OpenSky™

Portable Radio Model P-801T Users Manual

Welcome to the OpenSky Network

Chapter 1

Safety Notices

IMPORTANT INFORMATION ON SAFE AND
OPTIMAL OPERATION. READ THIS BEFORE
USING YOUR P-801T PORTABLE RADIO.

Notices to the User and Safety Training Information

WARNING **Your P-801T radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as "Occupational Use Only" meaning it must be used only during the course of employment by individuals aware of the hazards and the ways to minimize such hazards. This radio is NOT intended for use by the "General Population" in an uncontrolled environment.**

The OpenSky P-801T portable radio has been tested and complies with the FCC RF exposure limits for "Occupational Use Only." In addition, your P-801T radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.

- American National Standards Institute (C95.1–1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz.

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Government law prohibits the operation of unlicensed transmitters within the territories under government control. Illegal operation is punishable by fine or imprisonment or both. Refer service to qualified technicians only. Do not operate your transceiver in explosive atmospheres (gases, dust, fumes, etc.).

This equipment generates and uses radio frequency energy and may cause harmful interference to radio communications if not installed and used in accordance with the instructions. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.

- Increase the separation between the equipment and the receiver.

- Consult a service center for technical assistance.

Occupational Safety Guidelines and Safety Training Information

CAUTION**. To ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the guidelines below.**

Your P-801T portable radio may transmits using the integral antenna. When the radio is ON, it receives and also sends out radio frequency (RF) signals.

In 1996, the Federal Communications Commission (FCC) adopted RF exposure guidelines with safety limits for portable devices, based on the recommended limits of the National Council on Radiation Protection and Measurements (NCRP) and the American National Safety Institute (ANSI).

The design of the P-801T Portable Radio complies with the FCC guidelines for Occupational / Controlled exposure to RF electromagnetic fields, as measured by the specific absorption rate (SAR). To assure optimal performance and make sure human exposure to RF electromagnetic energy is within the FCC guidelines, always adhere to the following:

1. Do not hold the radio less than 1 inch from your body, especially your face, ears, or eyes, while transmitting.

2. When using the radio, angle the antenna away from your body and do not allow the antenna to touch your body during transmission.

3. The push-to-talk button should only be depressed when intending to send a voice message.

4. The radio should only be used for necessary work related communications.

5. The radio should only be used by authorized and trained personnel and should not be operated by children.

6. Do not operate your radio or replace/charge batteries in explosive atmospheres (gases, dust, fumes, etc.) or near explosive basking caps. Your radio should be turned off when installing and removing batteries.

7. Do not attempt any unauthorized modification to the radio. Changes or modifications to the radio may cause harmful interference. Service of the radio should only be performed by qualified personnel.

8. Always use M/A-COM authorized accessories (antennas, batteries, belt clips, speakers/mic, etc.). Use of unauthorized accessories can cause the FCC RF exposure compliance requirements to be exceeded.

The information listed above provides the user with the information needed to make him or her aware of a RF exposure, and what to do to assure that this radio operates within the FCC exposure limits of this radio.

OpenSky Overview

M/A-COM's OpenSky is a suite of products implementing an integrated digital voice and data system based on the Internet Protocol.

The OpenSky network is digital, but provides interoperability with analog radios, making it possible to integrate existing (legacy) equipment alongside the most sophisticated digital equipment available today.

- **If you've been issued a P-801T** to replace a conventional analog voice-only radio, you'll particularly appreciate the integrated voice and data capabilities of the all-digital OpenSky Portable equipment.

Internet Protocol (IP) Network

OpenSky's Wireless Private Network is changing the nature of real-time communications for large fleet mobile businesses and public safety organizations alike.

IP Backbone

Using Internet Protocol (IP) as a network backbone for end-to-end user applications, OpenSky integrates digital voice and packet data into a single network that provides significant performance advantages over yesterday's uneasy alliances of independently-built radio networks trying unsuccessfully to interact.

Like tuning into a channel in a conventional FM radio system, logging onto the OpenSky network with your pre-configured user profile will place you in contact with the members of a software-defined talk group consisting of the set of users you customarily have to contact.

- **Unlike your conventional FM radio,** your P-801T is a node on an Internet-Protocol (IP) network with its own unique IP address.

Addressable Headers

Messages intended for you (whether voice or data) are broken into packets with identifying headers, just like World Wide Web internet communications, and targeted to your specific IP address.

- **You can travel anywhere within your network** and messages intended for your IP address will find their way across the network to your personal receiving set.

This doesn't mean your communications are traveling across the World Wide Web. Far from it. OpenSky is a private wireless Intranet that adopts the best features of IP protocol for increased communications efficiency and capacity.

Integrated Voice and Data

Your P-801T Portable Radio is a hardware component of the OpenSky network, an integrated voice and data communications system that delivers end-to-end digital voice and data transmissions over the same wireless network to a single handheld device.

Digitized Voice, Text and Graphics

By converting analog voice waves to digital information before transmitting them over the network, OpenSky technology makes it possible for portable radio users to send and receive voice transmissions at the same time they receive and view data on the radio's display screen.

With a P-801T in your vehicle, or by your side, you'll be able to scroll through complex instructions and driving directions displayed on an external terminal device, or view on-screen emergency warnings while at the same time carrying on conversations with dispatchers or other mobile operators in your coverage area.

- **With OpenSky and the P-801T** you'll not only use the same device to receive data and carry on conversations, you won't even have to switch between radio modes to do both simultaneously.

RS-232 Interface

For heavy data transfers or displaying graphics, your P-801T is equipped with an industry-standard RS-232 interface serial port for connecting a portable PC or any of an increasing array of third-party display and key-entry devices.

A data programming cable is required in order to use this feature.

Multi-Agency Coverage

OpenSky is scalable, and designed to accommodate a virtually unlimited number of portable devices from a single fleet, or even a complex network made up of several cooperating agencies.

Examples of how OpenSky improves cooperation:

- Every truck in a Carrier Company's fleet can share one large national network.

- Every cruiser in a state-wide police agency can communicate with any other cruiser, from one end of the state to the other.

- Patrolmen with older analog equipment can connect seamlessly with newe r digital devices over the same network.

- Emergency response agencies share the same network for improved communications during a massive crisis.

Promotes Interagency Cooperation

!TIP

See full discussions of Talk Group, User Group and User Profile else where in this manual

In fact, the system is best suited to multi-agency public safety networks over areas as large as an entire state: every cruiser, ambulance and fire truck and all their dispatchers and support personnel sharing voice, data, even graphics over the same network.

Talk to Anyone on your Network

Your personal voice profile defines who you commonly communicate with. Each user needs only one authorized radio to connect seamlessly to many independent agencies or cooperating dispatch networks.

- There's no need to monitor multiple frequencies on several pieces of equipment to maintain contact.

- User talk groups connect you at all times with precisely the users you need to reach, no matter who they work for, or where they're located within the network.

Connectivity with Legacy Equipment

The all-digital, end-to-end IP OpenSky Intranet even provides support for legacy equipment and protocols both digital and analog.

Along with supplying voice and data to your P-801T portable radio, the network will also support existing (or "legacy") radio equipment you may still need to use during a hardware rollover.

This also means you'll be able to make radio contact with cooperating agencies on the same network, whether or not they have made the conversion to OpenSky equipment.

Improved Coverage and Signal Strength

Part of OpenSky's scalability is its ability to accommodate as many base stations as your coverage area requires to provide robust voice and data transmissions wherever your route may extend within the network.

Cell Sites

OpenSky cell sites automatically extend coverage into otherwise hard-to-reach areas and connect back into the network.

Background Roaming and Switching

Automated switching takes place in the background with OpenSky, so you'll no longer be required to scan for an open channel, or wait for an available channel, when you move through your coverage area.

