Providing quality aerial solutions, keeping you connected

All care has been taken to ensure the accuracy of all technical and specification information. No responsibility can be accepted for any errors or omissions.

Unless otherwise stated all products carry a one year manufacturers warranty. All sales are subject to our Terms of Trade which can be found on our website.

2025 Issue

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Contents

Contents

Mobile Antennas continued

Mounting Hardware

Cables & Connectors

New Zealand Distributors

Appendix One

Introduction

Since 1974 Hi-Tec Aerials have hand-made robust aerial solutions for the most demanding of conditions. Recognised as a quality antenna throughout the world, our extensive range of base station and mobile antennas provide reliable, easy to install solutions that are used by businesses and in the communications industry.

Manufacturing of dipoles, yagis, corner reflectors and many other types of antennas takes place at our factory in Christchurch, New Zealand. We have solutions for a wide range of frequencies, optimised to our customer's unique needs. Our base station aerials and fittings are designed for the toughest of conditions and our large range of clamps, cables, connectors and other items deliver a complete aerial hardware solution.

At Hi-Tec Aerials we pride ourselves on our ability to customise our range to suit our customers needs. While our catalogue showcases a wide range of options, we're always open to enquiries for specialised solutions.

We are also a distributor of Amphenol Procom and Sinclair Technologies products.

Your feedback is invaluable as we strive for continuous improvement and customer satisfaction. We encourage our customers to scan the QR code and send us an email with feedback, or to place an order to our sales team.

SCAN ME

Please see the back pages for help with the new codes, and do not hesitate to contact us for help.
We also have an 'old code vs new code' list available on request.

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Notes:

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station VHF

VHF Folded Dipoles & Yagis - Standard Series

Models FDV & Y2V to Y6V

The standard range of VHF yagis and folded dipoles are designed for urban site installations. Being lightweight with a small projected surface area, they can be installed on low cost supports. The coding “FD” indicates a folded dipole and “Y” indicates a yagi.

These antennas are constructed from grade 6000 series aluminium and corrosion resistance is increased by a silver anodised finish.

Elements are 12.7 x 1.42mm extruded sections, which provides a robust antenna.

The boom section is 25 x 25 x 1.8mm square tube, to which the elements are clamped. This system allows the aerial to be shipped as a kitset. Cast aluminium clamps with stainless steel hardware are used to mount each element to the boom.

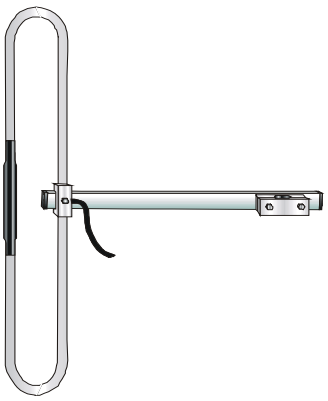
The nominal feed impedance is 50 Ohms with the matching section sealed within the driven element, eliminating the need for an external balun.

Mounting for vertical polarisation is standard. Mounting options available for clamping to 25mm, 38mm, 48mm or 63mm outside diameters include the mounting clamps, saddle clamps or the universal clamp. The universal clamp provides flexibility in mounting for either vertical or horizontal polarisation.

Bands available:

- **ESA Band** **75-80 MHz (FDV only)**
- **FM Broadcast** **88-108 MHz**
- **Aviation Band** **118-136 MHz**
- **ESB Band** **138-144 MHz**
- **E Band** **151-156 MHz**
- **Marine/Paging Bands** **156-162 MHz**
- **EE Band** **162-170 MHz**

Centre frequencies on request



FDV

HI-TEC AERIALS

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

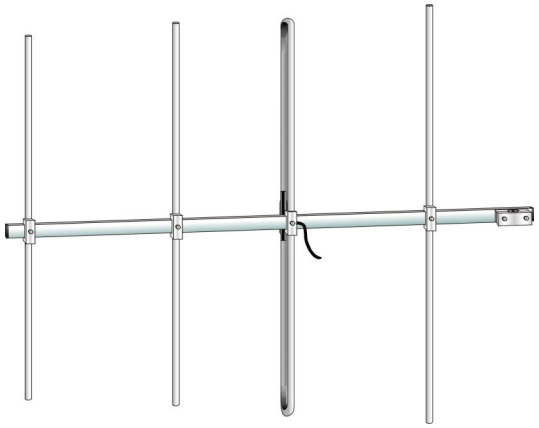
Base Station VHF

MODEL	FDV	Y2V	Y3V	Y4V	Y5V	Y6VCM	Y6VEM
Number of Elements	1	2	3	4	5	6	6
Frequency Range (MHz)	75-170	118-170 (see bandwidth)					
Bandwidth (MHz)	10	15	8	8	8	8	8
Gain (dBd)	0	3	5.5	7	8	9	9
Half Power Beamwidth E Plane (deg)	N/A	70	62	58	58	56	56
Half Power Beamwidth H Plane (deg)	N/A	145	95	74	68	65	65
Front to Back Ratio (dB)	N/A	10	13	15	15	15	15
Input Impedance (Ohms)	50						
Return Loss (dB & VSWR)	<-14dB 1.5:1						
Maximum Power (W)	200						
Cable Type	RG58 or RG58LL						
Max Element Length (m)	1.6	1	1.1	1.1	1.1	1.1	1.1
Boom Length (m)	1.5	0.8	1	1.3	1.6	2.3	2.3
Boom Diameter (mm)	25 square						
Projected Area (m^2)	0.05	0.06	0.08	0.10	0.12	0.14	0.14
Weight (kg)	1.4	0.6	0.8	1.5	1.2	2.9	2.9
Mounting Location	Rear					Centre	Rear

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

FDV-151-156-58-1-UNT-MC25
Folded Dipole VHF, E Band, RG58 1m, Unterminated, 25mm Clamp

Y4V-162-170-58LL-5-BNCP-MC38
Yagi 4 Element VHF, EE Band, RG58LL 5m, BNC Plug, 38mm Clamp



Y4V

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station VHF

VHF Folded Dipoles - Professional Series

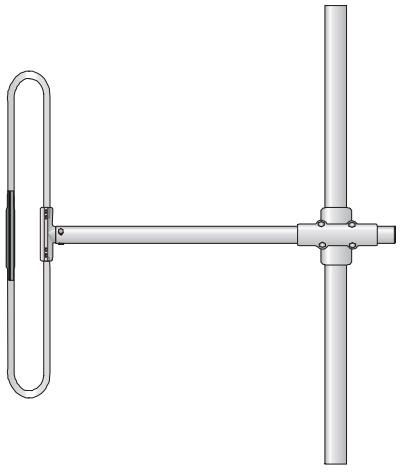
Models PRO-FDVL & PRO-FDVH

This range of folded dipoles provides broadband unity gain and is designed for general purpose base station and repeater sites.

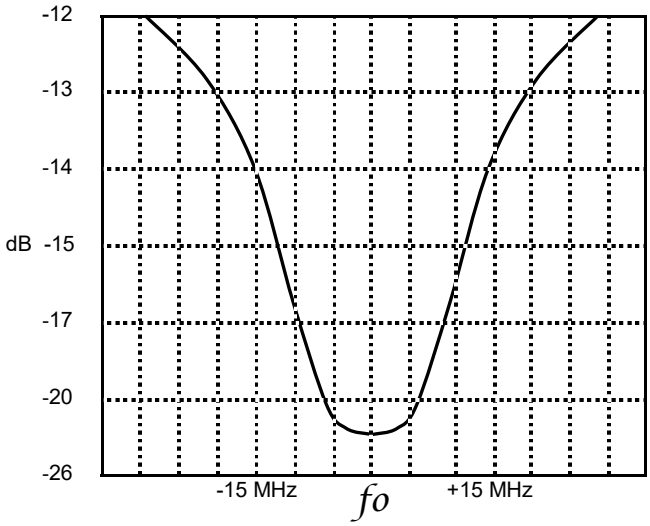
All models have vertically polarised radiation patterns which can be offset by locating the dipole at specific distances from a metallic support structure or by using a reflector. The folded dipole element is DC grounded.

The folded dipole models are constructed from heavy duty extruded aluminium tube with a rugged cast aluminium centre clamp. The clamp is attached to the boom with 3 radial bolts to provide a reliable connection. All hardware is stainless steel and to increase the corrosion resistance the aluminium element and boom are silver anodised.

Each dipole is fitted with a RG213 coax tail and suitable clamps to use are available.



PRO-FDVL & PRO-FDVH



Typical Return Loss PRO-FDHV

HI-TEC AERIALS

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

MODEL	PRO-FDVL	PRO-FDVH
Frequency Range (MHz)	75-108 (see bandwidth)	118-170 (see bandwidth)
Bandwidth (MHz)	10	30
Input Impedance (Ohms)	50	
Return Loss (dB & VSWR)	>-14 dB 1.5:1	
Maximum Power (W)	500	
Cable Type	RG213	
Element Length (m)	1.6	0.9
Boom Length (m)	1.5	1.0
Boom Diameter (mm)	48	38
Projected Area (m^2)	0.155	0.075
Wind Loading at 150 km/h (N)	160	80
Weight (kg)	4.5	2

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

PRO-FDVL-88-108-213-1-NP-NCL
Professional Folded Dipole VHF - Low Band, FM Band, RG213 1m, N Plug, No Clamp

PRO-FDVH-151-156-213-2-NJ-CRS
Professional Folded Dipole VHF - High Band, E Band, RG213 2m, N Jack, Cross Clamp Small

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station VHF

VHF Yagis - Professional Series

Models PRO-Y3VL to PRO-Y4VL & PRO-Y3VH to PRO-Y6VH

This comprehensive range of professional series yagi antennas are designed for directional point-to-point applications in the VHF bands. They are designed to be used in the most rugged environments and to withstand harsh weather conditions. They can be used for either vertical or horizontal polarisation. Please specify polarisation when ordering.

The yagis are constructed from extruded Series 6000 silver anodised aluminium with the clamps being cast aluminium and fitted with stainless steel hardware.

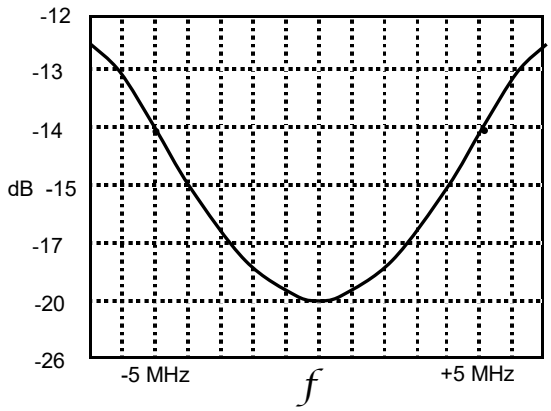
Nominal feed impedance is 50 ohms with the matching circuit within the sealed driven element. The feed line is typically RG213 coaxial cable. Some models are however fitted with a 75 ohm coaxial cable which acts as an impedance transformer.
Please note: Do not alter the cable length.

All elements are DC grounded.

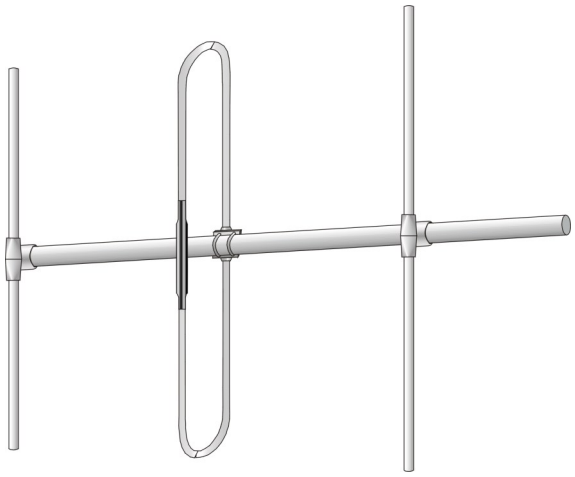
Bands available:

- **FM Broadcast** **88-108 MHz**
- **Aviation Band** **118-136 MHz**
- **ESB Band** **138-144 MHz**
- **E Band** **151-156 MHz**
- **Marine/Paging Bands** **156-162 MHz**
- **EE Band** **162-170 MHz**

Centre frequencies on request



Typical Return Loss PRO-Y3VH



PRO-Y3VH

HI-TEC AERIALS
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station VHF

MODEL	PRO-Y3VL	PRO-Y4VL	PRO-Y2VH	PRO-Y3VH	PRO-Y4VH	PRO-Y6VH
Number of Elements	3	4	2	3	4	6
Frequency Range (MHz)	88-108 (see bandwidth)		118-170 (see bandwidth)			
Bandwidth (MHz)	5		20	10		
Gain (dBd)	6	7.5	3	5	7	8.5
Half Power Beamwidth E Plane (deg)	65	57	72	65	55	50
Half Power Beamwidth H Plane (deg)	100	78	145	110	74	65
Front to Back Ratio (dB)	10	15	10	15		
Input Impedance (Ohms)	50					
Return Loss (dB & VSWR)	<-14dB 1.5:1					
Maximum Power (W)	250					
Cable Type	RG11		RG213	RG11	RG213	RG11
Max Element Length (m)	1.9		1.0			
Boom Length (m)	2.0	2.5	1.0	1.1	1.6	2.6
Boom Diameter (mm)	48		38			
Projected Area (m^2)	0.27	0.32	0.10	0.12	0.15	0.22
Wind Loading at 150 km/hr (N)	295	350	110	130	165	240
Weight (kg)	6	8	2	3	4	6
Mounting Location	Rear					Centre

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

PRO-Y4VL-88-108-213-1-NP-NCL
Professional Yagi 4 Element VHF - Low Band, FM Band, RG213 1m, N Plug, No Clamp

PRO-Y6VH-151-156-213-2-NJ-CRS
Professional Yagi 6 Element VHF - High Band, E Band, RG213 2m, N Jack, Cross Clamp Small

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station VHF

VHF Shrouded Dipole

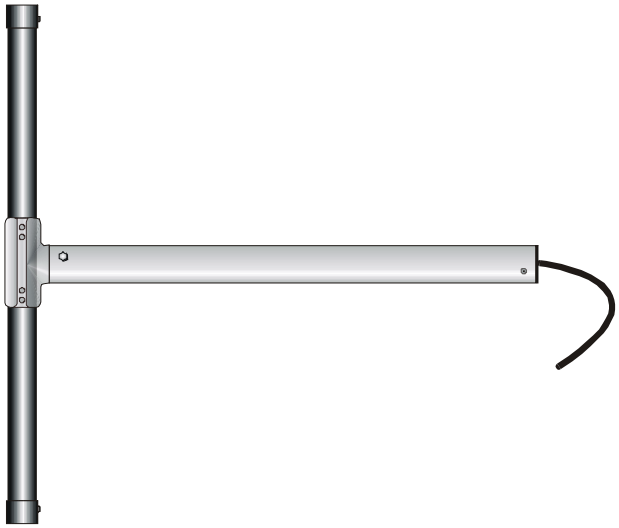
Model PRO-SHDV

The shrouded dipole provides a rugged mechanical design with a reduced surface area, making it ideal for a harsh or marine environment. To achieve this, the dipole element is shrouded in a 'pultruded' fibreglass radome which is sheathed with black heat shrink to assist ice shedding.

The dipole element is DC grounded which assists reduction of precipitation static. The centre feed exits through the heavy duty, element to boom casting. This casting is then attached to the boom with three radial bolts to provide reliable fixing. All booms for the VHF shrouded dipoles use 48mm OD x 4.5mm grade 6000 aluminium tubing. A coax tail of RG213 is fed down the centre of the boom.

All models have a vertical radiation pattern which can be offset by locating the dipole at specific distances from a metallic support structure or by using a reflector.

Suitable clamps to use are the cross clamps to a rigging pipe support.



PRO-SHDV

MODEL	PRO-SHDV	
Frequency Range (MHz)	75-80 (see bandwidth)	118-170 (see bandwidth)
Bandwidth (MHz)	8	20
Input Impedance (Ohms)	50	
Return Loss (dB & VSWR)	<-14dB 1.5:1	
Maximum Power (W)	100	
Cable Type	RG213	
Radome Length (m)	1.8	1.0
Radome Diameter (mm)	40	
Boom Length (m)	1.5	1.0
Boom Diameter (mm)	48	
Projected Area (m^2)	0.15	0.09
Wind Loading at 150 km/h (N)	165	100
Weight (kg)	4.9	3.7

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

PRO-SHDV-162-170-213-1-NP-NCL
Professional Shrouded Dipole VHF, EE Band, RG213 1m, N Plug, No Clamp

PRO-SHDV-138-144-213-5-NJ-CRS
Professional Shrouded Dipole VHF, ESB Band, RG213 5m, N Jack, Cross Clamp Small

Base Station VHF

VHF End Fed Dipole

Model PRO-EFDV

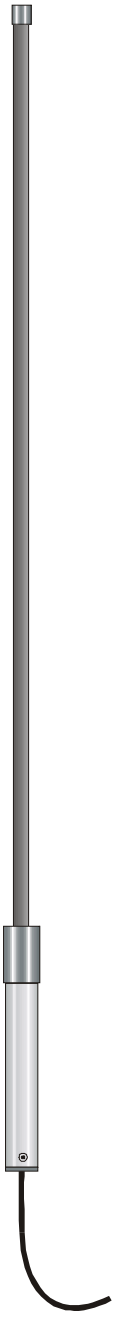
The end-fed vertical half wave antenna is designed within the frequencies of 138 and 170 MHz to suit many applications and environmental conditions. They are ideal for paging or similar systems where a neat and rugged installation is required. These dipoles are easy to install and are pre-tuned with no assembly or tuning adjustments required.

The dipole is factory assembled and tuned before being fitted and sealed in a rugged fibreglass radome. The radome is fitted to a short section of anodised aluminium tube which is used to mount the antenna.

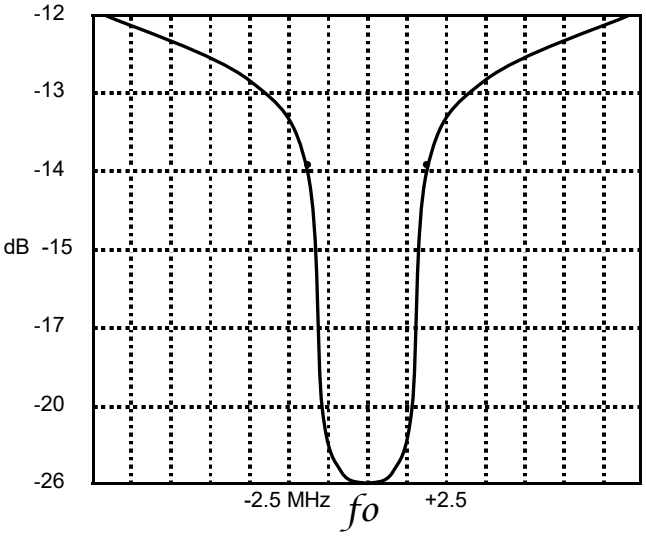
A RG58 coax tail exits through the end of the mounting tube.

MODEL	PRO-EFDV
Frequency Range (MHz)	138-170 (see bandwidth)
Bandwidth (MHz)	5
Gain (dBd)	0
Input Impedance (Ohms)	50
Return Loss (dB & VSWR)	<-14 dB 1.5:1
Maximum Power (W) (Intermittent use)	25
Cable Type	RG58
Overall Height (m)	1.55
Projected Area (m^2)	0.06
Weight (kg)	1.3
Mounting Tube Diameter (mm)	38

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch



PRO-EFDV



Typical Return Loss PRO-EFDV

Examples of ordering codes:
Model - Cable - Length - Connector - Clamp

PRO-EFDV-58-3-UNT-NCL
Professional End Fed Dipole VHF, RG58 3m, Unterminated, No Clamp

PRO-EFDV-58LL-1-NP-UV
Professional End Fed Dipole VHF , RG58 Low Loss 1m, N Plug, Universal Clamp

*due to narrow bandwidth, spot frequency needed when ordering

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station VHF

VHF Folded Dipole Stacked Arrays

Models PRO-FDVL-SA3, PRO-FDVL-SA6 & PRO-FDVH-SA3, PRO-FDVH-SA6

The VHF stacked array is designed to be used in different configurations, with minimal hardware. These arrays use our professional series folded dipoles in a stacked configuration to provide added gain.

The folded dipole assembly is mounted to a cast aluminium hub. The centre feed is taken out through the hub and a RG213 coax tail is fed down the centre of the boom. The antenna is DC grounded.

