

## Release 9 FAQs for PA-46

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### **What is the PA-46 R9 Retrofit Program?**

The R9 Retrofit Program for PA-46 removes the existing avionics in your aircraft and installs Avidyne's state-of-the-art, award-winning integrated flight deck that includes Avidyne's flight management system (FMS) and ultra-redundant architecture. The R9 system was designed from the ground up for simplicity, redundancy, and serviceability. It simply reinvents the modern glass cockpit.

### **Why should I install R9 in my PA-46?**

R9 is a clean-sheet design that was developed to make you a safer pilot in all conditions. The ease of use will vastly reduce your workload even in the most challenging of environmental or airspace conditions. The system will give you the confidence to use your airplane the way it was meant to be used, whether in day VMC or single-pilot heavy IFR. Simply put, R9 will increase the value, safety and utility of your airplane.

### **How has R9 been received in the market since certification in 2009?**

Avidyne is elated with the reception R9 has received in the market since the system's introduction last year. R9 won Flying Magazine's 2009 Editors' Choice Award "For creating, certifying, and delivering a truly integrated flat-panel avionics system that breaks new ground in every respect." Flying magazine wrote in the September 2009 edition that "With R9, the game officially changes." The system also was awarded "Best Panel in GA" by Aero News Network: "It has DRAMATICALLY eased our workload in some of the most intense airspace in the business."

### **What will I get when I install R9 in my Avidyne-equipped Meridian?**

The R9 package includes: Three IFD5000 Integrated Flight Displays (IFDs), Dual WAAS GPS/Nav/Com, Dual FMS900w Flight Management Systems, ACD215 QWERTY Keyboard w/display, Dual ADAHRS (Overhauled units from your existing *Entegra* equipment), MLB700, Three Multi-port input/output (MPIO), RDR2000 Radar display and control integration, Avidyne Synthetic Vision, Enhanced Vision compatibility, PT6A-42A Engine integration, S-TEC 1500 autopilot interface included in base price

### **What will I get when I install R9 in my Meggitt-equipped PA-46 Meridian?**

The upgrade package for Meggitt-equipped Meridians will include all the components in the list above for Avidyne-equipped Meridians, with the exception that the dual ADAHRS will be new units, including two new magnetometers. The Meggitt package also will include an additional data acquisition unit (DAU) for engine and sensor integration.

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### **What will I get when I install R9 in my Avidyne-equipped Mirage?**

The Mirage upgrade package includes all the components in the Avidyne Meridian package with the exception of the engine and autopilot interfaces, which will be for the IO-540 and the S-TEC 55X on the Mirage. Avidyne will pursue a digital attitude-based autopilot option for R9-equipped aircraft if interest warrants. Avidyne's digital autopilot will not be available as a retrofit for non-R9 aircraft.

### **What will I get when I install R9 in my Matrix?**

The Matrix upgrade package includes all components in the Avidyne Mirage package with the exception of one MPIO, radar interface, and the Enhanced Vision interface is a \$2,995 option. Instead of two overhauled ADAHRS, the Matrix package includes one overhauled unit and one new ADAHRS.

### **So Avidyne Synthetic Vision will be included?**

Yes! Avidyne Synthetic Vision is in the final stages of development and certification and will be included as part of your upgrade. Synthetic Vision is typically a \$15K option. With Avidyne Synthetic Vision you have the choice of displaying the 3D terrain in full-screen mode or on the top half of the display with a 2D map, HSI, Enhanced Vision window, engine page, FMS page, or checklist page on the lower half. This flexibility of display really does provide you with the greatest situational awareness possible in the industry today, for any situation.

### **When will R9 be available on PA-46 aircraft?**

R9 is FAA certified and flying in over 50 Cirrus aircraft already, with another 50 aircraft in the installation process. Avidyne is presently pursuing the PA-46 STC for the Piper Meridian, Mirage, and Matrix, which includes three screens and new engine and sensor (e.g. radar) interfaces. The goal of Avidyne's deposit program for the PA-46 is to accelerate the completion of the STC, which is presently scheduled for the second half of 2011. The goal of the deposit program is to enable us to complete the STC program in the first quarter of 2011 or earlier. A fully-funded deposit program will allow Avidyne to increase staffing on this STC work.

