



D1000C (P/N: 100240) IRIDIUM SATCOM DATA SOLUTION **Installation Guide**

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Revision 2.0

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INTRODUCTION

APPLICATION

This guide is applicable to the following components:

Part Number	Component Description
100240	D1000C Modem Unit
100184	DB9 Power Connector Kit
S67-1575-109	Single-channel Antenna (Iridium & GPS)
S67-1575-165	Dual-channel Antenna (Iridium & Iridium/GPS)
Notes	

OVERVIEW

The information contained in this manual describes the features, functions, technical characteristics, components, approval procedures, installation considerations, setup procedures, checkout procedures and instructions for continued airworthiness for a BLUE SKY NETWORK D1000C IRIDIUM SATCOM DATA SOLUTION.

Information, drawings and wiring diagrams contained in this manual are intended as a reference for engineering planning only. Drawings and wiring diagrams contained herein do not represent any specific aircraft installation. It is the installer's responsibility to create installation drawings specific to the aircraft. This manual, and drawings and wiring diagrams, contained herein may not be used as a substitute for any drawing package.

SYSTEM DESCRIPTION & OPERATION

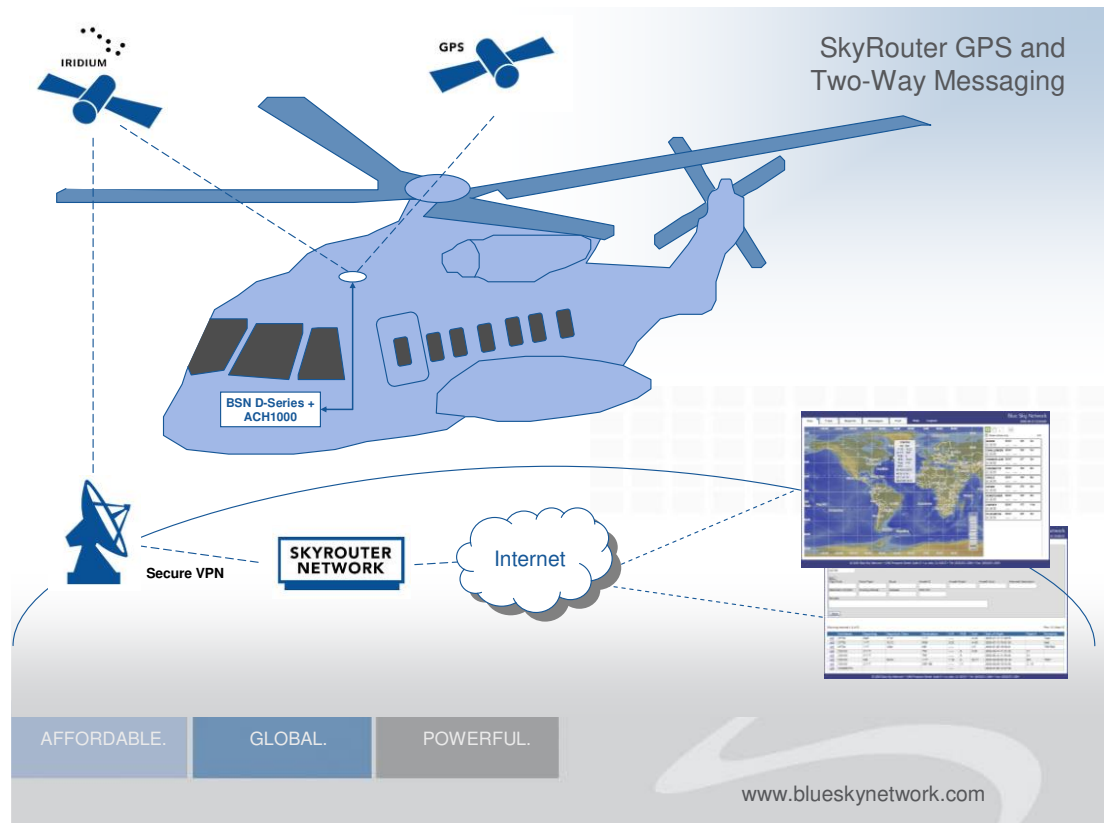
SYSTEM DESCRIPTION

General

The Blue Sky Network D1000C Iridium SATCOM data solution provides unprecedented next generation satellite data communications to and from aircraft on a global scale. This affordable and robust terminal provides an integrated Iridium and GPS solution that allows owners, operators, and passengers to track, and communicate with, aircraft world-wide. The D1000C offers GPS position reporting, two-way email messaging and telemetry data delivery.

All data services are managed by the customer through our web-based SkyRouter.com servers. SkyRouter.com offers global flight tracking powered by Flight Explorer and a two-way messenger application. It also offers account management features, such as user and D1000C fleet management, and billing information. Access to SkyRouter.com is highly secure and password protected.

The D1000C solution ties easily in with Blue Sky Network's SATCOM voice products using our dual-channel Iridium antenna.



Portable vs. Fixed Installation

The Blue Sky Network D1000C can be installed as a portable or fixed unit. In both configurations the D1000C should get power from the main aircraft power bus.

Features

World-wide - The D1000C is a truly global satellite communication solution. Using the Iridium Satellite Network, Blue Sky has exploited an efficient and cost effective communication delivery system.

GPS - The D1000C has an integrated GPS. Users can define position reporting intervals via the unit remotely. The GPS sensor receives its input via the single-channel, TSO'd Iridium antenna, requiring less installation.

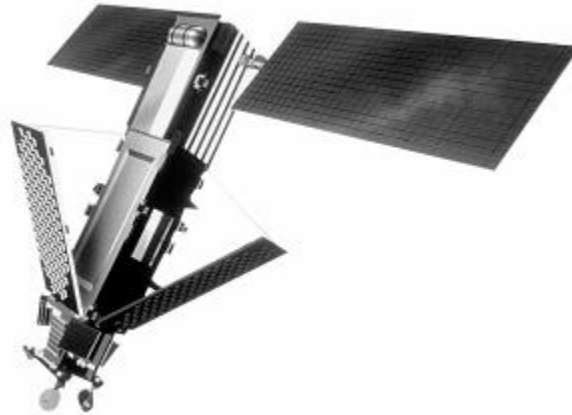
Flight Tracking - Directly from our website, users can view the location of one, or a fleet of aircraft. Our web-based SkyRouter.com flight tracking solution is powered by Flight Explorer. Flight tracking data can also be utilized by 3rd party flight tracking solutions.

Remote Configuration - Parameters in the D1000C unit have to be set remotely from the SkyRouter.com website. Parameters are changed on a last-updated basis.

