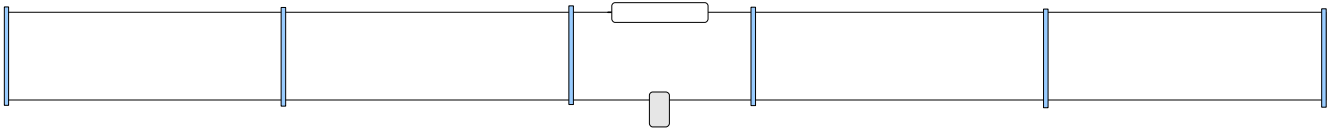


# **TENNADYNE®**

## **Folded Terminated Dipole**

# **TD-90**



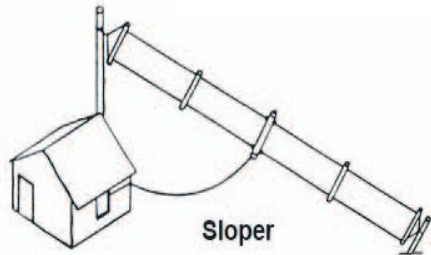
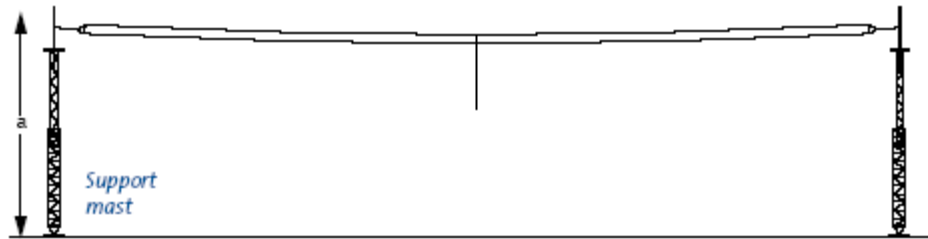
The TENNADYNE® TD series terminated folded dipole is a broadband antenna designed for fixed station, multi-frequency applications. The antenna can be mounted horizontally between two support systems, or as an inverted 'V' using a single central support mast. This antenna type is widely used by military, commercial and broadcasting services. The TD antenna line is made with extremely durable stranded Copper Clad Steel

- Pre Tuned no measuring or cutting!!
- Easy to install
- Fantastic NVIS performer
- Great for ALE Applications.
- An excellent broadband antenna.
- Ground Independent.

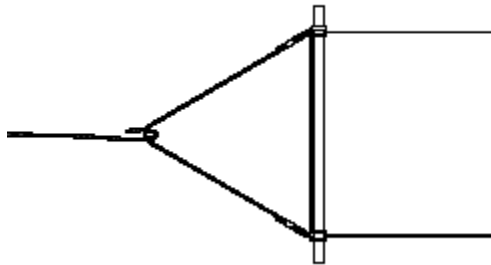
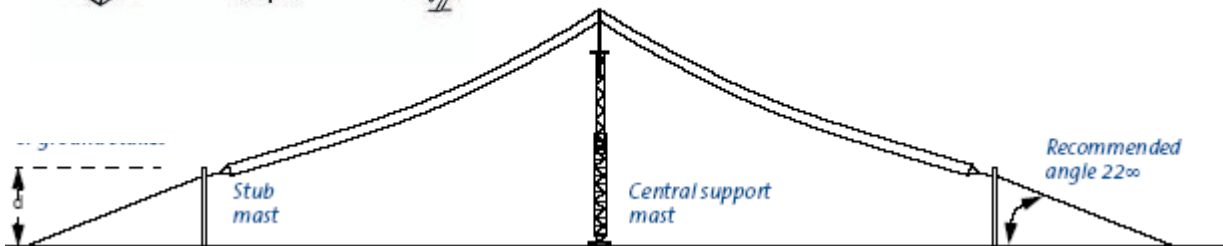
### Specifications:

Impedance: 50 Ohm nominal  
Bandwidth :1.8-30 MHz  
Length : 90 ft.  
Power : 1.5kw Impulse  
: 500w PEP SSB  
: 200w AM/FM/RTTY  
Connector : SO 239

## Flat top



## Inverted 'V' mounting



One of the most important components in any radio station is the antenna. It is important to take time and plan out your installation.

## Antenna Safety

*Under no circumstances will TENNADYNE® be liable for any damages or consequential damages arising from use or misuse of our products.*

The installation or dismantling of any antenna near power lines is dangerous. Each year hundreds of people are killed or injured while attempting to install or dismantle an antenna. In many cases, the victim was well aware of the dangers, but did not take adequate steps to avoid the hazards. For your safety and proper antenna installation, read and follow all safety precautions.

