



# **SABRE COMMUNICATIONS CORPORATION**

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## INSTALLATION

### Type SCC 800-T-T-1-J-HD

Erection of the portable series Aluminum/Alloy masts has been made as simple as possible. The radiating elements are also the primary mast support guys and are made of phosphor bronze wire rope with line fasteners fitted at each anchor to facilitate proper tension adjustment. The secondary guys are made of non metallic phillystrand and are required for additional support.

The antenna should be mounted in a clear area devoid of all metallic objects and obstructions.

### Erection Procedure

#### "Base Installation"

A reasonable level site is required to properly erect mast. (For total area required see Figure 1). Secure the base plate 871017 to the ground using the four (4) base plate pins 870773. Drive in the pins using a small sledge hammer making sure the pins are firmly anchored.

#### "Anchor Installation"

The procedures for locating and installing the four (4) element anchor stakes are as follows. Position the top mast section 870856 over the base plate. Unreel the four (4) upper element lines from the storage hooks. Extend each line out from the base 90 degrees apart keeping the elements in line with the corners of the base plate. A one inch black vinyl strip has been provided on each upper element to determine the location of the element anchor stakes. By holding onto that vinyl strip pull element until the sag is eliminated between the top mast section and the black vinyl strip. At that point insert element anchor stake (found on the lower element assembly 871018) into the ground at approximately 60 degree angle. (See Figure 2). Continue to the next element and repeat procedure.

NOTE: PROPER INSTALLATION REQUIRES  $46'-5" \pm 2"$  BETWEEN ELEMENT ANCHOR STAKES. (SEE FIGURE 1 & 2).

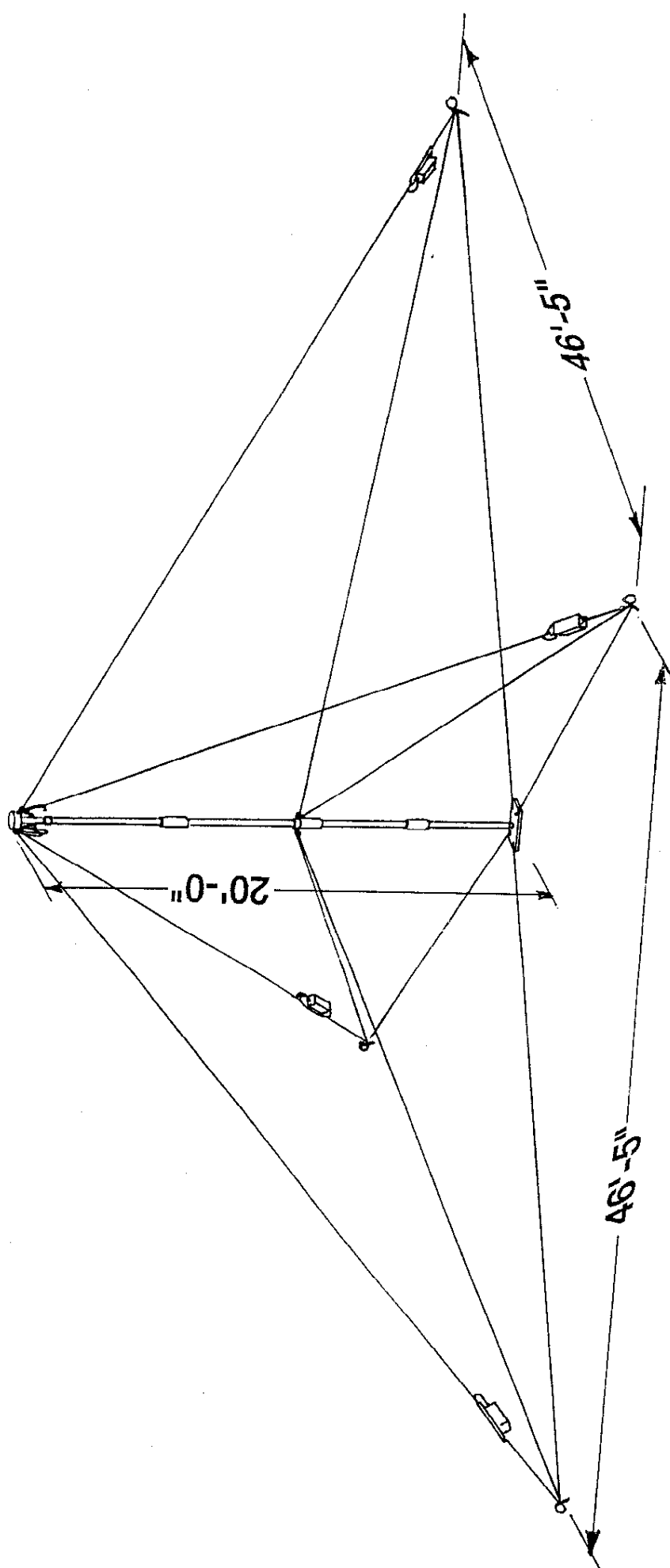
## **MODEL 800 - T-T-1-J-HD GENERAL INFORMATION**

### **1.0 GENERAL**

This manual is intended to provide the user with the information necessary to effectively install and operate the 800-T-T-1-J-HD Antenna. Included are installation instruction, operation recommendations and antenna efficiency characteristics.

This antenna has been designed with great care not only for optimum performance, but also for ease in handling and installation. Resistive terminations are employed to improve broadband impedance matching. No tuner is required.

The 800-T-T-1-J-HD Antenna System is a Broadband Antenna presenting a VSWR of less than 2.5:1 throughout the frequency range of 2-30 MHz when properly installed. It also employs a 20 ft. light weight aluminum mast with special end fittings for ease of erection and movement.