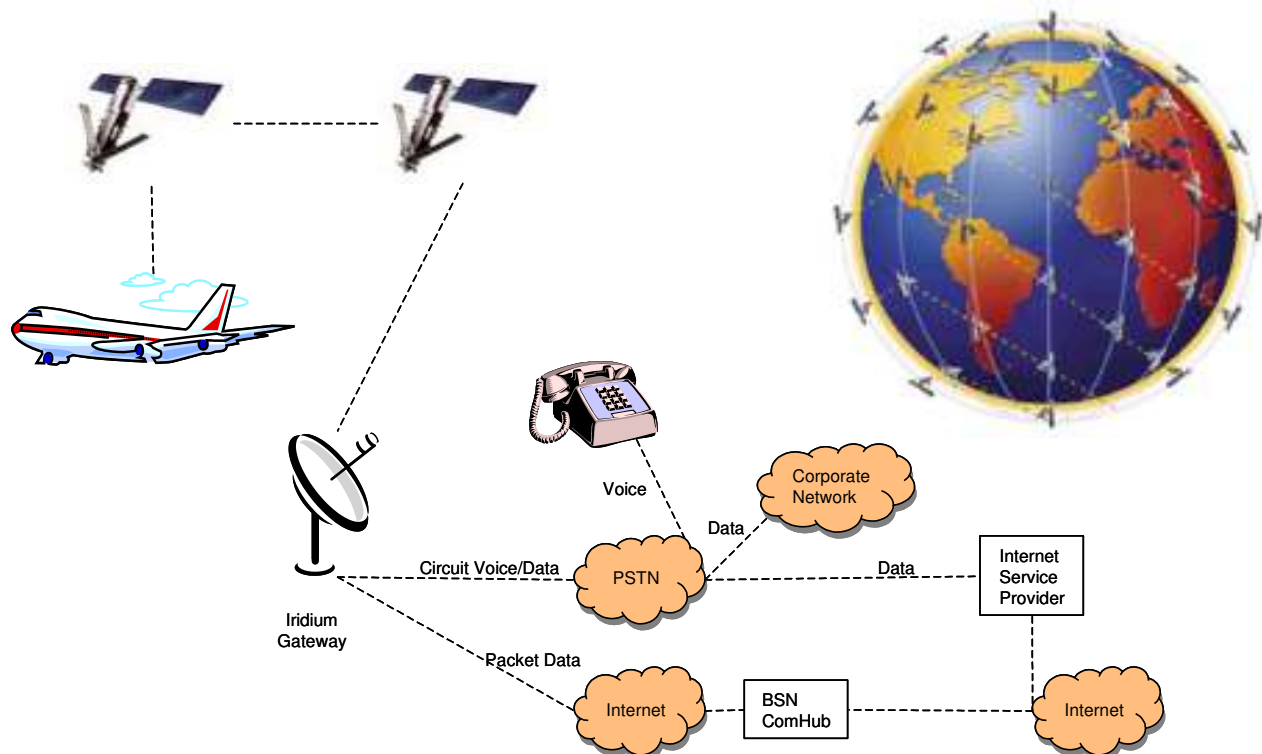
Portability - The D1000C may be used as a portable unit. A portable kit, including carrying case and cabling, is optional.

Iridium Satellite Network

The Iridium Satellite System is the only current provider of truly global, truly mobile satellite voice and data solutions with complete coverage of the Earth (including oceans, airways and Polar Regions). Through a constellation of 66 low-earth orbiting (LEO) satellites operated by Boeing, Iridium delivers essential communications services to and from remote areas where terrestrial communications are not available. The service is ideally suited for the aviation industry as well as industrial applications such as heavy construction, defense/military, emergency services, maritime, mining, forestry, oil and gas.



Satellites	66 (plus 6 in-orbit backup satellites)
Orbital Planes	6
Orbit Altitude	485 miles (780 kilometers)
Inclination of Orbital Plane	86.4 degrees
Orbital Period	100 minutes, 28 seconds
Satellite Weight	1,500 pounds (689 kilograms)
Spot Beams	48 per satellite (30 miles in diameter per beam)



GPS Satellite Navigation System

The Global Positioning System (GPS) is a worldwide radio-navigation system formed from a constellation of satellites and their ground stations.

GPS uses these "man-made stars" as reference points to calculate positions accurate to a matter of meters (like giving every square meter on the planet a unique address).

GPS satellite signals are processed in a GPS receiver, enabling the receiver to compute position, velocity and time. GPS receivers have been miniaturized to just a few integrated circuits, and are becoming very economical, which makes the technology accessible to virtually everyone.

While there are thousands of civil users of GPS world-wide, the system was designed for the U. S. military. GPS is funded and operated by the U. S. Department of Defense (DOD).

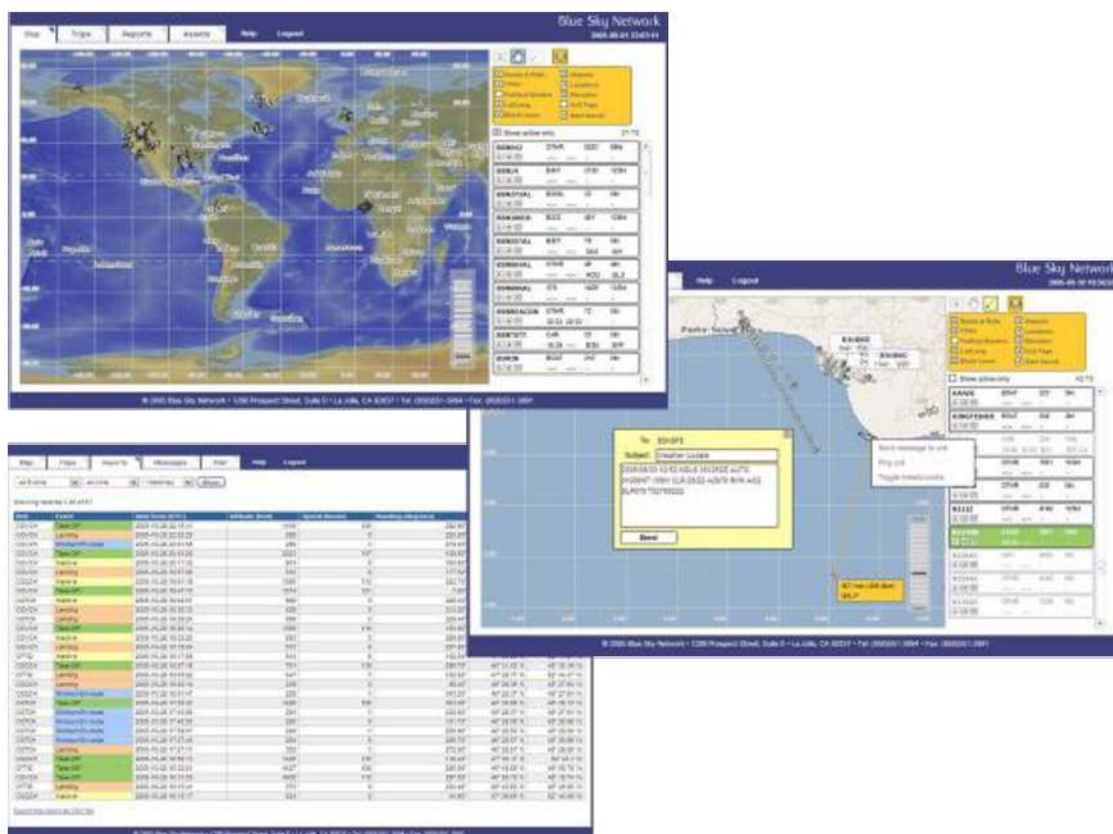
FLIGHT TRACKING

SkyRouter is an entirely unique, global web-portal, designed and operated by Blue Sky Network to support the company's powerful D-Series hardware. The system is designed to receive satellite messages from assets in route or end users on the ground, in the form of GPS position reports, two-way text messages, or telemetric data reports. Included in the SkyRouter web-portal is a smooth global mapping solution accessible to anyone with an Internet connection. From the SkyRouter management console users can track assets, communicate via simple text messaging, and receive and update trip plans.

The SkyRouter asset management portal works exclusively with Blue Sky Network SATCOM products (currently the D1000A, D1000C and ACH1000).

For the first time ever, dispatchers, logistics and operations managers as well as executives has the power to control all of their assets (aviation, marine or land based) from their desk. Asset management has never been easier.

Blue Sky Network also provides interfaces to several other Flight Tracking software solutions, such as Flight Explorer and Forest Services in both the US and Canada.



FAA/JAA APPROVAL

GENERAL

Acceptance for the installation and use of the D1000C Satellite System must be sought through the appropriate offices of the Federal Aviation Administration (FAA), Joint Aviation Authorities (JAA) or other certifying agency.

The D1000C Satellite System is approved by the FAA (Federal Aviation Administration) as compliant with the airworthiness requirements as defined in 14 CFR (Code of Federal Regulations), Part 23.

