

QSec®-2700 Phone *User Guide*



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This user guide is based on the production version of the QSec®-2700 phone. Software changes may have occurred after this printing. QUALCOMM Incorporated reserves the right to make changes in technical and product specifications without prior notice. The products and equipment described in this document are manufactured under one or more of the following U.S. Patents:

D424,052	D361,065	D397,110	D413,117	D427,143	D386,186	D429,210
D429,212	D426,219	D422,262	D412,483	D416,555	D356,560	D409,561
D424,573	D407,701	D375,740	D376,804	D411,823	D393,856	D413,857
D413,860	D410,893	D375,937	D421,981	4,901,307	5,056,109	5,099,204
5,101,501	5,103,459	5,107,225	5,109,390	5,193,094	5,228,054	5,257,283
5,265,119	5,267,261	5,267,262	5,280,472	5,283,536	5,289,527	5,307,405
5,309,474	5,337,338	5,339,046	5,341,456	5,383,219	5,392,287	5,396,516
5,408,697	5,414,728	5,414,796	5,416,797	5,426,392	5,437,055	5,442,322
5,442,627	5,452,473	5,461,639	5,469,115	5,469,471	5,471,497	5,475,870
5,479,475	5,483,696	5,485,486	5,487,175	5,490,165	5,497,395	5,499,280
5,504,773	5,506,865	5,509,015	5,509,035	5,511,067	5,511,073	5,513,176
5,515,177	5,517,323	5,519,761	5,528,593	5,530,928	5,533,011	5,535,239
5,539,531	5,544,196	5,544,223	5,546,459	5,548,812	5,559,865	5,559,881
5,561,618	5,564,083	5,566,000	5,566,206	5,566,357	5,568,483	5,574,773
5,574,987	5,576,662	5,577,022	5,577,265	5,588,043	5,589,756	5,590,069
5,590,406	5,590,408	5,592,548	5,594,718	5,596,570	5,600,754	5,602,833
5,602,834	5,603,096	5,604,459	5,604,730	5,608,722	5,614,806	5,617,060
5,621,752	5,621,784	5,621,853	5,625,876	5,627,857	5,629,955	5,629,975
5,638,412	5,640,414	5,642,398	5,644,591	5,644,596	5,646,991	5,652,814
5,654,979	5,655,220	5,657,420	5,659,569	5,663,807	5,666,122	5,673,259
5,675,581	5,675,644	5,680,395	5,687,229	5,689,557	5,691,974	5,692,006
5,696,468	5,697,055	5,703,902	5,704,001	5,708,448	5,710,521	5,710,758
5,710,768	5,710,784	5,715,236	5,715,526	5,722,044	5,722,053	5,722,061
5,722,063	5,724,385	5,727,123	5,729,540	5,732,134	5,732,341	5,734,716
5,737,687	5,737,708	5,742,734	5,748,104	5,751,725	5,751,761	5,751,901
5,754,533	5,754,542	5,754,733	5,757,767	5,757,858	5,758,266	5,761,204
5,764,687	5,774,496	5,777,990	5,778,024	5,778,338	5,781,543	5,781,856
5,781,867	5,784,406	5,784,532	5,790,589	5,790,632	5,793,338	5,799,005
5,799,254	5,802,105	5,805,648	5,805,843	5,812,036	5,812,094	5,812,097
5,812,538	5,812,607	5,812,651	5,812,938	5,818,871	5,822,318	5,825,253
5,828,348	5,828,661	5,835,065	5,835,847	5,839,052	5,841,806	5,842,124
5,844,784	5,844,885	5,844,899	5,844,985	5,848,063	5,848,099	5,850,612
5,852,421	5,854,565	5,854,786	5,857,147	5,859,612	5,859,838	5,859,840
5,861,844	5,862,471	5,862,474	5,864,760	5,864,763	5,867,527	5,867,763
5,870,427	5,870,431	5,870,631	5,870,674	5,872,481	5,872,774	5,872,775
5,872,823	5,877,942	5,878,036	5,881,053	5,881,368	5,884,157	5,884,193
5,884,196	5,892,178	5,892,758	5,892,774	5,892,816	5,892,916	5,893,035
5,898,920	5,903,554	5,903,862	5,907,167	5,909,434	5,910,752	5,911,128
5,912,882	5,914,950	5,915,235	5,917,708	5,917,811	5,917,812	5,917,837
5,920,284	5,920,834	5,923,650	5,923,705	5,926,143	5,926,470	5,926,500
5,926,786	5,926,786	5,930,230	5,930,692	5,933,462	5,933,781	5,933,787
5,936,582	5,937,019	5,940,383	5,940,761	5,942,929	5,943,361	5,943,606
5,943,615	5,946,614	5,946,618	5,949,814	5,953,320	5,953,322	5,953,648
5,953,674	5,956,651	5,956,683	5,959,583	5,960,361	5,960,362	5,963,867
5,966,652	5,970,413	5,974,041	5,974,356	5,978,679	5,982,315	5,982,333
5,982,760	5,983,099	5,983,114	5,983,119	5,984,697	5,986,620	5,987,076
5,987,122	5,987,326	5,988,583	5,990,847	5,991,284	5,991,345	5,995,821
5,997,314	5,999,816	5,999,828	6,002,933	6,005,506	6,005,855	6,006,108
6,007,378	6,008,762	6,009,307	6,011,796	6,011,978	6,016,568	6,021,122
6,023,717	6,026,292	6,028,884	6,028,984	6,032,039	6,035,209	6,037,750
6,038,037	6,044,074	6,044,103	6,049,305	6,055,428	6,058,338	6,060,949
6,061,336	6,064,678	6,067,458	6,069,525	6,069,526	6,069,880	6,069,888
6,070,085	6,070,835	6,073,007	6,073,013	6,075,847	6,075,859	6,075,974
6,078,284	6,081,229	6,081,724	6,084,870	6,085,085	6,085,349	6,091,299

6,094,465	6,097,339	6,097,972	6,101,168	6,101,173	6,101,179	6,101,397
6,107,878	6,107,959	6,107,969	6,107,977	6,108,364	6,108,372	6,108,536
6,108,591	6,111,865	6,114,996	6,115,142	6,115,607	6,118,250	6,118,765
6,118,826	6,122,384	6,124,810	6,125,107	6,130,923	6,134,215	6,134,421
6,134,434	6,134,440	6,137,321	6,137,441	6,137,840	6,147,647	6,147,964
6,147,978	6,147,981	6,148,010	6,148,042	6,148,079	6,148,283	6,149,443
6,150,852	6,151,296	6,151,311	6,151,502	6,154,101	6,154,158	6,157,611
6,157,668	6,157,815	6,167,270	6,173,007	6,185,246	6,215,777	6,216,004
6,240,071	6,240,143	6,243,561	6,249,683	6,252,865	6,252,958	6,253,085
6,256,301	6,275,478	6,282,250	6,285,655	6,298,051	6,304,563	6,304,755
6,314,125	6,317,435	6,351,460	6,351,650	6,356,528	6,359,868	6,360,100
6,366,778	6,373,823	6,377,607	6,377,809	6,378,099	6,389,000	6,389,067
6,393,295	6,396,804	6,396,867	6,414,988	6,421,540	6,424,619	6,426,960
6,480,521	6,480,528	6,496,543	6,501,787	6,510,228	6,512,925	6,526,030
6,535,563	6,535,739	6,542,488	6,545,989	6,546,248	6,549,525	6,553,064
6,574,210	6,584,313	6,587,446	6,597,705	6,597,922	6,603,751	6,603,752
6,606,485	6,611,566					

Other patents pending.

FCC/IC Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution

The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the warranty and user's authority to operate the equipment.

Caution

Use only QUALCOMM-approved accessories with QUALCOMM phones. Use of any unauthorized accessories will invalidate the phone warranty if said accessories cause damage to the phone.

Export of this technology may be controlled by the United States Government. Diversion contrary to U.S. law prohibited.

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Menu Tree

The menu structure of the QSec-2700 phone is listed below. Included are page references to the location in this user guide where the individual menu items are described.

Settings (page 77)

- Silence All (page 77)
- Auto Key Guard (page 78)
- Sound (page 78)
 - Volume
 - Alert Type
 - Ringer Type
 - Key Beep
 - Key Tone Length
- Display (page 79)
 - Backlighting
 - Banner
 - Contrast
 - Time Format
 - Screensaver (page 80)
- Alert (page 81)
 - Missed Call
 - Roaming
 - Service
 - Minute Alert
- Call Timers (page 81)
 - Outgoing Calls
 - Incoming Calls
 - All Calls
- Access (page 83)
 - Erase All Contacts
 - Erase All Recent Call List
 - Phone Reset
 - Lock Phone
 - Lock Code Change
- Accessories (page 82)
 - Ext Power Backlight
 - Headset Ringing
 - Any Key Answer
- Sys/Network
 - Roaming Option (page 83)
 - Forwarding Number (page 47)
- Phone Info (page 13)

Contacts (page 59)

- Find (page 65)
- View All (page 64)
- Business (page 64)
- Personal (page 64)
- Add New (page 62)
 - Phone
 - Email
 - Address
 - Web Page

Contacts (continued)

- Speed Dial List (page 67)

Recent Calls (page 69)

- Missed Calls
- Incoming Calls
- Outgoing Calls

Messages (page 49)

- Voice Mail (page 51)
- InBox (page 52)
- Create Message (page 53)
- Send Preformat (page 54)
- OutBox (page 54)
- Erase Messages (page 56)
- Message Settings
 - Voice Mail Number (page 52)
 - Message Alert (page 50)
 - Auto Erase Old InBox (page 56)

Extra (page 97)

- Games (page 104)
 - BlackJack
 - Video Poker
- Stop Watch (page 98)
- Alarm (page 98)
- Scheduler (page 100)
 - View Day
 - View Month
 - Add Event
 - Options
- Calculator (page 103)
- MobileShop (page 97)
 - MobileShop
 - Settings
 - Help

Security

- PIN
 - Login Secure User (page 19)
 - Logout Secure User (page 21)
 - Change Secure User PIN (page 20)
 - Login Terminal Admin
 - Factory Access
- Security Reset (page 87)
- Next Call
 - Incoming Secure (page 34)
 - Out Secure Data (page 38)
 - Normal
- Load Secure S/W (page 88)
- Secure Data Rate (page 38)
- Access Control (page 22)
- Audit Info (page 89)
- Key Management
 - Load Keys (page 93)
 - View Keys (page 94)
 - Delete All Keys (page 95)
 - Rekey (page 91)
- Version (page 89)
- Self-Test (page 88)

Introduction

Thank you for selecting the QSec[®]-2700 phone for your secure communication needs. The QSec-2700 phone is a Type 1 secure cellular phone that operates over 800 and 1900 MHz commercial CDMA cellular networks. It is compatible with currently available FNBDT-capable devices, including the QSec-800 and FNBDT-enabled versions of the wireline Secure Terminal Equipment (STE), Sectera Wireline Terminal (SWT), Sectera GSM phone and Omni.

Features of the QSec-2700 Phone

The QSec-2700 secure cellular phone functions as a regular wireless phone, and with its embedded security solution, provides end-to-end high assurance voice communications to meet the needs of authorized users on commercial CDMA networks. Features of your new phone include:

- Clear and secure transmission for voice (see “Making and Receiving Clear Calls” on page 27 and “Making and Receiving Secure Calls” on page 31)
- Transmission of clear data up to 153 Kb/s, and secure data up to 38.4 Kb/s (see “Making and Receiving Data Calls” on page 37)
- BREW[™] compatibility, which allows you to download and use applications (apps) from your service provider’s network using the MobileShop application (see “Using MobileShop” on page 97)
- A Messages application capable of sending/receiving voice mail and text messages (see “Voice Mail, Pages, and Text Messages” on page 49)
- A Contacts database for storing frequently-used numbers and addresses (see “Using the Contacts Database” on page 59)
- Sending and receiving e-mail and accessing the internet using a separately-purchased data cable (see “Accessories” on page 131) that is connected to a laptop or handheld device
- Transition between clear voice calls and secure voice calls, and transition from clear voice calls to secure data calls, when communicating with another QSec phone (see “In-call Features” on page 45)

What's in Your Phone Kit?

The following items are included in your phone kit:

- QSec-2700 phone
- This user guide and other literature, as appropriate
- Standard battery and slim battery
- Travel charger
- Belt clip

Getting Help

Prior to seeking assistance, check "Troubleshooting" on page 123 for common problems and possible solutions.

For most questions about your phone or phone service, contact your Terminal Administrator (TA). Your Terminal Administrator may be the COMSEC Custodian that is responsible for establishing service with the service provider and setting up your phone. Your Terminal Administrator can offer troubleshooting assistance, and will contact your service provider or QUALCOMM for additional help in solving any difficulties you may experience while using your phone.

If you do not have a Terminal Administrator, contact the National Security Agency (NSA) at the following website: <http://wireless.securephone.net>. Through this website, you can request a copy of the *QSec-2700 Phone Terminal Administrator Guide*. The TA guide describes the procedures that you will need to perform in order to set up your phone.

Using this Guide

The following table describes the formatting that is used throughout the procedures and informational text in this guide. Text formatting is used to help identify menu items, screen keys, and descriptive information pertaining to a procedure.

Convention	Example	Means the following:
Bolded Text	Select the Security tab.	Using the navigation keys, scroll to the Security tab, and then press the Select key to open it.
Bracketed Text	Select [OK].	Using the navigation keys, scroll to the OK screen key, and then press the Select key to choose it.
Italicized Text	<i>The Volume screen appears.</i>	Italicized text describing what should happen as a result of completing a step in a procedure.

This guide also uses graphic icons to identify important information that should be read in order to save time, learn more about a procedure or topic, avoid potential loss of data or equipment damage, or avoid bodily injury.



Tip

Tips provide suggestions or alternatives to make a certain procedure easier to perform.



Note

Notes provide additional information about a procedure, or an outcome from a procedure.



Caution

Cautions alert you to a potential for loss of data or equipment damage.



Warning

Warnings help you avoid personal injury. Be sure to read all warnings before starting a procedure.



Note

All phone screens shown in this user guide are pictorial representations of the actual QSec-2700 phone screens; they are not intended to be exact replications of these screens.

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Learning about Your Phone

This section describes your phone's basic features and functions.

In this section, you will learn about

- Your phone's battery (page 8)
- Your phone's keys (page 8)
- Your phone's screen icons (page 9)
- The secure LED (page 10)
- Your phone's memory (page 10)
- Tamper-evident features (page 10)
- Turning on/off your phone (page 11)
- The far-field speaker (page 12)
- Miscellaneous information (page 12)



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About the Battery









Your phone comes with a standard and slim lithium ion battery, both of which are partially charged. You should fully charge the battery before using or configuring your phone for the first time. See “Battery Care and Maintenance” on page 107 for information on installing, charging, and caring for your phone’s batteries.



To learn more about the charging accessories available for your phone, see “Accessories” on page 131.













Keys

The following table describes the keys on your phone.

	Select key. Confirms selection of screen key or menu item (see “Navigating Menus and Screens” on page 15).
	Navigation keys. Moves cursor left, right, up, or down. See “Navigating Using Navigation Keys” on page 18 for other functions related to these keys.
	Send/Talk key. Makes and answers calls. The length of time that the Send/Talk key is pressed determines whether a clear or secure call is initiated (see “Determining Your Phone’s Strapping” on page 21).
	Far-field Speaker key. Turns the far-field speaker on and off (see page 12).
	Clear key. During navigation, pressing the Clear key returns you to the previous screen. During text editing, pressing the Clear key deletes the character to the left of the cursor, and pressing and holding the Clear key deletes an entire line of characters (see “Deleting Characters from a Field” on page 62). When a call is <i>not</i> in progress, pressing and holding the Clear key for about two seconds activates the auto keyguard feature (see “To Lock/Unlock the Keypad” on page 78).
	Power/End-call key. Turns phone on or off (see page 11), ends calls (see “Ending Clear Calls” on page 30 or “Ending Secure Calls” on page 35), or returns you to the Home screen (see “Returning to the Home Screen” on page 16).
	Keypad keys. Enters numbers and letters on the screen (see “Entering Text into an Alphanumeric Field” on page 60).
	Push-to-talk key. The push-to-talk feature is not currently available, but the Push-to-talk key can be used to answer a call when the Any Key Answer setting is turned on (see “To Enable “Answering a Call Using Any Key”” on page 29).

Screen Icons

The following table describes the icons that appear in the icon bar at the top of the screen.

	Signal Strength. Shows the strength of the signal being received from your service provider's network. The icon ranges from five lines when a strong signal is received, to zero lines when a weak signal is received. To increase signal strength, go outside or stand by a window.
	No Signal. Your phone is not receiving a signal from your service provider's network. It has no service, and no calls can be made or received at this time. Wait a few minutes or move to a different area. See "Troubleshooting" on page 123.
	In-call / No Service. Your phone is engaged in a call / a call cannot be made or received at this time.
	Voice Privacy. Your phone is engaged in a call, and Voice Privacy is turned on. Voice Privacy is a network-enabled feature that scrambles the bits of a call so that it is less susceptible to being heard by other parties. It is not authorized to handle classified communications.
	Roaming. You are outside of your home network. Your home network is determined by your service provider. Contact your Terminal Administrator for information about your individual service options. See "To Enable/Disable Roaming" on page 83.
	Text Message. A new text message has been sent to your InBox. See "Retrieving Text Messages" on page 52.
	Voice Mail Message. A new voice message has been received by your voice mail. See "Retrieving Voice Mail Messages" on page 51.
	Alarm. An alarm from one of the phone's applications (such as the Scheduler) is currently active. See "Setting the Alarm" on page 98.
	Silence All. All audible alerts on your phone are disabled (although your phone may still be set to vibrate). See "To Silence/Enable Audible Alerts" on page 77.
	Keypad Lock. Your phone's keypad is locked. See "To Lock/Unlock the Keypad" on page 78.
	Battery. Shows the remaining charge on the battery. This icon goes from no charge (white battery) to full charge (completely green battery). When recharging, the battery icon is animated to indicate charging is in progress. The animation stops when the battery is fully charged.
	Far-Field Speaker. The Far-field speaker is on. See page 12.

About the Secure LED

The red (secure) LED is a visual indicator of your phone's secure status. When your phone's secure LED is:

- On Continuously (not blinking) Your phone is performing a trusted operation. Information on the screen that is preceded with a red bar (on the left side) is trusted, and can be considered secure and reliable. Information **not** preceded by a red bar is **not secure** and **cannot be trusted**. The secure LED is on continuously while you are engaged in a secure call, using the Security menu, or turning on/off your phone.
- Blinking Your phone's microphone is on but **not secure**. Blinking is normal during clear calls. You should confirm that the secure LED does not blink after a clear call ends (contact your Terminal Administrator if the LED keeps blinking).

Memory Usage

All applications that reside on your phone share your phone's built-in memory. These can be factory-installed applications such as Contacts and Scheduler, or BREW applications (apps) that are downloaded using MobileShop (see "Using MobileShop" on page 97).

The number of applications you can store or have active at any given time depends on the size of each application. If you try to download or activate too many applications, your phone will alert you to this situation. You will then either have to delete or close one or more applications, depending on the alert.

Tamper-evident Features


Your QSec-2700 phone is a National Security Agency certified Type 1 secure device that has tamper-evident features integrated into its construction. Never attempt to open the phone or alter the label on the back of the phone (under the battery).

In the event your phone does not operate properly, contact your Terminal Administrator for instructions on obtaining service. Only QUALCOMM is authorized to repair QSec-2700 phones.

Turning Your Phone On and Off

Because of the secure features of your phone, it takes approximately 45 seconds to power on your phone.


To Turn Your Phone On

- 1 Press the Power/End-call () key.


The QSec-2700 logo is displayed and the secure LED is lit.



The phone cycles through a series of displays:

- ♦ *Software verification in progress*
 - ♦ *Software successfully authenticated*
- 1 Check the icons on the Home screen to see if you are receiving a signal (see "Screen Icons" on page 9). The Home screen includes the banner, date and time.
-  **Note** *If the self-test fails, try turning your phone on again. See "Troubleshooting" on page 123 for possible solutions. Contact your Terminal Administrator for assistance if this condition persists.*

To Turn Your Phone Off

- 1 Press and hold the Power/End-call () key for one to three seconds.


The following notifications are displayed on the screen:

- ♦ *"Continue holding the END key to power down"*
- ♦ *After three seconds, "Powering down", immediately followed by "Secure powering down" and the QSec-2700 logo. The secure LED is lit.*



The phone turns itself off.

Far-field Speaker

Press the Far-field Speaker () key to turn on the far-field speaker (see "Keys" on page 8). The far-field speaker allows you to hear a call without holding the phone to your ear (like a speakerphone). The far-field speaker is for listening to calls only; you must use the microphone to talk.

Depending on how your phone is configured (see "Viewing Access Control Settings" on page 22), you may not be allowed to use this feature during secure calls.

Miscellaneous Information

The following information may be useful for understanding the operation and characteristics of your phone.

Interoperability with Other FNBDT Equipment

For secure calls, your QSec-2700 phone is designed to operate with other currently available FNBDT-compliant secure telephones. This includes QSec-800 phones, FNBDT-STE, Sectera Wireline Terminal (SWT), Sectera GSM phone and Omni. Contact your Terminal Administrator for a list of interoperable equipment.



Note

Certain features (such as secure-to-clear and clear-to-secure transitions) only work with other QSec phones, as these features may not be available with other brands of secure phones.

Secure Voice Call Characteristics

Secure voice calls do not sound the same as clear voice calls. Voice quality may be better in clear calls, and the transmission time may be significantly shorter in clear calls. When engaged in a secure call, try not to interrupt the other party; speak clearly and allow for longer pauses between your voice and their voice.




