



# **Palm™ WAP Browser Handbook**

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# Using the Palm™ WAP Browser

WAP (Wireless Application Protocol) browsing is a fast and simple way to browse the Internet via specially formatted WAP sites and receive WAP Push messages. These WAP sites give you access to a wide variety of practical Internet information.

The Palm™ WAP Browser supports WAP Push allowing you to receive push messages. You can sign up with a provider to receive messages automatically to inform you of important events, such as changes in stock prices. The Push message can also be Palm WAP Browser notifications of new e-mails.

To use the Palm WAP Browser on the Internet, you must have an Internet connection. This guide describes the functionality of the Palm WAP Browser. Setting up the Internet connection is not described. For information on connecting to the Internet, see the handbook for your handheld.

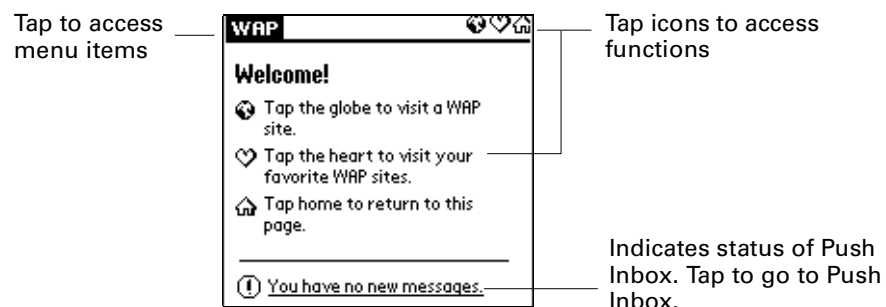
## Opening the WAP browser

Opening the WAP browser is the same as opening other applications on your handheld.

To open the WAP browser:

1. Tap the Applications icon .
2. Tap the WAP icon .

A Welcome screen appears indicating you have successfully opened the WAP browser. The appearance of the Welcome screen differs depending on the Internet service provider (ISP) you are using.



## Opening a WAP site



The WAP browser allows you to open WAP sites on the Internet. The WAP sites are formatted using WML (WAP Markup Language). These WAP site addresses (URLs) usually begin with wap, for example wap.palm.com. Some WML sites also use www.

**NOTE** The WAP browser does not open the same web sites as a standard web browser. These web sites are formatted using HTML (Hypertext Markup Language) and the URLs usually begin with www, for example, www.palm.com.

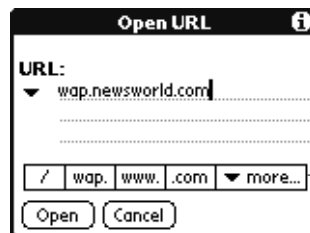
To open a WAP site, perform one of the following:

- Enter a URL
- Select a URL from the History List
- Select a bookmark (see “Using bookmarks” later in this chapter.)

To open a WAP site by entering a URL:

1. Open the Open URL dialog box by doing one of the following:
  - Tap the Globe icon .
  - Tap the Menu icon , and then tap Open URL.
2. Enter the URL.


Enter characters using Graffiti® writing, the onscreen keyboard, or by tapping an item to insert common URL elements.



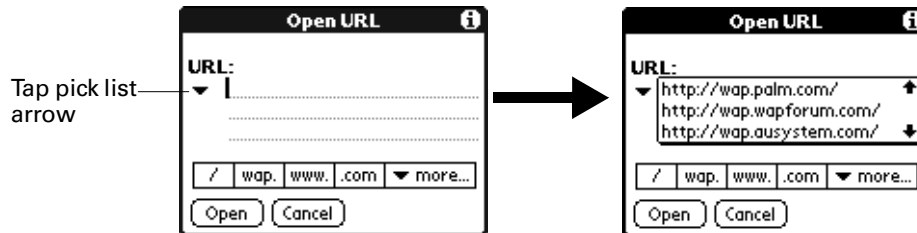
Tap item to insert common URL elements

3. Tap Open.

**To open a WAP site from the History List:**

1. Tap the Globe icon .
2. Tap the pick list arrow.

The most recently visited WAP site URLs are listed.



3. Select a URL from the pick list and tap Open.

## Browsing a WAP site

Browsing a WAP site using the WAP browser is similar to using a standard Internet browser. The browsing area displays the WAP site with text and underlined hyperlinks that can be accessed by tapping the link. The title bar displays information such as the name of the WAP site and navigation icons.

When a WAP page is being downloaded, the title bar displays the following:

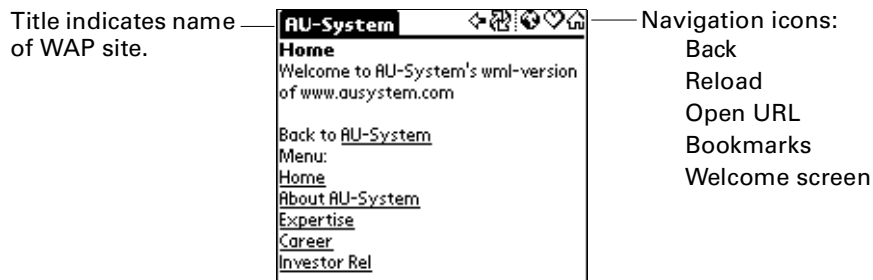
- Status
  - Connecting: Indicates the handheld is connecting to the WAP gateway.
  - Sending: Indicates the WAP browser is sending a request to a WAP site to download a page.
  - Receiving: Indicates the WAP browser is receiving content from the WAP gateway.
- Stop icon: Tapping the Stop icon halts the download and only areas of the page that were downloaded are displayed.
- Signal strength indicator: Shows the signal strength of the connection. If the signal strength indicator only shows one or two bars, the download could take longer or fail. Move to an area where you have a strong signal.



