MEASUREMENTS:
80m SWR: 1.08:1 @ 3.600 MHz
2:1 @ 3.520 MHz
2:1 @ 3.680 MHz

75m SWR: 1.13:1 @ 3.940 MHz
2.11:1 @ 3.850 MHz
1.56:1 @ 4.000 MHz
RETURN LOSS 24dB, Z: 45.5

60m SWR: 1.03:1 @ 5.368 MHz, FULL BAND <1.3:1 SWR
RETURN LOSS: 37dB, Z: 48.7

40m SWR: 1.26:1 @ 7.150 MHz, FULL BAND <1.8:1 SWR
RETURN LOSS: 18.8dB, Z: 43.6

30m SWR: 1.16:1 @ 10.118 MHZ, FULL BAND <1.3:1 SWR

20m SWR: 1.16:1 @ 14.160 MHz, FULL BAND <1.5:1 SWR
RETURN LOSS: 22dB, Z:50.4

ANTENNA ADJUSTMENTS
HALF WAVE LENGTH: Fc/F=L
80m, Fc=461.37

75m, Fc=465.66

60m, Fc=468.79

40m, Fc=474.54

30m, Fc=483.84

20m, Fc=482.83

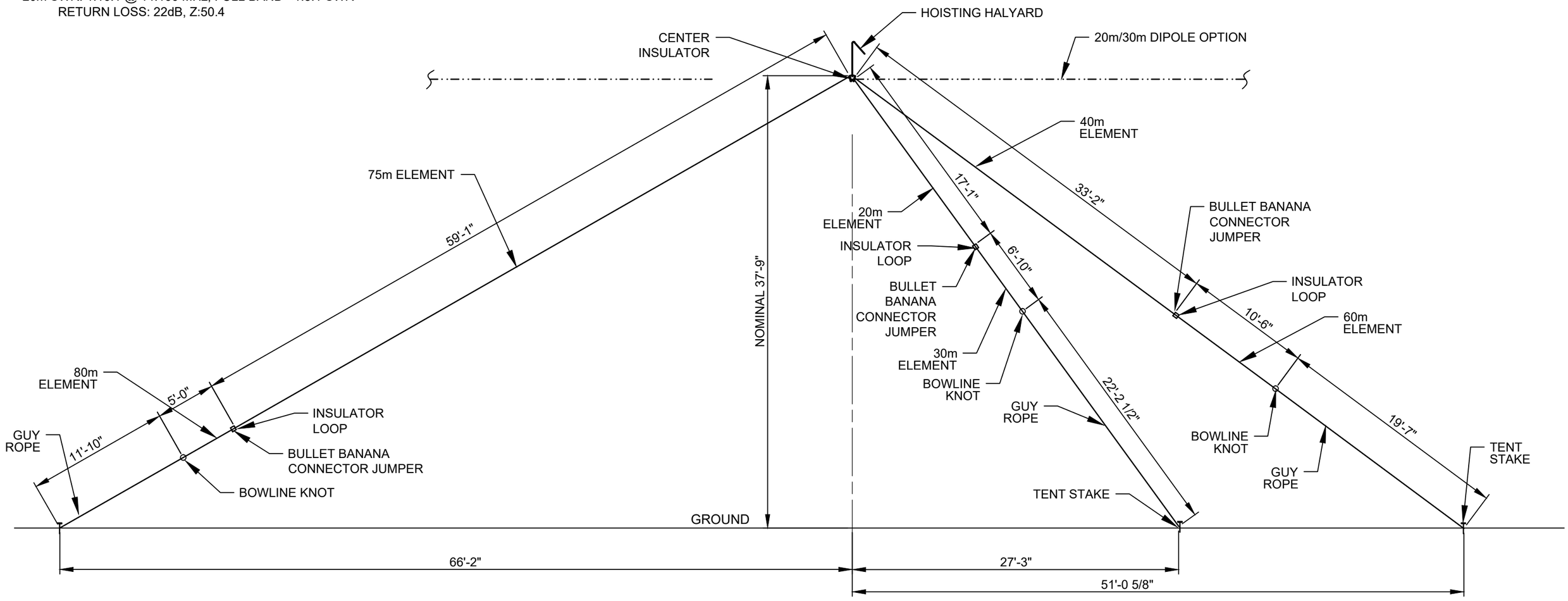
NOTES:
1. TYPE I PARACORD: PARACORD PLANET, 1/16" DIAMETER, 95LB WORKING LOAD, NYLON

