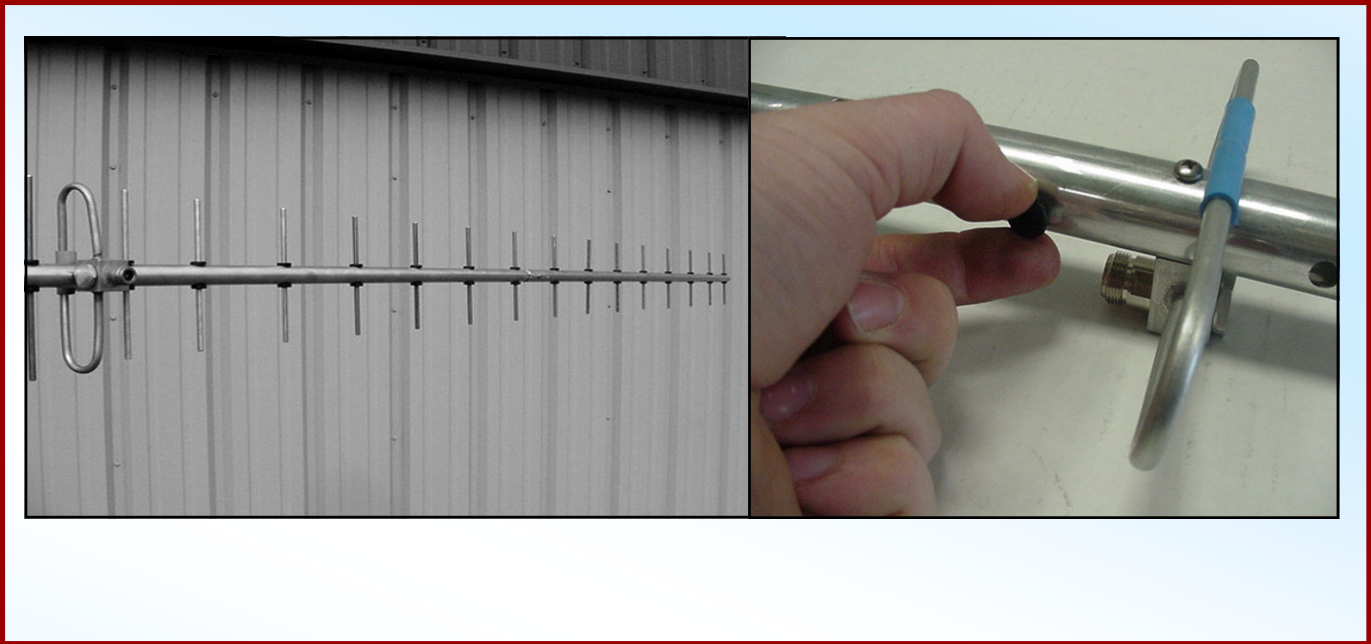




M2 Antenna Systems, Inc. Model No: 678-14 (TV CHANNEL 48-14)



SPECIFICATIONS:

Model	678-14 (CH48-14)	Power Handling	500 Watts
Frequency Range	674-682 MHz	Boom Length / Dia.....	80" / 1" - 3/4"
Usable Frequency Range	650-684 MHz	Stacking Distance.....	E=42" / H=41"
*Gain	16.8 dBi	Mounting.....	1-1/4" to 2" Nom.
Front to back	25 dB Typical	Wind area / Survival	0.5 Sq. Ft. / 100 MPH
Feed type	Folded Dipole	Weight / Ship Wt.....	4 Lbs. / 6 Lbs.
Feed Impedance.	50 Ohms		
Maximum VSWR.....	1.2:1 Typical		
Polarity	Vertically / Horizontally		
Input Connector.....	"N" Female		