When the WAP site is fully downloaded on the handheld, the title bar changes to display the name of the WAP site and the following navigation icons:

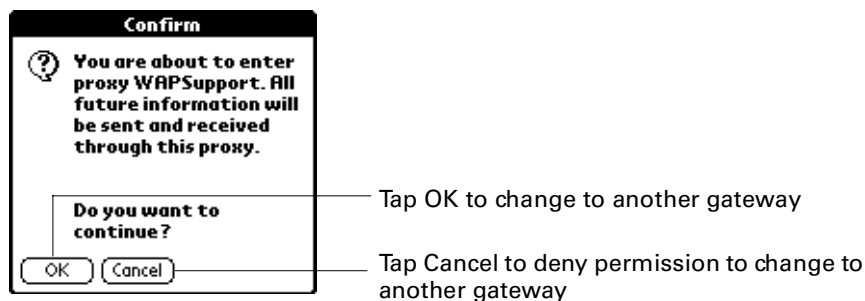
- Back: Returns to the previous page.
- Reload: Downloads current page from the source. If you are using cache memory, the current page that is saved in cache memory is *not* used.

- Open URL, Bookmarks, and Welcome screen: Provide the same function as on the Welcome screen (see “Opening the WAP browser”).



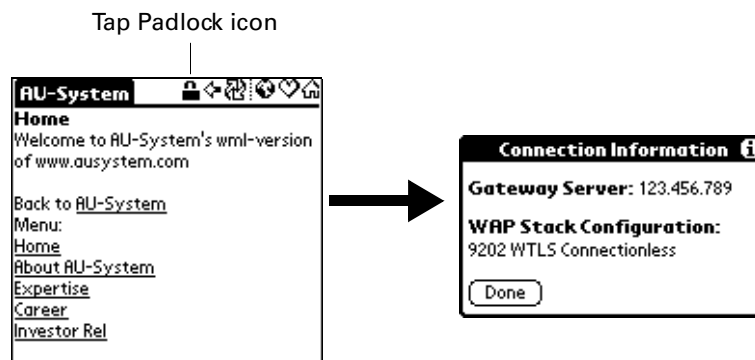
## Browsing secure WAP sites

When you access certain secure WAP sites, such as a bank, you are temporarily transferred to a secure gateway. Whenever you are transferred to a secure gateway, you are informed of the change and asked for permission.

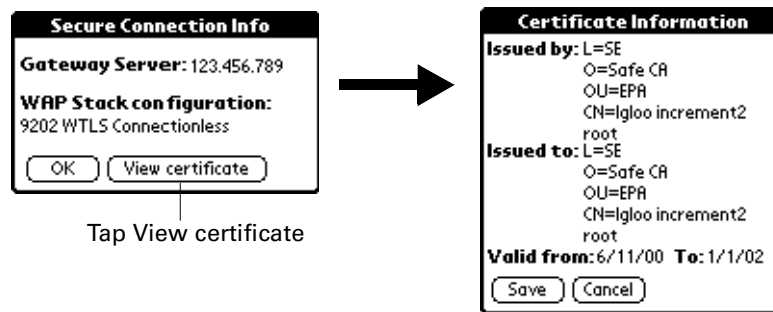


Once you are finished with the secure site, the WAP browser will automatically change back to the default WAP gateway.

If the WAP browser is connected to a gateway using the optional security layer WTLS, a small padlock displays in the title area. Tapping the Padlock icon opens the Secure Connection Info dialog box describing the WAP gateway address and WAP stack configuration.



If you have a secure connection using a WAP gateway server certificate, tapping the View certificate button displays certificate information.



## Using bookmarks

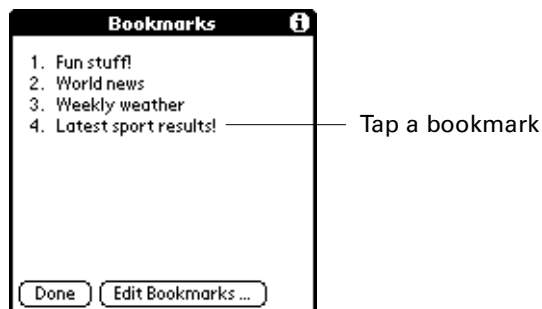
Bookmarks allow you to manage a list of your favorite WAP sites. You can easily access your bookmarks by tapping the Bookmark icon in the title bar.

### Opening a WAP site using a bookmark

By tapping a bookmark on the Bookmarks list, you can quickly open the WAP site.

