




Pre-Site Survey for the
**MultiExchange Unit
MXU2000R**
for the Iridium[®] Communications System



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1.0 Overview



Figure 1.0-1: MXU

The MXU provides up to four simultaneous voice or data phone calls over the Iridium constellation to a local Private Branch Exchange (PBX) or Public Switched Telephone Network (PSTN). The MXU is sold only through authorized Iridium Service Providers. Product availability and terms and conditions of sale are available from your Service Provider.

This manual provides a checklist to assist in site preparation before installing an MXU2000R.

2.0 Purpose

The purpose of this checklist is to prevent problems during the installation phase. This checklist is not an installation guide; it must be completed before the MXU equipment is ordered. Figure 2.0-1 is a summary of the checklist.

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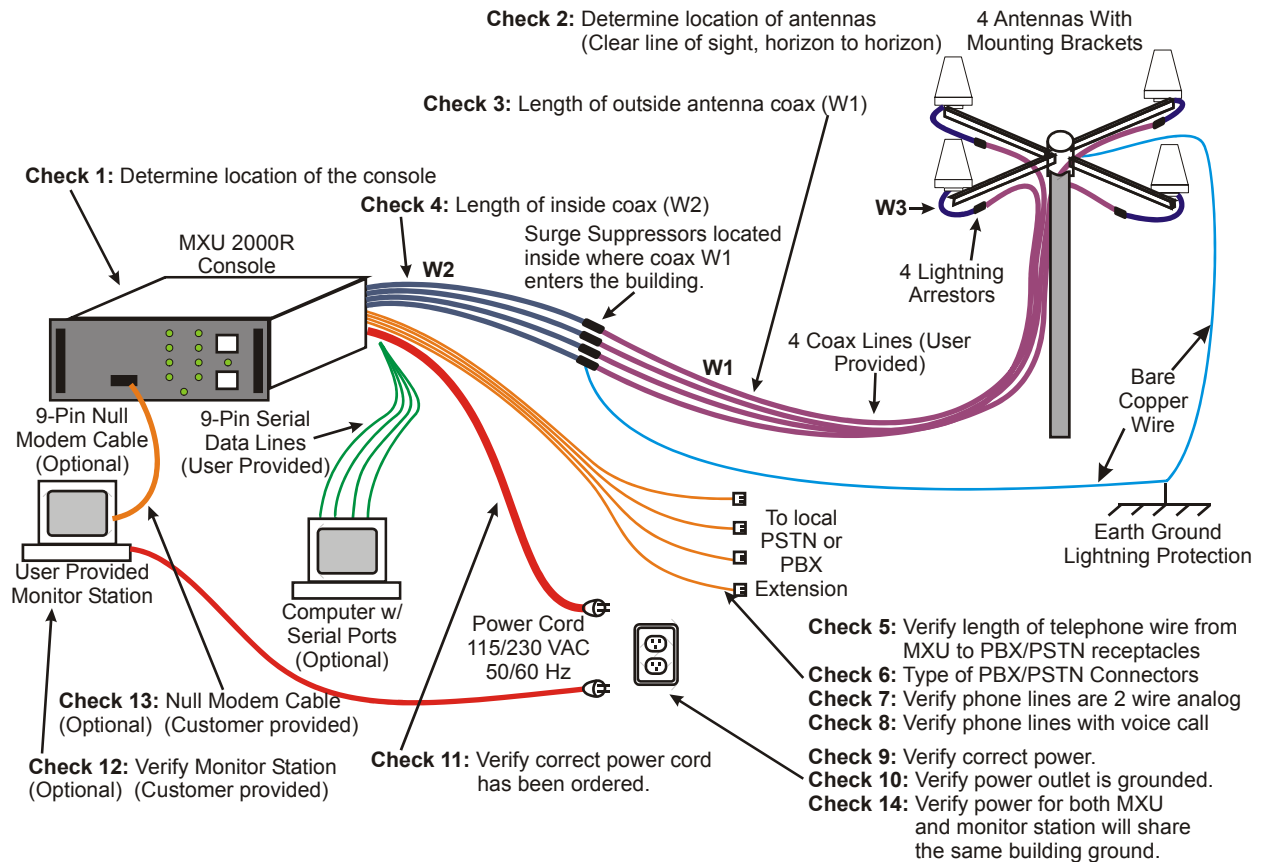


Figure 2.0-1: User Site, Four-Channel MXU Installation

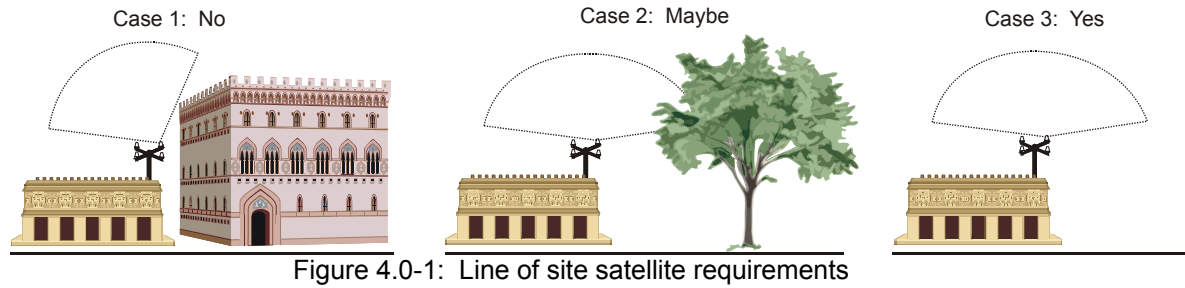
3.0 MXU Console

Check 1: Verify an MXU console environment of +32°F (0°C) to 113°F (+45°C) and a maximum 80% relative humidity, non-condensing. If it is to be installed in a console rack, at least one rack space above the MXU console must be open to allow for adequate cooling of the MXU.

