

Preface and Acknowledgments

This book fills a gap left by earlier works of general practical advice, most of which are either out of date or long out of print. It is both a contribution and a tribute to its predecessors' tradition of handing down craft knowledge. Although the volume distills years of practical experience working with astronomical equipment and accessories, it doesn't pretend to be complete in every detail. It would have been illogical to try to set down everything about maintaining equipment for every branch of the pursuit. Such a work would fill an already groaning bookshelf. Furthermore, I don't cover things I have no personal experience with – that's what compendium works are for, and there are some good ones around that cover most aspects of amateur astronomy. Several are included in the Bibliography. Finally, experts continuously cover new developments in fast-changing fields like electronic imaging, optical fabrication methods, narrowband imaging and robotic systems. This work concentrates on the practical acquisition and maintenance of the optics and mechanics that support such endeavors.

Despite the fabulous armchair journeys we can now make on the Internet, using optics under the sky is still what makes the pursuit of amateur astronomy enjoyable. Even the best astronomical equipment requires both care and appreciation to yield good results. Acquiring and caring for it takes patience and a few special skills. There is still time, place and a need for hands-on work.

Years ago I carried a pencil sketch and part of a homemade mount into a machine shop and asked if they could make a simple modification. The foreman in blackened coveralls took a look and said, "Sure, come back tomorrow, it should cost you about twenty." The last time I tried this, a fellow in a golfing shirt looked up from his computer and said, "Sure, send me a CAD file for our CNC guys, and we'll work up a quote for next week. How many units do you need?" Just the software would have cost more than a new mount!

The artisans aren't gone, but they are increasingly hard to find. When you do, they are busier than the devil. Thus, all the more need for a work that covers a little history, with some basic fixes and workarounds for the practical amateur. That's what Section II does. A few processes I have personally worked out and tested are outlined in Chapter 13.

My hat is off as I write this, aware of the many individuals and groups whose collective knowledge is far greater than my own. It was fascinating to review the works of earlier authors around the world, many of whom lived at a time when a telescope was a rare commodity, and most equipment cobbled together in the garages and basements of dedicated enthusiasts. The mission here is the same as

theirs: to impart some basics of contemporary instrument acquisition and maintenance to new astronomers, and to provide a useful lookup resource for the old hands. There is always room for improvement. In fact, I fully expect to hear about matters that weren't addressed.

I wish to express sincere appreciation to my present editor John Watson. I am especially gratified for the opportunity here to acknowledge mentors such as series editor Sir Patrick Moore, the late solar observer Donald Trombino, FRAS and editors in the past, including Richard Berry who accepted my first efforts at publication, William J. Cook, Martin Neumann and Simon Mitton. For hints and help over the years I am indebted to Alan MacRobert, Roger Sinnott, supportive members of management and staff at Sky Publishing, and to the Astronomical League, the British Astronomical Society, the Royal Astronomical Society of Canada and the Vereinigung der Sternfreunde (VdS) of Germany. A wide range of amateur and professional optical historians, from Peter Abrahams to Drs. Albert van Helden and Wayne Orchiston, pointed the way to valuable references on historical techniques. Additionally, *kudos* to all the fine people on the business side whose hearts are in the right place, especially Al Nagler who gave open permission to use equipment of his design to illustrate a few basic instruments and accessories for the book. Thanks also to New Focus, Inc. of San Jose, California, and Aerotech, Inc. of Pittsburgh, Pennsylvania, for the loan of bench components for generating laser visualizations of light through the telescope, published before only as line drawings.

Sincere regards to a host of observing companions too numerous to mention, and the many unseen folks, friendly voices in the dark from around the world. Here, too, is a nod to all amateurs' patient spouses and offspring who have lain awake at night wondering "what could possibly be so interesting out there?"

Finally, this volume is dedicated to fellow ATMs and Telescope Nuts, those people who insist on continuing to make contraptions out of odd glass and spare parts that rival or exceed the performance of the best manufactured equipment. The special community of amateur astronomers has endured for centuries. Our activities will doubtless continue long into the future as one of the most fascinating pursuits in this or any other universe. If this volume eases the path for a few, or just helps to pass time on a cloudy night, it will have repaid the effort.



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The author. Photo: L. Lattin.