Mounting of the boom to a vertical 48mm OD tube can be achieved with a Cross Clamp. This allows the dipoles to be spaced from the mounting tube to provide an omnidirectional or offset radiation pattern. The offset pattern provides a further 3dB gain in the offset direction. This is shown in the radiation pattern on page 19 with “A” being the 1/4 wave offset and “B” the omnidirectional radiation pattern.

Down tilt can be provided by inserting delay lines in the feed system.

Items supplied for a 3dB stacked array - 2 x Dipoles, 1 x Power Divider (PD2)
Items supplied for a 6dB stacked array - 4 x Dipoles, 1 x Power Divider (PD4)

Examples of ordering codes:
Model - Freq - Cable - Input Connector - Clamps

PRO-FDVL-SA3-75-80-213-(I)NP-NCL
Professional Folded Dipole VHF Low Band - Stacked Array 3dB, ESA Band, RG213,
N Plug (on input), No Clamps

PRO-FDVH-SA6-151-156-213-(I)NP-CRS
Professional Folded Dipole VHF High Band - Stacked Array 6dB, E Band, RG213,
N Plug (on input), Cross Clamps Small

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

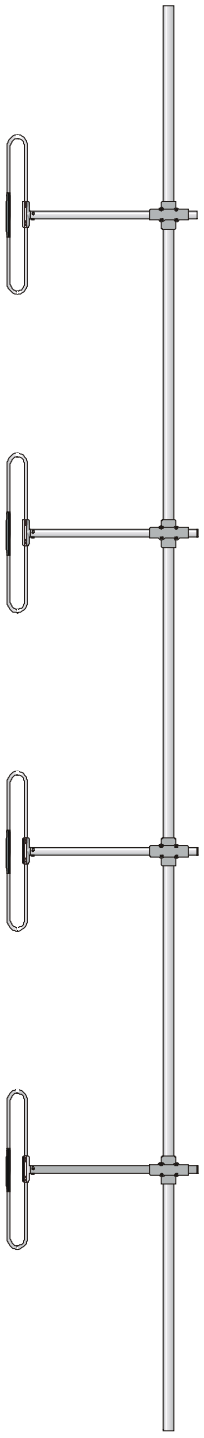
Base Station VHF

MODEL	PRO-FDVL-SA3	PRO-FDVL-SA6	PRO-FDVH-SA3	PRO-FDVH-SA6
Number of Dipoles	2	4	2	4
Frequency Range (MHz)	75-108 (see bandwidth)		118-170 (see bandwidth)	
Bandwidth (MHz)	10		30	
Omnidirectional Gain (dBd)	3	6	3	6
Gain with Offset (dBd)	6	9	6	9
Half Power Beamwidth E Plane (deg)	27	13	27	13
Return Loss (dB & VSWR)	<-14dB 1.5:1			
Maximum Power (W)	750			
Cable Type	RG213			
Boom Length (m)	1.5		1.0	
Boom Diameter (mm)	48		38	
Projected Area (m^2)	0.31	0.62	0.15	0.30
Wind loading at 150 km/h (N)	340	680	165	330
Weight (kg)	9.2	18.4	4.2	8.4

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

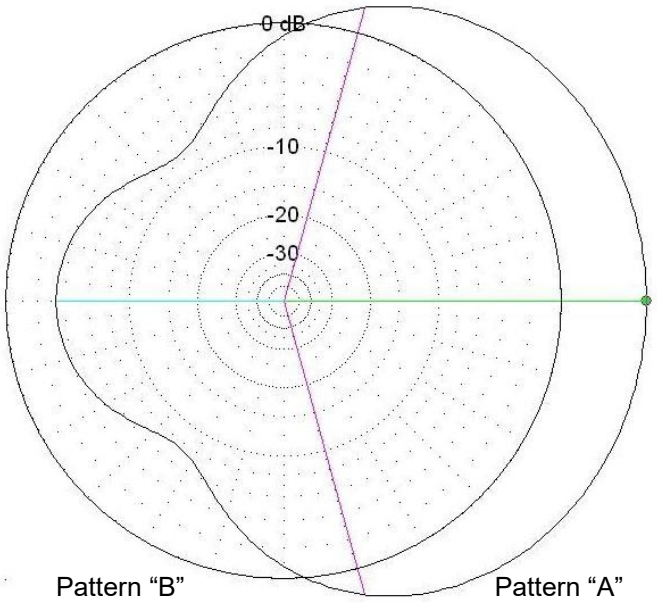
HI-TEC AERIALS

Base Station VHF

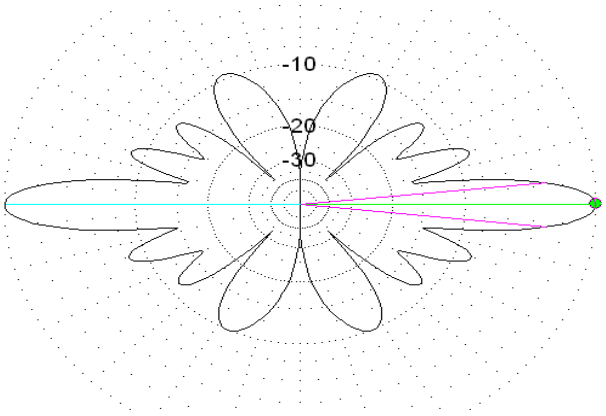


PRO-FDVH-SA6

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch



PRO-FDVH-SA6 H Plane Radiation Pattern with and without Off-set



PRO-FDVH-SA6 E Plane Radiation Pattern

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station VHF

VHF Collinear Antennas

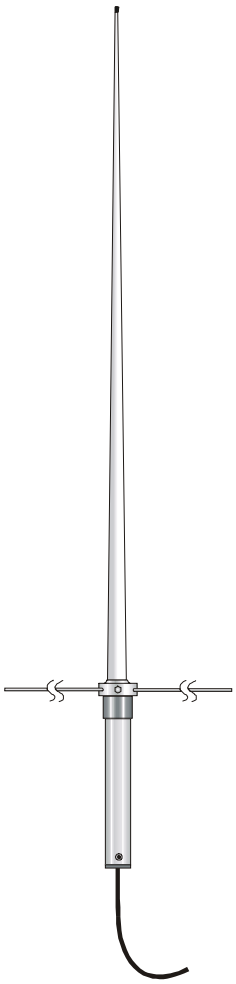
Models PRO-COL3V, PRO-COL6V & PRO-COL3V-RG, PRO-COL6V-RG

The VHF collinear design is an omnidirectional gain antenna and can be used where communication with a number of randomly placed outstations is required. They are available in 4 models to suit path requirements and installation environment.

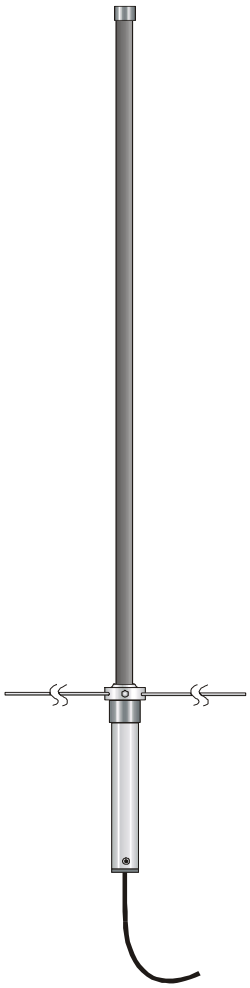
The internal radiating element is DC grounded and is housed in a high dielectric fibreglass radome to minimise the effects of precipitation and wind static. This provides for low noise operation.

The COL3V & COL6V models radome is tapered and finished in gloss white.
The COL3V-RG & COL6V-RG models radome is parallel and finished in matt black.
Stainless steel radials are fitted to the hub above the mounting section.

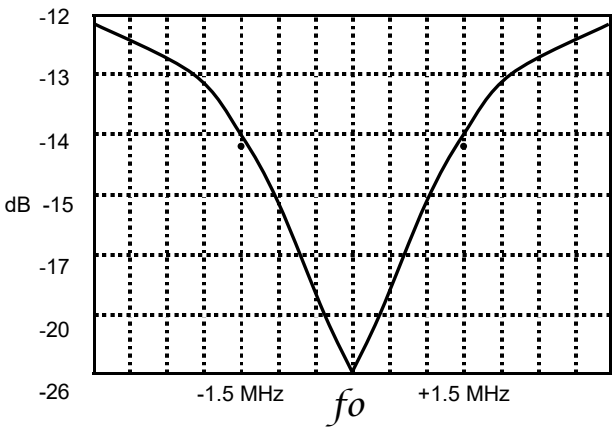
Construction of the antenna utilises quality materials to ensure long life and reliable operation. The heavy duty Universal Clamp is recommended and enables mounting to either a vertical or horizontal mounting support.



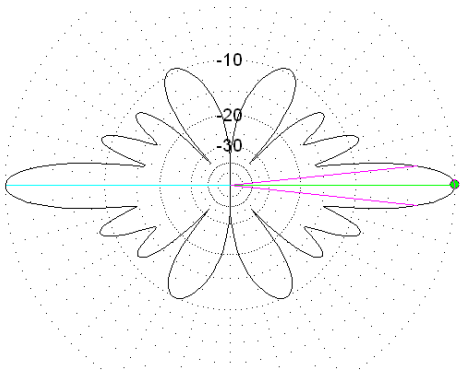
COL3V



COL3V-RG



Typical Return Loss COL6V



E PLANE RADIATION PATTERN FOR A COL6V

HI-TEC AERIALS

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station VHF

MODEL	PRO-COL3V	PRO-COL6V	PRO-COL3V-RG	PRO-COL6V-RG
Frequency Range (MHz)	118-170 (see bandwidth)			
Bandwidth (MHz)	5	3	5	3
Gain (dBd)	3	6	3	6
Half Power Beamwidth E Plane (deg)	34	15	34	15
Input Impedance (Ohms)	50			
Return Loss (dB & VSWR)	<-14dB 1.5:1			
Maximum Power (W)	100			
Cable Type & Length	RG213			
Overall Height (m)	2.2 - 2.6	2.8 - 3.5	2.2 - 2.6	2.8 - 3.5
Projected Area (m^2)	0.06	0.08	0.06	0.08
Weight (kg)	2			
Wind Speed Rating (km/h)	215*		>215	
Mounting Tube Diameter (mm)	38			
Ground Plane Radials	Yes			

* Ice loading installations will have a reduced rating

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

PRO-COL3V-162-170-213-1-NP-UV
Professional Collinear 3dB VHF, EE Band, RG213 1m, N Plug, Universal Clamp

PRO-COL3V-RG-151-156-213-2-NJ-NCL
Professional Rugged Collinear 3dB VHF, E Band, RG213 2m, N Jack, No Clamp

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station VHF

Coaxial Power Dividers

Models PD2 and PD4

Coaxial power dividers are used to divide RF power into two or more equal components with minimum loss. By using power dividers, antennas may be arranged into collinear or stacked arrays to provide added gain or to modify the radiation patterns.

The input and output impedance is 50 ohms, therefore the cables of the power divider must not be shortened. Likewise any additional antenna connecting cables must all be the same length so that the antennas are kept in phase.

Primary weather sealing is provided for, but additional weather sealing will be necessary.

PD2

PD4

MODEL	PD2		PD4	
Type Coaxial	2 Way		4 Way	
Bandwidth Range (MHz)	75-138	138-505	75-138	138-505
Bandwidth (MHz)	10	40	10	40
Power Rating (W)	750			
Insertion Loss (dB)	0.2			
Return Loss (dB & VSWR)	< -14dB 1.5:1			
Input Connector Type	N Plug			
Output Connector Type	N Jack			
Impedance input & output (Ohms)	50			

Other connectors are available to suit customer requirements

Examples of ordering codes:
Model - Freq - Input Connector - Output Connectors

PD2-75-80-(I)NP-(O)NJ
Power Divider 2 Way, ESA Band, N Plug on Input, N Jacks on Output

Model - Freq - Input Connector

PD4-151-156-(I)NP
Power Divider 4 Way, E Band, N Plug on Input
(N jacks are standard on output)

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station VHF

VHF All Weather Alpine Dipole

Model PRO-ADV

This VHF steel, all weather high site dipole is a very robust antenna and is suited to sites in harsh conditions.

They are available in 2 options - low band and high band.

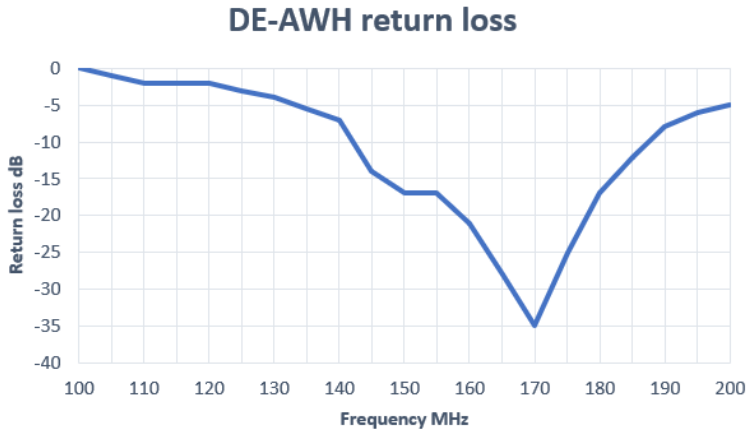
The all steel construction ensures that the radiating element and boom are D.C. grounded. This heavy duty construction will cope with high wind loadings and severe ice build up. Finished in a satin black powder coating over galvanized steel will ensure longevity and the ability to shed ice or snow rapidly when conditions are favourable.

The heavy duty cross clamp is recommended with the antenna which enables vertical 38mm or 48mm rigging support.

PRO-ADV

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

MODEL	PRO-ADV	
Frequency Range (MHz)	135-160	150-174
Bandwidth (MHz)	25	24
Gain (dBd)	0	
Input Impedance (Ohms)	50	
Return Loss (dB & VSWR)	<-14dB 1.5:1	
Connector Type	N Jack	
Max Element Length (m)	1	0.9
Boom Length (m)	0.8	
Boom Diameter (mm)	35 square	
Projected Area (m^2)	0.07	
Weight (kg)	4	



Examples of ordering codes:
Model - Freq - Clamp

PRO-ADV-135-160-NCL
Alpine Dipole VHF, 135-160 MHz, No Clamp

PRO-ADV-150-174-CRS
Alpine Dipole VHF, 150-174 MHz, Cross Clamp Small

Base Station UHF

UHF Folded Dipoles & Yagis - Standard Series

Models FDU & Y2U to Y12U

The standard range of UHF yagis and folded dipoles are designed for urban or rural site installations. Being lightweight with small projected surface areas, they can be installed on low cost supports. The coding “FD” indicates Folded Dipole and “Y” indicates Yagi.

These antennas are constructed from Grade 6000 series aluminium. Corrosion resistance is increased by silver finished anodising. Elements are 12.7 x 1.42mm extruded sections, which provide a robust antenna. The boom section is 25 x 25 x 1.8mm square tube, to which the driven element is clamped. The parasitic elements are fitted through the boom and fixed with aluminium rivets.

The nominal feed impedance is 50 ohms with the matching section sealed within the driven element, eliminating the need for an external balun. All elements are D.C. grounded.

Mounting for vertical polarisation is standard. Mounting options available for clamping to 25mm, 38mm, 48mm or 63mm outside diameters include the mounting clamps, saddle clamps or the universal clamp. The universal clamp provides flexibility in mounting for either vertical or horizontal polarisation.

Folded Dipole Bands available:

- **TD / I Bands** **400-430 MHz**
- **UHF Bands** **420-505 MHz**

Yagi Bands available:

- **TD / I Bands** **400-430 MHz**
- **JL Band** **430-450 MHz**
- **C/D/J Bands** **450-470 MHz**
- **C/D/F/J Bands** **450-495 MHz**

Centre or channel frequencies on request

MODEL	FDU	Y2U	Y3U	Y4U	Y6U
Number of Elements	1	2	3	4	6
Frequency Range (MHz)	400-505 (see bandwidth)	400-495 (see bandwidth)			
Bandwidth (MHz)	100	50	20	50	30
Gain (dBd)	0	3	4.5	6.5	8
Half Power Beamwidth E Plane (deg)	N/A	75	67	60	50
Half Power Beamwidth H Plane (deg)	N/A	145	114	85	42
Front to Back Ratio (dB)	0	10	15		20
Input Impedance (Ohms)	50				
Return Loss (dB & VSWR)	<-14dB 1.5:1				
Maximum Power (W)	100				
Cable Type	RG58 or RG58LL				
Max Element Length (mm)	320	400			
Boom Length (mm)	375	300	400	600	980
Boom Diameter (mm)	25 square				
Projected Area (m^2)	0.020	0.023	0.030	0.040	0.058
Weight (kg)	0.6	0.6	0.7	0.8	1.0
Mounting Location	Rear				

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

FDU-420-505-58-1-UNT-MC25
Folded Dipole UHF, UHF Bands, RG58 1m, Unterminated, 25mm Clamp

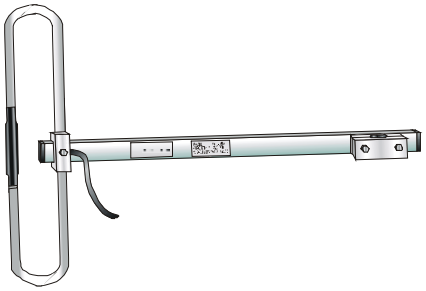
Y4U-400-430-58LL-5-BNCP-MC38
Yagi 4 Element UHF, TD/I Band, RG58LL 5m, BNC Plug, 38mm Clamp

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

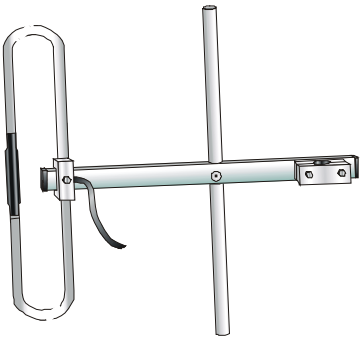
Base Station UHF

MODEL	Y8U	Y10U	Y12U
Number of Elements	8	10	12
Frequency Range (MHz)	400-495 (see bandwidth)		
Bandwidth (MHz)	30	20	20
Gain (dBd)	9	10	11
Half Power Beamwidth E Plane (deg)	40	35	33
Half Power Beamwidth H Plane (deg)	43	37	36
Front to Back Ratio (dB)	20		
Input Impedance (Ohms)	50		
Return Loss (dB & VSWR)	<-14dB 1.5:1		
Maximum Power (W)	100		
Cable Type	RG58 or RG58LL		
Max Element Length (mm)	400		
Boom Length (mm)	1350	1700	1900
Boom Diameter (mm)	25mm square		
Projected Area (m^2)	0.076	0.094	0.108
Weight (kg)	1.2	1.4	1.55
Mounting Location	Rear		

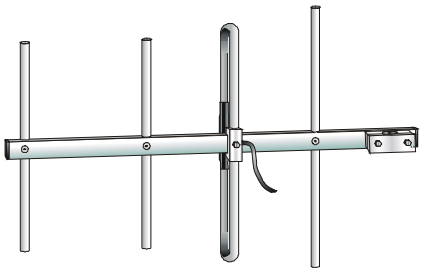
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch



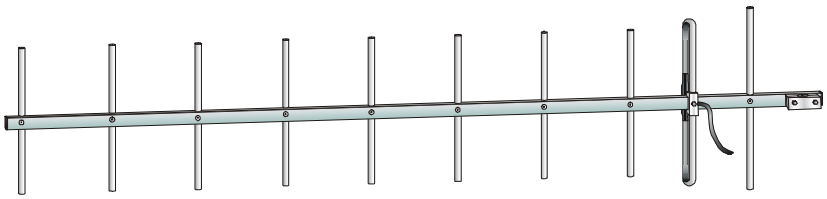
FDU



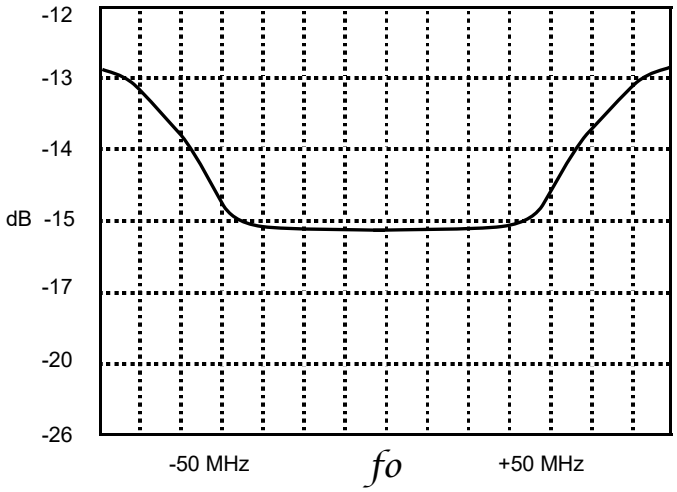
Y2U



Y4U



Y10U



Typical Return Loss FDU

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station UHF

UHF Yagis - Professional Series

Models PRO-Y4U, PRO-Y6U, PRO-Y8U & PRO-Y10U

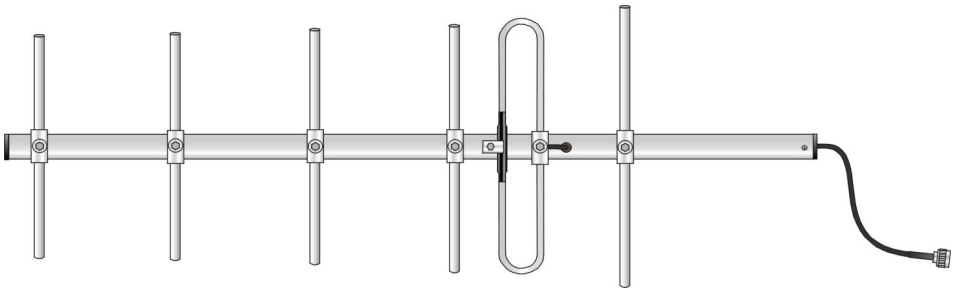
This comprehensive range of professional series yagi antennas are designed for directional point-to-point applications in the UHF bands. They are designed to be used in the most rugged environments and to withstand harsh weather conditions.