Instead of depending on choices from a central switching station, your radio itself constantly monitors signal strength and makes its own decision to roam to another base site for a more robust connection.

Better Peak-Time Performance

OpenSky's digital trunking architecture provides enormous advantages over conventional FM operation. Conversation capacity is effectively doubled by the system's ability to carry two voice-to-voice conversations over the same channel that was previously dedicated to just one.

Software-Configured Device

Your P-801T is a "soft" radio. Its functions are determined by OpenSky software applications, in much the same way computer hardware can be used for different applications.

Unlike older analog radios you may have used, with their hardware-based proprietary functions, your P-801T converts voice waves into digital information before it transmits to the network, providing noise-free audio transmission and reception.

 TIP

Make any radio in the system "your radio" by logging on with your identity code.

What's more, because each user in the network has a unique identity code, you can activate your identity from any radio connected to the network. Any radio from your agency's stockpile of radio hardware can become "your" radio and log on as part of your talk group and profile.

Software Upgradeable

As with computer hardware, your portable radio equipment is upgradeable each time the OpenSky software enables a new feature or operational enhancement.

Communications protocols, radio features, and user profiles can be changed easily and transparently to the user, during a shift or during "sign-on" at the beginning of a new shift.

Enhanced Digital Features

The all-digital network and OpenSky's digital trunking features also enable a rich array of network enhancements unthinkable over historical FM broadcast systems.

Voice grouping (into talk groups, user groups, and profiles) is probably the most obvious advantage to individual users. Other essential and enhanced feature sets include:

- Priority scanning

- Multiple priority levels

- Pre-emptive emergency calls

- Late-entry calls

- Autonomous roaming for wide area applications.

You'll benefit from high-quality, noise-free voice communications with enhanced speech clarity compared to analog, especially in noisy environments.

Network Organization

Chapter 2

Your Voice Feature Personality

When you activate your radio at the beginning of a shift and sign on with your unique identity code, your radio is assigned its IP address and "provisioned" with a radio personality that identifies other users on the network with whom you are most likely to need to communicate by voice.

Some users you'll only monitor, others you'll want to talk with during the course of your shift, just as with older analog equipment you talked over one frequency and monitored others to keep informed about the activities of users in your agency, workgroup, task force, fleet or geographic area.

!TIP

Profiles are assigned by your network administrator to match your communication needs. You'll have access only to those users who fall within your profile.

Your overall radio personality is organized into **User Groups** (talk groups and listen groups), similar to a *channel* in a conventional FM radio system. These user groups are then organized into **Profiles** (collections of up to 16 user groups), similar to *banks of channels*. Finally, as many as 16 profiles make up your personality.

Global Voice Profile

Profile 1 is known as the **Global Voice Group**. It is always active scanning for inbound calls. It is usually allocated to a **"Fleet"** operation allowing users to receive broadcast calls independently of the active profile.

There can be only one active user profile at any time. Within that profile, only one user group is your talk group; the others are listen groups. So, while you have tremendous capability to establish contact with a very large number of users, you'll need to select the profile that puts you into voice contact with the talk group you need at any time.

User Groups

A user group is a set of users who regularly need to communicate (all the officers in a state police barracks, for instance, or all the drivers who work a particular shift).

- **In conventional FM** radio broadcast systems, these users work together by tuning to the same channel.

- **In the IP-backbone OpenSky digital network**, subscribers in a user group are connected by a bit of data in the header of every voice or data packet addressed to the members of the group.

With OpenSky, members of the same user group can stay in contact regardless of where they roam within the network, whether the network incorporates a single county, a state, even the entire nation.

⚠ TIP

Network capacity is the only limitation on the number of users that can make up a group.

Dispatchers maintain contact with all members of the group, and each user can stay in "push-to-talk" contact with the dispatcher and all the users in their talk group, even if those users are from different, inter-networked agencies.

The Figure below illustrates a small user group of four P-801T portable radios.

Figure 1

User Group

Each radio assigned to an individual user
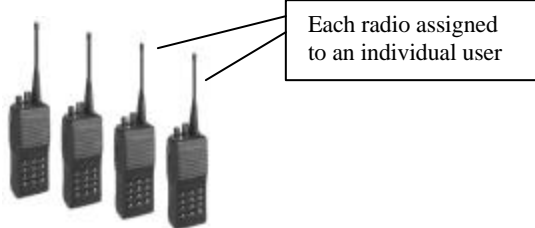
Nothing about this user group so far defines it as a talk group or a listen group. That determination is made when user groups are gathered together by the network administrator into the larger groups called profiles.

Profiles

A profile is a set of up to 16 user groups. All sorts of configurations are possible within this simple architecture. Police officers on the same shift might make up a profile, for instance. Within this profile, each police station within the network might be assigned a user group. So the profile would connect all the cruisers from 16 stations for an entire shift.

Officers from each station would most likely be in "push-to-talk" contact with one another; all other officers on the same shift would most likely monitor the other groups for "listen-only" access to all other calls within the profile. But this is only one possible configuration.
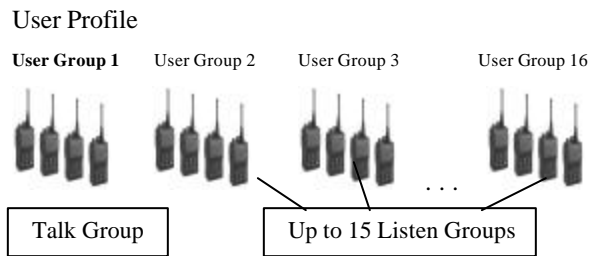

TIP

Members of a talk group are not necessarily scanning the calls of the same listen groups.

A user group might just as easily include officers from several stations: a SWAT team, for example, or a special emergency task force might require the collaboration of special personnel or equipment from different police stations, or even other agencies.

- **In conventional FM** radio broadcast systems, users with this sort of relationship would create an "ad hoc" profile by tuning to one channel for talk-group privileges and scanning an entire bank of channels to monitor the conversations of other groups.

- **In the IP-backbone OpenSky digital network**, members of the same talk group automatically receive every voice message addressed to the group, and monitor the voice messages of every other user group in the profile.

Each user in the OpenSky network can be assigned as many as 16 profiles by the network administrator. At any time during a network session, users can select the profile that suits their needs with a simple twist of the Profile Selector knob. The Active Profile Number is displayed in the radio's menu Display and Control Area.

Figure 2

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User Profile

User Group 1   User Group 2   User Group 3   User Group 16

. . .

| Talk Group | | Up to 15 Listen Groups |

Talk Groups

While your active profile can contain up to 16 user groups, only the primary group in any profile is your talk group. All the other user groups in your profile are listen-only groups. You'll hear the calls from these groups but they will not hear your voice *unless your user group is part of **their profile***.

To establish voice-to-voice contact with a particular user, you'll have to select the profile that makes that user part of your talk group. This is only possible if your network administrator has configured a talk group that contains both you and the other user.

If each of you has a profile that includes the other in a talk group, you can each select the profile that puts you into "push-to-talk" contact with the other.

Listen Groups

All the other user groups in each of your up to 16 profiles are listen groups. See the User Profile Figure above for an illustration of how user groups are related in a profile.

By adding different listen groups to your several profiles, your network administrator can change the configuration of the user groups you can monitor at any time by clicking your profile selector knob to the appropriate profile.

You may only have one talk group, but that doesn't keep you from tuning in different profiles to monitor a different "bank of channels."

Scan Modes

There are three scanning options that include:

Scan none: Scanning is disabled.

Scan normal: Scan all listen groups in your profile.
               PTT results in a response in your default
               talk group.

