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# Marine

Recreational, Commercial  
& Emergency Services



## Marine

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#### 2-30 MHz

##### Deck Mount

- HM208	2-22 MHz, vertical radiator, 2.1 dBi, 250W P.E.P., 316 stainless steel fold-down base, requires A.T.U., 2.4 metres
- HM212	2-30 MHz, vertical radiator, 2.1 dBi, 250W P.E.P., 316 stainless steel fold-down base, requires A.T.U., 3.7 metres
- HM215	2-30 MHz, vertical radiator, 2.1 dBi, 250W P.E.P., 316 stainless steel fold-down base, requires A.T.U., 4.5 metres
- HM215-L	2-30 MHz, vertical radiator, 2.1 dBi, 250W P.E.P., 316 stainless steel fold-down base, requires A.T.U., 6.1 metres - <a href="#">2-piece</a>
- HM300	1.6-30 MHz, 2.1 dBi, 2kW P.E.P., requires A.T.U., requires deck mount or side mount bracket, 10 metres - <a href="#">3-piece</a>

##### Mast Mount

- HM218-L	2-30 MHz, vertical radiator, 2.1 dBi, 500W P.E.P., requires A.T.U., 7.5 metres - <a href="#">3-piece</a>
- HM218-M	2-30 MHz, vertical radiator, 2.1 dBi, 500W P.E.P., requires A.T.U., 6.0 metres - <a href="#">2-piece</a>
- HM223-M	2-30 MHz, vertical radiator, 2.1 dBi, 1.4kW P.E.P., requires A.T.U., 8.1 metres - <a href="#">2-piece</a>
- HM300	1.6-30 MHz, 2.1 dBi, 2kW P.E.P., requires A.T.U., requires deck mount or side mount bracket, 10 metres - <a href="#">3-piece</a>

#### 27 MHz Marine CB Radio

##### Deck Mount

- ZM21-27	27.88 MHz emergency channel, 2.1 dBi, 25W, UHF male PL259, 4.5 metre cable, requires MM1 or MM2, 2.1 metres
- ZM24-27	27.88 MHz emergency channel, 2.1 dBi, 25W, UHF male PL239, 4.5 metre cable, requires MM1 or MM2, 2.4 metres

##### Mast Mount

- HM2800	27.68-27.98 MHz 'Coastguard' channels, 2.1 dBi, 50W, N-type female, 6.2 metres - <a href="#">ruggedised construction</a>
- ZM108A	27.88 MHz emergency channel, 2.1 dBi, 25W, N-type female, 2.8 metres
- ZM204	27.68-27.98 MHz 'Coastguard' channels, 2.1 dBi, 50W, UHF female SO239, 5.1 metres - <a href="#">5-piece telescopic design</a>

##### Whip

- ZM312H	27.88 MHz, ground dependent, 2.1 dBi, 25W, UHF male PL259 adaptor, 660mm - whip and cable base
- ZW312H	27.88 MHz, ground dependent, 2.1 dBi, 25W, 5/16"-26TPI female thread, 640mm - whip only

#### AIS - Automatic Identification System

##### Deck Mount

- ZM14-AIS	161.975-162.025 MHz, AIS1 + AIS2, 2.1 dBi, 50W, N-type female, 400mm cable, requires MM1 or MM2, 1.4 metres
- ZM14-AIS-5	161.975-162.025 MHz, AIS1 + AIS2, 2.1 dBi, 50W, N-type female, 5 metre cable, requires MM1 or MM2, 1.4 metres

##### Mast Mount

- B20G-N-AIS	161.975-162.025 MHz, AIS1 + AIS2, 5.1 dBi, 50W, N-type female, 3.2 metres
- CM162-AIS-B-SS	161.975-162.025 MHz, AIS1 + AIS2, 2.1 dBi, 50W, TNC male, 1.8 metre cable, 1.4 metres

#### AM/FM Radio Receive

##### Deck Mount

- ZM09-AMFM	AM/FM radio receive, 5 metre cable, solderless male radio connector, requires MM1 or MM2, 900mm - white radome
- ZM09-AMFM-B	AM/FM radio receive, 5 metre cable, solderless male radio connector, requires MM1 or MM2, 900mm - black radome
- ZM21-AMFM	AM/FM radio receive, 4.5 metre cable, solderless male radio connector, requires MM1 or MM2, 2.1 metres
- ZM24-AMFM	AM/FM radio receive, 4.5 metre cable, solderless male radio connector, requires MM1 or MM2, 2.4 metres

##### Mast Mount

- B20G-N-AMFM	AM/FM radio receive, N-type female, 3.4 metres
- HM218-AMFM	AM/FM radio receive, 5.7 metre cable, solderless male radio connector, 5.5 metres

##### Whip

- ZM312B	AM/FM radio receive, ground dependent, 2.1 dBi, solderless male radio connector, 660mm - whip and cable base
- ZW312B	AM/FM radio receive, ground dependent, 2.1 dBi, 5/16"-26 brass female thread, 640mm - whip only

## Marine

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#### L1 GPS 1575.42 MHz

##### Deck Mount

- ZAU-SA-300 L1 GPS 1575.42 MHz, dual amplifier/filter, +5dB, TNC female, 114mm diameter x 163mm height

#### Mobile Phone Network

##### Deck Mount

- ZAU-SA-200 Satellite communications 1616-1626 MHz, 4 dBi, 10W, TNC female, 114mm diameter x 163mm height
- ZM09-4GX All networks 4G LTE and lower 4G/3G 718-788 MHz & 820-890 MHz, 5.1 dBi, 50W, FME female, 990mm
- ZM18-4GX All networks 4G LTE 700-788 MHz, 8.1 dBi, 50W, FME female, 4.5 metre cable, 1.8 metres
- ZM21-4GX All networks 4G LTE 700-788 MHz, 8.1 dBi, 50W, FME female, 4.5 metre cable, 2.1 metres
- ZM24-4GX All networks 4G LTE 700-788 MHz, 8.1 dBi, 50W, FME female, 4.5 metre cable, 2.4 metres
- ZM09-CELL All networks dualband 4G/3G 820-960 MHz & 1710-2190 MHz, 6.2 & 3 dBi, 30W, FME female, 900mm - white radome
- ZM09-CELL-B All networks dualband 4G/3G 820-960 MHz & 1710-2190 MHz, 6.2 & 3 dBi, 30W, FME female, 900mm - black radome
- ZM21-CELLG Lower 4G/3G 890-960 MHz, 8.1 dBi, 30W, FME female, 5 metre cable, requires MM1 or MM2, 2.1 metres - [Optus & VHA](#)
- ZM21-CELLN Lower 4G/3G 820-890 MHz, 8.1 dBi, 30W, FME female, 5 metre cable, requires MM1 or MM2, 2.1 metres - [Telstra](#)
- ZM24-CELLN Lower 4G/3G 820-890 MHz, 8.1 dBi, 30W, FME female, 5 metre cable, requires MM1 or MM2, 2.4 metres - [Telstra](#)

##### Mast Mount

- CM1600-4GX All networks 4G LTE 700-788 MHz, 8.1 dBi, 20W, N-type female, 1.85 metres
- CM1600AM Lower 4G/3G 820-890 MHz, 8.1 dBi, 20W, N-type female, 2.4 metres - [Telstra](#)
- CMG1600AM Lower 4G/3G 890-960 MHz, 8.1dBi, 20W, N-type female, 2.4 metres - [Optus and Vodafone](#)
- SGDB-SS-S All networks dualband 4G/3G 820-960 & 1710-2190 MHz, 6.2 & 3 dBi, 30W, 900mm - [oceanic sealed](#)
- SGDB-MM-N All networks dualband 4G/3G 820-960 & 1710-2190 MHz, 6.2 & 3 dBi, 30W, N-type female, 1.4 metres
- SGDB-TPM All networks dualband 4G/3G 820-960 & 1710-2190 MHz, 6.2 & 3 dBi, 30W, 4.7 metre side exit cable, 900mm
- SGDB-TPM-BE All networks dualband 4G/3G 820-960 & 1710-2190 MHz, 6.2 & 3 dBi, 30W, 4.7 metre bottom exit cable, 900mm
- SGDB-T10 All networks dualband 4G/3G 820-960 & 1710-2190 MHz, 6.2 & 3 dBi, 30W, 10 metre cable, 900mm

#### UHF 400-520 MHz

##### Deck Mount

- ZM09-477 477 MHz UHF CB Radio, 2.1 dBi, 50W, UHF male PL259, 5 metre cable, requires MM1 or MM2, 900mm
- ZM21-477 477 MHz UHF CB Radio, 2.1 dBi, 50W, UHF male PL259, 4.5 metre cable, requires MM1 or MM2, 2.1 metres
- ZM21-UHF 400-520 MHz, specify 1.5%, 8.1dBi, 50W, UHF male PL259, 4.5 metre cable, requires MM1 or MM2, 2.1 metres

##### Mast Mount

- SG477-TPM 477 MHz UHF CB Radio, 2.1 dBi, 50W, UHF male PL259, 4.7 metre cable, 1/2"-12BSW thread mount, 900mm
- CLU3 400-520 MHz, specify 1.5%, 5.1 dBi, 100W, N-type female, 1.7 metres - anodised aluminium
- CLU3-SS 400-520 MHz, specify 1.5%, 5.1 dBi, 100W, N-type female, 1.7 metres - 304 stainless steel
- ZN2-77-06-AC 477 MHz, 8.1 dBi, 100W, N-type female, 2.5 metres
- ZN2-77-09-AC 477 MHz, 12 dBi, 100W, N-type female, 3.3 metres
- ZN2-375-03 477 MHz, 4.5 dBi, 100W, UHF female SO239, 1.55 metres
- ZN2-675-06 477 MHz, 6 dBi, 100W, UHF female SO239, 1.65 metres

##### Whip

- ZN4-77-09T 477 MHz UHF CB Radio, 2.1 dBi, elevated feed, 50W, UHF male PL259, 4.7 metre cable, 900mm
- M400-OB series 400-510 MHz, specify model, ground dependent, 2.1 dBi, 4 metre cable, OB-2 base, 590-950mm
- GID-MB4052 400-520 MHz, elevated feed, 2.1 dBi, 50W, UHF male PL259, 350mm

#### VHF 156-162 MHz

##### Deck Mount

- ZM21-VHF 156-162 MHz, 2.1 dBi, 50W, UHF male PL259, 4.5 metre cable, requires MM1 or MM2, 2.1 metres
- ZM24-VHF 156-162MHz, 5.1 dBi, 50W, UHF male PL259, 4.5 metre cable, requires MM1 or MM2, 2.4 metres

## Marine

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#### VHF 156-162 MHz (continued)

##### **Mast Mount**

- B20G	156-162 MHz, 5.1 dBi, 50W, UHF male PL259, 4.5 metre cable, 3.4 metres
- B20G-N	156-162 MHz, 5.1 dBi, 50W, N-type female, 3.4 metres
- CLV3	151-152 MHz, 3 dBd, 50W, N-type female, 3.3 metres
- CLV3-174	174.3MHz, 3dBd, 50W, N-type female, 3.0 metres

##### **Whip**

- ZM312V	156-162 MHz, ground dependent, 2.1 dBi, 25W, UHF male PL259, 470mm - whip and cable base
- ZW312V	156-162 MHz, ground dependent, 2.1 dBi, 25W, 5/16"-26 brass female thread, 450mm - whip only
- GID-1417	148-174 MHz, ground independent, 3.0 dBi, embedded UHF male, 850mm - whip only

#### Mounting Hardware

##### **Accessories**

- ZSPL-2	2-way band coaxial cable splitter, 27MHz/AMFM/VHF & UHF capable, 100W
- ZD-AMFM	2-way band coaxial cable splitter, AM/FM & DAB
- SWR meters	

##### **Deck Mounting**

- MM1	Toughened white nylon, dual axis pivot, ratchet mount,
- MM1-B	Toughened black plastic, dual axis pivot, ratchet mount,
- MM2	316 stainless steel, dual axis pivot, ratchet mount
- MM2-B	Black finish 316 stainless steel, dual axis pivot, ratchet mount

##### **Mast Mounting**

- NSM-218	Toughened nylon insulated wall/side clamp mount, 38mm antenna capability, 16mm mount hole
- NSM-223	Toughened nylon insulated wall/side clamp mount, 50mm antenna capability, 16mm mount hole
- NSM-B20M	Toughened nylon insulated wall/side clamp mount, 20-22mm antenna capability, 16mm mount hole
- NSM-CL3642	Toughened nylon insulated wall/side clamp mount, 32mm antenna capability, 16mm mount hole
- MMA	Anodised aluminium mast mount adaptor for ZM series, 250mm x 25mm, 1-1/4" UNS thread
- MMA-1200	Anodised aluminium mast mount adaptor for ZM series, 1200mm x 25mm, 1-1/4" UNS thread
- MMA-SS	304 stainless steel mast mount adaptor for ZM series, 250mm x 25mm, 1-1/4" UNS thread
- A-3050	Machined brass 1/2"-12BSW to 1-1/4" UNEF threaded adaptor
- A-3050-3C	Chrome finish M14 to M14 male threaded adaptor
- A-3050-5	316 stainless steel M14 to M14 male threaded adaptor
- Parallel clamps	Galvanised steel & stainless steel parallel capable mounting clamps
- Right-angle clamps	Galvanised steel & stainless steel right-angle capable mounting clamps

##### **Antenna installation accessories**

- 316 stainless steel cable ties
- 316 stainless steel cable tie tensioner
- Black nylon cable ties
- Fire Retardant Electrical tape
- Self-bonding amalgamation butyl rubber tape

##### **How to order**

##### **Terms & conditions of sale**

##### **Contact us**



# HM208, HM212 & HM215

## Omnidirectional deck mount vertical radiator

### Marine Radio or HF 2-22 MHz



The HM212 and HM215 fold down collinears are designed for HF marine communications, on either a vessel or structure/tower.

This antenna is designed to couple with transmitters via an Antenna Tuning Unit (A.T.U.). Customers should verify with their supplier whether their A.T.U. specification will load the given length of radiator for this antenna at the lowest frequency required.

Mounting hardware, water-proofing, bird-proofing and other installation accessories are all available separately.

	HM208	HM212	HM215
Construction	White fibreglass radome, chrome ferrule and 316 stainless steel fold down mount base		
Frequency range	2-22 MHz - HF		
Tuning	Field tuning using suitable Automatic Tuning Unit (A.T.U.)		
Gain	2.1 dBi		
Maximum power	250 Watts PEP		
Impedance - nominal	An A.T.U. is required to match to 50 Ohms		
Polarisation	Vertical		
H Plane	360° omnidirectional		
Cable	5.0 metres 20kV single core cable - side exit from ferrule		
Height - including mount	2.4 metres	3.7 metres	4.5 metres
Weight - including mount	3.0kg	3.3kg	3.5kg
Mounting hardware	MM2 - 316 stainless steel fold-down mount supplied		
Alternate mounting order separate	MMA-SS - mast mount adaptor for tower/mast mounting using 2 x EB1-SS or UB3-SS - consult ZCG		
Mounting position recommended	Mount as high on your vessel/structure or tower as possible ensuring no obstructions.		
Installation tools required	Flat head screw driver and 14mm and 16mm spanners for fold-down mount securing		



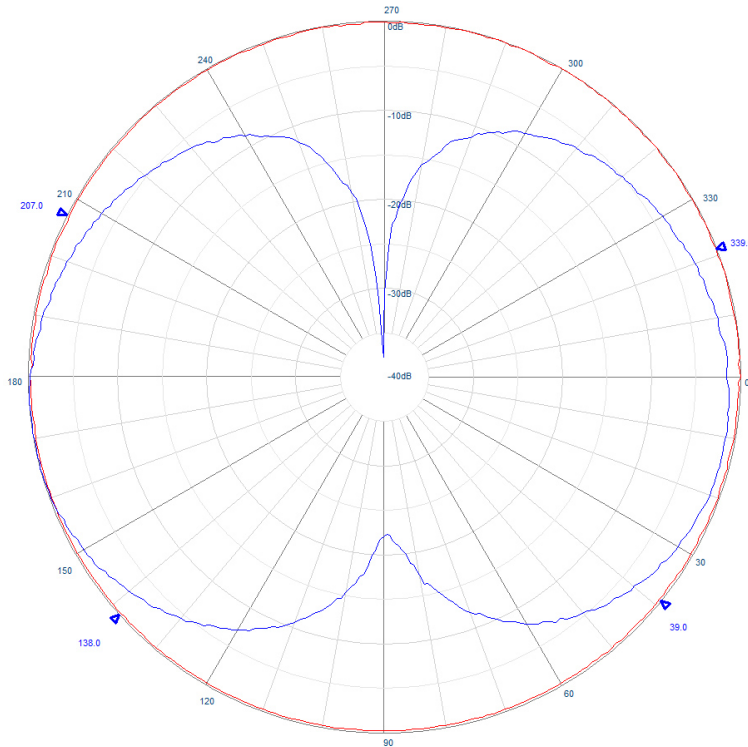
MM2 316 stainless steel dual axis fold down base included



# HM208, HM212 & HM215

Omnidirectional deck mount vertical radiator

Marine Radio or HF 2-22 MHz



Example radiation pattern

# HM208, HM212 & HM215

## Omnidirectional deck mount vertical radiator

### Marine Radio or HF 2-22 MHz

Alternate mounting hardware

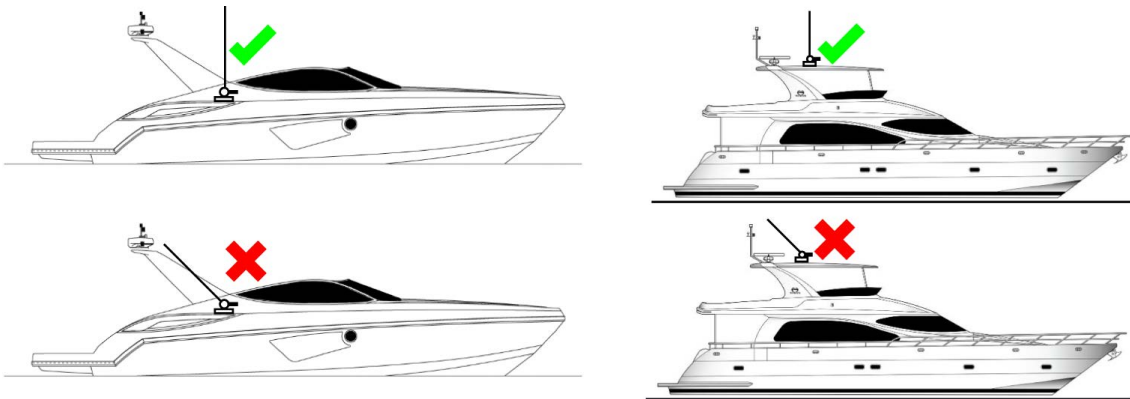
 <p>MM1 toughened white nylon dual axis fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2-B black finish 316 stainless steel dual axis fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>A-2654-2 - aluminium extension pole 1.1 metres includes 2 x 48mm U-bolts</p> <p>Requires antenna mounting hardware</p>	 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>
 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>	 <p>UB2-SS 304 stainless steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>
 <p>RB8 Galvanised steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	

# HM208, HM212 & HM215

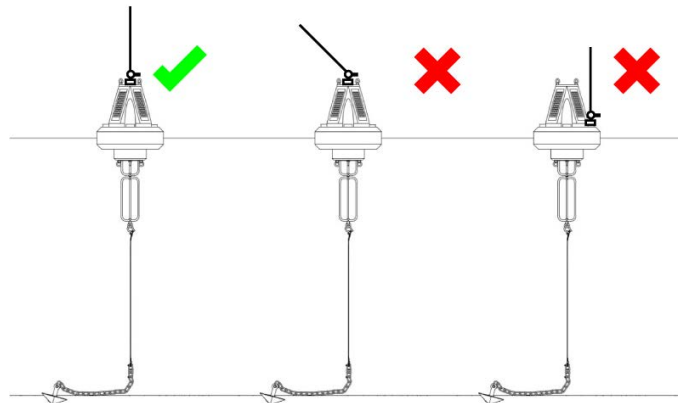
Omnidirectional deck mount vertical radiator

Marine Radio or HF 2-22 MHz

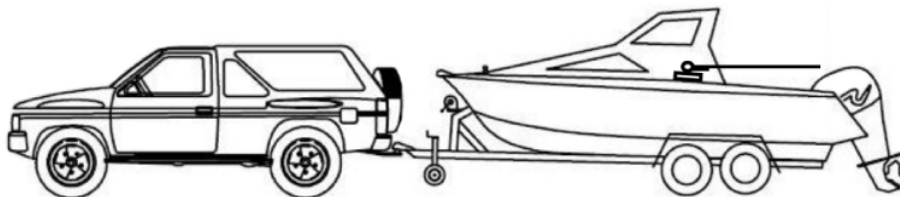
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.





# HM215-L

## 2-piece omnidirectional vertical radiator

### HF marine radio 2-30 MHz

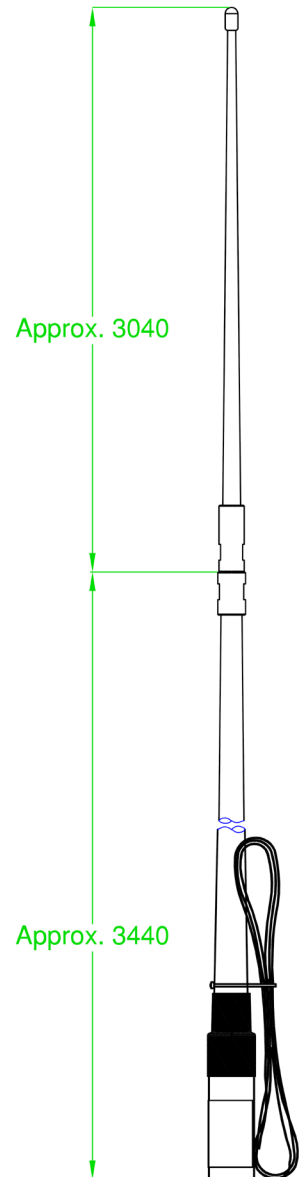


The HM215-L 2-piece fold down vertical radiator is designed for HF marine communications, on either a vessel or structure/tower. The 2-piece design reduces courier cost over a standard HM215, but requires additional assembly.

This antenna is designed to couple with transmitters via an Antenna Tuning Unit (A.T.U.). Customers should verify with their supplier whether their A.T.U. specification will load the given length of radiator for this antenna at the lowest frequency required.

Mounting hardware, water-proofing, bird-proofing and other installation accessories are all available separately.

Construction	2-piece white tapered fibreglass radome, chrome ferrule and fold down mount base
Frequency range	2-30 MHz - HF
Tuning	Field tuning using suitable Automatic Tuning Unit (A.T.U.)
Gain	2.1 dBi
Maximum power	250 Watts P.E.P.
Impedance - nominal	An A.T.U. is required to match to 50 Ohms
Polarisation	Vertical
Cable	5.0 metres 20kV single core cable - side exit from ferrule
Height - including mount	Assembled: 6.5 metres Packed: 3.5 metres
Weight - including mount	2.0kg
Mounting hardware supplied	MM2 - 316 stainless steel dual axis fold-down mount
Alternate mounting order separate	MMA-SS - mast mount adaptor for tower/mast mounting using 2 x EB1-SS or UB3-SS - consult ZCG
Mounting position recommended	Mount as high on your vessel/structure or tower as possible ensuring no obstructions.
Installation tools required	30mm and 27mm spanners for sectional securing Flat head screw driver and 14mm and 16mm spanners for fold-down mount securing



MM2 316 stainless steel dual axis fold-down base supplied



New Product

Australian  
manufactured  
in  
East Gippsland

# HM215-L

2-piece omnidirectional vertical radiator

HF marine radio 2-30 MHz

Build  
To  
Order

Alternate mounting hardware

 <p>MM1 toughened white nylon dual axis fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2-B black finish 316 stainless steel dual axis fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>A-2654-2 - aluminium extension pole 1.1 metres includes 2 x 48mm U-bolts</p> <p>Requires antenna mounting hardware</p>	 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>
 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>	 <p>UB2-SS 304 stainless steel steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>
 <p>RB8 Galvanised steel steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	

New Product

Australian  
manufactured  
in  
East Gippsland

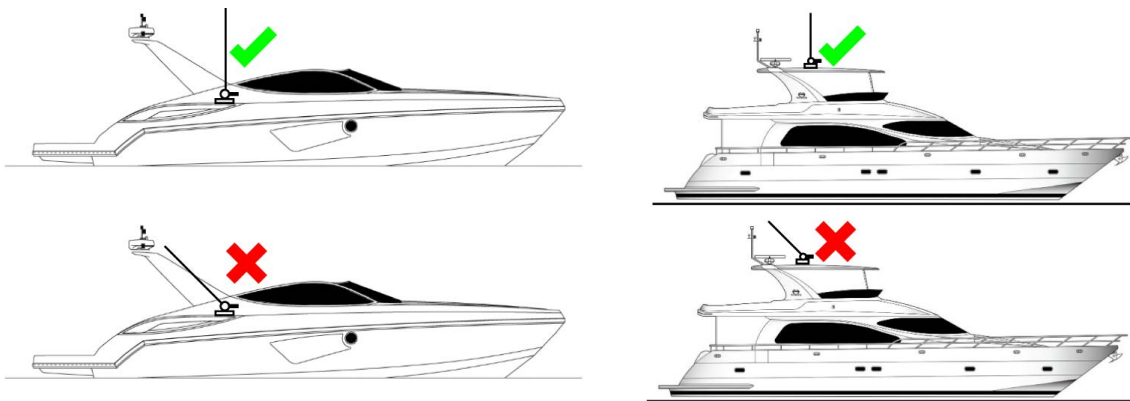
# HM215-L

2-piece omnidirectional vertical radiator

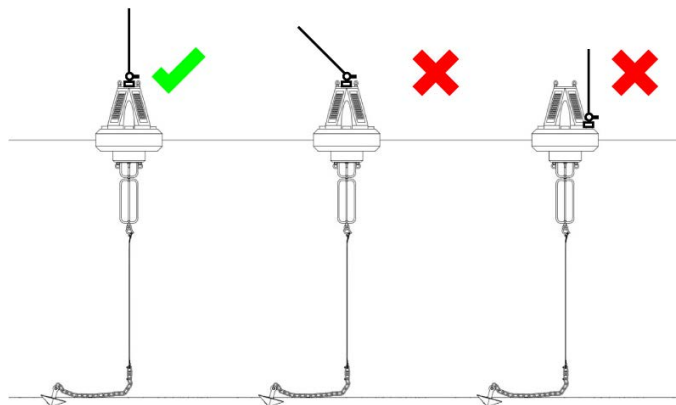
HF marine radio 2-30 MHz

Build  
To  
Order

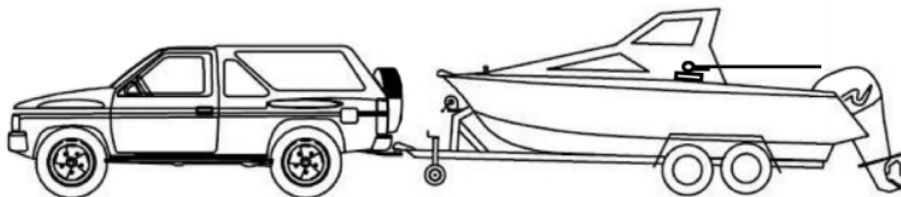
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



## HM300

### Heavy-duty 3-piece vertical radiator Marine Radio or HF 1.6-30 MHz

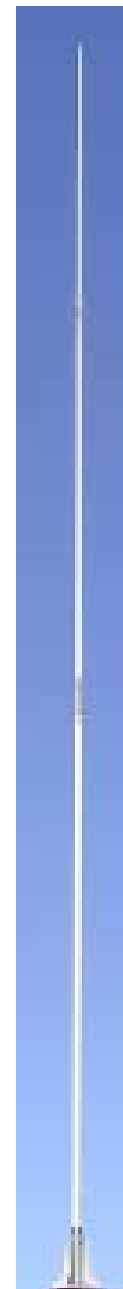


The HM300 is a free standing, marine HF radio, heavy duty mount antenna specifically designed for larger vessels or structure/tower installations. The HM300 delivers outstanding performance and is suited for extreme environments and high power applications.

**Please note:** Assembly of 3-piece construction is required before installation

Mounting hardware, water-proofing, bird proofing and other installation accessories are all available separately.

Construction	3-piece white radome, stainless steel joining ferrules, stainless steel mount section and detachable termination cable
Frequency range	1.6-30 MHz - HF
Tuning	Field tuning using suitable Automatic Tuning Unit (A.T.U.)
Gain	2.1 dBi
Impedance - nominal	An A.T.U. is required to match to 50 Ohms
Maximum power	2 Kilowatts P.E.P.
Polarisation	Vertical
Cable	6 metres 20kV single core cable
Termination	Termination lug
Height	10 metres - assembled, 3.7m - packed
Weight	24kg
Mount section	350mm length x 60mm diameter x 4mm thickness
Projected area	0.283m <sup>2</sup>
Wind load at 160kph	34.255kg, 0.336kN
Mounting hardware order separate	A-1429 316 stainless steel fully-welded heavy-duty mount base for deck/floor or roof mounting
Mounting position recommended	Mount as high as possible on the vessel/structure or tower ensuring no obstructions.
Installation tools required	52mm, 48mm, 30mm and 27mm spanners for sectional securing



HM300 fitted into A-1429 deck or roof mount bracket

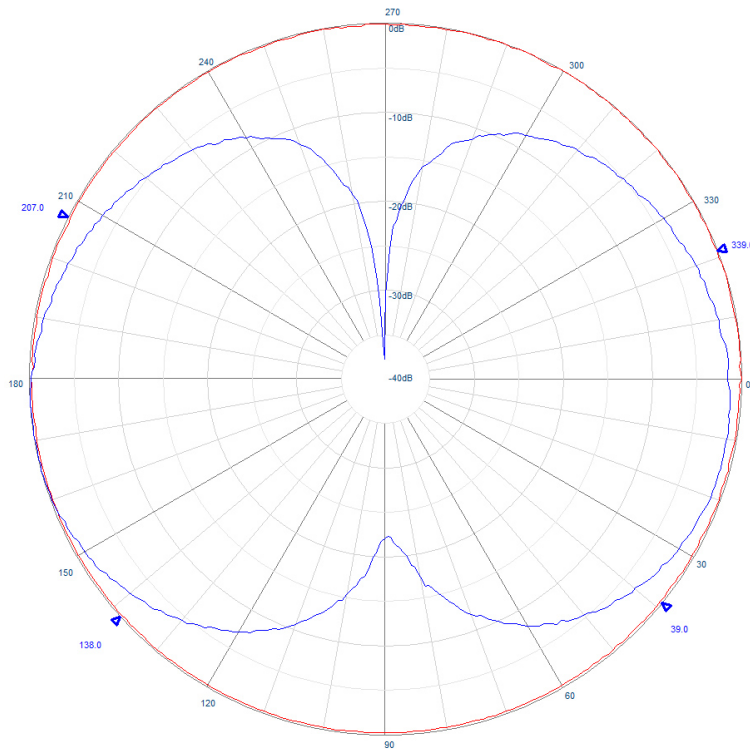
# HM300

## Heavy-duty 3-piece vertical radiator Marine Radio or HF 1.6-30 MHz

Improved  
Product

Australian  
manufactured  
in  
East Gippsland

  
Build  
To  
Order



Example radiation pattern

### A-1429 heavy duty deck mount

Construction	Fully-welded 316 grade stainless steel body and 304 stainless steel components
Dimensions	H: 313mm, Dia: 300mm, base plate thickness: 8mm
Antenna fixing bolts supplied	2 x M12 bolts/washers/nuts
Mounting holes	4 x 14mm holes



HM300 fitted into A-1429 deck or roof mount bracket



## HM218-L 3-piece mast mount collinear Marine HF 2-30 MHz

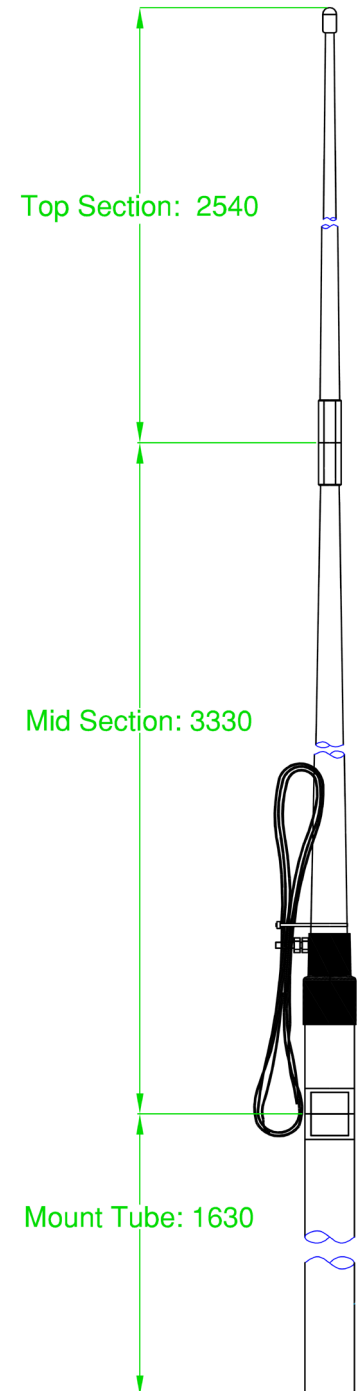


The HM218-L is suitable for all HF marine communications within the 2-30MHz range. These antennas offer top performance together with a 3-piece construction enabling easy dismantling and reduced storage area required.

This antenna is designed to couple with transmitters via an Antenna Tuning Unit (A.T.U.). Please check whether A.T.U. specification will load the given length of radiator for this antenna at your lowest frequency required.

Mounting hardware, water-proofing, bird proofing and other installation accessories are all available separately.

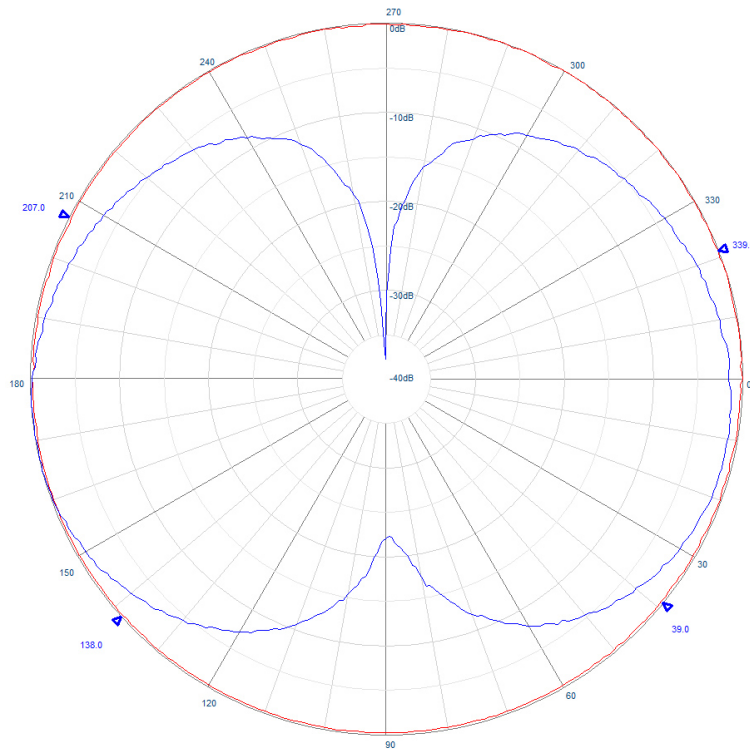
Construction	2-section white radome, chrome joining ferrules, 2-piece 316 stainless steel mount section and external cable
Frequency range	2-30 MHz - Marine HF, when combined with <u>suitable A.T.U.</u>
Tuning	Field tuning using A.T.U.
Gain	2.1 dBi
Maximum power	500 Watts PEP
Impedance - nominal	An A.T.U. is required to match to 50 Ohms
Polarisation	Vertical
Cable	6 metres 20kV single core cable
Termination	Stainless steel termination lug 25mm x 25mm
Height assembled: Height packed:	7.5 metres 3.4 metres
Weight	5.9kg
Projected area	0.161m <sup>2</sup>
Wind load at 160kph	19.559kg, 0.192kN
Mount section	2-piece 316 stainless steel 2.0m x 38.1mm $\phi$
Mast mounting order separate	2 x UAM180L-316 heavy-duty parallel clamps or 2 x UAM90L-316 heavy-duty right-angle clamps
Side/wall mounting order separate	2 x NSM-218
Mounting position recommended	Mount as high on your vessel or structure as possible using appropriate mounting hardware. Ensure no obstructions around antenna.
Installation tools required	16mm spanners for sectional securing 32mm spanner for mount section securing





# HM218-L

3-piece mast mount collinear  
Marine HF 2-30 MHz



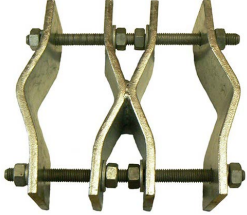
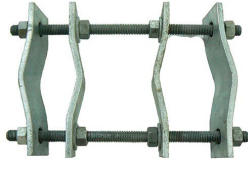
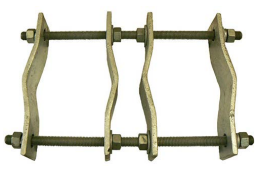
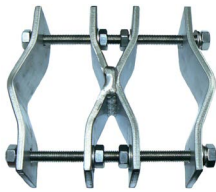
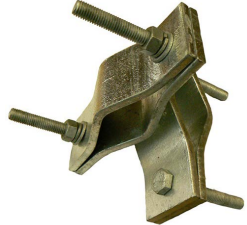



Example radiation pattern



# HM218-L

## 3-piece mast mount collinear Marine HF 2-30 MHz

Suitable mounting hardware

 <p><b>UAM180L</b> Galvanised steel heavy-duty parallel clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>	 <p><b>UAM180UNI</b> Galvanised steel large heavy-duty parallel clamp Boom: 40-70mm capability Mount pole: 40-90mm capability</p>
 <p><b>UAM180UNIL</b> Galvanised steel extra large heavy-duty parallel clamp Boom: 40-90mm capability Mount pole: 60-115mm capability</p>	 <p><b>UAM180L-SS316</b> 316 grade stainless steel large heavy-duty parallel clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>
 <p><b>UAM90L</b> Galvanised steel heavy-duty right-angle clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>	 <p><b>UAM90UNI</b> Galvanised steel large heavy-duty right-angle clamp Boom: 40-70mm capability Mount pole: 40-90mm capability</p>
 <p><b>UAM90LL</b> Galvanised steel extra large heavy-duty right-angle clamp Boom: 60-115mm capability Mount pole: 60-115mm capability</p>	 <p><b>NSM-218</b> Toughended nylon wall/side mount Boom: 38mm Mount hole: 16mm</p>

# HM218-M & HM223-M

## 2-piece mast mount omnidirectional vertical radiators

### Marine HF 2-30 MHz

The HM218-M and HM223-M are suitable for all HF marine communications within the 2-30MHz range. These antennas offer top performance together with a two-piece construction enabling easy dismantling and reduced storage area required. This antenna is designed to couple with transmitters via an Antenna Tuning Unit (A.T.U.). Please check whether A.T.U. specification will load the given length of radiator for this antenna at your lowest frequency required.

Mounting hardware, water-proofing, bird proofing and other installation accessories are all available separately.

	HM218-M	HM223-M
Construction	Two-piece white radome, chrome joining ferrule and 304 stainless steel mounting section	
Frequency range	Marine HF 2-30MHz - <u>using suitable A.T.U.</u>	
Tuning	Field tuning using A.T.U.	
Gain	2.1 dBi	
Maximum power	500 Watts P.E.P.	1,400 Watts P.E.P.
Impedance - nominal	An A.T.U. is required to match to 50 Ohms	
Polarisation	Vertical	
Cable	6 metres 20kV single core cable	
Termination	Stainless steel termination lug 25mm x 25mm	
Height - assembled:	6.0 metres	8.1 metres
Height - packed:	3.5 metres	4.3 metres
Weight	3.0kg	8.0kg
Projected area	0.136m <sup>2</sup>	0.215m <sup>2</sup>
Wind load at 160kph	16.46kg, 0.163kN	25.99kg, 0.255kN
Mount section	600mm x 38mm	840mm x 50mm
Mast mounting order separate	Parallel: 2 x UAM180L or 2 x UAM180UNI Right-angle: 2 x UAM90L or 2 x UAM90UNI	
Side/wall mounting order separate	2 x NSM-218	2 x NSM-223
Mounting position recommended	Mount as high on your vessel or structure as possible using appropriate mounting hardware. Ensure no obstructions around antenna.	
Installation tools required	HM218-M: 16mm spanner for sectional securing HM223-M: 32mm spanner for sectional securing	



HM223-M assembled

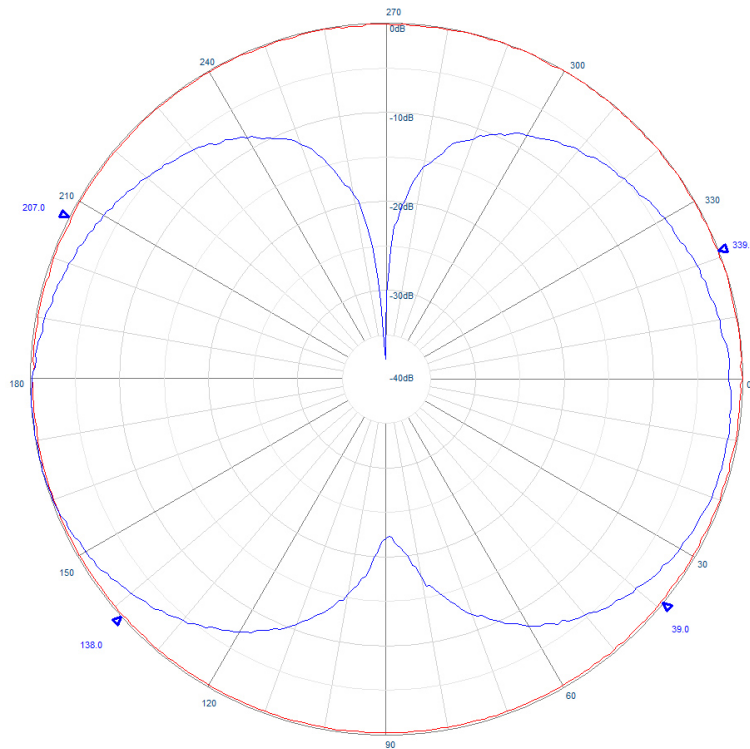
HM223-M dis-assembled



# HM218-M & HM223-M

## 2-piece mast mount omnidirectional vertical radiators

### Marine HF 2-30 MHz



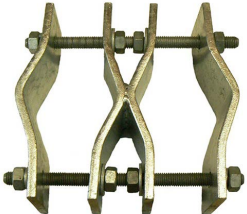
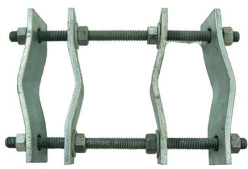

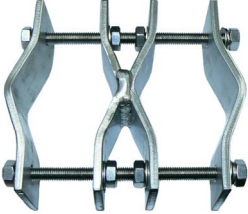
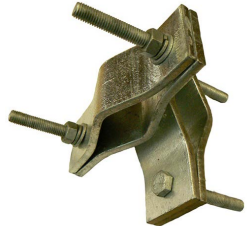
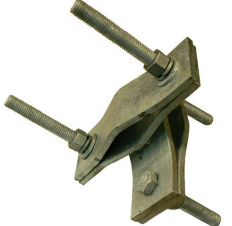
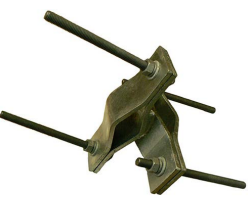


Example radiation pattern

# HM218-M & HM223-M

## 2-piece mast mount omnidirectional vertical radiators

### Marine HF 2-30 MHz

Suitable mounting hardware

	<p><b>UAM180L</b> Galvanised steel heavy-duty parallel clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>		<p><b>UAM180UNI</b> Galvanised steel large heavy-duty parallel clamp Boom: 40-70mm capability Mount pole: 40-90mm capability</p>
	<p><b>UAM180UNIL</b> Galvanised steel extra large heavy-duty parallel clamp Boom: 40-90mm capability Mount pole: 60-115mm capability</p>		<p><b>UAM180L-SS316</b> 316 grade stainless steel large heavy-duty parallel clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>
	<p><b>UAM90L</b> Galvanised steel heavy-duty right-angle clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>		<p><b>UAM90UNI</b> Galvanised steel large heavy-duty right-angle clamp Boom: 40-70mm capability Mount pole: 40-90mm capability</p>
		<p><b>UAM90LL</b> Galvanised steel extra large heavy-duty right-angle clamp Boom: 60-115mm capability Mount pole: 60-115mm capability</p>	
	<p><b>NSM-218</b> Toughened nylon wall/side mount Boom: 38mm Mount hole: 16mm</p>		<p><b>NSM-223</b> Toughened nylon wall/side mount Boom: 50mm Mount hole: 16mm</p>



## HM300

### Heavy-duty 3-piece vertical radiator Marine Radio or HF 1.6-30 MHz

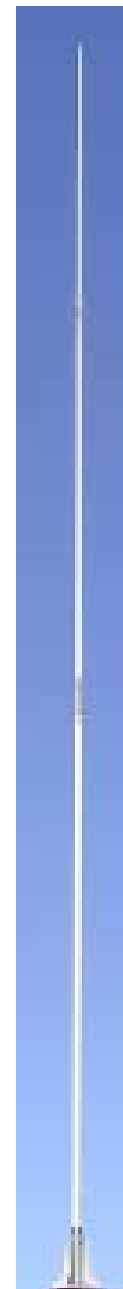


The HM300 is a free standing, marine HF radio, heavy duty mount antenna specifically designed for larger vessels or structure/tower installations. The HM300 delivers outstanding performance and is suited for extreme environments and high power applications.

**Please note:** Assembly of 3-piece construction is required before installation

Mounting hardware, water-proofing, bird proofing and other installation accessories are all available separately.

Construction	3-piece white radome, stainless steel joining ferrules, stainless steel mount section and detachable termination cable
Frequency range	1.6-30 MHz - HF
Tuning	Field tuning using suitable Automatic Tuning Unit (A.T.U.)
Gain	2.1 dBi
Impedance - nominal	An A.T.U. is required to match to 50 Ohms
Maximum power	2 Kilowatts P.E.P.
Polarisation	Vertical
Cable	6 metres 20kV single core cable
Termination	Termination lug
Height	10 metres - assembled, 3.7m - packed
Weight	24kg
Mount section	350mm length x 60mm diameter x 4mm thickness
Projected area	0.283m <sup>2</sup>
Wind load at 160kph	34.255kg, 0.336kN
Mounting hardware order separate	A-1429 316 stainless steel fully-welded heavy-duty mount base for deck/floor or roof mounting
Mounting position recommended	Mount as high as possible on the vessel/structure or tower ensuring no obstructions.
Installation tools required	52mm, 48mm, 30mm and 27mm spanners for sectional securing



HM300 fitted into A-1429 deck or roof mount bracket

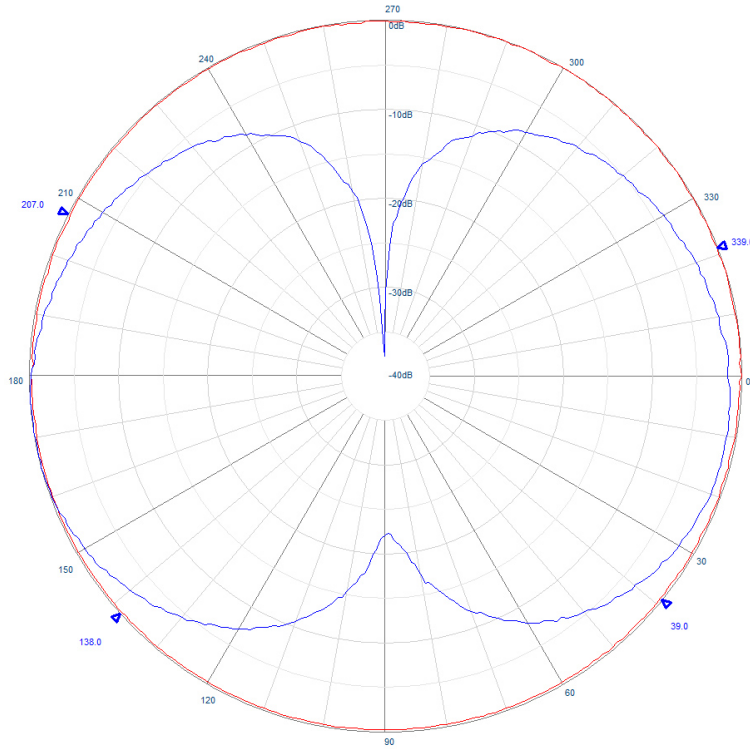
# HM300

## Heavy-duty 3-piece vertical radiator Marine Radio or HF 1.6-30 MHz

Improved  
Product

Australian  
manufactured  
in  
East Gippsland

  
Build  
To  
Order



Example radiation pattern

### A-1429 heavy duty deck mount

Construction	Fully-welded 316 grade stainless steel body and 304 stainless steel components
Dimensions	H: 313mm, Dia: 300mm, base plate thickness: 8mm
Antenna fixing bolts supplied	2 x M12 bolts/washers/nuts
Mounting holes	4 x 14mm holes



HM300 fitted into A-1429 deck or roof mount bracket



## ZM21-27 & ZM24-27

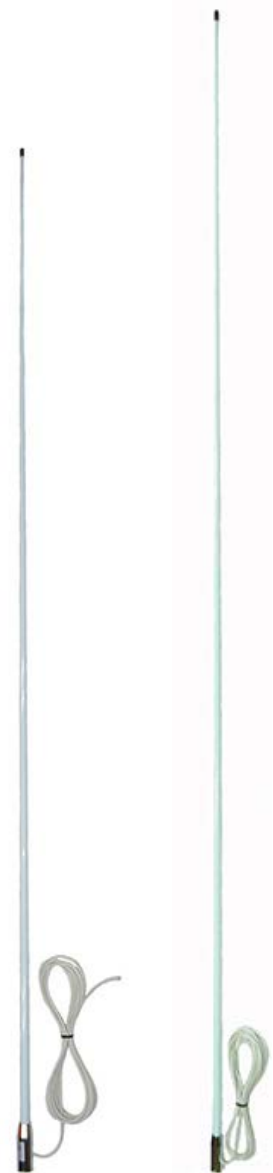
### Vessel deck or mast mount collinear Marine CB Radio 27.68-27.98 MHz



The ZM21-27 and ZM24-27 ground independent deck mount antennas are suitable for 27.68-27.98 MHz marine CB radio communications. The ZM21-27 is identical in appearance to all the ZM21 series of marine antennas. The ZM24-27 is identical in appearance to all the ZM24 series of marine antennas.

Mounting hardware, water-proofing, adaptors and other installation accessories are all available separately.

	ZM21-27	ZM24-27
Construction	White tapered fibreglass radome, chrome mount ferrule, external coaxial cable and supplied termination	
Frequency range	27.68 - 27.98 MHz - Maritime HF CB Radio	
Bandwidth	Tuned for 27.86 & 27.88 MHz marine CB radio emergency channels	
VSWR	<1.5:1 at emergency channels < 2.5:1 rest of band	
Tuning	Factory	
Gain	2.1 dBi	
Maximum power	25 Watts	
Impedance	50 Ohms	
Polarisation	Vertical - do not lean/tilt once installed, only during transit	
H Plane	360° omni-directional	
Cable	4.5 metres RG58 stranded - side exit from ferrule	
Connector	UHF male PL259 solder connector - supplied, not fitted	
Height	2.1 metres	2.4 metres
Weight	1.0kg	1.1kg
Mounting hardware order separate	MM1 plastic fold-down base or MM2 stainless steel MMA or MMA-SS mast mount adaptor for mast mounting Alternate: A-3050 adaptor and 1270 spring base with 1/2" bolt	
Mounting position recommended	Mount as high on your vessel/structure as possible ie. the roof or the deck.	



