



ANT-MULTI Installation Guide



Solectek ANT-MULTI Installation Guide

This antenna connects to the ODU (Outdoor Unit) supplied with Solectek MP-Series wireless bridge/routers. Antenna specifications are as follows:

Specifications

- Frequency: 2.400 to 2.485 GHz
- Polarization: vertical
- Elevation peak: horizon $\pm 5^\circ$
- VSWR: 2.5:1, maximum
- Impedance: 50 Ohms
- Construction: polycarbonate radome, sealed
- Environmental: -50° to 70° C
- Wind survival: 125 MPH
- Mounting: mast mounting with U-bolts*
- Mounting bracket: 4"x 4"x 4 1/4"
- User-installable reflector plates for configuration flexibility
- * ~~Antenna pole must be 2" (5cm) outside diameter~~
- **Maximum Pole Size: 2" (5cm) outside diameter**

40° Spread Configuration

- Gain: 13.8 dBi minimum at 2.440 GHz
- Elevation beamwidth: 22° , nominal
- 3 dB azimuth beamwidth: 42°
- 1 dB azimuth beamwidth: 22°
- Wind-load at 125 mph: 33.2 lbs.
- Size: 8 1/4" x 16" x 4"

110° Spread Configuration

- Gain: 10.5 dBi minimum at 2.440 GHz
- Elevation beamwidth: 26° , nominal
- 3 dB azimuth beamwidth: 110°
- 1 dB azimuth beamwidth: 56°
- Wind-load at 125 mph: 16.7 lbs.
- Size: 4 1/4" x 16" x 2 3/8"

360° Spread Configuration

- Gain: 6 dBi minimum at 2.440 GHz
- Elevation beamwidth: 26° , nominal
- Azimuth beamwidth: 360°
- Wind-load at 125 mph: 13 lbs.
- Size: 2 3/8" diameter, 16" long

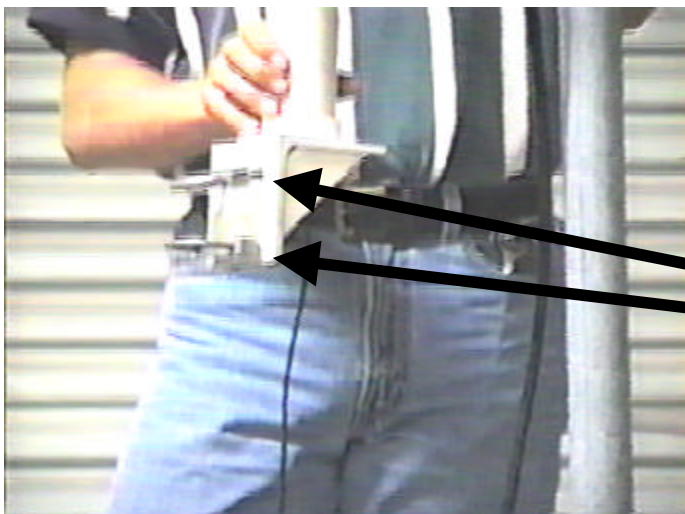
This manual provides the installer with a pictorial guide to the proper installation of this antenna. Please consult additional guidelines available from your Solectek Certified Reseller if necessary to ensure that this installation is safe and functions as expected.



The ANT-MULTI can be configured with one of three different radiation patterns: 360 degrees, 110 degrees, and 40 degrees. The basic antenna, shown in this photo, is configured for a 360 degree pattern.



Before attempting to mount the antenna, examine it to make sure there are no cracks or separations around the top or bottom of the plastic tube.



The ANT-MULTI requires two “U” bolts to mount to the mast (pole). It is usually most convenient for the installer to install the “U” bolts and “V” blocks on the antenna base before mounting the ANT-MULTI on the mast. In this photo, the two “U” bolts and “V” blocks are mounted on the antenna base. Do not tighten the nuts until the antenna is mounted on the mast.



The ANT-MULTI, with “U” bolts and “V” blocks installed, may be slipped over the end of the mast. For a 360 degree omnidirectional installation, it is best to mount the ANT-MULTI at the top of the mast to avoid the “mast shadow” which can interfere with the 360 degree transmitting and receiving capability of the antenna.



Carefully tighten the “U” bolt nuts to fasten the ANT-MULTI securely to the mast. Be careful to tighten the nuts only enough to hold the antenna firmly on the mast. It is possible to overtighten the nuts and deform the mounting base or break the “U” bolts if the nuts are overtightened.



