

# DXWV1-30

TRIBAND VERTICAL

12/17/30M ANTENNA



Thank you for purchasing our products. Be sure to read the manual, it is important to better understand the product to make the most of it.

## **ASSEMBLY AND INSTALLATION INSTRUCTIONS**

### **1. GENERAL INFORMATION**

DIEX manufactures a range of antennas designed and produced to give top performance and reliable long lasting service. They are completely manufactured of non-corrosive materials. The antennas come partly factory-assembled in order to facilitate and expedite your labor.

#### 1.1. Introduction and Description

This manual explains how to assemble the DIEX DXWV SERIES. The DXWV1-30 is a vertical antenna that covers the HF spectrum between 24.500 – 24.990 mhz (tunable), 18.000 – 18.200 mhz (tunable) and 10.000 – 10.200 mhz (tunable). It can be used with the full power of 1500 W PEP.

#### 1.2. Owner Assistance

If assistance or service is needed, your local dealer should be contacted first. In the unlikely event, you need further information you may get in touch with DIEX by email.  
e-mail: diexantennas@gmail.com

#### 1.3. Specifications

MODEL	DXWV1-30
BAND	12/17/30m
GAIN	2,4 DBI
2:1 SWR BANDWIDTH	+300khz
MAX. INPUT PWR	1500 W PEP
>ELEMENT	500 cm
RADIALS	WIRE (NOT INCLUDE) SEE INSTRUCTIONS
MAST DIAMETER	<38mm
WIND-LOAD AREA	0,08 m <sup>2</sup>
WEIGHT	2,95 Kg

#### 1.4. SAFETY FIRST!

Get acquainted with and observe strictly the requirements and instructions of your local legislation. Direct grounding of the antenna and the tower structure is essential as protection from lightning strikes and static electricity. The entire earth-connection system must meet your local standard requirements. Do not install the antenna close to power lines and cables, as their proximity, arc-over or contact with them during assembly, installation, and exploitation is hazardous and can be lethal. Do not work alone! You must have at least one assistant always when you work on the antenna. If you have any doubt concerning the safety, please consult your dealer or engage a professional company.

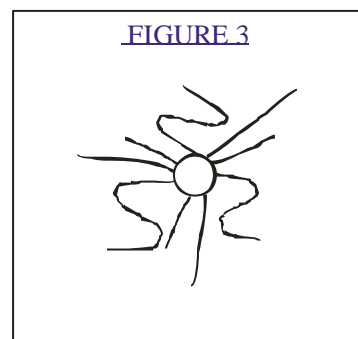
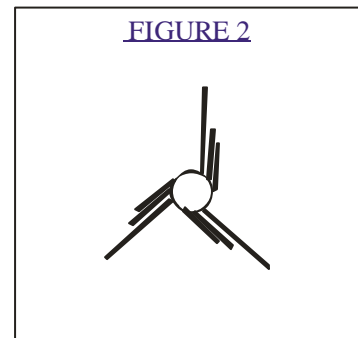
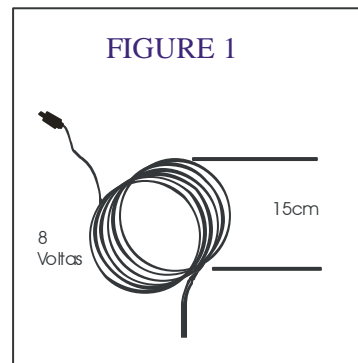
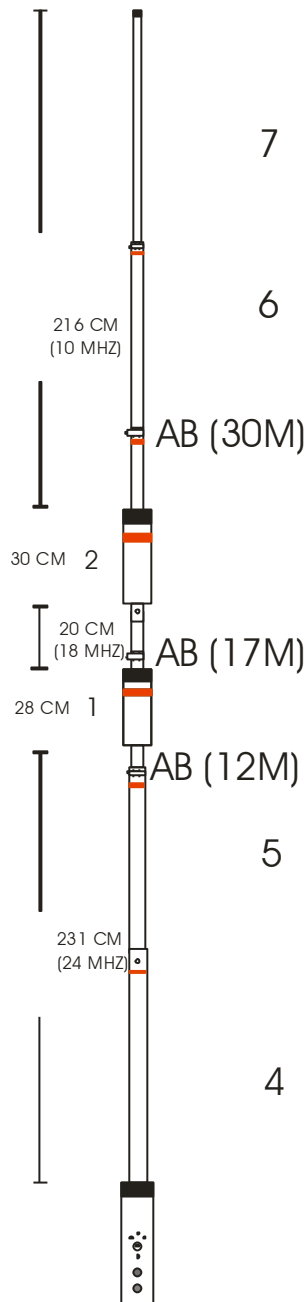
#### 1.5. Location

