

# FD900X3C

## Installation and Operation Manual

### 28VDC Wireless Audio Transmitter



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**Flight Display Systems**  
*Enhancing the Flight Experience*

## **FD900X3C**

28VDC Wireless Audio Transmitter

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## General Information

The FD900X3C is a 28VDC Wireless Audio Transmitter that represents a state of the art audio experience. The FD900X3C has features that allow installation in the smallest of mounting areas with the minimum of interface equipment. Built with retrofit aircraft integration in mind, this transmitter can be mounted almost anywhere in the cabin.

### Top View



### Additional Information

This Wireless Audio Transmitter is for use exclusively with the FD24X3C Headsets (not included, shown below). The headset operation information is included with the purchase of a headset. A brief overview of headset operation is to turn the headset ON using the ON/OFF/TUNE button. Press the TUNE button to tune in the first clear frequency. Adjust the VOLUME with the volume adjustment wheel. Subsequent channel selections are obtained by pressing the TUNE button. The headset can be turned off by holding the ON/OFF/TUNE button for 5 seconds.



FD23X3C

## Specifications

<b>Channels</b>	3
<b>Channel Frequencies (MHz)</b>	2460.3, 2460.9, 2461.5
<b>RF Output Power</b>	< 10 mW
<b>Distortion</b>	< 1%
<b>Signal-Noise Ratio</b>	≥ 75 dB
<b>Frequency Response</b>	30-20,000 Hz
<b>Dimensions</b>	6" (W) x 1.6" (H) x 3.6" (D)
<b>Weight</b>	7 oz
<b>Power</b>	28VDC @ 180 mA
<b>Input</b>	DB-15 High Density Male
<b>Materials</b>	ABS Plastic (Burn Rating - UL94-5VA)
<b>DO-160 TESTED</b>	FAA/PMA Approved
<b>Flammability Testing</b>	FAR 25.853(a) Appendix F, Part I(a)(1)(ii) Passed

## Installation Instructions

All cabin entertainment equipment, such as the FD900X3C, 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 two #8 mounting holes located on the ends of the housing. It is sufficient to mount by two attach points. Mounting locations in the cabin can be anywhere that is not blocked or enclosed by metal surfaces. A drawer, cabinet, headliner or other suitable location is fine. When using the headsets, it is necessary to cycle the headset to get the frequency's to tune. Sometimes if the operator leaves his/her hands touching the headset the arms and body will act like an antenna and the tuning is more difficult. For optimum tuning, press the TUNE button and release. It is important to match the output impedance of the audio sources. The input of the FD900X3C should be low level audio such as that used for the inputs to home or automotive entertainment systems. If one source is significantly stronger than another, it will cause significant variation in the volume levels between channels. It may also cause frequency bleeding and crossover between the audio channels.

**Installation Note:** The FD900X3C transmits 3 channels in the 2.4GHz frequency range. As a result there is a potential for the unit to interfere with or pick up interference noise from other devices within the cabin operating in the 2.4GHz range also. Examples of other devices that have created a known conflict include the Garmin GRT 10 Transceiver, used to remotely switch the Garmin GDL69A, and the Heads Up Technologies XMC050 remote control unit which also operates in the 2.4GHz frequency range. If you wish to interface a wireless headset transmitter to either of the two products mentioned we recommend you purchase a FD900X2 (2 channel wireless transmitter) or our FD900X5 (5 channel wireless transmitter) which both transmit at 900MHz.

## Power

The FD900X3 is a 28VDC device that requires 180 mA of power to operate.

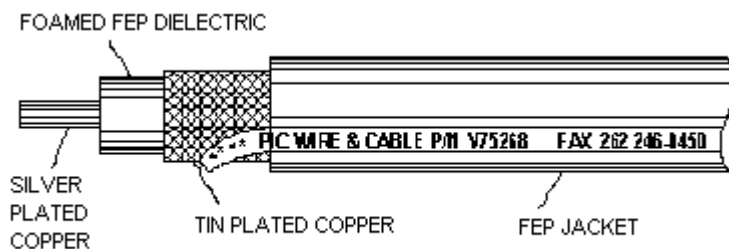
## Audio Wiring Suggestions

The center conductor of coaxial cable should be high, and outer shield should be the return/low.

- Avoid routing audio wiring parallel to:
- AC wiring
- Strobe wiring
- DC motor supply cables
- Inverter cabling
- Or any other potential noise source.

## Wiring

Recommended cable for audio purposes is PIC 75 Ohm Coax, P/N V75268. 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.

## Pinout for High Density DB-15

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

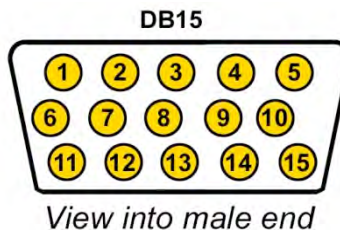
High density, D-sub, 15 contact receptacle (female)

P/N 748565-1

HD15F pins

P/N M39029/57-354

## Wiring Diagram



Pin Number	Description
1	28VDC Power
2	N/C
3	Audio #1 – Left
4	Audio #1 – Ground (L/R)
5	Audio #1 – Right
6	28VDC Ground
7	N/C
8	Audio #2 – Left
9	Audio #2 – Ground (L/R)
10	Audio #2 – Right
11	N/C
12	N/C
13	Audio #3 – Left
14	Audio #3 – Ground (L/R)
15	Audio #3 – Right

## Operating Instructions

The passengers will be able to access the different audio channels by momentarily pressing the TUNE button found on the headset (not supplied). It is necessary to cycle the headset through the different frequencies once turned on so that it may recognize the transmitting frequencies.

