

EH antenna for 7 MHz band

EH antenna was made on 7 MHz band, very small on size (the length 45 centimetres and diameter 11 centimetres) on black pipe from tense polyethylene, not containing smut or carbon additives.

The antenna was made specially for measurement level E and H fields from antenna. The picture of antenna is shown on **Fig. 1** (on the right of antenna - sensor H field).



Fig. 1

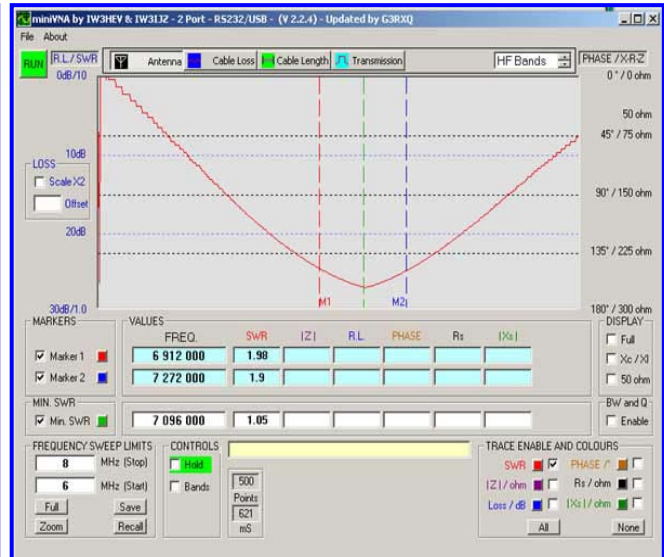


Fig. 2

The graph such antenna, measured by vector analyzer "miniVNA" is submitted of Fig. 2. Also were specially made sensors E and H field.

Internal and exterior of the sensor H field was submitted of **Fig. 3**

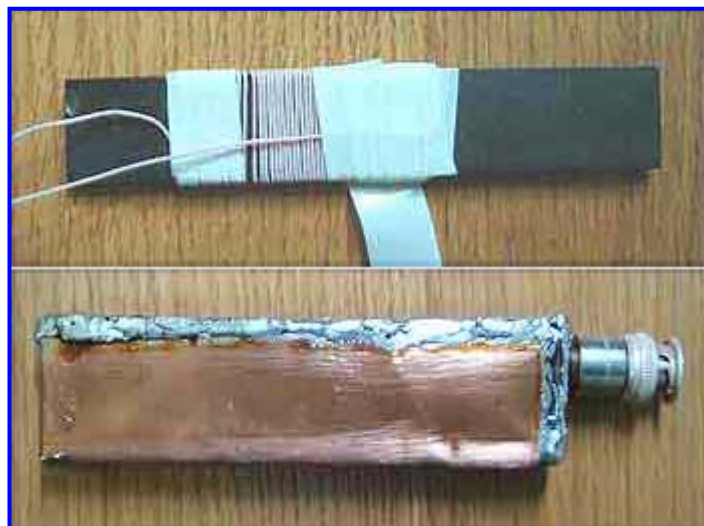


Fig. 3

For removing the feature of the field, the sensor moved strictly parallel EH antenna, evidences of the instrument were written. The Sensor E field served the pin by length 2 centimetres.

