F-04A
Manual for PC Connection

■ **About Manual for PC Connection**
This manual describes about data communications using F-04A and how to install "FOMA communication configuration file" and "DOCOMO Connection Manager" contained in CD-ROM.
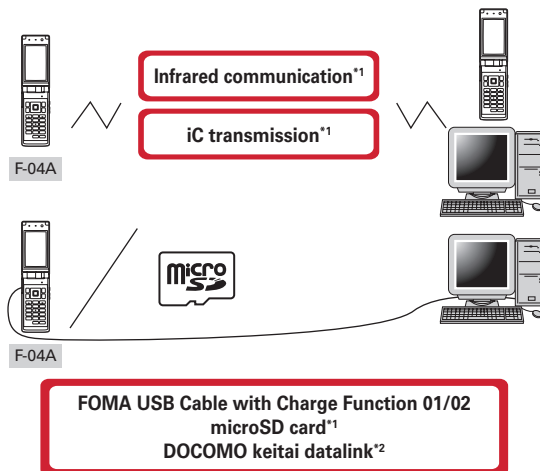**Depending on the environment of your PC, some of operation procedures and/or screens may be different.**

Data Communication

There are 3 communication modes available by connecting FOMA terminal and a PC : data transfer (OBEX™ communication), packet communication and 64K data communication.

● To make packet communications or 64K data communications or edit data such as the phonebook using a PC connected, installation of the software in the attached CD-ROM and various settings are required.

● When performing packet communication overseas, use IP connection (packet communication is unavailable with PPP connection). 64K data communication can not be used overseas.

● FOMA terminal does not support FAX communication or Remote Wakeup.

● Data communication can be performed connecting with DOCOMO's PDA like musea or sigmarion III. Note that update of musea is required for use. For details on update such as method, refer to DOCOMO website.

Data transfer (OBEX™ communication)

You can send and receive data such as image, music, phonebook or mail etc. to/from other FOMA terminals or PCs etc.

Infrared communication[*1]

iC transmission[*1]

F-04A

F-04A

**FOMA USB Cable with Charge Function 01/02
microSD card[*1]
DOCOMO keitai datalink[*2]**

*1 For details, see "Data Management" in "F-04A INSTRUCTION MANUAL".

*2 For details, see "PC Connection" in "F-04A INSTRUCTION MANUAL".

Packet communication

You can connect to the Internet and perform data communication (packet communication).
Packet communication charges are based on the amount of data sent and received, which makes it suitable for high-speed exchange of comparatively small amounts of data as in sending and receiving mail. No communication charges are required when no data are exchanged even if you are connected to the network. Therefore, sending/receiving data as needed while remaining connected to the network is possible.
High-speed packet communication can be performed at a maximum reception speed of 3.6Mbps and a maximum transmission speed of 384kbps by using access points that support FOMA packet communication such as mopera U of DOCOMO's Internet connection service. Best effort method which the actual communication speed varies with the environment and the rate of congestion offers.
Note that communications of large-size data such as viewing websites containing images and downloading data will require high charges.

* Both the maximum transmission/reception speeds are 384kbps when connecting out of FOMA HIGH-SPEED area, connecting to access points incompatible with HIGH-SPEED, or using devices incompatible with HIGH-SPEED such as DOCOMO's PDA like musea or sigmarion III.

1

* Maximum speed of reception 3.6Mbps and transmission 384kbps are the values in technical standards, thus they are not indicated actual communication speed. Actual communication speed varies by the network congestion or environment of communication.

64K data communication

You can connect to the Internet and perform 64K data communication.
Communication charges are based on the duration of the connection to the network regardless of the volume of data, which makes it suitable for sending and receiving relatively large amounts of data as in downloading multi-media contents.
You can use access points that support FOMA 64K data communication services such as mopera U of DOCOMO's Internet connection service or ISDN synchronized 64K access points.
Please be careful that a high cost will be charged for long-time communications.

Before use

Operating environment

The operation environment for using data communication is as shown below. They may vary depending on the PC system configurations.

Item	Requirements
Computer	USB port (conform to USB specification 1.1/2.0) compatible with PC/AT computer Recommended 800 x 600 dots in display resolution and High Color 16 bits or more
OS (Japanese version)*	Windows 2000, Windows XP, Windows Vista
Memory requirements	Windows 2000 : 64MB or more Windows XP : 128MB or more Windows Vista : 512MB or more
Hard disk capacity*	5MB or more free disk space

* Recommended environment for operating DOCOMO Connection Manager is as follows.
  OS : Windows 2000 SP4 or more, Windows XP SP2 or more (For details, refer to DOCOMO website).
  Hard disk capacity : 15MB or more free disk space
● DOCOMO will not guarantee operations on upgraded OS.
● Note that utilization may not be possible in certain operating environments. DOCOMO assumes no responsibility for pertaining to operation under conditions other than that described above.
● Recommended environment for operating the menu is Microsoft Internet Explorer 7.0 or later (For Windows XP, Microsoft Internet Explorer 6.0 or later). If no menu appears when CD-ROM is set, take actions given below.
  ① For Windows Vista : Click 🔵 (Start) → "すべてのプログラム (All programs)" → "アクセサリ (Accessories)" → "ファイル名を指定して実行 (Run)".
    Under Windows XP, Windows 2000 : Click "スタート (Start)" → "ファイル名を指定して実行 (Run)".
  ② Enter as follows in "名前 (Name)" and click "OK".
    <CD-ROM drive name> : index.html
    * CD-ROM drive name varies depending on a PC to be used.
● When the CD-ROM is inserted into the PC's CD-ROM drive, the warning screen may be displayed. This warning is displayed according to the security settings of Internet Explorer but it is not a problem for use. Click "はい (Yes)".
  * Depending on the environment of your PC, the screen may be different.

Devices required

The following devices are required in addition to FOMA terminal and a PC.
- FOMA USB Cable with Charge Function 01/02 (optional) or FOMA USB Cable (optional)
- Attached CD-ROM "CD-ROM for F-04A"
* USB cable for PC is not available because the connector type is different.
* When using USB HUB, it may not operate properly.

Usage precautions

Internet service provider usage charges

When using the Internet on a PC, usage charge to your Internet service provider (hereinafter referred to as Provider) is required. This charge is paid directly to the Provider, and is separated from the FOMA service charge. For details, contact your Provider.
● DOCOMO's Internet connection service, mopera U is available. mopera U is a charged service requiring subscription.

Dialup connection (Provider etc.)

Different dialup connections are required for packet communication and 64K data communication. When performing packet communication, use the dialup connection for packet communication. When performing 64K data communication, use the dialup connection for FOMA 64K data communication or ISDN synchronized 64K data communication.
● Connections to DoPa access points are unavailable.
● For service and connection/settings of mopera, refer to mopera website.
  http://www.mopera.net/mopera/index.html

User authentication

Some dialup connections require user authentication before a connection can be established. If user authentication is required, you must use your communication software or dialup network to enter your ID and password and connect. Your ID and password will be assigned by the network administrator of the connection destination such as your provider or corporate LAN. For details, contact your provider or network administrator.