### **What is the purpose of Avidyne's R9 deposit program for the PA-46?**

Avidyne has received numerous inquiries about the possibility of developing STCs for the R9 integrated avionics system. Based on all the positive feedback, and to ensure that a significant market exists to support the costs of developing a STC, Avidyne is seeking commitment from thirty (30) PA-46 customers to contribute a \$30,000 down payment. In exchange for making a deposit, customers will receive the following benefits: significant savings in the price of the system (\$30K discount for Meridian owners, \$20K for Mirage and Matrix owners) and priority order for the installation of the system. Should deposit holders choose to sell their plane or change their mind, Avidyne will assist in selling that position to another customer. This deposit program is limited to the first 30 customers.

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### **How can I secure my install position and take advantage of the deposit program savings?**

Sign a deposit program agreement and send in your fully-refundable check in the amount of \$30,000. Install position will be based on the order in which checks are received.

### **What is Avidyne's confidence level that this program will be completed within the next 18 months?**

R9 is a FAA-certified system. It is flying in certified aircraft around the world. Western Michigan chose to upgrade their fleet of 26 Cirrus aircraft to R9. Second, Avidyne is an established company with numerous successful products and customers. The company not only weathered the incredibly challenging economic conditions of 2009 but emerged with three brand-new products. We are highly confident we will meet or beat this schedule.

### **How much does R9 cost on the PA-46?**

The answer varies depending on the aircraft type. List prices for R9 are as follows:

Avidyne-equipped Meridian: \$125,000 list\*

Meggitt-equipped Meridian: \$155,000 list\*

Avidyne-equipped Mirage: \$100,000 list\* (pre-Avidyne/Jet-Prop will vary)

Matrix: \$90,000 list\*

\* Does not include installation.

### **I received a R9 coupon from Piper when I bought a new plane. How does that work?**

Piper coupon holders are entitled to a full R9 upgrade for only \$50,000. If you want to secure a position in the first 30 installations, please complete a deposit agreement and send a check to Avidyne in the amount of \$30K or, if you prefer for tax reasons, the full amount. Note that the Piper Matrix coupon is for dual displays. If you want a third display, you can upgrade the coupon to a three-display configuration through the deposit program for an additional \$10K. After the deposit program closes, an additional display will cost \$17,200.

### **What will happen to my existing avionics?**

Avidyne provides trade-in credit for both the Meggitt and Avidyne displays and XM receiver. This credit is already built into the pricing, and Avidyne expects to receive this equipment back when it is removed from the aircraft. Other avionics, such as Garmin GNS430/530s, transponders, and audio panels will be the property of the customer and can be sold to the dealer or third parties.

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### **Will I have the option to purchase an Avidyne digital autopilot for my PA-46?**

Once the PA-46 R9 deposit program closes, we will open a deposit program for the Avidyne DFC100 (replaces S-TEC 55X) and DFC200 (replaces S-TEC 1500) autopilots. The deposit amount will be \$10K, and depositors will receive a discount of \$10K off the list price for the autopilot. List prices for the DFC100 and DFC200 are \$20K and \$25K respectively.

### **I already have a digital autopilot in my Meridian, why would I switch?**

Your S-TEC 1500 will function perfectly well with R9. In fact, it will have tighter integration with R9 than it did with the original Entegra system. Avidyne's DFC series of autopilots is designed to use the full power of R9, including vertical navigation and vectors mode. It also will include Avidyne's envelope protection technology, as well as other innovative features not available with the S-TEC.

## **INSTALLATION**

### **Where will R9 installations for PA-46 take place?**

Avidyne is in the process of identifying R9 installers for the PA-46 around the country. The R9 installation is a significant project requiring a higher level of expertise and project management capability than many smaller avionics installations. In order to ensure quality and on-time delivery, Avidyne will choose a small number of installers in whom we have a great deal of confidence to produce a high-quality, on-time installation. Those installers will be geographically dispersed around the country to maximize customer convenience.

### **How long will R9 take to install?**

The answer very much depends on your aircraft and the installed equipment, and you will need to talk to your installer for a precise quote on installation hours. As a point of reference, R9 Installations on Cirrus have been running around 120 hours on average. The PA-46 installations will be more complex, with more interfaces and a third display, so 200 hours seems like a reasonable average. Installers will have the final say on required installation time for your aircraft. Total downtime for your aircraft also will depend on the installation shop. Cirrus installations are generally running 2-4 weeks in duration from aircraft drop-off to pick-up.

### **How much will R9 cost to install?**

See the answer above regarding installation time. Installation costs vary depending on the region of the country in which the installations are completed. Shops often charge around \$100 per hour, so assuming a 200-hour install the cost of installation would be in the vicinity of \$20K. Installation costs could be higher or lower depending on your aircraft.

