

Non Penetrating Roof Mount

PTX-NP238S(D)

PTX-NP300S(D)

***INSTALLATION &
ASSEMBLY INSTRUCTIONS***

PATRIOT[®]

LIMITED TWELVE (12) MONTH WARRANTY

This PATRIOT ANTENNA equipment is warranted to be free from defects in material and workmanship under normal use and service. PATRIOT ANTENNA shall repair or replace defective equipment, at no charge, or at its option, refund the purchase price, if the equipment is returned to PATRIOT ANTENNA not more than twelve (12) months after shipment. Removal or reinstallation of equipment and its transportation shall not be at cost of PATRIOT ANTENNA except PATRIOT ANTENNA shall return repaired or replaced equipment freight prepaid.

This Warranty shall not apply to equipment which has been repaired or altered in any way so as to affect its stability or durability, or which has been subject to misuse, negligence or accident. This Warranty does not cover equipment which has been impaired by severe weather conditions such as excessive wind, ice, storms, lightning, or other natural occurrences over which PATRIOT ANTENNA has no control, and this Warranty shall not apply to equipment which has been operated or installed other than in accordance with the instructions furnished by PATRIOT ANTENNA.

Claimants under this Warranty shall present their claims along with the defective equipment to PATRIOT ANTENNA immediately upon failure. Noncompliance with any part of this claim procedure may invalidate this warranty in whole or in part.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER AGREEMENTS AND WARRANTIES, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. PATRIOT ANTENNA DOES NOT AUTHORIZE ANY PERSON TO ASSUME FOR IT THE OBLIGATIONS CONTAINED IN THIS WARRANTY AND PATRIOT ANTENNA NEITHER ASSUMES NOR AUTHORIZES ANY REPRESENTATIVE OR OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE EQUIPMENT DELIVERED OR PROVIDED.

IN NO EVENT SHALL PATRIOT ANTENNA BE LIABLE FOR ANY LOSS OF PROFITS, LOSS OF USE, INTERRUPTION OF BUSINESS, OR INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND.

In no event shall PATRIOT ANTENNA be liable for damages in an amount greater than the purchase price of the equipment.

Some states do not allow limitations on how long an implied warranty lasts, or allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

PATRIOT ANTENNA has the right to void the warranty when the antenna is installed by someone other than a certified installer.

Product Serial Number- _____

Date Purchased- _____

Patriot Antenna Systems

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Albion, MI 49224 USA

Tel: (517)629-5990

Fax: (517)629-6690

E-mail: info@sepatriot.com

IMPORTANT!!!

INSTALLATION OF THIS PRODUCT SHOULD BE PERFORMED ONLY BY A PROFESSIONAL INSTALLER AND IS NOT RECOMMENDED FOR CONSUMER D.I.Y. (DO-IT-YOURSELF) INSTALLATIONS.

DANGER!!!

WATCH FOR WIRES! Installation of this product near power lines is dangerous. For your own safety, follow these important safety rules.

1. Perform as many functions as possible on the ground.
2. Watch out for overhead power lines. Check the distance to the power lines before starting installation. We recommend you stay a minimum of 6 meters (20 feet) from all power lines.
3. Do not use metal ladders.
4. Do not install antenna or mast assembly on a windy day.
5. If you start to drop antenna or mast assembly, get away from it and let it fall.
6. If any part of the antenna or mast assembly comes in contact with a power line, call your local power company. **DO NOT TRY TO REMOVE IT YOURSELF!** They will remove it safely.
7. Make sure that the mast assembly is properly grounded.

WARNING!!!

Assembling dish antennas on windy days can be dangerous. Because of the antenna surface, even slight winds create strong forces. For example, a 1.0m antenna facing a wind of 32 km/h (20 mph) can undergo forces of 269 N (60 lbs.). Be prepared to safely handle these forces at unexpected moments. Do not attempt to assemble, move or mount dish on windy days or serious, even fatal accidents may occur. PATRIOT ANTENNA SYSTEMS is not responsible or liable for damage or injury resulting from antenna installations.