Model 800-T-T-I-J-HD

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**MODEL 800-T-T-1-J-HD  
2-30 MHz COAXIAL TRANSPORTABLE  
ANTENNA SYSTEM**

**SABRE COMMUNICATIONS CORPORATION**

**3400 HIGHWAY 75 NORTH  
SIOUX CITY, IOWA 51105 USA**

**JOB NO.** \_\_\_\_\_  
**SHIP MO.** \_\_\_\_\_  
**MODEL** \_\_\_\_\_  
**SERIAL NO.** \_\_\_\_\_

When the anchor stakes are in position, attach the termination resistors 870781 and the lower element assemblies 871018 to the upper element strands. This will complete the element assembly (See Figure 3). Be sure to attach the U.H.F. connector to the resistor receptacles.

### **"Erection of Mast"**

Before erecting mast attach the RG8 coax to the balun at the top of the mast section 870856. The coax needs to be secured to the outside of the tubing prior to raising.

**NOTE: USE ELECTRICAL TAPE OR PLASTIC TIES TO SECURE THE COAX TO THE OUTSIDE OF THE MAST.**

Vertically raise the top mast section 870856 then insert mast section 870847 below and secure coax. The next section to be installed is 870846. When tube is in place, secure coax and attach the four (4) secondary guys 870793 to the guy rings. The last section required is the base section 870855. Position it on the base and then lower the top 3 sections to complete the 20 ft. mast. (See Figure 4). Check to see that base cap nut is positioned in the hole centered on the plate.

Adjust each element for proper tension to support mast in a plumb position.

The line fasteners will tighten and release instantly to adjust element as needed. Now that the mast is standing the secondary guys can be clipped to the end of the 1/4" fiber rope. The rope located at the lower element anchor stakes and tension for proper alignment.

**CAUTION: DO NOT ATTEMPT TO ASSEMBLE ANTENNA MAST ON THE GROUND AND RAISE IT TO A VERTICAL POSITION. TO DO THIS MAY CAUSE THE TUBING TO COLLAPSE.**

## **"GROUND RADIAL INSTALLATION"**

**Install four (4) Ground Radial Cable Assemblies 871019 by attaching one end to the receptacle located on the anchor stake and the other end to the base plate.**





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712-258-6690

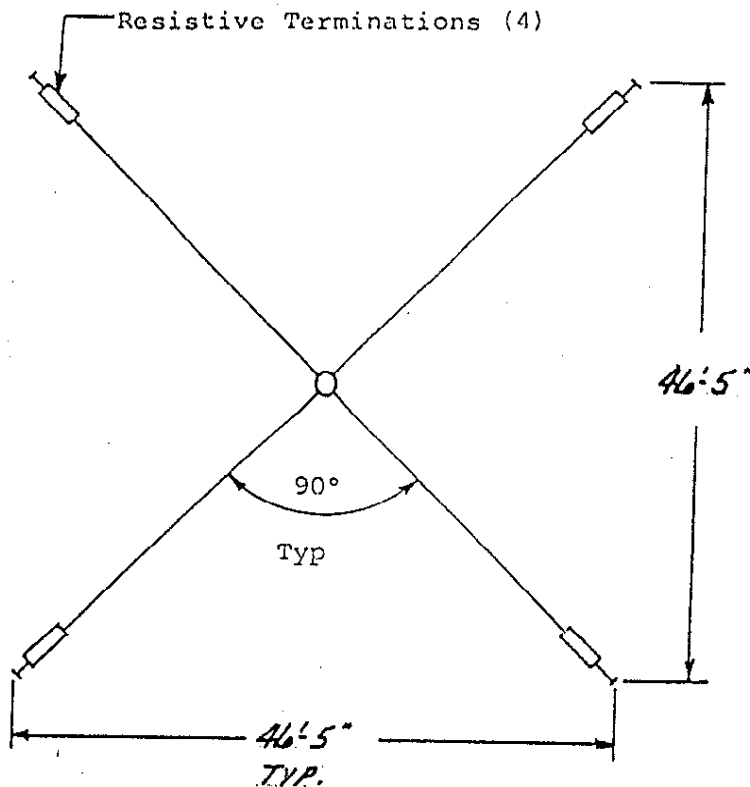
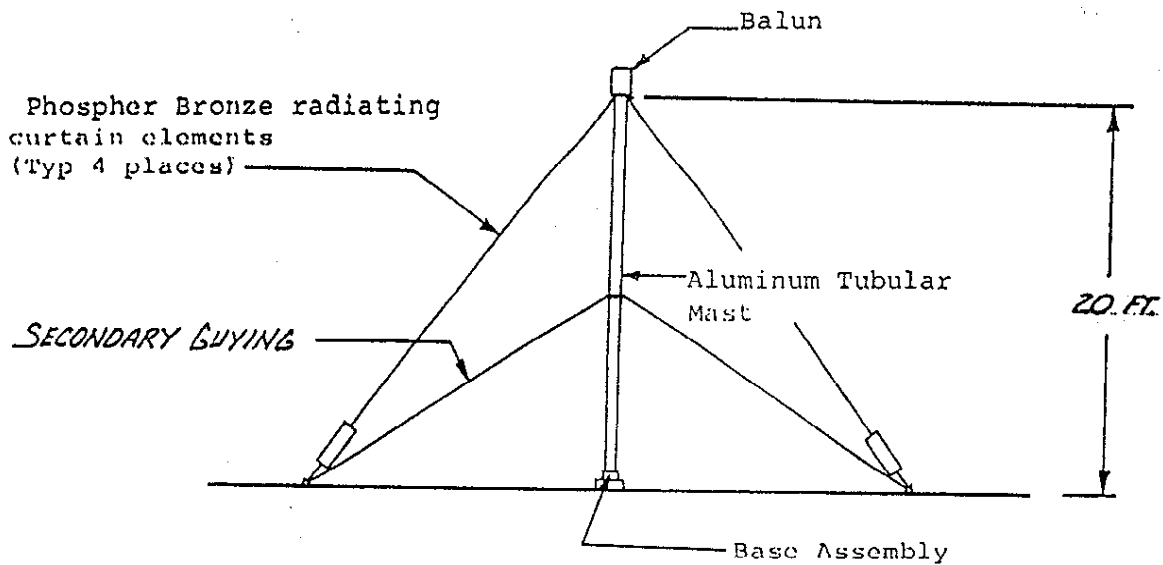
NUMBER

