



**TACTICAL
SINGLE-CHANNEL
RADIO
COMMUNICATIONS
TECHNIQUES**

DEPARTMENT OF THE ARMY

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TACTICAL SINGLE-CHANNEL RADIO COMMUNICATIONS TECHNIQUES

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PREFACE

Purpose and Scope

This manual provides information and guidance to all personnel who are involved with and use single-channel radio in tactical situations.

To ensure your understanding of all the material presented, this manual includes a brief discussion of radio fundamentals, antennas, and radio-wave propagation. It also covers procedures and techniques that have been used effectively during tactical operations to include: site selection and reliability factors; operation in the several transmission modes and under unusual conditions; field expedients; electronic warfare techniques and reporting; and other aspects of the practical applications of single-channel radio. There are other items pertinent to single-channel radio operations listed in the appendixes.

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Whenever a word normally referring to a particular sex appears within this publication, it is intended to include both masculine and feminine genders.

CHAPTER 1

INTRODUCTION TO SINGLE-CHANNEL RADIO COMMUNICATIONS

1-1. Employment of Radio Communications

Mobility is one of the keys to success on the modern battlefield. All communications must be geared to support a combat force that must repeatedly move to survive and fight the enemy. The single-channel radio is the primary means of communication for command, fire control, exchange of information, administration, and liaison between and within units. The versatility of radio communications makes it readily adaptable to rapidly changing tactical situations. Radio is essential for communications over large bodies of water, territory controlled by enemy forces, and terrain where the construction of wire lines is impossible or impractical. It is also required for air assault operations.

1-2. Capabilities and Limitations

The capabilities of the single-channel radio make it flexible, securable, mobile, and reliable.

Radio communications facilities usually can be installed more quickly than wire communications. Thus, radio can be used as a primary means of communications during the initial stages of combat operations.

Once installed in a vehicle, aircraft, or ship, the equipment is ready for use and does not require reinstallation. Wire communications require reinstallation with each move.

Radio equipment is designed to meet mobility requirements and is used by airmobile, amphibious, mechanized, and dismounted units.

Radio lends itself to many modes of operation, such as radiotelephone, radiotelegraph, radio teletypewriter (RATT), visual presentation, and data.

All of the modes of operation are securable when required equipment is available.

Natural obstacles, minefields, and terrain under enemy control or fire do not limit radio to the same extent that they limit other means of communications.

By using special techniques, radio can interface with other communications means (net radio interface), be separated from the immediate vicinity of the user (remoting), and operate over extended distances (retransmission).

The limitations of single-channel radio must also be considered.