All Professional UHF Series Yagis are end mounted and are built vertically polarised. Please specify if horizontal polarisation is required when ordering.

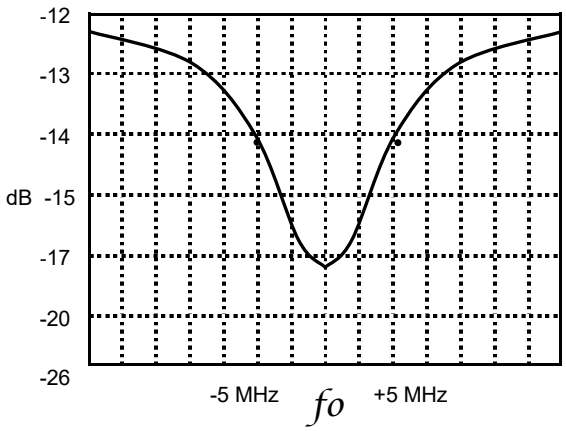
The yagis are constructed from extruded Series 6000 anodised aluminium with the clamps being cast aluminium and fitted with stainless steel hardware. Nominal feed impedance is 50 ohms with the matching circuit within the sealed driven element.

The bandwidth is typically 10MHz with a return loss of less than -14dB. All elements are DC grounded.

These antennas can be stacked for increased gain.



PRO-Y6U



Typical Return Loss PRO-Y6U

HI-TEC AERIALS
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

MODEL	PRO-Y4U	PRO-Y6U	PRO-Y8U	PRO-Y10U
Number of Elements	4	6	8	10
Frequency Range (MHz)	400-500 (see bandwidth)			
Bandwidth (MHz)	10			
Gain (dBd)	7.5	8.5	9.5	11
Half Power Beamwidth E Plane (deg)	55	48	40	36
Half Power Beamwidth H Plane (deg)	75	60	50	40
Front to Back Ratio (dB)	15	20	18	
Input Impedance (Ohms)	50			
Return Loss (dB & VSWR)	<-14dB 1.5:1			
Maximum Power (W)	100			
Cable Type	RG58LL			
Max Element Length (mm)	380			
Boom Length (mm)	0.85	1.2	1.6	1.9
Boom Diameter (mm)	38			
Projected Area (m^2)	0.055	0.078	0.103	0.122
Wind Loading at 150 km/h (N)	60	85	115	135
Weight (kg)	1.2	1.8	2.5	3.0
Mounting Location	Rear			

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

PRO-Y4U-450-460-58LL-1-NP-NCL
Professional Yagi 4 Element, 450-460 MHz, RG58LL 1m,
N Plug, No Clamp

PRO-Y10U-420-430-58LL-10-UNT-UV
Professional Yagi 10 Element, 420-430 MHz, RG58LL
10m, Unterminated, Universal Clamp

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station UHF

UHF Shrouded Dipole

Model PRO-SHDU

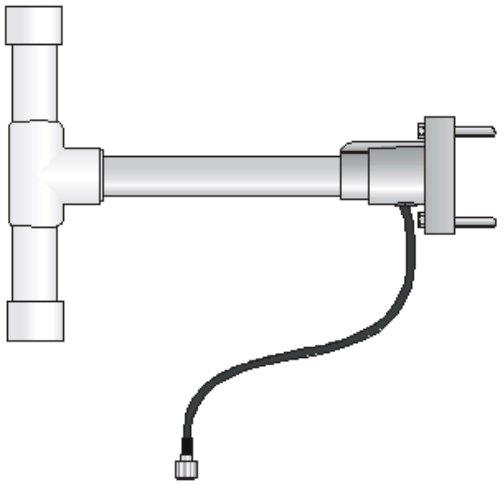
This model provides a rugged mechanical design ideal for the harsh environment.

The dipole assembly is housed in a UV protected PVC plastic radome. The centre feed is taken out through a 'tee' attached to a 38mm OD x 3mm wall anodised aluminium boom. A RG213 coax tail is fed down the centre of the boom. The PRO-SHDU dipole is supplied with a fitted End Mount Clamp designed for mounting to a vertical 48mm OD tube.

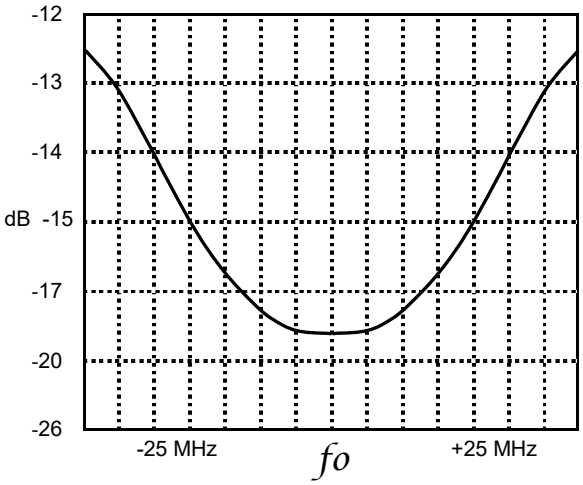
A reflector element can be added to this design to produce a two element shrouded yagi which has a gain of 3dB.

MODEL	PRO-SHDU
Frequency Range (MHz)	400-505 (see bandwidth)
Bandwidth (MHz)	50
Gain (dBd)	0
Input Impedance (Ohms)	50
Return Loss (dB & VSWR)	<-14dB 1.5:1
Maximum Power (W)	100
Cable Type	RG213
Radome Diameter (mm)	32
Radome Length (mm)	400
Boom Length (mm)	400
Projected Area (m^2)	0.034
Wind Loading at 150 km/h (N)	35
Weight (kg)	2
Mounting Pipe Diameter (mm)	48

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch



PRO-SHDU



Typical Return Loss PRO-SHDU

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

PRO-SHDU-400-450-213-1-NP-EM
Professional Shrouded Dipole UHF, 400-450 MHz, RG213
1m, N Plug, End Mount Clamp

PRO-SHDU-450-500-213-6-BNCP-EM
Professional Shrouded Dipole UHF, 450-500 MHz, RG213
6m, BNC Plug, End Mount Clamp

Base Station UHF

UHF Shrouded Dipole Stacked Arrays

Models PRO-SHDU-SA3 & PRO-SHDU-SA6

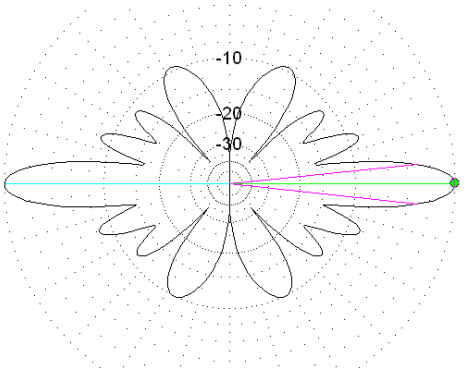
The UHF stacked array is designed to be used in different configurations, with minimal hardware. Like the UHF shrouded dipole, these arrays provide for rugged mechanical design ideal for the harsh environment.

The dipole assembly is housed in a UV protected PVC plastic radome. The centre feed is taken out through a 'tee' fixed to a 38mm OD x 3mm wall anodised boom. A RG213 coax tail is fed down the centre of the boom.

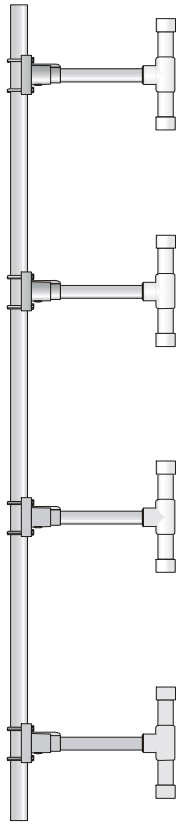
Each dipole is fitted with an End Mount Clamp which enables it to be clamped to a vertical 48mm OD tube or screwed to a wooden pole.

Down tilt can be provided by inserting delay lines in the feed system.

Items supplied for a PRO-SHDU-SA3 are 2 x dipoles (PRO-SHDU) and 1 x power divider (PD2)
Items supplied for a PRO-SHDU-SA6 are 4 x dipoles (PRO-SHDU) and 1 x power divider (PD4)



E PLANE RADIATION PATTERN FOR PRO-SHDU-SA6



PRO-SHDU-SA6

HI-TEC AERIALS

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

MODEL	PRO-SHDU-SA3	PRO-SHDU-SA6
Number of Dipoles	2	4
Frequency Range (MHz)	400-505 (see bandwidth)	
Bandwidth (MHz)	50	
Omnidirectional Gain (dBd)	3	6
Gain with Offset (dBd)	6	9
Half Power Beamwidth E Plane (Deg)	27	13
Input Impedance (Ohms)	50	
Return Loss (dB & VSWR)	<-14dB 1.5:1	
Maximum Power (W)	200	400
Cable Type	RG213	
Boom Length (mm)	400	
Boom Diameter (mm)	38	
Projected Area (m^2)	0.068	0.136
Wind Loading at 150 km/h (N)	75	150
Weight (kg)	4.2	8.4
Mounting Tube OD (mm)	48	

Note: the projected area and weight does not include any mounting structure.

Examples of ordering codes:
Model - Freq - Cable - Input Connector - Clamp

PRO-SHDU-SA3-400-450-213-(I)NP-EM
Professional Shrouded Dipole UHF - Stacked Array 3dB, 400-450 MHz, RG213, (Input) N Plug, End Mount Clamp

PRO-SHDU-SA6-450-500-213-NP-EM
Professional Shrouded Dipole UHF - Stacked Array 6dB, 450-500 MHz, RG213, N Plug, End Mount Clamp

Base Station UHF

Coaxial Power Dividers

Models PD2 & PD4

Coaxial power dividers are used to divide RF power into two or more equal components with minimum loss. By using power dividers, antennas may be arranged into collinear or stacked arrays to provide added gain or to modify the radiation patterns.

The input and output impedance is 50 ohms, therefore the cables of the power divider must not be shortened. Likewise any additional antenna connecting cables must all be the same length so that the antennas are kept in phase.

Primary weather sealing is provided for, but additional weather sealing will be necessary.

PD2

PD4

MODEL	PD2	PD4
Type Coaxial	2 Way	4 Way
Bandwidth Range (MHz)	138-505 (see bandwidth)	
Bandwidth (MHz)	40	
Power Rating (W)	750	
Insertion Loss (dB)	0.2	
Return Loss (dB & VSWR)	< -14dB 1.5:1	
Input Connector Type	N Plug	
Output Connector Type	N Jack	
Impedance input & output (Ohms)	50	

Note: other connectors are available to suit customer requirements

Examples of ordering codes:
Model - Freq - Input Connector - Output Connectors

PD2-151-156-(I)NP-(O)NJ
Power Divider 2 Way, E Band, N Plug on Input, N Jacks on Output

Model - Freq - Input Connector

PD4-151-156-(I)NP
Power Divider 4 Way, E Band, N Plug on Input
(N jacks are standard on output)

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station UHF

UHF Shrouded Dipole Side Mount 3dB Gain

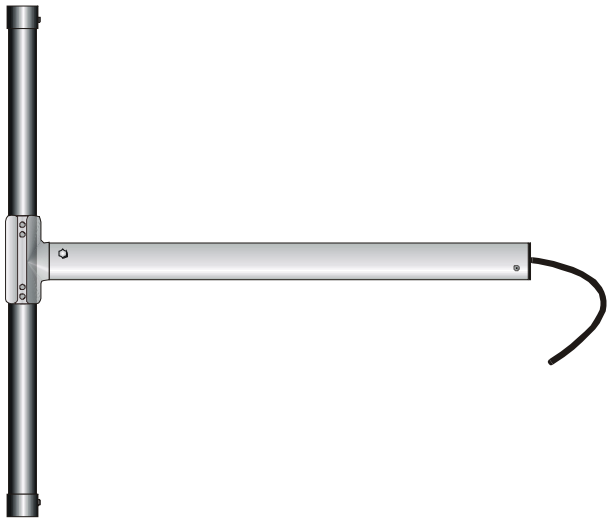
Model PRO-SHD3U

The shrouded dipole provides a rugged mechanical design with a reduced surface area, making it ideal for a harsh or marine environment. To achieve this, the dipole element is shrouded in a 'pultruded' fibreglass radome which is sheathed with black heat shrink to assist ice shedding.

The dipole elements are DC grounded which assists reduction of precipitation static. The centre feed exits through the heavy duty element to boom casting. This casting is then attached to the boom with three radial bolts to provide reliable fixing. The boom is made from 48mm OD x 4.47mm grade 6000 aluminium tubing. A coax tail of RG213 is fed down the centre of the boom. Standard tail length is 1.5m from the boom exit.

These dipoles have a vertical radiation pattern with 3dB gain in a compact dipole side mount package.

Recommended clamp is either of our cross clamps.



PRO-SHD3U

MODEL	PRO-SHD3U
Frequency Range (MHz)	400-505 (see bandwidth)
Bandwidth (MHz)	40
Omnidirectional Gain (dBd)	3
Input Impedance (Ohms)	50
Return Loss (dB & VSWR)	<-14dB 1.5:1
Maximum Power (W)	200
Cable Type & Length	RG213 1.5 Metre
Radome Length (m)	1.2
Radome Diameter (mm)	48
Boom Length (m)	1.5
Boom Diameter (mm)	48
Projected Area (m^2)	0.129
Wind Loading at 150 km/h (N)	140
Weight (kg)	5.5

Examples of ordering codes:
Model - Freq - Cable - Length - Connector

PRO-SHD3U-450-470-213-1.5-NP-CRS
Professional Shrouded Dipole UHF 3dB, 450-470 MHz, RG213 1.5m, N Plug, Cross Clamp Small

PRO-SHD3U-400-430-213-1.5-NJ-NCL
Professional Shrouded Dipole UHF 3dB, 400-430 MHz, RG213 1.5m, N Jack, No Clamp

Note: cable length does not change, always 1.5m

Base Station UHF

UHF Collinear Antennas

Models PRO-COL3U, PRO-COL6U, PRO-COL8U & PRO-COL3U-RG, PRO-COL6U-RG, PRO-COL8U-RG

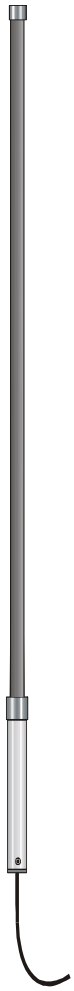
The UHF collinear design is an omnidirectional gain antenna and can be used where communication with a number of randomly placed outstations is required. It is available in three models to suit path requirements.

The internal radiating element is housed in a high dielectric fibreglass radome to minimise the effects of precipitation or wind static to provide low noise operation.

The COL3U, COL6U & COL8U models radome is tapered and finished in gloss white.
The COL3U-RG, COL6U-RG & COL8U-RG models radome is parallel and finished in matte black.
A RG213 tail is fitted as standard.

The antenna is constructed with high quality materials to ensure long life and reliable operation. The heavy duty Universal Clamp is recommended, which enables mounting to either a vertical or horizontal mounting support.

PRO-COL3U

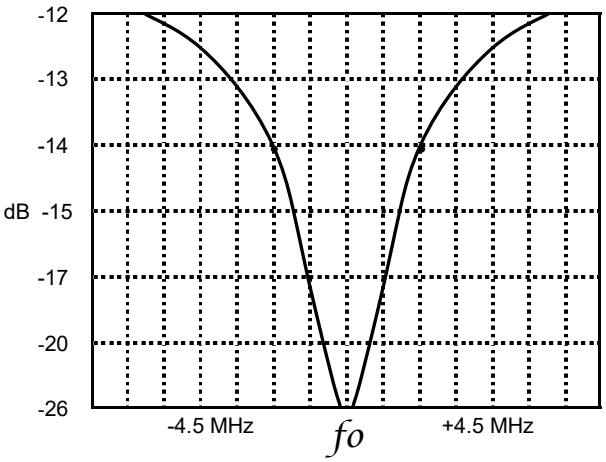


PRO-COL3U-RG

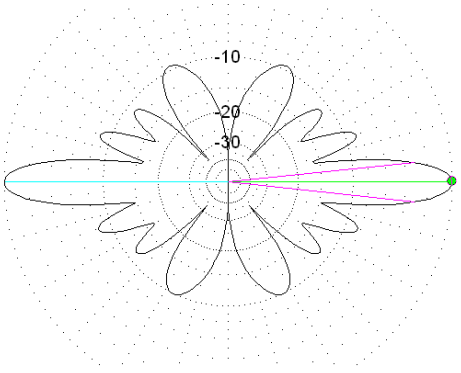
HI-TEC AERIALS
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

MODEL	COLU3	COLU6	COLU8
Frequency Range (MHz)	400-500 (see bandwidth)		
Bandwidth (MHz)	9		4
Gain (dBd)	3	6	8
Half Power Beamwidth E Plane (deg)	34	17	11
Input Impedance (Ohms)	50		
Return Loss (dB & VSWR)	<-14dB 1.5:1		
Maximum Power (W)	300		
Cable Type	RG213		
Overall Height (m)	1.6 - 2.0	1.8 - 2.4	2.2 - 2.8
Projected Area (m^2)	0.055	0.065	0.075
Weight (kg)	2.5		
Wind Speed Rating (km/h)	215*		
Mounting Tube Diameter (mm)	38		

* Ice loading installations will have a reduced rating



Typical Return Loss PRO-COL6U



E PLANE RADIATION PATTERN PRO-COL6U

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station UHF

MODEL	PRO-COL3U-RG	PRO-COL6U-RG	PRO-COL8U-RG
Frequency Range (MHz)	400-500 (see bandwidth)		
Bandwidth (MHz)	8		4
Gain (dBd)	3	6	8
Half Power Beamwidth E Plane (deg)	34	17	11
Input Impedance (Ohms)	50		
Return Loss (dB & VSWR)	<-14dB 1.5:1		
Maximum Power (W)	300		
Cable Type	RG213		
Overall Height (m)	1.6 - 2.0	1.8 - 2.4	2.2 - 2.8
Projected Area (m^2)	0.055	0.065	0.075
Weight (kg)	2.5		
Wind Speed Rating (km/h)	>215		
Mounting Tube Diameter (mm)	38		

* Ice loading installations will have a reduced rating

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

PRO-COL6U-400-430-213-1-NP-UV
Professional Collinear 6dB UHF, 400-430 MHz, RG213 1m, N Plug, Universal Clamp

PRO-COL3U-RG-470-500-213-2-NJ-NCL
Professional Rugged Collinear 3dB UHF, 470-500 MHz, RG213 2m, N Jack, No Clamp

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Notes:

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station UHF

UHF Corner Reflectors

Models PRO-CRU8 & PRO-CRU11

The corner reflector is a medium gain antenna for point to point, or sector communications. Designed as a rugged antenna it maintains its characteristics under harsh weather conditions.