FirstPass

If FirstPass (user certificate) is required for the access authentication during using PC browser, you must install FirstPass PC software from the attached CD-ROM and configure it. For details, refer to "簡易操作マニュアル" in the attached CD-ROM.
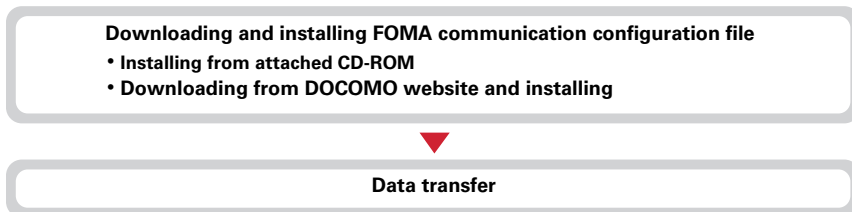
Conditions of packet communication and 64K data communication

To perform data communication in Japan, the following conditions must be satisfied.
- You must be within the FOMA service area.
- Packet communication requires an access point that supports FOMA packet communications.
- 64K data communication requires a dialup connection that supports FOMA 64K data communications or ISDN synchronized 64K.
* Note that even when the above requirements are satisfied, you may not be able to perform data communication if base station traffic is heavy or the radio wave conditions are poor.
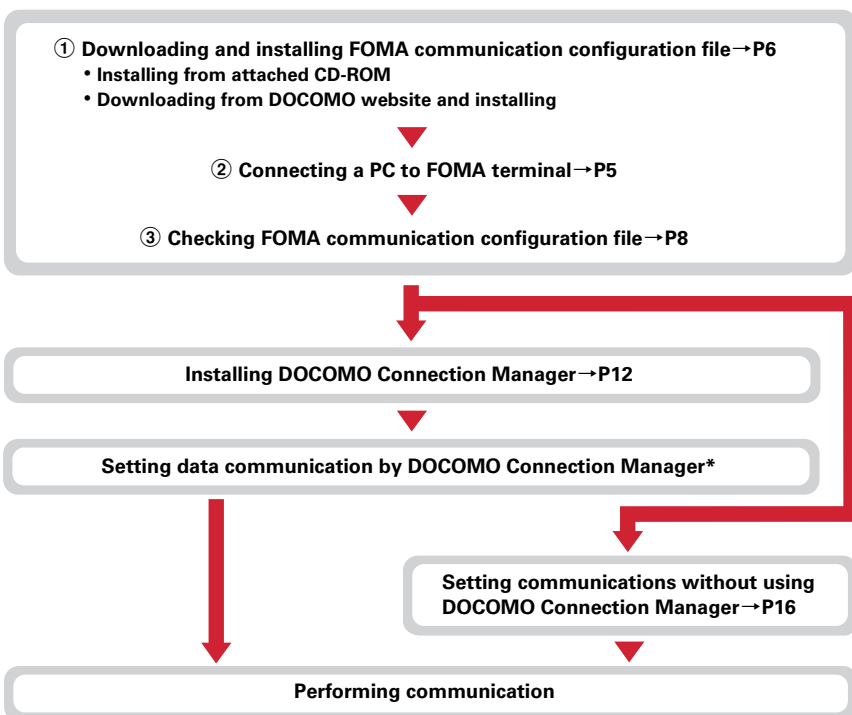
Flow of setup for data transfer (OBEX™ communication)

When using FOMA USB Cable with Charge Function 01/02 (optional), install FOMA communication configuration file in advance.

> **Downloading and installing FOMA communication configuration file**
> • **Installing from attached CD-ROM**
> • **Downloading from DOCOMO website and installing**

▼

> **Data transfer**

Flow of setup for data communication

This section describes the setup work needed to perform packet communication or 64K data communication.

> ① **Downloading and installing FOMA communication configuration file→P6**
> • **Installing from attached CD-ROM**
> • **Downloading from DOCOMO website and installing**
>
> ▼
>
> ② **Connecting a PC to FOMA terminal→P5**
>
> ▼
>
> ③ **Checking FOMA communication configuration file→P8**

> **Installing DOCOMO Connection Manager→P12**

▼

> **Setting data communication by DOCOMO Connection Manager***

> **Setting communications without using DOCOMO Connection Manager→P16**

> **Performing communication**

* For setting of DOCOMO Connection Manager, refer to "DOCOMO Connection Manager operation manual".

FOMA communication configuration file

When performing Packet communication or 64K data communication by connecting to a PC with USB cable, install FOMA communication configuration file.

DOCOMO Connection Manager

When DOCOMO Connection Manager (found on the attached CD-ROM) is installed on a PC, a number of settings required for packet communication or 64K data communication can be simply operated from a PC.

Precautions for installation/uninstallation

● Before starting operation, make sure that no other program is running and exit the program if any.
* Exit any resident programs on Windows including antivirus software.

  Example : Right-click the icon displayed in the task bar, click "閉じる (Close)" or "終了 (End)".
● For installing/uninstalling FOMA communication configuration file or DOCOMO Connection Manager, make sure that a user with administrator's privilege performs the operation. Installing/uninstalling the software by other users may produce an error. For Windows Vista, when the "ユーザーアカウント制御 (User Account Control)" screen appears, click "許可 (Permit)" or "続行 (Continue)", or enter the password and click "OK". For details on PC administrator privileges, contact your PC manufacturer or Microsoft Corporation.
● For operations of a PC, settings of administrator privileges, etc., refer to the Instructions Manual of the PC.

Connecting up PC to the FOMA terminal

● The connection should be made with a PC and FOMA terminal both turned ON.
● Install FOMA communication configuration file before connecting with a PC for the first time.→P6

Connecting USB cable

● FOMA USB Cable with Charge Function 01/02 is optional.
● The description in this manual takes the case with FOMA USB Cable with Charge Function 01 for example.

1 **Insert the connector of the USB cable into FOMA terminal's external connection jack.**

**2** **Insert the other end of the USB cable connector into the PC USB port.**
   • If you connect FOMA terminal to a PC before installing FOMA communication configuration file, Windows may automatically detect that USB cable has been inserted and request the driver. In such a case, remove FOMA terminal and click "キャンセル (Cancel)" on the displayed screen to end.

Make sure of the front side shown with stamps, seal, etc.

Connector   Open the jack cap.
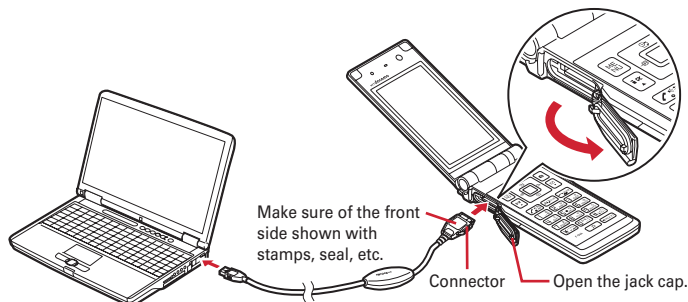
   • When a PC and FOMA terminal are connected, 📱 appears on the stand-by display of FOMA terminal.

