

FOMA[®] M702iG

Manual for Data Communication

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About Manual for Data communication

This manual explains the items required for making data communication on the FOMA M702iG as well as how to install "M702iG 通信設定ファイル (ドライバ) (M702iG Communication Configuration Files (Drivers))" and "FOMA PC 設定ソフト (FOMA PC configuration Software)" inside the CD-ROM.

About Windows XP Operation

This manual explains the contents compliant with Windows XP Service Pack 2. Some procedures and displays in this manual may differ depending on your operating environment.

Data Communications

Connecting the FOMA handset and a PC allows you to use three types of data communications (packet communication, 64K data communication and data transfer (OBEX)).

Available Data Communications from the FOMA Handset

■ Packet Communication

Packet communication is a communication method whose charges are based on the amount of data exchanged. It allows data communication at a maximum speed of 384Kbps for receiving and 64Kbps for sending.

In order to perform packet communication, connect the FOMA handset and a PC using a FOMA USB Cable (optional) or via Bluetooth and connect to an access point of DoCoMo's Internet connection service "mopera U" or "mopera", that handles the FOMA packet communication.

- Note that the communication fees may become high if you use packet communication to send/receive data.

■ 64K Data Communication

64K data communication is a communication method whose charges are based on the time connected to the network. It allows data communication at a speed of 64Kbps.

In order to perform 64k data communication, connect the FOMA handset and a PC using a FOMA USB Cable (optional) or via Bluetooth and connect to an access point of DoCoMo's Internet connection service "mopera U" or "mopera", that handles the FOMA 64K data communication or an access point that handles ISDN synchronous 64K.

- Note that the communication fees may become high if you use 64K data communication to connect for a long time.

■ Data Transfer (OBEX)

Data transfer is a communication method that exchanges data using the FOMA USB Cable, infrared, or Bluetooth.

In order to transfer data by connecting the FOMA handset and a PC with the FOMA USB Cable, data link software must be installed on the PC. In order to transfer data using infrared or Bluetooth, a communication device such as a PC must be equipped with infrared or Bluetooth capability.

Connecting the FOMA Handset and PC, etc.

The following connection methods are available to connect the FOMA handset to a PC to perform data communications:

■ Using the FOMA USB Cable (optional) (USB Connection)

Connecting the FOMA handset to a PC with the FOMA USB Cable allows you to use all communication methods (packet communication, 64K data communication and data transfer (OBEX)).

- The communication setup files (drivers) must be installed before connecting with the FOMA USB Cable. →P4
- When using the USB connection, set the USB mode to "Communication mode". →P5

■ Using Bluetooth (Bluetooth Connection)

Using Bluetooth allows you to use all communication methods (packet communication, 64K data communication and data transfer (OBEX)).

- Use a standard Bluetooth modem or a Bluetooth modem provided by a Bluetooth device manufacturer to connect via Bluetooth. For installation and configuration of a modem, contact the manufacturer of your PC or Bluetooth device.

■ Using Infrared

Using infrared allows you to use the communication method of data transfer (OBEX). You can exchange data with a PC, etc. with infrared capability.

Precautions before Use

■ Internet Service Provider Fees

Fees to an Internet service provider (ISP) may be required to connect to the Internet. These fees are in addition to the FOMA service fees and are paid to your ISP directly. For detailed information on connection fees, contact your ISP. You can use "mopera U" or "mopera", DoCoMo's Internet connection service. A separate subscription (fee-based) is required to use "mopera U". To use "mopera", no separate subscription is required, and no monthly usage fee applies.

■ Setting the Internet Connection (Internet service providers, etc.)

Packet communication and 64K data communication use different access points. For packet communication, use an access point compatible with packet communication, and for 64K data communication, use the FOMA 64K data communication or use an access point compatible with ISDN synchronous 64K.

- DoPa access points cannot be connected.

- Access points for PHS 64K/32K data communication for PIAFS, etc. cannot be connected.

■ User Authentication to Access Networks

Depending on the access point, user authentication (ID and password) may be required to connect. If required, enter the ID and password from the dial-up network. The ID and password will be provided by the network administrator of your ISP or access point. For details, contact the network administrator of your ISP or the access point.

■ Required Conditions for Packet and 64K Data Communications

The following conditions must be met to perform communications using the FOMA handset (a connection may not be established if traffic is heavy at the base station or if radio signals are weak).

- The PC must have an interface for the FOMA USB Cable.
- To connect via Bluetooth, the device such as a PC must be compatible with Dial-Up Networking Profile of Bluetooth standard Version 1.2
- The FOMA handset must be in a FOMA service area.
- The access point must support FOMA packet communication for packet communication.
- The access point must support FOMA 64K data communication or ISDN synchronous 64K for 64K data communication.

■ Data Communication Glossary

APN (Access Point Name)

Identifies an access point (ISP or LAN) for packet communication. The Internet connection service for DoCoMo, "mopera U" has "mopera.net" as its APN.

cid (Context Identifier)

A registration number of an APN of packet communication to the FOMA handset. The FOMA handset can contain up to 10 APNs using cid 1 - 10.

DNS (Domain Name System)

The database system that translates a domain name address such as "nttdocomo.co.jp" into a numerical IP address for PCs.

OBEX (Object Exchange)

A protocol for file transfer defined by IrDA (Infrared Data Association). Data such as Contacts, Schedule events, or images can be exchanged with devices that handle the OBEX protocol.

QoS (Quality of Service)

Indicates the network service quality. You can specify conditions of data communication speed in the FOMA handset configurations (actual communication speed varies depending on the communication conditions).

W-TCP

The TCP parameter is used to get the full utilization of the TCP/IP transmission capability for packet communications over the FOMA network. The TCP parameter must be optimized to get the most out of

the communication capability of the FOMA handset.

Administrator Privileges

Access rights that allow access to all functions on a Windows XP or Windows 2000 system. A user without administrator privileges cannot install or uninstall drivers or FOMA PC Configuration Software.

Before Using

Operating Environment

The following operating environment is required for a PC to use data communication:

Item	Requirement
PC Main Unit	• PC-AT compatible machine with a CD-ROM capable drive • USB port (in accord with Universal Serial Bus Specification Rev1.1/2.0) • Display resolution of 800x600 dots, High Color (65,536 color) or higher recommended • For Bluetooth connection -Dial-up Networking Profile compatible device that complies with Bluetooth Standard Version 1.2
OS*1	• Windows XP, Windows 2000 (Japanese version)
Required Memory	• For windows XP, 128M bytes or more*2 • For windows 2000, 64M bytes or more*2
Hard Disk Space	• Available space of 5M bytes or more*2

*1: DoCoMo does not guarantee the operation under the supported OS if it is changed through upgrade.

*2: Required memory or hard disk space may vary depending on the PC system configuration.

Note

- Depending on the operating environment, data communication may not be available. DoCoMo does not respond to any inquiries about the use nor guarantee proper operation under operating environments other than those described in "Operating Environment".
- The FOMA handset is not compatible with Remote Wakeup.
- The FOMA handset does not support FAX communication.

Required Devices

To use data communications, the following are required in addition to the FOMA handset and a PC:

- FOMA USB Cable (optional)*
- FOMA miniUSB Conversion Adapter M01 (accessory)*
- CD-ROM for FOMA M702iG (accessory)

*: For a Bluetooth connection, the FOMA USB Cable and FOMA mini USB Conversion Adapter M01 are not required.

Note

- For a USB connection, purchase the exclusive FOMA USB Cable. Commercially available USB cables have the wrong shape connectors and cannot be used.

Preparing for Data Communication

The flow for preparing for packet communication or 64K data communication is as follows:

Communication via USB Connection

Install the communication setup files (drivers) →P4

Checking the USB mode setting of the FOMA handset to "Communication mode" →P5

Connect the FOMA handset and a PC using a USB cable (optional) →P5

Checking after installation →P6

Communication via Bluetooth Connection

Connect the FOMA handset and a PC using a Bluetooth →P8

Checking the modem →P8

The following settings are common for both USB and Bluetooth connections.

Install the FOMA PC configuration software and set up the access point →P9

Set up the access point (for packet communication) and dial-up network without using the FOMA PC configuration software →P19

Connect →P15, P24

■ Data Communication Software included on the "CD-ROM for FOMA M702iG" M702iG communication setup files (drivers)

These files must be installed on a PC so that communication or file exchange can be performed after the FOMA handset and PC are connected using the FOMA USB Cable.

FOMA PC configuration software

This software is to be installed on a PC to quickly configure settings of dial-up connections, etc. that are required to perform data communication.

Installing the Communication Configuration Files (Drivers)

You need to install the communication configuration files so that the FOMA handset can be used from the PC before connecting the FOMA handset and the PC via USB connection for the first time.

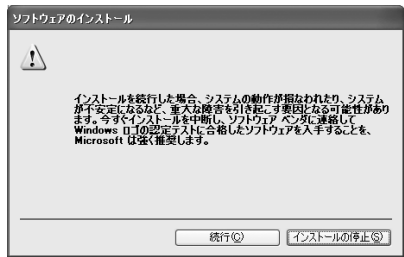
- The communication configuration file is not required for a Bluetooth connection.
- The communication configuration files installing with the FOMA handset not connected to a PC.
- Be sure to install the communication configuration files from a user account with the administrator privileges. For settings and operations regarding PC administrator privileges, contact your PC manufacturer or Microsoft Inc.
- Check that no other software is running before installing the communication configuration files. Terminate any running software before installing the files.

Installing to Windows XP

- 1 Insert the CD-ROM for FOMA M702iG into a PC**
- 2 Click "スタート (Start)" ▶ "ファイル名を指定して実行 (Select file name and run)" then enter " <CD-ROM drive letter>: ¥ Drivers ¥ Setup.exe" in "名前 (Name)" field ▶ Click [OK]**
- 3 Click [インストール (Install)]**
Installation of the drivers begins.



- If the screen to recommend the installation interruption is displayed



Click [続行 (Continue)] to continue the installation. The M702iG communication configuration file operates in the same way as the software has passed the Windows logo authentication test.

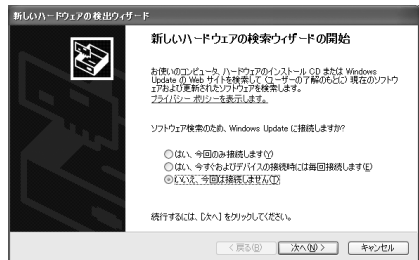
4 Click [OK] on the the confirmation screen

5 Connect the FOMA handset and the PC

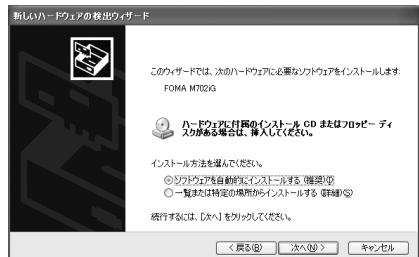
- Connecting → P5
- After the handset is connected properly, the taskbar of the PC displays a popup message "新しいハードウェアが見つかりました (New hardware found)" for a few seconds.

6 Select "いいえ、今回は接続しません (No, not this time)" ▶ Click [次へ (Next)]

- Depending on your PC status or settings, this screen may not appear. In this case, go to Step 7.



7 Select "ソフトウェアを自動的にインストールする(推奨) (Install the software automatically (recommended))" ▶ Click [次へ (Next)]



- If the screen to recommend the installation interruption is displayed
Click [続行 (Continue)] to continue the installation. The M702iG communication configuration file operates in the same way as the software has passed the Windows logo authentication test.

8 Click [完了 (Finish)]

9 Install all drivers of the other three types

Install all drivers of three types performing Steps 6 to 9.