2. MICRO CORD: ATWOOD ROPE MANUFACTURING, 3/64" DIAMETER, 100 LB WORKING LOAD

3. OPTIMUM ANTENNA HEIGHT FOR NVIS PROPAGATION (0.18λ TO 0.22λ, DEPENDING UPON SOIL TYPE);
80m: 48'-9"
75m: 45'-6"
60m: 33'-2"
40m: 24'-7"

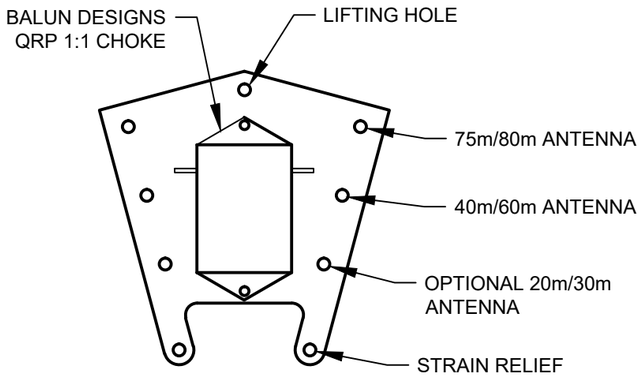
4. 20m HALF WAVE HEIGHT: 34'-6"