To open a WAP site from the Bookmarks dialog box:

1. Tap the Bookmark icon ♥.
2. Tap a bookmark to begin downloading the WAP page.




### Adding a bookmark

You can add a WAP site to the bookmarks list in two ways:

- Adding current WAP page using the Go menu
- Entering the information in the Edit Bookmarks dialog box


To bookmark the current WAP page:

1. Open the WAP site.
2. Tap the Menu icon .
3. Tap Add to Bookmarks.



Tap to add the current WAP page to Bookmarks

To enter a bookmark from the Edit Bookmarks dialog box:

1. Tap the Bookmark icon .
2. Tap Edit Bookmarks.



Tap Edit Bookmarks

3. Tap New.



Tap New

4. Enter the bookmark name and URL, and then tap Done.



Enter Bookmark name and URL

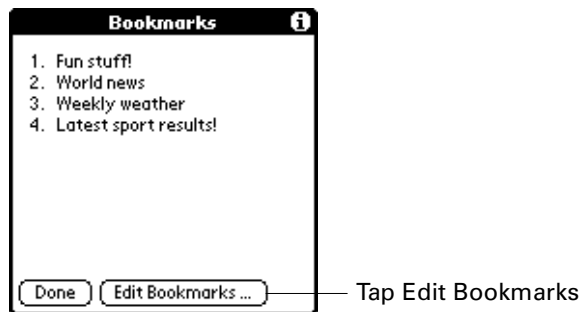
Tap Done

## Editing a bookmark

You can edit an existing bookmark using the Edit Bookmarks dialog box.

To edit a bookmark:

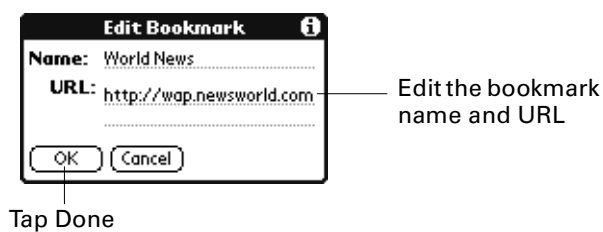
1. Tap the Bookmark icon ♥.
2. Tap Edit Bookmarks.



3. Select a bookmark, and then tap Edit.



4. Edit the bookmark name and URL, and then tap Done.

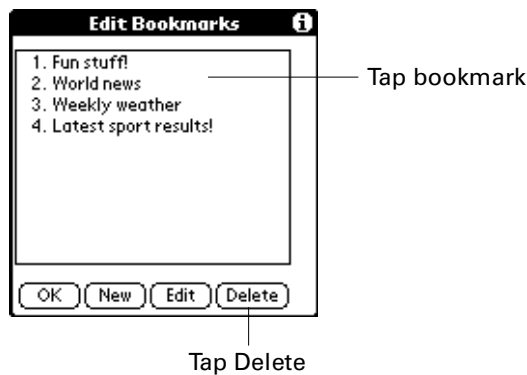


## Deleting a bookmark

You can delete sites from your bookmarks list using the Edit Bookmarks dialog box.

To delete a bookmark:

1. Tap the Bookmark icon ♥.
2. Tap Edit Bookmarks.
3. Tap the bookmark you want to delete.



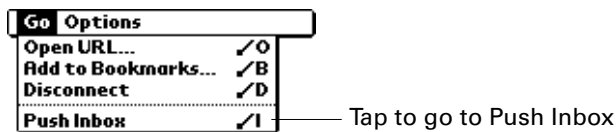
4. Tap Delete.
5. In the Confirmation dialog box, tap OK.

## Using your push inbox

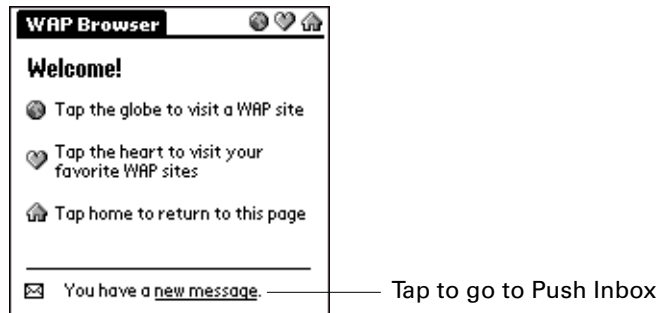
The Push Inbox lists all WAP Push messages received or stored by the handheld. Push messages are sent from services that you sign up for, for example, notifications of new e-mails, changes in stock prices, and so on. The service must support WAP Push.

You can open the Push Inbox in the following two ways:

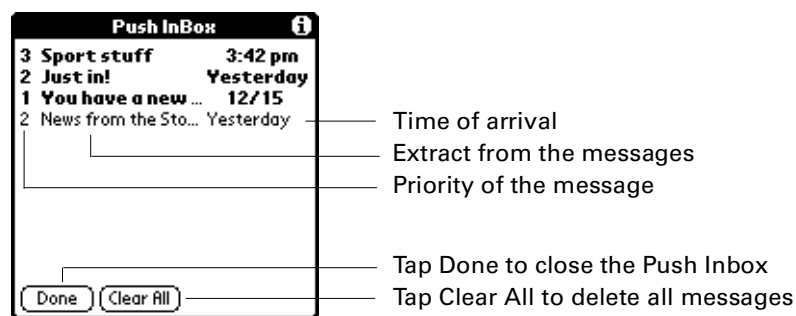
- Tap Push Inbox from the Go menu.