After the installation completes, the taskbar of the PC displays a popup message "新しいハードウェアがインストールされ、使用準備ができました (New hardware installed and ready)" for a few seconds.

- Go to "Checking the Communication Configuration Files (Drivers)". →P6

Installing to Windows 2000

1 Insert the CD-ROM for FOMA M702iG into a PC

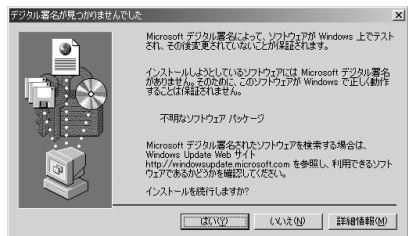
2 Click "スタート (Start)" ▶ "ファイル名を指定して実行 (Select file name and run)" then enter "<CD-ROM drive letter>: ¥ Drivers¥ Setup.exe" in "名前 (Name)" field ▶ Click [OK]

3 Click [インストール (Install)]

Installation of the drivers begins.



- If the screen to confirm the installation continuation is displayed



Click [はい (Yes)] to continue the installation. The M702iG communication configuration file operates in the same way as the software has verified the Microsoft digital signature.

4 Click [OK] on the confirmation screen

5 Connect the FOMA handset and the PC

4 types of drivers are automatically installed in a row.

- Connecting →P5

- If the screen to confirm the installation continuation is displayed

Click [はい (Yes)] to continue the installation. The M702iG communication configuration file operates in the same way as the software has verified the Microsoft digital signature.

- Go to "Checking the Communication Configuration Files (Drivers)". →P6

Connecting the FOMA Handset and PC Using the FOMA USB Cable (Optional)

This section explains the steps to connect the FOMA handset and a PC using the USB cable.

USB Mode Setting

Setting the USB Mode

Set the USB mode setting of the FOMA handset to "Communication mode"

1 (Connection) ▶ (USB Mode Setting)



2 [Change] ▶ "Communication mode" ▶ [Select]

Connecting the FOMA Handset and PC Using the FOMA USB Cable (Optional)

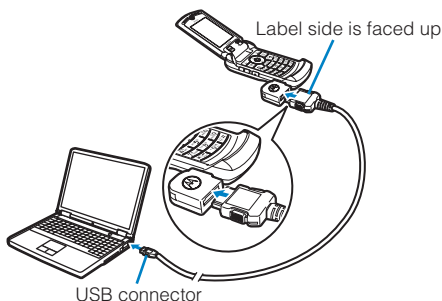
1 Open the cover of the external connector and plug the FOMA miniUSB conversion adapter M01 (Accessory)

- There is 2mm-gap between the handset and the FOMA miniUSB conversion adapter. This is normal.

2 Plug the FOMA USB Cable connector, with the label up, straight into the FOMA miniUSB conversion adapter

- Slide in the connector until it securely clicks into place.

3 Plug the USB connector of the FOMA USB Cable to a USB connector on the PC

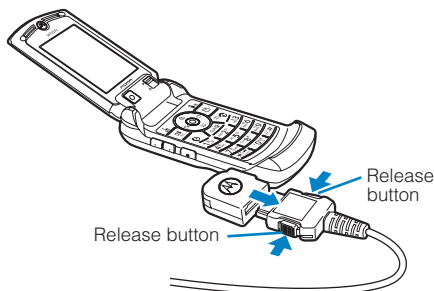


Note

- Use the exclusive FOMA USB Cable to connect the FOMA handset and PC. A commercially available USB cable has a different connector shape and cannot be connected to the FOMA miniUSB conversion adapter M01.
- Do not use excessive force inserting the FOMA USB Cable or FOMA miniUSB conversion adapter M01 connector. Connectors won't work unless they are inserted at the appropriate direction and angle. When connectors are inserted correctly, they can be inserted smoothly without requiring force. If you cannot insert a connector properly, do not use excess force and check the shape and direction of the connector.

■ Unplugging

- ① While pressing the release buttons of the external connector of the FOMA USB Cable, pull the cable in a horizontal position from the FOMA miniUSB conversion adapter M01
 - If you pull it forcibly, malfunction may result.
- ② Pull out the FOMA miniUSB conversion adapter M01 in a horizontal position from the FOMA handset
 - If you pull it forcibly, malfunction may result.



- ③ Unplug the FOMA USB Cable from the PC

Checking the Communication Configuration Files (Drivers)

Check that the M702iG communication configuration file has been installed correctly.

<Example: For Windows XP>

- 1 Click "スタート (Start)" ▶ "コントロール パネル (Control Panel)" and click "パフォーマンスとメンテナンス (Performance and Maintenance)" ▶ "システム (System)"

■ For Windows 2000

Click "スタート (Start)" ▶ "設定 (Settings)" ▶ "コントロールパネル (Control Panel)", and click "システム (System)"

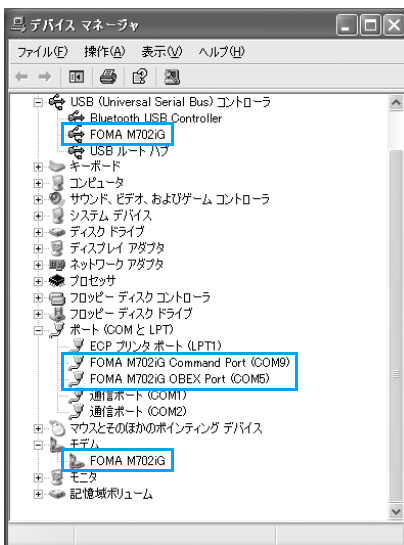
- 2 Click the "ハードウェア (Hardware)" tab ▶ Click [デバイスマネージャ (Device Manager)]

■ For Windows 2000

Click the [デバイスマネージャ (Device Manager)] tab

- 3 Click a device name to view the installed driver name

Check that "ポート (Port) (COM/LPT)", "モデム (Modem)" and "USB (Universal Serial Bus) コントローラ (Controller)" have drivers displayed.



Windows XP

Device	Driver
Port (COM/LPT)	- FOMA M702iG Command Port - FOMA M702iG OBEX Port
Modem	FOMA M702iG
USB (Universal Serial Bus) Controller	FOMA M702iG

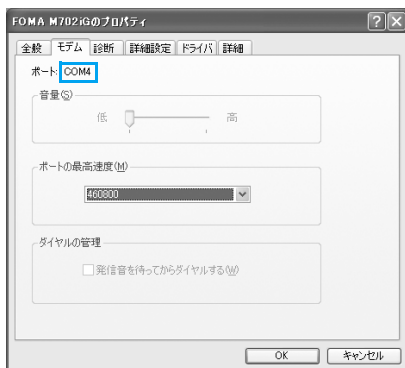
Note

- If the FOMA USB Cable (optional) was disconnected or the installation was cancelled by pressing [キャンセル (Cancel)] on the PC screen while the M702iG communication configuration file was being installed, the file was not installed successfully and the driver names may not be verified on the "デバイスマネージャ (Device Manager)" screen. In this case, uninstall then reinstall the M702iG communication configuration files.

■ To view the FOMA handset COM port number

The modem name or COM port number of the FOMA handset may be required if you set up communication without using the FOMA PC configuration software. This section describes how to check the COM port number on the Device Manager screen.

- 1 Connect the FOMA handset and the PC
 - Connecting → P5
- 2 Perform Step 1 and 2 in "Checking the Communication Configuration Files (Drivers)"
- 3 Click "モデム (Modem)" ▶ Select the "FOMA M702iG" ▶ From the menu bar, click [操作 (Operate)] ▶ [プロパティ (Properties)] ▶ Click the "モデム (Modem)" tab
The FOMA handset COM port number appears on the right side of "ポート (Port):".



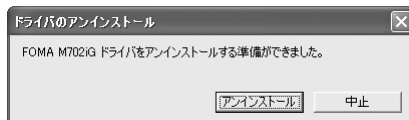
Uninstalling the Communication Configuration Files (Drivers)

To uninstall the communication configuration files (drivers), perform the following steps:

- Uninstall the files after disconnecting the FOMA handset from the PC.
- Be sure to uninstall the communication configuration files from a user account with the administrator privileges. For settings and operations regarding PC administrator privileges, contact your PC manufacturer or Microsoft Inc.
- Verify that no other software is running before uninstalling the communication configuration files. Terminate any running software before uninstalling the files.

<Example: For Windows XP>

- 1 Insert the CD-ROM for FOMA M702iG into a PC
- 2 Click "スタート (Start)" ▶ "ファイル名を指定して実行 (Select file name and run)" then enter "<CD-ROM drive letter>: ¥Drivers¥M702iGUn.exe" in "名前 (Name)" field ▶ Click [OK]
- 3 Click [アンインストール (Uninstall)]
Un-installation of the driver begins.
- 4 Click [OK] on the confirmation screen
- 5 Click [はい (Yes)] to restart the PC
The PC reboots and un-installation completes.



Dial-up Network Gateway

Preparing for Communication via Bluetooth

This section describes preparation for communication by connecting the FOMA handset and the PC via Bluetooth.

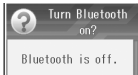
Make the Device Registration of the FOMA Handset and PC

After the FOMA handset become search ready, search for the FOMA handset from the PC, register the device, and connect the FOMA handset and the PC via Bluetooth.

- If you connect the FOMA handset and the PC after registering the device, registering the device (Steps 1 to 4) are not necessary. For connecting the devices after they are registered, refer to the instruction manual that came with the PC or a device such as the Bluetooth adapter that is connected to the PC.

1 (Connection) ➔ (Bluetooth Link) ➔ "Find Me"

- This screen does not open when Bluetooth on the FOMA handset is turned on. In this case, go to Step 3.



2 [Yes]

Bluetooth on the FOMA handset turns on and becomes search ready.  blinks at the top of the screen.

- While the device become search ready, if no searching operations were performed from the PC for about three minutes, the search ready state will be cancelled automatically.

3 Search and register the Bluetooth device on the PC

Select "FOMA M702iG" <checking the specifications> from the found device and perform steps to register it. The Device registration screen opens on the FOMA handset when you start the registering process.

For searching and registering devices, refer to the instruction manual that came with the PC or the device such as a Bluetooth adapter that is connected to the PC.

- It is recommended that you turn off Bluetooth devices around the PC other than the FOMA handset before searching and registering devices.
- Some instruction manuals may use "Find" for "Search" and "Pairing" for "Register".

4 [Yes] ➔ Enter the passkey

The Passkey authentication completion screen opens on the FOMA handset after the Bluetooth connection between the FOMA handset and the PC is established.

Go to "Checking the Registered Devices". →P8

Checking the Registered Devices

Check the settings of the Bluetooth devices registered to the FOMA handset and the PC to make sure you are ready to perform data communications via Bluetooth.

- For the device name displayed on the FOMA handset and the modem name displayed on the PC, refer to the instruction manual of your PC or the device connected the PC, such as the Bluetooth adapter.

Checking the Settings of Devices Registered to the FOMA Handset

Verify the connection method between the FOMA handset and the device. Change if necessary.

1 ➔ (Connection) ➔ (Bluetooth Link) ➔ "Device History"

Bluetooth devices registered to the FOMA handset are displayed.



2 Select a device ➔ ➔ select "Access Settings" ➔ ➔ check the settings in "Dialup Networking Gateway"

Select from the following as necessary:



Always Ask

The confirmation is displayed each time you connect.

Automatic

Connection is always permitted.

Never

The connection is denied and communication cannot be performed.

Just Once

The confirmation is displayed for the first connection. Later attempts will be rejected.

Checking the Modem

Check the COM port number assigned to the modem to set up data communication.

