The 100A Series antenna is the latest development in ERI’s famous ROTOTILLER® style FM antenna. The 100A Series antenna is designed for non-pressurized, translator and low power FM applications. This antenna is also available in half wave length bay to bay configurations which will limit RFI problems by reducing downward and upward radiation.

Mounting brackets and attachment hardware suitable for round members up to 4” diameter are included. Stand-off pole mounting brackets and antenna input jumper cables are also available.

**Characteristics**

<table>
<thead>
<tr>
<th>Product Line:</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Series:</td>
<td>100A Series</td>
</tr>
<tr>
<td>Frequency Range:</td>
<td>88 - 108 MHz, Single frequency</td>
</tr>
<tr>
<td>Polarization:</td>
<td>Circular (Clockwise)</td>
</tr>
<tr>
<td>Azimuth:</td>
<td>±2 dB in free space, horizontal</td>
</tr>
<tr>
<td>VSWR at Input:</td>
<td>1.5:1 ± 2 MHz</td>
</tr>
</tbody>
</table>

**Features**

- FM Translator and low power FM applications
- Circular polarization
- Light weight and low wind load design
- Economically priced
## 100A Model

### Electrical and Mechanical Specifications

<table>
<thead>
<tr>
<th>Type Number</th>
<th>Power Gain</th>
<th>dB Gain</th>
<th>Input</th>
<th>Input Feed Config.</th>
<th>Power Rating kW</th>
<th>Bay to Bay Spacing</th>
<th>Wave Weight</th>
<th>No Ice</th>
<th>1/2&quot; Ice</th>
<th>No Ice</th>
<th>1/2&quot; Ice</th>
<th>No Ice</th>
<th>1/2&quot; Ice</th>
<th>Wind Area (CaAa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100A-1M</td>
<td>0.42</td>
<td>-3.768</td>
<td>7-16 DIN Male</td>
<td>Branch</td>
<td>1.0</td>
<td>Full</td>
<td>20.0</td>
<td>9.1</td>
<td>45.0</td>
<td>20.4</td>
<td>1.40</td>
<td>0.13</td>
<td>3.00</td>
<td>0.28</td>
</tr>
<tr>
<td>100A-2F</td>
<td>0.90</td>
<td>-0.458</td>
<td>7-16 DIN Female</td>
<td>Branch</td>
<td>2.0</td>
<td>Full</td>
<td>45.0</td>
<td>20.4</td>
<td>100.0</td>
<td>45.4</td>
<td>3.50</td>
<td>0.33</td>
<td>7.10</td>
<td>0.66</td>
</tr>
<tr>
<td>100A-4F</td>
<td>1.92</td>
<td>2.833</td>
<td>7-16 DIN Female</td>
<td>Branch</td>
<td>2.0</td>
<td>Full</td>
<td>100.0</td>
<td>45.4</td>
<td>225.0</td>
<td>102.1</td>
<td>8.70</td>
<td>0.81</td>
<td>17.30</td>
<td>1.61</td>
</tr>
<tr>
<td>100A-2F-HW</td>
<td>0.63</td>
<td>-2.007</td>
<td>7-16 DIN Female</td>
<td>Branch</td>
<td>2.0</td>
<td>Half</td>
<td>45.0</td>
<td>20.4</td>
<td>100.0</td>
<td>45.4</td>
<td>3.50</td>
<td>0.33</td>
<td>7.10</td>
<td>0.66</td>
</tr>
<tr>
<td>100A-4F-HW</td>
<td>1.18</td>
<td>0.704</td>
<td>7-16 DIN Female</td>
<td>Branch</td>
<td>2.0</td>
<td>Half</td>
<td>100.0</td>
<td>45.4</td>
<td>225.0</td>
<td>102.1</td>
<td>8.70</td>
<td>0.81</td>
<td>17.30</td>
<td>1.61</td>
</tr>
</tbody>
</table>

**Notes:**
1. Rated at 2000 feet elevation
2. Includes mounting brackets and attachment hardware for up to 4-inch in diameter tower leg or pole.
3. Antenna weight and wind load are approximate values for a typical structure assuming no top load. Final design loads will vary for specific projects and should be verified by an ERI representative.
4. Wind loads are calculated in accordance with the ANSI/TIA/EIA 222-F standard. Weight and effective wind area (CaAa) includes antenna, inner transmission feed and typical support mast and mounting brackets with no ice.

### Ordering Information

**Mounting Notes**

Price includes mounting brackets and attachment hardware for up to 4-inch in diameter tower leg or pole.

### Type Number Definition

**100A - b c - d**

- **100A** ERI 100A Series low power FM antenna
- **b** Number of Bays
- **c** Input: M = Male, F = Female
- **d** Design Note: Blank = Full wave length bay to bay spacing, HW = Half wave length bay to bay spacing
About Electronics Research, Inc.

Founded in 1943, Electronics Research, Inc. delivers high quality, innovative, integrated solutions to broadcasters across the U.S. and around the world. Our dedicated staff of engineers, designers, fabricators, and project managers take pride in contributing to your success by providing AM, FM, VHF, UHF, BRS-EBS, and Mobile Media broadcast systems including the industry’s best antenna, transmission line, filter/combiner, and tower and structural support systems. In addition to manufacturing the full range of broadcast system components and installation accessories, ERI offers a suite of engineering and field services needed to plan, install, optimize, and maintain your broadcast facility. We are your single source for broadcast solutions.

Broadcast Antenna Systems
- ROTOTILLER® FM Antenna
- LYNX™ Dual Input Antenna for FM-IBOC
- 1105 Circularly Polarized FM Antenna
- 100A Series Low Power Circularly Polarized FM Antenna
- FM Low Power Horizontally Polarized Educational FM Antenna
- P300/P350 Series Vertically Polarized FM Antenna
- 1180 and 1090 Series Broadband Panel FM Radio Antenna
- SLIMWING™ Batwing VHF Television Antenna
- CRUCIS™ Crossed Dipole VHF Television Antenna
- STINGRAY™ Broadband Television Panel Antenna
- TRASAR® High Power Traveling Wave Television Antenna
- AGW Quick-Deploy Emergency UHF Television Antenna
- ALP Low and Medium Power UHF Television Antenna
- AL PLUS Low and Medium Power UHF Television Antenna
- AL Series Low Power UHF Television Antenna
- HMD BRS-EBS Antenna
- SHADOWMASTER® Shadow-Filling BRS-EBS Antenna

Transmission Line Systems
- MACXLine® Rigid Transmission Line with Bellows
- HELIAX® Air- and Foam-dielectric Coaxial Cable
- HELIAX® Standard Elliptical Waveguide
- GUIDELine® Circular Waveguide
- Standard Rectangular Waveguide
- Dehydrators and Pressurization Equipment

Filter and Combining Systems
- FM Radio Filter and Combining Systems
- UHF and VHF Television Filter and Combining Systems
- DAB Filter and Combining Systems
- Mobile Media Filter and Combining Systems
- RF Components
- System Monitoring and Protection Components

Structural Support Systems
- Guyed Towers
- Self-Supporting Towers
- Roof-top Antenna Support Structures
- Specialty Structures and Custom Antenna Supports

RF and Structural System Services
- RF Field and Engineering Services
- Installation and Structural Engineering Services