

Installation and Operation Manual

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 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 160E_SEC 21 CAT B & M

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

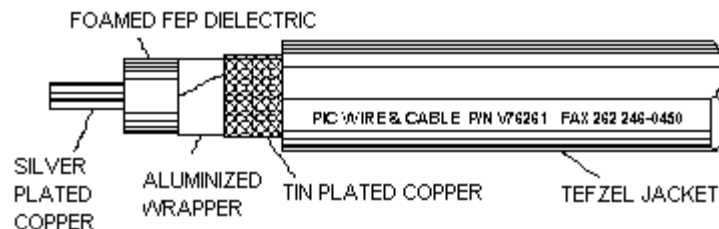
All shields should be grounded to the connector at the source, and floating at the display.

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 V76261. 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.

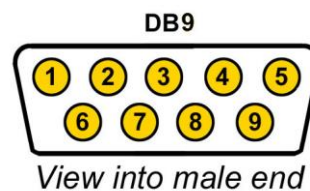
D-sub, 9 contact receptacle (female)

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



Technical Support

Should you have any questions concerning this product or other Flight Display Systems products, please contact our Product Support representatives at (470) 239-7421.

Flight Display Systems

6435 Shiloh Road

Alpharetta, GA 30005

Phone: 470-239-7400

Fax: 470-239-7439

Email: sales@FDSAvionics.com

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

Instructions for Continued Airworthiness

The DAPS321 is designed not to require regular general maintenance.



Limited Warranty

All FDS Avionics Corp. products are warranted to be free from material or manufacturing defects for a period of 24 months from the date of shipment for General Aviation customers or 12 months from the date of shipment for Government/Special Mission customers. Any material or repair workmanship for in warranty repair service will be specifically warranted for 90 days or the remainder of the original warranty period, whichever is longer. If the original warranty period has expired, the 90 day repair warranty is limited to the material and workmanship specific to the repair activity completed.

The following conditions are exclusions to warranty coverage:

1. Labor costs associated with installation, removal or reinstallation of any product.
2. Damage to or malfunction caused by any unauthorized alteration made to the product.
3. Resolving signal quality issues caused by externally generated noise introduced by aircraft electrical systems or other components connected to any FDS product.
4. Any malfunction caused by improper installation or connection to aircraft wiring, industry standard cabin management/inflight entertainment systems, or third party commercial equipment not specifically identified as compatible with FDS products.
5. Any malfunction caused by installation that does not conform to precautions associated with operating environments listed in the operating manual or consistent with industry best practices such as high temperature, adequate ventilation, high humidity, high dust, or power surges.
6. Cosmetic damage or damage to internal components caused by installation or removal, failure to follow installation or operating instructions, or any neglect or misuse of the product.
7. Any product that is returned for service with a broken tamper evident seal, indicating tampering or improper handling of the product by an unauthorized person. Violation of product tamper evident seals or modification of factory installed serial and PMA labels voids any warranty, either expressed or implied.

The FDS Technical Support team is available to provide distance troubleshooting support during business hours (8:00am to 5:00pm EST) Monday through Friday at (470) 239-7421.

Many repair requests can be resolved through distance support and may not require return of merchandise to the factory. If a product must be returned to the factory for repair, an RMA number will be issued as directed by the Technical Support team and communicated by the Repair Coordinator.

Upon request by the customer, FDS may send a Service Technician onsite to repair any non-PMA products. The travel expenses incurred to include transportation, lodging and meals along with the technician's hourly rate shall be payable by the customer in accordance with FDS' applicable rates and procedures.

