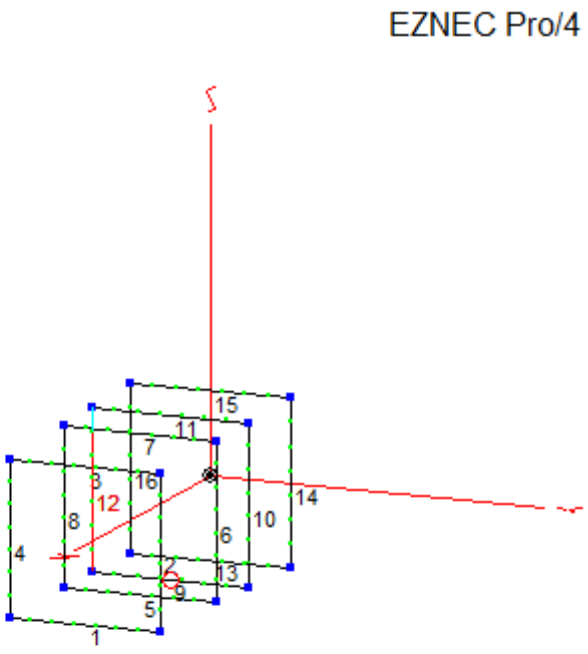
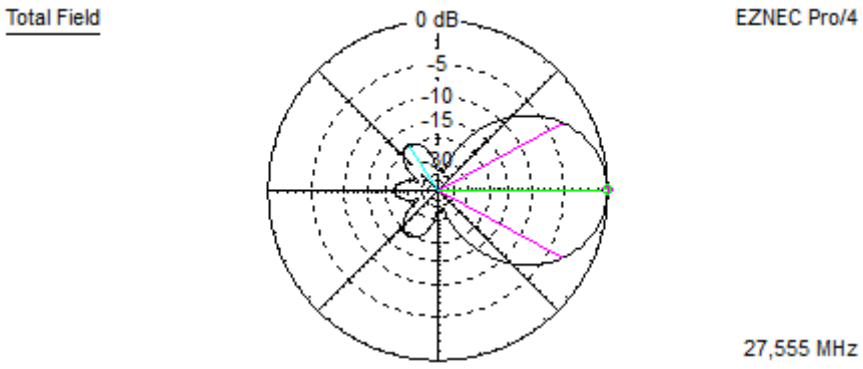
5,47 4el 10,22 dBI

TYPE : HPSD 4el QUAD

Gain:	10,22 dBI (8,07 dBD)
Gain: @ 18m heigth:	15,68 dBI
Front to back:	>23,36 dB
Front to side:	>19,52 dB
Azimuth-Beamwidth:	56,4 degrees
SWR bandwidth 2:1	850 Khz
SWR bandwidth 1:1	300 Khz
Max Power:	>10Kw
Longest element:	2,893 meter
Boom length:	5,47 meter
Stacking distance:	9,5 meter
Stacked Total gain:	13,02 dBI
Element diameter:	3 mm



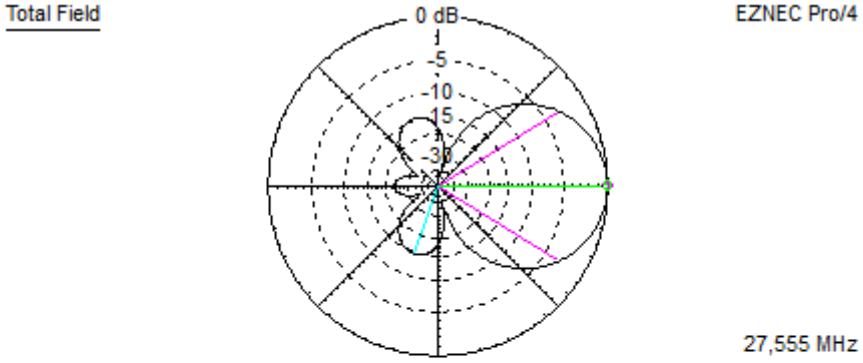
Below the azimuth plot:



Azimuth Plot		Cursor Az	0,0 deg.
Elevation Angle	0,0 deg.	Gain	10,22 dBi
Outer Ring	10,22 dBi		0,0 dBmax

Slice Max Gain	10,22 dBi @ Az Angle = 0,0 deg.
Front/Back	23,36 dB
Beamwidth	56,4 deg.; -3dB @ 331,8, 28,2 deg.
Sidelobe Gain	-9,3 dBi @ Az Angle = 123,0 deg.
Front/Sidelobe	19,52 dB

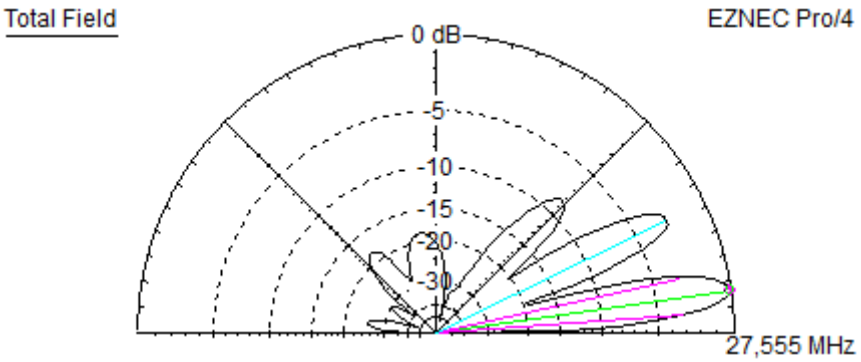
Below the elevation plot



Elevation Plot		Cursor Elev	0,0 deg.
Azimuth Angle	0,0 deg.	Gain	10,22 dBi
Outer Ring	10,22 dBi		0,0 dBmax

Slice Max Gain	10,22 dBi @ Elev Angle = 0,0 deg.
Front/Back	23,36 dB
Beamwidth	63,4 deg.; -3dB @ 328,2, 31,6 deg.
Sidelobe Gain	-4,55 dBi @ Elev Angle = 250,0 deg.
Front/Sidelobe	14,77 dB

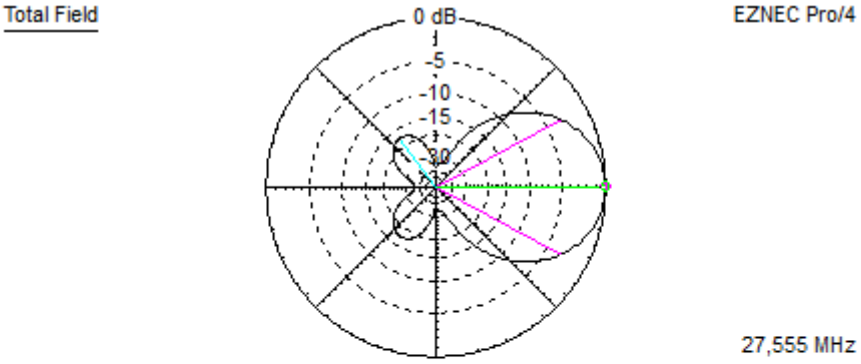
Below the elevation plot at 18 meters height above average ground.



Elevation Plot		Cursor Elev	8,0 deg.
Azimuth Angle	0,0 deg.	Gain	15,68 dBi
Outer Ring	15,68 dBi		0,0 dBmax

Slice Max Gain	15,68 dBi @ Elev Angle = 8,0 deg.
Beamwidth	8,6 deg.; -3dB @ 4,1, 12,7 deg.
Sidelobe Gain	13,18 dBi @ Elev Angle = 26,0 deg.
Front/Sidelobe	2,5 dB