Removing USB cable

1 **Press the USB cable's release buttons on both sides of the connector (①) and remove the connector from FOMA terminal (②).**

Release button

①
②
①
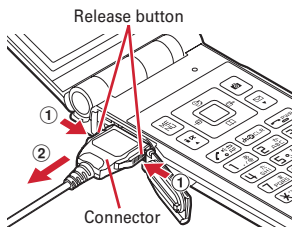
Connector

2 **Remove the USB cable out from the PC.**

INFORMATION

・Be careful not to give excessive force to the connecter of the USB cable when connecting/disconnecting the cable to/from FOMA terminal. When disconnecting the connector, be sure to pull it straight while pressing the release button. Applying an excessive force to disconnect the connector may give damage to it.
・Do not remove the USB cable during data communication. The data communication is disconnected and it may cause data loss or malfunction.

Installing FOMA communication configuration file

To make data communication by connecting FOMA terminal and a PC with USB cable, FOMA communication configuration file is required. Install the file before connecting FOMA terminal for the first time to the PC.

Installing FOMA communication configuration file

● Before operating, refer to "Precautions for installation/uninstallation". →P5
● Do not connect FOMA terminal before Step 4.

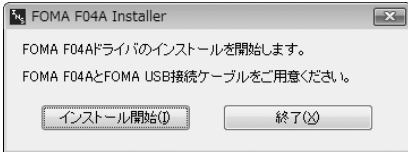**<Example> Installing the driver under Windows Vista**

1 **Insert the CD-ROM into the PC's CD-ROM drive.**

2 Click "データリンクソフト・各種設定ソフト (Data link software/Configuration software)"→"インストール (Install)" of "FOMA通信設定ファイル (USBドライバ) (FOMA communication configuration file (USB driver))" and double-click "F04Ast.exe" icon from a window displayed.
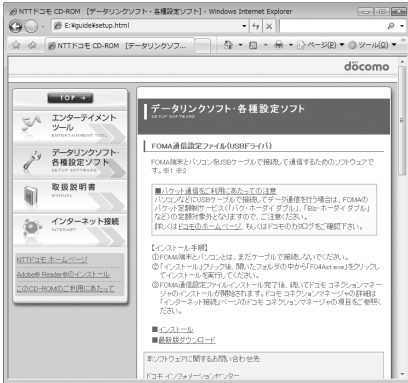
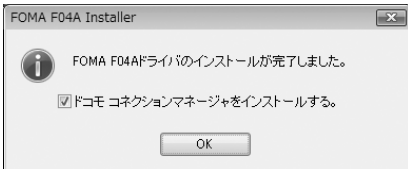**3** Click "インストール開始 (Start installation)".

4 When a message indicating to connect FOMA terminal to the PC appears, connect FOMA terminal to the PC.

• Connect FOMA terminal while the power is ON.

5 On the "インストール完了画面 (Installation completion screen)", click "OK".

Subsequently, install DOCOMO Connection Manager and perform setting of data communication. Continue to install from Step 3 in "Installing DOCOMO Connection Manager".→P13

• For DOCOMO Connection Manager, refer to "Using DOCOMO Connection Manager".→P10

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● When a PC does not detect FOMA terminal correctly, settings and communication cannot be performed.

<Example> Checking the driver under Windows Vista

**1** Click ⊕ (Start)→"コントロールパネル (Control panel)"→"システムとメンテナンス (System and maintenance)"→"デバイスマネージャ (Device manager)".

■ **Under Windows XP**
① Click "スタート (Start)"→"コントロールパネル (Control panel)"→"パフォーマンスとメンテナンス (Performance and maintenance)"→"システム (System)".
② On the "システムのプロパティ (Property of system)" screen, click "ハードウェア (Hardware)" tab→"デバイスマネージャ (Device manager)".

■ **Under Windows 2000**
① Click "スタート (Start)"→Click "コントロールパネル (Control panel)" from "設定 (Settings)"→ Double-click "システム (System)" icon.
② On the "システムのプロパティ (Property of system)" screen, click "ハードウェア (Hardware)" tab→"デバイスマネージャ (Device manager)".

2 Double-click the type of each device→Check that the name of the following devices are registered.
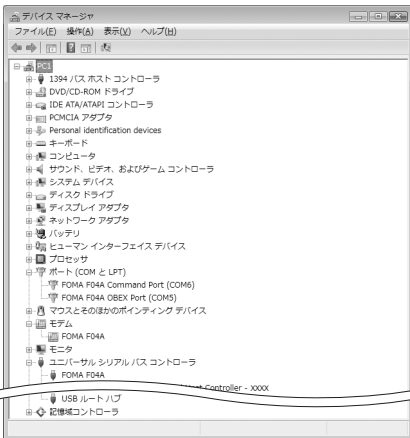
• Device types and names are shown as below. The order to be displayed differs depending on OSs.
- ポート(COMとLPT) (Port (COM and LPT)) : FOMA F04A Command Port (COMx)[*] FOMA F04A OBEX Port (COMx)[*]
- モデム (Modem) : FOMA F04A
- ユニバーサルシリアルバスコントローラ (Universal Serial Bus Controller) or USB (Universal Serial Bus) コントローラ (Controller) : FOMA F04A
* Depending on the PC environment, x represents different numbers.

Uninstalling FOMA communication configuration file

● Before operating, refer to "Precautions for installation/uninstallation".→P5
● Before operating, remove FOMA terminal from the PC.

<Example> Uninstalling the driver under Windows Vista

1 Click 🐕 (Start)→"コントロールパネル (Control panel)"→"プログラムのアンインストール (Uninstall programs)".

■ **Under Windows XP**
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/delete Programs)".

■ **Under Windows 2000**
Click "スタート (Start)"→Click "コントロールパネル (Control panel)" from "設定 (Settings)"→Double-click "アプリケーションの追加と削除 (Add/delete applications)" icon.

2 Select "FOMA F04A USB" and click "アンインストールと変更 (Uninstall and change)" (for Windows XP or Windows 2000, "変更と削除 (Change and delete)").

3 Check that "FOMA F04A Uninstaller" is displayed and click "はい (Yes)".
The uninstall process starts.

4 After the uninstallation in progress screen is displayed, click "OK".

INFORMATION
・ When "FOMA F04A USB" is not displayed on the deletion screen, execute the operations in "Installing FOMA communication configuration file" again and uninstall.→P6
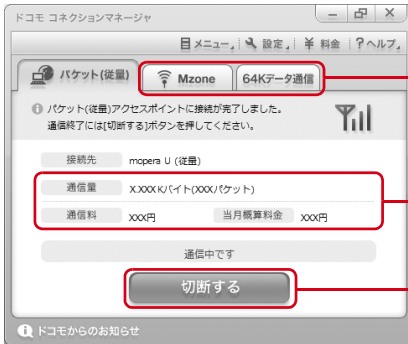
Using DOCOMO Connection Manager

The method of installing DOCOMO Connection Manager that connection rate vary by data volume is explained here.

