

RADARS FOR VARIOUS PURPOSES

PURPOSE: TO EXPLAIN WHAT RADAR IS, THEIR
VARIETIES AND METHODS OF APPLICATION

WHAT IS RADAR?

- A radar station (radar) is a device that can be used to detect various objects at a distance. These may include aircraft, sea vessels, and automobiles. Radar is used to determine their speed, geometric parameters, and range.

- Considering what a radar is, it should be noted that this device is based on the method of radiating radio waves that can be reflected from an object. James Maxwell also wrote about the existence of electromagnetic waves, and they were discovered by the German outstanding physicist Heinrich Hertz.

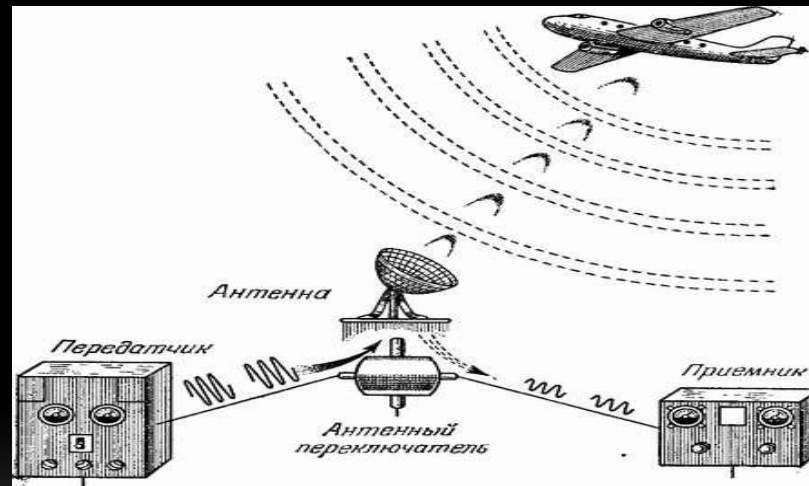
- Radars are divided into primary and secondary! Primary radar mainly serves to detect targets by illuminating them with an electromagnetic wave and then receiving reflections (echoes) of this wave from the target. Since the speed of electromagnetic waves is constant (the speed of light), it becomes possible to determine the distance to the target based on measuring various parameters of signal propagation.



- The radar device is based on three components: a transmitter, an antenna, and a receiver

- Secondary radar is used in aviation for identification. The main feature is the use of an active responder on aircraft.

- The principle of operation of the secondary radar is somewhat different from the principle of the primary radar. The Secondary radar device is based on the following components: a transmitter, an antenna, azimuth tag generators, a receiver, a signal processor, an indicator, and an aircraft responder with an antenna. The transmitter is used to generate request pulses in the antenna at a frequency of 1030 (ван саузент сети)MHz



POLICE RADAR

- Police radar is a Doppler radar designed to measure the speed of an object (usually a car). Such radars are used by law enforcement agencies to control speed on roads, as well as in some sports

THE WORK OF THE POLICE RADAR

- The radar emits a radio signal and registers the reflected signal. By changing the frequency, the radar calculates the speed difference between the radar itself and the object and thus determines the speed of the car.