<Example: For Windows XP>

1 Click "スタート (Start)" ▶ "コントロールパネル (Control Panel)" then click "パフォーマンスとメンテナンス (Performance and Maintenance)" ▶ "システム (System)"

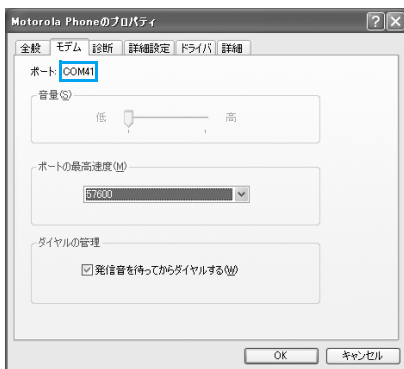
■ For Windows 2000

Click "スタート (Start)" ▶ "設定 (Settings)" ▶ "コントロールパネル (Control Panel)", and click "システム (System)"

2 Click the "ハードウェア (Hardware)" tab ▶ Click [デバイスマネージャ (Device Manager)]

3 Click "モデム (Modem)" ▶ Select the modem name ▶ From the menu bar, click [操作 (Operate)] ▶ [プロパティ (Properties)] ▶ Click the "モデム (Modem)" tab

The FOMA handset COM port number appears on the right side of "ポート (Port)".



Terminating a Bluetooth Connection

After data communication finished, terminate the Bluetooth connection between the PC and the FOMA handset.

1 Perform steps to disconnect the PC and the FOMA handset

For disconnection steps, refer to the instruction manual of your PC or the Bluetooth device added to the PC.

FOMA PC Configuration Software

Various settings regarding communication are required to perform packet communication or 64K data communication connecting the FOMA handset and PC. Using the FOMA PC configuration software allows you to perform the following settings quickly:

■ かんたん設定 (Easy Settings)

Follow the instructions to "Set up the dial-up connection for FOMA data communication" and at the same time "Configure W-TCP" automatically.

■ W-TCP Settings

Optimize the communication settings on the PC before using "FOMA packet communication". Communication settings need to be optimized by W-TCP settings in order to get the most out of the communication capability.

■ APN Settings

Configure the access point (APN) settings required for packet communication.

The regular phone number is not used to connect to the FOMA packet communication access point, unlike 64K data communication. Save APN (Access Point Name) for each access point on the FOMA handset in advance, then specify the registration number (cid) in the access point number field to connect. "mopera.ne.jp", the access point of "mopera", is saved in cid1 and "mopera.net", the access point of "moperaU" is saved in cid3 by default.

Note

- You can configure settings for packet communication or 64K data communication without using the FOMA PC configuration software. →P19, P24
- If the FOMA PC configuration software version 3.0.1 or its older version (hereafter old FOMA PC configuration software) is installed, uninstall the old FOMA PC configuration software in advance. →P11

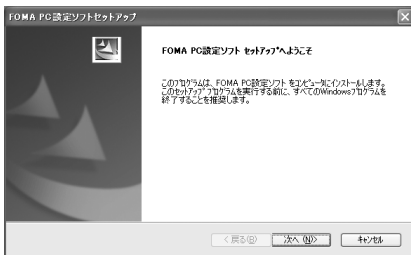
Installing the FOMA PC Configuration Software

- Be sure to install the FOMA PC configuration software from a user account with the administrator privileges. For settings and operations regarding PC administrator privileges, contact your PC manufacturer or Microsoft Inc.

- Check that no other software is running before installing the FOMA PC configuration software. Terminate any running software before installing the configuration software.

<Example: For Windows XP>

- 1 Insert the included CD-ROM for FOMA M702iG into a PC
- 2 Click "スタート (Start)" ▶ "ファイル名を指定して実行 (Select file name and run)" then enter "<CD-ROM drive letter>: ¥FOMA_PCSET¥Setup.exe" in "名前 (Name)" field ▶ Click [OK]
- 3 Click [次へ (Next)]
 - If a message indicating that "旧W-TCP設定ソフト (Old W-TCP configuration software)", "旧APN設定ソフト (Old APN configuration software)", or "旧FOMA PC設定ソフト (Old FOMA PC configuration software)" is installed appears, uninstall the software referring to P9.



- 4 Click [はい (Yes)] to agree to the license agreement

Clicking [いいえ (No)] cancels the installation and the FOMA PC configuration software will not be available.
- 5 Checkmark ☒ "タスクトレイに常駐する (Reside in the task tray)" ▶ Click [次へ (Next)]

After the installation,  (W-TCP settings) resides in the PC task tray. It is recommended that you keep it in the task tray because it allows you to change or view the W-TCP settings quickly.

- The FOMA PC configuration software can be installed even if "タスクトレイに常駐する (Reside in the task tray)" is set to ☐. To place the icon in the task tray after the initial installation, on the FOMA PC configuration software operation screen (P11), click "メニュー (Menu)" ▶ "W-TCP設定をタスクトレイに常駐させる (Place W-TCP settings in the task tray)".



- 6 Check the installation destination folder and click [次へ (Next)]
 - To change the installation destination
Click [参照 (Browse)] to specify an installation destination then click [次へ (Next)].
- 7 Check the name of the "プログラムフォルダ (Program folder)" field ▶ Click [次へ (Next)]



- 8 Click [完了 (Finish)]

After the installation completes, the FOMA PC configuration software launches and the operation screen opens.

■ Warning or confirmation screens that open during the installation of FOMA PC configuration software

This section describes operations if a warning or confirmation opens during the installation.

If a warning indicating that the FOMA PC configuration software has already been installed appears

The old version of FOMA PC configuration software has been installed. Uninstall the old version of FOMA PC configuration software from the "プログラム追加と削除 (Add or Remove Programs)" (for Windows 2000, "アプリケーションの追加と削除 (Add or Remove Applications)"), then install the FOMA PC configuration software.

If a warning indicating that an old version of W-TCP environment configuration software has been installed appears

Uninstall the old version of W-TCP environment configuration software from the "プログラム追加と削除 (Add or Remove Programs)" (for Windows 2000, "アプリケーションの追加と削除 (Add or Remove Applications)", then install the FOMA PC configuration software.

If a warning indicating that an old version of FOMA data communication configuration software has been installed appears

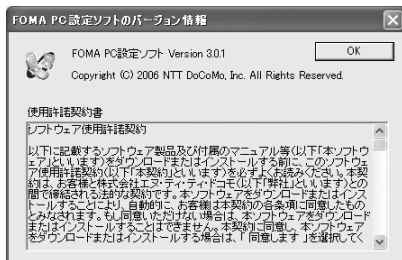
Click [OK] to uninstall the FOMA data communication configuration software automatically. After the un-installation, the FOMA PC configuration software installation resumes.

If a confirmation indicating to cancel the wizard appears when clicking [キャンセル (Cancel)] or [いいえ (No)]

Click [完了 (Finish)] to finish the installation. If re-installing, perform the installation steps from the beginning.

■ Checking the FOMA PC Configuration Software Version

On the FOMA PC configuration software operation screen, click "メニュー (Menu)" ▶ "バージョン情報 (Version)" to open the version information screen.



Configuring Communication Settings

This section describes steps to set up packet communication/64K data communication using the FOMA PC configuration software.

- Check that the FOMA handset and the PC are connected properly before configuring the settings.
→P5

Launching the FOMA PC Configuration Software

Launch the FOMA PC configuration software installed on the PC. The following can be configured from the operation screen when the FOMA PC configuration software is launched:

- Packet communication settings using "かんたん設定 (Easy Settings)" →P12

- 64K data communication settings using "かんたん設定 (Easy Settings)" →P14

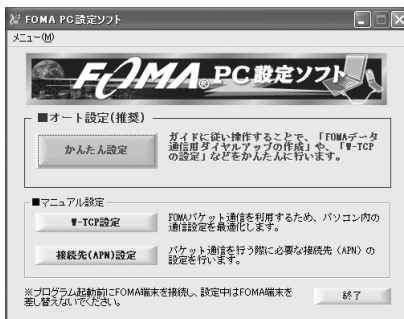
- Optimizing and changing the transmission capability of data communication using "W-TCP Settings" →P16

- APN settings for packet communication using "APN Settings" →P17

<Example: For Windows XP>

Click "スタート (Start)" ▶ "すべてのプログラム (All Programs)" ▶ "FOMA PC設定ソフト (FOMA PC configuration Software)" ▶ "FOMA PC設定ソフト (FOMA PC configuration Software)"

The FOMA PC configuration software launches and the operation screen opens.



■ For Windows 2000

Click "スタート (Start)" ▶ "プログラム (Programs)" ▶ "FOMA PC設定ソフト (FOMA PC configuration Software)" ▶ "FOMA PC設定ソフト (FOMA PC configuration Software)"

Specifying a COM Port

When performing data communication via Bluetooth connection, you need to specify the COM port number of the PC under "通信設定 (Communication Settings)" of the FOMA PC configuration software.

- This operation is usually not required for USB connection. Perform this operation if you want to specify the COM port.

1 Check the COM port assigned to the FOMA handset

Checking the COM port →P7, P8

2 From the FOMA PC configuration software operation screen, click "メニュー (Menu)" ▶ "通信設定 (Communication Settings)"

3 Select "COMポート指定 (Specify COM port)" ▶ Click the "COM:" field to set the COM port number assigned to the FOMA handset

- A COM port number can be specified between 1 and 99.



4 Click [OK]

Setting completes.

Setting Packet Communication Using Easy Settings

Packet communication is a communication method whose charges are based on the amount of data exchanged. It allows data communication at a maximum speed of 384Kbps for receiving and 64Kbps for sending. It is recommended that you use "mopera U" that handles broadband connection options or international roaming to connect to the Internet using the FOMA handset (separate subscription is required). You can perform only packet communication using international roaming. Note that packet communication fees under international roaming differ from those in Japan. If you want to connect to the Internet now, "mopera" is convenient. This section describes the steps to set up a USB connection as an example.

Using "mopera U" or "mopera"

1 On the FOMA PC configuration software screen, click [かんたん設定 (Easy Settings)]

2 Select "パケット通信 (Packet Communication)" and click [次へ (Next)]

3 Select "『mopera U』への接続 (Connect to mopera U)" or "『mopera』への接続 (Connect to mopera)" ▶ Click [次へ (Next)]

- If you select "『mopera U』への接続 (Connect to mopera U)", a screen to inquire whether you are a subscriber to "mopera U" appears. Click [はい (Yes)] if you are a subscriber and continue with the settings.

4 Click [OK]

The APN settings will be downloaded from the FOMA handset. Please wait.

■ For a Bluetooth Connection

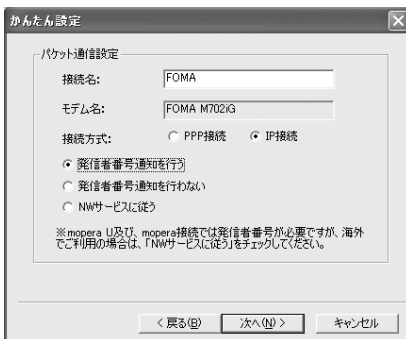
The confirmation may be displayed depending on the FOMA handset connection settings. Press  [Accept] to connect.