Connect the antenna cable from the ANT-MULTI to the “ANTENNA” terminal on the ODU (Outdoor Unit). Finger tighten the connection to the ODU. The cable and ODU connectors should thread together easily. Do not use any tools – finger tighten the connection until all threads are covered and the connection is tight.



Seal all connections using the black sealant strips provided. Start from the top (ODU end) of the connector and wrap downward, stretching the strip as you wrap the connector. After wrapping the connector, use your fingers to push the black sealant into place around the connector to form a weathertight seal.



This is the 40 degree backplate, one of two backplate provided with each ANT-MULTI. Please note that the 40 degree backplate is bent in a three-sided shape. The 110 degree backplate is flat. The backplate is attached to the ANT-MULTI with two "U" bolts. In this photo, the engineer has installed the two "U" bolts.



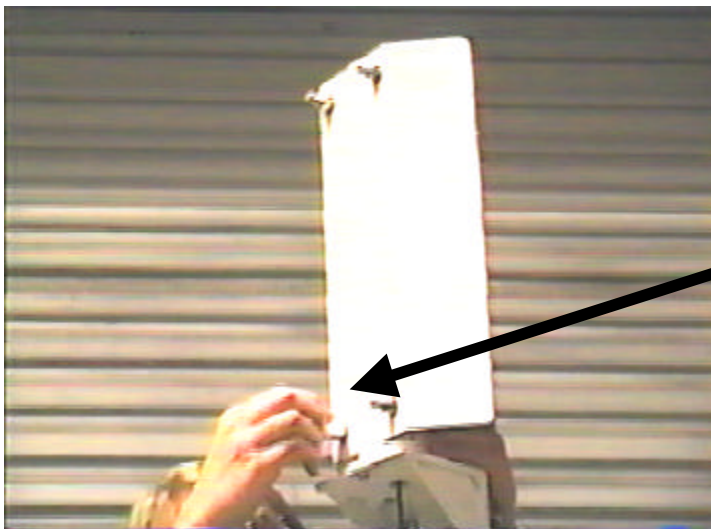
Rear view of the 40 degree backplate. The engineer has installed the washers and nuts in preparation for installing the backplate on the ANT-MULTI.



Carefully slip the backplate with "U" bolts over the ANT-MULTI antenna. Finger tighten the nuts on the back of the backplate.



Position the backplate for the optimum signal. Detailed procedures for aligning the antennas are provided in the ANT-Series Operator's Manual. The nuts on the backplate "U" bolts should be finger tight at this point.



When the antenna is aligned (procedures in MP-Series manual), tighten the nuts on the back of the backplate.

IMPORTANT NOTE: Hold a socket in your fingers to tighten the nuts on the backplate. Tighten **very carefully and slowly** until the backplate is held firmly against the plastic tube. It is very easy to damage the plastic tube by overtightening.

One Year Limited Warranty

**For products purchased using
Solectek's U.S. & Canada MSRP
Price List and installed in the
United States or Canada.
Effective August 1, 1999**

Subject to the conditions and procedures set forth below during the warranty period, Solectek will repair or replace, at Solectek's option, such Solectek products or parts thereof which, on inspection by Solectek, are found to be covered by the limited warranties set forth below. The warranty period for new hardware products, which are listed on Solectek's U.S. & Canada MSRP Price List at time of purchase, is twelve months from the date of shipment from Solectek. The warranty period for spare parts and R- part numbers is ninety days from the date of shipment from Solectek.

If you think there is a problem or defect with your Solectek hardware product:

- Contact Solectek's Technical Support Department between 8:00 a.m. and 5:00 p.m., Pacific Time at (858) 450-1220, or via fax at (858) 457-2681, or via e-mail at tech@solectek.com. The Solectek Technical Support Representative will discuss your problem to confirm the defect. After business hours, please leave a voicemail or send an e-mail or fax. A Technical Support Representative will respond to you the next business day.
- If warranty or return service is needed, you will receive a Return Material Authorization (RMA) number. At no time should Solectek products be sent back without a valid RMA number. Solectek accepts no responsibility for unauthorized returns.

You agree to pay for shipping to Solectek. If the product is under warranty, Solectek will pay for shipping of the repaired or replacement product to you via ground transportation to your location in the United States. For installations outside the continental U.S., Solectek will pay for shipping via ground transportation to the freight forwarder of your choice located in the continental United States. Any other freight arrangements will be at customer expense.

