

# DXFS12

12M MONO BAND 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 DXFS series. The DXFS12 is a bidirectional antenna that covers the HF spectrum between 24,5 - 25 MHz (tunable). The power input limit is 2000w 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](mailto:diexantennas@gmail.com)

#### **1.3. Specifications**

|                   |                      |
|-------------------|----------------------|
| MODEL             | DXFS12               |
| BAND              | 12 M                 |
| GAIN              | 2,4 DBI              |
| 2:1 SWR BANDWIDTH | + 500kHz             |
| MAX. INPUT PWR    | 2000 W PEP           |
| >ELEMENT          | 580 cm               |
| TURNING RADIUS    | 290 cm               |
| MAST DIAMETER     | 1 1/4" TO 2"         |
| WIND-LOAD AREA    | 0,093 m <sup>2</sup> |
| WEIGHT            | 3,050 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**

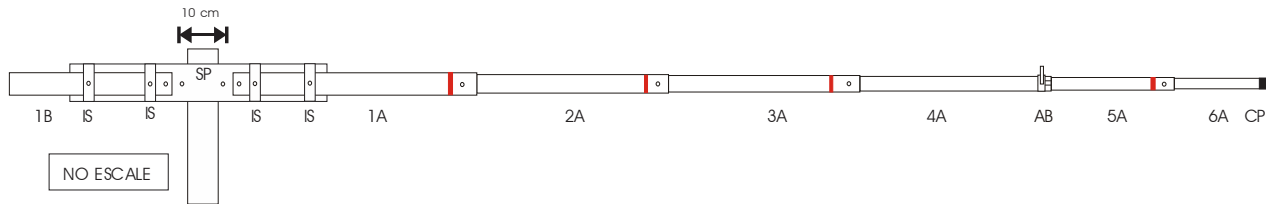
The antenna should be mounted on a support tower structure at a height between 5 and 10 meters (16 - 33ft) above the ground level. It must be located in the clear, away from trees, power installations, buildings, other antennas etc. Such objects can be dangerous and they can reduce the antenna efficiency or cause interference. If metal guy wires are used for the tower, they should be broken electrically with strain insulators, at 1,5 meters (4/5 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- Installing insulators (IS) on the support (SP).

2.1.1 - Fix the screws (PS) inside the support (SP) in insulators (IS) that should be as Figure 1.

Figure 1



2.2 - Fixing elements in insulators.

2.2.1 - Enter the element (1) in insulators and lock with screws (PS) at the top of the insulators.

2.2.2 - Leave a space of 10cm between the elements 1A and 1B.

2.2.3 - Place the contact screws (PC) as shown in figure 2.

Figure 2



### 2.3 - Assembling the elements.

2.3.1 - The total length should be around 5.80m, small adjustments may be necessary.

2.3.2 - Place the element 2 inside the element 1, 3 in the 2, 4 in the 3, 5 in the 4 and 6 in 5. The element 5/6 is adjustable with the clamp to the desired frequency;

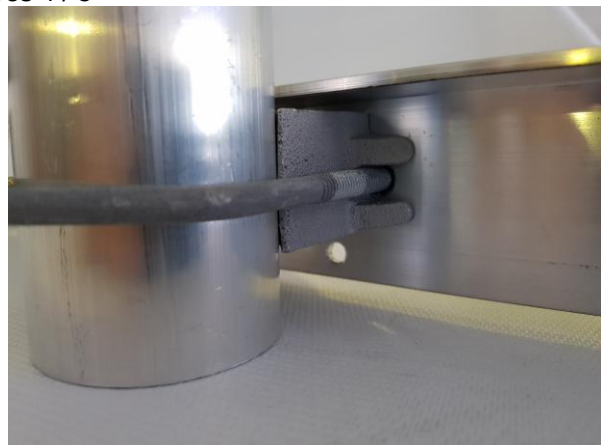
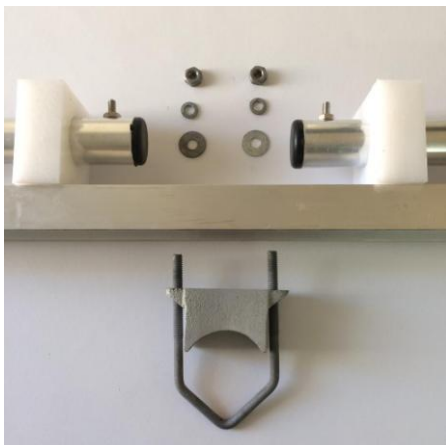
### 2.4 - Connecting the coaxial cable to the antenna.

2.4.1 - Separate the center of the cable loop about 10cm and solder the terminals (TM), connect the screws (PC) in the element 1 with nuts (NT), has no side seal well to prevent water from entering rain on the cable see in figure 2.

### 2.5 - Finishing the installation.

2.5.1 - Place the clip V in support as Figure 4/5 and install in mast in Maximum 50mm, attach the cable to the mast leaving off to avoid traction on the terminals.

Figures 4 / 5



2.5.2 - Perform the installation of the highest antenna possible and free of obstacles, other antennas, walls, etc. For optimum performance and good SWR install 10m height of the base of the antenna or at least 5.50m.

### 3 - Adjusting SWR

3.1 - With the antenna mounted and installed in the correct place, check SWR.

3.2 - Normally, adjustments are not necessary, however, if you notice that the swr is above 2:1 at the frequency you are going to use, it will be necessary to adjust.

3.3 - First it is necessary to find the point that the antenna is resonating with the best swr, use a good meter or the meter of the radio itself to measure.

3.4 - If the frequency found with the smallest swr is below the desired frequency, decrease the antenna 1cm at a time on both sides and measure again and repeat until you reach where you want.

3.5 - If the frequency found with the smallest swr is above the desired frequency, increase the antenna 1cm at a time on both sides and measure again and repeat until you reach where you want.

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.

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