5. ZING-IT THROW LINE: 1.75mm, 400 LB LOAD LIMIT, BRAIDED CORD, SAMSON ROPE COMPANY

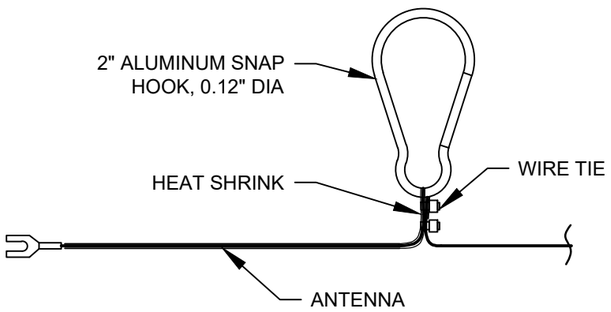


ANTENNA ELEMENTS HALF SECTION

K4BJS LIGHT WEIGHT EMCOMM ANTENNA
INVERTED "V" 80m/75m/60m/40m

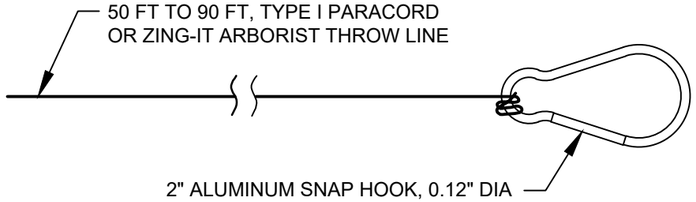


CENTER INSULATOR



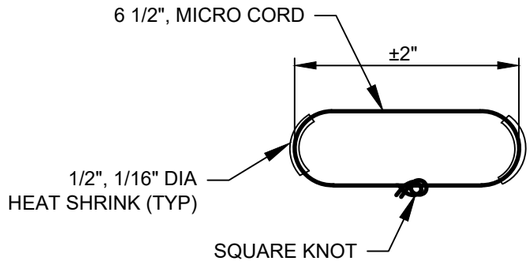
ANTENNA HOOK DETAIL

PLACE SNAP HOOK 3/4" FROM END OF HEAT SHRINK



HOISTING HALYARD DETAIL

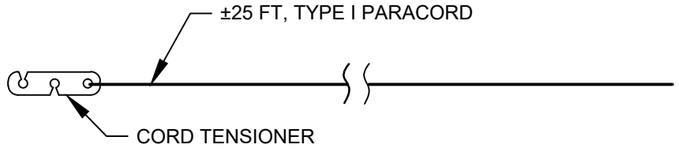