PAGE 1 OF 1

DATE

BY

TITLE SABRE MODEL - 800 T-T-1-J-HD



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## MODEL 800-T-T-1-J-HD

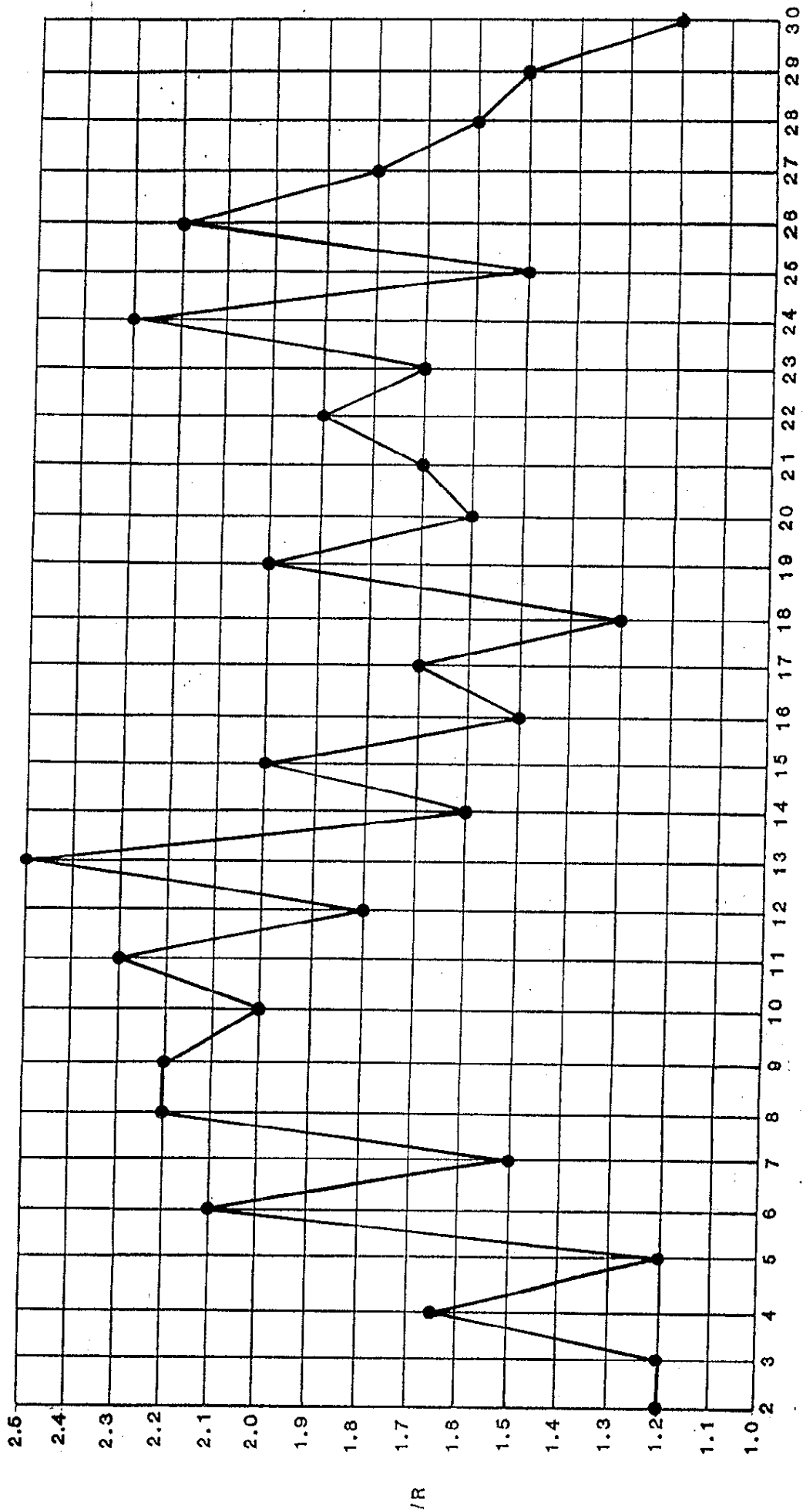
Polarization	Horizontal Vertical Component
--------------	----------------------------------

Impedance	50 ohms nominal
VSWR	2.5:1 maximum
Frequency	2-30 MHz
Power Handling	1 KW Avg/PEP
Mast Height	20 Ft.
Erection Time	10 min., 2 men

Power	Connector
Avg.	Type N
1KW	Female
PEP	
2KW	

Freq.	Directive Gain (dbi)	Efficiency (db)
2 MHz	5.0	-33.5
4 MHz	5.2	-22.7
10 MHz	6.2	- 9.3
16 MHz	5.9	- 7.5
28 MHz	6.9	- 4.7

