

Xplornet Tech Tool 1195

Jupiter 2 Installation Guidelines

This TechTool provides reminders and tips on how to properly install and provision for Jupiter 2. Many of these reminders are important and failure to follow will cause errors during provisioning and increase your time while on site.

Description

Complete the following checks and procedures when installing **Jupiter 2**




Site Survey

Launching System Control Center

Xplornet recommends that you log into the System Control Center by entering 192.168.01 into a browser. You can also log in by entering www.systemcontrolcenter.com into a browser.

EchoStar 19

Reminder to look for EchoStar 19 and not EchoStar 17 (Jupiter 1)

1. Install Parameter		2. Pointing		3. Registration	
RE-INSTALL					
SBC State: 22.1.1 (Waiting for installation parameters or terminal swap information)					
Current Tuning Status	Tuning	Satellite / Beam ID / Outroute Number		EchoStar-19 XCI / 9 / 18	
Latitude (DD MM.MMM):		<input type="text" value="45"/>	<input type="text" value="55.125000"/>	Northl ▾	
Longitude (DDD MM.MMM):		<input type="text" value="66"/>	<input type="text" value="38.179001"/>	Wes ▾	
Satellite:		<input type="text" value="EchoStar-19 XCI"/> <input type="checkbox"/> Beam Override			
Submit					

Confirming with Your Customer

When confirming the appointment inform your customer that it may take up to 3 hours to complete the installation. Before you arrive include the information you will need to complete XAP and ensure that the Account Holder is onsite. If the Account Holder is not available please ensure there is someone of age along with the Account Holder's contact information.

Quality of Install

Line of Sight

Ensure your Line of Sight is free of all obstructions. Please review ***Jupiter Customer Premise Equipment Installation, Chapter 6, Site Survey, Finding a Line of Sight***

Mounting Location

Do not Mount on a non-recommended structure such as decks, fences, rails, trees or patios are not acceptable.

Please review ***Jupiter Customer Premise Equipment Installation, Chapter 8, Jupiter ODU Installations*** for guidelines on choosing an installation location and proper mounting.

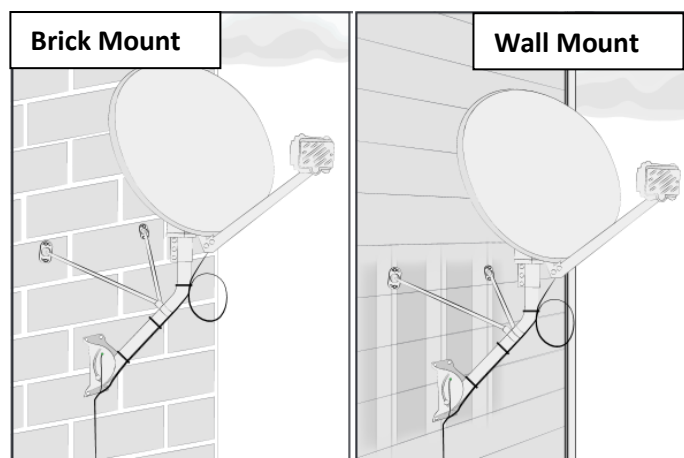
Mounting Standards

- The location provides a clear line of sight to the satellite.
- The total length of RG-6 coaxial cable from TRIA to HT2000 is less than 300ft / 91m and greater than 25ft / 7.6m.
- The building ground is within 20ft / 6m of the ground block.
- The ODU must be mounted 10ft / 3m above ground level.
- Both the mast bracket and the side stays must tie into a core structural element such as a wall stud, roof rafter, or truss.
- The mount surface must be free of decay, damage, or other signs of deterioration and must have a poured concrete foundation. Decks, fences, and rail posts are not acceptable mount points.
- Any mast over 10ft / 3m must be guyed at 3 points.
- The mast bracket and side stays must tolerate a pull-out pressure of 300 pounds.