Scan talk back: Scan all listen groups in your profile
                 within a time out period. PTT results
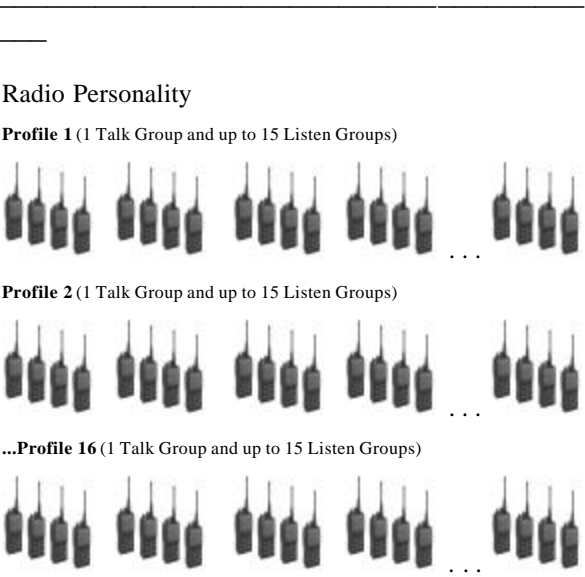   in a response in the active listen group.

Radio Personality

Your radio personality is a collection of up to 16 profiles. The entire personality is organized by your network administrator and is unique to your communication needs.

When you activate your radio at the beginning of a shift and sign on with your unique identity code, your radio is assigned its IP address and "provisioned" with a radio personality that identifies other users on the network with whom you are most likely to need to communicate by voice.

Your overall radio personality is organized into **User Groups** (talk groups and listen groups), similar to a *channel* in a conventional FM radio system. These user groups are then organized into **Profiles** (collections of up to 16 user groups), similar to *banks of channels*. Finally, as many as 16 profiles make up your personality.

Figure 3

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Radio Personality

Profile 1 (1 Talk Group and up to 15 Listen Groups)

. . .

Profile 2 (1 Talk Group and up to 15 Listen Groups)

. . .

...Profile 16 (1 Talk Group and up to 15 Listen Groups)

. . .

Radio personality architecture gives you tremendous flexibility to organize your communications needs, even as conditions change.

With 16 profiles you can participate in as many as 16 talk groups. Or, if you only need one talk group, you can still have up to 16 different profiles that can add more than 200 other user groups to your listen group pool, each with an almost unlimited number of subscribers.

Of course, with potentially hundreds of voice calls in your profile at any time, your personality also establishes strict pre-determined priority sequences to suppress the calls that would distract you from the calls you're more likely to need.

Terminology

Most of the terms and concepts you'll need to communicate with your dispatcher, network administrator and other users have parallels in legacy analog networks.

Digital	Compare to Analog
User Group...........	FM radio channel
Profile	Bank of FM radio channels
Talk Group...........	"Push-to-talk" connection with users tuned to the same channel
Listen Group........	"Listen-only" connection to a bank of radio channels
Profile	Talk privileges on one channel while monitoring an entire bank of channels

Getting Started

Chapter 3

Before Your First Shift

If you're already familiar with portable radio functions and the "profile and personality" architecture of an all-digital network, you'll find the features and controls of your new P-801T to be logically arranged and easy to understand.

But if you're new to digital radio service, and especially if you're migrating to OpenSky from an FM analog radio environment, take some time to review the Network Organization chapter of this manual before operating your radio.

In either situation you'll want to completely familiarize yourself with the controls and indicators of your new radio before you start trying to use it on the job. In particular, you'll want to be able to scroll your way through menu display choices and quickly select the appropriate radio profile for the changing conditions of your work day.

Radio Controls

Examine your radio thoroughly and familiarize yourself with the location and operation of its controls and indicators before studying their functions. The following diagrams will identify the components of your equipment one panel at a time.

Front Panel Components

The front panel of your P-801T includes the Speaker element, the Microphone, and a 12-button "telephone" Keypad. The microphone is a tiny rectangle in the upper left-hand corner of the speaker element. Be careful not to obstruct the microphone while talking.

Figure 1

Front Panel Components

Component	Function
Microphone	Picks up your voice for dispatcher and other users on the network to hear
Speaker Element	Allows you to hear voice calls
Telephone-Style .... Keypad	Used to gain access to additional system features

Left Panel Components

The left-side panel of your P-801T houses the Emergency button, the Push-to-Talk button, and two Select buttons for choosing among performance menu items when those items are displayed in the LCD Display on the radio's top panel.

Figure 2

Left Panel Components

Component	Function
Emergency Button	Sends an emergency alert over the network and initiates an emergency call. Also used to cancel an emergency alert.
Push-to-Talk Button	Turns the radio microphone on to transmit a voice call.

Emergency Button

Push-to-Talk Button

Select Buttons

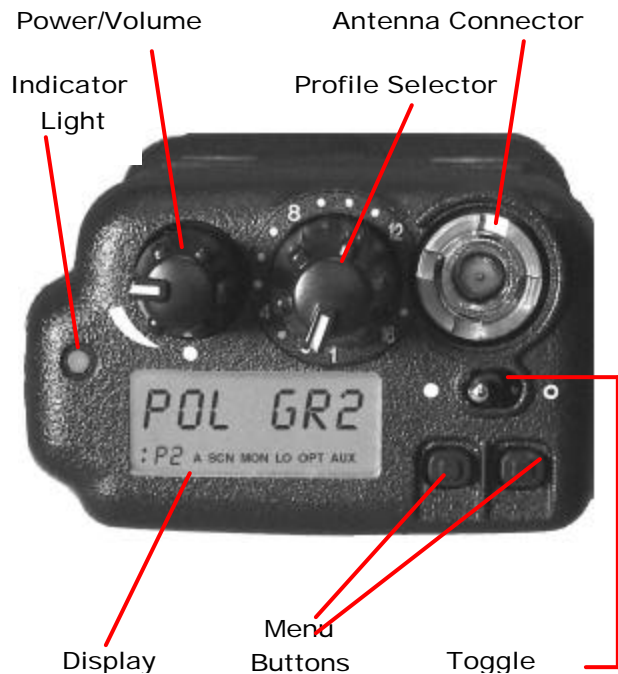**Select Buttons ....** Used with the Menu buttons on the radio's top panel. When the menu heading you want appears in the display panel, use the Select buttons to scroll "up and down" through the choices available.

Top Panel Components

The top panel of your P-801T houses the LED display panel, indicator light and antenna connector, plus four control components: the Power/Volume switch, the Profile Selector, Menu buttons and the Toggle switch.

Figure 3
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Top Panel Components

Component	Function
Power/Volume Switch	Turns the radio on and off. Controls the volume of calls coming into the speaker.
Antenna Connector	Mounting location for your removable antenna
Indicator Light	Turns red and blinks when you are in transmit mode. Turns green and blinks when you receive a call.
Profile Selector Dial	Sets one of 16 profiles as the active profile.
Display Panel	Provides profile and user group information. When the menu or select buttons are pressed, the menu display temporarily changes to show the selected menu screen. If no buttons are pressed, the display returns to the primary menu.
Menu Buttons	These allow the user to cycle "left and right" through the menu of radio functions. Responding to the buttons, menu headings will appear in the display panel. Once you find the menu you want, use the Select buttons on the radio's left panel to scroll "up and down" through the choices available in that menu.
Toggle Switch	Turns display, indicator light, and side tones on or off.

Right Panel Components

The right-side panel of your P-801T houses the Universal connector you'll use to attach an external microphone or speaker. Use this to connect to an external data terminal using an RS-232 adapter cable.

