# Technician Question Pool
# July 2022 to June 2026

**The MORE Project**

http://n2re.org/m-o-r-e-project

# Radio Wave Characteristics
# No-Nonsense pages 45 - 47

**Antenna Polarization & Propagation Phenomena**

How you mount an antenna affects its polarization. When the radiating element is vertical (horizontal) the transmitted waves will have a vertical (horizonal) polarization.

While VHF communications are typically line-of-sight, some propagation modes make it possible to communicate over long distances, by bouncing off of the ionosphere, when conditions permit.

# T3B02

What property of a radio wave defines its polarization?

A. The orientation of the electric field
B. The orientation of the magnetic field
C. The ratio of the energy in the magnetic field to the energy in the electric field
D. The ratio of the velocity to the wavelength

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What can happen if the antennas at opposite ends of a VHF or UHF line of sight radio link are not using the same polarization?

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B. Received signal strength is reduced
C. Signals have an echo effect
D. Nothing significant will happen

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What antenna polarization is normally used for long-distance CW and SSB contacts on the VHF and UHF bands?

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B. Left-hand circular
C. Horizontal
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B. Sporadic E
C. D region absorption
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B. They are distorted and signal strength varies considerably
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# T3C07

What band is best suited for communicating via meteor scatter?

A. 33 centimeters
B. 6 meters
C. 2 meters
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# T3C06

What type of propagation is responsible for allowing over-the-horizon VHF and UHF communications to ranges of approximately 300 miles on a regular basis?

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B. D region refraction
C. F2 region refraction
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What causes tropospheric ducting?

A. Discharges of lightning during electrical storms
B. Sunspots and solar flares
C. Updrafts from hurricanes and tornadoes
D. Temperature inversions in the atmosphere

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C. Precipitation
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A. Absorption
B. There is little effect
C. Deflection
D. Range increase

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A non-profit initiative by the IEEE and ARDC to increase the numbers of youth (12-18) and non-males in Amateur Radio. Participants earn FCC licenses and receive free 2-way radios.

For MORE information: n2re.org/m-o-r-e-project
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