

CHAPTER 1

INTRODUCTION

1.1 Background. The material presented in Part D, WSR-88D Unit Description and Operational Applications, of Federal Meteorological Handbook No. 11 (FMH-11) is based on data and information gathered from several sources. Unit description and functional flow material were extracted from technical manuals and computer program specifications prepared by the original system contractor and updated by the Radar Operations Center (ROC) and NEXRAD agencies. The material in Part D is as of software Build 6 for the Radar Product Generator (RPG) and Open Principal User Processor (OPUP), Build 10.2 of the legacy Radar Data Acquisition (RDA), and Build 10 of the legacy Principal User Processor (PUP). Chapter 4, dealing with operational applications, is based primarily on the inputs of agency personnel familiar with the operation and meteorological use of the WSR-88D, the National Weather Service's (NWS) Warning Decision Training Branch (WDTB), ROC subject matter experts, and a support services contractor.

1.2 Purpose and Scope. Part D is intended to provide the WSR-88D user community with an overview of unit operations and functional flow and insights into the meteorological applications of the WSR-88D. Additional and more detailed information regarding operating instructions are contained in baseline WSR-88D technical manuals. Recommended changes/corrections to this manuscript are welcome and should be sent to: <http://www.roc.noaa.gov/Feedback/>.

1.3 Organization. Part D covers three main topics of unit operations. They are:

Chapter 2, Unit Description

Chapter 3, Unit Functional Flow

Chapter 4, Operational Applications

The listings of site-adaptable parameters for the RDA, RPG, and PUP that were in Appendices A, B, and C of the April 1992 version of Part D can now be found in the Guidance on Adaptable Parameters at: <http://www.roc.noaa.gov/ssb/sysdoc/Operations.asp>. These documents are updated with each WSR-88D software release. Part A of this Handbook defines the authority to make changes to these parameters.

The WSR-88D images used in Part D are from the many diverse NEXRAD agency user display systems available. The list of the primary user display systems is in Section 2.4. In addition, figures from the proof-of-concept National Severe Storms Laboratory (NSSL) Warning Decision

Support System (WDSS), the National Climatic Data Center (NCDC) Level III/product archives via the NCDC NEXRAD Viewer, and the Common Operations and Development Environment (CODE) CODEview Graphics are used. These diverse displays are used to ensure the best representative examples of the phenomena being depicted are presented.

Appendix A lists acronyms and abbreviations found in Part D. Appendix B is a glossary of terms used in Part D.