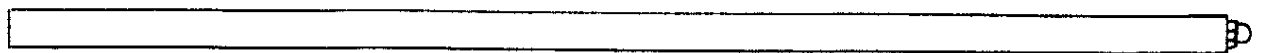
	Size	
Height	Length	Width
20 Ft.	46'-5"	46'-5"



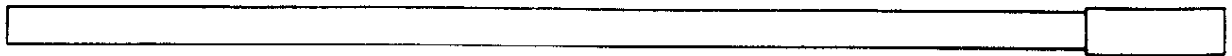
FREQUENCY (MEGAHERTZ)

TYPICAL VSWR CURVE

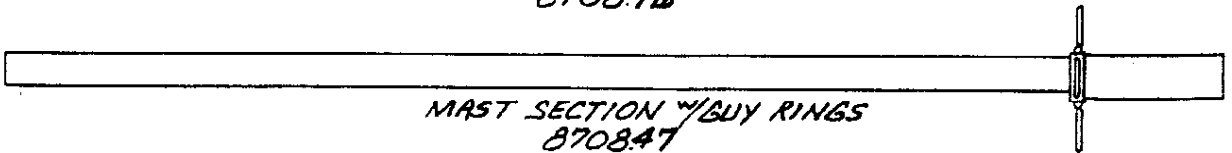
MODEL 800-T-T-1



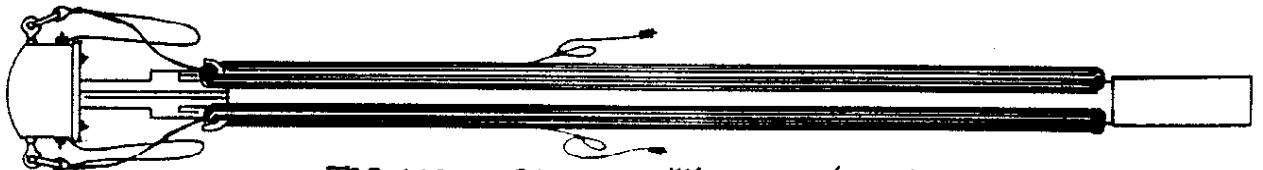
MAST BASE SECTION  
870855



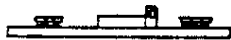
MAST SECTION  
870846



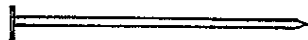
MAST SECTION w/ GUY RINGS  
870847



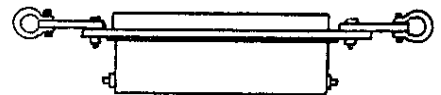
TOP MAST SECTION w/ BALUN & ELEMENTS  
870856



