

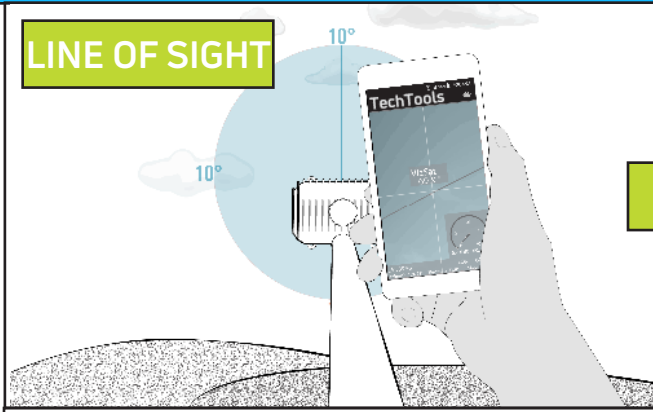
LOCATION / LOS

LOCATION



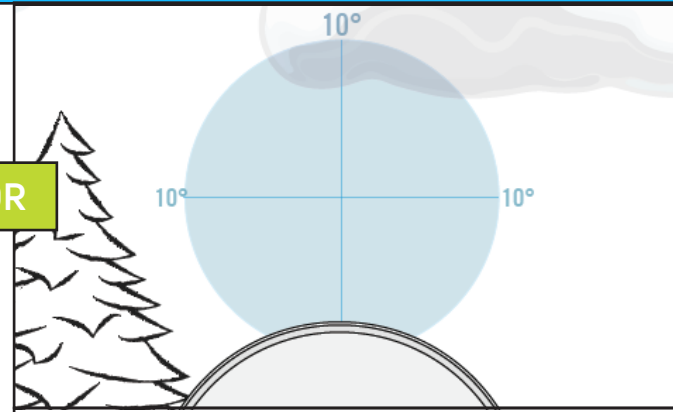
- Show full, frontal view of the home from the street:
- Do not take pictures of the customer, customer documents, or customer vehicle/license plate

LINE OF SIGHT



- Show a clear view of the southern sky toward the TRIA
- Take one photo that shows the clear line of sight from on top of the boom arm (where it connects to the reflector) toward the TRIA

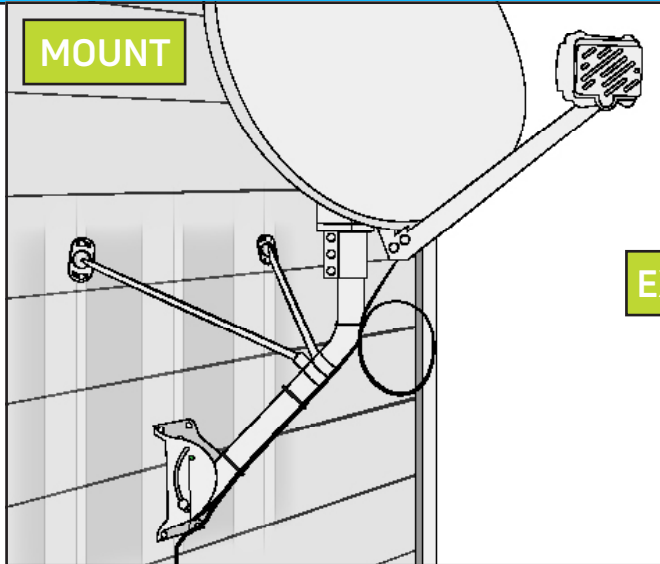
OR



- Line of Sight should be:
 - Clear in all directions by 10 degrees
 - Clear of tree growth, seasonal foliage changes, and future development