WARNING!!!

Antennas improperly installed or installed to an inadequate structure are very susceptible to wind damage. This damage can be very serious or even life threatening. The owner and installer assumes full responsibility that the installation is structurally sound to support all loads (weight, wind & ice) and properly sealed against leaks. PATRIOT ANTENNA SYSTEMS will not accept liability for any damage caused by a satellite system due to the many unknown variable applications.

INTRODUCTION

Thank you for purchasing your Patriot Commercial Antenna Non Penetrating Mount. We trust that you will find this to be a well designed product that will provide many years of reliable service. This manual covers the assembly and installation of the PTX NP238/300 System. Read this manual thoroughly before beginning assembly. For best results in the assembly process. Perform each step in the same sequence as listed in this manual. Record the serial number of the unit on to page 2 for future reference and read the warranty information. The serial number can be found on the antenna back structure.

UNPACKING AND INSPECTION

Shipping cartons should be unpacked and contents checked for damaged or missing parts. Should there be any parts that are damaged or missing, please contact technical support for replacement.

SITE SELECTION

The main objective of conducting a site survey utilizing a compass and inclinometer is to choose a mounting location on the ground that will give you the greatest amount of swing for azimuth and elevation for present as well as future use. A thorough preinstallation site survey is strongly recommended because it can alert you to any “look angle”, soil, wind or other problems.

The first and most important consideration when choosing a prospective antenna site is whether or not the area can provide an acceptable “look angle” to the satellite. A site with a clear, unobstructed view facing south, southeast is required. Your antenna site must be selected in advance so that you will be able to receive the strongest signal available. Also consider obstructions that may occur in the future such as the growth of trees.

It is important to conduct an on-site survey with a portable antenna or with a compass and clinometer to avoid interference, obstructions, etc.

When selecting “look angle”, be sure to observe and take readings approximately 10 deg to the left and right, above and below your selected “look angle”.

Before Ground Pole Installation, the soil type should be checked because soil conditions vary widely in composition and load bearing capacity. A soil check will help you to determine the type and size of foundation required to provide a stable base for the antenna.

Before digging is done, information regarding the possibility of underground telephone lines, power lines, storm drains, etc., in the excavation area should be obtained from the appropriate agency.

As with any other type of construction, a local building permit may be required before installing an antenna. It is the property owner’s responsibility to obtain any and all permits. Ground mounts are certified for 125 mph wind survival.

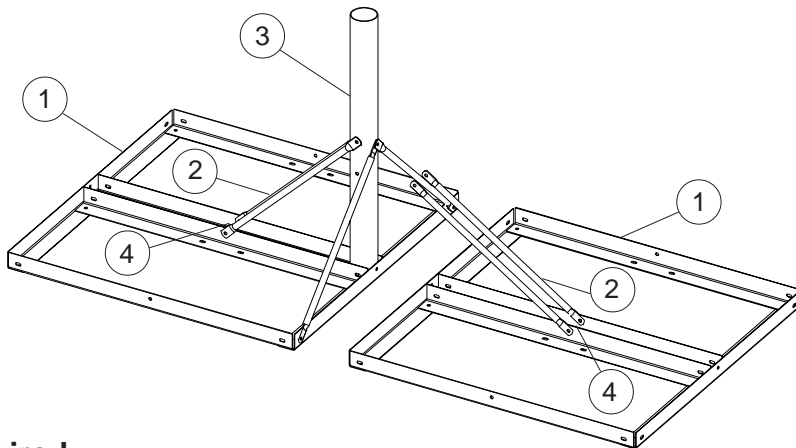
Hardware Table

#	Description	Quantity
1	Base Angle	6
2	Strut Tubes	4
3	Mast Pipe	1
4*	60mm / 75mm Bushing	1
5	Hardware kit	1

* The 60mm & 75mm are included in the Hardware Kit for 2 3/8" or 3" Mast pipe

Optional add-on Base Hardware Table

#	Description	Quantity
1	Base Angle	6
2	Strut Tubes	2
4	60mm Bushing	1
5	Hardware kit	1



Optional add-on Base (Not Included)

Tools Required

13 mm Combination Wrench
13 mm Socket Wrench

Options

Rubber Pad: Two pieces 36" x 72" (To be placed between mount base and roof surface).