Figure 4

Right Panel Components

Universal
Connector

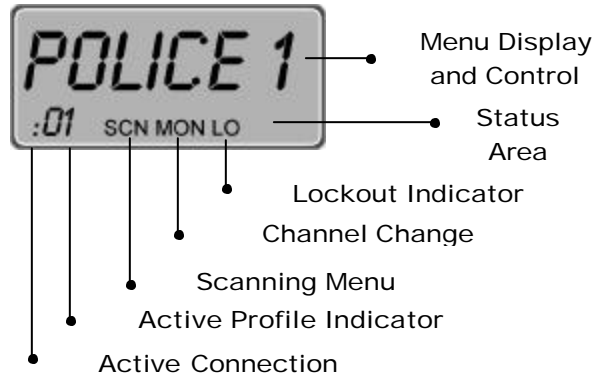## The Display Panel Overview

The radio display shows your active user group and profile, menu selections and status information. The display is divided into two major elements:

- Menu Display and Control Area (the top 2/3 of the panel) and,

- Status Area (the bottom 1/3 of the panel)

The figure below reflects a composite condition you'll never see on your display panel. It displays all the components of the default display, plus all the Status Area indicators at once, not a natural condition. In ordinary use, you'll see just one mode indicator in the Status Area at any time, and only for 10 seconds after you make menu selections, before the display reverts to the default screen.

Figure 5

Display Panel Elements

Menu Display and Control

Status Area

Lockout Indicator

Channel Change

Scanning Menu

Active Profile Indicator

Active Connection

Component	Function
Menu Display............. *Default Condition*	Provides profile and user group information under ordinary operating conditions
Menu Display............. *Menu Selection*	When Menu or Select buttons are pressed, this area changes to show selections from the menus. These displays, and any related Status Area indicators, stay onscreen for 10 seconds before the entire display reverts to the default condition.
Status Area.................	Arranged across the bottom of the display panel are five fields for displaying hints to remind you what menu you're accessing. Unless you're using your menus, many of these fields will be empty.
Status Area................. *Activity Indicator*	When your radio is on and connected to the OpenSky network, the **:** appears in the status area. The number of your active profile, if any, will appear after this symbol. Or, if you have engaged Priority Scan, a **P** will display while the radio scrolls through the user groups.
Status Area................. *Profile Number*	The **01** in the figure above indicates the active profile for this user is Profile 01.

Component	Function
Status Area................ *Scanning Mode*	When you activate the Scanning Mode menu, **SCN** will appear in the Status Area. In this condition, you can scroll through your scanning mode choices in the display area above.
Status Area................ *Channel Change*	When you activate the Active Radio Channel menu, **MON** will appear in the status area. In this condition, pressing the Select buttons will display available channels in the display area above.
Status Area................ *Lockout Indicator*	When you select the Lockout Menu, **LO** will appear in the Status Area. In this condition, you'll be able to scroll through profile names and select those you want to lock out.

Menu and Status Choices

You'll use your top panel Menu Buttons to scroll through the menu choices for changing your radio's status, then fine-tune your selections by using the left panel Selector Buttons to choose from the available options within each menu.

⚠️ TIP

The Profile Selector, not the Menu Buttons, is the component for changing your active profile

The column headings in the figure below are the primary menus accessible directly from your Menu buttons. Entries in the columns below represent the sort of menu items you might find when using the Selector buttons to scroll through the primary menus.

Your network administrator will organize the Priority Scan, Channels, and Lock Out menus to match your particular needs, so you won't be distracted by irrelevant options.

Figure 6

Primary/Secondary Menu Loop

Priority Scan	Scan Mode	Channel	Side Tone	Bright -ness	Mode Display	Change Mode	Lock Out
POLICE 1	SC NORM	OT 460	SIDE ON	BRGHT 1	OTP 418	SEL2CNG	POLICE 1
POLICE 2	SC NONE	OT 470	SIDEOFF	BRGHT 2	OTP 313		POLICE 2
FIRE 1	TLKBK	OT 480		BRGHT 3			FIRE 1
. . .		. . .			. . .		. . .
EMS 5		OT 990					EMS 5

When you've navigated to the secondary menu item you want to activate, do nothing. The radio will take your inactivity as a confirmation that you have made your choice and act accordingly. After a 10-second delay, your choice is confirmed and your screen will return to the default display.
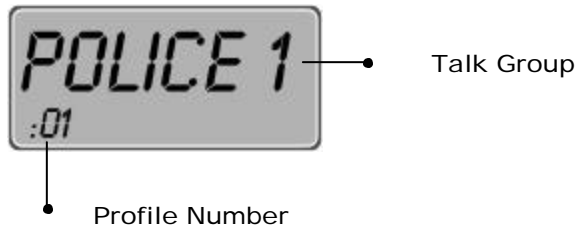
Primary Display

After you turn on the radio and the startup sequence finishes, the radio will try to register with the network using its last user ID. If successful, the display shows the active profile, talk group and menu selections. Unless you need to change any of the active settings, you can go right to work when you see this display.

This primary display is the default screen your radio will return to after you use the menu and selector buttons to change or review your active settings. Default is automatic. After your last button-push, and a 10-second delay, the radio will clear your final selection and return to the Primary display.

Figure 7

Primary Display (Default Screen)

POLICE 1 ————• **Talk Group**
:01

•——— Profile Number

Component	Explanation
Talk Group.................	Your profile (identified above as 01) may contain as many as 16 user groups. For each profile, only one user group is configured as your talk group. The default screen shows the active talk group in the menu display and control area.
Profile Number..........	Your network administrator can configure your radio personality with up to 16 distinct profiles. The default screen shows the active profile number in the status area.

!TIP
To see the other user groups in your active profile, you'll use the menu and selector buttons to scroll through the Priority Scan menu.

Display Panel Functions

Chapter 4

Menu and Selector Buttons

Most Display Panel functions are launched from the Menu and Selector buttons. You'll use your top panel Menu Buttons to scroll through the menu choices for changing your radio's status, then fine-tune your selections by using the left panel Selector Buttons to choose from the available options within each menu.

See the Figure: Primary/Secondary Menu Loop for a map of the menu choices.

Selecting a new menu setting is a 3-step process:

1.) Press either top panel menu button to enter the Primary Menu loop. Use the left or right menu buttons to scroll through the selections.

2.) When you find the appropriate menu, press either left-panel selector button to enter the menu. Use the top or bottom buttons to scroll through the selections.

3.) When you find the appropriate selection, do nothing. After a 10-second delay, your P-801T will accept your entry as your final selection, clear the screen, and return to the default screen.
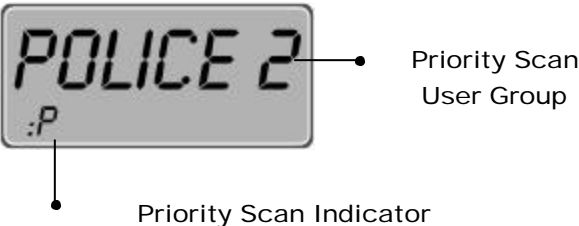
Priority Scan

When you use the menu buttons to choose Priority Scan, the P-801T scrolls through the available user groups in your currently selected profile and allows user selection of the appropriate group as your priority scan user group.

NOTE: Use of *Talk-Back Scan* will allow the radio to return a call on the same talk-group as an in-bound call was just received on. See **SCAN MODE** overleaf.

Figure 1

Priority Scan Menu

Priority Scan User Group

Priority Scan Indicator

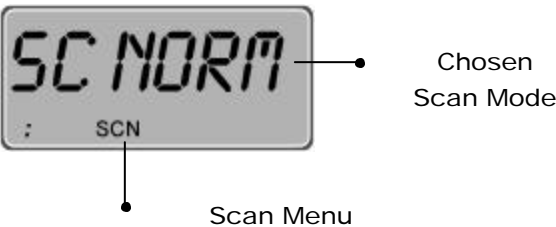| Component	Explanation
Priority Scan User Group	The priority scan user group will display for 10 seconds, then the menu display will revert to the default screen.
Priority Scan Indicator	The priority scan indicator **P** will appear in the status area while the radio scans the available user groups.

