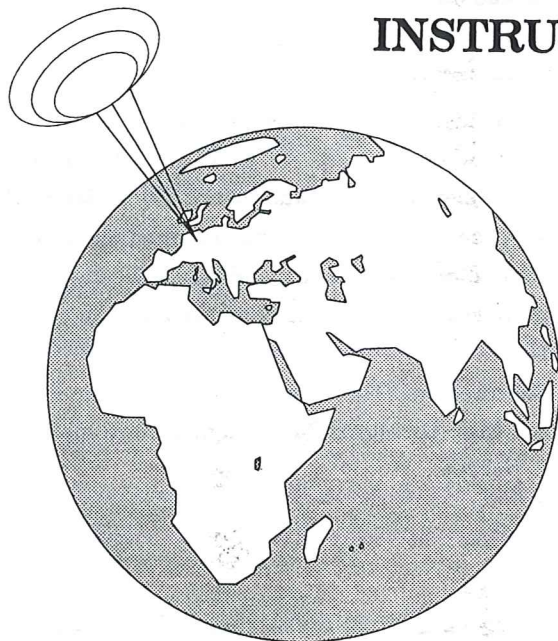


AFT

144 MHz 9 element Yagi antenna

Part #: 20809

**ASSEMBLY
INSTRUCTIONS**



F9FT

**Downloaded by
RadioAmateur.EU**

144 MHz 9 Element Yagi antenna

Part # : 20809

IMPORTANT

When opening the package, check and compare all parts and hardware with enclosed part list. Then thoroughly and carefully read the assembly instructions.

ELEMENT ASSEMBLY

Each element is mounted on the boom with a special jumper made of glass fiber loaded polycarbonate. This jumper is provided with a hexagonal print into which fits the tightening nut #17 (M5).

On each element is provided a centering bump which must fit inside the centering cavity (See arrow on close-up A). First snap the holder on the element, taking care for proper centering, and mount the holder on the boom, with M5x30 screw #5. The holder should be mounted as shown on the diagram (the hole is located *on the left* of the element, when the antenna is looked at as shown on diagram). If not, spacings between the elements may not be correct anymore.

Reflector R and the directors D1, D2 and D3 are mounted on the rear boom section (#1, black cap). Directors D4 through D7 are mounted on the front boom section (#2, red cap).

CAUTION

The antenna still being on ground, make sure that all element lengths decrease, from reflector R (longest element) through director D7 (shortest element): each successive element is either the same, or shorter than the prior element. If not, performance of the antenna may be drastically reduced..

DRIVEN ELEMENT AND FEED LINE

The coaxial feed line is connected to the driven element (Dip) with a watertight type N connector set. The driven element is fitted with a built-in standard UG58A/U female receptacle. A standard UG21B/U male connector is delivered as an accessory with the antenna. This connector can be used with RG213/U or Pope / Belden H500 cables, for example.

A quarter filter, called "*bazooka*" (#8 on diagram), is used to cancel the outer currents on the outer conductor of the coaxial line. A plastic hood is also provided to avoid condensation around the connector, on the driven element.

Slide the hood on the bazooka, the broad end of the hood facing to the free end of the bazooka ; slide the bazooka on the coax, with the mounting spring (#7 on diagram) opposite to the coax end ; mount the connector on the coax cable (See connector sketch for proper mounting). Place the driven element case above its mounting hole, and with wing screw #5. ***Do not overtighten this screw!*** Screw in the UG21B/U connector onto the UG58A/U socket. Firm hand tightening is sufficient, ***do not use any tool.*** Slide the hood on the ring provided around the coax socket, on the driven element (Close up B1 and B2), and drill a "breathe" hole (3 mm or 1/8") on the lower part of the hood.

The feed line must run on the same side as the elements, "above" the element holders, taping occurring two or three times along the rear boom section. Use "electricity grade" adhesive tape.

