

Tribander Assembly: Contents

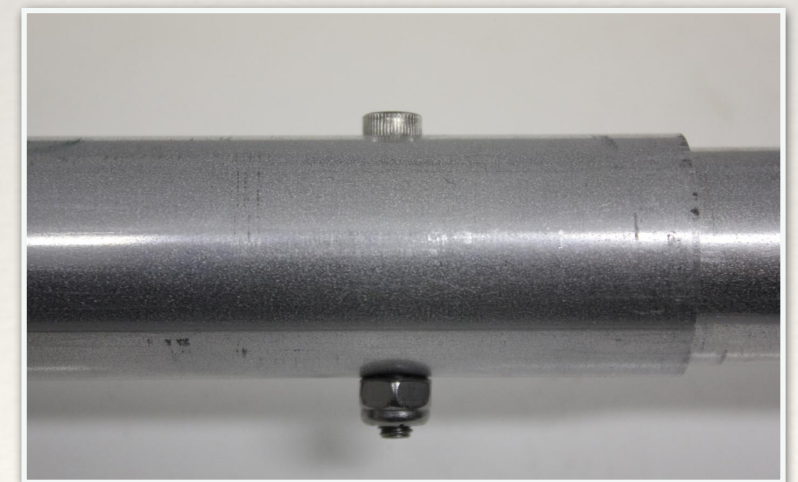
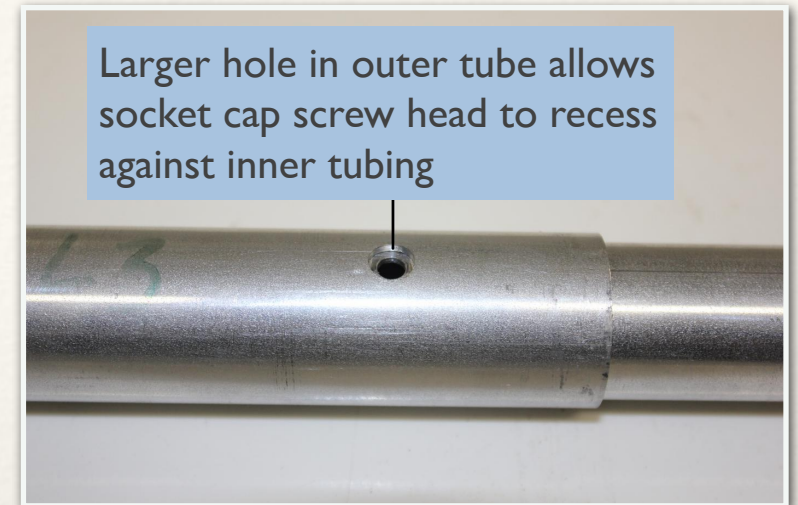
Steps for completing assembly of the partially-assembled Cycle-24 TX38 tribander (do this in parallel with tower assembly)

- ❖ Unpack the shipping tube and identify hardware
- ❖ Assemble boom
- ❖ Mount driver element center sections
- ❖ Mount parasitic element center sections
- ❖ Add element tips
- ❖ Check assembly

Tribander Assembly

❖ Things you need to know:

- ❖ The tribander is partially assembled. Do *not* undo hardware that is painted red. Do *not* remove the element mounting plates from the boom.
- ❖ Element joints and boom joints are color coded.
- ❖ Element-to-boom plates are color coded with the color of the corresponding element.
- ❖ Element sections are joined with a socket head screw. The joints are pre-drilled with a small hole on one side and a larger hole on the other side of the outer tube. *The head of the socket head screw must nest inside the larger hole in order to make a reliable electrical connection.*

