AKY/3

FM YAGI ANTENNA

INSTRUCTIONS



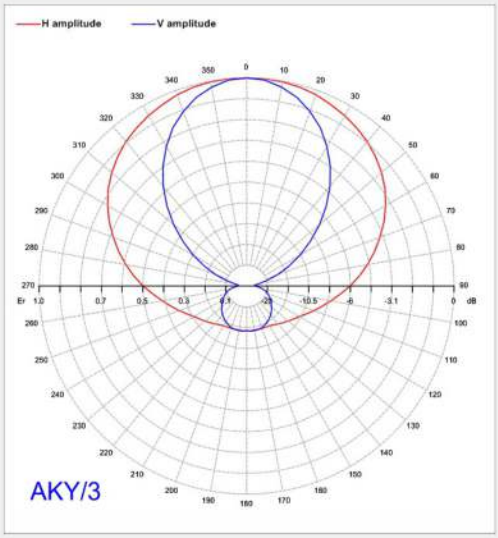
-Wide band FM Yagi antennas, stainless steel version.

-These Broadcast Antennas have directional diagram makes it the most used antenna model, especially for hills or mountains installations.

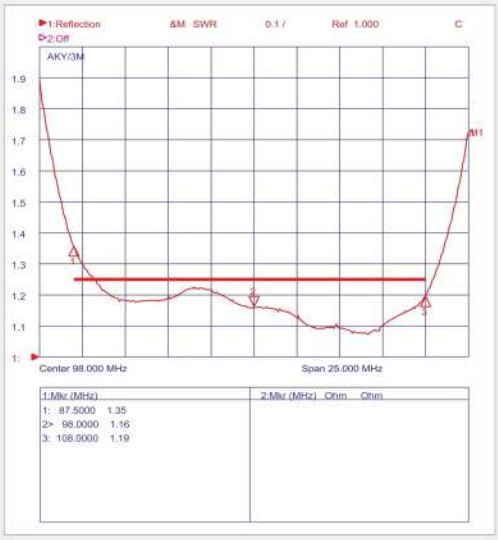
-The stainless steel surface is pickled with an electrochemical method that makes it uniform in color and eliminates the weld marks.

-All the metal parts are electrically grounded to prevent possible problems arising from lightnings.

-The gain of an antenna is related to its directivity and therefore the more the signal is concentrated in a limited portion of space, the more gain will be obtained.
Usually is used a parameter to define antenna gain, defined as the ratio of the power radiated by the antenna in a specific direction to the power radiated by a hypothetical isotropic antenna that is instead radiated in all directions. In a transmitting antenna, gain describes how much the antenna converts incoming power into radio waves radiated in a specific direction. Also with dipole antennas (Omnidirectional) is possible increase the gain and consists to increase the number of antennas.
A two antenna system has twice the gain of a single antenna. A four antenna system has twice the gain of a two antenna system, etc. In this case the gain increase because with more antennas we reduce the amplitude of the vertical lobe



-The coverage of a transmitting system depends on the power of the transmitter, the antenna system, the height at which the antennas are mounted and the type of area to cover. The best advice Label Italy can give you is to build the system with a good transmitter but don't overlook the type of the antenna and the height of the installation point. If you look at the horizon with binoculars, the maximum distance we can look at is called the "Line of sight". The FM signal does not go beyond this distance.
For this reason the height of the antenna is so crucial.



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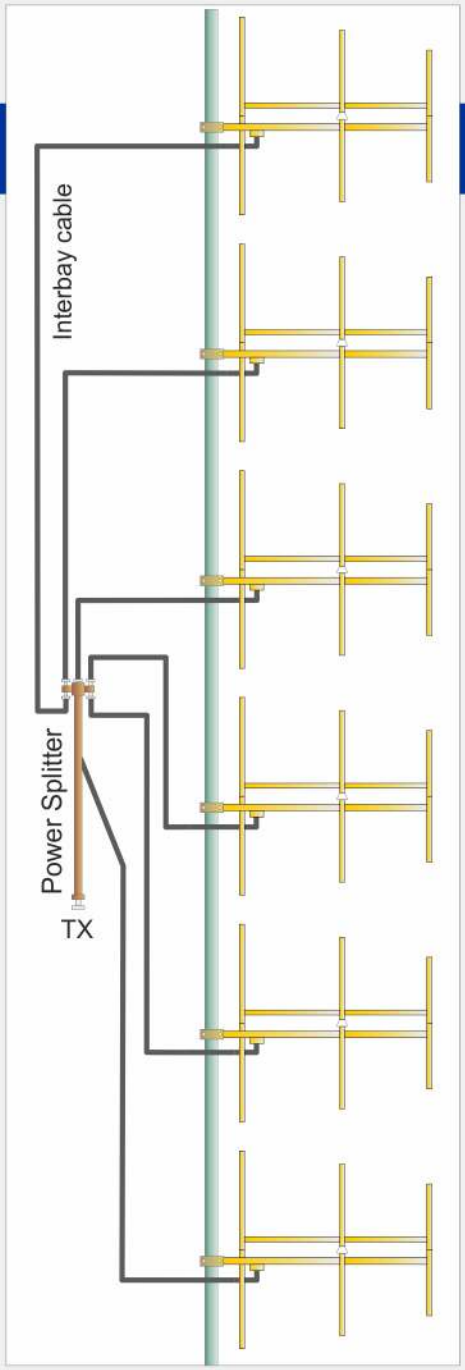
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SUGGESTED MAST SECTION

Is suggested install this Antenna over a pole with section from 60 to 110mm..

ESTIMATED DISTANCE BETWEEN FM ANTENNA BAYS

Wave Length = λ = 300 : f(MHz)

Distance between antenna bays (all antenna types) = **d**

d (suggested) = λ x 0.85

examples

88MHz λ = 300 : 88 = 3.41 mt d = 3.41 x 0.85 = 2.9 mt

98MHz λ = 300 : 98 = 3.06 mt d = 3.06 x 0.85 = 2.6 mt

108MHz λ = 300 : 108 = 2.78 mt d = 2.78 x 0.85 = 2.36 mt

Distance d suggested 2.6mt even if working frequency is Mid FM Band

BAYS	dBd Gain	Vert. dimensions	Weight kg	Wind Vel. Km/h	Wind Load kg
1	5,0	1,5 mt	12,5	160	18
2	8,0	4,1 mt	25	160	36
4	11,0	9,3 mt	50	160	72
6	12,5	14,5 mt	75	160	108
8	14,0	19,7 mt	100	160	144

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