Corner reflector antennas offer the following advantages:

- a broad bandwidth
- high front-to-back ratios
- low side lobes
- minimal de-tuning effect by ice

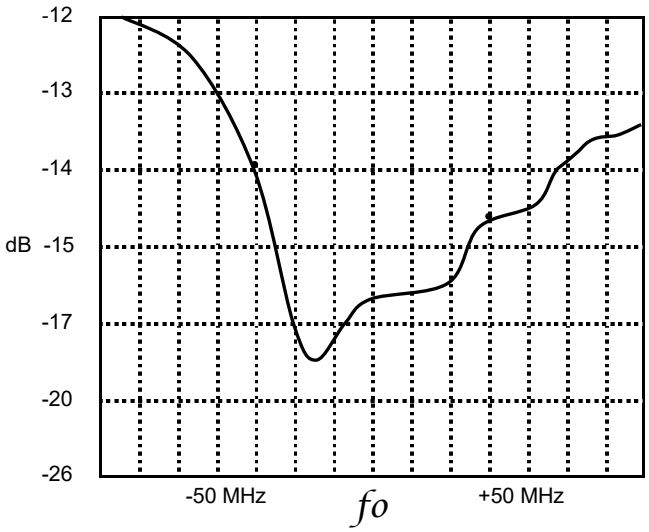
Series 6000 aluminium extrusion is utilised in the fabrication of the reflector framework. This framework is finished in a black powder coating to assist ice shedding. The support clamps for the framework are 63mm cast aluminium, these enable the antenna to be mounted in either a vertical or horizontal mode.

The driven element is housed in a UV protected PVC radome to minimise the effect of precipitation static.

As a standard, the corner reflectors are fitted with a 2m RG213 tail. The antenna is supplied on site as a knock down kit.

Items supplied for a PRO-CRU11 are 2 x PRO-CRU8 and 1 x power divider (PD2)

PRO-CRU8

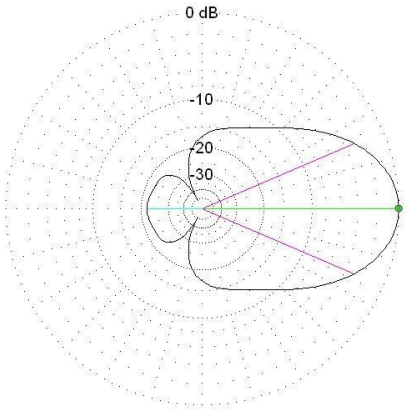


Typical Return Loss PRO-CRU8

HI-TEC AERIALS

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

MODEL	PRO-CRU8	PRO-CRU11
Frequency Range (MHz)	400-500 (see bandwidth)	
Bandwidth (MHz)	100	
Polarisation	Vertical or Horizontal	
Gain (dBd)	8	11
Half Power Beamwidth E Plane (Deg)	64	30
Half Power Beamwidth H Plane (Deg)	50	50
Front to Back Ratio (dB)	22	25
Input Impedance (Ohms)	50	
Return Loss (dB & VSWR)	<-14dB 1.5:1	
Maximum Power (W)	300	600
Cable Type & Length	RG213	
Reflectors Size (mm)	700 x 600 x 2	700 x 1200 x 4
Projected Area (m^2)	0.35	0.7
Wind Loading at 200 km/h (N)	900	1800
Weight (kg)	12	24
Mounting Tube Diameter (mm)	48 or 63	



E PLANE RADIATION PATTERN PRO-CRU8

Examples of ordering codes:
Model - Freq - Cable - Length - Connector

PRO-CRU8-400-500-213-2-NP
Corner Reflector UHF 8dB, 400-500 MHz, RG213 2m, N Plug

PRO-CRU11-400-500-213-NJ
Corner Reflector UHF 11dB, 400-500 MHz, RG213 2m, N Plug

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Base Station UHF

UHF 700 - 1000 MHz Cellular Yagis - Standard Series

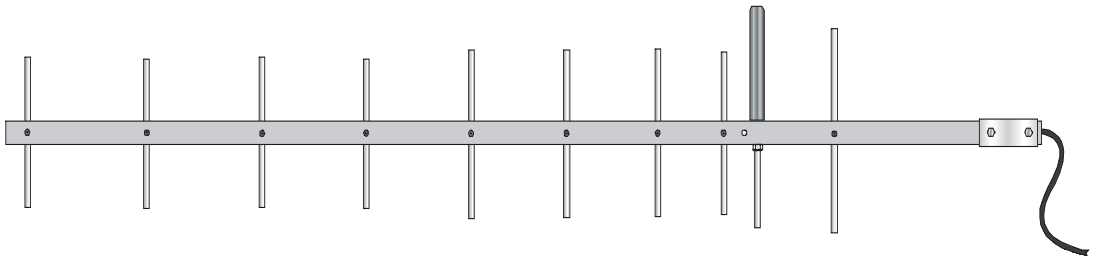
Models Y4C, Y6C, Y10C & Y15C

This yagi is designed to provide improved performance for cellular subscribers in remote or poorly serviced areas.

This design features a strong aluminium channel boom with an encapsulated driven element and feed system. All the parasitic elements are solid aluminium rod 6.35mm OD. Hardware is stainless steel with a cast aluminium mounting clamp which will mount the yagi to a standard fascia mount.

Please state network provider when ordering. Note that some cellular services now use higher frequency bands.
Also available in LTE Band.

Mounting for vertical polarisation is standard with the clamp located at the rear of the boom. Four mounting options are available for clamping to 25mm, 38mm, 48mm or 63mm outside diameters.



Y10C

HI-TEC AERIALS

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

MODEL	Y4C	Y6C	Y10C	Y15C
Number of Elements	4	6	10	15
Frequency Range (MHz)	700-1000			
Bandwidth (MHz)	50			
Gain (dBd)	6	8	11	13
Front to Back Ratio (dB)	15			
Input Impedance (Ohms)	50			
Return Loss (dB & VSWR)	<-14dB 1.5:1			
Maximum Power (W)	50			
Cable Type	RG58LL			
Max Element Length (mm)	180			
Boom Length (m)	0.45	0.8	1.1	1.8
Weight (kg)	0.6	0.8	1.0	1.2
Mounting Tube Diameter (mm)	20 channel			

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

Y6C-920-930-58LL-3-UNT-MC25
Cellular Yagi 6 Element, ISM Band, RG58LL 3m,
Unterminated, 25mm Clamp

Y10C-700-750-58LL-5-SMAP-MC25
Cellular Yagi 10 Element, LTE Band 28, RG58LL 5m,
SMA Plug, 25mm Clamp

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

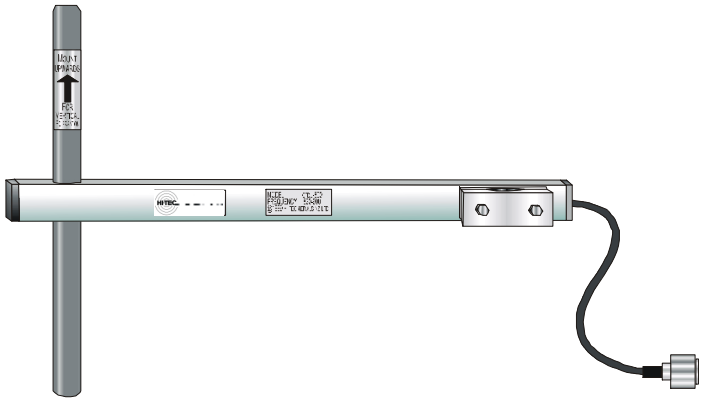
Base Station UHF

UHF 700-1000 MHz Cellular Dipole

Model SHDC

This UHF dipole antenna is designed for the 700-1000 MHz cellular, trunking and data bands. It is also ideally suited for STL links.

Hardware is stainless steel with a cast aluminium mounting clamp.



SHDC

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

MODEL	SHDC
Number of Elements	1
Frequency Range (MHz)	700-1000 (see bandwidth)
Bandwidth (MHz)	75
Gain (dBd)	0
Half Power Beamwidth E Plane (Deg)	80
Half Power Beamwidth H Plane (Deg)	N/A
Front to Back Ratio (dB)	0
Input Impedance (Ohms)	50
Return Loss (dB & VSWR)	<-14dB 1.5:1
Maximum Power (W)	50
Cable Type	RG58LL
Max Element Length (mm)	180
Boom Length (m)	0.3
Weight (kg)	0.3
Mounting Tube Diameter (mm)	25 Square Ali Tube

Examples of ordering codes:
Model - Freq - Cable - Length - Connector - Clamp

SHDC-920-930-58LL-1-NP-MC25
Cellular Shrouded Dipole, ISM Band, RG58LL 1m,
N Plug, 25mm Clamp

SHDC-700-750-58LL-5-BNCP-MC48
Cellular Shrouded Dipole, LTE Band 28, RG58LL 5m,
BNC Plug, 48mm Clamp

Filtering and Protection

VHF & UHF Cavity Filters

Models

CAV-VBP (Band Pass)
CAV-VBR (Band Reject)
CAV-VBPBR (Band Pass Band Reject)
CAV-VBRBP (Band Reject Band Pass)

CAV-UBP (Band Pass)
CAV-UBR (Band Reject)
CAV-UBPBR (Band Pass Band Reject)
CAV-UBRBP (Band Reject Band Pass)

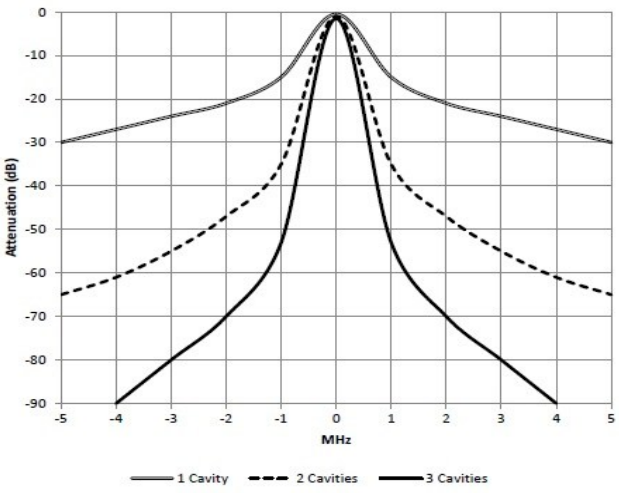
Our current range of coaxial resonator cavity filters are available in 150mm diameter. They are an aluminium construction, with the use of invar rod for tuning and temperature compensation. Mechanical design features provide contactless tuning.

Please specify frequencies when ordering.

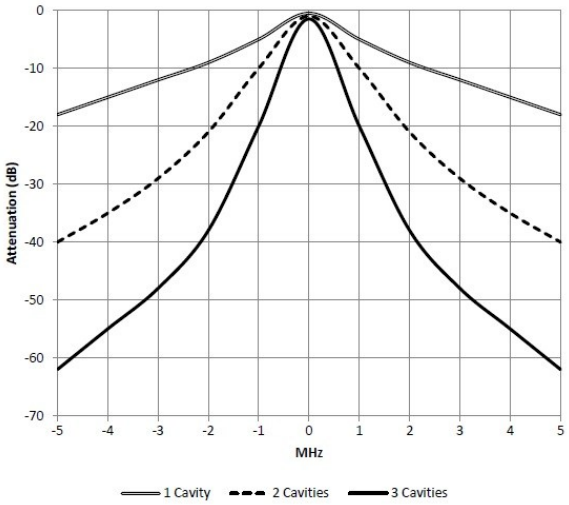
MODEL	CAVITY-VBP	CAVITY-UBP
Frequency Range (MHz)	75-80 & 138-170	400-510
Bandwidth of Pass Band at –14dB	50 KHz	300 KHz
Insertion Loss (dB)	0.5, 1.0, 1.5	
Input Impedance (Ohms)	50	
Return Loss (dB & VSWR)	<-14 dB 1.5:1	
Maximum Power (Watts)	250 @ 0.5dB IL / 100 @ 1.5dB IL	
Connector Type	N Jack	
Temperature Range (deg C)	-30 to +50 (5ppm)	
Cavity Diameter (mm)	150	
Weight (Kg)	4	2

CAV-VBP

CAV-UBP



CAV-VBP - Typical Response Curves at 0.5dB Insertion Loss



CAV-UBP - Typical Response Curves at 0.5dB Insertion Loss

Filtering and Protection

VHF & UHF Cavity Combiners

Model CAV-VTEE & CAV-UTEE

Cavity tee pass technology is used in both VHF & UHF combiners which can be used for Tx and Rx combining. In most cases receive multicouplers and preselect filters can be used on the Rx side. We can assist with system design as closely spaced channels can be problematic. The system design should consider insertion loss and isolation issues. Each tee pass cavity filter must have a dual isolator connected between the transmitter and the tee pass filter.

MODEL	CAV-VTEE	CAV-UTEE
Frequency Range (MHz)	138-170	400-510
Antenna Tx Isolation (dB)	70	
Tx-Tx Separation (dB)	>80	
Input Impedance (Ohms)	50	
Return Loss (dB & VSWR)	<-14dB 1.5:1	
Maximum Power (Watts)	150	
Connector Type	N Jack	
Temperature Range (degC)	-30 to +50 (5ppm)	
Cavity Diameter (mm)	150	
Weight (kg)	4	2

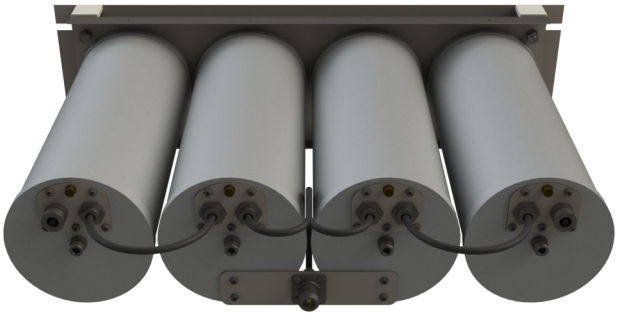
CAV-UTEE

VHF Duplexer 4 Cavity

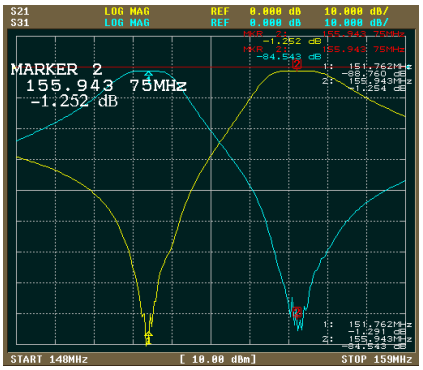
Models DUP

This VHF duplexer design is a band pass band reject, which provides additional protection from out of band signals. Fully temperature compensated 105mm copper cavity resonators ensure low insertion loss, high rejection and very good isolation between the transmit and receive ports.
Each duplexer is designed for a particular band. Supplied as standard as 3U 19" rack mountable.

MODEL	DUP
Frequency (MHz)	138-170
Tuning range MHz	5
Min Frequency Separation (MHz)	1.5
Insertion Loss Tx & Rx to Ant (dB)	1.5
Rx Isolation at Tx Frequency (dB)	80
Tx Noise Suppression at Tx Freq (dB)	80
Min Tx to Rx Isolation (dB)	50
Cavity diameter (mm)	105
Impedance (Ohms)	50
Min Return Loss (dB)	<-14
Connector	N jack
Power (watts)	100
Temperature range (deg C)	-30 to +60
Weight (kg)	9



DUP



TYPICAL RESPONSE CURVES

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Filtering and Protection

Lightning Protection

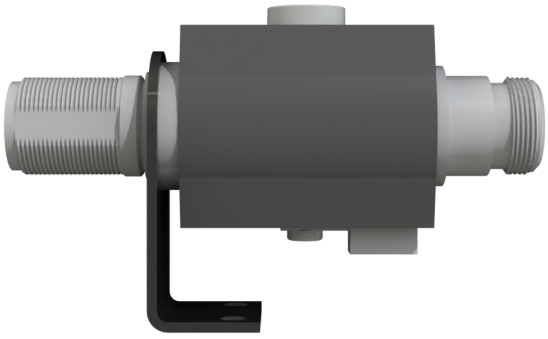
Model LTA-AL-NFNFB-9

For protection of radio equipment, lightning protectors are very useful. Good earthing and careful installation of equipment at radio sites provide further protection.

The L-COM surge protector is of the gas discharge type and is suitable for use from DC to 3000 MHz. It features a N Jack to N Jack Bulkhead connector with a rubber O ring seal for mounting through an enclosure wall or with the included aluminium mounting bracket.

We also stock some Polyphaser arrestors.

MODEL	LTA-AL-NFNFB-9
Frequency Range (MHz)	DC - 3000
Input / Output Impedance (Ohms)	50
Return Loss (dB & VSWR)	<-14dB 1.5:1
Insertion Loss (dB)	< 0.2
Maximum Power (W)	200
Connector Type	N Jack - N Jack Bulkhead
Breakdown Voltage (Volts)	90
Dimensions (mm)	82 x 40 x 20
Weight (gm)	90



LTA-AL-NFNFB-9

Notes:

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Aerial Bases

The 1/4w aerial bases come in a 38mm base (HTAB38) or a 50mm base (HTAB50) and are injection moulded from high impact nylon which gives UV protection and a long service life.

Both bases are ground dependent and are supplied with a mounting block and sealing gasket.

Model	Description
HTAB50	Hi-Tec Aerials Base 50mm
HTAB38	Hi-Tec Aerials Base 38mm
HTAB38-STUD-58	Aerial Base 38mm Stud Mount for RG58
HTAB50-STUD-58	Aerial Base 50mm Stud Mount for RG58

HTAB50

HTAB38

HTAB38-STUD-58

Spare parts available:

Model	Description
HTAB50-TOP	Hi-Tec Aerials Base 50mm - Top Only
HTAB38-TOP	Hi-Tec Aerials Base 38mm - Top Only
GSK-50	Gasket 50mm
GSK-38	Gasket 38mm
MB-174	Mounting Block for RG174
MB-58	Mounting Block for RG58
MB-STUD-58	Mounting Block Stud for RG58

Pre-Wired Aerial Bases

Pre-wired bases are a convenient and fast way to fit out a vehicle. The standard pre-wired base comprises of a HTAB38 base which is riveted to a BR-RA1/4-38-BLK bracket. A 4 metre RG58 tail is pre-wired to the HTAB38 base.

Other base, bracket and cable length options are available on request, as well as terminating with a connector.

Model - Prewired	Description
HTAB38-PW58-4-UNT-RAB	Hi-Tec Aerials Base 38mm Prewired RG58 4m, Unterminated, Right Angle Black Bracket
HTAB38-PW58-4-UNT-RA	Hi-Tec Aerials Base 38mm Prewired RG58 4m, Unterminated, Right Angle Bracket
HTAB38-PW58-4-UNT-Z	Hi-Tec Aerials Base 38mm Prewired RG58 4m, Unterminated, Z Bracket
HTAB38-PW58-4-UNT-SM	Hi-Tec Aerials Base 38mm Prewired RG58 4m, Unterminated, Side Mount Bracket

Model - Stud Mount Prewired	Description
HTAB38-STPW58-4-UNT-NB	Hi-Tec Aerials Base 38mm Stud Mount Prewired RG58 4m, Unterminated, No Bracket
HTAB38-STPW-75AM-4-NB	Hi-Tec Aerials Base 38mm Stud Mount Prewired 75ohm Car Radio Plug 4m, No Bracket

*Also available with the 50mm base. Change the 38 to a 50.

HTAB38-PW58-4-UNT-RAB

HTAB38-STPW58-4-UNT-NB

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mobile Antennas

Ground Dependent Whips

There are a number of different whips available which cover the range from 65 MHz right up to the cellular frequencies. They all mount onto our aerial bases using either a collet mount or a grubscrew mount.

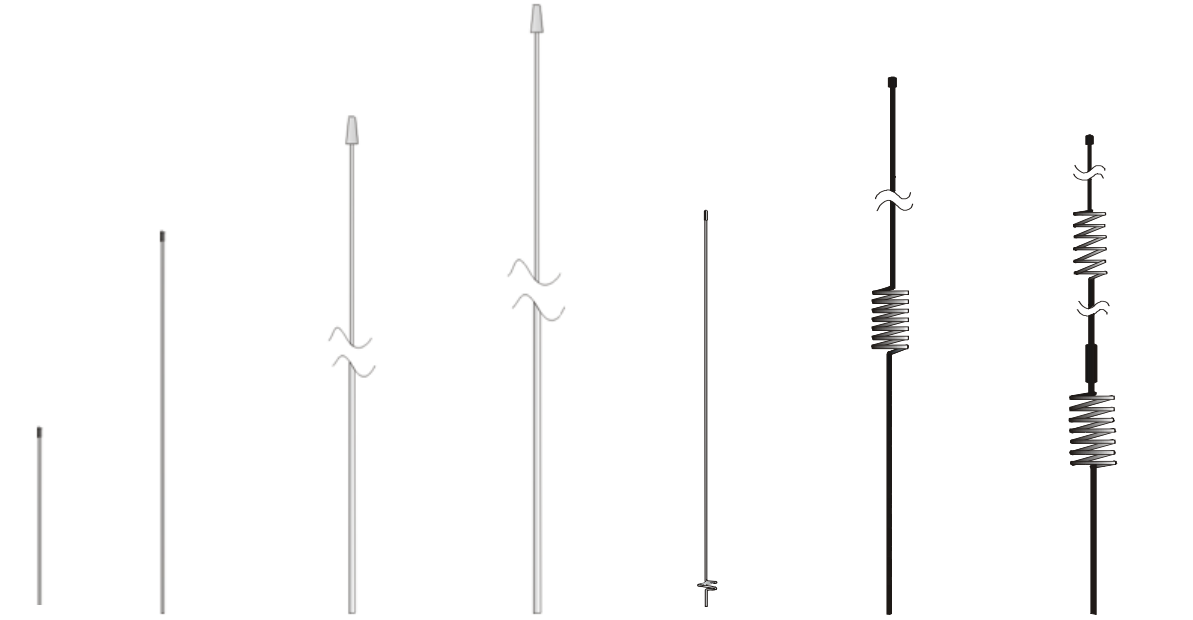
The W02 and W05 are made from parallel stainless steel with a vinyl tip, while the W09 and W12 whips have a 2.7mm base and taper up to a machined tip.

