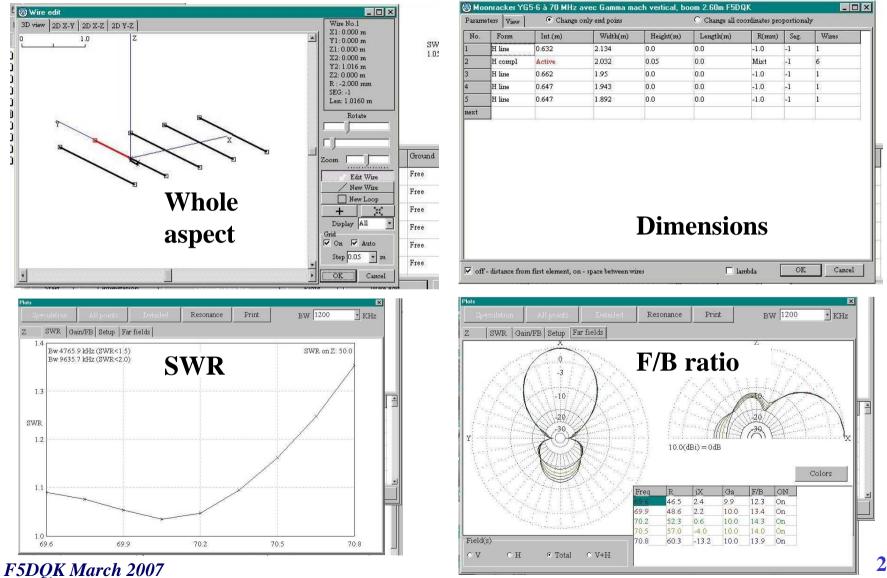
Moonracker YG5-4 transformations

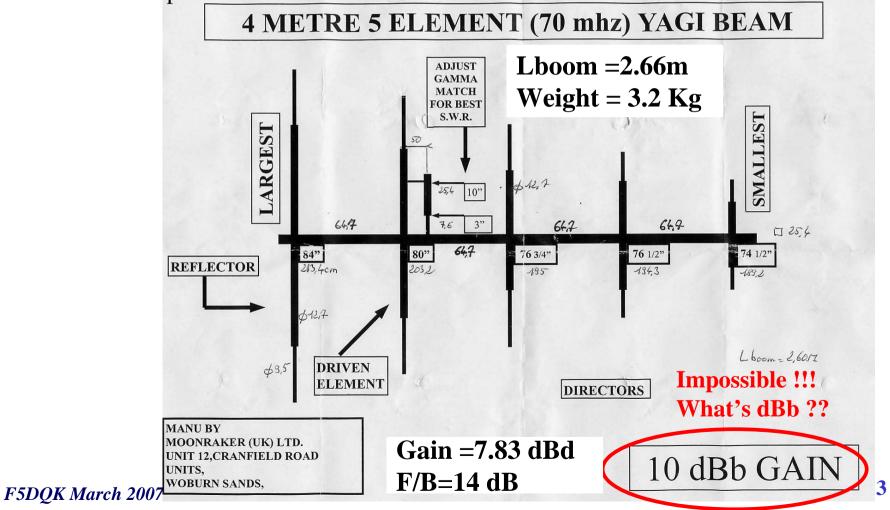
1/ Original Moonracker YG5-42/ YU7EF transformations3/ SWR meas

Measures at 70.2 MHz using Mmana simulator



Original Moonracker design

- Equal spacement between elements
- Gamma Mach feed (serious problems with humidity and torque)
- F/B ratio not optimised



Gamma mach feeding







Zoom on gamma mach feeding : too much distance !!

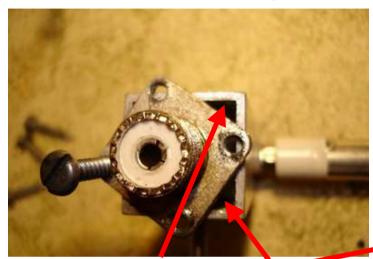


Zoom on rear of feeding box





Zoom on front of the feeding box : All the water can enter here !!