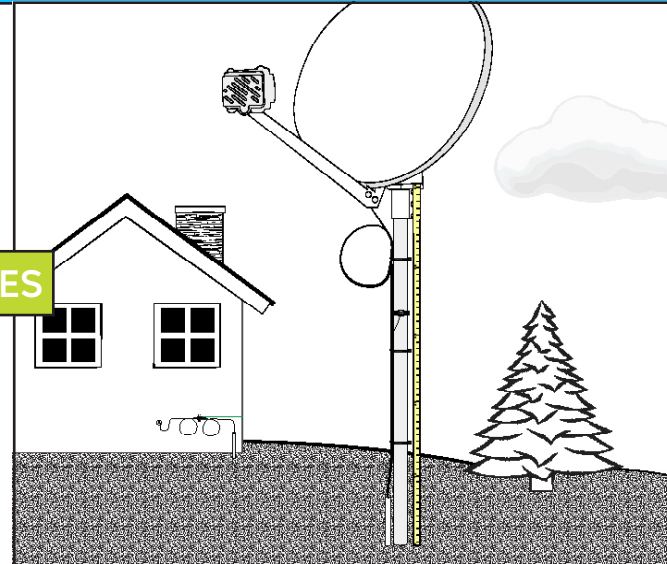
OUTDOOR UNIT (ODU)

MOUNT



- Show correct installation of one of our approved mounts:
 - Wall / Roof Mount (tri-mast)
 - Pole Mount
 - Side "S" Mount
 - Low Profile "Stub" Mount
 - Under Eave Mount
 - Brick Wall Mount
 - Non-Pen Mount
 - Rail Mount
 - Tile Roof Mount

EXAMPLES

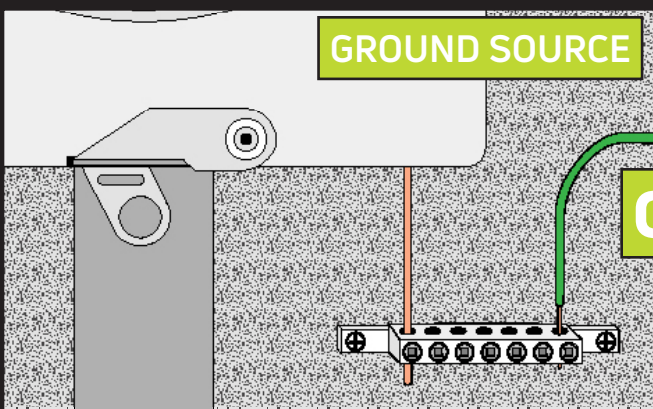


Reference "Mount Types" section for specific mount standards

- All information detailed in the mount profile must be visible in the installation photo
- Submit as many pictures as necessary to depict all installation requirements
- Tighten all nuts and bolts, including collar bolts and elevation rod nuts
- Use all hardware as designed for assembly
- Use only approved components (matching reflector, AZ/EL and hardware)
- Set skew according to the information on the work order
- If Zone of Protection grounding is used, mount photo must reflect ZOP location.

GROUND

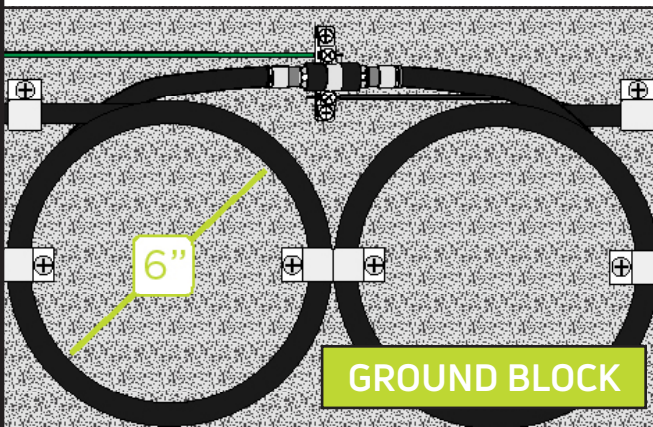
GROUND SOURCE



OR

- Show a UL listed device attached to an NEC-approved ground source
 - IBT (required if present), #6 bare copper wire, back-bonded grounding electrode, metallic raceway, meter box, grounded I-beam
- Use matching metals (ex. copper to copper)
- Do not impede the opening of the meter box door
- Do not share ground sources (Note: each IBT port is an available ground source)
- Scrape paint to allow metal to metal contact