Approved Mounting

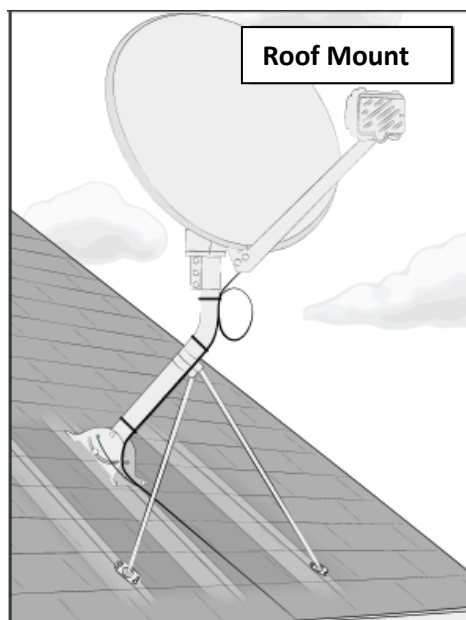
Wall Mount

A wall mount installs on the side of a building. In all cases, it must mount into structural elements and use the side stays provided in the ODU (Outdoor Unit) kit. A wall mount is the preferred mount type but cannot be used in all situations.

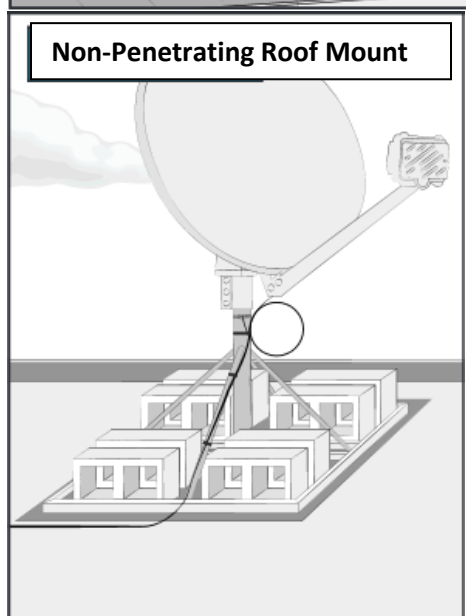


Penetrating Roof-Mount

A penetrating roof mount installs on a slant roof. In all cases, it must mount to roof rafters or trusses and use the side stays provided in the ODU kit.

**Non-Penetrating Roof Mount**

A non-penetrating roof mount can only be installed on a flat roof. It must be installed with weights to secure the mast tube and side stays.

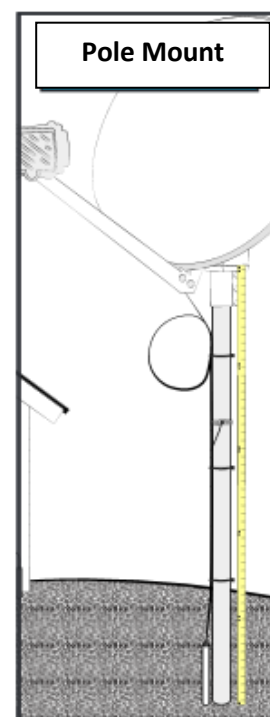


Pole Mount

A pole mount is a steel pole in a cement base. Because it requires cement, a pole mount can only be installed at certain times of the year in most parts of Canada.

A pole mount is an option when any of the following is true:

- The building ground point is on the north side of the building.
- The wall or roof structure will not support the ODU.
- The building does not have a poured concrete foundation.



Cabling and Equipment

New Outdoor cable and Equipment Only

Always use NEW approved Xplornet outdoors cables and grounding. Do NOT use used outdoor hardware. See TechTool 1193, *Xplornet Conversions to Jupiter 2* for guidelines.

List of Approved Cables and Vendors

Vendor	Approved RG-6 Cable
Commscope	5729*
	5731 (with Ground)
Eagle Aspen	39B1
	39B2*
	49B2*
Perfect Vision	CB1B06DSCR0-05*
	CB4B06DSCR0-05 (with Ground) *
	CX64-1B/1W
	CX64-4B/4W (with Ground)
Vextra	V621-B*
	V621-W*
	V621-G*

Grounding

Ensure you have properly grounded the equipment. Please review ***Jupiter Customer Premise Equipment Installation***, Chapter 9, Jupiter Cable and Ground Installation for complete grounding instructions.

Approved Grounding	Unapproved Grounding
<ul style="list-style-type: none"> • A building ground, also called an electrical service electrode. • Service equipment enclosures. Never drill into an electrical service panel. • A metal conduit or raceway of the electrical service. • A grounded interior metal water pipe. • An I-beam clamp on a grounded structural steel member. 	<ul style="list-style-type: none"> • Conduit on the load side of a building enclosure • A cut-off switch or a condensation pipe on a Heating Ventilation Air Conditioning, or HVAC, system • Steel roof trusses • Metal roofs, metal roof screws, metal screens, or metal windows • Vents or vent pipes • Electrical outlets or light fixtures • Gas pipes, gutters, exterior water faucets, unlicensed ground rods

Power Down all equipment before Swapping

Before swapping ensure to power down the all the Outdoor and Indoor equipment.

