

SELECTING a V/UHF ANTENNA: ADVICE and ASSISTANCE Further to Full Price List of Antennas in Last Issue

V/UHF BASE Station Arrays: Options: Yagi vs Vertical Collinear.

For fixed, point to point comms a yagi offers good gain for size and cost. The gain comes at the cost of not being omni-directional. This is not an issue if you are only seeking gain in a fixed direction, eg - wanting to access a particular DX repeater or station. However, if you intend using it for general comms, several repeaters, mobile stations, nets and the like, the cost savings will be expended on a rotator system. Horizontal polarity remains a dubious plus for the Yagi. Convention, sees many SSB DXers preferring horizontal polarity and a yagi offers this option. In fact it is considerably easier to mount a yagi horizontally than vertically, when the interaction of any supporting features effects the performance, resonance and directivity of the array. I say dubious, because I believe a large number of DX and indeed contest contacts are lost when a stations DX performance is limited to Horizontal polarization. The vast majority of stations active on our V/UHF bands have only verticals, the 20+Db loss in polarity change, may mean the opportunity of numerous contest contacts and points being missed. You can, of course, pivot your yagi, but there is another hassle and cost factor. Then there is always the missed contacts on the side or back of the beam - if your yagi is any good they should NOT be able to hear you !

It is little wonder Vertical collinear is so very popular: here are some more of the advantages -

Omni-directional - This can not be under-stated. When working a net, all stations will hear you and you will hear any DX from any direction. You can monitor all repeater channels regardless of their location or direction.

Ease of installation and matching - attach coax and operate. No balun or matching harness is required, ease of support and wind-loading, only the very biggest of them require staying.

Dare I mention **Aesthetics** here ? They are far less obtrusive than a yagi of comparable gain.

Multi-band design - given the dominant use of dual-band transceivers, the most popular collinear are also tuned designed for dual-band operation, so a single array provides gain on 2 & 70. The more recent include the 6M band - compatible with the most recent generation of equipment.

General Application - 99% of V/Uhf stations use Verticals - all repeaters and all mobiles, of course, and these are the stations that will make up the bulk of your V/UHF qso's . Even serious DX/contest stations will certainly have a collinear available these days - so you will be worked .

Final Preferences:

CSX500 \$395 Premium Base Collinear for serious V/UHF Operator - Over 5M long - offers over 8dB gain on 2M and 12dB on 70 but stays are a necessity.

X-300 \$345 The most preferred compromise, just under 3M long, it is self-supporting and has over 6dB gain on 2M and 9 on 70cm. Ideal for any Dual-band base station.

CSX200 \$295 New to our range - An ergonomic, slightly smaller version of the X300 and may usurp its popularity, given the price vs gain advantage. 2.6M long providing 6 and 8dB gain.

CSX50 \$175 Only 1.3M long, this is preferred antenna where noise-free, reliable local repeater access and good local simplex is all that a base station. The "club net" antenna.

X50 \$195 Deluxe Version of the CSX50 — slightly longer 1.7M offering 4.5 & 7dB gain

V2000 \$320 Tri-band Vertical covering 6 (2.5dB) 2 (6+dB) and 70 (8+dB) Very popular for stations equipped with the recent generation of All band transceivers or the HF transceivers that include 6M coverage. The convenience (and aesthetics) of a single antenna justifies cost.

All the aforementioned have collinear elements protected in a fibreglass tube and come complete with small radial assembly. All mounting hardware is included.

CSX22 \$115 3.5M base collinear for 2M operation providing 5.5dB gain. Very rugged construction making it ideal and a very economic option if you have no intention of operating on UHF

CP22E \$135 Deluxe pre-fabricated version of the CSX 22

CS210Y \$190 10 ele 2M Yagi on 3.6M boom offers 9dB gain

CS25Y \$110 5 ele 2M Yagi on 1.8M boom for 6dB

CS713 \$144 13ele on 70 cm on 2.5M boom **CS76Y \$110** 6ele on 70 on 1M boom

V/UHF Mobile Antennas - What to Choose - and Why ?

