

Installation and Operation Manual

FD102CV-C-1

10.2” Widescreen LCD





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General Information

The FD102CV-C-1 is a special mission high resolution 10.2” widescreen LCD. The LCD features NVG technology which can be switched to Day or Night mode using the rocker switch. The FD102CV-C-1 will support composite video, s-video, VGA and DVI-D single link.

Front View



Additional Information

The FD102CV-C-1 can be connected to existing video switchers and can take a composite video input from a selector interface box. Multiple input sources can be selected and displayed on the monitor.

The FD102CV-C-1 is made of all metal components. DO-160 testing has been completed and is available upon request.

The LCD is protected with a .060” Lexan lens to prevent scratching of the LCD.

Specifications

Display Type	10.2" Widescreen TFT Color LCD
Pixel Pitch	0.072 mm X 0.220 mm
Screen Resolution	1024x600
Supported Resolution	Up to 1600x1200
Brightness	300 cd/ m ²
Contrast	500 : 1
Display Dimension	9.8" (W) x 6.32" (H) x 1.23" (D)
Display Size	8.70" (W) x 5.215" (H)
Weight	2 lbs. 7oz
Power	28VDC @ 0.5 Amp
Operating Temperature	-20°C/60°C
Storage Temperature	-30°C/70°C
PC & Video Input	VGA (Analog RGB 15 pin D-sub) Composite Video, S-Video, DVI-D Single Link
Video Type Supported	NTSC/PAL
Screen Control	On Screen Display Menu
Remote Control	IR, included
Materials	Aluminum
Aspect Ratio	16:9

Installation Instructions

All cabin entertainment equipment, such as the FD102CV-C-1, should be installed on a non-essential bus and have a dedicated circuit breaker. It is a requirement that a switch be installed in the cockpit so that the pilot can de-energize the entertainment system should it become necessary.

It is recommended that you leave approximately ¼ inch of space above and below the display to have circulating air.

Power

This is a **28V DC** monitor that requires .5 Amps of power to operate. The unit turns on automatically upon power application.

Wiring Suggestions

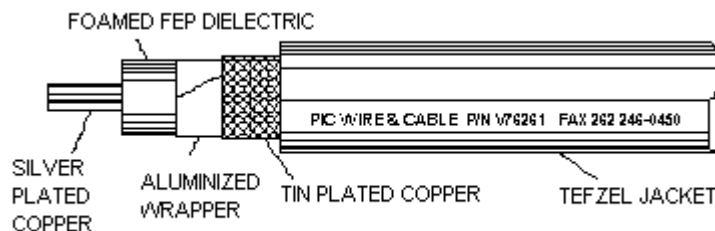
All shields should be grounded to the connector at the source, and floating at the display.

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).

