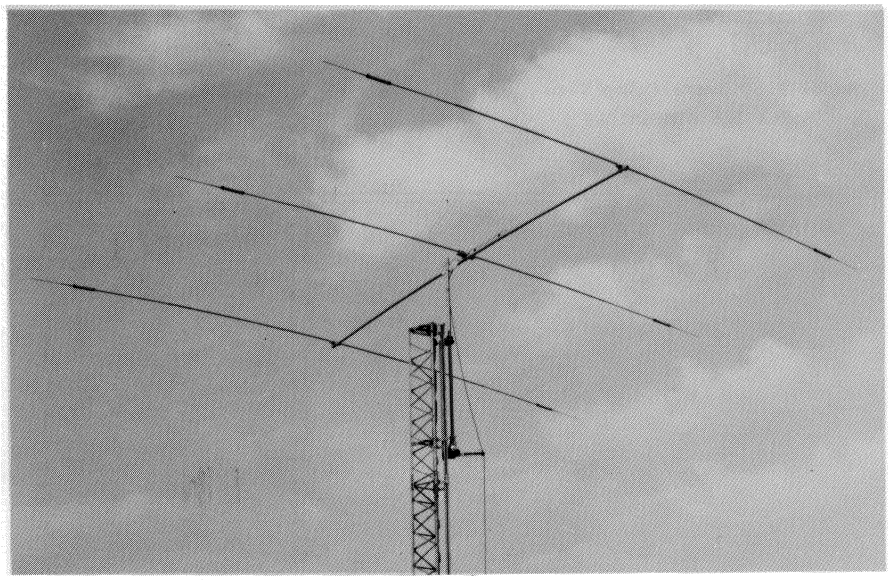
Duo-Band Yagi Beam Antenna

216 16-22 MHz **116** 16-22 MHz

★ High Gain Tower
And Simple Yagi Type
★ Minimum Installation Site,
and Economical
★ Ideal for Base Stations,
Coastal Communications