The W5/8U and WUCOL3 both have 3dB gain, with the latter having a wider bandwidth. The W5/8U is supplied tuned to 400-410 MHz and the WUCOL3 is supplied tuned to 400-420 MHz. They are both easily tuned to the other bands as per their tuning guides.

The WCELCOL6 provides 6dB of gain.

Please contact us if you require assistance with selecting a whip.

Model	Description	Frequency Range (MHz)
W02	Stainless Steel Whip 200mm	380-550
W02-BLK	Stainless Steel Whip 200mm - Black	380-550
W05	Stainless Steel Whip 500mm	150-380
W05-BLK	Stainless Steel Whip 500mm - Black	150-380
W09	Stainless Steel Tapered Whip 980mm	75-110
W09-BLK	Stainless Steel Tapered Whip 980mm - Black	75-110
W12	Stainless Steel Tapered Whip 1200mm	65-90
W12-BLK	Stainless Steel Tapered Whip 1200mm - Black	65-90
W5/8U	5/8w UHF Stainless Steel Whip	400-500
W5/8U-BLK	5/8w UHF Stainless Steel Whip - Black	400-500
WUCOL3	UHF Collinear 3dB Whip - Black	400-500
WCELCOL6	Cellular Collinear 6dB Whip - Black	700-1000



W02 W05 W09 W12 W5/8U WUCOL3 WCELCOL6

Model	Description
AP-012	Hi-Tec Base to Wire Whip - Collet
AP-012-BLK	Hi-Tec Base to Wire Whip - Collet - Black
AP-011	Hi-Tec Base to Wire Whip - Grubscrew
AP-011- BLK	Hi-Tec Base to Wire Whip - Grubscrew - Black

AP-012

AP-011

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mobile Antennas

Helical & 1/4w Whips

These aerials are designed for use on hand held transceivers, or applications where a shortened aerial is required. They are available for all VHF & UHF bands and for any customer specified frequency.

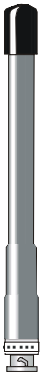
The helical radiating element is a high tensile coil assembly, which is plated to improve the radiation efficiency. This element is encased within a silicon rubber tube to provide a very flexible and durable aerial. The 1/4w model is only available in UHF. Also wideband 1/4w solid core whips are available which screw directly onto our Hi-Tec bases.

Model	Description
HEL-HTAB-E	Helical on Hi-Tec Base 151-156 MHz
HEL-BNCP-AV	Helical on BNC Plug 118-136 MHz
HEL-TNCP-EE	Helical on TNC Plug 162-170 MHz
HEL-PL259-CDF	Helical on PL259 450-495 MHz
FLX1/4-HTAB-CDF	Flexi 1/4w on Hi-Tec Base 450-495 MHz
FLX1/4-BNCP-E	Flexi 1/4w on BNC Plug 151-156 MHz
FLX1/4-PL259-EE	Flexi 1/4w on PL259 162-170 MHz
RIG1/4-FG-HTAB-E	Rigid Fibreglass 1/4w on Hi-Tec Base 151-156 MHz

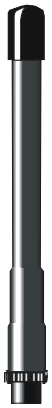
Note - for a different frequency, change the band at the end

Helical

HEL-BNCP-CDF



HEL-BNCP-E



HEL-TNCP-EE

HEL-HTAB-E

Flexi

FLX1/4-HTAB-CDF

FLX1/4-BNCP-E

Rigid

RIG1/4-HTAB-E

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mobile Antennas

5/8w VHF Aerials

The range of 5/8w aerials offers a rugged and reliable design. VHF models are constructed from solid 6.5mm pultruded fibreglass rod and covered with heat shrink. All fittings are nickel plated.

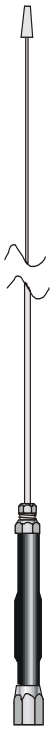
The 5/8w aerials provide a nominal gain of 3dB with a low angle of radiation.

These 5/8w aerials can be mounted in two ways, either straight onto the aerial bases or with a tilt assembly that goes onto the aerial base and allows the aerial to fold down when not in use.

Model	Description	Frequency Range (MHz)	Bandwidth (MHz) -14dB
5/8-ESA	5/8w Aerial ESA Band	75-80 (see bandwidth)	3
5/8-A	5/8w Aerial A Band	81-88 (see bandwidth)	3
5/8-FM	5/8w Aerial FM Band	88-108 (see bandwidth)	3
5/8-AV	5/8w Aerial Aviation Band	118-136 (see bandwidth)	3
5/8-ESB	5/8w Aerial ESB Band	138-144 (see bandwidth)	3
5/8-E	5/8w Aerial E Band	151-156 (see bandwidth)	3
5/8-MM	5/8w Aerial Marine Band	156-162 (see bandwidth)	3
5/8-EE	5/8w Aerial EE Band	162-170 (see bandwidth)	3

Note - for a tile base, add a TLT-ASY

See Appendix 1 for tuning guide



5/8-E

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mobile Antennas

CB Aerials

We have a wide range of citizen band aerials for mobile installations.

Also available is a pretuned centre loaded model only 1.2m high. The coil assembly is fitted to the centre of a stainless steel whip, and is ideal for vehicle installations with height restrictions or where a slim flexible aerial is required.

Model	Description
CB-CL12	CB Aerial 1.2m Centre Loaded S/S Whip - Silver
CB-CL12-BLK	CB Aerial 1.2m Centre Loaded S/S Whip - Black
CB-PT3-WHT	CB Aerial Pretuned 300mm (Fibreglass) - White
CB-PT3-BLK	CB Aerial Pretuned 300mm (Fibreglass) - Black
CB-PT12-WHT	CB Aerial Pretuned 1.2m (Fibreglass) - White
CB-PT12-BLK	CB Aerial Pretuned 1.2m (Fibreglass) - Black
CB-PT12-DUM-WHT	CB Aerial Pretuned 1.2m - Dummy (Fibreglass) - White
CB-PT12-DUM-BLK	CB Aerial Pretuned 1.2m - Dummy (Fibreglass) - Black
CB-AD7-WHT	CB Aerial Adjustable Tuning 700mm (Fibreglass) - White
CB-AD7-BLK	CB Aerial Adjustable Tuning 700mm (Fibreglass) - Black
CB-AD12-WHT	CB Aerial Adjustable Tuning 1.2m (Fibreglass) - White
CB-AD12-BLK	CB Aerial Adjustable Tuning 1.2m (Fibreglass) - Black
CB-F5-WHT	CB Aerial Flexible 500mm (6mm Nylon) - White
CB-F5-BLK	CB Aerial Flexible 500mm (6mm Nylon) - Black
CB-FS6-WHT	CB Aerial Flexible Slim 600mm (3mm Fibreglass) - White
CB-FS6-BLK	CB Aerial Flexible Slim 600mm (3mm Fibreglass) - Black

CB-CL12

CB-PT3-BLK

CB-PT12-BLK

CB-AD7-BLK

CB-AD12-BLK

CB-F5-BLK

CB-FS6-BLK

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mobile Antennas

Mini 1/2w VHF & UHF Aerials

The mini 1/2w aerials feature a very small profile making them ideally suited for mounting on modern vehicles.

They are an end fed configuration which eliminates the need for a ground plane, so the aerial can be mounted in any position on a vehicle. It is also ideally suited for mounting on non-metallic surfaces.

The overall height of the aerial base is 80mm with a diameter of 16mm and is constructed from nickel plated brass with a black fibreglass centre section to house the impedance matching circuit.
The aerial is easily mounted by its 12mm stud, or onto a stainless steel bracket. Each mini 1/2w is fitted with 5 metres of RG58 coaxial cable as standard.
The radiating element is the standard 2.7 mm diameter stainless steel whip. The collinear element is formed from stainless steel wire with a black epoxy coating. This element is also available as a separate item (W1/2COL3).

The element cutting lengths for all models appear in Appendix 1. If further tuning is required, insert a reflected power meter in the feed line and tune the lower element for minimum reflected power.

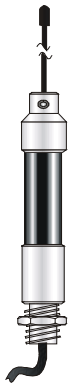
In some installations it may be advantageous to raise the mounting position of the aerial, to clear vehicle body panels and improve the radiation of the aerial.

Each aerial is stamped to make identification of the model possible. This is located on the vertical bottom surface of the aerial body.

Different options include RG58 low loss or RG174 cable, a change to the cable length, brackets, connectors, or the base only and no whip.

Model	Description	Frequency Range (MHz)	Bandwidth (MHz) at -14dB
M1/2ESB-58-5-W09-UNT-NB	Mini 1/2w Aerial 138-144MHz with RG58 5m, W09 Whip, Unterminated, No Bracket	138-144 (see bandwidth)	4
M1/2V-58-5-W09-UNT-NB	Mini 1/2w Aerial 150-170MHz with RG58 5m, W09 Whip, Unterminated, No Bracket	150-170 (see bandwidth)	4
M1/2V-PL259-150-170-SL	Mini 1/2w VHF on PL259 - Silver	150-170 (see bandwidth)	15
M1/2U-58-5-W05-UNT-NB	Mini 1/2w Aerial UHF with RG58 5m, W05 Whip, Unterminated, No Bracket	420-505 (see bandwidth)	15
M1/2U-PL259-SL	Mini 1/2w UHF on PL259 - Silver	420-505 (see bandwidth)	15
M1/2U-58-5-COL-UNT-NB	Mini 1/2w Aerial UHF with RG58 5m, 3dB Collinear Whip, Unterminated, No Bracket	420-505 (see bandwidth)	15
M1/2UC3-PL259-SL	Mini 1/2w UHF Collinear 3dB on PL259 - Silver	420-505 (see bandwidth)	15

See Appendix 1 for tuning guide



M1/2V-58-5-W09-UNT-NB

M1/2U-58-5-COL-UNT-NB

M1/2V-PL259-150-170-SL

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mobile Antennas

Mini 1/2w VHF & UHF Wideband Aerials

The mini 1/2w wideband aerial is an extremely versatile ground independent antenna, covering the majority of the VHF or UHF bands. With an industry standard PL259 base they can be easily field terminated, making them ideal for mobile vehicle installations and customers using channels across multiple bands.

The overall height of the aerial base is 80mm with a maximum diameter of 19mm, and is constructed from nickel plated brass with a black fibreglass centre section to house the impedance matching circuit.

The aerial is simply mounted by screwing it onto our SOB base. The SOB base has a thread diameter of 16mm and is easily mounted onto a stainless steel bracket.

Available in either nickel plated silver or black with a stainless steel whip.

These aerials come in three different configurations:

- Aerial only onto a PL259 connector
- Aerial onto a PL259 connector and a separate SOB base (order a SOB-58-SL with the aerial)
- Aerial onto a PL259 connector and a separate SOB base pre-terminated with 5m RG58 cable (order a separate cable SOB-KIT-58-5-UNT-NB-SL).

Use code BLK at the end for a black option instead of silver (SL).

MODEL	M1/2WB-V	M1/2WB-U
Frequency Range @ VSWR < 1.8:1 (MHz)	110-185	380-520
Frequency Range @ –14dB (MHz)	146-178	420-520
Input Impedance (ohms)	50	
Aerial Base Connector	PL259	
Maximum Power (Watts)	50	
Overall Height (mm)	740	260

When ordering, please order the aerial and then a separate SOB base or SOB 5m cable (see below pictures).

Model	Description
M1/2WB-V-SL	Mini 1/2w Wideband Aerial; VHF, Silver
M1/2WB-V-BLK	Mini 1/2w Wideband Aerial; VHF, Black
M1/2WB-U-SL	Mini 1/2w Wideband Aerial; UHF, Silver
M1/2WB-U-BLK	Mini 1/2w Wideband Aerial; UHF, Black

If a stud mount tail is required please use the following code layout:

Model	Description
M1/2WBV-58-5-UNT-NB	Mini 1/2w Wideband 146-178MHz with RG58 5m, Unterminated, No Bracket
M1/2WBU-58-5-UNT-NB	Mini 1/2w Wideband 420-500MHz with RG58 5m, Unterminated, No Bracket

M1/2WB-V-SL

M1/2WB-V-SL + SOB-58-SL

M1/2WB-V-SL + SOB-KIT-58-5-UNT-NB-SL

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mobile Antennas

Heavy Duty 1/2w VHF Aerials

Our heavy duty 1/2w aerial is available in a range of frequencies for VHF and also available for customer designated frequencies.

The end fed voltage feed configuration eliminates the need for a ground plane, so the aerial may be mounted in any position on a vehicle. This gives improved performance compared with other aerials ineffectively located on vehicles. The impedance matching circuit is mounted inside the rugged nylon base which provides a very strong, reliable and efficient unit. The aerial base is easily mounted by its 12mm stud or onto our range of stainless steel brackets.

This range is ideally suited for mounting on non-metallic surfaces or base station use as it readily mounts to buildings or fascia mounts with a stainless steel bracket. As standard a 5m coaxial cable tail is provided with the aerial which can be easily replaced when out in use. The radiator element is our standard stainless steel whip (W12 or W09). To achieve the required element length on A and FM bands an extender is fitted.

Each unit is identified on the top of the base moulding with the band or frequency of operation and are all in Black.
Different cable lengths, brackets and connectors are an option, as well as no whip (NW), if only the base is required.

Model	Description	Bandwidth (MHz) at -14dB
HD1/2ESA-58-5-W12E-UNT-NB	Heavy Duty 1/2w 75-80MHz with RG58 5m, W12 + Extender, Unterminated, No Bracket	3
HD1/2FML-58-5-W12E-UNT-NB	Heavy Duty 1/2w 88-96MHz with RG58 5m, W12 + Extender, Unterminated, No Bracket	3
HD1/2FMH-58-5-W12E-UNT-NB	Heavy Duty 1/2w 96-108MHz with RG58 5m, W12 + Extender, Unterminated, No Bracket	3
HD1/2AV-58-5-W12-UNT-NB	Heavy Duty 1/2w 118-136MHz with RG58 5m, W12, Unterminated, No Bracket	3
HD1/2ESB-58-5-W12-UNT-NB	Heavy Duty 1/2w 138-144MHz with RG58 5m, W12, Unterminated, No Bracket	3
HD1/2E-58-5-W09-UNT-NB	Heavy Duty 1/2w 151-156MHz with RG58 5m, W09, Unterminated, No Bracket	3
HD1/2EE-58-5-W09-UNT-NB	Heavy Duty 1/2w 162-170MHz with RG58 5m, W09, Unterminated, No Bracket	3

HD1/2FML-58-5-W12E-UNT-NB

HD1/2E-58-5-W09-UNT-NB

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mobile Antennas

Marine Band 1/2w Aerials

For VHF marine installations there are two models available.

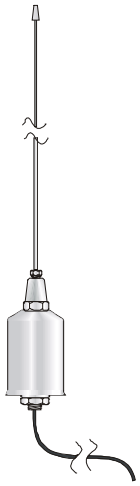
The popular 1/2w marine whip features a rugged moulded white nylon base fitted with a 890mm stainless steel whip. This aerial mounts through a 12mm hole or can be fitted to our stainless steel brackets. A longer mounting stud (40mm) is available on request.

The second model with a tilt is also a 1/2w configuration however it is fitted inside a tapered fibreglass radome. Mounting is by a fully adjustable plastic marine tilt base.

Both models have unity gain with an omnidirectional radiation pattern. As standard they are fitted with 5 metres of white coaxial cable.

The HD1/2-MM is also available in Black.

Model	Description
HD1/2MM-WHT-58W-5-W09-UNT-NB	White Heavy Duty 1/2w 156-162MHz with White RG58 5m, W09, Unterminated, No Bracket
HD1/2MM-BLK-58-5-W09-UNT-NB	Black Heavy Duty 1/2w 156-162MHz with Black RG58 5m, W09, Unterminated, No Bracket
MAR-MM1/2-58W-5-UNT-TLT	Marine Band Fibreglass 1/2w Aerial with White RG58 5m, Unterminated, Tilt Base



HD1/2MM-WHT-58W-5-W09-UNT-NB

MAR-MM1/2-58W-5-UNT-TLT

HI-TEC AERIALS

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

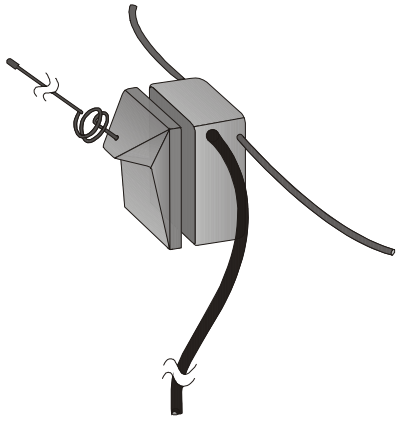
Glass Mount Aerial UHF

A glass mount aerial enables an aerial to be fitted to a vehicle without the need to drill holes in the external body panels.

The aerial plate and internal mounted matching unit are fitted to the glass with a high bond adhesive tape. The units are easy to install and tune.

The UHF model is a 5/8w configuration providing 3dB of gain.

Model	Description
GMU-58-4-UNT	Glass Mount UHF 3dB Aerial, RG58 4m, Unterminated



GMU-58-4-UNT

VHF models are available from Procom, see page 102 regarding Procom information

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mobile Antennas

VHF Low Profile Aerials

Low profile antennas are special application antennas for installations where minimum overhead clearance is available and where vibration may be severe. They are used in industries such as the railway and forestry.

The LP-VHF model is fabricated from series 6000 grade aluminium which is then welded. Completed antennas are finished with an epoxy coating to provide a weather resistant finish.

The LP-HD-FMRX model is a heavy duty design manufactured from cast aluminium and suitable for heavy industry use such as railways. Completed antennas are finished with an epoxy coating to provide a weather resistant finish. This model is supplied factory tuned.

The radiation pattern of all models is equivalent to a 1/4w antenna, vertically polarised when mounted on a horizontal ground plane and is essentially omnidirectional.

LP-VHF

LP-HD-FMRX

MODEL	LP-VHF	LP-HD-FMRX
Frequency Range (MHz)	138-160 (see bandwidth)	88-108 (see bandwidth)
Bandwidth (MHz)	5	2
Gain (dBd)	Unity	
Input Impedance (Ohms)	50	
Connector Type	N Jack	
Maximum Power (W)	100	Rx only
Height (mm)	75	80
Length (mm)	500	870
Width (mm)	38	55
Weight (kg)	0.5	3.5
Mounting	3 x 5mm holes	6 x 8mm holes
Field Tunable	Yes	No

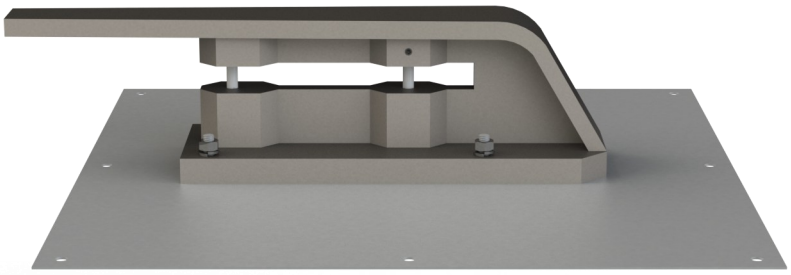
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

UHF Low Profile Aerial

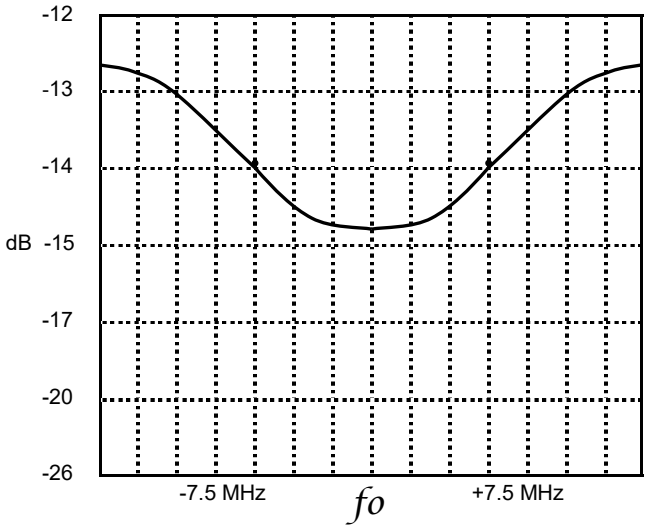
The LP-HD-UHF is a heavy duty design, manufactured from cast aluminium and is suitable for bus/ truck fleet operation or railway use. A hardwire RG58 coax tail is fitted as standard.