- Tap the new message line on the Welcome screen.



Unread messages are displayed in bold font.



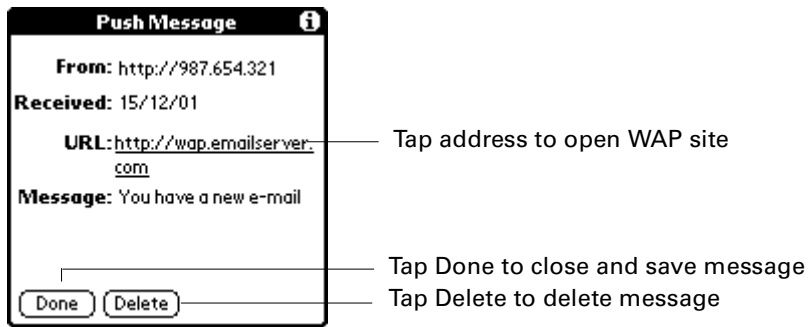
The Push Inbox list has the following three columns:

- Priority of the message
  - 1 - High
  - 2 - Medium
  - 3 - Low
- Extract from the message
- Time of arrival: The time of arrival is set differently depending on when the message was received. If it was received today, the time of arrival is shown. If received yesterday, the text Yesterday is displayed. If received earlier than yesterday, the date of arrival is displayed.

Tapping a message opens the Push Message dialog box showing all available information about the message. This dialog box displays the following:

- From: Where the message came from
- Received: Date and time the message was received

- URL: The URL associated with the message
- Message: The content of the message

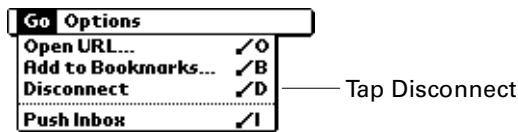


## Disconnecting from the Internet

Your handheld automatically connects to the Internet when you are downloading content or sending information. When you exit the WAP browser, the Internet connection is automatically disconnected. If you don't want to exit the WAP browser, you can disconnect manually from the Internet using the Go menu.

To manually disconnect from the Internet:

1. Tap the Menu icon .
2. Tap Disconnect.



## Using Advanced Features

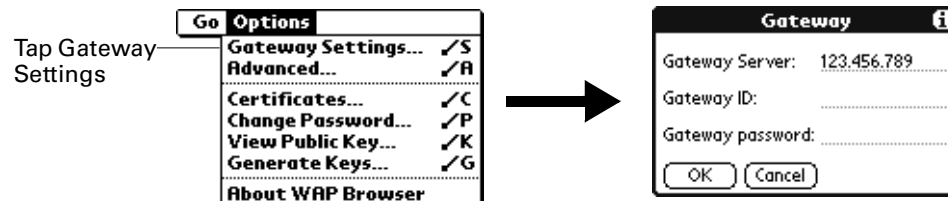
The WAP browser has many advanced features that allow you to modify performance and set security features. These options affect the performance of your browser and should be set by knowledgeable users. You may want to consult with technical support from your ISP before changing some of these options.

### Changing gateways

When you connect to the Internet, you normally connect through the default WAP gateway. Gateways are servers used to access WAP sites.

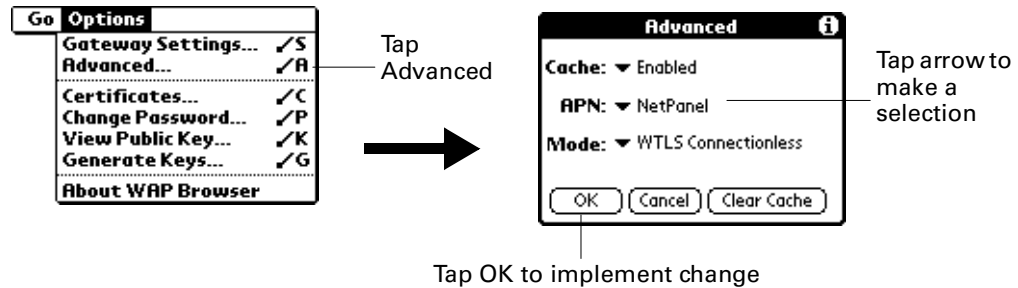
**NOTE** Generally, the gateway is automatically set by your ISP. Changing this setting can disable your WAP browser's ability to access sites, so please exercise caution if you alter this setting.

You can check or change the gateway settings from the Gateway dialog box. To access the Gateway dialog box, tap Gateway Settings on the Options menu.