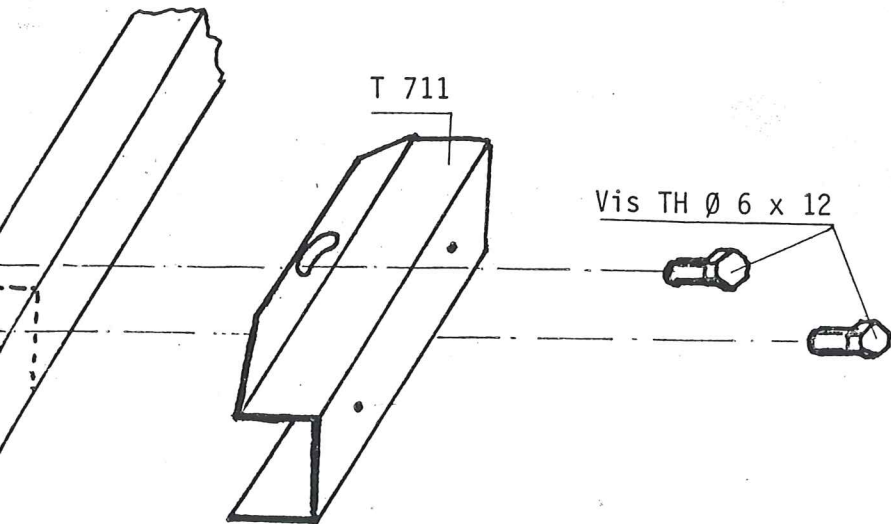
BOOM ASSEMBLY

Set the mast to boom assembly bracket (#12) to match 20 millimeter square tubing ; introduce tightening plate #11 into the proper slot (farther away from right angle bend). Screw in the M5x30 screws #5 to attach plate #11 to main plate #12. Keep the assembly loose enough to allow boom sections to slide into the gap between plates #11 and #12. Introduce both boom sections through each end of the bracket, so that they get in tight contact in the middle of the gap ; then firmly tighten the two screws #5. Then set in M6 counter-nuts #17, as shown on close-up C, and tighten.