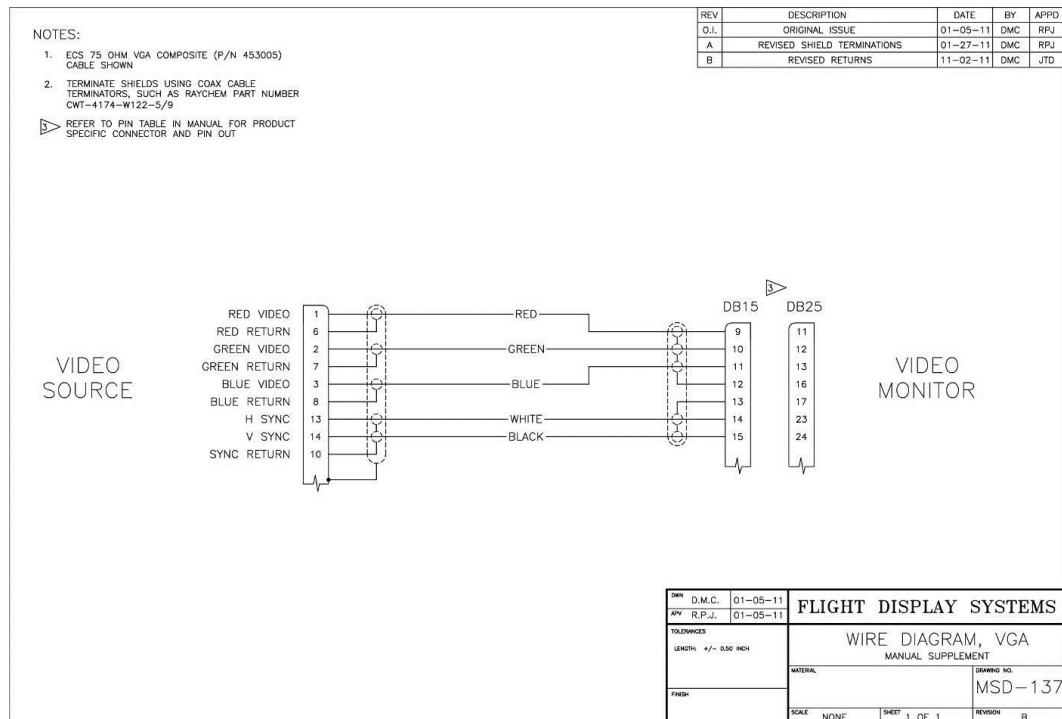


Similar aviation coaxial cable can be used from other vendors, as well.

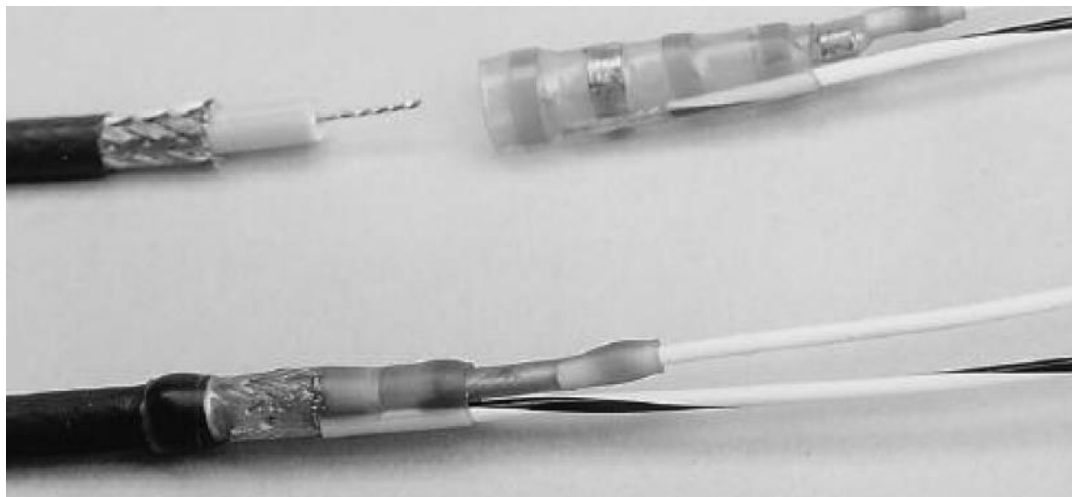
Some aircraft are prone to AC noise – we recommend adding to the composite source a 75Ohm video isolation transformer such as Deerfield Laboratory, Inc. Part No. 162-1 (www.deerfieldlab.com, (650) 632-4090). In most cases this should be added to the video output of the source.

VGA Wiring

Recommended cable for VGA purpose is ECS P/N 453005. This is a single shielded cable containing 5 separate coaxial cables, color-coded to match the functions of the wires.