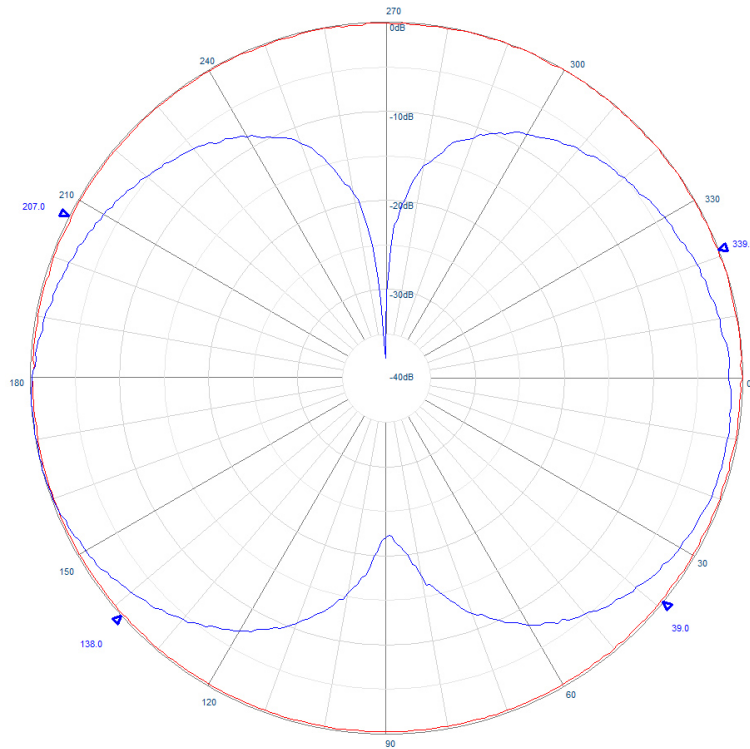
UHF male PL259 - supplied not fitted



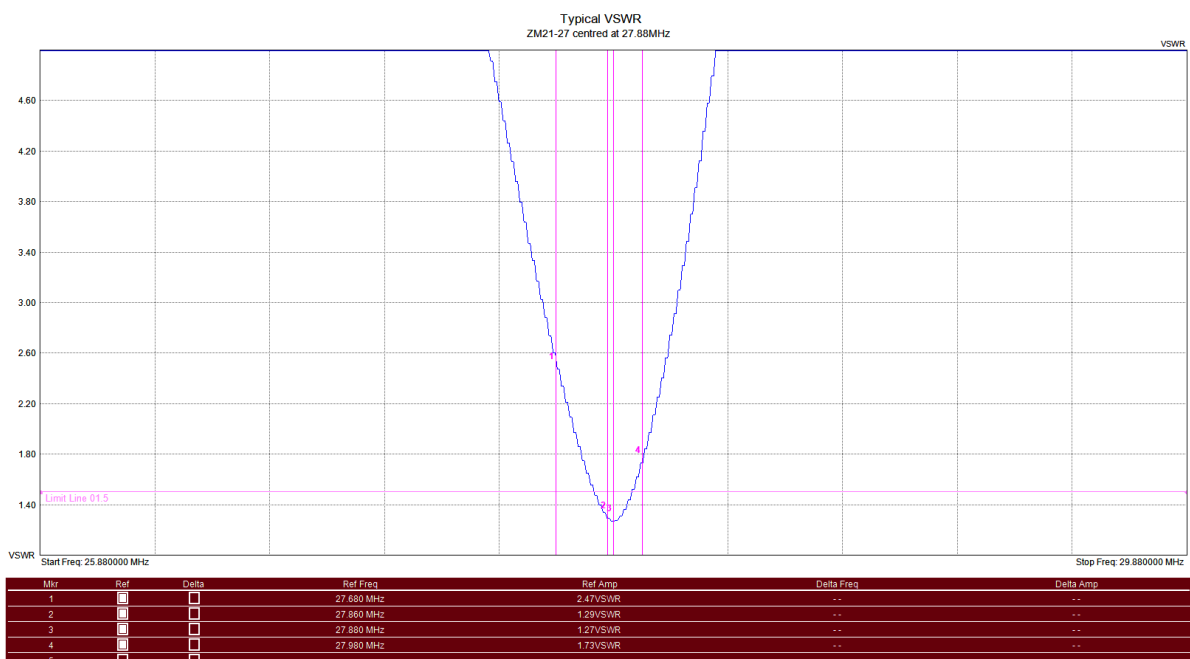
# ZM21-27 & ZM24-27

Vessel deck or mast mount collinear

Marine CB Radio 27.68-27.98 MHz



Example radiation pattern



Typical VSWR









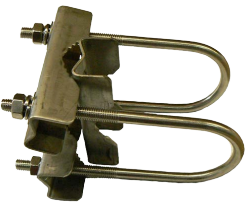



# ZM21-27 & ZM24-27

Vessel deck or mast mount collinear

Marine CB Radio 27.68-27.98 MHz

Alternate mounting hardware

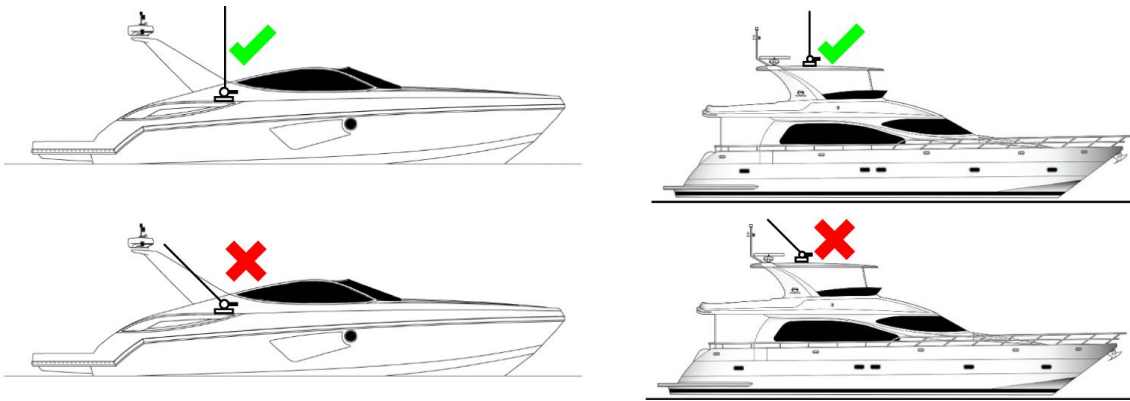
 <p>MM1 toughened white nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>A-1269 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>	 <p>A-1270 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>
 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>	 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
 <p>UB2-SS 304 stainless steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	 <p>RB8 Galvanised steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>

# ZM21-27 & ZM24-27

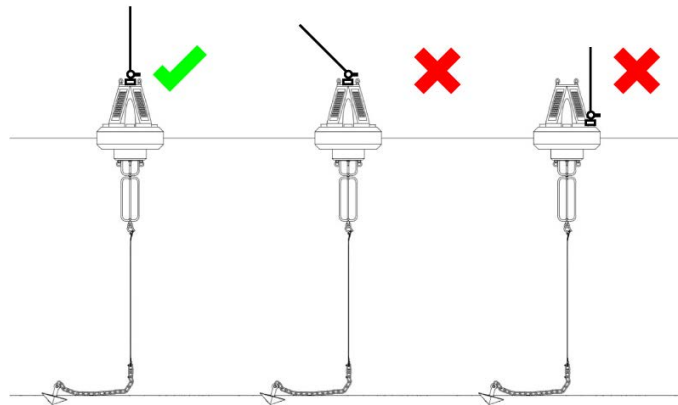
Vessel deck or mast mount collinear

Marine CB Radio 27.68-27.98 MHz

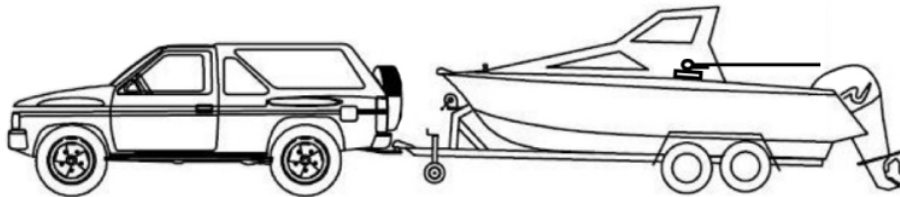
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



# HM2800

## Omni-directional "Coastguard" Collinear HF 27 MHz Marine Communications



Built to full commercial specifications, the HM2800 "coastguard" 27MHz fixed position collinear will survive long term in the most severe weather conditions and hostile environments.

The HM2800 is suitable for large vessels or mounting to the side of a structure or top of a tower.

Mounting hardware, coaxial feeder cable, connectors and other installation accessories are all available.

Construction	Single piece white fibreglass radome, 304 stainless steel mount section and external cable tail
Frequency range	27.680-27.980 MHz - HF
Tuning	Factory
VSWR	<1.5:1 across frequency
Gain	2.1 dBi
Maximum power	50 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omni-directional
Cable tail	1.0 metre RG213 - bottom exit from mount section
Connector	N-type female jack fitted to cable tail as standard or specify requirements
Height	6.2 metres
Weight	7.0kg
Mount section	500mm x 50mm - 304 stainless steel
Mounting hardware order separate	2 x UAM180L - parallel or 2 x UAM90L - right angle 2 x NSM-223 - wall/side mounting
Mounting position recommended	Mount as high on your vessel/structure or tower as possible ensuring no obstructions.

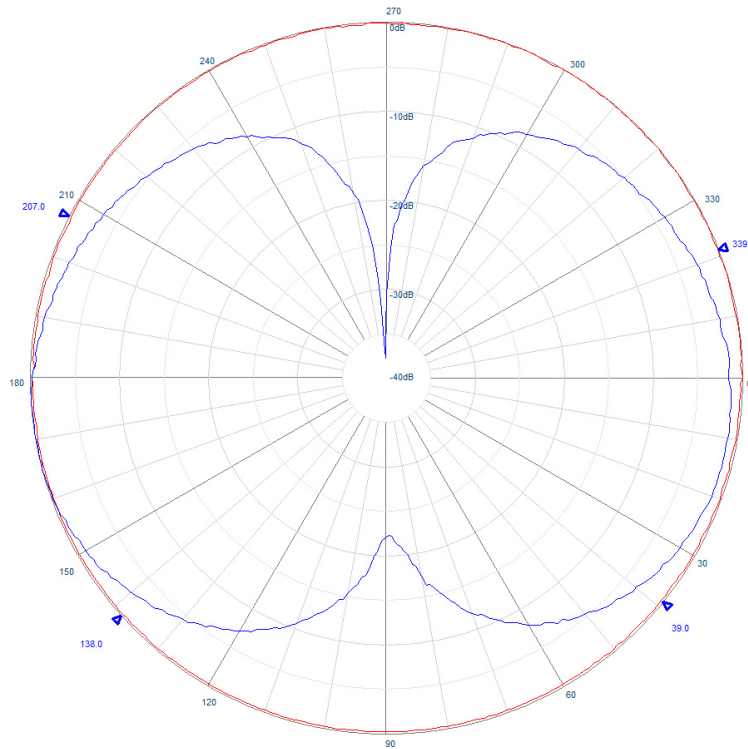


N-type female fitted to cable tail as standard

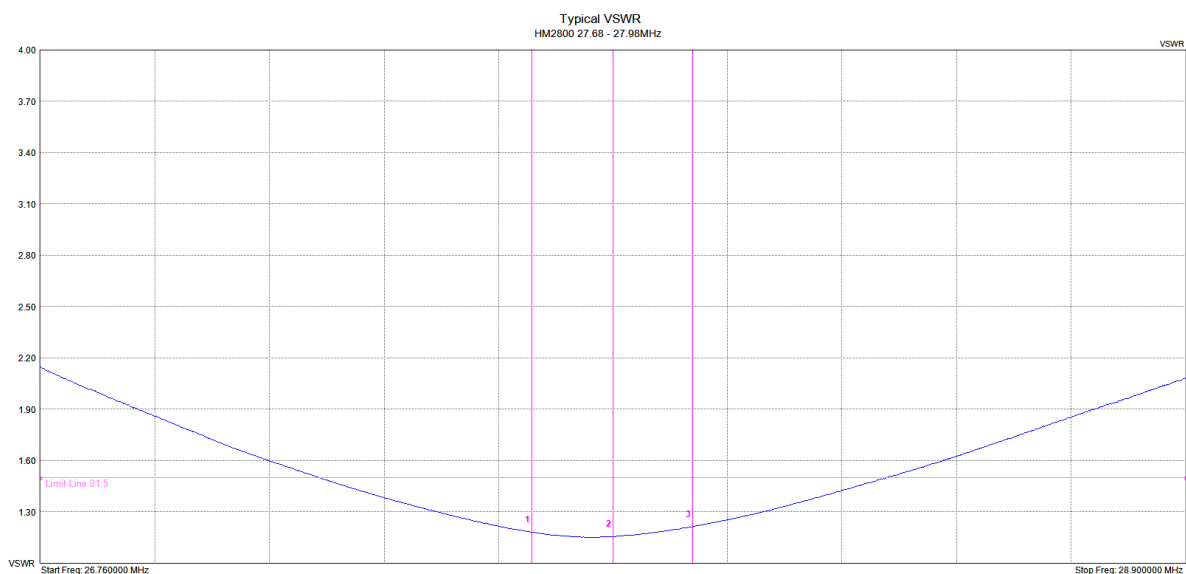


# HM2800

## Omni-directional "Coastguard" Collinear HF 27 MHz Marine Communications



Example radiation pattern



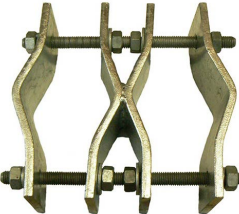
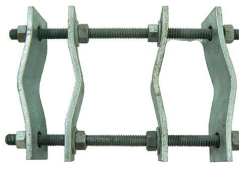
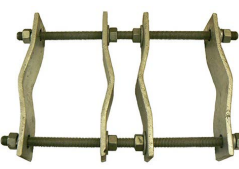

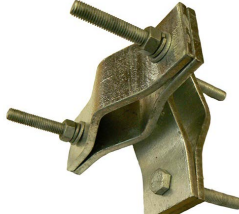



Mir	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27.679 MHz	1.18VSWR	--	--
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27.830 MHz	1.15VSWR	--	--
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27.979 MHz	1.21VSWR	--	--
4	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--

Typical VSWR

# HM2800

## Omni-directional "Coastguard" Collinear HF 27 MHz Marine Communications

### Suitable mounting hardware

	<p><b>UAM180L</b> Galvanised steel heavy-duty parallel clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>		<p><b>UAM180UNI</b> Galvanised steel large heavy-duty parallel clamp Boom: 40-70mm capability Mount pole: 40-90mm capability</p>
	<p><b>UAM180UNIL</b> Galvanised steel extra large heavy-duty parallel clamp Boom: 40-90mm capability Mount pole: 60-115mm capability</p>		<p><b>UAM180L-SS316</b> 316 grade stainless steel large heavy-duty parallel clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>
	<p><b>UAM90L</b> Galvanised steel heavy-duty right-angle clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>		<p><b>UAM90UNI</b> Galvanised steel large heavy-duty right-angle clamp Boom: 40-70mm capability Mount pole: 40-90mm capability</p>
	<p><b>UAM90LL</b> Galvanised steel extra large heavy-duty right-angle clamp Boom: 60-115mm capability Mount pole: 60-115mm capability</p>		<p><b>NSM-223</b> Toughened nylon wall/side mount Boom: 50mm Mount hole:</p>

### Suitable feeder coaxial cable and connectors

	<p><b>RU400</b> Solid copper conductor, low loss coaxial cable CNT-400 / LMR-400™ equivalent (* times microwave) P/N 7890 Available in 100m, 300m, 500m roll or alternatively request a custom cable assembly</p>		<p>N-type male crimp connector for RU400 low loss, solid conductor P/N 8226 Tri-metal plated</p>
	<p>1/2" corrugated shielding, foam dielectric coaxial cable P/N ZCG1250 Available in per metre, or 500m rolls or alternatively request a custom cable assembly</p>		<p>N-type male clamp connector for 1/2" flexible, corrugated shielded, coaxial cable P/N NM1250 Tri-metal plated</p>

## ZM108A

### Omnidirectional mast or side mount collinear Marine CB radio 27.88 MHz - Emergency channel 88

The ZM108 is a ground independent mast mount or side mount antenna for 27.88 MHz marine radio communications, emergency channel 88.

Suitable for mounting onto larger vessels or onto a structure/tower.

Mounting hardware, water-proofing, bird proofing, adaptors and other installation accessories are all available.

Construction	White fibreglass radome, 304 grade stainless steel mount section and external termination
Frequency range	27.88 MHz - Marine CB Radio Emergency channel 88 Also covers secondary emergency channel at 27.86MHz
VSWR	<1.5:1
Tuning	Factory
Gain	2.1 dBi
Maximum power	25 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
Connector	N-type female in base of mount section - no cable
Height	2.8 metres
Weight	1.6kg
Mount section	500mm x 22mm - 304 stainless steel
Projected area	0.041m <sup>2</sup>
Wind load at 160kph	4.99kg, 0.049kN
Mounting hardware order separate	Parallel: 2 x EB1-SS or 1 x UB3-SS or Right-angle: 2 x RB8 or 1 x UB2-SS
Operating temperature	0°C ~ +60°C (32°F to 140°F)
Relative humidity	20~80% - non-condensing
Mounting position recommended	Mount as high as possible on your structure/tower ensuring no obstructions, using appropriate mounting hardware

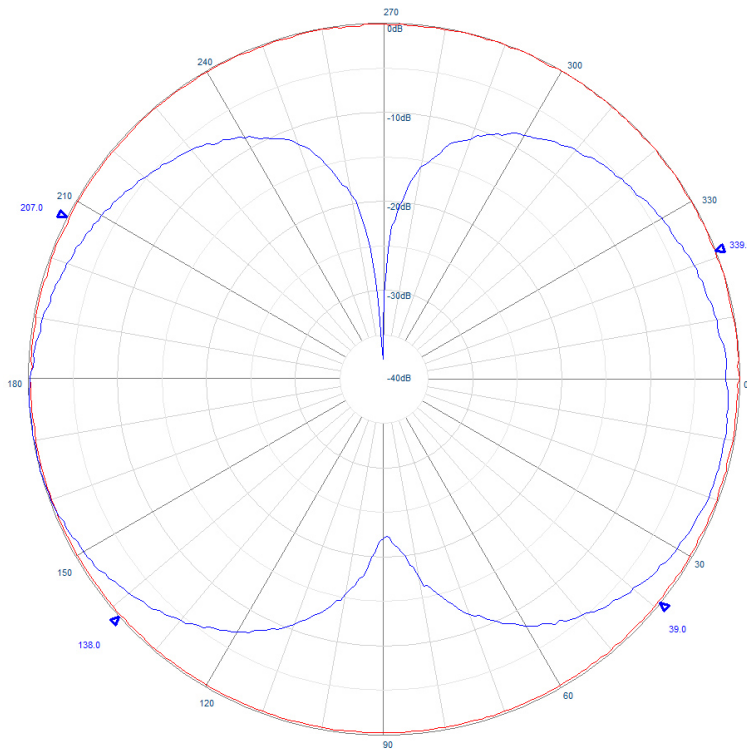


N-type female in base of mount section

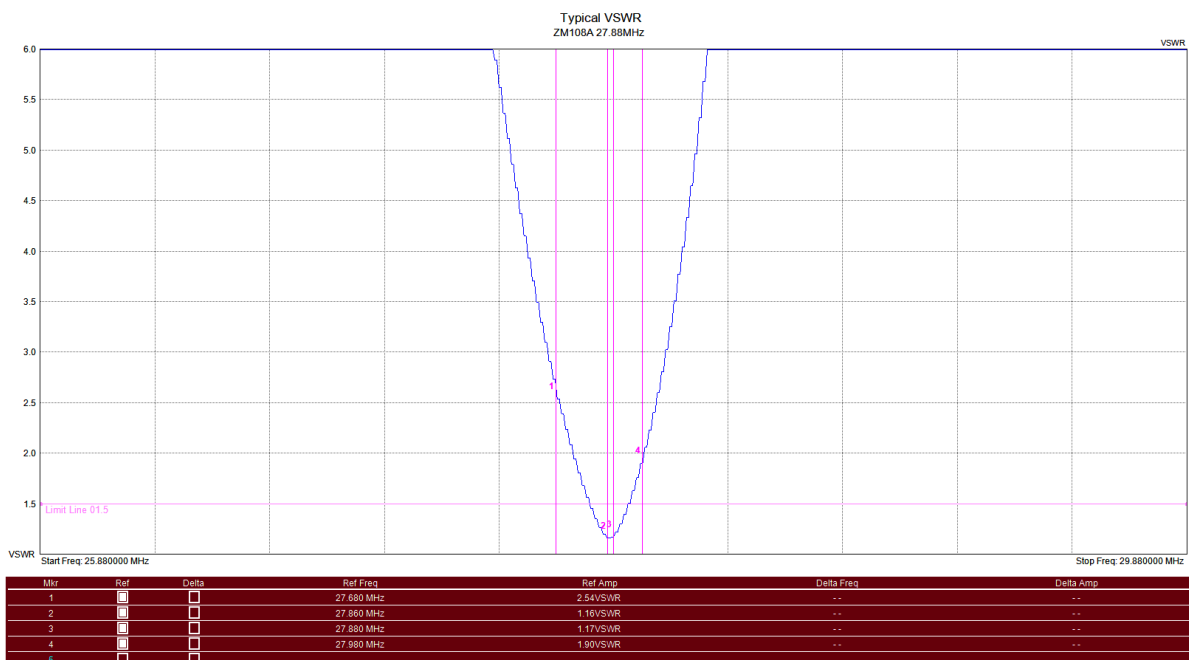


# ZM108A

Omnidirectional mast or side mount collinear  
Marine CB radio 27.88 MHz - Emergency channel 88



Example radiation pattern



Typical VSWR




# ZM108A

## Omnidirectional mast or side mount collinear Marine CB radio 27.88 MHz - Emergency channel 88




CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires mounting screws/ bolts and mounting hardware for antenna



A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires mounting screws/ bolts and mounting hardware for antenna




SFB Series - galvanised steel pole extension 0.9-2.0 metres  
Roof or overhang mounting

Requires mounting screws/ bolts and mounting hardware for antenna



EB1-SS - requires 2  
304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS  
304 stainless steel parallel clamp

Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8  
Galvanised steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability



UB2-SS  
304 stainless steel right-angle clamp


Boom: 20-50mm capability  
Mount pole: 20-50mm capability

Suitable feeder coaxial cable and connectors



MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable  
P/N 7800

Available in 100m or 300m rolls or alternatively request a custom cable assembly



N-type male crimp connector for MIL-SPEC RG213  
P/N 7937

Tri-metal plated



RU400 Solid copper conductor, low loss coaxial cable  
CNT-400 / LMR-400™ equivalent  
(™ times microwave)  
P/N 7890

Available in 100m, 300m or 500m rolls or alternatively request a custom cable assembly



N-type male crimp connector for RU400 low loss, solid conductor  
P/N 8226

Tri-metal plated



# ZM204

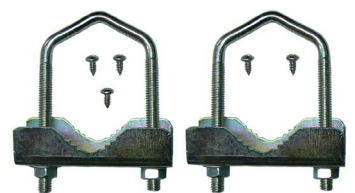
## 5-piece telescopic collinear Marine 27MHz CB radio

The ZM204 offers a economical and lightweight solution omnidirectional marine 27MHz communications. With a telescopic design this antenna has the ability to reduce in height significantly when storage/transportation is required and greatly reduces courier costs in comparison to an equivalent sized single piece collinear.

**Please note:** assembly of this antenna is required.

Mounting hardware, coaxial feeder cable, connectors and other installation accessories are all available separately.

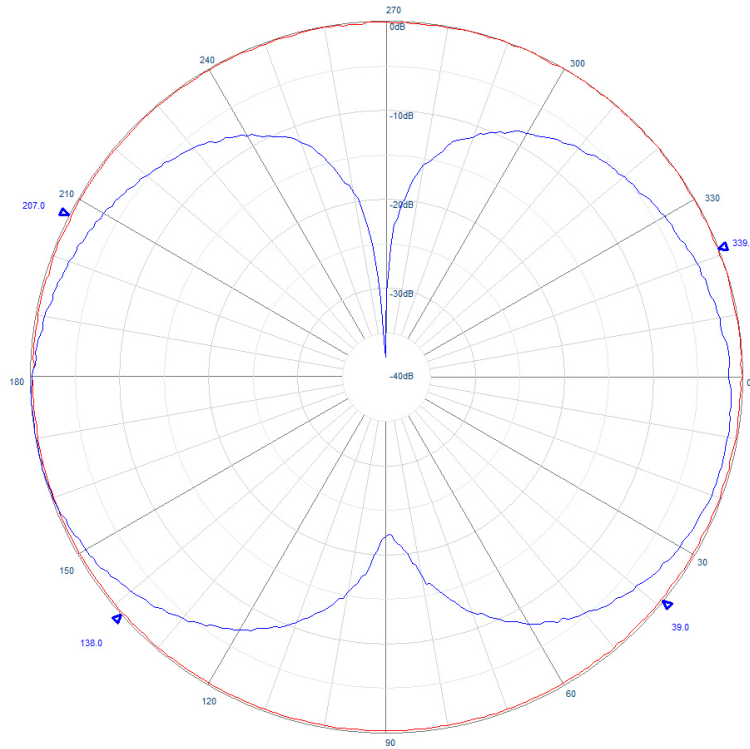
Construction	5-piece aluminium radiator tubes, anodised aluminium mount section and
Frequency range	27.680-27.980 MHz - Marine CB Radio
Tuning	Factory
VSWR	<1.5:1 across frequency
Gain	2.1 dBi
Maximum power	50 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
Connector	UHF female SO239 in base of mount/tuning section
Height	5.1 metres
Weight	2.0kg
Length	1.4m - packed, 5.1m - assembled
Mount section	300mm x 38mm - anodised aluminium
Projected area	0.06m <sup>2</sup>
Wind load at 160kph	7.276kg, 0.071kN
Mounting hardware	2 x U-bolts V-blocks and 5 screws - supplied
Mounting position recommended	Mount as high on your vessel/structure or tower as possible ensuring no obstructions.
Assembly tools required	- Phillips head / Star screwdriver - for telescopic sections - 10mm ring spanner or ratchet spanner - for U-bolts



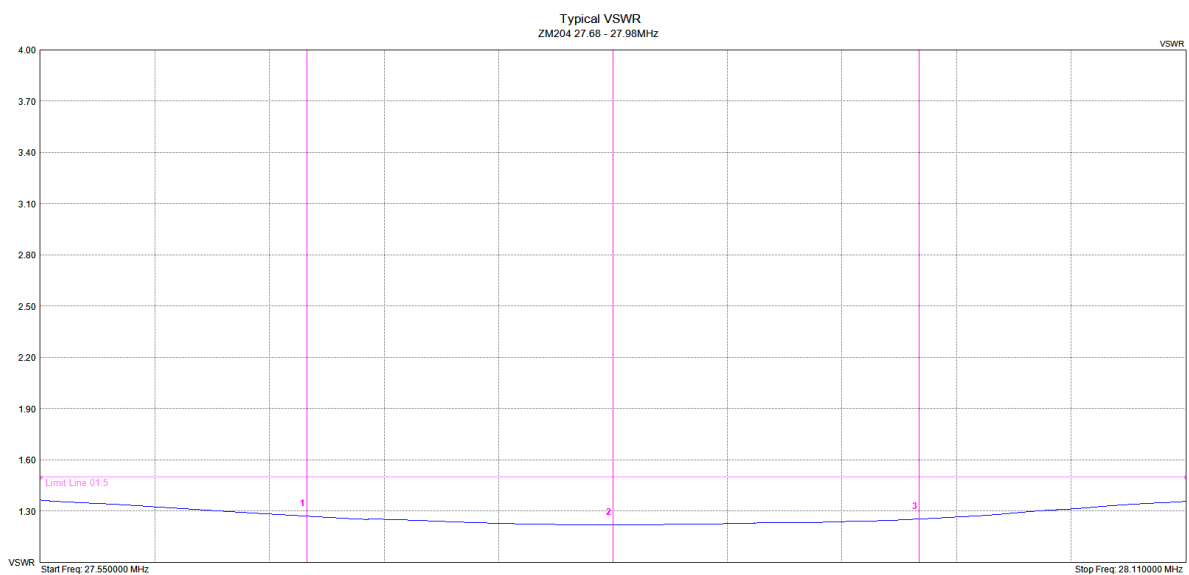


# ZM204

## 5-piece telescopic collinear Marine 27 MHz CB radio



Example radiation pattern



Mtr	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27.680 MHz	1.27VSWR	--	--
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27.830 MHz	1.22VSWR	--	--
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	27.980 MHz	1.25VSWR	--	--
4	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--


Typical VSWR



## ZM204


### 5-piece telescopic collinear Marine 27 MHz CB radio

Suitable mounting hardware - order separate




CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires mounting screws/ bolts and mounting hardware for antenna



A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

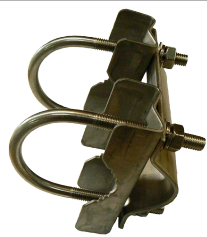
Requires mounting screws/ bolts and mounting hardware for antenna



SFB Series - galvanised steel pole extension 0.9-2.0 metres  
Roof or overhang mounting

Requires mounting screws/ bolts and mounting hardware for antenna

Alternate mounting hardware - order separate




UB3-SS  
304 stainless steel parallel clamp  
Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8  
Galvanised steel right-angle clamp  
Boom: 20-50mm capability  
Mount pole: 20-50mm capability



UB2-SS  
304 stainless steel right-angle clamp  
Boom: 20-50mm capability  
Mount pole: 20-50mm capability



NSM-218  
Toughened nylon wall/side mount  
Boom: 38mm  
Mount hole: 16mm

Suitable feeder coaxial cable and connectors



MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable  
P/N 7800

Available in 100m or 300m rolls or alternatively request a custom cable assembly



UHF male PL259 crimp connector for MIL-SPEC RG213  
P/N 7910  
Nickel plated



RU400 Solid copper conductor, low loss coaxial cable  
CNT-400 / LMR-400™ equivalent  
(\* times microwave)  
P/N 7890

Available in 100m, 300m or 500m rolls or alternatively request a custom cable assembly



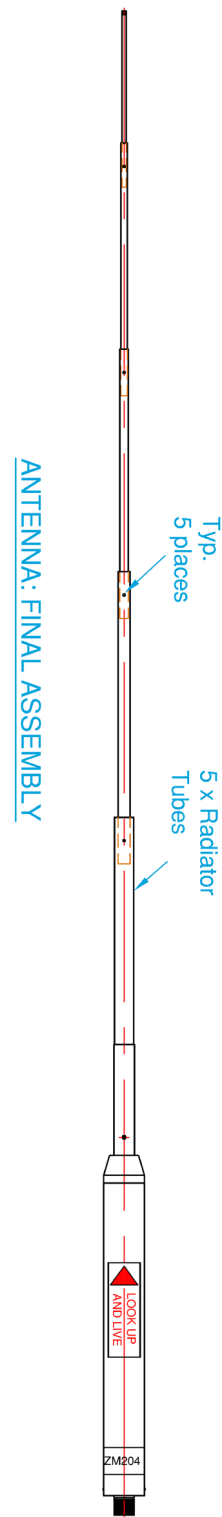
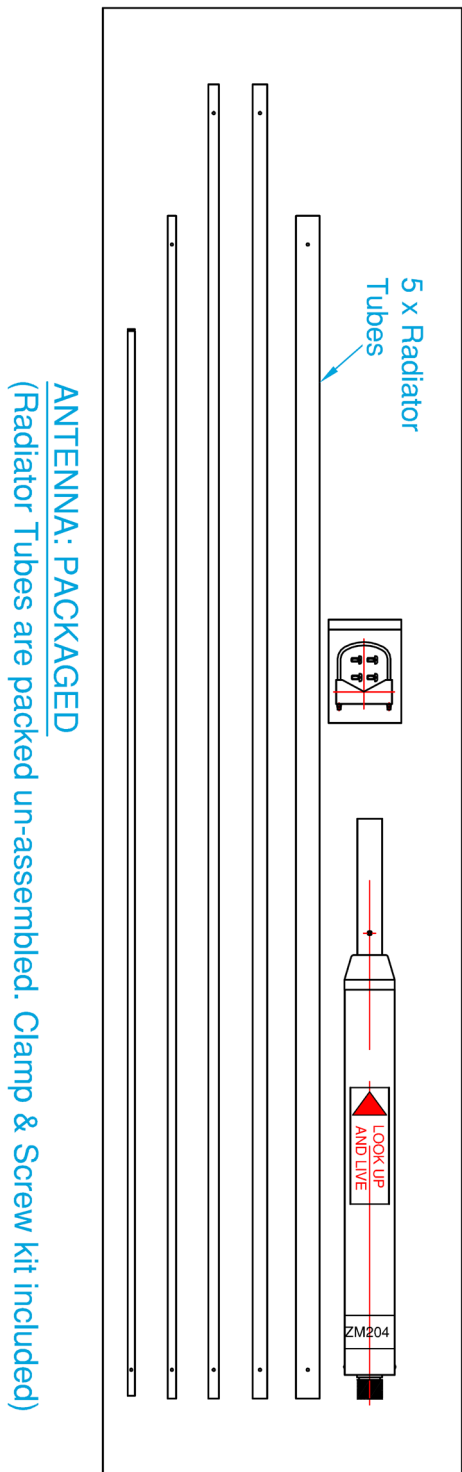
UHF male PL259 clamp-style connector for RG213 or RU400 low loss, solid conductor  
P/N 7908  
Nickel plated

# ZM204

5-piece telescopic collinear  
Marine 27 MHz CB radio

  
In-stock  
Ready to  
Ship

  
Australian  
manufactured  
in  
East Gippsland





## ZM312H

### Ground dependent 27 MHz whip and base Marine CB radio 27.68-27.98 MHz



The ZM312H fibreglass whip is designed for 27.88MHz marine radio communications while at sea. With a white whip, base and cable this antenna blends onto most marine vessels. The ZM312H is suitable for small to medium vessels or reduced space availability.

**Please note:** This whip requires a metallic ground plane.

Water-proofing, bird proofing and other installation accessories are all available separately.

Construction	White heatshrink coil loaded whip, chrome mount ferrule, Australian standard OB mount base and external coaxial cable
Frequency range	27.68-27.98 MHz - HF favoured for emergency frequencies 27.86 - 27.88 MHz
VSWR	<1.8:1 - emergency channels <2.5:1 - rest of frequency range
Tuning	Factory
Gain	2.1 dBi
Maximum power	25 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omni-directional
Cable	5 metres white RG58 low loss exits from base
Connector - fitted	FME female fitted to cable - for ease of installation
Adaptor - supplied	FME female to UHF male
Height - including base	660mm
Weight	350grams
Ground independent	No - <u>requires metallic ground plane see below</u>
Mounting requirements	Onto metal ground plane/surface minimum 0.5m <sup>2</sup>
Mounting position recommended	Mount as high on your vessel/structure as possible, ensuring no obstructions.
Alternate mounting location	The ZM312H can be fitted onto a vehicle, truck or caravan structure ensuring metallic ground plane present.

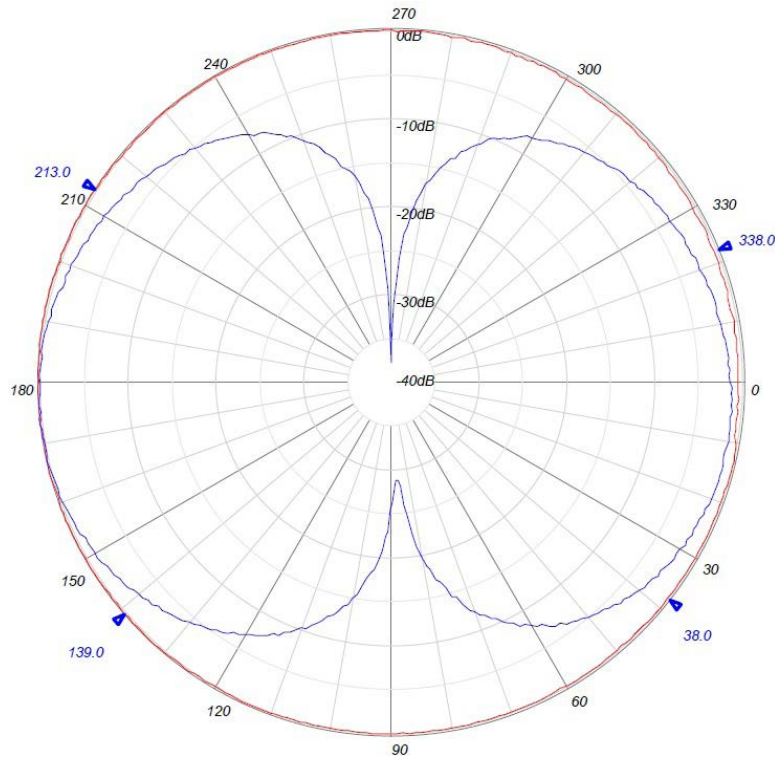


FME to UHF male PL259 adaptor supplied

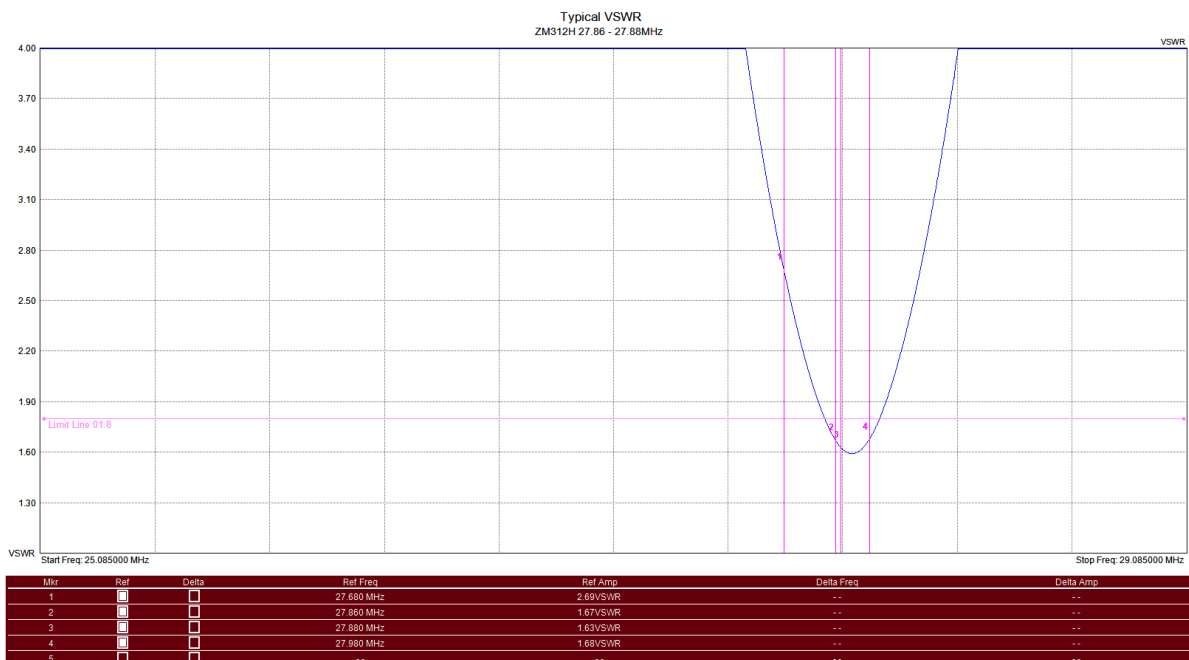


# ZM312H

Ground dependent 27 MHz whip and base  
Marine CB radio 27.68-27.98 MHz



Example radiation pattern - on 1/2 wave metal ground plane



Typical VSWR

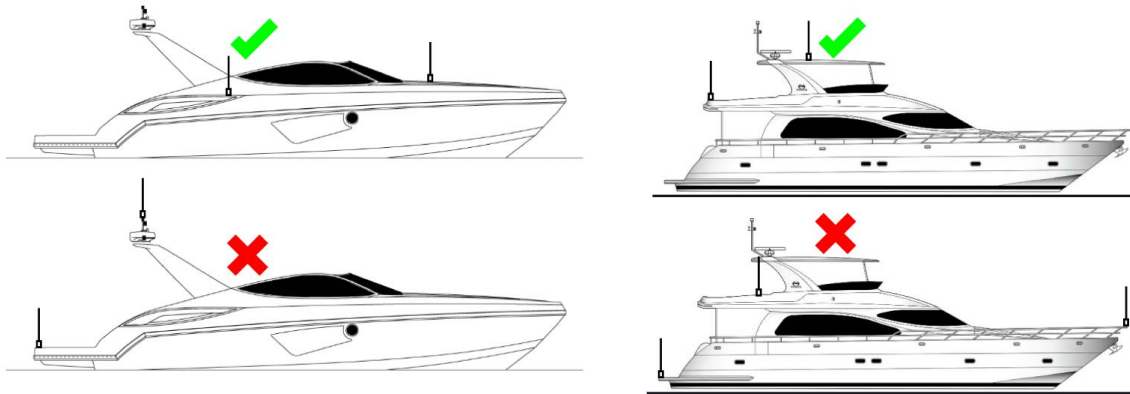


# ZM312H

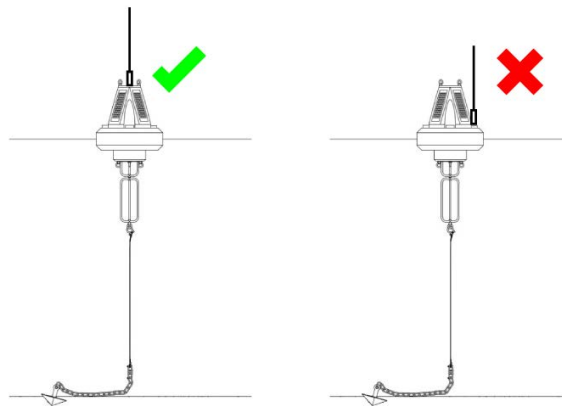
Ground dependent 27 MHz whip and base  
Marine CB radio 27.68-27.98 MHz



Recommended Installation orientation  
Must be a metal mounting location for effective performance



Recommended Installation orientation - Buoy location



# ZM14-AIS Series

## Vessel mounted fold-down collinear

### Automatic Identification System A.I.S. 161.9-162.1 MHz

The ZM14-AIS antenna is specifically designed for Automatic Identification System (A.I.S.) on marine vessels. The benefit of A.I.S. is that a vessels information such as weight, length, speed and destination is broadcast to all vessels in the near vicinity and online, to improve safety on the water.

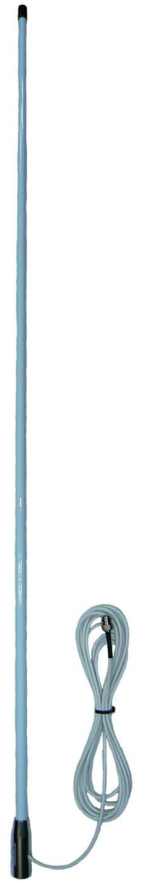
Please check with your local nautical authority to the requirements of A.I.S. on your vessel.

Mounting hardware, water-proofing, adaptors and other installation accessories are all available separately.

	ZM14-AIS	ZM14-AIS-5
Construction	White fibreglass radome, chrome ferrule and external cable	
Frequency range	AIS1 & AIS 2 - 161.975-162.025 MHz	
VSWR	<1.5:1	
Tuning	Factory	
Gain	2.1 dBi	
Maximum power	50 Watts	
Impedance	50 Ohms	
Polarisation	Vertical - do not lean/tilt once installed, only during transit	
H Plane	360° omni-directional	
Cable	300mm of white RG58 low loss - side exit from ferrule	5.0m of white RG58 low loss - side exit from ferrule
Connector - fitted	N-type female fitted to cable or specify requirements	
Height	1.4 metres	
Weight	900grams	
Mounting hardware order separate	MM1 plastic fold-down base or MM2 stainless steel MMA or MMA-SS mast mount adaptor for mast mounting Alternate: A-3050 adaptor and 1270 spring base with 1/2" bolt	
Mounting position recommended	Mount as high on your vessel/structure as possible ie. The roof or the deck	



ZM14-AIS  
300mm cable



ZM14-AIS-5  
5 metre cable



Coaxial cable side  
exit from ferrule



N-type female fitted  
to cable as standard

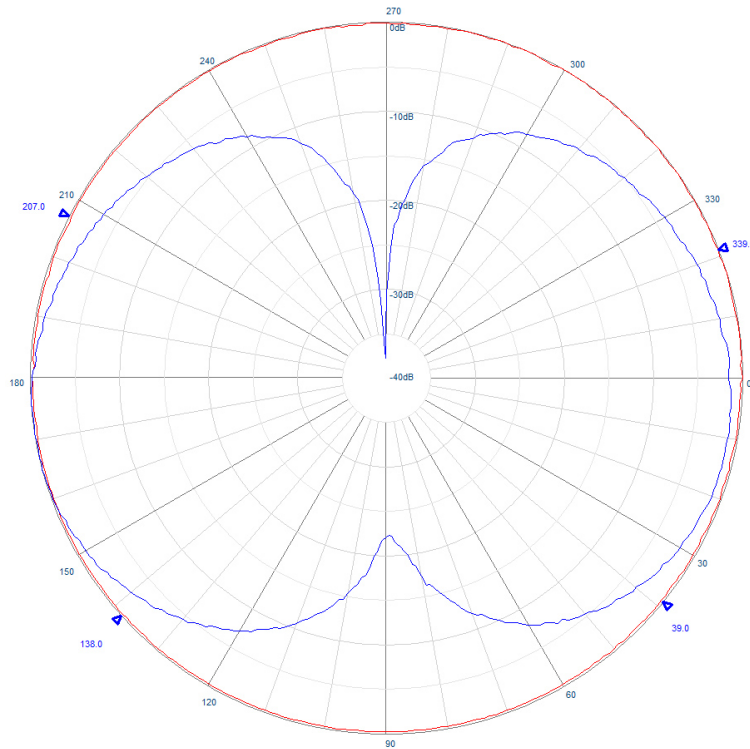




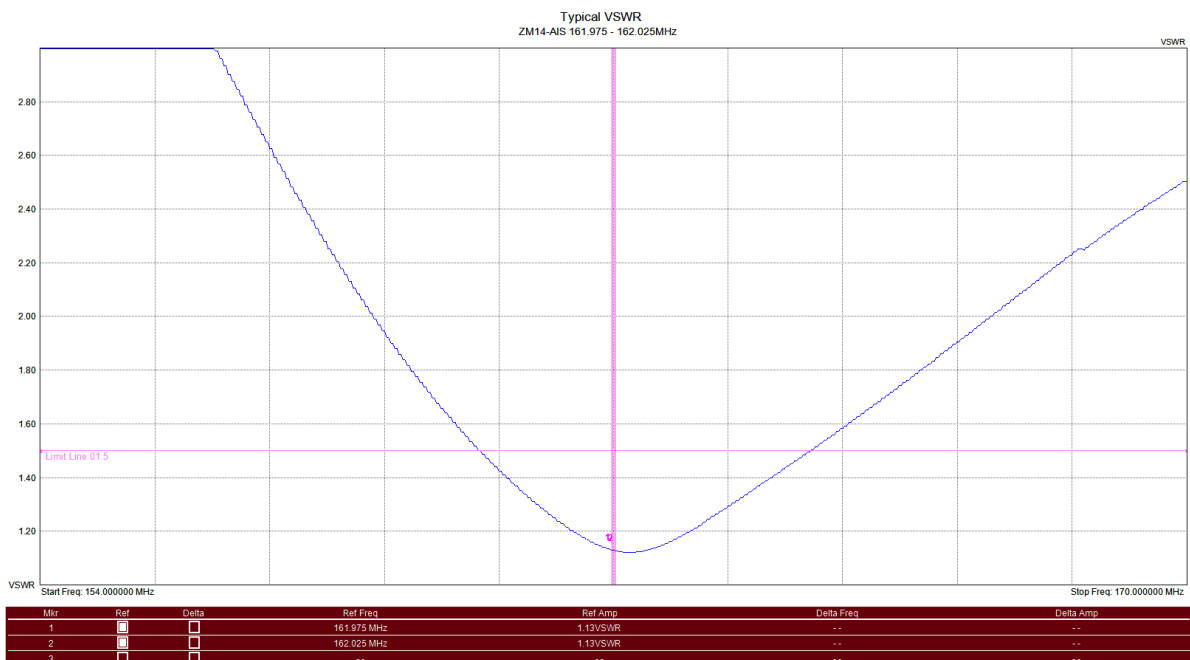
# ZM14-AIS Series

Vessel mounted fold-down collinear

Automatic Identification System A.I.S. 161.9-162.1 MHz



Example radiation pattern



Typical VSWR










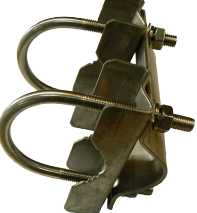
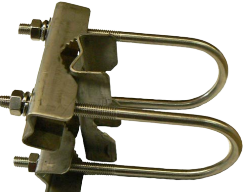
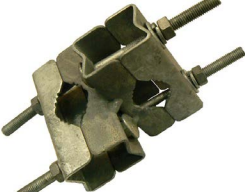


# ZM14-AIS Series

## Vessel mounted fold-down collinear

### Automatic Identification System A.I.S. 161.9-162.1 MHz

Alternate mounting hardware

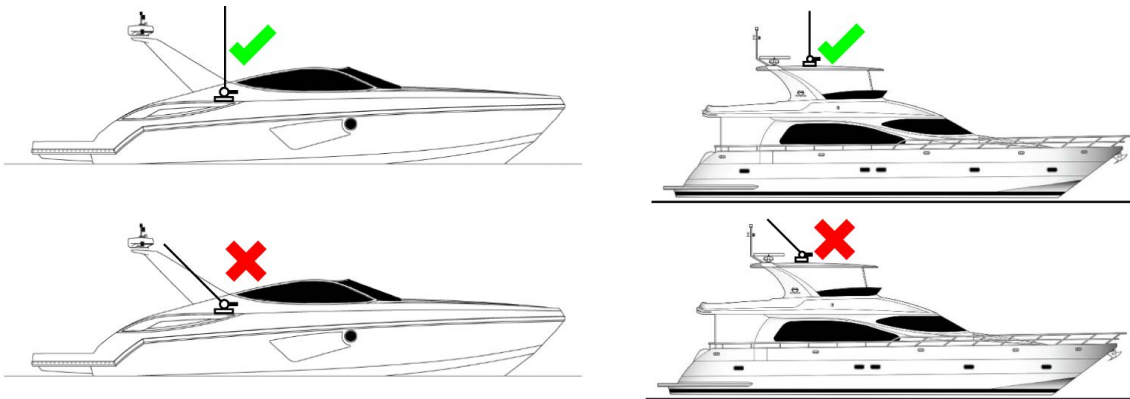
 <p>MM1 toughened white nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>A-1269 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>	 <p>A-1270 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>
 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>	 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
 <p>UB2-SS 304 stainless steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	 <p>RB8 Galvanised steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>

# ZM14-AIS Series

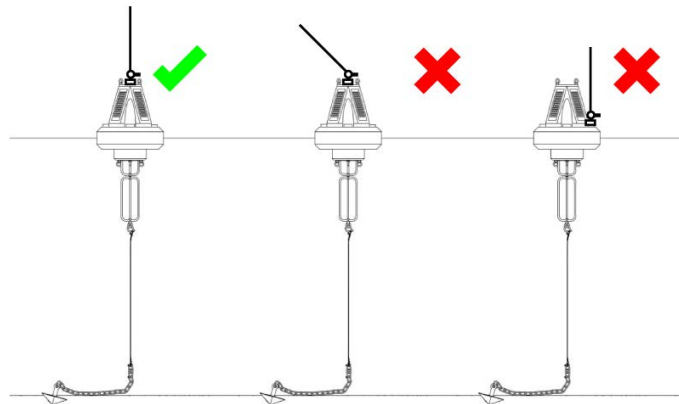
Vessel mounted fold-down collinear

Automatic Identification System A.I.S. 161.9-162.1 MHz

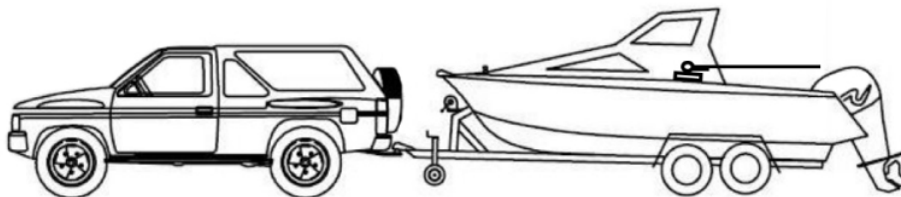
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



# B20G-N-AIS

## Mast mount/side mount collinear

### Automatic Identification System 161.975-162.025 MHz



The B20G-N-AIS is specifically designed for Automatic Identification System (A.I.S.) for use in a marine environment. All components used in construction are of the highest quality to ensure the antenna will survive the harshest environment for many years.

The benefit of A.I.S. is that a vessels information such as weight,length, speed and destination is broadcast to all vessels in the near vicinity and online, to improve safety on the water. Please check with your local nautical authority for requirements of A.I.S. on your vessel.

Mounting hardware, coaxial feeder cables, water-proofing, connectors and other installation accessories are all available separately.

Construction	White tapered fibreglass radome, 304 stainless steel mount section and external termination
Frequency range	161.975-162.025 MHz - VHF AIS1 & AIS2
Tuning	Factory
VSWR	<1.5:1
Gain	5.1 dBi
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omni-directional
Connector	N-type female in base of mount section - no cable
Height	3.2 metres
Weight	1.5kg
Mount section	500mm x 32mm dia. - 304 stainless steel
Mounting hardware order separate	Parallel: 2 x EB1-SS or 1 x UB3-SS Right-angle: 2 x RB8 or 1 x UB2-SS Side mounting: 2 x NSM-CL3642
Mounting position recommended	Mount as high on your structure/tower as possible ensuring no obstructions.

