FOMA® SH904i
Manual for
Data Communication

Data Communication manual
This manual explains the necessary items to perform the data communication with FOMA SH904i and the installation methods of "SH904i Communication Setting File (Driver)" and "FOMA PC Setup Software" in the CD-ROM.
For Windows operation
This manual is compliant with Windows XP Service Pack 2. The operation procedure and screens may be partly different depending on the use environment.

'07.6 (2nd Edition)

Data Communication

Data Communication Available from the FOMA Terminal

FOMA terminal communication formats fall into three categories: packet transmission, 64K data communication and data transfer.

- The FOMA terminal does not support fax transmissions.
- The FOMA terminal supports data communication with musea, sigmarion Ⅱ and sigmarion Ⅲ. Update musea and sigmarion Ⅱ before using.
  Refer to the DoCoMo web page for details on how to update.
- The FOMA terminal is not compatible with Remote Wakeup.
- Packet transmission and 64K data communications are not available overseas.

■ Packet transmission

Charges incurred are based on the amount of data sent and received. When you are only connected to the network and are not sending or receiving data, no communication charges are incurred. Remain connected to the network, with no charge, and only send or receive data when necessary. Uses access points that are compatible with FOMA packet transmission, such as the DoCoMo Internet connection services "mopera U" and "mopera", and sends and receives data at speeds up to 64 kbps and 384 kbps respectively (A best-effort connection is provided in which transmission speeds vary depending on the transmission environment and network traffic conditions).

For packet transmission, connect the FOMA terminal to a device such as a PC and perform appropriate settings. Best suited for sending and receiving mail text data or other relatively small amounts of data at high speeds.

Note that sending or receiving large files will lead to higher transmission charges.

Making voice calls while performing packet transmissions with a PC or other devices is possible.

■ 64K data communications

Charges incurred are based on the connection time. Uses access points that are compatible with FOMA 64K data communications, such as the DoCoMo Internet connection services "mopera U" and "mopera", or a synchronous ISDN 64K access point. Connect the FOMA terminal to a device such as a PC and perform appropriate settings to use 64K data communications. Best suited for sending and receiving relatively large amounts of data, such as downloading Data box contents.

Note that long-time communication leads to higher transmission charges.

■ Data transfer

Transfer or exchange data using a FOMA USB cable (sold separately) or Ir exchange without charges. Send or receive data such as phonebook entries, sent/received messages, and bookmarks.

Use infrared communication when connecting the FOMA terminal to another FOMA terminal or mobile phone. Use either the FOMA USB cable or infrared communication when connecting the FOMA terminal to a device such as a PC.

Things to Keep in Mind

■ Internet service provider fees

When using the Internet, usage fees are charged by the Internet service provider. These usage fees, paid to the Internet service provider, are separate from the FOMA service fee. Contact your Internet service provider for more information about usage fees.

Use the DoCoMo Internet connection services "mopera U" and "mopera". Subscription to "mopera U" requires a charge. "mopera" requires no subscription and charges no monthly usage fee.

■ Host (Internet service provider, etc.) settings

Hosts for packet transmission and 64K data communications differ. For packet transmission, use a host that supports FOMA packet transmission, and for 64K data communications, use a host that supports FOMA 64K data communications or synchronous ISDN 64K communication.

- Connecting to DoPa access points is not possible.
- Connecting to PHS 64K/32K data communication data access points (such as PIAFS) is not possible.

■ User authentication

Depending on the host, user authentication (ID and password) may be necessary when connecting. In such cases, enter your ID and password using communication software (dial-up network) to connect. Your ID and password are provided by your host Internet service provider or host network administrator. Contact your host Internet service provider or host network administrator for more information.

Packet transmission and 64K data communications conditions

The following conditions are necessary for communication using the FOMA terminal.

● The PC must support the FOMA USB cable.
● Must be within the FOMA service area.
● For packet transmission, the access point must be compatible with FOMA packet transmission.
● For 64K data communications, the host must support FOMA 64K data communications or synchronous ISDN 64K communications.

However, even if above conditions are met, communication may not be possible due to a busy base station or poor signal conditions.

Note

● When performing packet transmission, the device connected to your FOMA terminal must be a JATE (Japan Approvals Institute for Telecommunications Equipment) authorized product.

Before Use

Confirming the Operating Environment

The following lists the operating requirements for using data communications.

Item	System requirements	
	Communication setting file FOMA PC Setup Software	FirstPass PC Software
PC	PC/AT compatible A USB port (USB specification 1.1/2.0-compliant) is required	PC/AT compatible
OS	Windows 2000, Windows XP, Windows Vista (all Japanese versions)	
Required memory*	Windows 2000: At least 64 MB Windows XP: At least 128 MB Windows Vista: At least 512 MB	Windows 2000: At least 32 MB Windows XP: At least 128 MB Windows Vista: At least 512 MB
Hard disk*	At least 5 MB free space	At least 10 MB free space
Browser	—	Windows 2000: Internet Explorer 5.5 and above Windows XP: Internet Explorer 6.5 and above Windows Vista: Internet Explorer 7.0

* Required memory and hard disk are for the "FOMA PC Setup Software" and "FirstPass PC Software" operating environment. May differ depending on the PC system configuration.

● The operation in an upgraded OS cannot be guaranteed.
● Depending on the operating environment, use of the software may not be possible. DoCoMo holds no responsibility for responding to inquiries or guaranteeing operation in environments other than those specified above.

The following warning message may appear when a CD-ROM is set in a PC. This warning is shown by the security setting of Internet Explorer but does not cause any problem for use.
Click はい (Yes).
※ The following screen is an example for Windows XP. The screen depends on your PC.

Required Equipment

The following hardware and software are required besides the FOMA terminal and a PC.

● FOMA USB cable (sold separately) or FOMA USB Cable with Charge Function 01 (sold separately)
● CD-ROM "FOMA SH904i CD-ROM" (accessory)

Note

● Purchase a dedicated USB cable "FOMA USB cable" or "FOMA USB Cable with Charge Function 01". USB cables for PC are not available since the connector shape is different.
● The explanations in this manual are based on the case of "FOMA USB cable".

2

■ Data communication terminology

APN (Access Point Name)
A character string used by Internet service providers and corporate LANs for identification purposes. The APN of the DoCoMo Internet connection service mopera U is **mopera.net** and mopera is **mopera.ne.jp**.

cid (Context Identifier)
Registration number assigned when an APN is registered to the FOMA terminal. On the FOMA terminal, numbers 1 to 10 can be used.

DNS (Domain Name System)
System that converts domain names (for example, **nttdocomo.co.jp**) into IP addresses used on the PC.

IrDA (Infrared Data Association)
Organization that establishes the standard for infrared exchange.

IrMC (Ir Mobile Communications)
Standard created for the purpose of transferring data between mobile phones or PDAs (Personal Digital Assistants). Exchange phone numbers and schedules between mobile phones or PDAs with IrMC-compliant infrared terminals.

OBEX (Object Exchange)
One of the international data communication standards. Enables sending and receiving data between OBEX-compatible devices such as mobile phones, PCs, digital cameras and printers.

QoS (Quality of Service)
Service quality. Technology for using lines as the user intends, during communication. Set communication speed for connection, etc. on the FOMA terminal (☞P. 32, P. 38 and P. 39).

W-CDMA
One of the third-generation mobile communication systems (IMT-2000) recognized as a global standard. The FOMA terminal is compliant with the W-CDMA standard.

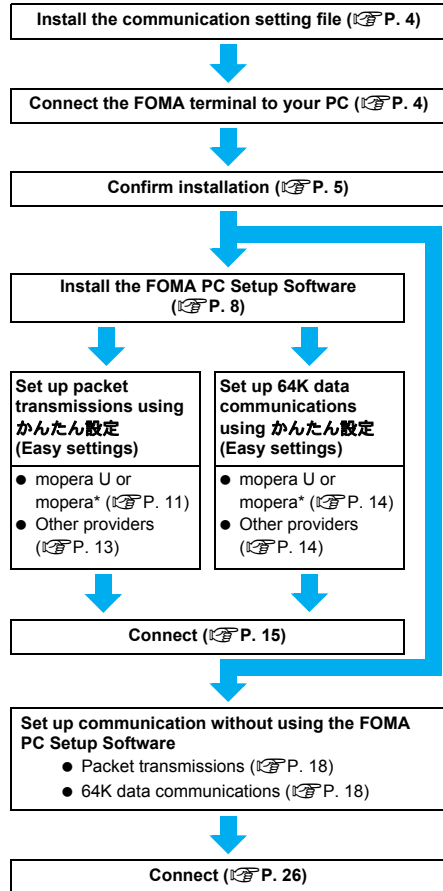### Transmission setting optimization (W-TCP)
A TCP parameter for maximizing TCP/IP transfer capabilities when using packet transmission on the FOMA network. Use this communication setting to maximize the communication performance of the FOMA terminal.

Users with PC administrator rights
Authority that makes access to all OS systems possible. On a single PC, at least one person is set as a user with PC administrator rights. Normally, users without PC administrator rights cannot install or uninstall drivers or software.

General Flow to Prepare for Data Communication

This section describes the preparation required to connect the FOMA terminal to your PC, and use packet transmission and 64K data communications. The general flow is as shown below.

Install the communication setting file (☞P. 4)

⬇

Connect the FOMA terminal to your PC (☞P. 4)

⬇

Confirm installation (☞P. 5)

⬇

Install the FOMA PC Setup Software (☞P. 8)

Set up packet transmissions using かんたん設定 (Easy settings)	Set up 64K data communications using かんたん設定 (Easy settings)
● mopera U or mopera* (☞P. 11)	● mopera U or mopera* (☞P. 14)
● Other providers (☞P. 13)	● Other providers (☞P. 14)

⬇

Connect (☞P. 15)

⬇

Set up communication without using the FOMA PC Setup Software
● Packet transmissions (☞P. 18)
● 64K data communications (☞P. 18)

⬇

Connect (☞P. 26)

* Use "mopera U" (subscription necessary) for the broadband Internet connection, etc. Subscribe to a plan that only charges for months which the service was used. Also available is "mopera", a simple Internet connection service with no subscription necessary.

3

Communication Setting File

To connect the FOMA terminal to your PC for data communication, installation of the communication setting file from the accompanying CD-ROM is required (☞P. 4 to P. 7).

Note

● If installation fails and *FOMA SH904i* is not listed in the screens of step 3 of "Confirming the Installed Communication Setting File (Driver)" on P. 5, uninstall the communication setting file (☞P. 6) and install it again.
● If, for some reason, the PC is unable to recognize the FOMA terminal, uninstall the communication setting file (☞P. 6) and install it again.

## FOMA PC Setup Software/FirstPass PC Software

Install the FOMA PC Setup Software from the accompanying CD-ROM to a PC and make a variety of necessary settings to perform packet transmission and 64K data communications connecting the FOMA terminal to the PC (☞P. 7). The FirstPass PC Software enables access to FirstPass supported sites via a PC Web browser with user certificates obtained by the FOMA terminal.
Refer to "FirstPassManual" on the accompanying CD-ROM for details. Adobe Reader (version 6.0 and above is recommended) is required to view "FirstPassManual" (PDF format).

Connecting the FOMA Terminal to Your PC

Connect the FOMA terminal to your PC with both devices turned on. If the communication setting file is already installed, ⏚ appears on the FOMA terminal screen.
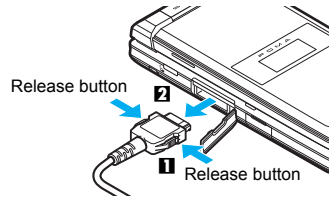
Connecting Using the FOMA USB Cable

FOMA USB cable

Keep side with the characters up

Open external connection terminal cover
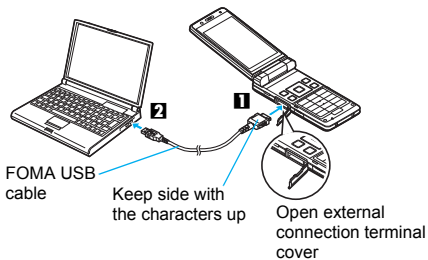
1 Insert the FOMA side of the FOMA USB cable (sold separately) into the external connection terminal on the FOMA terminal (**1**).

2 Insert the PC side of the FOMA USB cable into the PC USB connector (**2**).

How to remove

1 Hold the release button on the FOMA terminal side of the FOMA USB cables (**1**), and pull out from the FOMA terminal (**2**). Pull by force may cause a malfunction.

Release button

Release button

2 Pull the FOMA USB cable out from the PC.

Note

● Connecting the FOMA terminal while charging in the desktop holder is also possible.
● Do not remove the FOMA USB cable during data transmission. Otherwise, transmission disconnection or data loss may occur.

Installing the Communication Setting File

To make data communication by connecting the FOMA terminal to a PC, the communication setting file is required. Install the file before connecting the FOMA terminal for the first time to the PC.

Installing the Communication Setting File (Driver)

● Install on the PC using a user with administrator rights.
● Perform steps 1 to 3 first, and then connect the FOMA terminal to the PC.

4

1
Insert the accompanying CD-ROM into your PC.

● The initial screen appears.

※ Microsoft Internet Explorer 6.0 and above is recommended for activating menus.
Take the steps below if one of the followings happens; none of the recommended applications is installed in your PC, menus do not appear even if the CD-ROM is set, or the initial screen does not appear for unknown reasons.
Click ファイル名を指定して実行 (Run) in スタート (Start) menu, enter *<CD-ROM drivename>:¥SH904i_USB_Driver¥SH904ist.exe*, click *OK* and proceed to step 3.

2
Click データリンクソフト・各種設定ソフト (Data link software/Setting software) → *FOMA*通信設定ファイル (*USB*ドライバ) (FOMA communication setting file (USB driver)) in the *FOMA*通信設定ファイル (*USB*ドライバ) (FOMA communication setting file (USB driver)) column, and then double-click *SH904ist.exe*.

3
Click インストール開始 (Start installation).

● *FOMA SH904i*と*PC*を*FOMA USB*接続ケーブルにて接続してください。(Connect FOMA SH904i to PC with FOMA USB cable.) appears after a set period of time.

4
Connect the FOMA terminal to your PC when *FOMA SH904i*と*PC*を*FOMA USB*接続ケーブルにて接続してください。(Connect FOMA SH904i to PC with FOMA USB cable.) appears.

