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HYS TC-110M Antenna Magnet Mount User Manual

Model: TC-110M | Brand: HYS

1. PRODUCT OVERVIEW

The HYS TC-110M is a versatile magnetic mount designed for CB, VHF, UHF, and HF ham radio antennas. It features an SO-239 connection style, compatible with antennas using a PL-259 connector. The mount includes a 5-meter (16.4 ft) RG58 coaxial cable terminated with a PL-259 plug for connecting to your mobile radio. Its 4.3-inch diameter magnetic base provides a strong pull strength of 30.8 lbs, ensuring secure attachment to metallic surfaces. A protective rubber coating on the magnet prevents scratching the vehicle's finish.



Image: HYS TC-110M magnet mount with coiled coaxial cable and PL-259 connector.

2. SAFETY INFORMATION

- Ensure the mounting surface is clean and dry before attaching the magnet mount to achieve maximum adhesion.
- Do not exceed the recommended antenna length of 1.3 meters (approximately 4.3 feet) and weight of 0.5 kg (approximately 1.1 lbs) for the magnetic base to prevent detachment, especially at high speeds.

- Route the coaxial cable carefully to avoid pinching, sharp bends, or interference with vehicle operations (e.g., doors, windows, pedals).
- Regularly inspect the magnet mount and cable for any signs of wear or damage. Replace if necessary.
- Avoid placing the magnet mount near sensitive electronic equipment inside the vehicle that could be affected by magnetic fields.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1 x HYS TC-110M Magnetic Antenna Base with SO-239 connector
- 1 x 5-meter (16.4 ft) RG58 Coaxial Cable with PL-259 plug (pre-attached to the base)
- 1 x Protective Rubber Sleeve (pre-installed on the base)

Note: The antenna itself is not included with this magnet mount and must be purchased separately.

Picture as a reference
Not includes Antenna



Image: HYS TC-110M magnet mount with coaxial cable, shown next to an antenna for reference, indicating antenna is not included.

4. SETUP INSTRUCTIONS

Follow these steps to set up your HYS TC-110M antenna magnet mount:

1. **Prepare the Mounting Surface:** Choose a flat, metallic surface on your vehicle, such as the roof or trunk lid. Clean the surface thoroughly to remove any dirt, dust, or debris. This ensures optimal magnetic adhesion and prevents scratching.
2. **Inspect the Protective Rubber Sleeve:** The magnet mount comes with a protective rubber sleeve. Ensure it is properly seated around the base to protect your vehicle's paint.



Image: The protective rubber sleeve on the magnet mount base.

3. **Attach the Magnet Mount:** Place the magnet mount firmly on the prepared metallic surface. The strong magnet will secure it in place.
4. **Connect the Antenna:** Screw your compatible antenna (with a PL-259 connector) onto the SO-239 connector on the top of the magnet mount. Hand-tighten until secure.



Image: SO-239 (UHF Female) connector on the magnet mount and PL-259 (UHF Male) connector on the coaxial cable.

- 5. Route the Coaxial Cable:** Carefully route the 5-meter RG58 coaxial cable from the magnet mount into your vehicle to your radio. Avoid sharp bends, kinks, or areas where the cable could be pinched or damaged. Ensure it does not interfere with doors, windows, or other moving parts.
- 6. Connect to Radio:** Plug the PL-259 connector at the end of the coaxial cable into the corresponding antenna input on your CB, VHF, UHF, or HF mobile radio.

Setup Demonstration Video

Your browser does not support the video tag.

Video: This video demonstrates the process of connecting an antenna to the SO-239 magnet mount and highlights the protective rubber coating.

Product Overview Video

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Video: A brief overview of the HYS magnetic base, highlighting its size and pull strength.

5. OPERATING INSTRUCTIONS

Once the magnet mount and antenna are securely installed and connected to your radio, you can begin operation. Ensure your radio is properly configured for the antenna type and frequency band you are using.

- **SWR Adjustment:** For optimal performance and to prevent damage to your radio, it is crucial to check and adjust the Standing Wave Ratio (SWR) of your antenna system. Refer to your antenna and radio manuals for specific SWR tuning

procedures.

- **Optimal Placement:** The performance of your antenna system can be affected by the mounting location. Generally, a central location on a large metallic surface (like the vehicle roof) provides the best ground plane and radiation pattern.



Image: Reference diagram showing signal performance based on antenna mounting location on a vehicle.

6. MAINTENANCE

Proper maintenance ensures the longevity and performance of your magnet mount:

- **Clean the Base:** Periodically clean the underside of the magnetic base and the vehicle's mounting surface. Dirt and debris can reduce magnetic adhesion and scratch paint. Use a mild soap and water solution, then dry thoroughly.
- **Inspect Cable and Connectors:** Check the coaxial cable for any cuts, fraying, or damage. Ensure the PL-259 plug and SO-239 connector are clean and free of corrosion.
- **Check Antenna Connection:** Verify that the antenna is securely tightened to the SO-239 connector on the mount.

7. TROUBLESHOOTING

If you encounter issues with your HYS TC-110M magnet mount, consider the following:

- **Antenna Detaches at Speed:**
 - Ensure the mounting surface is clean and flat.
 - Verify the antenna's length and weight are within the recommended limits (max 1.3m / 0.5kg).
 - Check if the protective rubber sleeve is properly seated and not interfering with magnetic contact.
- **Poor Signal Performance:**
 - Check all cable connections for tightness and proper seating.

- Ensure the SWR of your antenna system is properly tuned. High SWR can indicate a poor match or connection.
- Confirm the antenna is compatible with the magnet mount's SO-239 connector.
- Consider the mounting location; a central roof position generally offers better performance.

- **Intermittent Connection:**

- Inspect the coaxial cable for damage (cuts, kinks).
- Check the PL-259 and SO-239 connectors for corrosion or loose pins.

8. SPECIFICATIONS

Feature	Specification
Model Number	TC-110M
Connection Style	SO-239 (UHF Female)
Coaxial Cable	RG58
Cable Length	5 meters (16.4 feet)
Cable Plug	PL-259 (UHF Male)
Base Diameter	110mm (4.3 inches)
Pull Strength	30.8 lbs
Max Antenna Length Supported	1.3 meters
Max Antenna Weight Supported	0.5 kg
Impedance	50 Ohms
Color	Black



Image: Dimensions of the HYS TC-110M magnet mount and cable length.

9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your HYS TC-110M Antenna Magnet Mount, please refer to the documentation provided with your purchase or contact HYS Communication directly through their official website or customer service channels. Keep your purchase receipt as proof of purchase for any warranty claims.