DOCOMO Connection Manager

DOCOMO Connection Manager is the software to make data communication by the plan of connection rate varied by data volume. Using DOCOMO Connection Manager allows you to subscribe to mopera U or set for making data communication connecting FOMA terminal to a PC by simple operation.
You can also check approximate values of data communication volume or usage fees by charges counter function.

Not displayed in default setting.
For details, refer to ヘルプ (Help) of ドコモ コネクションマネージャ "DOCOMO Connection Manager".

Fee counter

Connect/Disconnect button

● For Internet connection with FOMA terminal, you need to subscribe to Internet service provider (mopera U etc.) applicable to services and data communication.
  For details, refer to DOCOMO website.

INFORMATION

・ Note that communications of large-size data such as viewing websites containing images using packet communication and downloading (example: updating of application, music, movie, OS or anti-virus software) will require high charges.
  Note that the packet flat-rate services such as Pake-hodai, Pake-hodai full, Pake-hodai double, Biz-hodai and Biz-hodai double are not applicable to the communication using PC etc.
・ For using of flat-rate data plan, you need to subscribe to Internet service provider applicable to flat-rate data communication charging plan. For details, check to DOCOMO website.
・ For using flat-rate data plan, be sure to use "定額データプラン接続ソフト (Connection software for flat-rate data plan)". You can download "定額データプラン接続ソフト (Connection software for flat-rate data plan)" from DOCOMO website.
・ For connection/settings of mopera, refer to mopera website.
  http://www.mopera.net/mopera/support/index.html

Before installing DOCOMO Connection Manager

Before installing DOCOMO Connection Manager, check the items below and perform to change setting of software/uninstall as required.
● Prepare FOMA terminal, FOMA USB Cable with Charge Function 01/02 (optional) or FOMA USB Cable (optional) in advance.
● Check the contents of subscription for services and Internet service provider.
● If installing connection software except for DOCOMO Connection Manager, change the setting not to be activated automatically as required.→P11 "Using connection software except for DOCOMO Connection Manager"

Changing setting of Internet Explorer

● Before installing DOCOMO Connection Manager, set to "ダイヤルしない (No dialing)" for connection setting at "インターネットオプション (Internet option)" field of Internet Explorer in advance.
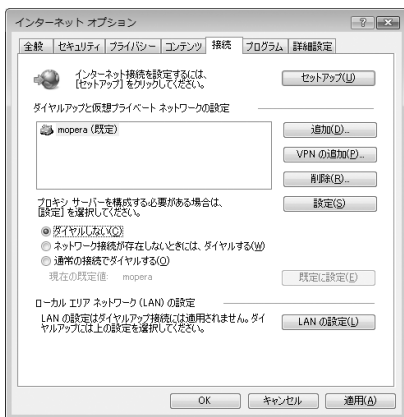
\<Example\> Changing under Windows Vista

1 Click 🔵 (Start)→"すべてのプログラム (All programs)"→"Internet Explorer".

　■ **Under Windows XP, Windows 2000**
　Click "スタート (Start)"→Select "すべてのプログラム (All programs)" ("プログラム (Programs)" for Windows 2000)→Click "Internet Explorer".

2 Click "ツール (Tool)"→"インターネットオプション (Internet option)".

3 Click "接続 (Connection)" tab→Select "ダイヤルしない (No dialing)".

4 Click "OK".

Using connection software except for DOCOMO Connection Manager

DOCOMO Connection Manager includes same function as that of software below and using together is not required. Perform to change setting not to be activated or uninstall as required.

・ mopera U start up tool
・ mopera U connection & setting tool
・ FOMA PC configuration software
・ FOMA Byte counter

And, when using Mzone (Public wireless LAN connection) by DOCOMO Connection Manager, uninstall the following public wireless LAN connection software. And, when installing all at once, Mzone connection cannot be used by DOCOMO Connection Manager.

・ U公衆無線LANユーティリティソフト (U public wireless LAN utility software)
・ ドコモ公衆無線LANユーティリティソフト (DOCOMO public wireless LAN utility software)
・ ドコモ公衆無線LANユーティリティプログラム (DOCOMO public wireless LAN utility program)

Installing DOCOMO Connection Manager

● After performing to install FOMA communication configuration file, when the screen for installation of DOCOMO Connection Manager appears, click "インストール (Install)" and start from Step 3.
● When FOMA communication configuration file is installed already, start from Step 1.

<Example> Installing under Windows Vista

**1** **Insert the CD-ROM into the PC's CD-ROM drive.**
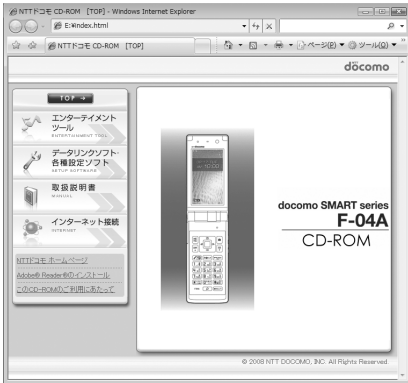
2 **"インターネット接続 (Internet connection)"→Click "インストール (Install)" field in Step ② of "本CD-ROMからのFOMAデータ通信の設定方法 (Setting method of FOMA data communication from this CD-ROM)".**

• When the warning screen of security is displayed, click "実行 (Execute)".
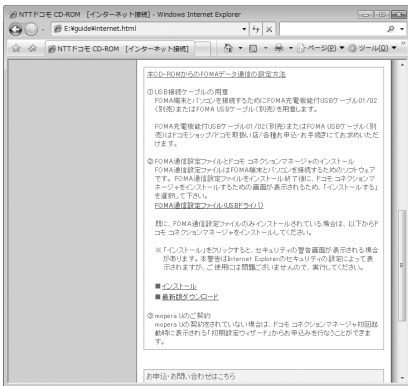
• For Windows XP, when the confirmation screen for installing of MSXML6/Wireless LAN API is displayed, click "Install" to install MSXML6/Wireless LAN API. After performing to install MSXML6/Wireless LAN API, reboot Windows to start installation of DOCOMO Connection Manager automatically.

