

## 5-band antenna "CITY-Windom" 10, 12, 17, 20, 40 m

### 1. Package contents.

Antenna wire	1 pcs.
Package	1 pcs.
Instruction manual	1 pcs.

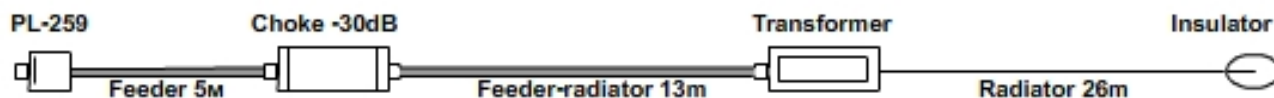
### 2. Antenna specifications.

Operating frequencies	
40 m (for SWR), less than 1.4	7,0-7,2 MHz
20 m (for SWR), less than 1.6	14,0-14,35 MHz
17 m (for SWR), less than 4.4	18.06-18.31 MHz
12 m (for SWR), less than 4,2	24.9-25.14 MHz
10 m (for SWR), less than 1.4	28-29,5 MHz
Impedance	50 Ohm
Connector type	PL-259
Max. power input	100 W (PEP)
Antenna length	20 m
Antenna weight	1.2 kg
Polarization	horizontal



### 3. Electrical circuit and antenna description.

A common problem of modern city radio amateurs living in high-rise buildings is the roof antenna installation. That is why wishing to have a multi-band "rope" which doesn't require so many attachment points as, for instance, "triangular" is quite natural. But even a simple antenna like W3DZZ or Windom still require at least 2 attachment points – at your and neighboring house. In that case the feeder entering the radio amateurs window is difficult to install at the required angle close to 90 degrees if the radio amateurs lives at the top floor. Then the only variant left is a Long Wire antenna. But it also has disadvantages as it needs a tuner and a good earth connection. The matching tuner must be always readjusted when switching from one band to another.



Considering these problems I decided to design Windom free of the above disadvantages. The new antenna's feature is that the feeder and the radiating curtain form the integral unit. The RF choke isolates the radiator from the feeder at 30 dB. Otherwise the antenna is a standard Windom with a centre transformer which transforms the center 'feedpoint' impedance on the bands of 40/20/17/12/10 meters down to 50 Ohm.

The antenna well proved itself in operation. A decreased noise level of that antenna was noted in the reception mode, probably due to a short-circuited matching transformer.

A good antenna performance in WARC bands must also be noted. The band of 17 m opening in spring already in February brought a number of exotic stations from ZL and YB.

Field testing with suspension of a higher point on a tree of 15 m high also showed excellent results. QSO with ZD7 with the report 55 was especially memorable.

### 4. Recommendations for building and installing the antenna.

#### Installation rules

- Requirements to installation place should be as follows – the span between two suspension points shall be at least 21 meters. The height of the suspension points – at least 10 meters, and preferably at descent.
- Deployment of any antennas over electric power lines is prohibited!
- To avoid breaking the antenna it is necessary to guy up its far end with the load snatch block.
- When installing please note that while lifting the expanded antenna from the land it may cling to the trees, if any nearby. Therefore, we recommend that you throw an ordinary rope, dropping it from the roof of your house over branches. After that, you may pull antenna up from the ground.
- Antennas are produced with a small margin over the length of the radiator. This was done intentionally to have ability of adjusting it to the bands. Therefore, after installation, you must measure the resonances, and if necessary trim the excess strand. Low-frequency and high-frequency bands are not always "friends" with each other.

Wish you nice days with your transceiver in search of interesting DX'es!