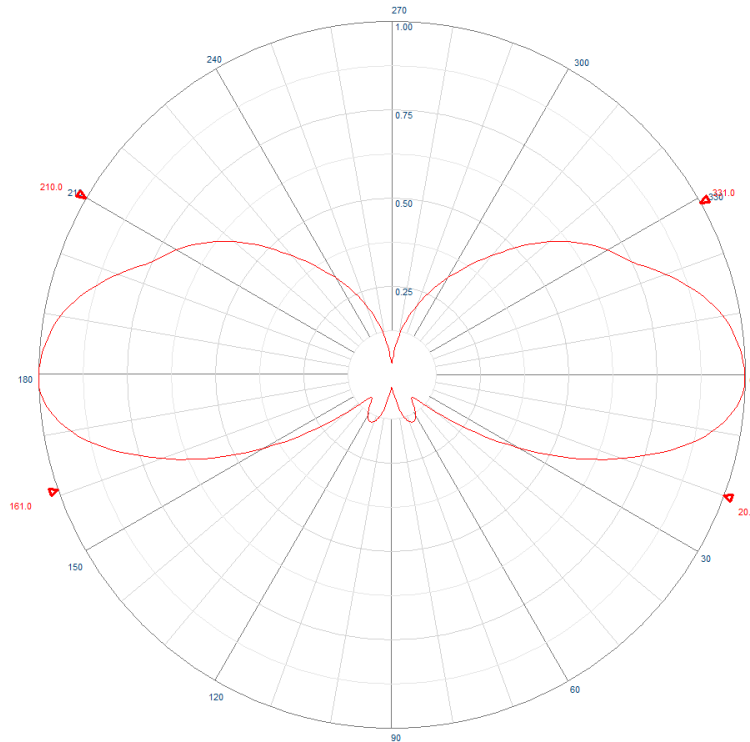


N-type female in base of mount section

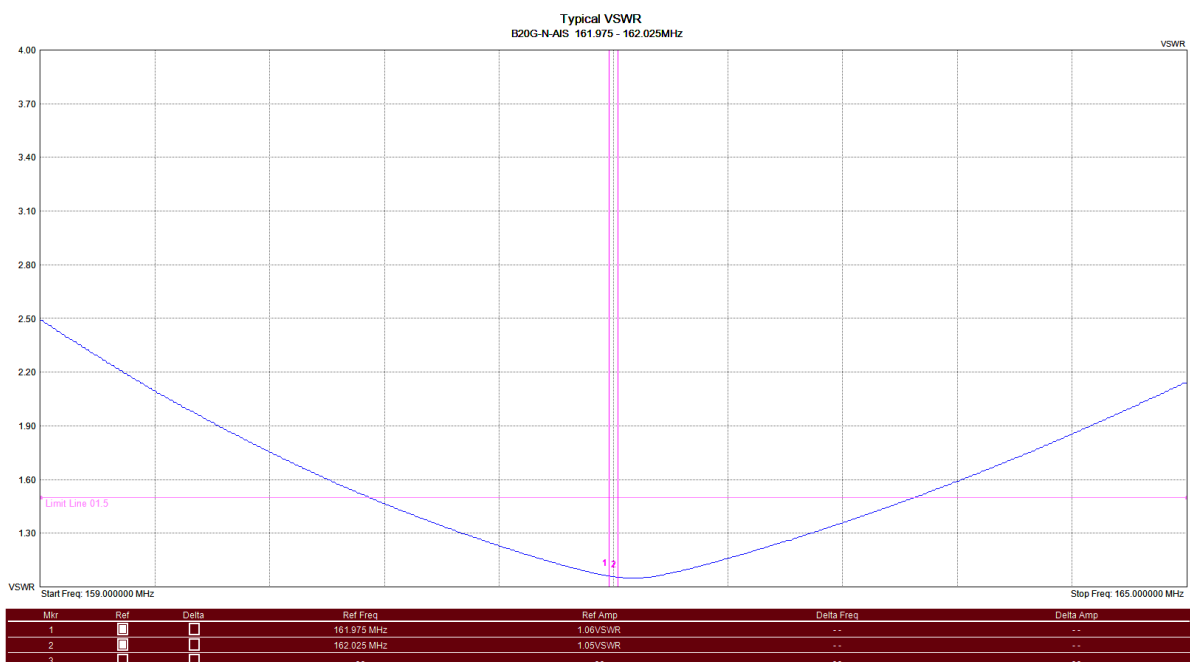


# B20G-N-AIS

Mast mount/side mount collinear  
Automatic Identification System 161.975-162.025 MHz



Example radiation pattern



Typical VSWR

# B20G-N-AIS

## Mast mount/side mount collinear

### Automatic Identification System 161.975-162.025 MHz

Suitable mounting hardware

 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>EB1-SS - requires 2 304 stainless steel parallel clamp Boom: 20-40mm capability Mount pole: 25-45mm capability</p>	 <p>UB3-SS 304 stainless steel parallel clamp Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
 <p>UB2-SS 304 stainless steel right-angle clamp Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	 <p>RB8 Galvanised steel right-angle clamp Boom: 20-50mm capability Mount pole: 20-50mm capability</p>
 <p>NSM-CL3642 Toughened nylon wall/side mount Boom: 32mm Mount hole: 16mm</p>	

Suitable feeder coaxial cable and connectors

 <p>RU400 Solid copper conductor, low loss coaxial cable CNT-400 / LMR-400™ equivalent (* times microwave) P/N 7890 Available in 100m, 300m, 500m roll or alternatively request a custom cable assembly</p>	 <p>N-type male crimp connector for RU400 low loss, solid conductor P/N 8226 Tri-metal plated</p>
 <p>RU600 Solid copper conductor, low loss coaxial cable LMR-600™ equivalent (* times microwave) P/N 7890-3 Available in 500m roll or alternatively request a custom cable assembly</p>	 <p>N-type male crimp connector for RU600 low loss, solid conductor P/N 8226-2 Tri-metal plated</p>



# CM162-AIS-B-SS



## Omni-directional Buoy/bracket mounted collinear Automatic Identification System 161.975 - 162.025 MHz

The CM162-AIS-B-SS antenna is specifically designed for mounting on the top of a ocean going buoy or on a suitable bracket for the Automatic Identification System (A.I.S.).

The benefit of AIS is that a vessels information such as weight, length, speed and destination is broadcast to all vessels in the near vicinity and online, to improve safety on the water.

Alternative mounting options, water-proofing, adaptors and other installation accessories are all available separately.

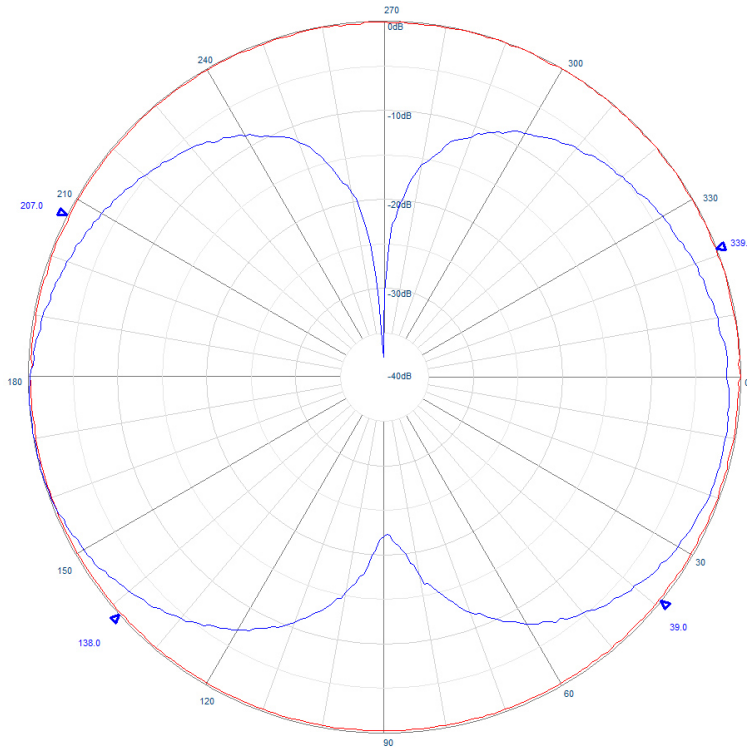
Construction	White tapered fibreglass radome, 304 stainless steel mount ferrule, securing nut, external coaxial cable and termination
Frequency range	161.975 -162.025 MHz - AIS1 & AIS2
VSWR	<1.5:1
Tuning	Factory
Gain	2.1 dBi
Maximum power	50 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
Cable	1.85 metres white RG58 low loss bottom exit from mount ferrule
Connector	TNC male fitted as standard or specify requirements
Height	1.4 metres
Weight	900grams
Mounting hardware order separate	Minimum 20mm hole, M20 female thread or utilise appropriate mounting bracket.
Mounting position recommended	Mount as high on your buoy, vessel or structure as possible with no obstructions, to ensure a true omnidirectional pattern.
Installation tools required	30mm spanner for securing nut



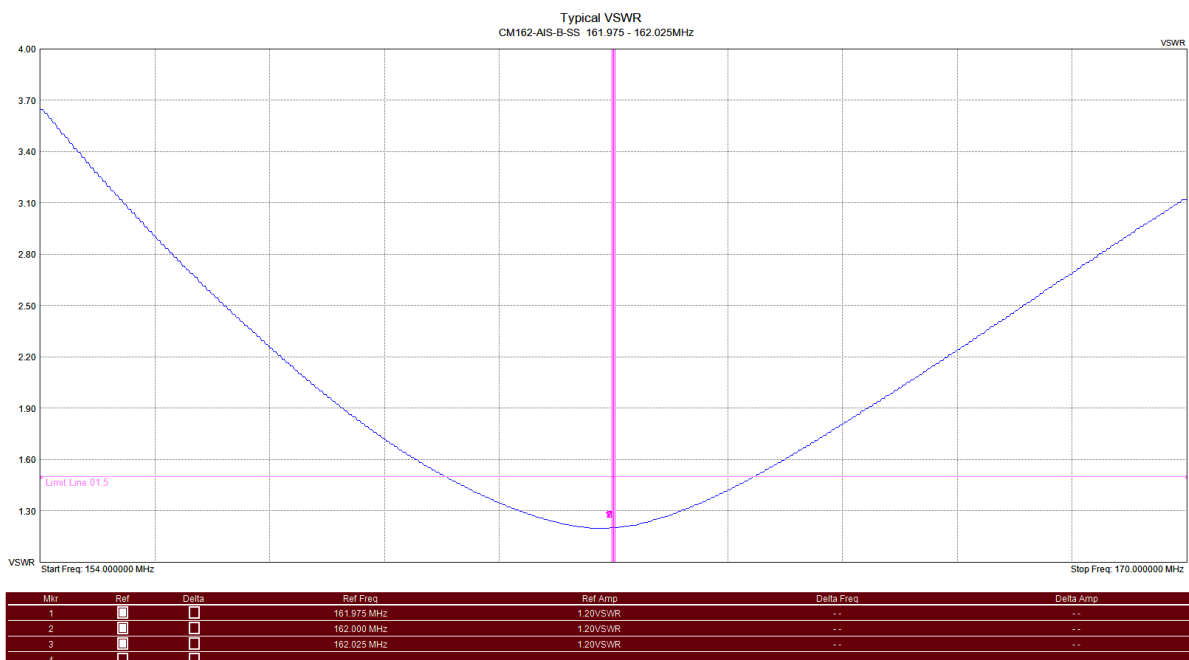


# CM162-AIS-B-SS

Omni-directional Buoy/bracket mounted collinear  
Automatic Identification System 161.975 - 162.025 MHz



Example radiation pattern



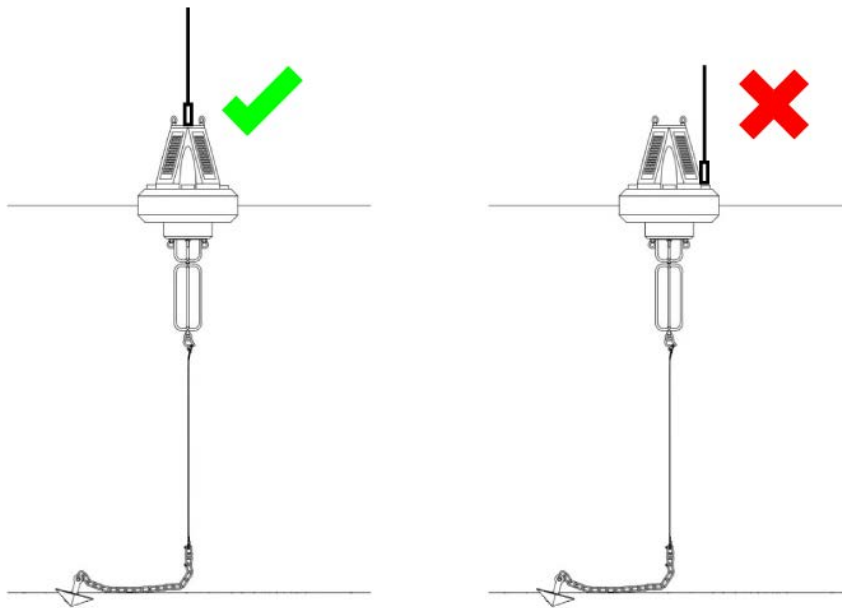
Typical VSWR





# CM162-AIS-B-SS

Omni-directional Buoy/bracket mounted collinear  
Automatic Identification System 161.975 - 162.025 MHz





## ZM09-AMFM

### Deck or mast mount radio receive collinear AM radio 530-1600 kHz & FM Radio 87.5-108 MHz



The ZM09-AMFM marine deck mount antenna will significantly improve your AM and FM radio reception while at sea. The ZM09-AMFM is the smallest available collinear in the ZCG marine AMFM receive range.

The ZM09-AMFM is identical in appearance to the other ZM09 series of marine antennas

**Please note:** The ZM09-AMFM will not improve radio reception where no signal is being transmitted.

Mounting hardware, bird-proofing and other installation accessories are all available separately.

	ZM09-AMFM	ZM09-AMFM-B
Radome colour	White	Black
Construction	Parallel fibreglass radome, aluminium mount ferrule, mount adaptor and cable assembly	
Frequency range	AM Radio 530-1600 kHz and FM Radio 87.5-108 MHz	
Tuning	Factory	
Gain	Receive only	
Polarisation	Vertical - do not lean/tilt once installed, only during transit	
H Plane - receive	360° omnidirectional	
Cable	5 metres RG58 - side exit from ferrule	
Connector	FME female fitted to cable for ease of routing cable	
Adaptor - supplied	FME male to AM/FM Radio adaptor supplied for plug & play installation	
Height	900mm	
Weight	800grams	
Deck/roof mount hardware order separate	MM1 plastic fold-down base MM2 316 stainless steel base	MM1-B plastic fold-down base MM2-B 316 stainless steel base
Mast mount hardware order separate	MMA or MMA-SS mast mount adaptor for mast mounting Alternate: A-3050 adaptor and 1270 spring base with 1/2" bolt	
Mounting position recommended	Mount as high on your structure or vessel as possible ensuring no obstructions i.e. the roof or deck.	



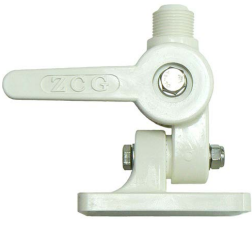









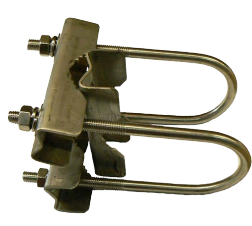
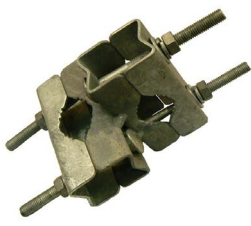
FME male to AM/FM radio adaptor supplied for plug & play installation

# ZM09-AMFM

Deck or mast mount radio receive collinear

AM radio 530-1600 kHz & FM Radio 87.5-108 MHz

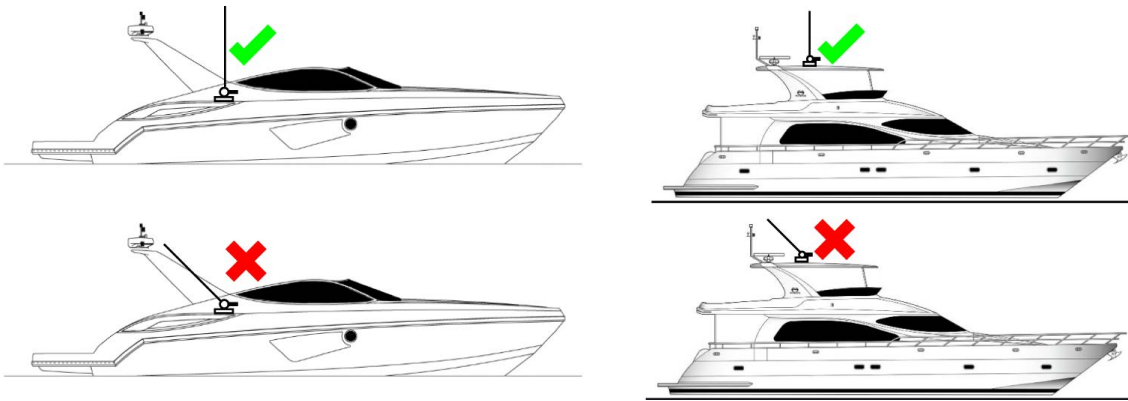
Suitable mounting hardware

 <p>MM1 toughened white nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MM1-B toughened black nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2-B black finish 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium or 304 stainless steel mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>A-1270 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>
 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>	 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
 <p>UB2-SS 304 stainless steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	 <p>RB8 Galvanised steel steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>

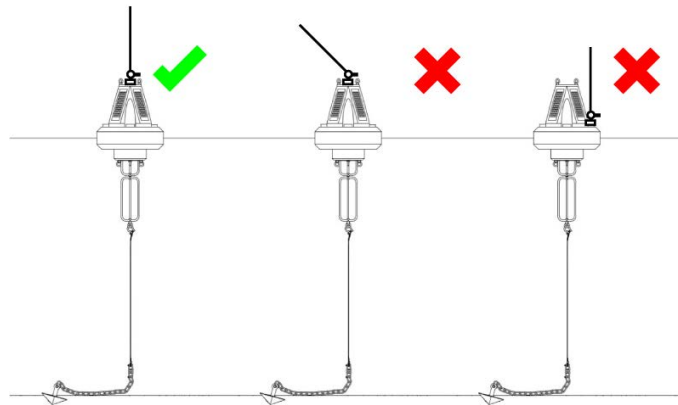
# ZM09-AMFM

Deck or mast mount radio receive collinear  
AM radio 530-1600 kHz & FM Radio 87.5-108 MHz

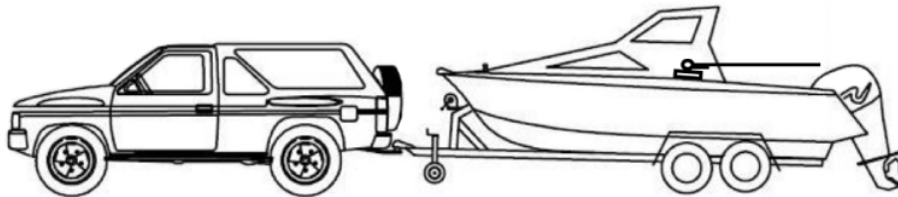
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.

## ZM21-AMFM & ZM24-AMFM

Vessel deck or mast mount radio receive collinear

AM radio 530-1600 kHz & FM Radio 87.5-108 MHz

Designed for AM and FM radio receive while at sea, these marine deck mount antennas are the ideal solution for any size marine vessel.

The ZM21-AMFM is identical in appearance to all the ZM21 series of marine antennas. The ZM24-AMFM is identical in appearance to all the ZM24 series of marine antennas.

**Please note:** The ZM-AMFM series will not improve radio reception where no signal is being transmitted.

Mounting hardware, water-proofing, bird-proofing, adaptors and other installation accessories are all available separately.

	ZM21-AMFM	ZM24-AMFM
Construction	White tapered fibreglass radome, chrome mount ferrule, external coaxial cable and supplied termination	
Frequency range	AM Radio 530-1600 kHz and FM Radio 87.5-108 MHz	
Tuning	Factory	
Gain	Receive only	
Polarisation	Vertical	
H Plane - receive	360° omnidirectional	
Cable	4.5 metres RG58 - side exit from ferrule	
Connector	FME female fitted to cable for ease of routing cable	
Adaptor - supplied	FME male to AM/FM Radio adaptor supplied for plug & play installation	
Height	2.1 metres	2.4 metres
Weight	1.0kg	1.1kg
Mounting hardware order separate	Order either plastic MM1 or stainless steel MM2 fold down base when ordering. Alternatively for mast mounting order a MMA/MMA-SS mast mount adaptor and suitable clamp/s or side mounts	
Mounting position recommended	Mount as high on your vessel/structure as possible ie. The roof, deck or tower/mast.	



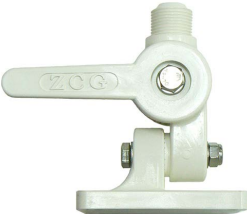



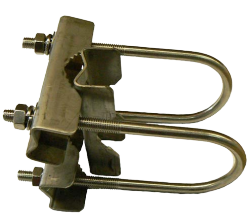
FME male to AM/FM radio adaptor supplied for plug & play installation

# ZM21-AMFM & ZM24-AMFM

Vessel deck or mast mount radio receive collinear

AM radio 530-1600 kHz & FM Radio 87.5-108 MHz

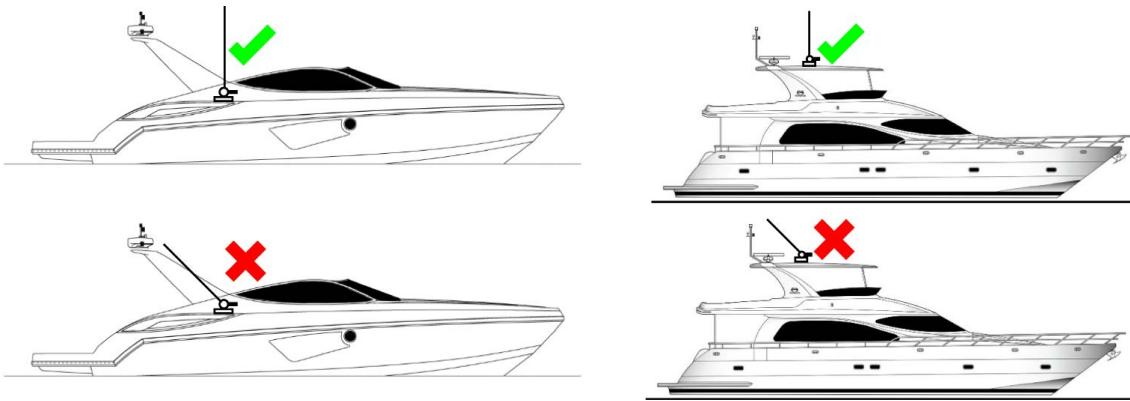
Suitable mounting hardware

 <p>MM1 toughened white nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>A-1269 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>	 <p>A-1270 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>
 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>	 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
 <p>UB2-SS 304 stainless steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	 <p>RB8 Galvanised steel steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>

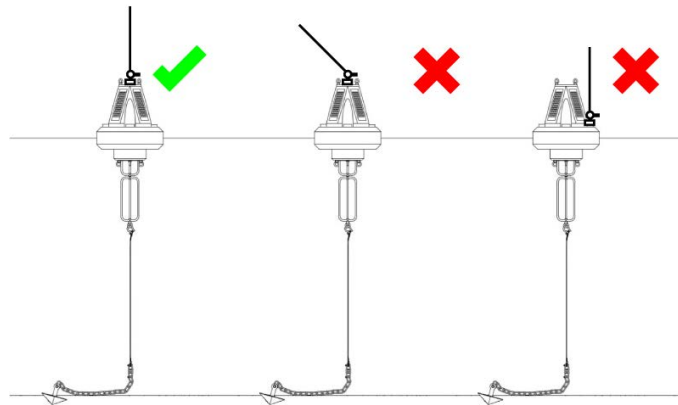
## ZM21-AMFM & ZM24-AMFM

Vessel deck or mast mount radio receive collinear  
AM radio 530-1600 kHz & FM Radio 87.5-108 MHz

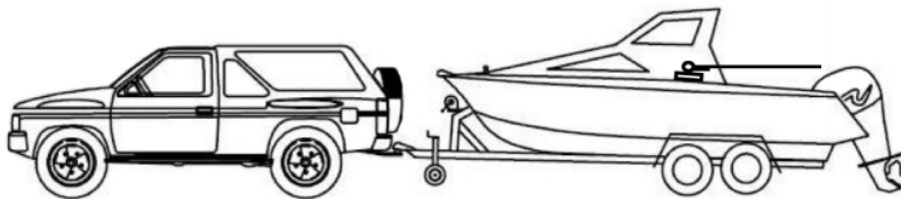
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.

## B20G-N-AMFM

### Omnidirectional mast or side mount collinear

### AM/FM radio receive 530-1600 kHz & 87.5-108 MHz

To improve AM and FM radio receive reception, the B20G-N-AMFM ground independent mast or side mount antenna offers superb performance with reliable construction.

The B20G-N-AMFM is suitable for a structure or a larger vessel.

**Please note:** the antenna will not receive AM/FM radio where no signal is present.

Mounting hardware, water-proofing, bird-proofing, adaptors and other installation accessories are all available separately.

Construction	White fibreglass radome, 304 stainless steel mount section and external termination
Frequency range	AM Radio 530-1600 kHz and FM Radio 87.5-108 MHz
Tuning	Factory
Gain	Receive only
Impedance	50 Ohms
Polarisation	Vertical
H Plane - receive	360° omnidirectional
Connector	N-type female in base of mount section - no cable
Height	3.4 metres
Weight	1.5kg
Mount section	Length: 500mm, Diameter: 32mm
Projected area	0.068m <sup>2</sup>
Wind load at 160kph	0.081kN, 8.260kg
Mast Mounting hardware order separate	Parallel: 2 x EB1-SS, 1 x UB3-SS Right-angle: 2 x RB8 or 1 x UB2-SS
Side/Wall mounting order separate	2 x NSM-CL3642
Mounting position recommended	Mount as high on your structure/tower as possible ensuring no obstructions.



N-type female in base of mount section



# B20G-N-AMFM

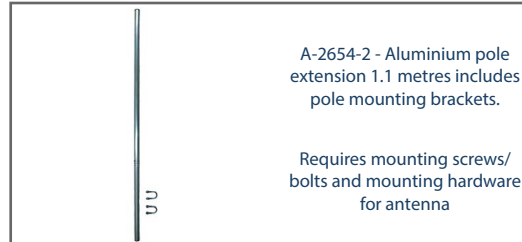
## Omnidirectional mast or side mount collinear

### AM/FM radio receive 530-1600 kHz & 87.5-108 MHz



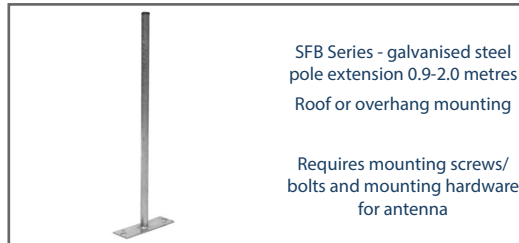
CFB series - Galvanised steel J' hockey stick brackets, 1.1 - 2.1 metres.

Requires mounting screws/ bolts and mounting hardware for antenna



A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires mounting screws/ bolts and mounting hardware for antenna



SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting

Requires mounting screws/ bolts and mounting hardware for antenna



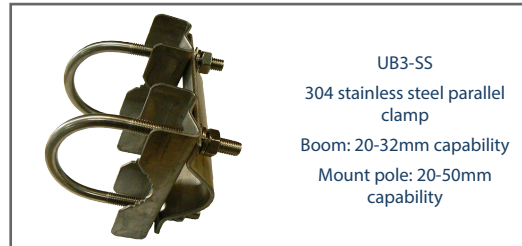
NSM-CL3642 - requires 2 Toughened white nylon wall mount

Boom: 32mm capability  
13mm mount hole required



EB1-SS - requires 2 304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS

304 stainless steel parallel clamp  
Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8 Galvanised steel steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability



UB2-SS

304 stainless steel steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability

#### Suitable feeder coaxial cable and connectors - B20G-N



MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable  
P/N 7800

Available in 100m or 300m rolls or alternatively request a custom cable assembly



N-type male crimp connector for MIL-SPEC RG213

P/N 7937

Tri-metal plated



RU400 Solid copper conductor, low loss coaxial cable  
CNT-400 / LMR-400™ equivalent  
(\* times microwave)  
P/N 7890

Available in 100m, 300m or 500m rolls or alternatively request a custom cable assembly



N-type male crimp connector for RU400 low loss, solid conductor

P/N 8226

Tri-metal plated

# HM218-AMFM

## Omni-directional mast or side mount vertical radiator AM Radio 530-1700 kHz and FM Radio 87.5-108 MHz

The HM218-AMFM mast or side mount collinear is designed and manufactured for AM/FM radio receive radio improvement.

The HM218-AMFM is suitable for structure/tower mounting or for larger vessels.

**Please note:** the antenna will not receive AM/FM radio where no signal is present.

Mounting hardware, coaxial feeder cable, connectors and other installation accessories are all available.

Construction	2-piece white tapered fibreglass radome, 304 stainless steel mount section and external cable assembly
Frequency range	530-1700 kHz - AM Radio and 87.5-108 MHz - FM Radio
Tuning	Factory
Gain	Receive only
Maximum power	Receive only
Polarisation	Vertical
Cable	5.7 metre RG58 stranded white - bottom exit from mount section
Connector	Solderless 'easy-fit' male car radio connector - supplied not fitted
Height	5.5 metres assembled - 3.65 metres packed
Weight	7.0kg
Mount section	595mm x 38.1mm - 304 stainless steel
Projected area	1.03m <sup>2</sup>
Wind load at 160kph	12.469kg, 0.122kN
Mast mounting order separate	Parallel: 2 x UAM180L or UAM180UNI Right-angle: 2 x UAM90L or UAM90UNI
Side mounting order separate	2 x NSM-218
Mounting position recommended	Mount as high on your structure/tower or vessel as possible ensuring no obstructions around antenna.
Installation tools required	16mm spanner for sectional securing

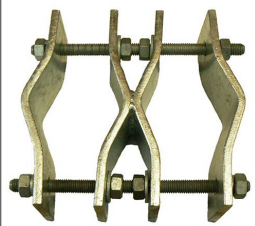
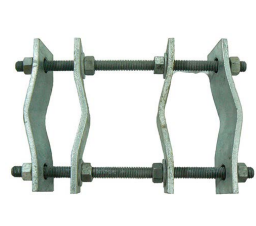
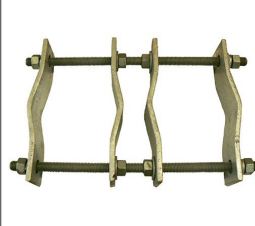
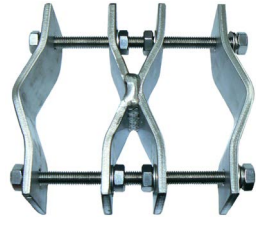
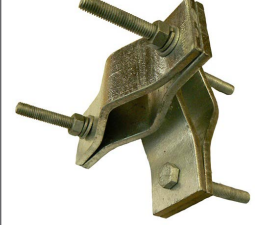




'Easy-fit' male car radio connector  
supplied not fitted





# HM218-AMFM

## Omni-directional mast or side mount vertical radiator AM Radio 530-1700 kHz and FM Radio 87.5-108 MHz

### Suitable mounting hardware

 <p>UAM180L - requires 2 Galvanised steel parallel clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>	 <p>UAM180UNI - requires 2 Galvanised steel large parallel clamp Boom: 40-70mm capability Mount pole: 40-90mm capability</p>
 <p>UAM180UNIL - requires 2 Galvanised steel extra large parallel clamp Boom: 40-90mm capability Mount pole: 60-115mm capability</p>	 <p>UAM180L-SS316 316 grade stainless steel large heavy-duty parallel clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>
 <p>UAM90L - requires 2 Galvanised steel right-angle clamp Boom: 40-75mm capability Mount pole: 40-75mm capability</p>	 <p>UAM90UNI - requires 2 Galvanised steel large right- angle clamp Boom: 40-70mm capability Mount pole: 40-90mm capability</p>
 <p>UAM90LL - requires 2 Galvanised steel extra large right-angle clamp Boom: 60-115mm capability Mount pole: 60-115mm capability</p>	

### Suitable feeder coaxial cable

 <p>MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable P/N 7800  Available in 100m, 300m roll or alternatively request a custom cable assembly</p>	 <p>N-type male crimp connector for RG213 stranded core, solid PE dielectric coaxial cable  P/N 7937  Tri-metal plated</p>
 <p>RU400 Solid copper conductor, low loss coaxial cable CNT-400 / LMR-400™ equivalent (* times microwave) P/N 7890  Available in 100m, 300m, 500m roll or alternatively request a custom cable assembly</p>	 <p>N-type male crimp connector for RU400 low loss, solid conductor, foam PE dielectric coaxial cable  P/N 8226  Tri-metal plated</p>

# ZM312B

## Ground dependent whip and base

### AM/FM radio receive 530-1600 kHz & 87.5-108 MHz

The ZM312B fibreglass whip is designed for AM and FM radio receive while at sea. With a white whip, base and cable this antenna blends onto most marine vessels.

**Please note:** This whip requires a metallic ground plane.

Water-proofing, bird proofing and other installation accessories are all available separately.

Construction	White heatshrunk whip, chrome ferrule and white mounting base and cable
Frequency range	530-1600 kHz - AM Radio and 87.5-108 MHz - FM Radio
Tuning	Factory
Gain	Receive only
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omni-directional
Cable	5 metres white RG58 low loss exits from base
Connector	'Easy fit' solderless car radio connector fitted to cable
Height - including base	660mm
Weight	350grams
Ground independent	No - requires metallic ground plane
Mounting requirements	Onto metal surface minimum 0.5m <sup>2</sup>
Mounting position recommended	Mount as high on your vessel/structure as possible, ensuring no obstructions. As high on your vehicle or structure as possible using a minimum 16mm hole or appropriate bracket with a 16mm hole
Replacement parts	ZW312B - whip only
Alternate mounting locations	Mount onto a vehicle, truck or caravan ensuring a metal ground plane is present.



#### Other models available

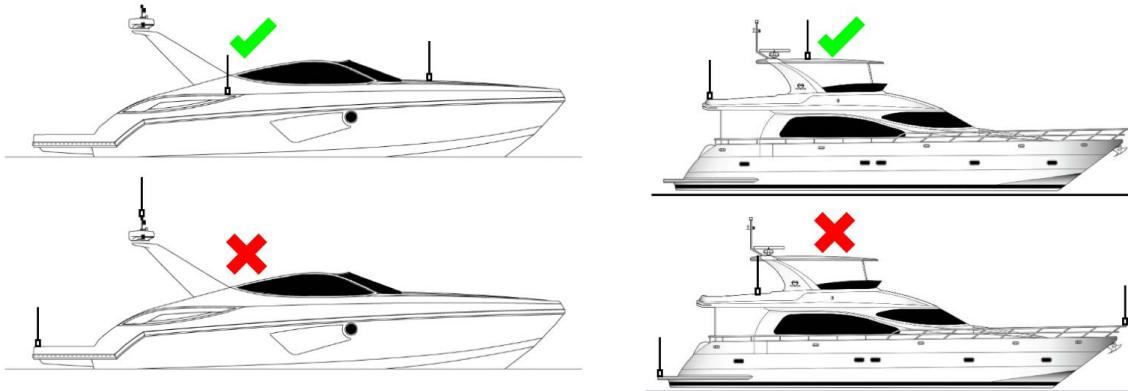
ZM312B-BK	Black heatshrunk coil loaded whip, chrome mount ferrule, black Australian standard mount base and black coaxial cable.
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# ZM312B

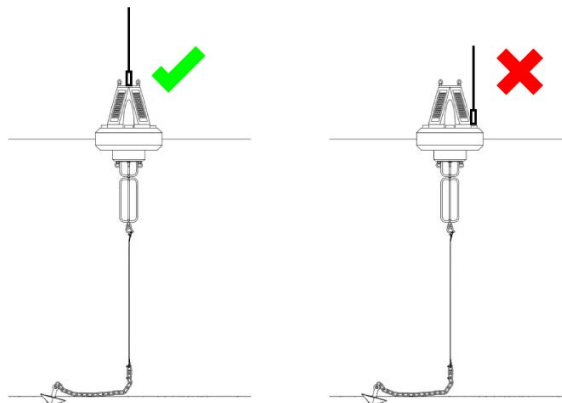
Ground dependent whip and base

AM/FM radio receive 530-1600 kHz & 87.5-108 MHz

Recommended Installation orientation  
Must be a metal mounting location for effective performance



Recommended Installation orientation - Buoy location



## ZAU-SA-300

### Dual filtered low profile 'Dome' GPS antenna L1 GPS 1575.42 MHz



The ZAU-SA-300 dual filtered L1 GPS antenna is ideal for L1 GPS applications all within a low profile, fully water-proof design. Suitable for larger vessels or fixed locations.

Patch leads, adaptors, water-proofing and other installation accessories are all available separately.

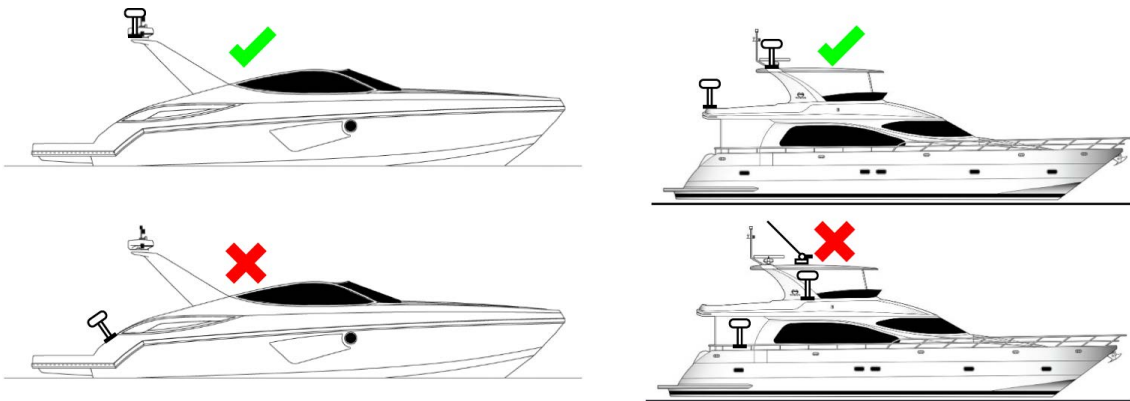
Construction	White PVC radome, embedded bottom exit termination and chrome plated mount base
Frequency range	1575.42 MHz - L1 GPS
Bandwidth	+/- 1.023 MHz
Gain	+5 dB typically at zenith
Polarisation	Right-hand circular (R.H.C.P)
Noise figure	2.0 dB maximum
VSWR	<1.5:1 maximum
Impedance	50 Ohms
Power requirements	4.5-5.5V DC
Power consumption	27mA@4.5V, 0.12W typical
Filtering	30dB minimum @ Fo+/-50MHz
Connector	TNC female embedded in base of antenna
Dimensions	114mm diameter x 163mm tall - excluding mount base
Weight	220grams
Operating temperature	-30°C to +85°C
Storage temperature	-40°C to +90°C
Waterproof rating	IP66
Mounting	Chrome plated mount with connector access hole. Use the 3 x mount hole to securely mount the base. Attach your cable then screw the antenna onto the base. Finally route cable to GPS device
Mounting position recommended	Mount as high on your vehicle, vessel or structure as possible using the supplied mounting hardware, ensuring no obstructions around or above the antenna



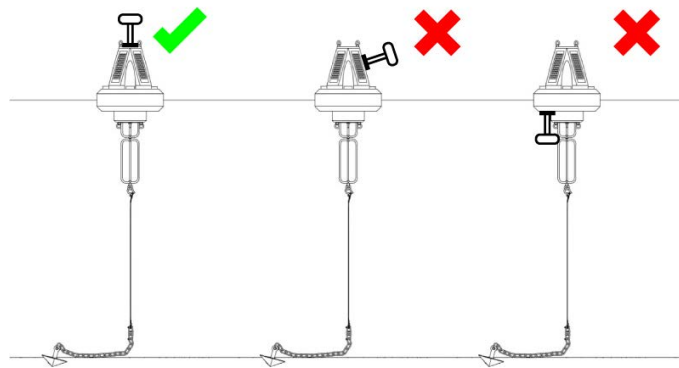
TNC female bulkhead termination in base of dome antenna. Will require additional water sealing via amalgamation tape and PVC tape

## ZAU-SA-300

Dual filtered low profile 'Dome' GPS antenna  
L1 GPS 1575.42 MHz



Recommended Installation orientation - Buoy location



# ZAU-SA-200

## Satellite communications low profile dome antenna 1616-1626.5 MHz



The ZAU-SA-200 low profile 'dome' antenna is ideal for small to large vessel requiring satellite communications at 1616-1626MHz, all within a low profile, fully water-proof design. Please note assembly is required.

Patch leads, adaptors, water-proofing and other installation accessories are all available separately.

Construction	White PVC radome, embedded bottom exit termination and chrome plated mount base
Frequency range	Satellite 1616-1626.5 MHz
Bandwidth	Full frequency range stated - 10.5 MHz
Gain	4 dBi
Polarisation	Right-hand circular (R.H.C.P)
VSWR	<2.0:1
Impedance	50 Ohms
Maximum power	10 Watts
H Plane - Azimuth	360° omnidirectional
E Plane - elevation	0-90°
Connector	TNC female
Cable	None supplied, please consult ZCG for a custom cable assembly to suit your satellite communications device
Dimensions	114mm diameter x 73.6mm tall - excluding chrome base
Weight	220grams
Operating temperature	-30°C to +85°C
Water resistance	100% waterproof housing. Termination requires additional water sealing with amalgamation tape and PVC tape
Mounting requirements	Chrome plated mount with connector access hole. Attach your cable then screw the antenna onto the base. Use the 3 x mount hole to securely mount the base. Finally route cable to your satellite communications device
Mounting position recommended	Mount as high on your vehicle or structure as possible using the supplied mounting bracket, ensuring no obstructions around or above the antenna

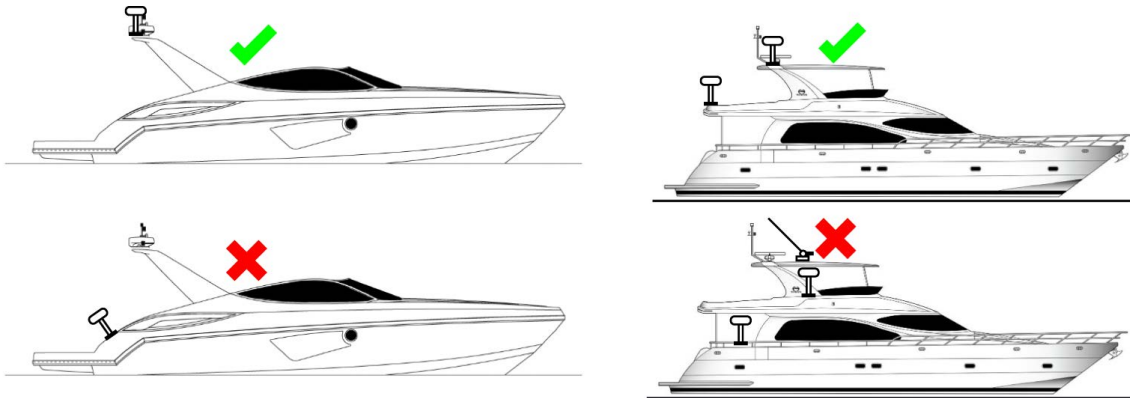


TNC female bulkhead termination in base of dome antenna. Will require additional water sealing via amalgamation tape and PVC tape

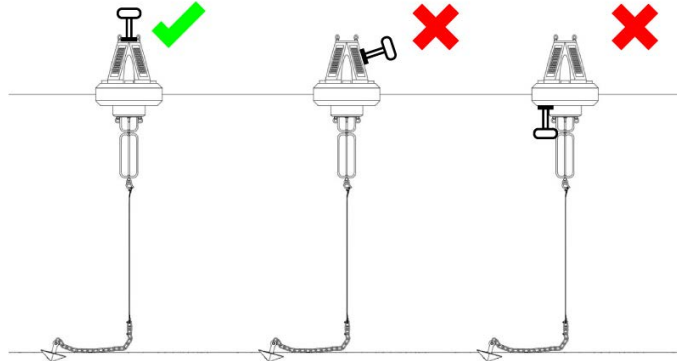


## ZAU-SA-200

Satellite communications low profile dome antenna  
1616-1626.5 MHz



Recommended Installation orientation - Buoy location





## ZM09-4GX

### Mobile phone/wireless data improvement

All networks 4G LTE 718-788 MHz and lower 4G/3G 820-890 MHz



The ZM09-4GX mobile phone/wireless data antenna provides dualband coverage of all networks 4G LTE with effective gain.

The ZM09-4GX will not improve reception where no signal is being transmitted.

Please check your carriers coverage map for availability of signal in your area. The ZM09-CELL will not work where no signal is present.

Mounting hardware, adaptors, water-proofing and other installation accessories are all available separately.



Construction	White tapered fibreglass radome, aluminium mount ferrule and white external cable
Frequency range	718-788 MHz - 4G LTE & 820-890 MHz - lower 4G/3G <i>Telstra &amp; Vodafone within Australia</i>
Bandwidth	Full frequency ranges stated
VSWR	<1.8:1 at 4G LTE 718-788 MHz < 2.5:1 at lower 4G/3G 820-890 MHz
Tuning	Factory
Gain	5.1 dBi
Maximum power	50 Watts
Impedance	50 Ohms
Polarisation	Vertical - do not lean/tilt once installed, only during transit
H Plane	360° omnidirectional
E Plane	22°
Cable	4.5 metres of white RG58 low loss side exit from ferrule
Connector	FME female fitted to cable for ease of installation or specify requirements
Height	990mm
Weight	2.2kg - excluding base
Mounting hardware order separate	MM1 plastic fold-down base or MM2 stainless steel MMA or MMA-SS mast mount adaptor for mast mounting Alternate: A-3050 adaptor and 1270 spring base with 1/2" bolt
Mounting position recommended	Mount the antenna as high on your structure or vessel as possible to ensure a true omni-directional signal.

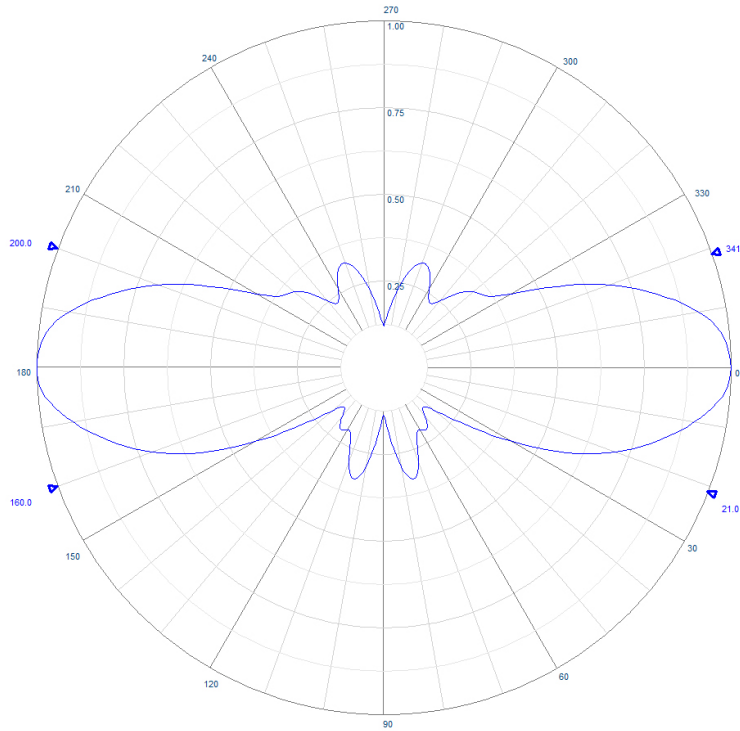




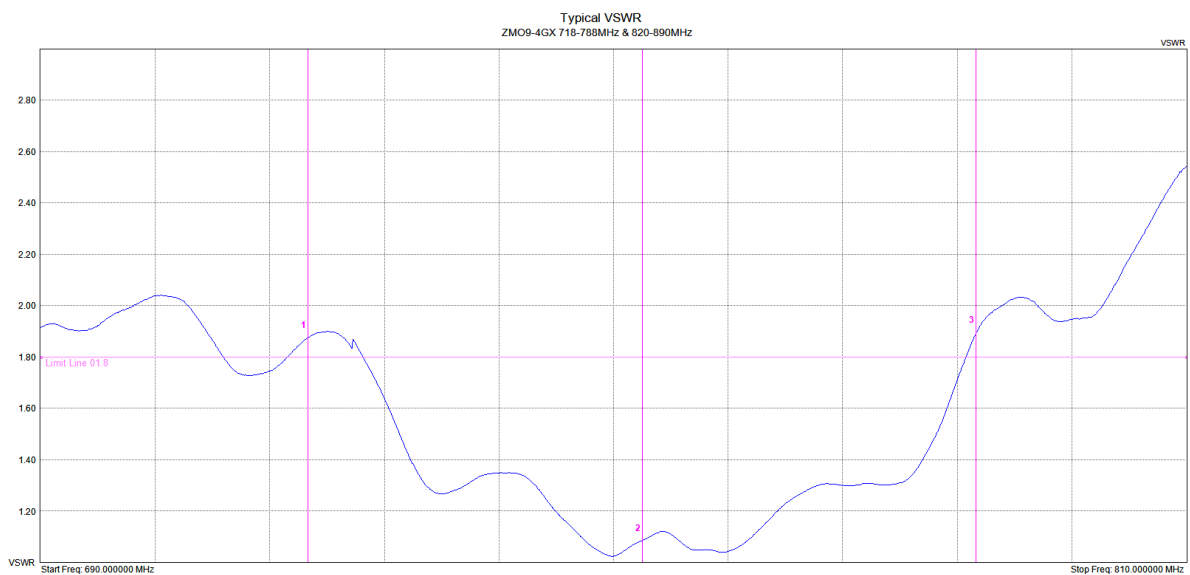
# ZM09-4GX

Mobile phone/wireless data improvement

All networks 4G LTE 718-788 MHz and lower 4G/3G 820-890 MHz



Example radiation pattern



Mtr	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	<input type="checkbox"/>	<input type="checkbox"/>	718.000 MHz	1.88VSWR	--	--
2	<input type="checkbox"/>	<input type="checkbox"/>	753.000 MHz	1.08VSWR	--	--
3	<input type="checkbox"/>	<input type="checkbox"/>	788.000 MHz	1.88VSWR	--	--
4	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--




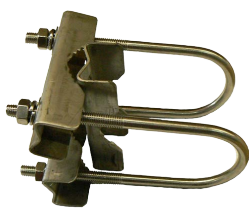
Typical VSWR at 718-788 MHz

# ZM09-4GX

## Mobile phone/wireless data improvement

All networks 4G LTE 718-788 MHz and lower 4G/3G 820-890 MHz

Alternate mounting hardware

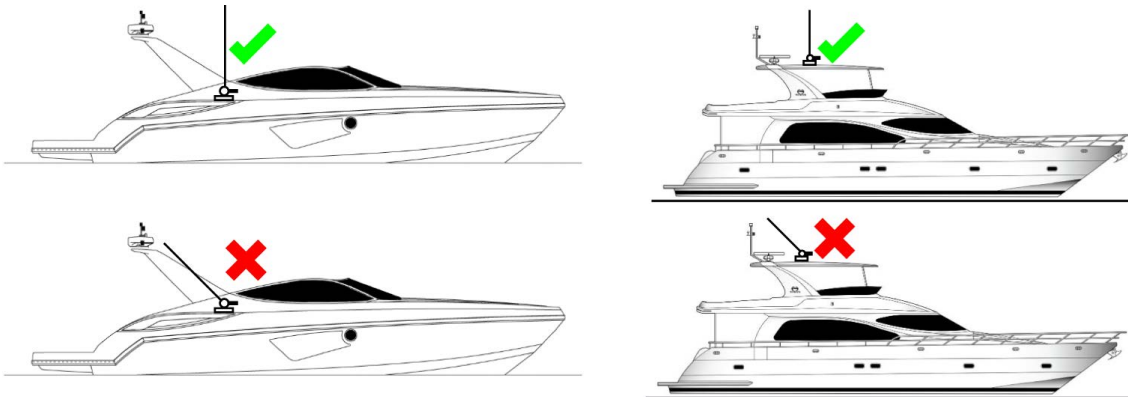
 <p>MM1 toughened white nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>A-1269 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>	 <p>A-1270 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>
 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>	 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
 <p>UB2-SS 304 stainless steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	 <p>RB8 Galvanised steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>

# ZM09-4GX

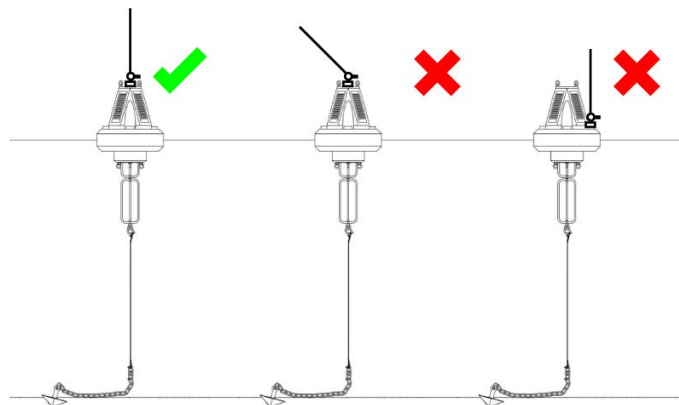
Mobile phone/wireless data improvement

All networks 4G LTE 718-788 MHz and lower 4G/3G 820-890 MHz

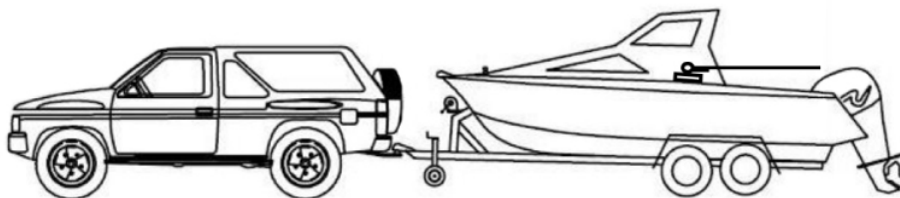
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



## 4G LTE Marine collinear Mobile phone/wireless data improvement All networks 4G LTE 700-788 MHz



The ZCG range of 4G LTE mobile phone/wireless data marine antennas offer the maximum gain and reception range practical in a broadband 4G LTE network antenna.