### **Is a new instrument panel required for this installation?**

Yes. The instrument panel will be new. Installers will have the choice between fabricating their own panels or purchasing a standard panel from Avidyne.

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### **How do I become a R9 installer for PA-46?**

Avidyne is interested in identifying a small number of install centers around the country that will become experts at installing R9 and will build a business around these installations. R9 is a larger and more complex installation than a typical avionics retrofit, and standardized installations are important to ensure high quality and a great price for the customer.

### **Where can I get my R9 system serviced if/when it needs it?**

There are approximately 600 qualified shops across the globe where service can be conducted on the R9 system.

### **Will R9 support EGPWS?**

Yes, R9 provides EGPWS aural alerts, and those are accompanied by Master Caution and Warnings. In addition to cautions and warnings generated by the EGPWS box, Avidyne's Synthetic Vision also will generate visual cautions and warnings.

### **Will R9 support XM Datalink and audio?**

Yes and no. There are no plans to support XM Datalink or audio with R9. However, Sirius/XM is now one company. Your R9 installation includes an MLB700 SIRIUS/XM Datalink receiver, and R9 fully supports WSI Datalink via the Sirius satellite network, with an option for Sirius audio entertainment. WSI is a superior weather product. It has been named Professional Pilot's #1 weather service for the past ten years. It should be noted that since XM merged with Sirius, Sirius audio now supports "XM favorites."

### **What are the differences between XM and Sirius?**

If you are asking about the weather datalink capability, this is really a question about the differences between WSI weather (partnered with Sirius) and Baron WxWorx weather (partnered with XM). See the entries below in this list for more details.

### **What will happen with my Jeppesen electronic charts on R9?**

R9 fully supports Jeppesen Electronic Approach Charts and Airport Diagrams with the ownship symbol overlaid on the charts and the ability to pan, zoom, and change chart views.

### **The deposit agreement mentions Overhauled ADAHRS. What does that mean?**

The ADAHRS unit is a proven component of the R9 system. Avidyne developed this highly-reliable system for the Entegra system and has continued to refine it over the years. It is a solid-state system, meaning there are no moving parts. An overhauled unit means that it has been back to the factory, brought up to the latest modifications and specifications, and submitted to a stringent set of complex tests to ensure its accuracy and reliability.

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### **Do I get two new transponders with this installation?**

Remote-mount Mode S transponders will be an option with the R9 installation. The advantage of the remote-mounted units is that it frees up space on your panel and allows the transponders to be controlled via the R9 keyboard. It also will be perfectly acceptable to keep your existing transponders, thereby saving the cost of the new Becker transponders.

### **R9 will integrate with PS Engineering Audio Panels and Becker Remote Transponders in addition to the installed Garmin audio panel and transponder. How do I get that 3rd party equipment?**

If you desire to upgrade to the PS Engineering PMA8000B Audio Select Panel or a Becker Remote-Mount Mode S Transponder, you will note that on your order form as optional add-ons. The avionics shop from whom you are buying R9 and doing the installation for you will purchase that equipment directly from PS Engineering and/or Becker. Avidyne has supplied the contact information, pricing and part number ordering information to the R9 installers. For those customers looking to minimize the cost of the R9 program, they can elect to keep their current transponder and audio select panel and there will be no adverse impact on the operation of Release 9. The advantage of the PS Engineering audio panel is that it enables R9 to display the active frequency on the PFD. For example, it will announce “Potomac App,” thereby ensuring you have tuned the proper frequency and confirming which ATC center with whom you are communicating.

### **What are the differences between XM and Sirius datalink weather systems?**

Both systems are satellite-based broadcast systems. Sirius and XM have merged (Sirius was the acquiring party).. R9 supports only the Sirius/WSI combination. Both systems support radio entertainment and datalink weather, and we believe the Sirius/WSI combination is a better package. WSI weather provides a superior product (e.g. altitude selectable icing severity, Supercooled Liquid Droplet (SLD) icing, temps aloft in 3K' increments instead of just freezing level) and provides notably higher levels of quality control including on-staff meteorologists who provide final quality analysis. The Sirius satellite constellation provides a larger coverage footprint including much of Canada, the Caribbean, and Central America. Avidyne offers several price point packages for the weather part of the datalink content, “Essential”, “Performance” and “Professional”.

