



## FMCPY2 Series

### Directional circular elliptical polarised broadband Yagi

#### FM Radio broadcast 87.5-108MHz



The FMCPY2 is a cross polarised FM broadcast Yagi that offers true circular field with full band coverage which permits multiple broadcast frequencies and antenna sharing.

Coaxial feeder cable, connectors and other installation accessories are all available separately.

	FMCPY2	FMCPY2-N-DT
Construction	Fully-welded corrosion resistant aluminium with fixed arms	Fully-welded corrosion resistant aluminium body with detachable arms
Frequency range	FM Radio 87.5-108MHz	
Bandwidth	Full frequency range	
VSWR	<1.2:1	
Tuning	Factory	
Polarisation	Circular Elliptical	
Gain - per plane	1 dBd, stacking increases gain	
Impedance - nominal	50 Ohms	
DC grounding	Yes	
H Plane - per plane	169°	
E Plane - per plane	79°	
Internal loss	0.4dB	
Front-to-back ratio	7dB	
Maximum power	1 Kilowatt per bay - 500 Watts per input	
Connectors - fitted to base	2 x N-type female - 7/16" DIN models on next page	
Dimensions	Height: 1.6m, Width: 1.6m, Depth: 0.95m	
Weight - aluminium	19kg	
Projected area	Front: 0.228m <sup>2</sup> Side: 0.28m <sup>2</sup>	
Wind load at 160kph per antenna	Front: 0.271kN, 27.648kg Side: 0.286kN, 29.218kg	
Mounting hardware	U-bolts and V-blocks, 50-76mm capability - supplied	
Installation hardware requirements	Power divider and 90° out of phase branch feeders - order separate to suit your requirements	
Warranty	2 Years	



FMCPY2 dual bay array with power divider, branch feeders, ordered separate for requirements



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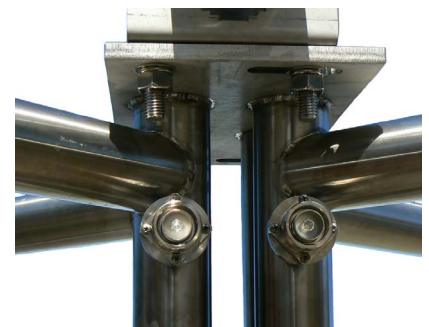
The FMCPY2-716 series are cross polarised FM broadcast Yagis that offers true circular field with full band coverage which permits multiple broadcast frequencies and antenna sharing.

Coaxial feeder cable, connectors and other installation accessories are all available separately.

	FMCPY2-716	FMCPY2-716SS
Construction	Fully-welded corrosion resistant aluminium	Fully-welded 304 grade stainless steel
Frequency range	FM Radio 87.5-108MHz	
Bandwidth	Full frequency range	
VSWR	<1.2:1	
Tuning	Factory	
Polarisation	Circular Elliptical	
Gain	1 dBD, stacking increases gain	
Impedance	50 Ohms	
DC grounding	Yes	
H Plane	169°	
E Plane	79°	
Internal loss	0.4dB	
Front-to-back ratio	7dB	
Maximum power	4 Kilowatts per bay total - 2kw per input	
Connectors - fitted to base	2 x 7/16" DIN female	
Dimensions	Height: 1.6m, Width: 1.6m, Depth: 0.95m	
Weight	20kg	30kg
Projected area	Front: 0.228m <sup>2</sup> Side: 0.28m <sup>2</sup>	
Wind load at 160kph per antenna	Front: 0.271kN, 27.648kg Side: 0.286kN, 29.218kg	
Mounting hardware	U-bolts and V-blocks, 50-76mm capability - supplied	
Installation hardware requirements	Power divider and 90° out of phase branch feeders - order separate to suit your requirements	
Warranty	2 Years	



The FMCPY2 design allows for a true circular elliptical signal to better penetrate into difficult terrain



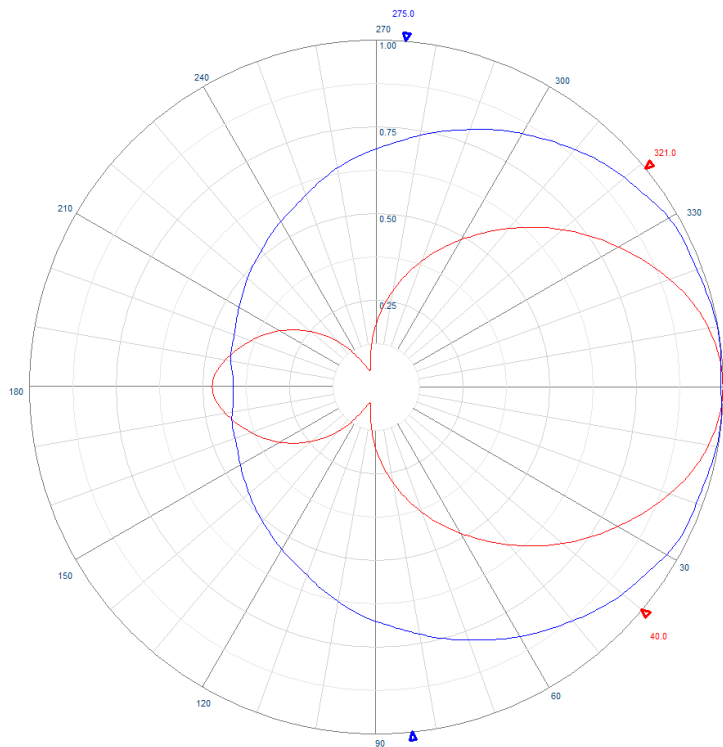
FMCPY2-716 series - dual 7/16" DIN female terminations