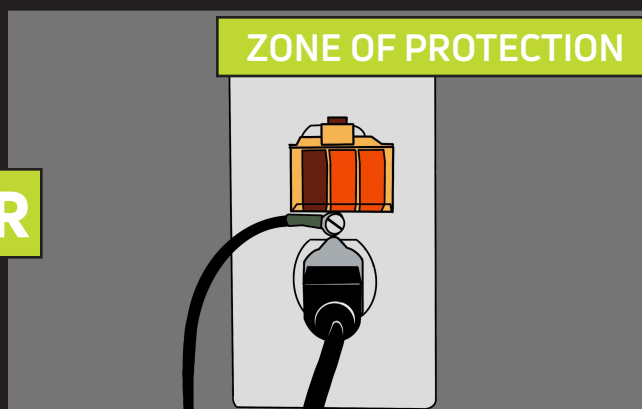
AND



GROUND BLOCK

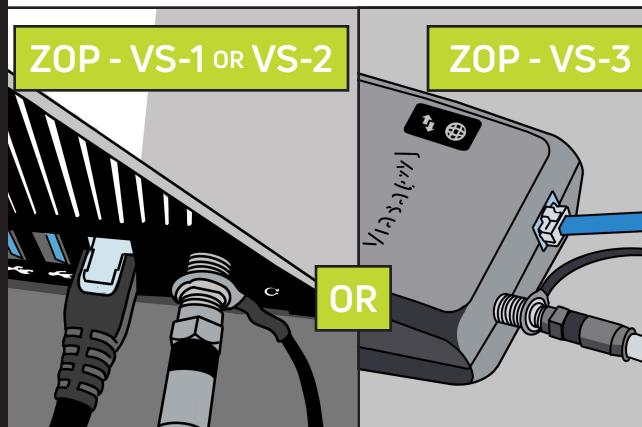
- Show the installation of a UL listed, 3Ghz rated ground block:
 - Install compression connectors, torque to 30 in. lbs.
 - Use weather boots on both sides of the ground block
 - Form 6" diameter service loops
 - Attach ground block directly to structure (2 screws)
 - Run the #10 gauge solid copper ground wire as straight and short as possible, with minimal bends (cannot exceed 20°)
 - Connect messenger and ground wire to ground block

ZONE OF PROTECTION



- If using the Zone of Protection (ZOP), the antenna location must meet NEC ZOP requirements
- Show properly secured bond to electrical outlet wall plate
- Use an adapter to convert the 3-prong grounded cord to a 2-prong cord
- Show outlet tester indicating properly wired circuit

AND

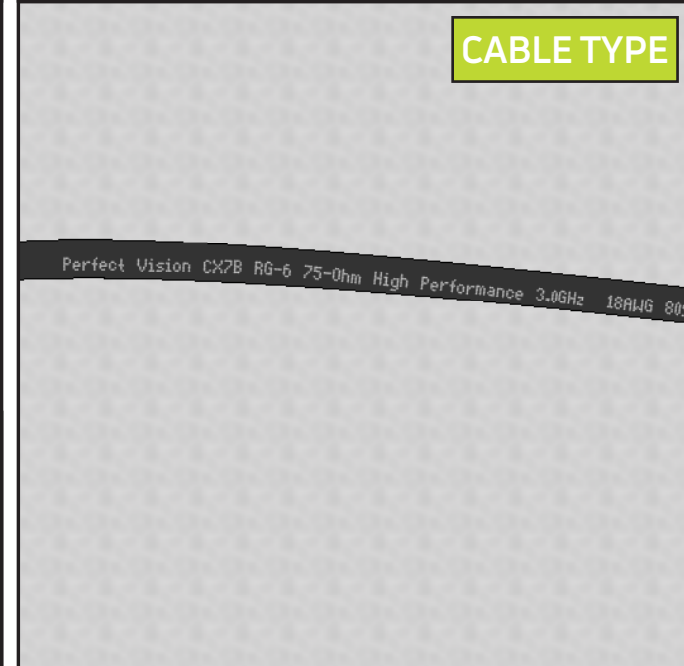


OR

- Show properly attached nuts on both sides of circle ring connector on back of the modem (VS-1 or VS-2) or the Viasat Network Power Adapter (VS-3)

CABLE

CABLE TYPE



- Show a close-up of cable markings proving:
 - Cable type and model number
 - Solid copper, rated to 3GHz, 75 Ohm, 60% braid
 - Cable is in good condition
 - Cable type must be taken attached to structure or mount. If more than one type is used (pre-wired structure), take a picture of both