STC Number: SA01588LA (DWG No. 3SKY01 rev. E) - Cessna 414A Series as amended February 10th, 2005

PMA #: PQ2389M

Supplement No.: 3

The Blue Sky Network Iridium-tuned Single-channel Antenna and the Iridium-tuned Dual-channel Antenna have been approved by the FAA (Federal Aviation Administration) as compliant with the airworthiness requirements as defined in 14 CFR (Code of Federal Regulations), Part 23.

INSTALLATION AND OPERATIONAL APPROVAL PROCEDURES

A functional ground test procedure and an operational flight check procedure should be used to verify proper installation, functional performance and electromagnetic compatibility with existing aircraft systems.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

The D1000C components require no routine servicing or maintenance. The installation has no additional overhaul time limitations.

ENVIRONMENTAL QUALIFICATION

D1000C Modem Unit

The D1000C Modem Unit has been tested to DO-160D Section 21, Category M.

Single-Channel Antenna

The Single-Channel Antenna is qualified to DO-160, MIL-C-5541, MIL-E-5400, MIL-STD-810 and TSO-C129.

Dual-Channel Antenna

The Dual-Channel Antenna is qualified to DO-160C, MIL-C-5541, MIL-E-5400, MIL-STD-810 and TSO-C129a.

EQUIPMENT SPECIFICATIONS AND DRAWINGS

BLUE SKY NETWORK D1000C SPECIFICATIONS

Height	Maximum 3.5 inches (8.9 cm)
Width	Maximum 5.3 inches (13.5 cm)
Depth	Maximum 11.5 inches (29.2 cm)
Weight	5.1 pounds
Power Requirements	10VDC - 33VDC
Alternate Power	---
Nominal Current	< 1A Continuous, < 2A Peak
Operating Temperature Range	-20 degrees C to + 60 degrees C
Altitude	Up to 50,000 feet
Iridium Data Circuit Frequency	L-Band
Short Burst Data Frequency	L-Band
GPS Frequency	L-Band
LED Indicators	Power (ON/OFF) Iridium and GPS Signal Strength Message Waiting (ON/OFF)
Laptop/PDA I/O	----
Sensor Data I/O	1 Serial Port (RS-232)
Antenna Options	Single or dual channel GPS/Iridium tuned fully TSO'd
FAA Certification	DO-160D

1. DIMENSIONS ARE FOR INSTALLATION REFERENCE ONLY AND NOT FOR INSPECTION.

2. CENTER OF GRAVITY (CG) IS APPROXIMATE AND DOES NOT INCLUDE MATING CONNECTORS AND CABLES OR THE PHONE CORD.

3. DIMENSIONS ARE IN INCHES (DIMENSIONS IN BRACKETS ARE IN MILLIMETERS)

4. MATING CONNECTOR: TYPE DB-9S

5. MATING CONNECTORS: TYPE DB-9P

6. MATING CONNECTORS: TYPE MICRO DB-9P

7. MATING CONNECTORS: TYPE TNC

8. NOMINAL WEIGHT: 5.1 LBS (2.3 KG) ±15%.

POWER CONNECTOR TYPE DB-9S

SERIAL1 CONNECTOR TYPE DB-9P

SERIAL2 CONNECTOR TYPE DB-9P

MAINTENANCE CONNECTOR TYPE MICRO DB-9S

ANTENNA CONNECTOR TYPE TNC

NAMEPLATE

MOUNTING SURFACE

OUTLINE AND INSTALLATION, D-1000 COMPACT

Dimensions (inches in brackets, millimeters in parentheses):

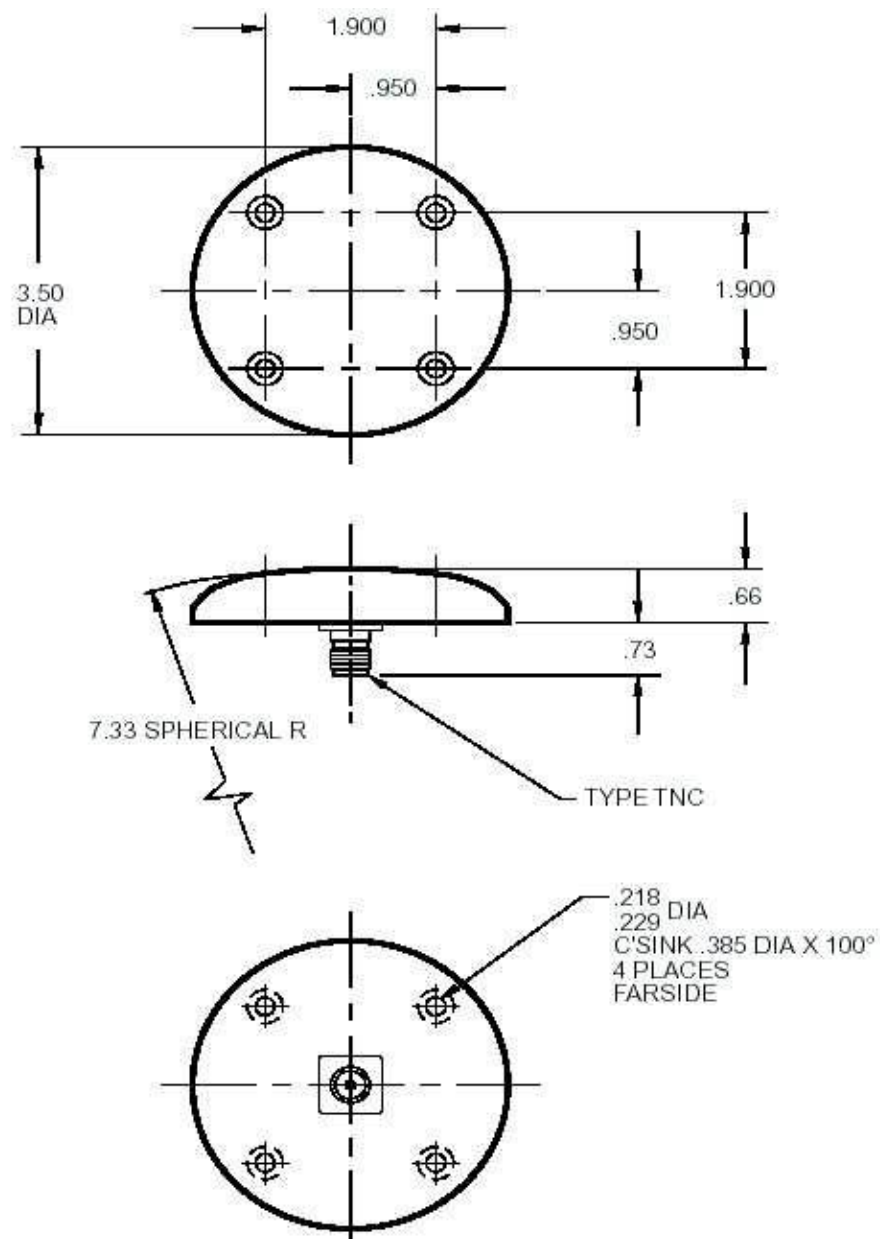
- Overall Width: 146.1 (3708)
- Overall Height: 5.75 (146)
- Mounting Hole Spacing: 8.4 (213)
- Mounting Hole Diameter: .33
- Mounting Hole Center to Bottom Edge: 135.3 (3437)
- Mounting Hole Center to Side Edge: 74.7 (1900)
- Mounting Hole Center to Bottom Edge: 2.94 (75)
- Mounting Hole Center to Side Edge: 1.24 (31.5)
- Mounting Hole Center to Bottom Edge: 2.47 (62.7)
- Mounting Hole Center to Side Edge: 3.47 (88.1)
- Mounting Hole Center to Bottom Edge: 10.77 (273.4)
- Mounting Hole Center to Side Edge: 11.27 (286.1)
- Mounting Hole Center to Bottom Edge: 4.9 (124)
- Mounting Hole Center to Side Edge: 3.2 (81)
- Mounting Hole Center to Bottom Edge: 4X Ø.19

SINGLE-CHANNEL ANTENNA



The antenna is a spherical-radius molded radome that provides protection against rain, ice, and lightning strikes. It is qualified for high-speed military and commercial aircraft and is designed to DO-160, MIL-C-5541, MIL-E-5400, MIL-STD-810 and TSO-C129 standards.