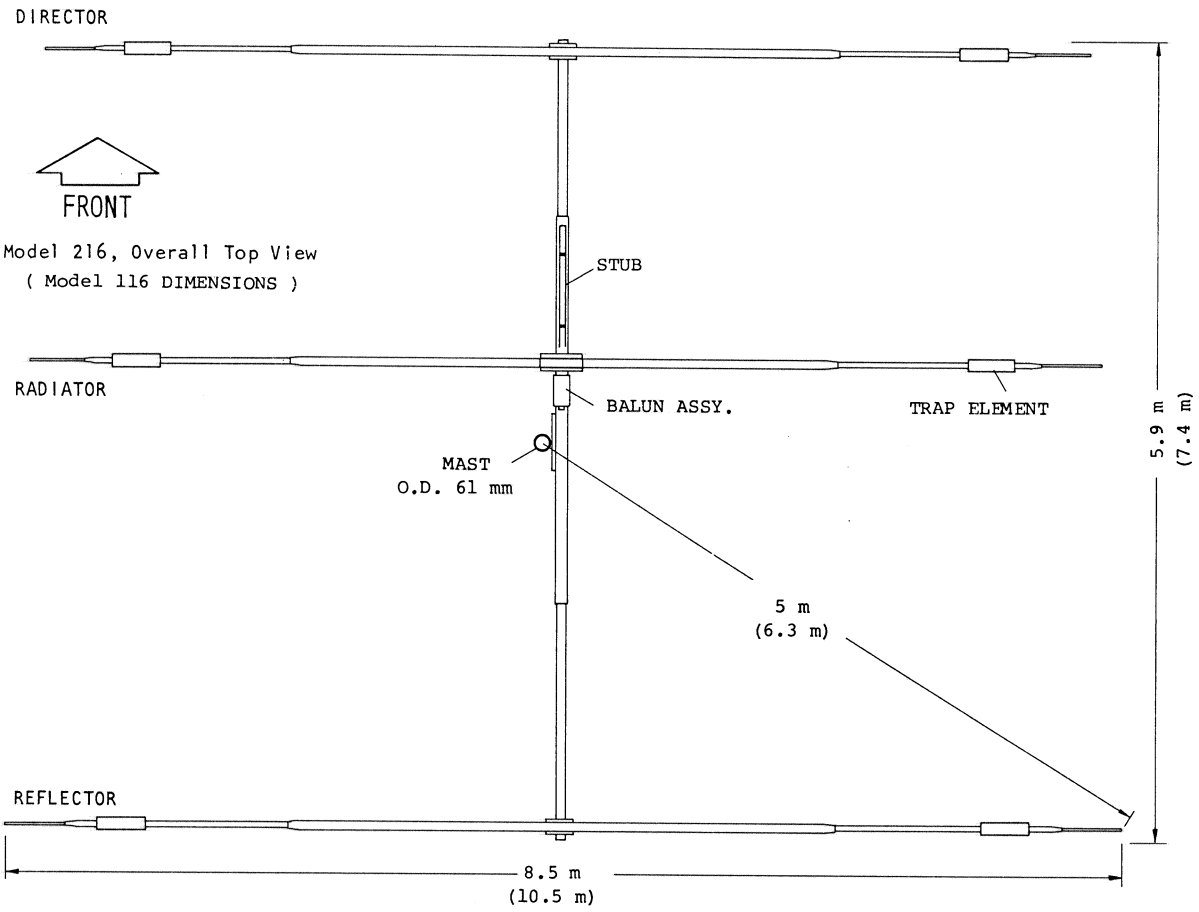
Model 116

PURPOSE AND FEATURES

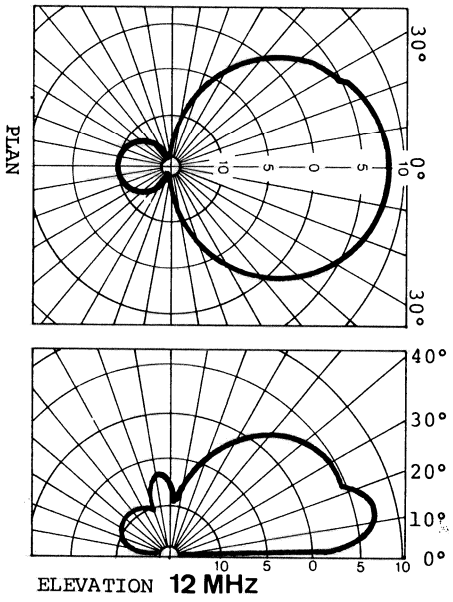
The model 116 and 216 are Yagi beam antennas specifically designed for a long range coastal communications. If intended communication range is approximately from 4000 to 15000 km, these antennas are ideal ones as they can derive more than 7 to 10dB gain in comparison with a dipole antenna. In addition to that, an use of these antennas arequite effective to reduce noise and interference due to high selectivity. These antennas are useful for making a simulation of the communication circuit, if you have a plan in the future to replace your existing antenna system with a wide band L.P. antenna or other high gain antenna. The effectiveness of the model 116 and 216 can be proved by the fact that millions of radio amateur operating on 14, 21 and 28MHz which are respectively closed to those commercial bands, obtained a good result using 3 element Yagi antenna. The electrical operation of these models 116, 216 are 3 elements, Yagi type an tenna having high forward gain, and is very economical one compared with those LP type of antennas except wide band characteristic. The model 116 and 216 assure complete 2 band operation by high-Q traps provided in each element. The power handling capability is 1kW but 5kW operation is available upon request. The feed section is provided with a 1:1 high-power balun as well as a unique matching hairpin stub in order to ensure optimum transmission of high frequency energy at a low standing wave ratio. Thus, mechanically, they are rugged and exceptional antennas in design and fabrication. High-tension aluminum alloys are used to withstand against hostile environment such heavy winds, rains and salty spray. Aluminum die-casting clamps and galvanized mast hardwares also ensure high reliability and long life. And CD provide an antenna rotator and a supporting tower for these antennas.