● The installation in progress screen appears and installation automatically begins.
● Connect the FOMA terminal while the power is on.

5
Click *OK* when *FOMA SH904i*ドライバのインストールが完了しました。(FOMA SH904i driver installation completed.) appears.

● Installation of the communication setting file completes.
● Go to "Confirming the Installed Communication Setting File (Driver)", and confirm the installed communication setting file.

Note

● Installation may take a few minutes.
● When a message prompting to restart the PC appears, follow the instruction and restart.
● If a PC and the FOMA terminal are connected before the communication setting file is installed, another driver may be automatically installed. When this happens, performing the operation in step 2 displays a message saying that the installed driver must be uninstalled. In this case, uninstall the driver following instruction shown on the screen and install the communication setting file.

Confirming the Installed Communication Setting File (Driver)

If the FOMA terminal is not properly recognized by the PC, setup and communications are not possible.
Example: Confirming Windows XP drivers
● The screens are different for Windows Vista and Windows 2000.

1
Click スタート (Start) menu → コントロールパネル (Control panel), and then click the パフォーマンスとメンテナンス (Performance and maintenance) icon → システム (System) icon.

● System properties screen appears.
Windows Vista
● Click スタート (Start) menu → コントロールパネル (Control panel), and then click the システムとメンテナンス (System and maintenance) icon → システム (System) icon.
Windows 2000
● Select スタート (Start) menu → 設定 (Settings) → コントロールパネル (Control panel), and then double-click the システム (System) icon.

2
**Click the ハードウェア (Hardware) tab and then click デバイスマネージャ (Device manager).**

● The device manager screen appears.
Windows Vista
● Click デバイスマネージャ (Device manager) in the タスク (Tasks).

5

3 **Click on each device, and confirm the name of the installed device.**

Confirm that the names of all the installed devices are displayed for *USB (Universal Serial Bus)* コントローラ (USB (Universal Serial Bus) controllers), ポート *(COM*と*LPT)* (Ports (COM & LPT)) and モデム (Modems).
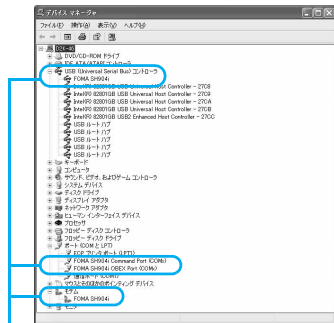
└── If recognized, they will appear in this manner.

● The following drivers are installed when the communication setting file is installed.

Device type	Device name
USB (Universal Serial Bus) controllers **Windows Vista** Universal Serial Bus controllers	● FOMA SH904i
Ports (COM and LPT)	● FOMA SH904i Command Port (COMx)* ● FOMA SH904i OBEX Port (COMx)*
Modem	● FOMA SH904i

* The "x" from "COMx" is a number and differs depending on the PC.

Related Operations

If installation fails or *FOMA SH904i* does not appear in the screen of step 3

● Uninstall the file, and then install it again. Refer to "Uninstalling the Communication Setting File (Driver)" for steps on uninstalling.

Uninstalling the Communication Setting File (Driver)

This section describes how to uninstall the communication setting file.

● When uninstalling the communication setting file, the PC user must have administrator rights. An error will occur when other users attempt to uninstall this software.
Contact the computer manufacturer or Microsoft Corporation for information about configuring the administrator rights setting.

■ **Uninstalling from the accompanying CD-ROM**

Example: Uninstalling from Windows XP
● The screens are different for Windows Vista and Windows 2000.

1 **Insert the accompanying CD-ROM into your PC.**

● When the initial screen (☞P. 5) appears, exit the screen (Close the screen). The initial screen may not appear when the CD-ROM is inserted into the PC depending on your settings.

2 **Click スタート (Start) menu → ファイル名を指定して実行 (Run).**

● The ファイル名を指定して実行 (Run) screen appears.

Windows Vista

● Click スタート (Start) menu → 検索の開始 (Start search).

3 **Enter *<CD-ROM drivename>: ¥SH904i_USB_Driver¥Win2k_XP ¥SH904iui.exe* and click *OK*.**

Windows Vista

● Enter *<CD-ROM drivename>: ¥SH904i_USB_Driver¥WinVista32 ¥SH904iui.exe* and click *OK*.

4 **When *FOMA SH904i*ドライバをアンインストールしますか？ (Uninstall FOMA SH904i driver?) appears, click はい (Yes).**

● Uninstallation of the communication setting file begins.

5 **When *FOMA SH904i*ドライバを削除しました。(FOMA SH904i driver deleted.) appears, click *OK*.**

● Uninstallation of the communication setting file finishes.

■ Uninstalling from the control panel

Example: Uninstalling from Windows XP

1 Click スタート (Start) menu → コントロールパネル (Control panel) and click the プログラムの追加と削除 (Add/Remove programs) icon.

● The プログラムの追加と削除 (Add/Remove programs) screen appears.

Windows Vista

● Click スタート (Start) menu → コントロールパネル (Control panel), and then click the プログラムと機能 (Programs and features) icon. The インストール済みのプログラム (Installed programs) screen appears.

Windows 2000

● Click スタート (Start) menu → 設定 (Settings) → コントロールパネル (Control panel) and double-click the アプリケーションの追加と削除 (Add/Remove application) icon. The アプリケーションの追加と削除 (Add/ Remove application) screen appears.

2 Select *FOMA SH904i USB* and click 変更と削除 (Change/Remove).

Windows Vista

● Double-click *FOMA SH904i USB*.

3 When *FOMA SH904i*ドライバをアンインストールしますか？ (Uninstall FOMA SH904i driver?) appears, click はい (Yes).

● Uninstallation of the communication setting file begins.

4 When *FOMA SH904i*ドライバを削除しました。(FOMA SH904i driver deleted.) appears, click *OK*.

● Uninstallation of the communication setting file finishes.

Communication Settings with the FOMA PC Setup Software

● The explanations in the subsequent steps are based on the settings for Windows XP. The screens are different for Windows Vista and Windows 2000.

FOMA PC Setup Software

Various network settings are required to connect the FOMA terminal to a PC to perform packet transmissions and 64K data communications. Use the FOMA PC Setup Software to easily make the following settings.

Easy settings

Follow the menu to easily create dial-up settings for FOMA data transmissions and optimize the transmission settings.

Transmission setting optimization

This optimizes the network settings in the PC before using *FOMA packet transmission*. Optimize the transmission settings and fully utilize the transmission performance.

Setting the Host (APN)

This configures the host (APN) required for packet transmissions.
Unlike in the case of 64K data communications, the host for FOMA packet transmissions does not use a telephone number. A host name, called an APN (Access Point Name), is registered to the FOMA terminal for each host in advance. The registration number (cid) of the APN is assigned to the host telephone number field and a connection is established. The APN *mopera.ne.jp* is registered in the first cid (cid1) and *mopera.net* is registered in the third cid (cid3) at the time of purchase for connection to mopera or mopera U. Configure a separate APN to connect to another provider or a corporate LAN. cid [Context Identifier] ...

> This number is a number for managing hosts (APNs) used for packet transmission, registered in the FOMA terminal. This is configured when an APN is registered in the FOMA terminal.

Note

● Alternatively, configure packet transmissions and 64K data communications without using the FOMA PC Setup Software (☞P. 18).

● FOMA PC Setup Software of versions earlier than 4.0.0 (earlier version FOMA PC Setup Software) supplied with a FOMA terminal released before this handset are installed in the PC, uninstall the earlier version FOMA PC Setup Software in advance.

From installing the FOMA PC Setup Software to connecting to the Internet

Check the operating environment of the FOMA PC Setup Software (☞P. 2).

STEP 1 Install the FOMA PC Setup Software

Uninstall earlier version FOMA PC Setup Software if installed before installing FOMA PC Setup Software of version 4.0.0. If earlier version FOMA PC Setup Software is installed, FOMA PC Setup Software of version 4.0.0 cannot be installed.

When a screen appears to indicate that earlier version W-TCP Setup Software and earlier version APN Setup Software are installed, refer to P. 10.

STEP 2 Setup preparation

Check the following before making any settings.

- The FOMA terminal is connected to a PC (☞P. 4)
- The FOMA terminal is recognized on the PC (☞P. 5)

If the FOMA terminal is not properly recognized by the PC, setup and communications are not possible. Install the communication setting file (☞P. 4).

STEP 3 Use Easy settings to configure the network

- Packet transmissions using mopera U or mopera (☞P. 11)
- Packet transmissions using other providers (☞P. 13)
- 64K data communications using mopera U or mopera (☞P. 14)
- 64K data communications using other providers (☞P. 14)

Refer to P. 18 and following pages for other settings.

STEP 4 Establish a connection (☞P. 15)

Connect to the Internet.

Installing the FOMA PC Setup Software/FirstPass PC Software

- To install the FOMA PC Setup Software or FirstPass PC Software, the PC user must have administrative rights. An error will occur when other users attempt to install this software.
  Contact the computer manufacturer or Microsoft Corporation for information about configuring the administrator rights setting.
- Before installation, check that the communication setting file (driver) for the FOMA terminal is properly installed on the PC (☞P. 5). In addition, close all other programs. If other programs are running, click キャンセル (Cancel) on the FOMA PC Setup Software screen, close all other programs after saving, then restart installation.

1 Insert the accompanying CD-ROM into your PC.

- The initial screen appears (☞P. 5).

※ Microsoft Internet Explorer 6.0 and above is recommended for activating menus.

Take the steps below if one of the followings happens; none of the recommended applications is installed in your PC, menus do not appear even if the CD-ROM is set, or the initial screen does not appear for unknown reasons.

Click ファイル名を指定して実行 (Run) in スタート (Start) menu, enter *<CD-ROM drivename>:¥FOMA_PCSET¥setup_4.0.0.exe*, click *OK* and proceed to step 3.

2 Click データリンクソフト・各種設定ソフト (Data link software/Setting software) → インストール (Install) in the *FOMA PC*設定ソフト (FOMA PC Setup Software) column.

- When インストール (Install) is clicked, the following warning message may appear. This warning is shown by the security setting of Internet Explorer but does not cause any problem for use.

  ■ **When the ファイルのダウンロード - セキュリティの警告 (File Download - Security Warning) screen appears**

  Click 実行 (Run).
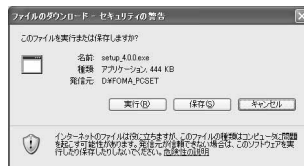
  ■ **When the Internet Explorer - セキュリティの警告 (Internet Explorer - Security Warning) screen appears**

  Click 実行する (Run).

To install FirstPass PC Software

- In the initial screen, click データリンクソフト・各種設定ソフト (Data link software/Setting software) → インストール (Install) in the *FirstPass PC*ソフト (FirstPass PC Software) column.
- A warning screen similar to the one that appears when the FOMA PC Setup Software is installed may appear depending on the security settings of Internet Explorer, but does not cause any problem for use.
- Follow the instructions in *FirstPassManual* found in the FirstPassPCSoft folder of the CD-ROM to install.

Windows 2000

- In the initial screen, click データリンクソフト・各種設定ソフト (Data link software/Setting software) → インストール (Install) in the *FOMA PC*設定ソフト (FOMA PC Setup Software)/*FirstPass PC*ソフト (FirstPass PC Software) column → 開く (Open).

8

3 Click 次へ (Next).

- Refer to "Notes about installing the FOMA PC Setup Software" on P. 10 if a screen appears, stating that an earlier version of W-TCP Setup Software, FOMA Data Transmission Setup Software or FOMA PC Setup Software is already installed.

4 Read the licensing agreement and click はい (Yes) to agree.
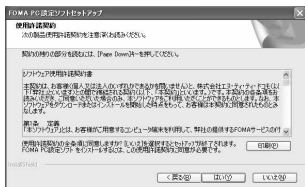
- This is the user licensing agreement for the FOMA PC Setup Software. Clicking いいえ (No) cancels the installation.

Windows Vista

- The setting in step 5 is not necessary. Proceed to step 6.

5 Put a check mark ☑ to タスクトレイに常駐する (Resident in task tray) and click 次へ (Next).

- After setup, the transmission setting optimization icon is added to the task tray (☞P. 16).
  This icon can be removed or added after installation by selecting メニュー (Menu) on the start screen of the FOMA PC Setup Software and then changing the setting of 通信設定最適化をタスクトレイに常駐させる (Add the transmission setting optimization icon to the task tray).

6 Confirm the destination program folder and click 次へ (Next).

- To change the destination program folder, click 参照 (Browse), select a destination for installation and click 次へ (Next).

7 Confirm the program folder name and click 次へ (Next).

- To change, enter a new folder name and click 次へ (Next).

8 Click 完了 (Finish) on the *InstallShield Wizard*の完了 (Installshield Wizard completed) screen.

- The FOMA PC Setup Software restarts. Now configure the settings (☞P. 11).

Notes about installing the FOMA PC Setup Software

● If an earlier version of W-TCP Setup Software, FOMA Data Transmission Software or FOMA PC Setup Software is installed

If an earlier version of W-TCP Setup Software, FOMA Data Transmission Software or FOMA PC Setup Software is installed, a warning screen appears. Click *OK* and uninstall the software using プログラム（アプリケーション）の追加と削除 (Add/Remove programs (application)) before installing the FOMA PC Setup Software (Ver. 4.0.0).

● If キャンセル (Cancel) is clicked during installation

The setup cancellation screen appears if キャンセル (Cancel) or いいえ (No) is clicked during setup to cancel installation. To continue with the installation, click いいえ (No). To cancel the installation, click はい (Yes).

Checking the FOMA PC Setup Software version

In the startup screen of the FOMA PC Setup Software, select メニュー (Menu) → バージョン情報 (Version information) to view version information.

Uninstalling the FOMA PC Setup Software/FirstPass PC Software

Before uninstalling the software

Return the transmission settings changed for the FOMA back to their original settings before uninstalling the FOMA PC Setup Software.

● To uninstall the FOMA PC Setup Software or FirstPass PC Software, the PC user must have administrative rights. An error will occur when other users attempt to uninstall this software.
Contact the computer manufacturer or Microsoft Corporation for information about configuring the administrator rights setting.

