



## Classic Bonanza Avionics Showcase Avionics Results

*Advanced, 'No-Compromise' avionics perfectly suited to the classic 'Art Deco' panel*

Those of us with pre-1962 Beechcraft Bonanzas have long faced a dilemma; forego the latest advances in avionics or butcher the classic, 'Art Deco' Bonanza panel. Years ago, when I was contemplating various kits to 'modernize' our N-35 panel, Rich Jones, my good friend and Oshkosh 1996 Grand Champion winner for his immaculate J35 Bonanza prevented me from making a mistake with this sage advice:

*"If you want a newer panel, buy a newer airplane. Don't butcher a classic airplane panel."*

Hallelujah! Classic Bonanza pilots can now fly with the most advanced avionics available.

At project inception over a year ago, our avionics selection process focused on certain well-known and heavily advertised components – many requiring significant panel and/or performance compromises. Along the way, we met some wonderful people with tremendous insight, learned a lot and ended up completely rethinking the available options. We discovered the availability of exceptional, no-compromise avionics which fit perfectly in the classic panel!

Our selection of the Aspen Evolution 2000 MAX system should come as no surprise to anyone looking for superior performance while retaining the unique beauty of the classic Bonanza panel and the improved visibility of its low glareshield. The new Aspen MAX couples a 'big glass' view with full redundancy, dramatically improving IFR safety in the event of pitot-static failure.

The Avidyne IFD550 is a wonderful surprise. Our initial focus was a competitor's large-display GPS but we repeatedly heard 'Yes, but have you seen the new Avidyne IFD 550? It's a full Flight Management System!' After six months, we gave Avidyne a closer look. Boy, are we glad we did! We now understand why it is marketed as a "Premium FMS/GPS Navigator".

With such stellar performers as Aspen and Avidyne, I'm embarrassed to admit that we initially had no intention of updating our audio panel. After all, our PS-Engineering PMA-7000CD had provided many years of reliable performance. It finally occurred to me that PS-Engineering might wish to participate. Their dual Bluetooth PMA-450B is a quantum improvement!

All the Best,



Steve Walker

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## Oh, my goodness!!

After a year of research, consultation and COVID-19 delayed installation, we were confident we'd selected a superb avionics suite. 31+ flight hours later, we've absolutely confirmed it!

Our flights took us from central Texas to Mt. Rushmore, on to Yellowstone park and then over the Rocky & Cascade mountains to the Pacific Northwest where we headed down the coast to the California Redwoods and on to the Southern Arizona border before returning home. The new avionics worked flawlessly and the avionics interfaces intuitive enough that the transition from 'steam gauges' to basic operational confidence was straight forward. The extensive online video tutorials – particularly by Avidyne – were extremely helpful in getting up to speed, quickly.

### Aspen Evolution 2000 MAX

Aspen was selected as the core component specifically to provide 'glass cockpit' capabilities fitting seamlessly into the Classic Bonanza without hacking up the 'art deco' instrument panel. The Evolution Pro MAX fulfilled these requirements beautifully and added much, much more.



During selection, we learned that by adding the MFD & external backup battery, we could:

- eliminate our 'steam gauge' Attitude Indicator
- eliminate our entire vacuum system
- enjoy uncluttered route & traffic displays, and
- achieve full IFR redundancy.

The Synthetic Vision option provided additional IFR situational awareness & peace of mind.

By the time we reached our Garden City, KS fuel/lunch stop enroute to Mt. Rushmore (KCUT), I was already comfortable with basic operation of the intuitive, feature-rich Aspen displays. Gaining this level of operational comfort after a single 2½-hour flight, its apparent Aspen was designed 'by pilots for pilots'. The Evolution 2000 MAX delivers reliable, vibrant, clearly readable displays (even in direct sunlight); easily customizable for a pilot's individual

preferences with seamless, full-function interfaces for the IFD550, PMA450B & legacy autopilot.

The optional Synthetic Vision proved to be much more valuable than I had initially thought, providing a substantially meaningful level of situational and terrain awareness – most particularly while during IFR ops. By the second flight leg, I came to appreciate real-time

*If you fly Bonanzas & are interested in a 'glass panel' upgrade, I strongly suggest you seriously consider Aspen – particularly if you fly much IFR.*

display of winds aloft (with vector arrow), OAT, TAS & ground speed and the utility of

the easy to use assigned Altitude and IFR Minimums Alerters. Built-in GPSS worked flawlessly, even with our legacy autopilot!