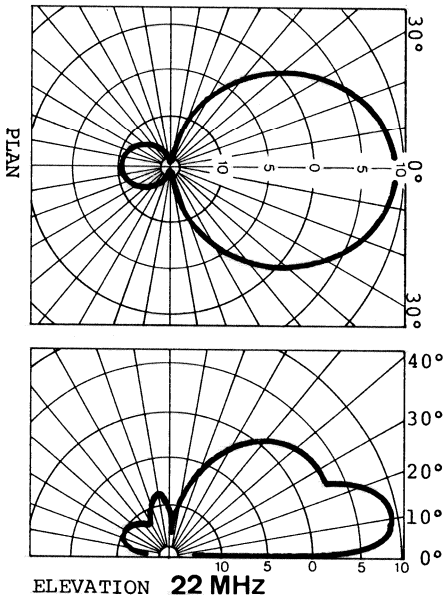
SPECIFICATIONS

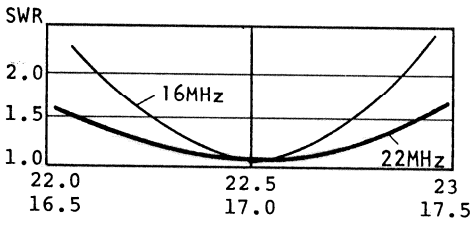
Model No.	116	216
Frequency	12, 16 MHz	16, 22 MHz
Polarization	Horizontal	Horizontal
Forward Gain	10 -12 dBi	10 -2 dBi
F/B Ratio (Average)	18 dB	18 dB
Azimuth Beam Width (Ave)	70 degree	70 degree
Power Handling Capability (Ave/PEP)	1/2 kW	1/2 kW
Impedance	50 or 75 ohms	50 or 75 ohms
VSWR	Less than 1.7:1	Less than 1.7
Boom Length	7.4 m	5.9 m
Maximum Element Length	10 m	8.5 m
Turning Radius	6 m	5 m
Weight	28 kg	22kg
Wind Survival Rating, 60 m/s (45 m/s)	250 kg-f (140 kgf)	190 kg-f (110 kgf)
Adaptable Mast Diameter	Dia. 61 mm	Dia. 61 mm
Recommended Rotator	RC5B-x	RC5B-x
Recommended Height	more than 15 m	more than 15 m
Recommended Tower, for 60 m/s (45 m/s)	KT18S (KT18R)	KT15R (KT7N)



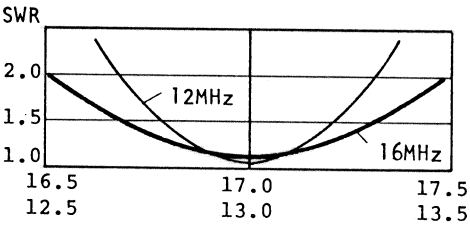
RADIATION PATTERNS gain in dBi.



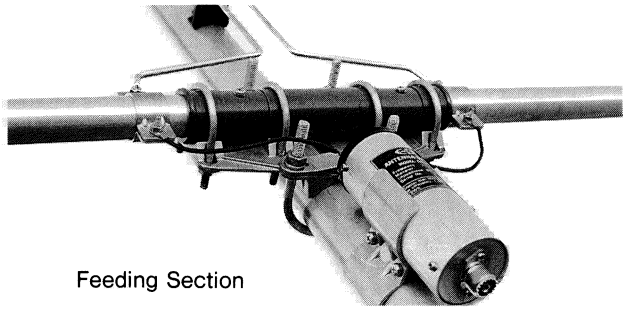




Model 216



Model 116



Feeding Section

High performance CD wave traps challenge full-size antenna elements by offering the same stable VSWR due to combined high Q factor and high power handling capability (Q is 250 minimum)