

AM 823-018-00

# CONSTRUCTION MANUAL ROOF TOWER SET

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## CR18

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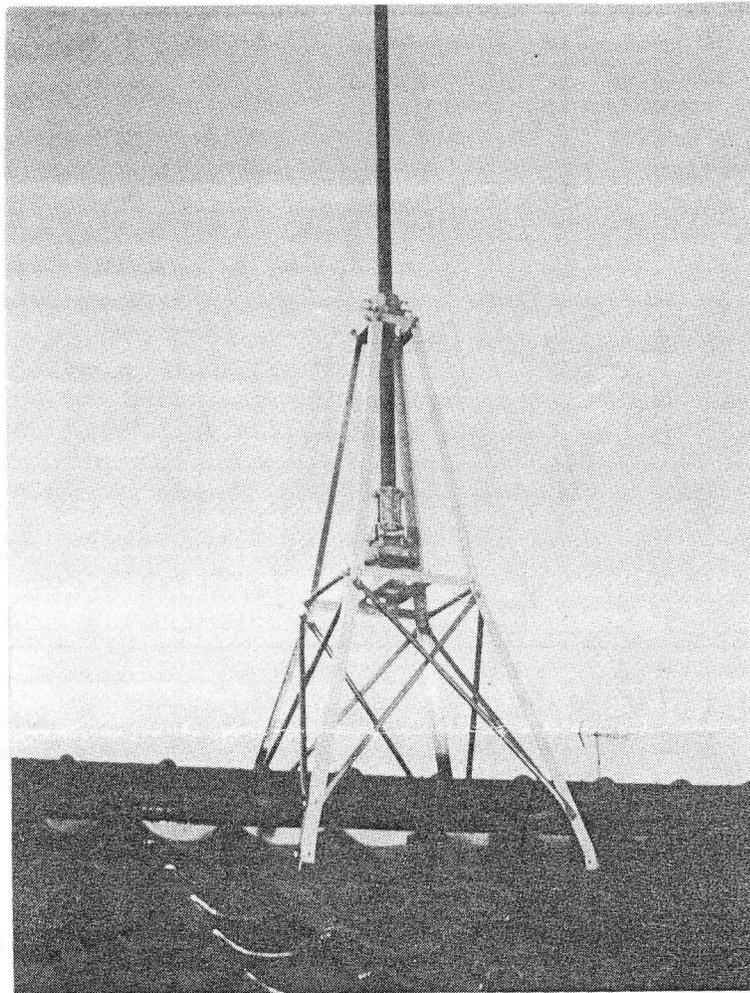


Figure 1-1. Roof Tower Set, model CR18.

1 st edition 3-1982

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# SECTION 1 GENERAL

## 1-1 OUTLINE

Model CR18 shown in Fig. 1-1 in a light stayed roof tower. Its full length is 1.85 m, with a space of 0.8 m between its poles. It has a structure of 2-step pyramid type square tower. A pole material is a light and hightension aluminum alloy. Steel plates finished with zinc plating are used for parts where high strength is particularly required. Since these parts are to be assembled, you must supervise all construction works by yourself. To secure its long service life, you will need sufficient experiences, skills and additional parts. Follow the precautions and construction procedures given below. It is recommended to prepare what you need for construction in order to install this device in the optimum and quickest way.