***Subtract 2.14 from dBi for dBd**

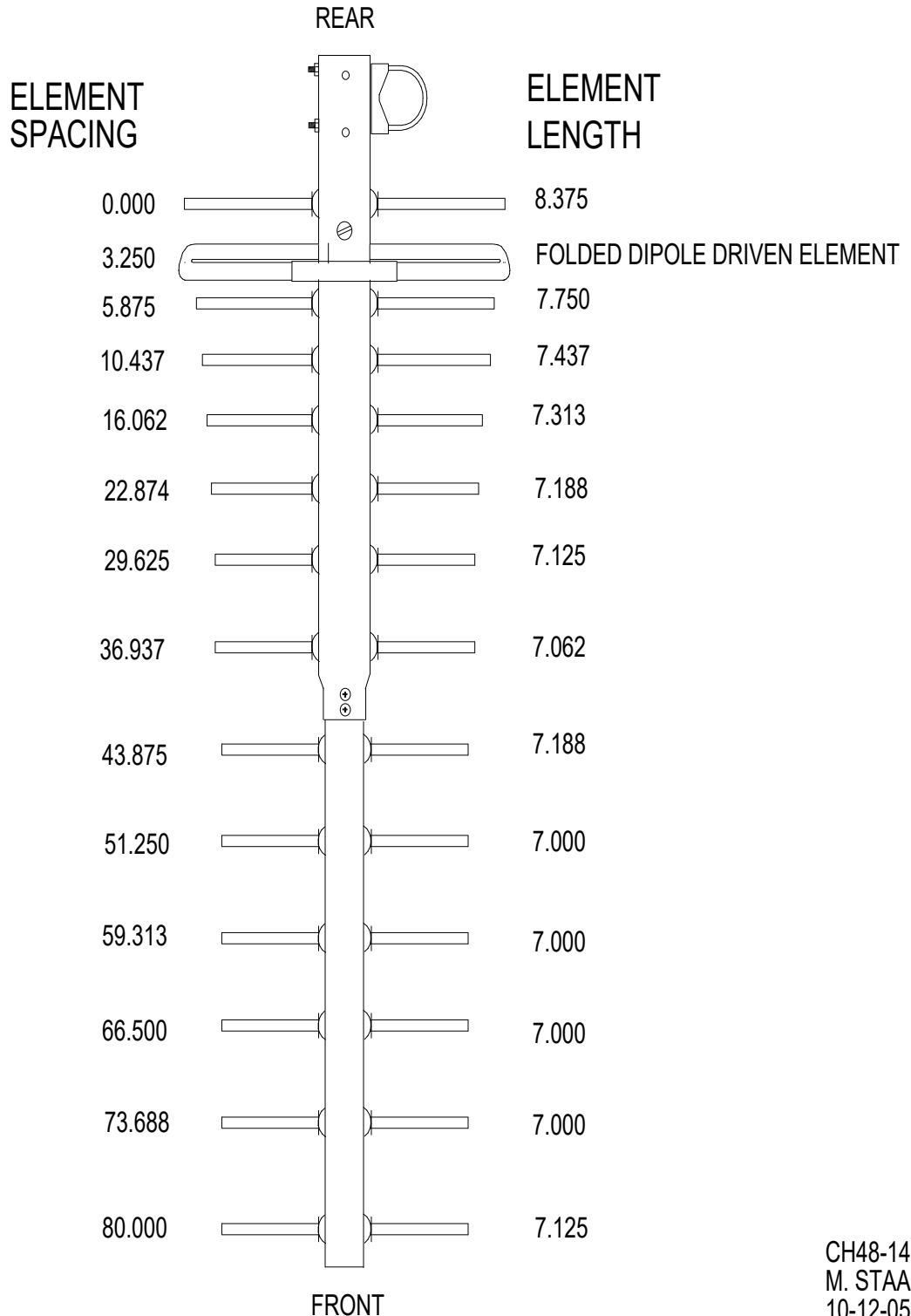
FEATURES:

The 678-14 (CH48-14) is designed for deep fringe UHF TV reception where smaller Yagi's and wide band compromise antennas just don't cut it. The antenna enables the "Polarity Flexibility" in any given application. Low cost yet manufactured for dependability, the 678-14 (CH48-14), the folded dipole, provides a virtual flat match for over 10+ MHz. The gain has been designed to roll-off quickly above range limits to prevent receiver overload from high power adjacent channel interference. The heavy duty two piece boom and 3/16" elements, provide superior performance and longevity. The 678-14 (CH48-14) is a DC grounded antenna designed to help protect receiver front ends from lightning and static.

Specialized single and multiple channel antennas are available for all TV and FM bands.

678-14 (CH48-14) DIMENSION SHEET

CHAN-48 -14 (HI-PERFORMANCE 674-680 MHZ YAGI) DIMENSION SHEET



DECIMAL TO FRACTION CONVERSION

.062 = 1/16
.125 = 1/8
.188 = 3/16
.250 = 1/4
.313 = 5/16
.375 = 3/8
.437 = 7/16
.500 = 1/2
.562 = 9/16
.625 = 5/8
.688 = 11/16
.750 = 3/4
.813 = 13/16
.875 = 7/8
.937 = 15/16

678-14 (CH48-14) ASSEMBLY MANUAL

GETTING STARTED

Tools handy for assembly process: Phillips head screwdriver, 11/32" nut driver or socket, 7/16" end wrench or socket.

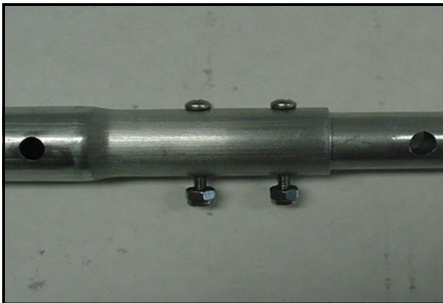
Start by checking the parts needed to complete the assembly. You should have the following parts below:



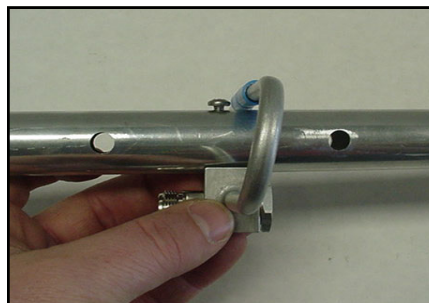
1. CHAN48-14 Boom Assembly
2. Folded Dipole Assembly
3. Hardware bag and Uni-cradle Assembly
4. Element Assembly



Step 1:
Assembly the boom sections using 8-32 x 1-1/4 screws and locknuts.