5 Enter a connection name in the "接続名 (Connection Name)" field ▶ Select [接続方式 (Connection Method)] ("PPP接続 (PPP Connection)"/"IP接続 (IP Connection)" ▶ Select "発信者番号通知を行う (Show Caller ID)" ▶ Click [次へ (Next)]

- The following half-pitch characters cannot be entered in the "接続名 (Connection Name)" field.
¥ / : * ? ! < > | "
- To connect to "mopera U", select "接続方式 (Connection Method)" to "IP接続 (IP Connection)". When using in Japan, you can select any "接続方式 (Connection Method)".
To connect to "mopera", select "PPP接続 (PPP Connection)".
- To connect to "mopera U" or "mopera", Caller ID must be sent. Do not select "発信者番号通知を行わない (Hide Caller ID)".
- If using overseas, select "NW サービスに従う (Follow the NW Service)" and on the FOMA handset, operate  (Network Services) ▶ "Caller ID Notification" ▶ "Change Notification Setting" to set whether to show your Caller ID.

■ For a Bluetooth Connection

Check that the name displayed under "モデム名 (Modem Name)" is correct by referring to the instruction manual for your PC or the Bluetooth adapter connected to the PC.



6 Select any users under "使用可能ユーザーの選択 (Select a permitted user)" and click [次へ (Next)]

To connect to "mopera U" or "mopera", the "ユーザー名 (User Name)" and "パスワード (Password)" fields can be left unfilled.

7 Set "最適化を行う (Optimize)" to ☒ and click [次へ (Next)]

■ If already optimized

A conformation to optimize does not appear. Go to Step 8.

8 Check the settings ▶ Click [完了 (Finish)]

- 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 a shortcut to dial-up on the desktop)" is set to ☒, a shortcut to the dial-up connection will be created on the desktop.

■ To change settings

Click [戻る (Back)].

9 Click [OK]

Setting completes.

■ If the optimization setting was changed

You need to restart the PC. Click "はい (Yes)" on the screen to reboot.

Using Another Provider

1 On the FOMA PC configuration software screen, click [かんたん設定 (Easy Settings)]

2 Select "パケット通信 (Packet Communication)" and click [次へ (Next)]

3 Select "その他 (Other)" and click [次へ (Next)]

4 Click [OK]

The APN settings will be downloaded from the FOMA handset. Please wait.

■ For a Bluetooth Connection

The confirmation may be displayed depending on the FOMA handset connection settings. Press ☒ [Accept] to connect.

5 Enter a connection name in the "接続名 (Connection Name)" field

- The following half-pitch characters cannot be entered in the "接続名 (Connection Name)" field.
¥/:*?!<>|"
- Follow the instructions from your ISP to set the "接続方式 (Connection Method)" and Caller ID notification.

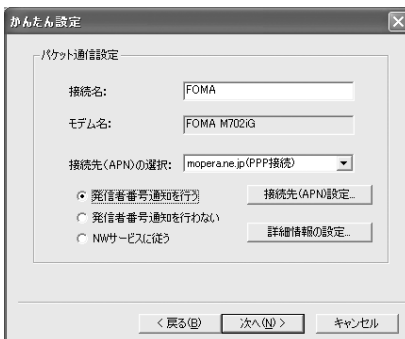
- If using overseas, select "NW サービスに従う (Follow the NW Service)" and on the FOMA handset, operate  (Network Services) ▶ "Caller ID Notification" ▶ "Change Notification Setting" to set whether to show your Caller ID.

■ For a Bluetooth Connection

Check that the name displayed under "モデム名 (Modem Name)" is correct by referring to the instruction manual for your PC or the Bluetooth adapter connected to the PC.

■ To set the IP address and DNS

If your ISP requires setting IP addresses and DNS, click [詳細情報の設定 (Advanced Information Settings)] and set these items.



6 Click [接続先 (APN) 設定 (APN Settings)]



7 Click [追加 (Add)] ▶ Set up the APN ▶ Click [OK]

Set "番号 (cid)" to 2 or 4-10.

8 Click [OK]

The "接続先 (APN) 設定 (APN Setting)" screen closes.

9 Click [次へ (Next)]

10 Set "ユーザー名 (User Name)" and "パスワード (Password)" ▶ Select any users under "使用可能ユーザーの選択 (Select a permitted user)" ▶ Click [次へ (Next)]

Enter the user name and password provided by your ISP accurately paying attention to upper or lower case.

11 Set "最適化を行う (Optimize)" to ☒ Click [次へ (Next)]

■ If already optimized

A conformation to optimize does not appear.
Go to Step 12.

12 Check the settings ▶ Click [完了 (Finish)]

- 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 a shortcut to dial-up on the desktop)" is set to ☒, a shortcut to the dial-up connection will be created on the desktop.

■ To change settings

Click [戻る (Back)].

13 Click [OK]

Setting completes.

■ If the optimization setting was changed

You need to restart the PC. Click "はい (Yes)" on the screen to reboot.

Setting 64K Communication Using Easy Settings

64K data communication is a communication method whose charges are based on the connection time. It allows a maximum speed of 64Kbps to transfer data.

It is recommended that you use "mopera U" that handles broadband connection options or international roaming to connect to the Internet using the FOMA handset (separate subscription is required). You can perform only packet communication using international roaming.

Note that packet communication fees under international roaming differ from those in Japan. If you want to connect to the Internet now, "mopera" is convenient.

This section describes the steps to set up a USB connection as an example.

Using "mopera U" or "mopera"

1 On the FOMA PC configuration software screen, click [かんたん設定 (Easy Settings)]

2 Select "64Kデータ通信 (64K Data Communication)" and click [次へ (Next)]

3 Select "『mopera U』への接続 (Connect to mopera U)" or "『mopera』への接続 (Connect to mopera)" ▶ Click [次へ (Next)]

■ When selecting "『mopera U』への接続 (Connect to mopera U)"

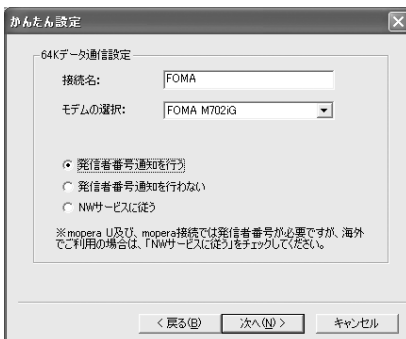
A screen to confirm whether you are a subscriber to "mopera U" appears. Click [はい (Yes)] if you are a subscriber and continue with the settings.

4 Enter a connection name in the "接続名 (Connection Name)" field ▶ Select "発信者番号通知を行う (Show Caller ID)" ▶ Click [次へ (Next)]

- The following half-pitch characters cannot be entered in the "接続名 (Connection Name)" field.
¥ / * ? ! < > | "
- Select "FOMA M702iG" for the "モデムの選択 (Select the modem)" field.
- To connect to "mopera U" or "mopera", Caller ID must be sent. Do not select "発信者番号通知を行わない (Hide Caller ID)".

■ For a Bluetooth Connection

Check that the name displayed under "モデム名 (Modem Name)" is correct by referring to the instruction manual for your PC or the Bluetooth adapter connected to the PC.



5 Select any users under "使用可能ユーザの選択 (Select a permitted user)" ▶ Click [次へ (Next)]

To connect to "mopera U" or "mopera", the "ユーザー名 (User Name)" and "パスワード (Password)" fields can be left unfilled.

6 Check the settings ▶ Click [完了 (Finish)]

- 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 a shortcut to dial-up on the desktop)" is set to ☒, a shortcut to the dial-up connection will be created on the desktop.

■ To change settings

Click [戻る (Back)].

7 Click [OK]

Setting completes.

1 On the FOMA PC configuration software screen, click [かんたん設定 (Easy Settings)]

2 Select "64Kデータ通信 (64K Data Communication)" ▶ Click [次へ (Next)]

3 Select "その他 (Other)" ▶ Click [次へ (Next)]

■ When selecting "『mopera U』への接続 (Connect to mopera U)"

A screen to confirm whether you are a subscriber to "mopera U" appears. Click [はい (Yes)] if you are a subscriber and continue with the settings.

4 Configure the communication settings ▶ Click [次へ (Next)]

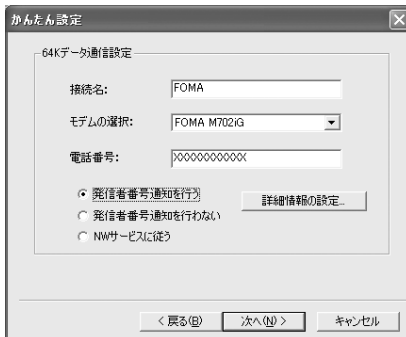
- Perform the following to configure the communication settings:
- Enter a connection name in the "接続名 (Connection Name)" field. The following half-pitch characters cannot be entered in the "接続名 (Connection Name)" field.
¥/:*?!<>|"
- Select "FOMA M702iG" for the "モデムの選択 (Select the modem)" field.
- Enter the phone number to dial your ISP in the "電話番号 (Phone Number)" field.
- Follow the instructions of your ISP to set the "接続方式 (Connection Method)" and Caller ID notification.
- If using overseas, select "NW サービスに従う (Follow the NW Service)" and on the FOMA handset, operate  (Network Services) ▶ "Caller ID Notification" ▶ "Change Notification Setting" to set whether to show your Caller ID.

■ For a Bluetooth Connection

Check that the name displayed under "モデム名 (Modem Name)" is correct by referring to the instruction manual for your PC or the Bluetooth adapter connected to the PC.

■ To set IP addresses and DNS

If your ISP requires setting IP addresses and DNS, click [詳細情報の設定 (Advanced Information Settings)] and set these items.



5 Set "ユーザー名 (User Name)" and "パスワード (Password)" ▶ Select any users under "使用可能ユーザーの選択 (Select a permitted user)" ▶ Click [次へ (Next)]

Enter the user name and password provided by your ISP accurately paying attention to upper or lower case.

6 Check the settings ▶ Click [完了 (Finish)]

- 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 a shortcut to dial-up on the desktop)" is set to ☒, a shortcut to the dial-up connection will be created on the desktop.

■ To change settings

Click [戻る (Back)].

7 Click [OK]

Setting completes.

Start Communicating

This section describes steps to start and terminate communication set up using the FOMA PC configuration software.

- Use the same FOMA handset that was connected when you set the communication settings. Using another FOMA handset requires the installation of the communication configuration file.

1 Double click the connection icon on the PC desktop



If a connection icon is not displayed on the desktop, perform the following steps:

■ For Windows XP

Click "スタート (Start)" ▶ "すべてのプログラム (All programs)" ▶ "アクセサリ (Accessories)" ▶ "通信 (Communication)" ▶ "ネットワーク接続 (Network connection)" ▶ Double-click the access point that has been set up

■ For Windows 2000

Click "スタート (Start)" ▶ "プログラム (Programs)" ▶ "アクセサリ (Accessories)" ▶ "通信 (Communication)" ▶ "ネットワークとダイヤルアップ接続 (Network and dial-up connection)" ▶ Double-click the access point that has been set up

2 Enter "ユーザー名 (User Name)" and "パスワード (Password)" ▶ Click [ダイヤル (Dial)]

The access point will be connected.

- To connect to "mopera U" or "mopera", the "ユーザー名 (User Name)" and "パスワード (Password)" fields can be left unfilled.



Note

- The communication speed displayed on the PC may be different from the actual communication speed.

Disconnecting Communication

Exiting the Internet browser may not terminate the connection. Perform the following steps to terminate the connection securely.

1 Click the dial-up icon in the task tray of the PC



2 Click [切断 (Disconnect)]

The communication will be terminated.



W-TCP Settings

"W-TCP configuration software" is a tool to set TCP parameters in order to optimize the TCP/IP transmission capability when packet communication is performed over the FOMA network. In order to get most out of the FOMA handset communication capability, you need to optimize the communication settings using this software.

- Optimization is not necessary if you selected "最適化を行う (Optimize)" when configuring the communication settings using "Easy Settings".

For Windows XP

You can set/cancel optimization per dial-up connection.

