

TOTAL PERFORMANCE VAN'S AIRCRAFT

14401 Keil Road NE, Aurora, Oregon, USA 97002

PHONE 503-678-6545 • FAX 503-678-6560 • www.vansaircraft.com • info@vansaircraft.com

Service Letters and Bulletins: www.vansaircraft.com/public/service.htm

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RV-14 Avionics Update

Our intent is to make the RV-14 Avionics installation as simple as possible for builders. There will be no standard avionics kits available through Van's Aircraft as with the RV-12, but there will be choices for those who want a "plug & play" avionics system.

Broadly, we have designed the electrical system around three basic EFIS options for those who want "plug and play" panels. For now (June 2016), these are: Garmin G3X Touch, Dynon Skyview, and Advanced Flight Systems. For a professionally wired, plug and play panel utilizing one of the systems above, contact SteinAir for the G3X and Skyview, and Advanced Flight Systems for the Skyview and AFS systems.

These companies are familiar with the RV-14/14A airframe, and will be able to guide you through the maze of choices available within those systems so that you can create a panel that will meet your needs and budget. We don't see any added value for the customer to put Van's between them and the avionics supplier. Van's does not have avionics experts, we make airframe kits, so the end user is better served by talking directly to the avionics specialists.

Of course, those with the necessary skills will be able to design and build their own panel, or builders may use any avionics company to build whatever they want. If your choice of avionics does not include the EFIS systems listed above, you will be in the typical position of most past RV builders, but with more defined parts than earlier kits. The wiring supplied in the tailcone and wings will be useful. Van's Aircraft will offer an optional "standard" common fuselage harness with pre-populated connectors that will connect to the tailcone and fuselage wiring with extended, labeled wires at the instrument panel. You may purchase this harness with two different styles of termination at the sub panel, either extended wires or with wires terminated at the sub panel in D-sub and high powered connectors. For more information see the WH-00125 schematics on the download page of the Van's Aircraft web site.

Van's will be able to supply some basic components that you may want. Here is a short list of kits and components that will soon be (or are) available:

- ELT Install Kit
 - ELT, mounting instructions and hardware.
 - Status: Kit is available. Order the "14 ELT ACK-04 KIT".
- Autopilot Servo Installation Kit
 - Brackets, Garmin or AFS/Dynon harnesses, hardware and pushrods
 - Status: Kits are available. Order
Garmin "14 GARMIN AP SERVO INSTALL KIT"
AFS/Dynon "14 SV AFS AP SERVO INSTALL KIT"

- Yaw Dampener Servo Kit
 - Brackets, hardware and cables. The servos and servo arm will be supplied by the servo manufacturer.
 - Status: Kits are available. Order
Garmin “14 G3X YAW SERVO INSTALL KIT”
AFS/Dynon “14 SV AFS YAW SERVO INSTALL KIT”
- Garmin or Dynon Pitot Tube Mount
 - Mount bracket, hardware, pitot mast. The Dynon mast will work with both heated and unheated Garmin and Dynon/AFS pitot tubes.
 - Status: Order Dynon Part Number 102813-000 direct from Dynon.
- Garmin Magnetometer Mounting Kit
 - Bracket to mount a GMU22 Magnetometer in the left wing ADAHRS position. See KAI Section 20.
 - Status: Order the “RV-14 GMU22 MOUNT KIT”
- Garmin Transponder and ADS-B Bracket
 - Brackets to mount a Garmin GTX23 Remote Transponder and GDL-39R remote ADS-B between the instrument and sub panels on the co-pilot side of the aircraft. This will still leave room for a second screen.
 - Status: In work
- Aileron Trim Kit
 - Provides roll trim.
 - Status: Order the “EA-10/14 ELECTRIC ROLL TRIM KIT”.
- Flap Position Sensor Kit
 - Provides flap motor position feedback required by most EFIS manufacturers for flap motor control.
 - Status: Kit is available. Order the “14 FLAP POSITION KIT”.
- Fuse Module
 - ATC Fuses, Bat and Alt Ammeter Shunts, Alt Circuit Breaker etc.
 - Status: Available from SteinAir. A kit with brackets and mount plate is available for the SteinAir module from Van’s. Order “14 POWER MODULE INSTALLATION KIT”.
- Control Stick Harness
 - If not using the Tosten stick option below. Provides connector at base of stick with extended wires for your choice of grip and switches
 - Status: Harness is available. Order the “WH-00074”. One per stick required.
- Tosten Control Stick Grip
 - Stick assembled and prewired. Plug’n play ready.
 - Status: Available. Order the “CS-00008T-L & -R”.
- Wingtip Nav Lighting:
 - Status: Kit is available. Order the “LN-WING TIP LED” kit.

- Tail Light:
 - Status: Kit is available. Order the “LN-TAIL LIGHT KIT”.
- Landing Light Kit:
 - Status: Kit is available. Order the “LL LED KIT A”.
- Blank Instrument Panel
 - Status: Available. Order Qty 2 “F-00111” for the left and right side panels, Qty 1 “F-00112” for the center panel. See also the dxf on the downloads page of the Van’s Aircraft web site.
- Canopy Harness
 - Defrost fans and the canopy warn switch are supplied in the finish kit. This harness connects to those items. Provision is also made for powering a LED strip (not provided in kit order “LC LED STRIP RED”).
 - Status: Order the “ES WH-00126 KIT”
 - See also the following files on the downloads page of the Van’s Aircraft web site
 - “SkyView Canopy Warning Read-Me MM-DD-YY.doc”
 - “AFS Canopy Warning Read-Me MM-DD-YY.doc”
 - “Garmin Canopy Warning Read-Me MM-DD-YY.doc”
- Common Fuselage Harness
 - Description is mentioned above. The harness is supplied with extended wire lengths (for direct routing to units behind the sub-panel) or with connectors at the base of the sub-panel. Harness, aux music jack, power outlet and instructions for installation to mate to the empennage and wing root connectors
Status: Kit is available.

Order:

ES WH-00125 KIT	Main harness RV-14 extended unterminated wires with phono jacks
ES WH-00125 KIT-1	Main harness RV-14 extended unterminated wires with phono and LEMO jacks
ES WH-00125 KIT-2	Main harness RV-14 D-Sub/Molex connectors at the sub panel with phono jacks
ES WH-00125 KIT-3	Main harness RV-14 D-Sub/Molex connectors at the sub panel with phono and LEMO jacks

Pre-cut panels will not be offered by Van's - these can be supplied individually by the above vendors to a customer's specific requirements.

The large electrical cables from the battery and alternator will be supplied in the Powerplant Kit. These will work with the 3 EFIS options above. If you are using a completely different panel you may wish to delete these items from the Powerplant kit.

Engine sensor packages should be ordered through your avionics supplier.

Before you start to design your panel or contact the vendors above, think carefully about the flying you will do (not what you might do someday). Pick the components that will work well for now - you can always upgrade later. And bear in mind that while you can fly with a minimal panel, you'll need an engine and prop to get off the ground. So don't blow the budget on the panel at the expense of the powerplant. Do you want to fly, or sit in the shop programming screens? Not for nothing does one of SteinAir's T-shirts say "The best ALL your money can buy...".

For more info, or to discuss the capabilities of the various systems:

Advanced Flight Systems: 503-263-0037
info@advanced-flight-systems.com

Dynon: 425-402-0433
info@dynonavionics.com

Garmin Experimental: 866-854-8433
G3xpert@garmin.com

SteinAir: 651-460-6955
info@steinair.com