1 Right-click 📷 in the task tray and click 終了 (Exit).

Right-click
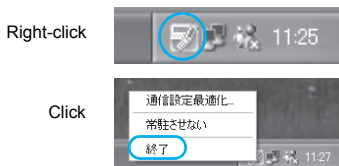
Click

2 End any programs that are running.

Uninstalling the software

1 Click スタート (Start) menu → コントロールパネル (Control panel) and click the プログラムの追加と削除 (Add/Remove programs) icon.

● The プログラムの追加と削除 (Add/Remove programs) screen appears.

Windows Vista

● Click スタート (Start) menu → コントロールパネル (Control panel) → プログラム (Programs) → プログラムと機能 (Programs and features). The インストール済みのプログラム (Installed programs) screen appears.

Windows 2000

● Click スタート (Start) menu → 設定 (Settings) → コントロールパネル (Control panel) and double-click the アプリケーションの追加と削除 (Add/Remove application) icon. The アプリケーションの追加と削除 (Add/Remove application) screen appears.

2 Select *NTT DoCoMo FOMA PC* 設定ソフト (NTT DoCoMo FOMA PC Setup Software) and click 削除 (Remove).

Select *NTT DoCoMo FOMA PC* 設定ソフト (NTT DoCoMo FOMA PC Setup Software).

Click here

Windows Vista

● Double-click *NTT DoCoMo FOMA PC* 設定ソフト (NTT DoCoMo FOMA PC Setup Software).

To uninstall FirstPass PC Software

● Select *FirstPass PC* ソフト (FirstPass PC Software) and click 変更と削除 (Change/Remove).

Uninstalling the software

3 **Confirm the program name to delete and click はい (Yes).**

- Uninstallation of the FOMA PC Setup Software begins.
- The below screen will appear when attempting to uninstall, while FOMA PC Setup Software or Transmission Setting Optimization Software are running. Cancel the uninstallation program and close the running programs.
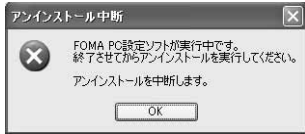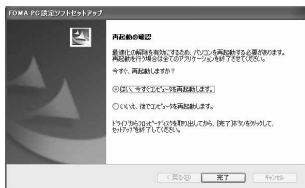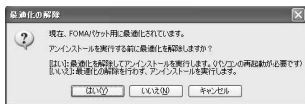

4 **Click 完了 (Complete).**

- Uninstallation of the FOMA PC Setup Software is completed.

Disabling transmission setting optimization (for Windows XP and Windows 2000 only)

- The screen below appears when the transmission settings are optimized.
- Click はい (Yes) to disable optimization. The transmission setting optimization is disabled after the PC is restarted.

Setting Up Communication

Use the FOMA PC Setup Software to easily create a dial-up setting for FOMA data communications.

- Check that the FOMA terminal is correctly connected to the PC before making any settings (☞ P. 4).

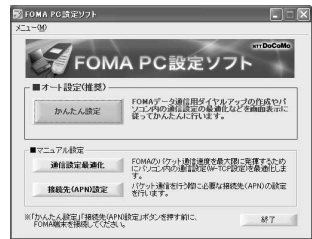**1** **Start the FOMA PC Setup Software.**
Windows XP

- Select スタート (Start) menu → すべてのプログラム (All programs) → **FOMA PC**設定ソフト (FOMA PC Setup Software) → **FOMA PC**設定ソフト (FOMA PC Setup Software).

Windows Vista

- Select スタート (Start) menu → すべてのプログラム (All programs) → メンテナンス (Maintenance) → **FOMA PC**設定ソフト (FOMA PC Setup Software).

Windows 2000

- Select スタート (Start) menu → プログラム (Programs) → **FOMA PC**設定ソフト (FOMA PC Setup Software) → **FOMA PC**設定ソフト (FOMA PC Setup Software).

Easy Settings

Communication setting

1 **Start the FOMA PC Setup Software and click メニュー (Menu) → 通信設定 (Communication setting).**

2 **Select 通信ポート指定 (Specify communication port) and click *OK*.**

- Normally, select 自動設定（推奨） (Automatic setting (recommended)). The connected FOMA terminal is automatically specified.
- To specify a COM port, select *COM*ポート指定 (Specify COM port) and specify a COM port number (COM 1 to 99) to which the FOMA terminal is connected.


Note

- Refer to "Confirming the Installed Communication Setting File (Driver)" on P. 5 for the checking method of COM ports.
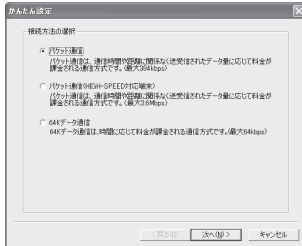
Selecting packet transmission from Easy settings (with mopera U or mopera)

The setting is made for high-speed packet transmissions at a maximum speed of 384 kbps. For the provider, use mopera U or mopera, the DoCoMo Internet connection service.
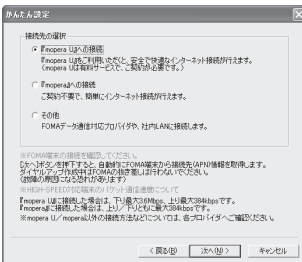
1 **Start the FOMA PC Setup Software and click かんたん設定 (Easy settings).**
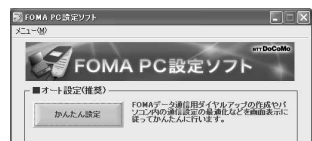
2 Select パケット通信 (Packet transmission) and click 次へ (Next).

3 Select 『*mopera U*』への接続 (mopera U connection) or 『*mopera*』への接続 (mopera connection) and click 次へ (Next).


- mopera U is a paid service that requires subscription. A subscription confirmation message appears when mopera U is selected.
- Using another provider (☞P. 13)

4 Click *OK* on the *FOMA* 端末設定取得 (FOMA terminal setting acquisition) screen.

- The Host (APN) setting is acquired from the FOMA terminal connected to the PC. Wait until acquisition is completed.

5 Enter the connection name and click 次へ (Next).

- FOMA SH904i supports only PPP connections. Select *PPP*接続 (PPP connection) for connection.
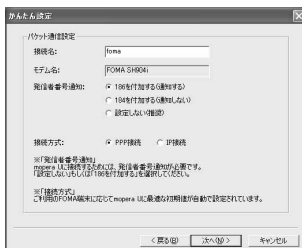
- Enter a name in the 接続名 (Connection name) field.

- The following single-byte characters cannot be entered.
  ¥ / : ＊ ? ! < > | ˮ
- To connect to mopera U and mopera, Notify caller ID must be enabled. Select 設定しない (No) or 186を付加する (Add 186).

6 Click 次へ (Next).

- When using mopera U or mopera, ユーザー *ID* (User ID) and パスワード (Password) can be left blank to connect.
- For Windows XP and Windows 2000, specify the users to whom rights are granted.
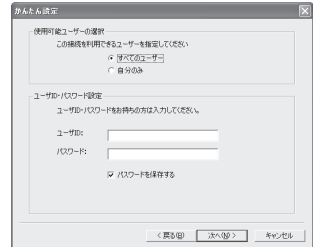
Windows Vista

- The setting in step 7 is not necessary. Proceed to step 8.

7 Make sure that 最適化を行う (Optimize) is checked ☑ and click 次へ (Next).

- The transmission settings on the PC are optimized for using FOMA packet transmission. This screen does not appear if the W-TCP setting has already been optimized.

8 Confirm the setting information and click 完了 (Finish).

- The settings appear in a list. Check that the settings are correct.
  If デスクトップにダイヤルアップのショートカットを作成する (Create dial-up shortcut on desktop) is checked ☑, a shortcut is created automatically.
  To change the settings, click 戻る (Back).

9 Click *OK* on the 完了 (Finish) screen.

- Restart the PC to enable the changes to the settings. Click はい (Yes) when a message appears prompting to restart the PC.
- Sending and receiving transmissions (☞P. 15)

■ Selecting packet transmission from Easy settings (with other providers)

The setting is made for high-speed packet transmissions at a maximum speed of 384 kbps.

1 Follow steps 1 to 4 of "Selecting packet transmission from Easy settings (with mopera U or mopera)" on P. 11.

- Select その他 (Other) for the host in step 3.

2 Enter the connection name and click 接続先 *(APN)* 設定 (Host (APN) settings).

- Enter a name in the 接続名 (Connection name) field.
- The following single-byte characters cannot be entered.
  ¥ / : ＊ ? ! < > | "
- Select whether to enable Notify caller ID when dialing up. For details on the Notify caller ID setting, follow instructions provided by your provider.

Advanced settings (TCP/IP settings)

- Click 詳細情報の設定 (Advanced) and the IP Address/Name server setting screen appears. To enter dial-up information, such as the provider or corporate LAN, register the necessary addresses according to the instructions.

3 Configure the host (APN).

- The default setting for the first cid is *mopera.ne.jp*, the APN used to connect to mopera. The default setting for the third cid is *mopera.net*, the APN used to connect to mopera U.

  ### 1 Click 追加 (Add).
  The 接続先 *(APN)* の追加 (Add host (APN)) screen appears.

2 Properly enter the FOMA packet transmission supported host name (APN) for the provider in the 接続先 *(APN)* (Host (APN)) field, and click *OK*.
  The 接続先 *(APN)* 設定 (Host (APN) settings) screen reappears.

- Enter only single-byte alphanumeric characters, hyphen (-) or period (.) for 接続先 *(APN)* (Host (APN)).
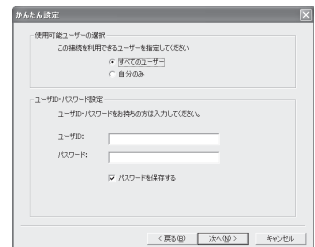- ※ Register up to ten cids.

4 Click *OK* on the 接続先 *(APN)* 設定 (Host (APN) settings) screen.

- The screen in step 2 reappears. The host (APN) set in step 3 appears in 接続先 *(APN)* の選択 (Selected host (APN)).

5 Check the host name (APN) in 接続先 *(APN)* の選択 (Selected host (APN)) and click 次へ (Next).

6 Enter the user ID and password, and click 次へ (Next).

- Enter the user ID and password provided by the provider while making sure that the use of upper and lower case characters is correct.
- For Windows XP and Windows 2000, specify the users to whom rights are granted.

Windows Vista

- The setting in step 7 is not necessary. Proceed to step 8.

7 Make sure that 最適化を行う (Optimize) is checked ☑ and click 次へ (Next).

- The transmission settings on the PC are optimized for using FOMA packet transmission. This screen does not appear if the W-TCP setting has already been optimized.

Continued on next page ▶▶

8 Confirm the setting information and click 完了 (Finish).

● The settings appear in a list. Check that the settings are correct.
If デスクトップにダイヤルアップのショートカットを作成する (Create dial-up shortcut on desktop) is checked ☑, a shortcut is created automatically.
To change the settings, click 戻る (Back).

9 Click *OK* on the 完了 (Finish) screen.

● Restart the PC to enable the changes to the settings. Click はい (Yes) when a message appears prompting to restart the PC.
● Sending and receiving transmissions (☞P. 15)

■ Selecting 64K data communications from Easy settings (with mopera U or mopera)

The setting is made for 64K data communications. For the provider, use mopera U or mopera, the DoCoMo Internet connection service.

1 Follow steps 1 to 4 of "Selecting packet transmission from Easy settings (with mopera U or mopera)" on P. 11.

● Select *64K* データ通信 (64K data communications) for the connection method in step 2.

2 Enter the connection name, select a modem and click 次へ (Next).

● Enter a name in the 接続名 (Connection name) field.
● The following single-byte characters cannot be entered.
¥ / : ＊ ? ! < > | "
● Make sure that *FOMA SH904i* is set in モデムの選択 (Selected modem).
● To connect to mopera U and mopera, Notify caller ID must be enabled. Select 設定しない (No) or 186を付加する (Add 186).

3 Click 次へ (Next).

● When using mopera U or mopera, ユーザー *ID* (User ID) and パスワード (Password) can be left blank to connect.
● For Windows XP and Windows 2000, specify the users to whom rights are granted.
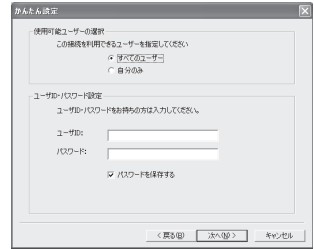
4 Confirm the setting information and click 完了 (Finish).

● The settings appear in a list. Check that the settings are correct.
If デスクトップにダイヤルアップのショートカットを作成する (Create dial-up shortcut on desktop) is checked ☑, a shortcut is created automatically.
To change the settings, click 戻る (Back).

5 Click *OK* on the 完了 (Finish) screen.

● Sending and receiving transmissions (☞P. 15)

■ Selecting 64K data communications from Easy settings (with other providers)

The setting is made for 64K data communications.

1 Follow steps 1 to 4 of "Selecting packet transmission from Easy settings (with mopera U or mopera)" on P. 11.

● Select *64K* データ通信 (64K data communications) in step 2 and その他 (Other) in step 3.

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2 Make the settings and click 次へ (Next).

- To connect to a provider with an ISDN synchronous 64K access point, make the following settings when creating a dial-up setting.
  - Connection name:
    Enter a connection name.
  - Selected modem: FOMA SH904i
  - Phone number:
    Enter the phone number provided by the provider.
- The following single-byte characters cannot be entered for the connection name.
  ¥ / : ＊ ? ! < > | "
- The following characters can be entered for the phone number.
  0 1 2 3 4 5 6 7 8 9 A B C D P T W a b c d p t w !
  @ $ - . ( ) + ＊ # , & and single-byte space
- Select whether to enable Notify caller ID when dialing up. For details on the Notify caller ID setting, follow instructions provided by your provider.

Advanced settings (TCP/IP settings)

- Click 詳細情報の設定 (Advanced) and the IP Address/Name server setting screen appears. To enter dial-up information, such as the provider or corporate LAN, register the necessary addresses according to the instructions.

3 Enter the User ID and password and click 次へ (Next).

- Enter the User ID and password provided by the provider while making sure that the use of upper and lower case characters is correct.
- For Windows XP and Windows 2000, specify the users to whom rights are granted.
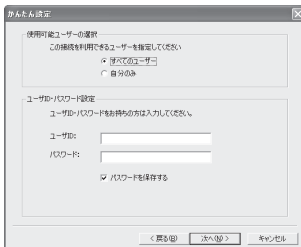
4 Confirm the setting information and click 完了 (Finish).

