



Installation and Operation Manual

FD102CV-C-7-L/R

10.2" LCD Monitor Left/Right Arm Mount





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General Information

The FD102CV-C-7-L/R is a special mission military monitor. It consists of two separate parts, the LCD monitor and the articulating arm.

Built with retrofit aircraft integration in mind, this display can switch between two video input sources using the buttons on the bezel. Additional functions are added using the 8 bezel keys. These functions are generated by the mission computer.

The arm has 2 pivot points which enable it to have a range of rotation up to 180° at each pivot point. This monitor also tilt forward and AFT 20° in either direction and can rotate 45° left and right.

The LCD features NVG technology which can be switched to Day or Night mode using the rocker switch. The NVG LCD filters out infrared rays in the 1000nm range.

Front View



Additional Information

The FD102CV-C-7-L/R is made of all metal components. The milled aluminium arm represents the evolution of several design enhancements for an optimum mounting solution.

Specifications

Display Type	10.2" TFT Color LCD
Display Color	262K color by 6 bi R.G.B Signal input
Screen Resolution	1024x600
Viewing Angle	140° Horizontal; 110° Vertical
Mount Dimensions (stowed)	11.10(W)x10.45(H)x2.95(D)
Mount Dimensions (deployed)	14.78" (W) x 10.45" (H) x 2.95" (D)
Display Dimensions	11.10" (W) x 6.75" (H)
Weight	4lbs. 5 oz.
Power	28V DC @ 1.0 Amp
Video Inputs Supported	2 - HDSDI
Video Types Supported	HDSDI
Screen Control	On Screen Display Menu
Mount Materials	Aluminum
DO-160 Testing	DO-160 Testing is completed on Parent Products of a similar nature

Installation Instructions

All cabin entertainment equipment, such as the FD102CV-C-7-L/R, 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 monitor should it become necessary.

Power

This is a **28VDC** monitor that requires 1.0 Amps (28 Watts) of power.

Power and Ground Wiring

This is a 28VDC monitor that requires 1 amp of power to operate. To operate properly this monitor requires an input voltage of 18-29VDC.

The rated current of the equipment and associated voltage drop should be taken into consideration when selecting wire gauge. The following example is based on an install with a 28VDC power system and a total of 50 feet of wire between the circuit breaker, monitor and ground.

Example: 22awg wire has 16.2 Ohms per 1000 feet, this equates to .81 Ohms for 50 feet. 1 Amp of current on .81 Ohms will drop .81 Volts.

Resistance of Wire Type M22759/16-** (** = Gauge)	
Gauge (AWG)	OHMS/1000'
24	26.20
22	16.20
20	9.88
16	4.81
12	2.02
10	1.26
8	.701

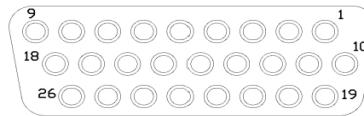
Also, use short heavy gauge wire and a clean tight connection for ground.

It is the installer's responsibility to understand the product's requirements to install the product in compliance with industry standards and safety.

J1 (Power/USB)

Connector
 Contact, Socket

P/N: M24308/2-287F
 P/N: M39029/57-354



MATING FACE

Pin Number	Description
1	28VDC Power
2	28VDC Ground
3	N/C
4	N/C
5	N/C
6	N/C
7	N/C
8	N/C
9	N/C
10	N/C
11	N/C
12	N/C
13	N/C
14	N/C
15	N/C
16	N/C
17	N/C
18	N/C
19	N/C
20	N/C
21	N/C
22	USB Data + (Green)
23	USB Data - (White)
24	USB +5VDC (Red)
25	USB Ground (Black)
26	USB Shield

J2 (HSDSI

Input)

J3 (HDSDI Input)

Standard 75Ω BNC Receptacle (RG179 connector supplied)

Pin	Description
Center	Video Signal
Shell	Video Return

Operation Instructions

The FD102CV-C-7-L/R is continuously on but can be de-energized by removing power from the system. No pilot or aircrew action is necessary during flight or ground operation.

The operator will be able to change the video input from the FD102CV-C-7-L/R using the rocker switch on the LCD monitor.

When applying 28VDC power, the display will turn on and look for a valid input on the last known source. If video is not displayed when power is applied, then increase the backlight brightness using the Right Arrow on the 5 button keyboard as the first step in troubleshooting.

Button Controls




Located at the bottom of the FD102CV-C-7-L/R are five buttons.



