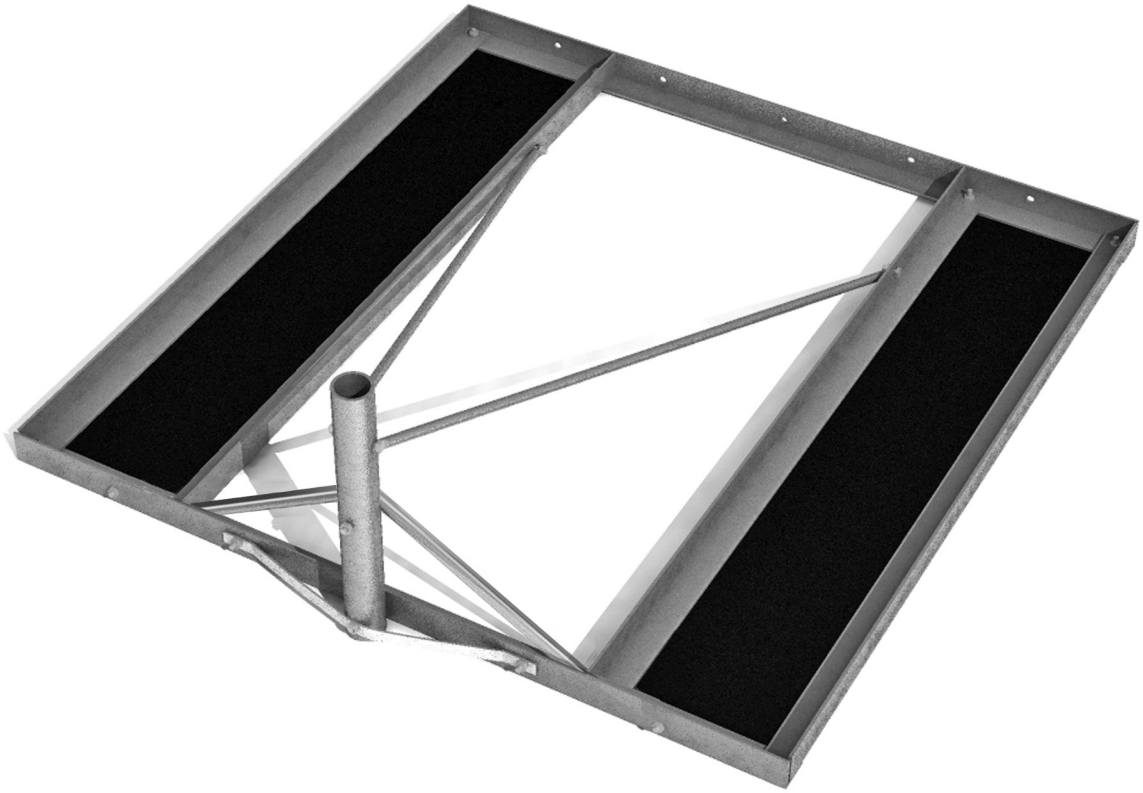
Installation Instructions

8001026-01

Model 6110057-03
1.98 m x 1.98 m NPRM with Roof Pads

For 1.2 m Antenna Systems



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Connecting The World

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MANUAL REVISION HISTORY

DATE	DESCRIPTION	REVISION
03/09	5079524	A

WARRANTY

ASC SIGNAL CORPORATION
VERY SMALL APERTURE TERMINAL (VSAT) PRODUCTS
TWELVE (12) MONTH LIMITED WARRANTY

Seller warrants that all ASC Signal manufactured VSAT products are transferred rightfully and with good title; that they are free from any lawful security interest or other lien or encumbrance unknown to Buyer. Seller also warrants that for a period of twelve (12) months from the date of shipment from Seller's factory, all its VSAT products shall be free from defects in material and workmanship which arise under proper and normal use and service. Buyer's exclusive remedy hereunder is limited to Seller's correction (either at its plant or at such other place as may be agreed upon between Seller and Buyer) of any such defects by repair or replacement at no cost to Buyer, except for the costs of any transportation in connection with the return of the defective VSAT products to be replaced or repaired, and the costs to remove and/or reinstall the products, which shall be borne by Buyer. The limited warranty period shall not be extended beyond its original term with respect to any part or parts repaired or replaced by seller hereunder.

This warranty shall not apply to VSAT products which (I) have been repaired or altered in any way so as to affect stability or durability, (II) have been subject to misuse, negligence or accident, (III) have been damaged by severe weather conditions such as excessive wind, ice, storms, lightning, or other natural occurrences beyond Seller's control; (IV) have presented damages, defects or non conformances caused by improper shipping, handling or storage, and (V) have not been installed, operated or maintained in accordance with Seller's instructions.