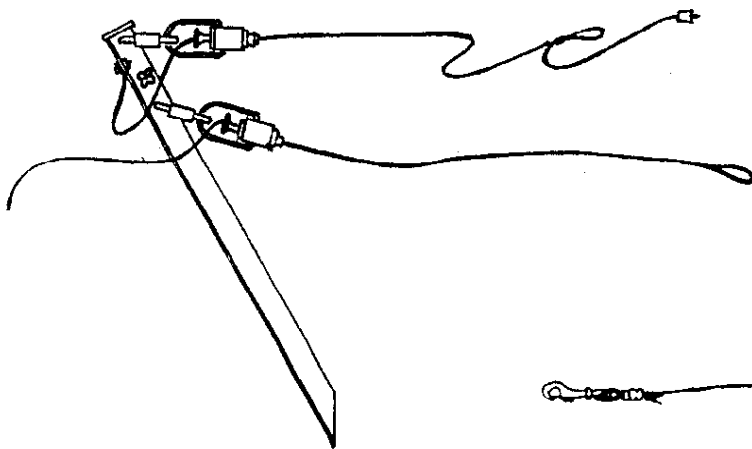
BASE PLATE  
871017



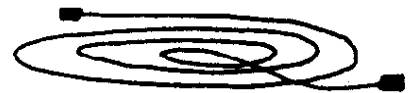
BASE PLATE PIN  
870773



TERMINATION RESISTOR  
870781



LOWER ELEMENT ASS'Y.  
871018



20 FT. RG8 COAX ASS'Y.  
870899