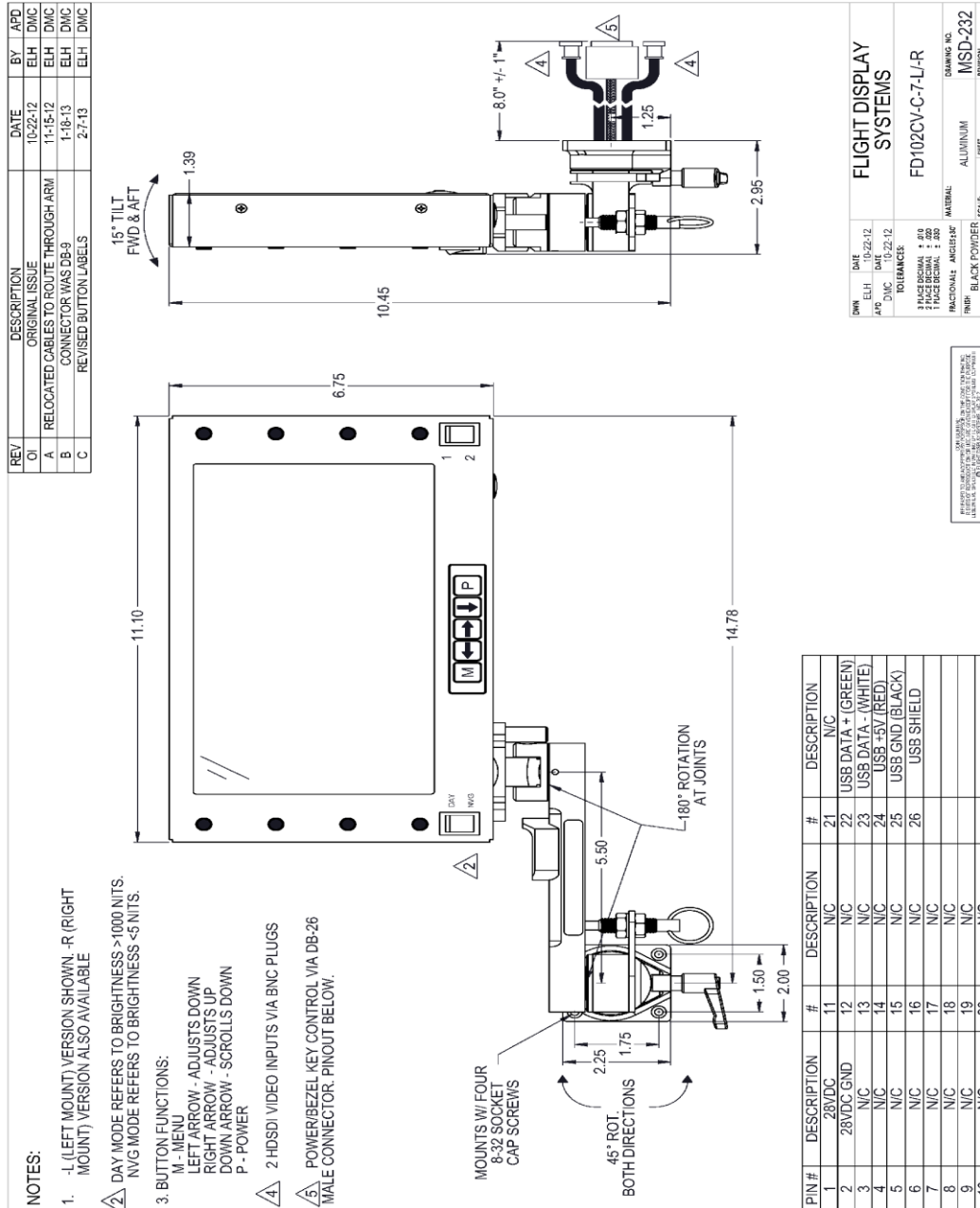
Operations for both switches and buttons are as follows:

Day/NVG – Rocker switch turns night vision on and off

1/2 - Rocker switch allows user to switch from one HDSI input connection to the other.

BUTTON	DESCRIPTION
M	Menu - Used to change the configuration of the picture settings (Backlight, Brightness, Contrast, Saturation, Hue, etc.)
	Left Arrow – Adjusts Down
	Right Arrow – Adjusts Up
	Arrow Down – Scrolls Down
P	Power Button

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-7-L/R 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.





Revisions Log

Rev	Date	Page	Description
A	02/21/2014		Initial Release
B	5/5/2017	All	New Format, New Company Name, new Warranty