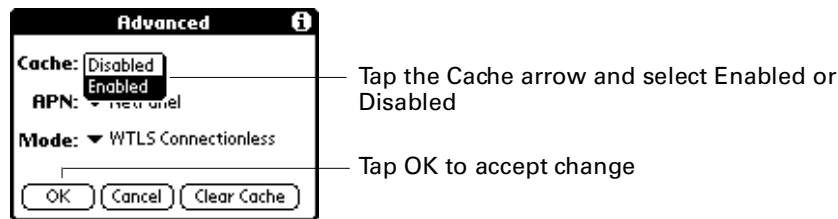
## Setting advanced options

The Advanced dialog box allows you to enable or disable the cache functions, select an access point name, and select a mode.

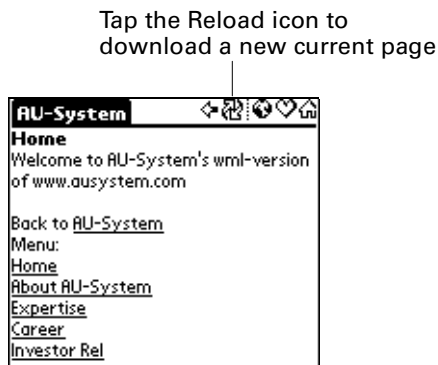


## Using cache memory

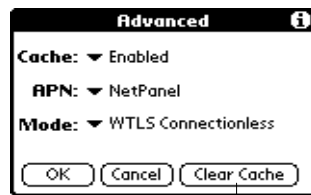
The Cache pick list on the Advanced dialog box allows you to enable or disable the cache memory. The default setting is cache memory enabled. Cache memory stores and displays a previously loaded WAP page rather than reloading the page each time. This enables you to save time in viewing pages, but you might view an older saved page rather than an updated one.



When viewing a page, you can update the current page by tapping the Reload icon. A new page is downloaded from the WAP site.



You can also clear cache memory so that all stored pages are deleted by tapping the Clear Cache button on the Advanced dialog box.

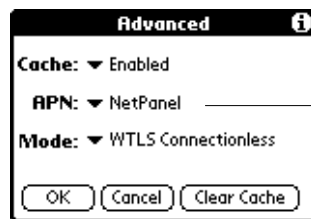


Tap Clear Cache to clear all pages stored in cache memory

## Selecting an Access Point Name

The APN pick list on the Advanced dialog box allows you to select an Access Point Name (APN) from a preset number of alternatives. The selections available in the APN list are dependent on your ISP. The APN may be preset or configured automatically by your ISP.

**NOTE** Changing the APN can disrupt your access to the Internet. Contact your ISP for more information.



Tap APN arrow to set APN

## Selecting Mode

**NOTE** Changing the mode can disrupt your access to the Internet. The mode should not be changed unless you receive specific instructions from your ISP.

The Mode pick list on the Advanced dialog box allows you to set the WAP stack configuration. There are two standard modes and two secure modes:

### Standard modes

- Connectionless (CL-WSP: Connectionless - Wireless Session Protocol)
- Connection Oriented (CO-WSP: Connection Oriented - Wireless Session Protocol)

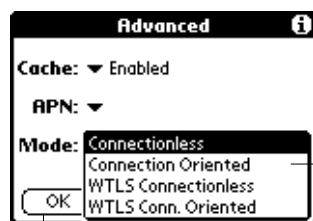
**Secure modes**

- WTLS Connectionless (CL-WTLS-WSP: Connectionless - Wireless Transport Layer Security - Wireless Session Protocol)
- WTLS Conn. Oriented (CO-WTLS-WSP: Connection Oriented - Wireless Transport Layer Security - Wireless Session Protocol)

Each mode has a port number associated with it:

- Connectionless - 9200
- Connection Oriented - 9201
- WTLS Connectionless - 9202
- WTLS Conn. Oriented - 9203

Once the WAP stack configuration for a WAP gateway is set, this parameter should not be changed unless you want to use another WAP gateway (see [“Using the security features”](#) earlier in this chapter).



Tap Mode arrow and select mode

Tap OK to accept change

## Using the security features

The WAP browser uses the Public Key Infrastructure (PKI) method to exchange secure messages between you and another party. PKI is based on the use of a password key pair and a signature key pair. Each key pair has one public key and one signed key. The public key can be available to anyone, but you must store the signed key securely. All security of a PKI solution is based on the integrity of the signed key.

The public key is exchanged between you and another party using a certificate created and signed by a trusted Certificate Authority (CA). The process of creating certificates and using a CA is beyond the scope of this guide. You can use the same key pair for several certificates.

All certificates are stored in the WAP Identity Module (WIM). The WIM is a storage area designed to store certificates, your private keys, and secure session data used to establish a secure connection. Usually the WIM is a smart card. The WAP browser uses a software WIM that has the same functionality.

The WAP browser uses the following two protective passwords:

- Password: Protects the password key pair. This password also protects the WIM and must be entered every time you access any content in the WIM.
- Signature: Protects the signature key pair. This signature is only used when you are asked to verify that you accept something asked for by another, such as a bank transfer.

The WAP browser allows you to create multiple password and signature key pairs. Each type of key pair is protected by a password or signature that you create. You have only one password and one signature even if you have multiple key pairs. You can change the password and signature at any time.

