



## Installation and Operation Manual

# FD151CV-C-HT

15" Heated LCD Display on Military Arm





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## General Information

The FD151CV-C-HT is a special mission monitor mounted on a ruggedized arm. The unit includes an internally mounted heater to ensure the LCD maintains an optimal operating temperature in the harshest environments.

### Front View



### Additional Information

The FD151CV-C-HT utilizes a state of the art digital video decoding chipset for the analog video input. S-Video is the sole video source available on this unit.

The LCD is protected with a .060" non-glare Lexan lens to prevent scratching of the LCD, and to meet stringent FAA abrasive load criteria.

The arm has 2 pivot points which enable it to have a range of rotation up to 180° at each pivot point with up to six options for locking points at the wall mount; 0°, 45°, 90°, 120°, 153°, and 180°. This monitor also tilts fore and aft 20° and may be rotated 180° left and right with locks at each extent.

## Specifications

Display Type	15" TFT Color LCD
Display Color	16.2 Million Colors
Screen Resolution	XGA 1024 x 768
Brightness	400 cd/m <sup>2</sup>
Dimensions (w/ arm)	17.3" (W) x 16.2" (H) x 4.25" (D)
Display Size	13.8" (W) x 11.4" (H) x 1.6" (D)
Weight	7.1 lbs (monitor only) 9.0 lbs (monitor and arm)
Power (Monitor Only)	28V DC @ 1.1 AMPS
Power (Heater Only)	28V DC @ 3.6 AMPS
Power (Monitor & Heater)	28V DC @ 4.7 AMPS
Video Input	S-Video
Video Type Supported	NTSC/PAL
Screen Control	On Screen Display Menu
Viewing Angle	140° Horizontally, 125° Vertically
Materials	Aluminum
Operating Temperature	0-50° C (32-122° F)
DO-160 Testing	Section 21, Category B Section 7, Category B

## Installation Instructions

All cabin equipment, such as the FD151CV-C-HT, 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 system should it become necessary.

### Power

This is a **28VDC** monitor that requires 1.1 AMPS of power to operate. The unit turns on automatically upon power application. See Operating Instructions below for more details.

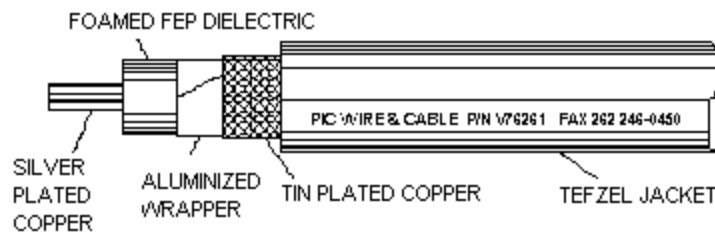
## Wiring Suggestions

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.

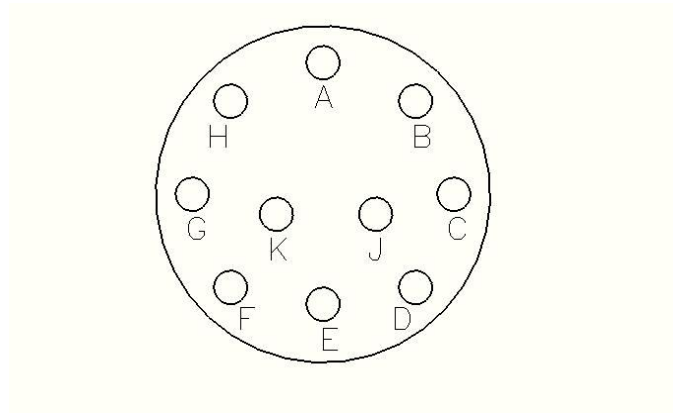
Some aircraft are prone to AC noise - we recommend adding to the composite source a 75 Ohm video isolation transformer such as Deerfield Laboratory, Inc. Part No. 162-1 ([www.deerfieldlab.com](http://www.deerfieldlab.com), (650) 632-4090). In most cases this should be added to the video output of the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

## Power and Ground Wiring

20 AWG wire is recommended for Power and Ground applications.

## Power/Video

Aircraft side connector (provided by FDS Avionics Corp.):  
 D38999/20WC98SN – wall mounted receptacle with sockets  
 M85049/38S13W – Strain relief back shell



Pin Letter	Description
A	28 VDC (MONITOR)
B	GROUND (MONITOR)
C	28 VDC (HEATER)
D	GROUND (HEATER)
E	S-VIDEO Y - SIGNAL
F	S-VIDEO Y - GROUND
G	S-VIDEO C - SIGNAL
H	S-VIDEO C - GROUND
J	CABLE SHIELD
K	CABLE SHIELD

## Operation Instructions

The FD151CV-C-HT is continuously on but may be de-energized by removing power from the display system. No pilot or aircrew action is necessary during flight or ground operation.

When applying 28VDC power, the display will turn on and look for a valid input. If no input is found, the display will go to standby mode.