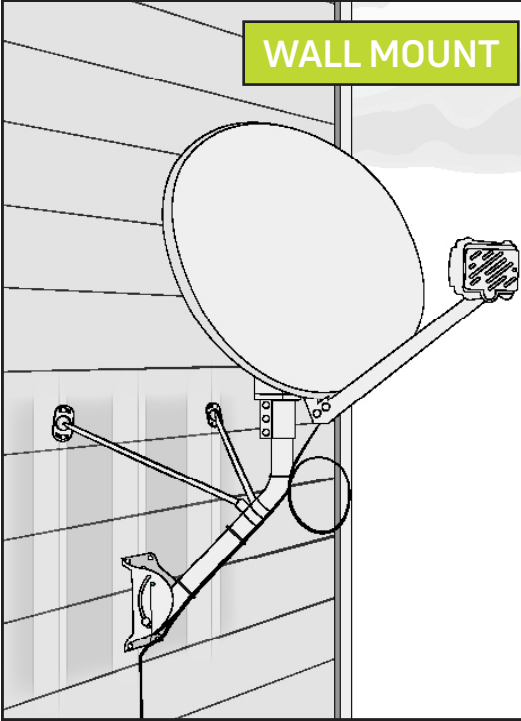
CABLING SPECS

- 150' maximum run of RG-6 cable that is neat and follows the lines of the house
- Attached using only screw clips
- Continuous and does not use in-line barrels, excluding the ground block and wall plate
- Never bent to 90 degree angles

QUALITY INSTALLATION STANDARDS

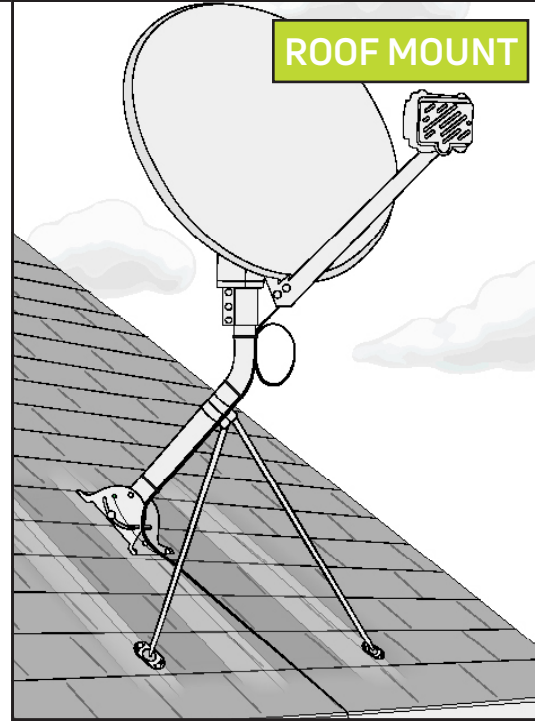
MOUNT TYPES

WALL MOUNT



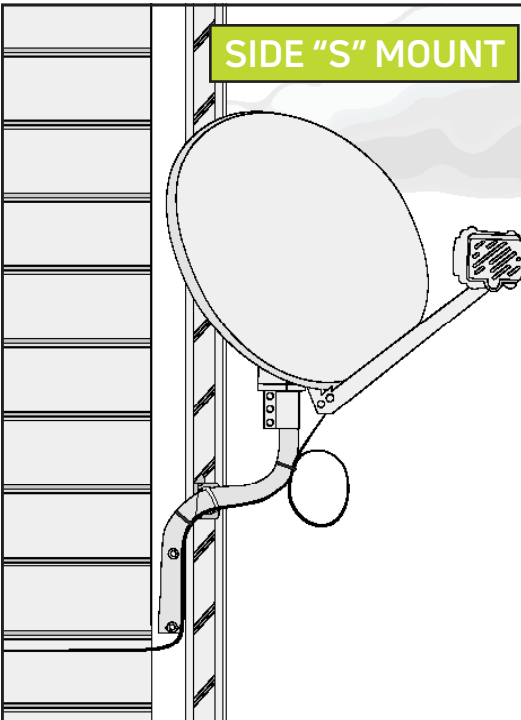
- Attach to an approved, structurally sound surface (wood or composite siding only)
- Mount antenna at least 4' above walking surface
- ODU is at least 3' from electrical panel and 20' from power lines
- Use only approved and matching ODU hardware
- Pre-drill holes required using a 1/4" wood bit
- Secure the footplate to the wall with:
 - Two 3" lags through center holes into stud
 - Four 2" lags through corner holes
- Position monopoles 2" below the bend, at an upward angle, forming a tripod
- Secure monopole plates to adjacent studs using two 3" lags
- Seal all drilled holes with silicone
- Zip-tie cable to the mast, including a 6" diameter service loop
- Connect the messenger/ground wire to a green ground screw on the footplate
- Tighten all hardware completely

