

Docking Station Installation

Safety Information

Please read and understand this Installation Guide and the Docking Station QuickStart before installing your Docking Station and Iridium handsets. Careless or incorrect installation can degrade performance, damage both new and existing equipment, and incur unexpected network airtime charges.

Warning: Never connect an Iridium 9505 handset to a 9505A Docking Station or a 9505A handset to a 9505 Docking Station. These handsets contain different circuitry that can be damaged!

Exposure to Radio Frequency Signals

Your Iridium-designed satellite unit is a low power radio transmitter and receiver. When it is ON, it receives and sends out radio frequency (RF) signals.

International agencies have set standards and recommendations for the protection of public exposure to RF electromagnetic energy:

- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1996
- Verband Deutscher Elektrotechniker (VDE) DIN-0848
- United States Federal Commission, Radio Frequency Exposure Guidelines (1996)
- National Radiological Protection Board of the United Kingdom, GS 11, 1988
- American National Standards Institute (ANSI) IEEE C95, 1-1992
- National Council on Radiation Protection and Measurements (NCRP) Report 86
- Department of Health and Welfare Canada, Safety Code 6

These standards are based on extensive scientific review. For example, over 120 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the updated ANSI standard.

The design of your phone complies with these standards when used as described under "Unit Operation."

Antenna Care

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the phone and may violate local agency regulations.

Unit Operation

Do not operate the unit when a person is within 4 inches (10 centimeters) of the antenna.

A person or object within 4 inches (10 centimeters) of the antenna could impair call quality and may cause the unit to operate at a higher power level than necessary and expose that person to RF energy in excess of that established by the FCC RF Exposure Guidelines.

Driving

Check the laws and regulations on the use of wireless telephones in the areas where you drive. Always obey them. Observe the following guidelines when using your phone while driving:

- Give full attention to driving—driving safely is your first responsibility.
- Use hands-free phone operation, if available.
- Pull off the road and park before making or answering a call if driving conditions so require.

Electronic Devices

Most modern electronic equipment is shielded from RF signals. However, certain equipment may not be shielded against RF signals from your Iridium-designed satellite unit.

Pacemakers

The Health Industry Manufacturers Association recommends that a minimum separation of 6 inches be maintained between a wireless phone's antenna and a pacemaker to avoid potential interference with the

pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research.

Persons with pacemakers:

- Should ALWAYS keep the Iridium-designed satellite unit more than six inches from their pacemaker when the unit is turned ON.
- Should turn the unit OFF immediately if you have any reason to suspect that interference is taking place.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

Turn your unit OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted Facilities

Turn your unit OFF in any facilities where posted notices so require.

Blasting Areas

To avoid interfering with blasting operations, turn your unit OFF when in a "blasting area" or in areas posted "Turn off two-way radio." Obey all signs and instructions.

Potentially Explosive Atmospheres

Turn your unit OFF and disconnect the power supply when you are in any area with a potentially explosive atmosphere. Obey all signs and instructions. Sparks from your battery or power source in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are not always clearly marked. They include, but are not limited to: fueling areas such as gasoline stations; below deck on boats; fuel or chemical transfer or storage facilities; areas where fuel odors are present (for example, if a gas/propane leak occurs in a car or home); areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you normally would be advised to turn off your vehicle engine.

For Vehicles Equipped With Airbags

An air bag inflates with great force. Do NOT place objects, including both installed or portable wireless equipment, in the area over the air bag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

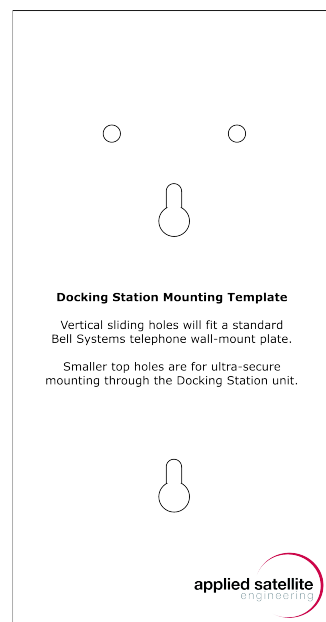
How to Mount the Docking Station

Find a protected but convenient location where the Docking Station will be visible but not disturbed. Be cautious of foot traffic that might accidentally collide with the unit. Verify that the cable runs for the antennas, switches, and analog phone will be within specifications. Verify that the cables, when connected, will not be under stress.

The Docking Station is designed to use a standard telephone mounting plate with two vertical connectors. In addition, two separate holes are provided in the Docking Station that allow ultra-secure mounting with heavy-duty screws or bolts. A drill template is provided for both standard plate and ultra-secure mounting.

 Use caution when drilling to avoid damage to walls and cables that may be behind them.

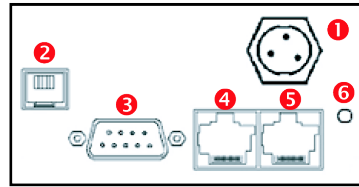
The drill template included with the Docking Station shows the positions of the secure mounting holes as well as a standard Bell wall-mount plate.