The results of the measurements - **Fig. 4**

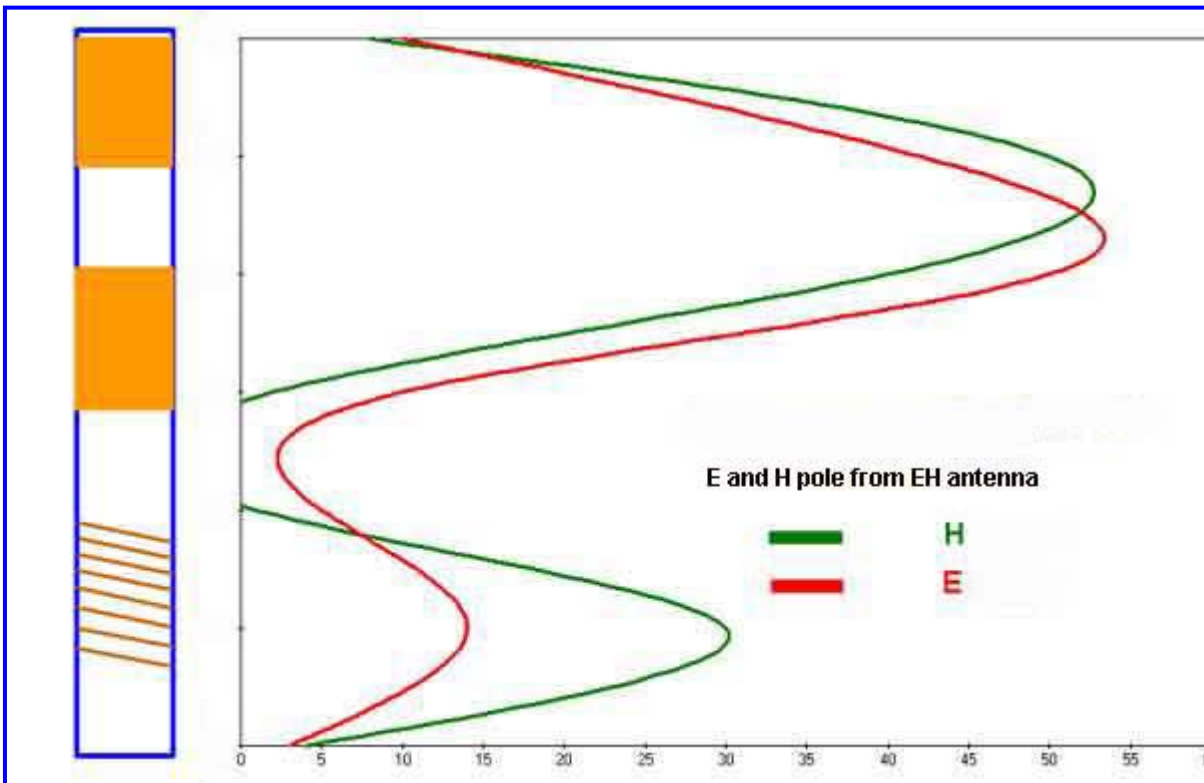


Fig. 4

Certainly this was not instrumental measurements, but only merit. The level by field drawing on graph in conditional unit, but signifies and real correlation between E and H fields on graph not self-possessed. However, by means of such measurements to manage approximately to see distribution by field from EH antenna and compare them with fields from standard Dipol. The Combined graphs were submitted for drawing **Fig. 5**

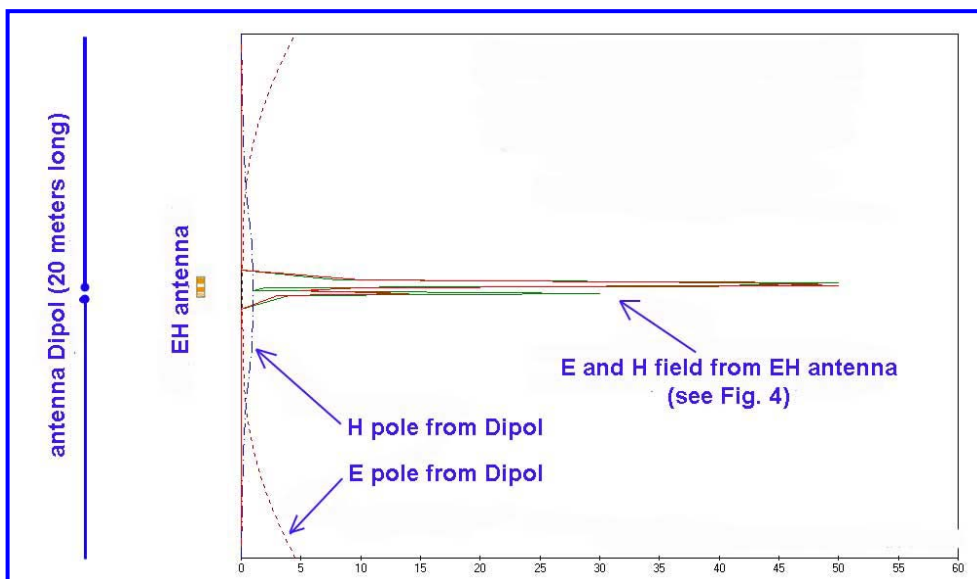


Fig. 5

The scale in correlations of the sizes of the antennas and their fields approximately coincides.

Thereby, became possible graphically to see whole difference between distribution by field of Dipol and EH antenna.

Hereinafter experience was continued and cylinders EH antenna were cut along (both cylinders), as it is seen on drawing Fig. 6



Fig. 6

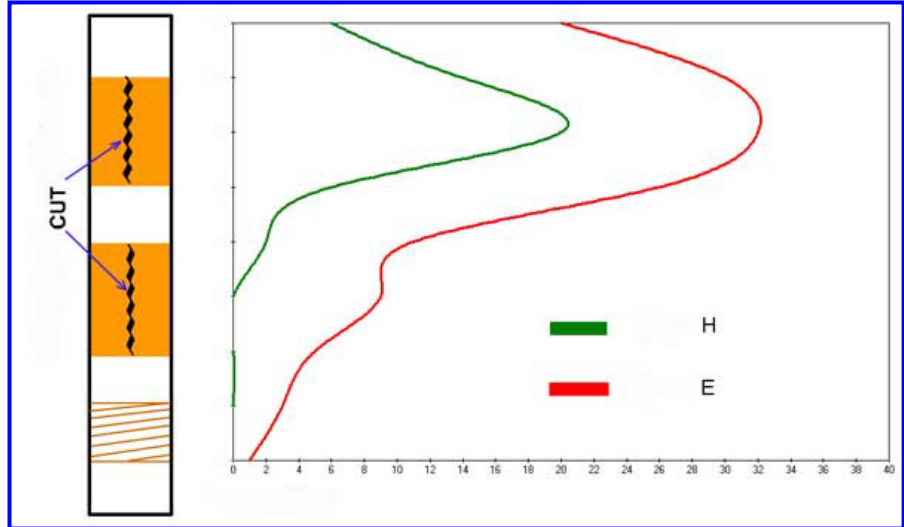


Fig. 7

After cutting up cylinder were also measurement level by fields from modified antenna. The results of the measurements are brought on drawing Fig. 7



After undertaking the test, I did not remain and conducted beside 20 QSO (CW, SSB, PSK-31) on such antenna from premises of the street floor (1,2 metres from the ground), using cable of the feedline by length 50 centimetres and power about 50 watts (see photo **Fig. 8**). QSO of UA1, UA3, UR, SP, SM, OH (in radius of 1000-1300 kilometers).

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