If you recognize degradation in the quality of your audio or that you cannot channelize the frequencies, check to make sure your headset batteries have sufficient power.

## Technical Support

Should you have any questions concerning this product or other Flight Display Systems products, please contact our Product Support representatives at (678) 867-6717.

### **Flight Display Systems**

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

## **Instructions for Continued Airworthiness**

The FD900X3C is designed not to require regular general maintenance.

## **Warranty Information**

Flight Display Systems warrants the FD900X3C against material or manufacturing defects for a \*two-year period (effective 1/1/2009 on all equipment shipped with 2009 pricing). Warranty begins on date of installation. \*The warranty registration card must be returned upon installation in order to validate the two-year warranty. Any warranty registration not returned during this time period will default to the date of purchase as the warranty start date.

If product support is required, please call our Technical Support team at 678-867-6717 to obtain assistance. If the return of the unit to the factory is required, an RMA number will be issued at that time. Flight Display Systems will, upon receipt of the failed hardware, remanufacture or replace the unit at our discretion.

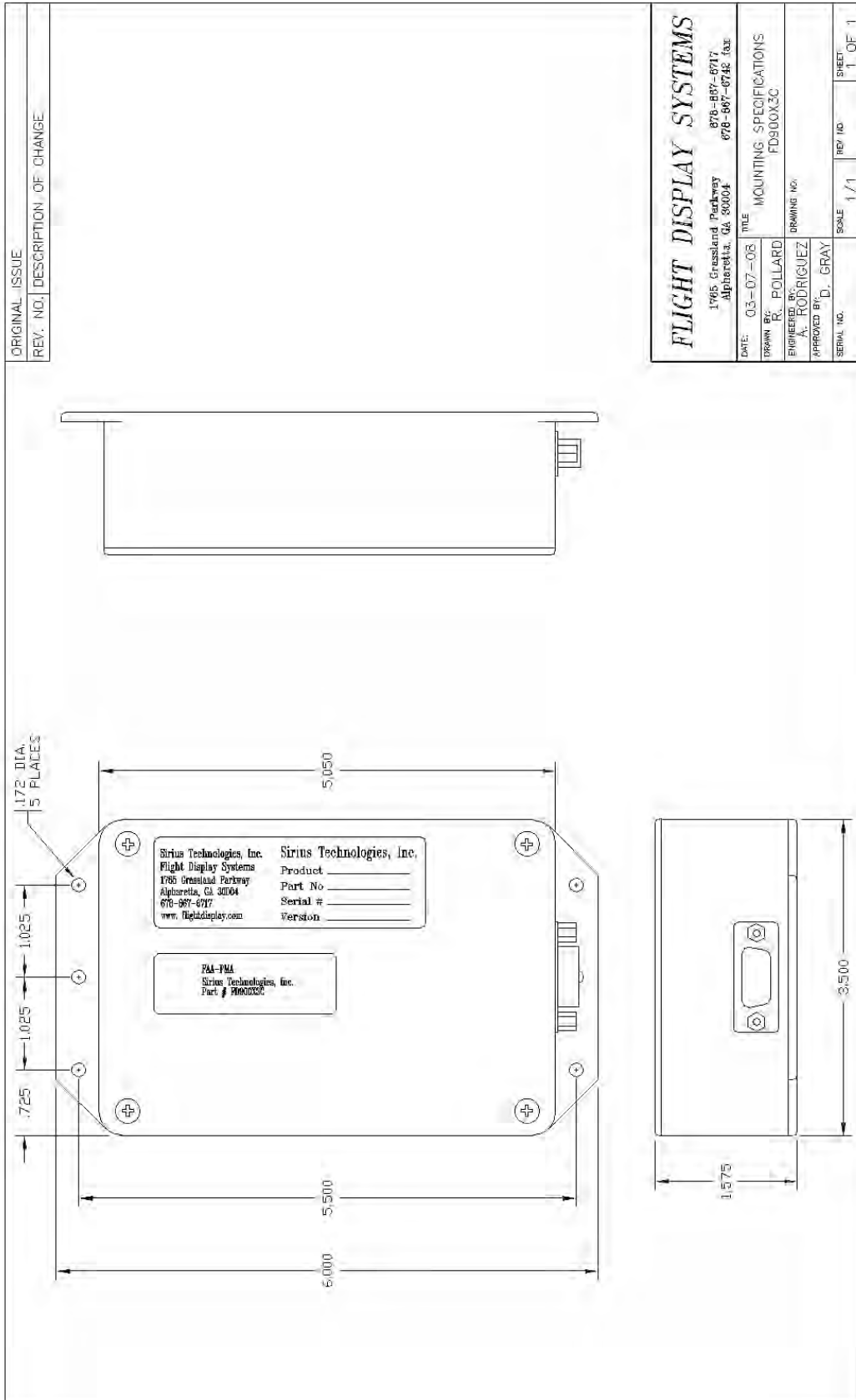
Flight Display Systems will pay Ground Shipping charges for warranted items. Charges for express shipment will be the responsibility of the sender.

This warranty is not transferable. Any implied warranties expire at the expiration date of this warranty. We shall not be liable for incidental or consequential damages.

This warranty does not cover a defect or failure that has resulted from improper or unreasonable installation, use or maintenance, as determined by Flight Display Systems. This warranty is void if there is any attempt to disassemble or open this product without factory authorization.

Any labor charges associated with the removal of product or related troubleshooting by a firm other than Flight Display Systems or its designee will not be covered.

# Assembly Drawing



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## Revision Log

Revision	Date	Page	Description
A	06/20/2008	N/A	Original
B	07/25/2008	9	Updated assembly drawing
C	04/14/2009	4,8	Updated specifications, warranty info
D	08/18/2009	5	Added Installation Note