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AT1621-20 Active Iridium Antenna
User Manual

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

To satisfy FCC RF exposure requirements for mobile transmitting devices, the minimum safety distance is 55 cm (21.7 inches). This separation distance should be maintained between antenna and people during operation of the antenna.

Rev History

Rev	Changes
1	• First version.
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Table of Contents

1 Introduction

The AT1621-20 antenna is designed for Iridium applications where long RF cables are needed and a passive antenna cannot be used. The AT1621-20 has an integrated power amplifier (for transmitting signals to the satellite) and low noise amplifier (for receiving signals from the satellite)

2 Important Safety Information Regarding Exposure to RF Signals

WARNING

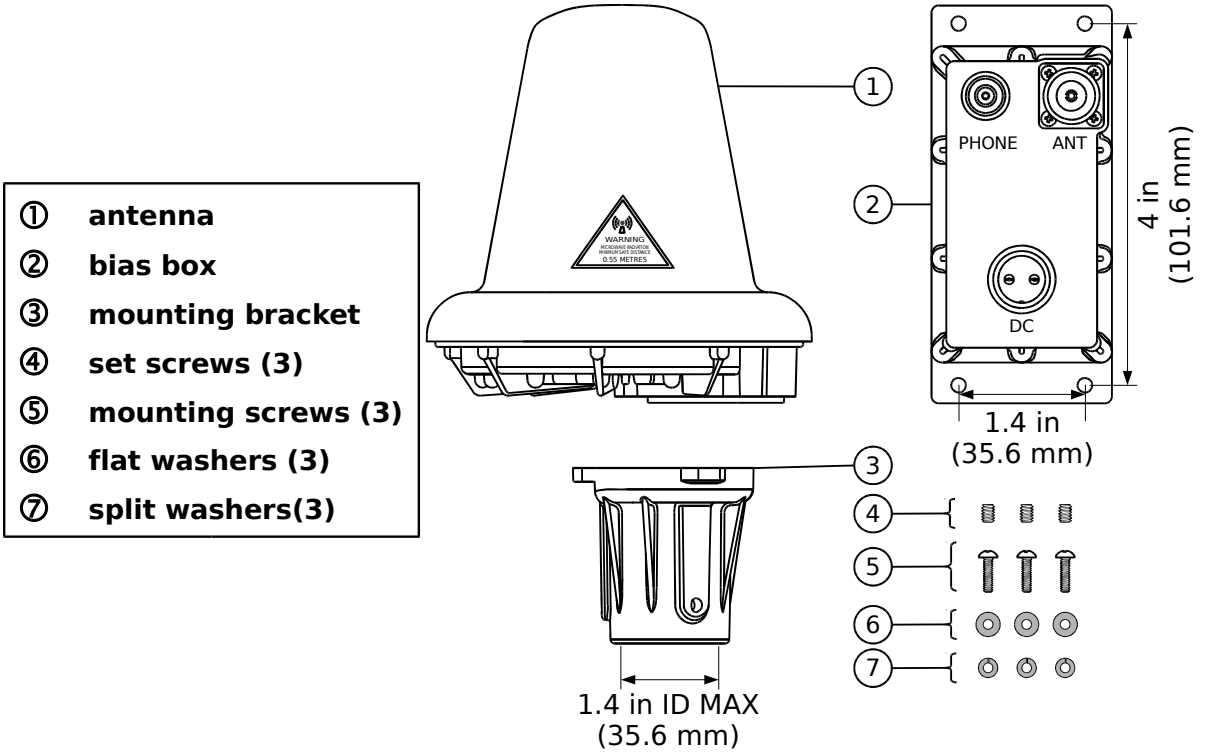
To satisfy FCC RF exposure requirements for mobile transmitting devices, the minimum safety distance is 55 cm (21.7 inches). This separation distance should be maintained between antenna and people during operation of the antenna.

3 Cable Length Requirements

To meet Iridium performance requirements and comply with FCC regulations, care must be taken to use the appropriate total RF cable length. Your antenna distributor should provide the appropriate cable.

