

## Application

This antenna is intended primarily for use with high powered Transmitter/Antenna Tuning Unit Systems in the LF and MF bands. It is particularly intended for use with aeronautical and marine non-directional radio beacons (NDBs).

## General Description

Basically, the antenna system consists of two interconnected #2 ACSR aluminum elements 230 ft. (70 m) long, laterally spaced on 5 ft. 10 inch (1.75 m) centers and supported by four high voltage insulators between two towers at ground potential. The RF signal is fed to the antenna via an aluminum jacketed downlead which is connected to both horizontal elements. The location of this connection point is not fixed so the downlead can be installed in the most convenient position for individual site requirements. The actual attachment of the antenna to the towers is by means of galvanized rope halyards, two at each end, passed over pulleys fixed to the towers. One set of halyards are brought to ground level and made fast to the tower. At the other end, the halyards are held down by counterweights. This system of suspension prevents tower overload due to high winds and/or severe icing. It also provides for much simpler inspection and maintenance procedures.

An optional ground plane of 18 - 500 ft. copper radials provide the RF current return path and completes the system.

## Electrical Specifications

### Frequency Range

LF and MF bands

### Input RF Power Rating

Up to 4000 watts average; 16000 watts peak with T50 insulators without exceeding maximum RF voltage level.

### Maximum RF Operating Voltage KV RMS WET\*

T35 Insulators 35 kV

T50 Insulators 50 kV

### Antenna Capacity

1100 pF approximate

\* This figure is maximum recommended under wet conditions. To obtain peak voltage allowed, multiply by a factor of 1.4. If station is 100% amplitude modulated, the voltage with unmodulated carrier should not exceed one half of that shown.

## Mechanical Specifications

### Recommended Tower Heights

120 ft. (36.5 m) to 150 ft. (45.5 m)

### Tower Spacing

240 ft. (73 m) minimum

### Radiator

Two #2 ACSR aluminum elements, 230 ft (70 m) long spaced horizontally on 5 ft 10 inch (1.75 m) centers, spreaders, support assemblies etc. constructed of aluminum alloy; halyards are 1/4" galvanized wire rope.

### Maximum Wind Velocity

120 mph (192 kph)

### Maximum Ice Loading

3/4" (1.9 cm) radial thickness

### Tower Specifications

To be capable of supporting a 750 lb (341 kg) horizontal force in conjunction with a vertical force of similar magnitude.

## Shipping Information

1 crate 69 cm x 64 cm x 51 cm 38 kg

1 crate 61 cm x 61 cm x 44 cm 108 kg

1 crate 27 cm x 34 cm x 193 cm 31 kg

0.57 m<sup>3</sup>

177 kg total

*Specifications subject to change without notice.*



# High Power "T" Antenna System

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www.nautel.com | info@nautel.com

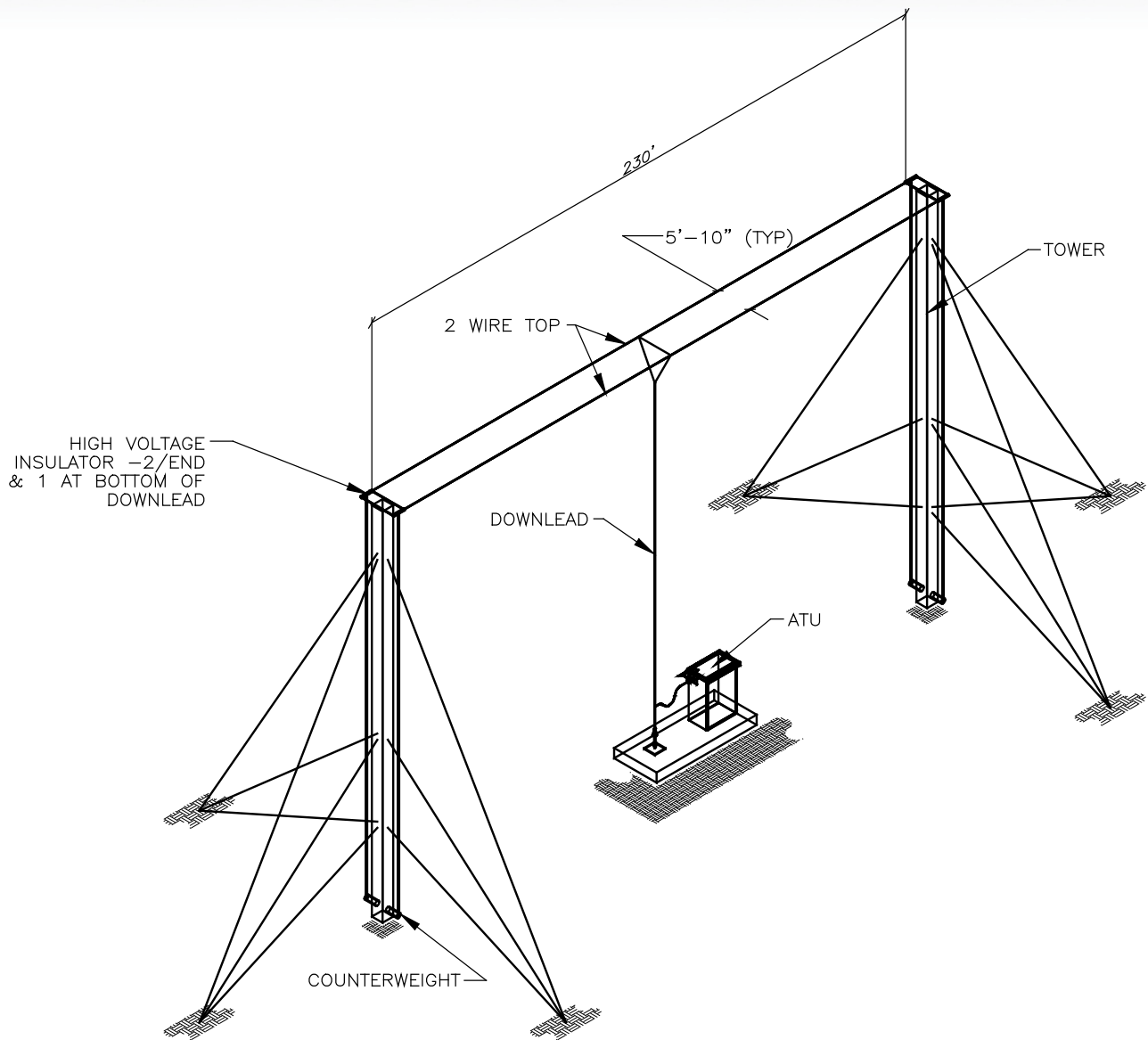


Diagram I - Two Wire Flat Top Antenna