Suitable for both mobile phone reception as well as wireless data improvement while at sea. The ZM2-4GX series will not improve reception where no signal is being transmitted. Please check your networks coverage map for coverage in your area.

Mounting hardware, water-proofing, bird-proofing, adaptors and other installation accessories are all available separately.



	ZM18-4GX	ZM21-4GX	ZM24-4GX*
Construction	White tapered fibreglass radome, chrome mount ferrule, external coaxial cable and termination		
Frequency range	All networks 4G LTE 700-788 MHz		
Bandwidth	Full frequency range state - 88 MHz		
Tuning	Factory		
VSWR	<1.8:1		
Gain	8.1 dBi		
Maximum power	30 Watts		
Impedance	50 Ohms		
Polarisation	Vertical - do not lean/tilt once installed, only during transit		
H Plane	360° omni-directional		
E Plane	13°		
Cable	4.5 metres RG58 low loss - side exit from ferrule		
Connector	FME female fitted to cable - for ease of installation		
Height	1.8 metres	2.1 metres	2.4 metres
Weight	500grams	550grams	650grams
Mounting hardware order separate	MM1 plastic fold-down base or MM2 stainless steel MMA or MMA-SS mast mount adaptor for mast mounting Alternate: A-3050 adaptor and 1270 spring base with 1/2" bolt		
Mounting position recommended	Mount as high on your vessel/structure as possible such as the roof, deck or tower/mast		



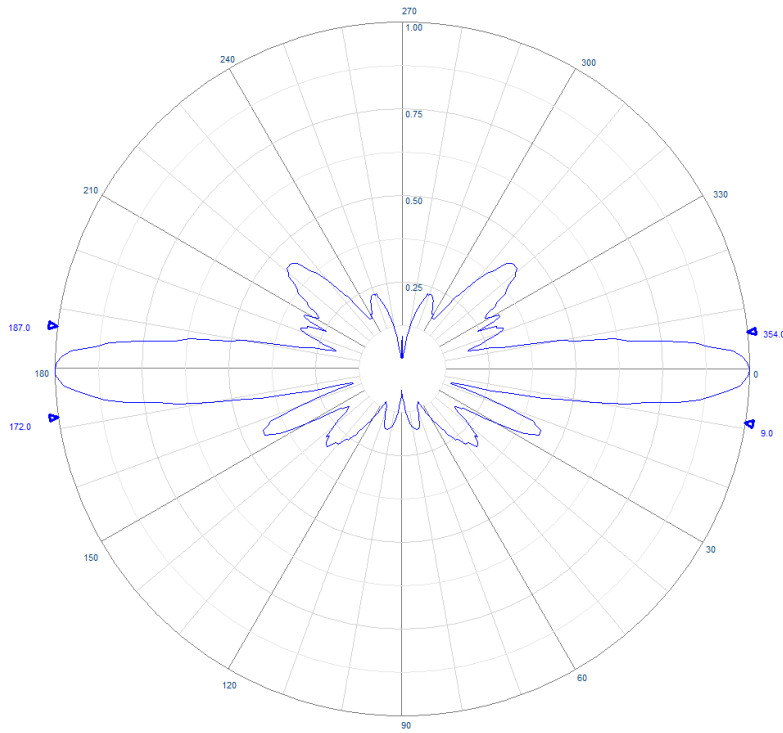
FME female fitted as standard or specify requirements



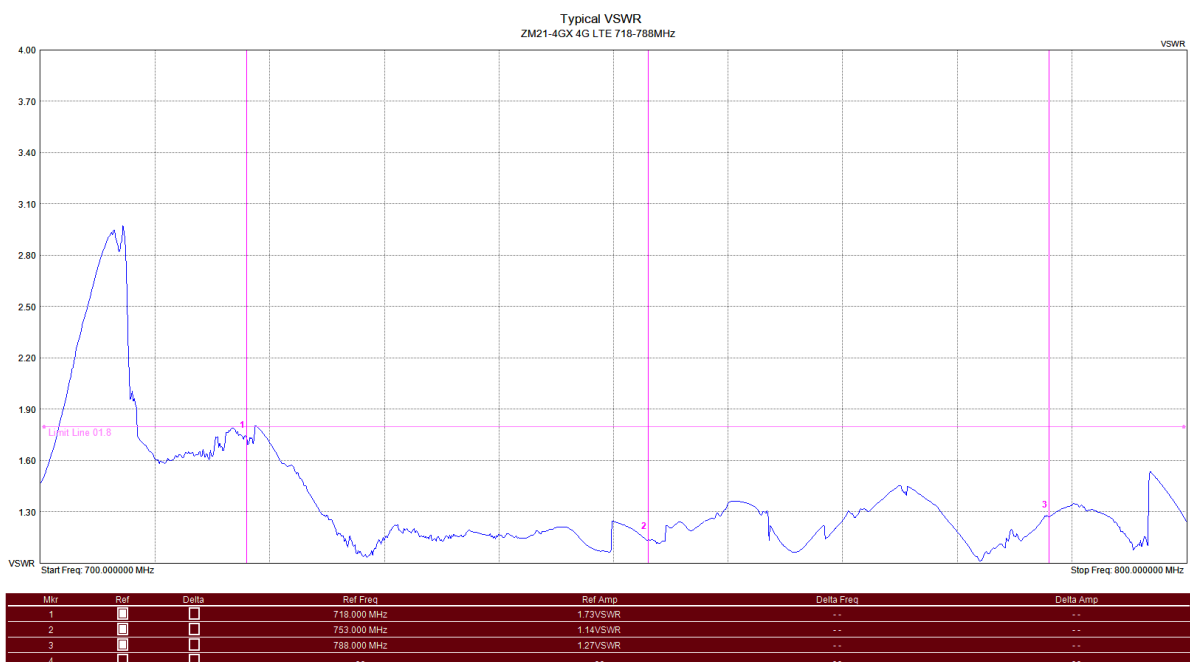
# 4G LTE Marine collinear

Mobile phone/wireless data improvement  
All networks 4G LTE 700-788 MHz

 In-stock  
Ready to Ship  
\* Signifies build to order item



Example radiation pattern





Typical VSWR

# 4G LTE Marine collinear

## Mobile phone/wireless data improvement

### All networks 4G LTE 700-788 MHz

Alternate mounting hardware

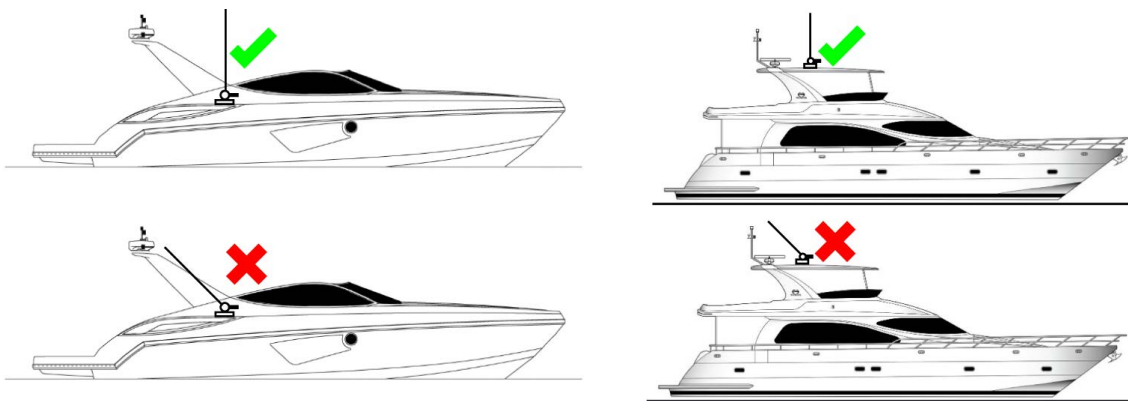
	<p>MM1 toughened white nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>		<p>MM2 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
	<p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>		<p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
	<p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>		<p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
	<p>A-1269 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>		<p>A-1270 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>
	<p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>		<p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
	<p>UB2-SS 304 stainless steel steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>		<p>RB8 Galvanised steel steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>



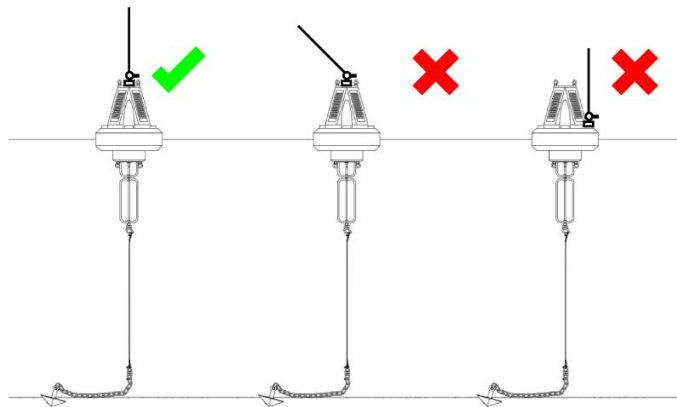
# 4G LTE Marine collinear

Mobile phone/wireless data improvement  
All networks 4G LTE 700-788 MHz

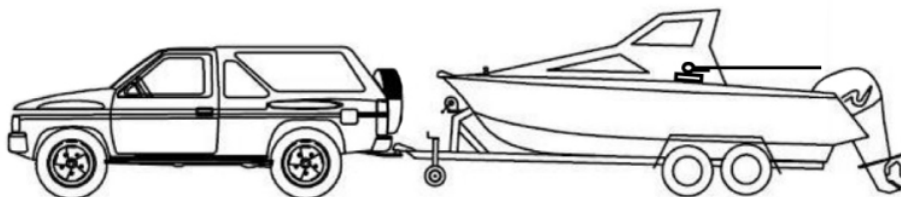
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



## ZM09-CELL Series

Mobile phone/wireless data improvement

All networks 4G & 3G 825-960 MHz & 1710-2190 MHz



The ZM09-CELL series of mobile phone/wireless data antenna provides dualband coverage of 4G and 3G with effective 6.2dBi gain. The ZM09-CELL range is identical in appearance to the other ZM09 series of fold-down antennas.

Please check your carriers coverage map for availability of signal in your area. The ZM09-CELL will not work where no signal is present.

Mounting hardware, adaptors, water-proofing and other installation accessories are all available separately.

	ZM09-CELL	ZM09-CELL-B
Colour	White	Black
Construction	Parallel fibreglass radome, aluminium mount ferrule, mount adaptor, external coaxial cable and termination	
Frequency range	825-960 MHz & 1710-2190 MHz - all networks 4G/3G	
Bandwidth	Full frequency ranges stated	
VSWR	<1.6:1 at 820-960 MHz <3:1 at 1710-2190 MHz	
Tuning	Factory	
Gain	6.2dBi at 820-960MHz and 3dBi 1710-2190MHz	
Maximum power	30 Watts	
Impedance	50 Ohms	
Polarisation	Vertical - do not lean/tilt once installed, only during transit	
H Plane	360° omni-directional	
Cable	4.5 metres white RG58 low loss side exit from ferrule	4.5 metres black MIL-SPEC RG58 low loss side exit from ferrule
Connector	FME female fitted to cable for ease of installation	
Height	900mm	
Weight - excluding base	800grams	
Mounting hardware order separate	MM1/MM1-B plastic fold-down base or MM2 stainless steel MMA or MMA-SS mast mount adaptor - mast mounting	
Mounting position recommended	Mount the antenna as high on your structure or vessel as possible to ensure a true omni-directional signal.	



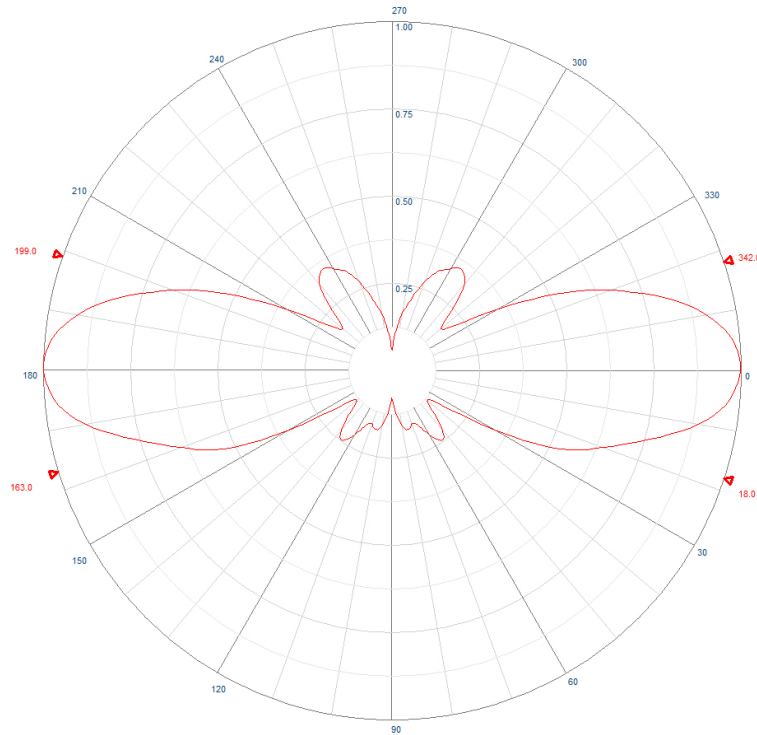
FME female fitted as standard or specify requirements



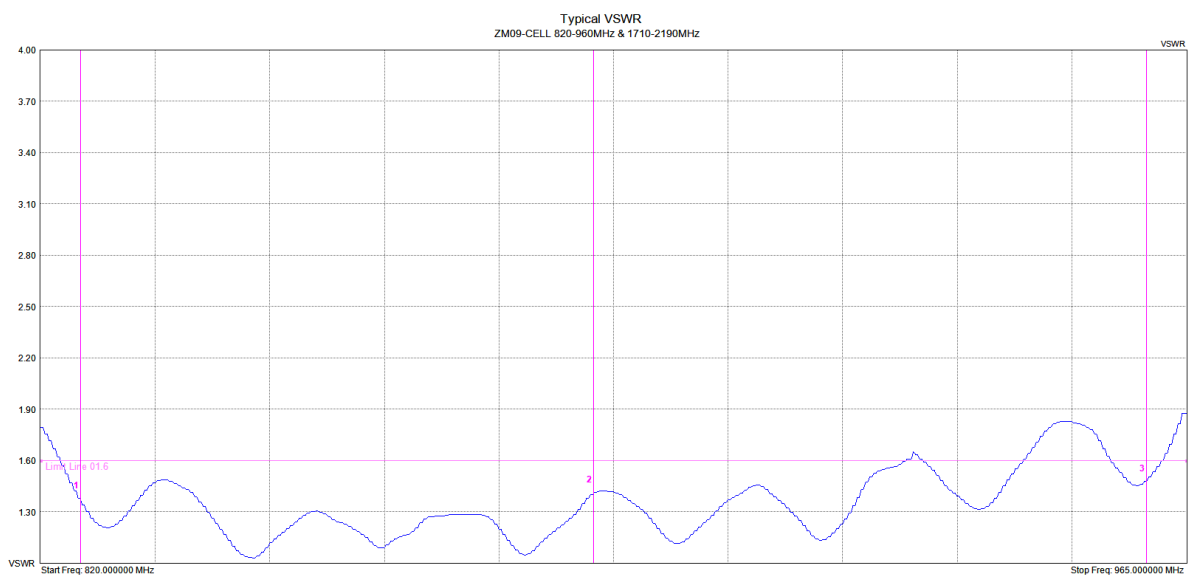
# ZM09-CELL Series

Mobile phone/wireless data improvement

All networks 4G & 3G 825-960 MHz & 1710-2190 MHz



Example radiation pattern



Mtr	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	<input type="checkbox"/>	<input type="checkbox"/>	825 000 MHz	1.38VSWR	--	--
2	<input type="checkbox"/>	<input type="checkbox"/>	890 000 MHz	1.42VSWR	--	--
3	<input type="checkbox"/>	<input type="checkbox"/>	960 000 MHz	1.48VSWR	--	--
4	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--

Typical VSWR at 820-960MHz

# ZM09-CELL Series

Mobile phone/wireless data improvement

All networks 4G & 3G 825-960 MHz & 1710-2190 MHz

Alternate mounting hardware

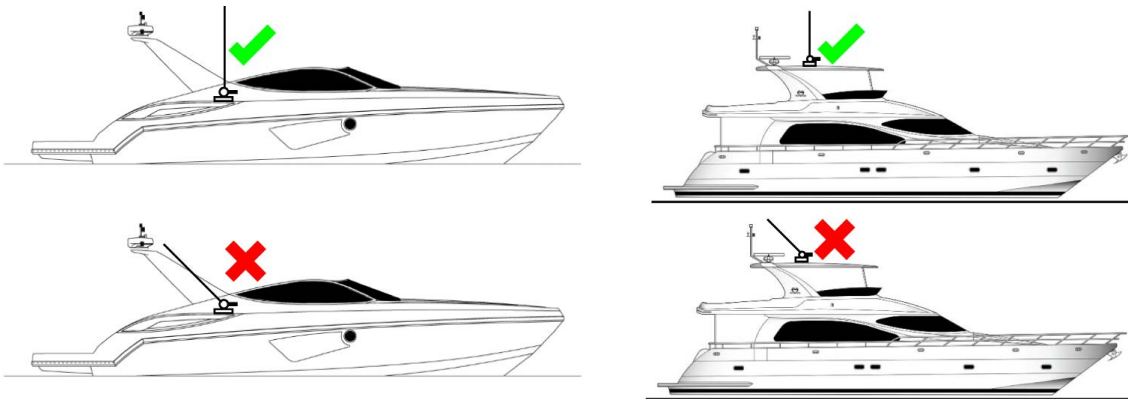
 <p>MM1 toughened white nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>A-1269 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>	 <p>A-1270 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>
 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>	 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
 <p>UB2-SS 304 stainless steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	 <p>RB8 Galvanised steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>

# ZM09-CELL Series

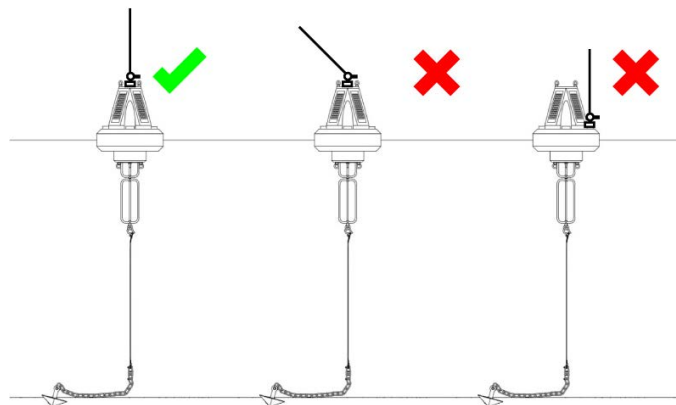
Mobile phone/wireless data improvement

All networks 4G & 3G 825-960 MHz & 1710-2190 MHz

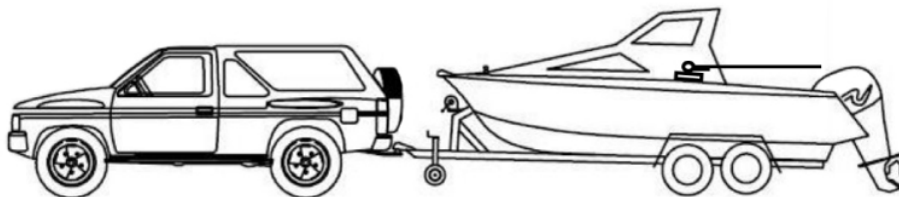
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



## ZM21-CELLG

### Mobile phone/wireless data improvement Lower 4G/3G 890-960 MHz



The ZM21-CELLG marine deck mount offers the maximum gain and reception range practical in a lower 4G/3G mobile phone antenna. The ZM21-CELLG is identical in appearance to the other ZM21 series of marine antennas.

Please check your carriers coverage map for availability of signal in your area. The ZM21-CELLG will not work where no signal is present.

Mounting hardware, water-proofing, adaptors and other installation accessories are all available separately.



Construction	White fibreglass radome, chrome mount ferrule, cable assembly and tri-metal plated termination
Frequency range	890-960 MHz - Lower 4G/3G <small>Optus &amp; Vodafone within Australia</small>
Bandwidth	Full frequency range
Tuning	Factory
VSWR	<1.6:1
Gain	8.1 dBi
Maximum power	30 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
E Plane	13°
Cable	5 metres RG58 low loss - side exit from ferrule
Connector	FME female fitted to cable - for ease of installation
Height	2.1 metres
Weight	1.0kg
Mounting hardware order separate	MM1 plastic fold-down base or MM2 stainless steel MMA or MMA-SS mast mount adaptor for mast mounting Alternate: A-3050 adaptor and 1270 spring base with 1/2" bolt
Mounting position recommended	Mount as high on your vessel/structure as possible ie. The roof, deck or tower/mast.

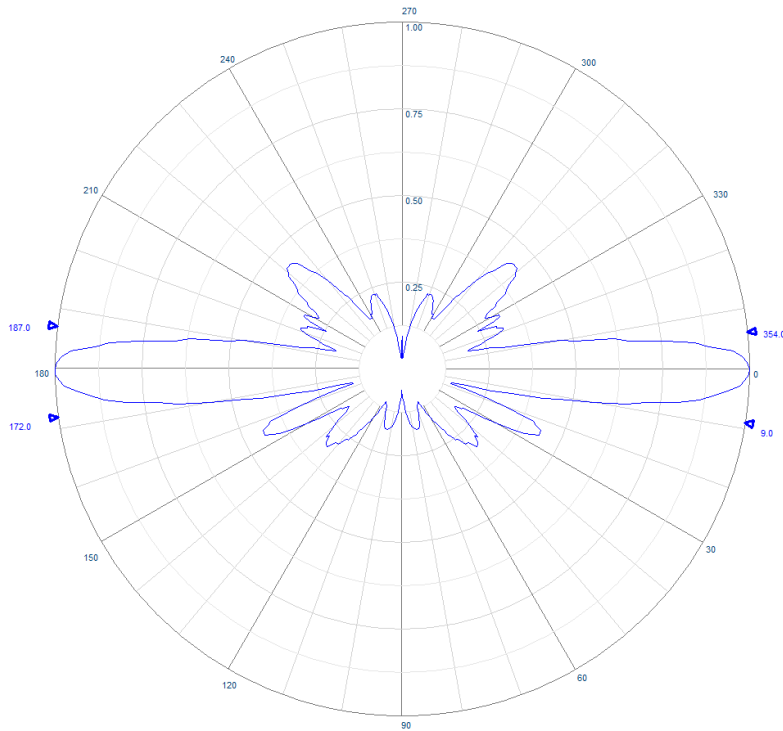


FME female fitted as standard or specify requirements. For CEL-FI Go connection request SMA male

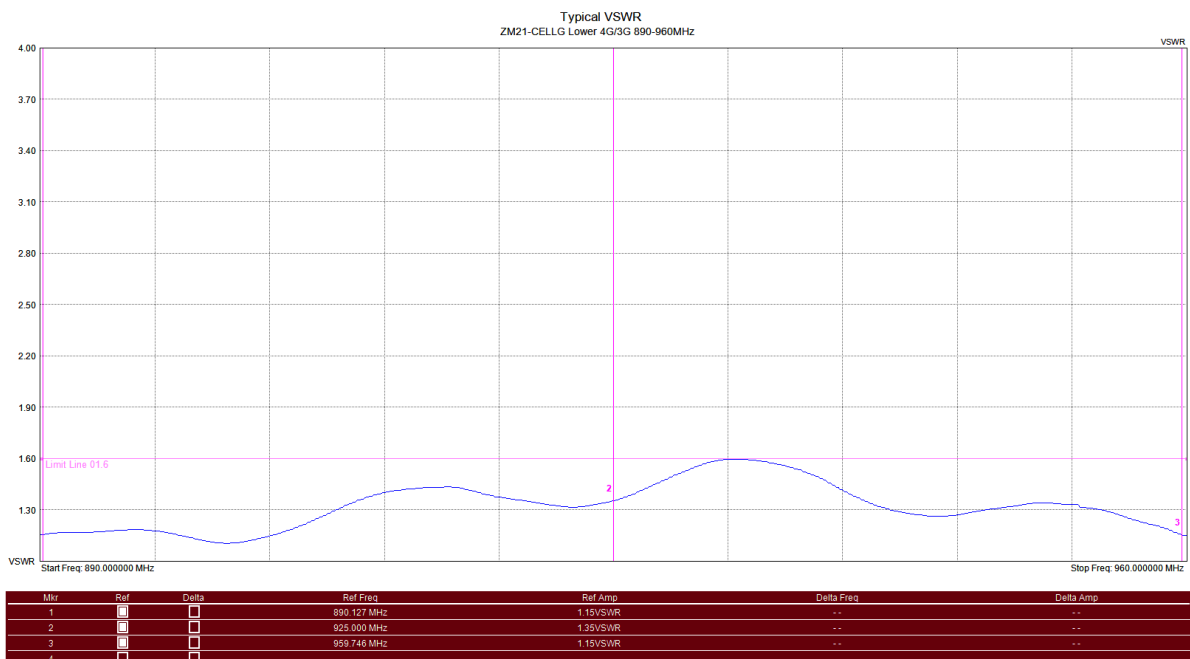


# ZM21-CELLG

Mobile phone/wireless data improvement  
Lower 4G/3G 890-960 MHz



Example radiation pattern




Typical VSWR

# ZM21-CELLG

## Mobile phone/wireless data improvement

### Lower 4G/3G 890-960 MHz

Alternate mounting hardware

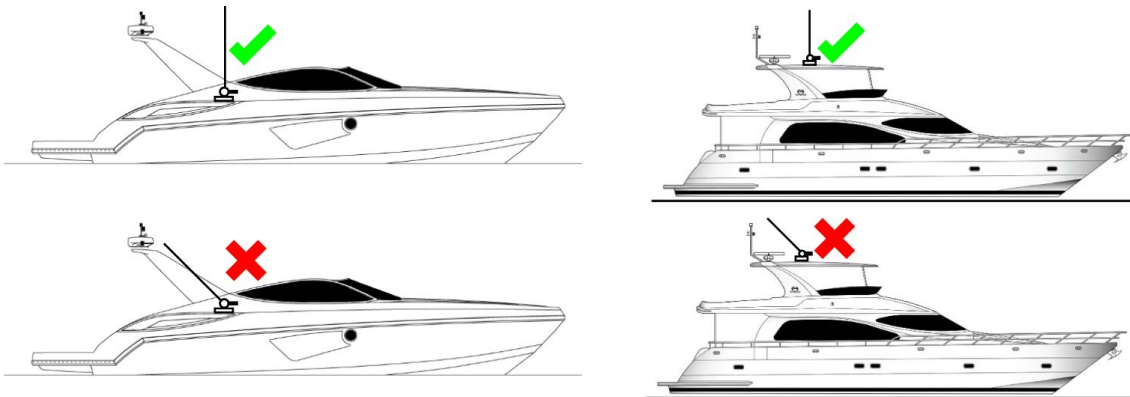
 <p>MM1 toughened white nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>A-1269 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>	 <p>A-1270 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>
 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>	 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
 <p>UB2-SS 304 stainless steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	 <p>RB8 Galvanised steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>



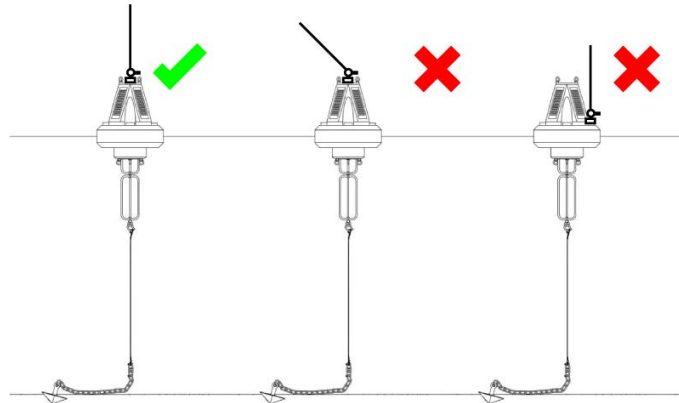
# ZM21-CELLG

Mobile phone/wireless data improvement  
Lower 4G/3G 890-960 MHz

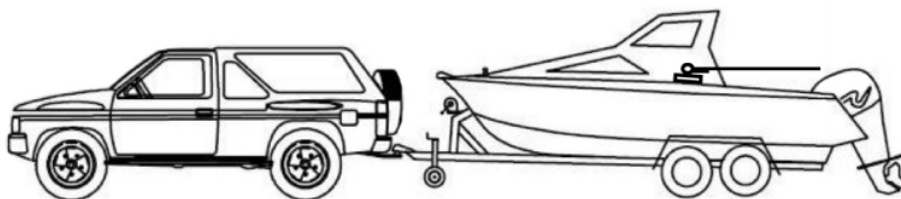
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



## ZM21-CELLN & ZM24-CELLN

Mobile phone/wireless data improvement  
Lower 4G/3G 825-890 MHz



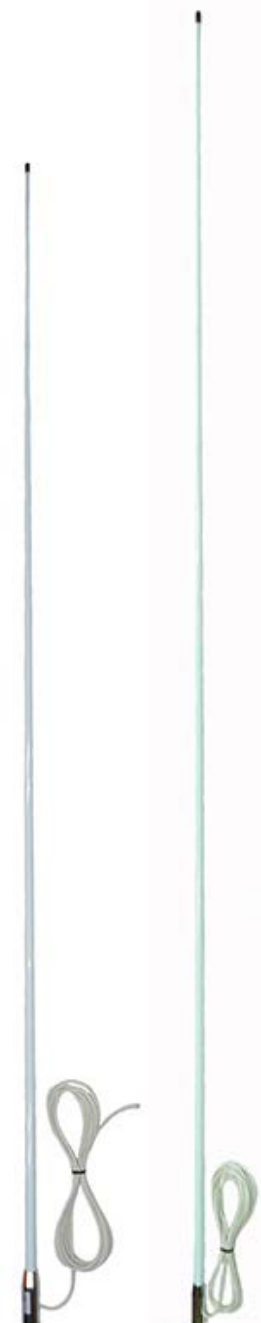
These marine mobile phone/wireless data deck mount models offer the maximum gain and reception range practical in a broadband lower 4G/3G network antenna. The ZM21-CELLN is identical in appearance to all the other ZM21 series of marine antennas. The ZM24-CELLN is identical in appearance to all other ZM24 series of marine antennas.



Please check your carriers coverage map for availability of signal in your area. The ZM21-CELLN will not work where no signal is present.

Mounting hardware, water-proofing, adaptors and other installation accessories are all available separately.

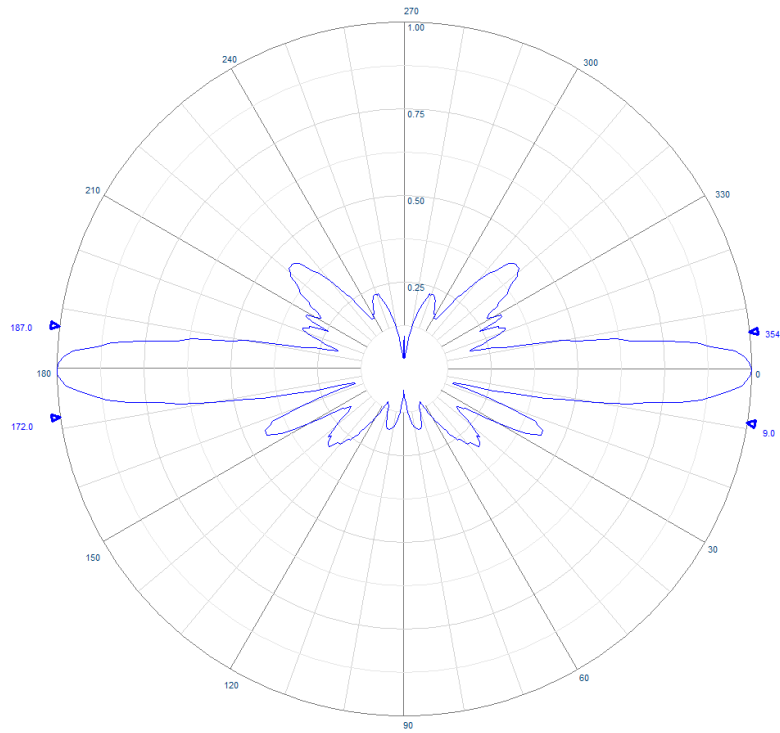
	ZM21-CELLN	ZM24-CELLN
Construction	White fibreglass radome, chrome mount ferrule, external cable assembly and termination	
Frequency range	825-890 MHz - Lower 4G/3G <small>Telstra &amp; Vodafone within Australia</small>	
Bandwidth	Full frequency range stated - 65 MHz	
Tuning	Factory	
VSWR	<1.5:1	
Gain	8.1 dBi	
Maximum power	30 Watts	
Impedance	50 Ohms	
Polarisation	Vertical - do not lean/tilt once installed, only during transit	
H Plane	360° omnidirectional	
E Plane	13°	
Cable	5 metres white RG58 low loss - side exit from ferrule	
Connector	FME female fitted to cable - for ease of installation	
Height	2.1 metres	2.4 metres
Weight	1.0kg	1.1kg
Mounting hardware order separate	MM1 plastic fold-down base or MM2 stainless steel MMA or MMA-SS mast mount adaptor for mast mounting Alternate: A-3050 adaptor and 1270 spring base with 1/2" bolt	
Mounting position recommended	Mount as high on your vessel/structure as possible ie. The roof, deck or tower/mast.	



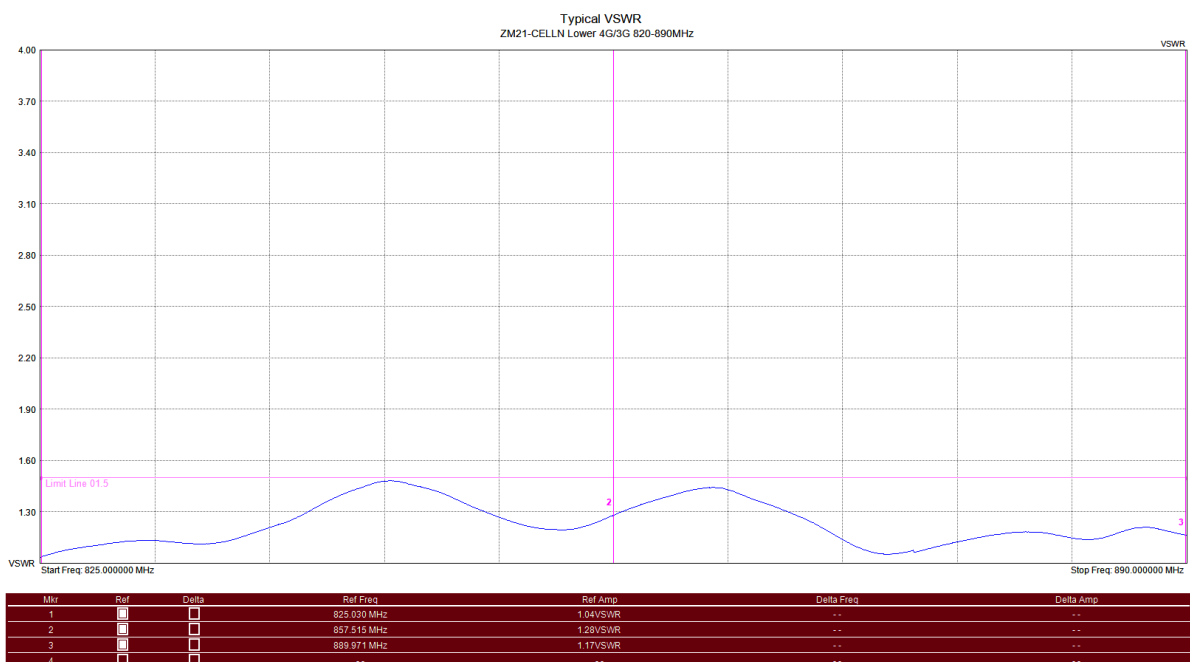


# ZM21-CELLN & ZM24-CELLN

Mobile phone/wireless data improvement  
Lower 4G/3G 825-890 MHz



Example radiation pattern









Typical VSWR

# ZM21-CELLN & ZM24-CELLN

Mobile phone/wireless data improvement

Lower 4G/3G 825-890 MHz

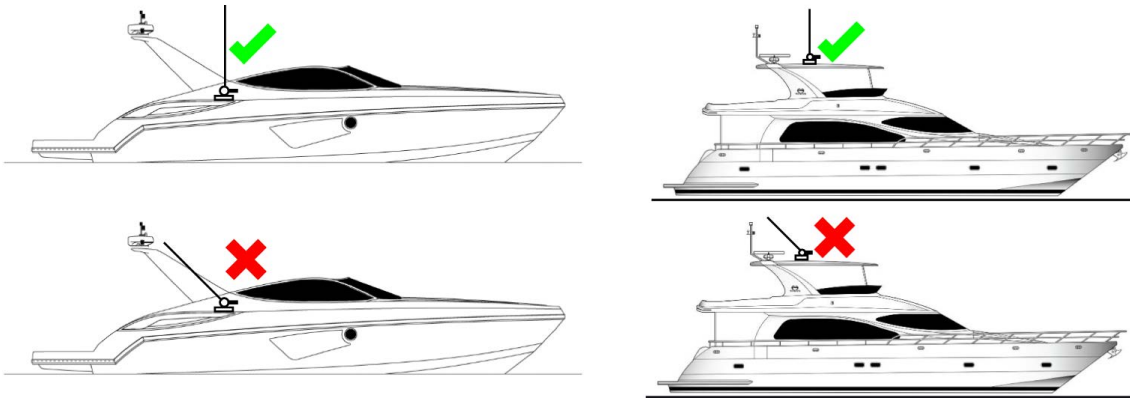
Alternate mounting hardware

 <p>MM1 toughened white nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>A-1269 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>	 <p>A-1270 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>
 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>	 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
 <p>UB2-SS 304 stainless steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	 <p>RB8 Galvanised steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>

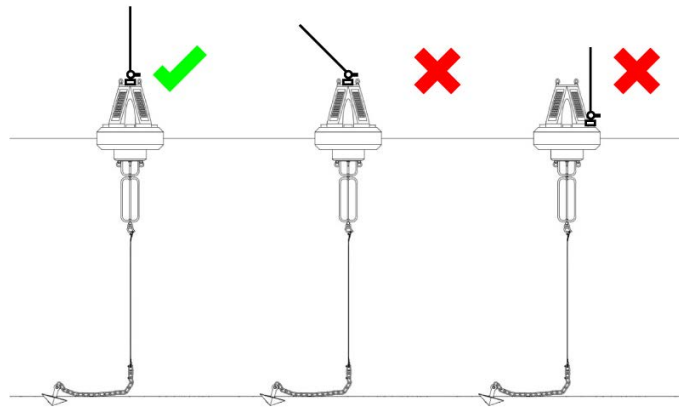
# ZM21-CELLN & ZM24-CELLN

Mobile phone/wireless data improvement  
Lower 4G/3G 825-890 MHz

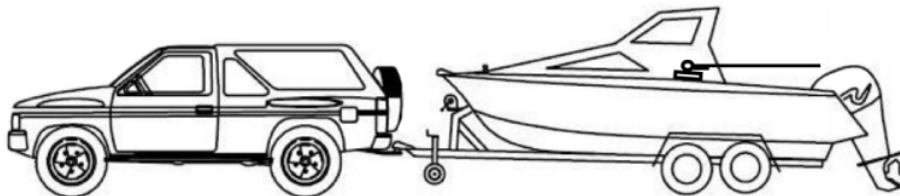
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



## CM1600 series

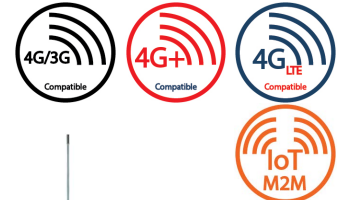
All Networks 4G LTE or lower 4G/3G

700-788 MHz, 825-890 MHz or 890-960 MHz



These mast mount models offer the maximum gain and reception range practical in a omnidirectional, mobile phone or wireless data fixed position antenna.

Mounting hardware, coaxial feeder cable, connectors and other installation accessories are all available separately.



	CM1600-4GX	CM1600AM	CMG1600AM-AC
Construction	White fibreglass radome, 304 stainless steel mount section, aluminium cap (-AC model) and bottom exit chrome termination		
Frequency range	700-788 MHz - 4G LTE	825-890 MHz - Lower 4G/3G Telstra within Australia	890-960 MHz - lower 4G/3G Optus & Vodafone within Australia
Bandwidth	Full frequency range stated		
VSWR	<1.6:1		
Tuning	Factory		
Gain	8.1 dBi		
Maximum power	20 Watts		
Impedance	50 Ohms		
DC grounding	Yes		
Polarisation	Vertical		
H Plane	360° omni-directional		
E Plane	14°	14°	14°
Connector	N-type female jack connector in base of mount section - no cable		
Height	1.85 metres	2.4 metres	2.4 metres
Weight	730grams	700grams	690 grams
Mount section	420mm x 20mm - 304 stainless steel		
Mounting hardware order separate	Parallel mast mounting: 2 x EB1-SS or 1 x UB3-SS Right-angle mast mounting: 2 x RB8 or 1 x UB2-SS Side/Wall Mounting: 2 x NSM-B20M		
Mounting position recommended	Mount as high on your mast/tower or structure using the appropriate clamp/s to achieve stated levels/performance.		



Aluminium top cap for reduced environmental and animal damage  
CMG1600AM-AC only



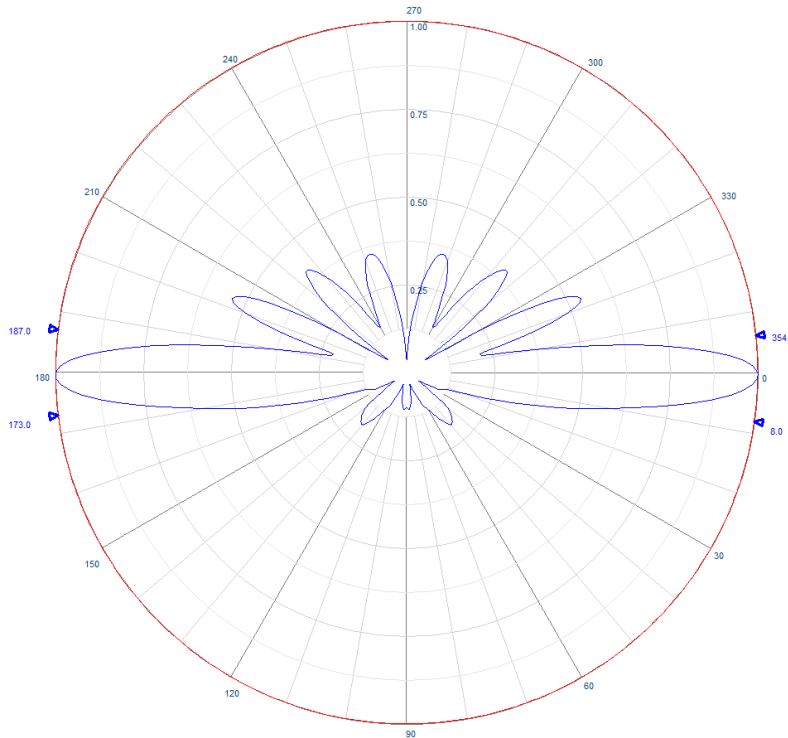
N-type female termination at base of mount section



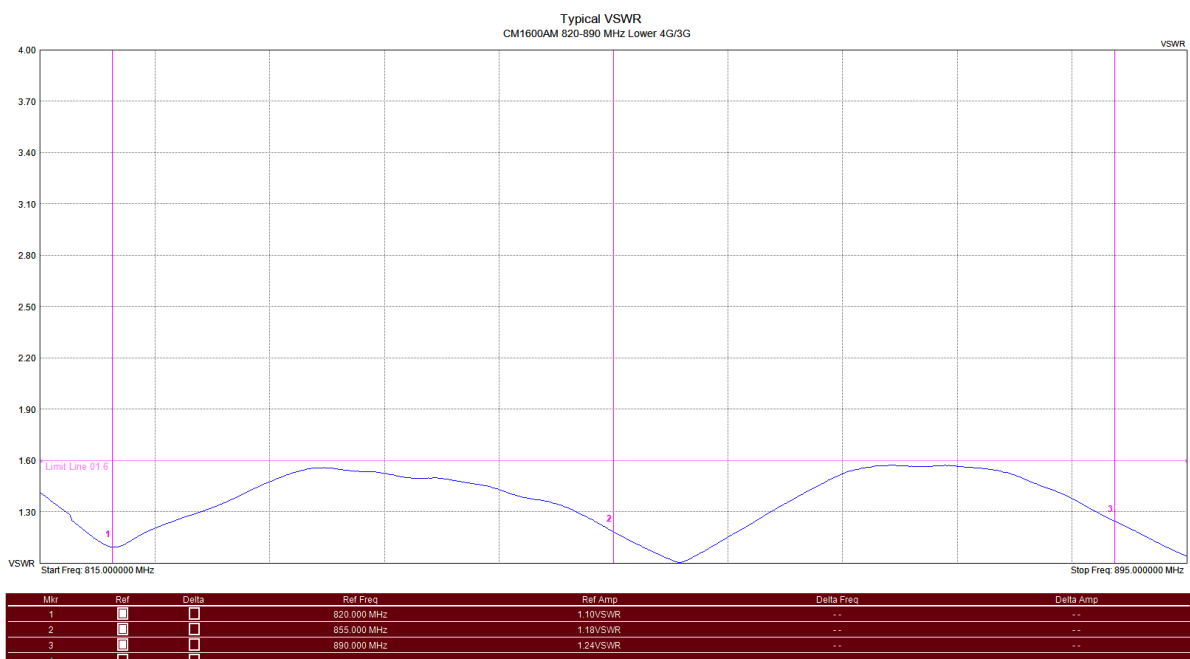
# CM1600 series

All Networks 4G LTE or lower 4G/3G

700-788 MHz, 825-890 MHz or 890-960 MHz



Example radiation pattern



Typical VSWR - CM1600AM



# CM1600 series


All Networks 4G LTE or lower 4G/3G

700-788 MHz, 825-890 MHz or 890-960 MHz





CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires mounting screws/ bolts and mounting hardware for antenna




A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires mounting screws/ bolts and mounting hardware for antenna



SFB Series - galvanised steel pole extension 0.9-2.0 metres  
Roof or overhang mounting

Requires mounting screws/ bolts and mounting hardware for antenna




NSM-B20G  
Toughened white nylon wall mount

Boom: 20mm capability  
13mm mount hole required




EB1-SS - requires 2  
304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS  
304 stainless steel parallel clamp

Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8  
Galvanised steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability



UB2-SS  
304 stainless steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability

Suitable feeder coaxial cable and connectors



RU400 Solid copper conductor, low loss coaxial cable  
CNT-400 / LMR-400™ equivalent  
(\* times microwave)

P/N 7890

Available in 100m, 300m, 500m roll or alternatively request a custom cable assembly



N-type male crimp connector for RU400 low loss, solid conductor

P/N 8226

Tri-metal plated



1/2" corrugated shielding, foam dielectric coaxial cable

P/N ZCG1250

(also available in super flexible)

Available in per metre, 500m roll 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





## SGDB-SS-S

Oceanic sealed mobile phone/wireless data improvement  
All networks 4G/3G 825-960 MHz & 1710-2190 MHz



The SGDB-SS-S is specifically designed and manufactured for the marine environment where mobile phone and wireless data receive and transmit improvement is required.



The antennas radiating internals are completely oceanic sealed to ensure no water or moisture ingress inside which could reduce performance and life span. This antenna can also be mounted in an inverted configuration.

Mounting hardware, coaxial feeder cable, connectors and other installation accessories are all available separately.

Construction	Black radome, stainless steel mount ferrule and mount adaptor, external coaxial cable and termination
Frequency range	All networks 4G, 3G & 2G 825-960MHz & 1710-2190MHz Telstra, Optus & Vodafone within Australia
Bandwidth	Full frequency range
VSWR	<1.6:1 at 825-940 MHz <2:1 at 940-960 MHz <3.5:1 at 1710-2190 MHz
Tuning	Factory
Gain	6.2 dBi 825-960 MHz and 3 dBi 1710-2190 MHz
Maximum power	30 Watts
Impedance	50 Ohms
Polarisation	Vertical
DC grounding	Yes
H Plane	360° omni-directional
Connector	FME female fitted as standard or specify requirements
Cable	1.0m RG58A/U stranded side exit from ferrule or specify length requirements
Height	900mm
Weight	1.2kg
Mounting section	150mm x 24mm - solid 304 stainless steel
Mounting hardware order separate	Parallel mast mounting: 2 x EB1-SS or 1 x UB3-SS Right-angle mast mounting: 2 x RB8 or 1 x UB2-SS
Mounting position recommended	Mount as high on your mast/tower or structure as possible using the appropriate clamp/s.

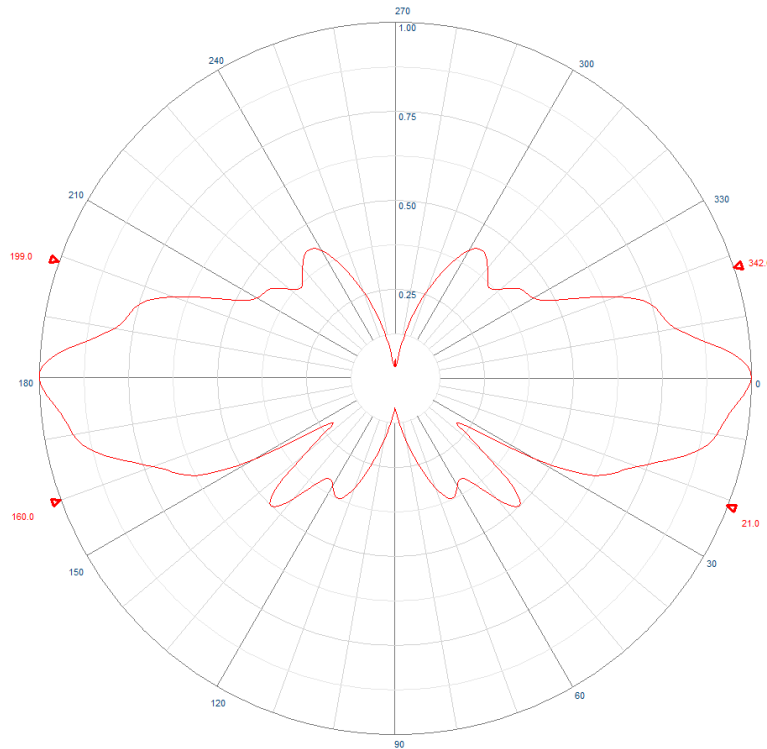


FME female fitted to cable as standard or specify requirements

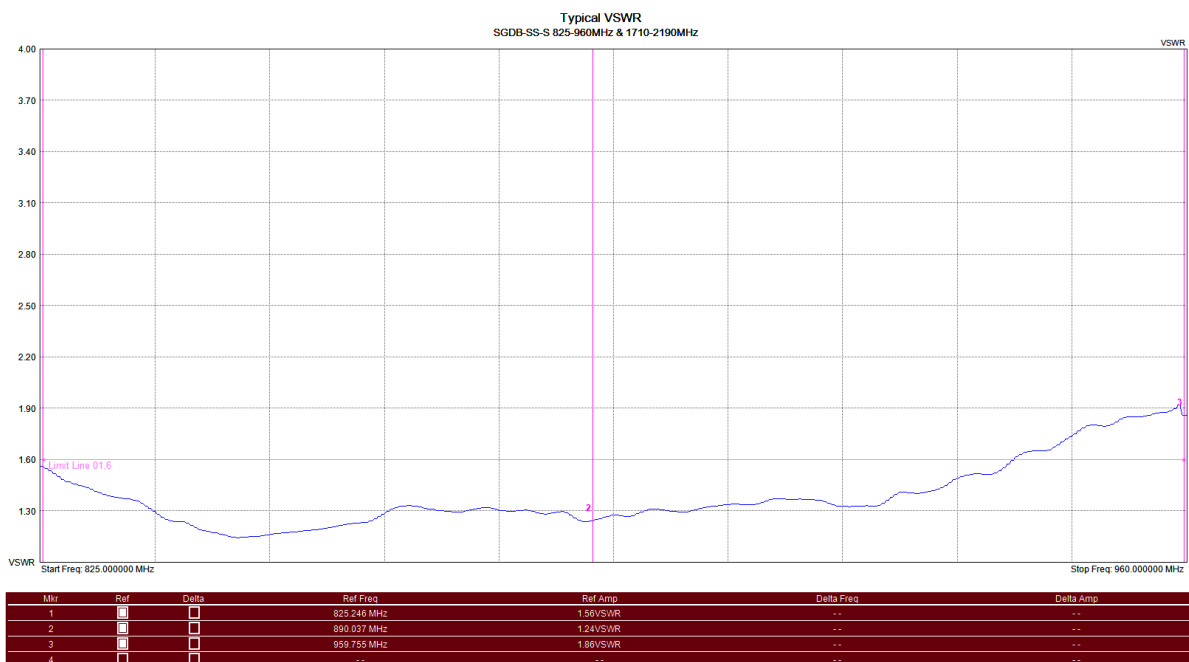


# SGDB-SS-S

Oceanic sealed mobile phone/wireless data improvement  
All networks 4G/3G 825-960 MHz & 1710-2190 MHz



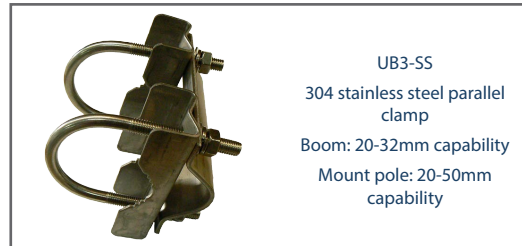
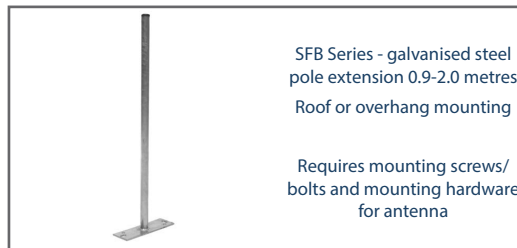
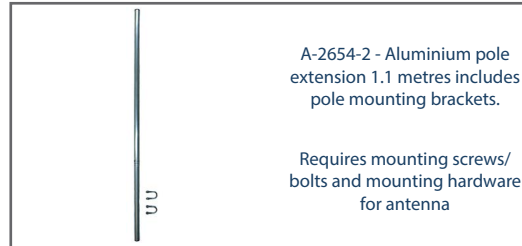
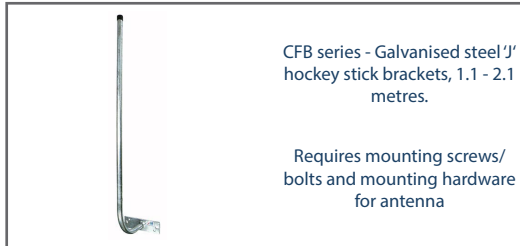
Example radiation pattern



Typical VSWR 825-960 MHz

# SGDB-SS-S

Oceanic sealed mobile phone/wireless data improvement  
All networks 4G/3G 825-960 MHz & 1710-2190 MHz





## SGDB-MM-N

**Mast mount mobile phone/wireless data improvement collinear**  
**All networks 4G/3G 825-960 MHz & 1710-2190 MHz**



The SGDB-MM-N is a mast mount collinear, designed and manufactured to improve your mobile phone and wireless data receive and transmit.