<Example: Optimizing>

1 Start the FOMA PC configuration software ▶ Click [W-TCP設定 (W-TCP settings)]

- To operate from the task tray of the PC
Click .

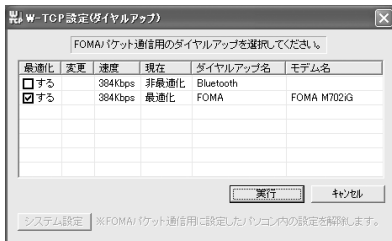
2 On the W-TCP settings screen, click [最適化を行う (Optimize)]

■ To cancel optimization

On the W-TCP settings (dial-up) screen, click [システム設定 (System Settings)] ▶ [最適化を解除する (Cancel Optimizing)]

- If already optimized, the W-TCP settings screen will not open. In this case, go to Step 3.

- 3 Set ☒ to a dial-up connection to optimize ▶ Click [実行 (Execute)]
 - Set ☐ to a dial-up connection to cancel optimizing.



- 4 Follow the instructions on the message to reboot the PC to enable the optimization

The optimization of the system settings will become enabled after the PC reboots.

For Windows 2000

<Example: Optimizing>

- 1 Start the FOMA PC configuration software ▶ Click [W-TCP設定 (W-TCP settings)]
 - To operate from the task tray of the PC
Click
 - 2 On the W-TCP settings screen, click [最適化を行う (Optimize)]
 - To cancel optimization
On the W-TCP settings screen, click [最適化を解除する (Cancel Optimization)]
 - 3 Follow the instructions on the message to reboot the PC to enable the optimization
- The optimization of the system settings will become enabled after the PC reboots.

Setting APN

Set the access point (APN) for packet communication.
Up to 10 APN can be set, and a cid of 1 to 10 can be assigned.
Use a cid to specify the access point for packet communication. The default cid1 is registered "mopera.ne.jp" for APN of "mopera" and cid3 is registered "mopera.net" for APN of "mopera U", when you set cid, 2 or a number between 4 and 10.

- Check that the FOMA handset and the PC are connected properly before configuring the settings.
→P5, P8

- 1 Start the FOMA PC configuration software ▶ Click [接続先 (APN) 設定 (APN settings)]

- 2 Click [OK] on the Download FOMA handset settings screen

The information on the APN that has been accessed and registered by the connected FOMA handset will be read.

- 3 Configure APN

- To set the connection method, click [編集 (Edit)] ▶ [詳細設定 (Advanced Settings)] and select a connection method.



Editing/Deleting/Adding an APN

- To edit a registered APN
Select an APN from the list ▶ Click [編集 (Edit)]
- To delete a registered APN
Select APN from the list ▶ Click [削除 (Delete)]
 - APN's registered for cid 1 and cid 3 cannot be deleted (Even if you select number (cid) 1 or 3 and click [削除 (Delete)], it will not be deleted, and number (cid) 1 reverts to "mopera.ne.jp" and 3 reverts to "mopera.net").
- To add an APN
Click [追加 (Add)]

Saving to a File

You can make a backup of saved APN settings on the FOMA handset or save APN settings that are being edited.

- 1 Click "ファイル (File)" ▶ "名前を付けて保存 (Save as)" or "上書き保存 (Save)"

Reading from a File

You can re-edit the APN settings saved on the PC or write the settings to the FOMA handset.

- 1 Click "ファイル (File)" ▶ "開く (Open)"

Writing APN Information to the FOMA Handset

You can write the APN settings that have been written to the FOMA handset, to the FOMA handset.

1 Click [FOMA端末へ設定を書き込む (Write settings to FOMA handset)]

The confirmation to overwrite appears.

2 Click [はい (Yes)]

Reading APN Information from the FOMA Handset

You can read the registered APN from the FOMA handset on demand.

1 Click "ファイル (file)" ▶ "FOMA端末から設定を取得 (Download settings from FOMA handset)"

The Download FOMA handset setting screen is displayed.

2 Click [OK]

Creating a Dial-up Connection

Write the added or edited APN to the FOMA handset and set up a dial-up connection.

1 Select the added or edited APN ▶ Click [ダイヤルアップ作成 (Create a dial-up connection)]

A confirmation to write to the FOMA handset appears.

2 Click [はい (Yes)]

After the APN information was written to the FOMA handset, clicking [OK] opens the "パケット通信用ダイヤルアップの作成 (Create a dial-up connection for packet communication)" screen.

3 Enter a connection name ▶ Click [アカウント・パスワードの設定 (Account/ password setting)]

- For "mopera U" or "mopera", the fields can be left unfilled.

4 Set "ユーザー (User)" and "パスワード (Password)" ▶ Select any users under "使用可能ユーザーの選択 (Select a permitted user)" ▶ Click [OK]

A dial-up connection is created.

- If your ISP provided IP and DNS information, click [(Set detailed information)] on the Dial-up for packet communication creation screen, entered any necessary information, and click [OK].

Note

- APN information is saved on the FOMA handset. If you connect a different FOMA handset, save the APN information again.
- If you want to use the APN information saved on the PC, register the same APN to the same cid on the FOMA handset.

Uninstalling the FOMA PC Configuration Software

- Be sure to uninstall the FOMA PC configuration software from a user account with the administrator privileges. For settings and operations regarding PC administrator privileges, contact your PC manufacturer or Microsoft Inc.

<Example: For Windows XP>

1 Terminate any running software

- Terminate "W-TCP設定ソフト (W-TCP configuration software)"
Right click  in the task tray of the PC and click "終了 (Exit)".
- Exit the FOMA PC Configuration Software
Click [終了 (Exit)] at the lower right corner of the screen.
- Terminate any running software

2 Click [スタート (Start)] ▶ [コントロールパネル (Control Panel)] ▶ [プログラムの追加と削除 (Add or Remove Programs)]

■ For Windows 2000

Click [スタート (Start)] ▶ [設定 (Settings)] ▶ [コントロールパネル (Control Panel)] ▶ [アプリケーションの追加と削除 (Add or Remove Applications)]

3 Select "NTT DoCoMo FOMA PC設定ソフト (NTT DoCoMo FOMA PC configuration Software)" ▶ Click [削除 (Delete)]

■ For Windows 2000

Select "NTT DoCoMo FOMA PC設定ソフト (NTT DoCoMo FOMA PC configuration Software)" ▶ Click "変更/削除 (Change / Delete)"

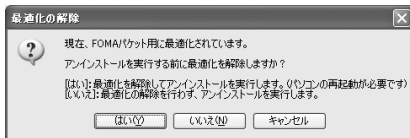
4 Check the program name to remove and click [はい (Yes)]

5 Click [完了(Finish)]

The un-installation of the FOMA PC configuration software completes.

■ If W-TCP settings have been optimized

The following screen is displayed. If you do not intend to perform data communication by connecting the FOMA handset, click [はい] (Yes)) to cancel optimization.



Configuring a Dial-up Network

This section describes the steps to configure settings for packet communication or 64K data communication without using the FOMA PC configuration software. Because there are many common steps to set up packet communication and 64K data communication, this section describes how to set up the connection for packet communication. The steps to set up 64K data communication, different steps, and cautions are described on Page 25.

Setting APN

Set the access point (APN) for packet communication. Up to 10 APN's can be set up and they are managed with cid's. Communication software requires setting up an APN in order to enter AT commands. This section describes the steps necessary for using "Hyper Terminal" that comes with Windows.

- To set up a 64K data communication connection, or to use "mopera U" or "mopera" as an access point for packet communication, these settings are not required.
- For APN's other than "mopera U" or "mopera", contact your ISP.

<Example: Setting up a USB connection in Windows XP>

1 Connect the FOMA handset and the PC

- Connecting →P5

■ For a Bluetooth Connection

- Connecting →P7

2 Click "スタート (Start)" ▶ "すべてのプログラム (All programs)" ▶ "アクセサリ (Accessories)" ▶ "通信 (Communication)" ▶ "ハイパーターミナル (Hyper Terminal)"

Hyper Terminal launches.

■ For Windows 2000

Click "スタート (Start)" ▶ "プログラム (Programs)" ▶ "アクセサリ (Accessories)" ▶ "通信 (Communication)" ▶ "ハイパーターミナル (Hyper Terminal)"

3 Enter a connection name in the "名前 (Name)" field ▶ Click [OK]



4 Enter a non-existing phone number (such as "0") in the "電話番号 (Phone Number)" field ▶ Check that "FOMA M702iG" is displayed for "接続方法 (Connection Method)" ▶ Click [OK]

- If there are similar modem names displayed in the "接続方法 (Connection Method)" field, check the FOMA handset modem name. →P8

■ For a Bluetooth Connection

Set "接続方法 (Connection Method)" to the modem name verified in "Checking the Modem" (P8).



5 Click [キャンセル (Cancel)] on the Connection screen

The Hyper Terminal entry screen opens.

6 Enter the APN in the following format ▶ Press

[Entry Format]

AT+CGDCONT=<cid>,"<PDP type>","<APN>" 

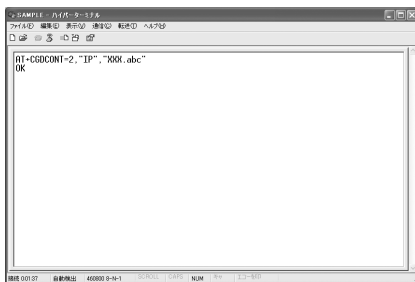
<cid>: Enter the registration number (cid) of the access point (APN). Cid1 is registered "mopera.ne.jp" and cid3 is registered "mopera.net" already, when you set cid, 2 or a number between 4 and 10.

<PDP type>: Enter the PDP type of the APN in PPP or IP.

<APN>: Enter the access point (APN).

[OK] appears after the access point is set up.

- Enter ATE1  if the entered characters are not displayed.



- To reset the APN settings of the specified cid

Enter AT+CGDCONT=<cid>.

- To view the registered APN

Enter AT+CGDCONT? .

7 Click "ファイル (File)" ▶ "ハイパーターミナルの終了 (Exit Hyper Terminal)"

8 Click [はい (Yes)] on the conformation to disconnect screen ▶ Click [いいえ (No)] on the confirmation to save screen

Hyper Terminal exits and the APN settings complete.

Note

- APN information is saved on the FOMA handset. If you connect a different FOMA handset, save the APN information again.
- If you want to use the APN information saved on the PC, register the same APN to the same cid on the FOMA handset.

Setting Display/Hide Caller ID

You can set to display or hide Caller ID for packet communication using the *DGPIR AT command.

- To set up 64K data communication connection, this setting is not required.

1 Perform Step 1 to 5 in "Setting APN"

Hyper Terminal launches and the entry screen opens.

2 Set whether to display or hide Caller ID using the following format ▶ Press

[Entry Format]

AT*DGPIR=<n>

<n> : Set to 1 to hide Caller ID ("184" is added when dialing).

Set to 2 to display Caller ID ("186" is added when dialing).

[OK] appears after Caller ID notification is set.

- To use "mopera U" or "mopera", set to 2 (display Caller ID).
- Enter ATE1  if the entered characters are not displayed.

Note

- You can also enter the leading "184" or "186" to the phone number of an APN for a dial-up connection to display or hide the Caller ID. →P20, P22
If you set Caller ID notification using the *DGPIR command and the dial-up connection setting, the dial-up connection setting takes precedence.
For example, even if you set <n> of the *DGPIR command to 2, entering the leading "184" (hide) to the APN number in the dial-up network hides the Caller ID.
- When using overseas, set AT*DGPIR=0 (Default). Calls will be made according to the registered APN.