Buyer shall present any claims along with the defective VSAT product(s) to Seller immediately upon failure. Non-compliance with any part of this warranty procedure may invalidate this warranty in whole or in part.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, OTHER THAN AS SPECIFICALLY STATED ABOVE. EXPRESSLY EXCLUDED ARE ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE FOREGOING SHALL CONSTITUTE ALL OF SELLER'S LIABILITY (EXCEPT AS TO PATENT INFRINGEMENT) WITH RESPECT TO THE VSAT PRODUCTS. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY LOSS OF PROFITS OR REVENUE, LOSS OF USE, INTERRUPTION OF BUSINESS, OR INDIRECT, SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND AS A RESULT OF THE USE OF THE PRODUCTS MANUFACTURED BY SELLER, WHETHER USED IN ACCORDANCE WITH THE INSTRUCTIONS OR NOT. UNDER NO CIRCUMSTANCES SHALL SELLER'S LIABILITY TO BUYER EXCEED THE ACTUAL SALES PRICE OF THE VSAT PRODUCTS HEREUNDER.

In some jurisdictions, Buyer may have other rights under certain statutes that may imply non-excludable warranties. No representative is authorized to assume for Seller any other liability in connection with the VSAT products.

DO NOT DISCARD CONTENTS
The product in this packaging was placed in the market after August 13, 2005. Its components must not be discarded with normal municipal or household waste.

Contact your local waste disposal agency for recovery, recycling, or disposal instructions.

WARNINGS

LAW: Installation and installer must meet local codes and ordinances regarding safety! Installation of this product should be performed only by a professional installer and is not recommended for consumer Do-It-Yourself installations.

DANGER: **WATCH FOR WIRES!** Installation of this product near power lines is extremely dangerous and must never be attempted. Installation of this product near power lines can result in death or serious injury!

For your own safety, you must follow these important safety rules. Failure to follow these rules could result in death or serious injury!

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. Stay at least 6 meters (20 feet) away from all power lines.
3. Do not install antenna or mast assembly on a windy day.
4. If you start to drop antenna or mast assembly, move away from it and let it fall.
5. 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.
6. Make sure that the mast assembly is properly grounded.

WARNING: Assembling dish antennas on windy days is extremely dangerous and must never be attempted. Due to the surface area of the reflector, even slight winds create strong forces. For example, the 1.2 meter antenna facing a wind of 32 km/h (20 mph) can undergo forces of 269 N (60 lb). **BE PREPARED TO SAFELY HANDLE THESE FORCES AT UNEXPECTED MOMENTS. ATTEMPTING TO ASSEMBLE, MOVE OR MOUNT A DISH ON WINDY DAYS COULD RESULT IN DEATH OR SERIOUS INJURY.** ASC Signal 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 and ice) and properly sealed against leaks. ASC Signal will not accept liability for any damage caused by a satellite system due to the many unknown variable applications.

PRE INSTALLATION CONSIDERATIONS

TOOLS REQUIRED:

Compass with Degree Scale
Inclinometer or Protractor
9" Magnetic Level
#1 or #2 Phillips Screwdriver
Torque Wrench
Ratchet Wrench (3/8 in Drive)
13 mm Deep Socket (3/8 in Drive)
10 mm Nut Driver
7 mm Wrench

ADDITIONAL INSTALLATION MATERIALS *(Not Supplied)*

Grounding Rod, Clamp & Grounding Block - As required by National Electric Code or local codes.
Ground Wire - #10 solid copper or #8 aluminum as required by National Electric Code or local codes (length required).
RG-6 Coaxial Cables from antenna to indoor unit(s).
Concrete Blocks: Cored (16in x 8in x 8in-Nominal) or cap/solid (16in x 8in x 4in-Nominal).
Cable Clamps - 6 Minimum (see Ballast requirements).
Cable - 5/32" [4mm] diameter stainless or galvanized 7 x 7 or 7 x 19 Strand Core 2100 lb. breaking strength - length as required (see Ballast requirements).

SITE SELECTION

The first and most important consideration when choosing a prospective antenna site is whether or not the area can provide an acceptable "look angle" at the satellite. A site with a clear, unobstructed view is preferred. Your antenna site must be selected in advance so that you will be able to receive the strongest signal available.

The roof section must be flat and of sufficient area for the base of the roof mount (see Ballast requirement and location chart for base size).

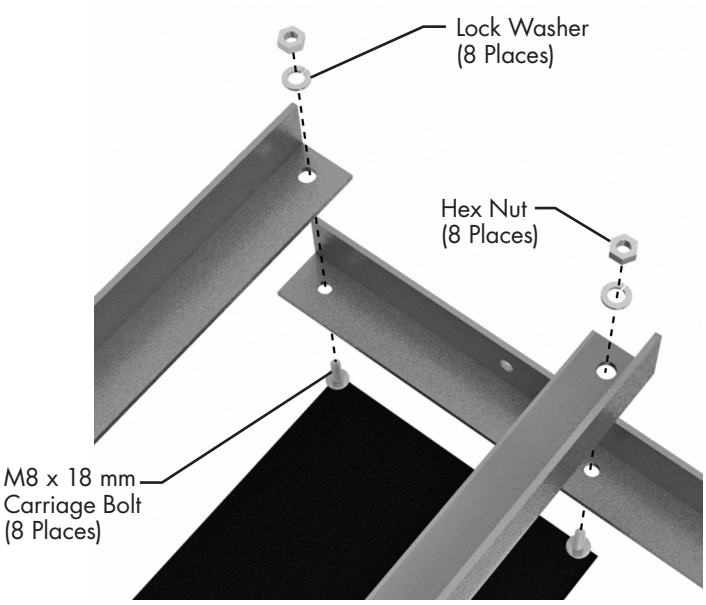
The roof section must also be able to withstand the weight of ballast, antenna and mount assembly.