About Your Phone Number(s)

To retrieve the phone number(s) of your phone, use the following procedure. There are two types of phone numbers; these types are described below:

- **Basic phone number.** The basic phone number is the only number that someone needs in order to call you for non-classified (clear call) conversations. It is also the only number that other QSec-800 and QSec-2700 phones need in order to make secure calls to your phone (see “Receiving Secure Calls” on page 33).
- **Async number.** The async number is the number that STE, Sectera and Omni users need in order to make a secure call to your phone.

In some cases, these two numbers are identical. In this scenario, a different procedure has to be followed in order to receive a secure call (see “Receiving Secure Calls with Single-number Phones” on page 34).

To View Your Phone Numbers

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Settings** tab, and press the Select () key.
- 3 From the Settings menu, scroll to **Phone Info** and press the Select () key.

The screen displays the phone's basic phone number and async number.

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Navigating Menus and Screens

Before learning how to make calls on your phone or change the settings, you need to know how to navigate menus and screens.

In this section, you will learn to

- Recognize the Home screen (page 15)
- Navigate menus (page 16)
- Navigate using screen keys (page 18)
- Navigate using navigation keys (page 18)
- Go back to the previous screen (page 18)

Recognizing the Home Screen



Note

Unless otherwise indicated, the procedures described in this manual will use the Home screen as the starting point.

When you first turn on your phone, the Home screen appears.



This screen displays your banner, along with the current date and time (see “To Configure the Phone’s Display” on page 79 for details on customizing the banner and time format).




Tip

From the Home screen, press the Left navigation key to access the Recent Calls list, or press the Right navigation key to access the Contacts list.

Hold down the Up navigation key to enable Silence All, or hold down the Clear (⏮) key to enable Auto Keyguard.

Returning to the Home Screen

While navigating through screens and menus, you can return to the Home screen by pressing the Power/End-call () key.




Caution

When you return to the Home screen, all unsaved or incomplete data/procedures will be lost.

Navigating Menus


The following procedure describes how to navigate through the menu structure of your phone. It includes a short description of each main application (tab).

- 1 From the Home screen, press the Select () key.


A series of application tabs appears on the screen, with the currently selected tab and its associated icon displayed.

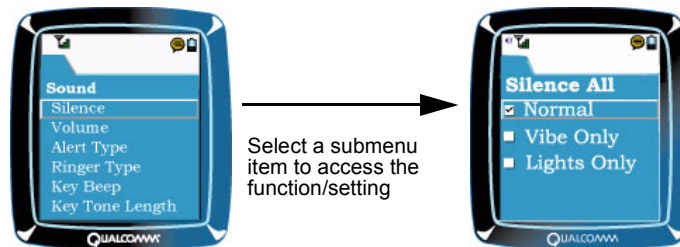


- 2 Use the Left and Right navigation keys to scroll through these tabs. The following applications are included in your phone:
 - ♦ **Settings** tab: Allows you to configure your phone's sound, display, alerts, etc. Refer to "Customizing Your Phone" on page 77 for a complete description of the settings in your phone.
 - ♦ **Contacts** tab: Allows you to build and customize your electronic phone book (Contacts list), including adding speed dial numbers. Refer to "Using the Contacts Database" on page 59 for procedures on setting up and customizing your Contacts list.
 - ♦ **Recent Calls** tab: Provides a list of recent calls. This tab allows convenient viewing of numbers that were recently dialed or received by your phone. Refer to "Accessing Recent Calls" on page 69.

- ♦ **Messages** tab: Allows you to send, receive and forward text messages, and provides access to your voice mail (which may include pages). Refer to “Voice Mail, Pages, and Text Messages” on page 49 for procedures on setting up and transmitting messages.
 - ♦ **Extra** tab: Provides access to a number of miscellaneous applications, including MobileShop, a stopwatch, an alarm, a scheduler, a calculator and games. Refer to “Other Phone Features” on page 97 for details on setting up and using these applications.
 - ♦ **Security** tab: Allows you to configure a number of security-related settings and parameters. Refer to “Determining Your Phone’s Security Settings” on page 19, “Making and Receiving Secure Calls” on page 31, “Making and Receiving Data Calls” on page 37, and “Secure-phone Management” on page 87 for a complete description of these settings and how to use them.
- 3 Press the Select () key to access the menu corresponding to the current tab.
The menu and its items appear on the screen.



- 4 Use the Up and Down navigation keys to scroll through the menu. The menu item that the cursor is currently on is highlighted.
- 5 To select the highlighted menu item, press the Select () key.
A submenu and its items may appear on the screen.



- 6 Repeat steps 4 and 5 for all remaining submenus.



Tip

To go back to the previous level of menus (or tabs), press the Clear (<<) key.

After you complete the procedure associated with the selected menu item, you are returned to the corresponding menu.

Navigating Using Screen Keys

Screen keys appear on the lower part of the screen while you perform certain procedures (such as adding new contacts), or automatically while you engage in one or more calls.

View Ignore

Sometimes the cursor is located outside of the screen key area. To move the cursor to the screen keys (e.g., from a text field), either press the Select (OK) key or the Down navigation key. You scroll to different screen keys by using the Left and Right navigation keys. To choose the screen key that is highlighted, press the Select (OK) key.

Navigating Using Navigation Keys

Some screens contain visual cues, such as arrows pointing in a particular direction. These cues indicate that another screen or more information is available. Arrows pointing right or left mean you can scroll the cursor right or left by pressing the Right or Left navigation key. Arrows pointing up and down mean you can scroll the cursor up or down by pressing the Up or Down navigation key.

The Right/Left navigation keys are also used in the following ways:

- To navigate through screen keys
- To scroll through text

The Up/Down navigation keys are also used in the following ways:

- To navigate through menus
- To scroll between a text box and the screen keys
- To move the cursor up or down through text
- To navigate to other screens
- To control volume during a call

Going Back to the Previous Screen

To go back to the previous screen (without saving changes), press the Clear (<<) key. You can continue to press the Clear (<<) key until you return to the Home screen.

Determining Your Phone's Security Settings

This section describes the security settings of your phone.

In this section, you will learn to

- Log on to your phone with your secure PIN (page 19)
- Determine your phone's strapping (page 21)
- View your phone's Access Control settings (page 22)

About Your Secure PIN



Your secure user PIN (personal identification number) is an access number that was assigned by your Terminal Administrator. Use your secure user PIN to log on to your phone as a secure user. You will be prompted to enter your PIN when initiating, receiving or transitioning to a secure call if you are not already logged on as a secure user. You will also be prompted to enter your PIN when accessing secure features within the Security menu.



Caution

Once you log on as a secure user, you remain logged on until the phone powers down, or until you manually log out of secure mode (see page 21). Never leave your phone unattended while logged on as a secure user.

To Log On as a Secure User

- 1 From the Home screen, press the Select key.
- 2 Scroll to the **Security** tab, and press the Select () key.
The Security menu appears.
- 3 Select **PIN**, then **Login Secure User**.
A prompt appears asking you to enter your secure user PIN.
- 4 Enter your secure user PIN and press the Select () key twice to select [OK]. If you do not know your secure user PIN or have forgotten it, contact your Terminal Administrator.

**Caution**

If you enter your PIN incorrectly three times, the phone disables your account and removes all secure capability. The phone must be returned to the Terminal Administrator for reactivation. You can still make emergency and clear calls after your secure account is disabled.



*When entering a PIN, your phone displays asterisks (* s). These asterisks represent the digits in your PIN.*

**Note**

If you do not enter a secure user PIN within two minutes, the PIN entry will timeout (but not count as a failed attempt).

To Change Your PIN

You will not be able to change the secure user PIN if a call is in progress, or if your phone's 'User Pin Change' Access Control setting is disabled (see "Viewing Access Control Settings" on page 22). Otherwise, use the following procedure to change your PIN.




- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.

The Security menu appears.

- 3 Select **PIN**, then **Change Secure User PIN**.



**Note**

If you are not permitted to change your secure user PIN, your phone displays an alert (the Terminal Administrator can restrict PINs from being changed).

- 4 Enter your current secure user PIN and press the Select () key twice to select [OK].
- 5 Enter your new secure user PIN and press the Select () key twice to select [OK]. Your new secure user PIN must adhere to the following conditions:
 - ♦ Be between four digits and 12 digits in length (numbers only)
 - ♦ Not be made up of all the same digit, for example 1111
 - ♦ Not be made up of consecutive digits, for example 1234 or 4321
- 6 Reenter your new secure user PIN and press the Select () key twice to select [OK].

You are notified if your new secure user PIN is accepted. Otherwise, you must repeat steps 4 through 6.


To Log Out of Secure User Mode







- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
The Security menu appears.
- 3 Select **PIN**, then **Logout Secure User**.
You are notified that you are now logged out of secure user mode.



You cannot log out of secure user mode during a call.



Determining Your Phone's Strapping

Strapping affects how your phone behaves when initiating calls, and what types of calls your phone is capable of making. Your phone can be strapped with one of three settings, as shown in the following table. The Traditional and Autosecure settings affect the type of call that is made when the Send/Talk () key is pressed.

Type of strapping	To make a clear call	To make a secure call
Traditional	Press the Send/Talk () key.	Press and hold the Send/Talk () key for approximately 1 second (until the phone beeps).
Auto-secure	Press and hold the Send/Talk () key for approximately 1 second (until the phone beeps).	Press the Send/Talk () key.
Secure-only	<i>If your phone is strapped as Secure-only, you can only make clear emergency (911) calls.</i> Press (or press and hold) the Send/Talk () key to make an emergency call.	Press the Send/Talk () key.

Also, the strapping of the phone you are calling can affect the type of call that can be made. For example, if the receiving phone is strapped as Secure-only, then you will only be able to make a secure call between your phone and the receiving phone.

To Determine Your Phone's Strapping

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
The Security menu appears.
- 3 Select **Access Control**.
The Access Control settings are displayed on the screen.
- 4 Check the Security Strap setting to see if your phone is strapped Secure-only, Auto-secure or Traditional.

Viewing Access Control Settings

The **Security, Access Control** menu item allows you to view the Access Control settings (formerly User Privilege Vector (UPV) settings). These settings specify the level of security for secure voice and data communications, as well as other security-related configurations and privileges.

In most cases, your Terminal Administrator is responsible for configuring the Access Control settings of your phone. These settings determine the following:

- Your phone's strapping (see the previous section)
- If you can change your secure user PIN
- If you can make a secure voice or secure data call
- If you can make a clear data call
- If you can download key material or update your phone's software
- If you can use the far-field speaker during a secure call
- If your phone is allowed to receive GPS signals
- What level of secure voice or secure data call you can make or receive when connecting to another FNBDT-capable (secure) phone






Note





The Min/Max security levels listed on page 24 and page 25 ultimately depend on the key material loaded on your phone. For example, if you only have Confidential keys loaded on your phone, then the classification of a call involving your phone cannot be Secret or Top Secret, regardless of the Max Security Level Voice setting.

If you do not have a Terminal Administrator, or if you are responsible for setting your phone's Access Control settings, contact the NSA (<http://wireless.securephone.net>) to request a copy of the QSec-2700 Phone Terminal Administrator Guide. It describes the procedures that you will need to perform in order to set up your phone.

To View Your Access Control Settings

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
The Security menu appears.
- 3 Select **Access Control**.
The Access Control settings are displayed on the screen.
- 4 Using the Up and Down navigation keys, scroll to the desired Access Control setting and press the Select () key twice to select [OK].

While viewing the Access Control settings, a check mark to the left of a setting indicates the phone's current configuration. The following table describes your phone's Access Control settings. Factory-default settings are identified by a ✓.

Name	Setting	Description
Security Strap	Secure-only	You can make secure calls and emergency calls (911) only.
	Auto-secure	<ul style="list-style-type: none"> ■ You can make secure calls by pressing the Send/Talk () key. ■ You can make clear calls by pressing and holding the Send/Talk () key for approximately 1 second.
	✓ Traditional	<ul style="list-style-type: none"> ■ You can make clear calls by pressing the Send/Talk () key. ■ You can make secure calls by pressing and holding the Send/Talk () key for approximately 1 second.
User PIN Change	Enabled	You can change your user PIN.
	✓ Disabled	You cannot change your user PIN.
Secure Voice	✓ Enabled	You can make secure voice calls.
	Disabled	You cannot make secure voice calls.
Secure Data	✓ Enabled	You can make secure data calls.
	Disabled	You cannot make secure data calls.
Clear Data	✓ Enabled	You can make clear data calls. <i>This setting is overridden by the Secure-only strap.</i>
	Disabled	You cannot make clear data calls.

Name	Setting	Description
User Load Keys	✓ Enabled	You can load keys.
	Disabled	You cannot load keys.
User Load Secure Software	Enabled	You can upgrade the phone's software.
	✓ Disabled	You cannot upgrade the phone's software.
Secure Speaker Use	Enabled	You can use the far-field speaker while a secure call is in progress.
	✓ Disabled	You cannot use the far-field speaker while a secure call is in progress.
GPS Signal Reception	Enabled	Your phone can receive GPS signals.
	✓ Disabled	Your phone cannot receive GPS signals.
Max Security Level Voice	✓ None	You can make secure voice calls from the minimum level for voice to the Top Secret level.
	Unclassified	You can only make secure voice calls from the Unclassified level.
	Confidential	You can make secure voice calls from the minimum level for voice to the Confidential level.
	Secret	You can make secure voice calls from the minimum level for voice to the Secret level.
	Top Secret	You can make secure voice calls from the minimum level for voice to the Top Secret level.
Min Security Level Voice	✓ None	You can make secure voice calls from the Unclassified level to the maximum level for voice.
	Unclassified	You can make secure voice calls from the Unclassified level to the maximum level for voice.
	Confidential	You can make secure voice calls from the Confidential level to the maximum level for voice.
	Secret	Your can make secure voice calls from the Secret level to the maximum level for voice.
	Top Secret	You can only make secure voice calls that are Top Secret.

Name	Setting	Description
Max Security Level Data	✓ None	You can make secure data calls from the minimum level for data to the Top Secret level.
	Unclassified	You can only make secure data calls from the Unclassified level.
	Confidential	You can make secure data calls from the minimum level for data to the Confidential level.
	Secret	You can make secure data calls from the minimum level for data to the Secret level.
	Top Secret	You can make secure data calls from the minimum level for data to the Top Secret level.
Min Security Level Data	✓ None	You can make secure data calls from the Unclassified level to the maximum level for data.
	Unclassified	You can make secure data calls from the Unclassified level to the maximum level for data.
	Confidential	You can make secure data calls from the Confidential level to the maximum level for data.
	Secret	You can make secure data calls from the Secret level to the maximum level for data.
	Top Secret	You can only make secure data calls that are Top Secret.

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Making and Receiving Clear Calls

Your QSec-2700 phone can make secure voice calls (see “Making and Receiving Secure Calls” on page 31). Depending on how your phone was strapped by the Terminal Administrator, you may be able to make clear (non-secure) voice calls as well. See “Determining Your Phone’s Strapping” on page 21 to determine whether or not you can make clear calls.



Note

If the phone is strapped secure-only, all non-emergency calls made on the phone are secure calls. However, emergency calls will always be treated as clear calls.


In this section, you will learn to

- Make clear calls (page 27)
- Receive clear calls (page 28)
- Retrieve missed calls (page 30)
- End clear calls (page 30)

Making Clear Calls

As long as your phone is strapped Traditional or Auto-secure, you will be able to make clear calls. The Security Strap setting is controlled by the Terminal Administrator.

You can make a clear call in one of the following ways:


- Dial the number directly (see the following procedure)
- From the Home screen, press the Send/Talk () key twice to redial the last outgoing number.
- Use one of the auto-dial methods (see “Automated Dialing Methods” on page 73)
- Transition from a secure call to a clear call (see “To Transition from a Secure Call to a Clear Call” on page 46)



Note

You can make a new clear call while engaged in another clear call (which puts the first clear call on hold).

To Make a Clear Call by Direct Dialing



- 1 Make sure your phone is turned on and receiving a signal (see “To Turn Your Phone On” on page 11).
- 2 Enter the phone number using the keypad.
- 3 Press or press and hold the Send/Talk () key, depending on your phone's strapping (see “Determining Your Phone's Strapping” on page 21).



Note *You can adjust the volume of your phone using the Up and Down navigation keys. Use the [Mute]/[Unmute] screen key to toggle the muting of this call.*

Your phone behaves like a commercial phone (except for the blinking secure LED), and the call is connected.

Receiving Clear Calls

Your phone must be turned on and receiving a signal in order to receive a call. When a call is received, press the Send/Talk () key to answer it, or answer the call using any key (see “To Enable “Answering a Call Using Any Key”” on page 29). Alternatively, you can press the Power/End-call () key to reject the incoming call and send the caller directly to your voice mail.




Note *During this call, adjust the volume of your phone using the Up and Down navigation keys. Use the [Mute]/[Unmute] screen key to toggle the muting.*

When you answer the call, the call duration is displayed on screen. The text displayed on screen varies depending on the nature of the incoming call:

- If caller ID information is available, the calling party's number is displayed.
- If the calling party's number matches an entry in your Contacts list, or if the network provides one, then a name is displayed along with the number (see “Using the Contacts Database” on page 59).
- If caller ID is blocked, then “Restricted” is displayed.
- If caller ID is not supported, then “Unavailable” is displayed.

Handling Calls You Do Not Want to Answer

Alternatively, you can select one of the following screen keys to handle an incoming call that you do not want to answer:

- [Silence]: Silences the ringer
- [Voice Mail]: Sends the incoming call directly to voice mail (you can also press the Power/End-call () key). See “Retrieving Voice Mail Messages” on page 51.
- [Answer Hold]: Puts the incoming call on hold. After answering the call, you can release the hold by selecting [Release Hold].







- [Forward Call]: Forwards the incoming call to a pre-programmed number. See “Forwarding Clear Calls” on page 46 for details on setting up call forwarding.
- [Network Forward]: Forwards the incoming call to a network-stored number. See “Forwarding Clear Calls” on page 46 for details on setting up call forwarding.

**Note**

Depending on your phone's configuration, some of these screen keys (incoming call options) may not be available.



To Enable “Answering a Call Using Any Key”


- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Settings** tab, and press the Select () key.
The Settings menu appears.
- 3 Select **Accessories**, then **Any Key Answer**.
- 4 Select one of the following options:
 - ♦ **On:** any key except the Power/End-call (), Select () or Clear () key answers an incoming call
 - ♦ **Off:** only the Send/Talk () key answers an incoming call

**Note**

The Any Key Answer setting does not work when Auto KeyGuard is enabled (see “To Lock/Unlock the Keypad” on page 78).

Responding to a Second Call

When a call is received while you are currently engaged in another call, the standard incoming call screen shall appear, with the addition of the following two screen keys:

- [Answer]: Accepts the new call. You can switch between the two calls by pressing the Send/Talk () key, assuming your service provider supports this feature.
- [Ignore]: Stops the incoming call alert, and returns to the previous call.

Retrieving Missed Calls

When you miss an incoming call and the phone stops ringing, a missed call notification appears on the screen.



Select one of the following screen keys to proceed:


- [OK]: You return to the previous application you were using.
- [Calls]: You go to the Recent Calls application. See "Making a Call from Recent Calls" on page 75.



Note

After you exit the Recent Calls application, you return to the application that was running prior to the incoming call.

Ending Clear Calls

Press the Power/End-call () key to end the call. The text "Call Ended" and the call duration are briefly displayed before the phone reverts back to the Home screen. Also, the secure LED stops blinking.

Making and Receiving Secure Calls

Your QSec-2700 phone can make secure voice calls. Before making secure calls, you will need to know your PIN in order to log on to your phone (see “About Your Secure PIN” on page 19). You will also need to know how your phone is strapped (see “Determining Your Phone’s Strapping” on page 21).

In this section, you will learn to

- Make secure calls (page 31)
- Receive secure calls (page 33)
- End secure calls (page 35)





Making Secure Calls

Before making a secure call, make sure your phone is not connected to an external power source (e.g., the travel charger). You can make a secure call in one of the following ways:



Note

See “Determining Your Phone’s Strapping” on page 21 to determine whether you press or press and hold the Send/Talk () key to initiate a secure call.

- Make a clear call, and then transition to secure mode by selecting the [Go Secure Voice] screen key (see “To Transition from a Clear Call to a Secure Call” on page 45).
- Select a number from the Contacts database, and press or press and hold the Send/Talk () key (see “Making a Call from the Contacts List” on page 74).
- Dial the secure number directly (see the following procedure).
- Press the Send/Talk () key once to bring up the last outgoing number, then press or press and hold the Send/Talk () key to redial this number.
- Select a number from the Recent Calls application, and press or press and hold the Send/Talk () key (see “Making a Call from Recent Calls” on page 75).



Note

It is highly recommended that you enter numbers into your Contacts database before making secure calls to them. See “Understanding QSec Type Phone Numbers” on page 59 to understand the reason for this recommendation. See “Entering contacts” on page 61 for details on entering a secure number as a new contact.



Note

You can use Speed Dial to make a secure call if your phone is strapped Auto-secure or Secure-only (see “Making a Call Using Speed Dial” on page 74).

During secure call setup, there is a progress tone and progress displays on the screen. When secure call setup is complete, a completion tone sounds; you may now begin talking. A secure call usually takes longer to set up than a clear call. For example, if the called party is not logged on as a secure user when the call is initiated, the called party will need to do so before the call can be connected.

The secure LED is lit when making or transitioning to a secure call. In addition, there is a red bar on the left edge of the screen that highlights the trusted information. Any information not highlighted by this red bar is not secure, and should not be trusted.


