

Diamond Antenna HF17CL

Diamond Antenna HF17CL Mobile HF Monoband Antenna
User Manual

Model: HF17CL

Introduction	Safety Information	Package Contents	Setup	Operating	Maintenance
	Troubleshooting	Specifications	Warranty & Support		

1. INTRODUCTION

The Diamond Antenna HF17CL is a high-performance mobile HF monoband antenna designed for amateur radio operators. It provides reliable and efficient signal transmission for mobile communication, ensuring clear and consistent contacts. This antenna is engineered for optimal gain and radiation on its designated HF frequency band, making it suitable for both local and long-distance (DX) communications.

Constructed with durable, corrosion-resistant materials, the HF17CL is built to withstand various weather and road conditions, offering long-lasting reliability for mobile operations. Its compact and lightweight design facilitates easy installation on a variety of vehicles.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the HF17CL antenna. Failure to follow these instructions may result in injury or damage to equipment.

- **Power Lines:** Never install the antenna near overhead power lines or other electrical circuits. Contact with power lines can be fatal.
- **Lightning:** Do not install or adjust the antenna during a lightning storm. Disconnect the antenna from your radio during electrical storms to prevent damage.
- **Vehicle Safety:** Ensure the antenna is securely mounted to your vehicle to prevent it from becoming a projectile during sudden stops or accidents.
- **RF Exposure:** Maintain a safe distance from the antenna during transmission to minimize exposure to radio frequency (RF) energy. Consult your radio's manual for specific RF exposure guidelines.
- **Tools:** Use appropriate tools for installation and wear safety glasses to protect your eyes.

3. PACKAGE CONTENTS

Verify that all components are present in the package before proceeding with installation:

- Diamond Antenna HF17CL Mobile HF Monoband Antenna
- Mounting hardware (if included with specific model variant)
- Instruction sheet (this document)

If any items are missing or damaged, please contact your dealer or Diamond Antenna customer support.

4. SETUP AND INSTALLATION

The HF17CL antenna is designed for easy vehicle mounting. Proper installation is crucial for optimal performance and safety.

4.1 Choosing a Mounting Location

Select a mounting location on your vehicle that provides a clear, unobstructed view of the sky and minimizes interference from the vehicle's body. Common locations include the trunk lid, fender, or roof. Ensure the location allows for secure attachment and proper grounding.

4.2 Mechanical Installation

1. Assemble any necessary mounting brackets according to their specific instructions.
2. Securely attach the antenna base to the chosen mounting point on your vehicle. Ensure all bolts and fasteners are tightened to prevent movement during vehicle operation.
3. Connect the antenna element to the base. Ensure a firm, hand-tight connection.

Note: A good electrical ground connection to the vehicle chassis is essential for optimal antenna performance. If your mount does not provide this automatically, ensure a separate ground wire is run from the antenna base to the vehicle's chassis.



Figure 1: Example of the Diamond Antenna HF17CL mounted on a vehicle. The antenna is shown vertically oriented, indicating its high-gain vertical design for mobile HF communication.

4.3 Electrical Connection

1. Connect a high-quality coaxial cable (e.g., RG-58, RG-8X) from the antenna's connector to the antenna input on your amateur radio transceiver.
2. Ensure all connections are tight and free from corrosion.

4.4 Tuning and SWR Measurement

While the HF17CL is optimized for a specific HF frequency band, it is crucial to measure the Standing Wave Ratio (SWR) after installation to ensure optimal performance and prevent damage to your transceiver. Use an SWR meter

to check the SWR across the antenna's operating band. Adjustments to the antenna length (if applicable to your specific model variant) or the use of an antenna tuner may be necessary to achieve an SWR of 1.5:1 or lower.

5. OPERATING THE HF17CL ANTENNA

The HF17CL is a monoband antenna, meaning it is optimized for operation on a single HF frequency band. This optimization ensures efficient radiation and minimal signal loss, enhancing communication clarity and reliability.

- **Transceiver Compatibility:** The HF17CL is compatible with most amateur radio transceivers. Refer to your transceiver's manual for proper connection and operation procedures.
- **High-Gain Performance:** The antenna's high-gain vertical design provides excellent performance for mobile HF communication, enabling clear signal transmission and reliable long-distance contacts.
- **Mobile Operation:** When operating mobile, be aware of your surroundings and local regulations regarding mobile radio use. Always prioritize safe driving.
- **Power Output:** Adhere to the maximum power rating specified for the HF17CL antenna to prevent damage.

6. MAINTENANCE

The Diamond Antenna HF17CL is constructed with durable, corrosion-resistant materials designed for long-term outdoor use. Regular, simple maintenance will help ensure its continued performance.

- **Regular Inspection:** Periodically inspect the antenna for any signs of physical damage, such as bends, cracks, or loose connections. Check the coaxial cable for wear or damage.
- **Cleaning:** Clean the antenna periodically with a mild soap and water solution to remove dirt, grime, and road salt. Rinse thoroughly with fresh water. Avoid using abrasive cleaners or solvents.
- **Connection Check:** Ensure all electrical connections (antenna to coax, coax to radio) remain tight and free of corrosion. Apply a small amount of dielectric grease to connectors to prevent moisture ingress and corrosion.
- **Mounting Security:** Verify that the antenna's mounting hardware remains secure and tight. Re-tighten if necessary.

7. TROUBLESHOOTING

If you experience issues with your HF17CL antenna, consider the following troubleshooting steps:

7.1 Poor Signal or High SWR

- **Check Connections:** Ensure all coaxial cable connections are secure and free of corrosion.
- **Grounding:** Verify that the antenna has a good electrical ground to the vehicle chassis. A poor ground can significantly impact performance.
- **Coaxial Cable:** Inspect the coaxial cable for damage (kinks, cuts, shorts). A faulty cable can cause high SWR and signal loss.
- **Antenna Tuning:** Re-check the SWR across the operating band. If SWR is high, re-tune the antenna or use an external antenna tuner.
- **Obstructions:** Ensure the antenna has a clear path for radiation, free from nearby metal objects or obstructions.

7.2 No Transmission/Reception

- **Radio Settings:** Confirm your transceiver is set to the correct frequency and mode.

- **Antenna Selection:** Ensure your radio is configured to use the correct antenna port if multiple antennas are connected.
- **Cable Continuity:** Use a multimeter to check for continuity in the coaxial cable and ensure there are no shorts.

If problems persist after performing these checks, consult a qualified amateur radio technician or contact Diamond Antenna customer support.

8. SPECIFICATIONS

Model Number	HF17CL
Brand	Diamond Antenna
Antenna Type	Mobile HF Monoband Antenna
Impedance	50 Ohms
Maximum Range	264 Feet (approximate, highly dependent on conditions)
Construction	Durable, corrosion-resistant materials
Design	High-gain vertical
UPC	712265206898

9. WARRANTY AND SUPPORT

9.1 Warranty Information

The Diamond Antenna HF17CL comes with a **1-year limited warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by improper installation, misuse, accidents, modifications, or natural disasters.

Please retain your proof of purchase for warranty claims.

9.2 Customer Support

For technical assistance, warranty service, or inquiries about your Diamond Antenna HF17CL, please contact your authorized dealer or visit the official Diamond Antenna website for support contact information.

© 2023 Diamond Antenna. All rights reserved.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

<https://manuals.plus/asin/B07M6S6P94>

More documents and user manuals: **<https://manuals.plus/>**