

**LatheCity Books**

**Working Safely with Benchtop Lathes I**

Featuring the Sherline System

*Volume 1 – Basic Lathe Operations*

by Uwe Burghaus

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187 pages, 125 figures, 9 tables

Binding Spines, gray scale LASER print

1st edition, 1st print (c) 2012, Uwe Burghaus, Fargo, ND, USA

**Synopsis Vol. 1.** Detailed are typical lathe procedures assuming nothing but your interest in metal work. The LatheCity book series features the popular Sherline metal shop, but it will be useful for projects with any tabletop metal lathe. The object is getting “you to work” efficiently, quickly, but safely. We emphasize very much safety issues throughout the book series without the intention of boring the reader to death. Project examples include various artwork projects, household utensils, and engineering type projects. However, the main philosophy is to describe clearly the lathe operations that one can machine whatever may be desirable. This is an introductory text with an endless number of photos and drawings. However, we do not stop at the simplest possible operations. Besides standard lathe operations an entire chapter describes additionally how a manual lathe, without any accessories, can emulate a CNC lathe. One can machine ball ends, elliptical shapes, or parabolic shapes by slicing. This typically requires no more than 10-20 min per work piece.

The author is not a professional machinist or engineer. In fact, the author holds a PhD in physics and teaches physical chemistry at a college. The author is a hobby machinist, as you probably are. Therefore, no information provided herein represents professional advice or best practices in machining. All information is provided to help hobbyists and other non-professionals gain a better understanding of using a miniature benchtop / tabletop lathe for hobby type work.

**LatheCity Books**

**Working Safely with Benchtop Lathes II**

Featuring the Sherline System

*Volume 2 – Working with Lathe Accessories*

by Uwe Burghaus

ISBN-10: 0985136014

ISBN-13: 978-0-9851360-1-7

205 pages, 167 figures, 13 tables

Binding Spines, gray scale LASER print

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**Synopsis Vol. 2.** Detailed are lathe accessories for the popular Sherline metal shop, but the outlines will be useful for projects with nearly any tabletop metal lathe. Obtain a fair but critical and independent opinion about the numerous and often pricy accessories for the Sherline benchtop lathe before purchasing those. The author is a hobby machinist as you probably are. Compare the price of this book which details numerous accessories with a typical price for just one of the lathe upgrades. Accessories from other vendors besides Sherline are also included in the discussion.

This second volume of the LatheCity book series is written for more advanced hobby machinists and includes engineering type information. However, a brief short course of standard lathe operations is also included.

A quite detailed chapter describes how to work safely with difficult to machine and exotic materials as well as where to purchase those materials. How to cut threads on a lathe is described in detail, including curiosities such as cutting double lead screws or left hand screws. The author focusses here on practical procedures and troubleshooting (tips & tricks). Indeed it is shown how all of this can be done on a benchtop lathe. We have not seen this type of information as concise as it is here anywhere else in a hobby type machining book. The descriptions focus on practical and doable procedures, but include also the engineering background. Standard topics such as using (and fixing) a compound slide and radius cutter or how to cut a Morse taper and grind HSS tools properly are certainly also detailed. A short chapter describes additionally how a manual lathe, even without any accessories, can emulate a CNC lathe. One can machine ball ends, elliptical shapes, or parabolic shapes by slicing. This typically requires no more than 10-20 min per work piece.