Frequency (Iridium/GPS)	1616 -1626.5 MHz / 1575 \pm 10MHz
VSWR	1.5:1
Polarization	Right Hand Circular Polarization (RHCP)
Impedance	50 ohms
Power Handling	60 watts CW
Gain	+3 dBic @ Zenith
Lightning Protection	DC grounded
Weight	6 oz.
Material	6061-T6 aluminum / thermoset plastic
Finish	Skydrol resistant enamel

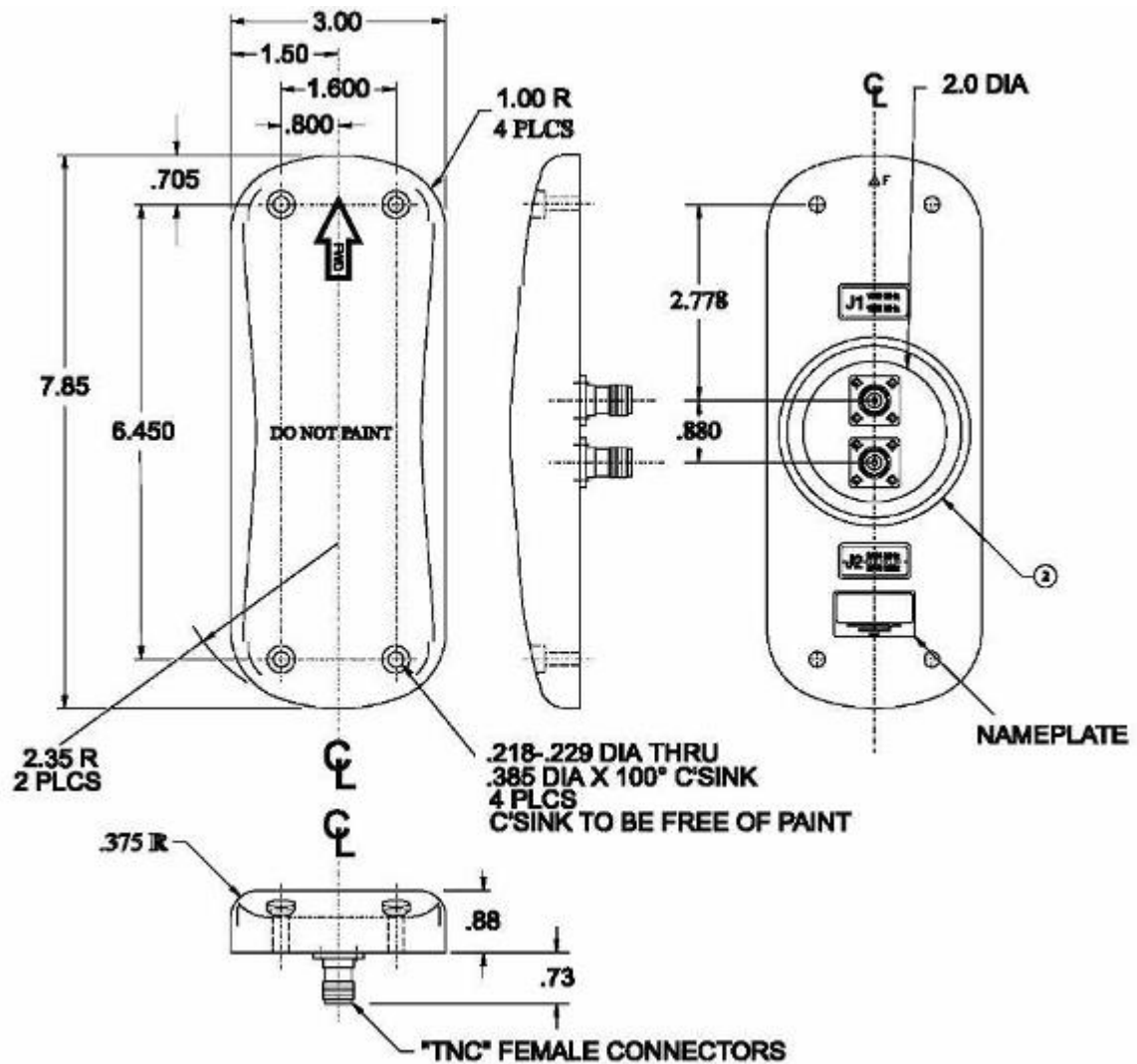


DUAL-CHANNEL ANTENNA



The Dual-Channel antenna is available for aircraft with multiple Iridium phone installations. The antenna is a low profile dual-element molded radome that provides coverage from 1610 to 1626.5 MHz for excellent Iridium operations and 1530-1660.5 MHz for low gain data application. It is designed to DO-160C, MIL-C-5541, MIL-E-5400, MIL-STD-810 and TSO-C129a standards and is qualified for high-speed military and commercial aircraft.

Frequency	
J1	1610 - 1626.5 MHz
J2	1530 - 1660.5 MHz
VSWR.....	2.0:1
Polarization	Right Hand Circular Polarization (RHCP)
Impedance	50 ohms
Power Handling	60 watts
Gain	+3 dBic @ Zenith
Lightning Protection.....	DC grounded
Weight.....	16 oz.
Material	6061-T6 aluminum / thermoset plastic
Finish	Skydrol resistant enamel



INSTALLATION & WIRING

GENERAL INFORMATION

Generally, modification of the aircraft consists of installing a dedicated single-channel or dual-channel Iridium antenna with a connection for a carry-on D1000C.

NOTE: AN IRIDIUM ANTENNA REQUIRES PROFESSIONAL INSTALLATION.

LICENSE REQUIREMENTS

The D1000C SATCOM DATA SOLUTION has no licensing requirements.

COOLING AIR REQUIREMENTS

The D1000C has very low power usage so forced air cooling is not required for any of the components. However, units should be kept away from heat sources.

AIRCRAFT INTERFACES

The D1000C operates independent of aircraft navigation systems. Therefore, no aircraft interface is required other than the 10-33Vdc Power Input, Power Return and Chassis Ground.

Power Input

The only component of the D1000C requiring aircraft power is the Modem Unit.

The D1000C power interface supports wide voltage input in the range of 10V to 33V DC. The following input connections are the most commonly used:

- 28 VDC nominal, typically less than 1A
- 12 VDC nominal, typically less than 2A

A single 3-amp circuit breaker is recommended to protect the aircraft power distribution system. See the section of the Modem Unit installation or the D1000C Modem Unit Equipment Specification & Drawing for details.

EQUIPMENT REQUIRED BUT NOT SUPPLIED

1. Circuit Breaker: Pull Type Required for D1000C Modem Unit
2. Interconnect Wiring for power
3. Mounting Hardware

WIRE HARNESS FABRICATION & INSTALLATION CONSIDERATIONS

Referring to the appropriate section of this manual, assemble a wiring harness as required for the installation. All wires must be MIL-SPEC in accordance with current regulations. Two-conductor shielded wire must be used where indicated and be MIL-SPOEC-27500 or equivalent specification. Shields should only be grounded at the Modem Unit end of the interconnect cable. Other ends remain floating.

It is imperative that the correct wiring be used and that proper stripping, shielding, grounding, crimping and soldering techniques be used at all times. Failure to correct techniques may result in poor performance, electrical noise or unit failure.

