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Diamond D3000N

Diamond Antenna D3000N Super Discone Antenna Instruction Manual

Model: D3000N

1. INTRODUCTION AND OVERVIEW

The Diamond Antenna D3000N is a super discone antenna designed for ultra-wideband reception and multi-band transmission. It offers a receive frequency range of 25 to 3000 MHz and a transmit frequency range of 50-1200 MHz, with 6m tunable for transmit. Its compact and lightweight design allows for versatile installation, including on balcony railings. This antenna is suitable for various amateur radio bands, including 2m, 1-1/4m, 70cm, 33cm, and 23cm. It also serves as an effective "shop" antenna for testing multiple transmitters with a single coaxial cable. The design allows for further compactness by removing the top loading coil if 25-50 MHz reception is not required.



Figure 1: Assembled Diamond Antenna D3000N Super Discone Antenna. This image shows the antenna's full assembly, featuring the central mast, the upper discone elements, and the lower conical elements, all designed for wideband frequency coverage.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating this antenna.

- Electrical Safety: Never install the antenna near power lines. Contact with power lines can be fatal.
- Mounting Safety: Ensure the mounting location is structurally sound and can support the antenna's weight and wind load. Use appropriate mounting hardware and techniques.
- **Lightning Protection:** Consider installing a lightning arrestor and proper grounding for the antenna system to protect equipment and property.
- Personal Protective Equipment: Wear appropriate safety gear, such as gloves and eye protection, during installation.

3. PACKAGE CONTENTS

Verify that all components are present before beginning assembly.

- · Main Antenna Mast/Body
- Upper Discone Elements (Radials)
- · Lower Conical Elements (Radials)
- · Top Loading Coil/Whip Element
- Mounting Hardware (U-bolts, clamps, nuts, washers)
- · Assembly Screws/Bolts
- · Instruction Sheet (this document)

4. SETUP AND ASSEMBLY

Follow these steps to assemble your D3000N antenna. Assembly may require two people for easier handling.

- 1. **Unpack Components:** Carefully remove all parts from the packaging and lay them out on a clean, flat surface. Identify all components listed in Section 3.
- 2. **Assemble Upper Discone Elements:** Attach the shorter, upper radial elements to the designated points on the main antenna body. Ensure they are securely fastened.
- 3. **Assemble Lower Conical Elements:** Attach the longer, lower radial elements to the main antenna body, forming the conical shape. These elements are typically hollow stainless steel tubes.
- 4. **Install Top Loading Coil/Whip:** Secure the top loading coil or whip element to the uppermost part of the antenna. This element can be removed if 25-50 MHz reception is not required, making the antenna more compact.
- 5. **Mounting:** Secure the assembled antenna to a sturdy mast or pole using the provided U-bolts and clamps. Ensure the antenna is mounted vertically and is clear of obstructions. The antenna connector is an N-type connector, located at the base of the main antenna body.
- 6. **Coaxial Cable Connection:** Connect a high-quality 50 Ohm coaxial cable with an N-type connector to the antenna. Route the cable safely, avoiding sharp bends or kinks.

Note: The antenna features a UHF-N connector. Ensure your coaxial cable or adapter is compatible.

5. OPERATING INSTRUCTIONS

The D3000N is designed for broad frequency coverage.

- **Reception:** Connect the antenna to your receiver or scanner. The antenna provides excellent reception across 25 to 3000 MHz.
- Transmission: For amateur radio use, the antenna supports transmission on 50-1200 MHz (6m, 2m, 1-1/4m, 70cm, 33cm, 23cm bands). Always ensure your transceiver is properly tuned and the antenna's SWR (Standing Wave Ratio) is within acceptable limits for your equipment to prevent damage.
- Testing: This antenna is well-suited for testing various transmitters due to its wideband characteristics.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your antenna.

- **Periodic Inspection:** Annually inspect all connections, mounting hardware, and coaxial cable for signs of wear, corrosion, or damage. Tighten any loose fasteners.
- Cleaning: Clean the antenna elements periodically with a soft cloth and mild detergent to remove dirt, grime, and salt buildup, especially in coastal areas. Rinse thoroughly with fresh water.
- Corrosion Protection: Apply a dielectric grease or corrosion inhibitor to exposed metal connections, particularly the N-connector, to prevent moisture ingress and corrosion.

7. TROUBLESHOOTING

If you experience issues with your D3000N antenna, consider the following:

- Poor Reception/Transmission:
 - Check all coaxial cable connections for tightness and proper seating.
 - Inspect the coaxial cable for damage (cuts, kinks, severe bends).
 - Ensure the antenna is mounted in a clear location, away from large metal objects or other antennas that could interfere.
 - Verify your radio equipment is functioning correctly and tuned to the desired frequency.
- High SWR (for transmission):
 - · Confirm all antenna elements are correctly assembled and securely fastened.
 - Check the coaxial cable and connectors for shorts or open circuits.
 - Ensure the antenna is not too close to other conductive structures.
- **Missing Components:** If any parts were missing upon delivery, contact your retailer or Diamond Antenna customer support immediately.

