**Federal
Communications
Commission**

Distance and Azimuths Between Two Sets of Coordinates

The terminal coordinates program (/media/radio/find-terminal-coordinates) may be used to find the coordinates on the Earth at some distance, given an azimuth and the starting coordinates.

The shortest distance between two points on the surface of a sphere is an *arc*, not a line. (Try this with a string on a globe.) In addition, the azimuth looking from Point B to Point A will not be the converse (90 degrees minus the azimuth) of the azimuth looking from Point A to Point B.

Applicants will find this program helpful in determining compliance with the minimum spacing table in 47 CFR 73.207 for FM stations (http://www.ecfr.gov/cgi-bin/text-idx?node=se47.4.73_1207) or 47 CFR 73.610 (http://www.ecfr.gov/cgi-bin/text-idx?node=se47.4.73_1610) for television stations. DXers (long distance listeners and viewers) can use this function to find the locations of, and best receive antenna orientation for, distant stations. Station coordinates may be found through the AM Query (/media/radio/am-query), FM Query (/media/radio/fm-query), or the TV Query (/media/television/tv-query).

Distance between:
Proposed Location
28 22 1. N Latitude,   81 23 13. W Longitude (Point 1)
As decimals: 28.3669444 Latitude, -81.3869444 Longitude

and

Authorized Location
25 42 0. N Latitude,   80 21 44. W Longitude (Point 2)
As decimals: 25.7000000 Latitude, -80.3622222 Longitude

Distance = 312.501 km (194.179 miles)

via the method in Sections 73.208 and 73.611(d)
This method is only suitable for distances up to 475 km (295 miles).

Azimuth, Point 1 to Point 2: 160.87° True
Azimuth, Point 2 to Point 1: 341.34° True

Return to Data Input   Print Results

To find the terminal coordinates given a bearing and a distance
use the Terminal Coordinates function.

Questions on Distance Between Coordinates may be directed to Dale Bickel, dale.bickel@fcc.gov (mailto:dale.bickel@fcc.gov).

Information about broadcast radio stations is available at the Audio Division (/media/radio/audio-division) on the FCC's website, and at Broadcast Radio Links (/media/radio/broadcast-radio-links).

Information about television stations is available at the Video Division (/media/television/video-division).

FCC (https://www.fcc.gov) > Media Bureau (/media) > Audio Division (/media/radio/audio-division), (202)-418-2700, and Video Division (/media/television/video-division), (202)-418-1600.

Bureau/Office:

Media (https://www.fcc.gov/media)

Tags:

AM Radio (/tags/am-radio) - Class A and Low Power Television (/tags/class-and-low-power-television) - Data (/tags/data) - Data, Maps, Reports (/tags/data-maps-reports) - Digital Television (/tags/digital-television) - FM Radio (/tags/fm-radio) - Low Power FM (/tags/low-power-fm-0) - Radio (/tags/radio) - Television (/tags/television) - Translators (/tags/translators)

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