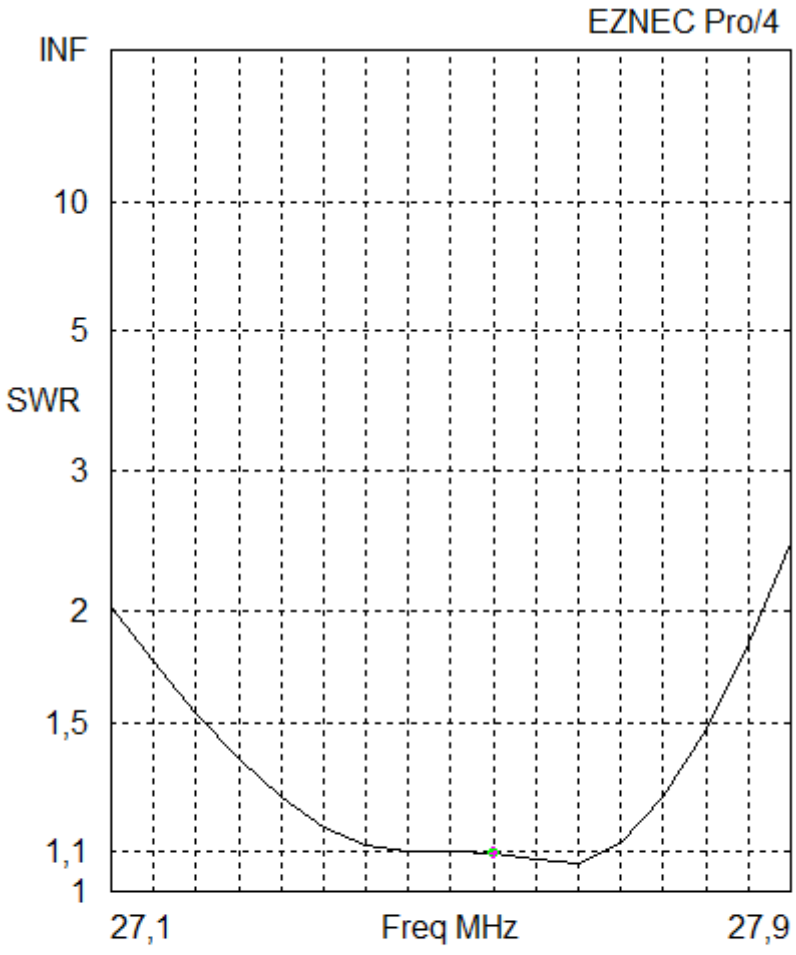
Below the azimuth plot in free space of the “stack” (2x 4el quad 9,5 meter spacing)



Azimuth Plot		Cursor Az	0,0 deg.
Elevation Angle	0,0 deg.	Gain	13,02 dBi
Outer Ring	13,02 dBi		0,0 dBmax

Slice Max Gain	13,02 dBi @ Az Angle = 0,0 deg.
Front/Back	34,76 dB
Beamwidth	56,4 deg.; -3dB @ 331,8, 28,2 deg.
Sidelobe Gain	-4,5 dBi @ Az Angle = 127,0 deg.
Front/Sidelobe	17,52 dB

Below the predicted SWR pattern of the single 4el quad.



Freq	27,55 MHz	Source #	1
SWR	**1,096**	Z0	50 ohms
Z	54,81 at 0,26 deg.		
	= 54,81 + j 0,2512 ohms		
Refl Coeff	0,04596 at 2,85 deg.		
	= 0,04591 + j 0,002287		
Ret Loss	26,8 dB		

ELEMENT DIAMETER:

The diameter of the wire is 3mm. The wire must be without isolation.

If you do use it with the isolation, all element lengths will be approximently 3-5 percent longer.

If you need other diamters, please mail.

ELEMENT DISTANCES:

Reflector- radiator = 1,715 M

Reflector-Director1=3,04 M

Reflector-Director2=5,46 M

ELEMENT LENGTHS:

Reflector= 2,893 (per side so x4 for total element length)

Radiator= 2,799

Direcor1=2,75

Director2=2,704

FEEDING THE ANTENNA:

The antenna has a 50 ohm impedance. It can be direct fed. (of course a 1:1 balun is advised)