Power Wiring

To assure that the D100C will operate properly down to its rated minimum input voltage, ensure that power wires of at least the recommended size are connected in accordance with the installation drawings. It is recommended that power and ground wires are a twisted pair to reduce signal noise.

Ground Bonding

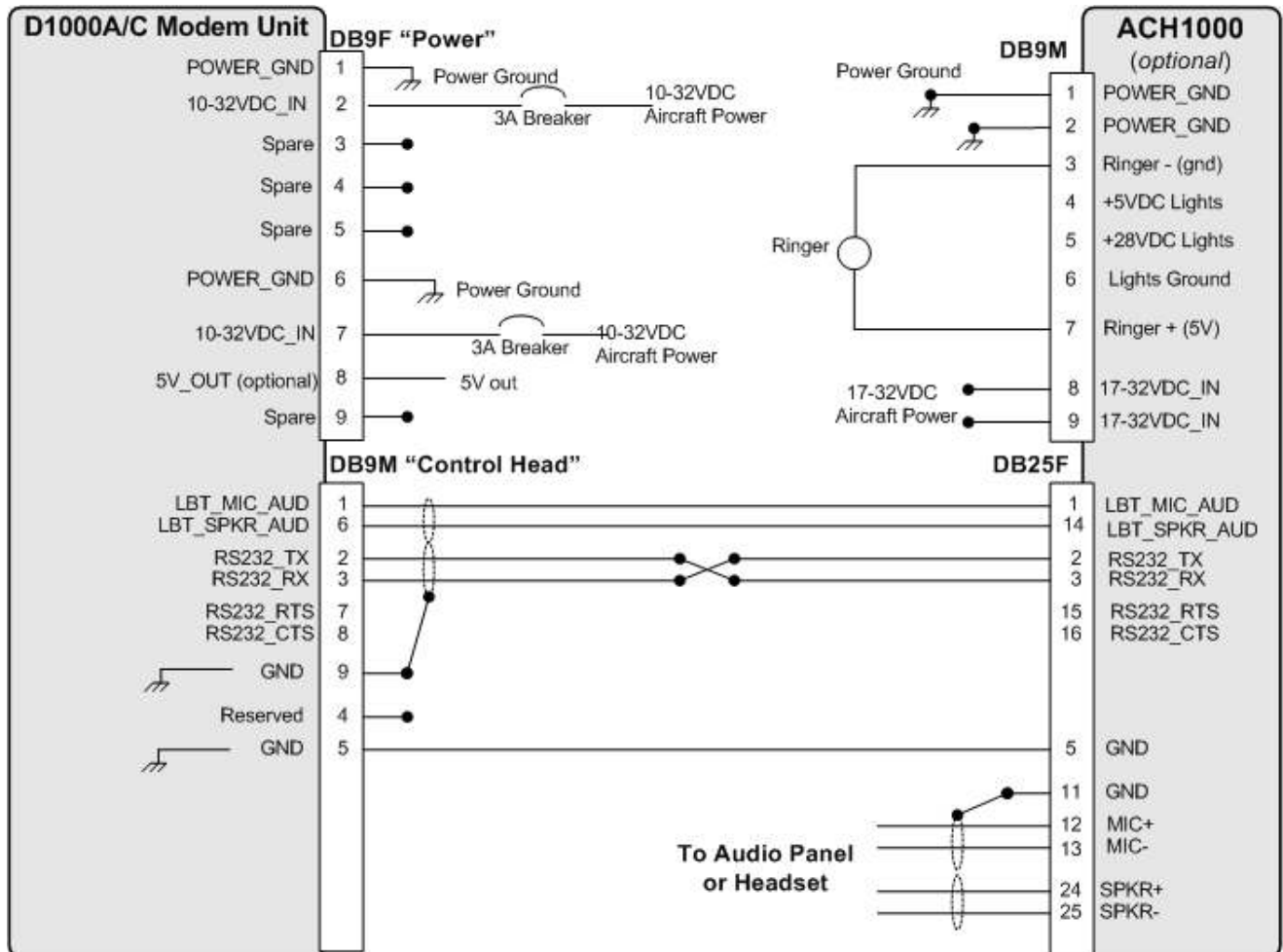
In order to assure installation characteristics match the DO-160 RF and Lightning test conditions, ensure that ground wires of at least the recommended size are installed and these wires are connected to a bonded aircraft ground.

Note: The D1000C Modem Unit needs to be grounded to the airframe for proper operation. See Pinout tables for correct pin information.

Cable & Wire Harness Routing Considerations

- The length and routing of cables must be carefully planned before starting the installation.
- Avoid sharp bends in the cable.
- Do not locate the cable near aircraft controls.
- Observe all appropriate sections of FAR Parts 23, 25, 27, and 29, as well as AC 43.13-1B and AC 43.13-2A. Damage caused by improper installation will void product warranty.
- In order to ensure optimum performance, the D1000C and associated wiring should be kept a minimum of three feet from high noise sources and not routed with cables from high power sources.

Wiring Diagram



ANTENNA & ANTENNA CABLE INSTALLATION

For optimum performance, the antenna must be installed on the upper surface of the aircraft fuselage, away from the vertical stabilizer and with an unrestricted view of the sky down to eight degrees above the horizon (similar to a GPS antenna).

Transmission from the antenna may be affected by, and can affect the operation of other systems and it is the installer's responsibility to evaluate the location for any possible RF interference. In particular, the Iridium frequency is near the allocated GPS and Inmarsat band. The antenna should be at least 39 inches (1 meter) from any L-band antennas, particularly GPS, TCAS and Transponder antennas.

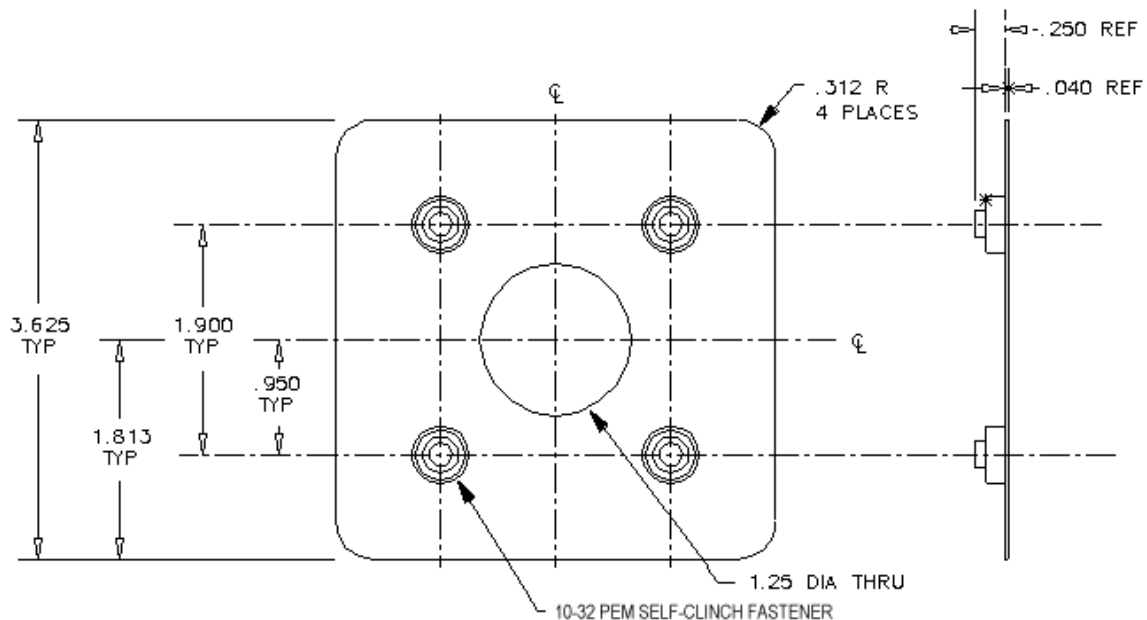
Observe all appropriate sections of AC 43.13-1B and AC 43.13-2A.