**Please note:** The SGDB-MM-N will not receive signal where no signal is present, please check your carrier coverage map for signal location/strength.

Mounting hardware, coaxial feeder cable, connectors and other installation accessories are all available separately.



Construction	White parallel fibreglass radome, stainless steel mount section and external termination
Frequency range	825-960 MHz & 1710-2190 MHz - all networks dualband 4G/3G
Bandwidth	Full frequency ranges stated
VSWR	<1.6:1 at centre and <2.1:1 at edges
Tuning	Factory
Gain	6.2 dBi at 825-960 MHz and 3 dBi at 1710-2190 MHz
Maximum power	30 Watts
Impedance	50 Ohms
Polarisation	Vertical
DC grounding	Yes
H Plane	360° omnidirectional
E Plane	32°
Connector	N-type female in base of mount section
Height	1.4 metres
Weight	1.2kg
Mount section	Height: 400mm, Diameter: 22.2mm - 304 stainless steel
Mounting hardware order separate	Parallel: 2 x EB1-SS or 1 x UB3-SS Right-angle: 2 x RB8 or 1 x UB2-SS
Mounting position recommended	Mount as high on your structure ,mast or tower using the appropriate mounting clamp/s.
Installation requirements	Waterproofing amalgamation tape P/N A-8574 and PVC tape P/N A-8651-0 for external terminations.



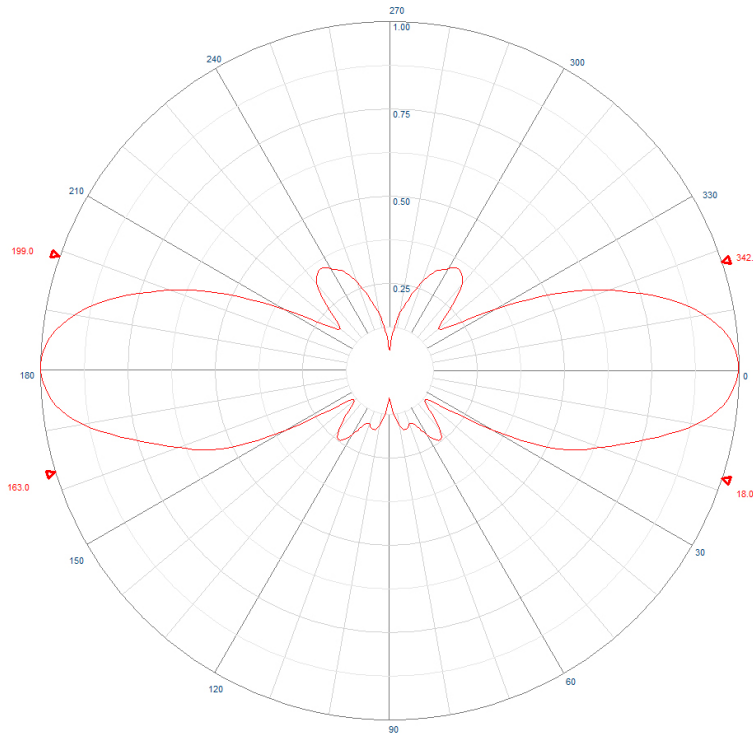
N-type female in base of mount section



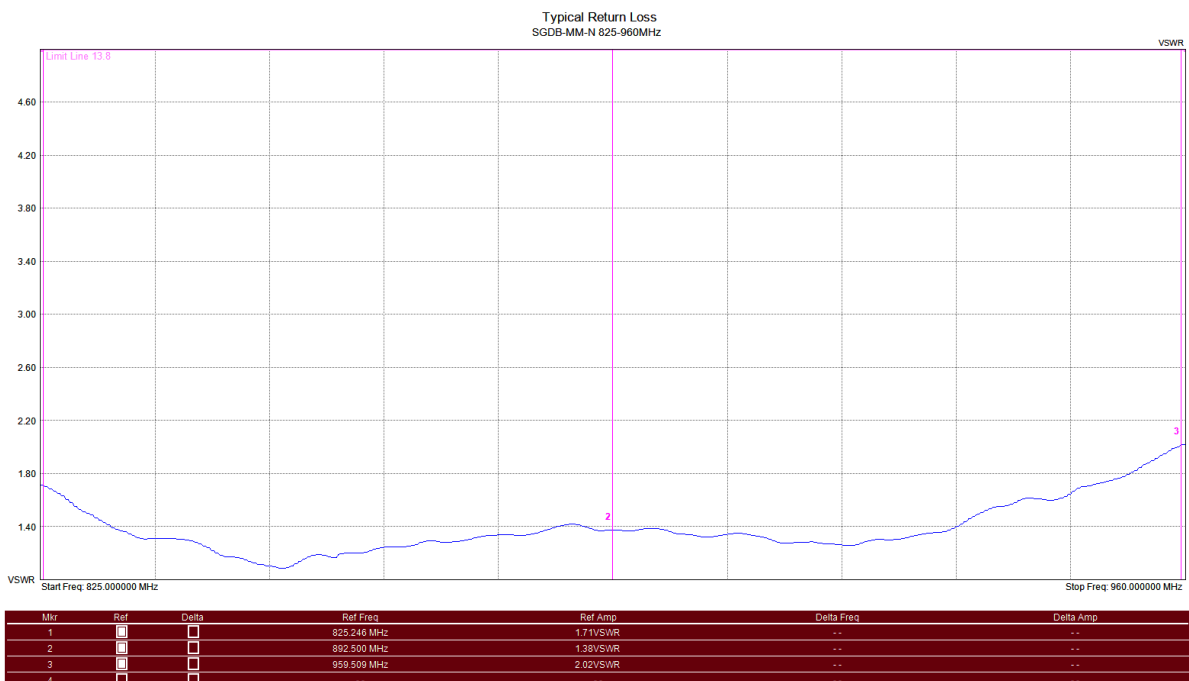
# SGDB-MM-N

Mast mount mobile phone/wireless data improvement collinear  
All networks 4G/3G 825-960 MHz & 1710-2190 MHz

  
In-stock  
Ready to  
Ship




Example radiation pattern



Typical VSWR at 820-960MHz


## SGDB-MM-N

Mast mount mobile phone/wireless data improvement collinear  
All networks 4G/3G 825-960 MHz & 1710-2190 MHz



CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires A-4266 series + 2 x EB1-SS or 1 x UB2-SS



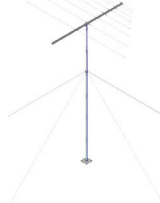
A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS



SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS




A-2307 - 6-piece aluminium & fibreglass mast - 6.68m

Includes: insulated top, guy wires, spigots and base bracket.



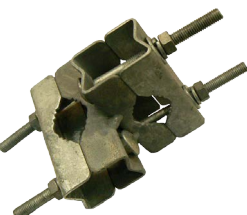
EB1-SS - requires 2 304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS 304 stainless steel parallel clamp

Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8 - requires 2 Galvanised steel right-angle clamp

Boom: 20-40mm capability  
Mount pole: 20-40mm capability



UB2-SS 304 stainless steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability

Suitable feeder coaxial cable and connectors



MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable

P/N 7800


Available in 100m or 300m rolls or alternatively request a custom cable assembly



N-type male crimp connector for MIL-SPEC RG213

P/N 7937

Tri-metal plated



RU400 Solid copper conductor, low loss coaxial cable

CNT-400 / LMR-400™ equivalent  
(\* times microwave)

P/N 7890

Available in 100m ,300m or 500m rolls or alternatively request a custom cable assembly



N-type male crimp connector for RU400 low loss, solid conductor

P/N 8226

Tri-metal plated



## SGDB-TPM series

Mobile phone/wireless data improvement

All networks 4G and 3G 825-960 MHz & 1710-2190 MHz



At some remote locations, inside a building or whilst travelling, mobile phone and wireless data reception can often be poor, the SGDB-TPM is an adaptable antenna for mounting outdoors at your home or office.



**Please note:** the SGDB-TPM series will not transmit/receive signal where no cellular infrastructure is present, please check network coverage.

Mounting hardware, adaptors, bird-proofing and other installation accessories are all available separately.

Radome colour	Black SGDB-B-TPM	White SGDB-W-TPM*	All Black SGDB-BLKR-TPM*
Construction	Coloured fibreglass radome, aluminium mount ferrule, external cable assembly and termination		Black fibreglass radome, black ferrule and external cable
Frequency range	825-960 MHz & 1710-2190 MHz - all networks dualband 4G/3G		
Bandwidth	Full frequency ranges stated		
VSWR	<1.6:1		
Tuning	Factory		
Gain	6.2 dBi at 825-960 MHz and 3 dBi at 1710-2190 MHz		
Maximum power	30 Watts		
Impedance	50 Ohms		
Polarisation	Vertical		
H Plane	360° omni-directional		
E Plane	32°		
Cable	5 metres MIL-SPEC RG58 low loss - side exit from ferrule		
Connector	FME female fitted to cable as standard or specify requirements		
Height	800mm		
Weight	700grams		
Mounting hardware order separate	Bracket: GM1, GM2, GM6 or A-6211 Mast Mount: A-4266 series - using 2 x EB1-SS or 1 x UB3-SS Magnetic base: MGB Or any minimum 13mm hole		
Mounting position recommended	As high on your structure/tower or building as possible, using the appropriate mounting hardware.		
Installation tools required	19mm or 3/4" spanner for securing nut		



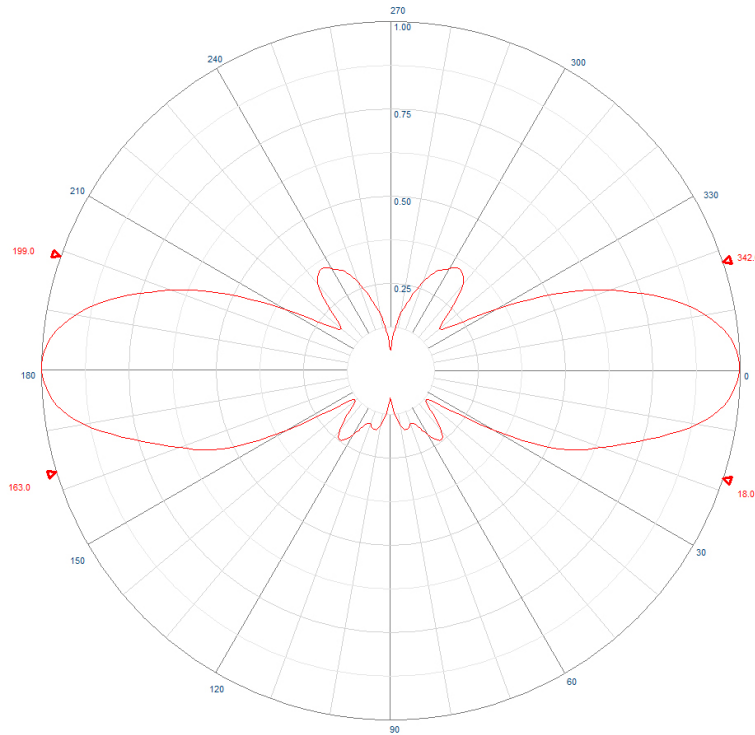


# SGDB-TPM series

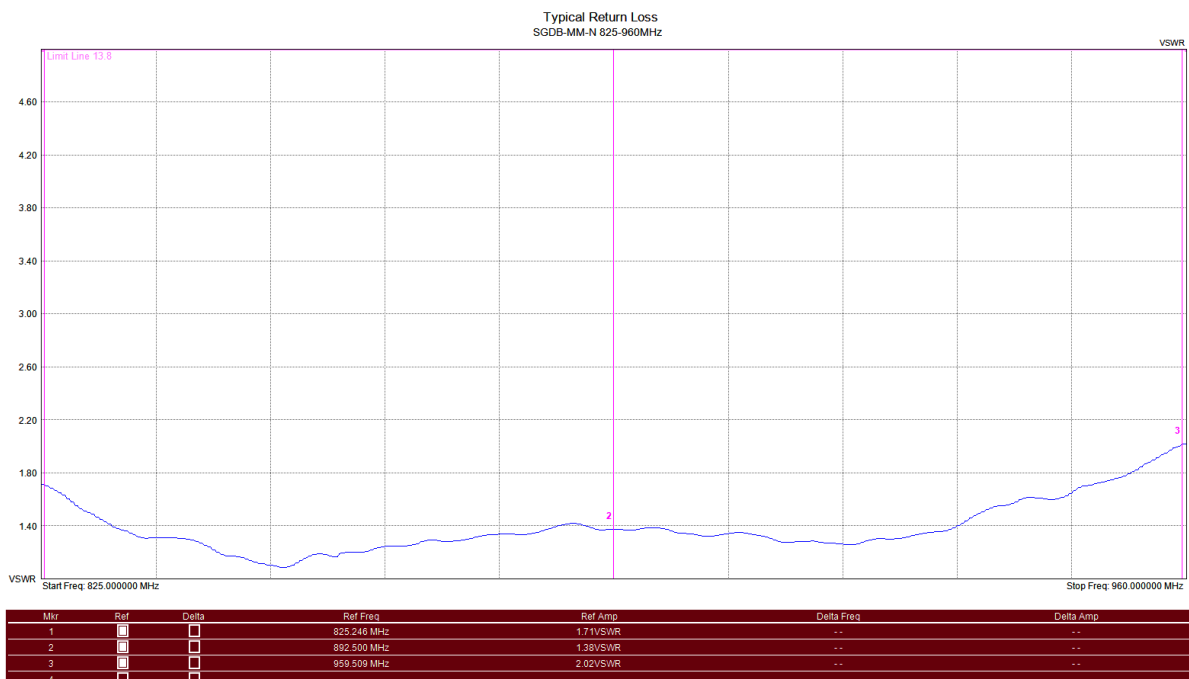
Mobile phone/wireless data improvement

All networks 4G and 3G 825-960 MHz & 1710-2190 MHz

  
In-stock  
Ready to  
Ship  
\* Signifies build to order item



Example radiation pattern



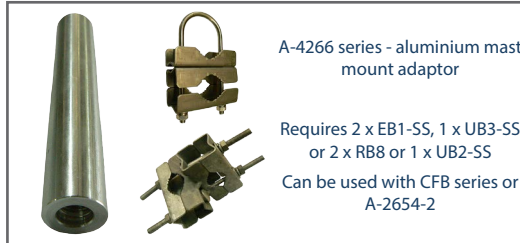
Typical VSWR at 820-960 MHz



## SGDB-TPM series

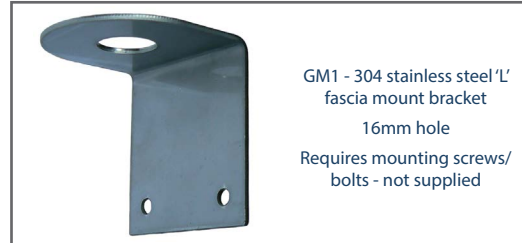
Mobile phone/wireless data improvement

All networks 4G and 3G 825-960 MHz & 1710-2190 MHz



A-4266 series - aluminium mast  
mount adaptor

Requires 2 x EB1-SS, 1 x UB3-SS  
or 2 x RB8 or 1 x UB2-SS  
Can be used with CFB series or  
A-2654-2



GM1 - 304 stainless steel 'L'  
fascia mount bracket

16mm hole  
Requires mounting screws/  
bolts - not supplied



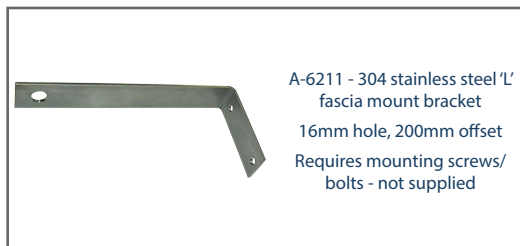
GM2 - 304 stainless steel 'Z'  
fascia mount bracket

16mm hole  
Requires mounting screws/  
bolts - not supplied



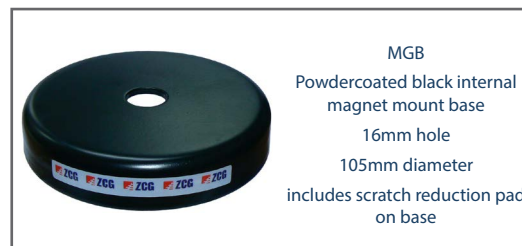
BBKB-B - black powdercoated  
'knock-down' mount bracket

17mm hole  
Includes mounting screws/  
bolts



A-6211 - 304 stainless steel 'L'  
fascia mount bracket

16mm hole, 200mm offset  
Requires mounting screws/  
bolts - not supplied



MGB

Powdercoated black internal  
magnet mount base  
16mm hole  
105mm diameter  
includes scratch reduction pad  
on base



A-2845

Powdercoated black tri-  
magnetic mount base  
13mm hole  
Santoprene coated magnets  
for scratch reduction



A-4554 SG to Marine base  
mount adaptor

+  
MM1 Nylon mount base or  
MM2 316 stainless steel mount  
base

### Recommended installation requirements



A-8574

Self-bonding butyl  
amalgamation tape  
Apply a single taught-layer  
over all external terminations,  
followed by a layer of PVC tape



A-8651-0

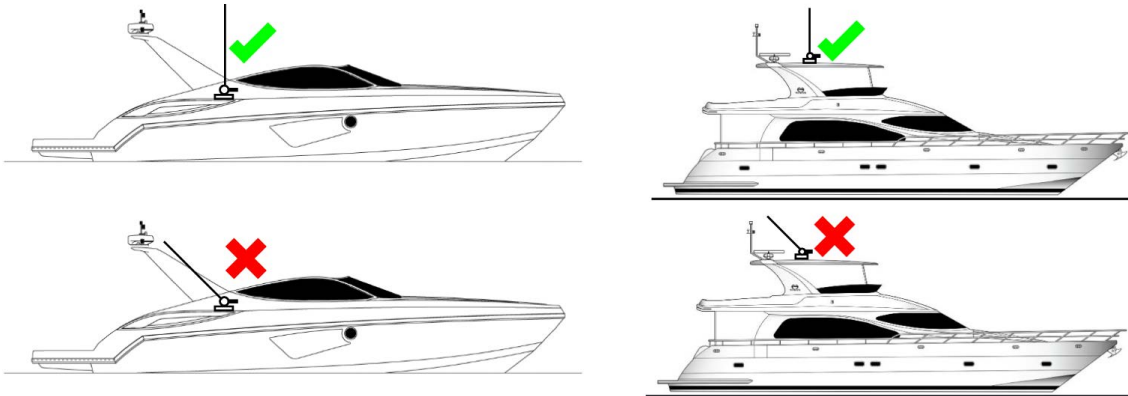
Fire retardant black PVC tape  
Apply a single taught-layer  
over all external terminations,  
over-top of amalgamation tape

# SGDB-TPM series

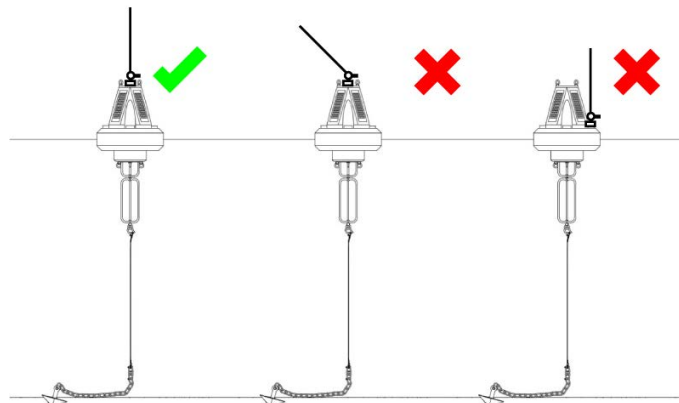
Mobile phone/wireless data improvement

All networks 4G and 3G 825-960 MHz & 1710-2190 MHz

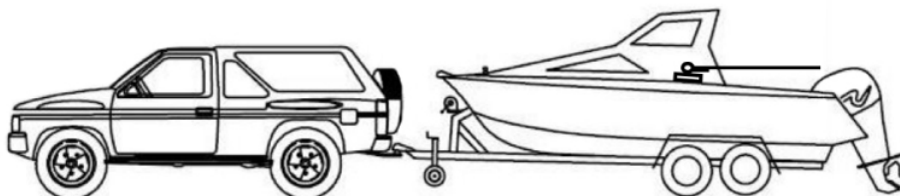
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.

New Product

Australian  
manufactured  
in  
East Gippsland

# SGDB-TPM-BE series

Mobile phone/wireless data improvement

All networks 4G and 3G 825-960 MHz & 1710-2190 MHz

Build  
To  
Order

For mounting at the highest point on your vessel or structure the SGDB-TPM-BE dualband cellular antenna is the ideal broadband solution. With a bottom exit cable, allowing direct routing to your device through walls or cable through puts, whilst maintaining a clean profile.

**Please note:** the SGDB-TPM-BE series will not transmit/receive signal where no cellular infrastructure is present, please check your carriers network coverage.

Mounting hardware, adaptors, bird-proofing and other installation accessories are all available separately.



Construction	Black fibreglass radome, aluminium mount ferrule and bottom exit cable assembly - white radome on request
Frequency range	825-960 MHz & 1710-2190 MHz - all networks dualband 4G/3G
Bandwidth	Full frequency ranges stated
VSWR	<1.6:1
Tuning	Factory
Gain	6.2 dBi at 825-960 MHz and 3 dBi at 1710-2190 MHz
Maximum power	30 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
E Plane	32°
Cable	10 metres RG58 low loss/low noise - bottom exit from ferrule
Connector	SMA male fitted to cable as standard - or specify
Height	800mm
Weight	1.0kg
Mounting hardware order separate	Bracket: GM1, GM2, GM6 or A-6211 Magnetic base: MGB - can be fitted in factory, request Mast mount adaptor: 4266-7 (to be fitted in factory) + 2 x EB1-SS Or any minimum 13mm hole
Mounting position recommended	As high on your structure/tower or building as possible, using the appropriate mounting hardware.
Installation tools required	19mm or 3/4" spanner for securing nut



Cable bottom exits from ferrule.

New Product

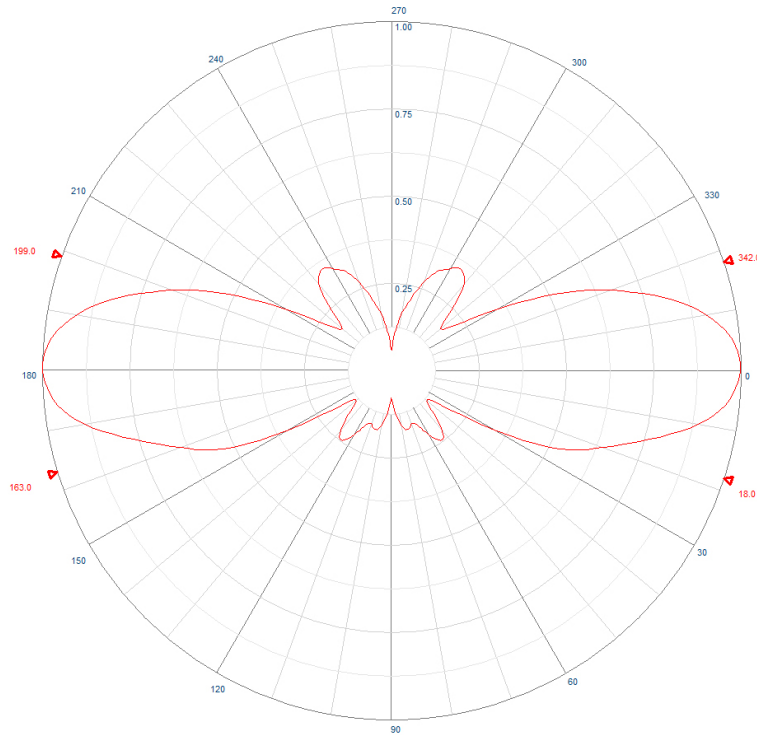
Australian  
manufactured  
in  
East Gippsland

# SGDB-TPM-BE series

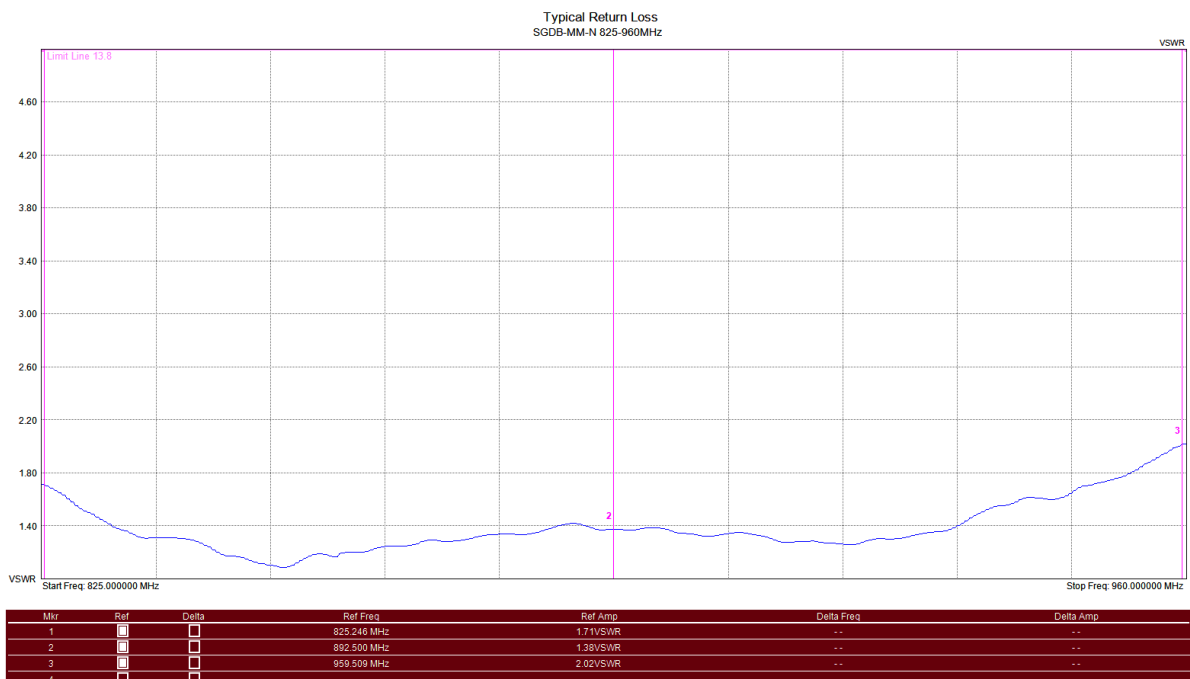
Mobile phone/wireless data improvement

All networks 4G and 3G 825-960 MHz & 1710-2190 MHz

Build  
To  
Order



Example radiation pattern



Typical VSWR at 820-960 MHz

New Product

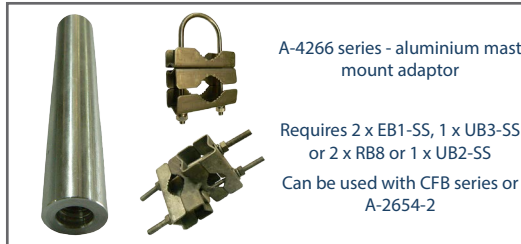
Australian  
manufactured  
in  
East Gippsland

## SGDB-TPM-BE series

Mobile phone/wireless data improvement

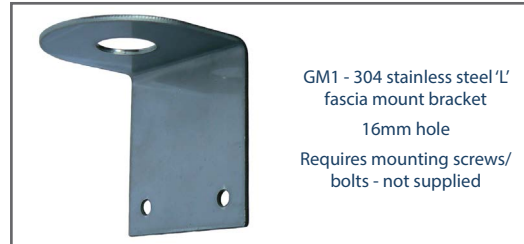
All networks 4G and 3G 825-960 MHz & 1710-2190 MHz

Build  
To  
Order



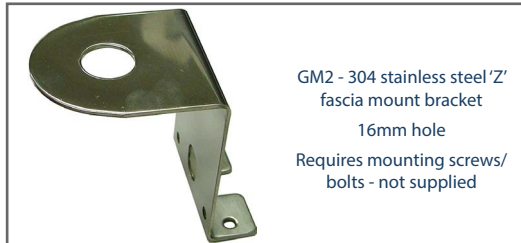
A-4266 series - aluminium mast  
mount adaptor

Requires 2 x EB1-SS, 1 x UB3-SS  
or 2 x RB8 or 1 x UB2-SS  
Can be used with CFB series or  
A-2654-2



GM1 - 304 stainless steel 'L'  
fascia mount bracket

16mm hole  
Requires mounting screws/  
bolts - not supplied



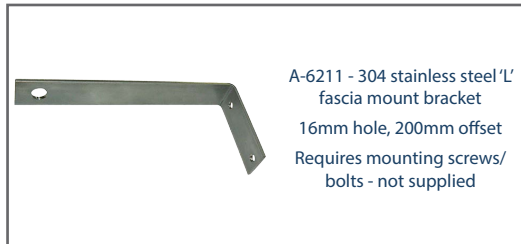
GM2 - 304 stainless steel 'Z'  
fascia mount bracket

16mm hole  
Requires mounting screws/  
bolts - not supplied



BBKB-B - black powdercoated  
'knock-down' mount bracket

17mm hole  
Includes mounting screws/  
bolts



A-6211 - 304 stainless steel 'L'  
fascia mount bracket

16mm hole, 200mm offset  
Requires mounting screws/  
bolts - not supplied



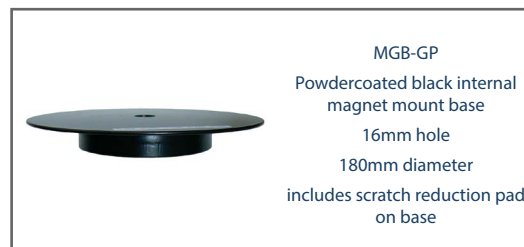
MGB

Powdercoated black internal  
magnet mount base  
16mm hole  
105mm diameter  
includes scratch reduction pad  
on base



A-2845

Powdercoated black tri-  
magnetic mount base  
13mm hole  
Santoprene coated magnets  
for scratch reduction



MGB-GP

Powdercoated black internal  
magnet mount base  
16mm hole  
180mm diameter  
includes scratch reduction pad  
on base

### Recommended installation requirements



A-8574

Self-bonding butyl  
amalgamation tape  
Apply a single taught-layer  
over all external terminations,  
followed by a layer of PVC tape



A-8651-0

Fire retardant black PVC tape  
Apply a single taught-layer  
over all external terminations,  
over-top of amalgamation tape



## SGDB-T10



### Mast Mount Mobile Phone/Wireless Data Improvement All networks dualband 4G/3G 825-960 MHz & 1710-2190 MHz

The SGDB-T10 super gain collinear is a popular choice to improve your mobile phone or wireless data reception. The SGDB-T10 is different from the standard SGDB due to the capability of mast mounting to a pole or vertical mast and the cable exiting the bottom of the mounting section.



**Please note:** The SGDB-T10 will not receive signal where no signal is present, please check your carrier coverage map for signal location.

Mounting hardware, adaptors, connectors and other installation accessories are all available separately.

Construction	Black fibreglass radome, aluminium ferrule and mast mount, cable assembly and termination
Frequency range	825-960 MHz & 1710-2190 MHz - all networks dualband 4G/3G
Bandwidth	Full frequency ranges stated
VSWR	<1.6:1
Tuning	Factory
Gain	6.2 dBi at 825-960 MHz and 3 dBi at 1710-2190 MHz
Maximum power	30 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
E Plane	32°
Cable	10 metres RG58 low loss - bottom exit from mount section
Connector	Gold plated SMA male fitted as standard or specify requirements
Height	900mm
Weight	900grams
Mount section	150mm x 24mm - machined aluminium
Mounting hardware order separate	Parallel: 2 x EB1-SS or 1 x UB3-SS Right-angle: 2 x RB8 or 1 x UB2-SS
Mounting position recommended	Mount as high on your structure, mast or tower using the appropriate mounting clamp/s.

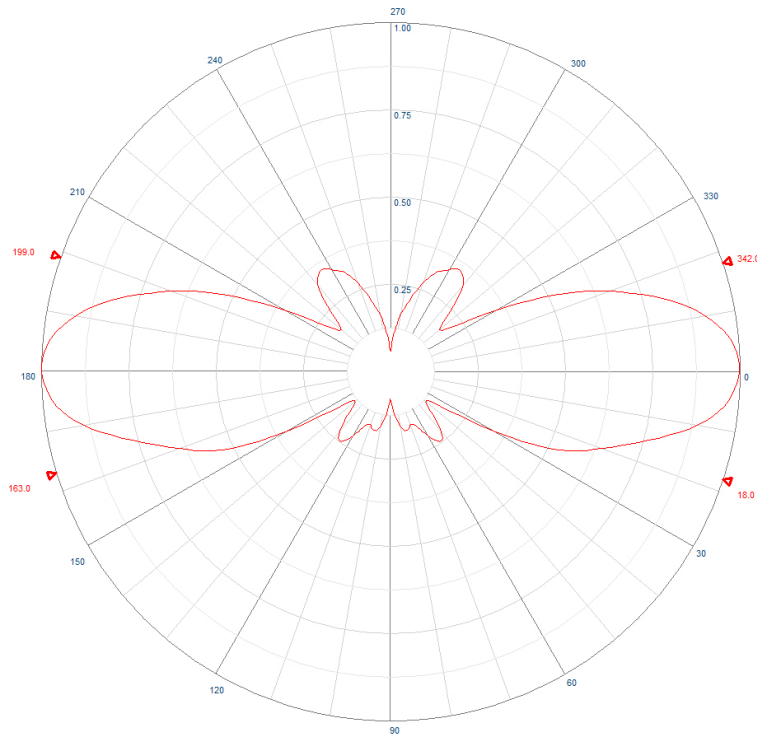


Gold plated SMA male fitted as standard or specify requirements

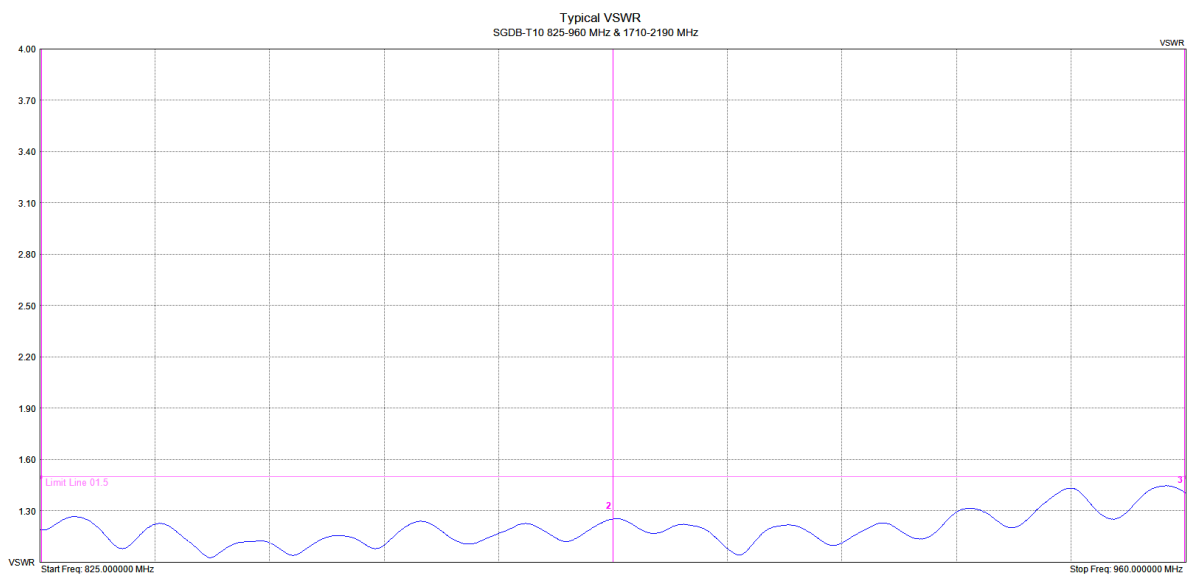


# SGDB-T10

Mast Mount Mobile Phone/Wireless Data Improvement  
All networks dualband 4G/3G 825-960 MHz & 1710-2190 MHz



Example radiation pattern




Mhz	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	<input type="checkbox"/>	<input type="checkbox"/>	825.067 MHz	1.39VSWR	--	--
2	<input type="checkbox"/>	<input type="checkbox"/>	892.531 MHz	1.28VSWR	--	--
3	<input type="checkbox"/>	<input type="checkbox"/>	959.939 MHz	1.41VSWR	--	--
4	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--

Typical VSWR - 825-960 MHz

# SGDB-T10


## Mast Mount Mobile Phone/Wireless Data Improvement

All networks dualband 4G/3G 825-960 MHz & 1710-2190 MHz




CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires mounting screws/bolts and mounting hardware for antenna



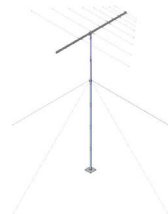
A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires mounting hardware for antenna



SFB Series - galvanised steel pole extension 0.9-2.0 metres  
Roof or overhang mounting

Requires mounting screws/bolts and mounting hardware for antenna

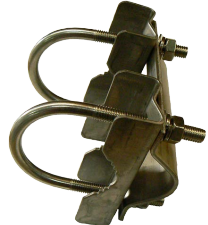


A-2307 - 6-piece aluminium & fibreglass mast - 6.68m

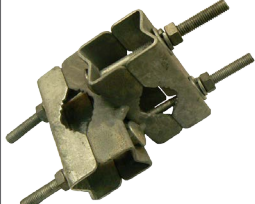
Includes: insulated top, guy wires, spigots and base bracket.



EB1-SS - requires 2  
304 stainless steel parallel clamp  
Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS  
304 stainless steel parallel clamp  
Boom: 20-32mm capability  
Mount pole: 20-50mm capability




RB8 - requires 2  
Galvanised steel right-angle clamp  
Boom: 20-40mm capability  
Mount pole: 20-40mm capability



UB2-SS  
304 stainless steel right-angle clamp  
Boom: 20-50mm capability  
Mount pole: 20-50mm capability

Typical alternate connectors



P/N 7963-4  
Reverse gender SMA male termination

Also available in right-angle configuration, alternate gender or standard polarity



P/N 7976  
FME female termination

Also available in right-angle configuration or alternate gender



P/N 7933-2  
N-type male termination

Also available in right-angle configuration or alternate gender



## ZM09-477

### Omnidirectional deck or mast mount collinear Marine UHF 477 MHz CB radio

The ZM09-477 marine UHF 477MHz CB antenna will significantly improve your UHF CB transmit and receive while at sea.

The ZM09-477 is compatible with all UHF CB radios on the market and is identical in appearance to the other ZM09 series of marine antennas.

Mounting hardware, water-proofing, bird-proofing and other installation accessories are all available separately.

Construction	White parallel fibreglass radome, aluminium mount ferrule, mount adaptor and external cable
Frequency range	477 MHz - UHF CB Radio
Bandwidth	476.4125 - 477.4125 MHz - all 40/80 channels
Tuning	Factory
Gain	2.1 dBi
VSWR	<1.5:1
Impedance	50 Ohms
Polarisation	Vertical - do not lean/tilt once installed, only during transit
H Plane	360° omnidirectional
Cable	4.5 metres white RG58 low loss - side exit from ferrule
Connector	UHF male solder connector PL259 supplied, not fitted
Height	900mm
Weight	800grams
Mounting hardware order separate	MM1 plastic fold-down base or MM2 stainless steel MMA or MMA-SS mast mount adaptor for mast mounting Alternate: A-3050 adaptor and 1270 spring base with 1/2" bolt
Mounting position recommended	Mount as high on your vessel/structure as possible ie. The roof or the deck.
Installation tools required	Soldering iron - connector centre pin amalgamation tape + PVC tape - connector waterproofing cable ties - securing coaxial cable

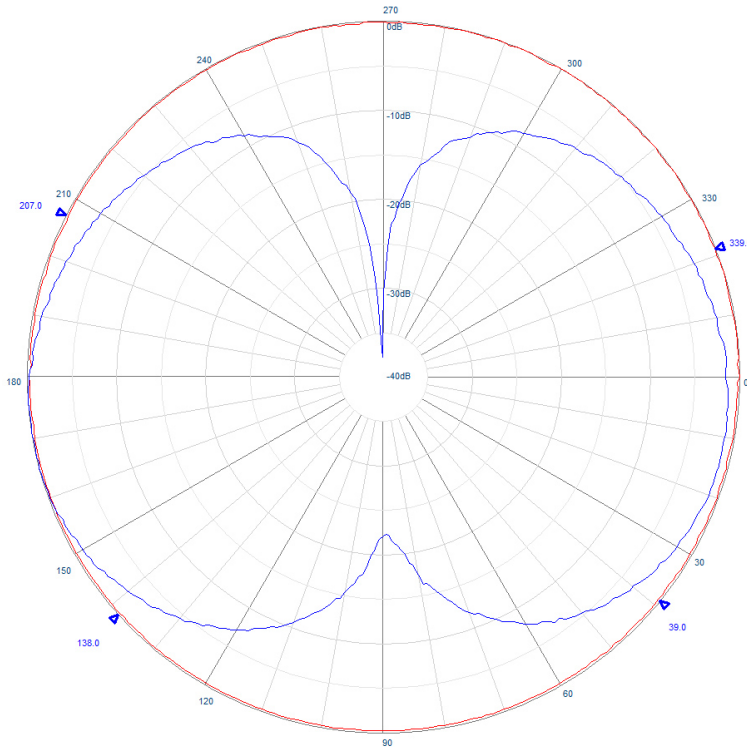


UHF male PL259 supplied not fitted

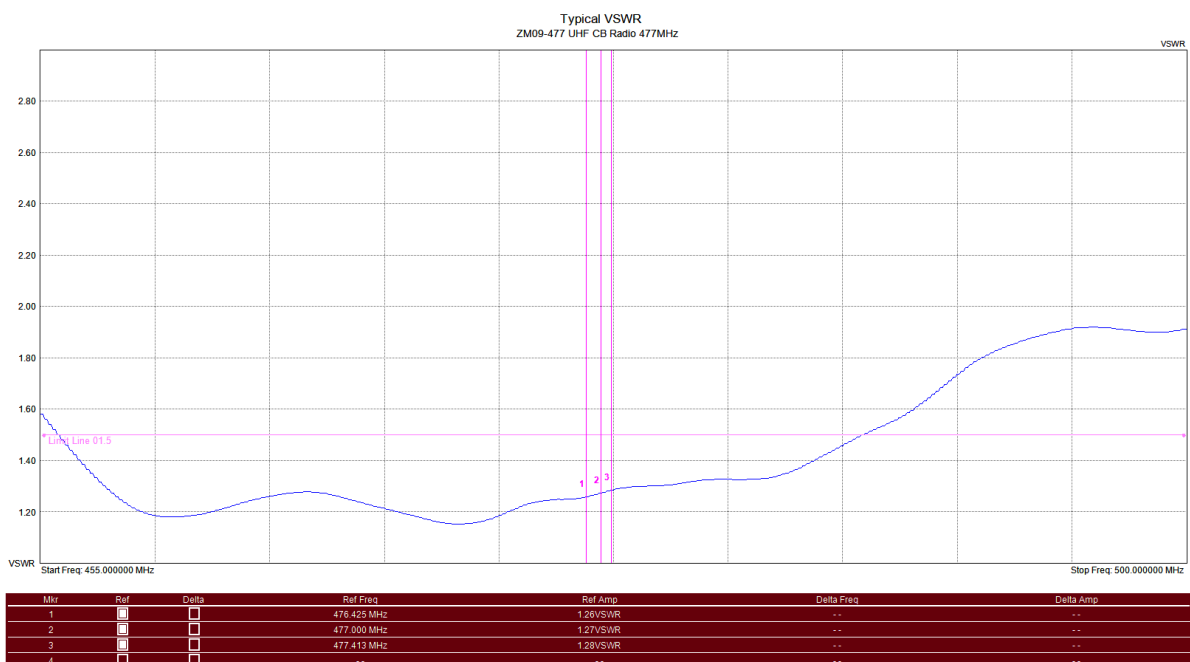


# ZM09-477

Omnidirectional deck or mast mount collinear  
Marine UHF 477 MHz CB radio



Example radiation pattern







Typical VSWR

# ZM09-477

## Omnidirectional deck or mast mount collinear

### Marine UHF 477 MHz CB radio

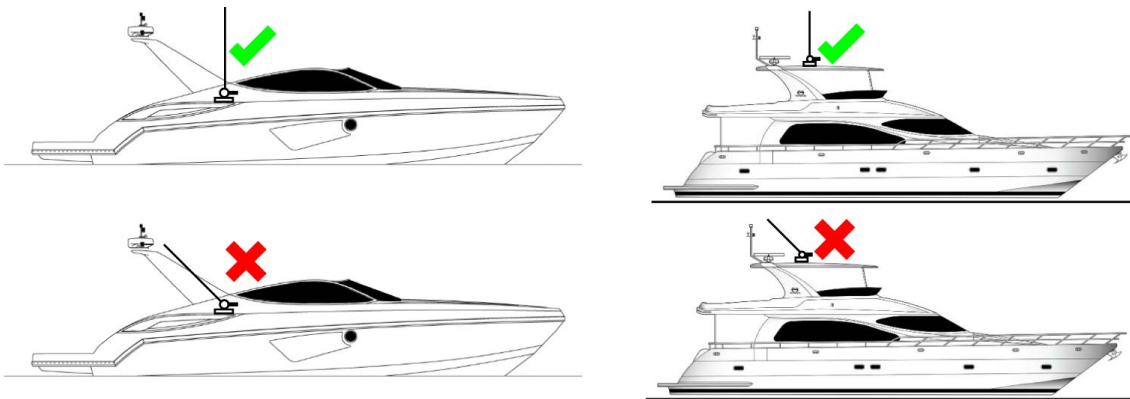
Alternate mounting hardware

 <p>MM1 toughened white nylon dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>MM2 316 stainless steel dual axis, ratchet fold down mount</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>MMA series - anodised aluminium mast mount adaptor 250-1200mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>	 <p>MMA-SS - 304 stainless steel mast mount adaptor 250mm</p> <p>Requires mounting hardware EB1-SS or UB2-SS</p>
 <p>CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>	 <p>SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting</p> <p>Requires mounting screws/ bolts and mounting hardware for antenna</p>
 <p>A-1269 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>	 <p>A-1270 'barrel' spring base + A-3050 mount adaptor</p> <p>For converting marine antenna to spring base mount or for vehicle mounting</p>
 <p>EB1-SS - requires 2 304 stainless steel parallel clamp</p> <p>Boom: 20-40mm capability Mount pole: 25-45mm capability</p>	 <p>UB3-SS 304 stainless steel parallel clamp</p> <p>Boom: 20-32mm capability Mount pole: 20-50mm capability</p>
 <p>UB2-SS 304 stainless steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>	 <p>RB8 Galvanised steel steel right-angle clamp</p> <p>Boom: 20-50mm capability Mount pole: 20-50mm capability</p>

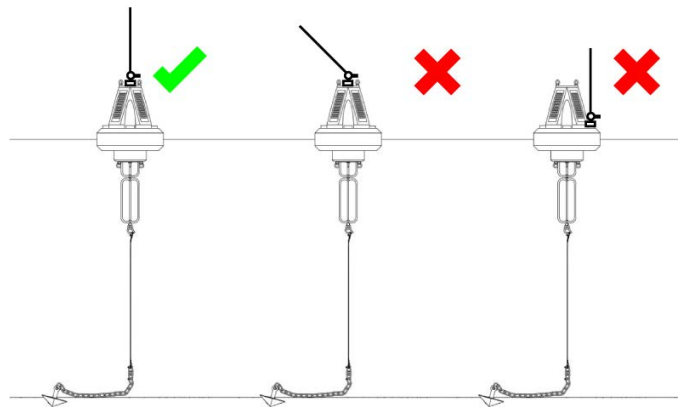
# ZM09-477

## Omnidirectional deck or mast mount collinear Marine UHF 477 MHz CB radio

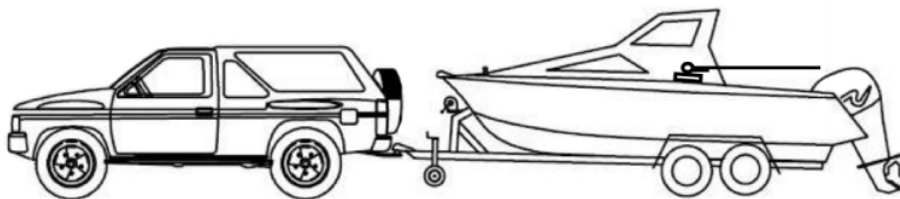
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



## ZM21-UHF & ZM21-477

Deck or mast mount collinear

Marine UHF 400-520 MHz or Marine UHF CB radio 477 MHz



These ground independent, deck mount antennas, are specifically designed and manufactured for marine UHF communications. The ZM21-UHF and ZM21-477 are compatible with all UHF radios on the market and are identical in appearance to all the ZM21 series of marine antennas.

Mounting hardware, water-proofing, adaptors and other installation accessories are all available separately.

