

Models AJ3E-AJ3EBI- AJ3E/INOX-AJ3E/IT

- High power version (H.P.)
- FM band 87.5÷108 MHz
- Suitable for VHF, Band I and or OIRT Band on request
- Gamma match tuned
- Vertical polarization
- Light - low cost - demountable



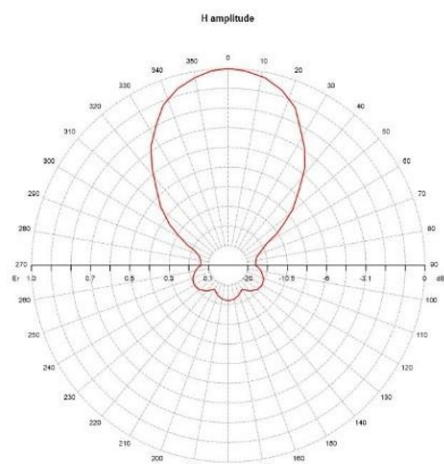
ELECTRICAL DATA

| | |
|-----------------------|--|
| Frequency range | 87.5 – 108 mhz. |
| Impedance | 50 Ohm |
| Connectors | N or 7/16" female or 7/8" EIA |
| Max Power | 650W (N) -1300W (7/16"-H.P version) |
| VSWR \pm 2MHz | $\leq 1.1:1$ in the opening channel |
| Polarization | Vertical or horizontal |
| Gain | 7dB (referred to half wave dipole) |
| Half power beam width | E plane $\pm 25^\circ$ H plane $\pm 30^\circ$ |
| Lightning protection | No DC grounded |

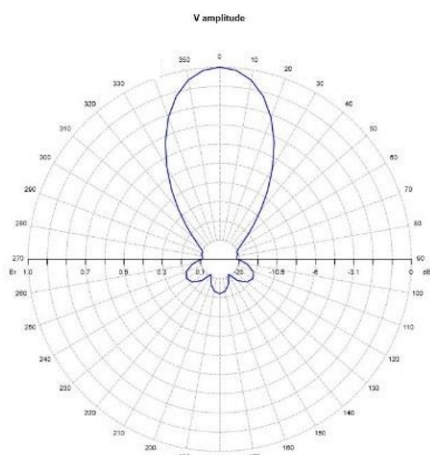
MECHANICAL DATA

| | |
|-------------------|---|
| Dimensions | According to the working frequency (1500(H)x1480(L)x100(W)mm at 98 MHz) |
| Weight | According to the mounting frequency |
| Wind surface | 0.14 m ² (at 98MHz) |
| Wind load | 18 kg (wind speed at 160 km/h) |
| Max wind velocity | 200 km/h. (AJ3E/IT version) |
| Materials | -AJ3E: Alluminium elements and boom -AJ3EBI: Alluminium and boom inox -AJ3E/INOX: Inox elements and boom -AJ3E/IT: Inox tig welded -Insulator: teflon; -Radome: PE (option icing protection) |
| Radome color | Transparent optional |
| Mounting | With special pipe clamps 50-110mm.Ø |

RADIATION PATTERN (MID BAND)



E plane



V plane

Version radome option



Antenna Systems with the AJ3E

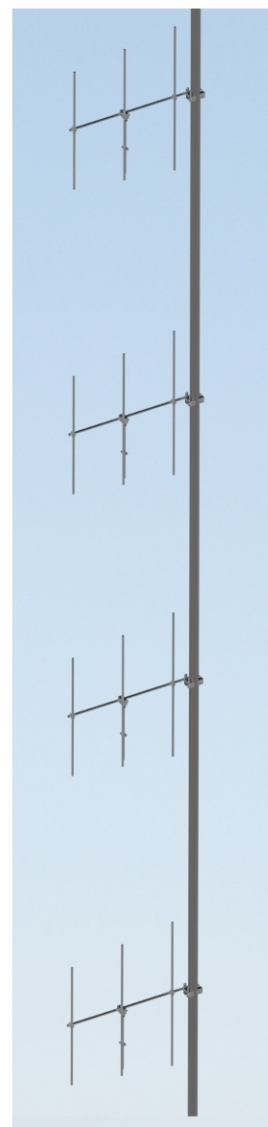
directional pattern

ELECTRICAL DATA

| | |
|--------------------|--|
| Frequency range | 87.5÷108 MHz |
| Impedance | 50 Ohm |
| Connector | EIA flange according to system power rating |
| VSWR | ≤ 1.1:1 Max |
| Polarization | Vertical or horizontal |
| Gain | According to requirement |
| Horizontal pattern | Any type according to the customer requirements |
| Vertical pattern | Null fill, beam tilt and special requirements on demand |
| Other facilities | The antenna system can be supplied in split feed with two equal half antennas. Each half can accept full power |

MECHANICAL DATA

| | |
|-------------------|--|
| Height of array | Subject to number of bays (refer to table) |
| Total net weight | According to the working frequency |
| Wind load | Refer to table (at 98MHz) |
| Pressurizable | No |
| Radome colour | Transparent (optional) |
| Mounting hardware | INOX AISI 304 clamps (standard) |
| Shipping | As required |



TECHNICAL DATA

| Number of bays | Dipole per bay | Gain ¹ | | Weight ² kg | Antenna height L m | Wind load (v=160 km/h) kg | COLLINEAR SYSTEMS ³ | | | | |
|----------------|----------------|-------------------|-------|------------------------|--------------------|---------------------------|--------------------------------|----------|---------|---------|---------|
| | | dB | times | | | | 800W | 1Kw | 2Kw | 3Kw | 5Kw |
| 1 | 1 | 7 | 5 | - | 1.5 | 18 | AJ3E | AJ3E(HP) | - | - | |
| 2 | 1 | 10 | 10 | - | 4.1 | 36 | - | AJ3EX21 | - | - | |
| 4 | 1 | 13 | 20 | - | 9.3 | 72 | AJ3EX41 | - | AJ3EX42 | AJ3EX43 | |
| 6 | 1 | 14.8 | 30 | - | 14.5 | 108 | AJ3EX61 | - | AJ3EX62 | AJ3EX62 | - |
| 8 | 1 | 16 | 40 | - | 19.7 | 144 | AJ3EX81 | - | AJ3EX82 | - | AJ3EX85 |

1 - Referred to half wave dipole. Attenuation of connecting cables not taken into account

2 - Without mounting hardware.

3 - Systems comprise: antennas, cables and splitter – for more details look on catalog – different versions on demand

- Gain is provided for vertical polarisation.
- When antenna is pole mounted on the top of a tower the horizontally polarized radiation pattern is omni - directional.
- If the antenna is side mounted, the supporting structure will have a slight effect on the radiation pattern and VSWR.
- Vertical tower space, wind load and weight numbers given are typical. Actual values vary with the specific installation. Contact us for more details of your installation.
- Gain will be reduced if null fill, beam tilt or special wavelength spacing are provided.
- Antenna radiation aperture is the distance from the centre of the top bay to the centre of the bottom bay.
- A length of five ft(1.6mt) of pipe is required above the top bay and below the bottom bay to protect from pattern interference by other antennas.
- Antenna wind load is calculated for 100 Mph (160Km/h) as of EIA-222-C standard