1 REQUIRED



ENSURE HEAT SHRINK PIECES ARE AT OPPOSITE ENDS OF THE LOOP

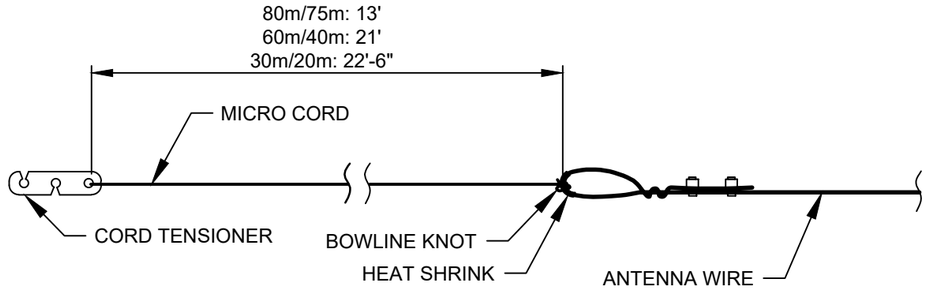
INSULATOR LOOP DETAIL

6 REQUIRED



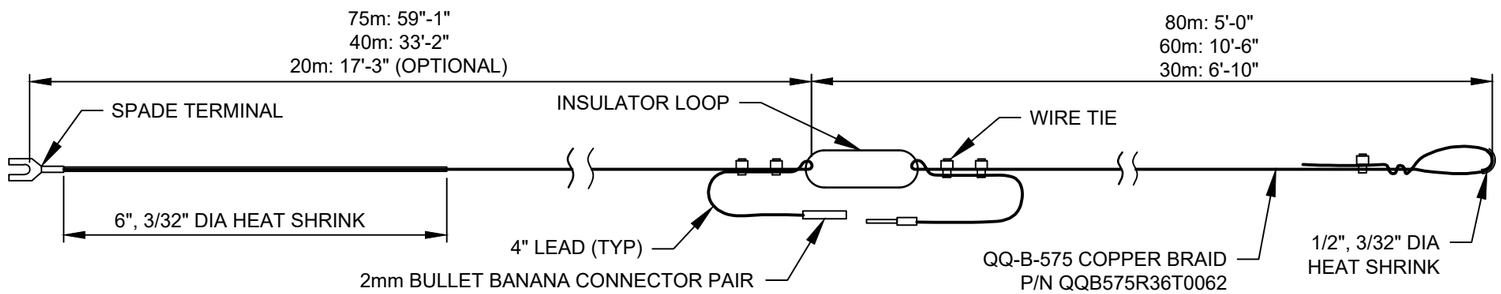
DIPOLE ANTENNA HALYARD DETAIL

2 REQUIRED



GUY ROPE DETAIL

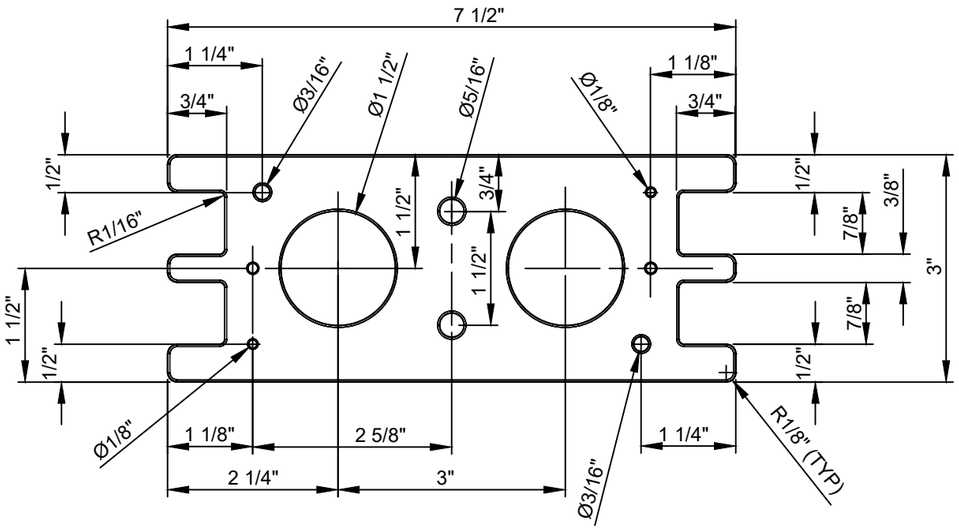
2 OF EACH SIZE REQUIRED



ANTENNA ELEMENT DETAIL

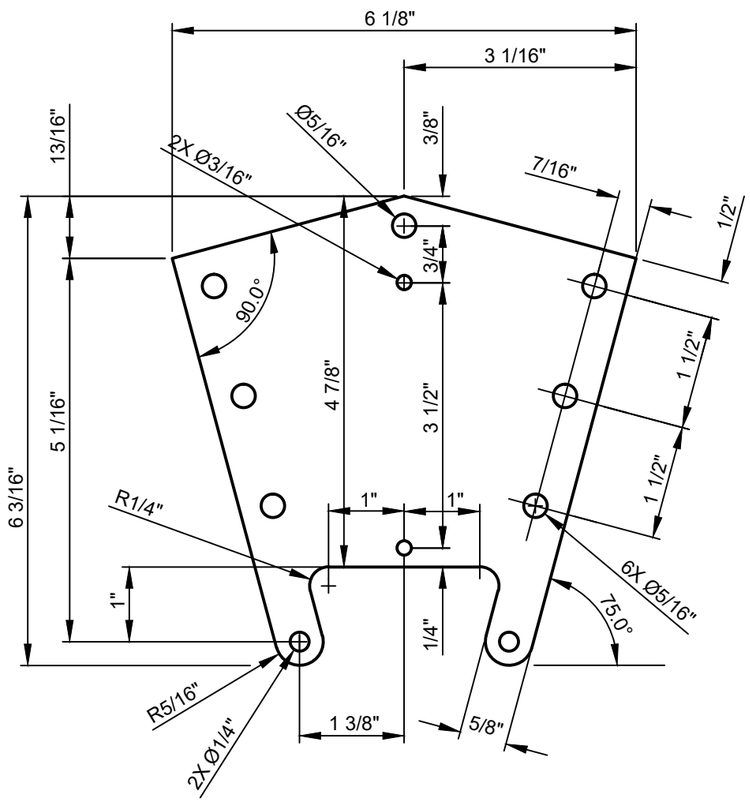
2 REQUIRED FOR 75/80, 40/60, 20/30 BANDS