During a secure voice call you can:

- Transition to a clear voice call (see “To Transition from a Secure Call to a Clear Call” on page 46)
- Navigate into the Security menu
- Toggle the muting of the call using the [Mute]/[Unmute] screen key
- Transmit digits securely using the Secure Dial feature (see page 33)

During a secure voice call you **cannot**:

- Navigate into menus other than the Security menu
- Enter digits directly onto the screen (see “To Transmit Characters Using Secure Dial” on page 33)
- Use the far-field speaker if the ‘Secure Speaker Use’ Access Control setting is disabled (see “Viewing Access Control Settings” on page 22)
- Hold or forward a call
- Make a three-way call
- Send a call to your voice mail

To Make a Secure Call by Direct Dialing

- 1 Make sure your phone is turned on and receiving a signal (see “To Turn Your Phone On” on page 11).
- 2 Enter one of the following phone numbers using the keypad:
 - ◆ **for QSec phones:** *basic phone number*
 - ◆ **for other secure phones:** *async (secure) number*
- 3 Press or press and hold the Send/Talk () key, depending on your phone’s strapping (see “Determining Your Phone’s Strapping” on page 21). If you have not previously logged on as a secure user, you are prompted to enter your secure PIN (see “To Log On as a Secure User” on page 19).

The secure LED is lit, and the message “GOING SECURE” appears, followed by a series of other messages.

The types of messages you see and the length of setup time depends on whether the number you dial has been previously recognized and stored as secure in your Contacts database (see “Understanding QSec Type Phone Numbers” on page 59).



Note You can adjust the volume of your phone using the Up and Down navigation keys. Use the [Mute]/[Unmute] screen key to toggle the muting of this call.

During a secure call, DAO (Department/Agency/Office) information appears on the screen, identifying the other party. In addition, the security classification (Top Secret, Secret, Confidential or Unclassified), time and identification information of the other party also appear on the screen.

To Transmit Characters Using Secure Dial

While engaged in a secure call, you can transmit numbers and special characters securely to a secure call recipient using the [Secure Dial] screen key.

Perform the following procedure to use Secure Dial:

- 1 Make sure your secure call is still active.
- 2 Select the [Secure Dial] screen key.



A secure dial display appears on the screen, providing the following:

- ♦ A notification that digits (0-9), * and # can be entered
 - ♦ An option to select more characters
- 3 When more characters are requested, you can select from the following additional characters:

♦ Flash-OV	♦ Flash
♦ Immediate	♦ Priority
♦ Go On Hook	♦ Hookflash
♦ Pause	♦ Go off-hook
♦ Hookswitch reset	

Receiving Secure Calls

To receive a secure call from a QSec-800 or QSec-2700 phone, the calling party can use either your basic phone number or async number. To receive a secure call from other types of secure phones, the calling party must dial your async number. See “About Your Phone Number(s)” on page 13 for information on accessing your basic phone and async numbers.

Your phone must be turned on and receiving a signal in order to receive a secure call. When a secure call is received, your phone displays "Incoming Secure Call" on the screen. Press the Send/Talk () key to answer it, or answer the call using any key (see "To Enable "Answering a Call Using Any Key"" on page 29). Alternatively, you can press the Power/End-call () key to reject the incoming secure call.

If you have not entered your PIN prior to receiving the secure call, you are prompted to enter it. After entering your PIN, the message "Going Secure Voice" appears, followed by a series of other messages.

**Note**


No other calls can be received while you are engaged in a secure call.

When the secure call is connected, a secure call screen appears.

**Note**

You can adjust the volume of your phone using the Up and Down navigation keys. Use the [Mute]/[Unmute] screen key to toggle the muting.

Responding to a Secure Call

To reject an incoming secure call, press the Power/End-call () key.

When a secure call is received, the following two screen keys appear:

- [Silence]: Silences the ringer. The incoming call alert remains on the screen.
- [Ignore]: Stops the incoming call alert.

**Note**

You cannot put a secure call on hold, send a secure call to voice mail, or forward a secure call to another number.

Receiving Secure Calls with Single-number Phones

If your phone does not have a separate basic phone number and async number (see "About Your Phone Number(s)" on page 13), you receive a secure call using one of the following methods:


- Arrange to make a clear call with the other party, and then transition to a secure call. This is the recommended way to receive a secure call when the other party is using a QSec-2700 or QSec-800 phone (unless either phone is strapped Secure-only). See "To Transition from a Clear Call to a Secure Call" on page 45 for details on making this transition.

- Prepare to receive the next incoming call as secure. This is the only way to receive a secure call from a non-QSec phone, or from a QSec phone that is strapped Secure-only. This can be executed by talking to the other party in a clear call, and arranging for that party to initiate a secure call to your phone in a minute or so. You then select the **Security, Next Call, Incoming Secure** menu item. The next incoming call is answered as secure.

**Note**

The Incoming Secure menu item must be selected before the incoming secure call can be received. Any outgoing call will reset this setting to Normal. Also, this menu item is only available for single-number phones.

Ending Secure Calls

Press the Power/End-call () key to end the secure call. The text "Secure Call Ended" and the call duration are briefly displayed before the phone reverts back to the Home screen.

**Note**

If a secure call is dropped, the text "Secure Call Failed" appears on the screen until a key is pressed.

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Making and Receiving Data Calls

Your phone is capable of making and receiving secure and clear data calls. Secure data calls involve making a data call to another secure phone, and can be used to send files (via FTP) and telnet. There are two types of clear data calls: clear async data calls and clear packet data calls.

- Clear async data calls involve making a data call to another phone via a communications application on your computer or handheld device, and can be used to send faxes, files (via FTP), and telnet.
- Clear packet data calls involve using a dial-up connection to access an internet server (IP address), and can be used to send/receive e-mail and browse the Internet.

In effect, your phone can serve as a clear or secure modem to transfer information to/from a computer or handheld device. Your phone can be connected to a computer or handheld device using a separately-provided data cable (for details on ordering a data cable, see "Accessories" on page 131). Before making a data call, you must set up the computer or handheld device to work with your phone. See the documentation that comes with your data cable for information on connecting and setting up a computer or handheld device.

In this section, you will learn to

- Make secure data calls (page 37)
- Receive secure data calls (page 39)
- Make clear async data calls (page 40)
- Receive clear async data calls (page 41)
- Make clear packet data calls (page 41)
- Make a data call to a STE (page 43)

Making Secure Data Calls

Unlike clear data calls, which are controlled directly from your computer, you must initiate and end secure data calls using your phone's keys. To make a secure data call, you first need to set the desired data rate for the call. Then, you specify that the next call will be a secure data call and initiate the call.





Note

If the 'Secure Data' Access Control setting on your phone is disabled, you will not be able to make a secure data call (see "Viewing Access Control Settings" on page 22).

While making a secure data call, you can still access the Security menu.



To Set the Data Rate for a Secure Data Call

The data rate is the speed at which the phone communicates data to and from the attached computer or handheld device. Before you make a secure data call, you must set the phone's data rate to the data rate of the computer or handheld device.

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
The Security menu appears.
- 3 Select **Secure Data Rate**.
- 4 Select the appropriate data rate (1200, 2400, 4800, 9600, 19200, or 38400) (expressed in b/s).

To Make a Secure Data Call

Before starting this procedure, make sure that the data cable (model DXDTA0011) is attached to the bottom of the phone, and to the 9-pin serial COM port of the computer or handheld device.


- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
The Security menu appears.
- 3 Select **Next Call**, then **Out Secure Data**.




Note

This setting automatically resets to Disable, so you can make voice calls again after the secure data call is completed.

To receive secure data calls, you do not have to use this feature.

- 4 TBD-Enter the phone number using the keypad, and press and hold the Send/Talk () key (or use one of the methods specified in "Automated Dialing Methods" on page 73).

If you have not logged on as a secure user, you will be prompted to do so. The following notifications are displayed during the setup of a secure data call:

- ♦ "Call setup in progress"
 - ♦ "Secure Data"
- 5 Transfer text or files using a communications application loaded to your computer or handheld device (such as HyperTerminal).
 - 6 To end this data call, press the Power/End-call () key.

A "Secure call ended" notification appears on the screen.

Receiving Secure Data Calls




Note

If the 'Secure Data' Access Control setting on your phone is disabled, you will not be able to receive a secure data call (see "Viewing Access Control Settings" on page 22).

While engaged in a secure data call, you can still access the Security menu.

To receive a secure data call, you first need to set the desired data rate for the call (see "To Set the Data Rate for a Secure Data Call" on page 38). Then, make sure that the data cable (model DXDTA0011) is attached to the bottom of the phone, and to the 9-pin serial COM port of the computer or handheld device. When the phone rings, simply answer it as you would a normal secure call (see "Receiving Secure Calls" on page 33).

If you have not entered your PIN prior to receiving the secure data call, you are prompted to enter it. After entering your PIN, the message "TBD-Going Secure Data" appears, followed by a series of other messages. To end this data call, press the Power/End-call () key.

Receiving Secure Data Calls with Single-number Phones

If your phone does not have a separate basic phone number and async number (see "About Your Phone Number(s)" on page 13), you receive a secure data call using one of the following methods:

- Arrange to make a clear voice call with the other party, and then transition to a secure data call. This is the recommended way to receive a secure data call when the other party is using a QSec-2700 or QSec-800 phone (unless either phone is strapped Secure-only). See "Transitioning from Clear Voice Calls to Secure Data Calls" on page 47 for details on making this transition.
- TBD-Prepare to receive the next incoming call as a secure data call. This is the only way to receive a secure data call from a QSec phone that is strapped Secure-only. This can be executed by talking to the other party in a clear call, and arranging for that party to initiate a secure data call to your phone in a minute or so. You then select the **TBD-Security, Next Call, In Secure Data** menu item. The next incoming call is answered as a secure data call.



Note

TBD-The In Secure Data menu item must be selected before the incoming secure data call can be received. Any outgoing call will reset this setting to Normal. Also, this menu item is only available for single-number phones.

Making Clear Async Data Calls

Clear async data calls are initiated by a computer or handheld device (not by your phone). To make a clear async data call, you first need to set the data rate for the call in your communications application. Then, you execute two AT commands to initiate the call.



Note

If the 'Clear Data' Access Control setting is disabled, you will not be able to make a clear async data call (see "Viewing Access Control Settings" on page 22).

To Make a Clear Async Data Call

Before starting this procedure, make sure that the data cable (model DXDTA0011) is attached to the bottom of the phone, and to the 9-pin serial COM port of the computer or handheld device.

- 1 Open a communications application loaded to your computer or handheld device (such as HyperTerminal)
- 2 In this application, set the data rate to 115200 b/s.




Note

If you want to make sure the phone is communicating with the application, type "at" and press ENTER. The application should respond with "OK".

- 3 In this application, execute one of the following AT commands:
 - ♦ "at\$Qcvad3" (for one data call)
 - or
 - ♦ "at\$Qcvad4" (for multiple data calls: allows you to make other data calls without reentering this command)
- 4 In this application, execute the "atdt<{clear number}>" command to initiate the clear call. {clear number} is the clear number of the receiving phone.

A few seconds after connecting, the application displays "CONNECT".

Your phone displays "Calling data..." while the clear async data call is being established. Once connected, your phone displays the duration of this data call in hh:mm:ss format, and the in-call indicator.
- 5 Transfer text or files using the communications application.
- 6 To end this data call, press the Power/End-call () key on your phone, or execute the following AT commands in the application:
 - ♦ "+++" (interrupt the call)
 - ♦ "ath" (end the call)

Receiving Clear Async Data Calls

To receive a clear async data call, you first need to set the data rate for the call in your communications application. Then, you execute an AT command to answer the call.



Note

If the 'Clear Data' Access Control setting is disabled, you will not be able to receive a clear async data call (see "Viewing Access Control Settings" on page 22).

To Receive a Clear Async Data Call

Before starting this procedure, make sure that the data cable (model DXDTA0011) is attached to the bottom of the phone, and to the 9-pin serial COM port of the computer or handheld device.

- 1 Open a communications application loaded to your computer or handheld device (such as HyperTerminal)
- 2 In this application, set the data rate to 115200 b/s.




Note

If you want to make sure the phone is communicating with the application, type "at" and press ENTER. The application should respond with "OK".

- 3 When the phone rings, DO NOT answer the phone. Instead, execute the "ata" command in the application.

A few seconds after connecting, the application displays "CONNECT".

Once connected, your phone displays the duration of this data call in hh:mm:ss format, and the in-call indicator.

- 4 Transfer text or files using the communications application.
- 5 To end this data call, press the Power/End-call () key on your phone, or execute the following AT commands in the application:
 - ♦ "+++" (interrupt the call)
 - ♦ "ath" (end the call)

Making Clear Packet Data Calls

By making a clear packet data call, you can connect to an internet server (IP address). This connection allows you to access e-mail and the internet. Before you initiate a packet data call, you must first set up the modem, set the data rate for the modem, and create a new dial-up connection.



Note

The following directions apply to most operating systems. However, please consult your operating system documentation for specific procedures related to setting up the modem, creating a dial-up connection and initiating a packet data call.

Before starting these procedures, make sure that the data cable (model DXDTA0011) is attached to the bottom of the phone, and to the 9-pin serial COM port of the computer or handheld device.

**Note**

If the 'Clear Data' Access Control setting is disabled, you will not be able to make a clear packet data call (see "Viewing Access Control Settings" on page 22).

To Set Up the Computer's Modem

To set up the modem, first access the Control Panel window (usually via the **Start, Settings, Control Panel** menu item on the taskbar). Double-click the **Modems** icon. Then from the Modems tab/window, select **Add**.

While setting up the modem, make sure to select the following options:

- "Don't detect my modem; I will select it from a list"
- "(Standard Modem Types)", "Standard 19200 Modem"
- The communications port that the data cable is connected to (e.g., COM1)

The correctly-configured modem has been added to your computer. Now you can set the data rate for this modem.

To Set the Data Rate for the Modem

To set up the modem, first access the Control Panel window (usually via the **Start, Settings, Control Panel** menu item on the taskbar). Double-click the **System** icon. Then from the Hardware tab, select **Device Manager**. Expand the **Modem** option, and then double-click **Standard 19200 Modem**. From the Modem tab, select **115200** from the "Maximum speed" list, and then select **OK**.

**Note**

*To make sure this modem is working properly, you can query it in the **Diagnostics** tab.*

The data rate has now been set for the modem. You can now create the dial-up connection.

To Create a Dial-Up Connection

To set up the modem, first access the Control Panel window (usually via the **Start, Settings, Control Panel** menu item on the taskbar). Double-click the **Network Connections/Dial-Up Networking** icon. Select the **Connections, Make New Connection** menu item.

While creating a new dial-up connection, make sure to select the following options:

- "Dial-up to private network"
- "Standard 19200 Modem"
- Enter "#777" in the phone number field
- "For all users"
- "Add a shortcut to my desktop"

The new dial-up connection has been created on your computer. Now you can initiate a packet data call.


To Initiate a Packet Data Call



Note

Before making a clear packet data call, you need to know the user name and password associated with the IMSI and the carrier.

During a clear packet data call, you cannot originate a voice call, but you can still answer incoming calls.

- 1 From the desktop, double-click the Dial-up connection icon for the new dial-up connection you just created.
- 2 Enter the User name and Password.
- 3 Select **Connect/Dial**.
TBD-The "Connecting to..." window appears on the computer screen, displaying the status.
Your phone displays "Calling data..." while the clear packet data call is being established. Once connected, your phone displays the duration of this data call in hh:mm:ss format.
- 4 Access your e-mail or browse the internet.
- 5 TBD-To end this data call, press the Power/End-call () key on your phone, or select **Disconnect** from the "Connected to..." window.

Making a Data Call to a STE

TBD from Ron-it should talk about who makes the call. How/when to connect cables, etc.

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In-call Features

In-call features are actions performed while you are involved in one or more calls.

In this section, you will learn to

- Transition between clear and secure calls (page 45)
- Make three-way calls (page 46)
- Forward clear calls (page 46)
- Transition between clear voice calls and secure data calls (page 47)

Transitioning Between Clear/Secure Calls

You can transition between clear and secure *during* a call for phones that are strapped Traditional or Auto-secure. If you have established a clear call connection, you can transition to a secure one; if you have established a secure call connection, you can transition to a clear one.




Note

Due to the secure features of your phone, it may take a few minutes to transition between call types.

To Transition from a Clear Call to a Secure Call

You can only transition clear calls to secure calls when both phones are QSec phones.

- 1 Perform one of the following actions.
 - ◆ *From the screen keys displayed during a clear call, select [Go Secure Voice].*
 - ◆ *Press or press and hold the Send/Talk () key, depending on your phone's strapping (see "Determining Your Phone's Strapping" on page 21). This action is similar to initiating a secure call.*
- 2 When the secure LED is lit, enter your secure user PIN (if prompted to do so).

The person you are talking to may also be prompted to enter a PIN. Upon transitioning to a secure call, your phone plays a tone to alert you that a secure call is in progress. See "Making Secure Calls" on page 31 for more information on the behavior of your phone during a secure call.




Note

If you are receiving a request to transition the call from clear to secure, refer to "Receiving Secure Calls" on page 33.

To Transition from a Secure Call to a Clear Call

You can only transition secure calls to clear calls when the two phones are strapped Traditional or Auto-secure. If either phone is strapped Secure-only (or is a non-QSec phone), you cannot transition from a secure call to a clear call; the secure call will continue.

- 1 Perform one of the following actions:
 - ♦ From the screen keys displayed during a secure call, select [Go Clear].
 - ♦ Press or press and hold the Send/Talk () key, depending on your phone's strapping (see "Determining Your Phone's Strapping" on page 21). This action is similar to initiating a clear call.
- 2 The procedure that follows depends on which phone initiated the transition: the originator of the secure call, or the receiver.
 - ♦ **Secure call originator initiates transition:** The recipient of the transition receives a "Transition to clear call?" prompt. After selecting [Yes], a message appears on the screen notifying both phones that a transition to clear is in progress. After the transition to clear is complete, both phones indicate that the call is no longer secure.
 - ♦ **Secure call receiver initiates transition:** The recipient of the transition receives a "Transition to clear call?" prompt. After selecting [Yes], the initiator of the transition then also receives a "Transition to clear call?" prompt. After selecting [Yes], a message appears on the screen notifying both phones that a transition to clear is in progress. After the transition to clear is complete, both phones indicate that the call is no longer secure.



Note

If you or the other party selects [No] in the "Transition to clear call?" prompt, the clear call fails. In addition, the secure call is not continued.

Making Three-way Clear Calls

Three-way calling allows three parties to participate in the same phone conversation. Three-way calls can only be made in clear mode. Contact your Terminal Administrator for details.

Forwarding Clear Calls

When there is an incoming clear call on your phone, you can select one of the following screen keys to forward this call to another number:

- [Forward Call]: Forwards the incoming call to a pre-programmed number. See the following section if you want to change this number.



- [Network Forward]: Forwards the incoming call to a network-stored number.

**Note**

Depending on your phone's configuration, these screen keys (call forwarding options) may not be available.

Contact your Terminal Administrator for more details.

To Change the Forwarding Number

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Settings** tab, and press the Select () key.
- 3 From the Settings menu, select **Sys/Network**.
The Sys/Network menu appears.
- 4 Select **Forwarding Number** to change the forwarding number that is used when you select the [Forward Call] screen key during an incoming call.

**Note**

Depending on your phone's configuration, the Forwarding Number menu item (and call forwarding in general) may not be available.

Transitioning from Clear Voice Calls to Secure Data Calls

You can transition from a clear non-emergency voice call to a secure data call. To make this transition, the originator of the clear voice call must select the [Go Secure Data] screen key on his/her phone. The receiver of the original voice call cannot successfully initiate the transition.

**Note**

Transitioning from a clear data call to a secure data call is not permitted.

During the transition to secure data, if either you or the other party have not logged on as a secure user, you will be prompted to do so (see "To Log On as a Secure User" on page 19).

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Voice Mail, Pages, and Text Messages

Depending on your service provider, your phone has a number of messaging features such as voice mail, paging, and text messaging. Messages are ways callers can contact you when you do not answer the phone. You must turn your phone on to receive messages. Also, the type of message services available to you depends on your service provider. Contact your Terminal Administrator for more information.

In this section, you will learn to

- Understand the types of messages, such as voice mail, pages, and text messages (page 49)
- Set up your message center (page 50)
- Know when you have a message (page 50)
- Retrieve voice mail messages (page 51)
- Retrieve text messages (page 52)
- Send text messages (page 53)
- Forward text messages (page 55)
- Erase old text messages (page 56)
- Return and save callback numbers (page 57)

Types of Messages

The following types of messages are supported by the QSec-2700 phone:

Voice mail. With the voice mail feature, calls automatically go to voice mail when you do not answer the phone. When you receive a voice message, the voice mail system sends a notification to your phone. You must call your voice mail service to hear the message, since it is stored on your service provider's system and not on your phone. You can also view information about the voice mail before retrieving the message.

Pages. When a caller enters a number into your voice mail instead of a voice message, it appears on your phone as a numeric page.

Text messages. Callers can also send preset text messages. If you have e-mail service for your phone, e-mail may appear as a text message. You can view pages and text messages on your phone's screen.

Setting Up Your Message Center

When you first receive your phone, you will need to contact your Terminal Administrator for service provider-specific instructions on how to set up your message center, such as entering a personal greeting and private pass code to retrieve messages. Usually, messages are retrieved by pressing and holding the 1 key (see "Using the Speed Dial List" on page 67).



Knowing You Have a Message

Upon receipt of a message, one or all of the following behaviors may occur:

- The Text Message or Voice Mail Message icon appears at the top of the screen. If the icon flashes, the message was sent "priority" or "urgent."
- If audible message alerts are turned on, the phone will beep once when receiving the message, and may also beep every minute until you acknowledge the message (see the next section).
- If vibratory message alerts are turned on, the phone will vibrate once when receiving the message, and may also vibrate every minute until you acknowledge the message (see the next section).
- Backlighting is activated for the duration of the current backlighting setting (see "To Configure the Phone's Display" on page 79).
- For voice mail messages: a message notification appears, which is discussed in "Retrieving Voice Mail Messages" on page 51.
- For text messages: a message notification appears, which is discussed in "Retrieving Text Messages" on page 52.