Corps de
l'antenne

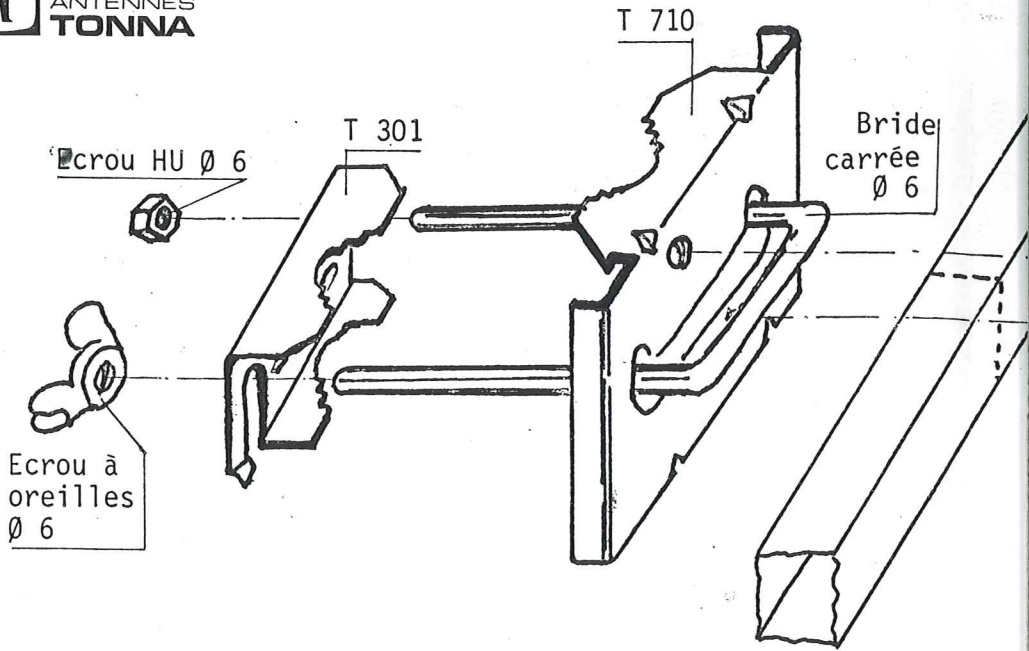
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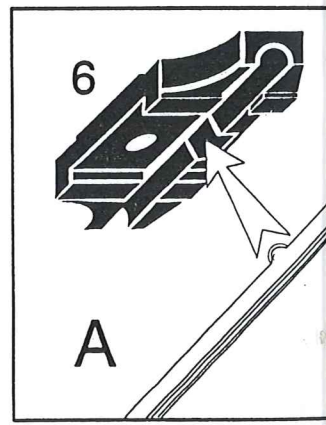
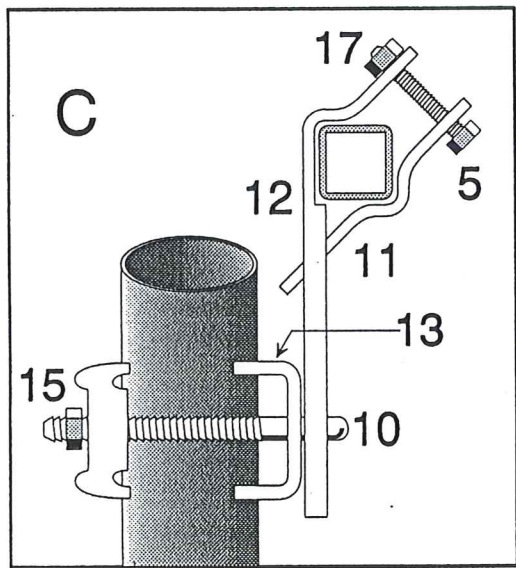