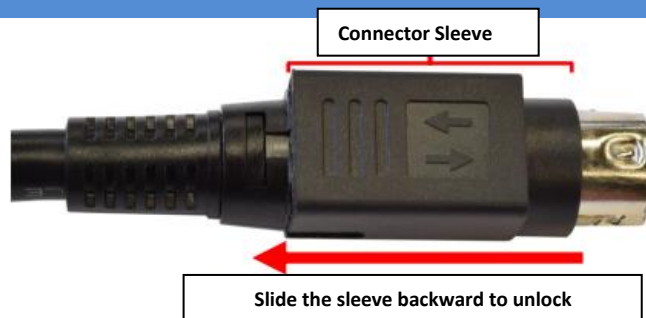
Remove DAPT after Pointed

After the DAPT is registered and the Dish is aligned, remove the DAPT before beginning your Work Order. If you do not remove the DAPT after registration you are cannot enter the Installer Portal.

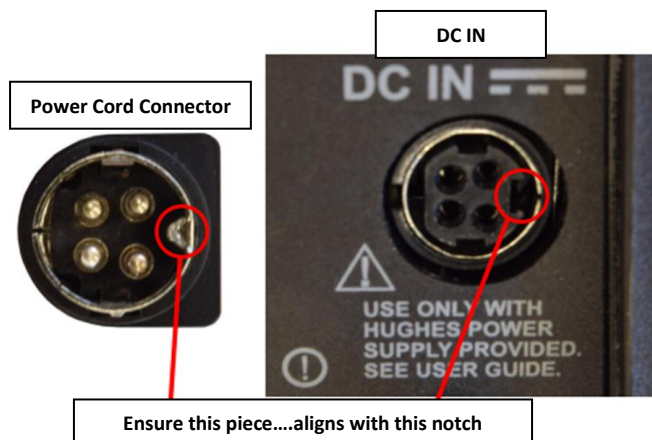
Connecting the HT2000 to a Computing Device and Power

Step 1 Connecting the Power Supply connector to the HT2000 requires that you:

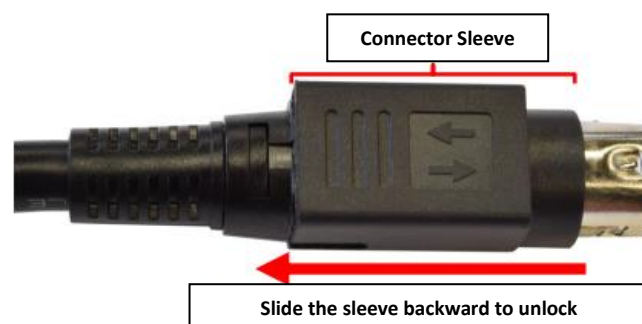
Lift the connector slide shield to insert fully into the **DC IN** on the back of the HT2000



Step 2 Insert the connector fully into the **DC IN** so that the metal piece (Flat side of power supply connector) aligns with the **DC IN** notch



Step 3 When disconnecting you must lift the shield before withdrawing or you risk damaging the connection



Disable Wifi

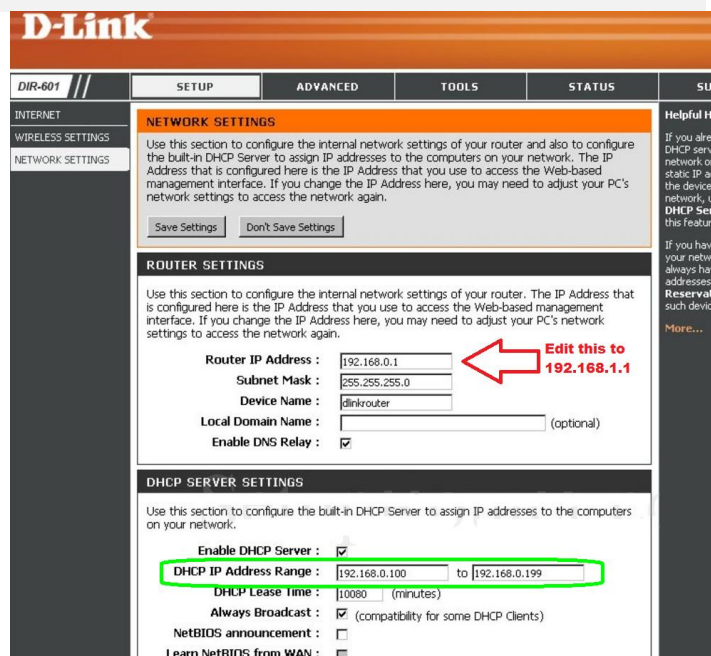
Before provisioning a Jupiter system, disable the Wi-Fi. When a PC is directly connected to a router and directly connected to a HT 2000, it can cause a DNS issue and prevents the Installer Portal from opening.