To Change the Message Alert

You can modify the alert when a voice mail, page or text message is received by your phone. Perform the following procedure to change the message alert:

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Messages** tab, and press the Select () key.
- 3 From the Messages menu, select **Message Settings, Message Alert**.
The Message Alert menu appears.
- 4 Scroll to and select one of the following message alert options:
 - ♦ **None:** no message alert
 - ♦ **Vibrate Once:** phone vibrates once when receiving a message
 - ♦ **Vibrate & Remind:** phone vibrates once when receiving a message, and once every minute until you acknowledge the alert

- ♦ **Beep Once:** phone beeps once when receiving a message
- ♦ **Beep & Remind:** phone beeps once when receiving a message, and once every minute until you acknowledge the alert

Retrieving Voice Mail Messages

When a new voice mail message arrives, a voice mail notification appears on the screen. It includes the the number of voice mail messages and [View]/[Ignore] screen keys.



[View] displays the voice mail message(s) on the screen, while [Ignore] returns you to the previous application.







Note

Each voice mail notification automatically replaces the previous notification, but the actual messages in your voice mail are not overwritten.




See the next section for details on configuring your voice mail number.

To Enter Your Voice Mail Number into the Phone

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Messages** tab, and press the Select () key.
- 3 From the Messages menu, select **Message Settings, Voice Mail Number**.
A notification appears indicating whether or not a voice mail number has been configured for this phone.
- 4 Press the Select () key twice to select [Edit].
The Enter Number screen appears.
- 5 Enter your voice mail number, and press the Select () key twice to select [OK].
The phone will call this number whenever you access voice mail functions.

To Access Your Voice Mail Messages

To call your voice mail number, perform one of the following actions:


- Press and hold the 1 key (see “Using the Speed Dial List” on page 67). This action may not work for all service providers.
- Press the Send/Talk () key from the voice mail notification screen.
- Press the Send/Talk () key while the cursor is on the **Messages, Voice Mail** menu option.
- Press the Send/Talk () key while viewing a voice mail message.
- First, select the **Messages, Voice Mail** menu option to view all received voice mails (the number in parentheses (N) indicates the number of voice mails). The Voice Mail screen appears. Select [Call] from this screen.



Note

If you have not saved a voice mail number into the phone, a notification will appear prompting you for this number. Once you enter the number, the phone will make a call to your voice mail.



Once you call the voice mail number, perform the following procedure to access your voice mail messages:

- 1 Enter your private pass code and press the Select () key.
- 2 Follow the audible instructions provided by your service provider to access your messages.


Retrieving Text Messages

When a new text message arrives, a text message notification appears on the screen. It includes the date and time of the message, the sender's phone number (or name if it matches a number in the Contacts list), and [View]/[Ignore] screen keys. [View] displays the message text, while [Ignore] returns you to the previous application.

To View Received Text Messages

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Messages** tab, and press the Select () key.
- 3 From the Messages menu, select **InBox** to view all received text messages. The two numbers in parentheses indicate the number of new messages in the Inbox, and the total number of messages in the Inbox, respectively.

The InBox appears, displaying the received messages. The newest messages are displayed at the top of the screen.

- 4 Scroll to the message you want to view, and press the Select () key.





The text message appears on the screen. It includes a time/date stamp, the contact name (if applicable), and a callback number (see "To Return a Call" on page 57 for details on dialing this number). The message auto-scrolls page-by-page so you can read its entire body.

- 5 Press the Up or Down navigation keys to manually scroll through the message line-by-line.

Sending Text Messages

You can send text messages to a phone number or e-mail address. You can send a standard text message, where you manually enter the entire text of the message. Alternatively, you can send a preformatted text message, where the start of the message is already entered for you.

To Send Standard Text Messages




- 1 From the Home screen, press the Select () key.
 - 2 Scroll to the **Messages** tab, and press the Select () key.
 - 3 From the Messages menu, select **Create Message**.
The Send To field appears.
 - 4 Enter the destination address (a phone number or an e-mail address), or select [Contacts] to retrieve an address from the Contacts list (see "Using the Contacts Database" on page 59 for details on entering and editing contacts).
-  **To change the text entry method, scroll to [Numbers] and select it, then select one of the following options.**
- Note**
- **Multitap:** standard text entry method. Press the number key corresponding to the letter as many times as necessary to enter that letter.
 - **Numbers:** enters numbers corresponding to each number key
 - **Symbols:** enters a symbol corresponding to a number key
- 5 Press the Select () key twice to select [Continue].
 - 6 Enter the message text. A count of the number of characters left to use is displayed in the top left corner of the screen. See the note above to change the text entry method. Select [Continue] when you are done entering the message.

The Message Options screen appears.

- 7 Select one of the following options:
 - ♦ **Send:** sends the message immediately
The screen displays “Sending message. Please wait...”, and then a success or failure notification is displayed. The message appears as a sent message in the OutBox.
 - ♦ **Save:** saves the message to the phone’s memory
The message appears as a pending message in the OutBox.




To Send Preformatted Text Messages

Using the **Send Preformat** menu item, you can use a pre-composed phrase as the default for your new text message. Perform the following procedure to send preformatted text messages:

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Messages** tab, and press the Select () key.
- 3 From the Messages menu, select **Send Preformat**.
A list of phrases appears on the screen.
- 4 Select the phrase that you want to start your message with.
The Send To field appears.
- 5 Repeat Step 4 and Step 5 of the “To Send Standard Text Messages” procedure
The pre-composed phrase appears in the message field.
- 6 Edit the message text as desired, and then press the Select () key twice to select [Continue].
The Message Options menu appears.
- 7 Repeat Step 7 of the “To Send Standard Text Messages” procedure.

To View Sent Text Messages

Your phone keeps a log of all text messages that you send. This includes messages that were successfully sent, messages that are pending, and messages that failed to reach their recipient. Perform the following procedure to view sent text messages:

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Messages** tab, and press the Select () key.
- 3 From the Messages menu, select **OutBox** to view all sent and pending messages.
The number in parentheses (N) indicates the number of messages in the OutBox.
The OutBox appears, displaying the sent messages.
- 4 Scroll to the message you want to view, and press the Select () key.



The text message appears on the screen. The message auto-scrolls page-by-page so you can read the entire body of the message. You can scroll line-by-line using the Up and Down navigation keys.


- 5 Select one of the following screen keys:
 - ♦ *[Done]: returns to the OutBox*
 - ♦ *[Erase]: erases the message. Select [Yes] to erase the message, or select [No] to cancel this action.*
 - ♦ *[Send]: attempts to send the message again (to the same recipient)*
 - ♦ *[Forward]: forwards the message to another number. See the next section for more details.*
 - ♦ *[Edit]: allows you to edit the message, and then send it to another number. See Step 4 through Step 7 of "To Send Standard Text Messages" on page 53.*


Forwarding Text Messages

You can forward a text message located in the OutBox or InBox to another recipient.


To Forward a Text Message

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Messages** tab, and press the Select () key.
- 3 From the Messages menu, select **InBox** or **OutBox**.

The InBox or OutBox appears.
- 4 Scroll to the message you want to forward, and press the Select () key.

The text message appears on the screen.
- 5 Scroll to the [Forward] screen key, and then press the Select () key.

The Forward To field appears.
- 6 Repeat Step 4 and Step 5 of the "To Send Standard Text Messages" procedure.

The old message appears in the message field.
- 7 Edit the message text as desired, and then press the Select () key twice to select [Continue].

The Message Options menu appears.
- 8 Repeat Step 7 of the "To Send Standard Text Messages" procedure.

Erasing Old Text Messages

When available memory falls below 25% of the total memory and you select the **Messages, Inbox** menu item, the phone beeps and a low-memory warning appears.



When the phone runs out of memory, it does not accept any new text messages. The out-of-memory warning contains an option to erase all old messages from the Inbox.



Note



When the phone runs out of memory, you must erase old text messages in order to free up memory. Alternatively, you can set up your phone to automatically erase old text messages whenever necessary (see “To Erase Old Messages Automatically” on page 56).

To Erase Old Text Messages Manually

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Messages** tab, and press the Select () key.
- 3 From the Messages menu, select **Erase Messages**.
The Erase Messages screen appears.
- 4 Select one of the following options:
 - ♦ **No:** returns to the Messages menu without deleting messages
 - ♦ **Entire Inbox:** deletes all messages in the Inbox. From the confirmation prompt, select [Yes] to delete the entire Inbox, or select [No] to cancel this action.
 - ♦ **Entire Outbox:** deletes all messages in the OutBox. From the confirmation prompt, select [Yes] to delete the entire OutBox, or select [No] to cancel this action.
 - ♦ **Old Inbox:** deletes all read (old) messages in the Inbox. From the confirmation prompt, select [Yes] to delete all the old Inbox messages, or select [No] to cancel this action.

To Erase Old Messages Automatically

You can set up your phone to automatically erase as many old messages as needed to make room for new messages. Perform the following procedure to enable the phone to automatically erase old messages:


- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Messages** tab, and press the Select () key.
- 3 From the Messages menu, select **Message Settings, Auto Erase Old Inbox**.


- 4 Select one of the following options:
 - ♦ **Enable:** messages are automatically erased, as needed
 - ♦ **Disable:** messages are not automatically erased

Returning and Saving Callback Numbers

Callback numbers are numbers someone can leave you as a page or a text message, or numbers that are automatically stored on your phone when you receive a call. If your service provider has caller ID, or if a caller left a callback number in the page message, you can return the call without redialing the number. You can also save the callback number to your Contacts list.

To Return a Call

- 1 The following methods can be used to return a call:
 - ♦ From a text message containing a callback number, press the Send/Talk () key, and then select [Call] (see “Making a Call Using a Callback Number” on page 76).
 - ♦ Access the Recent Calls list (go to Step 2).
- 2 Access the Recent Calls list using one of the following actions:
 - ♦ From the application tabs, select **Recent Calls**.
 - ♦ From the Home screen, press the Left navigation key.
 - ♦ From the missed call notification screen, select [Calls]. The Missed Calls screen appears. Go to Step 4
- 3 Select the **Missed Calls** option.

The Missed Calls screen appears, displaying the 10 most recent missed calls.
- 4 Scroll to the call you want to return and press the Send/Talk () key.

The number is dialed.



Note

If an incoming caller ID is restricted, private, unavailable or unknown, the caller's number is not displayed on the screen, and is not available for callback.


To Save a Callback Number


- 1 The following methods can be used to save a callback number:
 - ♦ From the body of a text message, scroll to the callback number and select it. Go to Step 5
 - ♦ Access the **Recent Calls** menu item. Go to Step 2

- 2 Access the Recent Calls application using one of the following actions:
 - ♦ From the main menu, select **Recent Calls**.
 - ♦ From the Home screen, press the Left navigation key.
 - ♦ From the missed call notification screen, select [Calls]. The Missed Calls screen appears. Go to Step 4
- 3 Select one of the following options:
 - ♦ **Missed Calls:** missed (unanswered) calls
 - ♦ **Incoming Calls:** incoming (answered and unanswered) calls

The Missed Calls or Incoming Calls screen appears.
- 4 Select the callback number you want to save.

The Options screen appears.
- 5 Select one of the following options:
 - ♦ **Save New:** to add a new contact using this phone number. Perform Step 5 through Step 7 of "To Enter Contacts Directly" on page 62.
 - ♦ **Save To Existing:** to add this phone number to an existing contact. Perform the following steps:

The Phone Number field appears.
- 6 Edit the phone number as desired, and then press the Select () key twice to select [Next].

The 'Select a contact' list appears.
- 7 Scroll to the contact you want to add this phone number to, and press the Select () key.

The new number is added to this contact. The contact is shown on the screen.

**Note**

If the phone number in the Recent Calls list is restricted, private or otherwise unavailable, you will not be able to save it as a contact.

Using the Contacts Database

Your phone contains an electronic phone book called Contacts in which you can save phone numbers, mailing addresses, e-mail addresses and web addresses with an associated name.

In this section, you will learn to

- Understand QSec type phone numbers (page 59)
- Enter text into an alphanumeric field (page 60)
- Delete characters from a field (page 62)
- Enter contacts (clear and secure) (page 62)
- View, search and dial contacts (page 64)
- Customize and edit a contact (page 65)
- Use the Speed Dial list (page 67)



Note

The quick (shortcut) method to access your Contacts list is by pressing the Right navigation key from the Home screen.

The Contacts database cannot be entered during a secure call. See “Making Secure Calls” on page 31 for information on limitations during a secure call.

Understanding QSec Type Phone Numbers

Selecting and dialing a number stored in Contacts is the preferred way to use your phone to make secure calls. In particular, calls to other QUALCOMM phones, including the QSec-800 phone and the QSec-2700 phone, should be saved in Contacts as a QSec type number (). Additional information is saved with a QSec number during secure calls to ensure that subsequent secure calls connect in the preferred mode, and in the quickest time. If the number of a QSec phone is not stored as QSec type, it will automatically be changed to QSec type during the first secure call to the QSec phone.

Most QSec-2700 phones have two phone numbers: a basic phone number (called “clear” number on the QSec-800 phone), and an async number (called “secure” number on the QSec-800 phone). Make sure you enter the basic phone number (including the area code) into Contacts. See “To View Your Phone Numbers” on page 13 to access these numbers.


Calls from a QSec-2700 phone can be made to other FNBDT-interoperable devices. The numbers for these types of phones should be saved as Work (), Home () or Mobile () types, not as QSec types.



Note

If you dial the number of a QSec-2700 phone directly without first saving the number in Contacts, the call may connect in a non-preferred mode, and may not have the shortest possible setup time.

To Change the Number Type to QSec


- 1 From the Home screen, press the Right navigation key.
The Contacts list is displayed.
- 2 Scroll to the contact whose number type you want to change, and press the Select () key.



Note

Make sure the contact you select is a QSec phone.

The contact appears on the screen, along with a list of saved numbers.


- 3 Scroll to the appropriate number and press the Select () key.

Note

Make sure the number you select is the basic phone number of the QSec phone, not the async (secure) number. If you accidentally enter the async number and attempt to save it as a QSec type, all calls to that phone will fail. To delete and re-enter such a contact, see “To Customize/Edit an Existing Contact” on page 66.

The Options menu appears.


- 4 Select **Number Type**.
- 5 From the Number Type menu, select **QSec**.

The number is now a QSec type number (), and will be treated as such during secure calls.

Entering Text into an Alphanumeric Field

In numeric fields such as the phone number field, you can only enter numbers. However, you can enter numbers, letters, and punctuation (symbols) into an alphanumeric field such as the mailing address field.

To Enter Letters into an Alphanumeric Field

- 1 Make sure the cursor is inside an alphanumeric field.
- 2 Press the Select () key to access the screen keys below this field.
- 3 Scroll to the [Multitap]/[Numbers] screen key. If this screen key is set to [Numbers], select it and then select **Multitap** from the Text Mode menu.


- 4 To enter a letter, press the number key corresponding to that letter as many times as it takes to get to that letter. For example, to enter a “c”, press the “2” key three times. You cycle through “a” and “b”, and end up with a “c”. You can also enter a number in Multitap text mode by cycling through all the letters until the number appears on the screen.

**Note**


You must press the number key rapidly, because any pause in the pressing will result in the current letter being entered (and the cursor moving to the next space).

- 5 Press the pound (#) key to enter a space, or hold down the asterisk (*) key and press a number key to enter an upper-case letter.

To Enter Numbers into an Alphanumeric Field

- 1 Make sure the cursor is inside the alphanumeric field.
- 2 Press the Select () key to access the screen keys below this field.
- 3 Scroll to the [Multitap]/[Numbers] screen key. If this screen key is set to [Multitap], select it and then select **Numbers** from the Text Mode menu.
- 4 To enter a number, press the corresponding number key. You can also enter the asterisk (*) and pound (#) characters by pressing those keys.



To Enter Symbols into an Alphanumeric Field

- 1 Make sure the cursor is inside the alphanumeric field, in the space where you want to insert the symbol (punctuation).
- 2 Press the Select () key to access the screen keys below this field.
- 3 Select the [Multitap]/[Numbers] screen key, and then select **Symbols** from the Text Mode menu.
The Symbols screen appears, displaying a symbol for each of the number keys.
- 4 Scroll up or down to switch to another page of symbols. There are four pages of symbols loaded on the phone (30 total symbols).
- 5 Press the number key corresponding to the symbol you want to enter.

The symbol is inserted into this field, and you are returned to either Multitap or Numbers text mode, depending on which mode you were in prior to entering the symbol.

Deleting Characters from a Field

To Delete Characters from a Field



- To delete the character preceding the cursor (or the last character entered), press the Clear () key.
- To delete an entire line of characters, press and hold the Clear () key.

Entering Contacts

There are four ways to enter contacts:

- Enter contacts directly.
- Open the Recent Calls list and save a number as a contact.
- Save a number just dialed as a contact (at the end of that call).
- Save a callback number left with a message as a contact.

To Enter Contacts Directly



- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Contacts** tab, and press the Select () key.
- 3 From the Contacts menu, select **Add New**.
- 4 Select one of the following options:
 - ♦ **Phone:** The Phone Number field appears. Enter a phone number. The phone number can be up to 32 digits long. This phone number is automatically hyphenated when it appears in the Contacts database. Read “Understanding QSec Type Phone Numbers” on page 59 to verify that you enter the correct number into Contacts.




Note

Make sure you enter the full-length phone number into Contacts (including the area code, if applicable).





- ♦ **Email:** The Email Address field appears. Enter an e-mail address (see “Entering Text into an Alphanumeric Field” on page 60). The e-mail address can be up to 256 characters long.
- ♦ **Address:** The Street Address field appears. Enter a street/mailling address (see “Entering Text into an Alphanumeric Field” on page 60). The street address can be up to 256 characters long.
- ♦ **Web Page:** The Web Page field appears. Enter a web page address (see “Entering Text into an Alphanumeric Field” on page 60). The web address (URL) can be up to 256 characters long.

- 5 Press the Select () key to access the screen keys below the field you selected in the previous step. Select [Next] to continue.
The Enter Name screen appears.
- 6 Enter a name for this new contact. The name can be up to 256 characters long. Press the Select () key twice to select [Next].
The new contact is added to the Contacts list. The contact is shown on the screen.
- 7 Scroll to and select one of the following options:
 - ♦ **Options:** *The Options menu appears. Using this menu, you can add new entries to this contact, edit the contact's name, classify the contact, or erase the contact. See "Customizing and Editing Contacts" on page 65 for more information on these options.*
 - ♦ **[address/number]:** *accesses options related to the address/number you entered. Typically, you can view, edit or erase the address/number. See "Customizing and Editing Contacts" on page 65 for more information on these options.*



Note If the Power/End-call () key is pressed during alphanumeric entry, all currently entered input is lost, and you are returned to the Home screen.

To Create/Save Contacts from a Recent Calls List


- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Recent Calls** tab, and press the Select () key.
- 3 From the Recent Calls menu, select any of the three options.
- 4 Scroll to the entry from the Recent Calls list that you want to add to the Contacts list, and press the Select () key.
- 5 Scroll to select one of the following options:
 - ♦ **Save New:** *to add a new contact using this phone number. Perform Step 5 through Step 7 of "To Enter Contacts Directly" on page 62.*
 - ♦ **Save To Existing:** *to add this phone number to an existing contact. Perform the following steps:*
The Phone Number field appears.
- 6 Edit the phone number as desired, and press the Select () key twice to select [Next].



Note Make sure you enter the full-length phone number into Contacts (including the area code, if applicable).

The 'Select a contact' menu appears.




- 7 Scroll to the contact you want to add this phone number to, and press the Select () key.

The new number is added to this contact. The contact is shown on the screen.




Note *If the phone number in the Recent Calls list is restricted, private or otherwise unavailable, you will not be able to save it as a contact.*

To Enter Contacts at the End of a Call

After you end a call, the phone number you just dialed appears on the screen. To save this number in your Contacts list, press the Select () key to select it, and then follow Step 5 through Step 7 of “To Create/Save Contacts from a Recent Calls List” on page 63.



To Save Callback Numbers to the Contacts List


- 1 From the body of a text message, scroll to the callback number and press the Select () key to select it. See “To View Received Text Messages” on page 52 for details on accessing your text messages.
- 2 Follow Step 5 through Step 7 of “To Create/Save Contacts from a Recent Calls List” on page 63.

Viewing, Searching and Dialing Contacts






After you enter contacts in the Contacts list, you can easily view/dial them and conduct searches for them.

To View/Dial Contacts

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Contacts** tab, and press the Select () key.

- 3 From the Contacts menu, select one of the following options (using the Select () key):

- ♦ **View All:** to display all contacts
- ♦ **Business:** to display only Business contacts
- ♦ **Personal:** to display only Personal contacts


The Contacts list appears, displaying the appropriate contacts. The name of each contact appears, along with an icon indicating the phone number type of the primary number for this contact. Possible types include Work (), Home (), Mobile (), Pager (), and QSec ().

- 4 Scroll up or down to highlight the contact you want to dial.
- 5 Press the Right navigation key to access the contact's next phone number. Press the Left navigation key to access the contact's previous phone number. The phone number type icon will change accordingly.






Note

If a contact has more than one number of a particular type, it is not possible to distinguish between them in the Contacts list. In this instance, you should first select the contact from the list, scroll to the number you want to dial, and then dial it using the Send/Talk key.

- 6 Press or press and hold the Send/Talk () key, depending on your phone's strapping and whether you want to make a clear or secure call (see "Determining Your Phone's Strapping" on page 21).










To Search for Contacts


- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Contacts** tab, and press the Select () key.
- 3 From the Contacts menu, select **Find**.
The Find Name field appears.
- 4 Enter a string of characters to search for a name, and then press the Select () key twice to select [Find].
All names that match the search string are displayed in the Search Results screen.
- 5 Repeat Step 4 through Step 6 of "To View/Dial Contacts" on page 64 to select and dial a phone number from the Search Results list.