## Creating password and signature key pairs

To protect your transactions, you need to create a password key pair. If you are signing documents, you will also need to create a signature key pair.

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**IMPORTANT** Key generation can take up to an hour. During this time, your handheld appears to be completely frozen and you are not able to use your handheld.

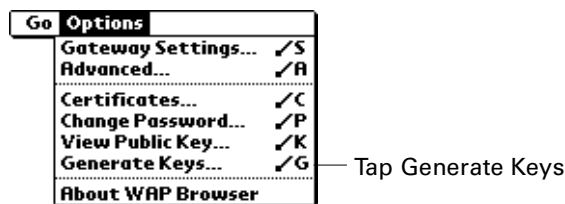
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You can create a password and signature key pair by opening the Generate Keys dialog box from the Options menu. You select which kind of key pair you want to generate: password or signature.

If this is the first time that you have generated the selected type of key pair, you must enter a password or signature to protect access to and usage of the keys. If you have already generated this type of key pair, you must enter the corresponding password or signature to continue the key generation.

To create a password key pair:

1. Tap the Menu icon , and then tap Options.
2. Tap Generate Keys.



3. Tap Continue.



Tap Continue

4. Tap Password key pair.



Tap Password key pair

5. Enter your password twice and tap OK.

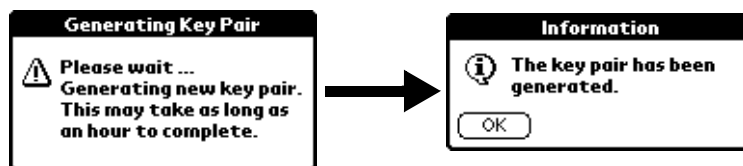
If you have already created a password key pair, enter the password you have already created. The characters used to set the password or signature can be any character, for example small and capital letters, numbers, or symbols.



Enter password twice

Tap OK

A Generating Key Pair dialog box appears informing you that it may take an hour to generate the key pair. When the key pair has been generated, a Confirmation dialog box appears.




6. Tap OK.

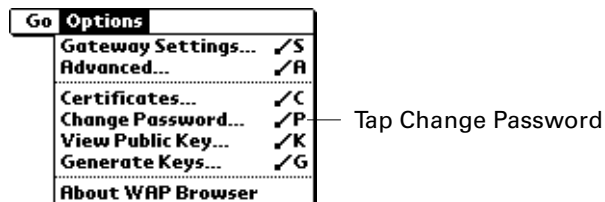
**NOTE** Generating a Password key pair and a signature key pair are similar. To generate a signature key pair, follow the steps for creating a password key pair, and select Signature key pair in step 4.

## Changing your password or signature

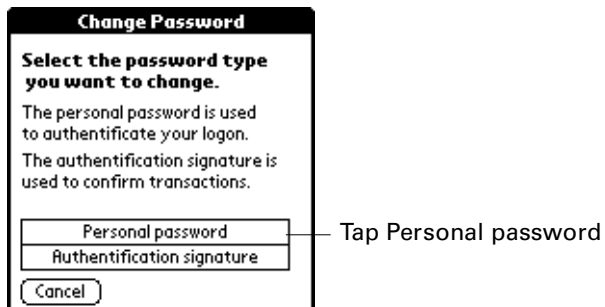
Maintaining a secure password and signature is critical for the security of your transactions. You can change your password or signature regularly to maintain security.

To change your password:

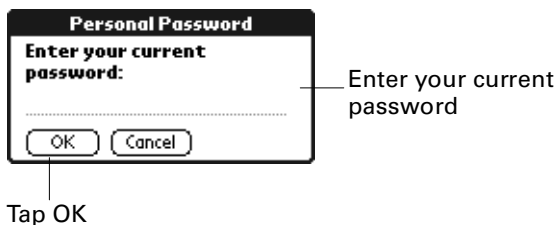
1. Tap the Menu icon , and then tap Options.
2. Tap Change Password.



3. Tap Personal password.

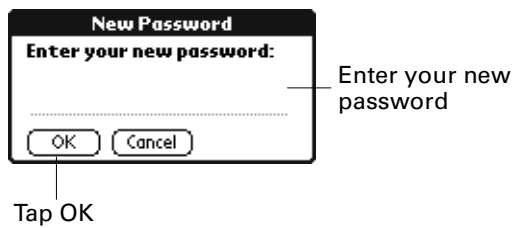


4. Enter your current password, and then tap OK.

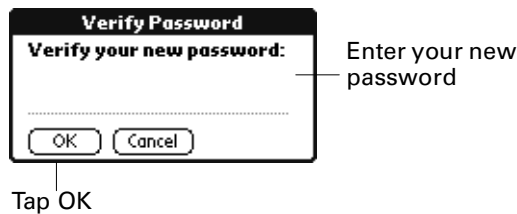


5. Enter the new password and then tap OK.

The characters used to set the password or signature can be any character, for example small and capital letters, numbers, or symbols.