Distributed loads (lb/sq. ft) and total dead load are shown on charts, pages 8 and 9 for your consideration. It is the customer's responsibility to make sure distributed loads of this product do not exceed roof design load. If you do not know your roof design loads, consult a professional engineer.

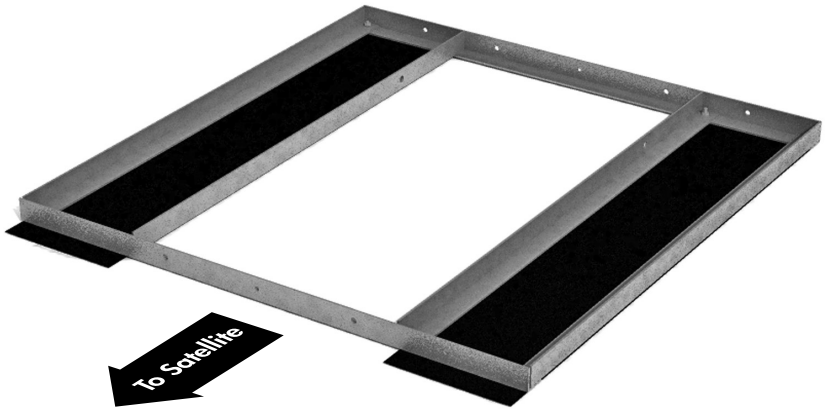
ASSEMBLY INSTRUCTIONS

Clear roof of all debris, gravel or other loose materials. If supplied, place rubber mats approximately 28.5 in apart. Assemble frame with rubber pad as shown on right, using eight M8 x 18 mm carriage bolts, lock washers and hex nuts. (Note: Do not tighten bolts in frame assembly until all parts have been attached).

Note: Frame is assembled with eight M8 x 18 mm carriage bolts, eight lock washers and eight hex nuts.

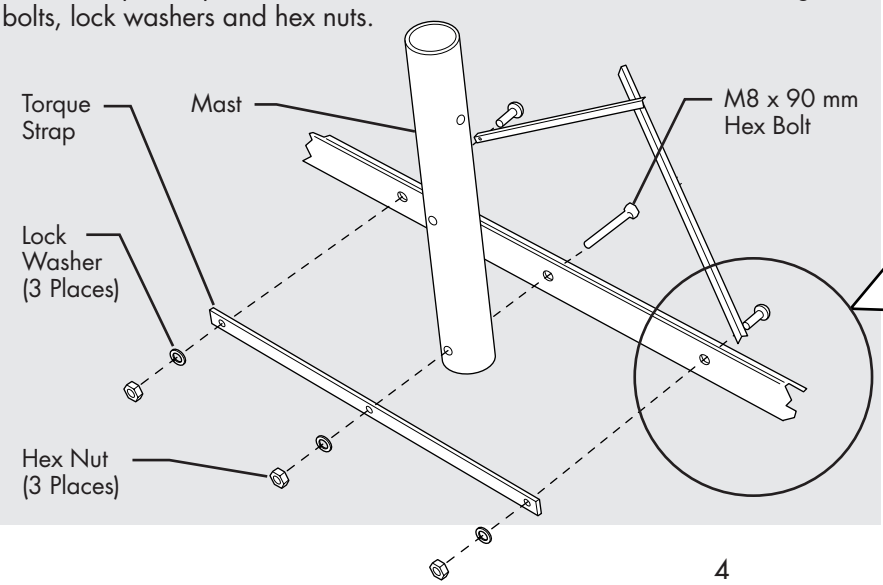


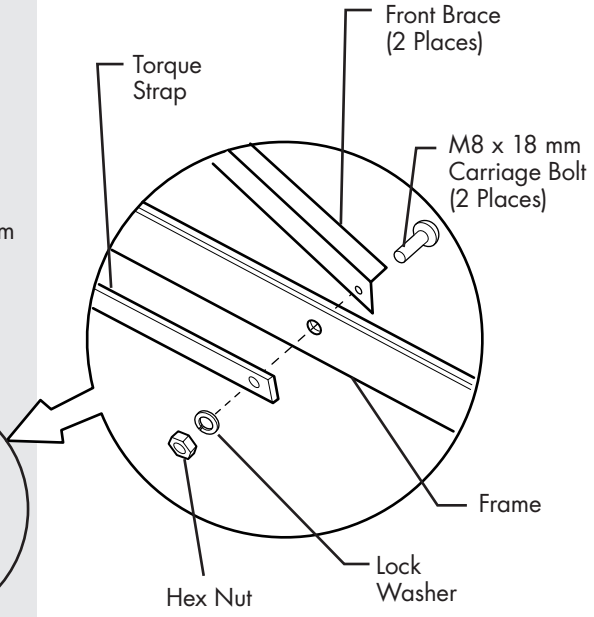
Once frame is assembled, place on rubber mats (if supplied) and orient so mast will point to satellite.