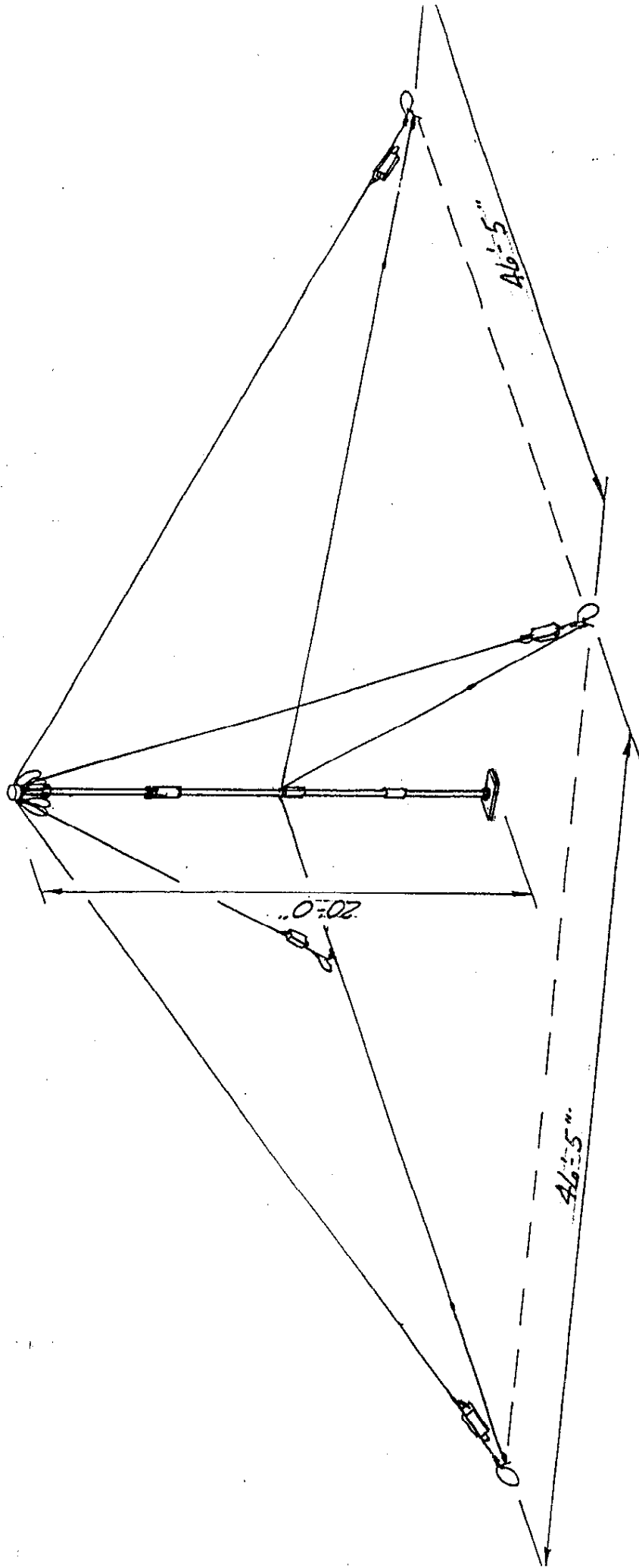


SECONDARY GUY ASS'Y  
870793



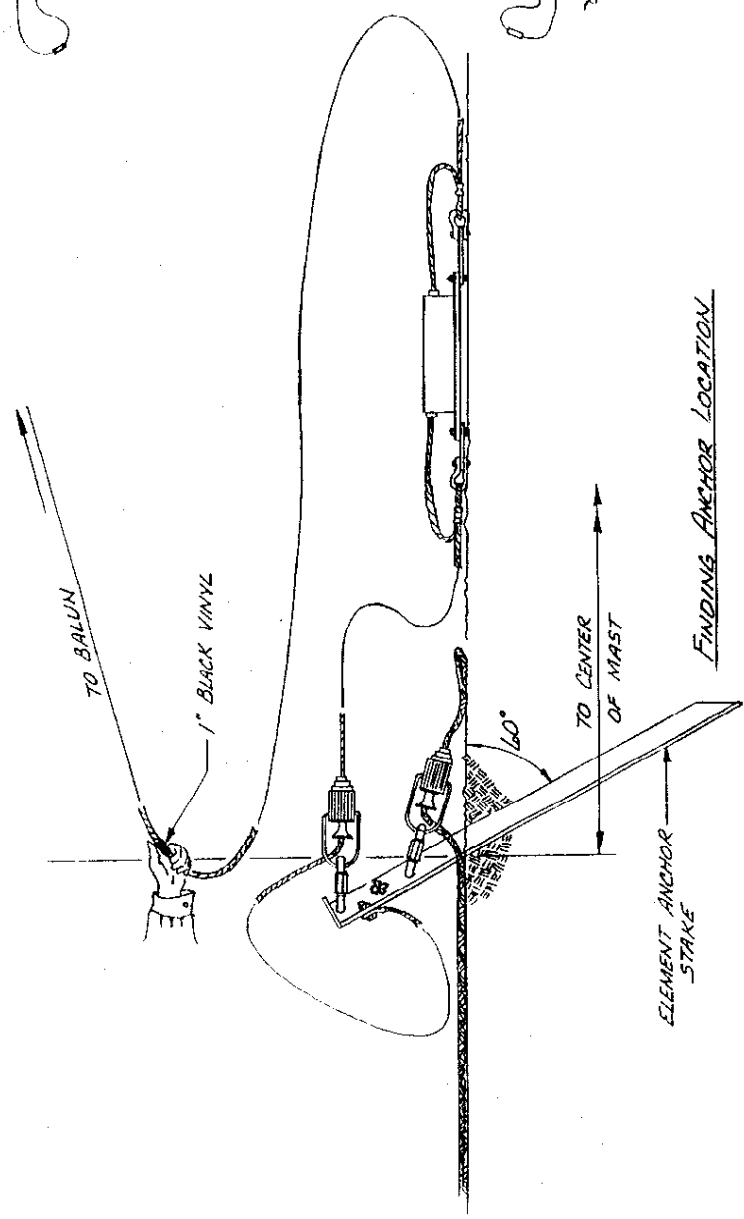
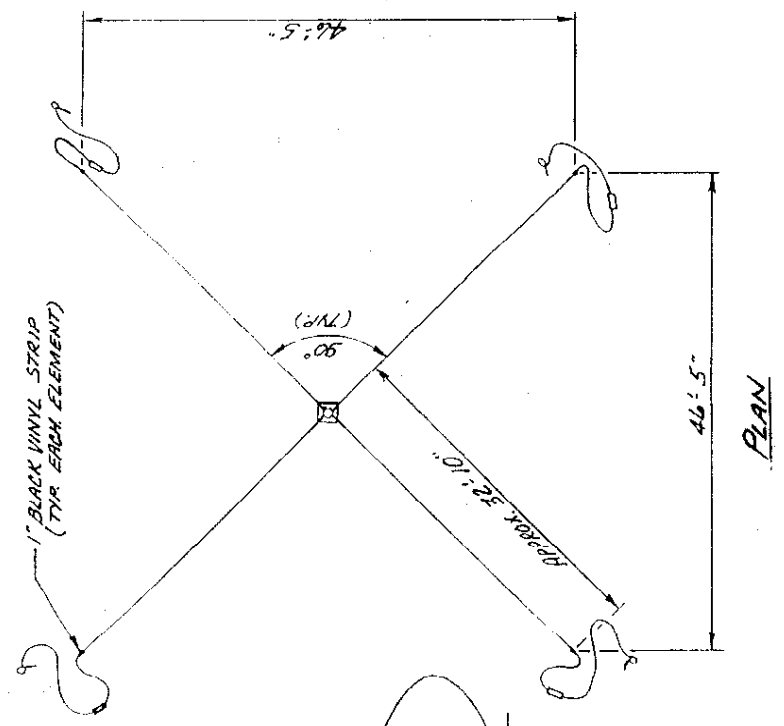
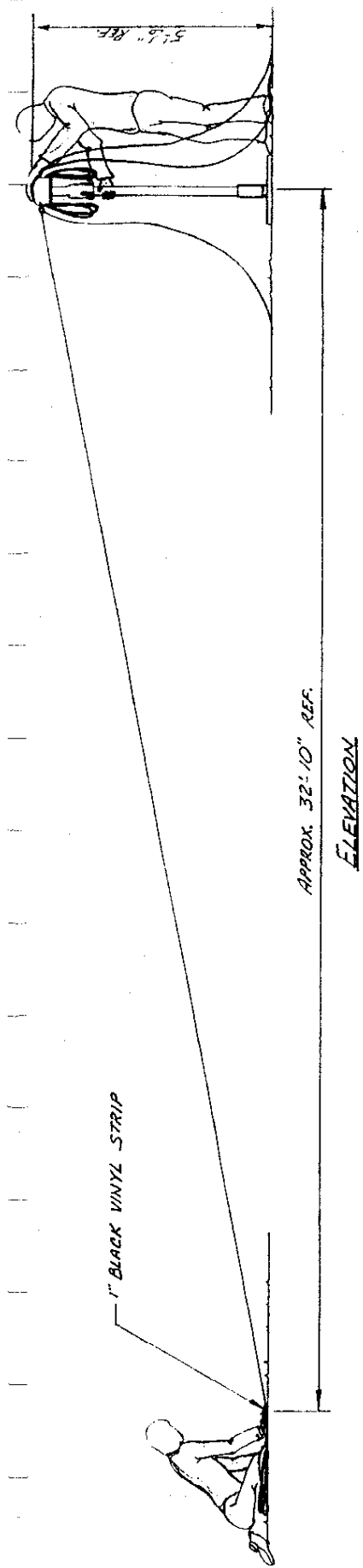
GROUNDING RADIAL CABLE  
871019