Docking Station Interface Ports

| Port | Port Type | Function |
|------|------------------|----------------------------------|
| 1 | TNC Female | Iridium antenna |
| 2 | RJ45 | Reserved |
| 3 | RJ11 | Analog phone, PBX interface |
| 4 | DB-9 Male | RS-232C computer interface |
| 5 | RJ45 DSC/DPL Bus | SIM card reader, digital handset |
| 6 | 2.5mm Audio Jack | Hands-free headset operation |
| 7 | Power Input Jack | DC voltage input |

Docking Station Ports



- ❶ Power input jack
- ❷ RJ11 analog phone/PBX interface
- ❸ DB-9 female RS-232C interface
- ❹ RJ45 DSC bus for digital handset or SIM card reader
- ❺ Reserved
- ❻ 2.5mm audio jack for hands-free headset

Port 1: Iridium Antenna

| Parameter | Value |
|--------------------------------------------------------|-------------------------------------|
| Operating Temperature Range (without loss of function) | -40°C to +85°C |
| Measurement Frequency Range | 1616 MHz to 1626.5 MHz |
| Return Loss (minimum) | 9.5 dB (< 2:1 VSWR) |
| Gain (weighted average minimum) | 0.0 dBic |
| Minimum "Horizon" Gain | -2.0 dBic (82 degree conic average) |
| Nominal Impedance | 50 |
| Polarization | Right Hand Circular (RHCP) |
| Basic Pattern | Omnidirectional and Hemispherical |
| Cable | Must have < 3 dB loss |
| Termination | TNC male to TNC male |
| Cable Length (LMR400) | 19m |
| Cable Length (LMR600) | 30m |
| Cable Length (LMR900) | 40m |

i The antenna cable must ensure a loss of < 3 dB and the minimum link margin of 12.1 dB must be maintained.

The antenna must have an unobstructed view 360° around the antenna and 20° above the horizon.

Port 2: Reserved

| Parameter | Value |
|-----------|------------|
| Undefined | Future Use |

Port 3: Analog Phone or PBX

| Parameter | Value |
|------------------------------------------|------------------------------------------------------|
| Line Voltage | 48VDC |
| Line Current (Source) | 24mA |
| Ring Voltage | 60VRMS |
| Impedance Options - Std | 600 Ohm (typical) |
| Impedance Options - Other | Factory configurable (contact ASE with requirements) |
| Example Cable Length (600 Ohm Impedance) | 3.0km |
| RJ11 Plug Description | |
| Pin 1 | No Connect |
| Pin 2 | Tip |
| Pin 3 | Ring |
| Pin 4 | No Connect |

⚡ Improper installation for PBX use can result in damage to both the Docking Station and the PBX system. Be sure to read and follow these instructions.

- When connecting to a PBX it is important to remember that the Docking Station emulates the Central Office and does not operate as an extension. Plugging an analog phone into the Docking Station RJ11 jack is therefore the same as plugging into a standard wall jack. When connecting to the PBX, care must be taken to configure the PBX correctly or the Docking Station can be damaged.
- On a PBX system, do not try to ring the Docking Station as if it were an extension. The Docking Station is designed to ring an extension (**provide** ring-voltage) and not to ring as an extension (**receive** ring-voltage). **Trying to ring the Docking Station unit as an extension from the PBX system could result in damage to the RJ11 interface.**

Port 4: DB9 RS232C Data Cable

| Parameter | Value |
|-------------|----------------------------|
| RS232C Data | External modem application |


The RS232C data cable connects the Docking Station to a PC as an external modem. The modem should be configured as 19.2Kbps, N/8/1 (no parity, 8 data bits, 1 stop bit), hardware flow control (RTS/CTS). Contact your Iridium Service Provider for software to access this port.

(9505) Port 5: DSC Accessories

| Part Number | Description |
|-------------|--------------------------|
| SCN2778A | Intelligent handset |
| SYN7908B | External SIM card reader |

(9505A) Port 5: DPL Accessories

| Part Number | Description |
|-------------|--------------------------|
| DPL2778A | Intelligent handset |
| DPL7908B | External SIM card reader |


 The Docking Station accessory port supports only the parts listed above. Do not connect unapproved parts or damage to both the accessory and the Docking Station may result.

Port 6: Audio Jack

| Parameter | Value |
|------------------|------------------------|
| 2.5mm Audio Jack | Hands-free headset use |

Port 7: Input Power

| Parameter | Value |
|--------------------------------|-----------------------------|
| Nominal Power | 12V or 24V DC |
| Operating Voltage Range | 10 to 32VDC unregulated |
| Operating Current (peak @ 10V) | 1.8 amps |
| Operating Current (peak @ 12V) | 1.5Amps |
| Operating Current (peak @ 24V) | 0.75Amps |
| Power Consumption | 5 Watts idle, 18 Watts peak |
| Cable Socket | Description |
| Type | Conxall 6282-3SG-3XX |
| Pin 1 | +DC In |
| Pin 2 | -DC In (GND) |
| Pin 3 | No Connect |

 Operating with inadequate power supply (current capabilities below 5Amps) can result in an inability to connect to the satellite network and/or cause calls to be dropped.