3 Click "次へ (Next)".
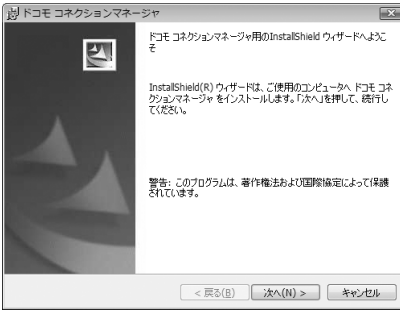
4 Check "注意事項 (Precautions)" and click "次へ (Next)".
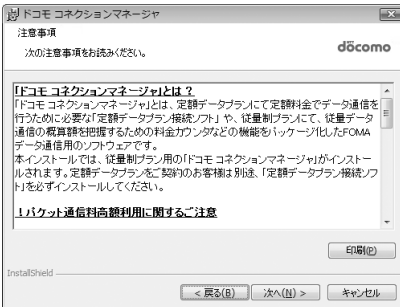
5 Check the contents of ソフトウェア使用許諾契約 (Software license agreement) and if you agree to the agreement, select "使用許諾契約の条項に同意します (Agree to the clauses of the agreement)" and click "次へ (Next)".
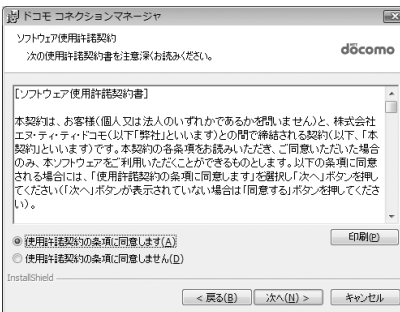
6 **Check the installing folder and click "次へ (Next)".**
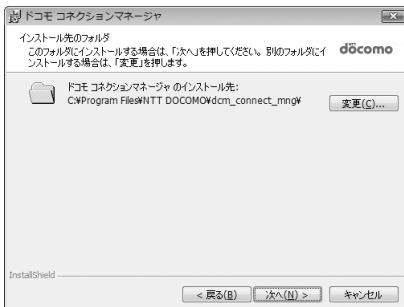
7 **Click "インストール (Install)".**

Installation starts.
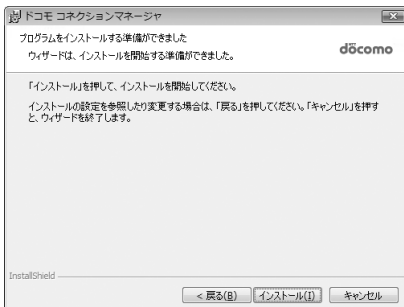
8 **When the "InstallShieldウィザードを完了しました (Performed InstallShield wizard)" screen appears, click "完了 (Done)".**

Installing DOCOMO Connection Manager is completed.

INFORMATION

- Installation may take a few minutes.
- When a message notifying you to reboot Windows is displayed, follow the instruction of screen and reboot.
- Do not install during data communication.

Activating DOCOMO Connection Manager

● Before operating, make sure that a PC and FOMA terminal are properly connected.

<Example> Setting under Windows Vista

1 **Click 🔵 (Start)→"すべてのプログラム (All Programs)"→"NTT DOCOMO"→ "ドコモ コネクションマネージャ (DOCOMO Connection Manager)"→"ドコモ コネクションマネージャ (DOCOMO Connection Manager)".**

■ **Under Windows XP, Windows 2000**
Click "スタート (Start)"→Select "すべてのプログラム (All programs)" (for Windows 2000, "プログラム (Program)"→"NTT DOCOMO"→"ドコモ コネクションマネージャ (DOCOMO Connection Manager)→Click "ドコモ コネクションマネージャ (DOCOMO Connection Manager)".
DOCOMO Connection Manager starts.
When booting a PC at first time, the setting wizard screen appears automatically.

- You can make a setting for data communication to use Internet connection by following the setting wizard.
  After setting, you can perform communication using DOCOMO Connection Manager.
  For details, refer to "ドコモ コネクションマネージャ操作マニュアル (DOCOMO Connection Manager operation manual)".

INFORMATION
- Just exiting the Internet browser or mail software may not disconnect communication. When you do not use communication, be sure to disconnect the communication from "切断する (Disconnect)" button of DOCOMO Connection Manager.
- Please note that if auto update is set for OS update etc., the software is updated automatically and high cost may be charged for the packet communication fee.
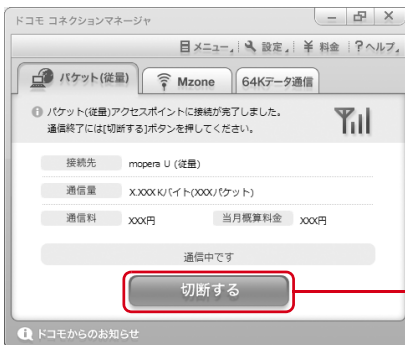
Connect/Disconnect button

Setting communications without using DOCOMO Connection Manager

The method of dialup connection setup without DOCOMO Connection Manager is explained.

● When using an access point compatible with HIGH-SPEED such as mopera for packet communication, make settings using DOCOMO Connection Manager.

Flow of dialup network setting

Flow of setup for data communication→P4

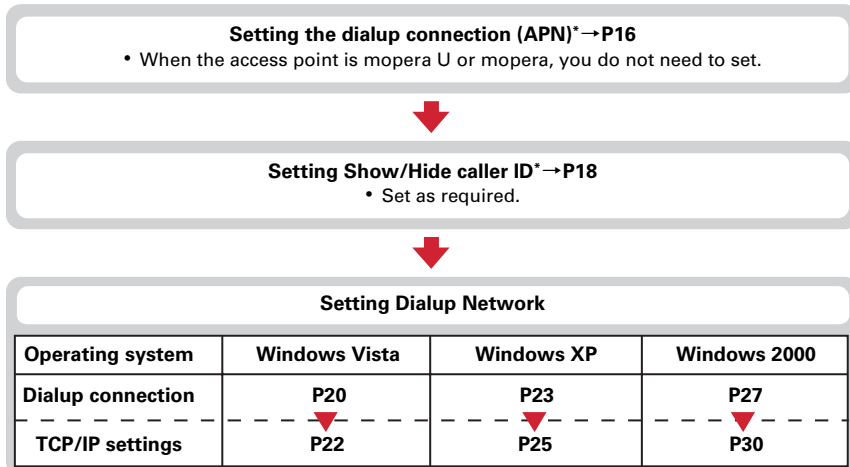> **Setting the dialup connection (APN)***→P16
> • When the access point is mopera U or mopera, you do not need to set.

> **Setting Show/Hide caller ID***→P18
> • Set as required.

Setting Dialup Network

Operating system	Windows Vista	Windows XP	Windows 2000
Dialup connection	P20	P23	P27
TCP/IP settings	P22	P25	P30

* Set for packet communication.

Communication software to input AT commands is required for settings.

The method of setting using "ハイパーターミナル (HyperTerminal)" that comes with Windows 2000 and Windows XP is explained here. Windows Vista does not support "ハイパーターミナル (HyperTerminal)". For Windows Vista, set using the software supported by Windows Vista (Follow the method for the software to be used.).

Setting the dialup connection (APN)

The dialup connection (APN) and registration number (cid)

The dialup connections (APN) for packet communication can be set for registration numbers (cid) between 1 and 10 in FOMA terminal. "mopera.ne.jp" (APN) to connect to mopera is registered in cid1 and "mopera.net" (APN) to connect to mopera U is registered in cid3 by default. For connecting to other providers or corporate LANs, register APN for cid2 or 4-10.

● For the dialup connections (APN), inquire your provider or network administrator.

● The dialup connection settings can be considered as phonebook entries registered for packet communication. The comparison between dialup connection settings and FOMA terminal phonebook is as shown below.

Dialup connection settings	FOMA terminal phonebook entries
Registration number (cid)	Registration number (Phonebook No.)
APN	Party's phone number

● The registered cid become the connection number in the dialup connection numbers setting.