Customizing and Editing Contacts

After you enter contacts in the Contacts list, you can customize and edit them. This includes adding new entries to an existing contact, editing the contact's name, classifying the contact, and erasing the contact. You can also customize and edit entries (numbers and addresses) within a contact.

To Customize/Edit an Existing Contact

- 1 Access the Contacts list or perform a search (see “Viewing, Searching and Dialing Contacts” on page 64).
- 2 Select the contact you want to edit.
- 3 Select **Options**.
The Options menu appears.
- 4 Select one of the following options:
 - ♦ **Add New:** adds a new phone number, e-mail address, mailing address, or web address to the contact. See Step 4 of “To Enter Contacts Directly” on page 62 for more information on the entries you can add to a contact.
 - ♦ **Edit Name:** allows you to edit the contact's name. After you edit the name, select **Save** to save the changes, or select **Cancel** to return to the Options menu without saving the changes.
 - ♦ **Classify Contact:** allows you to classify the contact as **Business**, **Personal** or **Neither**
 - ♦ **Erase Contact:** deletes the contact from your Contacts list. After you select this option, select [Yes] to delete the contact, or select [No] to return to the Options menu without deleting the contact.
- 5 Press the Clear () key to return to the Contact screen. Scroll up or down to an entry within this contact that you want to dial or edit.
- 6 Press one of the following keys:
 - ♦ Send/Talk () - dials a phone number (if one is selected)
 - ♦ Select () - allows you to edit or delete the selected entry
- 7 If you chose Select () in the previous step, you can modify this entry. Select one of the following options:
 - ♦ **Number Type:** Phone numbers only. Assigns a phone number type to the selected entry. Possible types include **Work** (), **Home** (), **Mobile** (), **Pager** (), and **QSec** (). See “Understanding QSec Type Phone Numbers” on page 59 for a description of the QSec type and its significance.
 - ♦ **View Address:** Addresses only. Displays the entire address on the screen.
 - ♦ **Edit:** allows you to edit the entry's contents
 - ♦ **Erase:** deletes the entry

- ♦ **Add to Speed Dial:** Phone numbers only. Adds the number to the Speed Dial list. Scroll to an empty (unused) slot, and press the Select () key. See the next section for more information on the Speed Dial list.


Using the Speed Dial List

Using the Speed Dial list, you can dial a phone number quickly by entering a one or two digit slot number. The Speed Dial list holds a maximum of 99 entries. Each entry consists of a unique speed dial slot number, a contact name, and a single phone number.



Note Speed dial slot 1 is reserved for accessing your voice mail number; you can only assign slots 2 through 99.

To Add a Speed Dial Entry


- 1 Access the Contacts list or perform a search (see “Viewing, Searching and Dialing Contacts” on page 64).
- 2 Scroll to the appropriate contact, and press the Select () key to select it.
- 3 Select the phone number you want to add to the Speed Dial list.

The Options menu for this phone number appears.

- 4 Select **Add to Speed Dial**.

The Speed Dial list appears, displaying both used and unused slots (unused slots have the word ‘-empty-’ next to them).





- 5 Scroll to a used or unused slot, and press the Select () key to add the number to this slot.




Note If the slot is occupied by another number, an ‘Overwrite entry?’ message appears on the screen. Select [Yes] to overwrite the old entry with the new one, or select [No] to return to the Speed Dial list without overwriting this entry.

To View the Speed Dial List

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Contacts** tab, and press the Select () key.
- 3 From the Contacts menu, select **Speed Dial List**.

The Speed Dial list appears, displaying only slots that you have assigned contacts to.

To Delete a Speed Dial Entry

- 1 Access the Speed Dial list (see the previous section).
- 2 Scroll to the speed dial entry you want to delete, and press the Select () key.
- 3 Select **Options**, then **Erase Contact**.

An 'Erase contact?' prompt appears on the screen.

- 4 Select [Yes] to delete this entry, or select [No] to return to the Options menu without deleting the speed dial entry.

To Dial a Speed Dial Entry

- 1 Access the Home screen.
- 2 Press and hold the number key corresponding to the slot number. If the slot number is a two-digit number, press the first number key, and then press and hold the second number key.

The phone number corresponding to this slot number is dialed.



Note

If the slot number you entered is not associated with a contact (i.e., it is empty), a message appears on the screen and no call is made.

Accessing Recent Calls

The Recent Calls application includes three lists: Missed Calls, Incoming Calls and Outgoing Calls. These lists contain the calls that have recently been received and sent by your phone.

In this section, you will learn to

- View a recent calls list (page 69)
- View, edit and delete a recent call (page 70)
- Send a text message to a recent call (page 71)
- Save a recent call as a new or existing contact. (page 71)



Note


To dial a phone number from a recent calls list, see “Making a Call from Recent Calls” on page 75.

The Recent Calls application cannot be accessed during a secure call. See “Making Secure Calls” on page 31 for a discussion of secure call limitations.

Viewing a Recent Calls List

Each recent calls list contains the 10 most recent calls of that particular type. If a list already has 10 entries, the oldest entries are removed and the newest entries are added.

To View a Recent Calls List

- 1 Use one of the following methods to access a recent calls list:
 - ♦ From the application tabs, scroll to the **Recent Calls** tab and press the Select () key.
 - ♦ From the Home screen, press the Left navigation key.
 - ♦ From the missed call notification screen, select [Calls]. The Missed Calls screen appears (see the Missed Calls description below).
- 2 From the Recent Calls menu, select one of the following options:
 - ♦ **Missed Calls:** displays the 10 most recent unanswered (missed) calls
 - ♦ **Incoming Calls:** displays the 10 most recent incoming (received) calls, which includes both missed and answered calls
 - ♦ **Outgoing Calls:** displays the 10 most recent outgoing (sent) calls



Viewing, Editing or Deleting a Recent Call


When you select a name or phone number from a recent calls list, you can view the phone number, view the recent call's time, date and duration, edit the phone number or delete the recent call.



Note

*If you select a recent call from **Outgoing Calls**, you cannot edit the phone number or delete the recent call.*

To View, Edit or Delete a Recent Call

- 1 Perform the procedure in "Viewing a Recent Calls List" on page 69.
- 2 From the recent calls list, scroll to a number (or name) and press the Select () key to select it.



Note

*A contact name will appear instead if the phone number matches an entry in your **Contacts database** (see "Using the **Contacts database**" on page 59).*

If caller ID is blocked/not supported, then "Restricted"/"Unavailable" is displayed instead of the phone number. When a number is not displayed, you are unable to make a call to it, send a text message to it, or enter it as a contact.

*The **Options menu** appears.*

- 3 Select one of the following options:
 - ♦ **Time:** The **Call Time** screen appears. This screen displays the time and date of the recent call, as well as the duration of the call in minutes and seconds. Select [OK] to return to the **Options menu**.
 - ♦ **View Number:** The **View Number** screen appears. This screen displays the phone number of the recent call.
 - ♦ **Edit Number:** The **Enter Number** field appears, with the current phone number already entered. You can edit this number, and then select [Save].

The “Recent Calls Entry Saved” notification appears. Selecting [Cancel] returns you to the Options menu without editing the number.

**Note**

If you edit this number, make sure that you enter a full-length phone number (including the area code, if applicable).

- ♦ **Delete Entry:** The “Delete Entry?” prompt appears. Select [Yes] to delete this recent call, or select [No] to return to the Options menu without deleting this recent call.

Sending a Text Message to a Recent Call

When you select a name or phone number from a recent calls list, you can also send a text message to this number. This is similar to sending a text message from the Messages application (see “Sending Text Messages” on page 53).

To Send a Text Message to a Recent Call

- 1 Perform Step 1 and Step 2 of the previous procedure.
- 2 Select **Send SMS Message**.
- 3 Perform Step 6 and Step 7 of “To Send Standard Text Messages” on page 53.
You return to whichever recent calls submenu you came from.

Saving a Recent Call as a Contact

There are two ways to save a recent call to your Contacts database. You can either save the recent call as a new contact, or save the associated phone number to an existing contact. See “Using the Contacts Database” on page 59 for more information on creating and editing contacts.

To Save a Recent Call as a Contact

- 1 Perform Step 1 and Step 2 of “To View, Edit or Delete a Recent Call” on page 70.
- 2 Perform Step 5 through Step 7 of “To Create/Save Contacts from a Recent Calls List” on page 63.
You return to whichever recent calls submenu you came from.

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Automated Dialing Methods

There are a number of automated dialing methods that allow you to dial a number without manually pressing the number keys. These include redial, speed-dial, dialing from the Contacts list, dialing from the Recent Calls list, and dialing from a text message.


In this section, you will learn to

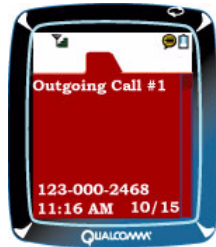
- Redial the last number called (page 73)
- Make a call using speed-dial (page 74)
- Make a call from the Contacts list (page 74)
- Make a call from the Recent Calls application (page 75)
- Make a call using a callback number from a text message (page 76)


Redialing the Last Number Called

Using the redial method, you can redial the number that was last called. This is analogous to pressing the Redial key on a standard phone.

To Redial the Last Number Called

- 1 Press the Send/Talk () key once to bring up the last number dialed.




- 2 Press or press and hold the Send/Talk () key, depending on your phone's strapping and whether you want to make a clear or secure call (see "Determining Your Phone's Strapping" on page 21).

Making a Call Using Speed Dial

Using the Speed Dial method, you can dial a phone number quickly by entering a one or two-digit slot number. By entering the most commonly-dialed numbers into the Speed Dial list, you do not need to go through all the numbers in your Contacts list in order to dial these numbers.



Note

Using the Speed Dial method is analogous to entering a number and pressing the Send/Talk () key (not pressing and holding it). Therefore, you can only use the Speed Dial method to make a secure call if your phone is strapped Auto-secure or Secure-only (see “Determining Your Phone’s Strapping” on page 21).

For information on adding, viewing and deleting Speed Dial entries, refer to “Using the Speed Dial List” on page 67.

To Make a Call Using Speed Dial

- 1 Access the Home screen.
- 2 Press and hold the number key corresponding to the slot number. If the slot number is a two-digit number, press the first number key, and then press and hold the second number key.

The phone number corresponding to this slot number is dialed.



Note



If the slot number you entered is not associated with a contact (i.e., it is empty), a message appears on the screen and no call is made.






Making a Call from the Contacts List

The Contacts list contains all of your contacts, including their phone numbers. From the Contacts application, you can select a number and dial it.

For information on adding and editing contacts, refer to “Using the Contacts Database” on page 59.

To Make a Call from the Contacts List


- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Contacts** tab, and press the Select () key.
- 3 From the Contacts menu, select one of the following options:
 - ♦ **View All:** to display all contacts
 - ♦ **Business:** to display only Business contacts
 - ♦ **Personal:** to display only Personal contacts


The **Contacts** list appears, displaying the appropriate contacts. The name of each contact appears, along with an icon indicating the phone number type of the primary number for this contact. Possible types include **Work** () , **Home** () , **Mobile** () , **Pager** () , and **QSec** () .

- 4 Scroll up or down to highlight the contact you want to dial.
- 5 Press the Right navigation key to access the contact's next phone number. Press the Left navigation key to access the contact's previous phone number. The phone number type icon will change accordingly.



Note



*If a contact has more than one number of a particular type, it is not possible to distinguish between them in the **Contacts** list. In this instance, you should select the contact from the list, scroll to the number you want to dial, and then dial it using the **Send/Talk** () key.*

- 6 Press or press and hold the **Send/Talk** () key, depending on your phone's strapping and whether you want to make a clear or secure call (see "Determining Your Phone's Strapping" on page 21).

Making a Call from Recent Calls

The **Recent Calls** application contains the missed calls, incoming calls and outgoing calls that have been received and sent by your phone. From the **Recent Calls** list, you can select a number and dial it.

To Make a Call from the Recent Calls List

- 1 From the Home screen, press the **Select** () key.
- 2 Scroll to the **Recent Calls** tab, and press the **Select** () key.
- 3 From the **Recent Calls** menu, select one of the options (**Missed Calls**, **Incoming Calls** or **Outgoing Calls**).

The corresponding screen appears.


- 4 Scroll to the number (or name) you want to dial.



Note

*A contact name will appear instead if the number matches an entry in your **Contacts** database (see "Using the **Contacts** Database" on page 59).*

If caller ID is blocked or is not supported, then "Restricted" or "Unavailable" is displayed instead of the number, respectively. When a number is not displayed, you are unable to make a call to it.




- 5 Press or press and hold the **Send/Talk** () key, depending on your phone's strapping and whether you want to make a clear or secure call (see "Determining Your Phone's Strapping" on page 21).

Making a Call Using a Callback Number


Typically, text messages include a callback number that you can use to call the sender of the message. From the Messages application, you can access text messages and the corresponding callback numbers.

For more information on using the Messages application, refer to “Voice Mail, Pages, and Text Messages” on page 49.

To Make a Call Using a Callback Number

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Messages** tab, and press the Select () key.
- 3 From the Messages menu, select **InBox** to view all received text messages.
- 4 Scroll to the message containing the callback number, and press the Select () key to select it.

The text message appears on the screen, along with the callback number.

- 5 Press or press and hold the Send/Talk () key, depending on your phone's strapping and whether you want to make a clear or secure call (see “Determining Your Phone's Strapping” on page 21).
- 6 Select the [Call] screen key to initiate a call to this number.

Customizing Your Phone

From the Settings menu, you can change the settings on your phone to customize the screen display and sound.



Note

The Settings menu cannot be accessed during a secure call. See “Making Secure Calls” on page 31 for a discussion of secure call limitations.

In this section, you will learn to

- Silence/enable audible alerts (page 77)
- Lock/unlock the keypad (page 78)
- Configure the phone's sound (page 78)
- Configure the phone's display (page 79)
- Set up the phone's screensaver (page 80)
- Enable/disable alerts (page 81)
- View/reset call duration timers (page 81)
- Configure the phone's accessories (page 82)
- Enable/disable roaming (page 83)
- Change the forwarding number (page 83)
- Use the advanced settings (page 83)

Standard Settings

Some of the items that can be changed include whether to silence all alerts, sound options such as the volume or ringer type, display options such as the banner or time format, alert options, call timers and accessory options.



To Silence/Enable Audible Alerts

Using the Silence All function, you can silence all audible alerts that come from the speaker. Perform the following procedure to silence/enable audible alerts:



Note

The Silence All, Lights Only setting can also be activated by pressing and holding the UP navigation key from the Home screen.

- 1 From the Home screen, press the Select () key.
- 2 Press the Select () key again to select the **Settings** tab.
- 3 From the Settings menu, select **Silence All**.

- 4 Select one of the following options:

- ♦ **Normal:** to enable all audio alerts
- ♦ **Vibe Only:** to disable all audio alerts and replace them with vibratory alerts
- ♦ **Lights Only:** to disable all audio and vibratory alerts





Silencing audible alerts will not silence in-call alerts.

Note *This setting does not affect backlighting.*


To Lock/Unlock the Keypad

Using the Auto KeyGuard option, you can lock the keypad to prevent accidental key presses while the Home screen is displayed. Perform the following procedure to lock the keypad:


- 1 From the Home screen, press the Select () key.
- 2 Press the Select () key again to select the **Settings** tab.
- 3 From the Settings menu, select **Auto Key Guard**.
- 4 Select one of the following options:
 - ♦ **On:** to lock the keypad
 - ♦ **Off:** to disable the keyguard
 - ♦ **30 Sec:** to lock the keypad after 30 seconds of idle time
 - ♦ **2 mins:** to lock the keypad after 2 minutes of idle time
 - ♦ **5 mins:** to lock the keypad after 5 minutes of idle time

- 5 To unlock the keypad, press '123'.





Auto KeyGuard can also be activated by pressing and holding the Clear () key from the Home screen.

Note

Only the Send/Talk () key can answer a call while the Auto KeyGuard is active; however, all keys are active when you are in a call.

To Configure the Phone's Sound

From the Sound menu, you can configure the volume, alert type, ringer type, key beep and key tone length for your phone. Perform the following procedure to configure the phone's sound:

- 1 From the Home screen, press the Select () key.
- 2 Press the Select () key again to select the **Settings** tab.
- 3 From the Settings menu, select **Sound**.

The Sound menu appears.

- 4 Select **Volume** to set the volume for each audible output. Select one of the following outputs, and scroll left or right to adjust the volume for this output:

- ♦ **Ringer**
- ♦ **Earpiece**
- ♦ **Key Beep**
- ♦ **Speaker**

**Note**

You can also turn the volume of the Ringer and Key Beep off.

- 5 Select **Alert Type** to set the alerts for the phone:

- ♦ **Off:** alerts will appear on the phone's screen (no sound or vibration)
- ♦ **Ringer:** phone will ring during the entire alert
- ♦ **Vibration:** phone will vibrate during the entire alert
- ♦ **Vibe+Ringer:** phone will vibrate during the first half of the alert, and ring during the second half of the alert



**Note**

Any time external power is applied to the phone (e.g., the Travel charger), the Ringer is active regardless of the Alert Type setting.

- 6 Select **Ringer Type** to choose a ringer for incoming calls. There are 15 ringer types stored in your phone.
- 7 Select **Key Beep** to choose which sound the phone keys make:
- ♦ **Tones**
 - ♦ **Clicks**
- 8 Select **Key Tone Length** to choose the duration of the key tones (the Key Beep setting above must be set to Tones):
- ♦ **Normal:** standard key tone duration
 - ♦ **Long:** key tone lasts as long as key is held down


To Configure the Phone's Display

From the Display menu, you can configure the backlighting, banner, contrast and time format for your phone. Perform the following procedure to configure the phone's display:

- 1 From the Home screen, press the Select () key.
- 2 Press the Select () key again to select the **Settings** tab.
- 3 From the Settings menu, select **Display**.

The Display menu appears.



- 4 Select **Backlighting** to set the length of time that the backlight and the keypad illuminate after a key press, and whether or not the backlight also illuminates during a call:
 - ♦ **Off:** *backlight turned off*
 - ♦ **10s:** *backlight stays lit for 10 seconds after a key press*
 - ♦ **30s:** *backlight stays lit for 30 seconds after a key press*
 - ♦ **10s and in call:** *backlight stays lit for 10 seconds after a key press, and at all times when engaged in a call*
 - ♦ **30s and in call:** *backlight stays lit for 30 seconds after a key press, and at all times when engaged in a call*
- 5 Select **Banner** to set up a personal greeting that is displayed on the phone's Home screen. The banner can be up to 12 characters long. Perform the following steps:
 - ♦ Select **Edit**.
The Banner field appears.
 - ♦ Enter text into the field, and then select [Save].

 **Note** To change the text entry method, select the [Multitap] screen key, then select one of the following options:

 - **Multitap:** standard text entry method. Press the number key corresponding to the letter as many times as necessary to enter that letter.
 - **Numbers:** enters numbers corresponding to each number key (instead of letters)
 - **Symbols:** enters a symbol corresponding to a number key
- 6 Select **Contrast** to adjust the contrast of the display using one of the 11 contrast levels. Scroll left or right to adjust the contrast.
- 7 Select **Time Format** to set the time format displayed on the phone.
 - ♦ **AM/PM** (e.g., 2:06 PM)
 - ♦ **24 HR** (e.g., 14:06)

To Set Up the Phone's Screensaver

From the Display menu, you can set up your phone's screensaver. Perform the following procedure to set up your phone's screensaver:



- 1 From the Home screen, press the Select () key.
- 2 Press the Select () key again to select the **Settings** tab.
- 3 From the Settings menu, select **Display**, then **Screensaver**.

The Screensaver menu appears.

- 4 Select **Type** to choose a screensaver from the list of four programmed screensavers on your phone. The **None** option disables the screensaver.
- 5 Select **Timeout** to set the length of idle time before the screensaver is activated:
 - ♦ **30 seconds**
 - ♦ **2 minutes**
 - ♦ **5 minutes**

To Enable/Disable Alerts

From the Alert menu, you can enable/disable missed call, roaming, service and minute alerts for your phone. Perform the following procedure to enable/disable these alerts:



- 1 From the Home screen, press the Select () key.
- 2 Press the Select () key again to select the **Settings** tab.
- 3 From the Settings menu, select **Alert**.

The Alert menu appears.
- 4 You can choose to **Enable** or **Disable** each of the following alerts after selecting them.
 - ♦ **Missed Call:** alerts you that a call was not answered
 - ♦ **Roaming:** alerts you that the roaming state has changed
 - ♦ **Service:** alerts you when the phone acquires or loses service
 - ♦ **Minute Alert:** alerts you 10 seconds before the end of each minute of elapsed call time

To View/Reset Call Duration Timers

From the Call Timers menu, you can view or reset the call duration timer for outgoing calls and incoming calls. In addition, you can also view the call duration timer for all calls.

Perform the following procedure to view/reset the call duration timers:



- 1 From the Home screen, press the Select () key.
- 2 Press the Select () key again to select the **Settings** tab.
- 3 From the Settings menu, select **Call Timers**.

The Call Timers menu appears.
- 4 Select **Outgoing Calls** to display the amount of time that the phone has been involved in calls initiated by the phone since the timer was last reset.
 - ♦ **[OK]:** returns to the Call Timers menu
 - ♦ **[Reset]:** resets the timer for outgoing calls

- 5 Select **Incoming Calls** to display the amount of time that the phone has been involved in calls received by the phone since the timer was last reset.
 - ♦ *[OK]: returns to the Call Timers menu*
 - ♦ *[Reset]: resets the timer for incoming calls*
- 6 Select **All Calls** to display the amount of time that the phone has been involved in both outgoing and incoming calls since it was manufactured. Select [OK] to return to the Call Timers menu.