Strict maximum attenuation requirements for the coax cable and connectors that link the Antenna to the D-1000 Unit must be observed. The signal loss budget, including the antenna cable and all connector, from the antenna to the D-1000 Unit is < 1.5dB @1626MHz. The BSN Installation Kits include the FAA approved low loss coax antenna cable sized to meet this requirement.

Single-Channel Antenna (S67-1575-109) Installation

The S67-1575-109 Single-Channel Antenna has a low profile, providing structurally insignificant drag loads. The antenna is usually installed using four MS27039C1-10 attachment screws (10-32). However, each aircraft has unique airframe issues. *The installer is responsible for the decision on any antenna installation issue*

A 1.25-inch (32 mm) diameter penetration, drilled at installation, permits the antenna coax connector to be fed into the aircraft. A doubler, provided with the antenna, reinforces the 1.25-inch diameter penetration. The doubler is 0.040 inch (1.0 mm) thick 6061-T6 aluminum alloy and creates an effective ring of 4.09 inches (104 mm). The doubler is attached to the skin using sixteen NAS1097AD3 rivets. *This doubler may NOT be appropriate for your aircraft. The installation material required may vary from aircraft to aircraft and is the responsibility of the installer to determine.*



Doubler Plate

Dual-Channel Antenna (S67-1575-165) Installation

The S67-1575-165 Dual-Channel Antenna has a low profile, providing structurally insignificant drag loads. The antenna is usually installed using four MS27039C1-10 attachment screws (10-32). However, each aircraft has unique airframe issues. *The installer is responsible for the decision on any antenna installation issue.*

A 1.25- inch (32 mm) diameter penetration, drilled at installation, permits the antenna coax connector to be fed into the aircraft. No doubler plate is included with the dual channel antenna, since each aircraft has a different shape and design.

The Dual-Channel Antenna has a J1 and a J2 channel. The D-1000 unit and matching coax cable must be connected to the **J2** channel. This is the only channel that will cover both the Iridium and GPS frequencies.

Antenna Cable Installation

The antenna cable must be routed from the antenna to the D1000 Modem Unit. The Modem Unit is generally installed in the avionics bay of the aircraft or other location as determined by the installer.

Strict maximum attenuation requirements for the coax cable and connectors that link the Antenna to the D1000C must be observed. The signal loss budget, including the antenna cable and all connectors, from the antenna to the D1000 Modem Unit is < 1.5dB @1626MHz. Maximum cable length is determined by this specification. Measured Voltage Standing Wave Ratio, or VSWR, of the coax cable assembly, antenna and any bulkhead feed-through adapter must be less than 1.5 to 1.

Note: *The Blue Sky Network Installation Kits include a 15-foot (4.6 m) FAA approved low loss coax antenna cable sized to meet this requirement. In addition, Blue Sky Network has custom cables lengths and configurations up to 60 feet (18 meters) long to meet your installation requirements. You can also request that one or both end connectors be shipped uninstalled to ease cable routing.*

Antenna Cable Routing Considerations

- The length and routing of cables must be carefully planned before starting the installation.
- Avoid sharp bends in the cable. Exceeding the minimum bend radius of the antenna coax cable may result in permanent degradation of the cable loss.
- Do not locate the cable near aircraft controls.
- Observe all appropriate sections of FAR Parts 23, 25, 27, and 29, as well as AC 43.13-1B and AC 43.13-2A
- In order to ensure optimum performance, the D1000 and associated wiring should be kept a minimum of three feet from high noise sources and not routed with cables from high power sources.

D1000C INSTALLATION

The location of the D1000C is at the option of the installer, but consideration should be given to environmental conditions and distance from the antenna.

GROUND TEST & OPERATIONAL FLIGHT CHECK PROCEDURE

A functional ground test procedure and an operational flight check procedure should be used to verify proper installation and functional performance. Please check the section “System Performance Verification” on page 21 for further test details.

The required logbook entries and FAA approvals are the responsibility of the installer and Blue Sky Network assumes no responsibility for either obligation.

If any difficulty is experienced with the functionality or operational performance of the D1000C, contact Blue Sky Network for assistance.

MAINTENANCE

Aircraft Annual Inspection Considerations

During the aircraft annual inspection:

- Visually inspect the antenna installation for loose fasteners or corrosion
- Perform a functional check of the system by transmitting and receiving data (such as making an internet inquiry).

SERVICE ACTIVATION

To activate service; please submit an activation form via our Support Website at:

<https://support.skyrouter.com>

You should receive a confirmation email at the provided email address shortly after submitting the form, please review the form data shown in the email and let us know if there are any errors.




For security reasons we will only activate upon the request of the account administrator. The account administrator is the contact name listed on your service agreement.

Please allow 1-2 hours for activations to be completed during business hours (Monday - Friday, 8am - 5pm Pacific Time). For emergency requests (after business hours); additional time may be required and a \$100 fee (per activation) will be charged to your account in addition to applicable activation/service charges.

Once activation is complete the account administrator will receive a confirmation email from Blue Sky Network.

We strongly recommend that you submit activation requests well prior to your requested activation time.

Required *

Name *	<input type="text" value="Mathew Pearson"/>
Company *	<input type="text" value="Blue Sky Network"/>
Email *	<input type="text" value="support@blueskynetwork.com"/>
Contact Tel *	<input type="text" value="8585513894"/>
Activation Date *	<input type="text" value="2015-12-23"/> 
Activation Timeframe *	<input checked="" type="radio"/> Standard (Business Hours, Free) <input type="radio"/> Emergency (Out of hours, \$100)
Service Type *	<input checked="" type="radio"/> Data <input type="radio"/> Voice <input type="radio"/> Data + Voice
IMEI Number *	<input type="text" value="300015152152005"/>
Notes	<input type="text" value="Please activate for service."/>
Spam Check *	<div>  <input type="text" value="kKNhy"/></div>
<div><input type="button" value="Reset"/> <input type="button" value="Submit"/></div>	

System Performance Verification

POWER-UP TEST

Position the aircraft outside of the hangar with no overhead obstructions. With all other aircraft systems powered down, apply aircraft power to the D1000C Modem Unit.

1. As soon as power is provided to the unit, observe the LED's. As startup routine will light the LED's on the front of the unit, one by one (from Power to GPS to Iridium to Msg). This indicates that the software on the unit is operational.
2. Allow a couple of minutes to acquire both Iridium and GPS signal. The respective LED's will light upon sufficient signal. An amber signal indicates sufficient, but not full signal. Green indicates full signal.
3. Please refer to the "D1000 User Guide" and the "SkyRouter User Guide" for more operation information.

Please refer to <https://support.skyrouter.com> for FAQs and support information.

PRODUCT WARRANTY

PLEASE READ -- THIS DOCUMENT CONTAINS IMPORTANT NOTICES, WARRANTY INFORMATION AND LIMITATIONS ON YOUR RIGHTS

USE AND INSTALLATION

The D1000C is intended to be used and installed on aircraft only. Installation of this Product and any of its component parts and any other work performed on the airframe during installation must be performed in accordance with federal aviation administration ("FAA") regulations and all other applicable regulations and may require further FAA certification. This Product should be installed by a professional and is intended to be handled and used solely in accordance with FAA regulations and the most recent specifications and instructions distributed by Blue Sky Network, LLC ("Blue Sky"). NO SUBSTITUTION ALLOWED FROM RECOMMENDATIONS WITHOUT Blue Sky Network LLC PERMISSION, TO MAINTAIN EQUIPMENT WARRANTY.

FUNCTIONALITY

The functionality of this Product will, in significant part, depend on the service provider and the communications network used in conjunction with this Product. To the extent Blue Sky is also your service provider for this Product, then this Product is also subject to the terms and conditions of your service contract.

