



# 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



2, Bankova St., Kyiv, 01024, Ukraine  
Tel.: +38 (050) 446-87-12  
E-mail: office@ukrdia.com.ua  
www.ukrdia.com.ua



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9/11, Zhylianska St., Kyiv, 01033, Ukraine  
tel.: +38 (050) 655 40 09  
E-mail: seellcua@gmail.com  
www.seetech.org