Coax cables should be terminated using solder sleeve coaxial cable terminators, Raychem P/N: CWT-4174-W122-5/9

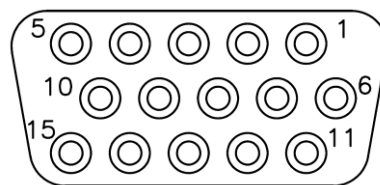


Power/Video

Pin out for High Density HD-15 Receptacle (supplied)

Connector
 Crimp Contacts

P/N: M24308/2-286 or Equivalent
 P/N: M39029/57-354 or Equivalent



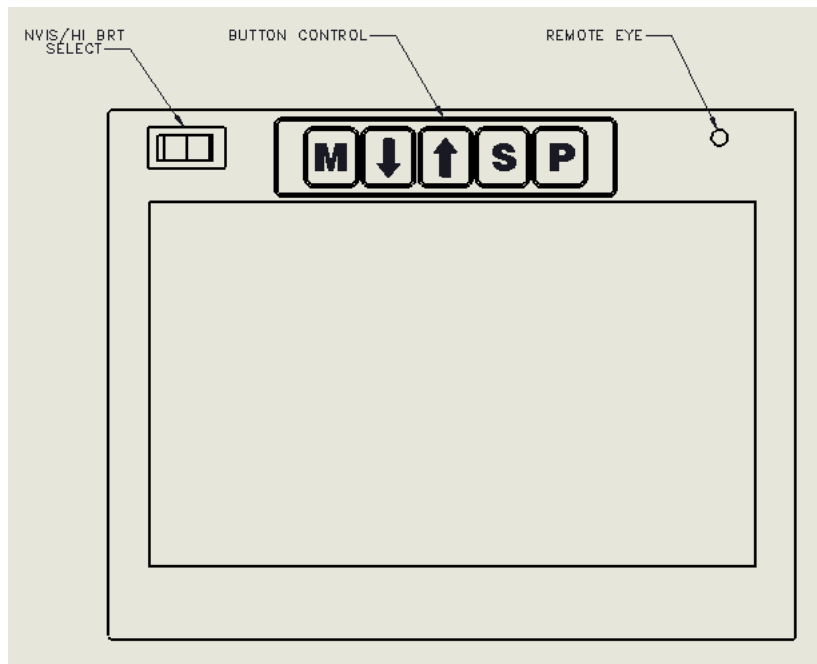
MATING FACE

Pin Number	Description
1	28VDC Power
2	28VDC Ground
3	Composite Video 1 - Signal
4	Composite Video 1 - Shield
5	S-Video Y - Signal
6	S-Video Y - Shield
7	S-Video C - Signal
8	S-Video C - Shield
9	Red Video (Pin 1 on Standard VGA)
10	Green Video (Pin 2 on Standard VGA)
11	Blue Video (Pin 3 on Standard VGA)
12	Red Ground (Pin 6 on Standard VGA)
13	Green Ground (Pin 7 on Standard VGA)
14	Horizontal Sync (Pin 13 on Standard VGA)
15	Vertical Sync (Pin 14 on Standard VGA)

Operation Instructions

The FD102CV-C-1 is continuously on but can be de-energized by removing power from the entertainment system.