- The settings appear in a list. Check that the settings are correct.
  If デスクトップにダイヤルアップのショートカットを作成する (Create dial-up shortcut on desktop) is checked ☑, a shortcut is created automatically.
  To change the settings, click 戻る (Back).

5 Click *OK* on the 完了 (Finish) screen.

Executing the Configured Transmission

1 Double-click the connection icon on the desktop.

- The connection screen appears.
- The name of the connection icon is the connection name entered in the earlier setting.

2 Click ダイヤル (Dial).

- The connection starts.

- When using mopera U or mopera, ユーザー名 (User name) and パスワード (Password) can be left blank to connect.
- If a user name and password are entered in step 3 on P. 15, that information is entered automatically into the ユーザー名 (User name) and パスワード (Password) fields.
- When using other providers or dial-up to connect, enter the ユーザー名 (User name) and パスワード (Password) and click ダイヤル (Dial).
- When Save user name and password field is checked ☑, the user name and password do not need to be entered next time.

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● When there is no connection icon on the desktop
<Windows XP>
Click スタート (Start) menu → すべてのプログラム (All programs) → アクセサリ (Accessories) → 通信 (Communications) → ネットワーク接続 (Network connections).
<Windows Vista>
Click スタート (Start) menu → 接続先 (Connect to).
<Windows 2000>
Click スタート (Start) menu → プログラム (Programs) → アクセサリ (Accessories) → 通信 (Communications) → ネットワークとダイヤルアップ接続 (Network and dial-up connections).

● A screen appears on the FOMA terminal showing the calling for packet transmission or dialing for 64K data communications.

● The transmission speed shown on the PC may differ from the actual transmission speed.

■ Disconnecting

Simply closing the browser may not disconnect the connection. Follow the steps below to properly disconnect.

1 **Click** 📲 **in the task tray and click 切断 (Disconnect).**

● The connection is disconnected.
Windows Vista

● Click スタート (Start) menu → 接続先 (Connect to) → ネットワークに接続 (Connect to a network), select the current dial-up connection and click 切断 (Disconnect).

Disabling transmission setting optimization (for Windows XP and Windows 2000 only)
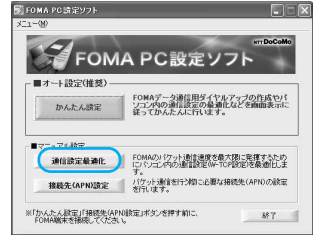
■ Transmission setting optimization function

Transmission Setting Optimization Software is a TCP parameter setup tool used to optimize the TCP/IP transmission capacity when sending and receiving packet transmissions over the FOMA network. Configure the transmission settings with this software to fully utilize the transmission performance of the FOMA terminal.

■ Enabling and disabling optimization

● For Windows XP

On Windows XP, configuring optimization for each dial-up setting is possible.

1 **Start the FOMA PC Setup Software and click 通信設定最適化 (Transmission setting optimization).**

When optimizing the transmission setting in the task tray

● Click 📲 in the task tray to start the transmission setting optimization.

2 **Perform the next operation.**
When the system setting is not optimized

● The following screen appears.
Select *384 kbps* and click 最適化を行う (Optimize).
The transmission setting optimization (New dial-up) screen appears.
Select the dial-up setting to optimize and click 実行 (Run). Optimization of the system setting and dial-up setting begins.
Follow the instructions on the screen to restart the PC. After the PC is restarted, optimization of the system setting is enabled.
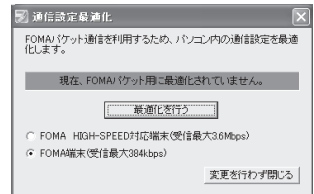
When the system setting is optimized

● The following screen appears.
To change the dial-up, select and optimize the dial-up to be set.
The changes to the settings take effect after the PC is restarted.

Disabling optimization

● To disable the setting in order to send and receive the transmissions without the use of the FOMA terminal, take off the check mark from the dial-up connection to be disabled and click 実行 (Run). The restart confirmation screen appears. End all currently running programs and restart the PC to disable the optimization setting.

● For Windows 2000

1 Perform the operation in step 1 of "For Windows XP".

2 Perform the next operation.

When the system setting is not optimized

● The following screen appears.
Select **384 kbps**, click 最適化を行う (Optimize), end all currently running programs and restart the PC to enable the optimization setting.
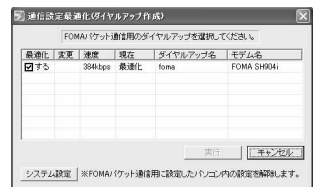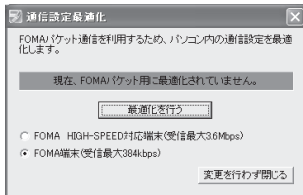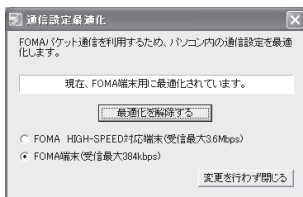

When the system setting is optimized

● The following screen appears.
Click 最適化を解除する (Disable optimization) → **OK** to disable the setting, for example, in order to send and receive transmissions without the use of the FOMA terminal. The restart confirmation screen appears. End all currently running programs and restart the PC to disable the optimization setting.

Host (APN) Settings

■ Reading Host (APN) information from the FOMA terminal

Click 接続先 *(APN)* 設定 (Host (APN) settings) and on the retrieve setting from FOMA terminal

screen, click **OK**. The connected FOMA terminal is accessed automatically and the registered host (APN) information is read (This operation is not performed if the FOMA terminal is not connected). The setting information can also be read by selecting from the toolbar ファイル (File) → *FOMA* 端末から設定を取得 (Retrieve setting from FOMA terminal).

■ Adding, editing or deleting a host (APN)

● To add a host (APN)
Click 追加 (Add) on the host (APN) settings screen.

● To edit a registered host (APN)
On the host (APN) settings screen, select the host (APN) and click 編集 (Edit).

● To delete a registered host (APN)
On the host (APN) settings screen, select the host (APN) and click 削除 (Delete).
● The host (APN) registered to the first and third cid cannot be deleted. When the third number (cid) is selected and 削除 (delete) is clicked, the number is not actually deleted. The number returns to *mopera.net*.

■ Saving to a file
Select ファイル (File) from the toolbar to back up the host (APN) settings registered to the FOMA terminal or to save settings being edited.

■ Loading settings from a file
To load saved host (APN) settings in order to re-edit them or write them onto the FOMA terminal, select the appropriate function from the ファイル (File) menu on the toolbar.

■ Writing host (APN) information onto the FOMA terminal

To write the indicated host (APN) setting to the FOMA terminal, click **FOMA** 端末へ設定を書き込む (Write settings onto FOMA terminal) on the Host (APN) setting screen.

■ Creating dial-up settings

On the host (APN) settings screen, select an added or edited host (APN) and click ダイヤルアップ作成 (New dial-up). A screen confirming the writing of the setting to the FOMA terminal appears. Click はい (Yes). After the setting is written to the host (APN), the パケット通信用ダイヤルアップの作成 (New dial-up for packet transmission) screen appears.

Enter a connection name and click ユーザ**ID**・パスワードの設定 (Set user ID and password) (Can be left blank to connect when using mopera U or mopera).

● For Windows XP and Windows 2000

Enter a ユーザ**ID** (User ID) and パスワード (Password), specify the users to whom rights are granted and click **OK**.

● For Windows Vista

Enter a ユーザ**ID** (User ID) and パスワード (Password), and click **OK**.

If the IP and DNS information from your provider are available, click 詳細情報の設定 (Advanced) on the new dial-up for packet transmission screen, enter the necessary information and click **OK**.

After entering the information, click **OK** → **OK** → **FOMA** 端末へ設定を書き込む (Write settings onto FOMA terminal), confirm that the old setting is to be overwritten and then write the settings.

Communication Settings Without the FOMA PC Setup Software

Setting Communications for Packet Transmissions and 64K Data Communications

This section describes how to set up packet transmission and 64K data communications without using the FOMA PC Setup Software.
To make the settings, communication software for entering AT commands are required. "Hyper Terminal", which is included as standard with Windows, is used here.

- The flow for setting up with use of AT commands is as follows.
- To use 64K data communications, there is no host (APN) setting.
- Windows Vista is not compatible with "Hyper Terminal". Use Windows Vista compatible software to set up communications (follow the instructions for the software).

Start up communication software that supports AT commands (steps 2 to 5)

| Set the host (APN) (☞steps 6 and 7 on P. 19) | Send/Not send caller ID (☞P. 20) | Set the Dial-up Network (☞P. 21) |
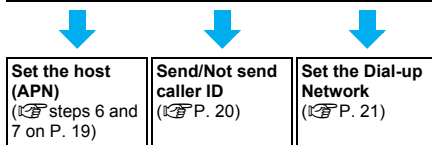
End communication software (☞step 7 on P. 20)

Note

- Install the communication setting file before making settings for packet transmission and 64K data communications (☞P. 4).
- AT commands are commands for controlling the modem. The FOMA terminal is compliant with AT commands and also supports some extended commands, as well as some unique AT commands.
- Making host (APN) settings is not necessary when using mopera U or mopera, the DoCoMo Internet connection service, since it is set as the default.
- Set Notify caller ID as necessary (When using mopera U or mopera, set **Send**). The default setting is **Not send**.
- Set other settings as necessary. Use is possible with the default settings.

Setting the Host (APN)

Set the host (APN) for using packet transmission. Register up to ten numbers. Hosts are managed using cid numbers from 1 to 10 (☞P. 19). The default setting for the first cid is *mopera.ne.jp*, the APN used to connect to mopera. The setting for the third cid is *mopera.net*, the APN used to connect to mopera U. Save hosts (APN) to cid2 or 4 to 10.

● The registered cid is the connection number set in the dial-up connection settings.
● Contact the Internet service provider or network administrator for hosts (APNs) other than mopera U or mopera.

Example: For Windows XP
● The screens are different for Windows 2000.

1 **Connect the FOMA terminal to your PC.**

2 **Select スタート (Start) menu → すべてのプログラム (All programs) → アクセサリ (Accessories) → 通信 (Communications) → ハイパーターミナル (Hyper terminal).**

● Hyper terminal starts up.
Windows 2000

● Select スタート (Start) menu → プログラム (Programs) → アクセサリ (Accessories) → 通信 (Communications) → ハイパーターミナル (Hyper terminal).

3 **Enter a name (such as a host name) in the 名前 (Name) field and click OK.**

● The advanced settings screen for phone number appears.

4 **Select *FOMA SH904i* from 接続方法 (Connection method), enter a temporary number in 電話番号 (Phone number) field that does not actually exist (such as *0*), and click OK.**

● For the area code, the default setting in Windows (such as *03*), appears. Set any number for the area code, since it is not related to the host (APN) setting.

5 **When the connection screen appears, click キャンセル (Cancel).**

6 **Enter host (APN) and press ↵.**
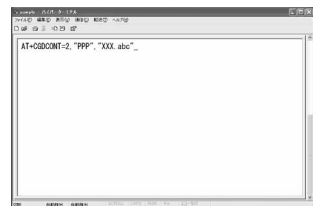
● Enter host (APN) in the format:
AT+CGDCONT=<cid>, "PPP","APN" (☞P. 32).
<cid> : Enter 2 or any of 4 to 10.
"PPP" : Enter "PPP" as is.
"APN" : Enter the host (APN) enclosed in " ".
● If *OK* appears, the APN is set successfully.
● To check the current host (APN) setting, enter AT+CGDCONT?↵, and the settings appear in a list.

When nothing appears on the screen when AT commands are entered

- ATE1⏎

  Refer to P. 35 for details on AT commands.

When resetting APN settings using AT commands

- AT+CGDCONT=⏎   : To reset all the cids
- AT+CGDCONT=<cid>⏎: To reset only specific cids

When reset, <cid>=1 returns to "mopera.ne.jp" (default setting), <cid>=3 returns to "mopera.net" (default setting) and settings for <cid>=2 or 4 to 10 are unregistered.

When confirming APN settings using AT commands

- AT+CGDCONT?⏎

  Refer to P. 32 for details on AT commands.
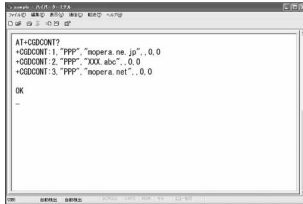
7 **Confirm that *OK* appears and select ハイパーターミナルの終了 (Exit hyper terminal) from the ファイル (File) menu.**
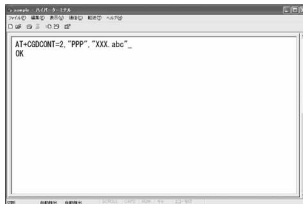
- Hyper terminal ends.
- セッション×××を保存しますか？ (Save session xxx?) appears. However there is no need to save.

Setting Send/Not Send Caller ID

Handset number (Caller ID) is important personal information. Use caution when setting.

1 **Follow steps 1 to 5 of "Setting the Host (APN)" on P. 19.**

2 **Set either Send caller ID (186) or Not send caller ID (184) during packet transmission.**
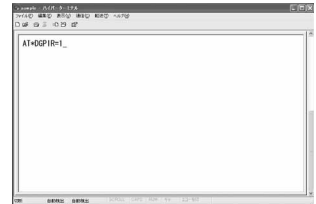
- Enter in the format: "AT*DGPIR=<n>" (☞P. 31).

  AT*DGPIR=1⏎:

  Adds "184" when packet transmission is established with the host (APN).

  AT*DGPIR=2⏎:

  Adds "186" when packet transmission is established with the host (APN).

3 **Confirm that *OK* appears.**
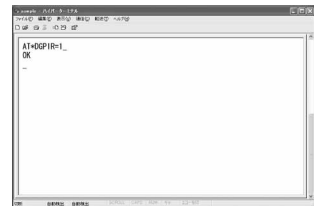
■ Send/Not send setting on dial-up networks

Adding "186" (Send) and "184" (Not send) to the host number in dial-up networks is also possible. Setting "186" (Send) and "184" (Not send) in both the *DGPIR command setting and the dial-up network setting results in the following.