Assemble mast and torque strap to frame with M8 x 90 mm hex bolt, lock washer and hex nut.

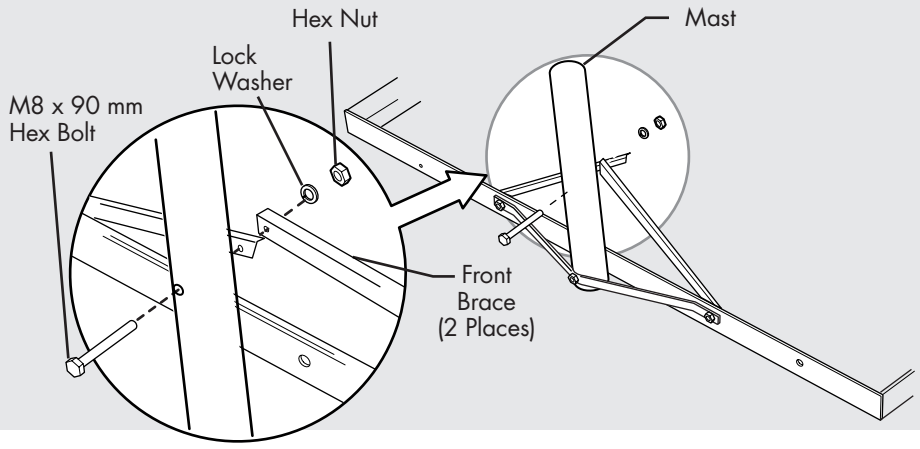
Attach torque strap and front braces to frame with M8 x 18 mm carriage bolts, lock washers and hex nuts.





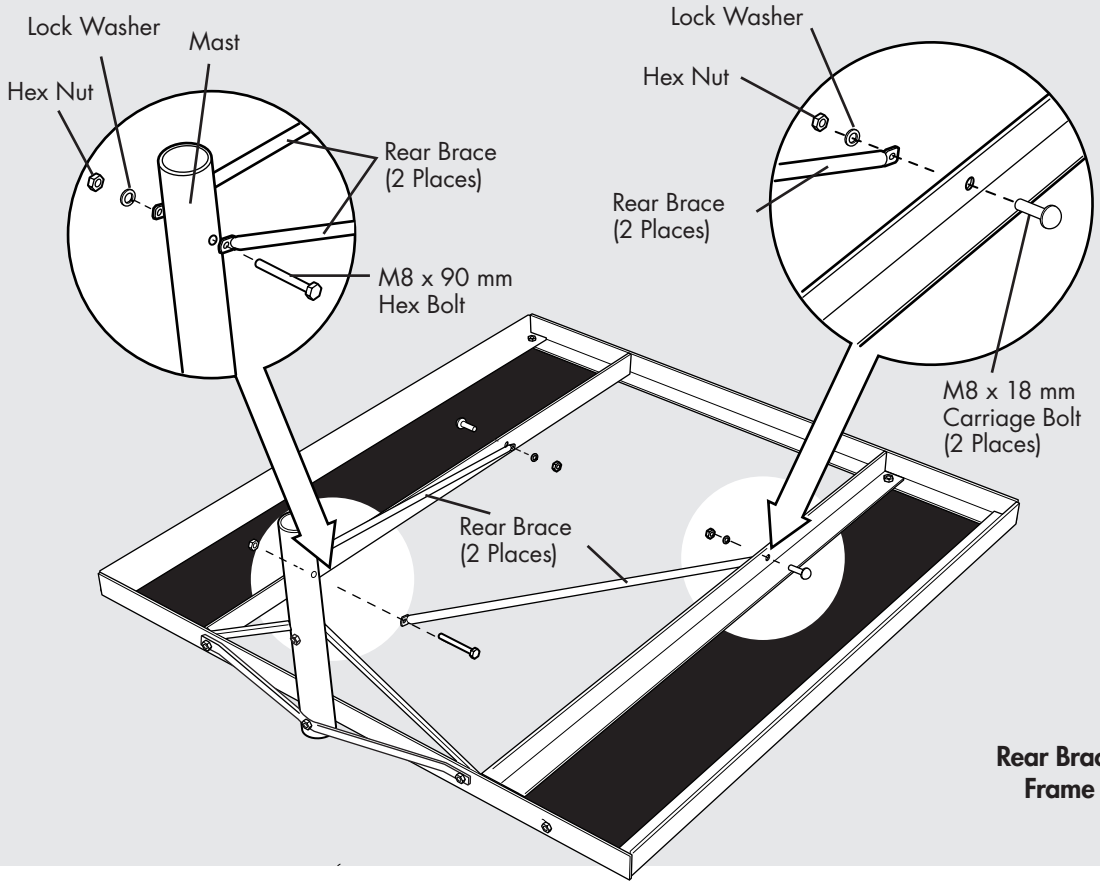
ASSEMBLY INSTRUCTIONS

Attach front braces to mast with M8 x 90 mm hex bolt, lock washer and hex nut.



Front Brace and Mast and Assembly

Attach rear braces to mast with M8 x 90 mm hex bolt, lock washer and hex nut. Attach rear braces to frame with M8 x 18 mm carriage bolts, lock washers and hex nuts as shown. Then tighten all hardware to 16 N-m (12 ft-lb) of torque.