6. Verify the new password by entering the password again, and then tap OK.




7. In the Information dialog box, tap OK.

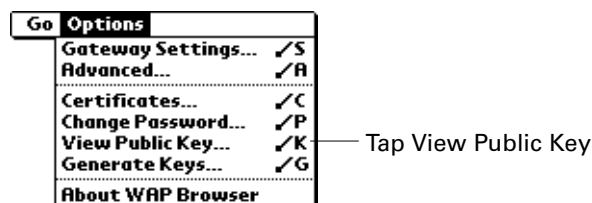
**NOTE** Changing a password and a signature are similar. To change your signature, follow the steps for changing your password, and select Authentication Signature in step 3.

## Viewing the public key and the signed key

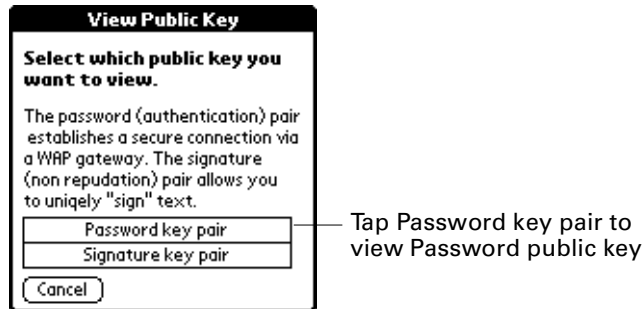
Once you create a keyed pair, you can view the public key and signed key by opening the View Public Key dialog box from the Options menu. This information is useful if you need to send a copy of the public key to your CA. The displayed keys are Base64 coded.

To view your public key and signed key:

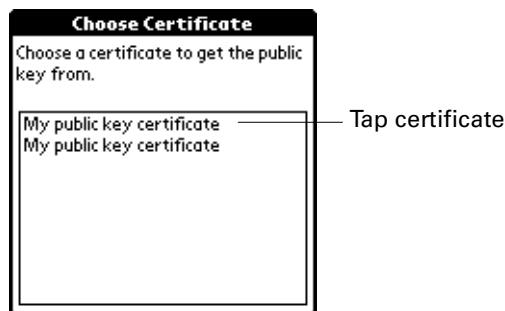
1. Tap the Menu icon , and then tap Options.
2. Tap View Public Key.



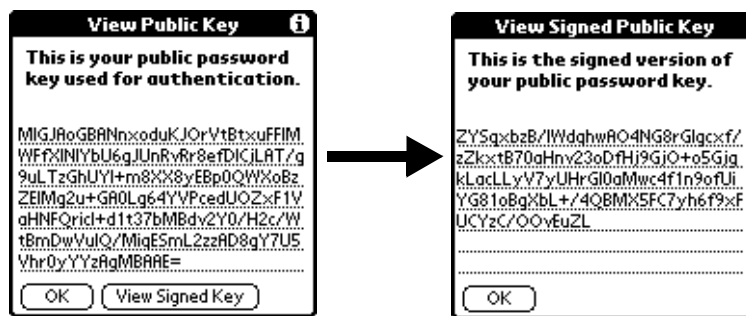
3. Tap Password key pair.



4. If you have several key pairs, a list of certificates displays and you can tap the appropriate certificate.



5. Tap View Signed Key to view the signed public key.



Tap View Signed Key

6. Tap OK.

**NOTE** Viewing a password and a signature key pair are similar. To view your signature public key, follow the steps for viewing your password public key, and select Signature key pair in step 3.

## Storing Certificates

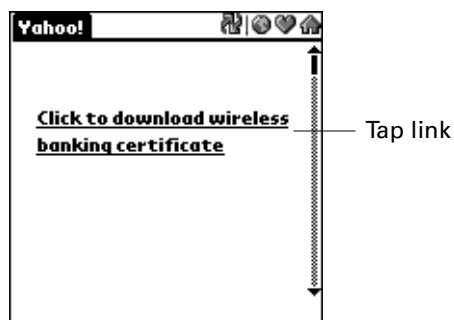
The WAP browser supports both CA or root certificates and user/server certificates. Certificates are stored securely in the WIM where you can view or delete them.

You can download a certificate from a WAP page by clicking on the link to the certificate. Once the CA has approved your request for a certificate, the certificate is available for download.

**To store a certificate:**

1. Tap the certificate download link.

The certificate download link varies depending on the WAP site.



2. Tap Save.



3. Enter your password and tap OK.

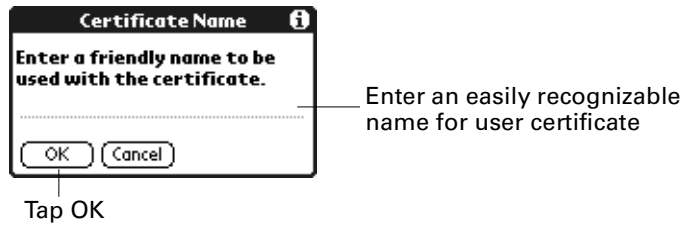
Your password is the same password set when you generated your Password key pair.



Tap OK

4. If you are storing a user certificate, you can enter a friendly name and tap OK.

The name is used for the certificate list when you are viewing your certificates. Make the name clear so that you can recognize the certificate. The friendly name is optional.