Dial-up network setting (when <cid>=1)	Using the ∗DGPIR command Send/Not send setting	Send/Not send caller ID
∗99∗∗∗1#	Not set (default setting)	Send
	Not send	Not send
	Send	Send
184∗99∗∗∗1#	Not set (default setting)	Not send (dial-up network "184" is given priority)
	Not send	
	Send	
186∗99∗∗∗1#	Not set (default setting)	Send (dial-up network "186" is given priority)
	Not send	
	Send	

- Enter "AT∗DGPIR=0" to return "186" (Send)/"184" (Not send) to **Not set** (default setting).
- Set **Send** for sending caller ID when using mopera U or mopera, the DoCoMo Internet connection service.

Setting the Dial-up Network

Set the host and TCP/IP protocol. Contact the Internet service provider or network administrator for more information on settings.

■ Hosts

For packet transmissions, set the host (APN) in advance. Register numbers (cid) 1 to 10 for the host (APN) in advance, to enable using packet transmission by specifying control numbers. Host (APN) settings are the equivalent to a phonebook for packet transmissions on a PC. Compared to normal phonebook entries, they appear as follows.

In phonebook	In Packet transmission setting
Registered number (memory number)	Control numbers (cids) 1 to 10
Other party's name	Host name (host (APN))
Other party's phone number	∗99∗∗∗<cid>#

For example, when the mopera host (APN), **mopera.ne.jp**, is registered for cid1, connecting to mopera is possible by specifying the host number "∗99∗∗∗1#". Other registered cids can be used similarly.

∗99∗∗∗1# : Connects to host (APN) registered to cid1. Alternatively, connect with just ∗99#.

∗99∗∗∗2# : Connects to host (APN) registered to cid2.
to
∗99∗∗∗10# : Connects to host (APN) registered to cid10.

As the default setting, **mopera.ne.jp**, the APN used to connect to mopera is registered for cid1, and **mopera.net**, the APN used to connect to mopera U is registered for cid3. When connecting to a corporate LAN or Internet service providers other than mopera or mopera U, register the host (APN) using cid2 or cid4 to 10 ().
For 64K data communications, enter the access point phone number supplied by the Internet service provider or network administrator.

- Contact the Internet service provider or network administrator for more information on settings.
- Access point phone number is "∗8701" for mopera U and "∗9601" for mopera when using 64K data communications.
- When using packet transmissions, enter "∗99∗∗∗3#" for mopera U and "∗99∗∗∗1#" for mopera (default setting).

■ Setting a dial-up network on Windows XP

On Windows XP, use ネットワークの接続ウィザード (Network connection wizard) to set both the host (APN) and TCP/IP protocol.
Example: Using <cid>=3 to connect to mopera U, the DoCoMo Internet connection service

- Subscription to mopera U requires a charge.

1 Click スタート (Start) menu → すべてのプログラム (All programs) → アクセサリ (Accessories) → 通信 (Communications) → ネットワーク接続 (Network connections).
- The network connections screen appears.

2 Click 新しい接続を作成する (Create new connection) in ネットワークタスク (Network tasks).
- A new connection wizard screen appears.

3 Click 次へ (Next).
- The screen to select network connection type appears.

4 Select インターネットに接続する (Dial-up to the Internet) and click 次へ (Next).
- A preparation screen appears.

5 Select 接続を手動でセットアップする (Manually set up Internet connection) and click 次へ (Next).
- The Internet connection screen appears.

6 Select ダイヤルアップモデムを使用して接続する (Connect through phone line and modem) and click 次へ (Next).
- A screen to specify the device appears.

7 **Select モデムー _FOMA SH904i (COMx)_ (Modem - FOMA SH904i (COMx)) and click 次へ (Next).**
- A number will replace "x".
- The connection name screen appears.
- Screen does not appear when no modems other than _FOMA SH904i_ are installed.

8 **Enter a connection name in the _ISP名_ (ISP name) field and click 次へ (Next).**
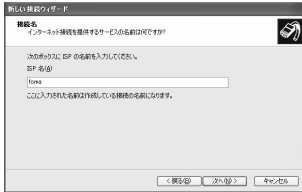
- The phone number to dial screen appears.
- The _ISP名_ (ISP name) is the name of the Internet service provider.

9 **Enter the host number in 電話番号 (Phone number) field and click 次へ (Next).**
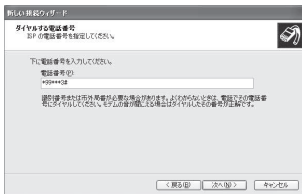
- The Internet account connection information screen appears.
- To connect to <cid>=3 (mopera U), enter "∗99∗∗∗3#".

10 **Set options in the screen, as shown below and click 次へ (Next).**
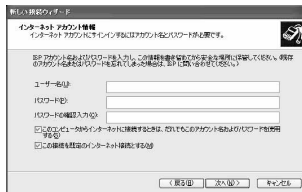
- The new connection wizard completed screen appears.
- When using mopera U or mopera, ユーザー名 (User name) and パスワード (Password) can be left blank to connect.
- When connecting to the Internet using a provider other than mopera U or mopera, enter the user name and password for the provider in the ユーザー名 (User name) and パスワード (Password) fields.

11 **When 新しい接続ウィザードの完了 (New connection wizard completed) appears, click 完了 (Finish).**
- The newly created connection wizard appears.

12 **Confirm the setting information and click キャンセル (Cancel).**
- Only confirming the settings without actually connecting.

13 **Select the icon for host created and select プロパティ (Properties) from the ファイル (File) menu.**
- Properties screen for the host appears.

14 **Confirm all the settings in the 全般 (General) tab.**

- When two or more modems are connected to the PC, make sure that _FOMA SH904i_ in 接続 の方法 (Connect using) shows ☑. When ☐ appears instead, change to ☑. For modems other than _FOMA SH904i_, change ☑ to ☐.
- Confirm that ダイヤル情報を使う (Use dialing rules) shows ☐. When ☑ appears instead, change to ☐.

15 **Click the ネットワーク (Networking) tab, confirm all settings and click 設 定 (Settings).**

- Set 呼び出すダイヤルアップサーバーの種類 (Type of dial-up server to call) to _PPP: Windows95/98/NT4/2000, Internet_.

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- In the この接続は次の項目を使用します (Components checked are used by this connection) field, ☑ should appear only for インターネットプロトコル *(TCP/IP)* (Internet protocol (TCP/IP)). Leave *QoS* パケットスケジューラ (QoS packet scheduler) settings as is. No changes are necessary.
- The PPP setting screen appears.
- For TCP/IP settings used for connecting to an Internet service provider, confirm with the Internet service provider or network administrator.

16 **Check all options to show □ and click *OK*.**
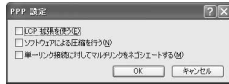
- Properties screen of the host reappears.

17 **Click *OK* on the プロパティ (Properties) screen.**
- The host and TCP/IP protocol are set.
- Refer to P. 26 for details on connecting to dial-up network.

■ Setting a dial-up network on Windows Vista

On Windows Vista, use ネットワークの接続ウィザード (Network connection wizard) to set the host (APN).
Example: Using <cid>=3 to connect to mopera U, the DoCoMo Internet connection service
- Subscription to mopera U requires a charge.

1 **Click スタート (Start) menu → 接続先 (Connect to).**
- The connect to a network screen appears.

2 **Click 接続またはネットワークをセットアップします (Set up a connection or network).**
- The connect to a network screen appears.

3 **Click ダイヤルアップ接続をセットアップします (Set up a dial-up connection) → 次へ (Next).**
- When two or more modems are connected to the PC, どのモデムを使いますか？ (Which modem do you want to use?) appears. Select *FOMA SH904i*.
- The set up a dial-up connection screen appears.

4 **Enter the host number in ダイヤルアップの電話番号 (Dial-up phone number) field and a connection name in the 接続名 (Connection name) field, and then click 接続 (Connect).**
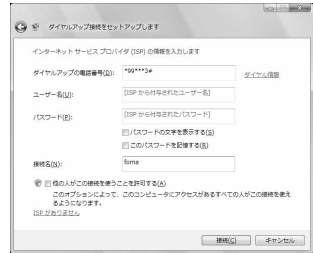
- To connect to <cid>=3 (mopera U), enter "＊99＊＊＊3#" in ダイヤルアップの電話番号 (Dial-up phone number) field.
- When using mopera U or mopera, ユーザー名 (User name) and パスワード (Password) can be left blank to connect.
- When connecting to the Internet using a provider other than mopera U or mopera, enter the user name and password for the provider in the ユーザー名 (User name) and パスワード (Password) fields.

5 **When (接続名) に接続中 (Connecting to (Connection name)) appears, click スキップ (Skip).**
- Only confirming the settings without actually connecting.
- If スキップ (Skip) is not clicked, the network is connected to the Internet.

6 **Click 接続をセットアップします (Set up a connection), and click 閉じる (Close).**

7 **Click スタート (Start) → ネットワーク (Network), and then click ネットワークと共有センター (Network and sharing center) → ネットワーク接続の管理 (Manage network connections).**
- The network connections screen appears.

8 **Select and right-click the icon for host created and select プロパティ (Properties).**
- Properties screen appears.

9 **Confirm all the settings in the 全般 (General) tab.**
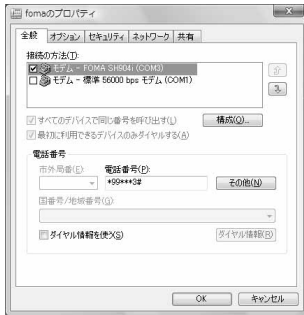
- When two or more modems are connected to the PC, make sure that *FOMA SH904i* in 接続の方法 (Connect using) shows ☑. When ☐ appears instead, change to ☑. For modems other than *FOMA SH904i*, change ☑ to ☐.
- Confirm that ダイヤル情報を使う (Use dialing rules) shows ☐. When ☑ appears instead, change to ☐.

10 **Click the ネットワーク (Networking) tab and confirm all settings.**
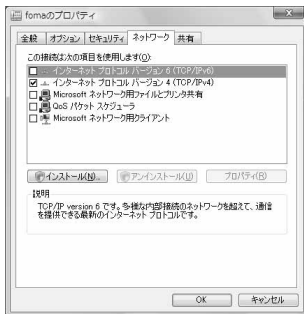
- In the この接続は次の項目を使用します (Components checked are used by this connection) field, ☑ should appear only for インターネットプロトコルバージョン 4 *(TCP/IPv4)* (Internet protocol version 4 (TCP/IPv4)). Set *QoS*パケットスケジューラ (QoS packet scheduler) according to the instructions of the provider.

11 **Click the オプション (Option) tab and click PPP設定 (PPP setting).**

- The PPP setting screen appears.

12 **Check all options to show ☐ and click *OK*.**

- The option setting screen reappears.

13 **Click *OK*.**

- The host and TCP/IP protocol are set.
- Refer to P. 26 for details on connecting to dial-up network.

Setting a dial-up network on Windows 2000

On Windows 2000, use ネットワークの接続ウィザード (Network Connection Wizard) to set both the host (APN) and TCP/IP protocol.
Example: Using <cid>=3 to connect to mopera U, the DoCoMo Internet connection service
- Subscription to mopera U requires a charge.

1 **Click スタート (Start) menu → プログラム (Programs) → アクセサリ (Accessories) → 通信 (Communications) → ネットワークとダイヤルアップ接続 (Network and dial-up connections).**

- The network and dial-up connections screen appears.

2 **Double-click the 新しい接続の作成 (Create new connection) icon.**

- The location information screen appears.
- This screen appears the first time the 新しい接続の作成 (Create new connection) icon is double-clicked.
  For the second and subsequent times, proceed to step 5.

3 **Enter 市外局番 (Area code) and click *OK*.**

- The phone and modem options screen appears.

4 **Click *OK*.**

- A network connection wizard screen appears.

5 **Click 次へ (Next).**
- The screen to select network connection type appears.

6 **Select インターネットにダイヤルアップ接続する (Dial-up to the Internet) and click 次へ (Next).**
- A wizard startup screen appears.

7 **Select インターネット接続を手動で設定するか、またはローカルエリアネットワーク *(LAN)* を使って接続します (Connect to Internet manually or through local area network (LAN)) and click 次へ (Next).**
- The screen to select the Internet appears.

8 **Select 電話回線とモデムを使ってインターネットに接続します (Connect through phone line and modem) and click 次へ (Next).**
- A screen to specify the modem appears.

24

9 Confirm that *FOMA SH904i* is set in イン
ターネットへの接続に使うモデムを選択
する (Select modem to use to connect
to the Internet) and click 次へ (Next).
- The Internet account connection information
  screen appears.
- Set to *FOMA SH904i* if not set.
- The screen does not appear when no modems
  other than *FOMA SH904i* are installed.

10 Enter the host number in 電話番号
(Phone number) field and click 詳細
設定 (Advanced).
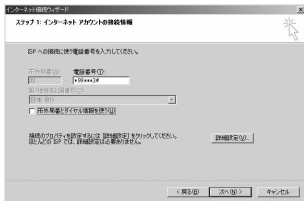
- Advanced connection properties screen appears.
- Confirm that 市外局番とダイヤル情報を使う
  (Use area code and dial-up information) shows
  ☐. When ☑ appears instead, change to ☐.

11 Confirm that all settings in the 接続
(Connection) tab are set as shown
in the example screen below.
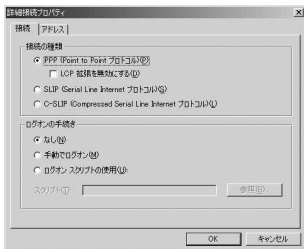
12 Click the アドレス (Addresses) tab
and confirm that all settings are set
as shown in the example screen
below.
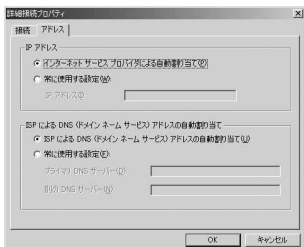
- For TCP/IP settings used for connecting to an
  Internet service provider, confirm with the
  Internet service provider or network
  administrator.

13 Click *OK*.
- The Internet account connection information
  screen reappears.

14 Click 次へ (Next).
- The Internet account login information screen
  appears.

15 Confirm all settings and click 次へ
(Next).
- The PC configuration screen appears.
- When using mopera U or mopera, ユーザー名
  (User name) and パスワード (Password) can be
  left blank to connect. When 次へ (Next) is clicked
  with ユーザー名 (User name) and パスワード
  (Password) left blank, a confirmation screen
  appears for the each of them. Click はい (Yes).
- When connecting to the Internet using a
  provider other than mopera U or mopera, enter
  the user name and password for the provider in
  the ユーザー名 (User name) and パスワード
  (Password) fields.