Scan Mode

When you use the menu buttons to choose Scan Mode, the display area adjusts to show you the first of three available scan modes: None, Normal, or Talkback.

Use the left-panel Selector buttons to scroll through the choices, then wait for the radio to accept your choice. When the default screen appears in your display, your choice has been activated.

Figure 2

Scan Mode Menu

Chosen
Scan Mode

Scan Menu

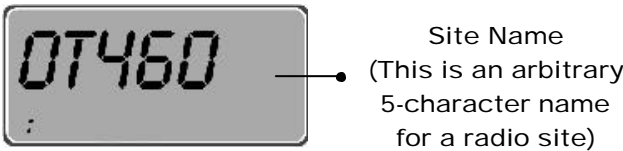| Component	Explanation
Chosen .... **Scan Mode**	The scan mode you select (None, Normal, or Talkback) will appear in the display area for 10 seconds, then the menu display will revert to the default screen.
Scan Menu .... **Indicator**	The scan menu indicator **SCN** will appear in the status area while you scroll through and select your scanning mode.

Channel Change

When you use the menu buttons to choose Channel, the P-801T adjusts to show you the first of the available channels from which you may choose.

Use the left-panel Selector buttons to scroll through the choices, then wait for the radio to accept your choice. When the default screen appears in your display, your choice has been activated.

Figure 3

Channel Change Menu

```
OT460
```
Site Name
(This is an arbitrary
5-character name
for a radio site)

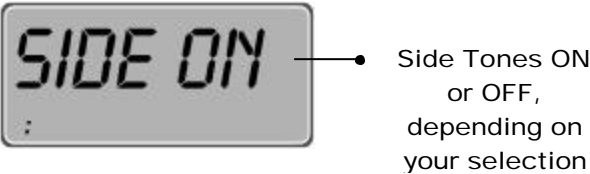| Component	Explanation
Site Name	Your selected channel will appear in the display area for 10 seconds, then revert to the default display.

Side Tone

There are only two choices in the Side Tone Menu (Side Tone ON, Side Tone OFF). Use this function to activate or de-activate the audible beeps that occur when you press a Menu or Selector button.

First use the top panel menu buttons to scroll to the Side Tone menu, then press either left-panel selector button to toggle between SIDE ON and SIDEOFF, then wait for the radio to accept your choice. When the default screen appears in your display, your choice has been activated.

Figure 4

Side Tone Menu

Side Tones ON or OFF, depending on your selection

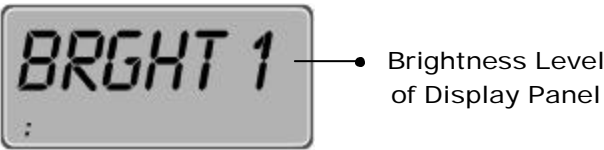| Component	Explanation
Side Tone	Your choice of Side Tones ON or OFF will appear in the display area for 10 seconds, then revert to the default display.

Brightness Control

There are only three choices in the Brightness Menu. You'll use the menu in high- or low-light situations to change the brightness of back-lighting for your display panel and key-pad.

First use the top panel menu buttons to scroll to the Brightness menu, then press either left-panel selector button to scroll through the choices BRGHT 1, BRGHT 2 and BRGHT 3, then wait for the radio to accept your choice. When the default screen appears in your display, your choice has been activated.

Figure 5
_____

Brightness Menu

BRGHT 1 ●————— Brightness Level
of Display Panel

Component	Explanation
Brightness Level........	The Brightness level you select for your display panel (3 is the brightest; 1 the dimmest) will appear in the display area for 10 seconds, then the menu display will revert to the default screen.

Mode Display

The Mode Menu is a "view-only" menu with only one active entry at a time. Its function is to display the name and revision number of the software your radio is running. As a safeguard against accidentally choosing the wrong software, you'll need to deliberately choose the Change Mode menu and scroll through the options available in that menu to make a software change.

You'll need only the top-panel Menu buttons to display your active software. Just scroll through the menu until your current mode is displayed in the panel.

Figure 6
___

Mode Menu (Current Software)

Active Software Name and Version

Component	Explanation
Active Software	This "view-only" information will appear in the display area for 10 seconds, then the menu display will revert to the default screen.

Change Mode

You'll use this mode to change the type or revision number of the software it runs. The most appropriate software for your use is automatically loaded with your other configuration specs whenever you turn on your radio. To see what software you're running currently, use the Menu buttons to scroll to the "view-only" Mode menu display.

If you need to run software other than what the Mode menu shows, continue to scroll to the Change Mode menu (screen display: SEL2CNG). Once you're in the Change Mode, use the left-panel Selector buttons to scroll through the list of available alternative software versions.

A detailed procedure for changing the mode of your radio can be found in Chapter 6.

Figure 7

Change Mode Menu

"Select to Change" Mode

Component	Explanation
"Select to Change" Mode	This is the menu heading you'll select to launch your radio into the Mode Change menu sequence.
	From here, you'll use the left-panel Selector buttons to choose another software mode.

Lock Out

You'll use the Lock Out menu to prevent you from hearing non-emergency voice calls from user groups you select. Supervisory and emergency calls will cut through your lock-out command, but you won't be distracted by the other voice call activity from user groups you've locked out, until you elect to run the menu again and remove the lock.

Use the top-panel Menu buttons to display the Lock Out menu, then use the left-panel Selector buttons to scroll through the list of available user groups in your active profile.

⚠ TIP

Lockout is a "toggle-type" condition. Re-select a locked out group to remove the lock.

Already locked-out user groups are marked by the lockout indicator **LO** in the display panel (see figure below). To lock out a user group not so marked, display that group in the display panel and wait until the radio accepts your selection and returns to the default display. To lock out another group, return to the Lock Out menu and make a new selection.

Figure 8

Lock Out Menu

Locked Out
User Group

Lock Out
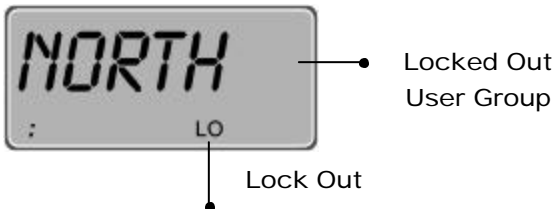
Component	Explanation
Locked Out................. **User Group**	As you scroll through the user groups in your active profile, locked out groups are marked by the indicator **LO**.
Lock Out .... **Indicator**	Unlike other Status area indicators that stay lit while the menu is active, the Lock Out indicator is only visible when the user group in the display is currently locked out, not visible when the selected group is not locked out.

Basic Radio Operation

Chapter 5

Power Switch and Volume

Power ON, Power OFF, and VOLUME functions are all handle͏ from the Power/Volume Switch, a top panel component.

➢ How to Turn Your Radio On

Power/Volume

1.) Rotate the **Power/Volume** switch clockwise until it clicks.

2.) Wait through the **Startup Sequence**, which lasts approximately 5 seconds. During this time your radio is provisioned with your radio personality and current user specifications.

3.) The : in the display panel indicates the end of the startup sequence and your live connection to the OpenSky network

4.) Turn the **Power/Volume** switch clockwise to increase the volume; counterclockwise to decrease the volume.

➢ How to Turn Your Radio Off

1.) Rotate the **Power/Volume** switch counter-clockwise until i͏ clicks.

2.) Your **Display Panel** displays SHUTDWN while the radio runs through its shutdown sequence. The operating mode of your radio is saved into network memory and recalled on the next start-up.