LIMITED WARRANTY

This Product consists of two basic components: a D1000C Modem Unit (part #100240), and antenna (part # S67-1575-109/165).

Blue Sky is the original equipment manufacturer for the modem unit. Blue Sky warrants that the Warranted Components shall be free from defects in materials and workmanship for a period of six (6) months from the date this Product is delivered to the first end-user purchaser ("Purchaser") or the date this Product is first placed into satellite subscriber service, whichever occurs earlier. This warranty is not assignable or transferable by the Purchaser.

Blue Sky, at its option, shall at no charge to Purchaser either repair or replace Warranted Components that do not conform to this warranty, provided that the Warranted Components are returned in accordance with the instructions set out below and within the warranty period. These remedies are Purchaser's exclusive remedies under this warranty. Repair may include the replacement of parts with functionally equivalent reconditioned or new parts. Warranted Components that have been repaired or replaced are warranted for the balance of the original warranty period. All Warranted Components for which replacements have been provided shall become Blue Sky's property.

Blue Sky does not manufacture the antenna and therefore Blue Sky is not providing any warranty concerning this component. To the extent the manufacturer warrants the antenna and such warranty may be assigned and passed through to Purchaser, such warranty shall be assigned by Blue Sky and passed through to the Purchaser. The Purchaser must deal directly with, and Blue Sky accepts no responsibility regarding the actions of, the manufacturer of the antenna.

Blue Sky does not warrant any installation, maintenance, or service of this Product or any component thereof not performed by Blue Sky.

Blue Sky is not responsible in any way for any damage to ancillary equipment or software which is attached to or used in connection with this Product, or for operation of this Product with any ancillary equipment or software, and all such equipment and software are expressly excluded from this warranty. Furthermore, Blue Sky is not responsible for any damage to this Product resulting from the use of ancillary equipment not furnished by Blue Sky for use with this Product.

BLUE SKY ASSUMES NO RESPONSIBILITY FOR PAYMENT OF ANY REPAIR SERVICES PERFORMED BY THIRD PARTIES INCLUDING REMOVAL OF THE UNIT FROM THE AIRCRAFT, INSPECTION, PACKAGING, HANDLING, OR INSTALLATION UNLESS SUCH SERVICES ARE AUTHORIZED IN ADVANCE AND IN WRITING BY BLUE SKY.

HOW TO GET WARRANTY SERVICE

Warranty service is available by contacting Blue Sky at the following telephone number (during business hours) or email address or by returning the Warranted Components to Blue Sky at the following address:

Blue Sky Network, LLC.
5333 Mission Center Rd. Suite 220
San Diego, CA 92108
Phone: +1-858 551-3894
E-mail: support@blueskynetwork.com

Purchasers are advised to contact Blue Sky at the above telephone number or email address for a consultation prior to returning Warranted Components. All Product shipped to Blue Sky must be shipped with freight, duties, and insurance prepaid. Purchaser must include with the Product a bill of sale (or other comparable proof of purchase), the Purchaser's name, address and telephone number, the tail number and serial number of the aircraft on which the Product was installed and a detailed description of the problem. Warranted Components that are repaired or replaced under this limited warranty shall be shipped to Purchaser at Blue Sky's expense for the freight and insurance and at Purchaser's expense for any applicable duties or other expenses of shipment.

Blue Sky reserves the right to make changes, upgrades, and improvements to this product without incurring any obligation to install such changes, upgrades, and improvements in previously manufactured products.

ANY SERVICE WORK PERFORMED BY A PARTY OTHER THAN BLUE SKY OR BY A PARTY NOT OTHERWISE AUTHORIZED BY BLUE SKY SHALL IMMEDIATELY VOID THIS LIMITED WARRANTY.

Please contact Blue Sky if you have any questions regarding Blue Sky's limited warranty.

DISCLAIMERS AND LIMITATION OF LIABILITY

EXCEPT FOR THE LIMITED WARRANTY SPECIFICALLY PROVIDED HEREIN, ALL OTHER WARRANTIES ARE EXPRESSLY DISCLAIMED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS OR SUITABILITY FOR A PARTICULAR PURPOSE. ANY LIABILITY SHALL BE LIMITED EXCLUSIVELY TO REPLACEMENT OR REPAIR OF THE WARRANTED COMPONENTS AS PROVIDED HEREIN. UNDER NO CIRCUMSTANCES SHALL LIABILITY EXIST FOR INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES RELATING TO THE HANDLING, INSTALLATION OR USE OF THIS PRODUCT. BLUE SKY SHALL NOT BE OBLIGATED OR LIABLE FOR, AMONG OTHER THINGS, DEFECTS CAUSED BY TAMPERING, MISUSE, ACCIDENT, ABUSE, NEGLIGENCE, IMPROPER STORAGE OR MAINTENANCE, USE IN A MANNER BEYOND WHICH THIS PRODUCT IS INTENDED TO BE USED AS SET FORTH IN BLUE SKY'S SPECIFICATIONS, IMPROPER REPAIR, POOR WORKMANSHIP OR USE OF DEFECTIVE MATERIALS BY SOMEONE OTHER THAN BLUE SKY, OR ANY OTHER CAUSE EXCEPT FOR DEFECTS IN MATERIALS OR WORKMANSHIP WITH RESPECT TO THE WARRANTED COMPONENTS AS DELIVERED BY BLUE SKY.

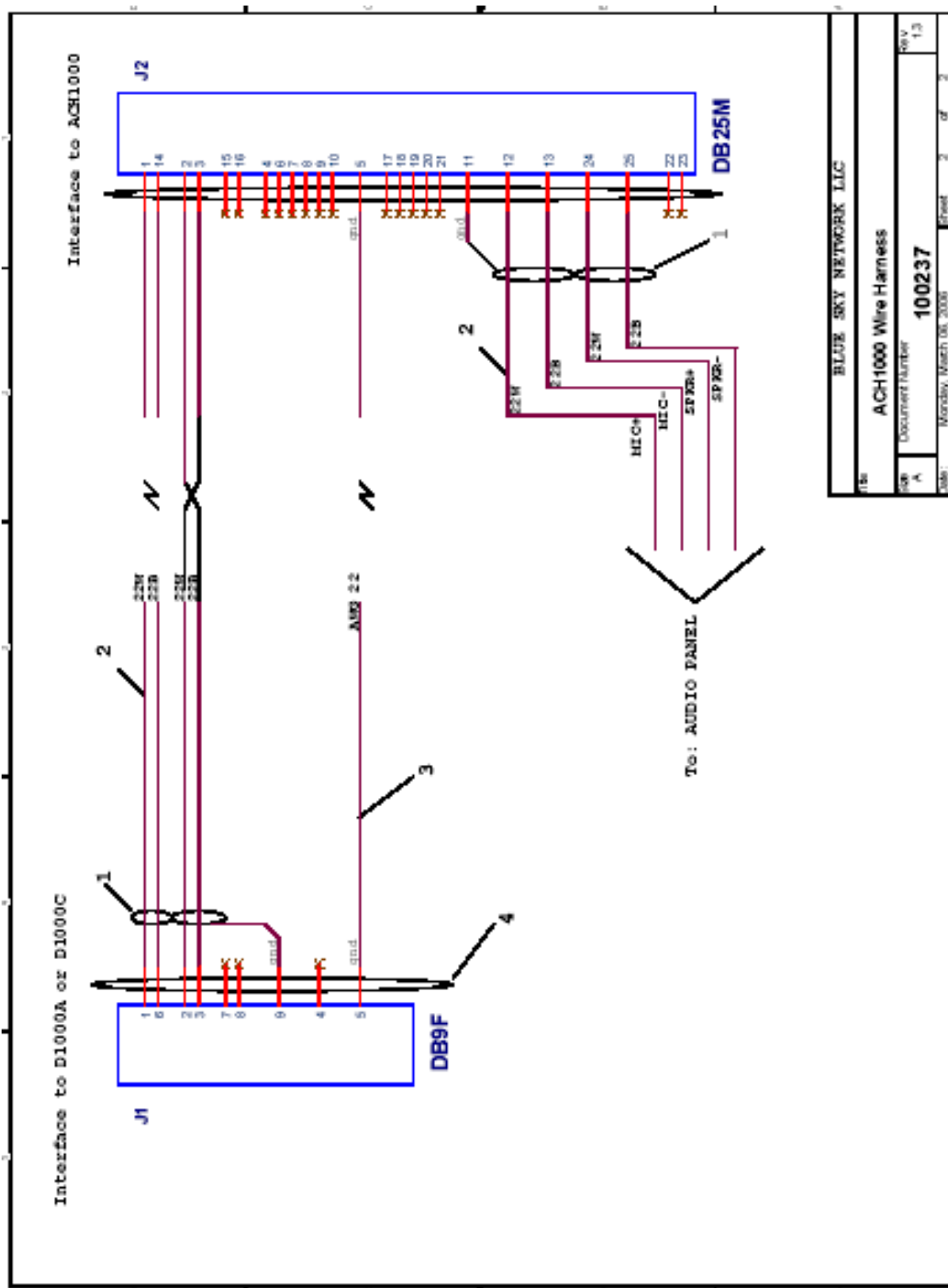
Some states do not allow the exclusion or limitation of incidental or consequential damages and some states do not allow limitations on how long an implied warranty may last; therefore, the above limitations or exclusions may not apply to you. The warranty provided herein gives you specific legal rights. You may also have other rights that vary from state to state. In the event any of the provisions of the limited warranty are found by statute or by applicable administrative or judicial entity to be unenforceable, the remaining provisions shall remain in force.