Reset Default IP Address

Hughes modems use a default IP address of 192.168.0.1 which conflicts with routers that use the same address.

To prevent IP address conflicts, any router used with the Jupiter system should have its internal IP address set to something other than 192.168.0.1. The recommended IP is 192.168.1.1.

1. Ensure the WAN of the router is set to DHCP
2. Open the LAN settings of the router
3. Change only the LAN IP address and do not change other settings:



Alignment

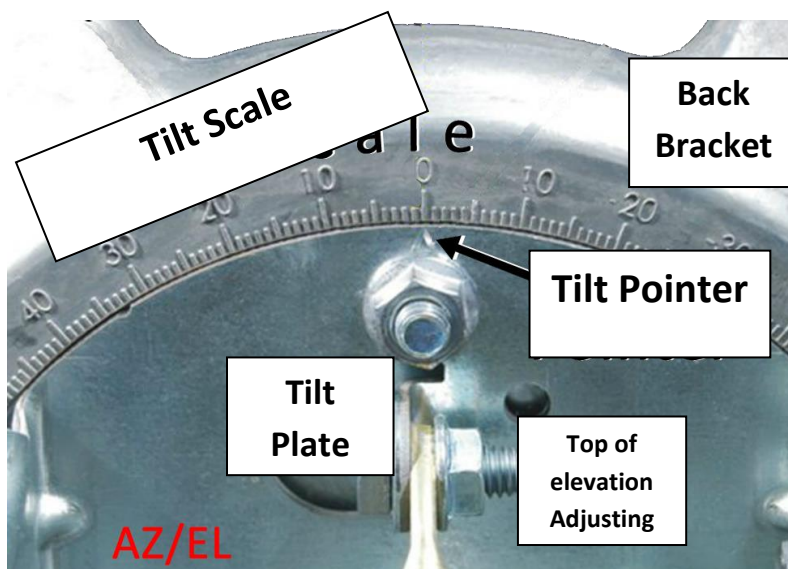
Set the Skew Before Pointing

Before you begin pointing you must set the skew during assembly. Setting the skew before pointing reduces errors and your time in repointing the dish if there is a Quality of Install failure due to improper setting.

Refer to installation parameters given by the modem after entering your Lats and Longs.

1. Find the Antenna Tilt value that could be a positive or negative number
2. Loosen the 5 carriage bolts that hold the Az-El , Tilt Plate, and back Bracket if the ODU is already assembled,
3. On the back bracket, rotate the Tilt Pointer arrow to the desired degree on the Tilt Scale (negative Right of 0, positive Left of 0)

1. Install Parameter	
RE-INSTALL	NEXT Hide SQF Graph
SBC State: 22.2.1 (Pointing in progress - outroute not locked)	
Satellite Name	EchoStar-19-XCI
Azimuth	128.617°
Elevation	26.865°
Antenna Tilt	-19.371°
Uplink Pol	Left-Hand (LH)
Beam Selected	2
Outroute Num	1

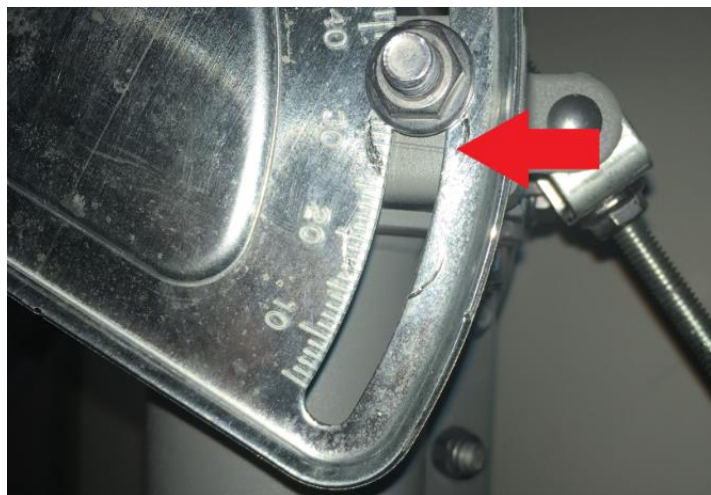


Remove DAPT after Pointed

After the DAPT is registered and the Dish is aligned, remove the DAPT before beginning your Work Order. If you do not remove the DAPT after registration you are cannot enter the Installer Portal.