Configuring Dial-up Network Settings

Set up the dial-up network on the PC. This section describes the steps to connect to "mopera U" that has been set to <cid>=3 in the USB connection as an example.

- For setting up connections to other than "mopoepra U" or "mopera", contact your ISP.

For Windows XP

1 Click "スタート (Start)" ▶ "すべてのプログラム (All Programs)" ▶ "アクセサリ (Accessories)" ▶ "通信 (Communication)" ▶ "新しい接続ウィザード (New Connection Wizard)"

2 On the New connection wizard screen, click [次へ (Next)]

3 Select "インターネットに接続する (Connect to the Internet)" ▶ Click [次へ (Next)]

4 Select "接続を手動でセットアップする (Set up the connection manually)" ▶ Click [次へ (Next)]

5 Select "ダイヤルアップモデムを使用して接続する (Use a dial-up modem to connect)" ▶ Click [次へ (Next)]

6 If the "デバイスの選択 (Select a device)" screen opens, select "Modem - FOMA M702iG" ▶ Click [次へ (Next)]

The "デバイスの選択 (Select a device)" screen opens only when there is more than one modem.

■ For a Bluetooth Connection

Select the modem you checked in "Checking the Modem" (P8).

7 Enter a name in the "ISP名 (ISP Name)" field ▶ Click [次へ (Next)]

8 Enter the APN phone number in the "電話番号 (Phone Number)" field ▶ Click [次へ (Next)]

- When you connect "mopera U", enter "99***3#" to the access point number.

9 Enter "ユーザー名 (User Name)", "パスワード (Password)", and "パスワードの確認入力 (Confirm password)" ▶ Click [次へ (Next)]

Enter the fields according to the information provided by your ISP.

For "mopera U" or "mopera", the fields can be left unfilled.

10 Click [完了 (Finish)]

The new connection wizard appears.

11 Click "スタート (Start)" ▶ "すべてのプログラム (All programs)" ▶ "アクセサリ (Accessories)" ▶ "通信 (Communication)" ▶ "ネットワーク接続 (Network connection)"

12 Select the icon of the created dial-up connection ▶ Click "この接続の設定を変更する (Change the setting of this connection)"

13 Check the settings on the "全般 (General)" tab screen

- If two or more models are connected to the PC, set only "Modem -FOMA M702iG" to ☒ in the "接続方法 (Connection Method)" field.
- Set "ダイヤル情報を使う (Use dialing information)" to ☐.



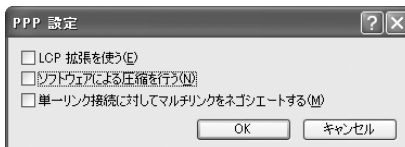
14 Click the "ネットワーク (Network)" tab ▶ Set as the example on the screen

- Select "PPP:Windows 95/98/NT4/2000,Internet" in the "呼び出すダイヤルアップサーバーの種類 (Dial-up server type to call)".
- Set "インターネットプロトコル (Internet Protocol) (TCP/IP)" to ☒ in the "この接続は次の項目を使用します (This connection uses the following items)" field. You cannot change the settings of "QoS パケットスケジューラ (QoS Packet Scheduler)".



15 Click [設定 (Settings)]

16 Set all items to ☐ ▶ Click [OK]



17 On the "ネットワーク (Network)" tab screen, click [OK]

For Windows 2000

- 1 Click "スタート (Start)" ▶ "プログラム (Programs)" ▶ "アクセサリ (Accessories)" ▶ "通信 (Communication)" ▶ "ネットワークとダイヤルアップ接続 (Network and dial-up connection)"
- 2 On the Network and Dial-up connection screen, double-click the "新しい接続の作成 (Create new connection)" icon.
- 3 If the location information screen opens, enter "市外局番 (City code)" ▶ Click [OK]
This appears only when "新しい接続の作成 (Create new connection)" is launched for the first time. Go to Step 5 when launching this for the second time or later.
- 4 On the phone and modem option screen, Click [OK]
- 5 On the Network connection wizard screen, Click [次へ (Next)]
- 6 Select "インターネットにダイヤルアップ接続する (Connect to the Internet via dial-up)" ▶ Click [次へ (Next)]
- 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 (Set up the Internet connection manually, or connect using LAN)" ▶ Click [次へ (Next)]
- 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 to the Internet using a phone line and modem)" ▶ Click [次へ (Next)]
- 9 If the modem selection screen opens, select "FOMA M702iG" ▶ Click [次へ (Next)]

- This screen may not open depending on the operating environment of your PC. Go to Step 10 if this screen does not open.

■ For a Bluetooth Connection

Select the modem you checked in "Checking the Modem" (P8).

10 Enter the APN phone number in the "電話番号 (Phone Number)" field ▶ Click [詳細設定 (Advanced settings)]

- When you connect "mopera U", enter "**99***3#" to the access point number.
- Set "市外局番とダイヤル情報を使う (Use city code and dialing information)" to ☐.

11 Set the "接続 (Connection)" tab screen according to the example on the screen

- If you are connecting to other than "mopera U" or "mopera", configure "接続の種類 (Connection type)" and "ログオンの手続き (Log on procedures)" according to the settings provided by your ISP.

12 Click the "アドレス (Address)" tab ▶ configure settings according to the examples on the screen ▶ Click [OK]

- If you are connecting to other than "mopera U" or "mopera", configure "IPアドレス (IP address)" and "ISPによるDNS (ドメインネームサービス) アドレスの自動割り当て (Assign DNS address automatically by ISP)" according to the settings provided by your ISP.

13 On the "インターネットアカウントの接続情報 (Internet account connection information)" screen, click [次へ (Next)]

14 Enter "ユーザー名 (User Name)" and "パスワード (Password)" ▶ Click [次へ (Next)]

Enter the fields according to the information provided by your ISP.

For "mopera U" or "mopera", the fields can be left unfilled.

If they are not filled, screens warning that the user name and password fields are not filled open one after another. Click [はい (Yes)] on each screen.

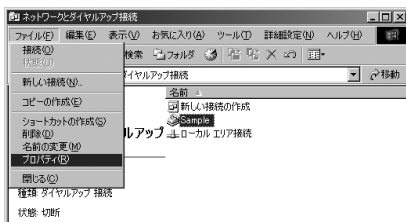
15 Enter a connection name in the "接続名 (Connection Name)" field ▶ Click [次へ (Next)]

16 Select "いいえ (No)" ▶ Click [次へ (Next)]

17 Click [完了 (Finish)]

- If "今すぐインターネットに接続するにはここを選び完了をクリックしてください (Select this to connect to the Internet now and click Finish)" appears, set the option to ☐.

18 Select the icon of the created dial-up connection ▶ Click "ファイル (File)" ▶ "プロパティ (Properties)"



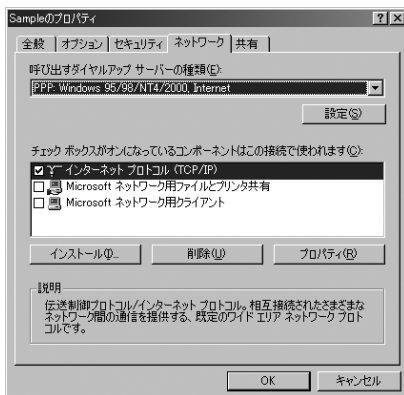
19 Check the settings on the "全般 (General)" tab screen

- If two or more models are connected to the PC, set only "Modem -FOMA M702iG" to ☒ in the "接続方法 (Connection Method)" field.
- Set "ダイヤル情報を使う (Use dialing information)" to ☒.



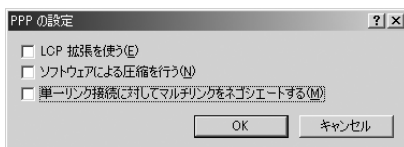
20 Click the "ネットワーク (Network)" tab ▶ Set as the example on the screen

- Select "PPP:Windows 95/98/NT4/2000,Internet" in the "呼び出すダイヤルアップサーバーの種類 (Dial-up server type to call)".
- Set only "インターネットプロトコル (Internet protocol) (TCP/IP)" to ☒ in the "チェックボックスがオンになっているコンポーネントはこの接続で使われます (Checked components are used for this connection)" field.



21 Click [設定 (Settings)]

22 Set all items to ☐ ▶ Click [OK]



23 On the "ネットワーク (Network)" tab screen, click [OK]

Communicating

This section describes steps to start and terminate communication set up without using the FOMA PC configuration software.

- Use the same FOMA handset that was connected when you set up the communication. Using another FOMA handset requires re-installation of the communication configuration file.

<Example: For Windows XP>

1 Click "スタート (Start)" ▶ "すべてのプログラム (All programs)" ▶ "アクセサリ (Accessories)" ▶ "通信 (Communication)" ▶ "ネットワーク接続 (Network connection)" ▶ Double-click the access point that has been set up

■ For Windows 2000

Click "スタート (Start)" ▶ "プログラム (Programs)" ▶ "アクセサリ (Accessories)" ▶ "通信 (Communication)" ▶ "ネットワークとダイヤルアップ接続 (Network and dial-up connection)" ▶ Double-click the access point that has been set up

2 Enter "ユーザー名 (User Name)" and "パスワード (Password)" ▶ Click [ダイヤル (Dial)]

The access point will be connected.

- To connect to "mopera U" or "mopera", the "ユーザー名 (User Name)" and "パスワード (Password)" fields can be left unfilled.



Note

- The communication speed displayed on the PC may be different from the actual communication speed.

Disconnecting Communication

Exiting the Internet browser may not terminate the connection. Perform the following steps to terminate the connection securely.

1 Click the dial-up icon in the task tray of the PC



2 Click [切断 (Disconnect)]

The communication will be terminated.



64K Data communication settings

This section describes precautions and different steps from the packet communication settings when 64K data communication connection is set up without using the FOMA PC configuration software.

64K Data communication dial-up connection and TCP/IP settings

The settings are the same as for packet communication (P19), however, note the following:

- The APN is not required to set up for 64K data communication. Enter the phone number of the access point provided by your ISP for the dial-up connection destination (enter "8701" to connect to "mopera U", and enter "9601" to connect to "mopera").
- Configure "発信者番号通知 / 非通知の設定 (Caller ID notification)" and settings using AT commands of your own choice (Caller ID must be displayed to connect to "mopera U").
- For detailed information on settings, contact your ISP.

Connecting/Disconnecting

Use the same operations as for packet communication. Perform the operations on P25.

AT Commands

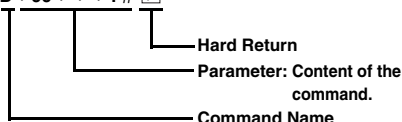
AT commands are used to check the FOMA handset function settings or status using a PC. Usually the communication software issues AT commands so that you do not have to be concerned about them. Use AT commands if you want to control the FOMA handset in your own way.

Format of AT Commands

AT commands should be input on the Terminal Mode screen of the communication software. Use only single-byte alphanumeric characters.

<Example of Entry Format>

ATD*99** * 1# 



- An AT command must be entered on a single line including parameters (numbers and symbols) following the command. On the Terminal Mode screen of the communication software, one line is from the first character to the previous character of .

Note

- In the Terminal mode, a PC functions as if it were a communication terminal. Characters entered from the keyboard are sent to a line connected to a communication port.

Switching between On-line Data Mode and On-line Command Mode

The following two methods are available to switch between on-line data mode and on-line command mode on the FOMA handset:

- Enter the "+++" command or the code set to the "S2" register.
- When "AT&D1" is set, set the ER signal of the serial (COM) port to OFF.
- The packet communication is available to switch to on-line command mode.

Enter "ATO " to switch from the on-line command mode to the on-line data mode.

