## Meade LXD55, LXD75

# A User's Guide to the Meade LXD55 and LXD75 Telescopes

Comprehensive Manual for Meade LXD Series Telescope Owners

## Introduction to Your Meade LXD Telescope Guide

This guide serves as a comprehensive resource for owners of Meade LXD55 and LXD75 series telescopes. It is designed to help both novice and experienced astronomers maximize the potential of their computer-controlled "go-to" telescopes, particularly those with German Equatorial Mounts (GEMs). The information herein is derived from extensive practical experience and addresses common challenges and questions faced by LXD series users.

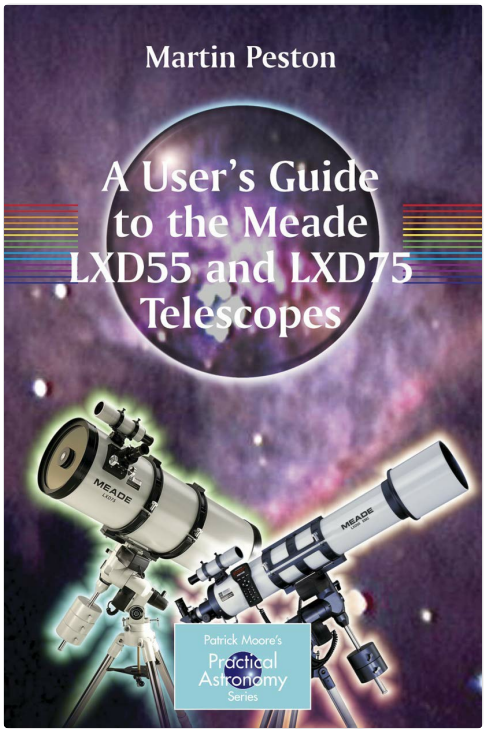


*Image: The cover of "A User's Guide to the Meade LXD55 and LXD75 Telescopes" by Martin Peston. This book provides detailed instructions and tips for operating and maintaining your Meade LXD series telescope.*

The Meade LXD series, known for its German Equatorial Mounts (GEMs), offers unique advantages such as zero field rotation, which is crucial for astrophotography. While setting up a GEM with a Go-To system can be more involved than an altazimuth mount, this guide provides the necessary steps and insights to simplify the process and enhance your observing experience.

## Getting Started: Setup and Assembly

Proper setup is fundamental to the performance of your Meade LXD telescope. This section outlines the critical steps for assembling and preparing your telescope for observation.

### Initial Assembly

- **Unpacking Components:** Carefully remove all parts from the packaging. Verify that all components listed in your telescope's packing list are present.
- **Mount Assembly:** Assemble the German Equatorial Mount (GEM) tripod and head. Ensure all locking mechanisms are secure.
- **Telescope Tube Attachment:** Securely attach the optical tube assembly (OTA) to the mount. Balance the telescope on both axes to prevent strain on the motors.
- **Accessory Installation:** Install the finderscope, eyepieces, and any other necessary accessories.

### Polar Alignment

Accurate polar alignment is crucial for Go-To accuracy and tracking, especially with a GEM. This guide provides detailed instructions for achieving precise alignment.

- **Rough Alignment:** Orient the mount towards the celestial pole (Polaris for the Northern Hemisphere, Sigma Octantis for the Southern Hemisphere).
- **Fine Alignment:** Utilize the polar scope or drift alignment method for more precise alignment. The book details techniques for calibrating motors and improving Go-To accuracy.

## Operating Your Meade LXD Telescope

This section covers the operational aspects of your LXD series telescope, focusing on the Autostar Go-To system and general usage.

### Using the Autostar Hand Controller

The Autostar #497 hand controller is the primary interface for your Go-To telescope. Mastering its functions is key to effortless sky navigation.

- **Initial Power-Up:** Steps for powering on and initializing the Autostar system.
- **Date and Time Setting:** Ensuring accurate date, time, and location input for precise Go-To functionality.
- **Alignment Procedures:** Detailed walkthroughs of one-star, two-star, and three-star alignment methods.
- **Object Selection:** Navigating the Autostar database to select celestial objects (planets, stars, galaxies, nebulae).
- **Go-To and Tracking:** Initiating Go-To commands and understanding how the telescope tracks objects across the night sky.

### Interfacing with a PC or Laptop

Connecting your LXD telescope to a computer can unlock advanced control and planetarium software capabilities.

- **Required Cables and Adapters:** Identifying the correct serial or USB cables for connection.
- **Software Installation:** Overview of compatible planetarium and control software.
- **Establishing Connection:** Steps to ensure a stable connection between your computer and the Autostar controller.

## Maintenance and Care

Regular maintenance ensures the longevity and optimal performance of your Meade LXD telescope.

- **Optical Tube Cleaning:** Gentle methods for cleaning lenses and mirrors to avoid damage.
- **Mount Lubrication:** Identifying points for lubrication to ensure smooth movement of the GEM.
- **Storage:** Best practices for storing your telescope to protect it from dust, moisture, and extreme temperatures.

- **Firmware Updates:** How to check for and install the latest Autostar firmware to enhance functionality and fix bugs.

