

Thunderstorm Detection Tools

If you're serious about using a personal airplane for summer transportation, you also should be serious about using one or more of these tools. Each has their own downside(s), however. Here's the skinny.

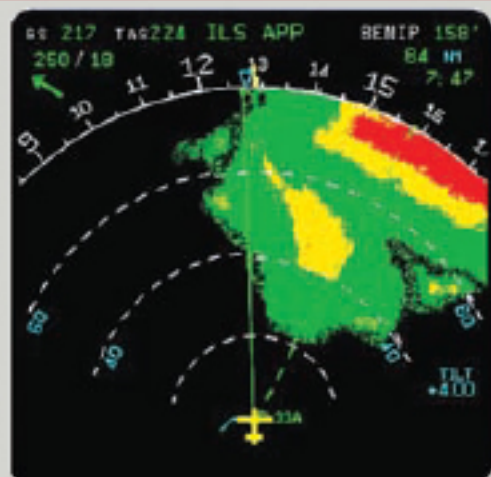
SFERICS

The Ryan Stormscope was a revolutionary product when it first came out, offering economical, self-contained and low-maintenance thunderstorm detection to the masses. By sensing the lightning discharges associated with turbulence, it can plot thunderstorm positions as much as 200 miles away. Insight's Strikefinder (pictured) uses the same basic technology and works well, also. Formerly standalone products, modern sferic examples (the term refers to using electronic devices to study the atmosphere) can be remotely mounted, with their output displayed on your MFD. Drawbacks include coarse resolution and the fact a thunderstorm's turbulence easily can exist without lightning.



AIRBORNE RADAR

Expensive, heavy and a potential maintenance hog, airborne weather radar also is the gold-standard for thunderstorm detection, especially if you're flying a twin and can accommodate a large antenna. A few singles have radar antennas mounted in their wings, and even more piston singles sport them, but you almost need a turbine twin to mount a nominal-size antenna in the nose. Just like any capable tool, however, safe, efficient use of airborne radar demands detailed training in how to use it. More than a few aircraft have been downed when their crew incorrectly interpreted attenuation as an absence of echoes.



DATA-LINKED NEXRAD

In-cockpit Nexrad imagery, delivered by satellite from XM Wx or WSI, has been around for 10 years or so. Soon, ADS-B In products, like Sporty's Stratus FIS-B solution pictured, will make it ubiquitous. It's probably the best solution, short of the airborne variety, mere mortals like us will ever have. One problem, of course, is the need to receive the broadcast signal, which can be problematic with either satellite or ADS-B data. Having a device on which to display the imagery also is required. In-cockpit Nexrad's main drawback, however, is the data's latency, which can mean the storm you thought you were circumnavigating is right there. See the sidebar on the opposite page for more details, including what the NTSB recently "discovered."