ROOF MOUNT



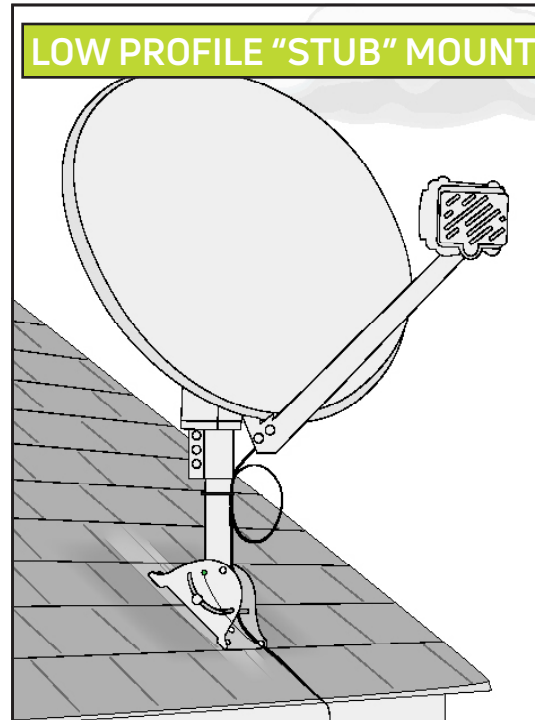
- Attach to an approved, structurally sound surface (asphalt shingles only, sloped roof, close to the roof's edge, ideally not over living space)
- ODU is at least 3' from electrical panel and 20' from overhead power lines
- Use only approved and matching ODU hardware
- Pre-drill holes required using a 1/4" wood bit
- Secure the footplate to the roof with:
 - Two 3" lags through center holes into rafter
 - Four 2" lags through corner holes
- Position monopoles 2" below the bend, at a downward angle, forming a tripod
- Secure monopole plates to adjacent rafters using two 3" lags
- Seal all drilled holes with tar-based sealant
- Zip-tie cable to the mast, including a 6" diameter service loop
- Connect the messenger/ground wire to a green ground screw on the footplate
- Tighten all hardware completely

SIDE "S" MOUNT

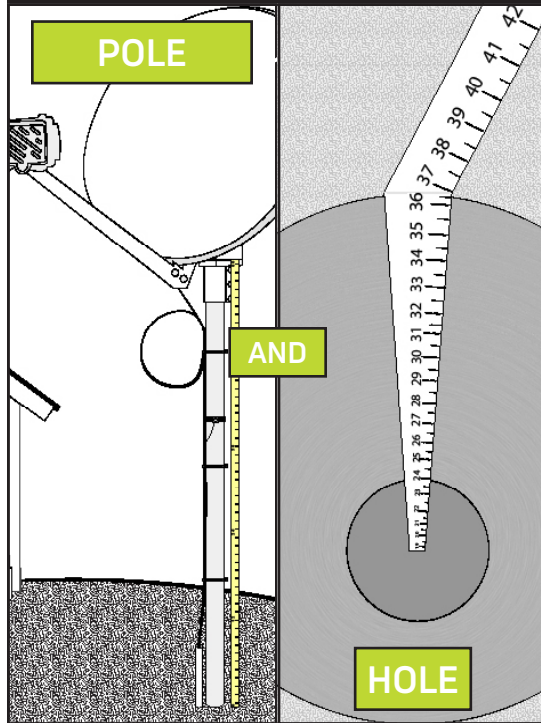


- Attach to an approved, structurally sound surface (wood or composite only, southern-facing corner, avoid touching the eave/roof with antenna)
- Mount antenna at least 4' above walking surface
- ODU is at least 3' from electrical panel and 20' from power lines
- Use only approved and matching ODU hardware
- Pre-drill holes required using a 1/4" wood bit
- Secure the mast to a corner stud with:
 - Two 6" lags on S-tube
 - Two 3" lags on L-bracket
- Seal all drilled holes with silicone
- Zip-tie cable to the mast, including a 6" diameter service loop
- Connect messenger/ground wire to a green ground screw on the "L" bracket
- Tighten all hardware completely