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Directional circular elliptical polarised broadband Yagi

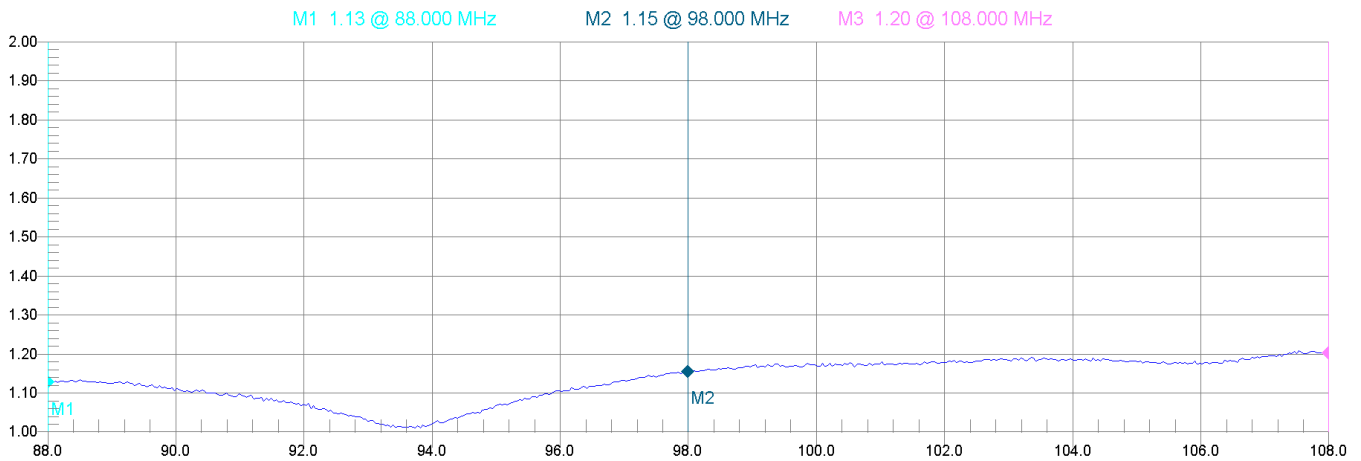
FM Radio broadcast 87.5-108MHz



Example radiation pattern - single bay

## Typical VSWR

FMCPY2 87.5-108MHz



Typical VSWR - single bay





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#### Mechanical Data


Height of array	Subject to configuration/frequency
Total net weight	Refer to table
Wind Load	Refer to table
Mounting hardware	2 U-bolts and V-block per bay - supplied 2 x 90° phased branch feeders - order separate 1 x 2-way power divider/splitter - order separate Feeder cable and extra power dividers - order as required

#### Technical Data - Calculated at 87.5MHz


Configuration	Off-set	Gain - dBd	Weight - kg	Antenna height L - m	Wind load - kN
1 antenna		1	19 / 20 / 30	1.6	0.271
2 bay		4	38 / 40 / 60	4.685	0.542
3 bay		5.5	57 / 60 / 90	7.77	0.813
4 bay		7	76 / 80 / 120	10.855	1.084
6 bay		8.5	114 / 120 / 180	17.025	1.626
8 bay		10	152 / 160 / 240	23.195	2.168

- Gain: refers to total antenna gain, not per plane, losses of power through cable or power dividers not included
- Weight: does include mounting hardware supplied, does not include extra mounting hardware, power dividers or mount poles
- Height calculated at optimum spacing at 87.5MHz, please review broadcast handbook for recommended frequency specific spacing
- Wind load: V = 160km/h

#### Array requirements



Multi-termination power divider/splitter  
Specify centre frequency when ordering.  
Multi-input/output connector configuration available.  
Includes mounting hardware



Custom cable branch feeders  
Length and termination determined by model and power divider spec.  
See following page for cable type recommended



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Suitable coaxial feeder cable and connectors



1/2" super flexible helical shielded, foam dielectric coaxial cable  
P/N ZCG1250SF

Available in per metre, or 500m rolls or alternatively request a custom cable assembly



N-type male clamp connector for 1/2" super flexible, helical shielded coaxial cable

