MOTOROLA

ASTRO®

APX™ Digital Portable Radios

User Guide Supplement

for Front Panel Programming

680XXXXXX-A

Preface

Before operating your radio, please review the "Product Safety and RF Exposure Compliance" section in the front of your Radio User Guide.

Be sure to retain this publication for future reference.

Computer Software Copyrights

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Frequency Programming Restrictions

- the radio may only be programmed for those frequencies that the radio user is permitted to use.
- Programming of frequencies should be done only by authorized service personnel.
- Radio operation on unauthorized frequencies is a violation of the federal law.

Warning, Caution, and Note Notations

Throughout this publication, you will notice the use of WARNING, CAUTION, and Note notations. These notations are used to emphasize that safety hazards exist, and care must be taken or observed.

WARNING	An operational procedure, practice, or condition, etc., which may result in injury or death if not carefully observed.
Caution	An operational procedure, practice, or condition, etc., which may result in damage to the equipment if not carefully observed.

Note: An operational procedure, practice, or condition, etc., which is important to emphasize.

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Notes

Getting Started

Introduction

Your radio provides the ability to edit and program several operational features using the front panel keypad. Front Panel Programming (FPP) covered in this manual, can only be programmed/ reprogrammed when the radio is ordered with the FPP option.

A special Advanced System Key (ASK) is also needed. It needs to be used with the CPS.

Before attempting Front Panel Programming as described in this manual:

- Familiarize yourself with the your radio.
- Remove the universal connector seal if it is attached to the radio.
- Install the ASK to the computer.
- Install the Customer Programming Software (CPS) on the computer.

Programming Feature Operation

The radio can be programmed in three ways:

- Front Panel Programming (FPP) using the front panel controls of the radio.
- Cloning the radio zone and channel information for one or more zones; that is, copying zone and channel information from one radio to another radio.
- Customer Programming Software (CPS), with the radio connected to a PC computer.

This supplement describes the Front Panel Programming (FPP) .

Note: The FPP features are not available when the radio is mounted in a Vehicular Adaptor.

Front Panel Programming

Front Panel Programming (FPP) allows the authorized service personnel to change the following parameters from the front panel controls of the radio:

- Tx/Rx Frequency
- Tx/Rx Coded Squelch (PL/DPLNAC)
- Receive Channel Analog / Digital / Mixed designation
- Transmit Channel Analog / Digital designation
- Bandwidth
- Channel Name
- Zone Name
- Zone Protection

There are two methods to program a channel within a zone. Either:

- Select the zone and channel through the radio interface, and then initiate the FPP feature.

OR

- Initiate the FPP feature, and then select the zone and channel (see the procedure starting on the next page).

Note: When any of the Rx parameters (i.e., Rx frequency, Rx PL, Rx DPL, and Rx NAC) is changed, FPP automatically copies these Rx parameter values to the equivalent Direct operation (also known as Talkaround operation) parameters.

Initiate the FPP Feature

- Connect the radio to the computer.
- Load the CPS software with the ASK installed.
- Via the CPS software enable the FPP feature. A password will then be needed to be keyed in.
- On the radio, browse to the FPP menu to access the FPP setup.
- Key in the password provided to gain access to the FPP feature.

Glossary

This is a list of terms used in this User Guide supplement.

Analog Signal	An RF signal that has a continuous nature rather than a pulsed or discrete nature
Channel	A group of characteristics such as transmit/receive frequency pairs, radio parameters, and encryption encoding.
Cursor	A visual tracking marker (a blinking line) that indicates a location on the display.
Digital Private Line (DPL)	A type of coded squelch using data bursts. Similar to PL except a digital code is used instead of a tone.

Digital Signal	An RF signal that has a pulsed or discrete, nature, rather than a continuous nature.
Front Panel Programming (FPP)	The provisioner is capable of changing channel/zone names, channel frequency, code, digital/analog operating modes, and bandwidth.
Network Access Code (NAC)	NAC operated on digital channels to reduce voice channel interference between adjacent systems and sites.
Operator	The person using the radio to transmit and receive audio. This is the primary user in day to day radio operation.

Prepro-grammed	A software feature that has been activated by a qualified radio technician.
Private Line (PL)	A sub-audible tone that is transmitted such that only receivers decoding the tone will receive it.
Program-mable	A radio control that can have a radio feature assigned to it.
Provisioner	The person that provisions channel parameters such as frequency and squelch code from the keyboard of the radio. This is also the person that initiates clon-ing.
Source Radio	The radio that contains the data to be cloned. This is the radio that initiates cloning.

Talkaround	Bypass a repeater and talk directly to another unit for easy local unit-to-unit basis.
Target Radio	The radio that is the target of a cloning operation.
Zone	A grouping of channels.

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