## 1-2 SPECIFICATIONS

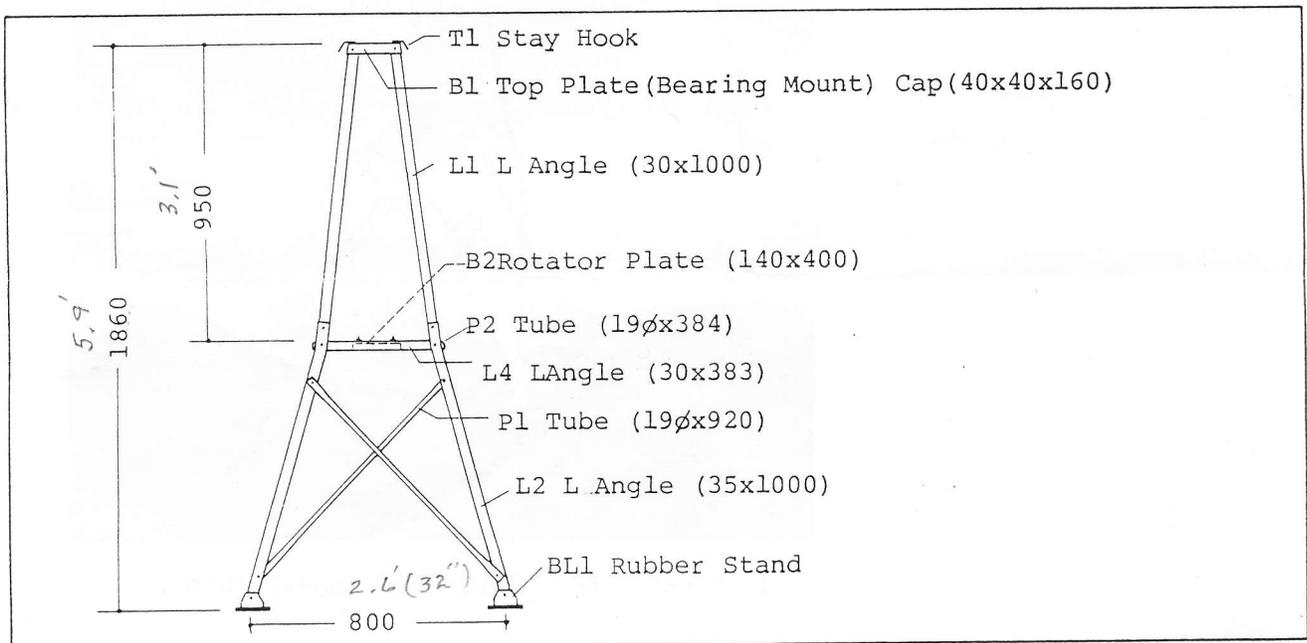
Fig. 1-2 shows the structure of Model CR18. The following gives you a summary of what you can mount to this tower and its mechanical performances.

### Mountable Parts:

- 1) Bearing: #300 made by Emoto Co. KS065 made by Kenpro.
- 2) Rotator: All products made by Emoto's and Kenpro's, ART3000 made by Aiger and CDE's and all the Create's RC5-x series rotators
- 3) Mast: Pipes with a diameter of 60 mm or less

### Mechanical Performances:

Tower Wind Load(at 40 m/s)..40 kg  
 Allowable Entenna Area (at 40m/s)  
 Max. Vertical Load ..... 200 kg  
 Max. Twisting Torque ..... 100 kg  
 Weight ..... 10 kg



## SECTION 2 PREPARATION

### 2-1 PARTS AND TOOLS REQUIRED FOR CONSTRUCTION

Fig. 2-1 shows a list of parts required for constructing Model CR18. Also, tools required are listed in Fig. 2-2. The number of workers required for construction and assembly is 3 to 4 persons.

Figure 2-1 Parts Required

Item	Description or Purpose
1. Wire for Guy (Stay)	$\phi 3 - 4$ (8 mm - square steel twisted wire)
2. Ball Insulator	Small one
3. Wire Clip	adjusted to the wire size
4. Turn Buckle	Thread: $\phi 6$ mm or more
5. Simple	for wire protection
6. Mast Bearing	Prevention of mast pipe from horizontal vibration
7. Rotator	for antenna rotation
8. Mast Pipe	for antenna rotating and holding

Figure 2-2 Tools Required

Item	Purpose
1. Radder	for Climbing Up to a Roof
2. Rope	for Lifting
3. Plaier	for Assembling the Tower
4. Wire Cutter	for Cutting the Wires
5. Scale	for Measuring dimensions
6. Hammer	for Fixing Stay Anchors