LOW PROFILE "STUB" MOUNT



- Attach to an approved, structurally sound surface:
 - Sloped roofs only
 - Asphalt shingles only
 - Close to the roof's edge
 - Ideally not over living space
 - Boom arm should be parallel with rafter for best support
- ODU is at least 3' from electrical panel and 20' from power lines
- Use only approved and matching ODU hardware
- Pre-drill holes required using a 1/4" wood bit
- Secure the footplate to the roof with:
 - Two 3" lags through center holes into rafter
 - Four 2" lags through corner holes
- Seal all drilled holes with tar-based sealant
- Zip-tie cable to the mast, including a 6" diameter service loop
- Connect the messenger/ground wire to a green ground screw on the footplate
- Tighten all hardware completely

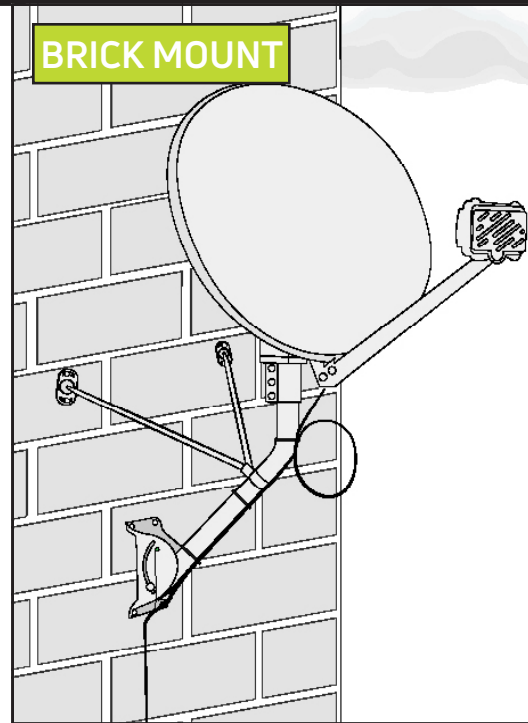


Pole Mount

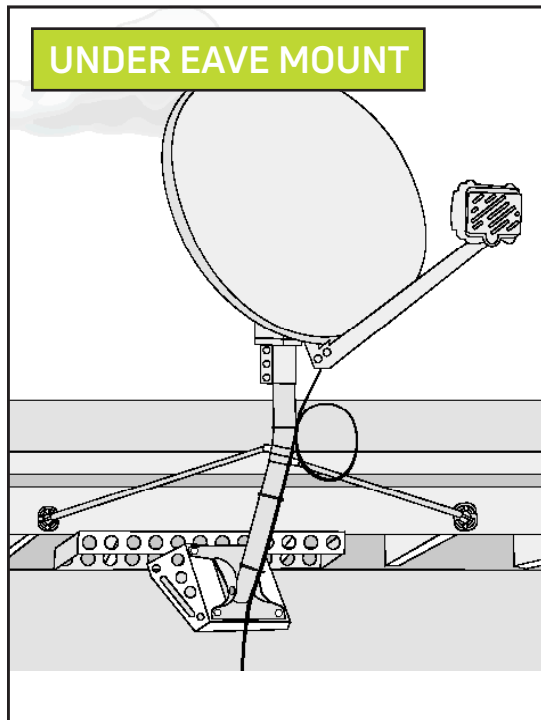
- Install in stable, solid ground
- Use an approved pole:
 - 2" OD, 9 gauge, or 2 3/8" OD with pole adapter, Schedule 40 (NEVER use adapter on a HEX pole)
- Galvanized, with an anti-spin device (unless using a HEX pole)
- Photo displays measuring tape for entire pole
 - If 7ft pole: 4' above walking surface
 - If 8ft pole: 5' above walking surface
- Use 150 lbs. of properly mixed concrete
- Use 2 sweeps (1 at pole, 1 at house)
- If non-flooded cable is used, it must be buried in conduit
- Zip-tie cable to the pole, including a 6" diameter service loop
- Connect the messenger or ground wire to a galvanized strap or a green ground screw on the flat side of the pole
- Tighten all hardware completely