Solid concrete cap blocks: 3.6" x 7.6" x 15.6" (Quantity, see Ballast requirements on page 10).

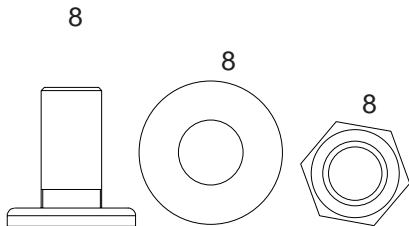
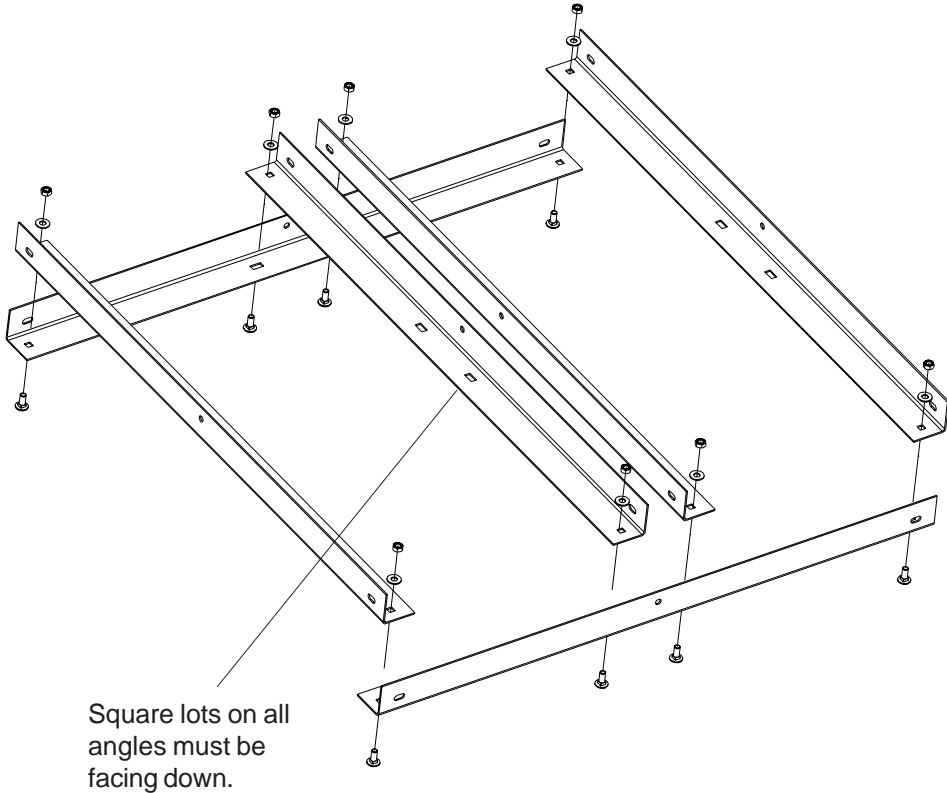
Cable(See page 8): 1/8 diameter minimum (1200 lbs. Minimum breaking strength) 7x7 or 7x19 construction, stainless steel or galvanized steel (length as required), and Cable clamps(6).

Grounding rod clamp, grounding block wire: - As required by national and local electric codes.

Non Penetrating Mount Assembly & Installation

1. Begin frame assembly by laying out the 6 Base Angles as shown and fasten together using M8 hardware shown. Finger tighten only at this time.

NOTE: The bolt heads are on bottom side against rubber matting.

