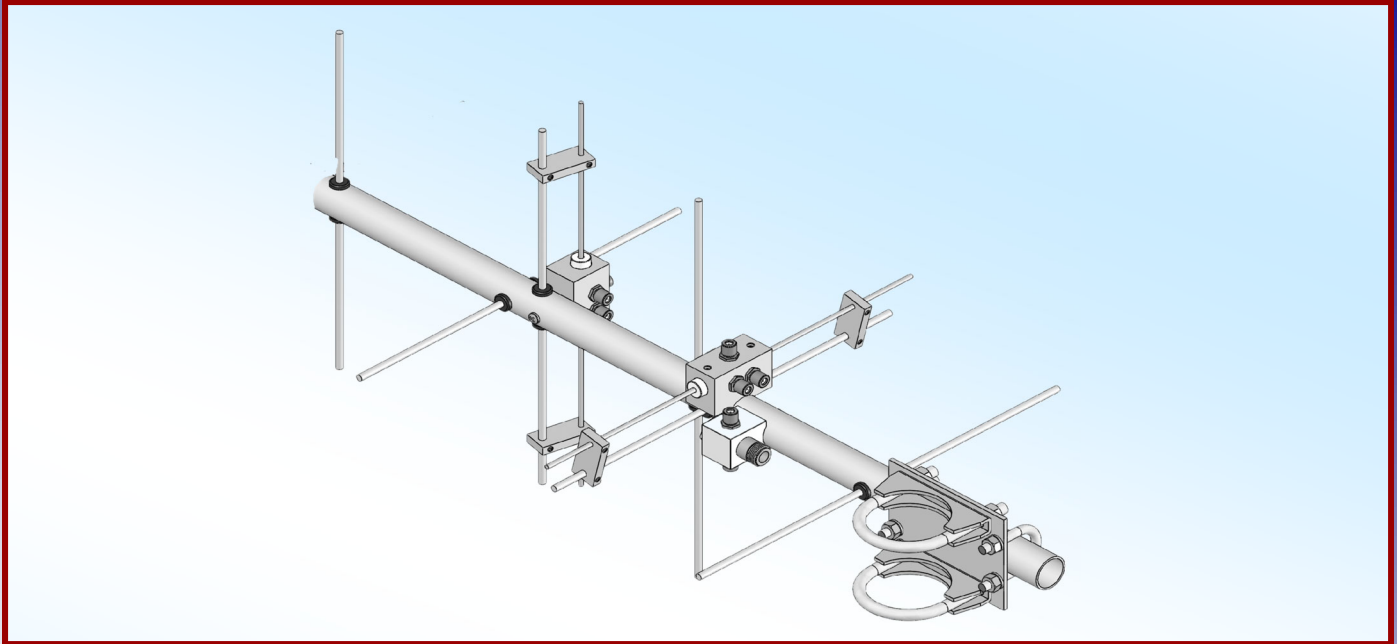




# M2 Antenna Systems, Inc. Model No: 403CP6



## SPECIFICATIONS:

Model .....	403CP6	Power Handling .....	500 Watts
Frequency Range.....	400 to 406 MHz	Boom Length / Dia.....	23" / 1"
*Gain .....	7.85 dBic	Maximum Element Length.....	15"
Front to back .....	29 dB Typical	Turning Radius: .....	Call
Feed type .....	"T" Match	Stacking Distance.....	Call
Feed Impedance.....	50 Ohms Unbalanced	Mast Size.....	1-1/2" to 2" Nom.
Maximum VSWR.....	1.5:1	Wind area / Survival .....	0.07 Sq. Ft. / 100MPH
Input Connector.....	"N" Female	Weight / Ship Wt.....	4 Lbs. / 5 Lbs.

**\*Subtract 2.14 from dBi for dBd**

## FEATURES:

The 403CP6 is a practical sized, yet high performance circular polarized antenna with a remarkably clean pattern. The pattern is important in order to match the antenna's noise temperature with modern low noise preamps. This antenna is ideal for satellite work but is also excellent for terrestrial uses.