Monitor Control Buttons



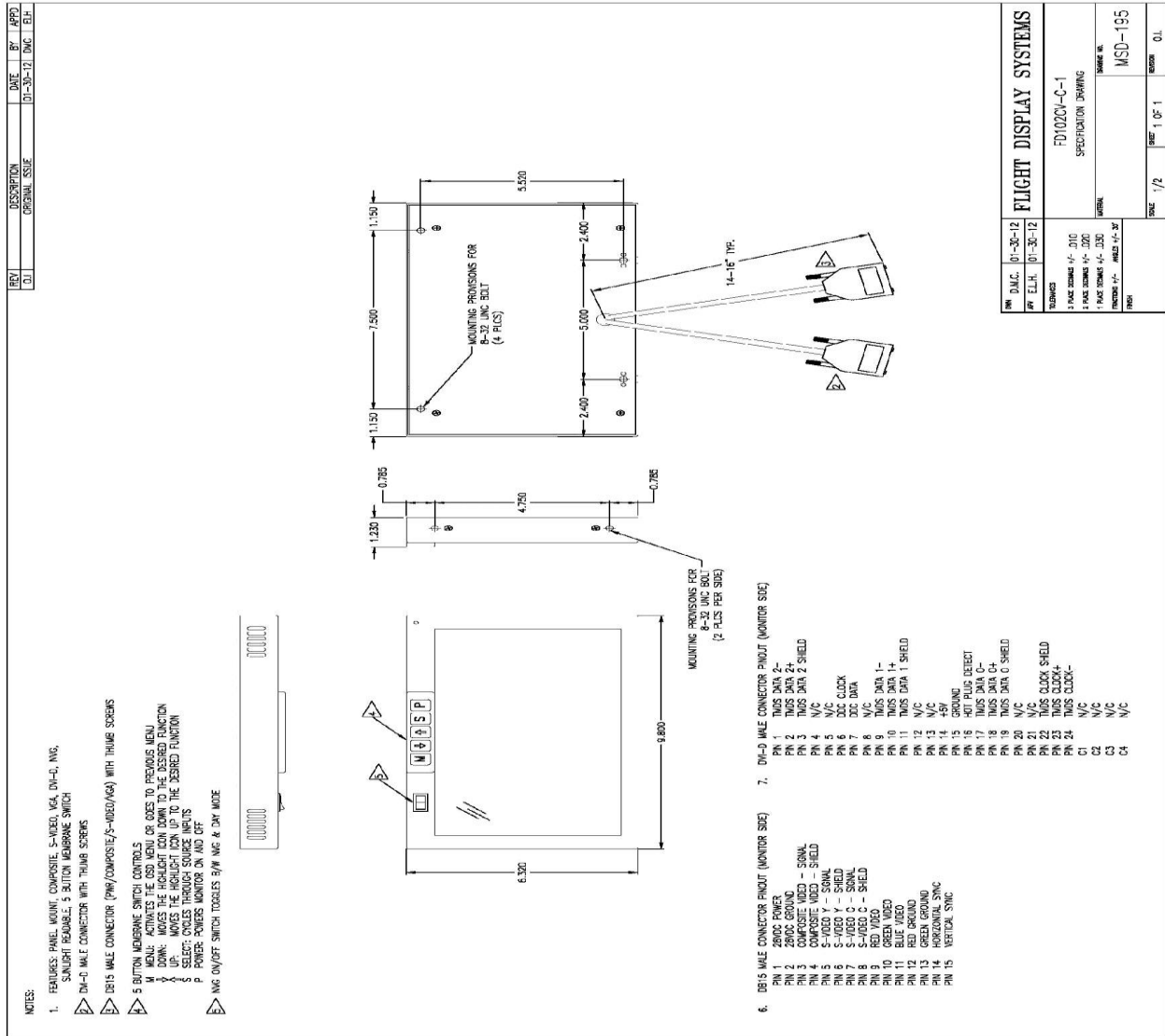
Button	Function	Description
M	MENU	Opens the menu and escapes out of menus
↓	DOWN	Decreases selected option's value in the menu. Outside of the menu this is a hot button to decrease selected function (backlight, brightness or contrast)
↑	UP	Increases selected option's value and enters menu pages. Outside of the menu this is a hot button to increase selected function (backlight, brightness or contrast)
S	SOURCE	Scroll through video sources. In the menu selects between options and menu pages
P	POWER	Turn unit on or off

Remote Control Buttons



The remote control included with the FD102CV-C-1 contains the same functionality available on the display buttons, to include power, source, menu, and directional arrows.

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.

FDS Avionics Corp.
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 FD102CV-C-1 is designed not to require regular general maintenance.





Warranty Information

All FDS Avionics Corp. (FDS) 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	06/29/2012	---	Initial Release
B	4/27/2017	All	Company name change, Warranty, and format.