4.0 Antennas, Coax, and Lightning Protection

Check 2: Verify that the location of the antennas and the 5.9 ft (1.8 m) high mast provides a clear line of sight, horizon to horizon, 360°. Ensure that buildings, trees, etc. are not between the antennas and the Iridium satellites. Refer to Figure 4.0-1 below.

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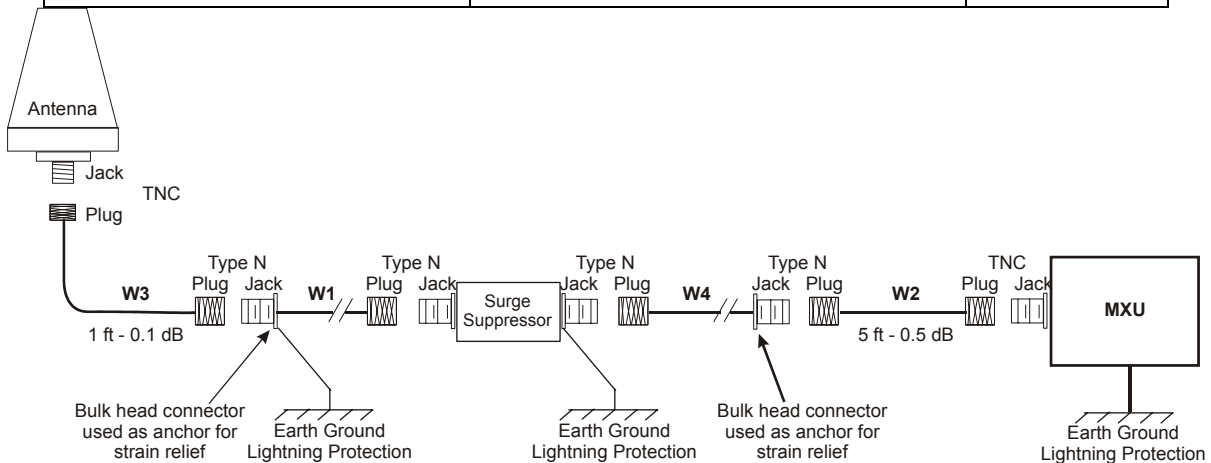
Case 1 – The antennas have only a partial horizon view since part of the horizon is blocked from view by a building. The MXU will not work properly.

Case 2 – The antennas have only a partial horizon view since part of the horizon is blocked from view by a tree. The MXU may or may not work properly.

Case 3 – The antennas have from 8° above the horizon views in all directions. The MXU will work properly.

Check 3: Refer to Figure 4.0-2: W1 is the name of the outside cable that connects the antenna cable W3 to the surge protector. Measure and record the required length of W1. As an option, W1 is available as a 26.2 ft (8 m) cable. Longer W1 cables require lower loss cable. If longer cable is required, refer to Figure 4.0-2 for cable loss limitations.

Antenna Cable	Length	Loss
W3 Antenna Strain Relief Cable	1 ft. (0.3 m) ¹	0.1 dB
W1 Outside RF Cable	As Needed. ²	
W4 Inside RF Cable	Optional (depending on installation) ^{1 2}	
W2 Inside Strain Relief Cable	5 ft. (1.8 m). ¹	0.5 dB
Surge Protector and Connectors		0.2 dB
Total Maximum Loss		3 dB



¹ Coax cable, W3, must be used in the installation to serve as strain relief, preventing damage to the connections. W2 can be used or W4 can replace W2, but you should ensure that there is no strain on the inside cables (W2 and/or W4).

² The length and type of coax used for W1 and W4 are dependent on the installation. The total loss in the cables (W1 and W4) must not exceed 2.2 dB. The cable specifications are transmission between 1616 to 1626.5 Mhz at 50 Ω impedance.

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Check 4: Verify that the 5 ft. (1.8m) inside cable, W2, will reach from the surge protectors to the back of the MXU as shown in Figure 4.0-2. If the length of the supplied W2 coax is not sufficient, refer to figure 4.0-2 for cable extension option. As shown, the cable W4 is not supplied with the unit and can be ordered from your local supplier.

5.0 PBX / PSTN

Check 5 The telephone lines shipped with the MXU are 10 ft (3 m) long. Verify a distance between the location of the MXU and PBX/PSTN sockets of less than 10 ft (3 m). If required, longer phone lines may be used. Typical length should not exceed 820 ft (250 m).

