

## ASSEMBLY INSTRUCTIONS

**Boom Assembly:** Slide the 72" x 2" tubing into the ends of the 2-1/8" center tubing to the black line. The sections are secured by G-19 clamps. Press the 2" plastic caps onto the ends. The boom is marked with the element numbers. Be sure the sections are placed in the proper numerical order. The assembled boom length is 18 feet.

**Trap Covers:** All trap covers should be placed over the traps before element assembly begins. The 10-meter trap covers are 3-1/4" x 1-5/8" O.D. and the 15-meter traps are 4-1/4" x 1-1/2" O.D. Two plastic caps for each trap are provided. Refer to Figure 1 for assembly details.

### Element Assembly:

#### 20/15 Meter Reflector #1

Slide each 1-1/8" tube as far as the black line into the 1-1/4" center tube. These tubes should butt against each other at the center. Secure with G-12 clamps. Insert each 1" tube as far as the black line into the 1-1/8" tube and secure with a G-11 clamp. Insert each 7/8" tube as far as the black line into the 1" tube and secure with a G-10 clamp. The 15 meter trap (coax end) is inserted into each of the 7/8" tubes. These traps should be fully inserted to the edge of the trap, and secured with G-9 clamps. The 5/8" end tubes are inserted into the traps as far as the black line. These tubes are secured with G-8 clamps. Press the 5/8" plastic caps onto the ends. Refer to Figures 2 and 6 for mounting details.

#### 10 Meter Reflector #2

Slide each 3/4" tube as far as the black line into the 7/8" center section, and secure with a G-9 clamp. The 5/8" end tubes are inserted into the 3/4" tubes as far as the black line. Secure these end pieces with G-8 clamps. Press the 5/8" plastic caps onto the ends. Refer to Figure 3 for mounting details.

#### 20/15/10 Meter Driven Element #3

Align the 1/4" holes in the 1-1/4" tubes with the center insulator holes. Slide each 1-1/8" tube as far as the black line into the 1-1/4" tube and secure with a G-12 clamp. Place the nuts, lockwasher and balun strap in the proper order on the 1-1/4" stainless steel screw. The 1-1/4" screw is tightened to secure the 1-1/8" tubing. The 1/4 - 20 hex nut and lockwasher are tightened next. Leave the strap and last hex nut loose until the balun is mounted to the boom. The other ends of the straps are mounted at the balun with 8-32 stainless steel washers and hex nuts. Slide each 1" tube as far as the black line into the 1-1/8" tube. Secure with G-11 clamps. Insert the 10 meter driven element traps (coax end) into the 1" tubes. These traps should be fully inserted to the edge of the trap, and secured with G-10 clamps. Insert each 15 meter trap (coax end) as far as the red line into the 10 meter trap. The distance between these traps should be 17-3/4". Secure with G-9 clamps. The 5/8" end tubes are inserted into the 15 meter traps as far as the black line. The end tubes are secured with G-8 clamps. Press the 5/8" plastic caps onto the ends. Refer to Figures 4 and 6 for mounting details.

#### 20/15/10 Meter Director #4

Slide each 1-1/8" tube as far as the black line into the 1-1/4" center tube. These tubes should butt against each other at the center. Secure with G-12 clamps. Insert each 1" tube as far as the black line into the 1-1/8" tube and secure with a G-11 clamp. Slide the 10 meter director traps (coax end) into the 1" tubes. Each trap should be fully inserted to the edge of the trap, and secured with a G-10 clamp. Insert each 15 meter trap (coax end) as far as the black line, into the 10 meter trap. The distance between these traps should be 14-3/4". Secure with G-9 clamps. The 5/8" end tubes are inserted into the 15 meter traps as far as the black line. The end tubes are secured with G-8 clamps. Press the 5/8" plastic caps onto the ends. Refer to Figures 2 and 6 for mounting details.