16 Enter a connection name in the 接続
名 (Connection name) field and
click 次へ (Next).
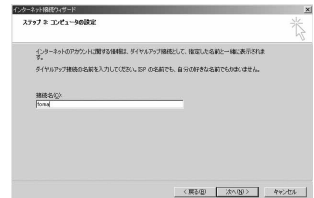
- The e-mail account configuration screen
  appears.

17 Select いいえ (No) and click 次へ
(Next).
- An Internet connection wizard completed
  screen appears.

18 Click 完了 (Finish).
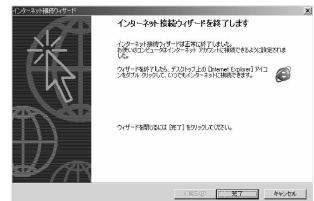
- The network and dial-up connections screen
  reappears.

19 Select the icon for host created and
select プロパティ (Properties) from
the ファイル (File) menu.
- Properties screen for the host appears.

25

20 Confirm all the settings in the 全般 (General) tab.

- When two or more modems are connected to the PC, make sure that *FOMA SH904i* in 接続 の方法 (Connect using) shows ☑. When ☐ appears instead, change to ☑. For modems other than *FOMA SH904i*, change ☑ to ☐.

- Confirm that ダイヤル情報を使う (Use dialing rules) shows ☐. When ☑ appears instead, change to ☐.

21 Click the ネットワーク (Networking) tab and check all the settings.
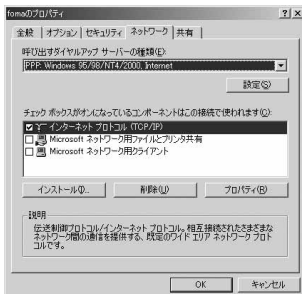
- Set 呼び出すダイヤルアップサーバーの種類 (Type of dial-up server to call) to *PPP: Windows95/98/NT4/2000, Internet*.

- Only インターネットプロトコル *(TCP/IP)* (Internet Protocol (TCP/IP)) should show ☑.

22 Click 設定 (Settings).

- The PPP setting screen appears.

23 Check all options to show ☐ and click *OK*.

- Properties screen of the host reappears.

24 Click *OK*.

- The host and TCP/IP protocol are set.
- Refer to P. 26 for details on connecting to dial-up network.

Connecting to the Dial-up Network

Example: Connecting with Windows XP
- The screens are different for Windows Vista and Windows 2000.

1 Connect the FOMA terminal to your PC.

2 Click スタート (Start) menu → すべ てのプログラム (All programs) → ア クセサリ (Accessories) → 通信 (Communications) → ネットワーク 接続 (Network connections).

- The dial-up network screen appears.

Windows Vista

- Click スタート (Start) menu → 接続先 (Connect to).

3 Double-click the connection icon.

- The connection screen appears.
- Alternatively, select the host icon and then select 接続 (Connect) in the ファイル (File) menu to display the connection screen.

4 Confirm the settings and click ダイ ヤル (Dial-up).

- The FOMA is connected to the host.
- The phone number set in "Setting the Dial-up Network" (☞P. 21) appears in the ダイヤル (Dial-up) field.
- When using mopera U or mopera, ユーザー名 (User name) and パスワード (Password) can be left blank to connect.

■ Disconnecting

Simply closing the browser may not disconnect the connection. Follow the steps below to properly disconnect.

1 **Click [icon] in the task tray and click 切断 (Disconnect).**

● The connection is disconnected.

Windows Vista

● Click [icon] in the task tray → 接続または切断... (Connect or disconnect), and double-click the disconnection icon.

Sending and Receiving Data (OBEX)

Sending/Receiving FOMA Terminal Data to/from a PC

● The FOMA terminal has OBEX as a data communication protocol. OBEX data communication enables sending and receiving phonebook, owner information from the Own number screen, Schedule, ToDo list, sent mail (including SMS), received mail (including SMS), unsent mail (including SMS), text memos, melodies, My picture, i-motion, My Documents and bookmark data to and from a PC. The FOMA SH904i is also equipped with an Ir exchange function. Send and receive phonebook entries or data from received mail to/from other FOMA terminals also equipped with the Ir exchange function. Also, transfer data using microSD Memory Card.

● Use the following three types of data communication with the FOMA terminal.
 ■ Send data one item at a time, from a PC to a FOMA terminal (Write 1).
 ■ Send data in bulk, from a PC to a FOMA terminal (Write all).
 ■ Send data in bulk, from a FOMA terminal to a PC (Read all).

● During data communication, the handset will be outside the service area, and functions such as voice/Videophone call, i-mode, i-mode mail, packet transmission, and PushTalk will not be available.

● Even after completion of data communication, 圏外 (outside the service area) may be displayed for a short time.

Note

● Make sure the FOMA terminal is properly connected to the PC. If not connected properly, sending and receiving data may not be possible, or data may be lost.

● Check whether there is enough remaining battery power of the FOMA terminal. If data communication is performed when the battery level is low or empty, sending and receiving data may not be possible, or data may be lost. Performing operations while charging the FOMA terminal in the desktop holder is recommended.

Note

● Check the PC power supply as well. If not turned on, sending and receiving data may not be possible, or data may be lost.

● Perform data communication with the FOMA terminal in stand-by. When movie/i-motion is set as the stand-by display, stop movie/i-motion playback before performing data communication.

● During communication (voice/Videophone call, data communication, and PushTalk), data cannot be sent or received. Also, when sending and receiving data, other data communication cannot be performed. However, receiving a call, right after data communication has begun, may be possible. In such cases, the sending or receiving of data is canceled.

● FOMA card phonebook data cannot be sent.

● During Ir exchange, melodies, still pictures, i-motion or PDF files with restrictions for mail attachment and output from the FOMA terminal cannot be sent. However, still pictures and movies shot with the built-in camera can be sent even if File restriction is set to **Restricted**.

● Mail with i-αppli start up designations can be sent after attached data has been deleted.

● Mail attachment data exceeding 100 KB (including the message text) are deleted and only message is sent.

● Data such as phonebook entries cannot be sent or received while All lock, or Self mode is set. Data of locked functions cannot be received while Function lock is set.

● Phonebook data cannot be sent or received when Keypad dial lock is set.

● Depending on data size, data communication may take some time. In addition, the FOMA terminal may not be able to receive data due to data size.

● When receiving phonebook data, data will be added from memory number **010** for single entry, or in accordance with memory number information when receiving all entries.

● When receiving all phonebook entries, Owner information (excluding first phone number) registered in Own number will be overwritten.

● Phonebook entries are sent in memory number order.

● When sending all phonebook entries, Owner information from own number screen is also sent.

● PDF files which exceed 2 MB cannot be sent.

■ Devices required for data communication (OBEX)

● To perform data communication, downloading OBEX-compliant data transfer software from the Internet, and installing this software to your PC is necessary. Refer to the software manual for information on operating environment and installation methods. In addition, installation of the FOMA SH904i Communication Setting File (☞P. 4 to P. 6) is necessary beforehand.
● A FOMA USB cable is required to connect the FOMA terminal to a PC.

Note

● The FOMA terminal data communication (OBEX) function conforms with IrMC1.1. However, depending on the function, some data may not be sent or received even when the other party's terminal complies with IrMC1.1.

Sending Single Data Item (Write 1)

● Send data from a PC to a FOMA terminal one item at a time.
● Sending one item at a time from a FOMA terminal to a PC is not possible.
● Data transfer operating methods differ depending on the software used. Refer to the software manual for details.

1 **Send data from a PC using data transfer software (Write 1).**

　● Refer to the software manual for details on sending data.

Note

● When phonebook data is sent (from a PC to the FOMA terminal handset) one entry at a time, entries are saved to the smallest available memory number from *010* to *999*. If all memory numbers from *010* to *999* are already used, entries are saved to the smallest available memory number between *000* and *009*.
● When phonebook data is received and 1,000 entries (names, phone numbers, or mail addresses) are already registered, or more than 1,000 entries have been registered, a message appears notifying that no further entries can be saved.

Sending All Data (Write All/Read All)

● Send and receive all data at once, between a PC and the FOMA terminal.
● "Write all" and "Read all" operations require data transfer software and your FOMA terminal authentication password.
● Data transfer operating methods differ depending on the software used. Refer to the software manual for details.

1 **Send data from a PC using data transfer software (Forward all).**

　● Refer to the software manual for details on sending data.
　● Entering your authentication password on the PC will be necessary.
　● Enter your authentication password (four digits).

2 **Enter terminal security code (four to eight digits) and the authentication password (four digits).**

3 **Start data transmission.**

Note

● Performing Write all from a PC to your FOMA terminal replaces all data stored in the FOMA terminal. All data previously stored in your FOMA terminal will be deleted. This includes phonebook, Schedule, and protected mail data saved as secret data.
● If an error occurs during data transmission from a PC to the FOMA terminal, all data stored in the FOMA terminal may be deleted. Check the cable connection, the FOMA terminal battery level, and the PC power supply before performing Write all. Performing operations while charging the FOMA terminal in the desktop holder is recommended.
● Depending on the connected device, the transmission status (bar display) may not appear.

AT Command List

AT Commands

AT commands are commands used to set FOMA terminal functions from a PC. When AT commands are entered from a PC, the FOMA terminal performs the corresponding operations.

■ AT command input format

AT commands must always start with "AT". Enter in single-byte alphanumeric characters. Below is an input example.

ATD*99***1#↵

        Return symbol: Entered by pressing the Enter key. Used to separate commands.

    Parameter: The command argument

Command: The command name

Each AT command including parameter (number or symbol) following the command must be entered on a single line. A single line means the characters from the first character until the character directly before the ↵ is pressed. Up to 160 characters (including "AT") can be entered.

■ AT command input modes

To operate the FOMA terminal using AT commands, set the PC to terminal mode. In terminal mode, the characters entered from the keyboard are sent directly to the communication port to operate the FOMA terminal.

● Offline mode
The FOMA terminal is in stand-by. Normally, this mode is used to operate the FOMA terminal using AT commands.

● Online data mode
The FOMA terminal is connected and performing data communication. When an AT command is entered in this mode, the characters are sent directly to the receiver, and may cause the receiver's modem to malfunction. Do not enter AT commands in this mode.

● Online command mode
Even when the FOMA terminal is connected and performing communication, with special operations, operation by AT commands is possible. When in this mode, AT commands are executed while remaining connected to the receiver, and communications can be resumed after the operation is completed.

■ Switching between online data mode and online command mode

Use either of the following methods to switch the FOMA terminal from online data mode to online command mode.

● Enter "+++" command, or enter the set code in the "S2" register.
● Turn the RS-232C* ER signal OFF when set to "AT&D1".

To switch from online command mode to online data mode, enter "ATO↵".

* USB interface emulates an RS-232C signal line, enabling RS-232C signal line control by the communication application.

[M]: AT commands that can be used with the FOMA SH904i Modem Port.

AT Command	Overview	Parameter/Explanation	Execution Example
AT — [M]		The modem function of the FOMA terminal can be controlled by adding commands in the list to the end of this command. ※ Returns OK if only AT is entered.	AT↵ OK
AT%V [M]	Displays FOMA terminal version.[2]	—	AT%V↵ Ver1.00 OK
AT&C<n> [M]	Sets operating condition for circuit CD (DCD) signals sent to DTE.[1]	n=0: Circuit CD always ON n=1: Circuit CD signal changes according to line connection status (default setting) When "&C1" is set, the CD signal is turned "ON" directly before the CONNECT signal is sent when connection is completed. The CD signal is turned "OFF" right before "NO CARRIER" is sent when the circuit is disconnected.	AT&C1↵ OK
AT&D<n> [M]	Sets the operation when the circuit ER (DTR) signal received from DTE changes from "ON" to "OFF" during online data mode.[1]	n=0: Ignores status (always considers signal ON) n=1: Sets online command mode when signal changes from ON to OFF n=2: Disconnects line and activates offline mode when signal changes from ON to OFF (default setting)	AT&D1↵ OK
AT&E<n> [M]	Selects speed display specifications when connecting.[1]	n=0: Wireless area transmission speed appears. n=1: DTE serial transmission speed appears. (Default setting)	AT&E0↵ OK
AT&F<n> [M]	Resets the FOMA terminal's AT command settings to their default settings. If this command is entered during communication, the settings are reset after disconnected.[2]	Can only be set as n=0 (can be omitted).	AT&F↵ OK
AT&S<n> [M]	Controls when the signal of data set ready (DR) is set to DTE.[1]	n=0: Always ON (default setting) n=1: DR signal ON when line is connected	AT&S0↵ OK
AT&W<n> [M]	Stores the current settings in the FOMA terminal's memory.[2, 5]	Can only be set as n=0 (can be omitted).	AT&W↵ OK
AT∗DANTE [M]	Displays the reception status of the FOMA terminal.[2]	The result from this command is in the following format. ∗DANTE:<m> <m> 0: Status where outside the service area appears on the FOMA terminal 1: Status where zero or one antenna appears on the FOMA terminal 2: Status where two antennas appears on the FOMA terminal 3: Status where three antennas appears on the FOMA terminal	AT∗DANTE↵ ∗DANTE:3 OK
AT∗DGANSM=<n> [M]	Sets Accept/Reject call modes for incoming packet communications. This setting is only valid for incoming packet communications after entering setup commands.[2]	n=0: Sets Reject call and Accept call settings to **OFF** (Default setting) n=1: Sets Reject call settings to **ON** n=2: Sets Accept call settings to **ON**	AT∗DGANSM=0↵ OK AT∗DGANSM?↵ ∗DGANSM:0 OK
AT∗DGAPL=<n> [,<cid>] [M]	Sets host (APN) to accept transmissions for incoming packet communications. APN settings use <cid> parameter defined by "+CGDCONT".[2]	Adds or deletes from Accept calls list with <n> parameter. If <cid> parameter is abbreviated, adds (<n>=0) or deletes (<n>=1) all of <cid> to or from list. Adds (deletes) <cid> not defined with "+CGDCONT" to (from) list with this command. n=0: Adds to list (Adds APN defined by <cid> to Accept calls list) n=1: Deletes from list (Deletes APN defined by <cid> from Accept calls list)	AT∗DGAPL=0,1↵ OK AT∗DGAPL?↵ ∗DGAPL:1 OK