**WiMo Antennen und Elektronik GmbH**

Am Gäxwald 14, D-76863 Herxheim Tel. (07276) 96680 FAX 9668-11

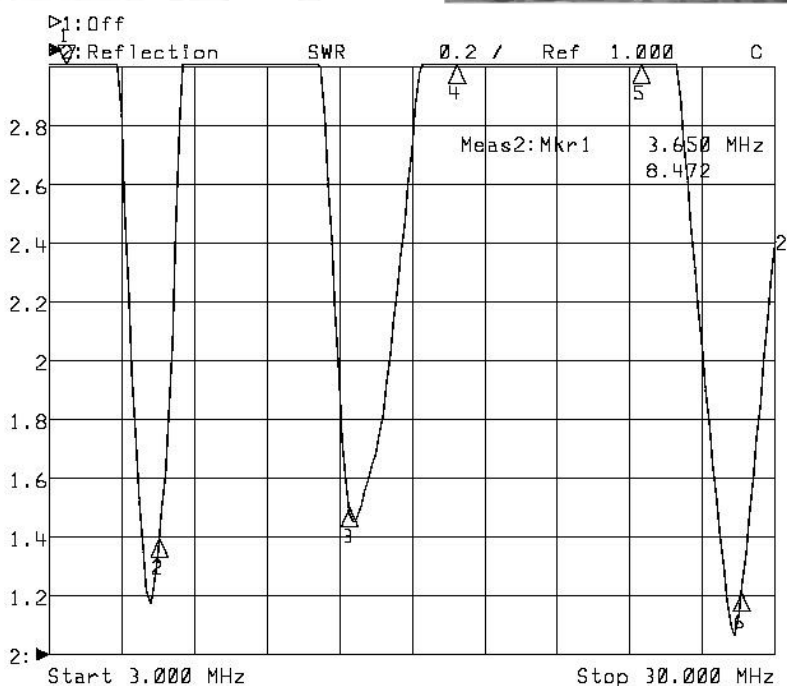
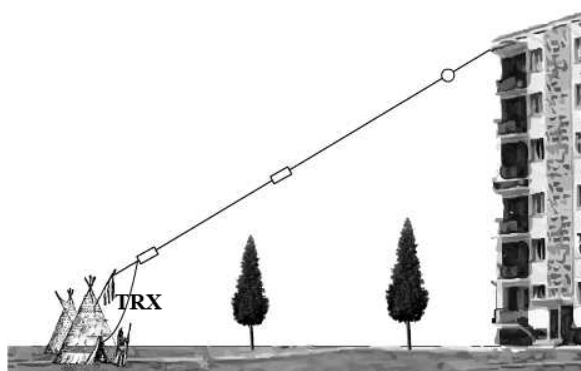
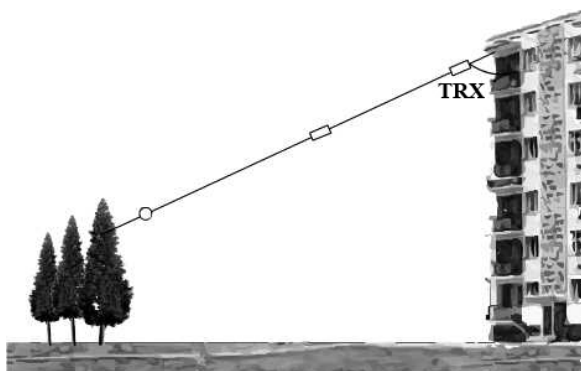
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Top-fed antenna.

Base-fed antenna

### 5. VSWR diagram



1: Mkr (MHz)	dB	2: Mkr (MHz)
		2: 7.1000 1.3
		3: 14.1700 1.4
		4: 18.1800 4.4
		5: 25.0200 4.2
		6: 28.7500 1.2

### 6. Warranty.

6.1 Legal warranty terms under german law apply.

6.2 The manufacturer is not liable for the failure of antenna and does not guarantee its work in the following cases:

- a) Non-compliance of the installation and operation;
- b) Negligence during transportation;
- c) Configuring, testing and repair by persons without proper authorization;
- d) Breaking of the manufacturer's sealing marks;
- e) Damages or malfunction are caused by fire, lightning or other natural event.

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