

Section 2

BROADCAST ANTENNAS

Updated 21 October 2011

FMCPX Series FM Radio Circular Polarised Dipoles

Frequency
88 – 108 MHz

Bandwidth
See Table

ZCG
SCALAR
BROADCAST SOLUTIONS

These FMCPX broadcast antennas offer a truly circular radiation pattern with equal power emitted throughout all planes. The result is an improved coverage area for your FM radio station. The stainless steel construction ensures a long service life.

- **FMCPX-78** is the high power model fitted with a 7/8" EIA connector rated for up to 5 kilowatts per bay. There are **A**, **B** and **C** models available, each factory tuned to cover a fixed segment within the FM band 88 to 108 MHz.
- **FMCPX-716** has a 7/16" Female DIN connector for 2 kilowatts input power per bay. Select the **A**, **B**, or **C** model according to your FM radio station transmit frequency.
- **FMCPX-N** is a lighter design with N-Female connector for transmit power up to 500 watts per bay. This model can be factory tuned for any 5 MHz bandwidth you specify within the FM band.

Other options available are :

1. For increased gain and power the antennas can be supplied in a factory tuned stack array package (2, 3, 4 or 6 bay) including a power divider, branch feeder cables and mounting clamps.
2. The **RS1-GAL** or **RS1-SS** rear reflector screens restrict the radiation pattern emitted behind the dipole and also produce an increase in forward gain.
3. A Rear Reflector Radial Bar is a smaller and more economical option to restrict the rear pattern and increase forward gain. Enquire for details.



SPECIFICATIONS	FMCPX-78	FMCPX-716	FMCPX-N
Construction	All models are constructed entirely from Stainless Steel		
Frequency Range	FM Band 88 to 108 MHz		88 to 108 MHz
Maximum Bandwidth (Please specify when ordering)	A = 87.5 to 96.0 MHz B = 93.5 to 102.5 MHz C = 99.7 to 108.0 MHz		Specify any 5 MHz within the FM Band
Tuning	All models are tuned in the factory		
Return Loss, VSWR	Better than -20 dB, < 1.2:1 across the bandwidth specified		
Gain	Single Bay -3 dBd When mounted in stack array formations : 2 Bay = 0 dBd, 3 Bay = 1.4 dBd, 4 Bay = 3 dBd, 6 Bay = 4.5 dBd		
Polarisation	Circular ± 2.2 dB	Circular ± 2.2 dB	Circular ± 2.2 dB
Impedance	50 Ohms	50 Ohms	50 Ohms
Connector	7/8" EIA	7/16" Female DIN	N-Female
Max Power per Bay	5 Kilowatts	2 Kilowatts	500 Watts
DC Grounding	Yes	Yes	Yes
Weight per Bay	13.5 kg	12.5 kg	5.5 kg
Projected Area	0.159 m ²	0.150 m ²	0.096 m ²
Wind Load at 160 kph	19.2 kg, 0.189 kN	19.0 kg, 0.180 kN	11.623 kg, 0.114 kN
Boom Dimensions	2.0 metres long x 50 mm diam round	1.5 metres long x 50 mm diam round	1.5 metres long x 25 mm square
Mounting Clamp	1 x Y2300SS supplied	1 x Y2300SS supplied	1 x S48-AM supplied
Options Available (Enquire for details)	<ol style="list-style-type: none"> 1. Factory tuned stack array packages, including power divider, branch feeder cables and clamps (2, 3, 4 or 6 Bay) 2. Rear Reflector Screen model RS1-GAL or RS1-SS 3. Rear Reflector Radial Bar 		