AT Command	Overview	Parameter/Explanation	Execution Example
AT*DGARL=<n> [,<cid>] [M]	Sets host (APN) to reject transmissions for incoming packet communications. APN settings use <cid> parameter defined by "+CGDCONT".[*2]	Adds or deletes from Reject calls list with <n> parameter. If <cid> parameter is abbreviated, adds (<n>=0) or deletes (<n>=1) all of <cid> or from list. Adds (deletes) <cid> not defined with "+CGDCONT" to (from) list with this command. n=0: Adds to list (Adds APN defined by <cid> to Reject calls list) n=1: Deletes from list (Deletes APN defined by <cid> from Reject calls list)	AT*DGARL=0,1⏎ OK AT*DGARL?⏎ *DGARL:1 OK
AT*DRPW [M]	Displays the reception power sent from FOMA terminal.[*2]	The result from this command is in the following format. *DRPW:<m> m: 0 to 75 (reception power)	AT*DRPW⏎ *DRPW:0 OK
AT*DGPIR=<n> [M]	Setting this command is valid when establishing communication. Enables adding 186 (send caller ID) and 184 (not send caller ID) to host number. Also available in dial-up network settings.[*2]	n=0: When establishing packet transmission, connects to host (APN) directly (default setting) n=1: When establishing packet transmission, adds 184 and connects to host (APN) n=2: When establishing packet transmission, adds 186 and connects to host (APN) When 186 (send caller ID)/184 (not send caller ID) are set by this command and in the dial-up network settings, refer to the table on P. 20.	AT*DGPIR=0⏎ OK AT*DGPIR?⏎ *DGPIR:0 OK
+++ [M]	Switches the FOMA terminal mode from online data mode to online command mode. Escape guard interval is fixed at one second.[*2]	—	(During communication) +++ (Does not appear) OK
AT+CACM= [<passwd>] [M]	Resets the total accumulated cost recorded on the UIM.[*2]	Resets the total accumulated cost recorded on the UIM, if the password matches. <passwd>: SIM PIN2 ※ Encloses this string parameter with quotation marks (" ") when entering.	AT+CACM="0123"⏎ OK
AT+CAOC= [<mode>] [M]	Inquires the current accumulated cost.[*2]	<mode> 0: Inquires the cost of current call. The result from this command is in the following format. +CAOC:"<ccm>"	AT+CAOC⏎ +CAOC:"00001E" OK
AT+CBC [M]	Inquires the battery status.[*2]	The result from this command is in the following format. +CBC:<bcs>,<bcl> <bcs> 0: The battery operates the FOMA terminal 1: Charging the battery 2: The battery is unconnected 3: Reducing the power <bcl> 0 to 100 (remaining battery power)	AT+CBC⏎ +CBC:0,80 OK
AT+CBST=[<speed>[,<name>[, <ce>]]] [M]	Sets the bearer service when establishing transmission. This setting is only valid when AT+FCLASS=<n> command (☞P. 34) = 0.[*1]	<speed> 116: 64K data communications (default setting) <name> 1: fixed value <ce> 0: fixed value	AT+CBST=116,1,0⏎ OK
AT+CEER [M]	Displays disconnection reason for preceding communication session.[*2]	Refer to "Reasons for Disconnection" (☞P. 38).	AT+CEER⏎ +CEER:36 OK

AT Command	Overview	Parameter/Explanation	Execution Example
AT+CGDCONT [M]	Sets host (APN) accessed when establishing packet transmission.[2]	Refer to "More on AT Commands" (☞P. 38).	Refer to "More on AT Commands" (☞P. 38).
AT+CGEQMIN [M]	Registers criterion determining whether to permit QoS (Quality of Service) sent from network when establishing packet transmission.[2]	Refer to "More on AT Commands" (☞P. 38).	Refer to "More on AT Commands" (☞P. 38).
AT+CGEQREQ [M]	Sets QoS (Quality of Service) requested of network during packet transmission.[2]	Refer to "More on AT Commands" (☞P. 39).	Refer to "More on AT Commands" (☞P. 39).
AT+CGMR [M]	Displays FOMA terminal version.[2]	—	AT+CGMR☐ 12345678901234 56 OK
AT+CGREG= <n>	Sets whether to send network registration status. Service area information (inside/outside) is sent.[1]	<n> 0: Does not set (default setting) 1: Sets When AT+CGREG=1 is set, information is sent in the format "+CGREG:<stat>". 0, 1, 4 or 5 can be set for the <stat> parameter. <stat> 0: Outside area 1: Inside area (home) 4: Unknown 5: Inside area (visitor)	AT+CGREG=1☐ OK (Set to send) AT+CGREG?☐ +CGREG:1,0 OK (Indicates outside area) +CGREG:1 (Moved from outside area to inside area)
AT+CGSN [M]	Displays the FOMA terminal's serial number.[2]	—	AT+CGSN☐ 123456789012345 OK
AT+CLIP=<n>	Shows PC calling number when receiving 64K data communications.[1]	<n> 0: Does not output results (default setting) 1: Outputs results Displays +CLIP:<n>,<m> for "AT+CLIP?" <m> 0: NW setting to not send own number during transmissions 1: NW setting to send own number during transmissions 2: Unknown	AT+CLIP=0☐ OK AT+CLIP?☐ +CLIP:0,1 OK
AT+CLIR=<n> [M]	Sets whether to send terminal's phone number when establishing 64K data communications.[2]	<n> 0: Follows the service agreement 1: Does not send 2: Sends (default setting) Displays +CLIR:<n>,<m> for AT+CLIR? <m> 0: CLIR is not running (always send) 1: CLIR is always running (never send) 2: Unknown 3: CLIR temporary mode (default setting is Do not send) 4: CLIR temporary mode (default setting is Send)	AT+CLIR=0☐ OK AT+CLIR?☐ +CLIR:2,3 OK
AT+CMEE=<n> [M]	Sets the manner to display FOMA terminal error reports.[1]	Sets whether to display errors only as "ERROR", or to display reason with text or numerical value. <n> 0: Displays "ERROR" and no result codes (default setting) 1: Displays result codes with numerical values 2: Displays result codes with text When reports are set to display by setting "n=1" or "n=2", they are displayed in the following format: +CME ERROR:xxxx xxxx is a numerical value or text. Refer to "Error Reports" (☞P. 38).	AT+CMEE=0☐ OK AT+CNUM☐ ERROR AT+CMEE=1☐ OK AT+CNUM☐ +CME ERROR:10

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AT Command	Overview	Parameter/Explanation	Execution Example

AT+CNUM
 	
[M]
	Displays FOMA terminal phone number.[*2]	number: Phone number
		type : 129 or 145
		
		  129: Does not include + international access code
		  145: Includes + international access code
			AT+CNUM⏎
			+CNUM:,"+8190 12345678",145
			
			OK

AT+COPS=[<mode>[,<format>[,<oper>]]]
 	
[M]
	Selects a telecommunications carrier to be connected.[*2]	<mode>
		0: Auto (Automatically searches network and switch telecommunications carriers)
		1: Manual (Connects to the telecommunications carrier specified in <oper>)
		2: Cancels (disconnects) the connection to the telecommunications carrier
		※ Unsupported.
		3: Does not make mapping
		4: Manual auto (Performs "Auto" processing if not connected to the telecommunications carrier specified in <oper>)
		※ Unsupported.
		
		<format>
		2: Fixed value
		
		<oper> is indicated by a hexadecimal number consisting of a country code (MCC) and a network code (MNC).
		The formats are shown below.
		  Digit 1 of MCC...octet 1 bits 1 to 4.
		  Digit 2 of MCC...octet 1 bits 5 to 8.
		  Digit 3 of MCC...octet 2 bits 1 to 4.
		  Digit 3 of MNC...octet 2 bits 5 to 8.
		  Digit 2 of MNC...octet 3 bits 5 to 8.
		  Digit 1 of MNC...octet 3 bits 1 to 4.
			AT+COPS =1,2,"44F001" ⏎
			
			OK
			(Connects to MCC:440MNC:10)

AT+CPAS [M]	Inquires the activity status of the FOMA terminal.[*2]	The result from this command is in the following format. +CPAS:<pas> <pas> 0: AT commands can be sent/received 1: AT commands cannot be sent/received (does not send the +CPAS:1 result) 2: Unknown 3: AT commands can be sent/received and the FOMA terminal is receiving a call 4: AT commands can be sent/received and performing data communication	AT+CPAS⏎ +CPAS:0 OK
AT+CPIN=<pin>[,<newpin>] [M]	Enters the UIM password (PIN1, PIN2).[*2]	<pin> Enters PIN1 while waiting for PIN1 input (Enter <pin> parameter only) Enters PIN2 while waiting for PIN2 input (Enter <pin> parameter only) Enters PUK1 while waiting for PUK1 input Enters PUK2 while waiting for PUK2 input ※ Encloses this string parameter with quotation marks ("") when entering. <newpin> Enters a new PIN1 while waiting for PUK1 input Enters a new PIN2 while waiting for PUK2 input ※ Encloses this string parameter with quotation marks ("") when entering.	AT+CPIN?⏎ +CPIN:SIM PIN1 OK (Indicates waiting status for PIN1 input) AT+CPIN="1234" ⏎ OK AT+CPIN?⏎ +CPIN:SIM PUK1 OK (Indicates waiting status for PUK1 input) AT+CPIN="12345 678","1234"⏎ OK

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AT Command	Overview	Parameter/Explanation	Execution Example
AT+CR=<mode> [M]	Sets whether to display packet transmission/64K data communications before "CONNECT" result code is displayed during line connection.[1] "GPRS" is displayed for packet transmission, and "SYNC" is displayed for 64K data communications.	<mode> 0: Does not display when line is connected (default setting) 1: Displays when line is connected	AT+CR=1↵ OK ATD*99***1# +CR:GPRS CONNECT
AT+CRC=<n> [M]	Sets to use extended results code at reception.[1]	n=0: Does not use extended results code (Default setting) n=1: Uses extended result codes	AT+CRC=0↵ OK
AT+CREG=<n> [M]	Sets service area information on or off.[1]	When AT+CREG=1 is set, information is set in the format "+CREG:<stat>". 0, 1, 4 or 5 can be set for the <stat> parameter. <n> 0: Does not send (default setting) 1: Sends <stat> 0: Outside area 1: Inside area (home) 4: Unknown 5: Inside area (visitor)	AT+CREG=1↵ OK (Set to send) AT+CREG?↵ +CREG:1,0 OK (Indicates outside area) +CREG:1 (Moved from outside area to inside area)
AT+CUSD=[<n>[,<str>[,<dcs>]]] [M]	Changes setting toward net for optional services, etc.[1]	<n> 0: Answers without intermediate result (default setting) 1: Answers with intermediate result <str> Service code ※ Refer to "Mobile Phone User's Guide [Network Services]". <dcs> 0: fixed value	AT+CUSD=0,"xxx xxx"↵ OK
AT+FCLASS=<n> [M]	Sets the mode.[1]	<n> 0: data (fixed value)	AT+FCLASS=0↵ OK
AT+GCAP [M]	Displays the ability list of the FOMA terminal.[2]	—	AT+GCAP↵ +GCAP:+CGSM,+FCLASS,+W OK
AT+GMI [M]	Displays FOMA terminal maker name in single-byte alphanumeric characters.[2]	—	AT+GMI↵ SHARP OK
AT+GMM [M]	Displays abbreviated FOMA terminal product name (FOMA SH904i) in alphanumeric characters.[2]	—	AT+GMM↵ FOMA SH904i OK
AT+GMR [M]	Displays FOMA terminal version.[2]	—	AT+GMR↵ Ver1.00 OK
AT+IFC=<n,m> [M]	Sets local flow control format between the PC and FOMA terminal.[1]	DCE by DTE (<n>) 0: No flow control 1: XON/XOFF flow control 2: RS/CS (RTS/CTS) flow control (default setting) DTE by DCE (<m>) 0: No flow control 1: XON/XOFF flow control 2: RS/CS (RTS/CTS) flow control (default setting)	AT+IFC=2,2↵ OK
AT+WS46=<n> [M]	Sets wireless network used to call. Incoming signals are not affected.[1]	n=22: FOMA network (fixed value)	AT+WS46=22↵ OK
A/ [M]	Performs the preceding executed command.[2]	—	A/ OK

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AT Command	Overview	Parameter/Explanation	Execution Example
ATA [M]	Performs incoming process for packet or 64K data if entered when receiving the data.[2]	Enter "ATA184↵" (arrival call action for anonymous call) or "ATA186↵" (arrival call action for identified call) while receiving packets.	RING ATA↵ CONNECT

ATD
 	
[M]
	Establishes communication.[2, 3]	● Packet transmission ATD∗99∗∗∗<cid>#↵
		  When ATD∗99# is entered:
		  Uses <cid>=1 (default setting) (When <cid> is not entered, setting becomes <cid>=1).
		  When syntax starting with ATD184∗99∗∗∗<cid># is entered:
		  "184" is added to host (APN) defined by specified <cid> (Alternatively, "186" can be added by same operation to turn caller ID sending to ON).
		● 64K data communications ATD [parameter] [phone number] ↵
		  Number cannot be dialed if characters other than 0 to 9, ∗, #, +, A, a, B, b, C, c, D, d, hyphens (-), spaces, T, t, P, p, !, W, w, @, or commas (,) are included. Characters highlighted with ▢ can be entered but are ignored during dialing.
			ATD∗99∗∗∗1#↵
			CONNECT

ATE<n> [M]	Sets whether the FOMA terminal returns echo of AT commands sent from the PC.[1]	n=0: Does not return echo n=1: Returns echo (default setting) Normally, set to n=1. If the PC has an echo function, set to n=0.	ATE1↵ OK
ATH [M]	Disconnects line when entered during packet transmission or 64K data communications.[2]	—	(During communication) +++ (Does not appear) OK ATH↵ NO CARRIER
ATI<n> [M]	Displays the verification code.[2]	n=0: NTT DoCoMo n=1: Displays abbreviated product name (FOMA SH904i) n=2: Displays the product version in a format such as "VerX.XX" n=3: Displays each element of ACMP signals n=4: Displays details of the communication functions provided in the FOMA terminal	ATI0↵ NTT DoCoMo OK
ATO [M]	Returns to online data mode from online command mode during communication.[2]	—	ATO↵ CONNECT
ATQ<n> [M]	Sets whether to display result codes.[1]	n=0: Displays result codes (default setting) n=1: Does not display result codes	ATQ0↵ OK
ATV<n> [M]	Sets manner of displaying result codes.[1]	Displays all result codes with numbers or text. n=0: Displays result codes with numbers n=1: Displays result codes with text (default setting)	ATV1↵ OK