## SECTION 3 PARTS LIST

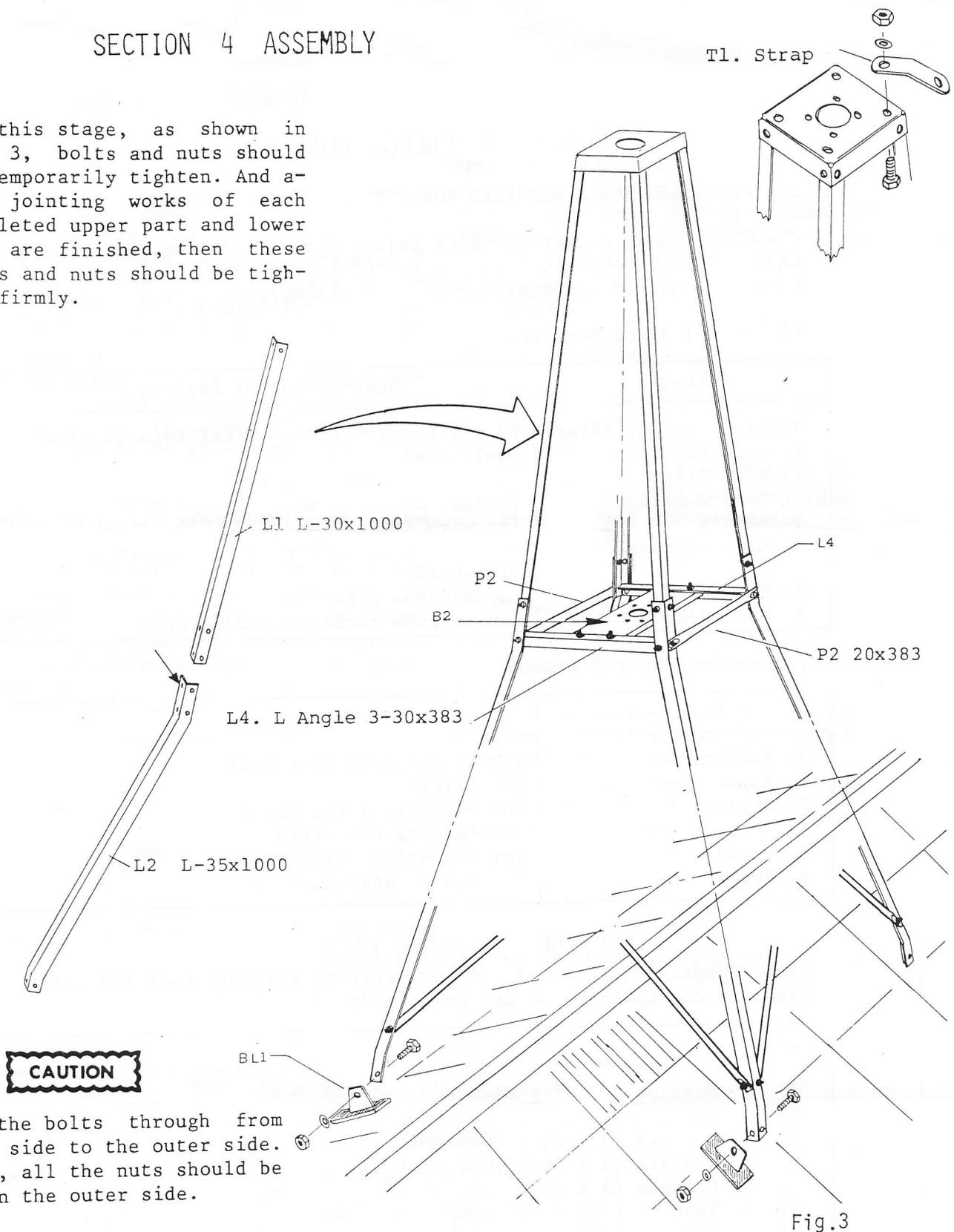
After unpacking cartons, check prior to assembly that the parts shown in the table below are contained:

Item	Description	Quantity
B1	Bearing Mounting Plate	1
B2	Rotor Mounting Plate	1
L1	L Angle (3 x 30 x 1000 m/m)	4
L2	L Angle (3 x 35 x 1000 m/m)	4
L4	L Angle (3 x 30 x 383 m/m)	2
P1	Tube ( $19\phi$ x 920 m/m)	8
P2	Tube ( $19\phi$ x 384 m/m)	2
S1	Screw (M8 x 20 m/m High Tension Bolts & Nuts w/W)	52
S2	Hook Bolt	4
BL1	Rubber Stand	4
T1	Stay Hook	4
W1	Spanner M8	1

\* Dimensions are subject to change without notice due to remodeling.

## SECTION 4 ASSEMBLY

In this stage, as shown in Fig. 3, bolts and nuts should be temporarily tighten. And after jointing works of each completed upper part and lower part are finished, then these bolts and nuts should be tighten firmly.



## SECTION 5 INSTALLATION

### 5-1 Stay Anchor

To keep the high strength of the roof tower, it is necessary to secure the foundation of the stay strong. Originally, the strength of the roof tower itself is sufficient. Accordingly, its strength cannot be obtained 100 % by installation which may cause the stay to be cut or its foundation to be broken. Observe a building properly and consider where to provide the foundation of the stay. Build the foundation of the stay, using square lumbers spanned across the roof and poles.