To Configure the Phone's Accessories

From the Accessories menu, you can toggle external power backlighting, headset ringing and any-key answer. Perform the following procedure to set these options:





- 1 From the Home screen, press the Select () key.
- 2 Press the Select () key again to select the **Settings** tab.
- 3 From the Settings menu, select **Accessories**.
The Accessories menu appears.
- 4 Select **Ext Power Backlight** to specify whether or not the backlight remains lit while an external power source (e.g., the travel charger) is being applied to the phone (regardless of the **Display, Backlighting** setting).
 - ♦ **On:** *the backlight is lit whenever the phone is attached to an external power source*
 - ♦ **Off:** *the backlight is not lit when the phone is attached to an external power source*
- 5 Select **Headset Ringing** to specify whether or not the phone should play incoming call alerts through the surveillance kit (headset), when one is attached to the phone (see "Accessories" on page 131).
 - ♦ **On:** *incoming call alerts ring through the headset*
 - ♦ **Off:** *incoming call alerts ring through the ringer*



Note

When a surveillance kit is attached to the phone, enabling this setting overrides the Alert Type setting (see "To Configure the Phone's Sound" on page 78); alerts will ring through the headset regardless of the Alert Type setting.



- 6 Select **Any Key Answer** to specify whether or not any key can be used to answer an incoming call.

- ♦ **On:** any key except Power/End-call (), Select () or Clear () answers an incoming call
- ♦ **Off:** only the Send/Talk () key answers an incoming call



Note The Any Key Answer setting does not work when Auto KeyGuard is enabled (see "To Lock/Unlock the Keypad" on page 78).

To Enable/Disable Roaming

- 1 From the Home screen, press the Select () key.
- 2 Press the Select () key again to select the **Settings** tab.
- 3 From the Settings menu, select **Sys/Network**.
The Sys/Network menu appears.
- 4 Select **Roaming Opt** to set up the roaming for your phone.
 - ♦ **No Roaming:** disables roaming on your phone
 - ♦ **Automatic:** roaming is automatically enabled whenever it is needed

Advanced Settings



The Access menu contain advanced settings that should be modified with extreme caution. These settings include erasing all contacts, erasing all recent calls, resetting the phone, locking/unlocking the phone, and changing the Lock Code.




Caution

Many of these settings will irreversibly change the behavior of your phone, and may affect performance and/or usability. Exercise extreme caution when modifying them.

To Open the Access Menu

- 1 From the Home screen, press the Select () key.
- 2 Press the Select () key again to select the **Settings** tab.
- 3 From the Settings menu, select **Access**.
The Enter Lock Code field appears.




- 4 Enter the Lock Code PIN and press the Select () key.
 - ♦ If the correct Lock Code PIN is entered, the Access menu is displayed.
 - ♦ If an incorrect Lock Code PIN is entered, you must correctly reenter this PIN. If an incorrect Lock Code PIN is entered too many times, the Lock Code is disabled. After the Lock Code has been disabled, you can re-enable it by entering the PUK (Personal Unblocking Key). If the correct PUK is entered, you will again be able to enter the Lock Code.


**Caution**

If an incorrect PUK is entered too many times your phone is disabled, and must be returned to your Terminal Administrator in order to be re-enabled.

To Erase All Contacts in the Contacts List

- 1 Open the Access menu using the procedure described in the previous section.
- 2 From the Access menu, select **Erase All Contacts**.
- 3 Press the Select () key to select [Yes]. This confirms erasing the contacts.
All the contacts stored in the Contacts list are erased.


To Erase All Recent Calls

- 1 Open the Access menu using the procedure described in "To Open the Access Menu" on page 83.
- 2 From the Access menu, select **Erase All Recent Call List**.
- 3 Press the Select () key to select [Yes]. This confirms erasing the recent calls.
The recent calls stored in all three Recent Call lists are erased.

To Reset the Phone's Settings



This option will remove all of the settings that you configured for your phone. Use this option with extreme caution!

- 1 Open the Access menu using the procedure described in "To Open the Access Menu" on page 83.
- 2 From the Access menu, select **Phone Reset**.
- 3 Press the Select () key to select [Yes]. This confirms resetting the phone's settings.

All of the phone's settings are reset to default factory values, except for the security parameters (such as the Access Control settings) that can only be changed from the Terminal Administrator (TA) menu.

To Lock/Unlock the Phone

- 1 Open the Access menu using the procedure described in "To Open the Access Menu" on page 83.
- 2 From the Access menu, select **Lock Phone**.
- 3 Select one of the following options:
 - ♦ **On:** you must enter the Lock Code when you power up the phone
 - ♦ **Off:** the Lock Code is not required upon power up

To Change the Lock Code

- 1 Open the Access menu using the procedure described in "To Open the Access Menu" on page 83.
- 2 From the Access menu, select **Lock Code Change**.
- 3 Enter the new Lock Code, and then enter it again to verify it is correct.

The Lock Code is changed accordingly. You will have to enter this new Lock Code in order to display the Access menu, or power up the phone if the Lock Phone setting is enabled.

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Secure-phone Management

Your phone has a number of security-related functions.

In this section, you will learn to

- Perform a security reset (page 87)
- Perform a self-test of your phone (page 88)
- Load secure software (page 88)
- View audit information (page 89)
- View software versions (page 89)




Performing a Security Reset

If you need to disable the user account and remove secure capabilities, you can perform a security reset at any time. After a security reset, you cannot make secure calls, but you can still make emergency and clear calls. To reactivate the phone, it must be returned to the Terminal Administrator.



There is no way to undo a security reset.

To Perform a Security Reset on Your Phone

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
- 3 From the Security menu, select **Security Reset**.
A prompt appears asking you to confirm the removal of all secure capability.
- 4 Press the Select () key to select [Yes]. This confirms removal of all secure capability on your phone.
The following occurs:
 - ◆ Any active call is terminated.
 - ◆ Your secure user PIN is disabled.
 - ◆ You are notified that the secure capability has been removed from your phone.
 - ◆ Your phone is powered down.



The Security Reset function can be executed regardless of whether or not you are logged in as a secure user.



Performing a Self-test of Your Phone

You may initiate a self-test of your phone at any time, except when you are involved in a call. This self-test runs the phone through a series of tests similar to those performed when you turn on the phone. The purpose of these tests is to:


- Test the phone's hardware
- Test various phone software algorithms

The phone will not work until it passes a self-test. If the phone encounters any security violations, you are notified. You are also notified of a successful self-test.

To Perform a Self-test of Your Phone

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
- 3 From the Security menu, select **Self-Test**.

A prompt appears, asking you to confirm the execution of the self-test procedure.

- 4 Press the Select () key to select [Yes]. The self-test begins.

A notification appears, informing you that self-tests are being performed. When the test is complete, a success ("self-test complete") or failure notification will appear.

The phone powers down.



The self-test function will be performed regardless of whether or not you are logged in as a secure user. However, if you were logged in prior to the self-test, you will need to log in again after the test in order to access secure mode.

Loading Phone Software

The QSec-2700 software can be upgraded by you or your Terminal Administrator. Instructions for loading new software will be provided with each software upgrade. After loading new software to your phone, make sure you unplug all cables from your phone and perform a power cycle on your phone before attempting to make a secure call.



The Terminal Administrator can authorize you to load phone software by enabling the 'User Load Secure Software' Access Control setting (see "Viewing Access Control Settings" on page 22).



Caution

Follow the software download instructions exactly. Failure to download the software successfully may disable your phone.

Viewing Audit Information

The **Security, Audit Info** menu item allows you to view audit information related to the secure functions of your phone. This information includes the following:

- Date of the last secure software download (see “Loading Phone Software” on page 88)
- Date of the last successful PIN entry by a secure user
- Date of the last successful PIN entry by a terminal administrator
- Number of unsuccessful secure user PIN entry attempts since last successful secure user PIN entry
- Number of unsuccessful TA PIN entry attempts since the last successful TA PIN entry
- Date of the last change to the Access Control settings (see “Viewing Access Control Settings” on page 22).



Note

Note that the dates for the above items are based on the date received from the CDMA infrastructure.



Note

The Audit Info menu item can be accessed regardless of whether or not you are logged in as a secure user.

Viewing Software Versions

The **Security, Version** menu item allows you to display the versions of the Host processor module (Secure Software) and Boot software (Secure Boot).



Note

The Version menu item can be accessed regardless of whether or not you are logged in as a secure user.

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Key Management

Using the **Security, Key Management** menu item, you can rekey your phone, perform a direct key load, view keys and delete keys. When you select a key management option, you are prompted to log in as a secure user (assuming you are not already logged in).

In this section, you will learn to

- Perform rekey procedures (page 91)
- Load keys (page 93)
- View keys (page 94)
- Delete keys (page 94)

Performing Rekey Procedures

When the phone powers up and determines that it has expired or seed keys, it will notify you. When the phone powers up and determines that a rekey is pending because of an interrupted rekey operation, it will also notify you. After confirming the notification, you can continue to operate the phone.

You must log on to your phone as a secure user before rekeying your phone. When you select a rekey mode, the phone displays a rekey idle display for this mode. While this display is shown, you can place a call to the Rekey center. Incoming calls are not allowed during rekey mode, nor is Secure Dial (see “To Transmit Characters Using Secure Dial” on page 33).





Note

When you place an emergency call during rekey mode, the phone exits and disables this mode. Any non-emergency call placed during rekey mode will be treated as a rekey call. Transition to a clear call during rekey is not permitted.

From the **Security, Key Management, Rekey** menu item, you can rekey seed and expired keys, rekey all keys or disable rekey.


To Rekey Seed and Expired Keys

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
- 3 From the Security menu, select **Key Management**.

If you have not logged on as a secure user, you will be prompted to do so. See “To Log On as a Secure User” on page 19.

- 4 Select **Rekey**, then **Rekey Seed & Expired Keys**.

The Rekey idle screen appears, displaying the rekey mode.

- 5 To initiate the rekey call, enter the number of the rekey center and press the Send/Talk () key.


The secure LED is lit, indicating a secure rekey call attempt. The phone will attempt to rekey only seed and expired keys, or continue a pending rekey of these keys. After the phone has successfully completed the rekey call, it notifies you that rekey is complete and exits rekey mode.



Note



Incoming calls cannot be received during rekey mode. Any non-emergency call placed during rekey mode will be interpreted by your phone as a rekey call.

You cannot rekey only seed and expired keys if a Rekey All Keys command has just been selected and is pending.

- 6 Press the Select () key to select [OK]. This acknowledges the rekey complete notification.

Rekey mode ends. Calls can be placed and received normally.


To Rekey All Keys

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
- 3 From the Security menu, select **Key Management**.

If you have not logged on as a secure user, you will be prompted to do so. See "To Log On as a Secure User" on page 19.

- 4 Select **Rekey**, then **Rekey All Keys**.

The Rekey idle screen appears, displaying the rekey mode.


- 5 To initiate the rekey call, enter the number of the rekey center and press the Send/Talk () key.

The secure LED is lit, indicating a secure rekey call attempt. The phone will attempt to rekey all keys, regardless of seed or expiration status. After the phone has successfully completed the rekey call, it notifies you that rekey is complete and exits rekey mode.



Note

Incoming calls cannot be received during rekey mode. Any non-emergency call placed during rekey mode will be interpreted by your phone as a rekey call.

- 6 Press the Select () key to select [OK]. This acknowledges the rekey complete notification.



Rekey mode ends. Calls can be placed and received normally.



Note

If you select this option during a pending rekey, the rekey will continue, and will result in all keys being rekeyed (regardless of the type of pending rekey).

To Terminate a Rekey Session

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
- 3 From the Security menu, select **Key Management**.

If you have not logged on as a secure user, you will be prompted to do so. See “To Log On as a Secure User” on page 19.

- 4 Select **Rekey**, then **Disable**.

The phone terminates the current rekey session.

Loading Keys



This procedure enables a direct key load (not an over-the-air rekey) via a secure data cable connected to the phone's serial port. You need to purchase a secure data cable and a DTD adapter cable for this operation (see “Accessories” on page 131).



Note

Before performing this procedure, make sure your phone is not connected to an external power source (e.g., the travel charger).

To Load Keys

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
- 3 From the Security menu, select **Key Management**.

If you have not logged on as a secure user, you will be prompted to do so. See “To Log On as a Secure User” on page 19.


- 4 Select **Load Keys**.



Note

If you are not authorized to load keys as specified by the ‘User Load Keys’ Access Control setting (see “Viewing Access Control Settings” on page 22), then you will not be able to perform this function.

A prompt asks whether or not to load keys from a DTD.



- 5 Press the Select () key to select [Yes]. A key load will be attempted from a DTD. If no DTD connection is active, the phone will time out after 90 seconds.

A success notification will appear on the screen when key loading is complete.

Viewing Keys

You can view detailed information for each key that is currently loaded on your phone.

To View Key Information

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
- 3 From the Security menu, select **Key Management**.

If you have not logged on as a secure user, you will be prompted to do so. See “To Log On as a Secure User” on page 19.

- 4 Select **View Keys**.
- 5 Select the key you want to view.

The phone displays the following for each SDNS key:

- | | |
|---------------------------|--------------------------------|
| ♦ Key Management ID | ♦ DAO description |
| ♦ Security classification | ♦ Other IDs and information |
| ♦ DAO code | ♦ Expired/seed key information |
| ♦ Expiration date | ♦ Rekey attempts |



Deleting Keys

You can either delete individual (selected) keys from your phone, or all keys from your phone.






If you delete all keys from the phone, you will have to load new keys before you can make a secure call.

To Delete Selected Keys

- 1 Repeat Step 1 through Step 4 of the previous procedure.
- 2 Select the key you want to delete.
- 3 Press the Select () key to select [Delete].
A delete key confirmation appears on the screen.
- 4 Press the Select () key to select [Yes]. This confirms key deletion.
The key is deleted from the phone.

To Delete All Keys

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Security** tab, and press the Select () key.
- 3 From the Security menu, select **Key Management**.
If you have not logged on as a secure user, you will be prompted to do so. See "To Log On as a Secure User" on page 19.
- 4 Select **Delete All Keys**.
A delete all keys confirmation appears on the screen.
- 5 Press the Select () key to select [Yes]. This confirms deletion of all keys.
All keys are deleted from the phone.

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Other Phone Features

From the Extra menu, you can access additional applications of your phone. These include MobileShop, a stop watch, an alarm, a scheduler, a basic calculator, and games.



Note

None of these applications can be accessed during a secure call. See “Making Secure Calls” on page 31 for a discussion of secure call limitations.

In this section, you will learn to

- Use MobileShop (page 97)
- Use the stopwatch (page 98)
- Set the alarm (page 98)
- Schedule events (page 100)
- Use the calculator (page 103)
- Play Blackjack and video poker (page 104)

Using MobileShop

Using MobileShop, you can download and run BREW applications (apps) on your phone. BREW users can easily find, add, and remove their apps with a few commands. You can even demo some apps before you purchase them.



Note

You can select from a variety of pricing options, depending on the apps you want to purchase.

To access MobileShop, scroll to and select the **Extra** tab, and then select **MobileShop**. Three icons appear along the top of the screen:




- **MobileShop:** Provides the catalog of apps that have already been downloaded on your phone, allows you to search for a particular app within this catalog, and provides online help to answer your questions regarding working with, purchasing and downloading apps.
- **Settings:** Allows you to order, organize and manage your apps. Also allows you to change the display of the main MobileShop screen, change the MobileShop screensaver, and view the log.
- **Help:** Provides online help to answer your questions regarding trying out, purchasing, managing and disabling/canceling your apps.

Refer to your service provider documentation for details on ordering, downloading and managing apps using MobileShop.

Using the Stopwatch

Using the Stopwatch application, you can start and stop the stopwatch to time a certain event.

To Use the Stopwatch


- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Extra** tab, and press the Select () key.
- 3 From the Extra menu, select **Stop Watch**.
- 4 Press the Select () key to select [Start].

The stopwatch starts.



Note



The smallest increment captured by this stopwatch is .01 seconds (one-hundredth of a second).

- 5 Press the Select () key to select [Stop].
The stopwatch stops.
- 6 Select one of the following options:
 - ♦ *[Start]: continues the stopwatch without resetting the timer*
 - ♦ *[Reset]: resets the timer. You must select [Start] to start the stopwatch again.*


Setting the Alarm

Using the Alarm Clock application, you can enable and set an alarm to go off at a certain time. You have the option of setting it for one day, all weekdays or every day of the week.

To Set the Alarm

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Extra** tab, and press the Select () key.
- 3 From the Extra menu, select **Alarm**.
The alarm status ('ON'/'OFF') and time (hh:mm AM/PM) is displayed.
- 4 Select one of the following options:
 - ♦ *[Enable]/[Disable]: This option toggles, depending on whether the alarm is off or on. Select [Enable] to turn the alarm on, or [Disable] to turn it off.*
 - ♦ *[Set]: allows you to set the alarm time and schedule*

When you select [Set], the Alarm Time screen appears.

- 5 Scroll up or down to change the value of the hour, minute or AM/PM setting. Scroll left or right to switch from hour to minute, and so on.
- 6 Press the Select () key to set the alarm schedule. Select one of the following options:
 - ◆ [Once]: The alarm will only go off during the next instance of the alarm time.
 - ◆ [Daily]: The alarm will go off every day of the week.
 - ◆ [Weekdays]: The alarm will go off Monday through Friday only.



Note

An enabled alarm will remain set even if the phone is turned off. The alarm icon will appear on the screen whenever an alarm is enabled.

To Respond to an Active Alarm

When the alarm goes off, an alarm notification appears on your phone's screen, the audible alert is played, and the alarm time blinks.



Note

During a secure call, you will not be able to hear the audible alert or see the alarm notification. See "Making Secure Calls" on page 31 for a discussion of secure call limitations.



Select one of the following options to respond to this alarm:

- [Off]: stops the alarm and the audible alert
- [Snooze]: delays the alarm for ten minutes. The new alarm time is displayed; the alarm will go off again after this period.





Note

After one of these options is selected, you are returned to the previous application. The alarm icon disappears when the alarm is turned off, but remains on the screen if the [Snooze] option is selected.

Scheduling Events

The Scheduler application allows you to set up a schedule of events. Using the Scheduler, you can view a day by hours, view a month by days, add an event to your schedule, edit/delete events in your schedule, automatically delete old events, set your work hours and configure an alarm for one or more events.

To View Your Schedule



- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Extra** tab, and press the Select () key.
- 3 From the Extra menu, select **Scheduler**.
- 4 Select one of the following options:
 - ♦ **View Day:** displays the current day by hours. Scroll up or down to move the cursor to other hours within the current day. Scroll left or right to view other days. Select an hour to schedule an event for that hour (see “To Add an Event to Your Schedule” on page 101).



- ♦ **View Month:** displays the current month by days. Scroll in any direction to move the cursor to another day within this month. If you scroll from the start or end of the month, you can also scroll to another month. Select a day to view that day by hours (see the **View Day** option above).



To Add an Event to Your Schedule


- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Extra** tab, and press the Select () key.
- 3 From the Extra menu, select **Scheduler**, then **Add Event**.



Note

You can also add an event while viewing your schedule. See Step 4 of the previous section ("To View Your Schedule")

The New Event screen appears.

- 4 Enter a title for your event, and press the Select () key twice to select [Next].



Note

To change the text entry method, select the [Multitap] screen key, then select one of the following options.

- **Multitap:** standard text entry method. Press the number key corresponding to the letter as many times as necessary to enter that letter.
- **Numbers:** enters numbers corresponding to each number key (instead of letters)
- **Symbols:** enters a symbol corresponding to a number key


- 5 In the Start field, scroll up or down to change the hour or minute setting of the starting time for this event. Scroll left or right to switch from hour to minute.
- 6 Scroll right to switch to the Duration field. Scroll up or down to increment the hour or minute of the event duration accordingly (smallest increment is 15 minutes). Scroll left or right to switch from hour to minute.
- 7 Scroll right to switch to the Alarm field. The alarm acts as a reminder for this event, notifying you that it is about to occur. Scroll up or down to select one of the following options:
 - ◆ **No Alarm:** the alarm for this event is disabled. No notification (reminder) is given for this event.
 - ◆ **1 Min:** the alarm goes off one minute before the event
 - ◆ **15Min:** the alarm goes off 15 minutes before the event
 - ◆ **30Min:** the alarm goes off 30 minutes before the event




Note

The Event notification (alarm) that appears on the screen includes the title, start time, duration and description of the event.

During a secure call, you will not be able to hear the audible alert or see the alarm notification. See "Making Secure Calls" on page 31 for a discussion of secure call limitations.

- 8 Press the Select () key to continue.

The Note screen appears.



- 9 You can enter a description for your event (optional). Press the Select () key when you are finished entering the note. Select [Next] to continue.


The Event Added notification briefly appears. Then, the day scheduler appears, showing your event.

To Edit/Eraser an Event in Your Schedule

- 1 From the day scheduler, select the event that you want to edit or delete (see "To View Your Schedule" on page 100).
- 2 Select one of the following options:
 - ♦ *[Edit]: edits the options for this event (see Step 4 through Step 9 of the previous section)*
 - ♦ *[Erase]: deletes the event from your schedule. Select [Yes] to confirm deletion of the event.*
 - ♦ *[New]: creates a new event (see Step 4 through Step 9 of the previous section)*



To Set Your Work Hours

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Extra** tab, and press the Select () key.
- 3 From the Extra menu, select **Scheduler**, then **Options**.

The Options menu appears.
- 4 Select **Set Work Hours**.
- 5 In the Work Start field, scroll up or down to change the hour or minute setting of your starting work time. Scroll left or right to switch from hour to minute.
- 6 Scroll right to switch to the End field. Scroll up or down to change the hour or minute setting of your ending work time. Scroll left or right to switch from hour to minute.
- 7 Press the Select () key to set your work hours.

These are the only hours that will be displayed in the day scheduler.

To Automatically Delete Old (Expired) Events

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Extra** tab, and press the Select () key.
- 3 From the Extra menu, select **Scheduler**, then **Options**.

The Options menu appears.