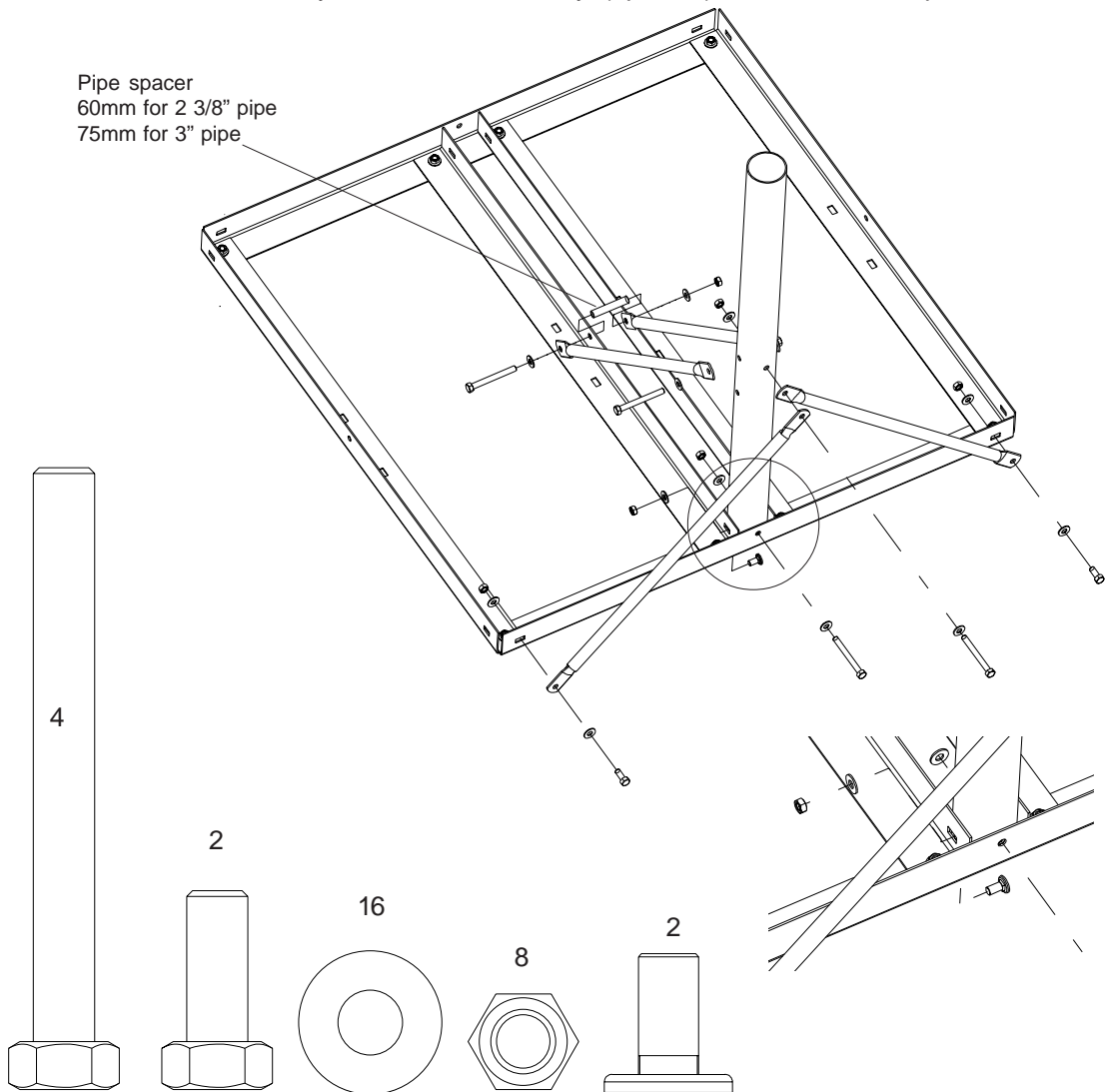


Non Penetrating Mount Assembly & Installation (cont.)