<Example> Setting under Windows XP

1 **Connect FOMA terminal to a PC.**

Connection method→P5

2 **Click "スタート (Start)"→Select "すべてのプログラム (All programs)" ("プログラム (Programs)" for Windows 2000)→"アクセサリ (Accessories)"→"通信 (Communication)" and click "ハイパーターミナル (HyperTerminal)".**

3 **Enter the desired dialup connection name in "名前 (Name)"→Click "OK".**

- The following characters (one-byte) cannot be used in "名前 (Name)".
  ￥/: ＊?<> │ "

4 **Enter a fictional phone number (such as "0") for "電話番号 (Phone number)" →Check that "FOMA F04A" is set for "接続方法 (Connection method)"→Click "OK".**
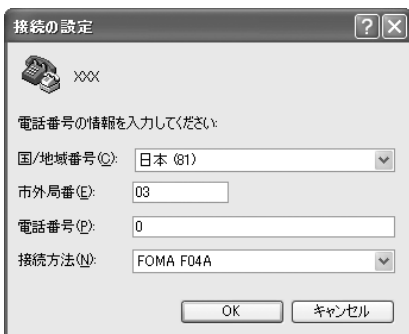
- "市外局番 (Area code)" differs depending on the PC environment. The code does not relate to Dialup connection (APN) setup. So no need to change.

5 **Click "キャンセル (Cancel)" on the "接続 (Connect)" screen.**

6 **Enter the dialup connection (APN) in the format "AT+CGDCONT =<cid>, "<PDP_TYPE>", "<APN>""→ ⏎ .**

<cid> : Enter any number between 2 or 4-10.
<PDP_TYPE> : IP or PPP
<APN> : Dialup connection (APN)

```
XXX - ハイパーターミナル
ファイル(F) 編集(E) 表示(V) 通信(C) 転送(T) ヘルプ(H)

AT+CGDCONT=2,"PPP","ABC"
```

- +CGDCONT command→P41 "Supplement to AT command"
- If nothing is displayed even when AT command is entered, enter ATE1 and press ⏎ .

7 **Check that "OK" is displayed and click "ファイル (File)"→Click "ハイパーターミナルの終了 (End HyperTerminal)".**

8 **When confirming disconnection, click "はい (Yes)"→When confirming saving, click "いいえ (No)".**

Setting Show/Hide caller ID

You can set to show/hide call ID for packet communication at once.
Caller ID is your important information. Take care when deciding to disclose your caller ID.
● If "Not notify" is set when using mopera U or mopera, connection is unavailable.

<Example> Setting under Windows XP

1 **Connect FOMA terminal to a PC.**

Connection method→P5

2 **Click "スタート (Start)"→Select "すべてのプログラム (All programs)" ("プログラム (Programs)" for Windows 2000)→"アクセサリ (Accessories)"→"通信 (Communication)" and click "ハイパーターミナル (HyperTerminal)".**

3 **Enter the desired dialup connection name in "名前 (Name)"→Click "OK".**

```
接続の設定                           ?×

     新しい接続

名前を入力し、アイコンを選んでください:
名前(N):
XXX
アイコン(I):


              OK        キャンセル
```

- The following characters (one-byte) cannot be used in "名前 (Name)".
  ¥ / : ＊ ? <> | "

4 Enter a fictional phone number (such as "0") for "電話番号 (Phone number)" →Check that "FOMA F04A" is set for "接続方法 (Connection method)"→Click "OK".

• "市外局番 (Area code)" differs depending on the PC environment. The code does not relate to Dialup connection (APN) setup. So no need to change.

5 Click "キャンセル (Cancel)" on the "接続 (Connect)" screen.

6 Enter notify/not notify of caller ID in the format "AT＊DGPIR=<n>"→ ⏎ .

<n> : 0-2
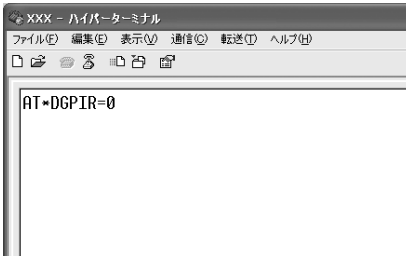- **0** : Connect directly (Default)
- **1** : Connect prefixing 184 (Not notify)
- **2** : Connect prefixing 186 (Notify)

• If nothing is displayed even when AT command is entered, enter ATE1 and press ⏎ .

7 Check that "OK" is displayed and click "ファイル (File)"→Click "ハイパーターミナルの終了 (End HyperTerminal)".

8 When confirming disconnection, click "はい (Yes)"→When confirming saving, click "いいえ (No)".

Show/Hide caller ID function by dialup network settings

The dialup network settings can also be used to append 186 (Notify)/184 (Not notify) to the dialup connection number.

● The Show/Hide of caller ID when both of the ＊DGPIR command and dialup network settings are set is as shown below.

Dialup network setting (<cid>=3) \ Setting made by ＊DGPIR command	No setting	Caller ID is not sent.	Caller ID is sent.
＊99＊＊＊3#	Caller ID is sent.	Caller ID is not sent.	Caller ID is sent.
184＊99＊＊＊3#	Caller ID is not sent.		
186＊99＊＊＊3#	Caller ID is sent.		

Setting dialup connection

1 **Connect FOMA terminal to a PC.**

Connection method→P5

2 **Click (Start)→"接続先 (Dialup connection)".**

3 **Click "接続またはネットワークをセットアップします (Set up connection or network)".**

4 **Select "ダイヤルアップ接続をセットアップします (Set up dialup connection)" and click "次へ (Next)".**

■ **When the "どのモデムを使いますか？ (Which modem will you use?)" screen is displayed**
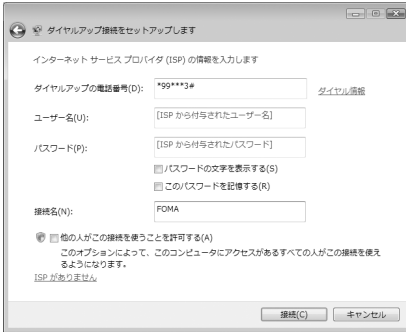**Click "FOMA F04A".**

5 Enter the phone number of the dialup connection in "ダイヤルアップの電話番号 (Dialup phone number)" ("＊99＊＊＊<cid>#" for packet communication) with one-byte→Enter "ユーザー名 (User name)"→Enter "パスワード (Password)"→Enter "接続名 (Connection name)" and click "接続 (Connect)".

<cid> : P17 The number registered in "Setting the dialup connection (APN)"

• When connecting to mopera U or mopera, enter as follows.

