



NAUDI

National Association of
Ukrainian Defense Industries



SEE

SYSTEM ELECTRONIC EXPORT



P-18C

MODERNIZED GROUND MOBILE RADAR

Functionality, application:

- The modernized ground-based mobile radar station P-18C operates in the VHF band. It is designed to automatically detect targets, determine current coordinates (azimuth and range) and send radar data (RD) for users automatically.

Main functions of P-18C radar:

- detecting, displaying and automatic determining of the coordinates of the azimuth and range of airborne objects (AO);
- automatic radar data (RD) sending via two-wire communication channels, Ethernet channels, optical and other communication channels to the user;
- the possibility of non-automated ("manual") radar

data acquisition according to the digital data of airborne objects forms in azimuth – range coordinates in non-automated groups;

- implementation of objective control of radar data at a remote workstation;
- semi-automatic binding of radar standing point;
- monitoring the technical condition and diagnostics of the main radar devices;
- remote control of radar operating modes
- special purpose software run on Linux;

The scope and list of specific functions performed, as well as the composition of individual software and hardware may vary depending on the subdivision configuration and the radar design.

SPECIFICATIONS

Performance characteristics:

- The radar is supplied from a three-phase alternating voltage network 380 V 50 Hz or from power units.
- P-18C radar can function:
 - at any time of the day;
 - in temperature conditions from -40 0C to +50 0C (at a wind speed of 30 m/s),
 - with an ice thickness of up to 10 mm on the antenna (with a wind speed of up to 10-15 m/s)
 - when exposed to precipitated.
- A well-trained crew can deploy (fold) the radar in 45 minutes
- The radar can use the GPS receiver for semi-automatic radar positioning.
- Radar equipment can be transported on its own on roads of the 4th and 5th categories with a speed of 25-40 km/h., On roads of the 1st – 3rd categories with a speed of 40-60 km/h.

Advantages

- three signals are used simultaneously, each signal is set to one of 100 fixed frequencies;
- electronic frequency tuning, frequency tuning time is microseconds;
- the frequency tuning step is 0.4 MHz;
- diagnostics of the main units and devices in the software of the workplace
- four speeds of rotation - 2/3/4/6 rpm, adjustment to other speeds is possible
- a smooth start of rotation and a smooth stop, which allows to save the resource of the rotation reducer
- average time between failures of the electronic part of the radar is 5000 hours;
- the lifetime of the radar is 60 000 h;
- the number of simultaneously tracked targets up to 250;
- one transport unit, the entire product is placed on one trailer;
- our product provides remote control of radar operating modes from a remote workstation;
- range of removal of the remote workstation from 50 m and more;
- simplicity in operation and maintenance

Characteristics:

| | |
|---|----------------|
| Frequency band, MHz | 140-180 |
| Measured coordinates | Azimuth, range |
| Target detection range: | |
| Minimum km | 2,6 |
| Maximum km | 360 |
| Antenna rotation rate, rpm | 2/3/4/6 |
| Accuracy of coordinates measurement: | |
| Range | 190 m |
| Azimuth | 0,40 |
| Resolution: | |
| Range | 1200 m |
| Azimuth | 60 |
| Probing signal energy, not less then | 1.5 J |
| Transmitter pulse power, kW | 8-15 |
| Pulse duration, ms | |
| Duration of probing signals: | |
| pulse 1, ms | 6 |
| pulse 2, ms | 72 |
| pulse 3, ms | 300 |
| Frequency tuning | electronic |
| Frequency tuning resolution | 0.4 MHz |
| Number of fixed frequencies | 100 |
| The number of frequencies in one probing signal | 3 |
| Receiver noise figure | 3 dB |
| Dynamic range of the receiver, not less than | 90 dB |
| Number of simultaneously tracked targets | up to 250 |
| RD removal method | automatic |
| Crew | 3-4 people |



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