This antenna can be supplied with or without a ground plane and is finished with a black powder coated paint finish. This antenna is supplied factory tuned.

On request the colour can be changed.



LP-HD-UHF-58-4-UNT-GP-BLK



Typical Return Loss LP-HD-UHF

HI-TEC AERIALS
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

MODEL	LP-HD-UHF
Frequency Range (MHz)	350-500 (see bandwidth)
Bandwidth (MHz)	15
Gain (dBd)	0
Input Impedance (Ohms)	50
Cable Type	RG58
Maximum Power (W)	100
Height (mm)	100
Length (mm)	300 (ground plane)
Width (mm)	300 (ground plane)
Weight (kg)	0.5
Mounting Location	Any Location
Field Tunable	No

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mobile Antennas

Coaxial 1/2w Aerial for 700-1000MHz

Our coaxial 1/2w aerials provide high performance in the 700-1000 MHz bands. A range of models are available across this frequency range.

Like our heavy duty 1/2w and mini 1/2w models, the coaxial 1/2w aerial operates without the need for a ground plane. This feature allows them to be mounted in a convenient position on a vehicle or base station site.

The radiator is a stainless steel collinear element finished in black epoxy, giving 3dB gain. The coaxial matching section is housed inside a slim fibreglass tube which is capped with nickel plated brass fittings. The aerial is fitted with low loss cable as standard, which enters through the 12mm mounting stud.

A 6dB element is available on request (WCELCOL6).

A range of brackets is available for mounting, see pages 92-95.

A colour coding band for model identification is fitted to the coax cable at the mounting stud.

MODEL	CX-700	CX-800	CX-825	CX-900
Frequency Range (MHz)	700-750	800-850	825-875	890-940
Bandwidth (MHz)	50			
Gain (dBd)	3			
Cable Type	RG58 Low Loss			
Colour Code	Green	Red	Yellow	Blue

Examples of ordering codes:
Model - Cable - Length - Connector - Bracket

CX-700-58LL-3-UNT-NB
CX-700, RG58LL 3m, Unterminated, No Bracket

CX-900-58LL-5-SMAP-RA
CX-900, RG58LL 5m, SMA Plug, Right Angle Bracket

HI-TEC AERIALS
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Multi Band Cellular Aerial

A multi band cellular aerial is available, suitable for outdoor wireless networks operating in the LTE, GSM, CDMA, PCS, 3G, 4G & WLAN frequency ranges making this antenna ideal for outdoor voice and data wireless systems.

It is housed in a white plastic radome, connected to a medium duty adjustable mounting bracket for a 25-50mm rigging pipe. A 200mm tail is terminated with a N Jack connector. Extension cables available as required.

MODEL	CELL-YAGI
Frequency Range (MHz)	698-960 / 1710-2700
Gain (dBd)	8 / 9
Input Impedance (Ohms)	50
Cable Length (mm)	200
Connector Type	N Jack
Maximum Power (W)	50
Dimensions LxWxH (mm)	445 x 40 x 205
Weight (kg)	1
Mounting	Wall or Pole

CELL-YAGI

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mounting Hardware

Mounting Clamp

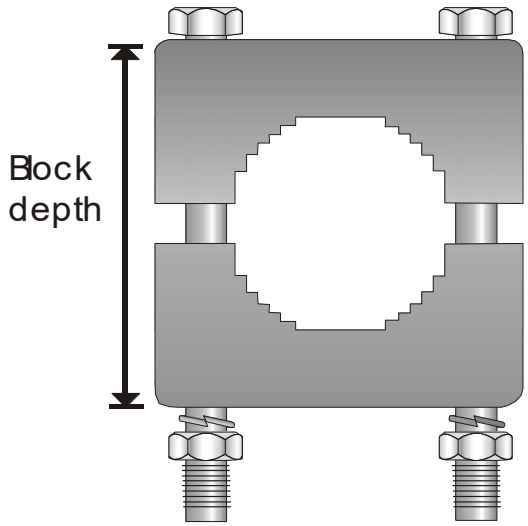
Models CL-MC25, CL-MC38, CL-MC48 & CL-MC63

This range of clamps uses two cast aluminium saddle blocks held with steel bolts.

They can be used to mount pipe or antenna booms to a flat surface, eg. flat plate, tower legs etc.

Clamps with long bolts are included with aerials, while clamps with short bolts are for clamps purchased by themselves. If ordering without an aerial but require long bolts please let us know or use the L codes when ordering.

MODEL	CL-MC25S	CL-MC38S	CL-MC38L	CL-MC48S	CL-CM48L	CL-CM63S	CL-MC63L
Body	Cast Aluminium Natural Finish						
Pipe Diameter (mm)	25	38	38	48	48	63	63
Block Depth with Pipe Fitted (mm)	55	70	70	90	90	115	115
Hardware Finish	Stainless Steel	Galvanised Steel					
Bolt Size (mm)	M6 x 100	M10 x 100	M10 x 120	M10 x 120	M10 x 140	M10 x 140	M10 x 150
Bolt Centres (mm)	40	64	64	64	64	80	80
Weight (kg)	0.2	0.4	0.4	0.6	0.6	0.8	0.8



CL-MC38 / CL-MC48 / CL-MC63

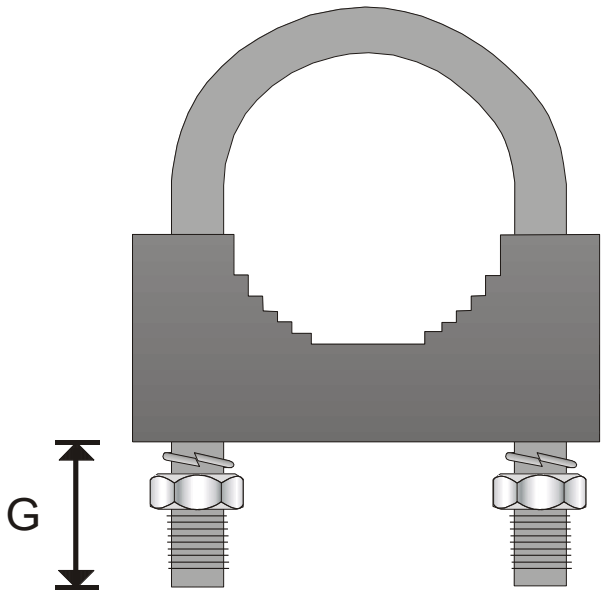
HI-TEC AERIALS
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Saddle Clamp

Models CL-SA38 & CL-SA48

These clamps are a cast saddle with a U bolt for clamping tubes. Designed to mount aerials to 48mm and 38mm tubing. The saddles are made of cast aluminium with a natural finish. The U bolts are 8mm stainless steel fitted with M8 nuts and spring washers. A 95mm U-bolt is fitted as standard.

MODEL	CL-SA38	CL-SA48
Body	Cast Aluminium Natural Finish	
Pipe Diameter (mm)	38	48
Dimension 'G' with Pipe Fitted (mm)	65	50
Hardware	1 x 95mm U Bolt	1 x 95mm U Bolt
Weight (kg)	0.25	0.3



CL-SA38 / CL-SA48

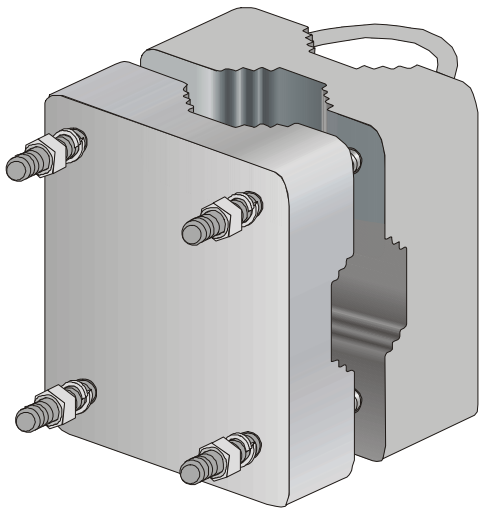
Mounting Hardware

Universal Clamp

Model CL-UV

This universal clamp is a heavy duty mounting clamp. It enables aerials to be mounted either in line vertically, or horizontally mounted to vertical or horizontal tubes/pipes. It will also accept the 25mm square booms of our yagis and folded dipoles.

MODEL	CL-UV
Body	Cast Aluminium Natural Finish
Hardware	2 x 120mm U-Bolts
External Vertical Tube Diameter (mm)	38 or 48 Minimum 38 Maximum 50
Internal Vertical Tube Diameter (mm)	38 or 48 Minimum 25 Maximum 50
Internal Horizontal Tube Diameter (mm)	38 or 48 Minimum 25 Maximum 50 or 25 Square Tube
Dimensions (mm)	90 x 90 x 120
Weight (kg)	1.2



CL-UV

Cross Clamp

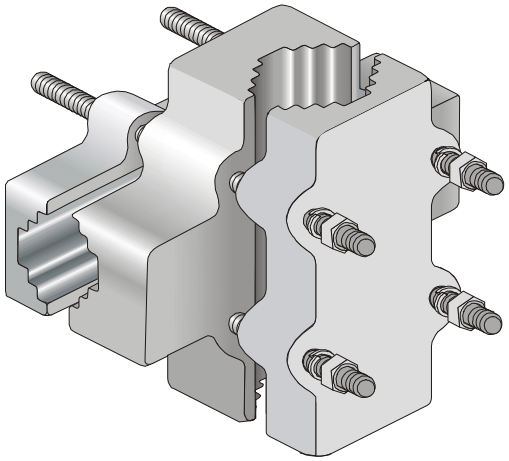
Model CL-CR-SML & CL-CR-LGE

Convenient heavy duty mounting clamps to mount a horizontal aerial boom to a vertical support.

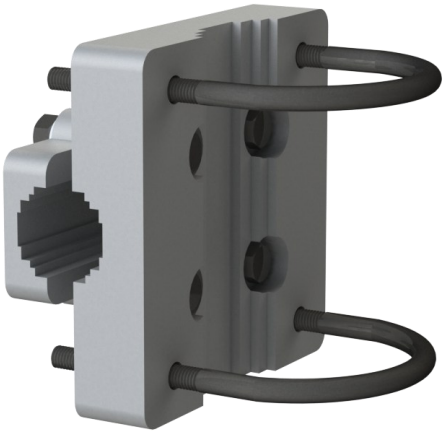
The smaller clamp has been designed with the site installer in mind. The centre section of the clamp is drilled and tapped, which allows one side of the clamp to be assembled onto the boom before fitting the antenna onto the mounting tube.

The larger clamp has been designed following the same philosophy as the smaller cross clamp. With the rugged U Bolts large enough to go around a pipe from 63mm right up to 115mm, it's a great new clamp solution for larger rigging.

MODEL	CL-CR-SML	CL-CR-LGE
Body	Cast Aluminium Natural Finish	Cast Aluminium Natural Finish
Hardware	M10 Stainless Steel	M12 Stainless Steel
Vertical Pipe Diameter (mm)	38 or 48 Minimum 32 Maximum 50	63 to 115
Horizontal Aerial Boom Diameter (mm)	38 or 48 Minimum 32 Maximum 50	38 or 48 Minimum 32 Maximum 50
Dimensions (mm)	160 x 160 x 160	190 x 190 x 120 (excl U Bolts)
Weight (kg)	2.3	4.5



CL-CR-SML



CL-CR-LGE

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mounting Hardware

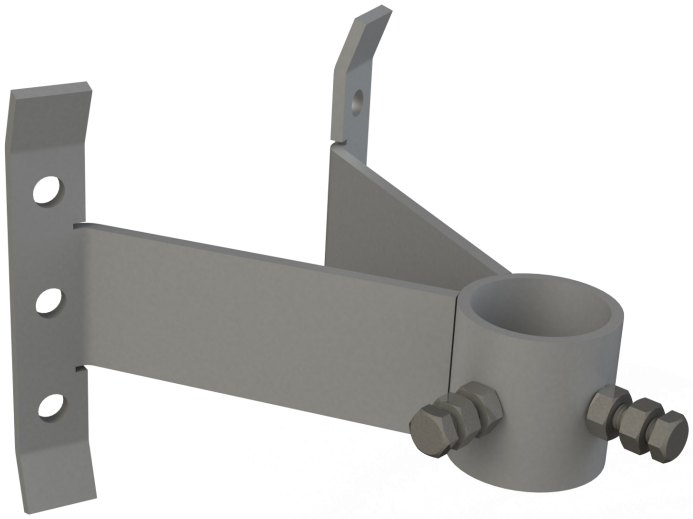
Rigging Pipe Clamp

Model CL-RP

Designed to mount rigging pipes to vertical wooden poles. It enables 48mm OD pipe (2” galvanised water pipe) to be mounted with a 150mm offset from a wooden pole.

The connection to the wooden pole is either by coach screws or band-it straps. A hole is provided opposite the securing nut to enable a through bolt to be fitted to the lowest clamp.

MODEL	CL-RP
Body	Hot Dip Galvanised Steel
Vertical Pipe Diameter (mm)	48mm OD
Mounting Pole Diameter (mm)	150-1000mm
Mounting Holes	6 x 12.5mm Holes
Dimensions (mm)	200 x 200 x 150
Weight (kg)	2



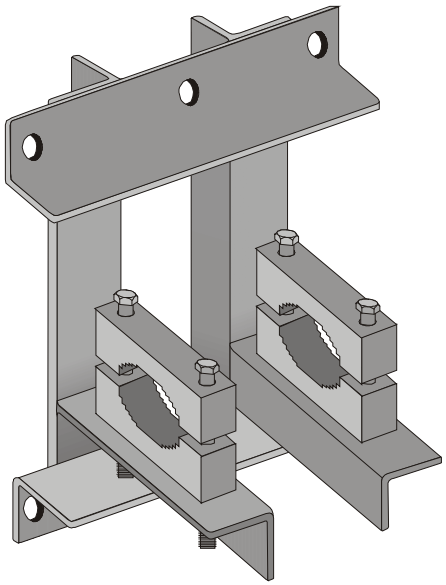
CL-RP

Pole Mount Clamp

Model CL-PM38 & CL-PM48

Designed to mount yagis or dipoles to a wooden pole. The clamp is ruggedly constructed and is fixed to the pole with adjustable chains, or with bolts. The aerial boom is easily clamped horizontally to the Pole Mount using saddle blocks bolted to its frame. A complete kit is supplied ready for installation.

MODEL	CL-PM38	CL-PM48
Body / Frame	Hot Dip Galvanised Steel	Hot Dip Galvanised Steel
Chains	8mm Galvanised Steel x 1m long	8mm Galvanised Steel x 1m long
Chain Bolts	M12 Galvanised Steel	M12 Galvanised Steel
Boom Mounting Blocks	38mm	48mm
Mounting Pole Diameter (mm)	150-300	150-300
Dimensions (mm)	350 x 280 x 170	350 x 280 x 170
Weight (kg)	10.7	10.9



CL-PM48

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mounting Hardware

Vertical Pole Mount Clamp

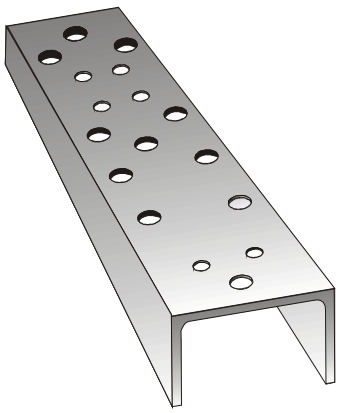
Models CL-VPM, CL-VPM25, CL-VPM38 & CL-VPM48

Designed to mount collinears to the top of a pole or dipoles to a wooden pole. The clamp is ruggedly constructed and is fixed to the pole with either bolts or coach bolts (not supplied).

A collinear can be easily clamped vertically to the pole mount using saddle blocks.
Alternatively two dipoles can be mounted horizontally.

This system can also be used to mount and stand off rigging pipes on wooden poles.

MODEL	CL-VPM	CL-VPM25	CL-VPM38	CL-VPM48
Body	Hot Dip Galvanised Steel			
Mounting Blocks	None	2x CL-MC25S	2x CL-MC38L	2x CL-MC48L
Mounting Pole Diameter (mm)	150 - 600			
Dimensions (mm)	400 x 100 x 50			
Weight (kg)	3.5	3.9	4.3	4.7



CL-VPM

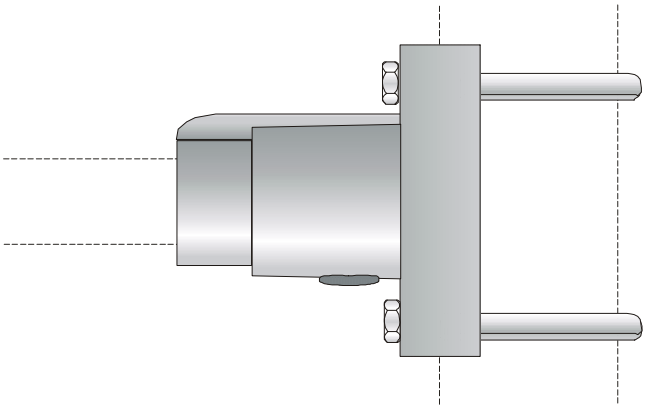
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Round Back End Mount Clamp

Model CL-EM-RB

Designed for mounting our UHF shrouded dipoles to a vertical or horizontal 48mm OD tube. The mount comes complete with stainless steel U bolts as standard. As an alternative, it can be fixed directly against a flat wall by bolting through the U bolt holes.

MODEL	CL-EM-RB
Body	Cast Aluminium Natural Finish
Hardware	2 x 50mm U-Bolts
Vertical Tube Diameter (mm)	38 or 48
Horizontal Aerial Boom Diameter (mm)	38
Grub Screws to Aerial Boom	4 x M6 x 8mm
Dimensions (mm)	140 x 105 x 80
Weight (kg)	0.8



CL-EM-RB

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

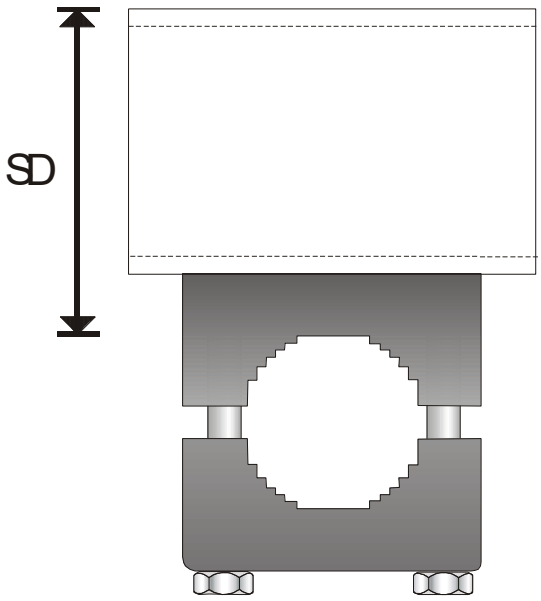
Mounting Hardware

Wall Mount Clamp

Models CL-WM38, CL-WM48 & CL-WM63

The wall mounts are designed for mounting vertical tubes or pipes to a vertical wall. The wall mount is available with mounting clamps to suit 38, 48 or 63mm OD tubes. These mounts can be used for either vertical or horizontal supports.