3. Attach Mast Pipe and Strut Tubes to the base frame with the hardware shown below. Hardware should be finger tight.

4. Visibly “square up” the Base frame and tighten all hardware .

5. Assemble and add-on any additional Ballast Trays(optional) needed for the required Ballast



Locating the Non-Pen Mount

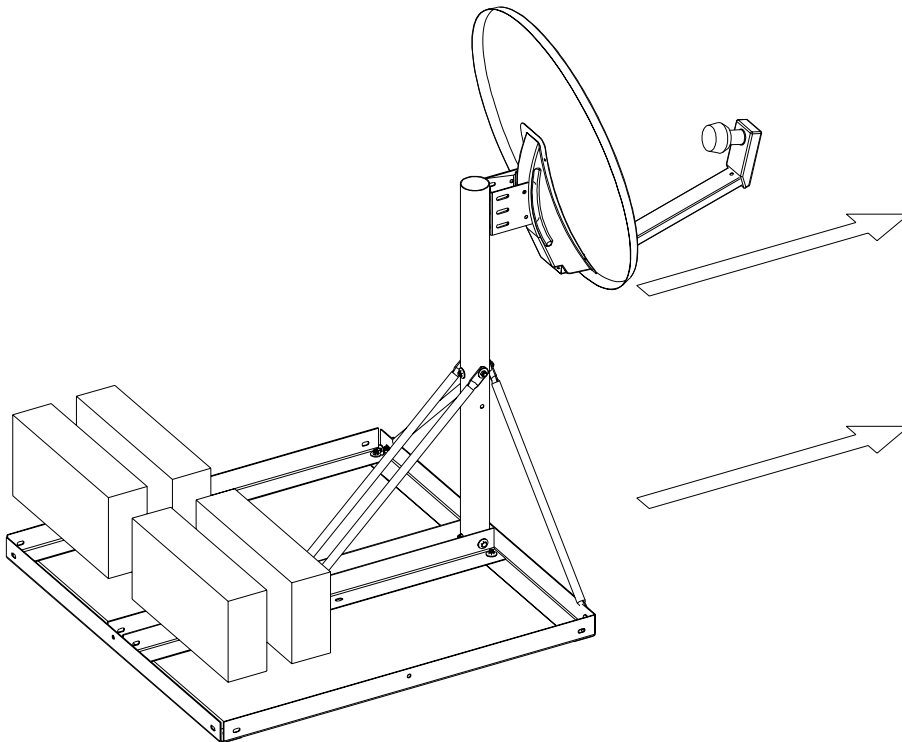
1. Remove all gravel and debris from the area that will be occupied by the Non-Pen Roof mount.

NOTE: It is required that a 3/8" rubber pad be attached to the bottom of the base frame with 3M super 7 spray adhesive. The rubber pad will provide the coefficient of friction that the ballast requirement calculations are determined from.

2. Roughly align the Non-Pen Frame assembly in the azimuth direction toward the desired satellite using a compass or realign the frame after step 4, and place 2-4 cement blocks into the ballast trays to give stability for a rough site-in.

NOTE: The Non-Pen mount should be aligned within 10 degrees of the direction the antenna is pointed.

