

DAPS321

Installation and Operation Manual

Video Amplifier



TECHNICAL SUPPORT
678-867-6717, or
www.FlightDisplay.com

Flight Display Systems
Enhancing the Flight Experience

DAPS321

Video Amplifier

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General Information

The DAPS321 is a Video Amplifier which takes 2 composite sources, and splits and amplifies each to 7 outputs. In addition, the DAPS321 supplies 3 Amps of 12VDC of power available for other cabin entertainment products (i.e. Wireless Audio, DVD player, Glareshield Camera, or LCD monitors).

Front View



Additional Information

The DAPS321 is designed to interface with products that use composite (RCA) video outputs such as our DVD Players and Glareshield Cameras. It has an “A” & “B” side each containing one input, and 7 outputs. The DAPS321 also produces a significant increase in video signal quality due to better shielding on the video board.

The DAPS321 is made of all metal components. DO-160D testing has been completed and is available upon request.

Specifications

Video System	NTSC or PAL
Input Sources	2 Channels
Output Targets	7 Each Channel
Video Input Level	2.0 Vpp
Video Output Level	0.5 ~ 1.5 Vpp (Adjustable)
Output Impedance	75 Ohms
Dimensions	7" (W) x 1.9" (H) x 4.3" (D)
Weight	1 lbs 11 oz
Power	28VDC @ 2 Amps
Mounting	8 Points on Flange
Materials	Aluminum
DO-160 TESTED	FAA/PMA Approved

Installation Instructions

All cabin entertainment equipment, such as the DAPS321, should be installed on a non-essential bus and have a dedicated circuit breaker. It is a requirement that a switch be installed so that the pilot can de-energize the system should it become necessary.

There are four mounting slots located on the sides for horizontal mounting and two mounting slots on the end for vertical mounting of the DAPS321. It is sufficient to mount the unit by two attach points. This unit can be mounted in any orientation. Care should be given to make sure the RCA jacks are firmly seated in the Composite inputs and outputs and that the aircraft wire bundle will not shift and pull the plugs away from the DAPS321.

The unit will turn on automatically upon power up. During check out you can look to see that the power LED's (one on each side of the DAPS321) are illuminated once power has been applied. Using a small flat-bladed screwdriver and turning the video level control corresponding to the input source adjusts the composite video output levels. As an example it may be necessary to decrease the output for monitors closer to the DAPS321 and increase the output for monitors further away.

Power

This is a **28VDC** device that requires 2 Amps of power to operate.

Video Wiring Suggestions

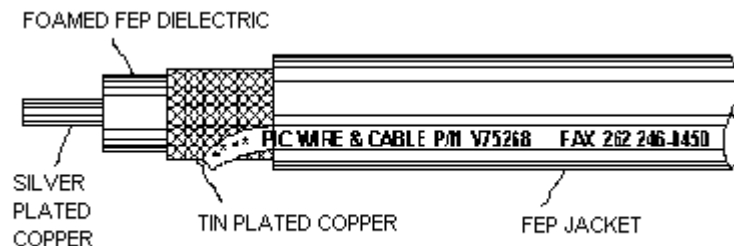
All shields should be grounded to the connector at the source, and floating at the display.

Avoid routing video wiring parallel to:

- AC wiring
- Strobe wiring
- DC motor supply cables
- Inverter cabling
- Or any other potential noise source.

S-Video/Composite and Audio Wiring

Recommended cable for s-video/composite and audio purposes is PIC 75 Ohm Coax, P/N V75268. This is a lightweight, flexible, and low signal loss cable which meets FAA flammability requirements of FAR 23.1359(d), FAR 25.853(a) and FAR 25.869(a)(4).



Similar aviation coaxial cable can be used from other vendors, as well.

Some aircraft are prone to AC noise - we recommend adding to the composite source a 75Ohm video isolation transformer such as Deerfield Laboratory, Inc. Part No. 162-1 (www.deerfieldlab.com, (650) 632-4090). In most cases this should be added to the video output of the source.

Power and Ground Wiring

22 AWG wire is recommended for Power and Ground applications.

Pinout for DB-9

Part Numbers for DB-9 connector, manufactured by Tyco or Amp.

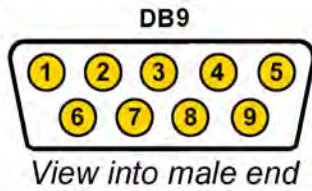
D-sub, 9 contact receptacle (female)

P/N 205203-1

9F pins

P/N M39029/63-368

Wiring Diagram



Pin Number	Description
1	28VDC In - Power
2	28VDC In - Ground
3	N/C
4	12VDC Out - Power
5	12VDC Out - Ground
6	12VDC Out - Power
7	12VDC Out - Ground
8	12VDC Out - Power
9	12VDC Out - Ground

Troubleshooting

Video Noise

Check for an incorrect ground in the installation wiring. See specific examples of video noise below, or visit <http://flightdisplay.com/Grounding.pdf>

Snow or Sweeping Lines

Lines that slowly sweep up and down are a result of AC noise. This AC noise can be generated by a power cart on the aircraft. Take the power cart off of the aircraft. Be careful of inverter wiring, which can also cause noise. Stand off the wires, if necessary.

If snow or sweeping lines persist, it is possible that the ground is at an incorrect point in the aircraft. Try moving the ground to another location.

No power to Monitor, or No video Input

- Verify correct wiring. Check the base receptacle connectors for possibly damaged pins.
- Check that the video source is:
 1. Powered on,
 2. In Play mode, and
 3. Displaying video.

Color Distortion

- Adjust brightness and contrast settings using the buttons on the monitor.

Remote Control Inoperable

- Confirm that the infrared eye on the LCD screen is visible.
- Replace battery in remote control.

Technical Support

Should you have any questions concerning this product or other Flight Display Systems products, please contact our Product Support representatives at (678) 867-6717.

Flight Display Systems
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For further product information, technical data and sample wiring diagrams, please click on the **Dealers** section of our web site at www.flightdisplay.com

Instructions for Continued Airworthiness

The DAPS321 is designed not to require regular general maintenance.

Warranty Information

Flight Display Systems warrants the DAPS321 against material or manufacturing defects for a two-year period (effective 1/1/2009 on all equipment shipped with 2009 pricing). Warranty begins on date of installation.

If product support is required, please call our Technical Support team at 678-867-6717 to obtain assistance. If the return of the unit to the factory is required, an RMA number will be issued at that time. Flight Display Systems will, upon receipt of the failed hardware, remanufacture or replace the unit at our discretion.

Flight Display Systems will pay Ground Shipping charges for warranted items. Charges for express shipment will be the responsibility of the sender.

This warranty is not transferable. Any implied warranties expire at the expiration date of this warranty. We shall not be liable for incidental or consequential damages.

This warranty does not cover a defect or failure that has resulted from improper or unreasonable installation, use or maintenance, as determined by Flight Display Systems. This warranty is void if there is any attempt to disassemble or open this product without factory authorization.

Any labor charges associated with the removal of product or related troubleshooting by a firm other than Flight Display Systems or its designee will not be covered.

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Log of Revisions

Rev	Date	Page	Description
A	01/25/2007	---	---
B	04/14/2009	6,11	Updated specifications, warranty info