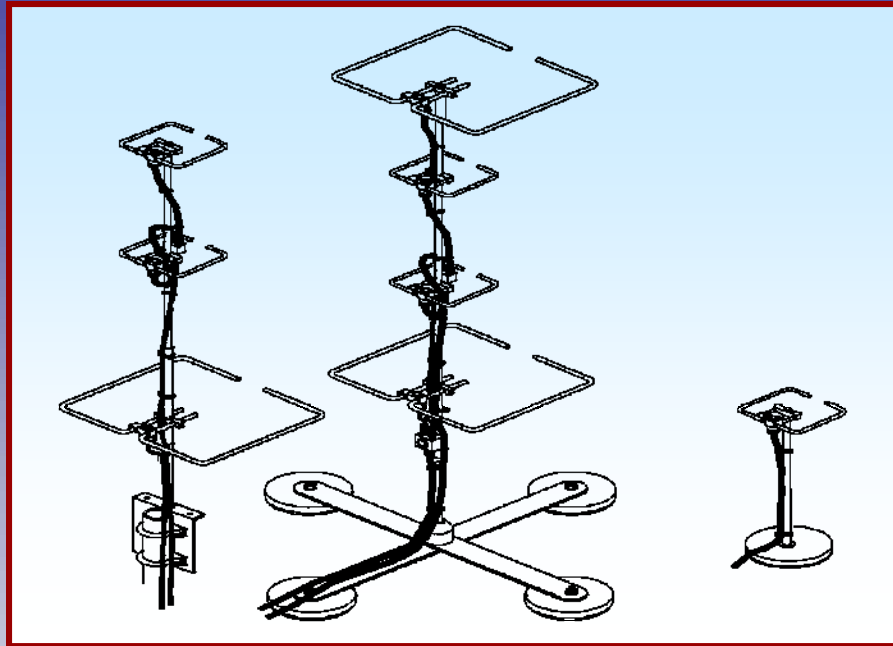




M2 Antenna Systems, Inc. Model No: 432 HO LOOP



SPECIFICATIONS:

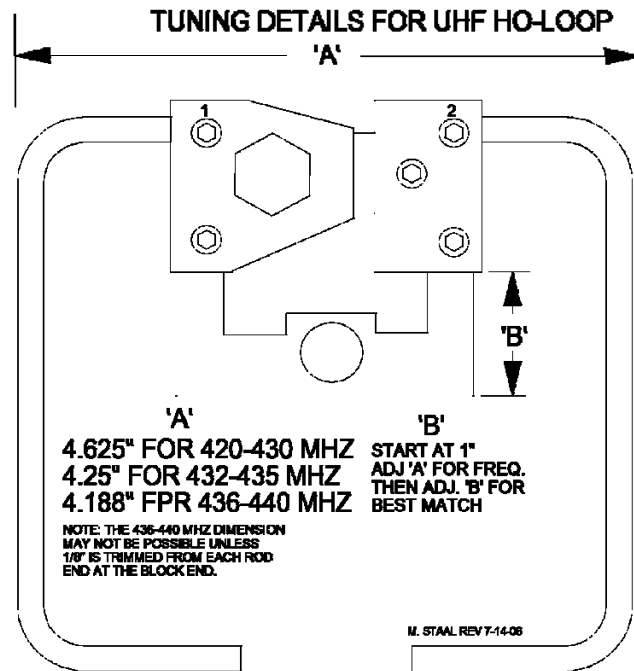
Model	432 HO LOOP	Feed Connector.....	Type "N" Female
Frequency Range.....	430 To 436 MHz	Mounting.....	3/8-24
Gain, Single @ 86 IN	5.0 dBd @ 4 deg.	Vehicle Mounting Height	6" or more
Gain, Stack @ 84 IN & 100 IN	8.8 dBd @ 4 deg.	Stacking Separation	16"
Polarity	Horizontal Omni	Wind Area.....	0.015 sq ft.
Impedance	50 Ohms, Unbalanced	Weight	7 oz.
Power Handling.....	800W, 1.5 kW for Stack		

***Subtract 2.14 from dBi for dBd**

FEATURES:

The new 432 HO LOOP provides easy SSB and CW communications out to 200 miles or more. HO LOOPS produce an omnidirectional, HORIZONTALLY polarized signal ideal for mobile and base operations. Horizontal polarity permits the HO loop to pick up 5 dB from ground gain that verticals don't get. As with most horizontally polarized antennas, performance improves dramatically with height above ground. By stacking two HO LOOPS, another big gain jump occurs (see pattern and note the great reduction of high angle lobes). For terrestrial use, the HO LOOP does not need groundplane, so mounting options are simplified. Mounting over a car roof at 6 to 10 inches produces 2.5 dBd gain dome shaped pattern upward for LEO satellite operation while still maintaining modest terrestrial performance. Physically, the 432 HO loop is a 4.313" square loop, fabricated from two 1/4" dia. aluminum rods to minimize losses. The sealed feed block provides weather protection with minimum wind drag. The heart of this unique design is the shorted stub matching to a 50 ohm coax feedline. Mounting is via a single 3/8" hole (standard for most mobile hardware). For more performance, try the HO LOOP-STACK PACKAGE:2 HO LOOPS, phasing lines, "T" junction block, upper and lower 1/2" mast sections. For easy base-station installation, use the optional wall or mast mounting bracket and U-bolts. For a powerful mobile signal, stack and array of HO LOOPS on our optional "BIG FOOT", mag-mount shown above). Use the optional 5" magnet and the 18" mast for single band mobile operation.

432 HO LOOP ASSEMBLY MANUAL



The 432 HO loop comes partially assembled from the factory only slight adjustment of loop size and/or shorting bar may be necessary .

1. Install the 8-32 x 1/4" set screw 2 places. (pos. 1 and 2)
2. Insert the two loop halves into the blocks to achieve the dimensions shown. Align the loop halves in the plane of the blocks and lightly tighten set screws.
3. TUNING: Mount the HO LOOP in its permanent location or on a temporary mast about 16" high or higher with the 3/8-24 x 1" bolt and locknut. Attach a good quality feedline and route it directly down the mast. adjust resonant frequency first by moving the loop halves in or out in 1/32" increments. Then adjust the match by varying the spacing of the shorting bar. Slight frequency adjustments are also possible by varying the gap distance. Squeezing the loop lowers the frequency and opening the gap raises the frequency. You should achieve a perfect match at your desired frequency between 430 and 440 MHz (typically at 432.100). Final tighten all set screws securely.

PART LIST

DESCRIPTION	QTY
FEED BLOCK #1 (LARGE)	1
FEED BLOCK #2 (SMALL)	1
SHORTING BAR	1
LOOP HALVES, 1/4" ROD	2
BOLT, 3/8-24 X 1"	1
LOCK WASHER, 3/8" SPLIT RING	1
SET SCREW, 8-32 X 1/4	2
ALLEN WRENCH 5/64"	1