	ZM21-UHF*	ZM21-477
Construction	White fibreglass radome, chrome ferrule and external cable	
Frequency range	400-520 MHz - UHF, TETRA or LMR	477 MHz - UHF CB Radio
Bandwidth	Specify any 1.5% and centre frequency when ordering	476.425 - 477.4125 MHz All 40/80 channels
VSWR	<1.5:1	
Tuning	Factory	
Gain	8.1 dBi	
Maximum power	50 Watts	
Impedance	50 Ohms	
Polarisation	Vertical - do not lean/tilt once installed, only during transit	
H Plane	360° omni-directional	
Cable	4.5 metres RG58 stranded - side exit from ferrule	
Connector	UHF male PL259 connector - supplied not fitted	
Height	2.1 metres	
Weight	1.0kg	
Mounting hardware order separate	MM1 plastic fold-down base or MM2 stainless steel MMA or MMA-SS mast mount adaptor for mast mounting Alternate: A-3050 adaptor and 1270 spring base with 1/2" bolt	
Mounting position recommended	Mount as high on your vessel/structure as possible ie. the roof or the deck	



UHF male PL259 supplied, not fitted

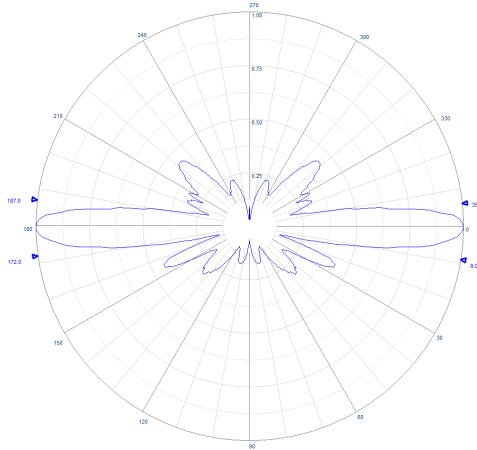


## ZM21-UHF & ZM21-477

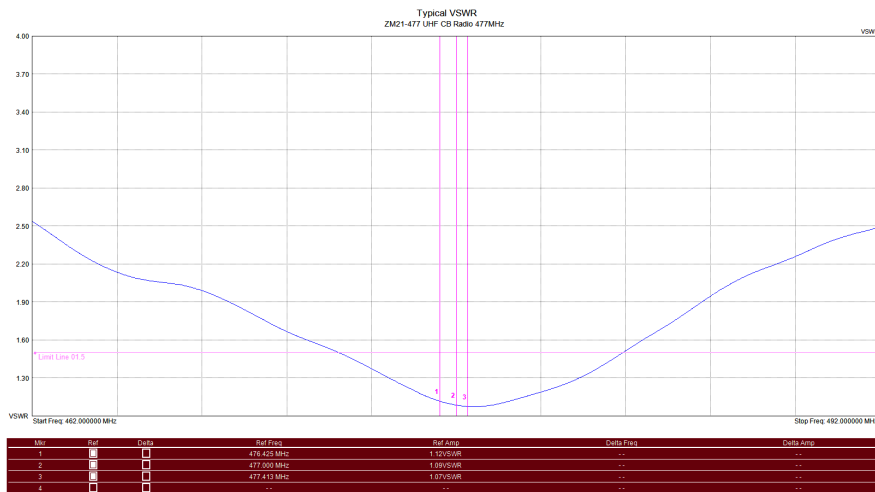
Deck or mast mount collinear

Marine UHF 400-520 MHz or Marine UHF CB radio 477 MHz

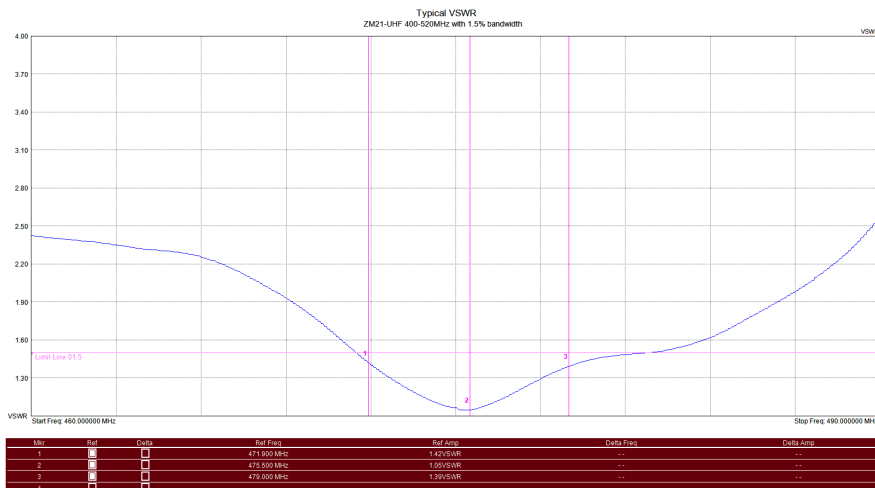
  
In-stock  
Ready to  
Ship  
\* Signifies build to  
order item



Example radiation pattern



Typical VSWR - ZM21-477



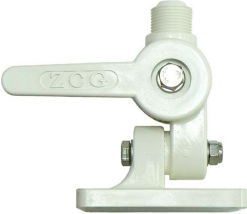
Typical VSWR - ZM21-UHF scaled to specific frequency

# ZM21-UHF & ZM21-477

## Deck or mast mount collinear


### Marine UHF 400-520 MHz or Marine UHF CB radio 477 MHz

Alternate mounting hardware



MM1 toughened white nylon dual axis, ratchet fold down mount

Requires mounting screws/ bolts and mounting hardware for antenna



MM2 316 stainless steel dual axis, ratchet fold down mount

Requires mounting screws/ bolts and mounting hardware for antenna




MMA series - anodised aluminium mast mount adaptor 250-1200mm

Requires mounting hardware EB1-SS or UB2-SS




MMA-SS - 304 stainless steel mast mount adaptor 250mm

Requires mounting hardware EB1-SS or UB2-SS




CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires mounting screws/ bolts and mounting hardware for antenna




SFB Series - galvanised steel pole extension 0.9-2.0 metres  
Roof or overhang mounting

Requires mounting screws/ bolts and mounting hardware for antenna



A-1269 'barrel' spring base + A-3050 mount adaptor

For converting marine antenna to spring base mount or for vehicle mounting




A-1270 'barrel' spring base + A-3050 mount adaptor

For converting marine antenna to spring base mount or for vehicle mounting



EB1-SS - requires 2 304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS  
304 stainless steel parallel clamp

Boom: 20-32mm capability  
Mount pole: 20-50mm capability



UB2-SS  
304 stainless steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability



RB8  
Galvanised steel right-angle clamp

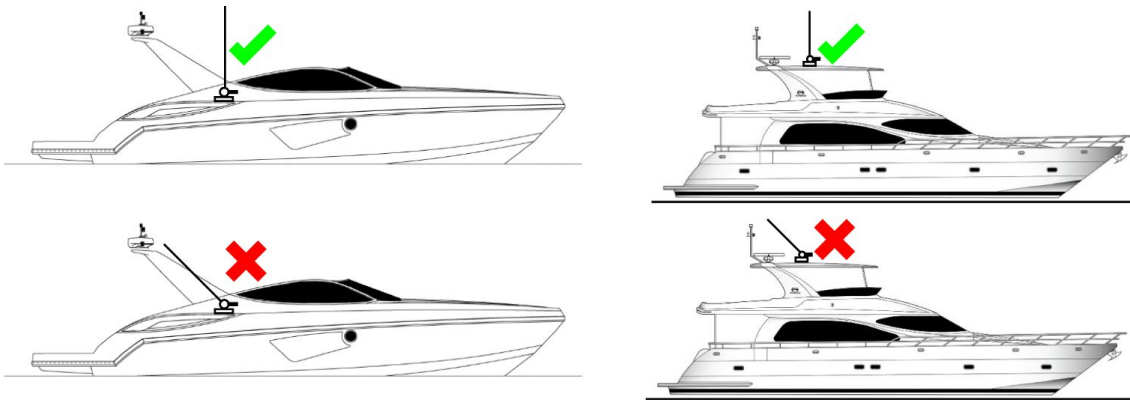
Boom: 20-50mm capability  
Mount pole: 20-50mm capability

# ZM21-UHF & ZM21-477

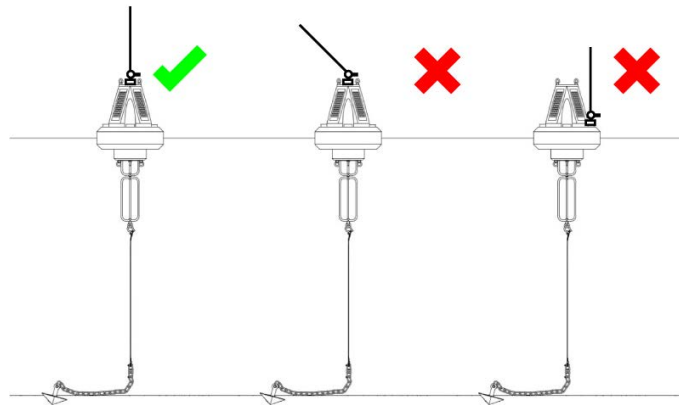
Deck or mast mount collinear

Marine UHF 400-520 MHz or Marine UHF CB radio 477 MHz

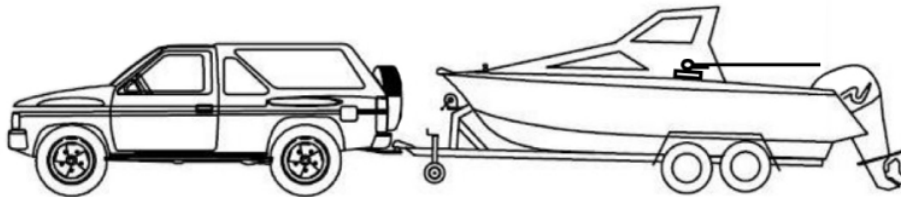
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



# SG477-TPM Series

## UHF CB Radio threaded base collinear

### UHF CB Radio 477 MHz

The SG477-TPM series of fixed position UHF CB radio collinears are ideal fixed position UHF communication applications.

A SG477-TPM can be used as a replacement top for the SG477 series of antennas and is identical in appearance to all other SG series of AM/FM or Mobile phone antennas.

Mounting hardware, adaptors, connectors and other installation accessories are all available separately.

Colours available	Black or White - specify when ordering
Construction	Fibreglass radome, aluminium mount ferrule and cap and side exit external coaxial cable
Frequency range	477 MHz - UHF CB radio
Bandwidth	476.4125 - 477.4125 MHz - covering all 40/80 channels
VSWR	<1.5:1
Tuning	Factory
Gain	2.1 dBi
Maximum power	20 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
Cable	5 metres RG58 low loss - side exit from mount ferrule
Connector - supplied	UHF male PL259 solder pin, twist-style connector
Mount thread	1/2"-12 BSW at base of mount ferrule - nut included
Height	900mm
Weight	800grams
Mounting hardware order separate	GM1, GM2, GM6 or A-6211 brackets or 4266 mounting adaptor with appropriate mounting hardware
Mounting position recommended	As high on your vehicle/structure as possible using a minimum 13mm hole or appropriate bracket with a 13mm hole
Assembly tools required	- 19mm or 3/4" spanner - for securing nut



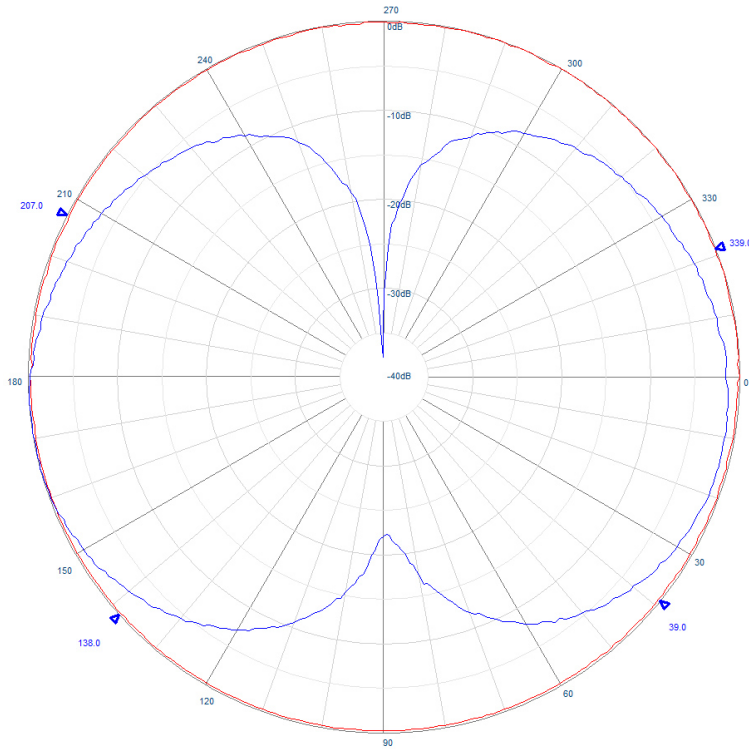
7900 - UHF Male supplied, not fitted



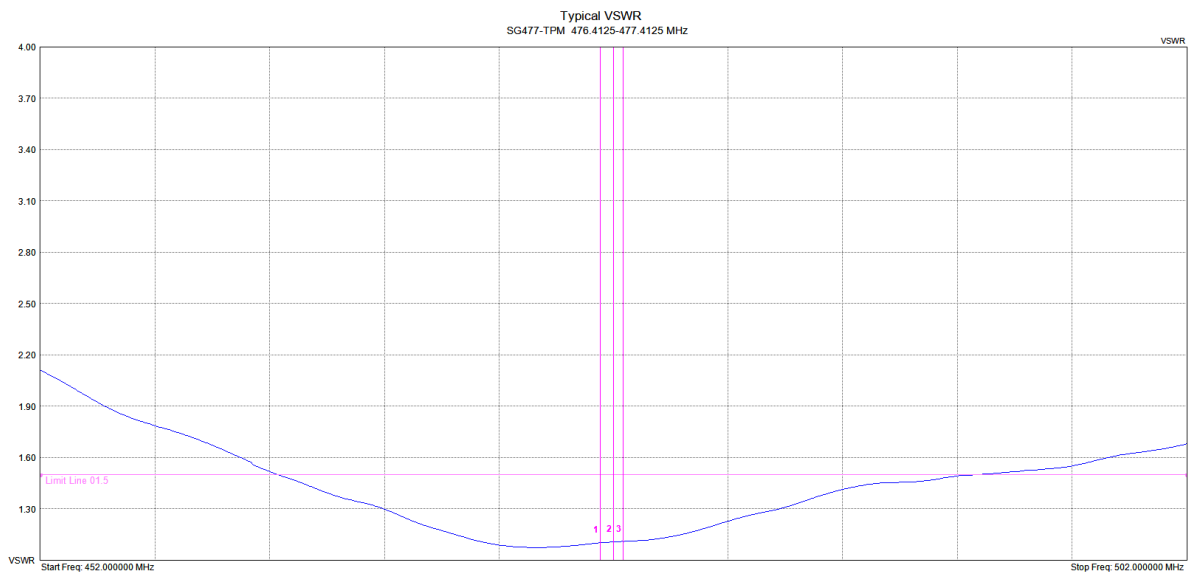
# SG477-TPM Series

## UHF CB Radio threaded base collinear

### UHF CB Radio 477 MHz



Example radiation pattern



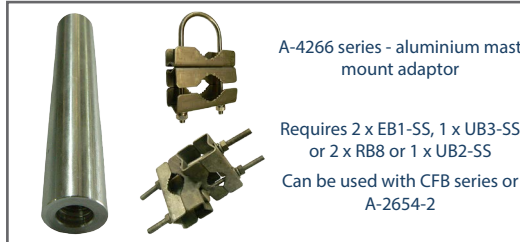
Mtr	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	476.413 MHz	1.10VSWR	--	--
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	477.000 MHz	1.11VSWR	--	--
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	477.413 MHz	1.11VSWR	--	--
4	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--

Typical VSWR

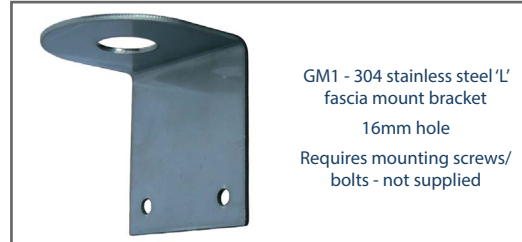
# SG477-TPM Series

## UHF CB Radio threaded base collinear

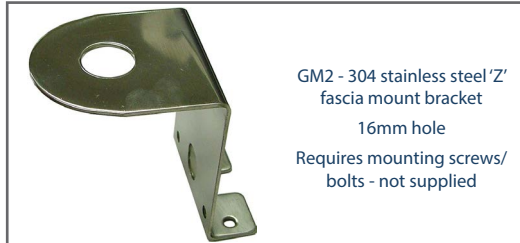
### UHF CB Radio 477 MHz



A-4266 series - aluminium mast mount adaptor  
Requires 2 x EB1-SS, 1 x UB3-SS or 2 x RB8 or 1 x UB2-SS  
Can be used with CFB series or A-2654-2



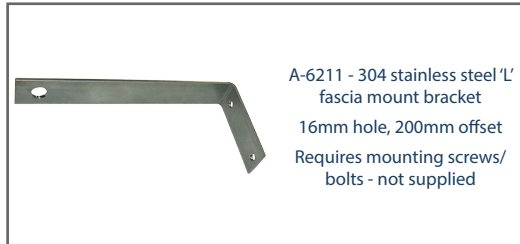
GM1 - 304 stainless steel 'L' fascia mount bracket  
16mm hole  
Requires mounting screws/ bolts - not supplied



GM2 - 304 stainless steel 'Z' fascia mount bracket  
16mm hole  
Requires mounting screws/ bolts - not supplied



BBKB-B - black powdercoated 'knock-down' mount bracket  
17mm hole  
Includes mounting screws/ bolts



A-6211 - 304 stainless steel 'L' fascia mount bracket  
16mm hole, 200mm offset  
Requires mounting screws/ bolts - not supplied



MGB  
Powdercoated black internal magnet mount base  
16mm hole  
105mm diameter  
includes scratch reduction pad on base



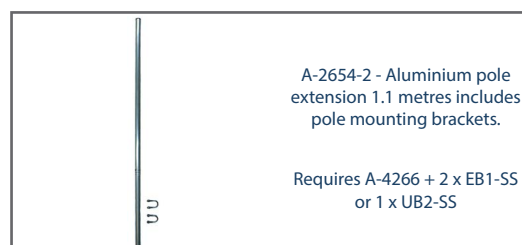
A-2845  
Powdercoated black tri-magnetic mount base  
13mm hole  
Santoprene coated magnets for scratch reduction



CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.  
Requires A-4266 series + 2 x EB1-SS or 1 x UB2-SS



SFB Series - galvanised steel pole extension 0.9-2.0 metres  
Roof or overhang mounting  
Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS



A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.  
Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS

#### Recommended installation requirements



A-8574  
Self-bonding butyl amalgamation tape  
Apply a single taught-layer over all external terminations, followed by a layer of PVC tape



A-8651-0  
Fire retardant black PVC tape  
Apply a single taught-layer over all external terminations, over-top of amalgamation tape

# CLU3 and CLU3SS

## Omni-directional Mast Mount Collinear

### TE.T.RA/Land Mobile Radio / UHF 400-520MHz

The CLU3 and CLU3SS fixed position UHF collinears are designed and manufactured to ensure long term survival and will deliver reliable performance for many years.

Mounting hardware, water-proofing, coaxial feeder cable, connector and other installation accessories are all available separately.

	CLU3	CLU3SS*
Construction	White fibreglass radome, aluminium mount section	White fibreglass radome, stainless steel mount section
Frequency range	TE.T.RA / L.M.R. / C.B.R.S. / UHF 400-520MHz	
Bandwidth	Specify centre frequency and 1.5% bandwidth when ordering	
Tuning	Factory	
VSWR	<1.6:1 across specified bandwidth	
Gain	5.1dBi	
Maximum power	100 Watts	
Impedance	50 Ohms	
DC grounding	Yes	
Polarisation	Vertical	
H Plane	360° omni-directional, ± 0.5 dBd	
E Plane	28°	
Connector	N-type female in base of mount section	
Height	1.7 metres	
Weight	1.1kg	1.2kg
Projected area	0.032m <sup>2</sup>	
Wind load at 160kph	3.9kg, 0.039kN	
Mount section	300mm x 25mm Anodised aluminium	300mm x 25mm 304 stainless steel
Mounting hardware order separate	Parallel: 2 x EB1-SS or 1 x UB3-SS Right-angle: 2 x RB8 or 1 x UB2-SS	
Mounting position recommended	Mount as high on your structure, mast or tower as possible using the appropriate mounting clamps	



N-type female in base of mount section

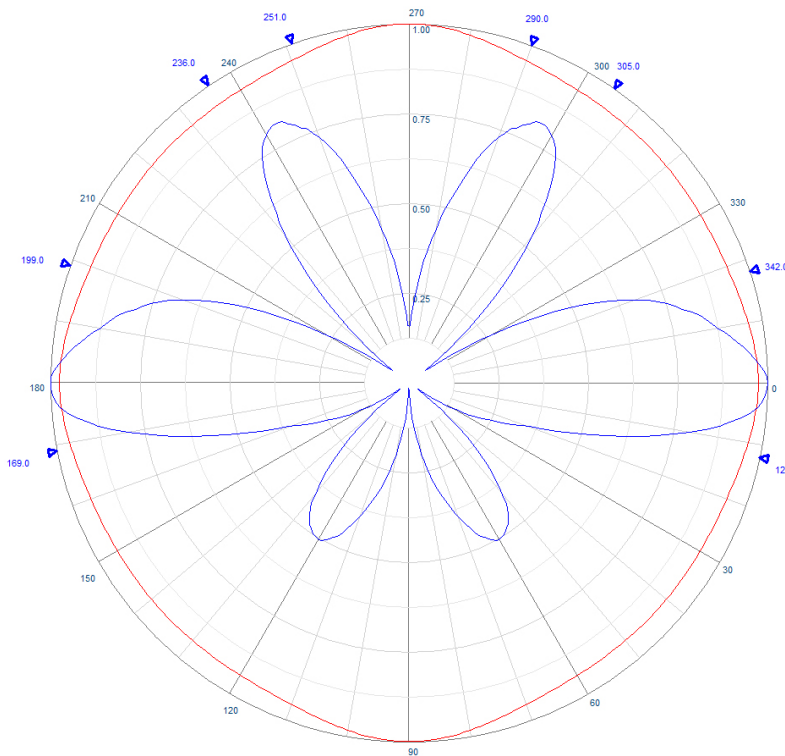


# CLU3 and CLU3SS

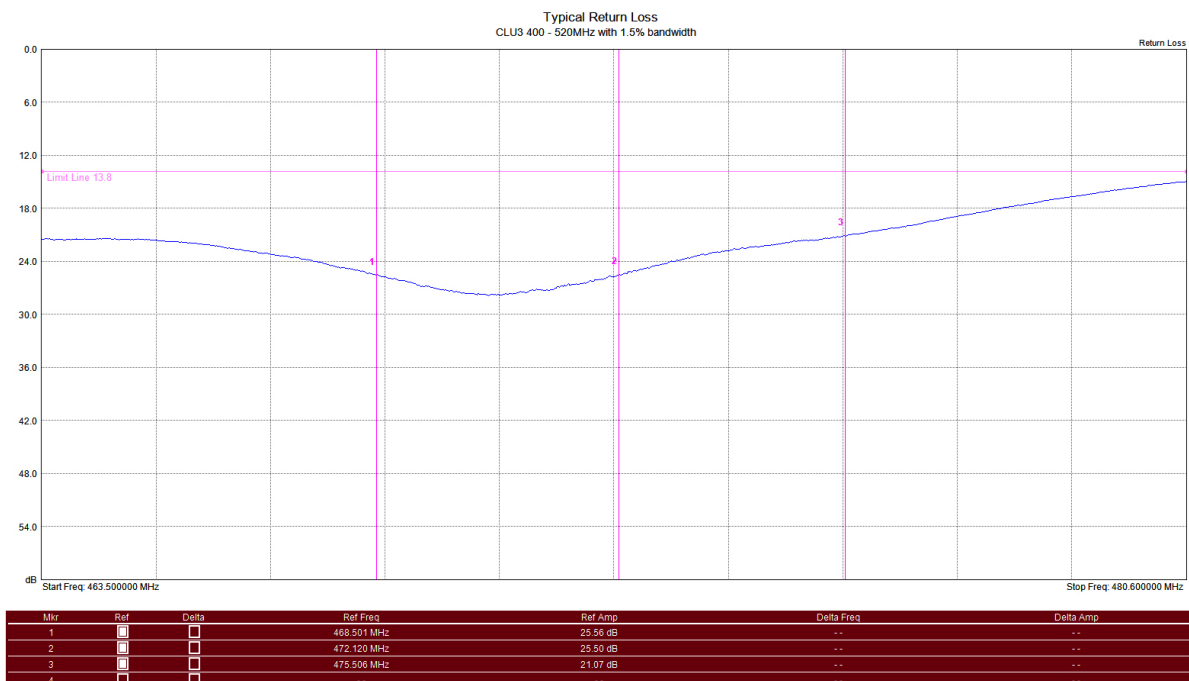
## Omni-directional Mast Mount Collinear

### TE.T.RA/Land Mobile Radio / UHF 400-520MHz

  
\* Signifies build to order item



Example radiation pattern



Typical Return Loss - scaled with 1.5% bandwidth

# CLU3 and CLU3SS

## Omni-directional Mast Mount Collinear

### TE.T.RA/Land Mobile Radio / UHF 400-520MHz



CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires mounting screws/ bolts and mounting hardware for antenna

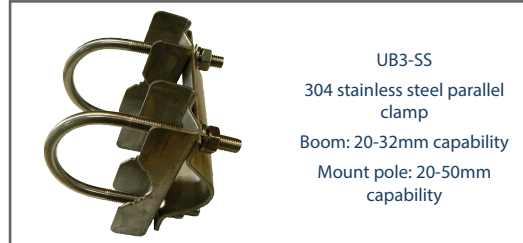


SFB900 - Galvanised steel straight extension brackets - 900mm or specify length requirements

Requires 2 x EB1-SS or 1 x UB2-SS for antenna mounting



EB1-SS - requires 2 304 stainless steel parallel clamp  
Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS  
304 stainless steel parallel clamp  
Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8  
Galvanised steel right-angle clamp  
Boom: 20-50mm capability  
Mount pole: 20-50mm capability



UB2-SS  
304 stainless steel right-angle clamp  
Boom: 20-50mm capability  
Mount pole: 20-50mm capability

#### Suitable feeder coaxial cable and connectors



MIL-SPEC RG213 stranded copper conductor coaxial cable  
P/N 7800

Available in 100m, 300m roll or alternatively request a custom cable assembly



N-type male crimp connector for MIL-SPEC RG213

P/N 7937

Tri-metal plated



RU400 Solid copper conductor, low loss coaxial cable  
CNT-400 / LMR-400™ equivalent  
(\* times microwave)  
P/N 7890

Available in 100m, 300m, 500m roll or alternatively request a custom cable assembly



N-type male crimp connector for RU400 low loss, solid conductor

P/N 8226

Tri-metal plated



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

Available in per metre, 500m roll 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



## ZN2-77-06-AC

### Omni-directional mast mount collinear UHF CB Radio 477 MHz



The ZN2-77-06-AC omni-directional collinear is specifically designed and manufactured for use as a UHF CB radio fixed position antenna. With high gain and the flexibility of mounting to a mast, building or any other structure, the ZN2-77-06-AC is the ideal solution for UHF CB radio communications.

Mounting hardware, adaptors, coaxial cable and other installation accessories are all available separately.

Construction	White fibreglass radome, anodised aluminium mount section, aluminium cap and external termination
Frequency range	477 MHz - UHF CB radio
Bandwidth	476.4125 - 477.4125 MHz - covering all 40/80 channels
VSWR	<1.5:1 at set frequency
Tuning	Factory
Gain	8.1 dBi
Maximum power	100 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
E Plane	15°
Connector	N-type female in base of mount section - no cable
Mount section	476mm x 25mm - anodised aluminium
Height	2.5 metres
Weight	750grams
Projected area	0.043m <sup>2</sup>
Wind load at 160kph	5.191kg, 0.051kN
Temperature range	-10°C - +60°C
Mounting hardware order separate	Parallel: 2 x EB1-SS or 1 x UB3-SS Right-angle: 2 x RB8 or 1 x UB2-SS
Mounting position recommended	Mount as high on your structure, mast or tower as possible using the appropriate mounting clamp/s

#### Other models available

ZN2-375-03	4.5dBi, UHF female SO239 - 1.55 metres
ZN2-675-06	6dBi, UHF female SO239 - 1.85 metres
ZN2-77-09-AC	12dBi, N-type female - 3.3 metres



Aluminium cap to reduce environmental damage and wasted signal.

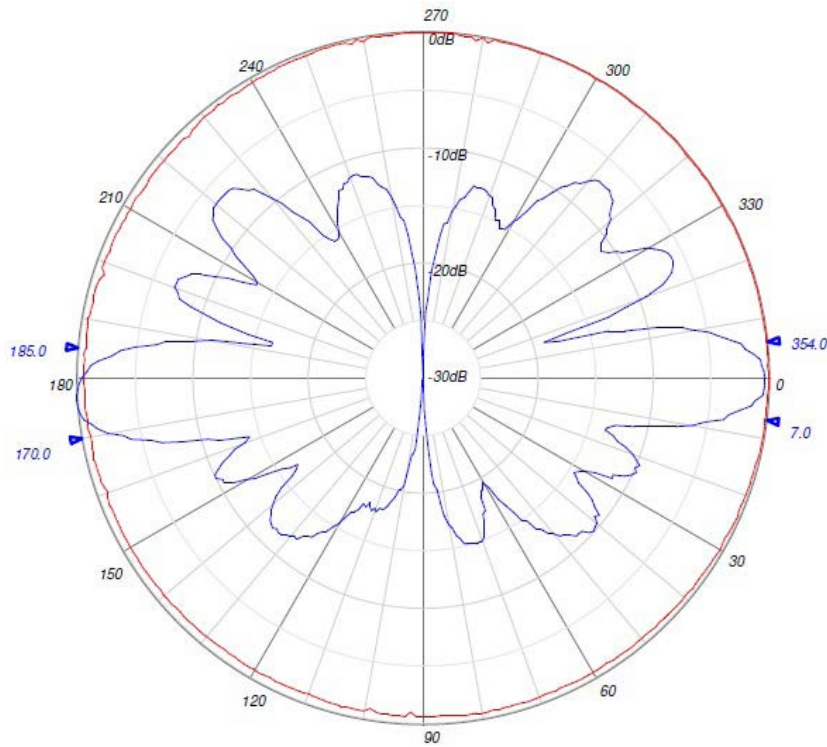


N-type female in base of mount section

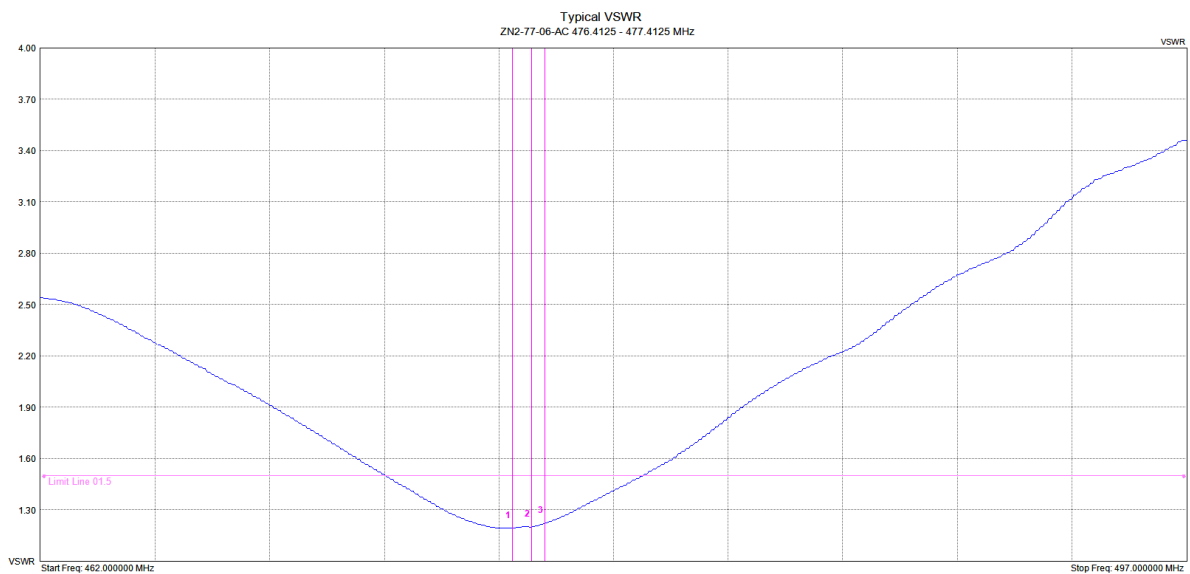


# ZN2-77-06-AC

## Omni-directional mast mount collinear UHF CB Radio 477 MHz



Example radiation pattern



Mtr	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	<input type="checkbox"/>	<input type="checkbox"/>	476.4125 MHz	1.19VSWR	--	--
2	<input type="checkbox"/>	<input type="checkbox"/>	477.0000 MHz	1.20VSWR	--	--
3	<input type="checkbox"/>	<input type="checkbox"/>	477.4125 MHz	1.22VSWR	--	--
4	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--

Typical VSWR






# ZN2-77-06-AC

## Omni-directional mast mount collinear UHF CB Radio 477 MHz



CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires A-4266 series + 2 x EB1-SS or 1 x UB2-SS




A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS



SFB Series - galvanised steel pole extension 0.9-2.0 metres  
Roof or overhang mounting

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS




A-2307 - 6-piece aluminium & fibreglass mast - 6.68m

Includes: insulated top, guy wires, spigots and base bracket.



EB1-SS - requires 2 304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS 304 stainless steel parallel clamp

Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8 - requires 2 Galvanised steel right-angle clamp

Boom: 20-40mm capability  
Mount pole: 20-40mm capability



UB2-SS 304 stainless steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability

Suitable feeder coaxial cable and connectors




MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable  
P/N 7800

Available in 100m or 300m rolls or alternatively request a custom cable assembly



N-type male crimp connector for MIL-SPEC RG213  
P/N 7937  
Tri-metal plated



RU400 Solid copper conductor, low loss coaxial cable  
CNT-400 / LMR-400™ equivalent (™ times microwave)  
P/N 7890

Available in 100m, 300m or 500m rolls or alternatively request a custom cable assembly



N-type male crimp connector for RU400 low loss, solid conductor  
P/N 8226  
Tri-metal plated



## ZN2-77-09-AC

### Omni-directional mast mount collinear UHF CB Radio 477 MHz



The ZN2-77-09-AC omni-directional collinear is specifically designed and manufactured for use as a UHF CB radio fixed position antenna. With high gain and the flexibility of mounting to a mast, building or any other structure, the ZN2-77-09-AC is the ideal solution for UHF CB radio communications.

Mounting hardware, adaptors, connectors and other installation accessories are all available separately.

Construction	White fibreglass radome, aluminium mount section and cap and tri-metal plated termination
Frequency range	477 MHz - UHF CB radio
Bandwidth	476.4125 - 477.4125 MHz - covering all 40/80 channels
VSWR	<1.5:1 at set frequency
Tuning	Factory
Gain	12 dBi
Maximum power	100 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
E Plane	13°
Connector	N-type female in base of mount section
Mount section	476mm x 25mm - anodised aluminium
Height	3.3 metres
Weight	1.5kg
Projected area	0.066m <sup>2</sup>
Wind load at 160kph	7.975kg, 0.078kN
Temperature range	-10°C to +60°C
Mounting hardware order separate	Parallel: 2 x EB1-SS or 1 x UB3-SS Right-angle: 2 x RB8 or 1 x UB2-SS
Mounting position recommended	Mount as high on your structure, mast or tower as possible using the appropriate mounting clamps

#### Other models available

ZN2-375-03	4.5dBi, UHF female SO239 - 1.55 metres
ZN2-675-06	6dBi, UHF female SO239 - 1.85 metres
ZN2-77-06-AC	8.1dBi, N-type female - 3.3 metres



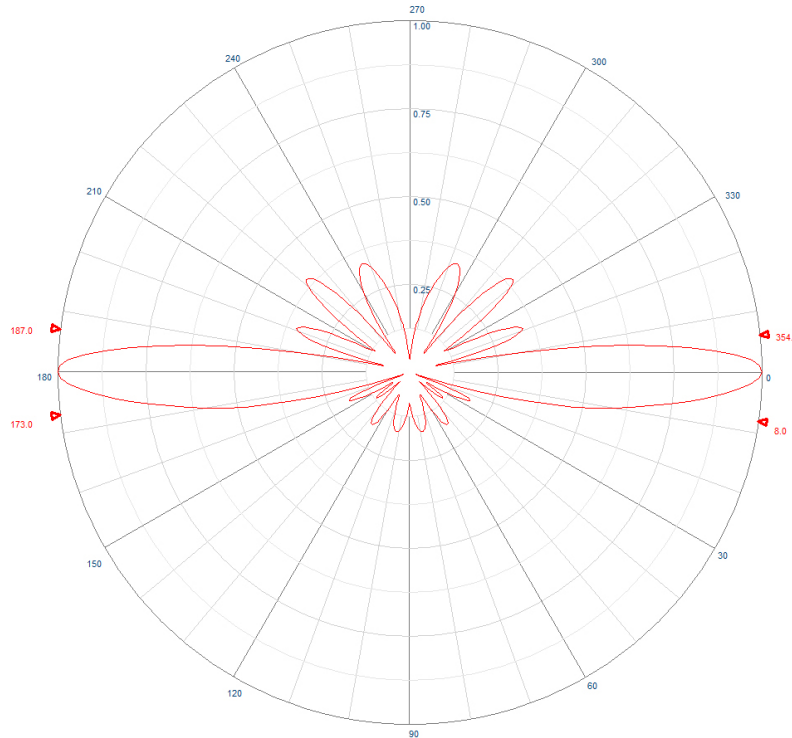
Aluminium cap to reduce environmental damage and wasted signal.

N-type female in base of mount section

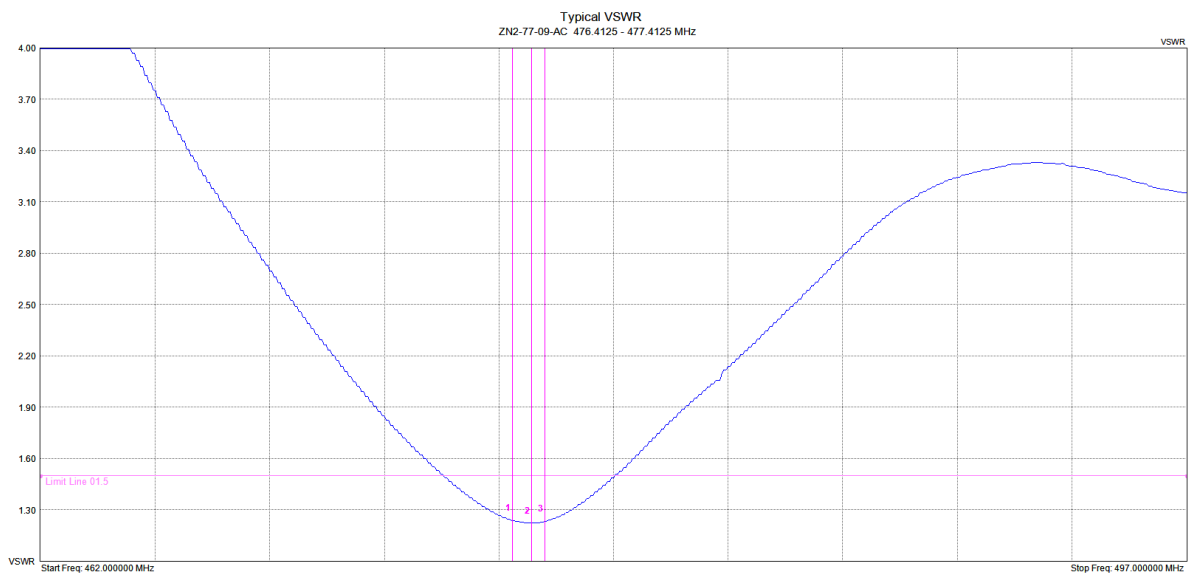


# ZN2-77-09-AC

## Omni-directional mast mount collinear UHF CB Radio 477 MHz



Example radiation pattern




Mtr	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	<input type="checkbox"/>	<input type="checkbox"/>	476.413 MHz	1.24VSWR	--	--
2	<input type="checkbox"/>	<input type="checkbox"/>	477.000 MHz	1.22VSWR	--	--
3	<input type="checkbox"/>	<input type="checkbox"/>	477.413 MHz	1.24VSWR	--	--
4	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--

Typical VSWR




# ZN2-77-09-AC

## Omni-directional mast mount collinear UHF CB Radio 477 MHz



CFB series - Galvanized steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires A-4266 series + 2 x EB1-SS or 1 x UB2-SS




A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS



SFB Series - galvanized steel pole extension 0.9-2.0 metres Roof or overhang mounting

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS




A-2307 - 6-piece aluminium & fibreglass mast - 6.68m

Includes: insulated top, guy wires, spigots and base bracket.



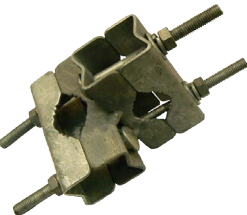
EB1-SS - requires 2 304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS 304 stainless steel parallel clamp

Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8 - requires 2 Galvanised steel right-angle clamp

Boom: 20-40mm capability  
Mount pole: 20-40mm capability



UB2-SS 304 stainless steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability

Suitable feeder coaxial cable and connectors



MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable  
P/N 7800

Available in 100m, 300m roll or alternatively request a custom cable assembly



N-type male crimp connector for MIL-SPEC RG213  
P/N 7937  
Tri-metal plated



RU400 Solid copper conductor, low loss coaxial cable  
CNT-400 / LMR-400™ equivalent  
(\* times microwave)  
P/N 7890

Available in 100m, 300m, 500m roll or alternatively request a custom cable assembly



N-type male crimp connector for RU400 low loss, solid conductor  
P/N 8226  
Tri-metal plated

## ZN2-375-03

### Omni-directional mast mount collinear UHF CB Radio 477 MHz

The ZN2-375-03 mast mount collinear is specifically designed and manufactured for UHF CB Radio communications at the 477 MHz frequency.

The ZN2-375-03 has foam-encased internals to improve longevity of the antenna in the harsh Australian environment.

Mounting hardware, coaxial feeder cable, water-proofing and other installation accessories are all available separately.

Construction	White fibreglass radome, anodised aluminium mount section and chrome termination - foam filled
Frequency range	477 MHz - UHF CB Radio
Bandwidth	476.4125 - 477.4125 MHz - covering all 40/80 channels
VSWR	<1.5:1
Tuning	Factory
Gain	4.5 dBi
Maximum power	100 Watts
Impedance	50 Ohm
Polarisation	Vertical
H Plane	360° omnidirectional
Connector	UHF female SO239 in base of mount section
Mount section	340mm x 20mm - anodised aluminium
Height	1.55m
Weight	600grams
Projected area	0.019m <sup>2</sup>
Wind load at 160kph	2.248kg, 0.022kN
Temperature range	-10°C - +60°C
Mounting hardware order separate	Parallel: 2 x EB1-SS or 1 x UB3-SS Right-angle: 2 x RB8 or 1 x UB2-SS Side/wall mounting: 2 x NSM-B20M
Mounting position recommended	Mount as high on your structure, mast or tower as possible using the appropriate mounting clamps

#### Other models available

ZN2-675-06	6 dBi, UHF female SO239 - 1.85 metres
ZN2-77-06-AC	8.1 dBi, N-type female - 2.5 metres
ZN2-77-09-AC	12 dBi, N-type female - 3.3 metres

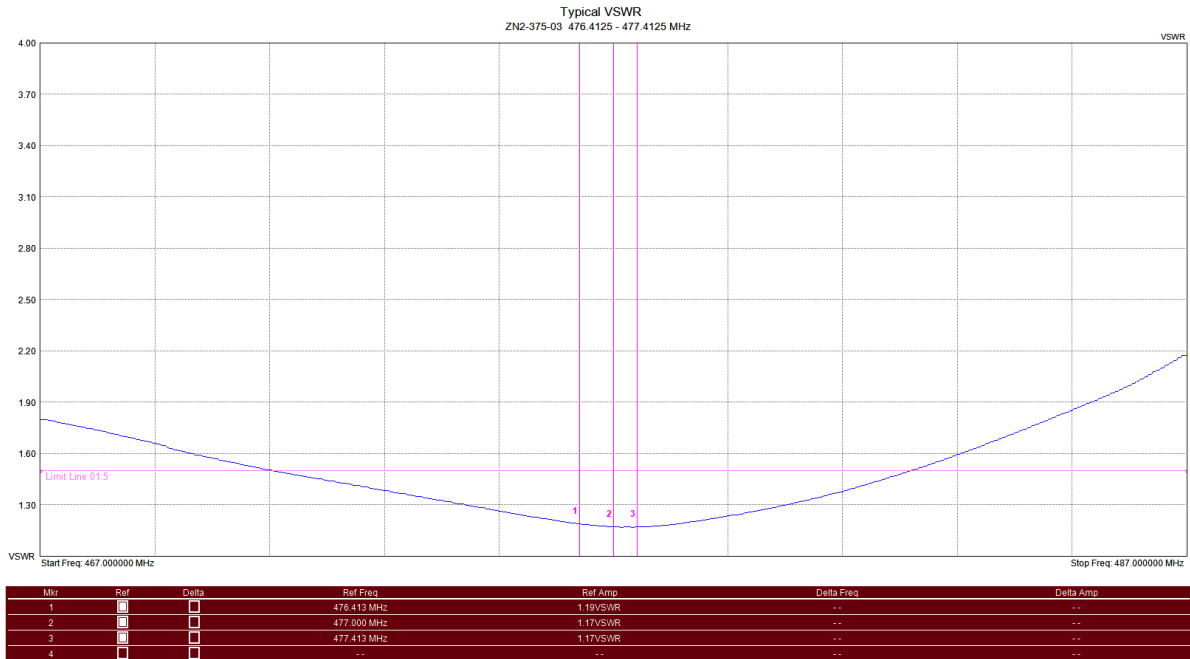


UHF female SO239 connector in base of mount section



# ZN2-375-03

## Omni-directional mast mount collinear UHF CB Radio 477 MHz




Typical VSWR

# ZN2-375-03


## Omni-directional mast mount collinear

### UHF CB Radio 477 MHz



CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires A-4266 series + 2 x EB1-SS or 1 x UB2-SS



A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS



SFB Series - galvanised steel pole extension 0.9-2.0 metres  
Roof or overhang mounting

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS




NSM-B20G - Toughened nylon wall/side mount, 20mm mount section capability.

Requires 13mm mount hole.



EB1-SS - requires 2  
304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS  
304 stainless steel parallel clamp

Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8 - requires 2  
Galvanised steel right-angle clamp

Boom: 20-40mm capability  
Mount pole: 20-40mm capability



UB2-SS  
304 stainless steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability

Suitable feeder coaxial cable and connectors



MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable  
P/N 7800

Available in 100m or 300m rolls or alternatively request a custom cable assembly



UHF male PL259, captured solder centre pin, crimp connector for MIL-SPEC RG213  
P/N 7910



RU400 Solid copper conductor, low loss coaxial cable  
CNT-400 / LMR-400™ equivalent  
(\* times microwave)  
P/N 7890

Available in 100m, 300m, 500m roll or alternatively request a custom cable assembly



UHF male PL259, clamp-style connector for MIL-SPEC RG213  
P/N 7908



## ZN2-675-06

### Omni-directional mast mount collinear UHF CB Radio 477 MHz



The ZN2-675-06 mast mount collinear is specifically designed and manufactured for UHF CB Radio communications at the 477 MHz frequency.

The ZN2-675-06 has foam-encased internals to improve longevity of the antenna in the harsh Australian environment.

Mountin accessories, coaxial feeder cable, water-proofing and other installation accessories are all available separately.

Construction	White fibreglass radome, anodised aluminium mount section - foam filled
Frequency range	477 MHz - UHF CB Radio
Bandwidth	476.4125 - 477.4125 MHz - covering all 40/80 channels
VSWR	<1.5:1 at set frequency
Tuning	Factory
Gain	6 dBi
Maximum power	100 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omni-directional
Connector - fitted	UHF female SO239 in base of mount section
Mount section	340mm x 20mm anodised aluminium
Height	1.85 metres
Weight	700grams
Projected area	0.022m <sup>2</sup>
Wind load at 160kph	2.688kg, 0.026kN
Temperature range	-10°C - +60°C
Mounting hardware order separate	Parallel: 2 x EB1-SS or 1 x UB3-SS Right-angle: 2 x RB8 or 1 x UB2-SS Side/wall mounting: 2 x NSM-B20M
Mounting position recommended	Mount as high on your structure, mast or tower as possible using the appropriate mounting clamp/s

#### Other models available

ZN2-375-03	4.5 dBi, UHF female SO239 - 1.55 metres
ZN2-77-06-AC	8 dBi, N-type female - 2.5 metres
ZN2-77-09-AC	12 dBi, N-type female - 3.3 metres



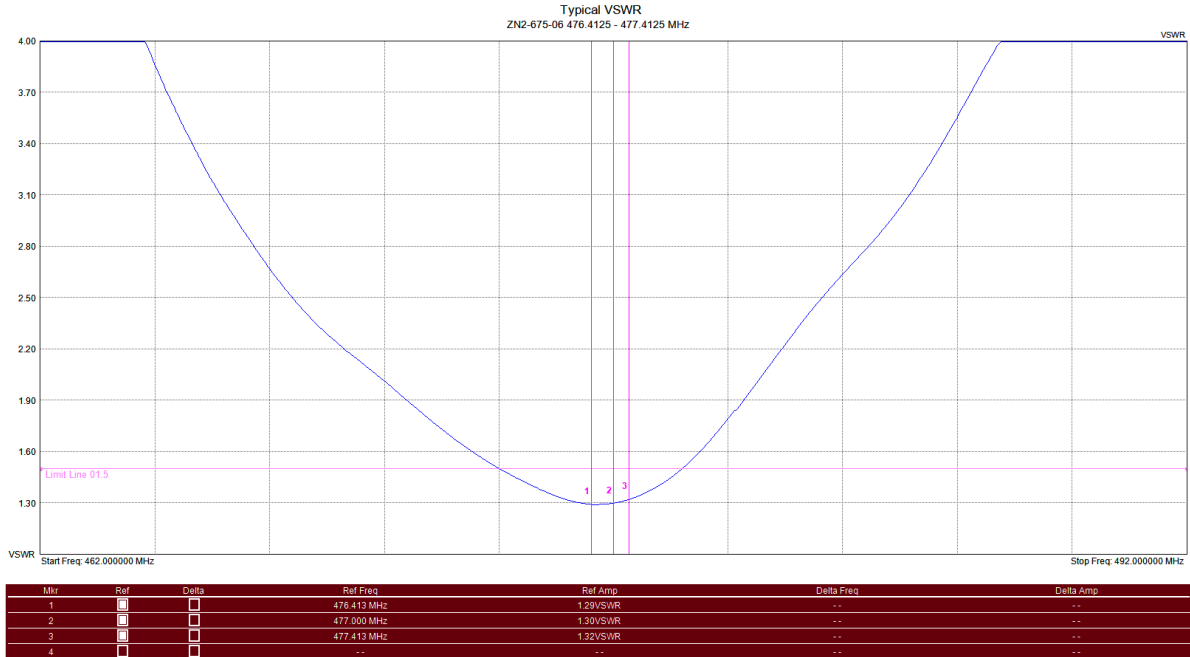
UHF female SO239 termination in base of mount section





# ZN2-675-06

## Omni-directional mast mount collinear UHF CB Radio 477 MHz



Typical VSWR

# ZN2-675-06


## Omni-directional mast mount collinear

### UHF CB Radio 477 MHz



CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires A-4266 series + 2 x EB1-SS or 1 x UB2-SS



A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS



SFB Series - galvanised steel pole extension 0.9-2.0 metres  
Roof or overhang mounting

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS




NSM-B20G - Toughened nylon wall/side mount, 20mm mount section capability.

Requires 13mm mount hole.



EB1-SS - requires 2  
304 stainless steel parallel clamp  
Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS  
304 stainless steel parallel clamp  
Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8 - requires 2  
Galvanised steel right-angle clamp  
Boom: 20-40mm capability  
Mount pole: 20-40mm capability



UB2-SS  
304 stainless steel right-angle clamp  
Boom: 20-50mm capability  
Mount pole: 20-50mm capability

Suitable feeder coaxial cable and connectors



MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable  
P/N 7800

Available in 100m or 300m rolls or alternatively request a custom cable assembly



UHF male PL259, captured solder centre pin, crimp connector for MIL-SPEC RG213  
P/N 7910



RU400 Solid copper conductor, low loss coaxial cable  
CNT-400 / LMR-400™ equivalent  
(™ times microwave)  
P/N 7890

Available in 100m, 300m, 500m roll or alternatively request a custom cable assembly



UHF male PL259, clamp-style connector for MIL-SPEC RG213  
P/N 7908



## ZN4-77-09T

### Light-duty fibreglass whip and base, no spring

### UHF CB Radio 477 MHz



The ZN4-77-09T series are ground independent UHF CB Radio antennas suitable for either light-duty installations or fixed position mounting. **Please note:** The ZN4-77-09T series **does not** come fitted with a spring base.

The elevated feed design results in true ground independence, suitable for metal or fibreglass constructed vessel.

Mounting hardware, connectors and other installation accessories are all available separately.

	ZN4-77-09T	ZN4-77-09T-W*
Colour	Black fibreglass phased coil whip	White fibreglass phased coil whip
Construction	Heatshrunk fibreglass phased coil whip, delrin and chrome elevated feed base, external coaxial cable and termination - <u>no spring base</u>	
Frequency range	477 MHz - UHF CB radio	
Bandwidth	476.4125 - 477.4125 MHz - covering all 40/80 channels	
VSWR	<1.5:1	
Tuning	Factory	
Gain	6.6 dBi	
Maximum power	25 Watts	
Impedance	50 Ohms	
Polarisation	Vertical	
H Plane	360° omnidirectional	
Cable	4.5 metres RG58 low loss, solid core, bottom exit from base	
Connector	FME female fitted to cable - for ease of installation	
Adaptor - supplied	FME male to UHF male PL259	
Height	800mm	
Weight	500grams	
Mounting hardware order separate	Bullbar: BBM-SS, BBML-SS or BBMXL-SS, ATLM or A-2651-2 20mm diameter bar: MRM-SS Bracket Mounting: GM1, GM2, GM6	
Mounting position recommended	As high on your vehicle/structure as possible using a minimum 13mm hole or appropriate bracket with a 13mm hole	
Installation tools required	14mm spanner for split nut securing on base	



Cable exit from base of mount  
**Note no spring base**



FME female jack connector fitted to cable



FME male to UHF Male PL259 adaptor



# ZN4-77-09T

Light-duty fibreglass whip and base, no spring

UHF CB Radio 477 MHz

Recommended installation accessories



BBM-SS - wrap around bull bar mount, up to 50mm diameter bull bar tube

16mm mount hole

Requires 10mm spanner



BBML-SS - wrap around extra large bull bar mount, up to 65mm diameter bull bar tube

16mm mount hole

Requires 10mm spanner



BBMXL-SS - wrap around extra large bull bar mount, up to 76mm diameter bull bar tube

16mm mount hole

Requires 10mm spanner



BBKB-B - Rhino knock down antenna mount, powder coated black

17mm mount hole with cable slot



ATLM series - Adjustable bonnet, boot and door jam mount. 360 rotational and 140 degree adjustment

16mm mount hole


Black or Chrome

Includes 5mm and 2mm allen keys



GM1 - 304 stainless steel 'L' mount bracket

16mm mount hole



MRM-SS - 304 stainless steel clamp style mirror mount


16mm mount hole

Requires 10mm spanner




GM2 - 304 stainless steel 'Z' mount bracket

16mm mount hole



A-6211 - 304 stainless steel offset mount bracket, 200mm offset

16mm mount hole



GM6 - 304 stainless steel 'L' mount bracket

16mm mount slot



## M400-OB series

### UHF phased coil whip and cable base UHF/TETRA 400-520 MHz



The MB400-OB series of ground dependent black stainless steel whip and OB base offer effective performance with effective gain, suitable for TETRA/UHF applications. The OB-2 Australian standard base is ideal for vehicle or fixed position mounting.

