

## Installation and Operation Manual

# DAPS440

Video/Audio Switcher





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## General Information

The DAPS440 is a Video/Audio Switcher which takes 4 composite sources, and amplifies and switches each to 4 outputs. In addition, the DAPS440 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 DAPS440 has 4 Audio & Video input source connections and four individual Audio & Video output connections for each input. Switching is accomplished with a ground switching system. The DAPS440 will support the installation of four independent switches at four different seat locations. Each individual at each of the four seat positions can independently access up to four audio and video sources by pushing their button. Every time the button is pushed, the audio and video source will sequence through sources 1, 2, 3 and 4.

For example, if you have installed our Moving Map, Glareshield Camera and two DVD players, the DAPS440 can sequence output from Moving Map, to Camera, to DVD1 and then to DVD2.

The DAPS440 is made of all metal components. DO-160 testing has been completed and is available upon request.

## Specifications

Dimensions	9.5" (W) x 7.25" (H) x 1.25" (D)
Video System	NTSC/PAL
Input Sources	4 Audio/Video Channels
Output Sources	4 Audio/Video Each
Video Impedance	75 $\Omega$
Control Sequence	Source 1,2,3,4
Audio Impedance	8.2 $\Omega$
Weight	1 lbs 12 oz
Power	28VDC @ 1.0 Amps
Source Selection	Momentary Ground Switch (Not Incl.)
Materials	Aluminum
Mounting	6 points on flange
DO-160	Section 21 Category B

## Installation Instructions

All cabin entertainment equipment, such as the DAPS440, 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 six mounting slots located on the sides of the housing. Four holes are located at the four corners of the back and four holes are located two on each side of the flange. It is sufficient to mount the display by two attach points. It is recommended that you leave about ¼ inch of space around the unit for air circulation.

Audio/Video inputs are paired and listed on the same side of the unit as the Power Input DB-15. From left to right the video/audio inputs are line 1,2,3,4. Use the inputs sequentially as you would like them selected by the operator.

On the opposite side of the unit is the output side. Here you will find four paired output jacks. The momentary ground is pinned to the DB-15 to accomplish the switch of the Audio/Video source.

### Power

This is a **28VDC** device that requires 1.0 Amps of power to operate.

## Wiring Suggestions

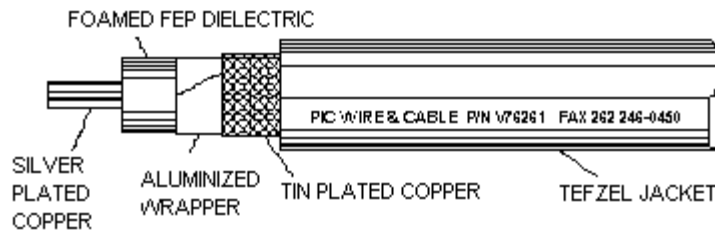
All shields should be grounded to the connector at the source, and floating at the display.

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](http://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.

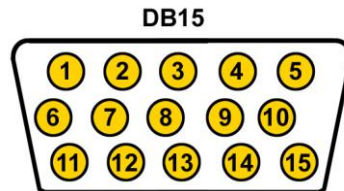
## Power/Video

### Pin out for High Density DB-15 Receptacle

Part Numbers for DB-15 connectors, manufactured by Tyco or Amp.