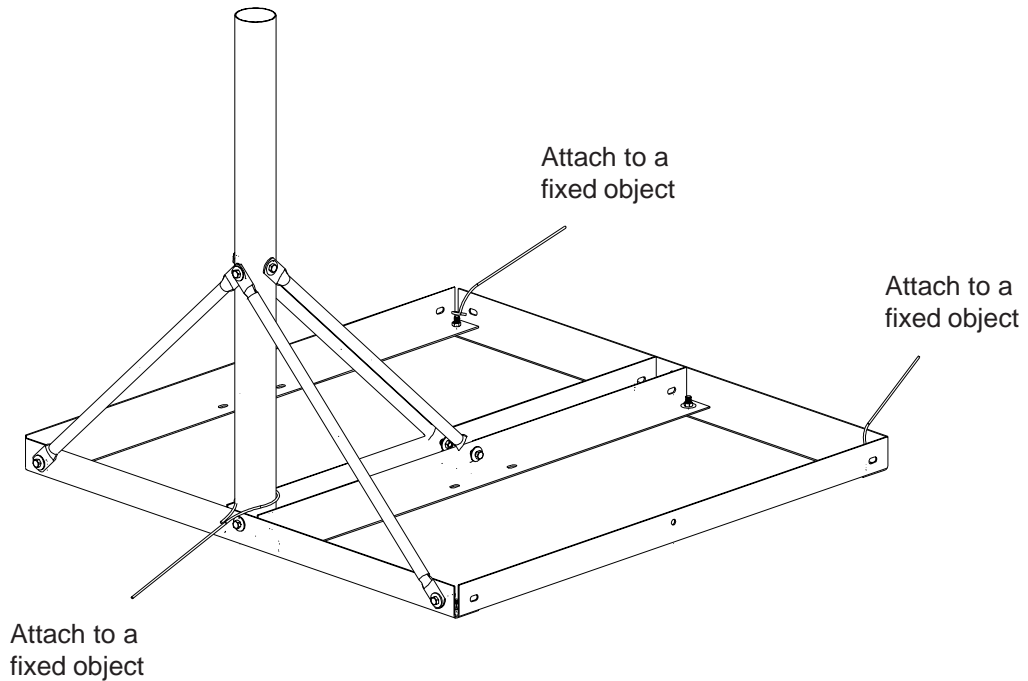
3. Place the assembled antenna onto the Mast Pipe.
4. Using installation tuning equipment, align the reflector with the desired satellite. Realign the direction of the Non-Pen mount if needed.