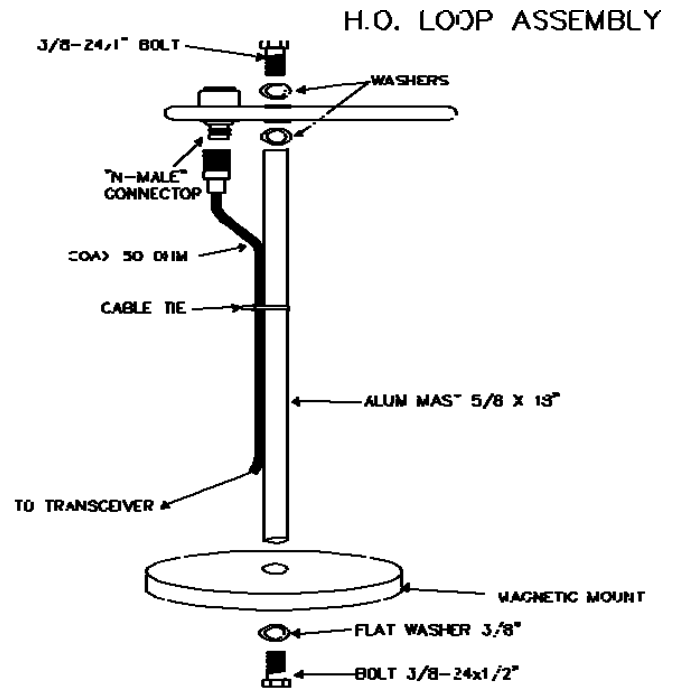
432 HO LOOP PARTS & HARDWARE

HO LOOP, STANDARD PARTS LIST

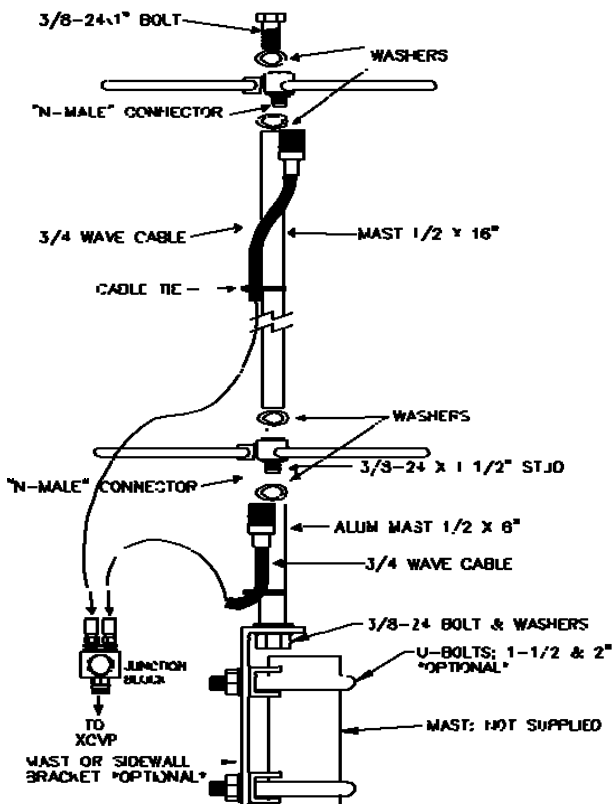
DESCRIPTION	QTY
H.O. Loop Half	2
H.O. Feed Assembly with N-Male Conn	1
H.O. Shorting Bar	1
Set Screw, 8-32 x 1/4 S.S.	2
Allen Wrench, 5/64	1
Bolt, 3/8-24 x 1" SS	1
Washer, 3/8 Split Ring SS	1
Assembly Manual	1

HO LOOP ADD ON MAG-MOUNT KIT

DESCRIPTION	QTY
5" Magnet	1
Mylar Cover	1
Mast, 5/8 x 18"	1
Bolt, 3/8-24 x 1/2 S.S.	1
Flatwasher, 3/8 S.S.	2
Cable Ties	2



H.O. LOOP STACK ASSEMBLY

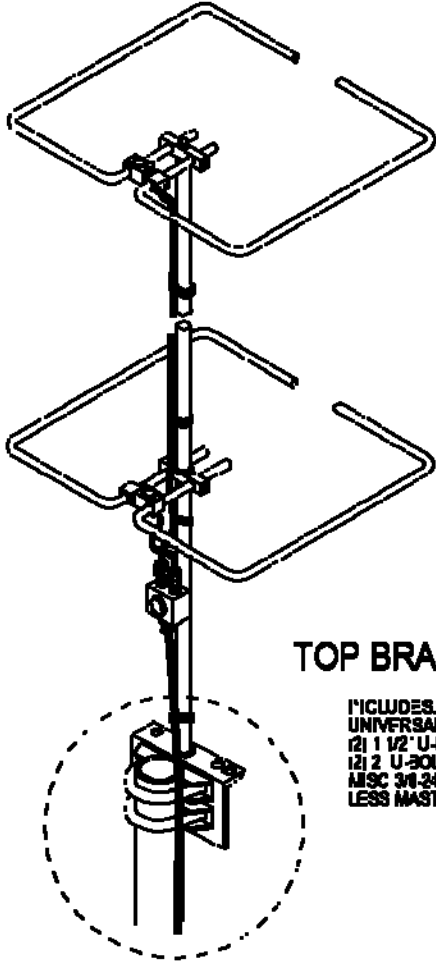


HO LOOP-STACK KIT ADD ON LIST

DESCRIPTION	QTY
Coaxial Cable RG-59 x 3/4 w/l (17")	2
Loop mast, 1/2 x 6"	1
Loop mast, 1/2 x 16"	1
Assembly Manual	1
HARDWARE BAG	
Junction Block	1
Stud, 3/8 x 24 x 1 3/4"	2
3/8 flatwasher	4
Nut Seal	2
Cable ties	4