Total Cable Loss Requirement	13.3 dB total for two cables
Reference Cable Set	5 ft (1.5 m) RG58LL 1.1 dB loss @1621 MHz
	115 ft (35 m) LMR240 12.2 dB loss @ 1621 MHz

4 Antenna Kit Contents



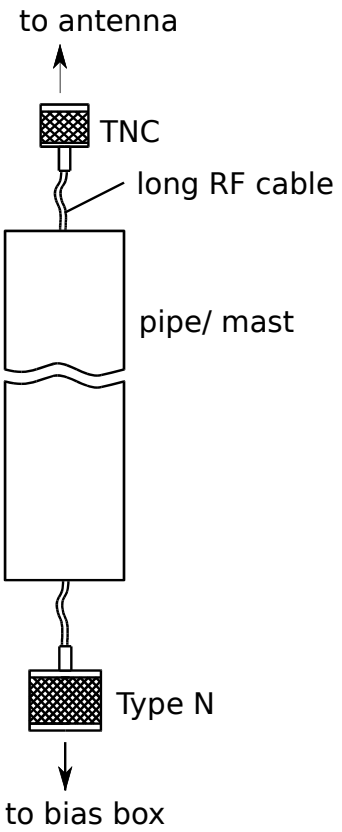
5 Connecting Your Antenna

WARNING

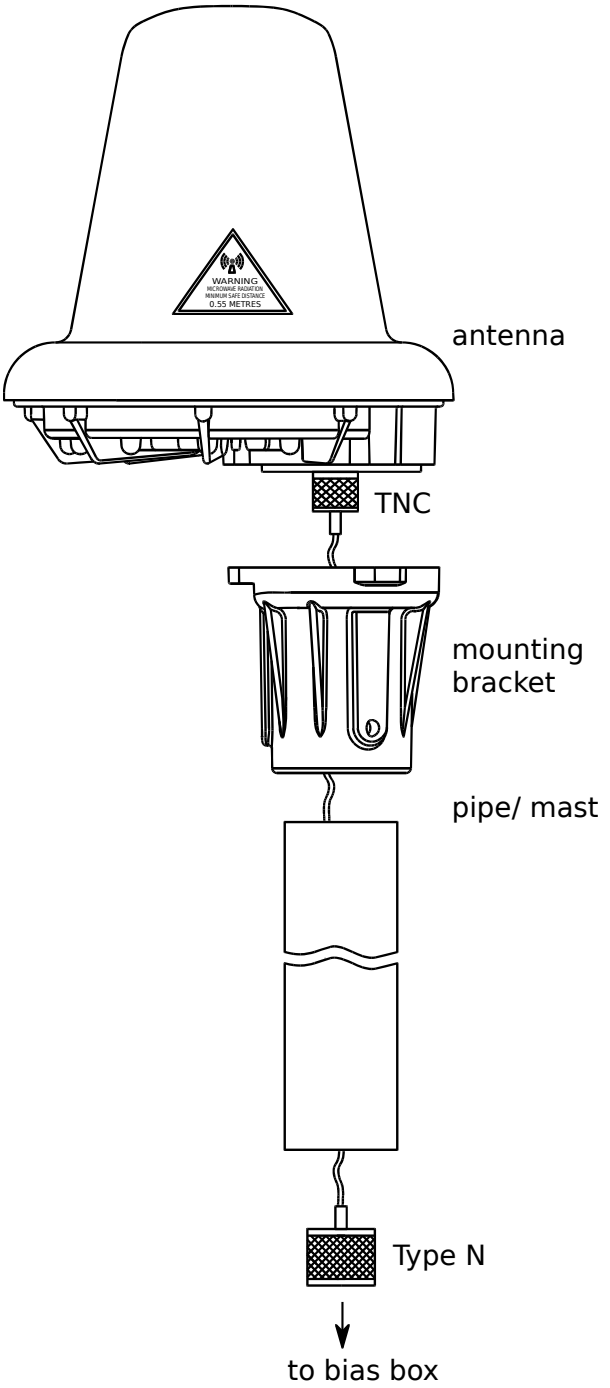
To satisfy FCC RF exposure requirements for mobile transmitting devices, the minimum safety distance is 55 cm (21.7 inches). This separation distance should be maintained between antenna and people during operation of the antenna.