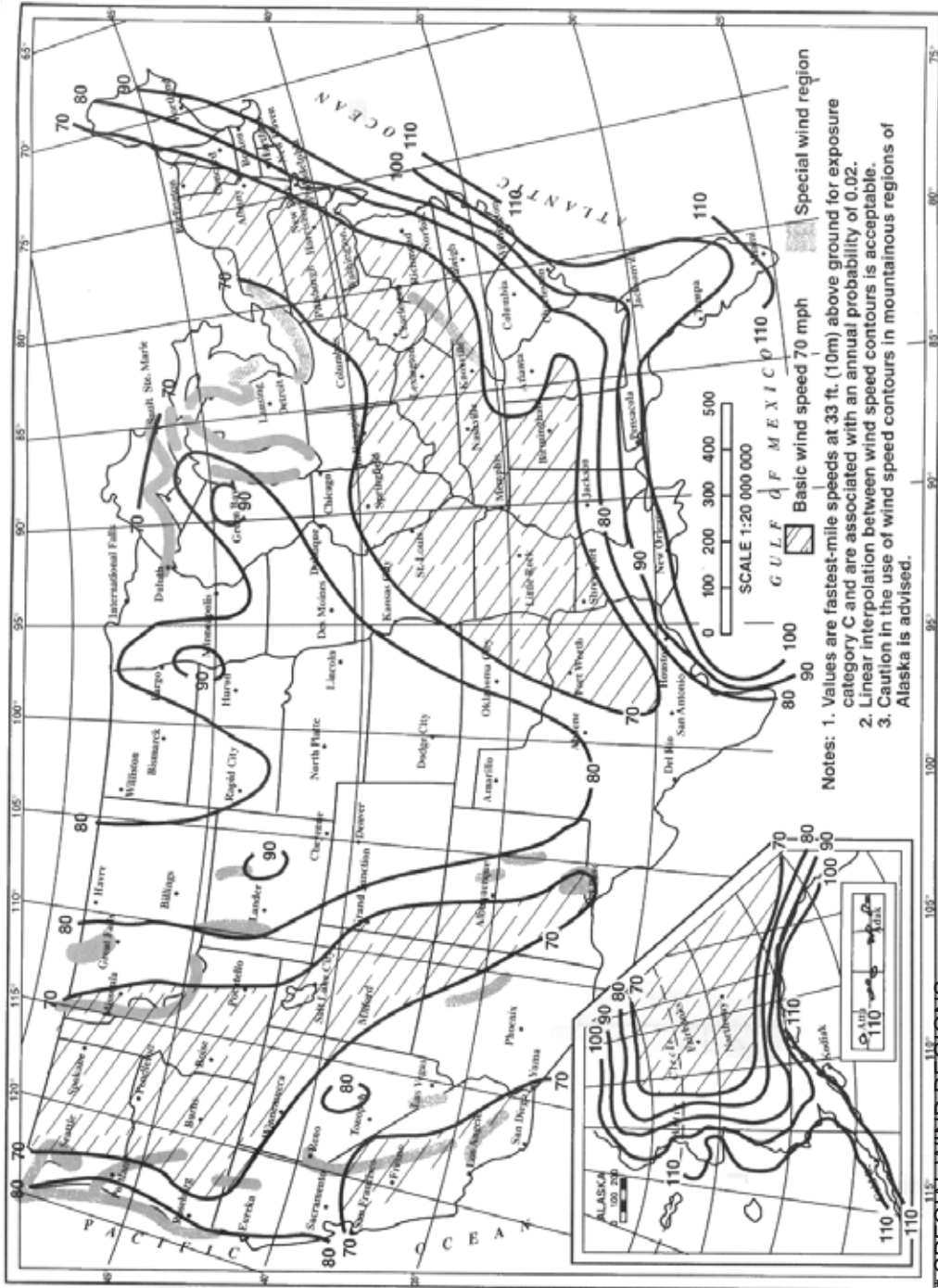


Typical Tethering For Non-Penetrating Mount Frame

For additional Safety, attach three cables as shown to fixed objects capable of supporting 150 lbs. Cable must be 1/8" DIA. minimum stainless steel or galvanized steel, 7x7 or 7x19, 1200 lbs. minimum breaking strength.

NOTE: Installations for Wind Speeds exceeding 100mph are recommended to be tethered.





*** SPECIAL WIND REGIONS:**

Records or experience indicates that the wind speeds are higher in mountainous terrain, gorges, and ocean promontories and shall be examined for unusual wind conditions. Contact your local meteorological authority and a local civil or professional engineer if your installation is in one of these areas.

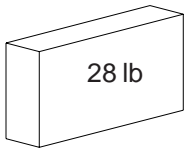
Ballast Requirements

1. Determine the Elevation angle, and Wind Speed requirement (see pg. 9).
2. Look up the required Ballast for the antenna size being installed.

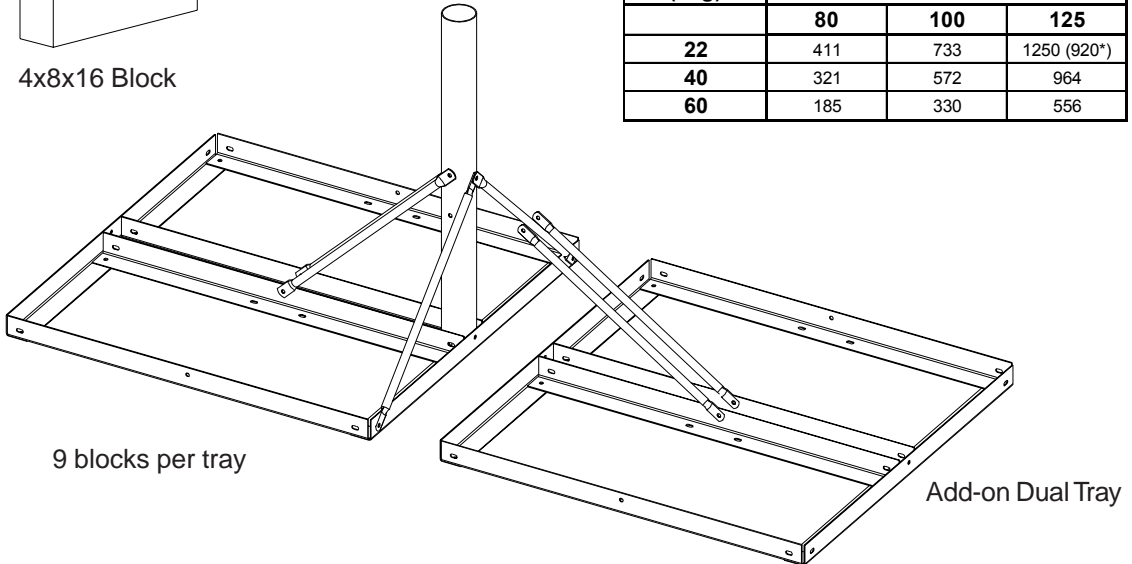
NOTE: Always use the larger Ballast weight when referencing Wind speed and Elevation angle.