OPTIONAL: "BIG FOOT" 4 point mag-mount

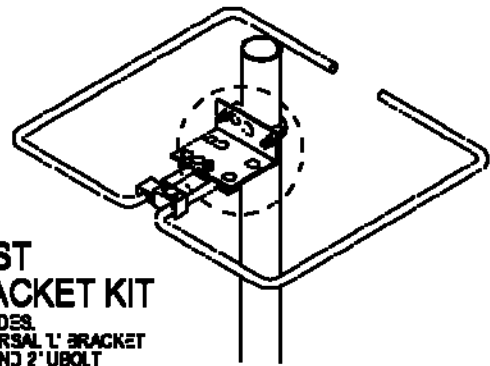
MOUNTING & OPTIONAL KITS



TOP BRACKET KIT

INCLUDES:
UNIVERSAL 'L' BRACKET
(2) 1 1/2" U-BOLTS
(2) 2" U-BOLTS
MSC 3/8-24 HARDWARE
LESS MAST SECTION

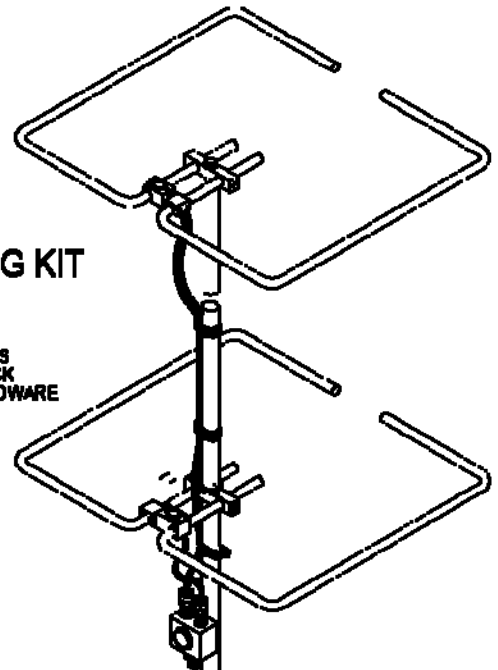
TOP OF THE MAST,
BASE OR MOBILE



MAST BRACKET KIT

INCLUDES:
UNIVERSAL 'L' BRACKET
1-1/2" ANJ 2" U-BOLT
3/8-24 X 1-1/2" BOLT
AND LOCKWUT

MIDDLE OR TOP MOUNTING
ON 1-1/4" TO 2" MAST

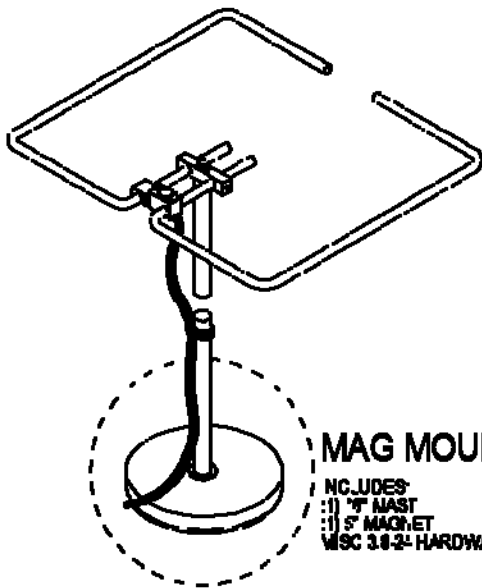


STACKING KIT

INCLUDES
50' MAST
18' MAST
FT-AS NG CABLES
COMBINER BLOCK
MSC 3/8-24 HARDWARE

OTHER OPTIONS

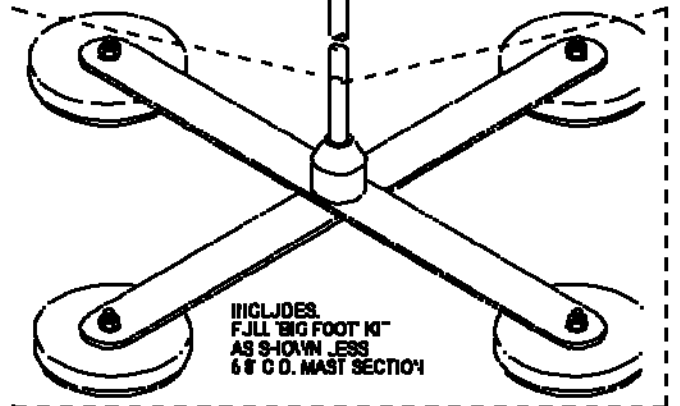
LMR-400 PHASING LINES
2" ANJ 4" PORT DIMERS
OTHER MAST LENGTHS
AND DIAMETERS
ENGINEERING SUPPORT



MAG MOUNT KIT

INCLUDES:
(1) 1" MAST
(1) 5" MAGNET
MSC 3/8-24 HARDWARE

REMOVABLE MOUNT
FOR VEHICLE ROOF



BIG FOOT KIT FOR MOBILE STACKS

INCLUDES:
FJLL "BIG FOOT KIT"
AS SHOWN LESS
6" C.D. MAST SECTION