Rear Brace, Mast and Frame Assembly

Antenna, Antenna Mount and Mast Assembly

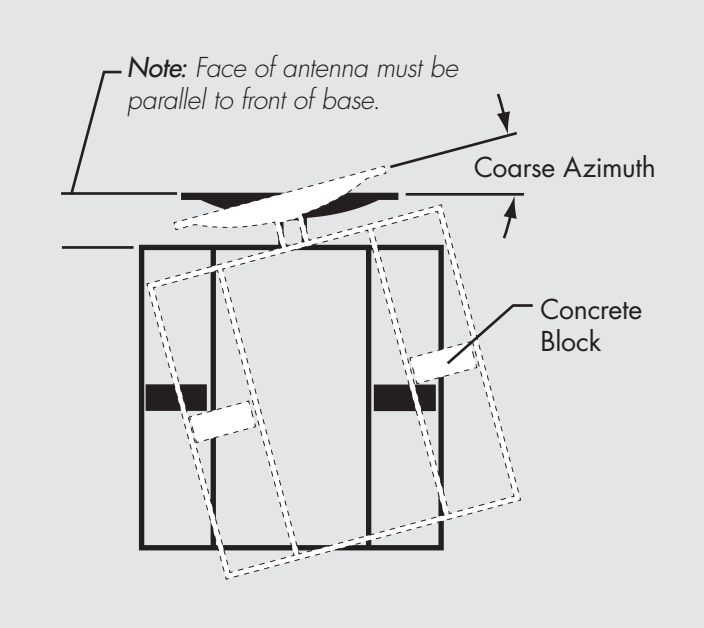
Assemble and install antenna, antenna mount and feed assembly per instructions suppplied with those products.

Alignment Procedure

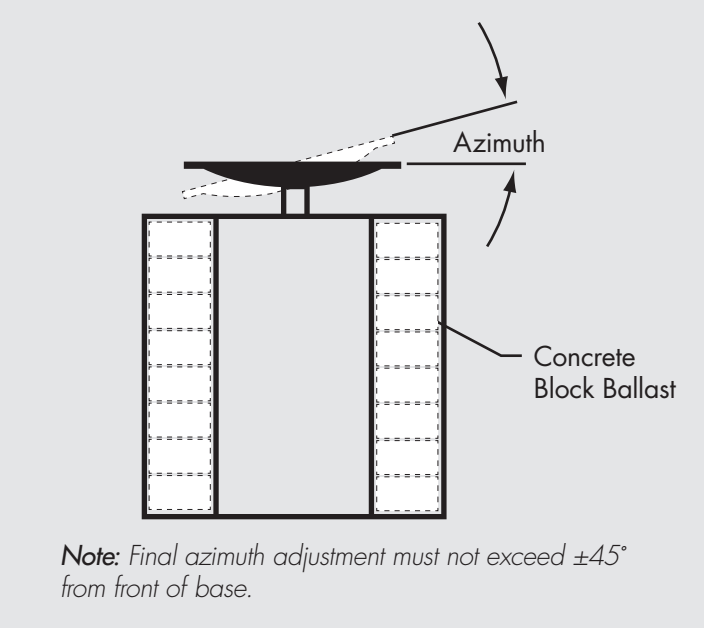
Obtain azimuth for your satellite from azimuth alignment chart found in instructions provided with antenna. Rotate antenna and base frame assembly, pointing it to the approximate compass heading taken from azimuth alignment chart.

Fine Tuning

Refer to Antenna, Antenna Mount Assembly and Installation Manual and Alignment Charts for fine tuning.