5. Tap OK.

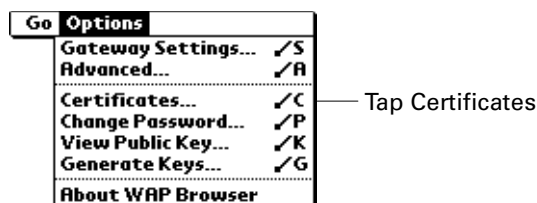


## Viewing Certificates

You can view your stored certificates by opening the Certificates dialog box from the Options menu.

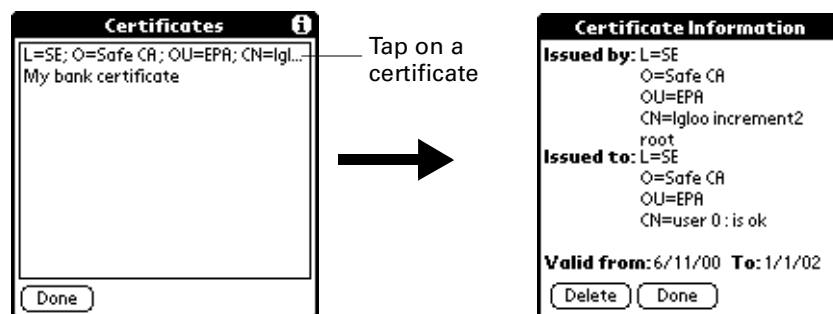
To view your stored certificates:

1. Tap the Menu icon , and then tap Options.
2. Tap Certificates.



3. Tap the certificate name.

You can delete the certificate by tapping Delete.





# Support and Troubleshooting

This chapter provides information for getting help with your WAP browser.

## If you encounter a problem




If you encounter a problem with your WAP browser, please do the following:

- Check the troubleshooting information in this handbook.
- Check the settings on your handheld.
- Contact your ISP.



If you still need assistance and you contact Palm technical support, please have the following information ready:

- The name and version of your WAP browser
- The error message or problem you are experiencing
- The steps you took to identify or reproduce the problem
- The version of the handheld software you are using and the available memory on the device

**To find WAP browser version information:**

1. Tap the Applications icon .
2. Tap WAP browser icon .
3. Tap the Menu icon .
4. Tap Options, and then tap About WAP Browser.

**To find version of handheld and available memory information:**

1. Tap the Applications icon .
2. Tap the Menu icon .
3. Tap App, and then tap Info.
4. Tap Version to see version numbers, and tap Size to see the amount of free memory, in kilobytes.

You can access handheld and WAP browser technical support in the following ways:

- Palm web site at [www.palm.com/support](http://www.palm.com/support)
- E-mail, in the U.S.: Use the form on the web site at [www.palm.com/support/contact/contactform.html](http://www.palm.com/support/contact/contactform.html)
- E-mail, outside the U.S.: Locate the applicable regional e-mail address on the web site at [www.palm.com/support/globalsupport.html](http://www.palm.com/support/globalsupport.html) and use the form supplied there
- English-only real-time chat on the web site at [www.palm.com/support](http://www.palm.com/support)
- Technical support phone numbers are available at [www.palm.com/support](http://www.palm.com/support)

**NOTE** Fees or charges may apply when seeking telephone support for some products.

## FAQs

For problems encountered within a specific WAP Internet site, contact the site administrator.

For general problems with the WAP browser, review the following information:

<b>Problem</b>	<b>Solution</b>
I cannot connect to my ISP.	You may need to enter additional technical networking information. Contact your ISP to obtain their primary and secondary DNS address and their IP address. See your handheld's handbook for instructions on how to enter this information.
I can connect to my ISP, but I can't access a WAP site.	Try alternate WAP sites. A WAP site could be temporarily unavailable due to site problems.  If you can't access the alternate sites, then contact your ISP and verify the following WAP browser settings: APN, Mode, and Gateway Server. Also check Gateway ID and Gateway password, if applicable.
Can I access all WAP sites?	The WAP browser can access all WAP web sites compliant to WAP version 1.1 or WAP version 1.2.1 (WAP June 2000 Conformance Release).

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Which WAP protocol stack configurations are supported?	<p>The supported WAP protocol stack configurations are the following:</p> <ul style="list-style-type: none"><li>CL-WSP (Connectionless - Wireless Session Protocol)</li><li>CO-WSP (Connection Oriented - Wireless Session Protocol)</li><li>CL-WTLS-WSP (Connectionless - Wireless Transport Layer Security - Wireless Session Protocol)</li><li>CO-WTLS -WSP (Connection Oriented - Wireless Transport Layer Security - Wireless Session Protocol)</li></ul>
Can I access an HTML web site?	<p>The WAP browser does not open HTML web sites, only WML web sites.</p>
Can I change the alert for my push messages?	<p>The WAP browser uses the standard Palm OS® software alerts set in the handheld's preferences panel. For more information, please consult your handheld's handbook.</p>
When generating a new password or signature key pair, my handheld froze.	<p>Key generation can take up to an hour. During this time, your handheld appears to be completely frozen and you are not able to use your handheld.</p>



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