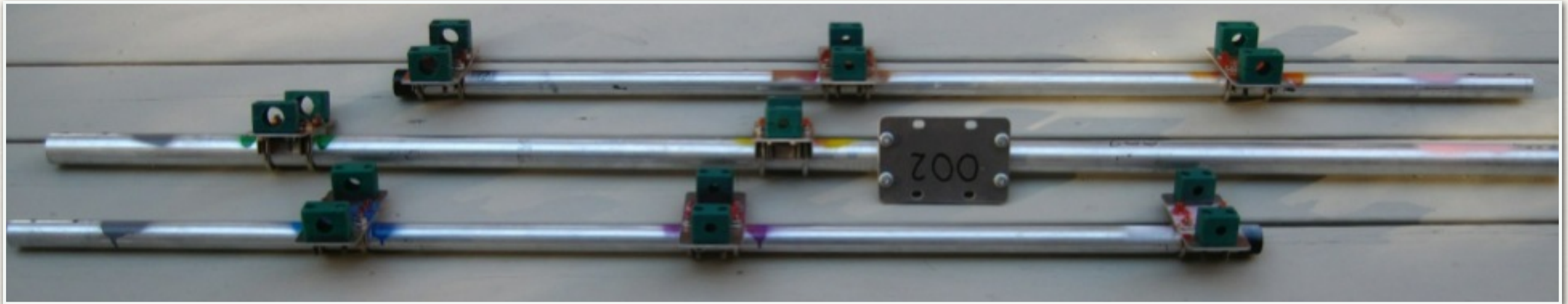


Unpack Shipping Tube

- ❖ The shipping tube contains:
 - ❖ Eight element tubing bundles.
 - ❖ Large bag of components:
 - ❖ Feed point choke
 - ❖ 2 phasing lines
 - ❖ Small bag of hardware:
 - ❖ 2 boom to mast muffler clamps
 - ❖ Three sizes of screws and lock nuts:
 - ❖ 4 large $\frac{1}{4}$ -20 x 2" for boom joints
 - ❖ 4 medium 8-32 x 1- $\frac{1}{4}$ " socket head screws for 20m mid-element sections
 - ❖ 16 small 6-32 x $\frac{3}{4}$ " socket head screws for element tips
- ❖ Lay the brown tarp under the assembly area to capture dropped hardware.



Assemble Boom

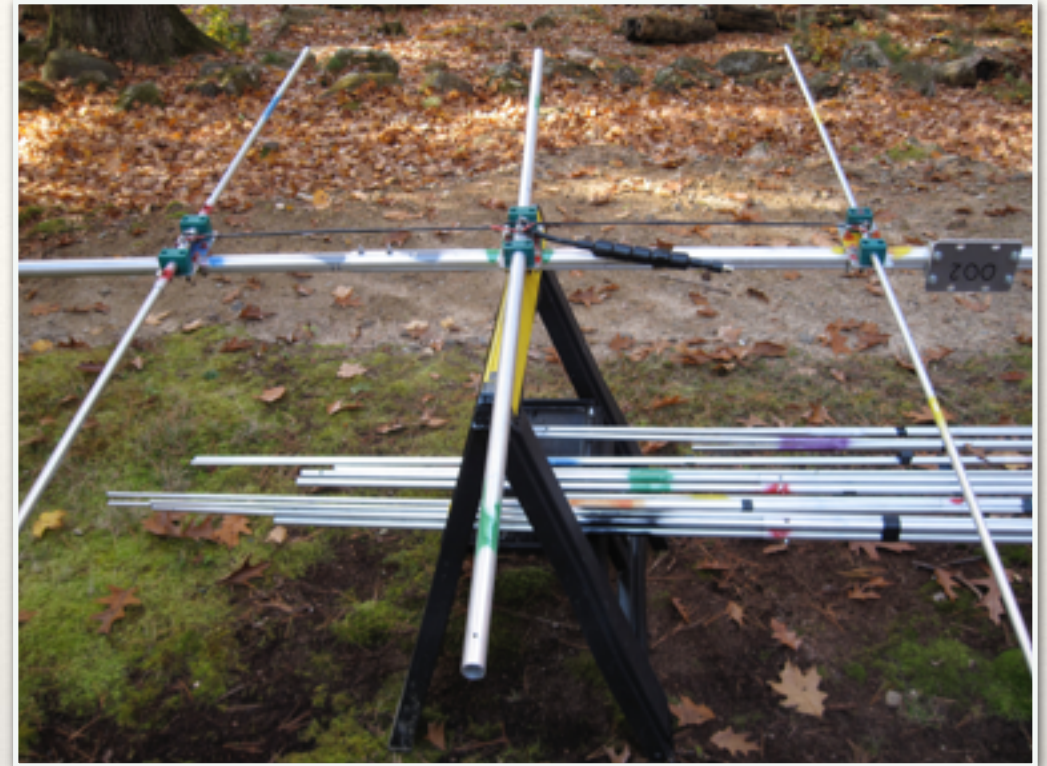


- ❖ The element-to-boom plates are on top of the boom during assembly, and below the boom when mounted on the mast.
- ❖ Join the three boom sections at the PINK and GRAY joints using the large $\frac{1}{4}$ -20 screws and lock nuts. Tools: $\frac{5}{32}$ " hex screwdriver, $\frac{7}{16}$ " nut driver (brown).



