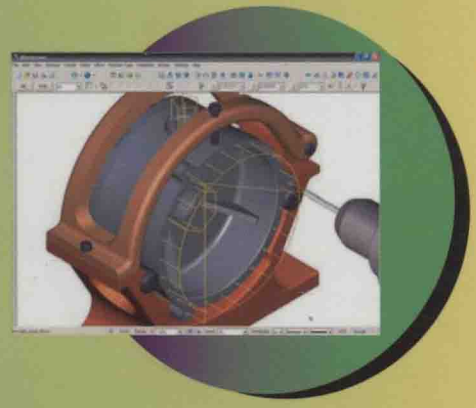
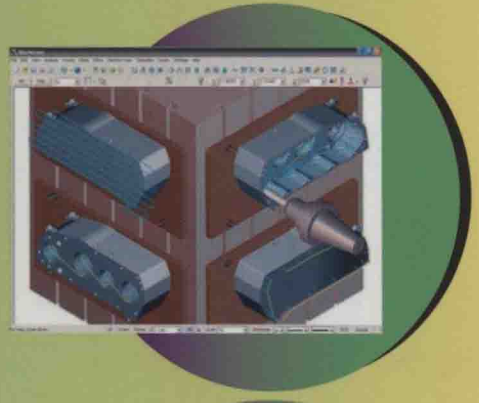
Mastercam X7

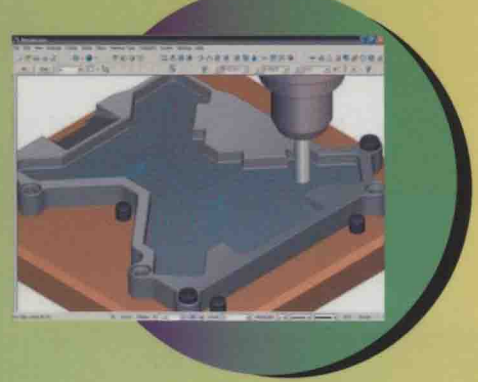
DEMO ENCLOSED

Learning MASTERCAM X7 MILL 2D

Step by Step







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DEDICATION

To my wife Barbara and to my children, Sarah and Andrew.

-James Valentino

To my students past, present and future.

-Joseph Goldenberg

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PREFACE

The CNC programmer now has a powerful tool to assist in the job of creating and verifying part programs. *MasterCam X7* CNC software provides the programmer with a full array of easy to use features. The benefits of using *MasterCAM X7* include: automatic calculation of toolpath coordinates, determination of speeds and feeds, animation of the machining process, off-line, without tying up the CNC machine, and postprocessing the part program.

MasterCAM X7 is a robust PC based package. Its many cababilities must be presented in a clear and logical sequence. This text was written to provide a thorough introduction to *MasterCAM X7*'s MILL package for students with little or no prior experience. Past users of *MasterCAM* will find release *X7* has been upgraded to run on Windows7. Several enhancements such as the new Verifier and Code Expert are also included.LEARNING *MasterCAM X7* MILL-2D Step by Step includes chapters on executing high speed dynamic milling operations and performing feature based machining on solid models. Examples of creating user defined tool planes and machining on those planes have also been included. The Appendix contains step by step instructions users can follow to customize *MasterCAM X7*'s toolbars, drop down menus and key strokes.

Several learning aids have been designed throughout.

- Good graphical displays rather than long text and definitions are emphasised.
- An overview of the process of generating a word address program is presented.
- Key definitions are boxed in.
- Examples provide step-by-step instructions with excellent graphical displays.
- Needless cross-referencing has been eliminated. Each example is presented with all explainations appearing on the same page.
- Exercises are presented at the ends of chapters.
- A process plan is provided for many machining exercises to indicate the machining operations to be performed and the tools to be used.
- A CD provided with the text contains:
  - ► *MasterCAM X7,* DEMO version. Students can use the DEMO to practice interactively on their own PC's.
  - ► Files now keyed in sequence to the selected examples. Students can follow interactively when learning the procedure with the concepts presented in the text.
  - ► Files containing CAD parts for machining exercises.

LEARNING *MasterCAM X7* MILL-2D can be used for many different types of training applications; these include:

- Undergraduate one-semester or two semester CNC programming courses.
- Computer assisted component of a CNC programming course.
- Indistrial training courses.
- Trade school courses on computer assisted CNC programming.
- Seminar on computer assisted CNC programming.
- Adult education courses.
- Reference text for self-study.

This text is designed to be used in many types of educational institutions such as:

- Four-year engineering schools.
- Four-year technology schools.
- Community colleges.
- Trade schools.
- Industrial training centers.

CONTENTS

APPENDIX A-1