**WARRANTY POLICY**

NovAtel Inc. warrants that its Global Positioning System (GPS) products are free from defects in materials and workmanship, subject to the conditions set forth below, for the following periods of time:

- **Choke Ring**: Ninety (90) Days
- **Cables and Accessories**: Ninety (90) Days

Date of sale shall mean the date of the invoice to the original customer for the product. NovAtel's responsibility respecting this warranty is limited solely to product repair at an authorized NovAtel location only. Determination of repair will be made by NovAtel personnel or by technical personnel expressly authorized by NovAtel for this purpose.

The foregoing warranties do not extend to (i) nonconformities, defects or errors in the products due to accident, abuse, misuse or negligent use of the products or use in other than a normal and customary manner, environmental conditions not conforming to NovAtel's specifications, or failure to follow prescribed installation, operating and maintenance procedures, (ii) defects, errors or nonconformities in the products due to modifications, alterations, additions or changes not made in accordance with NovAtel's specifications or authorized by NovAtel, (iii) normal wear and tear, (iv) damage caused by force of nature or act of any third person, (v) shipping damage; or (vi) service or repair of product without prior written consent from NovAtel.

In addition, the foregoing warranties shall not apply to products designated by NovAtel as beta site test samples, experimental, developmental, preproduction, sample, incomplete or out of specification products or to returned products if the original identification marks have been removed or altered.

The warranties and remedies are exclusive and all other warranties, express or implied, written or oral, including the implied warranties of merchantability or fitness for any particular purpose are excluded.

NovAtel shall not be liable for any loss, damage or expense arising directly or indirectly out of the purchase, installation, operation, use or licensing or products or services. In no event shall NovAtel be liable for special, indirect, incidental or consequential damages of any kind or nature due to any cause.

There are no user-serviceable parts in this accessory, and no maintenance is required.

You must obtain a RETURN MATERIAL AUTHORIZATION (RMA) number by calling GPS Customer Service at 1-800-NOVATEL (Canada and USA only) or 403-295-4900 before shipping any product to NovAtel or your local dealer.

Once you have obtained an RMA number, you will be advised of proper shipping procedures to return any defective product. When returning any product to NovAtel, please return the defective product in the original packaging to avoid ESD and shipping damage.

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**NovAtel GPSAntenna™ Accessory**

**Choke Ring Model A032**

- User Information -

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**DESCRIPTION**

The NovAtel Choke Ring Model A032 has been designed to provide a lightweight, low-cost solution for the problem of GPS signal multipath reflections. It enables the NovAtel GPSAntennas to achieve geodetic-quality GPS measurements for surveying, mapping and research applications.

A choke ring's unique construction substantially reduces the multipath effect on the GPS signal. The choke ring actually reduces the antenna gain at low elevation, where the multipath is more prone to affect system accuracy. By reducing measurement errors due to multipath, the result is greater accuracy in your positioning calculations.

The Model A032 choke ring is intended for use with NovAtel GPSAntenna Models 502, HMT20004, 531, and HMT20002. It will mount on a standard surveying tripod (with 5/8" mounting bolt), or other equivalent mounting structure.
GPS Choke Ring Model A032

Specifications

Material: Aluminum casting alloy with powder coated polyurethane finish

Diameter: 36.92 cm (14.4 inches)

Height of choke ring: 6.15 cm (2.4 inches)

Weight: 1.8 kg (4.4 lbs.)

Mounting: 5/8 - 11 UNC thread

Usable temperature range: -55°C to +70°C (-67°F to 158°F)

Phase Center (L1 only – model 531): 70 mm (2.77 inches)

Phase Center (L1/L2 – model 502): L1 = 70 mm (2.75 inches)
L2 = 69 mm (2.72 inches)

Mechanical Drawings

Note: All dimensions in millimetres except for thread size.

Installation

The procedure for setting up your NovAtel GPSAntenna Choke Ring is as follows:

1. From the bottom of the choke ring, feed the TNC connector end of the antenna cable through the curved cable feed opening (next to the center mounting hole).
2. Connect the TNC cable connector to the GPSAntenna and tighten.
3. Seat the GPSAntenna onto the pre-installed hex adapter insert, over the center mounting hole. Orient it so that the cable easily passes through the cable feed opening (see Figure 1).
4. Insert the threaded end of the adapter through the mounting hole, from the bottom (see Figure 2), into the hex insert and then the base of the antenna. Turn clockwise until finger tight.
5. Now that the choke ring is attached to the adapter, screw the bottom of the adapter onto a tripod, tribrach adapter or other equivalent mount (see Figure 3).
6. Pull any excess cable through the cable feed opening and connect it to your receiver.
7. Your GPSAntenna will have a logo and an arrow on its top surface. Align this arrow with north.

Figure 1: Seating the Antenna

Figure 2: Inserting the Adapter End

Figure 3: Mounted on a Tripod