■ Saving the Settings

Settings by AT commands are initialized when the FOMA handset power is turned off and back on except: APN settings set by the AT+CGDCONT command, QoS settings by AT+CGEQMIN/AT+CGEQUIREQ command, setting to show or hide the packet communication number by AT+DGPIR command, and settings to restrict notifying the Caller ID by AT+CLIR command.

AT Command List

The following AT commands can be used on the "FOMA M702iG" modem port.

- [&F] : A command to initialize settings used as AT&F command.
- [?] [=?] : The current settings appear when adding "?" at the end of the command, and the effective range of the current settings appear when adding "=?" at the end of the command.

AT Command	Overview	Parameters/Description	Command Examples
AT¥S	Display the setting contents of set commands and S registers.	—	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 OK
AT¥V<n> [&F]	Select whether to use the extended result code at connection.	n=0 (default) : The extended result code is not used. n=1 : The extended result code is used.	AT¥V0 OK
AT%V	Display the version of the FOMA handset.	—	AT%V XXXX OK
AT&C<n> [&F]	Set the operating conditions of the circuit CD for DTE.	n=0 : Always keeps line CD signal ON. n=1 (default) : CD changes depending on the other party's modem status.	AT&C1 OK
AT&D<n> [&F]	Set the operation performed when circuit ER signal received from DTE is switched from ON to OFF.	n=0 : Ignore ER signals (Always regard as ON) n=1 : On-line command mode starts when ER signals change from ON to OFF. n=2 (default) : Off-line mode starts when ER signals change from ON to OFF.	AT&D1 OK

AT Command	Overview	Parameters/Description	Command Examples
AT&E<n> [&F]	Select the specification to show the connection speed.	n=0 : Show the communication speed for wireless segment. n=1 (default) : Show the communication speed between the PC and FOMA handset.	AT&E0 OK
AT&F<n>	Reset the FOMA handset AT command set values to factory defaults. If executed during a communication, the line is disconnected.	Only n=0 can be set (skippable)	AT&F OK
AT&S<n> [&F]	Set the control of DR (data set ready) signals output by the FOMA handset.	n=0 (default) : Set DR signals always to ON. n=1 : Set DR signals to ON when the line is connected.	AT&S0 OK
AT * DANTE [=?]	Displays the number of antennas of signal strength. (0 to 5)	If you execute "AT*DANTE", it will be displayed in the form of "'DANTE: <n>". n=0 : Out of the service area of the FOMA handset n=1 : 1 antenna bar of the FOMA handset n=2 : 2 antenna bars of the FOMA handset n=3 : 3 antenna bars of the FOMA handset n=4 : 4 antenna bars of the FOMA handset n=5 : 5 antenna bars of the FOMA handset	AT * DANTE * DANTE: 5 OK
AT * DGPIR=<n> [?] [=?]	The setting of this command becomes valid when a call for packet communication is dialed. 184/186 can also be added to the APN number even for the setting of a dial-up network.	n=0 (default) : Use APN as it is. n=1 : Add "184" to APN (always hide). n=2 : Add "186" to APN (always show).	AT * DGPIR=0 OK
AT * DRPW [=?]	Show an indicator of the received radio signal power at the FOMA handset. (0 : lowest - 75 : highest value)	—	AT * DRPW * DRPW : 0 OK
+++	Switch the FOMA handset from the on-line data mode to on-line command mode.	This command is not applicable to the connection using packet communication.	(Online Data Mode) +++ (Unable to see the display) OK
AT+CACM=<passwd> [?]	Reset the cumulative billing value recorded on the UIM.	If the password meets with this command, it resets the cumulative billing value recorded on the UIM. Passwd=PIN2 code * This is a string parameter, and should be put in "" when entered.	AT+CACM=""0123" OK

AT Command	Overview	Parameters/Description	Command Examples
AT+CAOC= <mode> [?] [=?]	Inquire the current billing value.	mode=0 : Check the current billing value for the calls. Execute AT+CAOC or AT+CAOC=0 to display the current billing value in the form of +CAOC:"<ccm>". ccm: billing information	AT+CAOC +CAOC:"00001E" OK
AT+CBC [=?]	Display the battery level.	Executing "AT+CBC" displays in the format of "+CBC:<m>,<n>". m=0 : Indicate electricity is supplied from the battery pack to the FOMA handset. n=0 to 100 : Indicate the battery level in percent.	AT+CBC +CBC : 0,60 OK
AT+CBST [&F] [?] [=?]	Set the bearer (communication type) service.	AT+CBST=<speed>,<name>,<ce> speed=116 : 64K data communication name=1 : Default of 64K data communication (synchronous) ce=0: Default of 64K data communication (transparent)	AT+CBST=11 6, 1, 0 OK
AT+CEER	Display the reason for disconnection of the previous connection.	"Reasons for Disconnection" →P38	AT+CEER +CEER : 36 OK
AT+CGDCONT [?] [=?]	Set APN when sending Packet communication.	→P37	→P37
AT+CGEQMIN [?] [=?]	Save the judgment criteria whether to permit the QoS (Service Quality) sent by the network when packet communication is established via PPP connection.	AT+CGEQMIN= [Parameters] →P37	→P37
AT+CGEQQREQ [?] [=?]	Set the QoS (Service Quality) requested to the network when packet communication via PPP connection is dialed.	AT+CGEQQREQ= [Parameters] →P37	→P37
AT+CGMR	Display the version of the FOMA handset.	—	AT+CGMR 1234512345 123456 OK

AT Command	Overview	Parameters/Description	Command Examples
AT+CGREG=<n> [&F] [?] [=?]	Set whether to be notified of the network registration status.	n=0 (default) : Do not notify. n=1 : Notify when outside and inside the service area is changed. Execute "AT+CGREG?" then appears as "+CGREG : <n>,<start>". n : Setting value. start=0 : Outside the packet service area. start=1 : Inside the packet service area. start=4 : Unknown. start=5 : Inside the packet service area (while roaming).	AT+CGREG=1 OK
AT+CGSN	Display the serial number of the FOMA handset.	—	AT+CGSN 1234567890 12345 OK
AT+CLIP=<n> [&F] [?] [=?]	Set whether to display the caller's phone number when the caller sends Caller ID.	n=0 (default) : Not send the result. n=1 : Send the result. When executing "AT+CLIP?", the result is displayed in the form of "+CLIP : <n>,<m>". m=0 : Network setting not to send the number to the other party when calling m=1 : Network setting to send the number to the other party when calling m=2 : Unknown	AT+CLIP=0 OK AT+CLIP? CLIP=0,1 OK
AT+CLIR=<n> [?] [=?]	Set whether to send the Caller ID when making 64K data communication/video calls.	n=0 : In accord with the CLIR service subscription. n=1 : Do not send. (default) n=2 : Send. When "AT+CLIR?" is executed appear in the format of "+CLIR : <n>,<m>". n: Setting value. m=0: CLIR is not running. (Always send). m=1: CLIR is running. (Always hide). m=2: Unknown. m=3: CLIR temporary mode (Default for hide). m=4: CLIR temporary mode (Default for show).	AT+CLIR=0 OK

AT Command	Overview	Parameters/Description	Command Examples
AT+CPAS [=?]	Display FOMA handset state.	Executing "AT+CPAS" displays in the format of "+CPAS : <n>". n=0 : Available to set AT commands. n=1 : Unavailable to set AT commands. n=2 : Unknown (Response to AT commands is not guaranteed). n=3 : Available to set AT commands even during incoming. n=4 : Available to set AT commands even during a call.	AT+CPAS +CPAS : 0 OK AT+CPAS=? +CPAS : (0-4) OK
AT+CPIN="pin"/ AT+CPIN="puk", "pin" [?]	Command to enter the PIN1 code or PUK code for UIM.	Enter the SIM PIN for "pin" and the PUK for "puk". Execute "AT+CPIN?" then "+CPIN : <n>" is displayed. n=READY : Authenticated. n=SIM PIN : Waiting for input. n=SIM PUK : Waiting for PUK code entry.	(+CPIN : SIM PIN status) AT+CPIN="1234" OK (+CPIN : SIM PUK status) AT+CPIN="12345678", "1234" OK
AT+CPUC [=?]	Overwrite the currency table registered in the UIM.	AT+CPUC=<Currency>,<ppu>[,<passwd>] Currency: Currency ppu: Packet piece unit Passwd: PIN2 code * This is a string parameter, and should be put in "" when entered.	AT+CPUC="YEN","0.2", "0000" OK AT+CPUC? +CPUC : "YEN","0.2" OK
AT+CR=<n> [&F] [?] [=?]	Set whether to display the bearer (communication type) before "CONNECT" is displayed when 64K data communication is connected.	n=0 (default) : Hide. n=1 : Display in the format of "+CR : <serv>". serv=GPRS : Packet communication. serv=SYNC : 64K data communication.	AT+CR=1 OK ATD *99 * * * 1# +CR : GPRS CONNECT
AT+CRC=<n> [&F] [?] [=?]	Set to use extend result code for incoming connection.	n=0 (default) : Not to use +CRING. n=1 : Use +CRING: <type>.	AT+CRC=0 OK

AT Command	Overview	Parameters/Description	Command Examples
AT+CREG=<n> [&F] [?] [=?]	Set whether to show Out of service area or in the service area.	n=0 (default) : Hide n=1 : Show Enter "AT+CREG?" then it is shown in the format of "+CERG : <n>, <stat>" n: Setting value. stat=0 :Out of the service area of 64K data. communication/ video calls stat=1 :Inside of the service area of 64K data. communication/ video calls stat=4 :Unknown. stat=5 :Inside of the service area of 64K data communication/ video calls (while roaming).	AT+CREG=1 OK
AT+CUSD=[<n>[,<str>[,<dc>]]] [&F] [?] [=?]	Change the settings of the network, concerned with the additional services and the like.	n=0 (default) : Answer OK without answering interim result. n=1 : Answer interim result. str : Service code For details, refer to "ご利用ガイドブック (ネットワークサービス編) (Mobile Phone User's Guide [Network services])" . dc=0 : Fixed value	AT+CUSD=0,"xxxxxx" OK
AT+FCLASS=<n> [&F] [?] [=?]	Perform mode setting.	n=0 (default) : data	AT+FCLASS=0 OK
AT+GCAP	Display the capability list of the FOMA terminal.	—	AT+GCAP +GCAP: +CGSM, +FCLASS, +W OK
AT+GMI	Display the manufacturer of the FOMA handset.	—	AT+GMI Motorola CE, Copyright 2006 OK
AT+GMM	Display the name of the FOMA handset.	—	AT+GMM FOMA M702iG OK
AT+GMR	Display FOMA handset's version.	—	AT+GMR XXXX OK