The extensive range of Mobile aerals we offer exist for a greater purpose than to simply confuse our customers. Size, gain and frequency requirements are major considerations, before factoring in variables like mounting and specific applications. Let me attempt to provide a simple guide to ensure you get the antenna (or antennas) that best meet your specific requirements:

Around Town: MFJ's 1722 c/w little magmount (\$49) is certainly the smallest, but lacks the rigidity of the **CSM3** (\$50), still only 36cm long. Both are ideal for going in and out of garages and car-parks and will certainly access all local repeaters on 2 & 70, but can not offer than gain of the longer (+/-1M), more standard and most popular collinear - **NR770** (\$65) or the **DAX1000** (\$75) a slimline more deluxe version, both of which are suitable for mag-mounting if you change vehicles regularly. **MFJ's 1734**, (\$115) is a another inconspicuous dualband antenna - The convenience of the On-Glass mounting accounts for the higher cost.

If you monitor only 2M in your day-to-day travels, the ½ whips **CSM2** (\$58) or **M285** (\$50), both offer a very economic 3dB gain. The Slimline **DA140** (\$69) half-wave is similar in performance, but you pay a little more for its classy appearance. Again, a magmount will support these both these antennas.

Rural Radio: If your daily travels, a Sunday drive or a holiday takes you more into the sticks, the need for greater gain outweighs the need for "inconspicuous petit-ness" - to go under the garage and the like. The proven and popular **NR790** (\$179) gives 4.5 & 7dB gain on 2 & 70.

If you concentrate on 2M, the **CSM22** (\$70) or the prestigious Diamond **NR22L** (\$175) offer over 6.5dB gain. Being 2 x ½ elements in phase, they are over 2.5M long ! These antennas are the first choice of Car Rally and AREC operators where maintaining comms from obscure locations is the reason for their deployment. While you may not choose to use these big fellas on a day-to-day basis, they are now cheap enough to have one in the boot for any tiki-touring.

Specialist Mobiles: So many mobile rigs now include the 6M band. Our **DAX3300** (\$130) is our new tribander for operation on 6 2 and 70. I use one around town - it has great gain for 75Mhz reception !

Then there are the dream mobile machines that cover HF through to UHF bands. Our latest Diamond Antenna, the **HV7CX** (\$449) allows operation from 40M through to 70cm. In fact, by fiddling around with the different resonators I have mine operating on our commercial HF channels below 5MHz, without affecting the V/UHF coverage - and a plus, it is great on 75MHz !

Today, for the ultimate in mobile operating convenience simply invest in a Yaesu FT100 or FT857 and attach the Yaesu **ATAS120** Fully Automatic Antenna System (\$850). This gem will automatically tune to resonance from 40 to 70cm by adjusting its physical length.

Mounts: All antennas mentioned here, in fact, our entire Com-Sender, Daiwa and Diamond range have the same SO239 base mount - unbelievable, we have been able to standardise something ! We can, therefore, offer a comprehensive range of mounts and you can carry more than one antenna, selecting the best for any particular application or up-grade the model without having to replace the mount and re-wire your car ! The most popular are our **CSMT** (\$55) Bonnet/Trunk mounting kits. They will support the largest of the antennas, including the HF-UHF multi-band HV series, and do not require any holes to be drilled. Fitting flush with the panelwork, they also allow adjustment of the vertical plane of the antenna, making for an attractive installation. We also have the individual, component parts for putting together a diversity of mounts - the **SO239 Base** (\$18) and Stainless Steel "**Z**" and "**L**" brackets (\$15).

You can find pictures and other details in the previous *Communicator # 21* and , of course on our comprehensive web-site regarding all the V/UHF antennas mentioned in this article.

Remember: Any Antenna system, especially V/UHF arrays are by far and away the most economic and efficient method of acquiring gain. Alternatives, an expensive linear amplifier or re-locating to a hilltop home tend to have a greater impact on the pocket !

In subsequent issues, I will attempt to cover our other antennas, those covering the HF bands, our wide range of "rubber-duckies" and antennas for wide band scanners.

Prices Quoted are Subject to Change without Notice