



Installation and Operation Manual

FD141CV-TS-HDSI

14.1” High-Definition Touchscreen LCD





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General Information

The FD141-TS-HDSDI is a 14.1" High-Definition Touchscreen LCD. The unit will allow installation in the smallest of mounting areas with the minimum of interface equipment.

This 14" display is intended to support applications where high brightness is a critical factor. It is an excellent flat panel display for use in rugged environments or anywhere daylight applications are required.

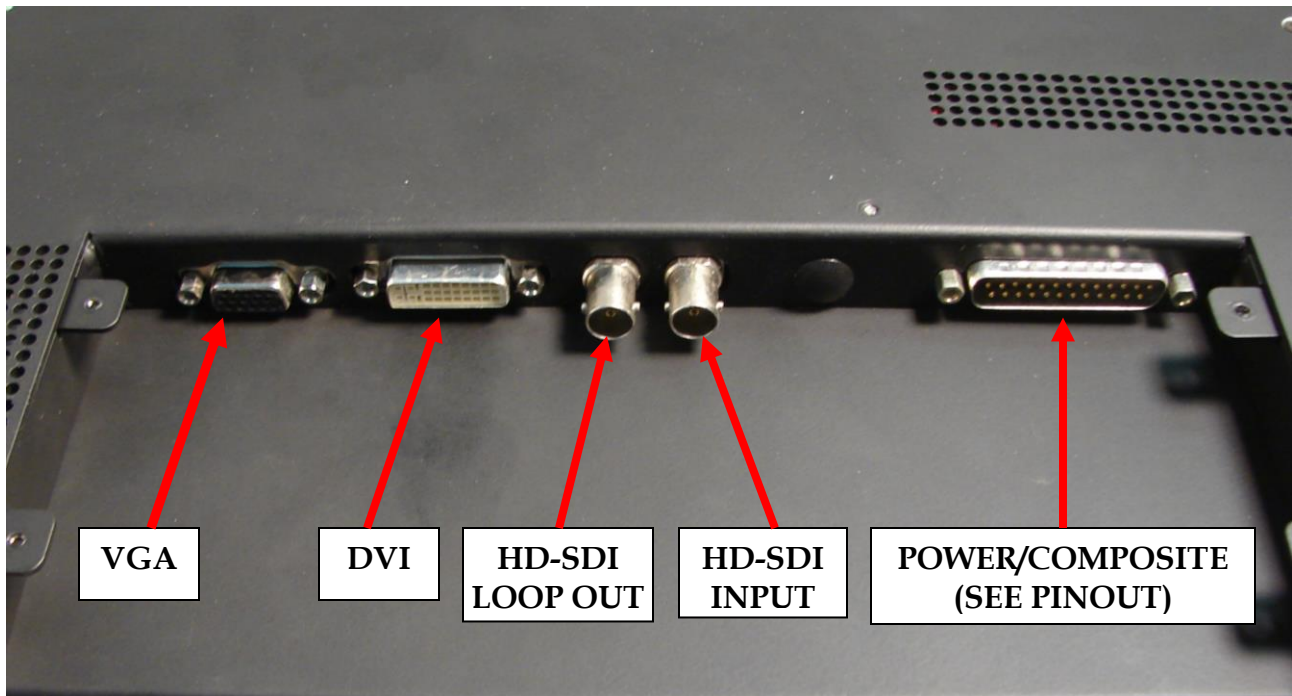
Front View



Rear View (with connector cover)



Rear View (inputs)



Additional Information

The FD141CV-TS-HDSDI utilizes a state of the art digital video decoding chipset for the analog video input. The unit includes 4 video source inputs. They are in order of picture quality: (1)HD-SDI (High Definition camera), (1) DVI (computer input), (1)VGA (computer graphics like Moving Maps) and (1) Composite.

The FD141CV-TS-HDSDI has touchscreen capability using support programs with RS-232.

The FD141CV-TS-HDSDI is made of all metal components.