AT Command	Overview	Parameters/Description	Command Examples
AT+IFC=<n>, <m> [&F] [?] [=?]	Set the local flow control method between the PC and the FOMA handset.	n : DCE by DTE control n=0 : No flow control. n=1 : XON/XOFF control. n=2 (default) : RS/CS (RTS/CTS) flow control. m : DTE by DCE control. m=0: No flow control. m=1: XON/XOFF control. m=2 (default) : RS/CS (RTS/CTS) flow control.	AT+IFC=2,2 OK
AT+WS46 [&F] [?]	Display the network settings of the FOMA handset.	12 : GSM 22 : 3G (WCDMA) 25 : Auto switch (default)	AT+WS46? 25 OK
ATA	The FOMA handset processes the incoming according to the receiving mode.	—	RING ATA CONNECT
A/	Retry a command just before performing.	 does not have to be entered.	A/ OK
ATD	Start packet communication or 64K data communication.	Packet communication : ATD *99 * * * <cid>#<cid> 1 to 10: +CGDCONT 64K data communication : ATD <phone number>	Packet communication : ATD *99 * * * 1# CONNECT 64K data communication : ATD XXXXXXXXXX CONNECT
ATE <n> [&F]	Set whether to echo back the text sent from a PC.	n=0 : Not to echo back. n=1 (default) : Echo back.	ATE1 OK
ATH <n>	Disconnect 64K data communication.	n=0 : Disconnect line (can be skipped).	(In communication) +++ ATH OK
ATI <n>	Display the confirmation code.	n=0 : Display "NTT DoCoMo". n=1 : Display the name of the FOMA handset (same as +GMN). n=2 : Display the FOMA handset version (same as +GMR). n=3 : Display "OK". n=4 : Display the details of communication functions of the FOMA handset.	ATI0 NTT DoCoMo OK
ATO	Switch from On-line command mode to Off-line command mode during communication.	—	ATO CONNECT
ATQ <n> [&F]	Set whether to display the result code on a PC.	n=0 (default) : Show result codes. n=1 : Hide result codes.	ATQ0 OK ATQ1 (OK is not displayed)

AT Command	Overview	Parameters/Description	Command Examples
ATS0=<n> [&F] [?]	Set number of rings until FOMA handset receives connection automatically.	n=0 (default) : No auto receive is performed. n=1 to 255 : Number of rings.	ATS0=0 OK
ATS2=<n> [&F] [?]	Set the escape character.	Only n=43 (default) can be specified.	ATS2=43 OK ATS2=043 OK ATS2? 043 OK
ATS3=<n> [&F] [?]	Set the return character (CR) to recognize the end of AT command text string.	Only n=13 (default) can be specified.	ATS3=13 OK
ATS4=<n> [&F] [?]	Set the line feed character. It is positioned next to the return character (CR) if displaying the result code in alphanumeric characters.	Only n=10 (default) can be specified.	ATS4=10 OK
ATS5=<n> [&F] [?]	Set the back space character (BS) to delete the last character in the input buffer while AT commands are entered.	Only n=8 (default) can be specified.	ATS5=8 OK
ATS6=<n> [&F] [?]	Set the pause time (in seconds) until dialing. When this command is used, the register is set but does not operate.	n=2 to 10 (Default n=5)	ATS6=5 OK
ATS7=<n> [&F] [?]	Disconnect the line if the connection is unavailable within the set time (in seconds) when dialing.	n=1 to 120 (Default n=60) : Regard the specifications between 121 and 255 as 120.	ATS7=60 OK ATS7? 060 OK
ATS8=<n> [&F] [?]	Set the pause time (in seconds) until comma dialing. When this command is used, the register is set, but the pause time remains 3 seconds.	n=0 : Does not pause n=1 to 255 (Default n=3) : Pause time (in seconds) until the comma is dialed.	ATS8=3 OK
ATS10=<n> [&F] [?]	Set the delay time (1/10 seconds) of auto disconnect. When this command is used, the register is set, but does not operate.	n=1 to 255 (Default n=1)	ATS10=1 OK
ATV<n> [&F]	Set the display method of the result code.	n=0 : Display in numeric characters. n=1 (default) : Display in text.	ATV1 OK

AT Command	Overview	Parameters/Description	Command Examples
ATX<n> [&F]	Set to detect the busy tone and dial tone, and to display the communication speed.	n=0 : Not to detect busy tones, not to detect dial tones, not to display speed. n=1 : Not to detect busy tones, not to detect dial tones, display speed. n=2 : Not to detect busy tones, detect dial tones, display speed. n=3 : Detect busy tones, not to detect dial tones, display speed. n=4 (default) : Detect busy tones, detect dial tones, display speed.	ATX1 OK
ATZ	Reset the FOMA handset AT command set values to factory defaults. If performed during a communication, the line is disconnected.	—	(On-line command mode) ATZ NO CARRIER (Off-line) ATZ OK

Supplementary Explanation of AT Commands

■ Command name : +CGDCONT

- Overview
Set APN when sending packet connection.
- Form
+CGDCONT=[<cid>[,<PDP type>] [,<APN>"]]]
- Parameter descriptions
Set APN when sending Packet communication.
See examples in command operation lists
<cid>* : 1 to 10
<PDP type>* : PPP or IP
<APN>* : Optional
*: <cid> is the number used to control the destination (APN) for the Packet communication to be registered in FOMA handset. 1 to 10 can be registered. The default cid1 is registered "mopera.ne.jp" for APN of "mopera" and cid3 is registered "mopera.net" for APN of "mopera U", when you set cid, 2 or a number between 4 and 10.
<PDP type> is a protocol for packet communication.
<APN> is optional connection name that indicates each destination.
- Operation without parameter
AT+CGDCONT= :
Delete all cid settings. However, settings for cid1 and cid3 will be reset to their defaults.
AT+CGDCONT=? :
Display list of values that can be configured
AT+CGDCONT=? :
Display list of values that can be configured
- Command examples
Registered APN named abc (When PDP type is "PPP" and cid=3)
AT+CGDCONT=3,"PPP","abc"
OK
* Not reset by [&F] and [Z], either.

■ Command name : +CGEQMIN=[Parameter]

- Overview
Save the judgment criteria values whether to allow the QoS (Service Quality) sent by the network when packet communication is established via PPP connection.
- Form
+CGEQMIN=[<cid>[,<Maximum bitrate UL>[,<Maximum bitrate DL>]]]
- Parameter description
<cid>* : 1 to 10
<Maximum bitrate UL>* : None (default) or 64
<Maximum bitrate DL>* : Non (default) or 384

*: <cid> is the number used to control the destination (APN) for the Packet communication to be registered in FOMA handset. 1 to 10 can be registered. The default cid1 is registered "mopera.ne.jp" for APN of "mopera" and cid3 is registered "mopera.net" for APN of "mopera U", when you set cid, 2 or a number between 4 and 10.

In <Maximum bitrate UL> and <Maximum bit rate DL>, the minimum connection speed [Kbps] is set for both upload and download traffic between FOMA handset download traffic between FOMA handset and the base station. If the parameter is set to None (default), all speeds are permissible. If values are set, any communication at a speed under the set value is not permitted, and the Packet communication will not be connected.

- Operation without parameter
AT+CGEQMIN= :
Set all <cid> as default value
AT+CGEQMIN=<cid> :
Set specified <cid> as default value
- Command examples
 - (1) Command used to permit all speed both upload and download both upload and download (when<cid>=2)
AT+CGEQMIN=2
OK
 - (2) Command used to permit only 64Kbps upload and 384Kbps download (when<cid>=2)
AT+CGEQMIN=2,,64,384
OK
 - (3) Command used to permit 64Kbps upload and all speed download (when<cid>=3)
AT+CGEQMIN=3,,64
OK
 - (4) Command used to permit all speed upload and only 384Kbps download (when<cid>=3)
AT+CGEQMIN=3,,,384
OK
- * Not reset by [&F] and [Z], either.

■ Command name : +CGEQUIREQ=[Parameter]

- Overview
Set the QoS (Service Quality) requested to the network when packet communication via PPP connection is dialed.
- Form
+CGEQUIREQ=[<cid>[,<traffic class>,<Maximum bit rate UL> [,<Maximum bitrate DL>]]]
- Parameter Description
<cid>* : 1 to 10 <traffic class> : 2
<Maximum bitrate UL>* : 64
<Maximum bitrate DL>* : 384
*: <cid> is the number used to control the destination (APN) for the Packet communication to be registered in FOMA handset. 1 to 10 can be registered to FOMA handset. The

default cid1 is registered "mopera.ne.jp" for APN of "mopera" and cid3 is registered "mopera.net" for APN of "mopera U", when you set cid, 2 or a number between 4 and 10.

In <Maximum bitrate UL> and <Maximum bitrate DL>, the minimum connection speed [in Kbps] is set for both upload and download traffic between FOMA handset and the base station. If the parameter is set to None (default), all speeds are permissible. If values are set, any connection at a speed over the set value is not permitted, and the Packet communication will not be connected.

- Operation without parameter
AT+CGEQREQ=<cid> :
Set all <cid> as default.
AT+CGEQREQ=<cid> :
Set specified <cid> as default.
- Command examples
Command used to require 64Kbps upload and 384Kbps download (when<cid>=3)
AT+CGEQREQ=3,2,64,384
OK

* Not reset by [F] and [Z], either.

List of Reasons of Disconnection

■ Packet communication

Value	Reason
27	APN does not exist, or is not valid.
30	Disconnected by the network.
33	No subscription for packet communication.
36	Disconnected properly.

■ 64K data communication

Value	Reason
1	Specified number does not exist.
16	Disconnected properly.
17	Cannot communicate as the other party is busy.
18	Although sent, there was no response within the specified time.
19	Cannot communicate as the other party is being called.
21	The other party rejected the communication.
63	The network service and the option are not valid.
65	Unsupported processing speed was specified.
88	Called to or received a call from a terminal with different terminal attributes.

Result Codes

■ List of Result Codes

Numeric display	Text display	Description
0	OK	Operation performed properly.
1	CONNECT	Connected to the other party.
2	RING	Incoming call.
3	NO CARRIER	Line disconnected.
4	ERROR	Unable to accept command.
6	NO DIAL TONE	Unable to detect dial tone.
7	BUSY	Detect busy tone. (Applied only when dialing by 64K data communication.)
8	NO ANSWER	Completed connection timeout.
101	DELAYED	Within restricted redialing time.

■ Extended Result Codes

When &E0

Show the connection speed between the FOMA terminal and the base.

Numeric display	Text display	Connection speed
122	CONNECT 64000	64000bps
125	CONNECT 384000	384000bps

When &E1

Numeric display	Text display	Connection speed
5	CONNECT 1200	1200bps
10	CONNECT 2400	2400bps
11	CONNECT 4800	4800bps
13	CONNECT 7200	7200bps
12	CONNECT 9600	9600bps
15	CONNECT 14400	14400bps
16	CONNECT 19200	19200bps
17	CONNECT 38400	38400bps
18	CONNECT 57600	57600bps
19	CONNECT 115200	115200bps
20	CONNECT 230400	230400bps
21	CONNECT 460800	460800bps

■ Communication Protocol Result Codes

Numeric display	Text display	Connection speed
1	PPPOverUD	Connection with 64K data communication
3	AV64K	Connection with video call (64K) communication
5	PACKET	Connection with packet communication

■ Examples of Displayed Result Codes

When ATX0 is set

Regardless of the AT¥V command (P27) settings, only CONNECT is displayed after connection is established.

Example of text display : ATD *99 * * * 1#
CONNECT

Example of numeric display : ATD *99 * * * 1#
1

When ATX1 is set

- When ATX1, AT¥V0 is set (default)
Display in the form of CONNECT <Speed between FOMA and PC> after the connection is established.

Example of text display

: ATD *99 * * * 1#
CONNECT 460800

Example of numeric display

: ATD *99 * * * 1#
121

- When ATX1, AT¥V1 is set
Display in the following form after the connection is established.
CONNECT <Speed between FOMA and PC>
PACKET <Destination APN>/<Maximum uplink speed (between FOMA terminal→Base)> / <Maximum downlink speed (between FOMA handset←Base)>

Example of text display

: ATD *99 * * * 1#
CONNECT 46080 PACKET
mopera.ne.jp/64/384 (Which means connect to "mopera.ne.jp" by 64Kbps uplink speed and 384Kbps downlink speed at the maximum.)

Example of numeric display

: ATD *99 * * * 1#
1215

- * If ATX1 and AT¥V1 are set concurrently, a dial-up connection may not be executed properly. It is recommended to use only AT¥V0.