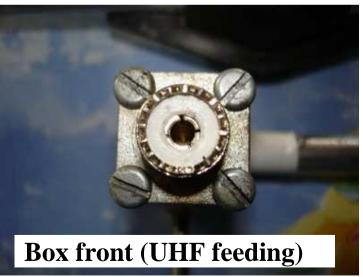


Metal screw WITHOUT dedicated nut part (very ugly) !!



Shield contact NOT reliable in the time !



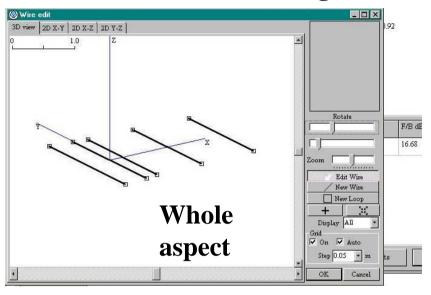


Initial elements fixing on boom and adjusting



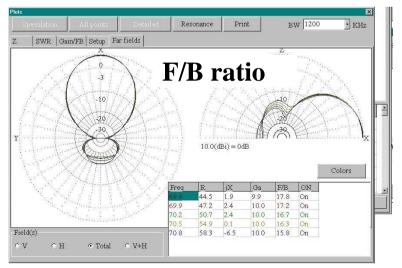


Measures at 70.2 MHz using Mmana simulator



Specula	tion A	11 points	Detailed	Resonance	Print	BW 1200	× • KHz
. SW	R Gain/FB	Setup Far fi	elds				
		: (SWR<1.5) : (SWR<2.0)	C	WD		SWR on Z: 5	0.0
1.3			3	WR			
SWR							
1.2						/	
1.1	\searrow					/	
			****		~		
1.0		69.9		70.2	70.5		70.8

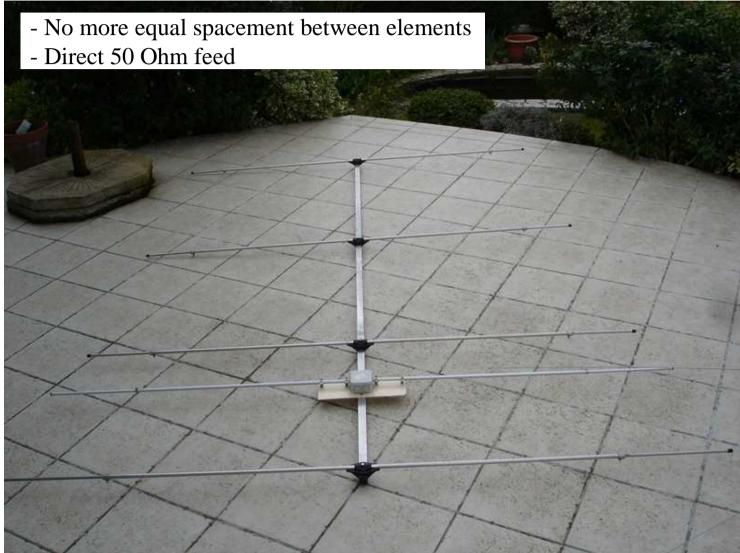
Parame	eters View	··· Change	only end poins	Change all coordinates proportionaly				
No.	Form	Int.(m)	Width(m)	Height(m)	Length(m)	R(mm)	Seg.	Wires
1	H line	0.43	2.19	0.0	0.0	-1.0	-1	1
2	H line	Active	2.116	0.0	0.0	-1.0	-1	1
3	H line	0.245	2.0	0.0	0.0	-1.0	-1	1
4	H line	0.865	1.975	0.0	0.0	-1.0	-1	1
5	H line	1.048	1.86	0.0	0.0	-1.0	-1	1
next	2							
			n	imor	nsion	G		



