Federal Aviation Administration, DOT

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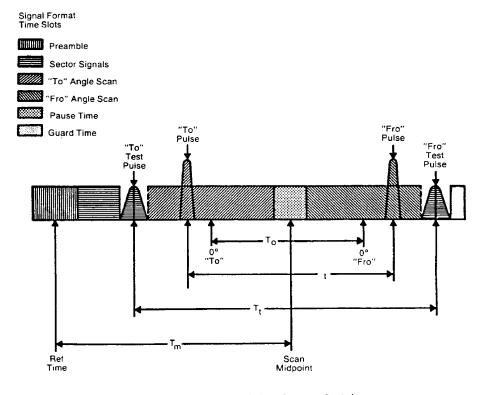


Figure 7. Azimuth Angle Scan Timing (Not to Scale)

(B) Azimuth angle encoding. Each guidance angle transmitted must consist of a clockwise TO scan followed by a counterclockwise FRO scan as viewed from above the antenna. For approach azimuth functions, increasing angle values must be in the direction of the TO scan; for the back azimuth function, increasing angle values must be in the direction of the FRO scan. The antenna has a narrow beam in the plane of the scan direction and a broad beam in the orthogonal plane which fills the vertical coverage.

(C) Elevation angle encoding. The radiation from elevation equipment must produce a beam which scans from the horizon up to the highest elevation angle and then scans back down to the horizon. The antenna has a narrow beam in the plane of the scan direction and a broad beam in the orthogonal plane which fills the horizontal coverage. Elevation angles are defined from the horizontal plane containing the antenna phase center; positive angles are above the horizontal and zero angle is along the horizontal.

(iv) Clearance guidance. The timing of the clearance pulses must be in accordance with Figure 8. For azimuth elements with proportional coverage of less than ± 40 degrees (± 20 degrees for back azimuth), clearance guidance information must be provided by transmitting pulses in a TO and FRO format adjacent to the stop/start times of the scanning beam signal. The fly-right clearance pulses must represent positive angles and the fly-left clearance pulses must represent negative angles. The duration of each clearance pulse must be 50 microseconds with a tolerance of ± 5 microseconds. The transmitter switching time between the clearance pulses and the scanning