High density, D-sub, 15 contact receptacle (female) P/N 748565-1

HD15F pins P/N M39029/57-354

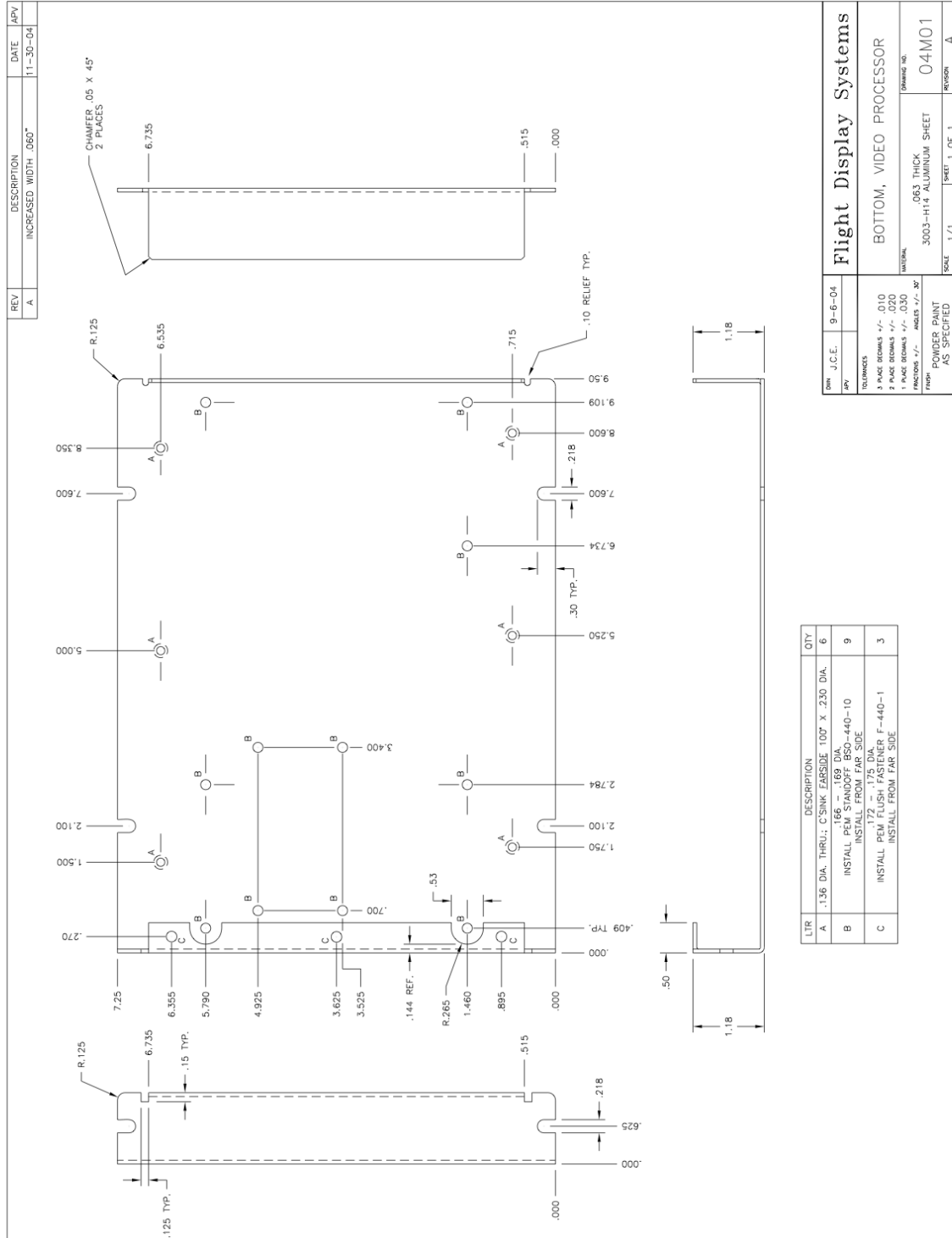


*View into male end*

Pin Number	Description
1	28VDC Power <b>In</b>
2	28VDC Ground <b>In</b>
3	N/C
4	12VDC Power <b>Out</b>
5	12VDC Ground <b>Out</b>
6	12VDC Power <b>Out</b>
7	12VDC Ground <b>Out</b>
8	N/C
9	12VDC Power <b>Out</b>
10	12VDC Ground <b>Out</b>
11	N/C
12	Switch #4
13	Switch #3
14	Switch #2
15	Switch #1



# Technical Drawing





## Technical Support

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

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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.FDSAvionics.com](http://www.FDSAvionics.com)

## Instructions for Continued Airworthiness

The DAPS440 is designed not to require regular general maintenance.





## Warranty Information

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.



## Log of Revisions

Rev	Date	Page	Description
A	01/25/2007	---	---
B	01/16/2008	8	Swapped pinout of Switch Inputs.
C	06/20/2008	8	Removed "Remote Control Inoperable" from troubleshooting
D	04/14/2009	6,11	Updated specifications, warranty info
E	12/11/2009	12	Revised Assembly Drawing
F	08/28/2012		Update format, warranty and non-PMA info
G	08/27/2014	1,11	Update addresses, phone numbers, warranty
H	05/04/2017	All	Updated Corporate Name, phone numbers, warranty