5.1 Outside/Above Decks

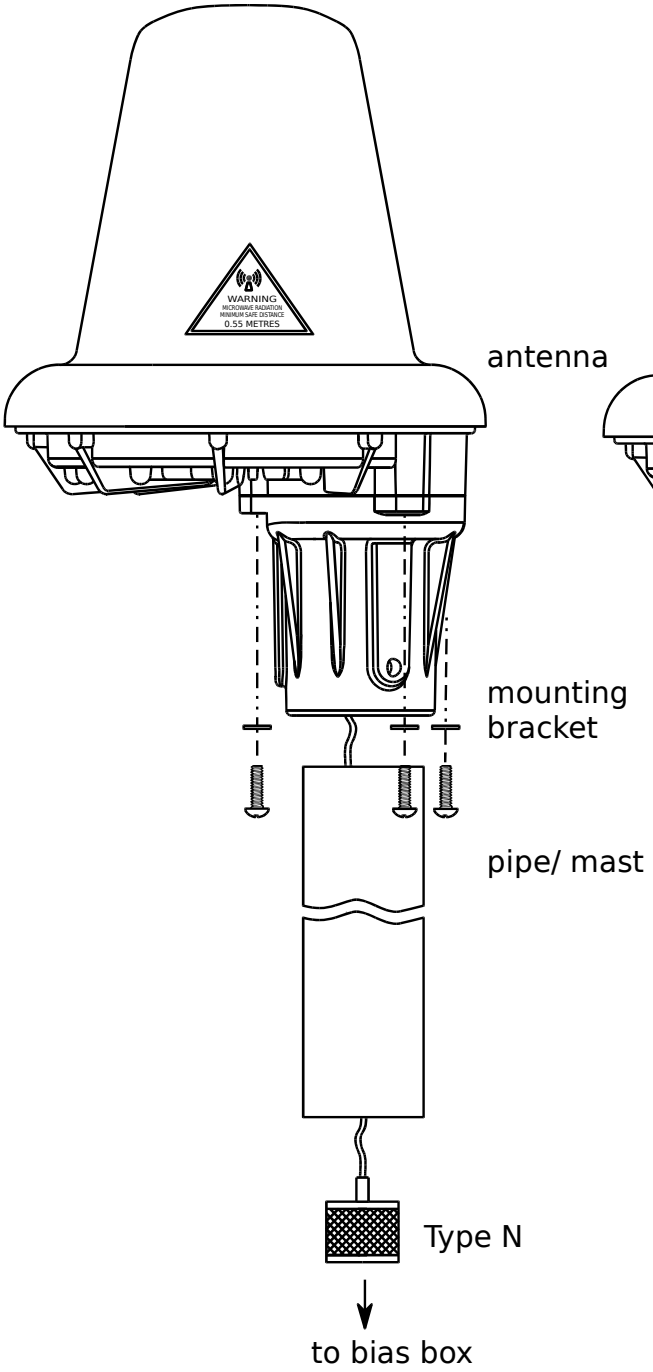
5.1.1 Bring long RF cable to top of pole or mast



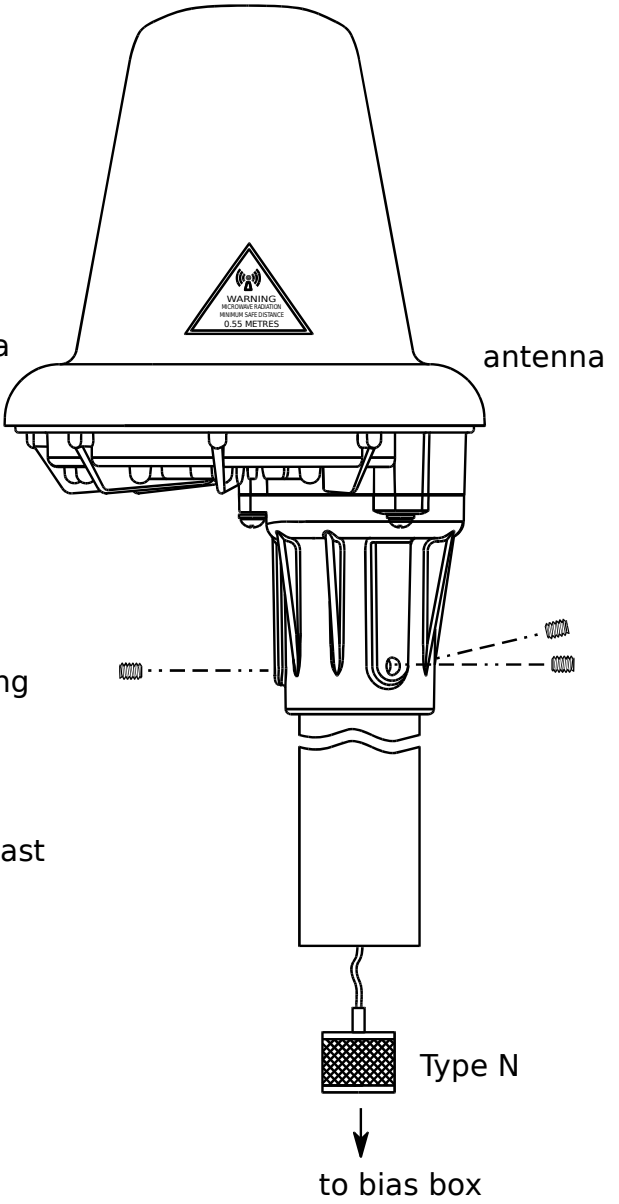
5.1.2 Feed cable through mounting bracket and attach TNC connector to antenna



