



## Classic Bonanza Avionics Showcase Component Selection

*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 advice:

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

Halleluia! 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 Aspen 'MAX' couples 'big glass' viewing area 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, which they did. Their PMA-450B is a quantum improvement!

All the Best,

*STEVE WALKER*

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For classic Bonanza owners, preservation of the 'Art Deco' instrument panel is a significant factor – eliminating consideration of glass 'flight decks'.

Large, easily readable displays are also important, putting 3 1/8" electronic displays at a distinct disadvantage.

Proven technology from reputable companies providing seamless integration with other firms' products and earning excellent service records is crucial. What to do?

Enter the [Aspen Evolution 1000 Pro MAX PFD](#) which:

- fits the panel beautifully,
- delivers advanced EFIS, six-pack replacement,
- offers 'big glass' Synthetic Vision viewing area,
- dramatically improves IFR safety w/ GPS-aided AHRS in the event of pitot static failure,
- integrates seamlessly with 3<sup>rd</sup> party avionics & autopilot/flight directors,
- displays real-time winds aloft, OAT, TAS, and ground speed (w/ compatible GPS navs),
- shows height above ground level (AGL) on navigation and terrain maps,
- reveals ADS-B traffic and weather,
- provides built-in GPS steering (w/ compatible GPS navs), and is
- surprisingly affordable



For complete systems redundancy, twice the viewing area, backup of all critical sensors & systems and even more features, we upgraded to the remarkable [Evolution 2000 MAX](#) combining the powerful, award-winning Pro MAX Primary Flight Display (PFD) and the MFD1000 MAX Multi-Function Display (MFD), providing:

- duplicate sensor set delivering PFD redundancy on the MFD if the PFD fails,
- elimination of redundant backup instruments (w/ opt. Pro MAX external battery),
- secondary HSI,
- display of chart and countdown timers,
- height above ground level (AGL) on navigation and terrain maps,
- METAR flags on the navigation map,
- high resolution moving maps with hazard display overlays,
- ADS-B traffic and weather (with compatible ADS-B transceiver, receiver or transponder),
- customizable screen layouts,
- font enlargement, and
- charts and geo-referenced airport diagrams

No compromises, no panel hacking, no squinting & no 3<sup>rd</sup>-party interface issues... No Problem!

## AVIDYNE

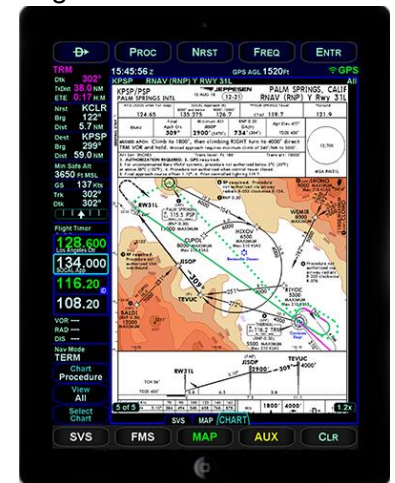
We initially planned for a significant competitor's large-display GPS but every time we turned around we heard 'Yes, but have you seen the new [Avidyne IFD 550](#)? It's a full Flight Management System!'

Well, we finally educated ourselves and now understand why it is marketed as a "Premium FMS/GPS Navigator".

Turns out, the IFD 550 is all that – and they have worked extensively with Aspen to ensure a tight operational interface! Among the Avidyne advantages are:



- **3D Exocentric Synthetic Vision**
  - 3D Terrain Awareness (SVS-TA) via hashed coloration of terrain
  - Forward Looking Terrain Alerting (FLTA) highlights projected flight path impact point in the event of a potential terrain collision w/ text & voice hazards alerts
  - Required Terrain Clearance Alerting – (RTC)
- **3D Traffic and Obstacle symbology** shows threat target size & relative altitude/bearing
- **Airport flags** color-coded with METAR ceiling and visibility
- **Hybrid Touch: Knobs & Buttons or Touch-Screen** – your interface, your way
  - In addition to dedicated knobs and buttons, the IFD 550 Hybrid Touch capability allows pilots to perform virtually all of those same functions via the touch screen interface, allowing you to go to any page in the system with only one or two clicks. Additionally, the IFDs offer MultiTouch functionalities such as pinch-zoom, map panning, and graphical flight plan editing. This can be done with the MultiTouch screen, or knobs and buttons depending on the pilot's phase of flight
- **Bluetooth & WiFi** Avidyne's IFD-Series are the only FMS/GPS Navigators in aviation offering both built-in Bluetooth® and WiFi.
- **IFD100 iPad app** included with any IFD purchase
  - When connected to the IFD 550 via the built-in WiFi, this app does far more than simply mirroring IFD functions but actually acts as an additional instance of an IFD:
    - edit your flight plan
    - monitor your map for ADS-B weather & traffic (with the Avidyne SkyTrax ADS-B In solutions) &
    - view IFD 550 pages independently.



**Complete ADS-B Capabilities** To meet the mandates for flight above and below FL180 in the U.S. & internationally and save even more panel space, we selected the AXP322 ADS-B Out Remote Mount Transponder and the companion SkyTrax100B Remote Mount ADS-B IN Receiver. The SkyTrax100B provides Flight Information System-Broadcast (FIS-B) weather information, including NEXRAD radar, METARs, TAFs, AIRMETs, SIGMETs, Special Use Airspace (SUA), and Temporary Flight Restrictions (TFRs).

One would have to look very hard and pay a lot more money for a system any more capable and feature-rich than this.





Flying with the excellent PS-Engineering PMA7000CD for years, we were not planning on replacing it. Many firms tout reliability but when the biggest issue encountered is forgetting CDs for a trip, you know you have a reliable piece of equipment! This and the excellent features suggests why many manufacturers rebadged PS-Engineering audio panels under their own name for so long.



On the drive to finalize the avionics installation, we decided to call PS-Engineering for their input. Boy, I'm sure glad we did! The new [PMA450B](#) is simply amazing, building on their legendary reliability and adding a number of features that we didn't even know we needed, like:

- **Flightmate<sup>®</sup>** integrated aircraft condition audio alert system
- **IntelliAudio<sup>®</sup>** True Dimensional Sound for simultaneous monitoring of two com radios
- **Alternate Intercom Mode** so everyone hears each other but the passengers don't hear radio traffic and when the radio is active, the crew won't hear the passengers. Nice!
- **Multiple Bluetooth<sup>®</sup> modules**
  - Music Streaming with front panel volume control (no more forgotten CDs!)
  - Telephone connection – handy for calling to ATC for an IFR clearance (also, so Teri can call for a hotel courtesy car on touchdown ☺)
  - Digital audio streaming output for in-flight video recordings
  - Foreflight<sup>®</sup> alerts
- **USB-C Charging** with 15 Watt output w/ electrical short Auto-Protection
- **4 Independent Music Inputs** - Music #1 & 2, Bluetooth<sup>®</sup> #1 & 2
- **Enhanced Digital Aircraft Radio Recorder** shows replayed Com & message number
- **Copilot as Passenger** function
- **6-place IntelliVox<sup>®</sup>** automatic VOX hi-fi stereo intercom w/ advanced intercom functions
- **Built-in Marker Beacon Receiver**

We look forward to many more years of dependable performance and will report back to you on the highlights of this essential upgrade to the Bonanza panel.



We looked at a number of avionics shops during our year of planning for this project. Many were 'just another' avionics shop but we wanted more...we wanted a full-service facility capable of appreciating – and fully implementing – the advanced features of the equipment we selected. Further, their installation standards had to be meticulous, with quality wire that was carefully terminated, routed, labelled and bundled - no rat's nests allowed! Since it made sense to have the annual done simultaneously with the avionics installation, a solid maintenance shop was important, as well.



[S<sup>3</sup>/KBFS](#) met all of our qualifications and is factory authorized for all the equipment we selected. As an added bonus, their Maintenance Services Manager, Jack Gainer has proven to be an excellent resource.

We'll keep you posted on the details and our experience with the installation process in the next article but for now, our money is on S<sup>3</sup>/KBFS at [KTPL](#) in Temple Texas!