800-T-T-1-J-HD ANTENNA COMPONENTS

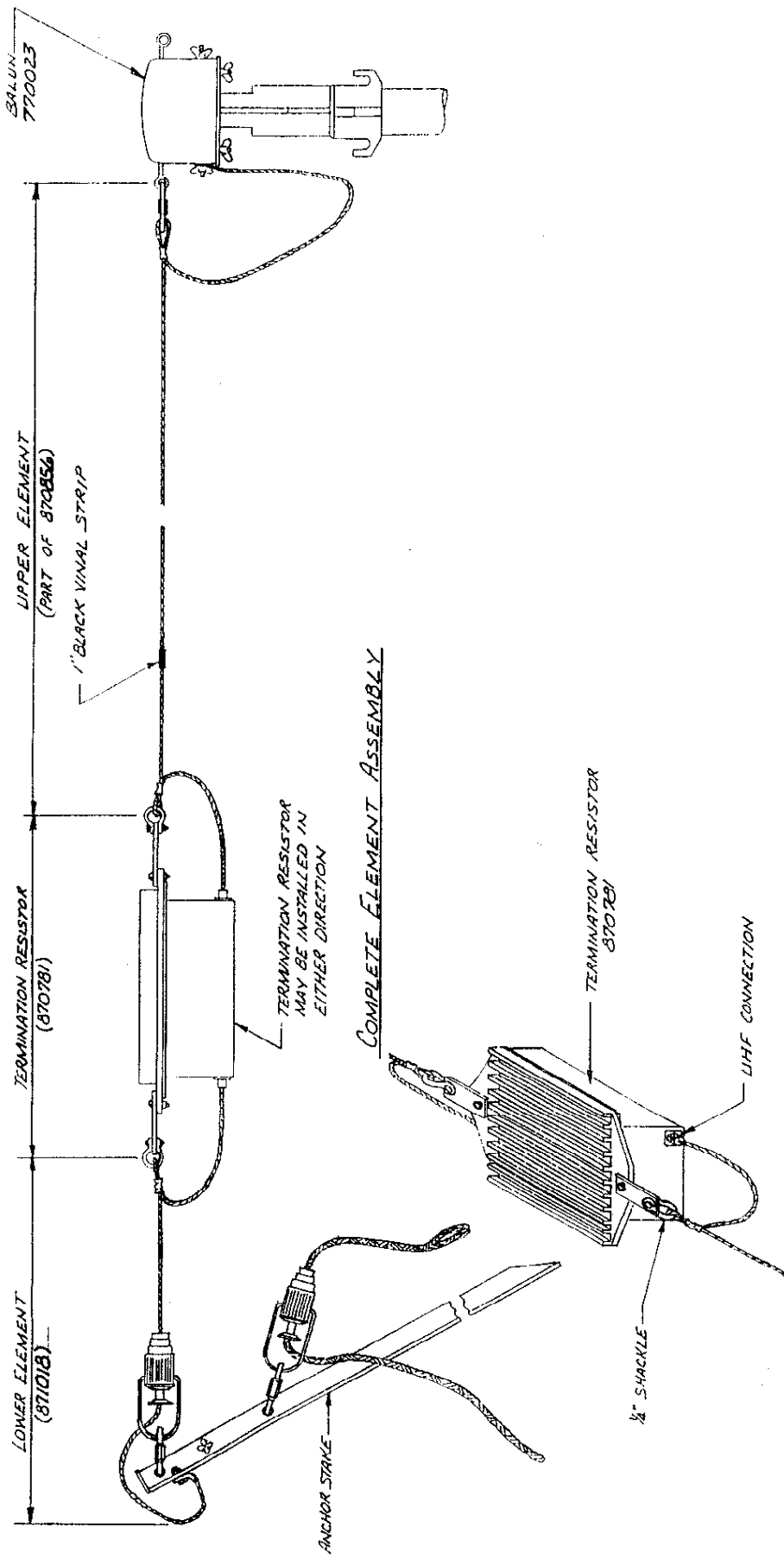


MODEL 800-T-7-1-J-HD

FIGURE 1

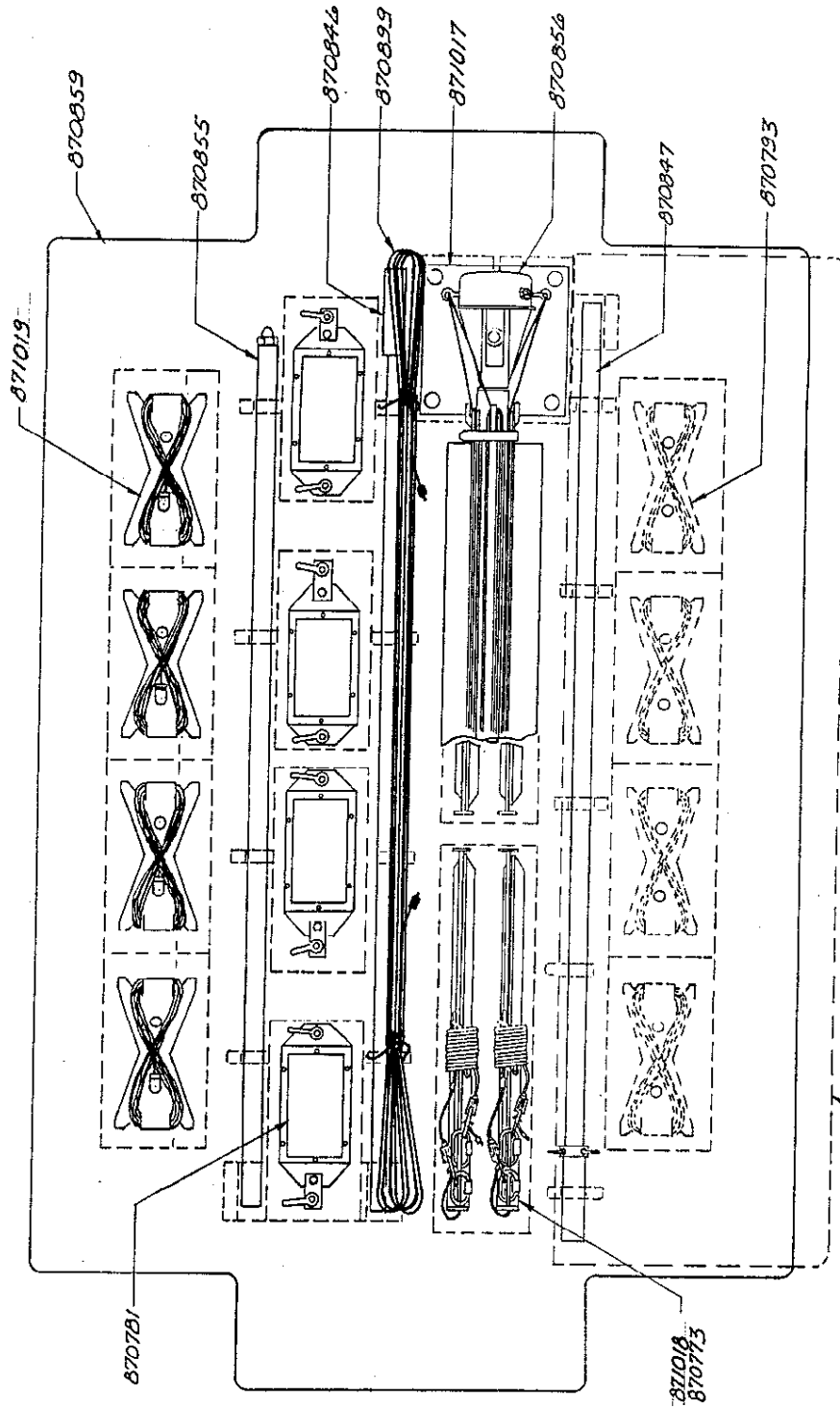


**FIGURE 2**  
MODEL 800-T-7-1-J-HD



RESISTOR INSTALLATION DETAIL

FIGURE 3  
MODEL 800-TT-1-J-HD



END VIEW

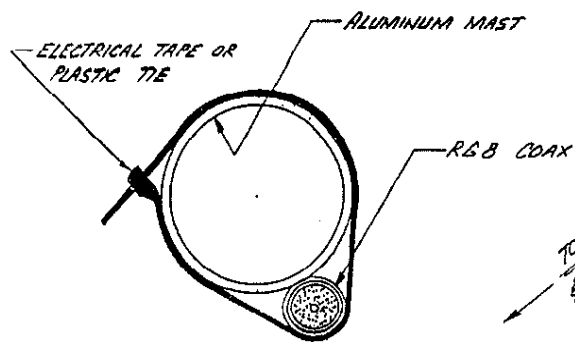
<b>SABRE COMMUNICATIONS</b> SIOUX CITY, IOWA		<b>800-TT-1-J-HD ANTENNA PACKING</b> <b>DIAGRAM "CANVAS TRANSPORT BAG"</b>	
CONTRACT NO. DATE <b>08-22-94</b>		SIZE <b>B</b>	
PREPARED CHECKED ENGINEER APPROVED	DEM    	CODE IDENT NO. <b>60348</b>	