***Choose an installation site for safety as well as performance.***

**All electric power lines, cable lines and telephone lines look alike. To be safe, assume ANY overhead line can kill you.**

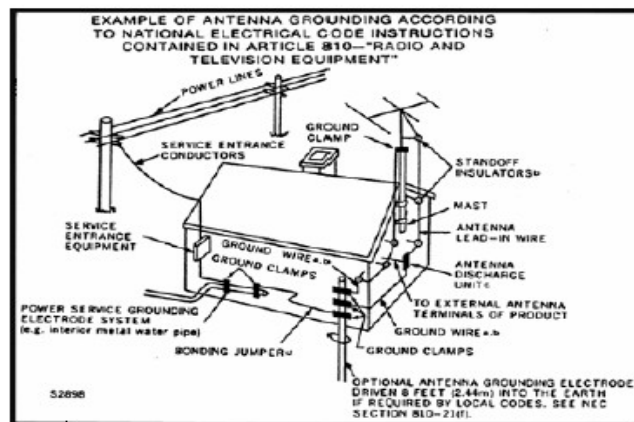
Do not place an antenna where it could potentially fall on to, or blow into a power line. To determine the SAFE DISTANCE follow these steps:

- (a) Determine the proposed height of your antenna.
- (b) Add the antenna length and the length of your tower mast.
- (c) Double the figure.

Your answer will be the minimum safe distance from the nearest power line that you should install your antenna.

Outdoor antennas should be grounded with an approved lighting arresting device. Local codes may apply. The radio should also be grounded to an earth ground to help protect both the radio and its user. Do not use hot water pipes or gas lines as a ground source.

OUTDOOR ANTENNA GROUNDING-If an outside antenna system is connected to any radio receiver or transmitter, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No.70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. Also refer to the ARRL's antenna safety instruction.



## Installation

- (1) Prepare supports, paying attention to best possible height, antenna configuration, and alignment. Do not install parallel to power lines.
- (2) Unpack the antenna. Lay it on the ground, the two rolls separated and the components laying in the middle.
- (3) Cut enough rope to support the antenna side tubes.
- (4) Uncoil one half of the antenna. Avoid twisting, kinking. Keep the antenna taut during uncoiling. Save the coil tubes for future storage.
- (5) Install the rope as shown in the diagram above. If you keep the top arm of the rope a couple inches shorter than the bottom arm, the antenna will hang in a proper vertical position instead of rotating flat.
- (6) Attach your coax cable and raise the antenna up in the air. Again avoid twisting, kinking or springing.
- (7) Run transmission line to the station. Run the transmission line down to the ground, and perpendicular to the antenna for as far as possible. This is important. Only use a sufficient length of transmission line to reach the station.
- (8) Your antenna is ready for operation.

## **WARRANTY**

**TENNADYNE®** guarantees each product to be free from defects in material and workmanship for 90 days from date of purchase. The warranty applies to the original purchaser only, and we will repair or replace the product at our discretion. Under no circumstances will **TENNADYNE®** be liable for any damages or consequential damages arising from use or misuse of our products. Warranty is voided if product is subject to misuse, neglect, accident, improperly installed or used in violation of the instructions furnished by us. We reserve the right to make changes in design at any time without obligation to update previously manufactured models. This warranty is given in lieu of any other warranty, expressed or implied.

# ***TENNADYNE®***

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# Field Test Results:

MHZ	TD-90 SWR	Other Manufacturer SWR
1.8	1.2	3.5
2.0	1.2	2.7
3.0	1.2	1.8
4.0	1.1	1.3
5.0	1.1	1.9
6.0	1.3	2.1
7.0	1.4	1.5
8.0	1.5	2.3
9.0	1.5	2.8
10.1	1.2	3.0
11.0	1.3	1.8
12.0	1.2	1.5
13.0	1.1	1.4
14.0	1.2	1.2
15.0	1.1	1.4
16.0	1.1	1.6
17.0	1.5	2.4
18.0	1.5	2.1
19.0	1.5	2.0
20.0	1.4	1.5
21.0	1.2	1.3
22.0	1.3	1.2
23.0	1.5	1.8
24.0	1.3	1.8
25.0	1.1	1.8
26.0	1.2	1.6
27.0	1.4	1.7
28.0	1.3	1.8
29.0	1.2	2.0

## Comments from Field Tester:

- 1. The wind/snow static. (tik tik tik sound from static discharge) is not present with the TD-90 as it is with the other manufacturer(OM). During mild to heavy winds, the OM can pull a small static arc from the coaxial line and you hear the tick tick tick in the radio speaker from it being discharged. Have had to incorporate a tuner on the OM antenna to take this discharge before it hits the radio. Have heard that some people added a one meg ohm resistor from the center conductor to the ground to eliminate this static.**
- 2. The TD-90 has more consistent RF output. Same RF out on each freq. With the OM output may range from 25 to 50 watts depending the freq/swr.**
- 3. The TD-90 RF power remains the same on all freqs.**
- 4. The end result is the same power on all freqs being scanned or sounded on. This would make a great ALE or WL2K antenna. It would be great for a (GO box) easy to set up as a Dipole, Sloper or Inverted "V".**
- 5. I have a mast section of fiberglass that can be used in the field for Emergency with the TD-90.**
- 6. The TD-90 would be a good ALL band base system. Being able to work several freqs without the need of an auto tuner. It was easy to erect. (one person).**
- 7. For testing, it was in a Dipole configuration at 20 feet above the earth. The radio used for testing was a Kenwood TS-570DG. Measurements was made with the Kenwood built in RF Power/SWR meter as well as a Bird 43.**
- 8. Submitted by Dave, WB8MWG**