Rotating Antenna and Base for Coarse Azimuth Setting

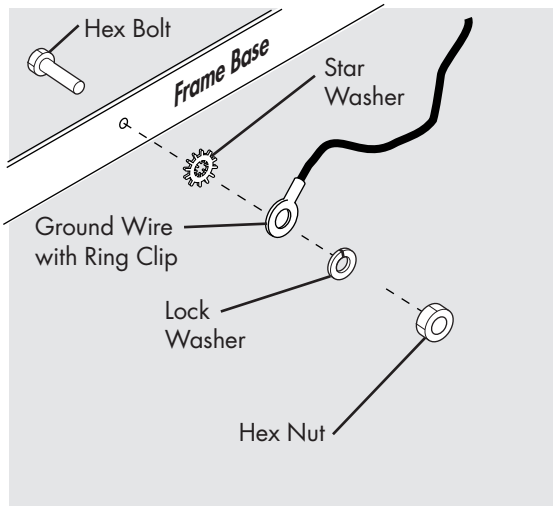


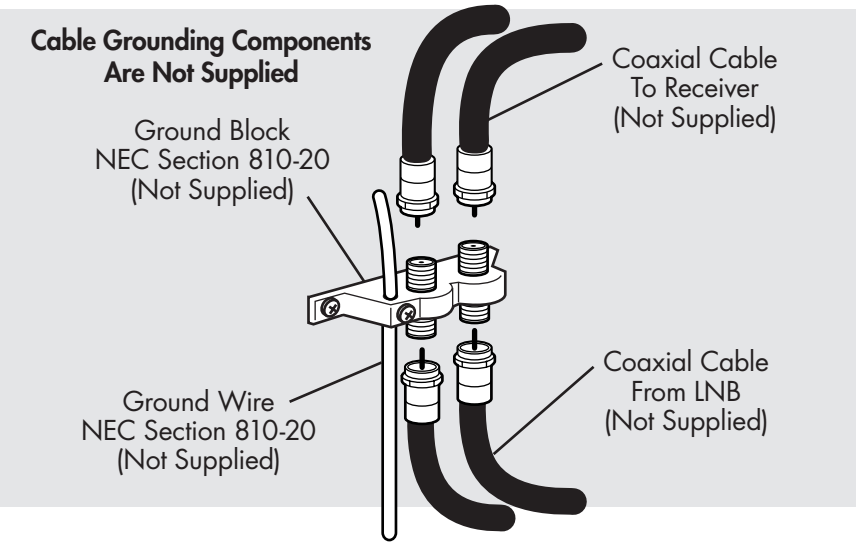
Fine Tuning Azimuth Setting Using Cap Mount

Grounding

Note: All installations to conform to latest issue of National Electrical Code. Ground antenna mount assembly and feed cables in accordance with current National Electrical code and local codes.

These illustrations depict typical grounding methods for the ground pole and feed cables. Clamps that provide a solid connection between ground wire and ground source should be used. Tighten and torque all hardware.

