

Vehicle Communications and Jamming Antennas

CHELTON



Evolving Tactical Communications

Over the last sixty years, the nature of conflict has dramatically changed. In the early second half of the 20th century battles were largely waged in rural environments, to defend a nation or continent from a foe in an easily recognizable uniform.

In the 21st century, the scenarios are very different in that the majority of conflicts are of a smaller scale. These include counter insurgency and peacekeeping activities on a global basis against a threat that is indistinguishable from the local population going about its normal activity. As a result of these changes in the tactical environment, communications has evolved to cater for the following:

- Increased volume of voice and data traffic simultaneously
- Increase in global communications with tactical UHF Satellite capability
- Amalgamation of multiple antennas into a single unit on vehicles

- Migration of developments from the civil market into the military sector e.g. WiFi, WiMax, GPS Navigation, Internet etc.
- Increased range of frequencies used for communications and neutralizing Improvised Explosive Devices (IEDs) requires high performance broadband antennas

Vehicle Solutions

Chelton's product range with the addition of a strategic marketing alliance with the Shakespeare Company offering the most extensive range of high performance, robust and compact antennas to support the latest generation of tactical vehicle radios and mobile jammers:



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- Single band antennas, HF, VHF, UHF (including TacSAT), covert, TETRA
- Multi-band antennas for multi-role radios or vehicle with GPS
- Broadband antennas for Software Defined Radios and High Capacity Data Radios that maximize performance over very wide frequency bands
- High power versions of all of the above for on-board vehicle jammers

Chelton compliments the above with an extensive range of accessories, including:

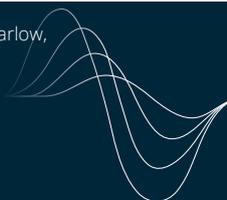
- Diplexers
- Elevation kits to mount antennas on tactical masts. This facilitates increased communications range
- Various mounting options available – e.g. 4 or 3/6 bases
- Tie-down kits for;
 - Deployment of long whips while on the move
 - To improve the Near Vertical Incidence Skywave (NVIS) operation

Related Products and Services

- RF Components
 - Range of diplexers, triplexers and filters
- Interference Cancellation
 - mINCAN – to remove interference and improve the performance of co-sited radio equipment and to provide communication through jamming



- Simulation Services
 - RF Platform modelling
 - Modelling antenna performance for customer specific vehicle requirements



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Part Number	Frequency	Power	Size	Detail
HF Vehicle Whip Antennas				
Style 120-Series	1.6-30 MHz	up to 1kW	up to 5m	
Style 120-Series	1.5-30 MHz	126W	3.72m	
3160-99	2-30 MHz	125W	1.9 x 0.9m	Half-Loop NVIS
VHF Vehicle Whip Antennas				
994	30-108 MHz	75W	2.9m	End Fed
3000-900	30-108 MHz	100W	2.6m	End Fed
4000-900	30-88 MHz	100W	2.6m	End Fed
4242MK1 & 2	30-88 MHz	100W	2.9m	End Fed
4242MK3	30-108 MHz	100W	2.9m	Centre Fed
4243-A	30-88 MHz	70W	1.9m	End Fed, Low Profile
High Band VHF Vehicle Whip Antennas				
4265A	118-174 MHz	60W	1.1m	Centre Fed
UHF Vehicle Whip Antennas				
1104-000	225-400 MHz	50W	0.6m	Centre Fed
4310	225-400 MHz	60W	0.9m	Centre Fed
4266	420-470 MHz	60W	0.7m	Centre Fed
3503	2400-2480 MHz	5W	53mm	
Broad/Multi-band VHF Vehicle Whips				
GD2013 Series 1	30-512 MHz	50W	1m	
SFB3512/VRC	30-512 MHz	50W	2.9m	Dual feed option available
DB-3450/VRC	30-88 MHz 225-400 MHz	150W 100W	2.5m	End Fed & Center Fed, Dual Band Diplexer option available
CF-3450/VRC	30-88 MHz 225-400 MHz	150W 100W	2.6m	End Fed & Center Fed, Dual Band Diplexer option available
WB5025/VRC	500-2500 MHz	25W	0.9m	Centre Fed
High Power Vehicle Whip Antennas				
GD2013 Series 2	30-512 MHz < 88 MHz > 88 MHz	100W 200W	1m	
HP3512/VRC	30-512 MHz	200W	2.9m	Dual feed option available
HP5250/VRC	500-2500 MHz	200W	0.9m	Centre Fed
EMM336	20-6000 MHz	200W	2m	Three, Two and Single Port versions available
COM231	30-88 MHz	200W	1.9m	Ground mounted version COM201B
UHF TacSAT Vehicle Antennas				
19-429 Series	225-400 MHz	Low Angle 100W max High Angle 200W max	0.3 x 0.5m	Monopole & Cross-dipole
GV2432	243-318 MHz	200W max	0.37 x 0.33m	High Performance, ground-plane independent
5000-9007	243-380 MHz	30W Covert	0.05 x 0.5 x 0.5m	High Angle
5000-9008	243-380 MHz	40W	0.1 x 0.3m	Medium Profile, ground-plane independent
GD2100	292-380 MHz	200W	0.41 x 0.33m	MUOS, UFO, High performance, ground-plane independent