- 4 Select **Auto Delete**.

The Auto Delete menu appears.



- 5 Select one of the following options:

- ♦ **Never:** does not delete old events. To delete events manually, see “To Edit/ Erase an Event in Your Schedule” on page 102.
- ♦ **After 1 Day:** deletes old events the day after they expire
- ♦ **After 1 Week:** deletes old events one week after they expire
- ♦ **After 1 Month:** deletes old events one month after they expire

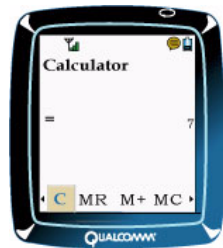
Using the Calculator

The Calculator application is a basic calculator that allows you to do decimal arithmetic operations.

To Use the Calculator

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Extra** tab, and press the Select () key.
- 3 From the Extra menu, select **Calculator**.

The Calculator screen appears, with the operator and function screen keys.



- 4 An example of a basic operation is subtracting two numbers (2 from 9).
 - ♦ Press the 9 key.
 - ♦ Scroll left or right until you get to the minus [-] operator, and select it.
This operator appears to the left of the number.
 - ♦ Press the 2 key.
The equal [=] operator is automatically scrolled to.
 - ♦ Select the equal [=] operator.
The result should be 7.

- 5 You can perform further operations on this result, or you can select [C] to clear this result and start over.



The following table describes each of the operators and functions:

Operator/Function	Description
\div	Divide
-	Subtract
=	Calculate the result
+	Add
x	Multiply
.	Insert a decimal point
C	Clear the result
MR	Replace the result with the value stored in memory
M+	Store the result in memory (overwrites the previously-stored value)
MC	Clear the result currently stored in memory
\pm	Change the result's sign (from positive to negative, or vice-versa)

Playing Blackjack and Video Poker

Blackjack and video poker are casino card games that involve placing bets on Blackjack and five-card draw poker hands, respectively. The rules of each game are presented during the introduction of that game.

To Play Blackjack

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Extra** tab, and press the Select () key.
- 3 From the Extra menu, select **Games**, then **BlackJack**.
- 4 Read the rules of the game (if needed), and select [New Game]/[OK].
If you have played this game before, you will be asked whether or not you want to continue your previous game or start a new one.
- 5 Select one of the following options (if presented):
 - ♦ [Continue]: continues your previous game
 - ♦ [New]: starts a new game

The game status is displayed, showing your current cash amount, and the current size of your bet.

6 Select one of the following options:

- ♦ *[Deal]: deals a hand of Blackjack*
- ♦ *[Bet]: allows you to select a new betting amount. Scroll up or down to select a new value.*

After you select [Deal], the Blackjack game screen appears. The dealer's cards are shown at the top (one is face down), while your cards appear below. If the dealer shows an Ace, you will be allowed to take insurance before playing your hand.



7 Select one of the following options:

- ♦ *[Hit]: you take another card. You can continue to hit until you bust. If you bust, you automatically lose the bet.*
- ♦ *[Stand]: you stand with your current hand*
- ♦ *[Double Down]: you double the amount of your bet while taking one and only one additional card. You can only double down when your first two cards add up to 9, 10 or 11.*

After you stand, the dealer hits until getting to 17 or busting. If the dealer busts, you win the bet. If the dealer does not bust, your standing count must beat the dealer's standing count in order to win the bet. Ties are pushes, and no money is either won nor lost. Your current cash amount and bet size are displayed.

8 Repeat Steps 6 and 7 to play again.

To Play Video Poker

- 1 From the Home screen, press the Select () key.
- 2 Scroll to the **Extra** tab, and press the Select () key.
- 3 From the Extra menu, select **Games**, then **Video Poker**.
- 4 Read the rules of the game (if needed), and select [New Game]/[OK].

If you have played this game before, you will be asked whether or not you want to continue your previous game or start a new one.

5 Select one of the following options (if presented):

- ♦ *[Continue]: continues your previous game*
- ♦ *[New]: starts a new game*

The game status is displayed, showing your current cash amount, and the current size of your bet.

6 Select one of the following options:

- ♦ *[Deal]: deals a hand of video poker*
- ♦ *[Bet]: allows you to select a new betting amount. Scroll up or down to select a new value.*
- ♦ *[Payout]: shows the payout for each possible hand, given the current bet size*

After you select [Deal], the Video Poker game screen appears. Your initial five cards are displayed.

7 Press the number key(s) that correspond to the card(s) you want to discard (1 through 5). To keep a card that you previously discarded, press that number key again.

8 Select [Continue] to replace the discarded cards with new cards.

The game will show the value of your final hand on the screen, how much money you won (if any), and the current cash amount and bet size.

9 Repeat Steps 6 through 8 to play again.

Battery Care and Maintenance

Each phone kit comes with two rechargeable, removable lithium ion batteries. The batteries are partially charged when you receive the phone. Before using your phone, fully charge the batteries (see "Recharging the Battery" on page 108).

Keep a battery installed in your phone at all times.

In this section, you will learn to

- Know the performance times of the standard battery (page 107)
- Know the performance times of the slim battery (page 108)
- Know the battery life (page 108)
- Recharge the battery (page 108)
- Remove the battery (page 109)
- Install a new battery (page 109)
- Dispose of the battery (page 110)
- Care for the battery (page 110)

Battery Performance Times

Standard Battery

Standard battery performance is as follows:

Service Mode	Talk Time	Standby Time*
Secure Voice	199 minutes	N/A**
Clear Voice	325 minutes	203 hours

* Standby time refers to the time your phone is not attached to a charger and is turned on, but not in use.

** N/A: There is no such mode as secure standby. When a secure mode call is completed, the phone reverts to clear mode and then transitions to standby.

Slim Battery

Slim battery performance is as follows:

Service Mode	Talk Time	Standby Time*
Secure Voice	88 minutes	N/A**
Clear Voice	144 minutes	86 hours

* Standby time refers to the time your phone is not attached to a charger and is turned on, but not in use.

** N/A: There is no such mode as secure standby. When a secure mode call is completed, the phone reverts to clear mode and then transitions to standby.

Battery Life

The shelf life of the standard/slim battery is approximately 12 months.

Recharging the Battery

The battery icon that appears at the top of the screen indicates the battery's charge. The more filled the battery icon is, the more charge the battery has (see "Screen Icons" on page 9). When the battery charge is very low, the icon on the screen blinks, the phone beeps, and a message alerts you to the low battery level.



Caution

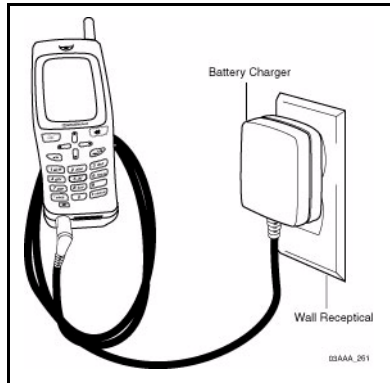
If the battery charge gets too low, the phone turns off and loses any function in progress.

The battery does not need to be completely drained before you recharge it. To recharge the battery, connect the travel charger (model DXTVL0011) to the power input on the bottom of your phone, then connect the travel charger's plug into a standard wall outlet. Your phone can either be on or off. However, the charging time will be significantly reduced if the phone is turned off prior to connecting it to the travel charger. The typical charge time is less than 2 1/2 hours.



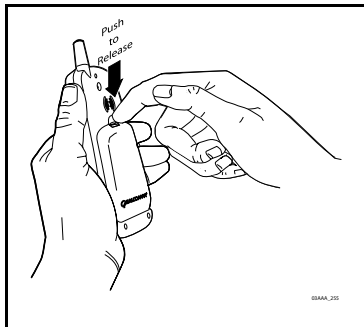
Note

If you have not used a standard or slim battery for more than a month, recharge it before using it.



Removing the Battery

- 1 Turn the phone power off to prevent losing data.
- 2 With your finger, push the plastic latch on the top of the battery down, and then pull the battery away from the phone.
- 3 Remove the battery from the phone.



Installing a New Battery



Note

For information on ordering a new battery, see "Accessories" on page 131.

1. Remove the old battery from the phone (see the previous procedure).
2. Insert the new battery by lining up the positioning tabs on the bottom of the battery with the phone, and rotating it into place.

- 3 Press down on the top of the battery until it locks.

Disposing of the Battery

It is illegal in some areas to dispose of lithium ion batteries in household or business trash. Contact your local recycling center for safe disposal options.



Do not handle a damaged or leaking lithium ion battery. Injury may result.

Caring for the Battery



Note

In order to provide the maximum capacity and longest life, QUALCOMM recommends that lithium ion batteries held in storage for extended periods be recharged annually.

- To conserve power when the battery is low, you can switch the backlight off (see “To Configure the Phone’s Display” on page 79).
- Do not disassemble or short-circuit the battery.
- Keep the metal contacts at the base of the battery clean.
- If you have not used a standard or slim battery for more than a month, recharge it before using it.
- If you have not used your phone in more than six months (e.g., because it has been stored in inventory), recharge the battery before using the phone.
- Replace the battery when it no longer maintains a charge.
- Do not use the charger in direct sunlight or in places with extremely high humidity.
- Never dispose of the battery in or by a fire. It could explode.
- Valid temperature range for battery charging is:
0 °C to +40 °C (+3 °F to +104 °F)
- Valid temperature range for battery storage:
 - ◆ 1 month: -20 °C to +60 °C (-4 °F to +140 °F)
 - ◆ 3 months: -20 °C to +40 °C (-4 °F to +104 °F)
 - ◆ 1 Year: -20 °C to +20 °C (-4 °F to +68 °F)

Performance, Maintenance, and Safety

In this section, you will learn to

- Achieve optimal in-call performance (page 111)
- Care for your phone (page 111)
- Understand safety issues (page 112)

Achieving Optimal In-call Performance

- Do not touch the antenna while you are on a call.
- If you have trouble making a connection, stand near a window while making the call, or go outside.

Caring for Your Phone

- **Treat your phone gently.** Use commonsense guidelines to avoid dropping it, hitting it, or sitting on it.
- **Clean your phone with a soft, damp cloth and, if necessary, a mild soap.** Avoid using cleaning solvents and strong detergents.



Caution

Keep your phone dry. Moisture can corrode electronic circuits. If the phone gets wet, turn the power off immediately and remove the external battery, if one is attached. Let it dry before you use it again.

Do not leave your phone in the sun, or in extremely hot or cold places.



Caution

Do not let unauthorized personnel install or service your phone or accessories. Faulty installation or service may damage your phone, and is against security protocols.



Caution

Only use QUALCOMM-approved accessories with QUALCOMM phones. Use of any unauthorized accessories will invalidate your phone warranty if said accessories cause damage to the phone. See "Accessories" on page 131.

Safety



Before using your wireless phone, you need to know a few basic safety guidelines. Not following these guidelines may cause personal injury, damage to your phone, or may be illegal.

Radio Frequency (RF) Energy

Your handheld portable telephone is a low-power radio transmitter and receiver. When it is turned on, it receives and also sends out radio frequency (RF) signals. In August 1996, the U.S. Federal Communications Commission (FCC) adopted RF exposure requirements with safety levels for handheld wireless phones. Those requirements are consistent with the safety standards previously set by both U.S. and international standards bodies:

- ANSI C95.1 (1992), American National Standards Institute
- NCRP Report 86 (1986), National Council on Radiation Protection and Measurements
- ICNIRP (1996), International Commission on Non-Ionizing Radiation Protection

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For example, over 120 scientists, engineers and physicians from universities, government health agencies and industry reviewed the available body of research to develop the ANSI Standard (C95.1).

Your phone complies with the standards set by these reports, and the FCC requirements.



To ensure that your exposure to RF electromagnetic energy is within the limits established by the FCC and the other standards listed in this section, always follow these procedures.

Only use a supplied and approved antenna. Use of unauthorized antennas or modifications to approved antennas could impair call quality, damage the phone, invalidate your phone warranty, and/or result in a violation of FCC regulations.

If the antenna is damaged, do not use the phone. Contact your Terminal Administrator to have your phone repaired.



If a damaged antenna comes into contact with your skin, injury may result.

Body-worn Operation

Your phone was tested for typical body-worn operations, with the back of the phone being kept 1.14 in. (29 mm) from the body. To comply with FCC RF exposure requirements, a minimum separation of 1.14 in. (29 mm) must be maintained between your body and the back of the phone, including the antenna.

Third-party belt clips and similar accessories containing metallic components should not be used with your phone. Body-worn accessories that cannot maintain a 29 mm separation distance between your body and the back of the phone, and that have not been tested for typical body-worn operations may not comply with FCC RF exposure limits, and should be avoided.

FDA Consumer Update

The U.S. Food and Drug Administration's Center for Devices and Radiological Health Consumer Update on Mobile Phones.

Do wireless phones pose a health hazard?

The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Wireless phones emit low levels of radio frequency energy (RF) in the microwave range while being used. They also emit very low levels of RF when in idle mode.

Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.

What is FDA's role concerning the safety of wireless phones?

Under the law, FDA does not review the safety of radiation-emitting consumer products such as wireless phones before they can be sold, as it does with new drugs or medical devices. However, the agency has authority to take action if wireless phones are shown to emit radio frequency energy (RF) at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of wireless phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists.

Although the existing scientific data do not justify FDA regulatory actions, FDA has urged the wireless phone industry to take a number of steps, including the following:

- Support needed research into possible biological effects of RF of the type emitted by wireless phones
- Design wireless phones in a way that minimizes any RF exposure to the user that is not necessary for device function
- Cooperate in providing users of wireless phones with current information on possible effects of wireless phone use on human health

FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of RF safety to ensure coordinated efforts at the federal level. The following agencies belong to this working group:

- National Institute for Occupational Safety and Health
- Environmental Protection Agency
- Federal Communications Commission
- Occupational Safety and Health Administration
- National Telecommunications and Information Administration

The National Institutes of Health participates in some interagency working group activities, as well.

FDA shares regulatory responsibilities for wireless phones with the Federal Communications Commission (FCC). All phones that are sold in the United States must comply with FCC safety guidelines that limit RF exposure. FCC relies on FDA and other health agencies for safety questions about wireless phones.

FCC also regulates the base stations that the wireless phone networks rely upon. While these base stations operate at higher power than do the wireless phones themselves, the RF exposures that people get from these base stations are typically thousands of times lower than those they can get from wireless phones. Base stations are thus not the primary subject of the safety questions discussed in this document.

What kinds of phones are the subject of this update?

The term “wireless phone” refers here to handheld wireless phones with built-in antennas, often called “cell,” “mobile,” or “PCS” phones. These types of wireless phones can expose the user to measurable radio frequency energy (RF) because of the short distance between the phone and the user’s head. These RF exposures are limited by Federal Communications Commission safety guidelines that were developed with the advice of FDA and other federal health and safety agencies.

When the phone is located at greater distances from the user, the exposure to RF is drastically lower because a person's RF exposure decreases rapidly with increasing distance from the source. The so-called "cordless phones," which have a base unit connected to the telephone wiring in a house, typically operate at far lower power levels, and thus produce RF exposures well within the FCC's compliance limits.

What are the results of the research done already?

The research done thus far has produced conflicting results, and many studies have suffered from flaws in their research methods. Animal experiments investigating the effects of radio frequency energy (RF) exposures characteristic of wireless phones have yielded conflicting results that often cannot be repeated in other laboratories. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals.

However, many of the studies that showed increased tumor development used animals that had been genetically engineered or treated with cancer-causing chemicals so as to be pre-disposed to develop cancer in the absence of RF exposure. Other studies exposed the animals to RF for up to 22 hours per day. These conditions are not similar to the conditions under which people use wireless phones, so it is not known what the results of such studies mean for human health.

Three large epidemiology studies have been published since December 2000. Between them, the studies investigated any possible association between the use of wireless phones and primary brain cancer, glioma, meningioma, or acoustic neuroma, tumors of the brain or salivary gland, leukemia, or other cancers. None of the studies demonstrated the existence of any harmful health effects from wireless phone RF exposures. However, none of the studies can answer questions about long-term exposures, since the average period of phone use in these studies was around three years.

What research is needed to decide whether RF exposure from wireless phones poses a health risk?

A combination of laboratory studies and epidemiological studies of people actually using wireless phones would provide some of the data that are needed. Lifetime animal exposure studies could be completed in a few years. However, very large numbers of animals would be needed to provide reliable proof of a cancer promoting effect, if one exists.

Epidemiological studies can provide data that is directly applicable to human populations, but 10 or more years of follow-up may be needed to provide answers about some health effects, such as cancer. This is because the interval between the time of exposure to a cancer-causing agent and the time tumors develop (if they do) may be many, many years. The interpretation of epidemiological studies is hampered by difficulties in measuring actual RF exposure during day-to-day use of wireless phones.

Many factors affect this measurement, such as the angle at which the phone is held and which phone model is used.

What is FDA doing to find out more about the possible health effects of wireless phone RF?

FDA is working with the U.S. National Toxicology Program, and with groups of investigators around the world to ensure that high priority animal studies are conducted to address important questions about the effects of exposure to radio frequency energy (RF).

FDA has been a leading participant in the World Health Organization International Electromagnetic Fields (EMF) project since its inception in 1996. An influential result of this work has been the development of a detailed agenda of research needs, which has driven the establishment of new research programs around the world. The project has also helped develop a series of public information documents on EMF issues.

FDA and the Cellular Telecommunications & Internet Association (CTIA) have a formal Cooperative Research and Development Agreement (CRADA) to do research on wireless phone safety. FDA provides the scientific oversight, obtaining input from experts in government, industry, and academic organizations. CTIA-funded research is conducted through contracts to independent investigators. The initial research will include both laboratory studies and studies of wireless phone users. The CRADA will also include a broad assessment of additional research needs in the context of the latest research developments around the world.

What steps can I take to reduce my exposure to radio frequency energy from my wireless phone?

If there is a risk from these products (and at this point it is unknown whether there is), it is probably very small. But if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your exposure to radio frequency energy (RF). Since time is a key factor in how much exposure a person receives, reducing the amount of time spent using a wireless phone will reduce RF exposure.

- If you must conduct extended conversations by wireless phone every day, you could place more distance between your body and the source of the RF, since the exposure level drops off dramatically with distance. For example, you could use a headset and carry the wireless phone away from your body, or use a wireless phone connected to a remote antenna

Again, the scientific data **do not** demonstrate that wireless phones are harmful. But if you are concerned about the RF exposure from these products, you can use measures like those described above to reduce your RF exposure from wireless phone use.

What about children using wireless phones?

The scientific evidence does not show a danger to users of wireless phones, including children and teenagers. If you want to take steps to lower exposure to radio frequency energy (RF), the measures described above would apply to children and teenagers using wireless phones. Reducing the time of wireless phone use and increasing the distance between the user and the RF source will reduce RF exposure.

Some groups sponsored by other national governments have advised that children be discouraged from using wireless phones at all. For example, the government in the United Kingdom distributed leaflets containing such a recommendation in December 2000. They noted that no evidence exists that using a wireless phone causes brain tumors or other ill effects. Their recommendation to limit wireless phone use by children was strictly precautionary; it was not based on scientific evidence that any health hazard exists.

What about wireless phone interference with medical equipment?

Radio frequency energy (RF) from wireless phones can interact with some electronic devices. For this reason, FDA helped develop a detailed test method to measure electromagnetic interference (EMI) of implanted cardiac pacemakers and defibrillators from wireless phones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical Instrumentation (AAMI). The final draft, a joint effort by FDA, medical device manufacturers and many other groups, was completed in late 2000. This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from wireless phone EMI.

FDA has tested hearing aids for interference from handheld wireless phones, and helped develop a voluntary standard sponsored by the Institute of Electrical and Electronic Engineers (IEEE). This standard specifies test methods and performance requirements for hearing aids and wireless phones so that no interference occurs when a person uses a "compatible" phone and a "compatible" hearing aid at the same time. This standard was approved by the IEEE in 2000.

FDA continues to monitor the use of wireless phones for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will conduct testing to assess the interference and work to resolve the problem.

How can I determine how much RF energy exposure I can get from using my wireless phone?

The FCC requires that wireless phones sold in the United States demonstrate compliance with human exposure limits adopted by the FCC in 1996. The relative amount of RF energy absorbed in the head of a wireless phone user is given by the Specific Absorption Rate (SAR), as explained in the next section. In terms of SAR, the FCC requires wireless phones to comply with a safety limit of 1.6 watts per kilogram (1.6 W/kg).

Information on SAR for a specific phone model can be obtained for many recently manufactured phones using the FCC identification (ID) number for that model. The FCC ID number is usually printed somewhere on the case of the phone. Sometimes it may be necessary to remove the battery pack to find the number. Once you have the ID number, go to the following web address: <http://www.fcc.gov/oet/fccid>. On this page, you will see instructions for entering the FCC ID number. Type the FCC ID number exactly as requested (the Grantee Code is the first three characters, the Equipment Product Code is the rest of the FCC ID number). Then click **Start Search**. The "Grant of Equipment Authorization" for your telephone should appear. Read through the grant for the section on "SAR Compliance," "Certification of Compliance with FCC Rules for RF Exposure" or similar language. This section should contain the value(s) for typical or maximum SAR for your phone.

The FCC database does not list phones by model number. However, consumers may find SAR information from other sources as well. Some wireless phone manufacturers make SAR information available on their own websites. In addition, some non-government websites provide SARs for specific models of wireless phones. However, the FCC has not reviewed these sites and makes no guarantees of their accuracy. Finally, phones certified by the Cellular Telecommunications and Internet Association (CTIA) are required to provide SAR information to consumers in the instructional materials that come with the phones.

Consumer Information on Specific Absorption Rate

This phone model meets the Government's requirements for exposure to radio waves.

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission (FCC) of the U.S. Government. These limits are part of comprehensive guidelines, and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg¹. Tests for SAR are conducted using standard operation positions specified by the FCC, with the phone transmitting at its highest certified power level in all tested frequency bands.