Disabling Lights and Side Tones

For covert operations, it is important to be able to turn off the radio's display lights and side tones. For safety's sake, though, you probably won't want to shut your radio down for the time you're planning to go covert.
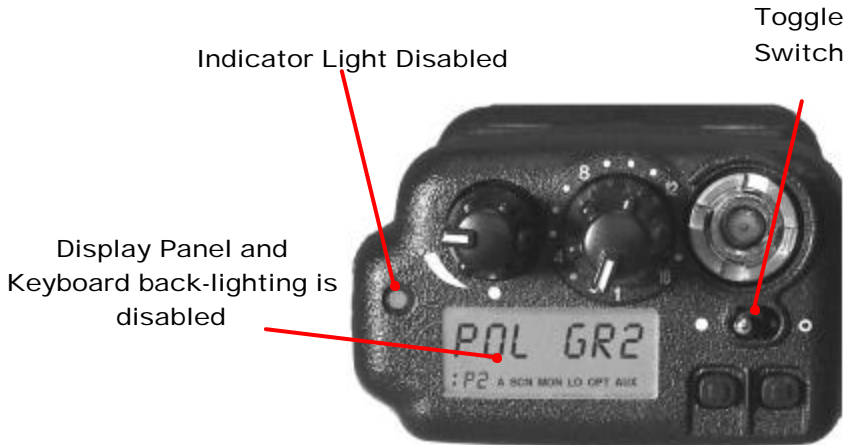
![!] TIP

Turning off your radio does not affect your Toggle Switch setting, which will be saved for your next use.

To temporarily disable the lights and sounds that could inadvertently expose your presence and position, flip the Toggle Switch, a top panel component. Another flip of the same switch will bring your display and tones back into operation.

➢ How to Go Covert

- Push the **Toggle Switch** to the right until it snaps into position.

Toggle Switch

Indicator Light Disabled

Display Panel and Keyboard back-lighting is disabled

- The **Display Panel** will go dark, the Indicator light will turn off, and the Side Tones (the audible beeps you hear when you use the menu buttons) will be disabled.

If you've been conducting covert operations and are ready to re-enable your radio's lights, display screen and side tones for ordinary use, a simple flip of the Toggle Switch will return the P-801T to full function. A "covert" radio looks like a "powered-off" radio. But re-enabling your functions has immediate results. You won't have to wait through the startup sequence and your radio will not be re-provisioned when you flip the toggle to re-enable your lights and tones.

➢ How to Enable Lights and Tones

- Push the **Toggle Switch** to the left until it snaps into position.

- The **Display Panel** will brighten, the Indicator light will turn on, and the Side Tones (the audible beeps you hear when you use the menu buttons) will be re-enabled.

- To test your side tones, press a **Menu** button and listen for the confirming tone.

Voice Calls

As soon as your radio completes the startup sequence and is live on the OpenSky network, you'll begin to hear voice calls from the talk and listen groups in your active profile. No action is required on your part, but the following list details how your radio responds to incoming voice messages.

➢ Initial Network Registration

1.) If the radio has never been registered on your network, it will attempt to use a default User ID, if one is available.

2.) If the radio has been previously registered on the network, it will automatically attempt to re-register with the same User ID and Password as previously used. Once registered, the Default Profile Name will be shown on the display panel.

3.) If registration fails, the message **NOT REG** will flash on the display.

4.) Also, if registration fails, does not have a default, a previously used ID, or if you want to enter a new user ID, do the following:

- The front panel keypad is used to enter a four-digit User ID and four-digit password (this must be issued to you by your System Administrator).

- Press the * key followed by your 4-digit User ID and 4-digit password. Press the # key to end. The key sequence for User ID 0063 and password 1234 is shown below.

- After each key press, an audio tone will be heard. If too many numbers are entered, a longer tone will be heard.

- To escape, press the * key. To start again, press * again.

- If the registration request is successful, the radio will display the active profile name.

- If the registration request is unsuccessful, three rapid beeps will be heard and the LCD panel will alternate between showing the **NOT REG** status and the default talk group.

➢ How to Take a Voice Call

1.) First, if you haven't already, power up your radio by rotating the **Power/Volume** switch clockwise until it clicks. (See *How to Turn Your Radio On*.)

2.) Your radio **Display Panel** flashes a user group to identify the incoming caller.

3.) The **Indicator Light** turns green and blinks throughout the call.

4.) At the end of the call, you will hear a single **End of Message** tone.

The steps for making a voice call with your P-801T are similar to those for a conventional portable radio.

➢ How to Make a Voice Call

1.) First, if you haven't already, power up your radio by rotating the **Power/Volume** switch clockwise until it clicks. (See *How to Turn Your Radio On*.)

2.) Check the **Indicator Light** for clearance. If the light is dark, you are clear to talk. If the light is blinking green, you are receiving a call.

Indicator

Blinks Green while you are receiving a call.

3.) Wait for clearance if necessary. A single **End of Message** tone will indicate the end of your incoming call.

4.) Depress and hold the **Push-to-Talk** button and speak normally. For maximum clarity, hold the transceiver such that the microphone is approximately 1½ inches from your mouth.

5.) Release the **Push-to-Talk** button to terminate your outgoing voice call.

➢ What the Beeping Means

1.) If the network is clear, you won't hear anything when you depress the Push-to-Talk button. Just hold the button down and talk, then release the button.

2.) If you hear **3 rapid beeps**, the network is too busy to transmit or even queue your call. You cannot place a call in this situation. Wait a few seconds and try your call again.

3.) If you hear a **3-beep sequence** (Medium tone / Medium tone / High tone), the network has acknowledged your request for clearance and placed your call in the queue.

When the network becomes available, the radio will automatically transmit for 10 seconds and the **Indicator light** will blink red.

The network can now accept your call. Depress and hold the **Push-to-Talk** button and speak.

Enable and Disable Side Tones

Your radio sounds confirming tones when you press the Menu or Selector buttons. Most users find this audible confirmation helpful in navigating the menus in the Display Panel.

You can disable the side tones, if you wish, by navigating to the Side Tone menu, and selecting SIDEOFF. To re-enable the tones, you'll need to navigate back to the same menu (without the benefit of side tones) and this time select SIDE ON.

➢ How to Disable Side Tones

1.) Press either **Menu** button and continue to press until the Side Tone menu appears.

SIDE ON — Shows current status of Side Tones

2.) The **Current Condition** will appear in the Display Panel. The figure above indicates that your side tones are ON.

3.) Press either **Select** button until the Display Panel shows SIDEOFF.

4.) No further action is required. Your radio accepts your choice and, after a short delay, reverts to the default screen.

If your radio is operating as normal, but you don't hear confirming tones when you navigate the menus, most likely your Side Tones are disabled.

➢ How to Enable Side Tones

1.) Press either **Menu** button and continue to press until the Side Tone menu appears.

Shows current status of Side Tones

2.) The **Current Condition** will appear in the Display Panel. The figure above indicates that your side tones are ON.

3.) Press either **Select** button until the Display Panel shows SIDE OFF.

4.) No further action is required. Your radio accepts your choice and, after a short delay, reverts to the default screen.

➢ How to Undo your selection

If you've made a selection in error, or immediately change your mind, you have a few seconds to undo your selection before it takes effect.

1.) Immediately press either **Menu** button.

2.) Your Display panel confirms that you are back in the **Side Tone** menu.

3.) Use either **Select** button to change your selection.

If pressing the Menu button does not launch you back into the Side Tone menu, you haven't acted quickly enough to Undo your choice. Wait approximately 10 seconds for the selection process to clear the radio, then scroll through the menu until SIDE ON or SIDEOFF appears in the screen.

Adjusting Display Brightness

The brightness of your backlighting for the LCD panel and keypad can be adjusted to any of three levels as the ambient brightness of your environment changes. Brightness is a menu item, accessible from the Menu buttons.

➢ How To Adjust Brightness

1.) Press a Menu button until the brightness menu shows in the Display panel.