Check 6 Verify local PBX/PSTN connections will accept RJ11 type plugs. Cables supplied with the MXU, have RJ11 plugs on each ends as illustrated in figure 5.0-1. If the PBX/PSTN wall receptacles are not RJ11 types, adapters have to be procured by the user.

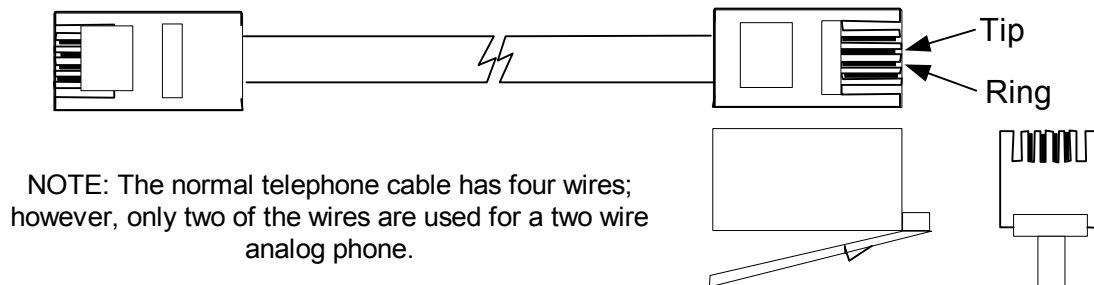


Figure 5.0-1: Standard RJ11 Plug

Checks 7 to 10: Will require support of your local phone service technician.

Check 7: Verify phone lines, to be attached to the MXU are two-wire analog. If not, the MXU will not function.

Check 8: Verify all four phone lines can make voice calls between two phones.

Check 9: Determine if the local PSTN/PBX has tone dialing. NOTE: If pulse dialing is used, users will have to use a tone generator between the MXU and PSTN/PBX.

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Check 10: Verify PSTN/PBX Disconnect Supervision: To disconnect a call when the party connected to the PSTN/PBX hangs up the phone, the PSTN/PBX must be properly configured. The MXU recognizes two disconnect signals from the PSTN/PBX. 1) A loop current reversal or 2) Loss of loop current. Contact the phone service provider or the PBX facilities manager to verify this.

6.0 Power

Check 11: Verify a power voltage of 115VAC +/- 10% or 230VAC +/- 10%, 47 to 63 Hz. If one of these two voltages is not available, the MXU will be damaged.

Check 12: Have a **certified electrician** verify the power outlet is correctly grounded. If the outlet is not properly grounded, have the electrician ground or replace it with a grounded receptacle.

Check 13: Verify the correct AC Power Cord has been ordered. If a power cord was not specified, the user will receive the power cord illustrated in figure 6.0-1.

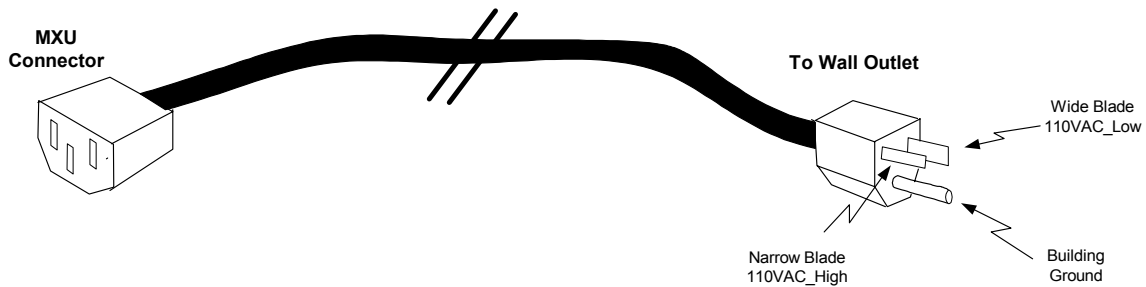


Figure 6.0-1: Standard Power Cord

7.0 Monitor Station (Optional, User Supplied)

Check 14: Verify the following configuration of the optional monitor station PC (optional, user-supplied):

- IBM compatible, Pentium-class PC
- With at least 50 MB of free disk space
- Microsoft NT 4.0 with a minimum of NT Service Pack 3 installed
- With at least 32 MB of memory
- CD ROM drive (required to install the MCM program)
- Serial Port

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Check 15: Verify a Null Modem Cable, as configured in Figure 7-0.1 is available (optional, user-supplied):

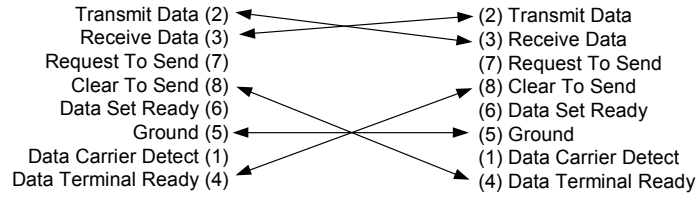


Figure 7-0.1: Null Modem Cable Schematic

Check 16: Verify the power for both the MXU console and the Monitor station share the same building ground.