INSTALLATION DRAWINGS

D1000C Wire Harness to ACH1000 (DB9F – DB25M)

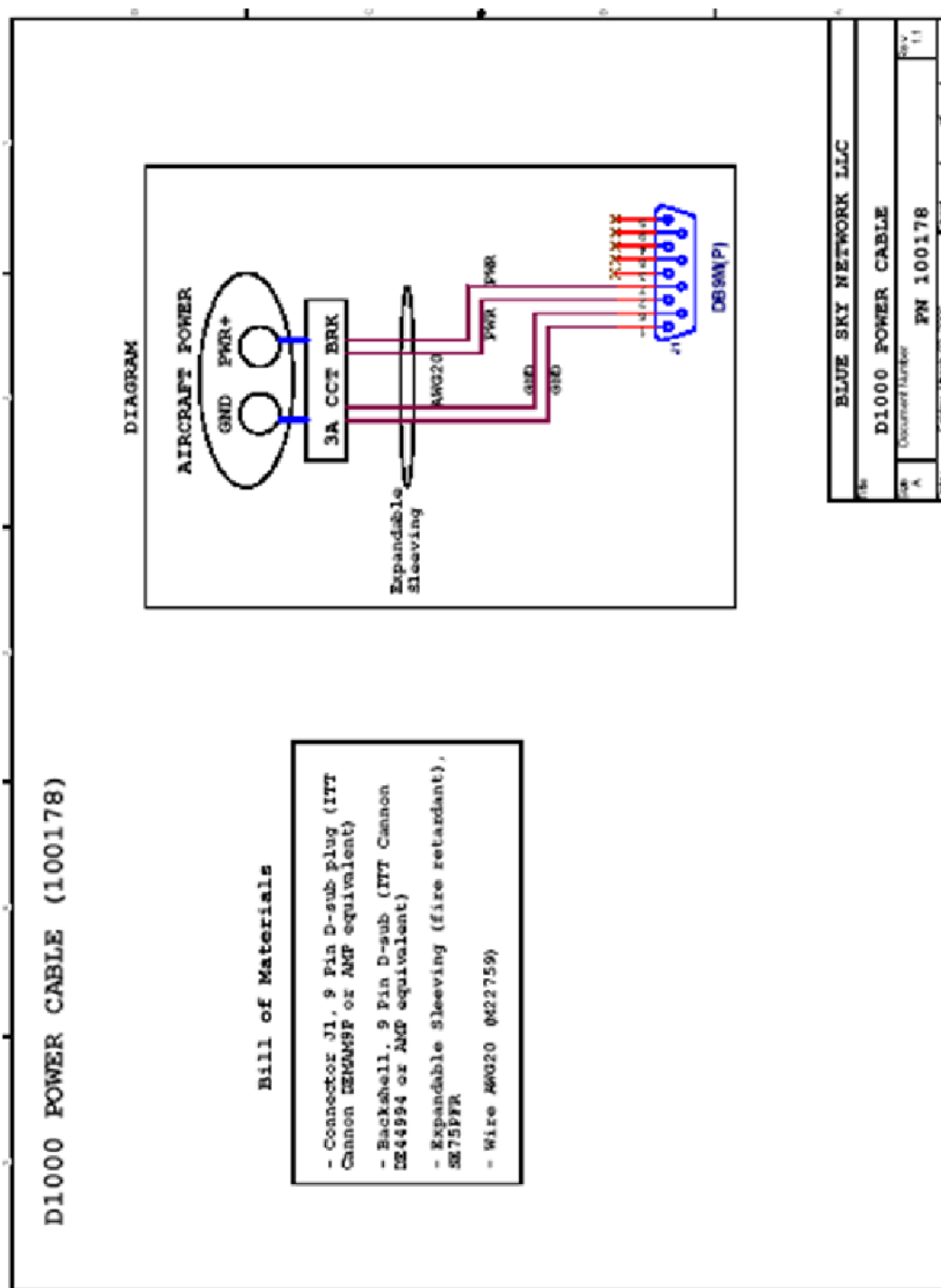
<p>P/N: 100237</p> <p>ACH1000 HARNESS</p> <p>DB9 (F) – DB25 (M)</p>	<p style="text-align: center;">CONNECTORS</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>J1 (DB9S)</p> <ul style="list-style-type: none"> - ITT Cannon DEMM9S or equivalent - Backshell (ITT Cannon DE44994) or equivalent - (2) Screw Lock Kits ITT Cannon D20419-84 or equivalent </div> <div style="border: 1px solid black; padding: 5px;"> <p>J2 (DB25P)</p> <ul style="list-style-type: none"> - ITT Cannon DEMM25P or equivalent - Backshell (ITT Cannon DE24659) or equivalent - Sliding-lock kit (ITT Cannon DB51221-1) or equivalent </div>	<p style="text-align: center;">WIRING ITEMS</p> <div style="border: 1px solid black; padding: 5px;"> <ol style="list-style-type: none"> 1 - Solder Sleeve (M33519 or equivalent) 2 - Wire, AWG 22, 2-conductor shielded (M27500-22T2T14) 3 - Wire, AWG 22, single conductor shielded (M22759/16-22-9) 4 - Expandable sleeving (fire retardant), SZ75PFR or equivalent </div>
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Date	Monday, March 08, 2015
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D1000C Power Cable

If the power harness between the circuit breaker and the D1000C Modem Unit is less than 10', there is no need to connect two PWR wires and two GND wires to the D-Sub connector (the diagram below shows the case scenario for a long wiring scheme – above 10'). The D1000C should work without problems if the installer chooses to only connect GND to pin 1 and PWR to pin 2. Installation of a 3A circuit breaker is also highly recommended for protection purposes.



ACH1000 Power Cable

If the power harness between the circuit breaker and the ACH1000 is less than 10', there is no need to connect two PWR wires and two GND wires to the D-Sub connector (the diagram below shows the case scenario for a long wiring scheme – above 10'). The ACH1000 should work without problems if the installer chooses to only connect GND to pin 1 and PWR to pin 9. One single breaker (for example, 3A) should be enough to cover both the D1000A/C and ACH1000 systems.

