SILVER 70

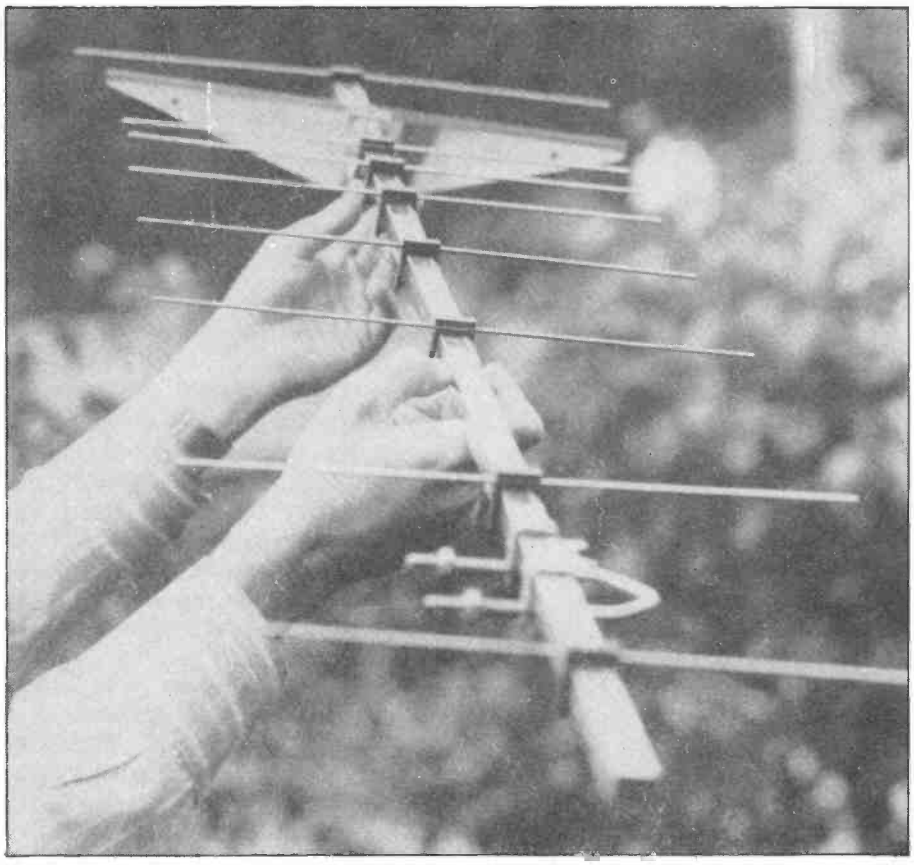
70cm Yagi Beam

Trevor Butler, G6LPZ, reviews the Silver 70 432 MHz antenna from Ant Products.

Claimed by its British manufacturers to be "the result of years of research and development", Ant Products' 432 MHz 14-element Silver 70 yagi arrived recently and was tested and evaluated for Ham Radio Today. Upon opening the box I was confronted by a well packaged piece of amateur radio equipment — a mass of metal and plastic parts to be assembled.

Assembly proved to be straightforward and initially took some 30 minutes (although with practice this time can be cut by half!). The enclosed instruction and data leaflet was generally helpful if rather confusing over protection from adverse weather — a polyurethane-type lacquer is not recommended. Instead a light coat of clear varnish is suggested.

Undeterred by this, I assembled the two boom sections and assembled and attached the angled brace. Next came the connection of the unique (patented?) elements — the most interesting being the driven element (of which more in a moment). The reflector and 12 directors are each attached to a black plastic clip, which in turn fixes to the boom into pre-drilled guide holes. These clips provide insulation for the elements and help to ensure correct polarity is obtained as well as helping to prevent any corrosion due to the interaction of metals.



Having virtually assembled the beast (it's 2.7 m long when complete, although a mere 1.1 kg in weight) I felt that the driven element was worthy of closer attention. It consists of a shaped piece of double-sided glass fibre board with a silver-plated copper element on one side, hence the antenna's name, and a delta/gamma match to the other side. Bolted to the board is an 'N' type socket (50 ohm) for connection of a suitable down lead. The driven element is held in place on the boom by a single screw biting into the metal.

One interesting observation was that there was a round hole to fix the element to the square boom! It was found that on field trials the driven element tended to move and a more rigid fixing would be an improvement.

Giving It A Try

Having selected a suitable length of UR67 feeder complete with 'N' type plug, I mounted the aerial on a 16 foot pole and situated myself on the South Downs, close to my home. Whilst there, many stations were worked and although direct comparison to other 70cms antennas was difficult, some pleasing results were obtained with the Silver 70 and many favourable reports exchanged. A gain of 16dBd is reported — it is good to see a dBd quotation instead, as one often finds, manufacturers' isotropic quotations, as the former means more to the radio amateur. The figure of 16dBd can, in my opinion, be taken as a fairly accurate figure based on the performance of the antenna in respect of other aerials tested and also in respect of received signal strengths.

There is a 3db Beam width in the E plane of about 22° and a satisfactory match was obtained across 10 MHz with good ATV reception available. Side lobes are rated to be some 10 to