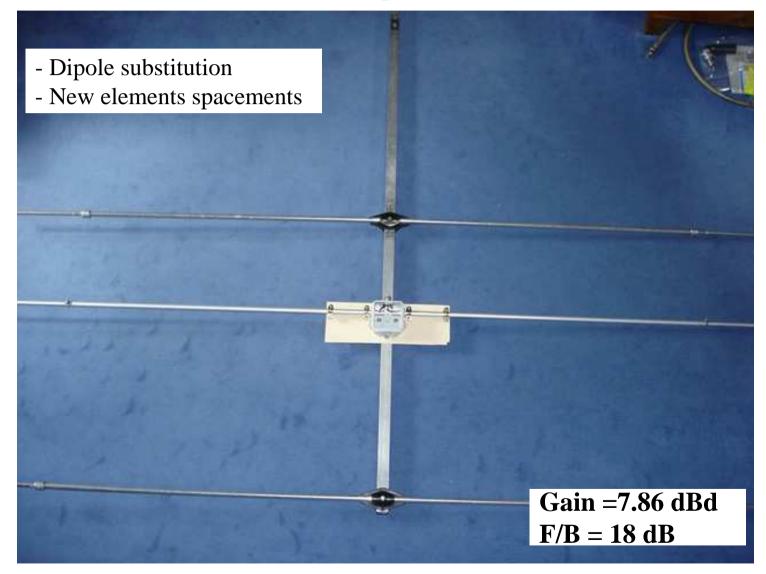
F5DQK March 2007

- I I See I

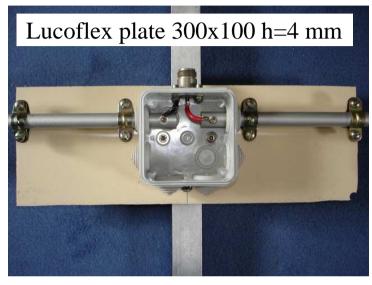
Finished antenna

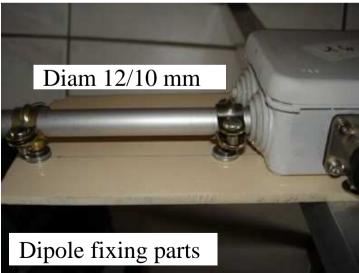


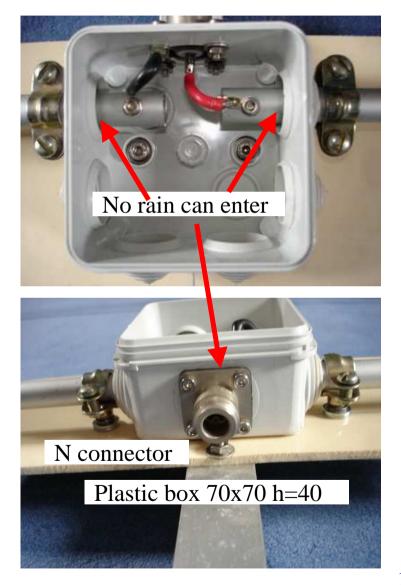
Construction of a brand new isolated dipole



