

REVISION NOTES:

VERSIONS:  
 1. AREOLA-TENNA 128 MHZ (AIR-BAND)  
 2. AREOLA-TENNA 162 MHZ (AIS)  
 3. AREOLA-TENNA 403 MHZ (SONDES)

SUPPLIED PARTS - ALL VERSIONS:  
 1. AREOLA-TENNA WITH SHORT FEED LINE.  
 2. F-81L CONNECTOR.  
 3. F FEMALE TO MALE SMA ADAPTER.

DESIGN NOTES:  
 1. THE AREOLA-TENNA SISTERS ARE COAXIAL CENTER FED DIPOLES, SOMETIMES CALLED DOUBLE BAZOOKAS (BAZOOKAS?). SHE IS INHERENTLY WIDE BAND AND WILL COVER THE ENTIRE AIR-BAND INCLUDING VOICE, ACARS AND VDL2 FREQUENCIES WHEN TUNED FOR 128 MHZ LIKE THE -128 VERSION.  
 2. USE INEXPENSIVE TRI OR QUAD SHIELD CATV RATED COAX TO EXTEND THE FEED LINE. THE ANTENNA MATCHES TO 50 OHM LINE WITH MINIMUM LOSS.  
 3. AREOLA-TENNA IS WATERPROOF AND CAN BE USED IN INDOORS AND OUTDOORS.  
 4. THE DIMENSIONS OF THIS DESIGN ARE BASED ON BELDEN 1505A CABLE WITH A Vp OF 82%, USING ANY OTHER CABLE WILL ALTER THE DIMENSIONS SHOWN HERE. BELDEN 1505A IS A 3 GHZ RATED RG-59 CLASS CABLE WITH A SOLID CU CENTER CONDUCTOR, FOAMED PE DIELECTRIC AND AN ALUMINUM FOIL TAPE / 95% COVERAGE BRAIDED TINNED COPPER SHIELD. BECAUSE THERE IS SOLDERING INVOLVED, COPPER CABLE IS ESSENTIAL. DO NOT ATTEMPT TO DIY ANYTHING SIMILAR WITH COPPER CLAD STEEL CENTER CONDUCTOR OR ALUMINUM BRAID CABLE. IF YOU HAVE OTHER SCRAPS OF CABLE TO USE, CONTACT LOTHAR OF THE HILL PEOPLE WITH THE CABLE SPECIFICATION SHEET AND HE WILL GIVE YOU APPROPRIATE DIMENSIONS TO USE IN FABRICATION.

INSTALLATION:  
 1. UNCOIL THE FEED LINE AND RADIATING ELEMENTS. GENTLY FORM THE CABLES TO PERPENDICULAR. DO NOT STRESS THE SHUNTS AND CENTER FEED POINTS.  
 2. YOU MUST PROVIDE YOUR OWN SUPPORTS FOR ALL VERSIONS, EXCEPT THE SONDE VERSION WHERE THE ELEMENTS ARE SO SHORT THAT THEY STAND ON THEIR OWN AND DO NOT NEED SUPPORTS OR RADOME. THE AIR-BAND AND AIS VERSIONS REQUIRE VERTICAL ELEMENT SUPPORT WHICH CAN BE ANY NON-METALIC MATERIAL OR A RADOME MADE FROM CARLON UV RATED PVC PARTS AND CONDUIT.  
 3. MOUNT THE ELEMENTS VERTICALLY POLARIZED.  
 4. RUN THE ATTACHED FEED LINE PERPENDICULAR AND HORIZONTAL TO THE ELEMENTS AS FOLLOWS:  
 4.1. AIR-BAND - 3' BEFORE TURNING DOWN.  
 4.2. AIS - 2' BEFORE TURNING DOWN.  
 4.3. SONDE - 1' BEFORE TURNING DOWN.  
 4.4. ATTACH AND TIGHTEN (20 IN./OZ.) THE F-81L TO THE ANTENNA AND YOUR FEED LINE AND APPLY TAPE, COAX SEAL OR SHRINK TUBING TO SEAL YOUR FEEDLINE.

