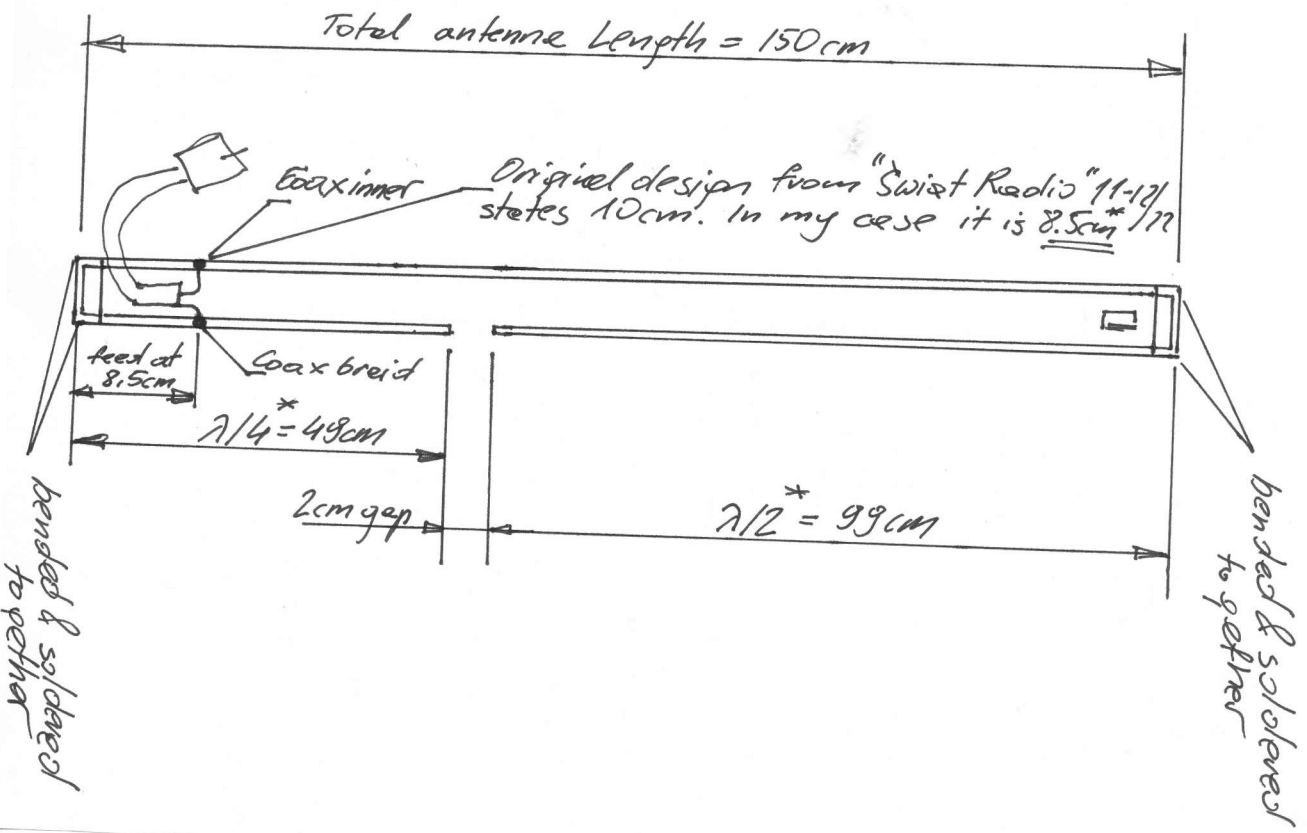


\* 300 ohm twin-lead cable  
manufactured by:  
513ste Febyrke Koebli S.A.  
from Katowice, Poland  
(today NKT cables)



$V_f$  (velocity factor) = 0,85 see text for measure.

C - speed of light in free space

$$299792458 \frac{\text{m}}{\text{s}}$$

$$C = \frac{\lambda}{T} = \lambda f \Rightarrow \lambda = \frac{C}{f}$$

In case of twin-lead line:

$$\lambda = \frac{C}{f \cdot V_f} = \frac{299792458}{0,85 \cdot 14400000} = 2,58 \text{ m}$$

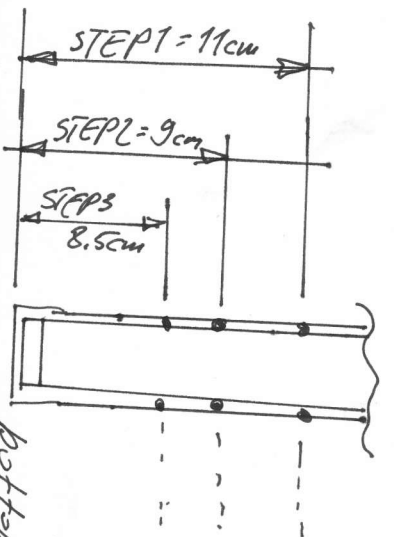
so:

$$f = 144 \text{ MHz} \Rightarrow \lambda = 2,58 \text{ m}$$

$$\lambda/2 = 1,29 \text{ m}$$

$$\lambda/4 = 0,645 \text{ m}$$

VSWR adjustment steps: (in my case);



VSWR min at:

152 MHz

147 MHz

146 MHz

8 cm point could be even more optimal.

bottom end of antenna's  $\lambda/4$  element