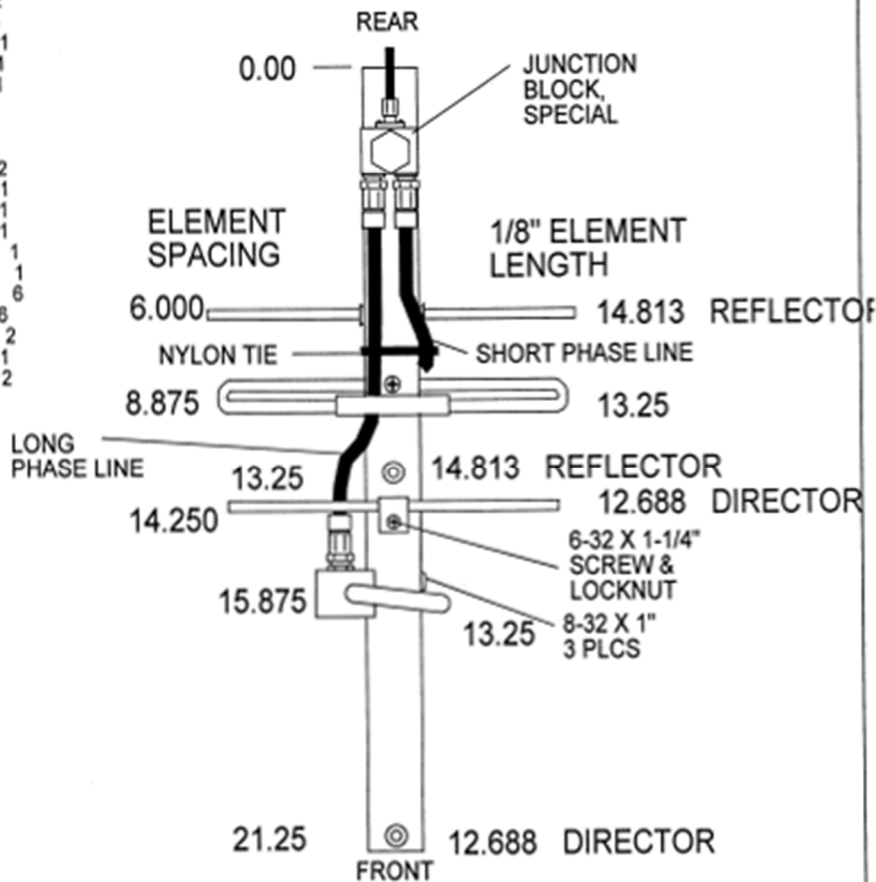
The CNC machined driven element module is O-ring sealed and weather tight for low maintenance and long-term peak performance. Internal connected are encapsulated in a space-age silicone gel that seals out moisture and improves power handling. The 3/16" 6061-T6 rod elements are centered to minimize interaction and maintain good ellipticity. Insulators are UV stabilized and locked in place with stainless keepers. Rugged construction, uncompromising performance for the boom length.

# 403CP6 ASSEMBLY/DIMENSION SHEET

## 403CP6LD ASSEMBLY SHEET

PART LIST 403CP6LD	QTY
DESCRIPTION	
BOOM, 3/4 X 21.5	1
FEED DIPOLE, FACORY ASSEM.	2
ELEMENT, 1/8" X SEE DIMS.	4
JUNCTION BLOCK, 'F' AND 'SMA'	1
PHASE LINE, SHORT, RG-6U	1
PHASE LINE, LONG, RG-6U	1
ASSEMBLY SHEET	1

HARDWARE	QTY
SCREW, 8-32 X 1", SS	2
SCREW, 8-32 x 7/8", SS (JBLOCK)	1
SCREW, 6-32 X 1-1/4", SS	1
LOCKNUT, 6-32, SS	1
CLAMP BLOCK, FLAT FOR 1/8"	1
CLAMP BLOCK, GROOVE FOR 3/4"	1
BUTTON INSULATOR, TEFLON, 14"	6
KEEPER, 1/8"	6
3/8-32 GOLD SEAL NUTS	2
PUSH TUBE, 3/8 X 3"	1
NYLON TIE, SHORT	2



ASSEMBLY: CLAMP REAR OF THE BOOM IN A VICE DURING ASSEMBLY.

1. SLIDE ONE WHITE TEFLON BUTTON INSULATOR ON THE REFLECTOR (LONGEST) AND CENTER IT APPROXIMATELY. SLIDE THE ELEMENT THROUGH THE REAR 1/4" HOLE. INSTALL THE SECOND WHITE TEFLON BUTTON INSULATOR, CENTER THE ELEMENT AND INSTALL THE KEEPERS (SHAFT RETAINERS). USE THE 3/8 X 3" "PUSH TUBE" SUPPLIED. DO NOT LET THE ELEMENT SLIP OFF CENTER.

2. THE REAR ANTENNA DIRECTOR IS MOUNTED ON THE BOOM USING TWO TINY CLAMP BLOCKS AND ONE 6-32 X 1-1/4" SCREW AND LOCKNUT. INSTALL THE CLAMP BLOCK PAIR AND INSERT THE ELEMENT, CENTER IT AND TIGHTEN THE HARDWARE.

3. INSTALL THE REAR FOLDED DIPOLE WITH THE 'F' CONNECTOR FACING TO THE REAR.

4. REPEAT FOR THE FRONT ANTENNA EXCEPT THE DIRECTOR MOUNTS THE SAME AS THE REFLECTOR. RIGHT HAND CIRCULAR POLARIZATION (RHCP) WILL RESULT IF THE DIPOLE POSITIONS ARE LIKE THE DRAWING. FOR LHCP MOUNT ONE DIPOLE ON OPPOSITE SIDE OF THE BOOM.

5. ADD THE SEAL NUTS WITH THE BLACK SEAL OUT, TO THE 'F' CONNECTORS ON THE DIPOLES. (THE JUNCTION BLOCK CONNECTION ARE TOO CLOSE TOGETHER FOR SEAL NUTS)

6. CONNECT THE LONG MATCHING CABLE TO THE FRONT DIPOLE AND THE SHORT CABLE TO THE REAR DIPOLE. ONCE CONNECTORS ARE TIGHT, RUN THE GOLD SEAL NUTS UP AGAINST THE FACE OF THE CONNECTORS.

7. CONNECT THE OTHER CABLE ENDS TO THE JUNCTION BLOCK. THE LONG CABLE REQUIRES ABOUT A 2" DIA. LOOP NEAR THE JUNCTION BLOCK, BEHIND THE REFLECTOR. ADD CABLE TIES TO KEEP LINES CLOSE TO THE BOOM. THIS COMPLETES THE ASSEMBLY.

403CP6DM  
M. STAAL  
5-31-06