Specifications

Display Type	WXGA LCD with LED Backlight
Display Color	262,144 Colors
Screen Resolution	1280 x 800 Pixels
Brightness	1000 cd/m ²
Dimensions	14.00”(W)x8.89”(H)x1.93”(D) (to button cover)
Display Size	11.89”(W)x7.42”(H)
Weight	6lbs. 10oz.
Power	28V DC @ 1.5 AMPS
PC & Video Input	VGA (High-Density DB-15 Connector), HD-SDI, DVI, Composite (via DB-25 Connector)
Video Type Supported	NTSC/PAL
Screen Control	Touchscreen
Viewing Angle	176° on Both Axis
Materials	Aluminum
DO-160 Testing	RTCA/DO-160 Section 7, Category B RTCA/DO-160 Section 21, Category B
Remote Control	N/A
Pixel Pitch	0.237(H)mm x 0.237(V)mm

Installation Instructions

All cabin entertainment equipment, such as the FD141CV-TS-HDSDI, 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.

To install the unit, (4) mounting locations are at the front corners of the unit. Four #10 socket-head screws (not supplied) are needed to secure the unit to the mounting surface. It is *strongly* recommended that all four mounting locations be used. When installed, at least ¼" gap should be maintained along the left and right sides and rear of the unit to allow for convection cooling.

Power

This is a **28V DC** monitor that requires 1.5 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.

Power and Ground Wiring

This is a 28VDC monitor that requires 1.5 amps of power to operate. To operate properly this monitor requires an input voltage of 28VDC.

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. 3 Amps of current on .81 Ohms will drop 2.43 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	.70

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

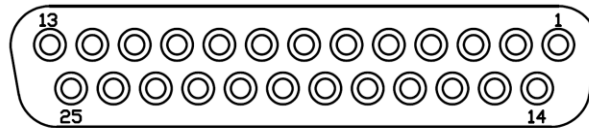
It is the installer's responsibility to understand the product's requirements to install the product in compliance with industry standards and safety.

Power/Video

Pinout for DB-25 Receptacle

Connector
 Crimp Contacts

P/N: M24308/2-283 or Equivalent
 P/N: M39029/63-368 or Equivalent



MATING FACE

Pin Number	Description
1	28VDC Power
2	28VDC Ground
3	Composite Video - Signal
4	Composite Video - Ground
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	RS232 - Request to Send (RTS)
15	RS232 - Received Data (RxD)
16	RS232 - Transmit Data (TxD)
17	RS232 - Ground (GND)
18	N/C
19	N/C
20	N/C
21	N/C
22	N/C
23	N/C
24	N/C
25	N/C

Operation Instructions

The FD141CV-TS-HDSI is continuously on but can be de-energized by removing power from the entertainment system. No pilot or aircrew action is necessary during flight or ground operation.

The passengers will be able to change the video output from the FD141CV-TS-HDSI using the video source select button on the display.

When applying 28V DC power, the display will turn on and look for a valid input on the last known source. If no input is found, the display will go to standby mode. Pressing the Select button will select new video input.