Shows current Brightness

> **⚠ TIP**
> Turning off your radio does not affect your Brightness setting, which will be saved for your next use.

2.) The **Current Condition** will appear in the Display Panel. The figure above indicates that your radio is operating at the lowest level of brightness. To make the display brighter, choose BRGHT 2 or BRGHT 3.

3.) Press the upper **Select** button to increase brightness. Press the lower **Select** button to decrease brightness.

4.) No further action is required. Your radio accepts your choice and, after a short delay, reverts to the default screen.

➢ How to Undo your Brightness Choice

If you've made a selection in error, or immediately change your mind, you have a few seconds to undo your selection before it takes effect.

5.) Immediately press either **Menu** button.

6.) Your Display panel confirms that you are back in the **Brightness** menu.

7.) Use either **Select** button to change your selection.

If pressing the Menu button does not launch you back into the Brightness menu, you haven't acted quickly enough to Undo your choice. Wait approximately 10 seconds for the

selection process to clear the radio, then scroll through the menu until the Brightness menu appears.

Changing Your Active Profile

During the Startup sequence, your radio is configured with an entire radio personality, including as many as 16 Profiles, one of which your network administrator has designated as your Active Profile by default.

Your default profile will contain your most common talk group and as many as 16 other user groups the radio treats as "listen groups."

⚠ TIP

PERSONALITY OVERRIDE. The position of your Profile Selector dial will override the default profile selection your radio makes on startup.

If at any time you need access to groups not loaded into your active profile, you can switch to any other profile in your radio personality. Profile selection is not a menu item. Instead, the 16-position Profile Selector dial, a top panel component, gives you much faster access to your bank of profiles.

➢ How to Choose Another Profile

You'll have to be familiar enough with your profiles to recognize them by number, or by the active "talk group" for each profile.

1.) Turn the **Profile** selector directly to the profile number of your choice, or browse through the choices until the talk group you need appears in the Display panel.

16-Position Profile Selector

Active Profile **Default Talk Group**
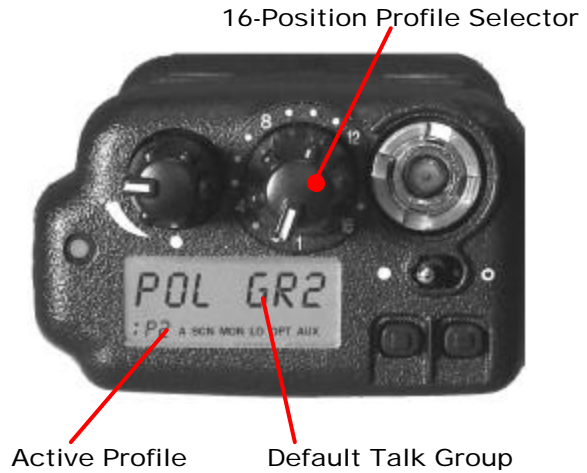
2.) Your new **Active Profile** appears in the Status area of the Display panel. The number following the : symbol identifies the profile you've selected.

3.) The default **Talk group** for the active profile is indicated in the Menu display and control area.

4.) Once you've dialed a profile, it remains your active profile selection until you dial another, **even if you turn off your radio**. The position of the dial when you Power On will override the profile selected for you during the startup sequence.

Emergency Communications

Your radio can send out an Alert or place Voice Calls over the entire network in an emergency. OpenSky handles Emergency Calls and Alerts with the very highest priority, giving you and the people you serve access to the help you need no matter how much traffic the network is handling.

➢ How to Place an Emergency Call

1.) Press the orange **Emergency Button** on your radio to send an emergency alert. You'll find the button just above the Push-to-Talk button on the left panel (see the Figure: *Left Panel Components*).

2.) You'll hear nothing, but other users will hear the **Emergency Alert** signal, a distinctive 3-tone burst of sound.

3.) At the same time, the network enables an **Emergency Talk Group**.

4.) Press the **Push-to-Talk** button to send your voice out over the emergency talk group.

5.) All the radios in the **Emergency Talk Group** will hear your call and see the emergency talk group displayed on their radio, overriding any other displays that may have been active there.

6.) When your emergency ends, your dispatcher must clear the emergency call.

Advanced Radio Operations

Chapter 6

Fine-Tuning Your Personality

Access to as many as 16 profiles within your pre-determined radio personality gives you tremendous responsiveness to the changing needs of your workday.

What's more, within each profile, the flexibility of the IP-protocol OpenSky network makes it possible to fine-tune your radio's sensitivity to incoming voice calls by changing the scanning priority of specific user groups, changing radio scanning modes and channels, even locking out the incoming voice calls of entire user groups.

Prioritizing a User Group

⚠ TIP

Priority Scan is different from Talk Group status. Even if you give a Listen Group priority scan status, your Talk Group is still your Talk Group.

At different times during your shift you may want to change the Priority Scan Group on your radio. This determines which talk group will take precedence in the event that multiple talk groups from your scan list are simultaneously active.

In the event that the Priority Scan Group is not one of multiple active talk-groups, the first active is the one that will be heard.

You may use the procedure below to establish one new priority scanning group for every profile in your radio personality. There's no ranking order in scanning priority: one group per profile is the priority group; all other groups in the same profile are "non-priority."

➢ **How to Assign Scan Priority to a Group**

1.) Turn the **Profile** selector dial to the profile containing the user group you wish to prioritize. When it comes to the screen, each profile is identified by its profile number and talk group, which is also the default priority scan group.

EMERG1 ——— Talk Group
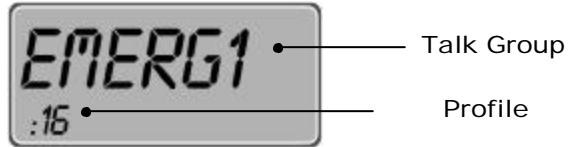
:16 ——— Profile

2.) Press the **right Menu** button one time to access the Priority Scan menu. When you arrive, you'll see the Priority indicator P in the Status area.

POLICE 1 ——— Priority Scan

:P ——— Priority Scan Indicator
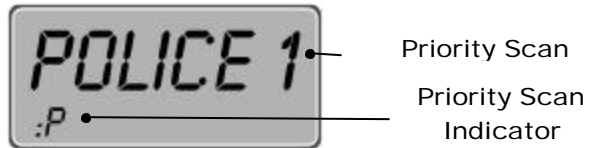
3.) Use the **Selector** buttons to scroll through the user groups in your active profile until you find the group you want to assign scanning priority.

4.) **Stop** when your new priority group appears in the display panel with the Priority Scan indicator.

5.) No further action is required. Your radio assigns priority status to the group you've selected and, after a short delay, returns to the default screen.

➢ **How to Undo your Priority Assignment**

If you've made a scanning priority assignment in error, or immediately change your mind, you have a few seconds to undo your selection before it takes effect.

2.) Immediately press either **Menu** button.

3.) Your Display panel confirms that you are back in the **Priority Scan** menu.

4.) Use either **Select** button to change your selection.

If pressing the Menu button does not launch you back into the Priority Scan menu, you haven't acted quickly enough to Undo your choice. Wait approximately 10 seconds for the selection process to clear the radio, then press the right Menu button to re-enter the Priority Scan menu.

Duration of Priority Assignments

If you make no priority assignments during your shift, each profile selects the talk group as the priority scan group. When you use the Priority Scan menu to assign scanning priority to a new group, your assignment stays in effect until you change it or turn your radio off. Powering Off erases all scanning priority assignments and resets your radio to the defaults.

Changing the Scanning Mode

Three scanning modes are available for the P-801T, but only one can be active at any time. Changing your scanning mode changes the way your radio scans voice calls for all of the profiles in your radio personality.

Your choice of scanning mode will broaden or narrow the span of your communications with all the listen groups in your profiles, but does not affect your interaction with your talk groups.