NOTE: Installations with required wind speeds in excess of 100mph are to be tethered.

*Lessor Ballast amounts that can only be used if the mount is properly tethered!



4x8x16 Block



60-75cm Ballast Chart

Elevation (deg)	Ballast Required (lbs)		
	Wind Speed (mph)		
	80	100	125
22	120	250	452
40	94	195	353
60	54	112	203

90-100cm Ballast Chart

Elevation (deg)	Ballast Required (lbs)		
	Wind Speed (mph)		
	80	100	125
22	259	480	825 (605*)
40	202	374	644 (475*)
60	116	216	372

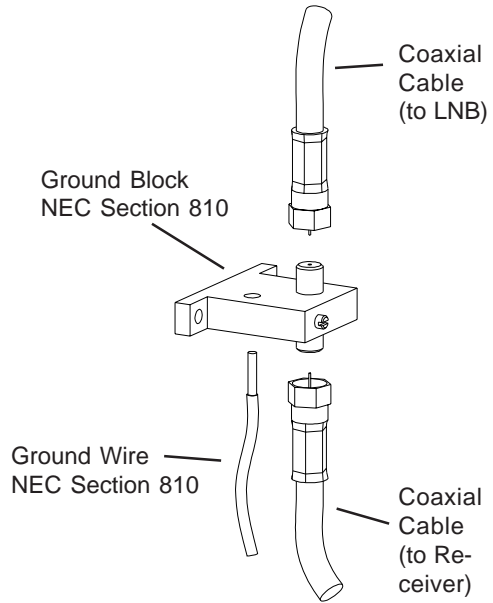
120cm Ballast Chart

Elevation (deg)	Ballast Required (lbs)		
	Wind Speed (mph)		
	80	100	125
22	411	733	1250 (920*)
40	321	572	964
60	185	330	556

Grounding

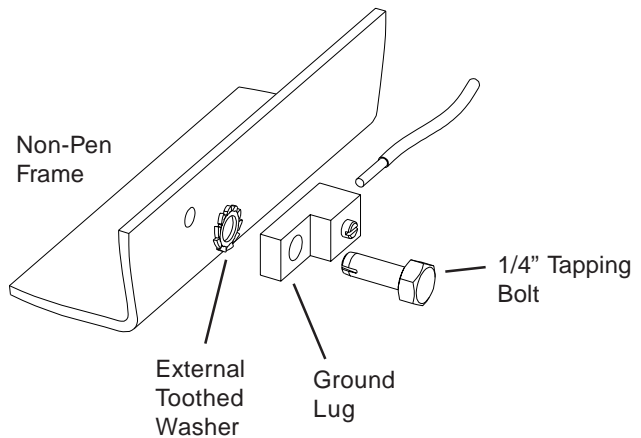
Grounding Antenna Feed Cables

1. Ground antenna feed cables in accordance with current National Electric code and local electric codes. The illustration shows a typical grounding method. Clamps that provide a solid connection between ground wire and a ground source should be used.



Grounding Non-Penetrating Mount Frame

1. Ground the Non-Penetrating mount frame. The illustration shows a typical grounding method. Refer to the NEC Section 810 and local electric codes for specific instructions on grounding the remaining end of the ground wire.





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Notes

Specifications

Mechanical

Antenna Size	60cm through 1.2m
Survival Wind	125mph
Pole Size	2-3/8"(60mm) & 3" (75mm) OD
Materials	Powder Coated Galvanized Steel
Weight	30 lbs 25 lbs (Double Tray add-on)
Dimensions	36 x 36 x 34(high) 36 x 72 x 34(high) with Double Tray add-on)



ANTENNA SYSTEMS

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