### **What are the differences between your weather data packages (Essential, Performance, and Professional)?**

The web link <http://www.avidyne.com/products/mlb700/subscriptions.asp> provides a more detailed breakdown but the basic differences are:

#### **Essential and Performance**

- NOWrad radar imagery
- Graphical and Textual METARS
- TAFs
- TFRs
- Datalink lightning

#### **Performance adds:**

- Cell height/movement
- Winds and temps aloft
- Graphical AIRMETS and SIGMETS
- Canadian radar (future), METARS, TAFs
- Caribbean METARS, TAFs

#### **Professional adds:**

- Icing (severity and SLD)
- Cloud Tops (future)
- PIREPS (future)

### **LEARNING RELEASE 9**

#### **What are the R9 Product Familiarization Opportunities?**

As part of the basic package, Avidyne is supplying a combined Pilot Guide/Product Familiarization Manual for R9. This will be supplied both in hard copy and electronically on a USBthumb drive and downloadable from our website. We also have a “self-study” guide on the website available for free download.

#### **What kind of user documentation exists?**

There are several documents and reviews that are available for reading/download now from [www.release9.com](http://www.release9.com). We will continue to add documentation and training material as it is developed.

#### **Is there a simulator for R9?**

Yes, a desktop PC-based Free-play simulator for R9 is available now to anyone interested. This will be provided via a CD or you may download it from the Avidyne website for desktop installation at no charge.

## ***SERVICE AND SUPPORT***

### ***What is the R9 warranty story?***

R9 is warranted for 2 years from date of install. This means the clock starts new for everything, including the already installed magnetometer and the overhauled ADAHRS. You have the opportunity to buy extra years of warranty via the FlexCare Extended Warranty program. The harness assembly is warranted by its manufacturer for 1 year. The install shops are warranting their installation for a minimum of 2 years (some for life of the install). This applies to any wiring or component that they touch (examples include the new instrument panel, the sheet metal brackets, replaced circuit breakers, any GPS antenna installation including the composite material work to support new antennas, and any repositioning of existing wiring or components). The original aircraft warranty has been confirmed to be intact for those components not directly touched or affected by the R9 installation (e.g. powerplant, aircraft electrical system, flight controls, aircraft structure except WAAS antenna work, etc).

### **If my R9 system needs service, what do I need to do?**

In many cases, R9 will tell you what is wrong. Through the extensive human-readable diagnostics that are available, you and/or your avionics shop will be able to very quickly diagnose a problem and identify any part that may need replacement. Because of the blade architecture nature of R9 and the Avidyne Platinum AOG Service that is available, downtime may be limited to just a few minutes or hours. Your quickest path to service is via your Avidyne Service Center. They can use the special R9 Service Hotline to start that repair process.

### **If I had some time left on my Avidyne FlexCare extended warranty, do I get to carry that time over to R9 and add it to the 2-year warranty?**

Yes, any left-over FlexCare warranty will be automatically tacked onto the end of your standard R9 2-year warranty.

### **How do I update the R9 system with periodic Charts, Nav data and Obstacle data?**

This is a much simpler process, and less costly in R9 systems. The upload process is divided into two parts. The Nav and Charts data are accessed via your Jeppesen JSUM account and loaded right onto a USB memory stick/fob. When the USB fob is inserted into the front panel USB slot on your R9 system and the display turned on, a single button press will start the loading of your displays with the new Nav and/or Chart data. For the Obstacle data, the updated file is accessible from the [www.release9.com](http://www.release9.com) website and that file is also transferred onto the USB fob for similar loading onto your display. The annual subscriptions have been significantly reduced by Jeppesen as well and should result in an average annual savings of \$320

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### **Is there any data logging in R9 that I can get access to?**

Yes, quite a bit. Each IFD has a data recorder provided at no charge.. Flight logs and Engine logs are available for download via the front panel USB port during ground operations. The type of data available is described in greater detail in the R9 Pilot's Guide.

### **How do I get software updates for R9? How will I know they exist? Will there be a charge?**

With very few exceptions, all software inside the IFDs is capable of being updated via the USB connections as well. This means the IFD does not need to be returned to the factory for any future software updates. This updating however requires that an authorized Avidyne Service Center perform the updates because of various FAA conformity requirements. This is not a service that an individual owner is allowed to perform him or herself. We will be using a number of overlapping means to notify owners that a software update is available, the nature of the update, if it is considered mandatory or optional and if there is a fee associated with the update. New features such as Syn Vis and Enhanced Vis should be expected to come with a fee but other sustaining engineering type of software changes may be no-charge.

### **When will R9 be available and supported outside the continental US?**

R9 is already available outside the US. We have installation in Europe and Australia at this time. We are in the process of applying for a number of individual regional certifications (e.g. EASA, Brazil, etc.).