Setting The Elevation

The elevation scale line can be difficult to find. You must look through the Elevation Gauge opening to find the line underneath.



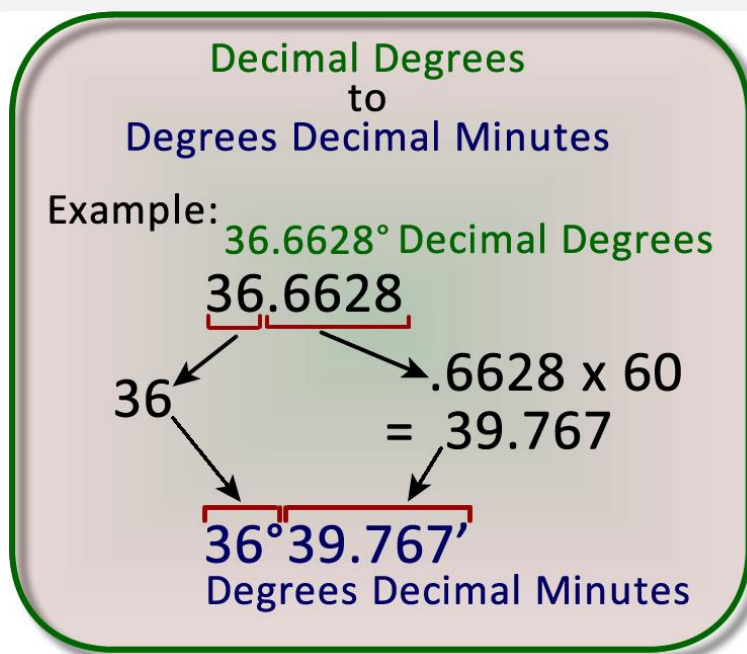
Lats and Longs Format

Lats and Longs must be entered in DD.MM.MMM and not DD.DDD. It is important to use the correct format so that the installation is ranged for the correct location. This produces a better installation target as well as a better Customer experience with the service.

1. Separate the whole number part of the Decimal Degrees from the decimal part.
2. Multiply the decimal part by 60.

Put the whole number part together with the result from step 2.

This gives the Degrees Decimal Minutes value




Entering Lats and Longs

When entering Lats and Longs click the **Submit** button to continue to the Pointing page.

Wait Before Clicking Installer Portal Link

Do not click the Installer Portal link until the Modem is fully registered and you see 3 green Checks. The Checks take approximately 45 seconds to appear. Once completed you then have a wall gardened IP Address.

1. Install Parameter		2. Pointing	
RE-INSTALL RE-REGISTER			
SBC State: 22.3.5 (Terminal activation stage)			
Range Rate Minimum / Target(dB)	OQPSK 512K 1/2 4.6 / 5.4	Ranging Sessions Initial / Final EsNo(dB)	
	Ranging Successful Registration Successful Associated with Network [REG09XCIWGW0202]		

Service Activation

QoI

Jupiter QoI is adjusted for weather that allows for some tolerances when activating.

Installer Portal QoI

Please remember that the QoI pages have a set life of 45 minutes for provisioning. Please follow the instructions and Recommended Actions before calling in to DSG. Successive clicking of the Submit button does NOT change the results. Please read the recommended actions for cable fixes before calling DSG.


Acquiring SAN

Do not close the Web Browser until you have received the SAN or you will be required to call DSG.

Beam Override

Before using the Beam Override you must call DSG for authorization

☐ Beam Override



Use only a PC for Provisioning

Use only a PC for provisioning. Do not use a smart phone for provisioning. Using a smart phone can cause incorrect values in UL ES NO and DL ES NO that cannot be fixed through the Installer Portal. Use a smart phone only for pointing.

Contact us

If you have questions about this bulletin, contact Xplornet Dealer Support at 1-866-841-6004 or dealer.support@corp.xplornet.com.