ATX<n>
 	
[M]
	Sets whether to include speed in the CONNECT display when connecting. Also detects busy tone or dial tone.[1]	Busy tone detection:
		  Sends BUSY response when number dialed is busy.
		Dial tone detection:
		  Determines whether FOMA terminal is connected.
		Speed display:
		  Sets whether to include speed in the CONNECT display when connecting.
		n=0: No busy tone detection, no dial tone detection, no speed display
		n=1: No busy tone detection, no dial tone detection, speed display
		n=2: No busy tone detection, dial tone detection, speed display
		n=3: Busy tone detection, no dial tone detection, speed display
		n=4: Busy tone detection, dial tone detection, speed display (default setting)
			ATX1↵
			OK

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AT Command	Overview	Parameter/Explanation	Execution Example
ATZ<n> [M]	Resets the FOMA terminal's AT command settings.*2, 4	Resets the FOMA terminal's AT command settings to the values set in non-volatile memory. If this command is entered during communication, the settings are reset after disconnected. Can only be set as n=0 (can be omitted).	(When online) ATZ⏎ NO CARRIER (When offline) ATZ⏎ OK
ATS0=<n> [M]	Sets number of rings before FOMA terminal automatically receives.*1	n=0: No automatic receiving (Default setting) n=1 to 255: Automatically receives after sets number of rings	ATS0=0⏎ OK
ATS2=<n> [M]	Sets the escape character.	n=0 to 127 (default setting: n=43) When n=127 is set, escape is disabled.	ATS2=43⏎ OK ATS2?⏎ 043 OK
ATS3=<n> [M]	Sets the carriage return (CR) character.	Defines the character used to recognize the end of an AT command character string. Appended to the end of the echoed command character string and result code. The settings cannot be changed (default setting: n=13).	ATS3=13⏎ OK ATS3?⏎ 013 OK
ATS4=<n> [M]	Sets the line feed (LF) character.	Appended after the CR character, when result codes are displayed as text. The settings cannot be changed (default setting: n=10).	ATS4=10⏎ OK ATS4?⏎ 010 OK
ATS5=<n> [M]	Sets the backspace (BS) character.	When detected while entering an AT command, the last character in the input buffer is deleted. The settings cannot be changed (default setting: n=8).	ATS5=8⏎ OK ATS5?⏎ 008 OK
ATS6=<n> [M]	Sets pause time (seconds) until dialing.	Sets a register, but has no other effect. n: 2 to 10 (default setting: n=5)	ATS6=10⏎ OK
ATS8=<n> [M]	Sets pause time (seconds) until comma dialing.	Sets a register but does not affect the pause time (3 seconds). n=0: Does not pause n: 1 to 255 (default setting: n=3)	ATS8=3⏎ OK
ATS10=<n> [M]	Sets the delay time (seconds) for automatic disconnection (1/10 seconds).*1	Sets a register, but has no other effect. n: 1 to 255 (default setting: n=1)	ATS10=1⏎ OK
ATS30=<n> [M]	Disconnects when no data is sent/received for at least this amount of time.	Only valid during 64K data communications. <n> is set in minutes. n: 0 to 255 (default setting: n=0) n=0 sets inactive timer off.	ATS30=3⏎ OK
ATS103=<n> [M]	Sets delimiter used when adding an incoming sub-address to number dialed.	Only valid during 64K data communications. n=0: ＊Asterisk n=1: /Slash (default setting) n=2: ¥Yen mark or backslash	ATS103=0⏎ OK

ATS104=<n>
 	
[M]
	Sets delimiter used when adding an outgoing sub-address to number dialed.	Only valid during 64K data communications.
		n=0: #Pound sign
		n=1: %Percent symbol (default setting)
		n=2: &Ampersand
			ATS104=0⏎
			OK

AT Command	Overview	Parameter/Explanation	Execution Example
AT¥S [M]	Displays current command and S register settings.[*2]	—	AT¥S⏎ E1 Q0 V1 X4 &C1 &D2 &S0 &E1 ¥V0 S000=000 S002=043 S003=013 S004=010 S005=008 S006=005 S007=060 S008=003 S010=001 S030=000 S103=001 S104=001 OK
AT¥V<n> [M]	Selects response code type used during connection.[*1]	Only valid when the ATX<n> command (☞P. 35) setting is not n=0. n=0: Does not use extended result codes (default setting) n=1: Uses extended result codes	AT¥V1⏎ OK

*1 Stored in FOMA terminal's memory using AT&W commands.

*2 Not stored in FOMA terminal's memory using AT&W commands. Not reset with AT&F or ATZ commands.

*3 Perform Redial with ATDN⏎ or ATDL⏎.

*4 If the ATZ command is executed before the AT&W command is used, terminal settings return to last written memory, and prior changes are erased.

*5 Settings written into the FOMA terminal's memory using the AT&W command is stored as non-volatile data when power is turned off.

Reasons for Disconnection

■ Packet transmissions

Value	Reason
27	Host (APN) does not exist, or was incorrect.
30	Disconnected by network.
33	No packet transmission subscription.
36	Disconnected properly.

■ 64K data communications

Value	Reason
1	Specified number does not exist.
16	Disconnected properly.
17	Line busy.
18	Number was dialed, but no response received within specified time.
19	Dialed number is making a call.
21	Dialed number refused incoming call.
63	Network service or option is not valid.
65	Transmission capacity not provided was specified.
88	Dialed number of terminal with different terminal attribute, or call was received.

Error Reports

Numerical display	Text display	Reason
10	SIM not inserted	FOMA card not inserted.
15	SIM wrong	A non-DoCoMo SIM (IC card equivalent to FOMA card) is inserted.
16	incorrect password	Password is incorrect.
100	unknown	Unknown error occurred.

More on AT Commands

■ Command name: +CGDCONT= [parameter]

Overview

Sets host (APN) accessed when establishing packet transmission.
Not stored in FOMA terminal's memory with AT&W commands. Not reset with AT&F or ATZ commands.

Syntax

+CGDCONT=[<cid>[,"PPP"[,"<APN>"]]]⏎

Parameter description

<cid>＊   : 1 to 10
<APN>＊ : Any number
<cid> is a number for managing hosts (APNs) used for packet transmission, registered in the FOMA terminal. It can be set between 1 and 10 in the FOMA terminal. The default settings are *mopera.ne.jp* for <cid>=1 and *mopera.net* for <cid>=3. Set cid in 2 or 4 to 10. APN is a user-specified character string for each connection, indicating the host.

Execution example

Command when registering host (APN) name "abc" (for <cid>=2)
AT+CGDCONT=2,"PPP","abc"⏎
OK

Operation when parameter is abbreviated

AT+CGDCONT=
Clears all <cid> settings. Resets <cid>=1 and 3 settings to default values.
AT+CGDCONT=<cid>
Clears specified <cid> setting. Resets <cid>=1 and 3 settings to default values.
AT+CGDCONT=?
Displays list of values that can be set.
AT+CGDCONT?
Displays current settings.

■ Command name: +CGEQMIN= [parameter]

Overview

Registers criterion determining whether to permit QoS (Quality of Service) sent from the network when establishing PPP packet transmission.
The command execution examples below describe the four available setting patterns.
Not stored in FOMA terminal's memory with AT&W commands. Not reset with AT&F or ATZ commands.

Syntax

AT+CGEQMIN=[<cid> [,, <Maximum bitrate UL> [, <Maximum bitrate DL>]]]⏎

Parameter description

<cid>＊   : 1 to 10
<Maximum bitrate UL>＊ : None (initial setting) or 64
<Maximum bitrate DL>＊ : None (initial setting) or 384
<cid> is a number for managing hosts (APNs) used for packet transmission, registered in the FOMA terminal. It can be set between 1 and 10 in the FOMA terminal. The default settings are *mopera.ne.jp* for <cid>= 1 and *mopera.net* for <cid>=3. Set cid in 2 or 4 to 10. *Maximum bitrate UL* and *Maximum bitrate DL* set the minimum uplink and downlink transmission speed (kbps) between the FOMA terminal and base station. When set to *None* (default setting), all speeds are permitted. Note that when set to "64" and "384", connections established under these speeds are not permitted, so packet transmission connection may not be established.

Execution examples

Set one of the following four patterns. Setting (1) is the initial setting for all cid.

(1) Command permitting all uplink/downlink speeds (for <cid>=2)
AT+CGEQMIN=2⏎
OK

(2) Command permitting only uplink speeds of 64 kbps and downlink speeds of 384 kbps (for <cid>=3)
AT+CGEQMIN=3,,64,384⏎
OK

(3) Command permitting uplink speeds of 64 kbps and all downlink speeds (for <cid>=4)
AT+CGEQMIN=4,,64⏎
OK

(4) Command permitting all uplink speeds and downlink speeds of 384 kbps (for <cid>=5)
AT+CGEQMIN=5,,,384⏎
OK

Operation when parameter is abbreviated
AT+CGEQMIN=
Clears all <cid> settings.
AT+CGEQMIN=<cid>
Returns specified <cid> setting to default setting.
AT+CGEQMIN=?
Displays list of values that can be set.
AT+CGEQMIN?
Displays current settings.

■ Command name: +CGEQREQ= [parameter]

Overview
Sets QoS (Quality of Service) required of the network when establishing PPP packet transmission.
The command execution example below describes the setting pattern which is also set as the initial setting.
Not stored in FOMA terminal's memory with AT&W commands. Not reset with AT&F or ATZ commands.

Syntax
AT+CGEQREQ=[<cid>]⏎

Parameter description
This setting is assigned to each cid by default value.
<cid>*: 1 to 10
<cid> is a number for managing hosts (APNs) used for packet transmission, registered in the FOMA terminal. It can be set between 1 and 10 in the FOMA terminal. The default settings are **mopera.ne.jp** for <cid>= 1 and **mopera.net** for <cid>=3. Set cid in 2 or 4 to 10.
Command when requesting connection at uplink speed of 64 kbps, or downlink speed of 384 kbps

Execution example
For <cid>=3
AT+CGEQREQ=3⏎
OK

Operation when parameter is abbreviated
AT+CGEQREQ=
Returns all <cid> settings to default settings.
AT+CGEQREQ=<cid>
Returns specified <cid> setting to default setting.
AT+CGEQREQ=?
Displays list of values that can be set.
AT+CGEQREQ?
Displays current settings.

Result Codes

■ Result codes

Numerical display	Text display	Meaning
0	OK	Successfully executed.
1	CONNECT	Connected to number dialed.
2	RING	Call detected.
3	NO CARRIER	Line disconnected.
4	ERROR	Command not accepted.
6	NO DIAL TONE	No dial tone detected.
7	BUSY	Detecting busy tone.
8	NO ANSWER	Connection completed. The server connection timed out.
100	RESTRICTION	Network restricted.
101	DELAYED	Redial restricted.

■ Extended result codes

Numerical display	Text display	Meaning
5	CONNECT 1200	FOMA terminal and PC connected at 1,200 bps.
10	CONNECT 2400	FOMA terminal and PC connected at 2,400 bps.
11	CONNECT 4800	FOMA terminal and PC connected at 4,800 bps.
13	CONNECT 7200	FOMA terminal and PC connected at 7,200 bps.
12	CONNECT 9600	FOMA terminal and PC connected at 9,600 bps.
15	CONNECT 14400	FOMA terminal and PC connected at 14,400 bps.
16	CONNECT 19200	FOMA terminal and PC connected at 19,200 bps.
17	CONNECT 38400	FOMA terminal and PC connected at 38,400 bps.
18	CONNECT 57600	FOMA terminal and PC connected at 57,600 bps.
19	CONNECT 115200	FOMA terminal and PC connected at 115,200 bps.
20	CONNECT 230400	FOMA terminal and PC connected at 230,400 bps.
21	CONNECT 460800	FOMA terminal and PC connected at 460,800 bps.

- When n=1 is set for the ATV<n> command (☞P. 35), result codes are displayed as text (default setting). When set to n=0, they are displayed as numerical values.
- Transmission speed is displayed to maintain compatibility with conventional modems connected by RS-232C. However, since the FOMA terminal is connected to the PC via FOMA USB cable, the displayed speed will differ from the actual speed of connection.
- When *RESTRICTION* (Number: 100) appears, the transmission network is congested. Try connecting again later.

Communication Protocol Result Codes

Numerical display	Text display	Meaning
1	PPPoverUD	Connected with 64K data communications
5	PACKET	Connected with packet transmission

Result code display examples

When ATX0 is set
The CONNECT display appears only when connection is completed, regardless of the AT¥V<n> command (☞P. 37) setting.

Text display example:
> ATD∗99∗∗∗1#
> CONNECT

Numerical display example:
> ATD∗99∗∗∗1#
> 1

When ATX1 is set

- When ATX1 and AT¥V0 are set (initial value)

When connection is completed, CONNECT <speed between FOMA terminal and PC> appears in the syntax.

Text display example:
> ATD∗99∗∗∗1#
> CONNECT 460800

Numerical display example:
> ATD∗99∗∗∗1#
> 1 21

- When ATX1 and AT¥V1 are set*

When connection is completed, the information below appears in the syntax.
CONNECT <speed between FOMA terminal and PC> PACKET <host (APN)>/<maximum uplink speed (FOMA terminal to mobile network base station)>/<maximum downlink speed (mobile network base station to FOMA terminal)>

Text display example:
> ATD∗99∗∗∗1#
> CONNECT 460800 PACKET
> mopera.ne.jp/64/384
> (Indicates terminal connected to
> *mopera.ne.jp*, at maximum uplink
> speed of 64 kbps and maximum
> downlink speed of 384 kbps)

Numerical display example:
> ATD∗99∗∗∗1#
> 1 21 5

* Dial-up connection may not be processed correctly when ATX1 and AT¥V1 are simultaneously set. Using only AT¥V0 is recommended.