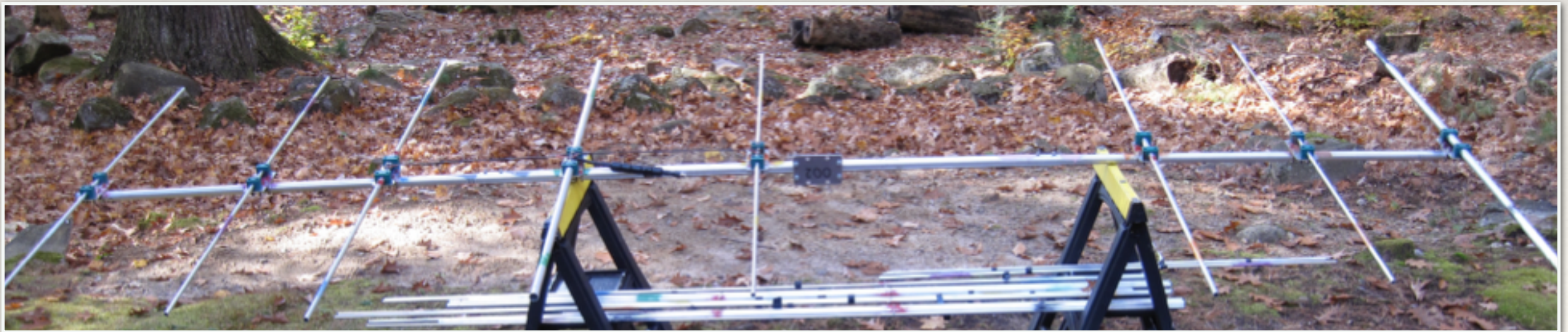
Mount Driver Center Sections

- ❖ To mount an element center section:
 - ❖ Remove green blocks from plate.
 - ❖ Place the blocks around the center of the section, centering insulated splice section between the blocks.
 - ❖ Reattach the blocks to the plate.
 - ❖ Do one element at a time to avoid mixing up the blocks; they are not interchangeable.
 - ❖ Tools: 5/32" hex screwdriver, 7/16" nut driver (brown).
- ❖ Mount the YELLOW element center (10m driver).
- ❖ Mount the GREEN element center (20m driver).
- ❖ Mount the BLUE element center (15m driver).
- ❖ Attach the choke to the GREEN element feed point with the coax connector towards the YELLOW element. Tape the choke to the boom. Tools: 11/32" nut driver (green).
- ❖ Attach the phasing lines between the YELLOW and GREEN elements and between the GREEN and BLUE elements. All red phasing line red terminals must be on the same side of the boom.



Mount Parasitic Center Sections

- ❖ Parasitic element center sections can be slid into loosened green mounting blocks. The sections have reference marks to be centered between the blocks. Orient the sections so that the larger of the holes at the ends faces downward. Tools: 5/32" hex screwdriver, 7/16" nut driver (brown).
- ❖ Mount the BLACK element center (20m reflector).
- ❖ Mount the BROWN element center (10m reflector).
- ❖ Mount the ORANGE element center (15m reflector).
- ❖ Mount the VIOLET element center (10m first director).
- ❖ Mount the WHITE element center (10m second director).



Add Element Tips

- ❖ Add 2 BLACK (20m reflector) mid-element sections:
 - ❖ Nest the section ends with two small holes into the center section.
 - ❖ Orient the mid-element sections so that the larger holes at the outer ends face downward.
 - ❖ Secure with medium 8–32 x 1–¼" socket head screws, nesting the heads of the socket head screws inside the larger holes of the center sections.
 - ❖ Tools: 9/64" hex screwdriver, 11/32" nut driver (green).
- ❖ Repeat the steps above for the 2 GREEN (20m driver) mid-element sections.
- ❖ Add 16 element tips to each of the eight elements:
 - ❖ Use color codes to associate tips with elements.
 - ❖ Secure with small 6–32 x ¾" socket head screws, nesting the heads of the socket head screws inside the larger holes at the ends of the inner element sections.

Check Assembly

- ❖ Confirm that element joint socket head screws are installed correctly.
- ❖ Inspect for loose hardware.
- ❖ Measure tip-to-tip lengths. Dimensions may vary from table by $\pm 1/2$ ".
- ❖ Do not skip this step; you will have to tilt the tower over later if you get it wrong.

Tip to Tip Dimensions

Element Number	Color Code	Element	Length
1	Black	20m Reflector	36' 7.0"
2	Brown	10m Reflector	17' 6.0"
3	Orange	15m Reflector	23' 3.0"
4	Yellow	10m Driver	16' 9.5"
5	Green	20m Driver	34' 7.0"
6	Blue	15m Driver	22' 4.5"
7	Violet	10m Director	15' 5.0"
8	White	10m Director	15' 2.0"