MODEL	CL-WM38	CL-WM48	CL-WM63
Body	200 x 50mm Aluminium Channel		
Body Length	150		
Pipe Clamp	1 x CL-MC38S	1 x CL-MC48S	1 x CL-MC63S
Standoff Distance 'SD' (mm)	118	120	127
Channel Mounting Holes	2 x 10.5mm at 150mm Centres		
Weight (kg)	0.9	1.1	1.3

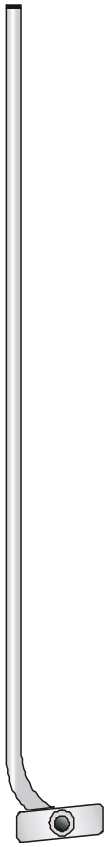


CL-WM38 / CL-WM48 / CL-WM63

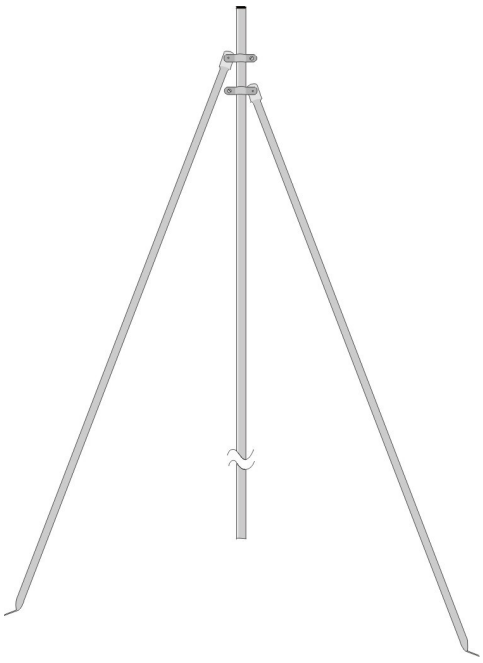
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Fascia Mounts & Stays

MODEL	DESCRIPTION
FM-1.2	Fascia Mount Hockey Stick 1.2m
FM-2	Fascia Mount Hockey Stick 2m
FM-STTEL-1.6	Fascia Mount Stays - Telescopic 1.6m (pair)



FM-2



FM-STTEL-1.6

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

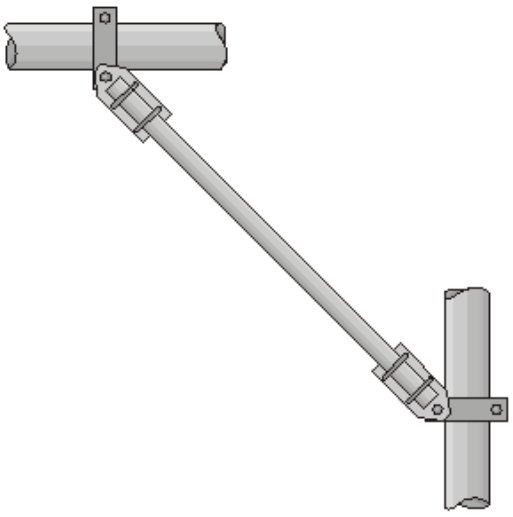
Mounting Hardware

Fibreglass Boom Support

Models CL-BS & CL-BS-LW

For use where additional support is required for long yagi or antenna booms. The boom support clamps to the end of the antenna boom, and then is diagonally fixed to the pole or support structure. They may be used horizontally to stabilise against high winds or vertically for additional ice loading support.

MODEL	CL-BS	CL-BS-LW
Boom / Support Clamps	2 x CL-MC38 or CL-MC48 Clamps	2 x CL-MC25 Clamps
Fibreglass Rod	Solid, diameter 25mm 1.0m long, or as required	Solid, diameter 16mm 1.0m long, or as required
Fibreglass Rod End Fitting	2x 6mm Stainless Steel plates, with 4x CL-MC25 clamps	6mm Aluminium plate with pressed stainless steel top plate, bolts, nuts and washers



CL-BS

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Notes:

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mounting Hardware

Brackets

Model	Description
BR-RA1/4-38	Right Angle for 1/4w Aerials on 38mm Base
BR-RA1/4-38-BLK	Right Angle for 1/4w Aerials on 38mm Base - Black
BR-RA1/4-50	Right Angle for 1/4w Aerials on 50mm Base
BR-RA1/4-50-BLK	Right Angle for 1/4w Aerials on 50mm Base - Black
BR-RA-38	Right Angle for 1/2w and Stud Mounts on 38mm Base
BR-RA-38-SOB	Right Angle for 1/2w and Stud Mounts on 38mm Base - SOB
BR-RA-38-BLK	Right Angle for 1/2w and Stud Mounts on 38mm Base - Black
BR-RA-38-BLK-SOB	Right Angle for 1/2w and Stud Mounts on 38mm Base - Black SOB
BR-RA-50	Right Angle for 1/2w and Stud Mounts on 50mm Base
BR-RA-50-SOB	Right Angle for 1/2w and Stud Mounts on 50mm Base - SOB
BR-RA-50-BLK	Right Angle for 1/2w and Stud Mounts on 50mm Base - Black
BR-RA-50-BLK-SOB	Right Angle for 1/2w and Stud Mounts on 50mm Base - Black SOB
BR-RA-50-MD	2.5mm Right Angle for 1/2w Aerials and Stud Mounts on 50mm Base
BR-RA-50-HD	3mm Right Angle for 1/2w Aerials and Stud Mounts on 50mm Base

*All brackets are Grade 304 stainless steel and in some cases powder coated black.

*SOB = 16mm top hole

BR-RA1/4-38

BR-RA1/4-38-BLK

BR-RA1/4-50

BR-RA-38

BR-RA-50

HI-TEC AERIALS

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Brackets

Model	Description
BR-SM1/4-50	Side Mount for 1/4w Aerials on 50mm Base
BR-SM-50	Side Mount for 1/2w and Stud Mounts on 50mm Base
BR-SM-50-SOB	Side Mount for 1/2w and Stud Mounts on 50mm Base - SOB
BR-Z1/4-38	Z Bracket for 1/4w Aerials on 38mm Base
BR-Z-38	Z Bracket for 1/2w and Stud Mounts on 38mm Base
BR-Z-38-SOB	Z Bracket for 1/2w and Stud Mounts on 38mm Base - SOB
BR-FM1/4-50	Right Angle Fascia Mount for 1/4w Aerials on 50mm Base
BR-FM-50	Right Angle Fascia Mount for 1/2w and Stud Mounts on 50mm Base
BR-FM-50-SOB	Right Angle Fascia Mount for 1/2w and Stud Mounts on 50mm Base - SOB
BR-BM1/4-38-BLK	Boot Mount for 1/4w Aerials on 38mm Base - Black

All brackets are Grade 304 stainless steel and in some cases powder coated black.

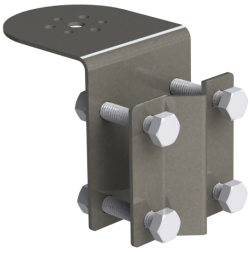
*SOB = 16mm top hole

BR-SM1/4-50

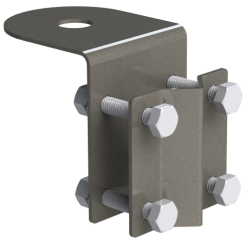
BR-SM-50

BR-Z1/4-38

BR-Z-38



BR-FM1/4-50



BR-FM-50

BR-BM1/4-38-BLK

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mounting Hardware

Brackets

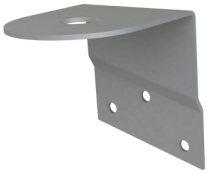
Model	Description
BR-TH-50-L	Toyota Hilux for 1/2w Aerials and Stud Mounts on 50mm Base - Left Hand (pre 2016)
BR-TH-50-L-SOB	Toyota Hilux for 1/2w Aerials and Stud Mounts on 50mm Base - Left Hand - SOB (pre 2016)
BR-TH-50-R	Toyota Hilux for 1/2w Aerials and Stud Mounts on 50mm Base - Right Hand (pre 2016)
BR-TH-50-R-SOB	Toyota Hilux for 1/2w Aerials and Stud Mounts on 50mm Base - Right Hand - SOB (pre 2016)
BR-TH16-50-L	Toyota Hilux for 1/2w Aerials and Stud Mounts on 50mm Base - Left Hand (2016+)
BR-TH16-50-L-SOB	Toyota Hilux for 1/2w Aerials and Stud Mounts on 50mm Base - Left Hand - SOB (2016+)
BR-FR-50	Ford Ranger for 1/2w Aerials and Studs Mounts on 50mm Base
BR-FR-50-SOB	Ford Ranger for 1/2w Aerials and Studs Mounts on 50mm Base - SOB
BR-FR1/4-50	Ford Ranger for 1/4w Aerials on 50mm Base
BR-FR23-50-L	Ford Ranger for 1/2w Aerials and Stud Mounts on 50mm Base - Left Hand (2023+)
BR-FR23-50-L-SOB	Ford Ranger for 1/2w Aerials and Stud Mounts on 50mm Base - Left Hand - SOB (2023+)
BR-FR23-50-R	Ford Ranger for 1/2w Aerials and Stud Mounts on 50mm Base - Right Hand (2023+)
BR-FR23-50-R-SOB	Ford Ranger for 1/2w Aerials and Stud Mounts on 50mm Base - Right Hand - SOB (2023+)
BR-FL1/4-50	Flat Bracket for 1/4w Aerials on 50mm Base
BR-U-A	Utility Angle Mounting in Black
BR-U-RA	Utility Right Angle Mounting in Black

*All brackets are Grade 304 stainless steel and in some cases powder coated black.

*SOB = 16mm top hole

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Brackets



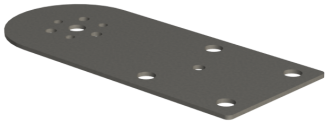
BR-TH-50-L

BR-TH16-50-L

BR-FR-50

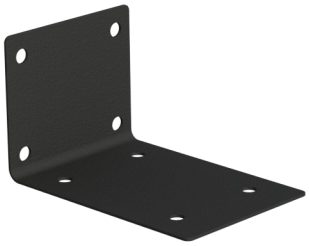
BR-FR1/4-50

BR-FR23-50-L



BR-FL1/4-50

BR-U-A



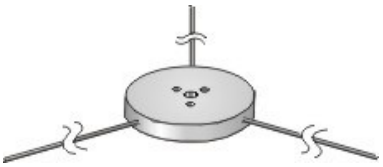
BR-U-RA

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Mounting Hardware

Mobile Aerial Fittings

Model	Description
RAD-GP-VHF	Radial Ground Plane VHF - Assembly for 1/4w Aerials, 3mm radials
RAD-GP-UHF	Radial Ground Plane UHF - Assembly for 1/4w Aerials, 3mm radials
SM-W	Spring Mount for Wire Whips
SM-HTA	Spring Mount with Hi-Tec Top (1/2” thread both ends)
TLT-BASE	Tilt Base
TLT-TOP	Tilt Top
TLT-ASY	Tilt Assembly (TLT-BASE + TLT-TOP)



RAD-GP-VHF

SM-W

SM-HTA

TLT-BASE

TLT-TOP

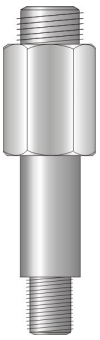
TLT-ASY

Mobile Aerial Adaptors

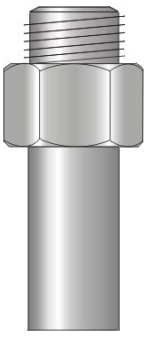
We have a wide range of adaptors, and can make custom adaptors as needed, just let us know your requirements.

Model	Description
AP-001	Hi-Tec Base to 3/8" UNF External - Short
AP-002	Hi-Tec Base to 3/8" UNF External - Long
AP-003	Hi-Tec Base to 1/4" UNF Internal
AP-004	Hi-Tec Base to 3/8" UNF Internal
AP-005	M6 x 1 Internal to Wire Element
AP-006	M6 x 0.75 Internal to Wire Element
AP-007	M5 x 0.8 Internal to Wire Element
AP-008	M5 x 0.8 External to Wire Element
AP-009	M6 x 0.75 External to Wire Element
AP-010	M6 x 1 External to Wire Element

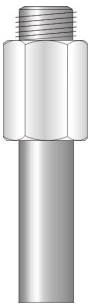
AP-001



AP-002



AP-003



AP-004

AP-005
AP-006
AP-007

AP-008
AP-009
AP-010

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

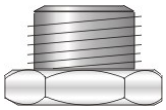
Mounting Hardware

Mobile Aerial Adaptors

Model	Description
AP-011	Hi-Tec Base to Wire Whip - Grubscrew
AP-011-BLK	Hi-Tec Base to Wire Whip - Grubscrew - Black
AP-012	Hi-Tec Base to Wire Whip - Collet
AP-012-BLK	Hi-Tec Base to Wire Whip - Collet - Black
AP-013	Hi-Tec Base to 5/16" BSB Internal
AP-014	Hi-Tec Base to 5/16" BSW Internal
AP-015	Hi-Tec Base to M6 Internal
AP-016	Hi-Tec Base to M6 External
AP-017	Hi-Tec Base Internal to 3/8" UNF Internal
AP-018	Mini 1/2w - Hi-Tec Base Internal to M12 Internal
AP-019	Hi-Tec Base Internal to 5/16" BSB External
AP-020	M6 Internal to 5/16" BSB External
AP-021	GME Base 5/16" Internal BSB to Wire Element
AP-022	Adaptor Stud: 5/16" BSB to 5/16" UNC

AP-011

AP-012

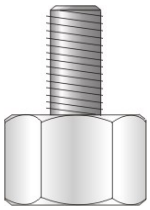


AP-013
AP-014
AP-015

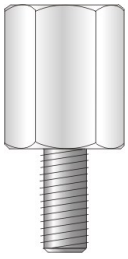
AP-016

AP-017

AP-018



AP-019



AP-020

AP-021

AP-022

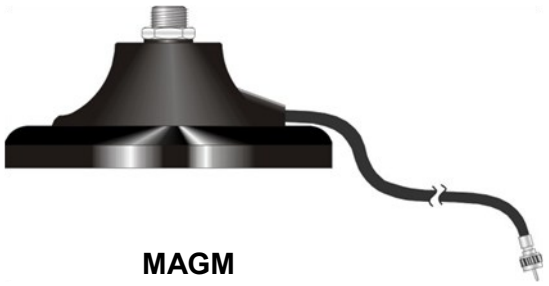
HI-TEC AERIALS

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Magnetic Mounting

Magnetic mount with 1/4w antenna elements (VHF or UHF) provide a useful portable or temporary antenna solution. With the addition of an AP-011 or AP-012 adaptor and whip the antenna is complete. The strong magnet is capable of holding the element upright at speeds in excess of 100km/hr. The MAGM comes standard with a 3.5m RG58 low loss cable terminated with a PL259 connector. Other connector options are available on request.

An alternative to the standard MAGM is the MAG-M1/2 range which is a VHF or UHF mini 1/2w built onto a magnetic mount base. This arrangement has the advantage of a ground independent antenna that can be mounted in any location. A 5m RG58 coax tail is fitted as standard.



MAGM

MAG-M1/2U

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Cable & Connectors

Coax Cable

We stock RG58 and RG213 coaxial cable, along with a large range of other cables including low loss 50 ohm cables.

All cables are available per metre or in full rolls.

Custom made cables with connectors fitted are available on request.

Model	Description
RG58	RG58
RG58-R305	RG58 - 305m Roll
RG58LL	RG58 Low Loss
RG58LL-R100	RG58 Low Loss - 100m Roll
RG58W	RG58 White
RG213	RG213
RG213-R100	RG213 - 100m Roll
RG214	RG214
RG223	RG223
RG174	RG174
LMR240UF	LMR240 Ultra Flex Low Loss
LMR400	LMR400 Low Loss
LMR400-R500	LMR400 Low Loss - 500m Roll
LMR400UF	LMR400 Ultra Flex Low Loss
LMR195	LMR195 Low Loss
LMR195UF	LMR195 Ultra Flex Low Loss
LDF4-50	LDF4-50A Heliax 1/2”

Connectors

We offer a comprehensive range of quality connectors. We stock Telegartner which is a quality connector manufactured in Germany and also stock a range from Italy.

We stock right angled connectors as well as some reverse polarity, bulkhead and tees.

We also stock a wide range of adaptors.

Model	Description
N-P-58	N Plug RG58
N-J-58	N Jack RG58
N-P-213	N Plug RG213
N-J-213	N Jack RG213
N-P-400	N Plug LMR400
N-J-400	N Jack LMR400
BNC-P-58	BNC Plug RG58
BNC-J-58	BNC Jack RG58
BNC-P-213	BNC Plug RG213
BNC-P-400	BNC Plug LMR400
TNC-P-58	TNC Plug RG58
TNC-J-58	TNC Jack RG58
TNC-P-213	TNC Plug RG213
TNC-P-400	TNC Plug LMR400
TNC-J-400	TNC Jack LMR400
SMA-P-58	SMA Plug RG58
SMA-J-58	SMA Jack RG58
FME-P-58	FME Plug RG58
FME-J-58	FME Jack RG58

New Zealand Distributor

Hi-Tec Aerials is a distributor of leading international antenna brands. This brings our customers cutting edge solutions, with premium advice and support to go with them. Our service includes customisations and support with mounting options.

Get in touch today and we can help with your requirements.

Amphenol Procom

Hi-Tec Aerials are your local distributors of Amphenol Procom products, covering base station antennas, portable and mobile antennas, combiners, filters and DAS solutions.

We are able to source the entire catalogue of products on request as well as collaborate on custom solutions.

Below are some products we carry stock of to provide short lead times -

Duplexers
DPF70/6-5/7-N - Duplexer 6 Cavity 406-500 MHz with a 5-7 MHz split
DPF2/6-150L-1/2-N - Duplexer 6 Cavity 138-156 MHz with a 1-2 MHz split
DPF2/6-150L-2/4-N - Duplexer 6 Cavity 138-156 MHz with a 2-4 MHz split
DPF2/6 H-4/6-N - Duplexer 6 Cavity 152-175 MHz with a 4-6 MHz split

Diplexers
DIPX-225/330-BNC - Diplexer for the 0-225 MHz and 330-1300 MHz Ranges

Glass Mounts
GF151 - VHF Glass Mount 0dB, Tunable 138-175 MHz, 6 MHz bandwidth

---

Sinclair Technologies

Hi-Tec Aerials is an importer of Sinclair Technologies products, servicing many sectors including public safety and private industry communication networks, such as emergency services, transportation, natural resources and utilities.

We are able to provide a range of antenna and RF signal conditioning products, with the below being just a few popular products we sell in the local market.