8. SPECIFICATIONS

Model Number	D3000N
Brand	Diamond Antenna
Receive Frequency	25 - 3000 MHz
Transmit Frequency	50 - 1200 MHz (6m tunable)

Impedance	50 Ohm
Connector Type	N-Type
Product Dimensions	33"L x 3"W x 1"H (approximate, assembled)
Item Weight	2.49 pounds
Manufacturer	Diamond Antenna

9. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the documentation provided with your purchase or visit the official Diamond Antenna website. Keep your proof of purchase for warranty claims.

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Related Documents - D3000N



<u>Diamond DP-CP5 5-Band Trap Vertical Antenna Assembly Instructions</u>

Detailed assembly instructions for the Diamond DP-CP5 80-10 Meters 5 Band Trap Vertical Antenna with Trap Radials. Learn how to assemble, adjust, and install this compact and efficient antenna.



Diamond Dermabrasion Unit Instruction Manual

Comprehensive instruction manual for the 7 Functions Diamond Dermabrasion Unit, detailing its features, operation, safety precautions, and treatment guidelines for skin rejuvenation and care.



Diamond Refrigerated Salad Bar SB 40 F B / SB 60 F B: Installation and User Manual

Comprehensive guide for installing, operating, and maintaining Diamond refrigerated salad bars, models SB 40 F B and SB 60 F B. Includes safety instructions, technical specifications, and warranty information.



Diamond BOOST/EQ Guitar Effects Pedal - Instruction Manual

Instruction manual for the Diamond BOOST/EQ guitar effects pedal, covering features, dual modes, signal chain placement, specifications, and warranty.



Diamond AN203T-2F Use and Maintenance Handbook

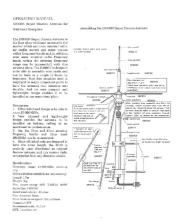
This comprehensive handbook details the operation, maintenance, and troubleshooting of the Diamond AN203T-2F refrigeration control system, covering panel functions, temperature adjustments, and alarm management.



Diamond PV600 Catering Equipment Parts List and Diagram

A comprehensive parts list and exploded view diagram for the Diamond PV600 catering equipment, including model number, production code, and detailed item descriptions with reference numbers.

Documents - Diamond - D3000N



[pdf] User Manual

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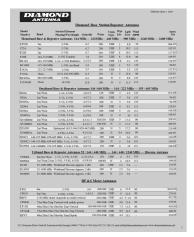
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Diamond Antenna Product Catalog: Amateur Radio Antennas & Accessories

Explore the Diamond Antenna Product Catalog, featuring a wide range of high-quality base station, mobile, and handheld antennas, along with essential accessories like mounts, duplexers, SWR meters, and power supplies. Discover durable, high-performance solutions for amateur radio and commercial applications, including detailed specifications, features, and installation ideas.

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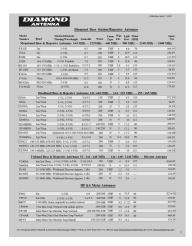


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Diamond Antenna Retail Price Schedule - Antennas & RF Accessories

Explore the comprehensive Diamond Antenna Retail Price Schedule, effective February 1, 2025. This document details specifications and pricing for a wide range of amateur radio equipment, including monoband, dualband, and triband base station and mobile antennas, HF and 6-meter antennas, various mounting kits (trunk lip, magnet, mirror, luggage rack), cable assemblies, replacement parts, high-power/low-loss duplexers and triplexers, handheld transceivers, receiving and scanner antennas, power/SWR meters, lightning discharge protectors, coax switches, dummy loads, and switching power supplies. Find models, bands, gain, power ratings, connectors, and dimensions for optimal amateur radio setups.

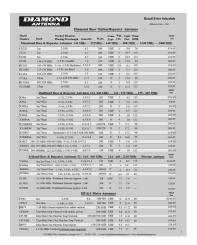
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Diamond Antenna Product Catalog: Amateur Radio Antennas & Accessories

Explore the comprehensive Diamond Antenna product catalog featuring high-quality amateur radio antennas, mobile mounts, SWR meters, power supplies, and accessories for various communication needs. Discover detailed specifications for base station, mobile, and handheld antennas, along with mounting solutions and essential radio equipment.

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Diamond Antenna Retail Price Schedule: Antennas and Accessories

Official retail price schedule for Diamond Antenna products, featuring a comprehensive listing of base station, mobile, handheld antennas, duplexers, triplexers, power meters, accessories, and power supplies. Effective February 1, 2025. Includes detailed specifications and pricing.

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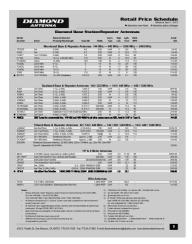


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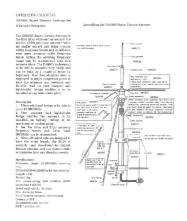
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