

For ADS-B 1090MHz frequencies using RG58/U with 0.66 velocity factor:

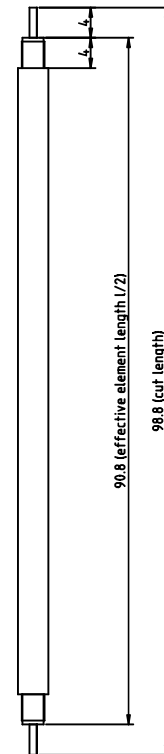
True (in air) wavelengths are:  
 Half wavelength :  $l/2 = 137.5\text{mm}$   
 Quarter wavelength :  $l/4 = 68.8\text{mm}$

Adjusted (in coax) wavelengths are:  
 Half wavelength :  $l/2 = 90.8\text{mm}$   
 Quarter wavelength :  $l/4 = 45.4\text{mm}$

Use the number of single elements required to obtain the desired gain but always with a single whip, single decoupling sleeve, single group of toroidal ferrite chokes (3nr FT50-43) and single feedline

'Antenna B' has a 10mm copper pipe as a decoupling sleeve and uses 2nr ferrite chokes

'Antenna C' is identical to Antenna B but without the decoupling sleeve



6-element coaxial colinear  
 1090MHz antenna for ADS-B

21/11/21

Antenna C

Chris Lees