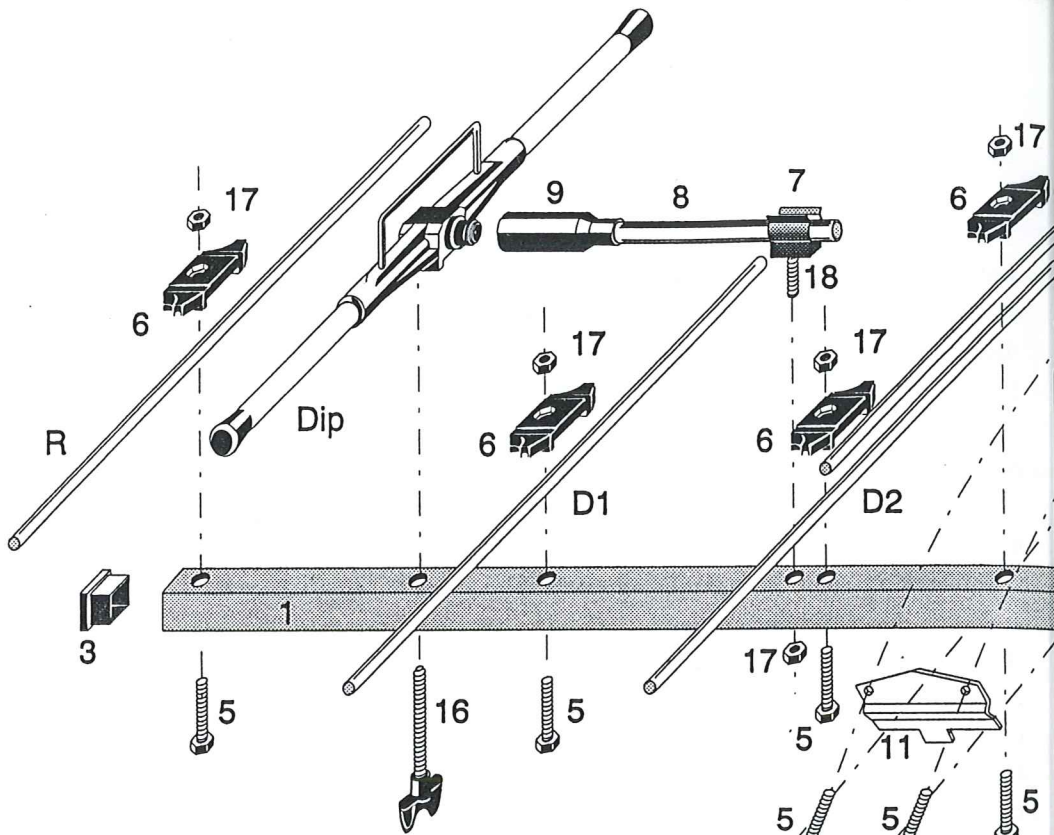
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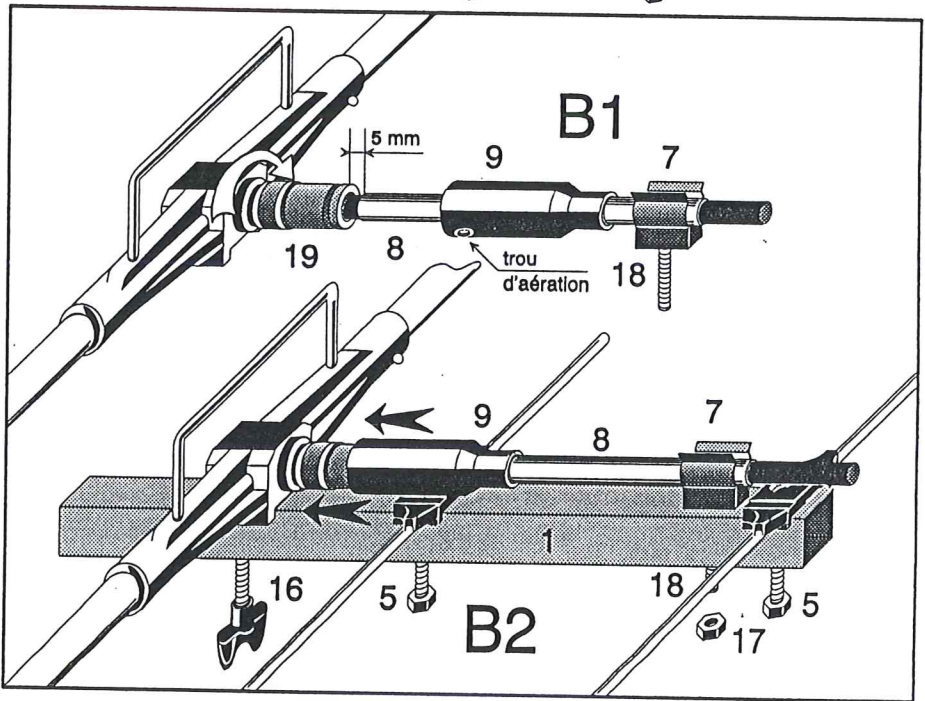
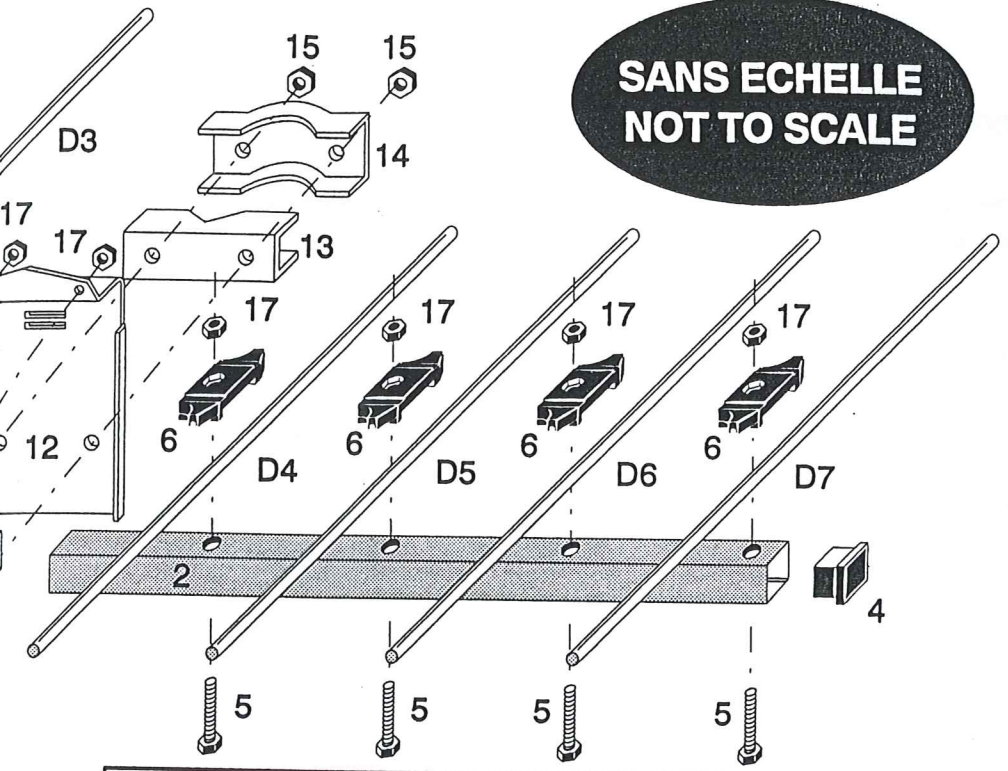