## Troubleshooting Common Issues

This section addresses frequently encountered problems and provides solutions to get your telescope back in optimal working order.

| Problem | Possible Cause | Solution |
|---|---|---|
| Inaccurate Go-To pointing | Poor polar alignment, incorrect date/time/location, uncalibrated motors. | Re-perform polar alignment. Verify date, time, and location settings. Calibrate telescope motors via Autostar menu. |
| Telescope not tracking objects | Incorrect tracking mode, power issues, motor problems. | Ensure tracking is enabled and set to the correct rate (sidereal, lunar, solar). Check power supply. |
| Hand controller display blank or unresponsive | Power supply issue, cable connection, controller malfunction. | Check power source and cable connections. Try a different power supply if available. Consult Meade support if persistent. |

## Specifications Overview (Meade LXD55 & LXD75 Series)

The Meade LXD series encompasses various optical tube assemblies (OTAs) mounted on either the LXD55 or LXD75 German Equatorial Mounts. While specific optical specifications vary by model (e.g., AR-6 Refractor, SC-8 Schmidt-Cassegrain), the mounts share core characteristics.

- **Mount Type:** German Equatorial Mount (GEM)
- **Go-To System:** Meade Autostar (#497 or similar)
- **Database:** Thousands of celestial objects (stars, galaxies, nebulae, planets, etc.)
- **Tracking Modes:** Sidereal, Lunar, Solar
- **Power:** Typically 12V DC (external power supply or batteries)
- **Optical Tube Compatibility:** Designed for various Meade optical tubes, including refractors, reflectors, and Schmidt-Cassegrains.

For detailed specifications of your specific LXD55 AR-6 Refractor or LXD75 SC-8 model, refer to your telescope's original manual or the comprehensive tables provided within this guide.

## Advanced Techniques and Imaging

Beyond basic observation, the Meade LXD series is capable of advanced astronomical pursuits, including astrophotography.

### Astrophotography with LXD Telescopes

The GEM design of the LXD mounts is ideal for long-exposure astrophotography due to its ability to track objects without field rotation.

- **Equipment:** Overview of cameras (DSLR, CCD, webcam), focal reducers, and other accessories.
- **Techniques:** Guidance on prime focus, eyepiece projection, and piggyback astrophotography.
- **Image Processing:** Basic principles of stacking and processing astronomical images.

## Support and Further Resources

While this guide provides extensive information, additional support and resources are available.

- **Meade Instruments:** For official product support, warranty information, and service, refer to the official Meade Instruments website.
- **Online Communities:** Engage with other LXD telescope owners on forums and dedicated websites (e.g., LXD55.com mentioned in the book's description) for shared experiences and tips.
- **Additional Reading:** This guide itself is a valuable resource. For further in-depth knowledge, explore other books in the Patrick Moore Practical Astronomy Series.



## Related Documents - LXD55, LXD75

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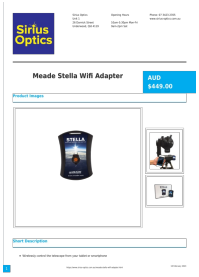
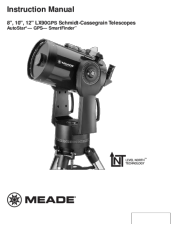
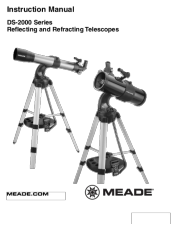
|  | Meade Stella WiFi Adapter: Wireless Telescope Control<br>Enhance your astronomy experience with the Meade Stella WiFi Adapter. Wirelessly control your Meade or compatible GoTo telescope from your tablet or smartphone using the StellaAccess app. Features easy setup, long battery life, and broad compatibility for seamless celestial exploration. |
|  | Meade LX90GPS Schmidt-Cassegrain Telescopes Instruction Manual with AutoStar and SmartFinder<br>This instruction manual provides comprehensive guidance for setting up, operating, and maintaining Meade 8", 10", and 12" LX90GPS Schmidt-Cassegrain telescopes, featuring AutoStar and SmartFinder technologies. Learn about telescope features, AutoStar operation, and astronomical observing. |
|  | Meade LX200-ACF Instruction Manual: Advanced Coma-Free Telescopes with GPS and AutoStar II<br>Comprehensive instruction manual for Meade LX200-ACF telescopes, covering setup, operation, features, and maintenance of these advanced coma-free telescopes with GPS and AutoStar II. |
|  | Meade DS-2000 Series Reflecting and Refracting Telescopes Instruction Manual<br>Comprehensive instruction manual for Meade DS-2000 Series telescopes, covering assembly, features, and operation of both reflecting and refracting models with Autostar control. |

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|  | Meade ETX-60AT & ETX-70AT Astro Telescope Instruction Manual with Autostar<br>Comprehensive instruction manual for the Meade ETX-60AT and ETX-70AT Astro Telescopes, detailing setup, operation with the Autostar Hand Controller, advanced features, maintenance, and troubleshooting for astronomical and terrestrial observation. |
|  | Meade LS-6 ACF and LS-6 SC Telescopes Instruction Manual with AutoStar III Hand Controller<br>Comprehensive instruction manual for Meade LS-6 LightSwitch® 6" ACF and LS-6 LightSwitch® 6" SC Telescopes, featuring AutoStar III Hand Controller. Covers setup, operation, key features like LightSwitch Technology and multimedia, maintenance, and specifications for astronomical observation. Visit Meade.com for more. |