Hole

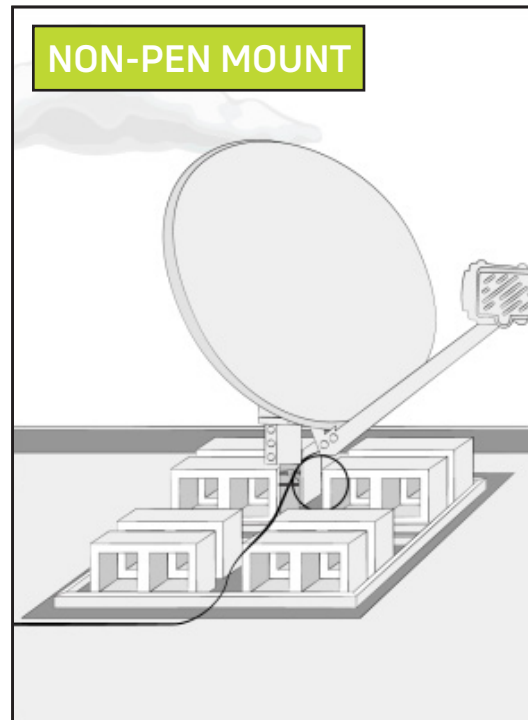
- Photo displays the hole measures 36" from the bottom to the top
- Hole should appear 12" in diameter



- Attach to an approved, structurally sound surface (load bearing wall, away from corner/door/window/top of wall, no chimneys)
- Mount antenna at least 4' above walking surface
- ODU is at least 3' from electrical panel and 20' from power lines
- Use only approved and matching ODU hardware
- Pre-drill holes required using a 1/2 inch masonry bit
- Use a hammer to lightly tap a lag shield into the pre-drilled holes
- Seal all drilled holes with silicone
- Lags must not be drilled into mortar, or more than two lags in one brick
- Secure footplate using four 2" lags in corner holes and proper anchors
- Position monopoles 2" below the bend, at an upward angle, forming a tripod
- Monopole plates secured by two 2" lags, using proper anchors
- Zip-tie cable to the mast, including a 6" diameter service loop
- Connect messenger/ground wire to a green ground screw on the footplate
- Tighten all hardware completely

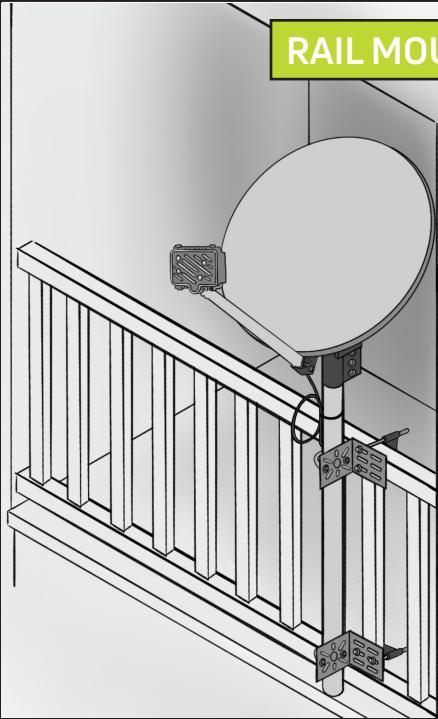


- Attach to an approved, structurally sound surface
- ODU is at least 20' from power lines
- Use only approved and matching ODU hardware
- Pre-drill holes required using a 1/4" wood bit
- The following option is available:
 - Slearo mount secured with four 3" lags
- Install the monopole per manufacturer's instructions
- Secure the monopole plates to adjacent rafters using two 2" lags
- Seal all drilled holes with silicone
- Zip-tie cable to the mast including a 6" diameter service loop
- Connect the messenger/ground wire to a green ground screw on the footplate
- Tighten all hardware completely