Your scanning mode choice will stay in effect until you change it again; even if you turn off your radio, your current selection will be saved until your next use.

Scan Mode	Explanation
No Scanning	Full communications (listen and talk) with your talk group.
	No calls from listen groups.
	Eliminates distractions.

| Scan Mode	Explanation
Normal .... **Scanning**	Full communications (listen and talk) with your talk group.
	Receive calls from the listen groups.
	This is the default setting. Network administrator has established this as the most effective configuration for everyday use.
Talkback .... **Scanning**	Full communications (listen and talk) with your talk group.
	Receive calls from the listen groups.
	Place voice calls to the most recent listen group by pressing the Push-to-talk button before the Talkback timer expires.

➢ **How to Place a Talkback Call**

With your radio in Talkback Scanning mode, you can respond to voice calls from listen groups in your active profile.

You can't initiate outgoing voice calls to just any listen group, but you can immediately respond to any incoming call by pressing your Press-to-Talk button before the Talkback timer expires. Your call will go out only to the most recent listen group you heard.

1.) Set your radio to **Talkback Scanning** mode.

2.) When you hear an incoming listen group call you want to respond to, press the **Push-to-Talk** button.

3.) . . . If you respond before the expiration of the talkback timer, your call will transmit as a voice call to the most recent listen group you heard.

4.) . . . If you fa il to beat the timer, your call will transmit to the talk group for your active profile.

5.) . . . If you repeatedly exceed the talkback time limit, consider asking the network administrator to extend the time allowed.

➢ **How to Change your Scanning Mode**

   1.) Press either **Menu** button until the Scan Menu
       appears. The Scan Menu indicator SCN lets you
       know you're in the menu. The Display panel
       shows the currently selected Scan mode.

   SC NORM ——————• Current Scan
                    Mode Status

   ; SCN ——————————• Scan Menu
                       Indicator
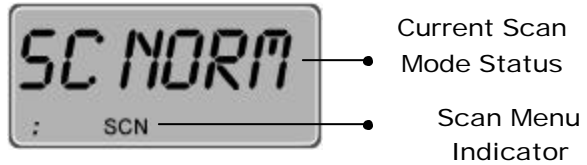
   2.) To **narrow** your scanning list to just the talk group
       in your active profile, press either **Select** button
       until SC NONE is displayed.

   3.) To select the **default scanning mode** which scans
       all the listen groups in your active profile, press
       either **Select** button until SC NORM is
       displayed.

   4.) To **broaden** your communications range by
       enabling talkback voice calls to your active listen
       groups, press either **Select** button until SC
       TLKB is displayed.

   5.) No further action is required. Your radio adjusts to
       the new scanning mode and, after a brief delay,
       reverts to the default screen.

➢ **How to Undo your Scan Mode Selection**

   If you've made a Scanning Mode selection in error, or
   immediately change your mind, you have a few
   seconds to undo your selection before it takes effect.

   1.) Immediately press either **Menu** button.

   2.) Your Display panel confirms that you are back in
       the **Scan Mode** menu.

   3.) Use either **Select** button to change your selection.

If the Menu button does not launch you back into the Scanning Mode menu, you've missed the Undo deadline. Wait approximately 10 seconds for the selection process to clear the radio, then use the Menu buttons to re-enter the Priority Scan menu.

➢ **Duration of Scanning Mode Selections**

Scanning Mode selections survive Power Off. At startup, your radio will default to the scanning mode of your last use. Any selection you make during your shift will remain in effect until you make a new selection from the Scan Mode menu.

Changing the Active Channel

If your reception is poor or you are repeatedly denied channel access, you can manually change the radio to a different channel.

➢ **How to Change the Active Channel**

1.) Press either **Menu** button until the Channel Change Menu appears. The indicator MON lets you know you're in the menu. The Display panel shows the currently selected active Channel.

Active Channel

Channel Menu Indicator
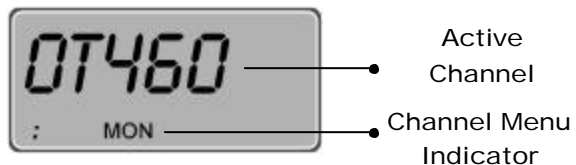
2.) Press either **Select** button once or repeatedly to display alternate channel choices. Stop when you see a channel you like.

3.) No further action required. Wait while the radio synchronizes with the new channel.

4.) When synchronization is complete, the display panel reveals the familiar Active Connection indicator : in the bottom left corner.

Network Operating Mode

Your P-801T operates with the OpenSky Trunked Protocol (OTP) to provide the full range of features available on your digital voice and data network.

At the same time, if your agency cooperates with several others in a multi-agency network supported by OpenSky's IP backbone, all agencies benefit from the advantages of the network architecture whether or not they've migrated from older analog equipment to digital OpenSky radios.

Locking Out User Groups

There are at least two ways to focus your voice communications by suppressing calls from listen groups in your active profile.

By changing your Scanning Mode to **No Scan** you can block all non-emergency voice calls from the listen groups in your profile, concentrating your attention entirely on your talk group.

Or, by Locking Out selected groups, you can eliminate just the non-essential communications from being heard on your radio. This allows you to focus on scanning resources on just the groups whose calls you wish to track. Lock Out will block only non-emergency calls. Emergency Alerts and the voice calls that follow the alerts will break through your Lock Out command.

Groups You Can Lock Out

It stands to reason that only groups in your active profile can be locked out, since they're the only groups whose voice calls you'll hear. The Lockout menu responds to your incoming voice call activity, loading the names of calling groups into the menu as the calls are received.

If you don't find a name you're looking for in the Lockout menu, either it's not in your active profile, or you haven't received a call from that group yet in this

radio session. Until you do take a call from that group, you can't lock them out.

➢   **How to Lock Out a Listen Group**

1.) Press either **Menu** button until the Lockout Menu appears. The indicator LO lets you know you're in the menu. The Display panel shows one of the user groups from which you've received voice calls.

NORTH

User Group from Active Profile

Lockout Menu Indicator
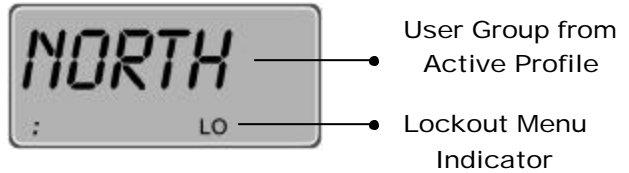
2.) If the message NONE appears in the panel, you haven't received any voice messages yet from the user groups in your active profile. Until you do, you won't be able to lock them out.

3.) If the name of a User Group appears in the panel, use the **Upper Select Button** to scroll through the menu of user groups you can lockout. (The lower Select button is reserved for another use in this procedure).

4.) Press the **Lower Select Button** to Lockout calls from a user group displayed in the panel.

5.) To return to the Menu for more Lockouts, press either **Menu** button immediately, then repeat Steps 3 and 4.

6.) If pressing the Menu button doesn't bring back the Lockout display, your radio is busy with the Lockout procedure. **Wait** about 10 seconds for the Menu to return to the screen.

Troubleshooting

If your radio does not operate properly, check the chart below for like ly causes. For additional assistance, contact a qualified service technician.

Symptom	Cause	Solution
Radio will not turn on	Low battery.	Install a fully charged battery pack.
No audio	Speaker volume is muted.	Increase the volume level.
Poor audio	You are in a poor coverage area or not on the network	Move to a better coverage area.
Poor audio	Antenna connection is loose.	Reseat the antenna in the top panel connector
Failed Registration	Wrong User ID/ password or ID not approved	Use correct User ID and/or password.
Missed Call	Scanning not enabled	Enable scan mode
Unable to Respond to a Call	Talkback scanning not enabled	Enable talkback scan