The unit may be turned on at -40°C, although no picture will appear on the screen. A yellow LED in the bottom, center of the monitor indicates that the heater is on and the unit is in pre-heat mode. Once the monitor has an internal temperature above 10°C, the heater will shut off, however, the monitor will power on automatically when the internal temperature reaches 0°C. A green LED at the bottom, right of the unit indicates that the LCD has power. The monitor may then be operated normally.

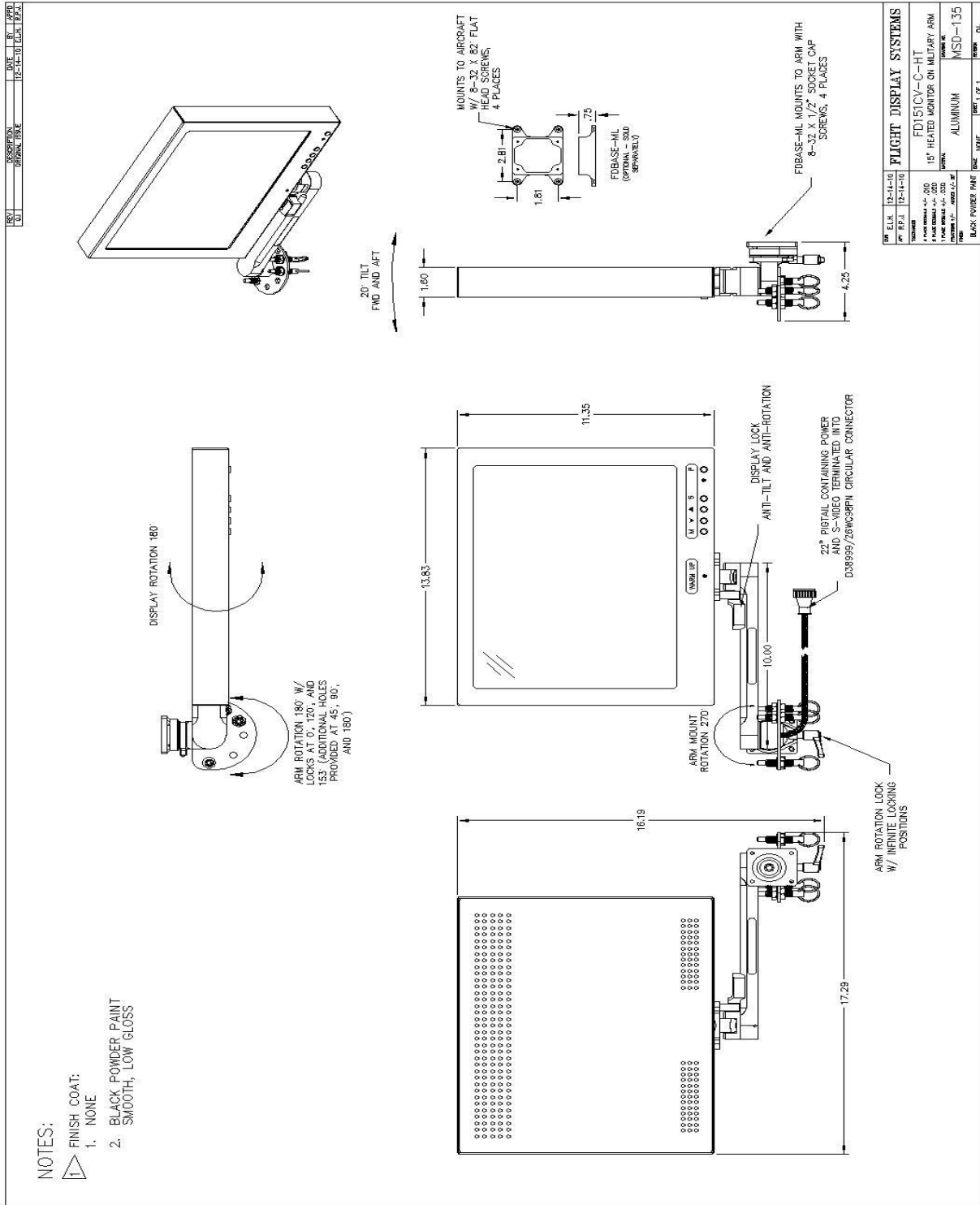
## Button Controls

Located on the front, bottom right of the FD151CV-C-HT are 5 buttons.



BUTTON	DESCRIPTION
M	Activates the OSD menu or goes to previous menu.
▼	Moves the highlight icon down to the function that user wants.
▲	Moves the highlight icon up to the function that user wants.
S	Cycles through source inputs. (Since only S-Video is available, all other inputs are disabled.)
P	Powers monitor on and off.

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

## Instructions for Continued Airworthiness

The FD151CV-C-HT is designed not to require regular general maintenance.





## Limited Warranty

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	02/18/2011		Initial Release
B	10/24/2011		Updated DO-160 Testing, Added Operating Temperature, Updated Warranty Info, updated photo
C	06/29/2012		Format and Warranty Update
D	5/5/2017	All	New Format, New Company Name, new Warranty