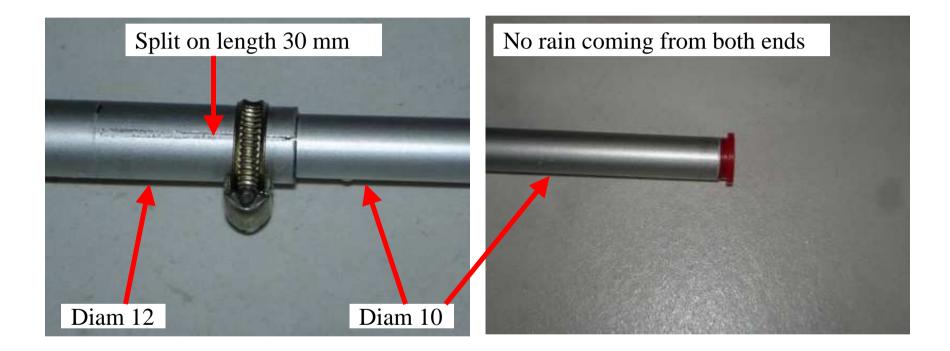
Dipole feeding details



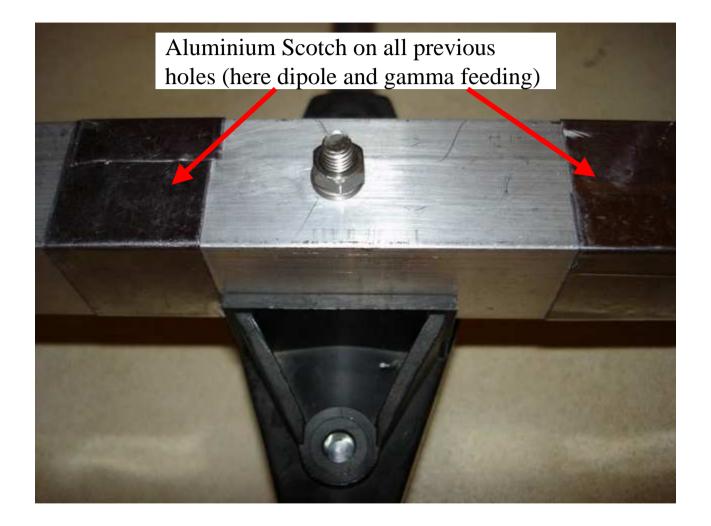




50 Ohm dipole ends



Moonracker YG5-4 : last improvements against rain



Moonracker YG5-4 measures

SWR with MFJ-269 analyser	2	1.5	1.2	1	1.2	1.5	1.5
Direct, mast at 3 meter heigth	69.5	69.5	70.18	70.5	70.8	70.95	70.95
+1 cm on all elements	69.25	69.25	69.83	70.28	70.5	70.68	70.68
Yagi now at 11 meter heigth	69.1	69.1	69.96	70.3	70.56	70.77	70.77
+2 cm on all elements - coming	67.5	67.5	67.8	70.12	70.32	70.49	70.49
New meas after 3 weeks	66.49	67.45	68.01	70.21	70.46	70.69	71.02

Moonracker YG5-4 final dimensions

Elements	El spacement (mm)	Real el dims (mm)	Simulated el dims (mm)
Ref 4	0	2198	2190
Dipole 4	430	2128	2116
D4a	675	2011	2000
D4b	1540	1986	1975
D4c	2588	1870	1860
-		R	1

Difference : about 10 mm

Moonracker YG5-4 : boomlength + 40 cm

Initial dims					1 st update					
WiewGain7.77 dBdParametersView $F/B = 13.73 dB$			O MHz Sel Stock Parameters View View		Gain	= 7.86 dBd = 16.68 dB				
No.	Form	$\frac{\mathbf{\Gamma}/\mathbf{D}}{\text{Int.(m)}} =$	15./5 UD	No.	Form	$\mathbf{\Gamma}/\mathbf{D} =$	• 10.08 UD			
1	H line	0.0	2.134	1	H line	0.0	2.19			
2	H line	0.647	2.032	2	H line	0.43	2.116			
3	H line	1.294	1.95	3	H line	0.675	2.0			
4	H line	1.941	1.943	4	H line	1.54	1.975			
5	H line	2.588	1.892	5	H line	2.588	1.86			

Elements at equal spacements

Last updates

Boomlength + *312 mm*

🕑 70 Param	MHz 5el 50 aters View	Gain	= 8.35 dBd
No.	Form	$ \mathbf{F/B} =$	22 dB
1	H line	0.0	2.162
2	H line	0.383	2.056
3	H line	0.619	2.004
4	H line	1 569	1.96
5	H line	2.9	1.85

Boomlength + 342 mm Boomlength + 402 mm

.35 dBd dB	r 🛞 70 Param	MHz 5el 501 eters View	$\begin{array}{c} \text{Gain} = \\ \text{Gain} = \\ \text{F/B} = 2 \end{array}$	8.39 dBd	ei 🧶 70 Param	MHz 5el 50 eters View	Gain	= 8.47 dBd 20.28
Width(m)	No.	Form	III.(m) = 2	Width(m)	No.	Form	Int.(m)	Width(m)
2.162	1	H line	0.0	2.15	1	H line	0.0	2.138
2.056	2	H line	0.384	2.052	2	H line	0.391	2.036
2.004	3	H line	0.612	2.004	3	H line	0.611	2.004
1.96	4	H line	1 584	1.96	4	H line	1 584	1.96
1.85	S	H line	2.93	1.847	5	H line	2.99	1.847

Initial dims

70 MHz 5el 500 hms YU7EF on initial Moonracke Parameters View Image: Number of State <						
No.	Form	Int.(m)	Width(m)			
1	H line	0.0	2.138			
2	H line	0.391	2.036			
3	H line	0.611	2.004			
4	H line	1.584	1.96			
5	H line	2.99	1.847			