ANTENNES
TONNA





**SANS ECHELLE
NOT TO SCALE**



MOUNTING OF ANTENNA TO MAST

The maximum useful mast outer diameter is 54 millimeters (2" 1/8). Loosely mount M6 U-Bolt #10, "alligator" clamps #13 and #14, and M6 nuts #15. Run mast through clamp set and tighten to mast (See close-up C).

OPERATING HINTS

Keep the antenna in local dominant wind direction, when not in use.

ELEMENT LENGTHS

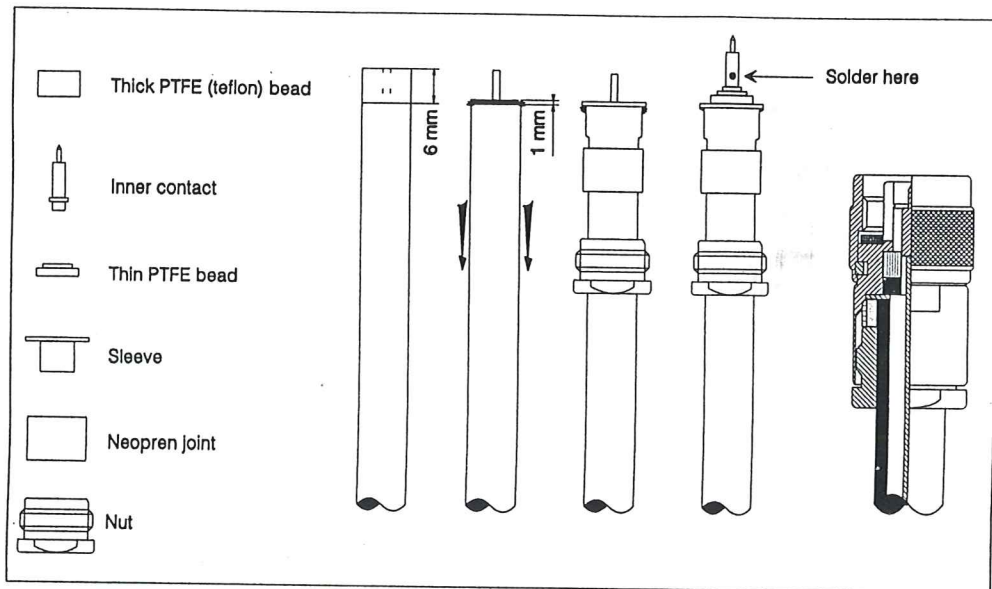
Element	Length (mm)	Length (inches)
Reflector (R)	1030	40 9/16
Driven element (Dip) *	970	38 3/16
Director 1 (D1)	984	38 3/4
Director 2 (D2)	957	37 11/16
Director 3 (D3)	945	37 1/4
Director 4 (D4)	930	36 5/8
Director 5 (D5)	920	36 1/4
Director 6 (D6)	910	35 13/16
Director 7 (D7)	900	35 7/16

* Length given without caps.

PART LIST

Part #	Description	Quantity
1	Rear boom section	1
2	Front boom section	1
3	Black plastic cap (rear)	1
4	Red plastic cap (front)	1
5	Stainless steel hex head screw, M5x30	10
6	Polycarbonate element mounting jumper	8
7	Bazooka mounting spring	1
8	Quarter wave filter, or "bazooka"	1
9	Plastic protective hood	1
10	Stainless steel U-bolt, M6x80	1
11	Boom size matching and tightening plate	1
12	Boom to mast attaching main plate	1
13	Boom to mast mounting "alligator" clamp	1
14	Boom to mast tightening "alligator" clamp	1
15	Stainless steel nut, M6	2
16	Special plastic thread wing screw	1
17	Stainless steel nut, M5M5	10
18	Bazooka mounting stainless steel screw M5x25	1
19	50Ω type N male connector (UG21B/U)	1

NOTE: AFT (F9FT) reserves for itself the right for modifying its products, without notice.



This connector can be used with cables RG213/U, H100, H500 or similar.

AFT

RADIOCOMMUNICATION

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