P/N NM1250SF

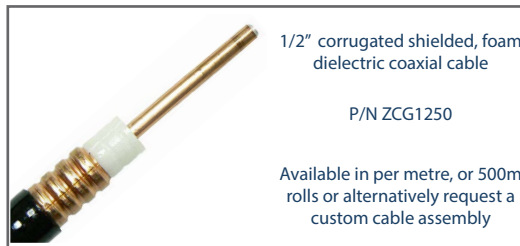
Tri-metal plated



Low PIM 7/16" DIN male clamp-style connector for 1/2" helical shielded foam dielectric coaxial cable

P/N 716DINM1250SF

Tri-metal plated



1/2" corrugated shielded, foam dielectric coaxial cable

P/N ZCG1250

Available in per metre, or 500m rolls or alternatively request a custom cable assembly



N-type male clamp connector for 1/2" flexible, corrugated shielded, coaxial cable

P/N NM1250

Tri-metal plated



Low PIM 7/16" DIN male clamp-style connector for 1/2" corrugated foam dielectric coaxial cable

P/N 716DINM1250

Tri-metal plated



7/8" corrugated shielding, foam dielectric coaxial cable

P/N ZCG7850

Available in per metre, or 500m rolls or alternatively request a custom cable assembly



N-type male clamp connector for 7/8" flexible, corrugated shielded, coaxial cable

P/N NM7850

Tri-metal plated



Low PIM 7/16" DIN male clamp-style connector for 7/8" corrugated foam dielectric coaxial cable

P/N 716DINM7850

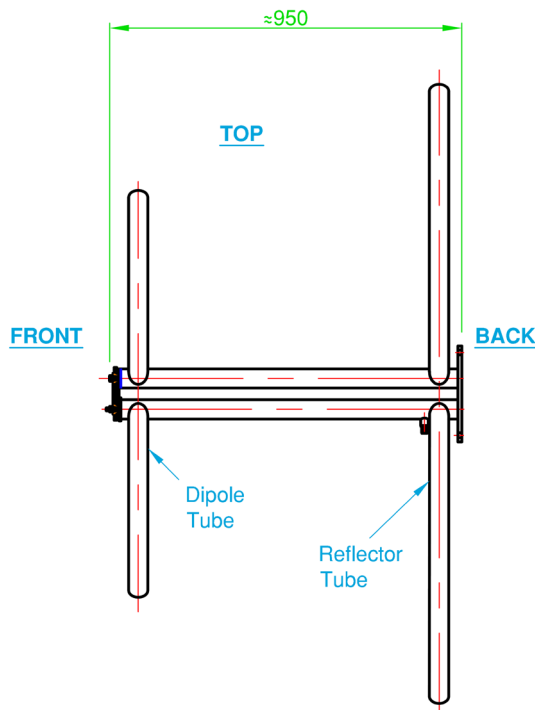
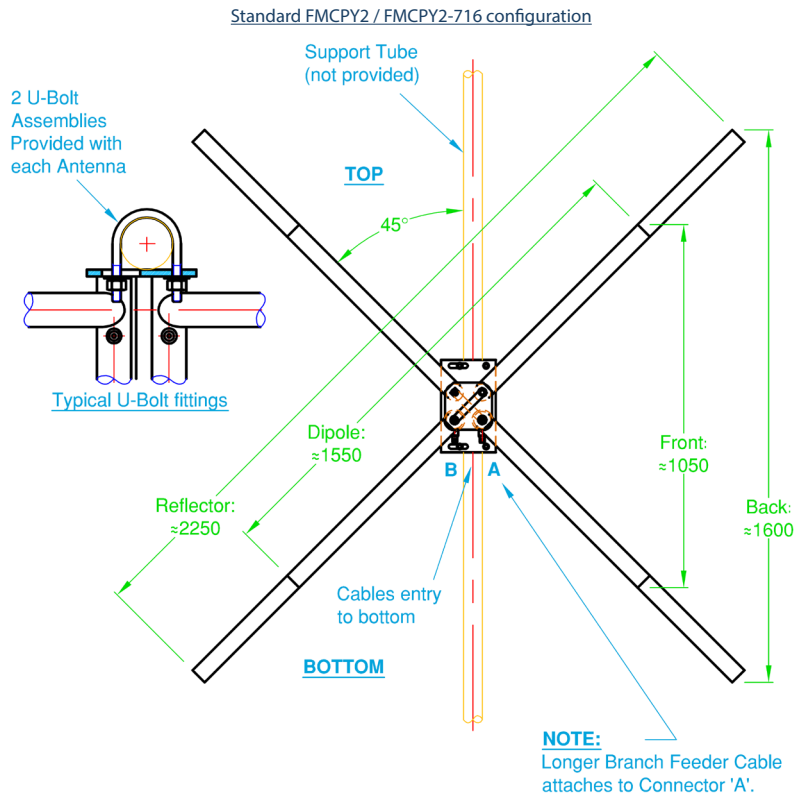
Tri-metal plated



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