DR6/11-135 DIGITAL RADIO SYSTEM
SYSTEM DESCRIPTION AND APPLICATION ENGINEERING
INTRODUCTION

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Published by
The AT&T Document Development Organization

1. INTRODUCTION

The AT&T 940-300-140 manual describes the DR6-30-135 and DR11-40-135 Digital Radio Systems and provides application engineering information. DR6-30-135 operates in the domestic 6-GHz common carrier band within the allocated 30-MHz channel bandwidth. Both systems use quadrature amplitude modulation (64QAM) to provide a bit rate capacity of 135 megabits per second. Aside from their respective frequency assignments, reflected in certain frequency-selective components in the radio transmitter/receiver, the two systems are identical.

The combination of system description and application engineering is suggested by a natural compatibility. That is, application engineering requires a basic knowledge of the overall system, its component hardware, operational theory, and intended performance. Therefore, both topics are addressed in this manual.

System Features and Specifications has been included to spare certain readers (transmission engineers, for example) the need to search through this manual for information. An effort has also been made to create an independent document in which reference to other publications for related information is minimized.

For those individuals who have not yet been introduced to the field of digital radio, a short historical background has been included with the discussion of the basics in *Digital Radio Fundamentals*.

Some of the subject matter highlights in the subsections of this manual include:

- *Digital Radio Fundamentals*—provides a brief review of the technical background
- *System Description*—describes the general system architecture
- *Maintenance Philosophy*—describes the maintenance features
- *Route Engineering*—provides design guidelines for acceptable digital performance
- *System Application*—provides engineering information to configure a system
- *Equipment Ordering*—provides feature and option information
- *Test Equipment and Sparing*—provides recommendations for maintenance
- *Document References*—provide a listing of system documentation.

1.1 UPDATE INFORMATION

This is a general revision. The information in this practice was formerly in AT&T 940-300-120.

2. CONTENTS OF MANUAL

3. HOW TO ORDER DOCUMENTATION

All documentation is distributed by the AT&T Customer Information Center in Indianapolis, Indiana. Any manual can be ordered by its nine-digit number printed on the binder spine (940-300-140, for example). Also, any individual AT&T Practice within the manual can be ordered separately.

Orders can be placed by contacting your technical documentation coordinator or by calling **1-800-432-6600**.

Additional information on associated documentation can be found in *AT&T 940-300-151, Related Documentation and Reference Material*.

4. CUSTOMER FEEDBACK

If you have any comments, please fill out the customer comment sheet at the back of this practice. Your comments will help us improve the quality and usefulness of our documentation. This comment sheet does not require postage and is the preferred method of communicating with AT&T about this manual.

If the comment sheet is missing or your comments are too detailed to fit on the sheet, you may write us at the following address:

AT&T
Attention: RADIO DEPARTMENT
2400 Reynolda Road
Winston-Salem, NC 27106-4606.

Comments will be acknowledged within 30 days. Thank you in advance for your comments.