5.1.3 Screw in Mounting Screws to affix mounting bracket to antenna

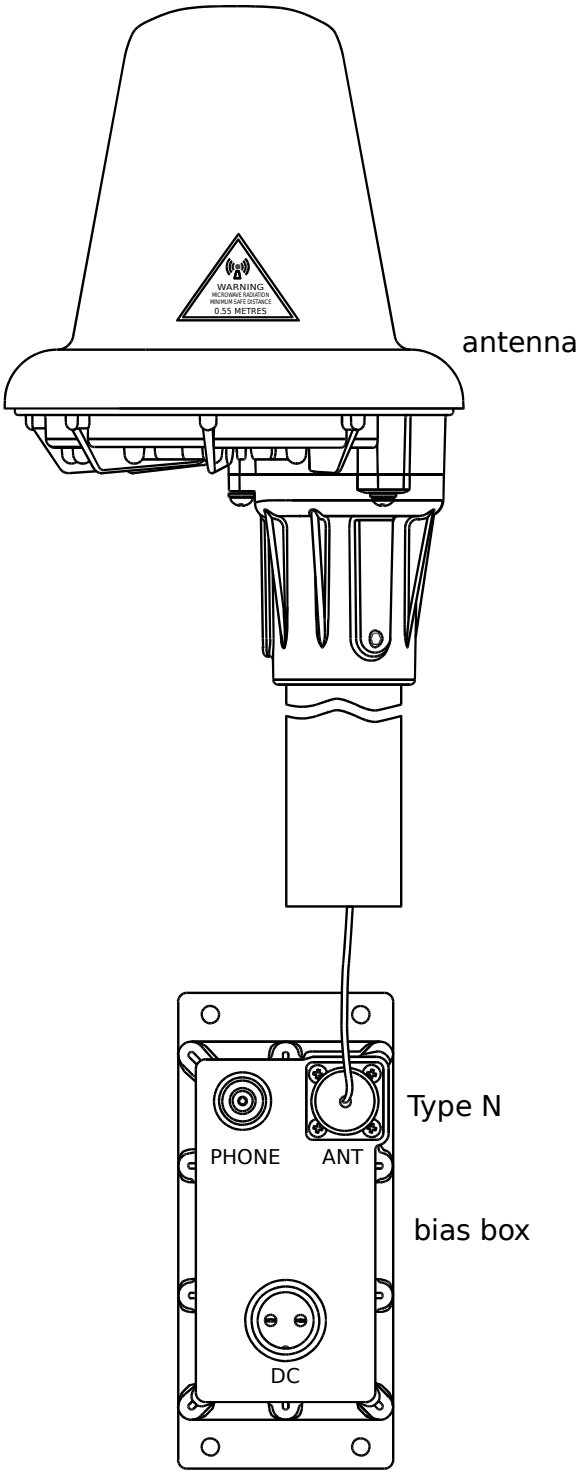


5.1.4 Place mounting bracket over pole and tighten set screws.

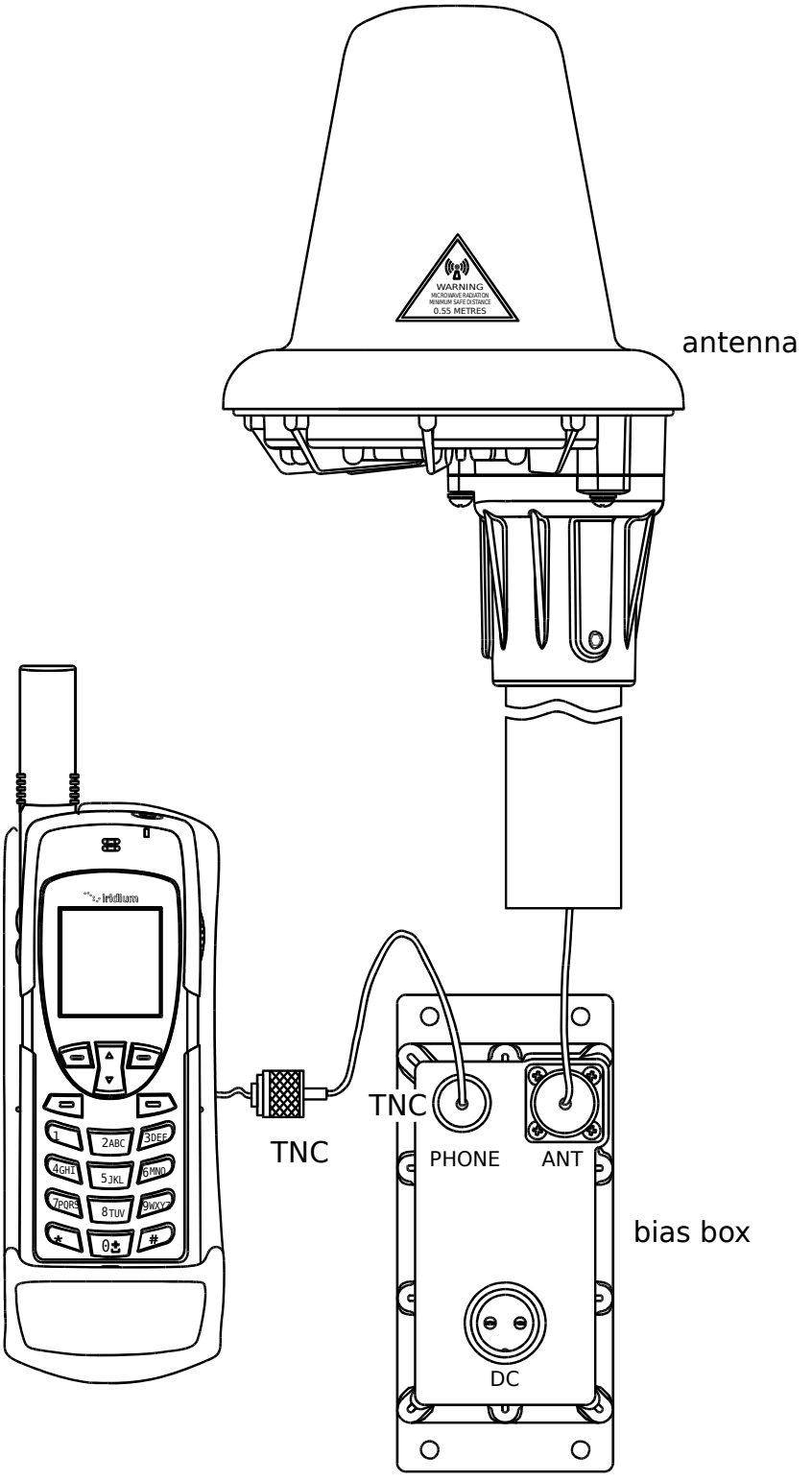


5.2 Inside/Below Decks

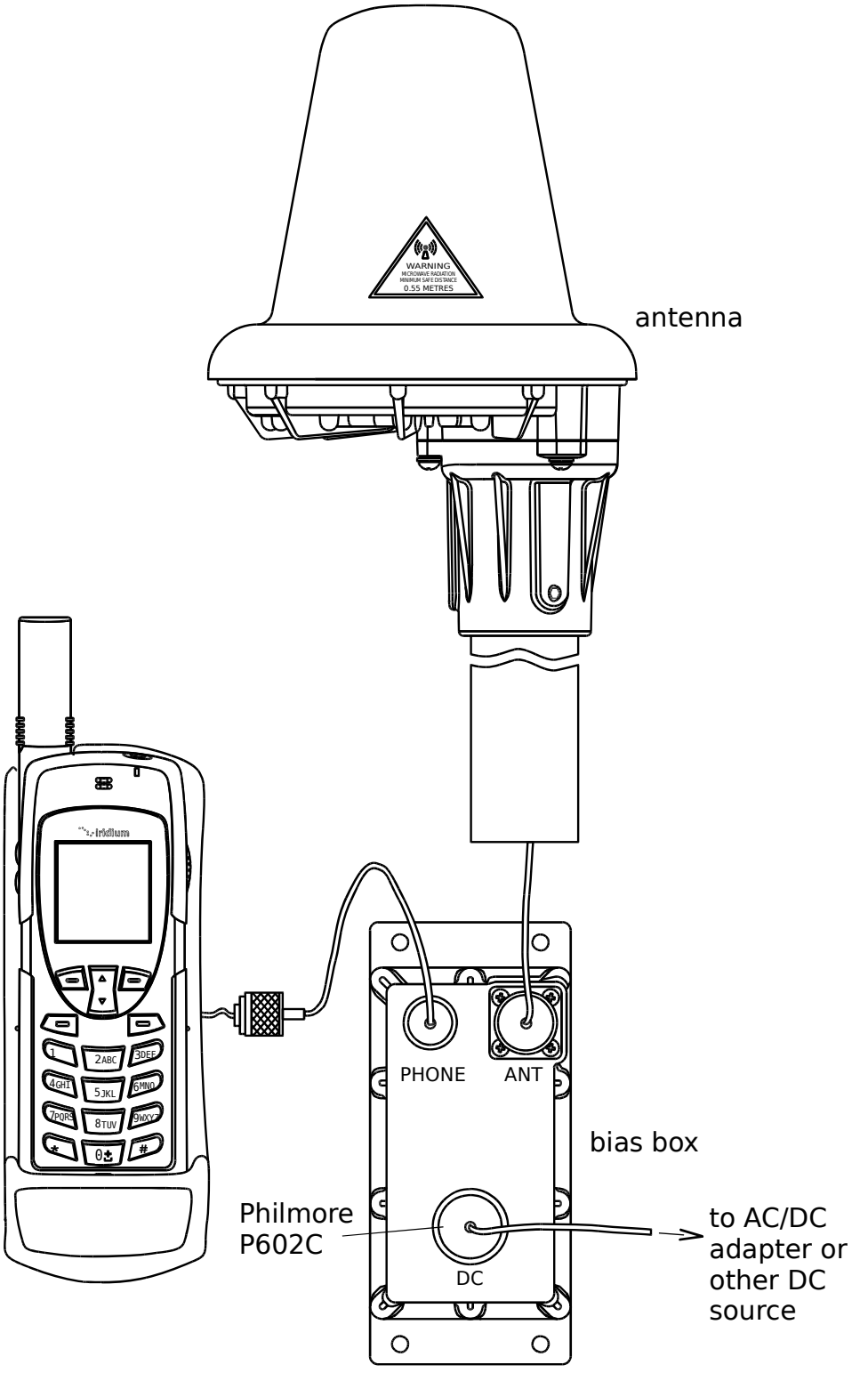
5.2.1 Attach Type N connector from long RF cable to bias box.



5.2.2 Attach short RF cable to bias box and phone/docking station.



5.2.3 Connect DC power (9 to 36 VDC, 30W max) to bias box.



6 Specifications

EQUIPMENT TYPE	Mobile or Fixed Base Station
INTEGRATED OPERATING ENVIRON-MENT	[x] Commercial [x] Light Industry & Heavy Industry
POWER SUPPLY REQUIREMENT	9 to 36V DC, 30W maximum
RF INPUT POWER RATING (US & CANADA)	29 dBm or 0.8 Watt peak (conducted)
EIRP	12.31 dBW Max
DUTY CYCLE	N/A
TX OPERATING FREQUENCY RANGE	1616.0 - 1626.5 MHz
RX OPERATING FREQUENCY RANGE	1616.0 - 1626.5 MHz
RF INPUT IMPEDANCE	50 Ohms
MODULATION	Q7W
EMISSION DESIGNATION	96K1Q7W
ANTENNA TYPE	Integral
ANTENNA CONNECTOR TYPE	TNC Female
TEMPERATURE RATING **STORAGE:** **OPERATIONAL:**	 -40°C to +80°C -25°C to +55°C