## [Avidyne IFD550 / AXP322 / SkyTrax 100B](#)

The capabilities of the IFD550 are simply remarkable. So remarkable in fact, that I urge you not to take my word for it but evaluate one for yourself. I'm confident that you'll find that the IFD550 does everything that you'd expect – and a lot more – but does so more intuitively, with a much



simpler interface and a lot fewer button pushes & knob twists. The IFD executes each requested function so smoothly and seemingly effortlessly that it will soon gain your confidence, particularly in IFR conditions. Add in the ADS-B In/Out capabilities of Avidyne's SkyTrax100B & AXP322 and you are flying with real-time in-flight information in the cockpit ... very helpful when avoiding afternoon Arizona squall lines!

Entering flight plans either into the IFD550 directly or

transferring to/from ForeFlight via the built-in WiFi hub is easy & intuitive and inflight edits to accommodate ATC holds & arrival procedures are a snap. Very impressive, indeed! The Avidyne menu interface is so much easier to navigate than most competitor's and the button pushes / knob turns needed to accomplish a given operation are dramatically reduced – sometimes by 90% - a significant advantage worth serious consideration when flying single-pilot IFR. Included with each IFD is the Avidyne IFD100 iPad app, providing full IFD550 control and an even larger display!

The IFD550 features a built-in Attitude Reference System (ARS) – a potential lifesaver in the event of a primary AHRS failure and Dynamic SVS which displays a 3D view of the aircraft in relation to nearby terrain and traffic in either “egocentric” (out-the-window) or “exocentric” (in trail) views to make IFR operations even safer.

*The Avidyne IFD550 is unquestionably my absolute first choice in GPS Navigators. Once you learn more of its capabilities, I suspect that it will soon become your first choice, as well!*

As if that were not enough, the IFD550 also incorporates 3D Terrain and FLTA. Terrain Awareness (SVS-TA) is provided via hashed coloration of terrain. Textual and aural alerts are provided for terrain hazards. Forward Looking Terrain Alerting (FLTA) provides

an extra measure of safety by displaying a solid yellow or red impact point based on projected flight path in the event that a collision with terrain is projected. FLTA also provides visual CAS messaging & aural alerting. Additional features include autotuned COM & VLOC frequencies (w/ decoded Ground, Tower, Approach ID displayed), auto enable of missed approaches and more ... too many features to list in a single article.



## [PS-Engineering PMA450B](#)

It turns out that the PS-Engineering PMA450B is the 'sleeper' of the new avionics suite. What initially was thought to be a pretty straightforward audio panel with a few handy 'bells & whistles' is, in fact a very, very capable piece of equipment that fulfills its intended functionality effortlessly,



almost invisibly and provides unexpectedly wonderful crew & passenger creature comforts, to boot! There is a reason why PS-Engineering is the 'Gold Standard' for aviation audio panels.

First the 'straightforward' part; the PMA450B provides the mic/audio channeling for each Nav/Com, full Marker Beacon functionality and Pilot/Crew/Passengers intercom features (with entertainment muting) that one expects from this level of product. It provides these features so unobtrusively that it is soon taken for granted – it always works and does so with the easiest of user interfaces. It does its job so well, it seems to 'disappear'.

As critical as the above-mentioned functionality is, it is only the beginning of what the PMA450B can do to make flights enjoyable and uncomplicated. The PMA450B provides Bluetooth® capability, so mobile-device audio can be enjoyed in full range stereo. But it does more than that – it provides two Bluetooth® channels and selectable music distribution, directing each channel independently to Pilot/Crew/Passengers, as desired. Should you wish, you can:

- stream headset audio narration to a digital video camera
- receive Foreflight® audio alerts, or
- phone ATC for your IFR clearance while your wife makes lunch reservations on the other channel

In fact, there are four independent music inputs (Music #1 & #2 (wired) and Bluetooth® #1 & #2).

But wait, there's more! 😊

- [Flightmate®](#) audio alerts allow the pilot to hear alerts related to aircraft conditions.
- [IntelliAudio®](#) spatially orients Com1 & Com 2 in the pilot's headset, enhancing the pilot's ability to monitor each and differentiate which is more important at the moment
- Enhanced digital aircraft radio recorder with Com display and message number
- 15 Watt USB-C charging port with Auto-Protection
- Three music mute modes (Mute On / Mute Off / Radio Mute)

*A subtle feature that really adds to the user experience is Alternate Intercom Mode which momentarily isolates the Pilot during ATC transmission while otherwise enjoying full intercom capabilities with passengers & crew.*

For a more detailed video presentation of the PMA450B capabilities, check out this [video](#).