K4BJS LIGHT WEIGHT EMCOMM ANTENNA
INVERTED "V" 80m/75m/60m/40m

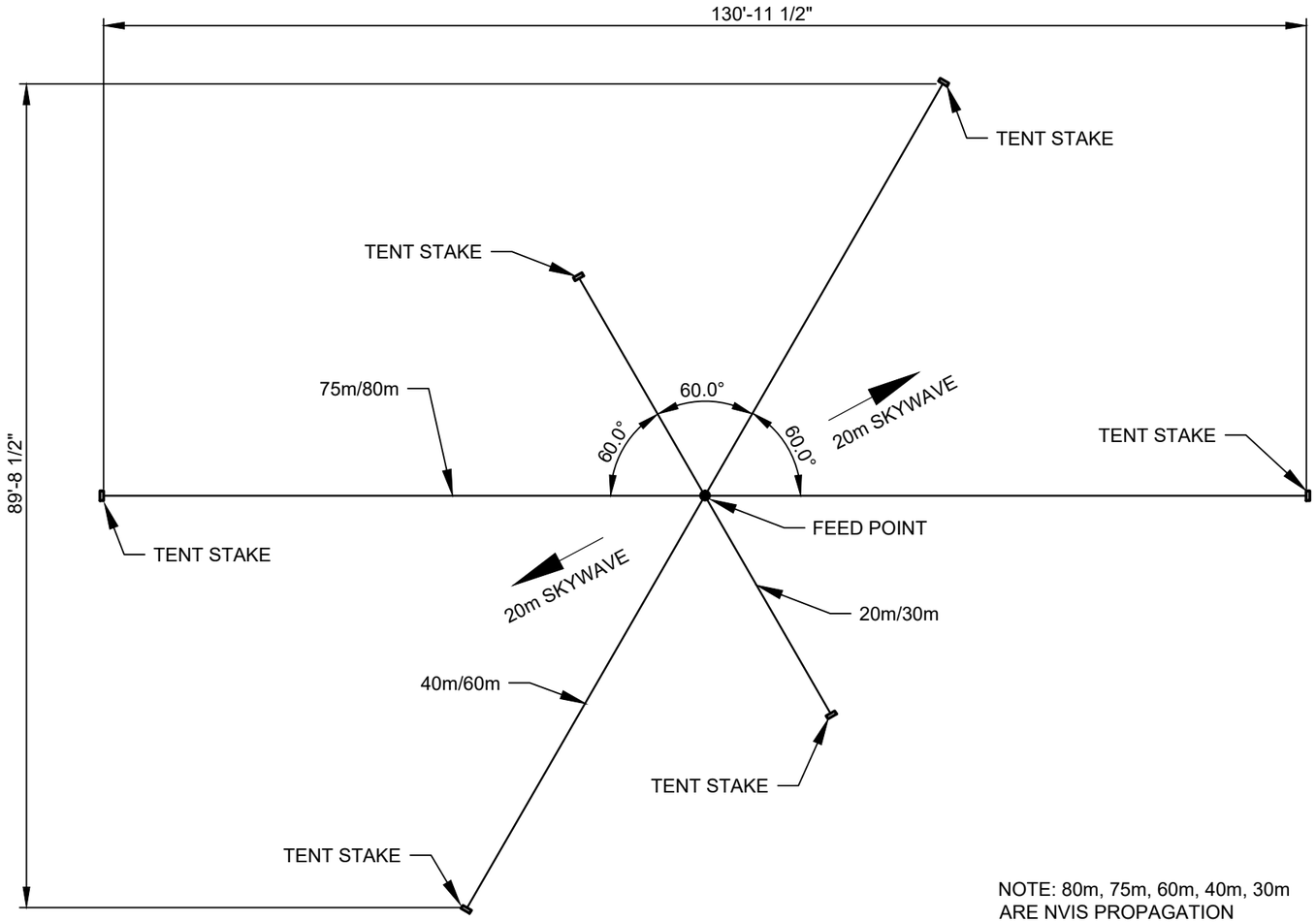


ANTENNA WINDER DETAIL

3 REQUIRED

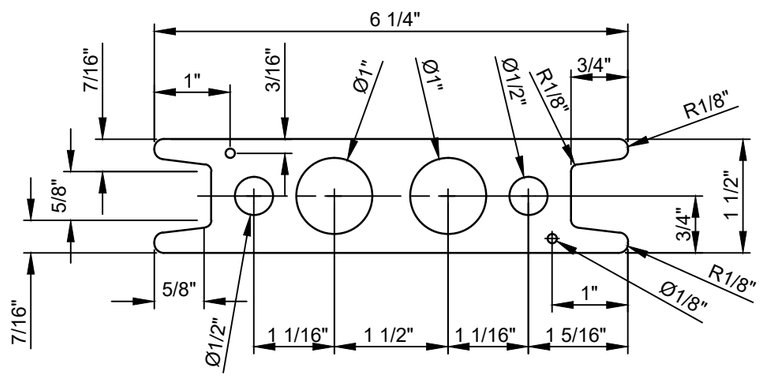


CENTER INSULATOR DETAIL



NOTE: 80m, 75m, 60m, 40m, 30m
ARE NVIS PROPAGATION

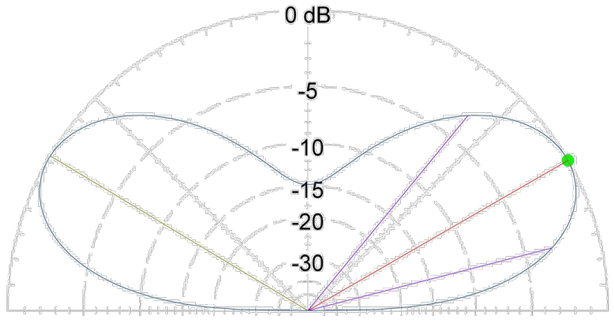
TRIPLE ANTENNA FAN CONFIGURATION



HALYARD WINDER DETAIL

3 REQUIRED

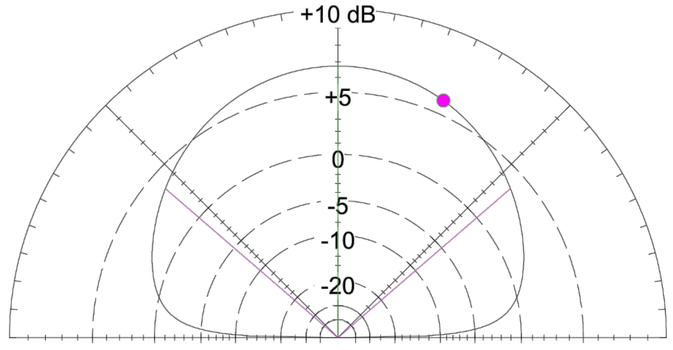
K4BJS LIGHT WEIGHT EMCOMM ANTENNA
INVERTED "V" 80m/75m/60m/40m