The antenna should be mounted on a support tower structure at a height between 10 and 15 meters (33-50ft) above the ground level. It must be located in the clear, away from trees, power installations, buildings, other antennas etc. Such objects can be dangerous and they can reduce the antenna efficiency or cause interference. If metal guy wires are used for the tower, they should be broken electrically with strain insulators, at 2 meters (6 ft) apart or less.

#### 1.6. Your first steps

The first step to installation is to fully read this manual. Then, carefully inspect the shipping cartons for any physical damage. DIEX ships antennas in highly protected containers, but it cannot assure that mistreatment by shippers will not occur. If there is any such damage, notify your DIEX dealer immediately. Failure to do so may invalidate your warranty. Select a large and clear area to assemble the antenna. The DIEX production uses metric (European) system of measurement units.

## 2. ASSEMBLING



2.1 - Place element 5 inside element 4 (base), 2 in 1 (traps), 1 in 5, 6 in 2 and 7 in the 6  
Follow the starting lengths in the drawing.

2.2 - The cable connection is with uhf connector, see the shock detail in figure 1, it can be done with the coaxial cable itself, leave only 20 cm of space until the start of the shock, they are 8 turns in a diameter of 15cm, use a form for the turns to be well made and parallel, DO NOT use cell cables (RGC) as the dielectric is made of foam and can deform when making the turns, thus altering the impedance, impairing the functioning.

### 2.3 - Radials:

-Install 3 radials for each band being:

3 wires from 7,10m to 30m

3 wires from 3.95m to 17m

3 wires from 2.90m to 12m

-Use 1mm or 1.5mm flexible cable

-Place the wires in a triangular shape as figure 2, if you don't have space, spread the wires occupying the largest possible area as shown in Figure 3.

2.4 - Perform the installation of antenna free of obstacles, other antennas, walls, etc.

### 3 - Adjusting SWR

3.1 - Adjust the length on the clamps (AB) for each band as per the drawing, one at a time.

3.2 - With the antenna mounted and installed in the correct place, check SWR, note the frequency where it gets better in each band, the adjustment starts at 12m and then at 17m and finally 30m

3.3 - You must choose which frequency will be the center, knowing the frequency that will be the center and comparing with the frequency the antenna is tuned to, it is possible to adjust the size of the antenna to the chosen frequency

If the Antenna Frequency above the chosen; increase the antenna to lower the frequency. If the below the chosen frequency, decrease the antenna to go up the frequency.

The position and angle of the radials can affect the swr.

3.4 - Try to use the antenna-turner on the other bands.

The contents of this manual are subject to change without notice.

## WARRANTY

Diex antenna products are guaranteed for One year against manufacturing defects, Diex may repair or replace parts or all of the product at its own discretion within the warranty period. Damage caused by lightning, falling, forces of nature, misuse, installation by an unqualified person, i.e., improper, negligent or incorrect assembly is not covered by the warranty.

Products that undergo any adaptation or alteration or repairs by unauthorized service automatically void the warranty.



Manual DXWV1-30 fe

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