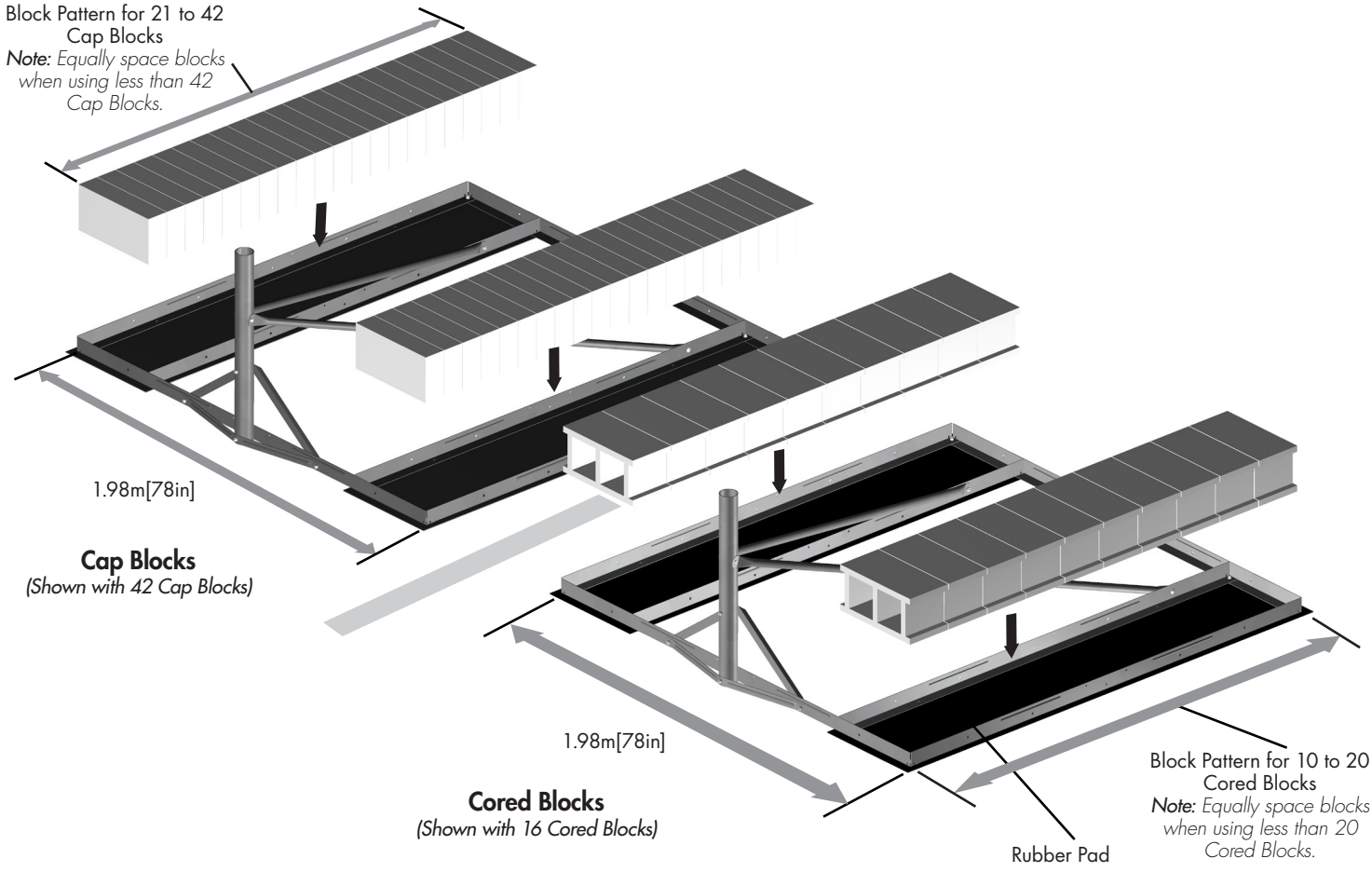




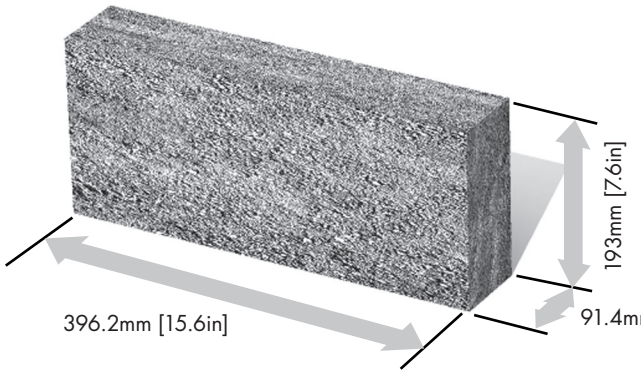
BALLAST INSTRUCTIONS

Ballast

Referring to ballast requirements and location chart, add the number of concrete blocks for ballast to base frame. Take care not to move base frame when adding blocks.

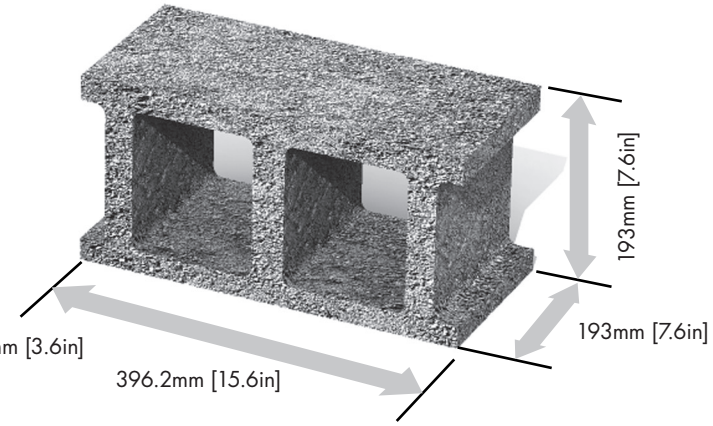


Detail 1: Cap Blocks



Weight: 32 lb

Detail 2: Cored Blocks



Weight: 39 lb

BALLAST REQUIREMENTS AND LOCATIONS *(1.2 m systems)*

Table 1: Wind Speed Tethered

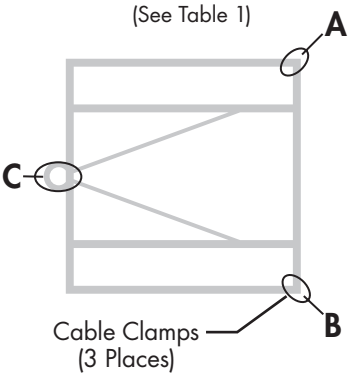
Cored Blocks	Solid Cap Blocks	Total Weight (lb) (Ballast + Antenna)	Distributed Load (lb/sq ft)	Exposure	Allowable Wind Speed (mph) When Height from Ground to Center of Antenna Is:		
					15 ft.	30 ft.	60 ft.
20	-	891	21.1	B	98	89	79
				C	75	70	65
-	20	751	17.9	B	90	81	73
				C	69	64	59
-	28	1007	24.0	B	104	94	84
				C	80	74	69
-	34	1199	28.5	B	114	103	92
				C	87	81	75
-	42	1455	34.6	B	126	113	101
				C	96	89	83

Table 2: Wind Speed Untethered

Cored Blocks	Solid Cap Blocks	Total Weight (lb) (Ballast + Antenna)	Distributed Load (lb/sq ft)	Exposure	Allowable Wind Speed (mph) When Height from Ground to Center of Antenna Is:		
					15 ft.	30 ft.	60 ft.
16	-	735	17.5	B	116	104	93
				C	88	82	76
18	-	813	19.3	B	122	110	98
				C	93	86	80
20	-	891	21.1	B	127	115	103
				C	97	90	84
-	20	751	17.9	B	117	106	94
				C	89	83	77
-	28	1007	24.0	B	-	122	109
				C	104	96	89
-	34	1199	28.5	B	-	-	119
				C	113	105	97
-	42	1455	34.6	B	-	-	-
				C	124	116	107

Tether Detail

(See Table 1)



To secure against sliding,attach three cables as shown to fixed objects capable of supporting 800 lb. Cable must be 5/32" diameter minimum stainless or galvanized steel, 7 x 7 or 7 x 19, 2100 lb minimum breaking strength.

NOTES:

1. Antenna and mount survival wind velocity is 125 mph.

2. Select ballast from table 1 or 2 based on wind velocity, UBC exposure "B" or "C" and height above ground.

3. Ballast consist of:

1) 16" x 8" x 8" nominal cored concrete blocks with weight of 39 lb each plus 111 lb for weight of antenna and mount. (See Detail 2)

2) 16" x 8" x 4" nominal cored concrete cap blocks with weight of 32 lb each plus 111 lb for weight of antenna and mount. (See Detail 1)

4. Ballast calculated to meet uniform building code exposure "B" or "C" (See tables) and 1.5 stability.

5. Table 1 ballast based on overturning requirements with 1.5 stability, to ensure against sliding tether as shown in tether detail.