Dialup connection	Packet communication	64K data communication
mopera U	＊99＊＊＊3#	＊8701
mopera	＊99＊＊＊1#	＊9601

• When the access point is mopera U or mopera, you do not need to enter "ユーザー名 (User name)" or "パスワード (Password)".
• You cannot use "." (one-byte period) at the beginning of "接続名 (Connection name)". Also, the following characters (one-byte) cannot be used.
¥/:＊?<>｜

6 On the connecting screen, click "スキップ (Skip)".
• Only make settings without connecting to the Internet right away.

7 On the "インターネット接続テストに失敗しました (Failed in Internet connection test)" screen, click "接続をセットアップします (Set up connection)".

8 Click "閉じる (Close)".

1 Click 🏁 (Start)→"接続先 (Dialup connection)".

2 Right-click the dialup connection created and click "プロパティ (Property)".

3 Check the setting of each item in "全般 (General)" tab.

- If multiple modems are installed in the PC, check that "モデム－FOMA F04A (Modem-FOMA F04A)" is only selected under "接続の方法 (Connection method)".
- Uncheck (☐) other than selected modem.
- COM port number assigned to the modem displayed at "接続の方法 (Connection method)" field differs by the environment of a PC you use.
- Uncheck (☐) "ダイヤル情報を使う (Use dial information)".

4 Click "ネットワーク (Network)" tab→Set each item as shown below.
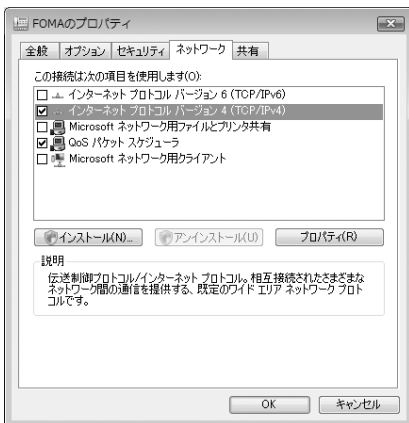
- Uncheck (☐) "インターネットプロトコルバージョン6 (TCP/IPv6) (Internet Protocol Version 6 (TCP/IPv6))".
- When settings of IP and DNS information have been requested from the provider, etc. select "インターネットプロトコルバージョン4 (TCP/IPv4) (Internet Protocol Version 4 (TCP/IPv4))", click "プロパティ (Property)" and set various information.
- When settings of "QoSパケットスケジューラ (QoS packet scheduler)" and other items have been requested from the provider, etc., check/uncheck as required.

5 Click "オプション (Option)" tab→Click "PPP設定 (PPP settings)".

6 Uncheck all items (☐)→Click "OK".

7 Click "OK".
Performing communication→P32

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Setting dialup connection

1 **Connect FOMA terminal to a PC.**
Connection method→P5

2 **Click "スタート (Start)"→Select "すべてのプログラム (All programs)"→"アクセサリ (Accessories)"→"通信 (Communication)" and click "ネットワーク接続 (Network connection)".**

3 **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 task)".**
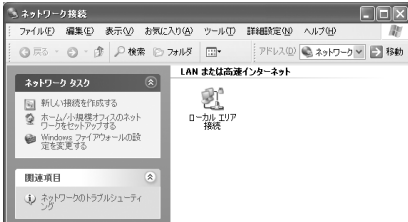
4 **On the "新しい接続ウィザードの開始 (New connection wizard start)" screen, click "次へ (Next)".**

5 **Select "インターネットに接続する (Connect to Internet)" and click "次へ (Next)".**
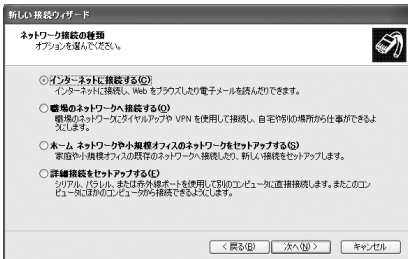
6 **Select "接続を手動でセットアップする (Set up connection manually)" and click "次へ (Next)".**

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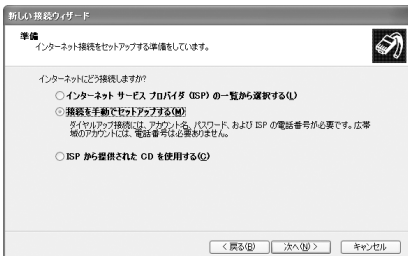
7 Select "ダイヤルアップモデムを使用して接続する (Use dialup modem to connect)" and click "次へ (Next)".
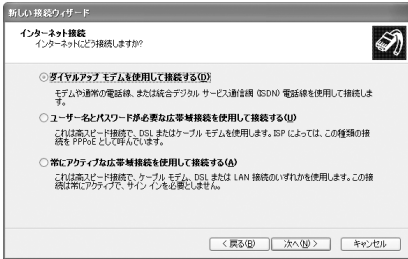
■ **When "デバイスの選択 (Device selection)" screen is displayed**
Select only "モデム－FOMA F04A (Modem-FOMA F04A)" and click [次へ (Next)].

8 Enter the desired dialup connection name in "ISP名 (ISP name)"→Click "次へ (Next)".

• You cannot use "." (one-byte period) at the beginning of "ISP名 (ISP name)". Also, the following characters (one-byte) cannot be used.
¥ /: ＊ ?<> ｜ "

9 Enter the phone number of the dialup connection in "電話番号 (Phone number)" ("＊99＊＊＊<cid>#" for packet communication) with one-byte→ Click "次へ (Next)".

<cid> : P17 The number registered in "Setting the dialup connection (APN)"
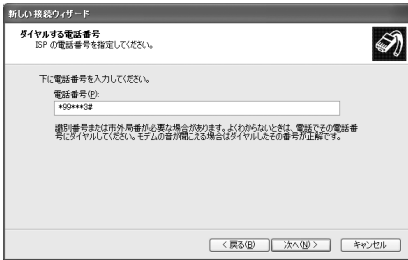
• When connecting to mopera U or mopera, enter as follows.

Dialup connection	Packet communication	64K data communication
mopera U	＊99＊＊＊3#	＊8701
mopera	＊99＊＊＊1#	＊9601

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10 Enter "ユーザー名 (User name)"→Enter "パスワード (Password)"→Enter "パスワードの確認入力 (Password confirmation entry)"→Select all items as shown below and click "次へ (Next)".
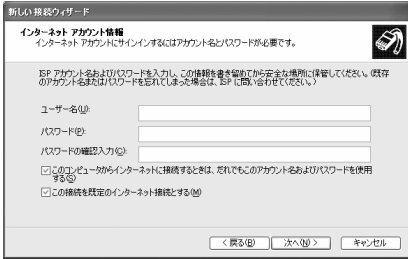
- When the access point is mopera U or mopera, you do not need to enter "ユーザー名 (User name)", "パスワード (Password)" or "パスワードの確認入力 (Password confirmation entry)".

11 On the "新しい接続ウィザードの完了 (New connection wizard completion)" screen, click "完了 (Done)".

12 On the "(操作8で入力したISP名) へ接続 (Connect to (the ISP name entered in Step 8))" screen, check the settings and click "キャンセル (Cancel)".

- Check the settings without connecting to the Internet right away.

Setting TCP/IP protocol

1 Select the created dialup connection icon and click "ファイル (File)"→Click "プロパティ (Property)".
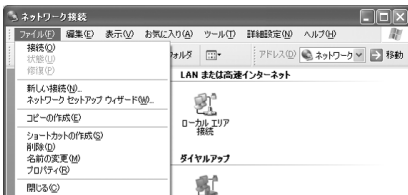
2 Check the setting of each item in "全般 (General)" tab.