Isolators
I2112A Isolator, single stage, 5MHz bandwidth, 30W load
I311(X)T-(Z) - Isolator, field tunable, 406-512 MHz

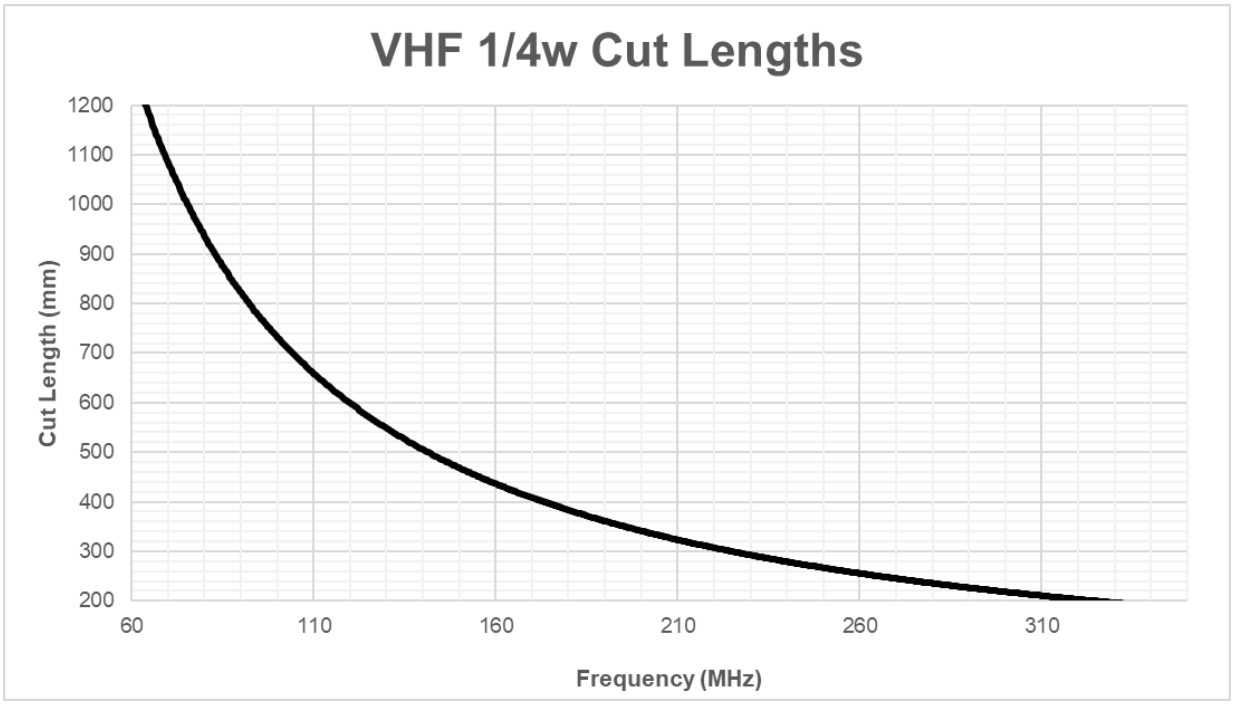
Low Profile Heavy Duty Aerials
ST321 Series - Low profile cast aluminium aerial UHF
ST221-SF1SNF Series - Low profile cast aluminium VHF

Notes:

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

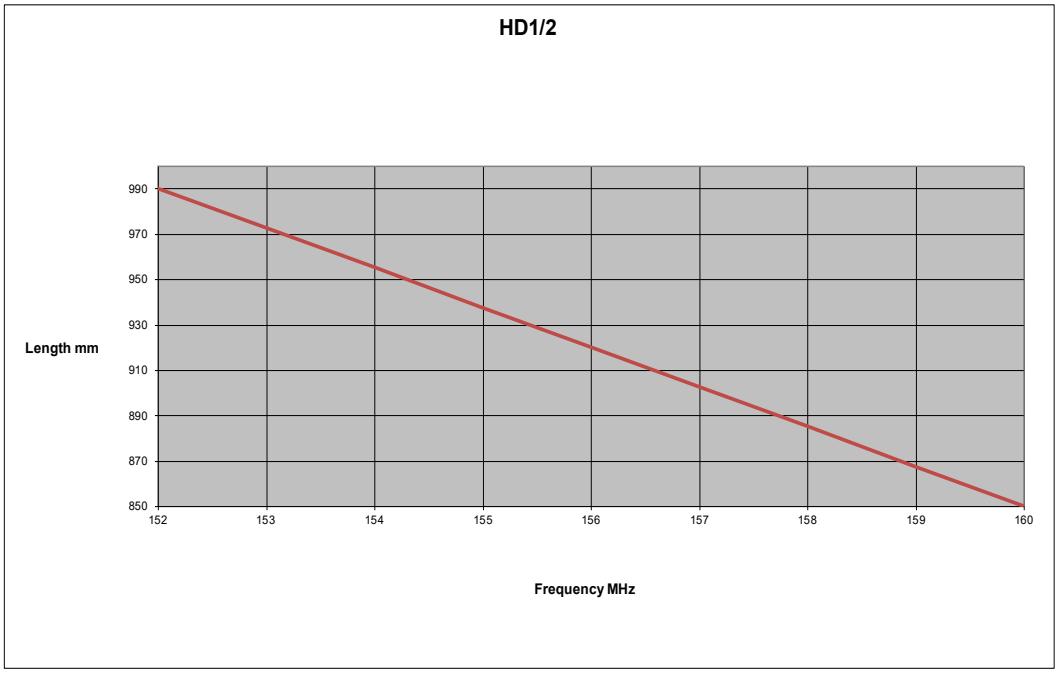
Appendix 1

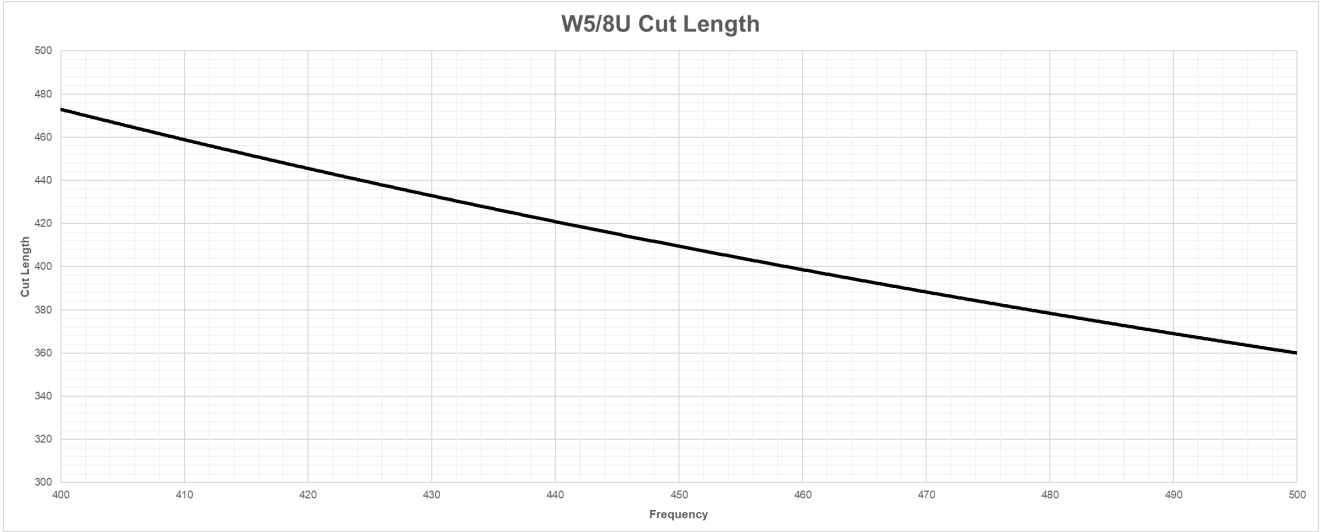
Tuning Guide for 1/4w VHF and UHF Whips



HI-TEC AERIALS
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Tuning Guide for HD1/2 and W5/8U Aerials

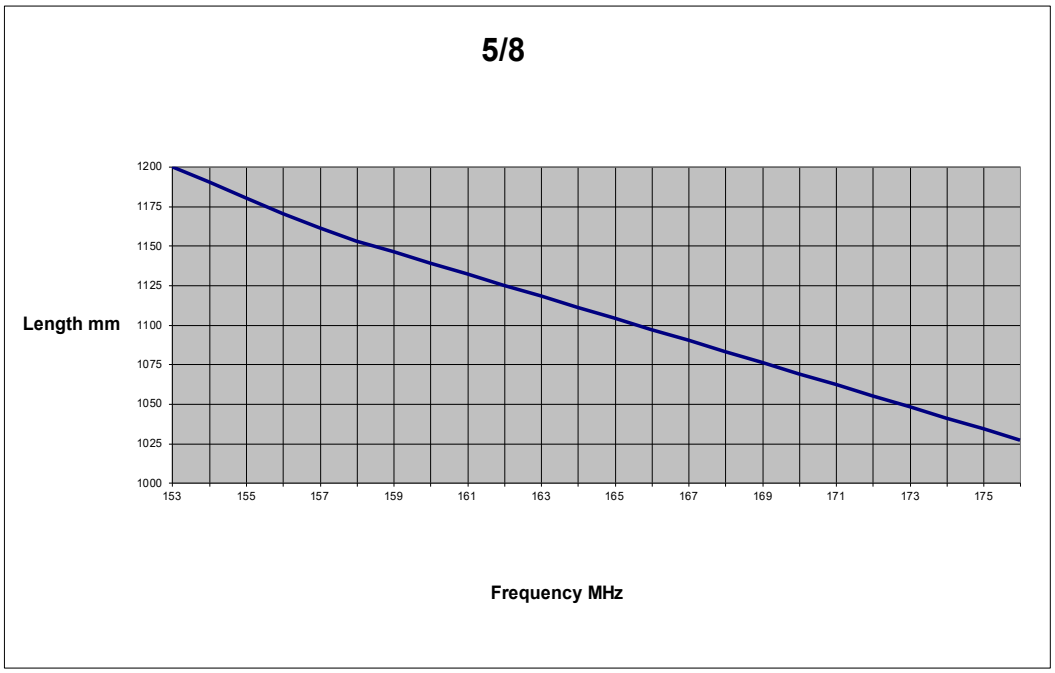




www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

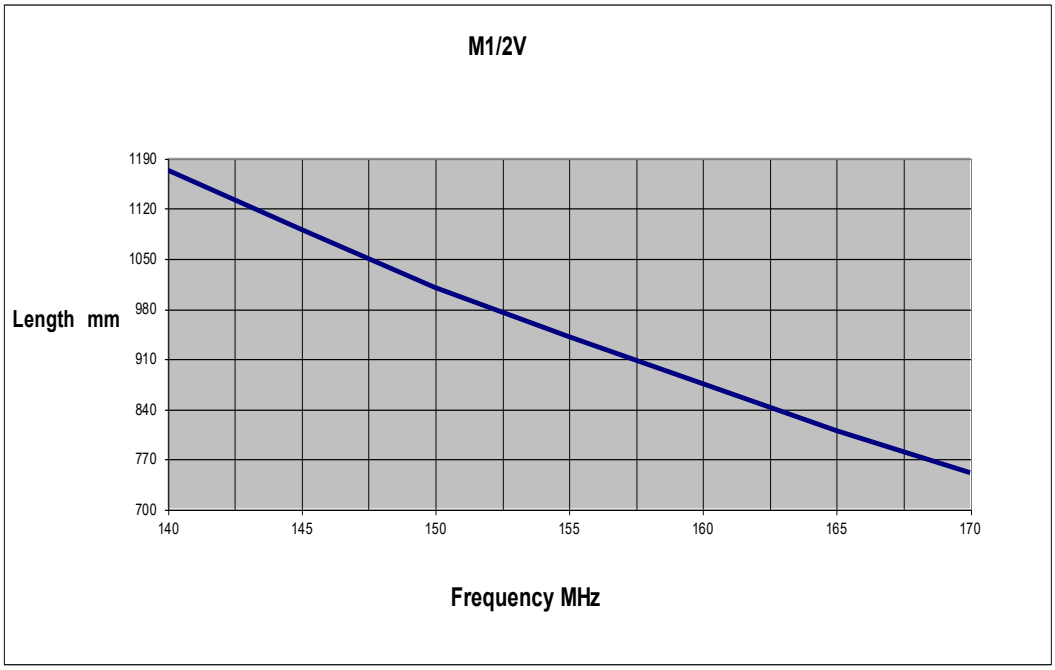
Appendix 1

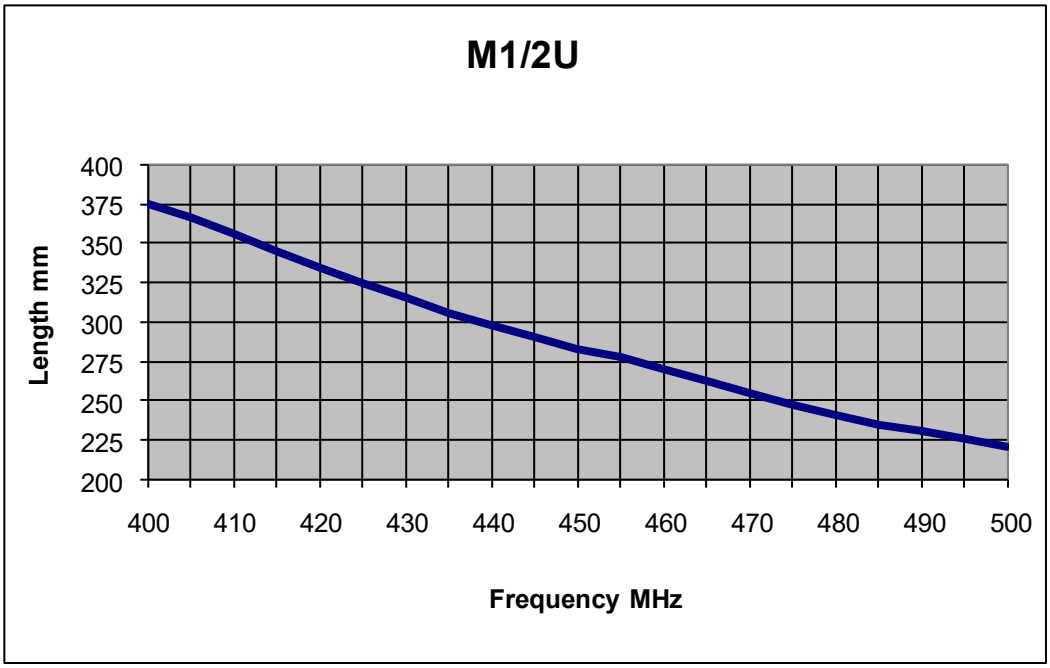
Tuning Guide for 5/8 Aerials



HI-TEC AERIALS
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Tuning Guide for M1/2V and M1/2U Aerials

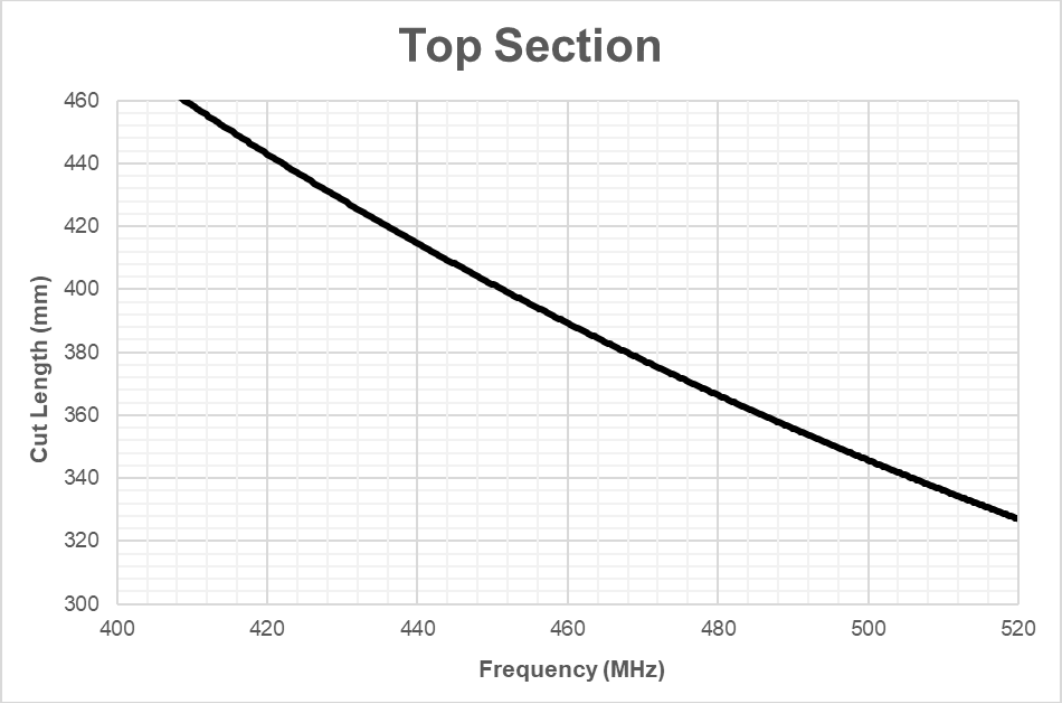


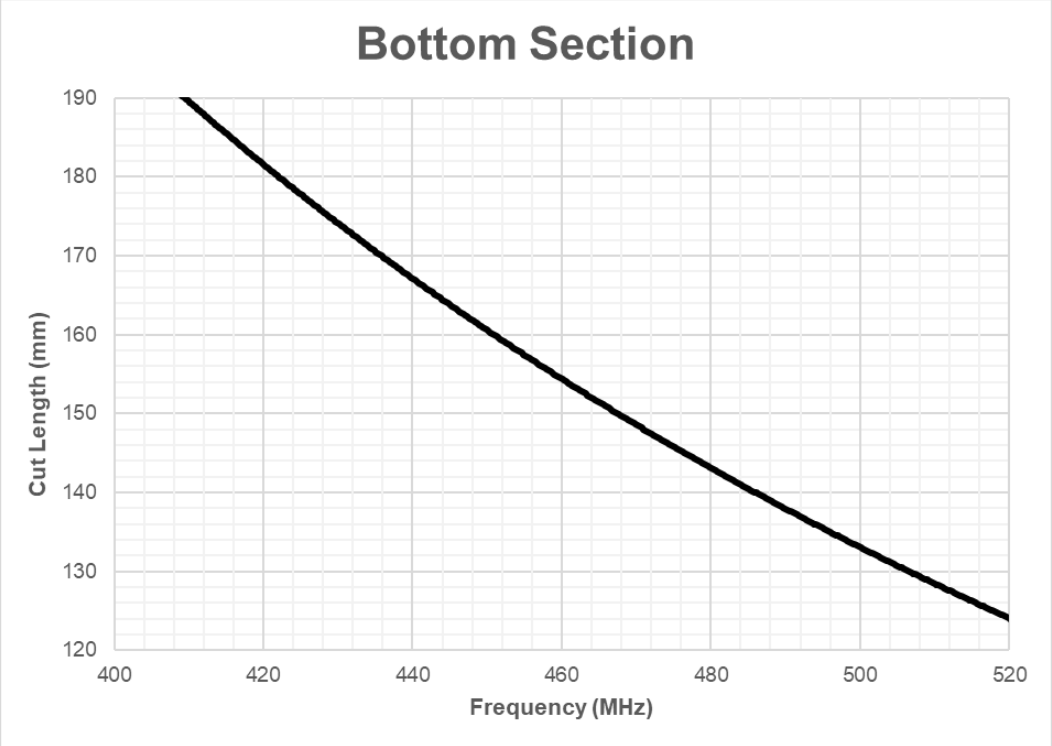


www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Appendix 1

Tuning Guide for WUCOL3 Whips





HI-TEC AERIALS
www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Appendix 1

Tuning Guide for W1/2COL3 and WCELCOL6 Whips

Tuning Dimensions for W1/2COL3		
Frequency (MHz)	**Top Element (mm)**	**Bottom Element (mm)**
400-420	490	365
420-440	460	340
450-470	430	270
470-500	400	250

Tuning Dimensions for WCELCOL6		
Frequency (MHz)	**Top Element (mm)**	**Bottom Element (mm)**
825-845	198	60
890-915 GSM	155	40

Note: The collinear coil end is the cutting dimension reference point.

www.hi-tec-aerials.co.nz
sales@hi-tec-aerials.co.nz
03 384 3375
1/14 Kennaway Rd, Woolston, Christchurch

Index

Index

Index

Code Cracking

Our new codes have been built to make ordering (and reordering) easier. They now have a format to follow so we can quickly identify what the aerial is and what extras it has.

For the most part, codes will start off with the aerial model, followed by the frequency or band, then the cable and length, connector and clamp or bracket.

We have changed our Commercial Series to be our Standard Series, the C has been dropped from the start and now all Professional Series aerials start with PRO.

In tables opposite are the products and then the associated codes to use when building out a product.

Base Station Aerials

What was once a CY6U with a 1m tail, unterminated and a 25mm clamp is now:

Y6U-450-495-58-1-UNT-MC25

What was once a Professional Series Yagi, Y4E with a 3m tail, N Jack and a Universal Clamp is now:

PRO-Y4VH-162-170-213-3-NJ-UV

What was once a DE-SH with a 1m tail, N plug and No Clamp is now:

PRO-SHDV-151-156-213-1-NP-NCL

Mobile Aerials

A M1/2E-5 is now:

M1/2V-58-5-W09-UNT-NB

A SM1/2E-5

M1/2V-58-5-NW-UNT-NB

A MVHFB-PW-SMB1/4 is now:

HTAB38-STPW58-4-UNT-NB

Please do not hesitate to contact the sales email if you need help with these new codes, and for a more extensive ‘old code vs new code’ list.

Cable & Length	
RG58 1m	58-1
RG58 5m	58-5
RG58LL 1m	58LL-1
RG58LL 8m	58LL-8
RG213 1m	213-1
RG174 0.5m	174-0.5

Connectors	
Unterminated	UNT
N Plug	NP
N Jack	NJ
FME Plug	FMEP
FME Jack	FMEJ
TNC Plug	TNCP
BNC Plug	BNCP
PL259	PL259
N Plug Right Angle	NPRA
N Plug Clamp	NPC

Clamps (base station)	
No Clamp	NCL
25mm Clamp	MC25
38mm Clamp	MC38
48mm Clamp	MC48
63mm Clamp	MC63
38mm Saddle Clamp	SA38
48mm Saddle Clamp	SA48
Universal Clamp	UV
Cross Clamp Small	CRS
Cross Clamp Large	CRL
End Mount Clamp	EM

Brackets (mobile)	
No Bracket	NB
Right Angle Bracket	RA
Right Angle Bracket Black	RAB
Z bracket	Z
Fascia Mount Bracket	FM
Side Mount Bracket	SM
Toyota Hilux Left (2016+)	THL
Toyota Hilux Right (2016+)	THR
Toyota Hilux Left (pre 2016)	TH16L
Toyota Hilux Right (pre 2016)	TH16R
Ford Ranger	FR
Ford Ranger Left (2023+)	FR23L
Ford Ranger Right (2023+)	FR23R