Solectek shall not be liable for any damage caused to the product in transit. You acknowledge and agree that you will bear all risk of loss or damage to the product while in transit.

Send return shipments to:

Solectek Corporation
6370 Nancy Ridge Drive, Suite 109
San Diego, CA 92121-3212

ATTN: RMA # _____

- Pack products securely, to prevent damage in transit. Be sure the RMA number is clearly visible on the outside of the return shipping carton.
- Returned Solectek products must include all other components from the original package, including the hardware, cables, connectors, software diskettes, and user manual(s) unless otherwise stipulated by Solectek.
- Enclose a copy of the original purchaser's proof of purchase, if needed to support warranty claim. (See details in LIMITATIONS section below.)

After inspecting the failed unit, Solectek will repair or replace materially defective parts or components. All products that are replaced become the property of Solectek. If upon inspection by Solectek, a unit returned under warranty is deemed to be damaged or out of warranty for any reason, (see LIMITATIONS section below), Solectek will contact the customer with a price for the repair or replacement unit. Upon receipt of payment (wire transfer, certified check, credit card, etc.) for the replacement unit plus outbound shipping fees, Solectek will send a repaired or replacement unit to the customer. Customers who do not accept the repair offer may receive their failed equipment back by prepaying an inspection fee of \$300 and the return freight cost.

If upon inspection by Solectek, a unit returned under warranty is found to be defect free, Solectek reserves the right to charge the customer a \$500 test fee.

SOLECTEK'S SOLE AND EXCLUSIVE OBLIGATION, AND YOUR SOLE AND EXCLUSIVE REMEDY, UNDER THIS LIMITED WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE APPLICABLE SOLECTEK PRODUCT IN ACCORDANCE WITH THE TERMS SET FORTH HEREIN.

LIMITATIONS

As the original purchaser, you receive these warranties from Solectek Corporation, subject to the terms and limitations set forth below.

Solectek warrants that your Solectek products will be free from defects in material and workmanship and will perform in substantial compliance with the operator's guide(s) accompanying the products for a period of one year for new hardware products listed on the U.S. & Canada MSRP Price List and ninety days for spare parts and R- part numbers.

Solectek does not cover or accept liability for any injury, damage or failure caused by misuse, misapplication, abuse, acts of nature, accidents (e.g., dropping the Solectek products or software diskettes), electrical mishaps, causes beyond our control, or claims by other than the original purchaser.

Solectek will not honor, and will consider this limited warranty voided, if, in Solectek's reasonable judgment, there has been any (1) tampering with the Solectek product's external label or serial number, (2) attempt to open the Solectek product's case without prior written consent from Solectek, (3) attempted or actual repair by anyone other than an authorized Solectek technician, (4) installation or use with any power supply component(s) other than the original Solectek power supply components provided in the product package, (5) installation or use with any cables or antenna(s) other than original Solectek products, (6) Installation or use in environmental conditions that are outside Solectek's published environmental specifications (including but not limited to temperature range, humidity, cable lengths, proximity to other devices, etc.).

Warranty is given for twelve (12) months from the date of product shipment from Solectek for new hardware products and ninety (90) days for spare parts and R- part numbers. Solectek will honor this warranty upon receiving proof of purchase. "Proof of purchase" is a copy of the original sales transaction, showing complete name and address of seller, complete name and address of purchaser, date of purchase, model number, and serial number.

This warranty is available only to the initial end user purchaser of the product and is not transferable. This warranty is applicable only to products purchased using Solectek's U.S. and Canada MSRP Price List and installed in

the U.S. and Canada. Warranty is void if products purchased using U.S. & Canada MSRP are sold and installed outside of the U.S. & Canada.

DISCLAIMER OF WARRANTIES

EXCEPT AS EXPRESSLY SET FORTH HEREIN, SOLECTEK HEREBY EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE.

WAIVER OF CONSEQUENTIAL DAMAGES

SOLECTEK HEREBY DISCLAIMS ANY AND ALL SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION, LOST PROFITS, LOSS OF OR DAMAGE TO ANY OTHER COMPUTER EQUIPMENT OR RELATED DATA) WHICH MAY RESULT FROM BREACH OF ANY WARRANTY, OR ARISING OUT OF THE USE OR INABILITY TO USE ANY SOLECTEK PRODUCT, EVEN IF SOLECTEK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

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