Figure 5-1 Overall View

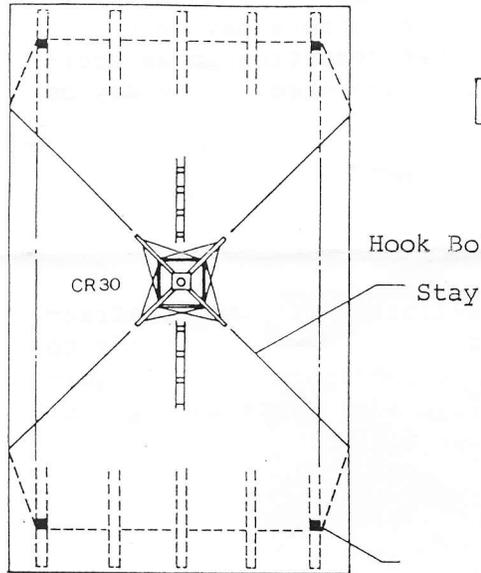
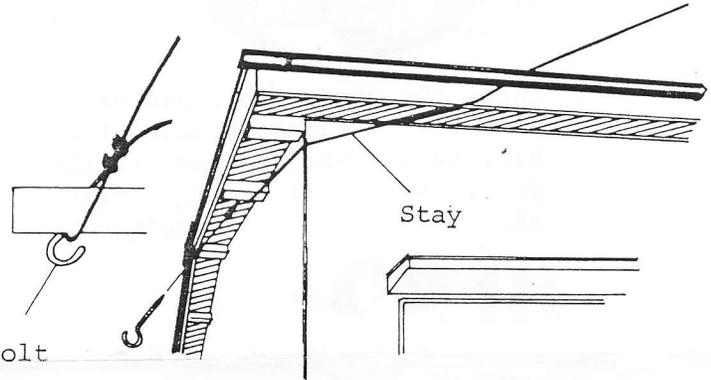


Fig. 5-3

If the square lumbers are visible, it is safer to wind wires round them.



**CAUTION**

Mounting of the stay anchors is one of the most dangerous works. Use a ladder, etc., if possible. It is also wise to let a specialist mount them.

Figure 5-2  
Elevation View

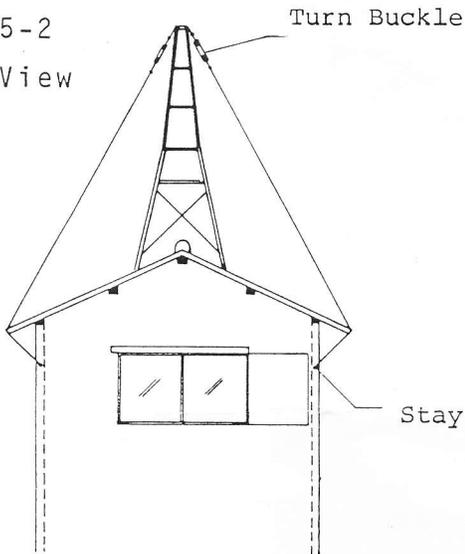
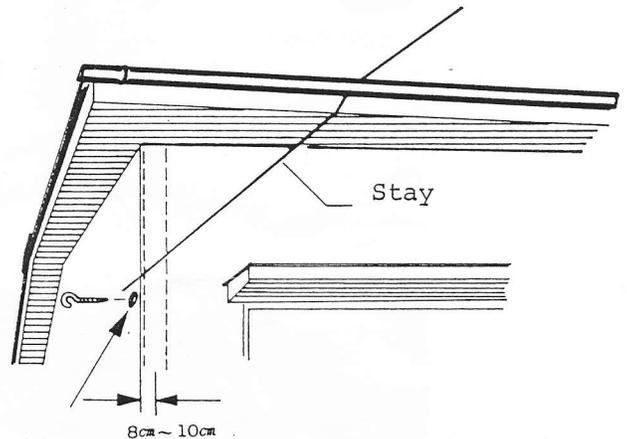


Fig. 5-2

When fixing to poles located at corners of Building:



5-4 When Building is Made of Mortar

When the building is made of mortar, make a hole, using a Philips screwdriver.

## Painting

After installing the antenna, paint the following parts:

1. Bolts and nuts of the tower
2. Stay anchors
3. Wire clips

Check the above-mentioned parts every 6 months. Especially, when the building is made of wood, the anchors may be broken because the wood become fragile, thus resulting in an accident. Also, if inappropriate wires are used, they may be elongated and the turnbuckles may come off.

- CUSTOMER SERVICE -

If you are anxious or have any questions about the construction of the CR tower, consult our dealer. We are ready to provide you with advices clearly and immediately. The equipment may be damaged or it may lose some parts during its delivery. In that case, contact our dealer.