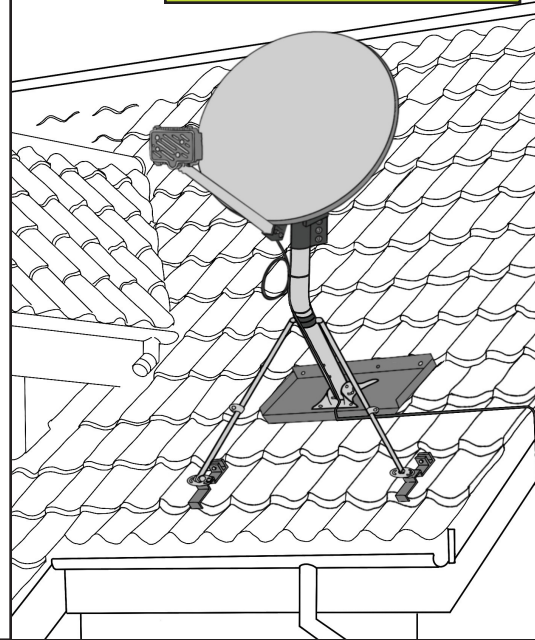
- Approved for flat roof, balcony, deck, patio, and ground use when a pole mount is not an option
- Use a protective mat on ALL locations
- If using monopoles, position the collars 2" below the bend, at a downward angle, forming a tripod
- Zip-tie cable to the mast, including a 6" diameter service loop
- Universal or stub mount based on location with snow as a consideration
- Should be placed in area of low traffic
- Surface must allow mast to be leveled
- Location should not be prone to flooding
- ODU is at least 3' from electrical panel and 20' from power lines
- Cable must not pose a tripping hazard
- Requires eight 28-pound cinder blocks for ballast
- Connect the messenger/ground wire to a green ground screw on the footplate
- Tighten all hardware completely

RAIL MOUNT



- Attach to a structurally sound railing, preferably near a wall or post
- ODU is at least 3' from electrical panel and 20' from power lines
- Zip-tie cable to the mast, including a 6" diameter service loop
- Connect the messenger to the L-bracket with a green ground screw
- Prevent hazards by properly routing and securing the coaxial cable
- Tighten all hardware completely

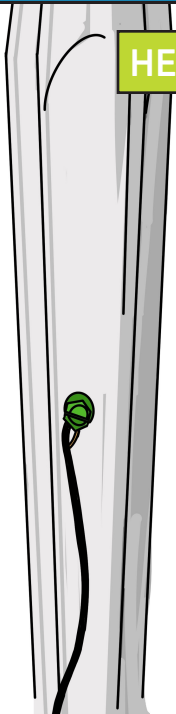
TILE ROOF MOUNT



- Attach to an approved, structurally sound surface on a sloped tile roof (clay or concrete tiles only)
- Avoid broken or cut tiles and use at least 3' from any flashing
- ODU is at least 3' from electrical panel and 20' from power lines
- Requires use of tri mast
- Place footplate 2 or more rows up from eave
- Position monopoles 2" below the bend, at a downward angle, forming a tripod
- Zip-tie cable to the mast, including a 6" diameter service loop
- Connect the messenger/ground wire to a green ground screw on the footplate
- Tighten all hardware completely

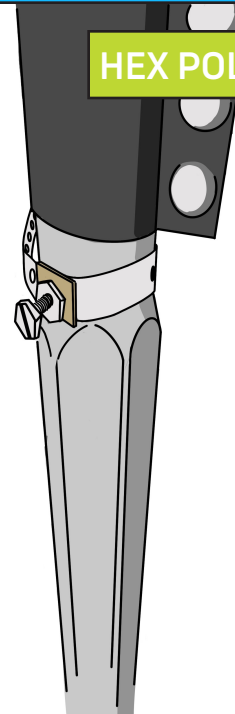
HEX POLE GROUND OPTIONS

HEX POLE (A)



- When grounding to a hex pole, the green ground screw can be drilled in directly to flat side of pole

HEX POLE (B)



- When grounding to a hex pole, a galvanized strap can be used at the top round part only