Alternative mounting hardware, adaptors, and other installation accessories are all available separately.

Construction		Type 17-7PH stainless steel whip (black or electro-polished, specify with black OB Australian standard base and external cable	
Frequency range	400-420 MHz 420-440 MHz 450-470 MHz 470-490 MHz 500-510 MHz	M410-OB4.0 M430-OB4.0 M460-OB4.0 M480-OB4.0 M510-OB4.0	MS430-OB4.0  MS480-OB4.0
VSWR	<1.5:1		
Tuning	Factory		
Gain	6.2 dBi on a metallic ground plane		
Maximum power	50 Watts		
Impedance	50 Ohms		
Polarisation	Vertical		
H Plane	360° omni-directional		
Cable and connector	4.0 metres RG58 MIL-SPEC stranded, specify termination BNC, SMA, N-type, MMCX, Fakra, UHF, TNC, etc Longer cable lengths available, consult ZCG.		
Whip mounting thread	5/16"-26 TPI female in mount ferrule		
Height & identification marker	M410-OB4.0 - 750mm - White cap M430-OB4.0 - 730mm - Brown cap M460-OB4.0 - 660mm - Red cap M480-OB4.0 - 630mm - Blue cap M510-OB4.0 - 590mm - Yellow cap		
Weight	300-500grams depending on model		
Mounting hardware order separate	Bracket: GM1, GM2, GM6, ATLM series or A-6211 Hole requirements: minimum 16mm diameter		
Mounting position recommended	Mount as high as possible on your vehicle or metallic structure to ensure a true omni-directional signal pattern. Ensure the antenna is installed in the optimum vertical polarisation		
Installation tools required	11mm spanner for OB base securing 15mm spanner for whip to OB base securing		



M5480-OB4.0



M5480-OB4.0

## M400-OB series

### UHF phased coil whip and cable base

### UHF/TETRA 400-520 MHz

#### Alternate mounting hardware



MGB-OB - Magnetic base with Australian standard OB base, 4.7 metres MIL-SPEC RG58 cable, no connector

105mm diameter



MGB-GP-2B - Magnetic ground plane base with Australian standard OB base, 2.0 metres MIL-SPEC RG58 cable, N-type male connector or specify

180mm diameter



A-2845  
Powdercoated black tri-magnetic mount base  
13mm hole  
Santoprene coated magnets for scratch reduction



OB-2 - Australian standard OB base with 5/16"-26TPI male thread, no cable, no connector

16mm mount hole  
Requires 11mm spanner



MS Base - Stainless steel parallel spring with 5/16"-26TPI male thread and female thread

Mounts between OB base and whip

#### Additional installation accessories



BBM-SS series - wrap around clamp mount, 50-76mm capability models available

16mm mount hole  
Requires 10mm spanner




BBKB-B - Rhino knock down antenna mount, powder coated black

17mm mount hole with cable slot



ATLM series - Dual axis adjustable 'lip' mount. 360 rotational and 140 degree adjustment

16mm mount hole  
Black or Chrome  
Includes mounting tools




GM1 - 304 stainless steel 'L' fascia mount bracket

16mm hole  
Requires mounting screws/bolts - not supplied



GM2 - 304 stainless steel 'Z' fascia mount bracket

16mm hole  
Requires mounting screws/bolts - not supplied



A-6211 - 304 stainless steel 'L' fascia mount bracket

16mm hole, 200mm offset  
Requires mounting screws/bolts - not supplied

**New Product**

Australian  
manufactured  
in  
East Gippsland

## GID-MB4052

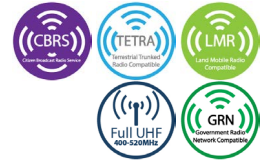
Wideband ground independent elevated feed whip

TE.T.RA / LMR / GRN / UHF 400-520 MHz

  
Build  
To  
Order

The GID-MB4052 ground independent wideband TETRA/UHF and Land Mobile Radio antenna is suitable for locations where height is an issue and no spring base is required. Suitable for TE.T.RA, GRN or LMR emergency services applications. The GID-MB4052 come configured without a spring base, for suitable vehicle mounted options, see the GID-MB4052-S with parallel spring base.

Mounting hardware, adaptors, connectors and other installation accessories are all available separately.



Construction	Chrome ground independent elevated feed base, flexible whip and external cable - <u>No spring base</u>
Frequency range	400-520 MHz - UHF, TETRA, LMR and GRN compatible
Bandwidth	Full frequency range stated - 120 MHz
VSWR	<1.5:1
Tuning	Factory
Gain	2.1 dBi
Maximum power	50 Watts
Ground independent	Yes
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
Cable	5 metres RG58 stranded - bottom exit from threaded base
Connector	UHF male PL259 supplied not fitted, or specify requirements
Height	350mm
Weight	500grams
Mounting hardware order separate	Mount using the threaded base onto an appropriate 16mm hole bracket such as BBM-SS bull bar mount or BBKB-B knock-down mount, or alternatively utilise any 16mm hole.
Mounting position recommended	As high on your vehicle, structure or pole as possible using an appropriate bracket or mount hole. Mount antenna minimum 350mm away from any other antenna.
Installation tools required	14mm or 9/16" spanner for securing split nut



PL259 UHF male  
supplied not fitted



New Product

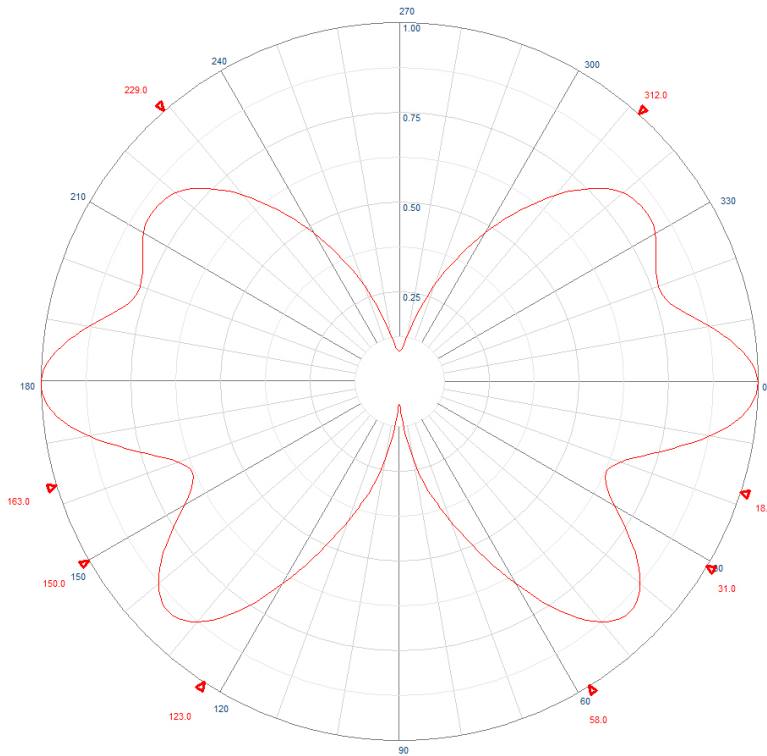
Australian  
manufactured  
in  
East Gippsland

# GID-MB4052

Wideband ground independent elevated feed whip

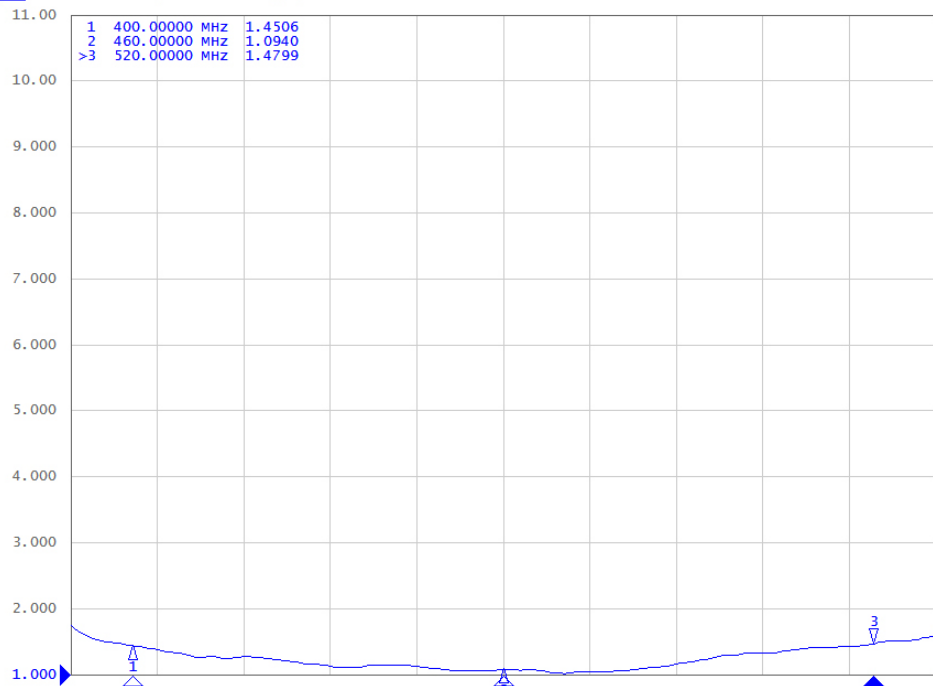
TE.T.RA / LMR / GRN / UHF 400-520 MHz

Build  
To  
Order



Example radiation pattern

SWR 1.000 / Ref 1.000 [F1]



Typical Return Loss

New Product

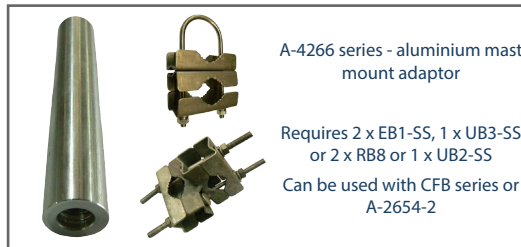
Australian  
manufactured  
in  
East Gippsland

## GID-MB4052

Wideband ground independent elevated feed whip

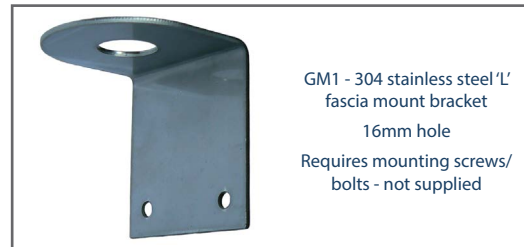
TE.T.RA / LMR / GRN / UHF 400-520 MHz

Build  
To  
Order



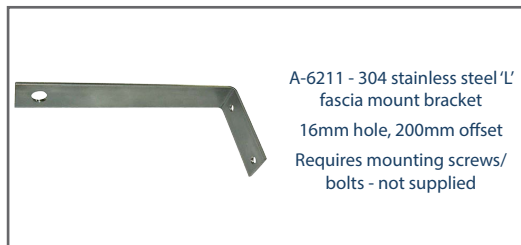
A-4266 series - aluminium mast mount adaptor

Requires 2 x EB1-SS, 1 x UB3-SS or 2 x RB8 or 1 x UB2-SS  
Can be used with CFB series or A-2654-2



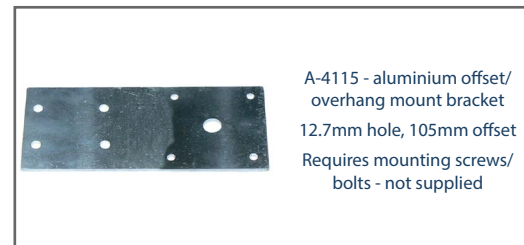
GM1 - 304 stainless steel 'L' fascia mount bracket

16mm hole  
Requires mounting screws/ bolts - not supplied



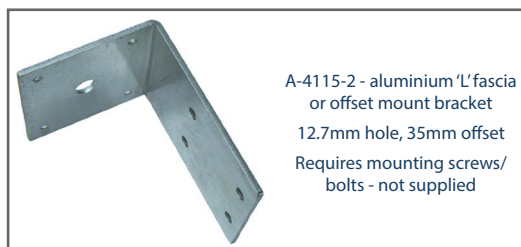
A-6211 - 304 stainless steel 'L' fascia mount bracket

16mm hole, 200mm offset  
Requires mounting screws/ bolts - not supplied



A-4115 - aluminium offset/overhang mount bracket

12.7mm hole, 105mm offset  
Requires mounting screws/ bolts - not supplied



A-4115-2 - aluminium 'L' fascia or offset mount bracket

12.7mm hole, 35mm offset  
Requires mounting screws/ bolts - not supplied



MGB

Powdercoated black internal magnet mount base

16mm hole  
105mm diameter  
includes scratch reduction pad on base



A-2845

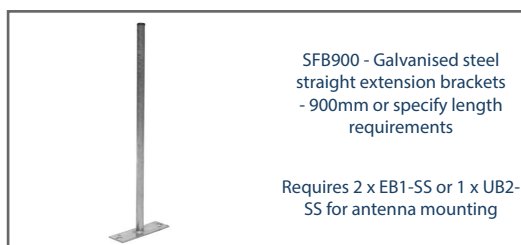
Powdercoated black tri-magnetic mount base

13mm hole  
Santoprene coated magnets for scratch reduction



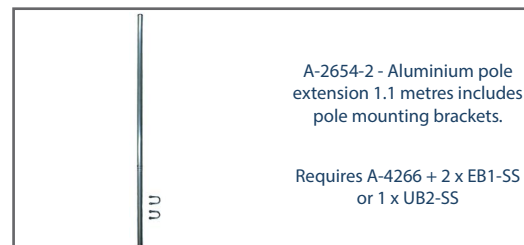
CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires A-4266 series + 2 x EB1-SS or 1 x UB2-SS



SFB900 - Galvanised steel straight extension brackets - 900mm or specify length requirements

Requires 2 x EB1-SS or 1 x UB2-SS for antenna mounting



A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires A-4266 + 2 x EB1-SS or 1 x UB2-SS



# ZM21-VHF & ZM24-VHF

Vessel deck or mast mount collinear

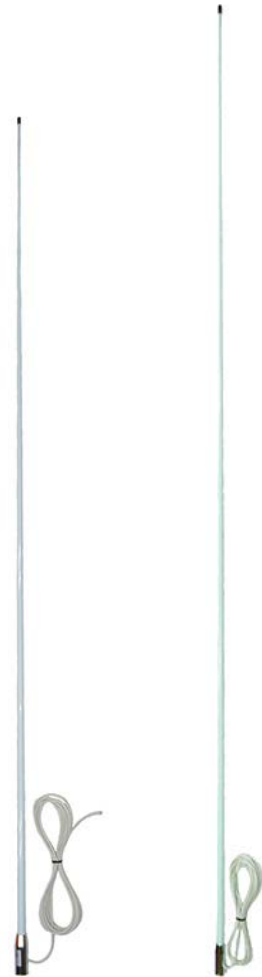
Marine radio VHF 156-162 MHz



The ZM21-VHF and ZM24-VHF are designed to cover the full Marine VHF communications band 156 - 162 MHz. The ZM21-VHF is identical in appearance to all the ZM21 series of marine antennas. The ZM24-VHF is identical in appearance to all the ZM24 series of marine antennas.

Mounting hardware, water-proofing, adaptors and other installation accessories are all available separately.

	ZM21-VHF	ZM24-VHF
Construction	White fibreglass radome, chrome mount ferrule and side exit external cable assembly	
Frequency range	156-162 MHz - VHF marine radio	
Bandwidth	Full frequency range stated - 6 MHz	
VSWR	156-158 MHz <1.5:1 - incl Emergency channel 21 & 22 158-162 MHz <2.0:1	
Tuning	Factory	
Gain	2.1 dBi	5.1 dBi
Maximum power	50 Watts	
Impedance	50 Ohms	
Polarisation	Vertical - do not lean/tilt once installed, only during transit	
H Plane	360° omnidirectional	
Cable	4.5 metres MIL-SPEC RG58 low loss, side exit from ferrule	
Connector	UHF male PL259 solder connector - supplied not fitted	
Height	2.1 metres	2.4 metres
Weight	1.0kg	1.1kg
Mounting hardware order separate	MM1 plastic fold-down base or MM2 stainless steel MMA or MMA-SS mast mount adaptor for mast mounting Alternate: A-3050 adaptor and 1270 spring base with 1/2" bolt	
Mounting position recommended	Mount as high on your vessel/structure as possible Example building/vessel roof or vessel deck/handrail	



ZM series chrome mount ferrule with 1-1/4" UNS female thread



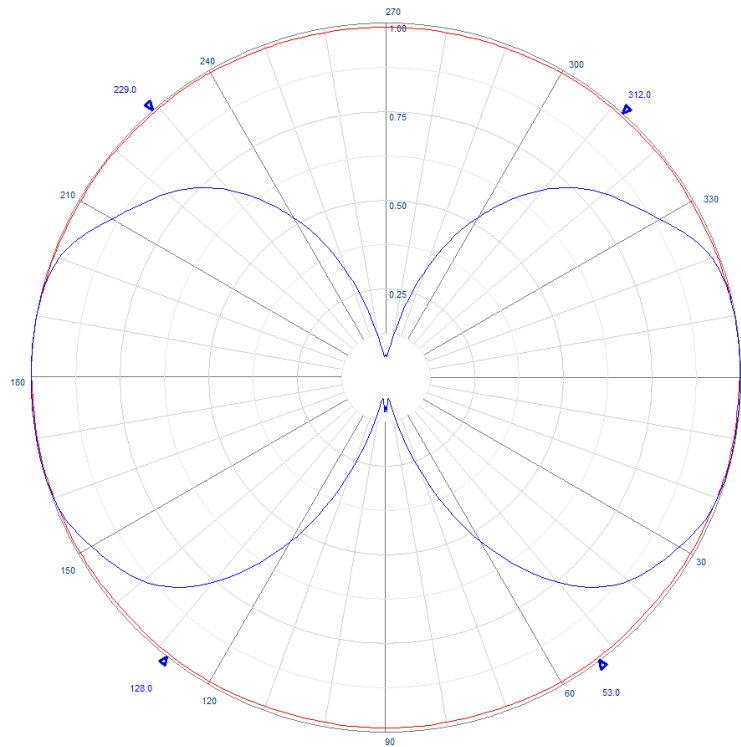
UHF male PL259 connector, solder pin, twist style



# ZM21-VHF & ZM24-VHF

Vessel deck or mast mount collinear

Marine radio VHF 156-162 MHz



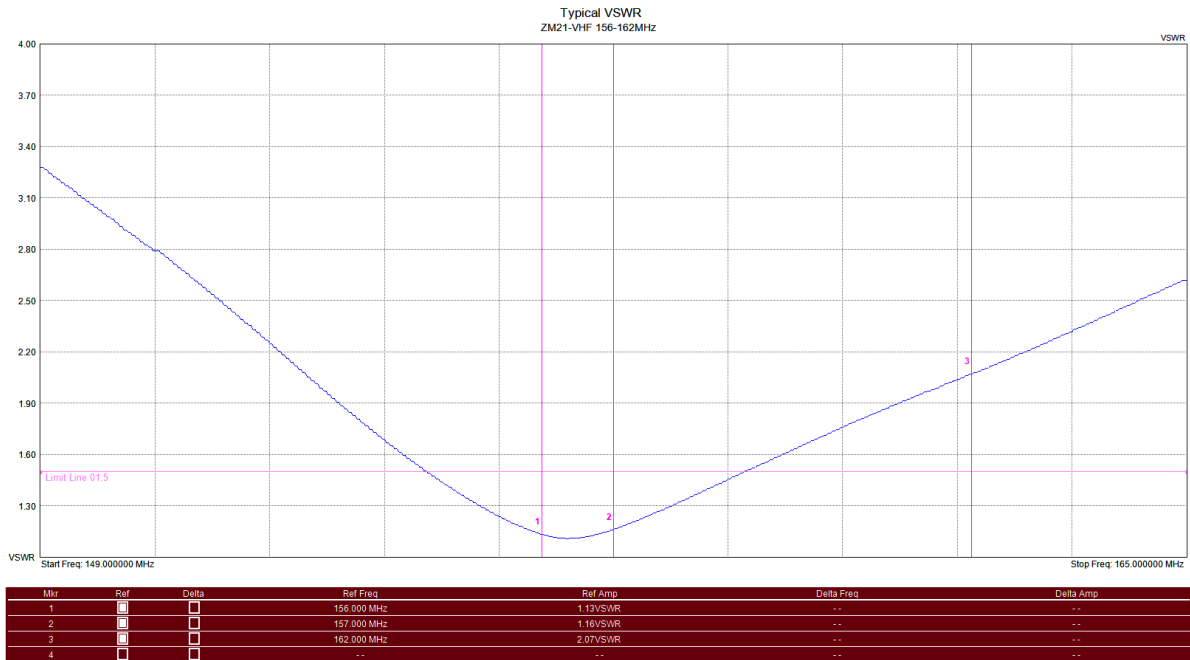
Example radiation pattern - ZM21-VHF



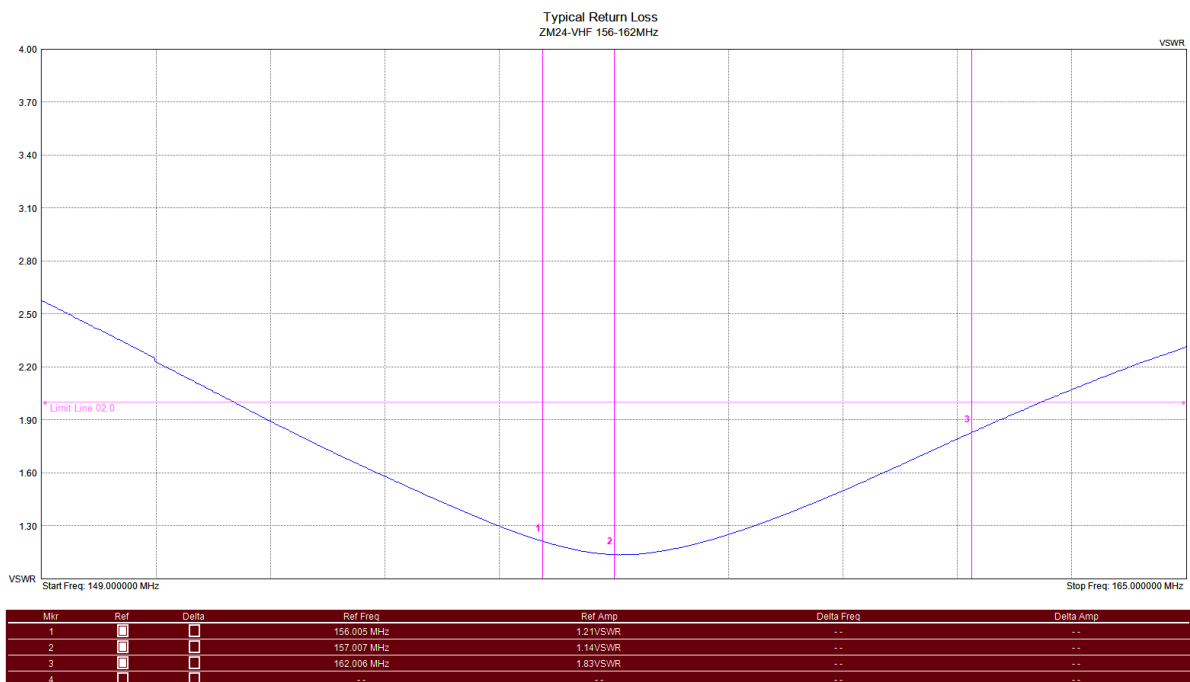
# ZM21-VHF & ZM24-VHF

Vessel deck or mast mount collinear

Marine radio VHF 156-162 MHz



Typical VSWR - ZM21-VHF



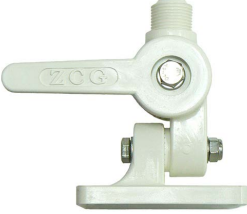
Typical VSWR - ZM24-VHF

# ZM21-VHF & ZM24-VHF

Vessel deck or mast mount collinear

Marine radio VHF 156-162 MHz

Alternate mounting hardware



MM1 toughened white nylon dual axis, ratchet fold down mount

Requires mounting screws/ bolts and mounting hardware for antenna



MM2 316 stainless steel dual axis, ratchet fold down mount

Requires mounting screws/ bolts and mounting hardware for antenna



MMA series - anodised aluminium mast mount adaptor 250-1200mm

Requires mounting hardware EB1-SS or UB2-SS




MMA-SS - 304 stainless steel mast mount adaptor 250mm

Requires mounting hardware EB1-SS or UB2-SS




CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires mounting screws/ bolts and mounting hardware for antenna




SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting

Requires mounting screws/ bolts and mounting hardware for antenna



A-1269 'barrel' spring base + A-3050 mount adaptor

For converting marine antenna to spring base mount or for vehicle mounting




A-1270 'barrel' spring base + A-3050 mount adaptor

For converting marine antenna to spring base mount or for vehicle mounting



EB1-SS - requires 2 304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS 304 stainless steel parallel clamp

Boom: 20-32mm capability  
Mount pole: 20-50mm capability



UB2-SS 304 stainless steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability



RB8 Galvanised steel right-angle clamp

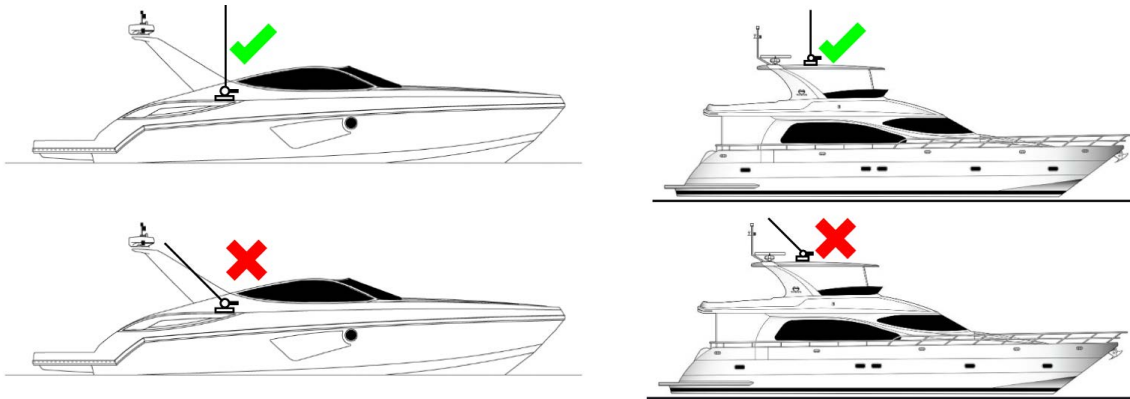
Boom: 20-50mm capability  
Mount pole: 20-50mm capability

# ZM21-VHF & ZM24-VHF

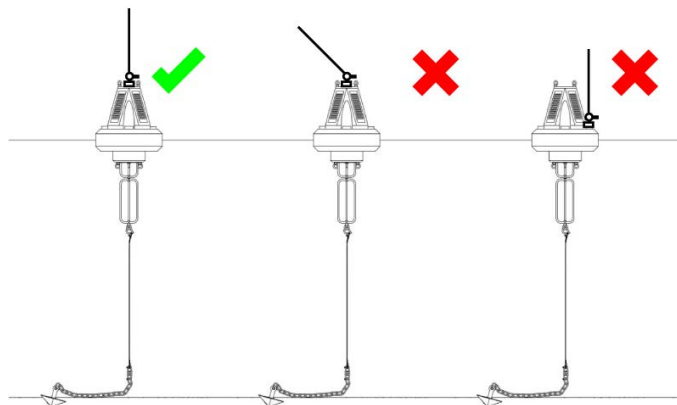
Vessel deck or mast mount collinear

Marine radio VHF 156-162 MHz

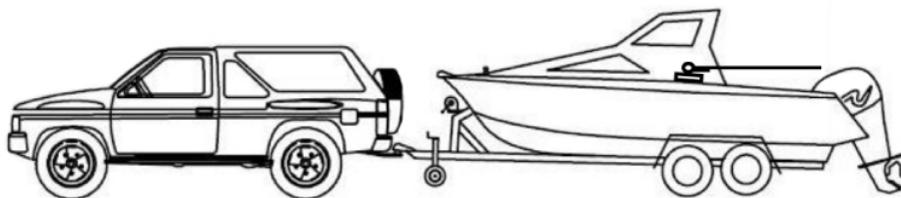
Recommended Installation orientation



Recommended Installation orientation - Buoy location



Recommended transportation orientation



ZCG recommend leaning/tilting the antenna down to parallel to the ground to eliminate any possible contact with overhead obstructions such as trees, overhead powerlines, entrance ways, roller doors or roof beams. Contact with obstructions will cause damage to your antenna or mounting surface.



# B20G & B20G-N

## Omnidirectional mast or side mount collinear

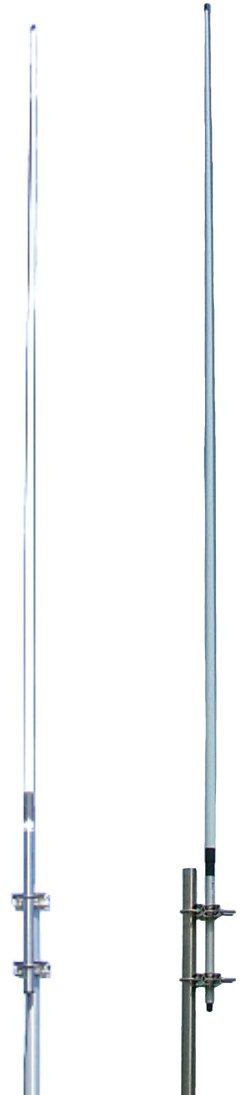
### Marine VHF 156-162 MHz



Tuned to cover the full VHF marine band, these ground independent antennas may be mounted to the mast of a vessel, or they can be side mounted from a wheelhouse of and other flat vertical surface.

Mounting hardware, coaxial feeder cable, adaptors and other installation accessories are all available separately.

	B20G	B20G-N
Construction	White fibreglass radome, stainless steel mount section and cable tail - B20G or bottom N-type termination, no cable - B20G-N	
Frequency range	156-162 MHz - Marine VHF Radio	
Bandwidth	Full frequency range stated - 6 MHz	
Tuning	Factory	
VSWR	Tx 156-158.5 MHz at <1.5:1 VSWR Rx 158-162 MHz at <1.5:1 - 2.8:1 VSWR	
Gain	5.1 dBi	
Maximum power	50 Watts	
Impedance	50 Ohms	
DC grounding	Yes	
Polarisation	Vertical	
H Plane	360° omnidirectional	
Cable	4.5 metres RG58 stranded	None
Connector	UHF male PL259 supplied, not fitted	N-type female at base of mount section
Height	3.4 metres	
Weight	1.5kg	
Mount section	500mm x 32mm - 304 stainless steel	
Mounting hardware order separate	Parallel mounting: 2 x EB1-SS or 1 x UB3-SS Right-angle mounting: 2 x RB8 or 1 x UB2-SS Side/wall mounting: 2 x NSM-CL3642	
Mounting position recommended	Mount as high on your structure or vessel as possible using the appropriate mounting hardware. Allow at least 1.0m spacing between antennas or vertical metallic obstructions.	



UHF male - B20G



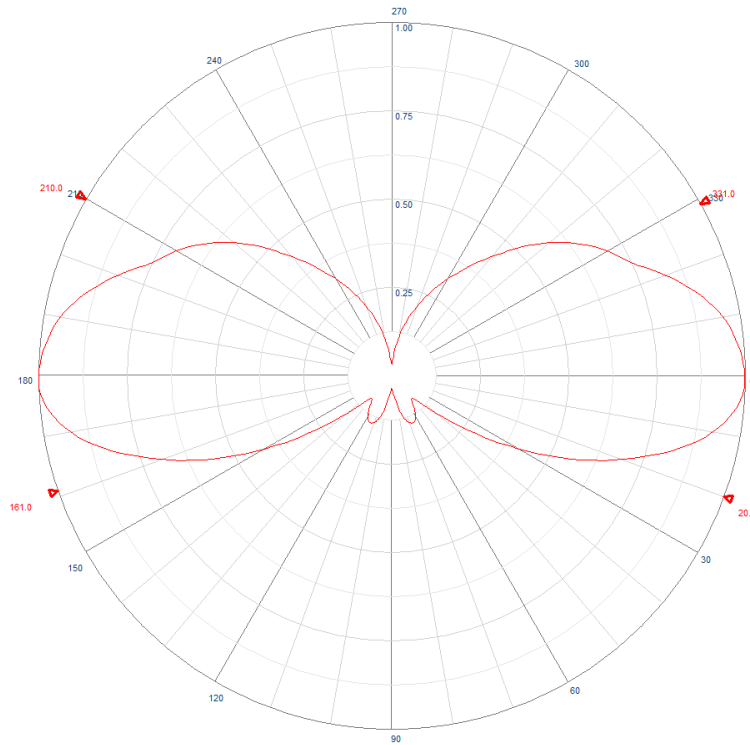
N-type female - B20G-N



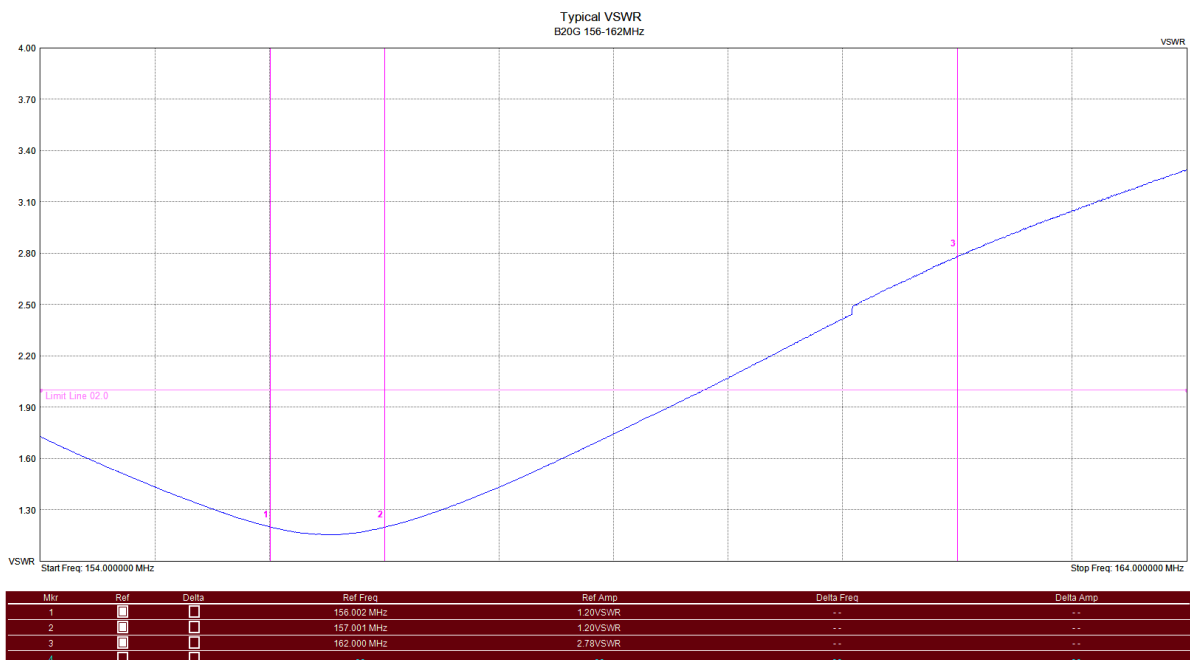


# B20G & B20G-N

Omnidirectional mast or side mount collinear  
Marine VHF 156-162 MHz



Example radiation pattern - B20G



Typical VSWR - tuned for emergency channel 21/22

# B20G & B20G-N


## Omnidirectional mast or side mount collinear

### Marine VHF 156-162 MHz




CFB series - Galvanised steel J' hockey stick brackets, 1.1 - 2.1 metres.

Requires mounting screws/ bolts and mounting hardware for antenna



A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires mounting screws/ bolts and mounting hardware for antenna



SFB Series - galvanised steel pole extension 0.9-2.0 metres Roof or overhang mounting

Requires mounting screws/ bolts and mounting hardware for antenna




NSM-CL3642 - requires 2 Toughened white nylon wall mount

Boom: 32mm capability  
13mm mount hole required



EB1-SS - requires 2 304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS 304 stainless steel parallel clamp

Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8 Galvanised steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability



UB2-SS 304 stainless steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability

Suitable feeder coaxial cable and connectors - B20G-N



MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable

P/N 7800

Available in 100m or 300m rolls



N-type male crimp connector for MIL-SPEC RG213

P/N 7937

Tri-metal plated



RU400 Solid copper conductor, low loss coaxial cable

CNT-400 / LMR-400™ equivalent (™ times microwave)

P/N 7890

Available in 100m, 300m or 500m rolls



N-type male crimp connector for RU400 low loss, solid conductor

P/N 8226

Tri-metal plated



## CLV3 series

### Omni-directional mast mount collinear VHF 151-152 MHz or VHF 173.9 MHz



The CLV3 series of VHF fixed position mast mount collinear are designed and manufactured to ensure long term survival and will deliver reliable performance for many years.

Mounting hardware, coaxial feeder cable, connector and other installation accessories are all available separately.

	CLV3	CLV3-174*
Construction	White fibreglass radome, anodised aluminium mount section and external termination	
Frequency range	151-152 MHz - VHF	173.9MHz - VHF
Bandwidth	Full frequency range stated	1 MHz around centre frequency.
Tuning	Factory	
VSWR	<1.5:1	
Gain	3 dBd	
Maximum power	50 Watts	
Impedance	50 Ohms	
DC grounding	Yes	
Polarisation	Vertical	
H Plane	360° omni-directional, ± 0.5 dBd	
E Plane	51°	
Connector	N-type female in base of mount section - no cable	
Height	3.3 metres	3.0 metres
Weight	2.0kg	
Projected area	0.071m <sup>2</sup>	
Wind load at 160kph	8.7kg, 0.039kN	
Mount section	350mm x 25mm	
Mounting hardware order separate	Parallel: 2 x EB1-SS or 1 x UB3-SS Right-angle: 2 x RB8 or 1 x UB2-SS	
Mounting position recommended	Mount as high on your structure, mast or tower as possible using the appropriate mounting clamp/s	



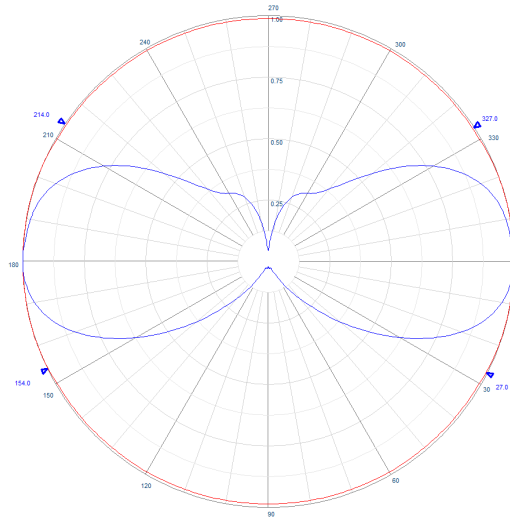
N-type female in base of anodised aluminium mount section



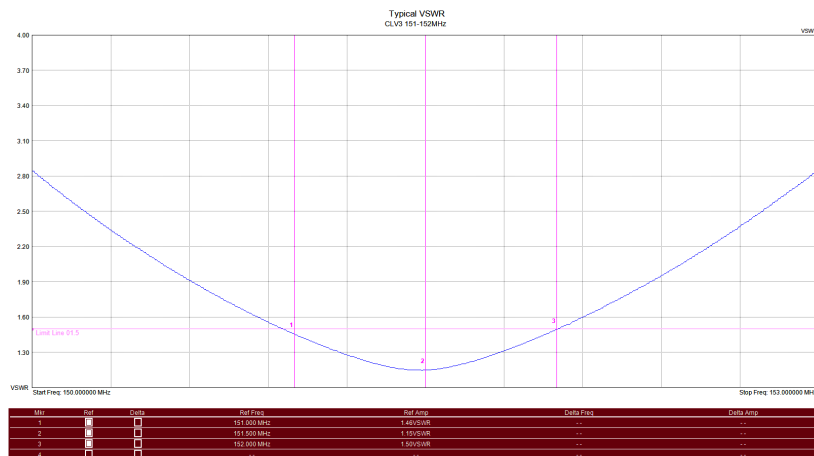
## CLV3 series

Omni-directional mast mount collinear  
VHF 151-152 MHz or VHF 173.9 MHz

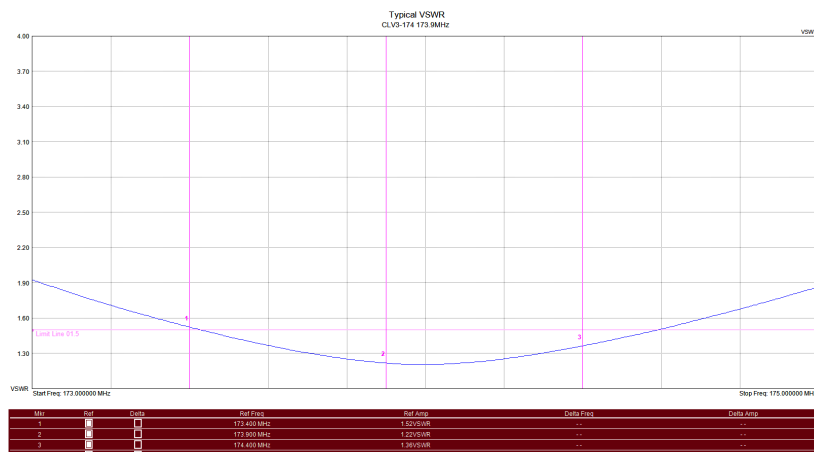
  
In-stock  
Ready to Ship  
\*Build to order item



Example radiation pattern - CLV3



Typical VSWR - CLV3



Typical VSWR - CLV3-174


# CLV3 series

## Omni-directional mast mount collinear VHF 151-152 MHz or VHF 173.9 MHz




CFB series - Galvanised steel 'J' hockey stick brackets, 1.1 - 2.1 metres.

Requires mounting screws/bolts and mounting hardware for antenna



A-2654-2 - Aluminium pole extension 1.1 metres includes pole mounting brackets.

Requires mounting screws/bolts and mounting hardware for antenna



SFB Series - galvanised steel pole extension 0.9-2.0 metres  
Roof or overhang mounting

Requires mounting screws/bolts and mounting hardware for antenna




NSM-218 - requires 2  
Toughened white nylon wall mount

Boom: 38mm capability  
13mm mount hole required



EB1-SS - requires 2  
304 stainless steel parallel clamp

Boom: 20-40mm capability  
Mount pole: 25-45mm capability



UB3-SS  
304 stainless steel parallel clamp

Boom: 20-32mm capability  
Mount pole: 20-50mm capability



RB8  
Galvanised steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability



UB2-SS  
304 stainless steel right-angle clamp

Boom: 20-50mm capability  
Mount pole: 20-50mm capability

Suitable feeder coaxial cable and connectors



MIL-SPEC RG213 stranded conductor, solid PE dielectric coaxial cable  
P/N 7800

Available in 100m, 300m roll or alternatively request a custom cable assembly



N-type male crimp connector for RG213 stranded core, solid PE dielectric coaxial cable  
P/N 7937

Tri-metal plated



RU400 Solid copper conductor, low loss coaxial cable  
CNT-400 / LMR-400™ equivalent  
(\* times microwave)  
P/N 7890

Available in 100m, 300m, 500m roll or alternatively request a custom cable assembly



N-type male crimp connector for RU400 low loss, solid conductor, coaxial cable  
P/N 8226

Tri-metal plated



## ZM312V

### Ground dependent omnidirectional whip and base Marine VHF communications 156-162 MHz



The ZM312V fibreglass whip is designed for VHF marine communications while at sea for metal hulled vessels or buildings. With a white coil loaded whip, Australian standard OB base and coaxial cable this antenna blends onto most white marine vessels.

**Please note:** This whip requires a metallic ground plane.

Water-proofing, bird proofing and other installation accessories are all available separately.

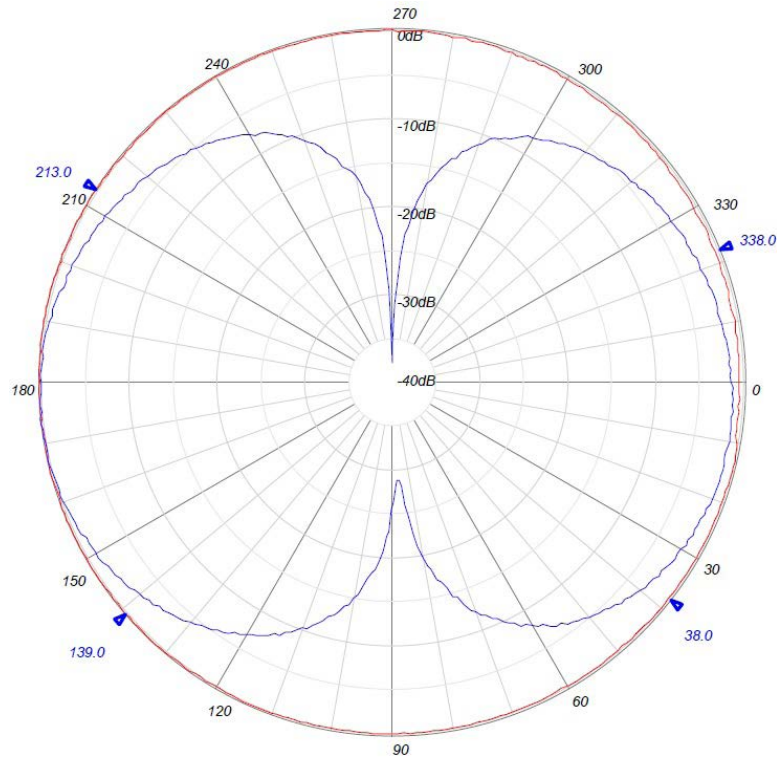
Construction	White heatshrunk whip, chrome ferrule and white mounting base and cable
Frequency range	156-162 MHz - Maritime VHF communications
VSWR	<1.5:1
Tuning	Factory
Gain	2.1 dBi
Maximum power	25 Watts
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
Cable	5 metres white RG58 low loss solid core bottom exits from base
Connector	FME female fitted to cable - for ease of installation
Adaptor - supplied	FME female to UHF male PL259
Height - including base	470mm
Weight	350grams
Ground independent	No - requires metallic ground plane
Mounting requirements	Onto metal surface minimum 0.5m <sup>2</sup>
Mounting position recommended	Mount as high on your vessel/structure as possible, ensuring no obstructions.
Replacement parts	ZW312V - whip only
Alternate mounting locations	The ZM312V can be fitted onto a vehicle, truck or caravan structure ensuring metallic ground plane present.



FME to UHF male PL259 adaptor supplied

# ZM312V

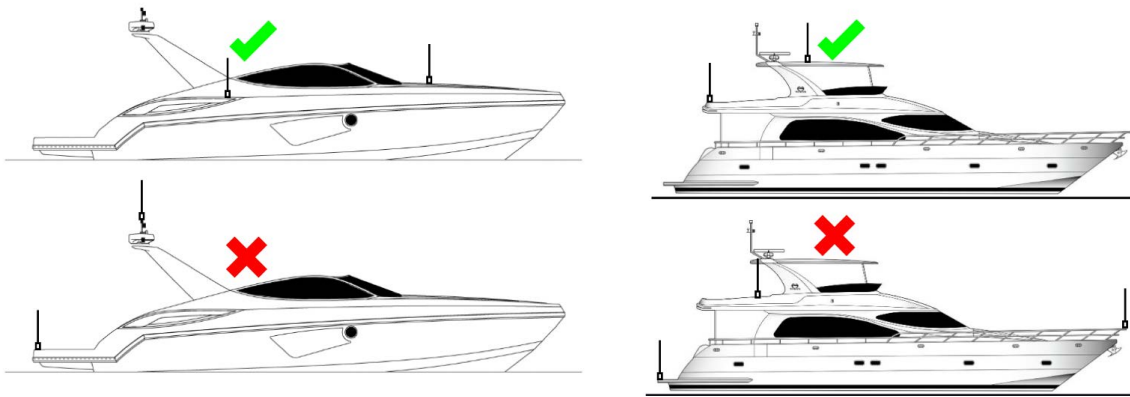
## Ground dependent omnidirectional whip and base Marine VHF communications 156-162 MHz



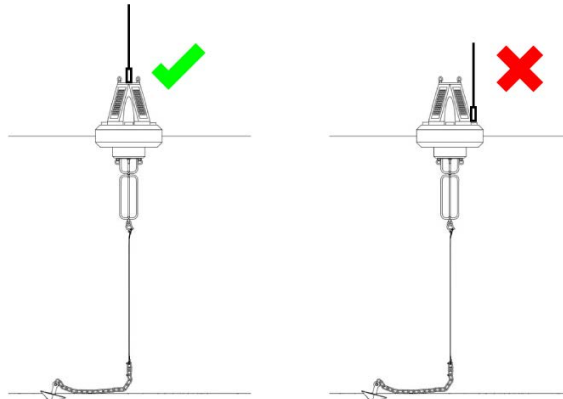
# ZM312V

## Ground dependent omnidirectional whip and base Marine VHF communications 156-162 MHz

Recommended Installation orientation  
Must be a metal mounting location for effective performance



Recommended Installation orientation - Buoy location





**New Product**

Australian  
manufactured  
in  
East Gippsland

## GID-1417

### Ground independent wideband loaded base whip VHF Communications 148-174 MHz

  
In-stock  
Ready to  
Ship

The GID-1417 detachable ground independent wideband VHF communications whip features a UHF male PL259 connector in the loaded PCB base, which fits onto any UHF female terminated base. The detachable design makes installation/removal quick and easy in situations of damage, vandalism or possible theft.

**Please note:** This antenna is the whip only and requires a mounting base - see recommended mounting hardware.

Mounting hardware, adaptors, connectors and other installation accessories are all available separately.

Construction	Black powdercoated whip, delrin loaded base and embedded UHF PL259 termination
Frequency range	148-174 MHz - VHF high band <b>incl. marine VHF 156-162 MHz</b>
Bandwidth	Full stated frequency range - 26 MHz
VSWR	<2:1
Tuning	Factory - no external tuning required
Gain	3 dBi
Maximum power	25 Watts
Ground independent	Yes
Impedance	50 Ohms
Polarisation	Vertical
H Plane	360° omnidirectional
Connector	UHF male PL259 in base of mount ferrule
Height	850mm
Weight	120grams
Mounting hardware order separate	Magnetic base: MGB-UHF or ZMB-90 Cable assembly: RA-4.7 with appropriate bracket such as BBM-SS
Mounting position recommended	As high on your vehicle/structure as possible using an appropriate magnetic base or cable base and bracket
Installation tools required	For permanent fixing, utilise a small amount of threadlocker applied onto thread, ensure no threadlocker on centre conductor



Detachable loaded PCB base for true wideband VHF capabilities, no tuning required.