Back yard dipole 14.2 MHz

Elevation Plot		Cursor Elev	30.0 deg.
Azimuth Angle	0.0 deg.	Gain	6.98 dBi
Outer Ring	6.98 dBi		0.0 dBmax
Slice Max Gain	6.98 dBi @ Elev Angle = 30.0 deg.		
Beamwidth	36.2 deg.; -3dB @ 14.4, 50.6 deg.		
Sidelobe Gain	6.98 dBi @ Elev Angle = 149.0 deg.		
Front/Sidelobe	0.0 dB		

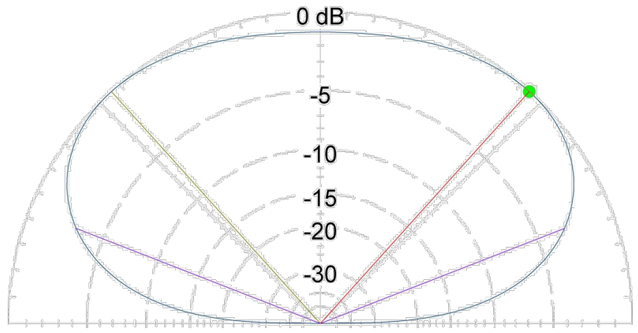
20m ELEVATION PLOT



INVERTED m V 3.95 MHz

Elevation Plot		Cursor Elev	66.0 deg.
Azimuth Angle	0.0 deg.	Gain	5.95 dBref
Outer Ring	10.0 dBref		-0.78 dBmax
Slice Max Gain	6.73 dBref @ Elev Angle = 90.0 deg.		
Beamwidth	98.4 deg.; -3dB @ 40.8, 139.2 deg.		
Sidelobe Gain	< -100 dBi		
Front/Sidelobe	> 100 dB		

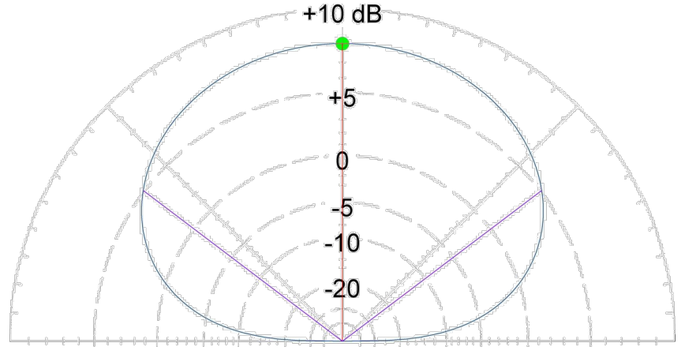
75m ELEVATION PLOT



Inverted V 30m 10.13 MHz

Elevation Plot		Cursor Elev	48.0 deg.
Azimuth Angle	0.0 deg.	Gain	5.32 dBi
Outer Ring	5.32 dBi		0.0 dBmax
Slice Max Gain	5.32 dBi @ Elev Angle = 48.0 deg.		
Beamwidth	137.4 deg.; -3dB @ 21.3, 158.7 deg.		
Sidelobe Gain	5.32 dBi @ Elev Angle = 132.0 deg.		
Front/Sidelobe	0.0 dB		

30m ELEVATION PLOT



INVERTED m V 7.2 MHz

Elevation Plot		Cursor Elev	90.0 deg.
Azimuth Angle	0.0 deg.	Gain	8.09 dBref
Outer Ring	10.0 dBref		0.0 dBmax
Slice Max Gain	8.09 dBref @ Elev Angle = 90.0 deg.		
Beamwidth	105.8 deg.; -3dB @ 37.1, 142.9 deg.		
Sidelobe Gain	< -100 dBi		
Front/Sidelobe	> 100 dB		

40m ELEVATION PLOT

K4BJS LIGHT WEIGHT EMCOMM ANTENNA
INVERTED "V" 80m/75m/60m/40m

SHEET 4 OF 4