1. In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kilogram (W/kg) averaged over one gram of tissue. This standard incorporates a substantial margin of safety to give additional protection to the public, and to account for any variations in measurements.

Although SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. Because the phone is designed to operate at multiple power levels in order to use only the power required to reach the network, in general, the closer you are to a wireless base station antenna, the lower the power output.

Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this phone model when tested for use at the ear is 1.43 W/kg, and when worn on the body, as described in this manual, is 0.49 W/kg. (Body-worn measurements differ among phone models, depending on available accessories and FCC requirements.) While there may be differences between SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure.

The FCC has granted an Equipment Authorization for this phone model, with all reported SAR levels evaluated as in compliance with the FCC RF emission guidelines. SAR information on this phone model is on file with the FCC, and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID J9CQSEC2700.

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) website at <http://www.wow-com.com>.

Driving Safety

- **Know the laws and regulations on using wireless telephones in the areas in which you drive.**
- **Do not use your handheld phone while driving.** Pull off the road in a safe location while using the phone.
- **Learn to use Speed Dial.** See "Using the Speed Dial List" on page 67.
- **Do not place your phone in front of an air bag.** Air bags inflate with great force. You or your passengers risk serious injury.
- **Do not use your phone while filling your gas tank.**

Safety with Medical Devices and Facilities

Pacemaker

If your portable wireless phone is too close to a pacemaker, the phone's RF energy may interfere with the pacemaker's operation. The Health Industry Manufacturers Association and the wireless technology research community recommend that you follow these guidelines to minimize the potential for interference:

- Always keep the phone at least six inches (15 centimeters) away from your pacemaker when the phone is turned on.
- Do not carry your phone near your heart, such as in a breast pocket.
- Use the ear opposite the pacemaker.
- If you have any reason to suspect that interference is taking place, turn your phone off immediately.

Hearing Aids

Some digital wireless phones may interfere with hearing aids. In the event of such interference, you may want to contact your Terminal Administrator.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of the device to determine if it is adequately shielded from external RF energy. Your physician may be able to help you obtain this information.

In Health Care Facilities

Turn your phone off in health care facilities, especially if any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.

Other Unsafe Areas



Warning

- **Turn off your phone while in an airplane.** FCC regulations prohibit using your phone on a plane.

- **Turn off your phone when in potentially explosive areas.** Areas with a potentially explosive atmosphere are often, but not always, clearly marked. Sparks in such areas could cause an explosion or fire resulting in bodily injury, or even death. They include the following:
 - ◆ *Fueling areas such as gas stations*
 - ◆ *Below deck on boats*
 - ◆ *Transfer or storage facilities for fuel or chemicals*
 - ◆ *Vehicles using liquefied petroleum gas, such as propane or butane*
 - ◆ *Areas where the air contains chemicals or particles such as grain, dust, or metal powders*

Standards and Safety Information

For standards and safety information, visit the Cellular Telecommunications Industry Association (CTIA) Web site at <http://www.wow-com.com> or call 888-901-SAFE (toll-free, U.S.A. only).

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Troubleshooting



This chapter provides troubleshooting procedures for problems occurring on the phone. To access the most current version of these troubleshooting tips, visit the QUALCOMM website at: <http://www.qualcomm.com/govsys/>

When using this troubleshooting table, find the topic that most closely resembles your problem, and work in sequence through the possible causes and solutions until your problem is solved. If you are experiencing problems that you cannot resolve, contact your Terminal Administrator.

Problem	Solution
Lost/Stolen Phone	
My phone was lost or stolen	Contact your Terminal Administrator.
Phone Power-up	
Phone does not turn-on	The battery needs to be charged. Check the battery icon at the top of the screen to ensure that your battery is sufficiently charged. See "Recharging the Battery" on page 108.
Phone Setup	
Phone is not set up correctly	Select Settings, Phone Info . If you do not see your phone number, contact your Terminal Administrator.
Signal/Reception	
Phone does not have a signal	Check the signal strength icon at the top of the screen (see "Screen Icons" on page 9). You should see at least one segment showing. To increase signal strength, go outside or stand by a window. Visually check that the antenna is not damaged. If it is damaged, contact your Terminal Administrator.
Phone has poor reception and drops calls	Check that you have good signal strength (see "Screen Icons" on page 9). Also, make sure that you are clear of any obstructions such as tall buildings, bridges, and parking garages.




Problem	Solution
Voice Characteristics	
Lag time for my voice is too long	This is a normal characteristic of secure calls. Be patient during secure calls, and try to alternate speaking regularly and predictably with the other user. Try not to interrupt the other user.
Lag time for my voice is different from call to call	Calls between QSec-2700 phones may connect in a mode that allows the voice lag time to be very short. Calls to STEs or other secure phones may connect in a mode that has a long lag time. Make sure the QSec numbers you are dialing are entered into the Contacts list (see "Understanding QSec Type Phone Numbers" on page 59).
Voice quality is poor, and varies from call to call	Voice quality is often better during clear calls. To ensure the maximum quality for secure voice calls, make sure the QSec numbers you are dialing are entered into the Contacts list (see "Understanding QSec Type Phone Numbers" on page 59).
Voice quality is poor during some secure calls	It is normal for voice quality to vary between secure calls, depending on what type of phone is engaged in the call, and what type of secure call the phone connected in.
Phone Sound/Display	
Phone volume is too low or too high	Increase or decrease the volume by pressing the Up or Down navigation key, respectively, during a call.
Phone display is too dark	Use the Settings, Display, Contrast menu item to change the level of contrast of the display. See "To Configure the Phone's Display" on page 79.
Icons are not visible during secure software download, or key loading	This is normal behavior. The icons that are normally displayed at the top of the screen are not visible during secure software loading, or key loading from a DTD.
Cannot see sent or received calls	To access the recent calls you have sent and/or received, see "Accessing Recent Calls" on page 69.
Battery	
Battery life is too brief	Your battery's performance is affected by talk time versus idle time, feature use, temperature, backlight use, and other factors. See "Battery Performance Times" on page 107. If the battery takes a long time to charge or loses a charge quickly, it may be time to replace your battery (see "Installing a New Battery" on page 109).

Problem	Solution
Did not see "battery low" alert before phone power failed	The QSec-2700 phone cannot play alert tones while it is in a secure call, or during loading of secure software or keys. During secure calls, monitor the battery icon at the top of the screen to see if the power is running low (see "Screen Icons" on page 9). Before doing a secure software download or key loading, make sure the phone has sufficient power.
Clear Voice Calls	
Cannot make clear calls	Make sure your phone is authorized for clear calls. Select the Security, Access Control menu item, and check the 'Security Strap' setting. If this setting is Secure-only, contact your Terminal Administrator.
Cannot access the Security menu during a clear call	This is normal behavior. While a clear call is active, you are prevented from navigating into the Security menu. To access the Security menu, you must be on the Home screen, or engaged in a secure call.
Secure Voice Calls	
Secure call failed - "Failed to establish data channel"	This error occurs when the phone failed to set up an async call with the other phone. Modem training may have failed. Try again. If the problem persists, contact your Terminal Administrator.

Problem	Solution
Secure call failed - "Failed to get async number"	<p>This error can occur for a number of reasons:</p> <ul style="list-style-type: none"> ■ The other phone is not a QSec phone, and you attempted to transition from clear to secure (you can only do this with other QSec phones). ■ The other phone is not a QSec phone, but its phone number is mistakenly entered into Contacts with the QSec type (). If the number is entered as QSec type, delete the contact and re-enter it (see "Customizing and Editing Contacts" on page 65). ■ The other phone is a QSec phone, but its async number is mistakenly entered into Contacts as a QSec type. If the async number is entered as QSec type, delete the contact and re-enter it (see "Customizing and Editing Contacts" on page 65). ■ The other phone is a QSec phone, and its basic phone number is properly entered into Contacts as a Mobile () or QSec type. During the first part of the call, the two phones exchange async numbers using DTMF tones. The connection reliability may not have allowed the successful transfer of DTMF tones, or the infrastructure may not support the sending of these tones. If the problem persists, contact your Terminal Administrator.
Secure call failed - "No common operational modes"	<p>This error occurs when the two phones do not share a common FNBDT secure operational mode. For example, the receiving phone may be set to data-only, and you are trying to connect in a secure voice call. Contact your Terminal Administrator.</p>
Secure call failed - "Security incompatibility"	<p>This error occurs when the two phones do not share compatible keysets. Contact your Terminal Administrator.</p>
Secure call failed - any other reason	<p>If you just loaded new software to your phone or had it provisioned, make sure you unplug all cables from your phone and perform a power cycle on your phone before attempting to make a secure call.</p> <p>Otherwise, try the secure call again. If the problem persists, contact your Terminal Administrator.</p>
Cannot connect directly to another QSec phone in a secure call	<p>Try to connect to the other phone in a clear call first, and then transition to a secure call by selecting the [Go Secure Voice] screen key (see "To Transition from a Clear Call to a Secure Call" on page 45).</p>

Problem	Solution
Cannot receive secure calls directly	Wireless equipment in certain areas does not support dual-number phones. You can determine if your phone is a single-number phone by checking the Settings, Phone Info menu item, and seeing if your basic phone number is the same as your async number (see "About Your Phone Number(s)" on page 13). If the two numbers are identical, you must either transition from a clear call to a secure call (if connecting with another QSec phone that is strapped Traditional or Auto-secure), or arrange with the other party to call back as a secure call. Before receiving this secure call, you must select the Security, Next Call, Incoming Secure menu item. This menu item must be selected before every incoming secure call. Any outgoing call will reset this setting to Normal. See "Receiving Secure Calls with Single-number Phones" on page 34 for more information.
Alarm that was set did not go off until secure call ended	The QSec-2700 phone cannot play alert tones while it is in a secure call, or during loading of secure software or keys. See "To Respond to an Active Alarm" on page 99.
Call setup time is too long for secure calls	Store all of your secure numbers in the Contacts list, particularly the QSec-800 and QSec-2700 numbers. Additional information is saved with a QSec number during secure calls to ensure that subsequent secure calls connect in the preferred mode, and in the quickest time (see "Understanding QSec Type Phone Numbers" on page 59).
Cannot access any menus (except the Security menu) during a secure call	This is normal behavior. While a secure call is active, you are prevented from navigating into any menu except the Security menu. To access Contacts, Messages, Settings and other menus, you must be in the Home screen, or engaged in a clear call.
Data Calls	
Cannot make a secure data call when a PC is attached	Check that your phone is authorized for secure data calls. Select the Security, Access Control menu item, and check the 'Secure Data' setting. If this setting is Disabled, contact your Terminal Administrator.
Cannot make a clear data call when a PC is attached	Check that your phone is authorized for clear data calls. Select the Security, Access Control menu item, and check the 'Security Strap' and 'Clear Data' settings. If 'Security Strap' is set to Secure-only or if 'Clear Data' is Disabled, contact your Terminal Administrator.

Problem	Solution
Call Transitions	
Transition to clear call fails with non-QSec phone	This is normal behavior. The QSec-2700 phone is designed to transition from a secure call to a clear call by selecting the [Go Clear] screen key (see "Transitioning Between Clear/Secure Calls" on page 45). This feature only works between QSec-2700 phones and other QSec-2700 or QSec-800 phones. This feature does not work with STEs, Sectera GSM phones, or other non-QUALCOMM phones. When talking to users of these other types of phones, you must hang up the secure call and separately initiate a new clear voice call to their clear number.
Transition to clear call fails with QSec phone	Make sure your phone is authorized for clear calls. Select the Security, Access Control menu item, and check the 'Security Strap' setting. If this setting is Secure-only, contact your Terminal Administrator. Otherwise, try again. If the problem persists, contact your Terminal Administrator.
Transition to secure call fails with non-QSec phone	This is normal behavior. The QSec-2700 phone is designed to transition from a clear call to a secure call by selecting the [Go Secure Voice] screen key (see "Transitioning Between Clear/Secure Calls" on page 45). This feature only works between QSec-2700 phones and other QSec-2700 or QSec-800 phones. This feature does not work with STEs, Sectera GSM phones, or other non-QUALCOMM phones. When talking to users of these other types of phones, you must hang up the clear call and separately initiate a new secure voice call to their secure number.
Transition to secure call fails with QSec phone	Try again. If the problem persists, contact your Terminal Administrator.
Cannot transition from clear voice call to secure data call	This feature only works between QSec-2700 phones and other QSec-2700 or QSec-800 phones. This feature does not work with STEs, Sectera GSM phones, or other non-QUALCOMM phones. Assuming the other phone is a QSec phone, this problem occurs when the phone attempting to initiate the transition is not the phone that originated the clear voice call. The [Go Secure Data] screen key is only displayed by the originating phone. To successfully make this transition, you can either have the originator perform the transition, or end the call and try it again, this time as the originator.

Problem	Solution
Contacts	
Cannot connect to the number for a STE or Sectera GSM phone using the Contacts database	Check that you did not save the number as a QSec type (). Only QSec-2700 and QSec-800 phones should be saved in Contacts with a QSec type (see "Understanding QSec Type Phone Numbers" on page 59). If problem persists, contact your Terminal Administrator.
Cannot connect to the number for another QSec-800 or QSec-2700 phone using the Contacts database	Check that you saved the basic phone number in Contacts, NOT the async (secure) number. If the async number was entered, delete it and enter the basic phone number (see "Customizing and Editing Contacts" on page 65). If you enter the async number and save it as a QSec type (), all calls to that phone will fail (see "Understanding QSec Type Phone Numbers" on page 59).
Cannot determine which number(s) to enter for my new contact	For other QSec-2700 or QSec-800 phones, enter their basic phone numbers into Contacts. DO NOT enter their async (secure) numbers into Contacts (see "About Your Phone Number(s)" on page 13). For non-QSec phones with two numbers, enter both of their numbers as separate entries: "Dave - clear" and "Dave - secure". See "Entering Contacts" on page 62 for procedures on adding entries to your Contacts database.
Phone number I entered into Contacts changed to a different number	This is normal behavior. You may have accidentally entered the async (secure) number of another QSec-2700 or QSec-800 phone into Contacts. If you did this, but did not save the number as QSec type (), then during the first secure call the phone number for that entry will automatically revert to the basic phone number (see "Understanding QSec Type Phone Numbers" on page 59).
Secure Mode Characteristics	
Cannot tell if I am logged in as a secure user or not	DO NOT leave a QSec-2700 phone unattended while in secure mode. To determine if you are logged in, select the Security, PIN, Login menu item. If you are already logged-in, you will be notified.
Cannot log out of secure mode	See "To Log Out of Secure User Mode" on page 21.

Problem	Solution
Red security LED (secure LED) is on continuously	This is normal behavior during secure calls, and while you are accessing the Security menu. It is also on while the phone is powering up and powering down. When the secure LED is continuously on, this indicates that the phone is performing a trusted operation, and that information highlighted on the screen with a red bar can be trusted. See "About the Secure LED" on page 10.
Red security LED (secure LED) blinks periodically	This is normal behavior during clear calls. When the secure LED blinks periodically, this indicates that the microphone is on and that control of this microphone is currently not secure. You should confirm that the secure LED does not blink after a clear call ends.
Red security LED is not on during a trusted operation	The secure LED may have failed, or your phone may be compromised. Contact your Terminal Administrator.
Key Management	
Phone indicates that it holds expired or seed keys	Perform a rekey procedure (see "To Rekey Seed and Expired Keys" on page 91, or see "To Rekey All Keys" on page 92).
Advanced Settings	
Want to perform an advanced or administrative function, but the phone says that I am not authorized	Your Terminal Administrator/COMSEC Custodian has not authorized you to perform that function. Contact your Terminal Administrator/COMSEC Custodian. Select the Security, Access Control menu item to view your Access Control settings (see "Viewing Access Control Settings" on page 22).
Accessories	
Surveillance kit (headset) does not work	When using a surveillance kit (headset), the Push-to-Talk key on the surveillance kit must be pressed while talking.

Accessories

The following optional accessories may be available from your Terminal Administrator (TA), or you can contact QUALCOMM directly at (877) 461-4411 to order more accessories.



Caution

*Only allow authorized personnel to service your accessories.
Unauthorized service may invalidate the warranty.*



Caution

*Only use QUALCOMM-approved accessories with QUALCOMM phones.
Use of any unauthorized accessories will invalidate your phone warranty
if said accessories cause damage to the phone.*

Accessory	Description
Travel Charger (model DXTVL0011)	Charges the phone battery. To recharge the battery, connect the travel charger to the bottom of your phone, and then plug it into a standard wall outlet (see "Recharging the Battery" on page 108).
	<i>This accessory is included with your phone.</i>
Belt Clip (model DXBLC0011)	Lets you clip your phone onto your belt.
	To ensure that your exposure to RF electromagnetic energy is within the limits established by the FCC, only use QUALCOMM-approved belt clips. These belt clips have been tested and approved for RF safety (see "Radio Frequency (RF) Energy" on page 112).
	<i>This accessory is included with your phone.</i>
Standard Battery (model DXBAT0011)	Standard rechargeable lithium ion battery that attaches to the back of your phone, providing power to it. For more information about your battery and how to use it, see "Battery Care and Maintenance" on page 107.
	<i>This accessory is included with your phone. Carrying extra batteries helps ensure that you have a charged battery at all times.</i>

Accessory	Description
Slim Battery (model DXBAT0021)	Slim rechargeable lithium ion battery that attaches to the back of your phone, providing power to it. For more information about your slim battery and how to use it, see "Battery Care and Maintenance" on page 107. Specifically, see "Battery Performance Times" on page 107 to compare the standard battery with this model. <i>This accessory is included with your phone.</i>
Car Power Adapter (CPA) (model DXCPA0011)	Plugs into your car power supply (such as a cigarette lighter) to allow your QSec-2700 phone to operate and charge while in your vehicle.
Data Cable (model DXDTA0011)	Lets you send and receive e-mail, faxes and other data via your QSec-2700 phone. The data cable attaches your phone to your computer's or handheld device's RS-232 serial port, which allows for communication between these devices. The data cable can also be connected to a DTD adapter cable to load keys (see below). See "Making and Receiving Data Calls" on page 37 for details on making clear and secure data calls. <i>Check with your Terminal Administrator to determine if this service is available.</i>
Data Transfer Device (DTD) Adapter Cable (model DXDTA0012)	Connects the QSec-2700 phone to a data transfer device (DTD), enabling the loading of cryptographic keying material. One end of the DTD adapter cable connects to the QSec-2700 data cable (model DXDTA0011), and the other end connects to the DTD. See "Loading Keys" on page 93 for details on loading cryptographic keying material.

Accessory	Description
Surveillance Kit (model DXSVL0011)	<p>Provides a headset for your phone that includes a microphone and an earpiece. When a surveillance kit is plugged into your phone, the phone's earpiece (or far-field speaker) audio is automatically routed to the surveillance kit. To use the microphone on the surveillance kit, press the PTT (Push-to-Talk) key on the surveillance kit (not the PTT key on the phone).</p> <p>To ensure that your exposure to RF electromagnetic energy is within the limits established by the FCC, only use QUALCOMM-approved surveillance kits. These headsets have been tested and approved for RF safety (see "Radio Frequency (RF) Energy" on page 112).</p>

Specifications

Operating Temperature -22 °F to +140 °F (-30 °C to +60 °C)

Storage Temperature -40 °F to +185 °F (-40 °C to +85 °C)

Physical Dimensions

Length	5.24 in. (133.1 mm)
Width	2.14 in. (54.4 mm)
Thickness	(w/slim battery) 1.04 in. (26.4 mm) (w/standard battery) 1.26 in. (31.9 mm)

Phone Weight

Without Battery	3.67 oz. (105 gm)
With Slim Battery	4.90 oz. (140 gm)
With Standard Battery	5.59 oz. (160 gm)

Battery

Type	Lithium Ion
-------------	-------------

Capacity	
Slim Battery	860 mAh
Standard Battery	1,700 mAh

Talk Time	
Slim Battery	144 min for clear voice, 88 min for secure voice
Standard Battery	325 min for clear voice, 199 min for secure voice

Standby Time	
Slim Battery	86 hours
Standard Battery	203 hours

Display

Type	TFT active matrix LCD; 65K colors
-------------	-----------------------------------

Dimensions

Length	1.83 in. (46.6 mm)
--------	--------------------

Width	1.57 in. (39.9 mm)
-------	--------------------

No. of Pixels

Vertical	220
----------	-----

Horizontal	176
------------	-----

Security

Type 1 voice and data

Interoperability Protocol

FNBDT

Data Rate

Clear	up to 153 kb/s
--------------	----------------

Secure

Asynchronous Data	up to 38.4 kb/s
-------------------	-----------------

Packet Data Rate	(TBD) up to xx.x kb/s
------------------	-----------------------

Text Message Length

(TBD) 1 to 255 bytes

Operating Frequency**Cellular (800 MHz Band)**

Transmit	824 MHz to 849 MHz
----------	--------------------

Receive	869 MHz to 894 MHz
---------	--------------------

PCS (1900 MHz Band)

Transmit	1850 MHz to 1910 MHz
----------	----------------------

Receive	1930 MHz to 1990 MHz
---------	----------------------

Air Interface Technology

CDMA, 1.25 MHz channel

Voice Encoders (Vocoders)

Clear Voice Vocoder	EVRC, 6.5 kb/s
---------------------	----------------

Secure Voice Vocoder	G.729 Annex D and MELP (circuit-switched mode)
----------------------	--

MELP (packet data mode)

Travel Charger Characteristics

Input	
Voltage	85 to 264 V ac
Current	0.2 A max
Frequency	47 to 63 Hz
Output	
Voltage	4.2 V dc (nominal)
Current	1.1 A max
Charging Time	3 h max
Operating Temperature	+32 °F to +122 °F (0 °C to +50 °C)
Storage Temperature	-40 °F to +185 °F (-40 °C to +85 °C)

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