

# Types of the radar

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Imagine an airplane plummeting towards the ground at a fast pace speed, its foggy outside and impossible for the pilot to regain control of the plane and he has to make an emergency stop, everyone on the plane is panicking but the pilot reassures them a safe landing, because he has a secret weapon called radar. What is radar? Radar stands for radio detecting and ranging, it is used to find radio waves and retrieve information and also to transmit radio wave information.

Heinrich Rudolf Hertz a German scientist studying electromagnetic theory of light is responsible for the development of the radar system. Along with other less well known scientist under him. There are multiple different types of radar, AIR SEARCH RADAR, meaning plane missiles response. HEIGHT FINDING RADAR- when in the air, trying to find signal to land. & FIRE CONTROL RADAR.

Radar was used a lot back in modern wars, mostly on ships for purposes like to avoid ship collision and to be able to find where the other boat and any other miscellaneous objects where and to either a. have the element of surprise or b. to avoid. Radar can also be used in the air, fighting while in flight can be even more dangerous than fighting by land or by the sea, but with the use of radar, planes can use antennas to detect other enemy airplanes, they might also have them in modern day airports to help the pilot find the landing strip while in the air, the radar will send transmitted information to the pilot that will help them prepare to land. It's not only used for these practices though it can also be used for many modern day 21 century objects in your home as well such as the microwave oven, the television, antennas and transmitters and the satellite radio.

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Directions/ example of how a radar would work:

Magnetron generates high-frequency radio waves. Duplexer switches magnetron through to antenna. Antenna acts as transmitter, sending narrow beam of radio waves through the air. Radio waves hit enemy airplane and reflect back. Antenna picks up reflected waves during a break between transmissions. Duplexer switches antenna through to receiver unit. Computer in receiver unit processes reflected waves and draws them on a TV screen. Enemy plane shows up on TV radar display with any other nearby targets

#### USES OF RADAR:

The radar gun, is a device often the police use to fine speeding drivers with, what happens is the police shoot a beam towards your car, the beam reflects off the metal body of the vehicle in question, depending on how high the wave frequencies are determines whether or not you will be issued a speeding ticket.

Navigation radar is used in many situations lets talk ships, the navy is the primary users of radar today, it has many uses for them including locating enemy ships, finding the distance of other ships to avoid collision in dreary weather and at night, to navigate on course to fix their various positions at sea so someone is aware of where they are if they get lost, measuring surface waves, monitor regular ship movements, sea traffic control, to warn of tropical storms and breaking waves and for sea clutters and traffic.

Fun fact: even though radar is useful to find the enemy the enemy can also find you, the US navy has developed “ secret” radar that is able to hide itself from being found at sea.

Weather radar devices electronically convert the reflected radio waves into picture that show the location and intensity of precipitation and the speed of the wind. It can be used to track the intensity and the location of various types of precipitation. Or where bad weather is coming from and headed, It is also used to detect and track the velocity of thunderstorms and tornadoes.