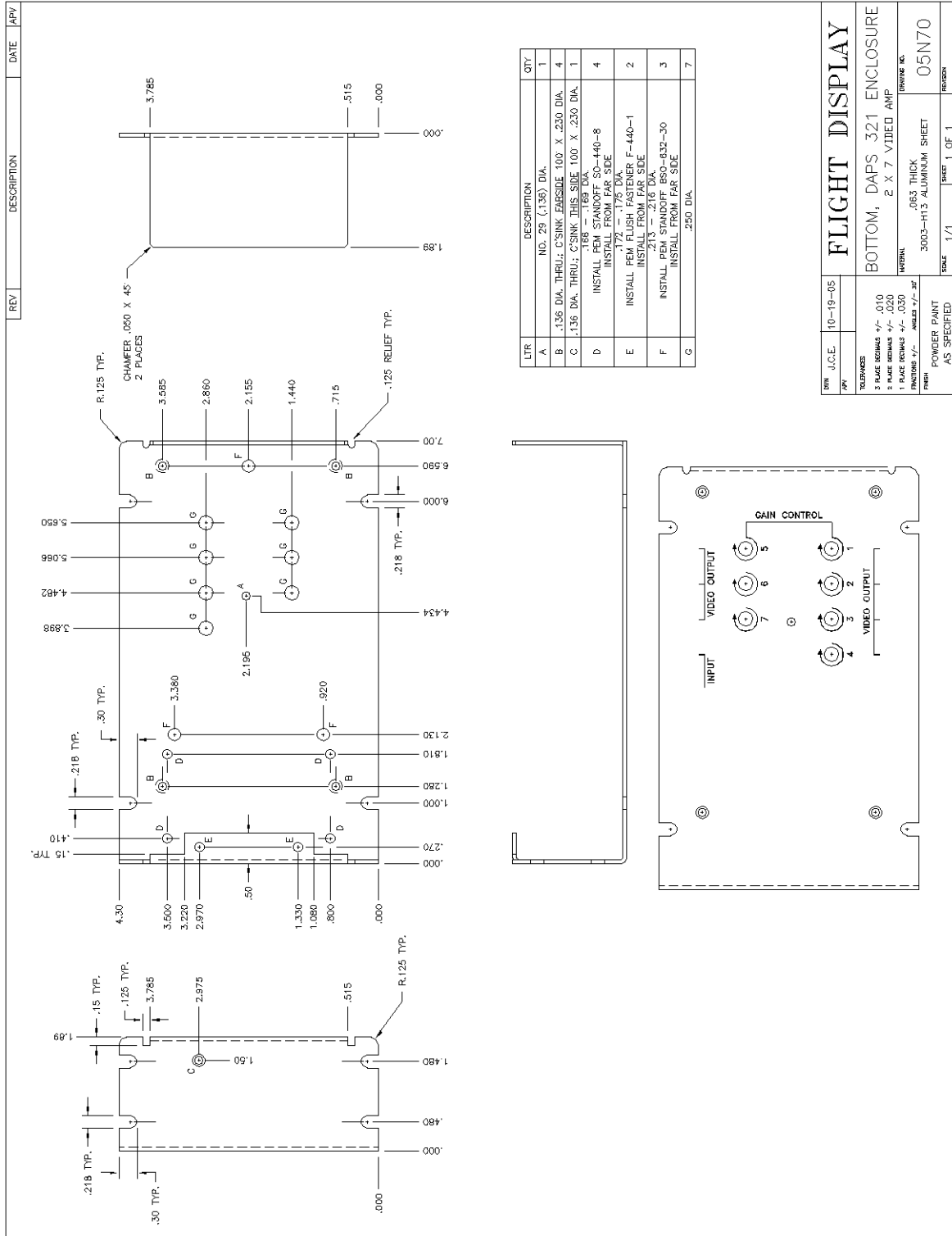
FDS Avionics Corp. will, upon receipt of returned merchandise, remanufacture or replace the unit at our discretion and return the product by Ground Return Shipping. Express return shipment will be the responsibility of the sender.

This warranty is not transferable.

Any implied warranties expire at the express limited warranty expiration date. FDS shall not be held liable for any indirect, special, punitive, incidental or consequential damages.

Some states do not allow limitation on the length of an implied warranty. In such states, the exclusions or limitations of this limited warranty may not apply.

Technical Drawing





Log of Revisions

Rev	Date	Page	Description
A	01/25/2007	---	---
B	04/14/2009	6,11	Updated specifications, warranty info
C	05/04/2017	All	New Format, New Company Name, Warranty