UHF Male PL259 in bottom of PCB loaded base



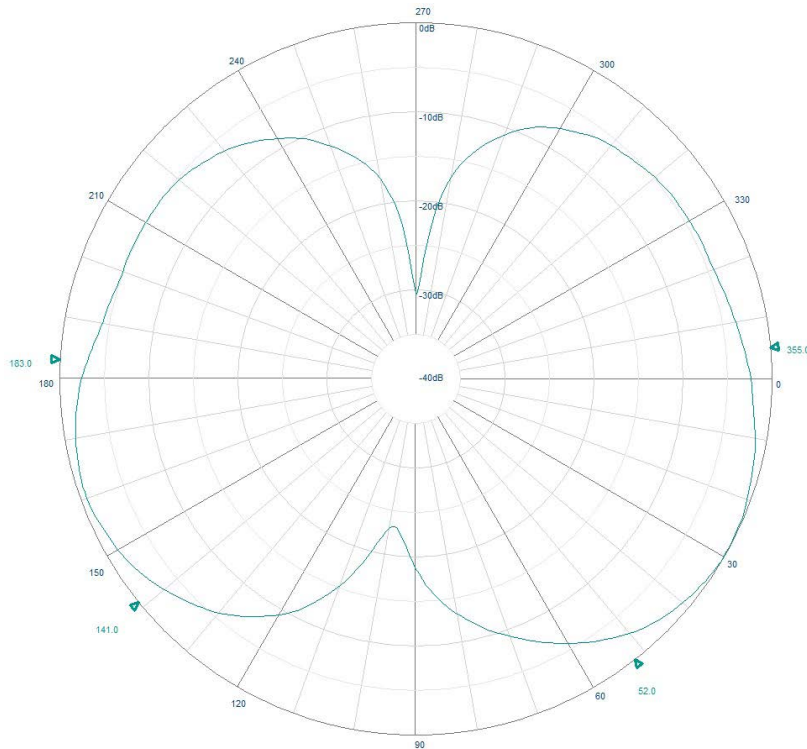
**New Product**

Australian  
manufactured  
in  
East Gippsland

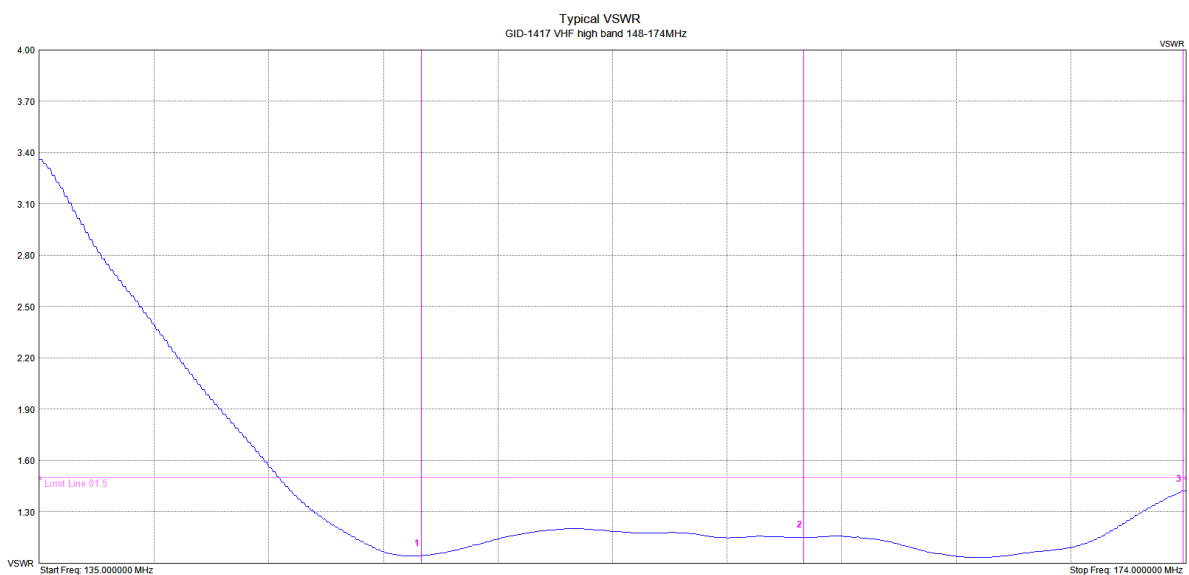
# GID-1417

Ground independent wideband loaded base whip  
VHF Communications 148-174 MHz

  
In-stock  
Ready to  
Ship



Example radiation pattern



Mtr	Ref	Delta	Ref Freq	Ref Amp	Delta Freq	Delta Amp
1	<input type="checkbox"/>	<input type="checkbox"/>	148.000 MHz	1.04VSWR	--	--
2	<input type="checkbox"/>	<input type="checkbox"/>	161.000 MHz	1.15VSWR	--	--
3	<input type="checkbox"/>	<input type="checkbox"/>	173.929 MHz	1.42VSWR	--	--
4	<input type="checkbox"/>	<input type="checkbox"/>	--	--	--	--

Typical Return Loss

**New Product**

Australian  
manufactured  
in  
East Gippsland

# GID-1417

## Ground independent wideband loaded base whip VHF Communications 148-174 MHz

  
In-stock  
Ready to  
Ship

Recommended installation accessories - GRN-TPM series



P/N 7944 - right-angle UHF female connector, no cable

Requires 16mm mount hole  
Requires 18mm & 25mm spanners



RA-4.7 - right-angle UHF female terminated 4.7m MIL-SPEC RG58A/U cable and UHF male PL259 connector supplied

Requires 16mm mount hole  
Requires 18mm & 25mm spanners



MGB-UHF - Black powdercoated magnetic mount base, 4.7 metres MIL-SPEC RG58A/U coaxial cable, UHF male PL259 supplied

105mm diameter



ZMB-90 - Black powdercoated magnetic mount base, 5 metres MIL-SPEC RG58A/U coaxial cable, UHF male PL259 fitted

90mm diameter

Additional installation accessories



BBM-SS series - wrap around mount, 50-70mm diameter tube capability

16mm mount hole

Requires 10mm spanner



GM1 - 304 stainless steel 'L' mount bracket

16mm mount hole



GM2 - 304 stainless steel 'Z' mount bracket

16mm mount hole



GM6 - 304 stainless steel 'L' mount bracket with mount slot

16mm mount slot



MRM-SS - 304 stainless steel 'Mirror mount' clamp bracket

16mm mount hole

Requires 10mm spanner



A-6211 - 304 stainless steel 'L' offset mount bracket, 200mm offset

16mm mount hole



# ZSPL-2

## 2-way band coaxial cable splitter

### 27 MHz, AM/FM, VHF or UHF



The ZSPL-2 2-way marine splitter is designed for 27MHz, AM/FM, VHF or UHF. The ZSPL-2 allows AM/FM radios to be connected to an already installed marine 27MHz, VHF or UHF antenna, such as the ZM21 or ZM24 marine range and be used as a AM/FM receive antenna as well.

For best AM/FM reception, a stand alone AM/FM antenna is recommended, such as the ZM09/ZM21/ZM24-AMFM.

Marine antennas, water-proofing, adaptors and installation accessories are all available seperately.

Construction	White RG58 coaxial cable, moulded splitter junction and chrome plated terminations
Compatible frequencies	27 MHz / VHF / AMFM and UHF
Maximum power	100 Watts
Impedance	50 Ohms
Antenna connection	UHF female SO-239
Radio/Device connection	UHF male PL259 and AM/FM male connector
Weight	200 grams
Cable arm lengths	1.3 metres
Mounting requirements recommended	For all terminations ensure a layer of water-proofing amalgamation and PVC layer has been applied.



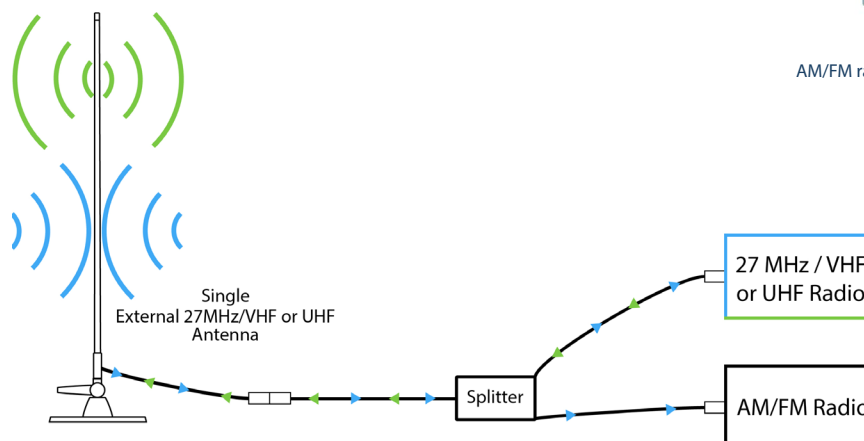
Termination for antenna input/output - UHF female



AM/FM radio input



27MHz / VHF or UHF radio input - UHF male



# ZD-AM-FM

## 2-way band coaxial cable splitter

DAB radio 174-230 MHz, AM 530-1700 kHz and FM 87.5-108 MHz

  
In-stock  
Ready to  
Ship

The ZD-AM-FM 2-way DAB and AM/FM Radio splitter is designed for 530-1600 kHz, 87.5-108 MHz and 174-230 MHz. The ZD-AM-FM allows AM/FM radios to be connected to an already installed DAB Radio whip/antenna, such as the SM39-DAB and also be used as a AM/FM receive antenna as well.

For best AM/FM reception, a stand alone AM/FM antenna is recommended, such as the CR36/CR66/SG1100 or ZM21/ZM24-AMFM range.

Antennas, adaptors and installation accessories are all available seperately.



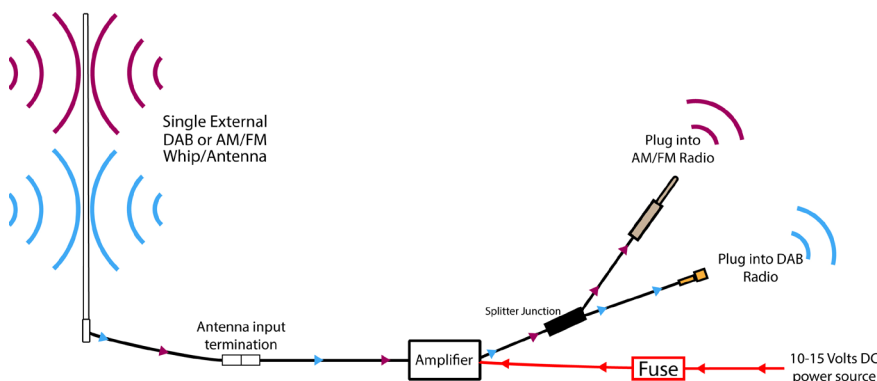
Construction	Enclosed amplifier, splitter output cable arm, input cable arm and 10-15VDC cable with internal fuse
Compatible frequencies	AM Radio 530-1600 kHz, FM Radio 87.5-108 MHz & DAB Radio 174-230 MHz
Power supply	DC 10-15V
Impedance	50 Ohms
Antenna connection	Female car radio with shroud
Radio/Device connection	Male car radio, SMA male and 10-15VDC cable with fuse
Weight	200grams
Cable arm lengths	Antenna input cable: 140mm Output splitter cable: 240mm 10-15VDC cable: 230mm
Installation requirements recommended	Ensure all terminations securely fitted and any exposed terminations waterproofing applied.



Female car radio termination for antenna input Male car radio



Radio input splitter terminations SMA male and Car Radio male



Enclosed amplifier box



10-15VDC power lead with enclosed fuse

# AVAIR meters

## SWR and power meters

### For HF, VHF and UHF applications

  
In-stock  
Ready to  
Ship

The range of AVAIR SWR and power meters are designed for testing and field tuning antenna operating in various ranges. The AVAIR meters have a large clear meter screen for easy measurement reading. Average or PEP measurements can be accessed at the switch of a button.

All models are an insertion type RF wattmeter and can be permanently fitted into a transmission system for continuous monitoring. The meters can be operated without external power, however the in-built lamp requires 13.8 Volt DC power supply.

	AV200	AV400	AV1000
Frequency range	1.8-160 MHz	140-525 MHz	Band 1: 1.8-160 MHz Band 2: 430-450 MHz Band 3: 800-930 MHz Band 4: 1240-1300 MHz
Switchable power range	5, 20, 200 & 400 Watt Average or PEP		5, 20, 200 & 400 Watt Average or PEP (430-1300MHz, 200 & 400W only)
Precision	5 Watt: ±5%	20 Watt: ±7.5%	200 Watt: ±10% 400Watt: ±12.5%
Minimum input power	0.5 Watts		
SWR	1 ~ Infinity		
Impedance	50 Ohms		
Input loss	0.2 dB		0.2 dB - 1.8-160 MHz 0.3 dB - 430-1300 MHz
Rear connectors	2 x SO-239, UHF female		2 x SO-239 - 1.8-160 MHz 2 x N-type - 430-1300 MHz
Dimensions	Width: 150mm, Height: 65mm, Depth: 100mm		
Weight	630grams		730grams
Mounting location	Install/Utilise the SWR/power meter inside a protected location such as inside a building. The components are not IP rated or suited for exterior mounting		



AV200



AV400



AV1000

## Marine Antenna Mounts

### Fold down, side and mast mount adaptors

### For mounting onto vessels, structure or towers



ZCG's range of marine antenna mounts can be utilised to mount your antenna onto a vessels deck or roof. Alternatively you can utilise any of the below mounts to install your antenna onto a structure, pole or tower.

	<b>MM1 nylon dual axis pivot ratchet mount</b>
Construction	Toughened white PVC plastic
Thread	1"-14 UNS male
Mounting hardware	Mount using 4 x M8 bolts or equivalent screws - not supplied
Mounting position recommended	Any flat surface, from a vessel deck, caravan,trailer, roof or fascia board - <u>as high on vessel/structure as possible</u>
Installation tools required	<u>12mm spanner for tilt adjustment securing</u> <u>Suitable spanner/screw driver for base mount securing</u>
	<b>MM1-B nylon dual axis pivot ratchet mount</b>
Construction	Toughened black PVC plastic
Thread	1"-14 UNS male
Mounting hardware	Mount using 4 x M8 bolts or equivalent screws - not supplied
Mounting position recommended	Any flat surface, from a vessel deck, caravan,trailer, roof or fascia board - <u>as high on vessel/structure as possible</u>
Installation tools required	<u>12mm spanner for tilt adjustment securing</u> <u>Suitable spanner/screw driver for base mount securing</u>
	<b>MM2 stainless steel dual axis pivot ratchet mount</b>
Construction	316 grade stainless steel
Thread	1"-14 UNS male at top of mount
Mounting hardware	Mount using 4 x M8 bolts or equivalent screws - not supplied
Mounting position recommended	Any flat surface, from a vessel deck, caravan,trailer, roof or fascia board - <u>as high on vessel/structure as possible</u>
Installation tools required	<u>12mm spanner and flat head screwdriver for tilt adjustment securing</u> <u>Suitable spanner/screw driver for base mount securing</u>
	<b>MM2-B black finish stainless steel dual axis pivot ratchet mount</b>
Construction	316 grade stainless steel
Thread	1"-14 UNS male at top of mount
Mounting hardware	Mount using 4 x M8 bolts or equivalent screws - not supplied
Mounting position recommended	Any flat surface, from a vessel deck, caravan,trailer, roof or fascia board - <u>as high on vessel/structure as possible</u>
Installation tools required	<u>12mm spanner and flat head screwdriver for tilt adjustment securing</u> <u>Suitable spanner/screw driver for base mount securing</u>



MM1



MM1-B



MM2



MM2-B

## Marine Antenna Mounts

Fold down, side and mast mount adaptors  
For mounting onto vessels, structure or towers

	<b>NSM-B20M</b>
Construction	Machined toughened nylon and 316 stainless steel fastening
Antenna capability	20-22mm mount section such as ZM108A or CM1600 series
Mounting hardware	1 x 1/2" BSW x 30mm mount bolt + 1 x M6 x 60mm antenna securing bolt - included
Mounting position recommended	Any vertical flat surface, from a wheelhouse wall, caravan, trailer or any vertical flat surface - <b>as high on vessel/structure as possible - requires min. 12mm hole</b>
Installation tools required	19mm spanner for mount bolt securing 10mm spanner for antenna securing bolt



	<b>NSM-CL2642</b>
Construction	Machined toughened nylon and 316 stainless steel fastening
Antenna capability	32mm mount section such as B20G or B20G-N
Mounting hardware	1 x 1/2" BSW x 30mm mount bolt + 1 x M6 x 60mm antenna securing bolt - included
Mounting position recommended	Any vertical flat surface, from a wheelhouse wall, caravan, trailer or any vertical flat surface - <b>as high on vessel/structure as possible - requires min. 12mm hole</b>
Installation tools required	19mm spanner for mount bolt securing 10mm spanner for antenna securing bolt



	<b>NSM-218</b>
Construction	Machined toughened nylon and 316 stainless steel fastening
Antenna capability	38mm mount section such as HM218-M
Mounting hardware	1 x 1/2" BSW x 30mm mount bolt + 1 x M6 x 60mm antenna securing bolt - included
Mounting position recommended	Any vertical flat surface, from a wheelhouse wall, caravan, trailer or any vertical flat surface - <b>as high on vessel/structure as possible - requires min. 12mm hole</b>
Installation tools required	19mm spanner for mount bolt securing 10mm spanner for antenna securing bolt



	<b>NSM-223</b>
Construction	Machined toughened nylon and 316 stainless steel fastening
Antenna capability	50mm mount section such as B20G or B20G-N
Mounting hardware	1 x 1/2" BSW mount bolt and 1 x M6 antenna securing bolt - included
Mounting position recommended	Any vertical flat surface, from a wheelhouse wall, caravan, trailer or any vertical flat surface - <b>as high on vessel/structure as possible - requires min. 16mm hole</b>
Installation tools required	24mm spanner for mount bolt securing 13mm spanner for antenna securing bolt







# Marine Antenna Mounts

Fold down, side and mast mount adaptors  
For mounting onto vessels, structure or towers



	MMA
Construction	Anodised aluminium tube with threaded end
Dimensions	Length: 250mm, Diameter: 25mm - or specify length requirements
Thread	1-1/4" UNS male thread - one end only
Mounting hardware	Requires 2 x EB1-SS, 1 x UB3-SS or 2 x RB8, 1 x UB2-SS - order separate
Mounting position recommended	Screws into any marine ZM series mount ferrule, <b>mount as high on vessel/structure as possible using appropriate mounting hardware</b>



	MMA-1200
Construction	Anodised aluminium tube with threaded end
Dimensions	Length: 1200mm, Diameter: 25mm - or specify length requirements
Thread	1-1/4" UNS male thread - one end only
Mounting hardware	Requires 2 x EB1-SS, 1 x UB3-SS or 2 x RB8, 1 x UB2-SS - order separate
Mounting position recommended	Screws into any marine ZM series mount ferrule, <b>mount as high on vessel/structure as possible using appropriate mounting hardware</b>



	MMA-SS
Construction	304 stainless steel tube with machined threaded end insert
Dimensions	Length: 250mm, Diameter: 25mm - or specify length requirements
Thread	1-1/4" UNS male thread - one end only
Mounting hardware	Requires 2 x EB1-SS, 1 x UB3-SS or 2 x RB8, 1 x UB2-SS - order separate
Mounting position recommended	Screws into any marine ZM series mount ferrule, <b>mount as high on vessel/structure as possible using appropriate mounting hardware</b>





# Mounting Adaptors

## Marine deck mount to spring base adaptors.



The 3050 series of mount adaptors allow you to take your vessel or deck mount marine antenna and remount it onto a mounting spring if required or suitable mounting hole.

- The A-3050 converts your marine antenna to be spring mounted, suits ZCG's ZM14, ZM18, ZM21 and ZM24 series of marine antennas
- The A-3050-3C suits any HF series whip with a M14 thread, such as HF Whip.
- ZCG can also manufacture any adaptor with any required thread

	A-3050	A-3050-3C	A-3050-5*
Construction	Brass	Chromed Brass	316 stainless steel
Suitable antennas	Any Antenna with a 1"-1/4 UNEF threaded ferrule	HF Antennas with a M14 x 2.0mm thread	
Length	36mm	54mm	
Width	25.2mm	7/8" - Hex	
Weight	100grams	120grams	150grams
Top thread	1"-1/4 UNEF x	M14 x 2.0mm	
Base thread	1/2" BSW	M14 x 2.0mm	
Suitable spring bases order separate	<ul style="list-style-type: none"> <li>• A-1269 heavy-duty barrel spring with mounting bolt</li> <li>• A-1270 heavy-duty parallel spring</li> </ul>	Any hole or bracket with minimum M14 hole or 1269-8 mounting spring with internal earthing strap or A-1269-8	



A-3050



A-3050-3/C & A-3050-5



A-3050 fitted to 1269 'barrel' spring



A-3050 fitted to 1270 parallel spring

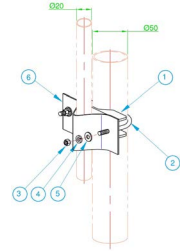


A-3050-3C fitted to 1269-8 'barrel' spring - requires M14 bolt for mounting

# Parallel mast mount clamps

Page 1 of 2

  
In-stock  
Ready to  
Ship  
\*Build to order  
item



### EB1-SS

Construction	304 stainless steel
Boom diameter	20-40mm - round
Mast diameter	20-45mm - round
Orientation	Parallel 180°
Service	Light to medium-duty
Weight	380grams

2 clamps recommended for mounting

### UB3-SS

Construction	304 stainless steel
Boom diameter	20-32mm - round
Mast diameter	20-45mm - round
Orientation	Parallel 180°
Service	Light to medium-duty
Weight	450grams

Single clamp sufficient for mounting

### UB4-SS\*

Construction	304 stainless steel
Boom diameter	20-32mm - round
Mast diameter	20-50mm - round
Orientation	Parallel 180°
Service	Light-duty
Weight	400grams

Single clamp sufficient for mounting



### SB1

Construction	Galvanised mild steel
Boom diameter	48.4mm - round
Mast diameter	48.4mm - round
Orientation	Swivel 360°
Service	Medium-duty
Weight	1.7kg

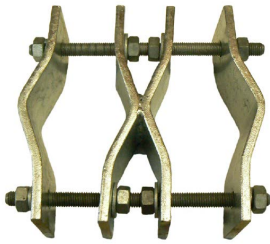
### SB4

Construction	Galvanised mild steel
Boom diameter	48.4mm - round
Mast mounting	Using M10 bolt
Orientation	360° mounting
Service	Medium-duty
Weight	1.7kg

# Parallel mast mount clamps

Page 2 of 2

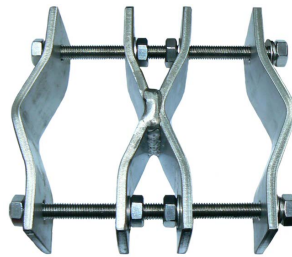
  
In-stock  
Ready to  
Ship  
\*Build to order  
item



**UAM180L**

Construction	Galvanised mild steel
Boom diameter	40-75mm - round
Mast diameter	40-75mm - round
Orientation	Parallel 180°
Service	Heavy-duty
Weight	1.8kg

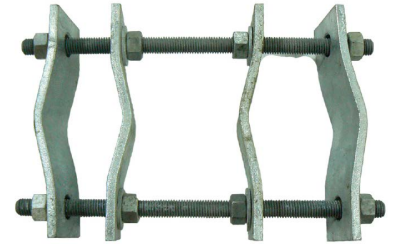
2 clamps recommended for mounting



**UAM180L-SS316\***

Construction	316 stainless steel
Boom diameter	40-75mm - round
Mast diameter	40-75mm - round
Orientation	Parallel 180°
Service	Heavy-duty
Weight	1.8kg

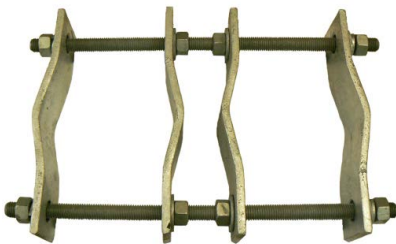
2 clamps recommended for mounting



**UAM180UNI**

Construction	Galvanised mild steel
Boom diameter	40-75mm - round
Mast diameter	40-90mm - round
Orientation	Parallel 180°
Service	Heavy-duty
Weight	1.9kg

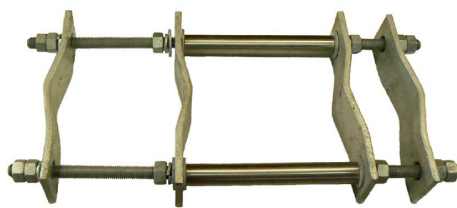
2 clamps recommended for mounting



**UAM180UNIL**

Construction	Galvanised mild steel
Boom diameter	40-90mm - round
Mast diameter	60-115mm - round
Orientation	Parallel 180°
Service	Heavy-duty
Weight	2.1kg

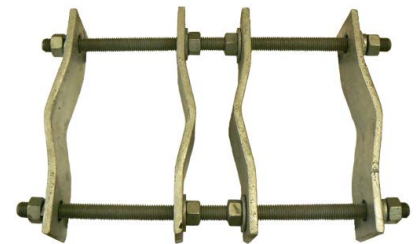
2 clamps recommended for mounting



**UAM180UNI-42**

Construction	Galvanised mild steel with 42mm stainless steel spacers
Boom diameter	40-90mm - round
Mast diameter	60-115mm - round
Orientation	Parallel 180°
Service	Heavy-duty
Weight	2.3kg

2 clamps recommended for mounting



**UAM180UNIL-48**

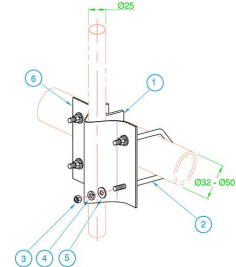
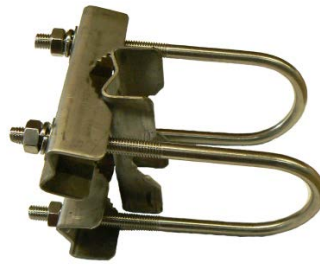
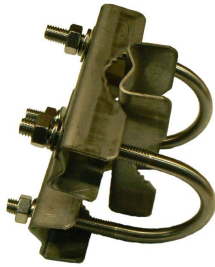
Construction	Galvanised mild steel
Boom diameter	50-70mm - round
Mast diameter	115-155mm - round
Orientation	Parallel 180°
Service	Heavy-duty
Weight	2.5kg

2 clamps recommended for mounting

## Right-angle mast mount clamps

### Light to medium-duty

  
In-stock  
Ready to  
Ship  
\*Build to order  
item



#### UB1-SS

Construction	304 stainless steel
Boom diameter	25mm - round
Mast diameter	38mm - round
Mounting orientation	Right-angle 90°
Service	Light to medium-duty
Weight	360grams

Recommended for stainless steel or aluminium antennas

Requires 13mm spanner for installation

#### UB2-SS

Construction	304 stainless steel
Boom diameter	20-50mm - round
Mast diameter	20-50mm - round
Mounting orientation	Right-angle 90°
Service	Light to medium-duty
Weight	540grams

Recommended for stainless steel or aluminium antennas

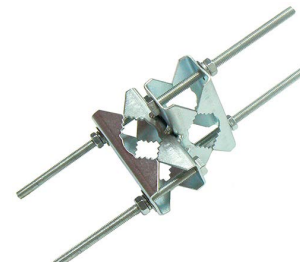
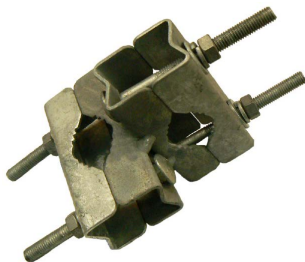
Requires 13mm spanner for installation

#### UB5-SS

Construction	304 stainless steel
Boom diameter	20-32mm - round
Mast diameter	32-50mm - round
Mounting orientation	Right-angle 90°
Service	Light-duty
Weight	450grams

Recommended for lightweight antennas

Requires 13mm spanner for installation



#### RB8

Construction	Galvanised steel
Boom diameter	20-40mm - round
Mast diameter	20-50mm - round
Mounting orientation	Right-angle 90°
Service	Light to medium-duty
Weight	540 grams

Recommended for stainless steel or aluminium antennas

Requires 13mm spanner for installation

#### RB8-L

Construction	Electroplated steel
Boom diameter	20-40mm - round
Mast diameter	20-50mm - round
Mounting orientation	Right-angle 90°
Service	Light to medium-duty
Weight	200 grams

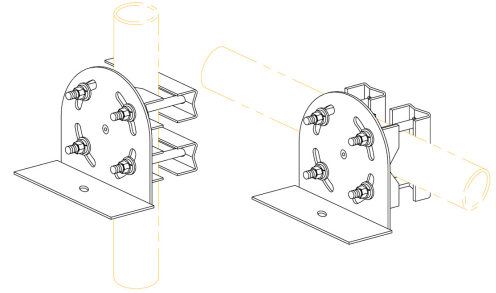
Recommended for stainless steel or aluminium antennas

Requires 13mm spanner for installation

# Right-angle mast mount clamps

Light to medium-duty

  
In-stock  
Ready to  
Ship  
\*Build to order  
item



## 1943

Construction	316 stainless steel
Boom diameter	50-60mm - round
Mount hole diameter	12mm with 6mm slot
Mounting orientation	Right-angle 90°
Service	Light to medium-duty
Weight	265grams

Recommended for vehicle mount antenna for fixed position such as GRH series

Requires 13mm spanner for installation

## SB3

Construction	Galvanised steel
Boom diameter	20-50mm - round
Mount hole diameter	8.5mm - round
Mounting orientation	Right-angle 90° with adjustment
Service	Light-duty
Weight	400grams

Recommended for light-duty antennas

Requires 13mm spanner for installation

## Accessories

### Stainless Steel & Black Nylon Cable Ties

Page 1 of 2

  
In-stock  
Ready to  
Ship

Cable ties, either Stainless Steel or Black nylon are a crucial accessories for any antenna installation.

PVC tape, amalgamation tape, grommets and other installation accessories are all available separately.

#### Stainless Steel cable ties

8117	Bag of 100, 316 Grade, 360mm long x 4.6mm
8117-2	Bag of 100, 316 grade, 200mm long x 4.6mm
8117-4	Bag of 100, 316 grade, 450mm long x 4.6mm
8117-5	Bag of 100, 316 grade, 600mm long x 4.6mm
8117-6	Bag of 100, 316 grade, 300mm long x 7.94mm
8117-7	Bag of 100, 316 grade, 500mm long x 7.94mm



#### 8125

Stainless steel cable tie tensioner required to tighten stainless steel cable ties.

Fits cable ties quick, easy and neat.

#### Black Nylon cable ties

8528-1	Bag of 100, 100mm long x 3mm width
8529	Bag of 100, 200mm long x 5mm width
8530	Bag of 100, 300mm long x 5mm width
8530-2	Bag of 100, 450mm long x 9mm width



# Accessories

## Water-proofing

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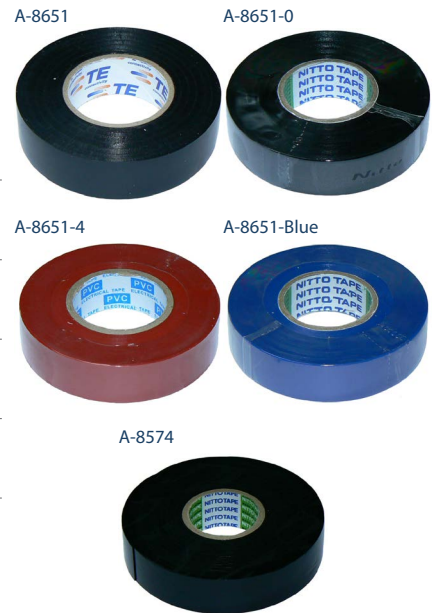
  
In-stock  
Ready to  
Ship

Water-proofing is an crucial step in any antenna installation whether it's a vehicle mount, marine, fixed position or broadcast, correct water-proofing can lengthen the life of your antenna system.

Consult ZCG's installation guides or ZCG's sales team for advice on correct water-proofing for your requirements.

### Adhesive waterproofing tape

A-8651	PVC electrical insulating tape, black, flame retardant, 19mm wide x 0.18mm thick, 20 metre roll
A-8651-0	PVC electrical insulating tape, black, 19mm wide x 0.18mm thick, 20 metre roll - Nitto brand
A-8651-4	PVC electrical insulating tape, red, flame retardant, 19mm wide x 0.18mm thick, 20 metre roll
A-8651-Blue	PVC electrical insulating tape, blue, 19mm wide x 0.18mm thick, 20 metre roll - Nitto brand
A-8574	Self-bonding amalgamating electrical tape, 20mm wide x 0.76mm thick, 10m roll - Nitto brand



### UV rated sealing cable gland

8485	Black PVC, UV rated, M16 thread, 5-10mm capability
8485-2	Black PVC, UV rated, M25 thread, 11-17mm capability - IP68
8485-5	Black PVC, UV rated, M40 thread suitable for 7/8" cable - IP68
8485-6	Black PVC, UV rated, M12 thread, 4-8mm capability - IP68
8485-7	Black PVC, UV rated, M16 thread, 5-10mm capability - IP68



### Cable grommet

5591	Bag 100, Nitrile grommet for RG58
5591-2	Single Nitrile grommet for RG58





# How to order

## Page 1 of 2

### ZCG distributor trade prices

ZCG scalar retail distributors, RF installer and Broadcasters can contact our team of consultants who will be pleased to assist you with complete detail about our extensive range of Broadcast and Radio Frequency Products. We DO NOT sell direct to the public or quote retail prices.

A written quotation detailing your Trade Discount Prices and product availability will be provided upon request.

Download the latest ZCG Scalar Product Catalogue from our website [www.zcg.com.au](http://www.zcg.com.au)

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### Stock items

Certain items are held in stock.

Our consultants can confirm availability of any item depending on the quantity required.

Orders for stock items will normally be dispatched the next working day.

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### Build items

Antennas and Accessories not held in stock will be manufactured to your requirements. Build times may vary according to the product, quantity required and factory loading.

Typical lead time is 3 working weeks (public holidays excluded) for dispatch ex works in Lindenow, Victoria. Contact our RF Solutions Consultants for advice according to the product required.

The scheduled dispatch date will be confirmed normally within 48 hours. Freight time will depend upon the method of delivery and final destination. Please allow an adequate period before scheduling any antenna installation.

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### Urgent priority build items

For orders that require a shorter than normal delivery time, ZCG Scalar offer a priority build service depending on the product and quantity.

Priority Build Service attracts a premium charge which RF Consultants will advise.

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### Placing orders

All Purchase Orders will be required in writing. Send your Purchase Order by fax or email.x

Fax orders to:

ZCG Head Office, Lindenow, Victoria on +61 (3) 5157 1641

Email orders to: [sales@zcg.com.au](mailto:sales@zcg.com.au)

PLEASE NOTE THAT ZCG SCALAR TERMS AND CONDITIONS OF SALE WILL APPLY.

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### Minimum order

ZCG Scalar reserve the right not to accept any purchase order for goods and/or services which totals less than \$50.00, excluding GST and Freight.

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### Payment

For customers holding a Trading Account with ZCG Scalar, payment is required within 30 days from the date of invoice.

For Non-Account customers, we will require full payment in advance with your purchase order.

ZCG Scalar accept payment by Credit Card or EFT bank deposit.

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### Order codes

Please use the correct "Order Codes" to identify the products you require when preparing an order.

This will eliminate the potential for any errors and assist us in speedy processing of your order. Product Order Codes appear on our website, in our Product Catalogue and also in our Price List. If in any doubt, our staff will be happy to assist you.

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### Specific frequency tuning requirements

For any antennas and accessories built for specific frequencies, we will require your Transmit and Receive frequencies (Tx and Rx) to appear in writing on your Purchase Order.

The performance of your RF product will be optimised accordingly. Please take note of the product's frequency range and bandwidth limitations which appear on Specification Sheets. If you require any clarification regarding frequency and bandwidth capabilities, please contact us.

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### Freight carriers

ZCG Scalar have negotiated competitive rates with our main freight carriers TNT and TOLL IPEC in order to deliver to all destinations around Australia using the fastest and most economical services available. A street address is required for delivery, not a post office box.

We will dispatch via TNT or TOLL IPEC, unless you instruct us otherwise.

Customers can certainly nominate their own preferred freight carrier if they wish. Simply provide us the details.

International customers will need to make their own freight arrangements and provide us details.

# How to order

## Page 2 of 2

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### Freight insurance

ZCG Scalar policy is to INSURE ALL OUTGOING FREIGHT against damage or loss during transit.

The Transit Insurance rate is 1 PERCENT of the value of goods before GST. This amount will be invoiced as a separate line item.

IF YOU INSTRUCT ZCG SCALAR NOT TO INSURE YOUR FREIGHT, then ZCG Scalar accept no responsibility whatsoever for goods.

If you utilise your own freight carrier, then Transit Insurance will not be provided by ZCG Scalar.

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### Responsibility to check goods upon arrival

When goods arrive at their destination, before signing the Delivery Docket, it is the customer's responsibility to CHECK that all items are present and in good condition.

If anything is found to have been damaged in transit, or is missing, make appropriate notes on the Delivery Docket prior to signing. Then contact ZCG Scalar.

If this is not done, then any subsequent insurance claim will be rejected. ZCG Scalar WILL NOT take any responsibility for uninsured goods or insured goods signed for as being received in good order and condition, but later found to be damaged or missing.

Please instruct your staff accordingly prior to the arrival of goods.

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### Warranty

ZCG Scalar warrants that all goods sold to the buyer will be free from defects in materials and workmanship attributable to ZCG Scalar for a period of:

- 2 Years from the date of Invoice for Broadcast Antennas and Power Dividers; and
- 1 Year from the date of Invoice for all other Antennas and Accessories.

Should the Buyer find any goods to be defective in materials or workmanship attributable to ZCG Scalar within the stated warranty period, then the Buyer must complete a "Warranty Claim Form" explaining the defect(s) and submit this form to ZCG Scalar. The "Warranty Claim Form" is available to download from our website, or will be provided upon request.

The freight for any items returned under warranty to ZCG Scalar must be arranged and paid by the Buyer. ZCG Scalar at their discretion will either repair, replace or refund the cost of any goods found to have a defect attributable to ZCG Scalar within the stated warranty period.

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### Return of goods

No goods can be returned for credit unless ZCG Scalar have issued the Buyer with a "Customer Return Authorisation Form" explaining the reason(s) why goods are being returned. Contact ZCG Scalar for this form.

When goods are returned by the Buyer, a minimum Re-Stocking Fee of ~~\$50.00~~ will be payable by the Buyer, or 15 percent of the Invoiced value of the goods returned to ZCG Scalar, whichever is the greater, unless stated otherwise by ZCG Scalar.

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### Terms and conditions of sale

All sales are subject to our ZCG Scalar Terms and Conditions of Sale.

These Terms and Conditions of Sale appear at the back of our Product Catalogue and are also available to download. Visit our website and select the menu 'downloads' Terms and Conditions of Sale.

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### Variations

ZCG Scalar reserve the right to alter product specifications, pricing and availability at any time without notice.

Our consultants are always available to confirm all details for you in this regard.

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# Terms and conditions of sale

## Page 1 of 4

In these Conditions “**ZCG Scalar**” means ZCG Scalar or any related corporation. The “**Buyer**” means the person, firm corporation or governmental or semi governmental authority purchasing goods and/or services from ZCG Scalar. Unless otherwise clearly stated in writing by ZCG Scalar the following conditions for wholesale sales will apply. “**Goods**” means the goods being purchased from ZCG Scalar, or any part thereof. “**Services**” means services being purchased from ZCG Scalar, or any part thereof.

### 1) CONTRACT

- a) The matters referred to on the face of this document and these conditions constitute a Contract (“**this Contract**”) between ZCG Scalar and the Buyer. These Conditions shall prevail over any forms of the Buyer that contain provisions contrary to or inconsistent with these conditions and any such forms shall not apply to this Contract nor shall they be deemed to constitute a counter offer by the Buyer.
- b) These terms and conditions shall apply to the exclusion of all agreements, representations and other statements made prior to entering into this agreement and shall constitute all the terms and conditions which govern this agreement.

### 2) MINIMUM ORDER

ZCG Scalar reserves the right not to accept any purchase order from the Buyer for goods and/or services which **totals less than \$50.00**, excluding GST and Freight.

### 3) DELIVERY

Unless ZCG Scalar otherwise agrees in writing, GST, delivery, carriage, insurance, handling, storage and packaging and any other expense relating to the goods and/or services shall be charged to and paid by the Buyer.

- a) In the absence of specific instruction from the Buyer, ZCG Scalar will select the carrier and make such contract with the carrier on behalf of the Buyer as ZCG Scalar in its absolute discretion considers reasonable.
- b) In the absence of specific instructions from the Buyer, ZCG Scalar will insure all outgoing freight. If the Buyer instructs that their freight is not to be insured, then ZCG Scalar will not accept any responsibility for goods lost or damaged during transit. When insured goods arrive at their destination, before signing the Delivery Docket, it is the Buyer’s responsibility to first check that all items are present and in good condition. If anything is found to have been damaged in transit, or is missing, the Buyer must ensure that appropriate notes are made on the Delivery Docket prior to signing. ZCG Scalar will not take any responsibility for products signed for as being received in good order and condition, but later found to be damaged or missing.
- c) ZCG Scalar will endeavour to deliver the goods and/or services within any delivery period required by the Buyer but subject to Condition 26 shall not in any event be liable for any loss or damage directly or indirectly resulting from any failure to deliver within such period. Time shall not be the essence of this Contract and any delay shall not constitute grounds for cancellation of this contract by the Buyer.
- d) ZCG Scalar shall not be liable for any loss or damage resulting from any failure to give notice of any delay in delivery.
- e) ZCG Scalar reserves the right to deliver the goods and/or services by instalments at its absolute discretion and in such circumstances the Buyer shall accept delivery of such goods and/or services by instalments.
- f) ZCG Scalar shall retain the full legal and beneficial ownership and title in and to goods and/or services delivered to the Buyer unless and until the Buyer has paid to ZCG Scalar or as it directs the invoiced price of those goods and/or services but risk in any such goods and/or services shall pass to the Buyer when ZCG Scalar appropriates the goods and/or services to the Buyer’s order. Such goods and/or services shall thereafter be at the risk and expense of the Buyer. If the Buyer defaults or otherwise fails to pay such amount as ZCG Scalar may (but without limiting any other rights or remedies available to ZCG Scalar at law, in equity or by statute) seize, repossess and/or sell the goods and/or services and for such purpose ZCG Scalar or its representatives may enter any premises in or upon which ZCG Scalar believes from time to time the goods and/or services to be located.
- g) If the Buyer sells, transfers or otherwise disposes of the goods and/or services to any personnel or corporation whatsoever (“the Third Party”) and the Buyer has not paid to ZCG Scalar or as it directs the invoiced price of those goods and/or services the Buyer holds as trustee to the extent of the unpaid invoiced price of the goods and/or services the proceeds of sale for ZCG Scalar and shall pay such proceeds to ZCG Scalar in full as soon as is reasonably practicable after receipt by the Buyer and, where the proceeds of sale are less than the amount owing by the Buyer to ZCG Scalar, such proceeds shall be applied in partial satisfaction to be the invoiced price or amount then outstanding.
- h) ZCG Scalar shall have the right to enter the Buyer’s premises or any premises upon which the Buyer stores the goods or some of the goods are stored and to take the goods from the Buyer until the goods have been paid for. If ZCG Scalar is unable to resell the goods at the same price or more than the Buyer has paid ZCG Scalar, then ZCG Scalar shall be entitled to make claim, demand or institute, if necessary, an action in order to recover any loss or damage sustained by ZCG Scalar due to ZCG Scalar not being able to obtain the same price as was receivable from the Buyer for the goods.

### 4) USE OF GOODS

- a) The Buyer agrees, for so long as it is required by ZCG Scalar so to do, that it will notify ZCG Scalar in writing prior to accepting the supply of any radio communications transmitter or receiver included in a class specified in regulations made under the Radio communications Act 1983 or any corresponding legislation if the particular radio communications transmitter or receiver is one that it intends to operate, or is one in respect of which it must otherwise comply with any law requiring the production to ZCG Scalar of a licence permitting the Buyer to operate or, possess the same. The Buyer warrants that any radio communications transmitter or receiver included in a class specified as aforesaid the supply of which it has accepted without giving the notice to ZCG Scalar required by this Condition is not one that it will operate.

# Terms and conditions of sale

Page 2 of 4

## 5) DESIGN CHANGES

ZCG Scalar reserve the right to alter the design or specifications of any goods and/or services at any time without notice. ZCG Scalar shall have no obligation to make alterations in the design or construction of goods and/or services previously accepted and delivered even though design changes are incorporated in goods and/or services subsequently being delivered.

## 6) BUYER'S SPECIAL REQUIREMENTS

Changes to the specifications at the Buyer's request after the placing of any order will only be accepted at ZCG Scalar's discretion. Such changes will only take effect when agreed in writing by the Company and may result in late delivery or increase in price.

## 7) CONSENTS

It shall be the responsibility of the Buyer to obtain any consent necessary for the importation of goods and/or services into their country. Any contract shall be conditional upon ZCG Scalar obtaining any consent necessary for the export of the goods and/or services from Australia and/or from the country of origin.

## 8) PAYMENTS

All accounts are payable net cash within thirty (30) days from date of Invoice.

- a) Where payment is not received in accordance within the specified time, the Buyer agrees that ZCG Scalar shall have the right to invoice and the Buyer will pay Late Payment Charges amounting to 2.5 per centum per month on all monies from time to time owing in respect of the goods and/or services including all charges.
- b) ZCG Scalar reserves the right to suspend all and any deliveries to the Buyer where payment is not received in accordance with paragraph (a) of the Clause.
- c) ZCG Scalar reserves the right to withdraw at any time credit facilities extended the Buyer where payment is not received in accordance with paragraph (a) of this Clause or where others acts or omissions of the Buyer are objectionable to ZCG Scalar.
- d) No discount will be allowed except where otherwise agreed in writing by ZCG Scalar.
- e) The Buyer authorises ZCG Scalar (its servants or agents) to make all reasonable enquires to verify the information given to ZCG Scalar by the Buyer is correct and that the Buyer can satisfy the requirements of ZCG Scalar and its commitments under the terms of this agreement.

## 9) PRICE VARIATION

- a) Subject to paragraph (b) of this clause all prices shall be as quoted in writing or in accordance with ZCG Scalars current price list. Verbal quotations are subject to written confirmation.
- b) ZCG Scalar reserves the right without notice to alter the price of goods and/or services whether or not a deposit or part payment has been received by ZCG Scalar for such goods and/or services and to invoice the Buyer for any such extra amount where the cost of the goods and/or services to ZCG Scalar has altered due to circumstances beyond its control, or to correct errors or omissions.

## 10) RETURN OF GOODS

- a) No return of goods will be accepted for credit unless :
  - i) A written "**Customer Return Authorisation Form**" has been issued to the Buyer by ZCG Scalar explaining the reason(s) why goods are being returned.
  - ii) The Buyer returns the goods to ZCG Scalar together with the "Customer Return Authorisation Form" within thirty (30) days from the date the form was issued, and
  - iii) The freight charge for the return of goods to ZCG Scalar is paid by the Buyer, unless stated otherwise by ZCG Scalar on the "Customer Return Authorisation Form".
- b) No return of goods will be accepted and no credit note will be issued for any goods specially acquired or specially manufactured for the Buyer.
- c) No credit note will be issued to refund the original freight charge to the Buyer, unless stated otherwise by ZCG Scalar on the "Customer Return Authorisation Form".
- d) When goods are returned by the Buyer, a minimum Re-Stocking Fee of \$50.00 will be payable by the Buyer, or 15 percent of the Invoiced value of the goods returned to ZCG Scalar, whichever amount is the greater, unless stated otherwise by ZCG Scalar on the "Customer Return Authorisation Form".

# Terms and conditions of sale

Page 3 of 4

- e) Where in ZCG Scalar's opinion goods are returned otherwise than in the same condition as when they were delivered to the carrier or directly to the Buyer a charge equal to the cost necessary to restore the goods to their original condition shall be levied and be payable by the Buyer on demand
- f) Where goods are returned to ZCG Scalar and ZCG Scalar are unable to resell the goods to a third party or unable to resell the goods to the third party for the same amount as was sold to the Buyer then ZCG Scalar shall be entitled to charge the Buyer an equal amount to the loss that it has incurred by reason of the Buyer returning the goods to ZCG Scalar.

## 11) CANCELLATION

To the full extent permitted by law, orders for good and/or services specially acquired by ZCG Scalar for the Buyer shall not be cancelled by the Buyer without ZCG Scalar's written consent. The cancellation of any order shall be made on terms with indemnify ZCG Scalar against all loss.

## 12) STANDARD SPECIFICATIONS AND FINISH

Goods and/or services ordered by reference to a standard specification shall be an order for goods and/or services of that general description being identified thereby, made to the current standard finish available.

## 13) INTELLECTUAL PROPERTY PROTECTION

ZCG Scalar does not warrant that the goods and/or services supplied do not infringe any Letters Patent, Registered Design, Copyright or any Trademarks and shall not indemnify the Buyer, its customers or any user of the goods and/or services against any action, suit, proceedings, demand or claim for actual or alleged infringement of any Letters Patent, Registered Design, Copyright or Trademarks brought or made against the Buyer, its customers or any users by reason of the use of goods and/or services supplied.

## 14) GOVERNING LAWS

The Buyer has the full responsibility of ensuring that he complies with all Acts, Regulations, Ordinances and By-Laws affecting the possession and use of goods and/or services sold including but without limiting the generality of the foregoing any Acts, Regulations, Ordinances and By-Laws regulating transmitting and receiving equipment or connection to a telecommunications network.

## 15) PRODUCT WARRANTY

ZCG Scalar warrants that all goods sold to the Buyer will be free of defects in materials and workmanship attributable to ZCG Scalar for the period of:

- a) **2 YEARS** from the date of Invoice for all Broadcast Antenna and Power Dividers; and
- b) **1 YEAR** from the date of Invoice for all other Antennas and Accessories

Should the Buyer find any goods to be defective in materials or workmanship attributable to ZCG Scalar within the stated warranty period, then the Buyer must complete a "Warranty Claim Form" explaining the defect(s) and submit this form to ZCG Scalar.

Upon receiving a "Warranty Claim Form" from the Buyer, then ZCG Scalar will either:

- a) Issue the Buyer with a "Customer Return Authorisation Form" in accordance with Paragraph (9) to authorise the return of goods to ZCG Scalar for examination, with the freight for items returned under warranty to ZCG Scalar arranged and paid by the Buyer; or
- b) Attend the Buyer's installation site to assess any defect(s) in the goods supplied.

ZCG Scalar at their discretion will either repair, replace or refund the cost of any goods found to be defective within the stated warranty period, provided that the goods have not been:

- a) damaged through improper installation, physical abuse, neglect or accident,
- b) assembled incorrectly
- c) serviced by an unauthorised person, or
- d) used for other than their intended purpose.

Components are only covered by the component manufacturer's normal warranty and should such warranty have expired before the return of goods then new components installed will be charged at cost. Goods repaired under warranty will be returned to the Buyer or ultimate user, carriage paid.

ZCG Scalar accept no responsibility for any costs incurred for removing or re-installing the product or any losses involved while the product is out of service.

The benefits conferred by the Warranty contained in this condition are in addition to all other rights and remedies in respect of the goods which the Buyer has under the Trade Practices Act similar State and Territory laws.

## 16) REPAIRS AND PARTS

ZCG Scalar does not promise the availability or facilities for the repair of the goods sold or the availability of parts for such goods

# Terms and conditions of sale

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## 17) INDEMNITY

To the full extent permitted by law the Buyer :

- a) Agrees to indemnify and at all times hereafter to keep indemnified and hold ZCG Scalar, its servants and agents and each of them harmless against all claims for loss or damage (whether as a result of negligence or otherwise) arising directly or indirectly out of the Buyer's use, possession, ownership or resale to a third party or out of the use possession or ownership by such third party of the goods and/or services or any part or parts thereof whether separately or in combination with any other equipment or material.
- b) Agrees that the indemnity in paragraph (a) of this Clause shall survive the termination of this Contract and shall extend to cover all alleged default or defect in the goods and/or services or part or parts thereof or instructions supplied for use in connection with the goods and/or services or out of any failure of the goods and/or services to perform a particular task or to achieve a particular result or to comply with any particular specifications.

## 18) FORCE MAJEURE

To the full extent permitted by law the Buyer releases ZCG Scalar from all and any liability for and in connection with or arising out of any failure or deal in performance of its obligation hereunder due in whole or in part to any cause whatsoever beyond ZCG Scalar's reasonable control.

## 19) IMPLIED CONDITIONS AND WARRANTIES

All implied conditions and warranties (statutory or otherwise) are hereby expressly excluded from this Contract insofar as they are capable of being excluded by Agreement.

## 20) COLLATERAL WARRANTY

Any collateral warranty that may have otherwise arisen from any statement or representation oral or in writing that may have been made by any servants or agents of ZCG Scalar prior to the delivery of the goods and/or services is hereby expressly excluded to the full extent permitted by law and to that extent the Buyer releases ZCG Scalar from any liability in connection with any such statement or representation.

## 21) REPRESENTATION

To the full extent permitted by law the Buyer hereby releases ZCG Scalar from, and ZCG Scalar expressly disclaims, any liability under, in connection with or arising out of any representation or advice, oral or in writing that may have been made by any servant or agent of ZCG Scalar prior to or at the time of delivery of the goods.

## 22) FITNESS FOR PURPOSE

The Buyer shall not rely on ZCG Scalar's skills and judgement on whether the goods and/or services are fit for the purpose of which they may be required by the Buyer.

## 23) WAIVER

No forbearance or other indulgence granted to the Buyer shall in any way discharge the Buyer from any of the Buyer's obligations under this contract or otherwise affect any such obligation.

## 24) EXTENT OF LIABILITY

In any event ZCG Scalar's liability to the Buyer for any loss damage or injury arising directly or indirectly from the sale of non-domestic goods shall be limited to an amount equal to :

- a) the cost of replacing the goods;
- b) the cost of obtaining equivalent goods; or
- c) the cost of having the goods repaired;

whichever is the lesser amount.

## 25) NOTICES

Any notices or account rendered to be given to the Buyer by ZCG Scalar shall be in writing and may be mailed postage pre-paid, emailed, faxed or hand delivered to the postal address, email address, facsimile number or street address advised by the Buyer in writing. Any such notice or demand shall be deemed to have been received by the Buyer two (2) business days in the place of a receipt after dispatch if sent by mail, or the same business day in the place of a receipt after dispatch is sent by email, facsimile or hand delivery. Any notice rendered to or to be given to the Company by the Buyer shall be in writing and may be mailed postage pre-paid, emailed, faxed or hand delivered to the Company's office as appears in this agreement or any other address that ZCG Scalar may advise in writing for the purpose.

## 26) LAW

This Contract shall be governed by and construed in accordance with the laws of the State of Victoria, Australia.

## 27) STATUTORY RIGHTS

The Buyer acknowledges that this agreement is subject to any rights and obligations arising between the parties pursuant to any legislation or by implication of law and specifically acknowledge that this agreement is not intended and will not operate to override any rights and obligations created by the Trade Practices Act of Commonwealth of Australia (1974 as amended). To the extent that any provision of this agreement is void, voidable or repugnant to the provisions of that Act or any other Act of the State of Victoria that provision shall be deleted from this agreement but the remainder of the provisions of this agreement shall continue to apply.



## Contact Us

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Mon-Fri 9am-5pm (AEST)

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