6. 1/8" rubber pads approximately 18" x 80" provided. are bolted to the bottom of the frame per assembly instructions.This willl protect the roof from puncture, provide friction coefficient shownin Table 2 and 1.5 sliding stability. – part of sentence in red is not needed.

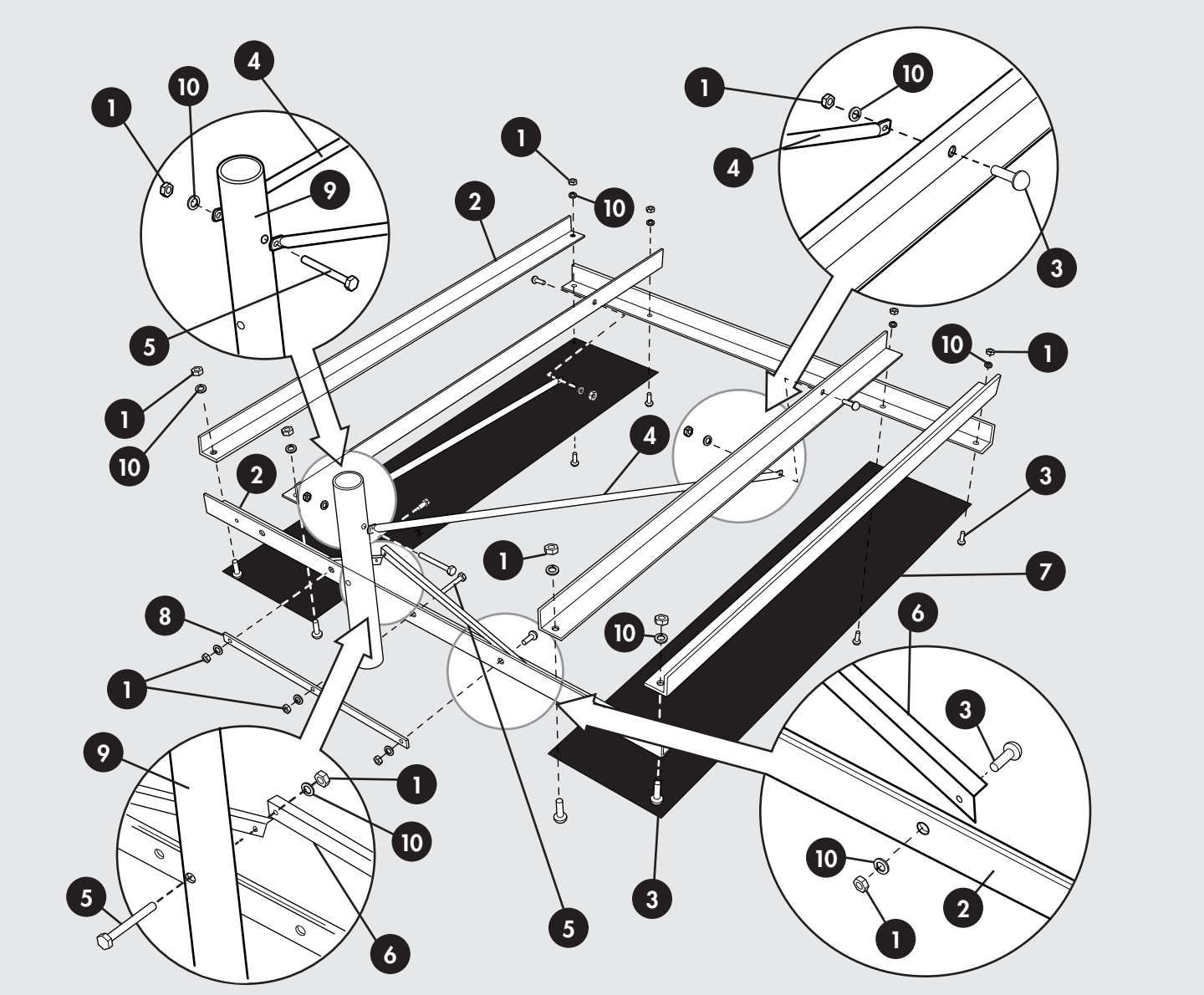
7. Clear roof of all debris, gravel or other loose materials.

8. Mount is fabricated galvanized steel and antenna is SMC thermoset-molded material.

9. Roof structure must be sufficient to support weight shown in table.

10. Installation must comply with latest revision of #8000671 instruction and assembly manual.

PARTS LIST



Item	Description	Qty
1	M8 x 1.25 Hex Nut	16
2	Frame Rail	6
3	M8 x 1.25 x 18 mm Carriage Bolt	12
4	Rear Brace	2
5	M8 x 1.25 x 90 mm Hex Head Bolt	3
6	Front Brace	2
7	Large Rubber Pad	2
8	Torque Strap	1
9	Non-Penetrating Mount Mast	1
10	Lock Washer	15