

# Stay Ahead Of MEFs

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You are cruising above the maximum elevation figure (MEF) on your sectional so you must be safe, right? Wrong! At a groundspeed of 120 knots, you will pass through a sectional's quadrangle once every 15 minutes, and the MEF will be different each time. Importantly, the highest object can be on the edge of the quadrangle border, not in its center. It's important to know the MEF for the quad you are heading into as well as the one you are in.

The way the MEF is calculated is important, too. When a natural obstacle (terrain/tree) is the highest feature within the quadrangle, its height is determined, then a "possible vertical error" is added. That can be either 100 or 200 feet, depending on how steep the surrounding terrain is. Then another 200 feet is added "for natural or man-made obstacles which are not portrayed because they are below the minimum height at which the chart

specifications require their portrayal." Finally, the value is rounded up to the next highest hundred-foot level.

In other words, if flying at the MEF value, you could be only 301 feet above the controlling obstacle. That value takes on great significance when we understand 300 feet is an acceptable altimeter error.

The solution? Pick a cruising altitude at least 500 feet (1000 feet is mo' bettah!) higher than the MEF for the sectional chart quadrangle in which you're flying, especially at night or in low visibility conditions.

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*Big Southern Butte, elevation 7560 feet, sets the 7900-foot MEF for its quadrangle. Flying along at 7000 feet is safe in the quadrangle to the east, but as soon as you cross into the next quad with the Butte, you are below its summit. It's easy to tell by day; at night, not so much.*