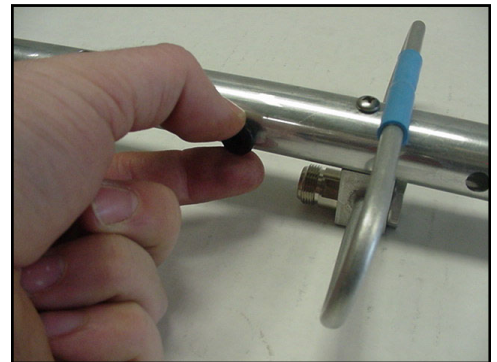
Step 2:
Attach the folded dipole to the boom using 8-32 x 1-1/4 screw and locknut. (small hole)



Step 3:
Assembly the Uni-cradle and U-bolt to the boom with 1/4-20 nuts and washers. Please note that you have the correct holes for your polarization (**vertical or horizontal**) Attach boom assembly to tripod or mast for ease of further assembly. **NOTE: The U-bolt and nuts are stainless steel and can seize. We suggest using WD40 or some other lubricant when assembling.**

Step 4:
Unroll the element assembly and position the green line as your starting point. Please note that the elements have already been center for you at the factory using 3/16" retainer clip. The reflector will be the first element to the right of the green line.

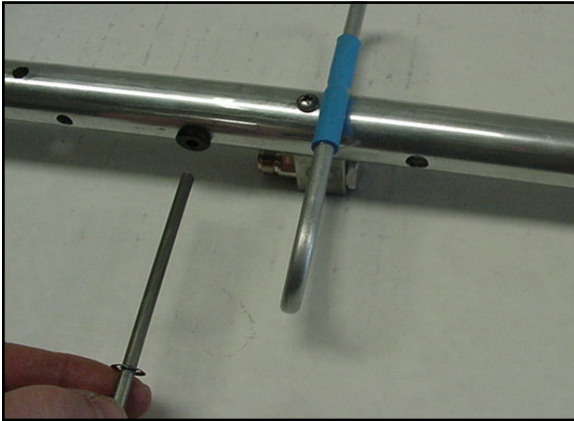
Step 5:
Starting at the "Reflector" or rear of the Boom (next to mast mount), install a button insulator on each side of the boom.



678-14 (CH48-14) PARTS LIST

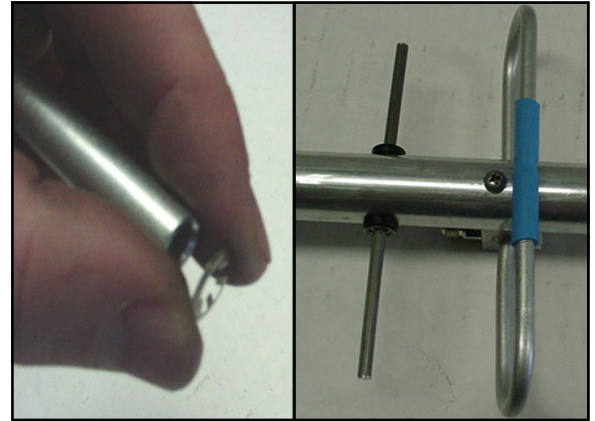
Step 6:

Starting at the rear of the antenna, hold the boom in one hand and insert the first element into the boom. Continue inserting first the button insulator and then the next element in series until finished.



Step 7:

Now move to the other side of the antenna. While holding one side of the element, push a retainer clip onto the other side of the element until it bottoms out on the button insulator. Continue this procedure until all elements are locked into place.



THIS COMPLETES THE ASSEMBLY OF THE 678-14 (CH48-14)

678-14 (CH48-14) PARTS LIST

10-12-05

DESCRIPTION	QTY
BOOM, 1.0" X .058 X 36.00 SOE TO FIT 3/4", ALUM	1
BOOM, 3/4" X .049 X 37.75 ALUM.....	1
ELEMENTS, 3/16" X SEE DIM. SHEET.....	13
DRIVEN ELEMENT FOLDED DIPOLE ASSEMBLY.....	1
BOOM TO MAST PLATE, 3 X 4 X 3/16"	1
U-BOLT, 2",	2
U-BOLT, 1" , SS.....	2
ASSEMBLY MANUAL	1
IN HARDWARE BAGS:	
NUT, 5/16-18, SS	4
LOCKWASHER, 5/16" SPLIT RING SS	4
NUT, 1/4-20, SS	4
LOCKWASHER, 1/4" SPLIT RING, SS.....	4
SCREW, 8-32 X 1-1/4", SS	3
LOCKNUT, 8-32, SS.....	2
SHAFT RETAINER (KEEPERS), 3/16" SS	26
BUTTON INSULATOR, POLY.....	26
PUSH TUBE, 3/8" X 3" USED TO INSTALL KEEPERS	1

M² ANTENNA SYSTEMS, INC.

4402 N. SELLAND AVE.

FRESNO, CA 93722

(559) 432-8873 FAX: 432-3059

www.m2inc.com Email: sales@m2inc.com