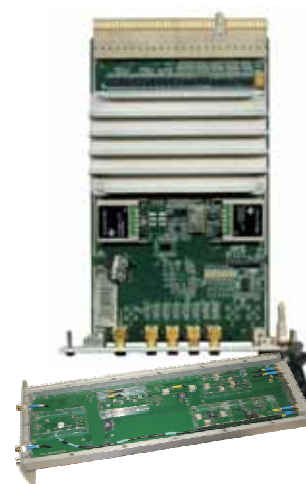
PURPOSE

Built-in radar interrogator (BRI) 69J01 of system MK XA, MK XII and RBS is designed to perform the following tasks:

- general identification of airborne objects equipped with radar transponders
- individual identification of airborne objects equipped with transponders
- cryptographically secure identification of airborne objects equipped with transponders and cryptocomputers
- determination of the aircraft identification code to meet the needs of ATC
- determination of the aircraft azimuth
- determination of slant range to the aircraft
- determination of the aircraft barometric altitude
- determination of the flag of SPI pulse receiving
- determination of the civil aircrafts' emergency codes
- determination of the flag of military aircraft wreck

TECHNICAL CHARACTERISTICS

- Pulse power of each transmitter is not less than 2000 W reducible by 12 dB at interval 3 dB
- Receivers' sensitivity is not less than minus 126 dBW
- Side-lobe suppression on interrogation
- Pulse amplitude difference between side-lobe suppression channel and main channel is <1 dB
- Side-lobe suppression on response within dynamic range 70 dB
- Enabling to select interleaving of interrogation codes under one-revolution mode or two-revolution mode
- Power consumed, W <130
- MTBF, h 10000
- MTTR, min 30

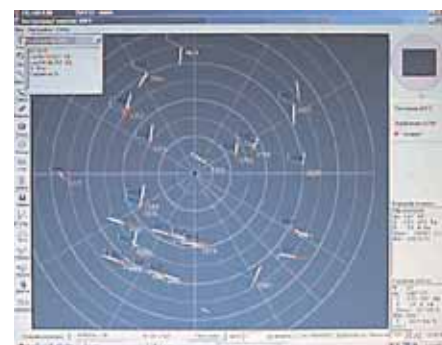


BRI 69J01 enables interrogation and decoding of response signals in systems MK XA and MK XII and RBS according to the table below.

Operating mode	Response information content
1	General identification
2	Individual identification
3/A	Associated military-civil identification mode and ATC
C	Flight altitude
4	Cryptographically secure identification

Operation under cryptographically secure mode 4 of system MK XII is implemented by cryptocomputer adapted to Customer's identification system as well as by generation facilities and core-data carriers which are at Customer's disposal.

To be integrated into the national system of state identification the interrogator envisages either loading of cryptographically secure encoding/decoding algorithms used in Customer's identification system or interfacing with Customer's cryptocomputer.



OPERATIONAL ENVIRONMENT

Ambient temperature, °C from minus 40 to plus 50

Relative humidity 98 % at 25°C

Location altitude, m up to