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES TOLERANCES FRACTIONS $\pm 1/32"$ ANGLES $\pm 1/2^\circ$ DECIMALS $\pm .015$ MATERIAL:		DRAWING NO. <b>87B1020</b>	
*TOLERANCES DO NOT APPLY TO RAW MATERIAL		SCALE <b>NONE</b>	
SHEET <b>1 OF 1</b>			

PLAN VIEW

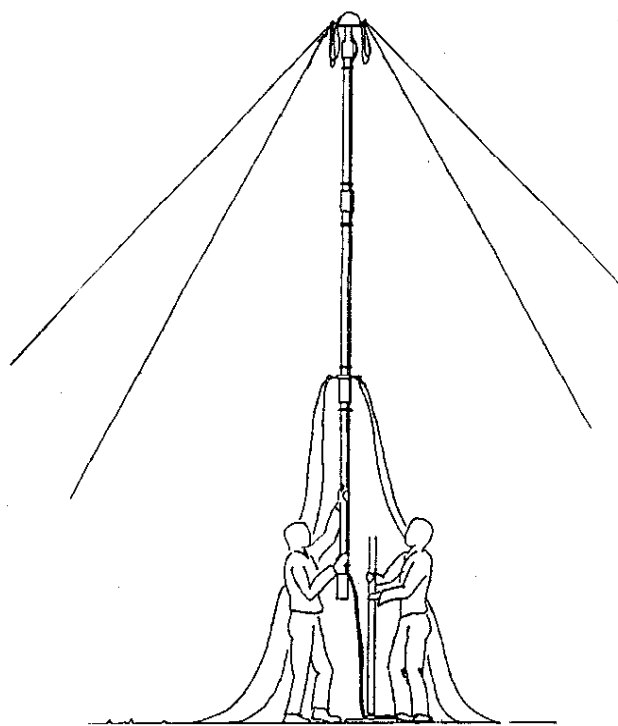
COVER FLAP



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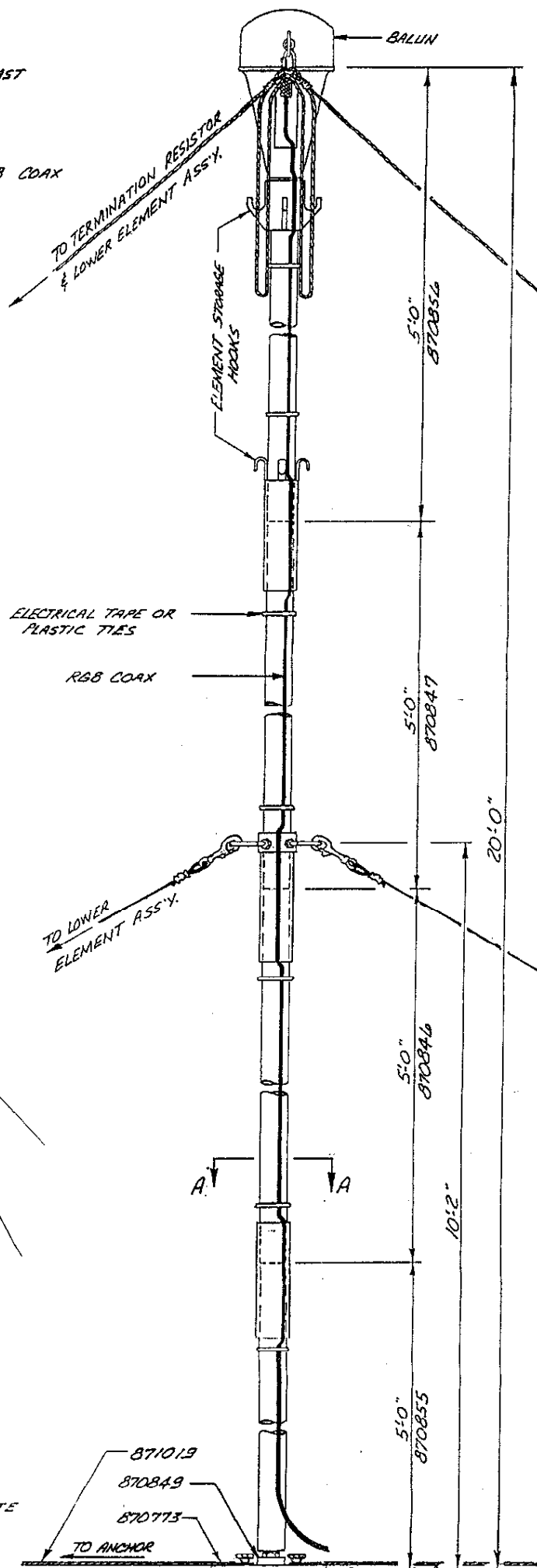


SECTION A-A



RAISING MAST TO ACCOMMODATE  
THE NEXT SECTION BELOW.

FIGURE 4  
MODEL 800-T-T-1-J-HD



ELEVATION VIEW