Button Controls

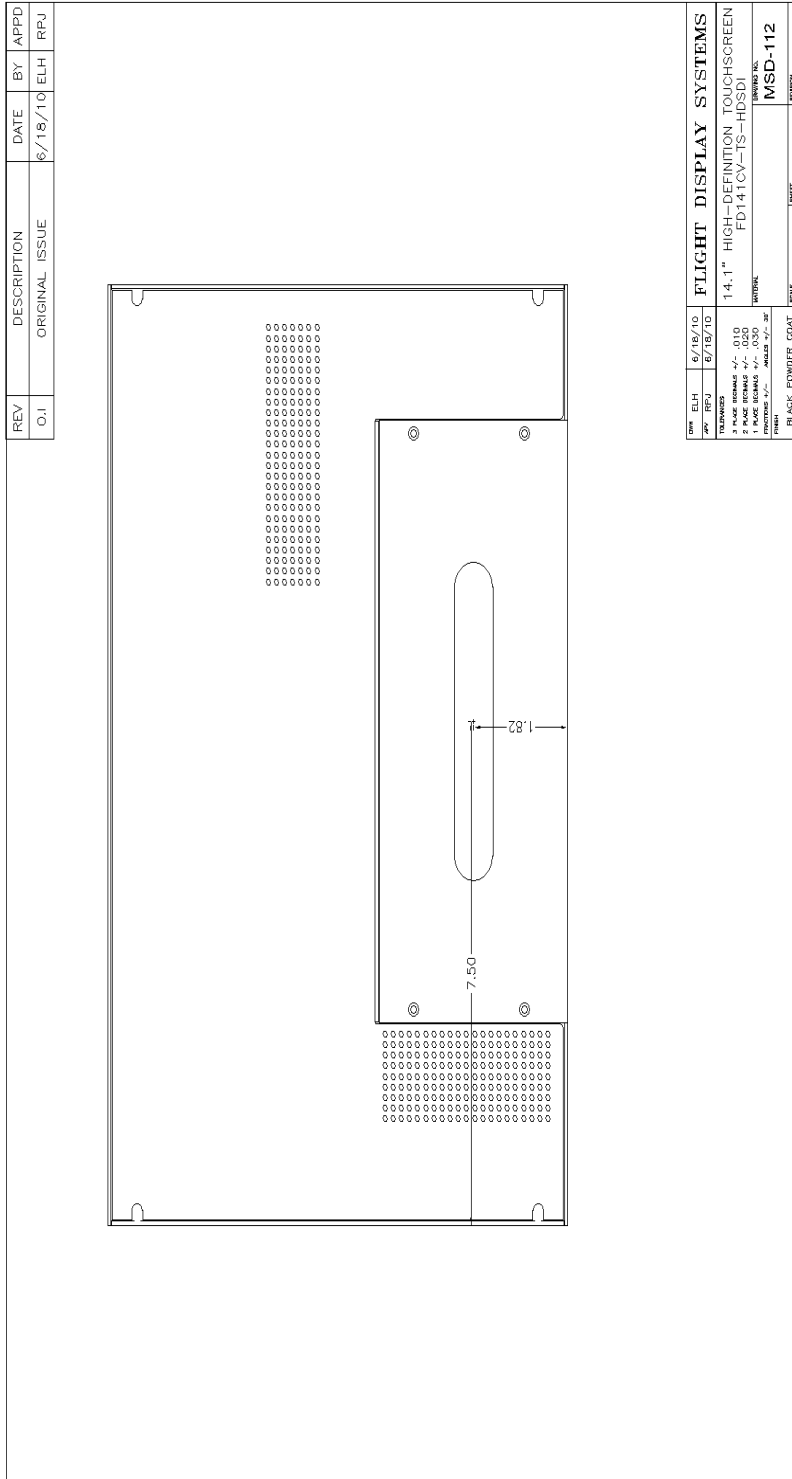
Located at the right of the FD141CV-TS-HDSI are 8 buttons. Their functions are shown below as well as labelled on the left side of the monitor.



BUTTON	DESCRIPTION
POWER	Toggles the power ON or OFF. Also, wakes the display up from SLEEP mode.
MENU	Opens the MENU.
AUTO	Auto-adjusts the display's size and position.
DOWN	Moves to the next selection in the menu.
UP	Moves to the previous selection in the menu.
LEFT	Decrease the selection's value in the menu.
RIGHT	Increases the selection's value in the menu.
SOURCE	Switches between sources coming into the display*. *CMS will automatically control the monitor source switching when using the Cabin Control Modules.



Installation 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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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 FD141CV-TS-HDSI 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	06/18/10		Initial Release
B	08/10/10	12	Updated Warranty info
C	03/29/2011	4,5	Added a note to the General Information, Updated Specifications
D	06/29/2012		Format and Warranty Update
D	1/12/2017	All	Company name change and formatting. No revision change necessary.