- If multiple modems are installed in the PC, check that "モデム－FOMA F04A (Modem-FOMA F04A)" is only selected under "接続方法 (Connection method)".
- Uncheck (☐) other than selected modem.
- COM port number assigned to the modem displayed at "接続方法 (Connection method)" field differs by the environment of a PC you use.
- Uncheck (☐) "ダイヤル情報を使う (Use dial information)".

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3 Click "ネットワーク (Network)" tab→Set each item as shown below.

- Since "QoSパケットスケジューラ (QoS packet scheduler)" settings in "この接続は次の項目を使用します (Use these items for this connection)" can not be changed, leave it as it is.
- When settings of IP and DNS information have been requested from the provider, etc. select "インターネットプロトコル (TCP/IP) (Internet protocol (TCP/IP))", click "プロパティ (Property)" and set necessary information.

4 Click "設定 (Set)".

5 Uncheck all items (□)→Click "OK".
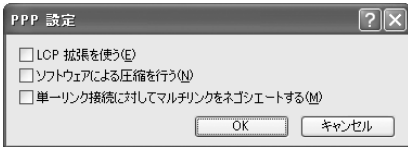
6 Click "OK".
Performing communication→P32

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Setting dialup connection

1 **Connect FOMA terminal to a PC.**

Connection method→P5

2 **Click "スタート (Start)"→Select "プログラム (Programs)"→"アクセサリ (Accessories)"→"通信 (Communication)" and click "ネットワークとダイヤルアップ接続 (Network and dialup connections)"→Double-click "新しい接続の作成 (Create new connection)" icon.**
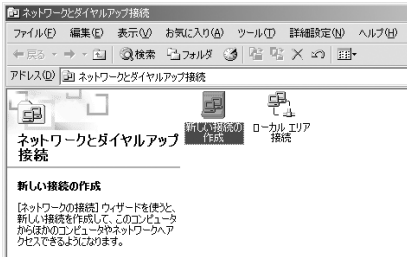
■ **When "所在地情報 (Location information)" screen is displayed**
  ① **Enter the area code in "市外局番／エリアコード (Area code)"→Click "OK"**
  ② **Click "OK" on the "電話とモデムのオプション (Phone and modem options)" screen.**

3 **On the "ネットワークの接続ウィザードの開始 (Network connection wizard start)" screen, click "次へ (Next)".**

4 **Select "インターネットにダイヤルアップ接続する (Use dialup connection to Internet)" and click "次へ (Next)".**
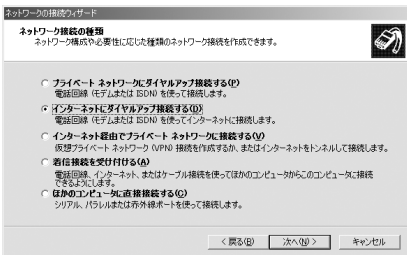
5 Select "インターネット接続を手動で設定するか、またはローカルエリアネットワーク (LAN) を使って接続します (Set Internet connection manually or connect using local area network (LAN))" and click "次へ (Next)".
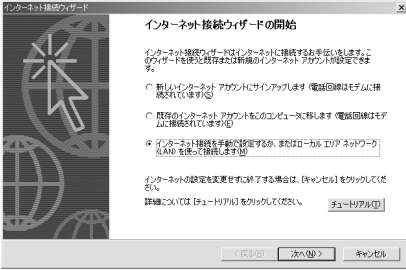
6 Select "電話回線とモデムを使ってインターネットに接続します (Connect to Internet using phone line and modem)" and click "次へ (Next)".
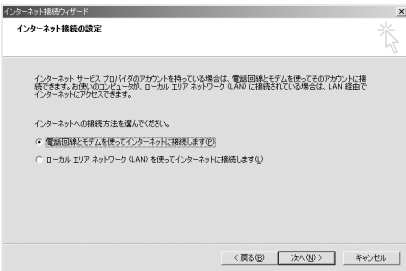
■ **When "モデムの選択 (Modem selection)" screen is displayed**
Select "FOMA F04A" and click [次へ (Next)].

7 Enter the phone number of the dialup connection in "電話番号 (Phone number)" ("＊99＊＊＊<cid>#" for packet communication) with one-byte→ Click "詳細設定 (Detailed settings)".

<cid> : P17 The number registered in "Setting the dialup connection (APN)"
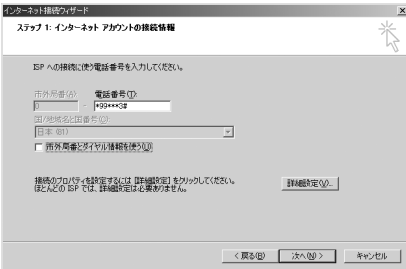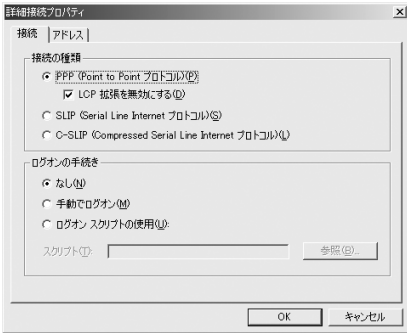
• When connecting to mopera U or mopera, enter as follows.
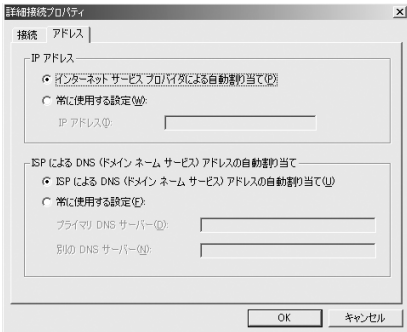
Dialup connection	Packet communication	64K data communication
mopera U	＊99＊＊＊3#	＊8701
mopera	＊99＊＊＊1#	＊9601

• Uncheck (☐) "市外局番とダイヤル情報を使う (Use area code and dial information)".

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8 Set each item in "接続 (Connection)" tab as shown below.
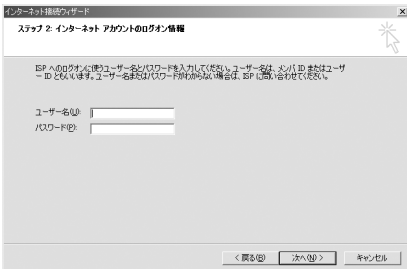
9 Click "アドレス (Address)" tab→Set each item.

- When settings of IP and DNS information have been requested from the provider, etc., set various information.
- When the access point is mopera U or mopera, you do not need to change the setting.

10 Click "OK"→Click "次へ (Next)".

11 Enter "ユーザー名 (User name)"→Enter "パスワード (Password)"→Click "次へ (Next)".

- When the access point is mopera U or mopera, you do not need to enter "ユーザー名 (User name)" or "パスワード (Password)". When you click "次へ (Next)" and the screen to confirm the blank entry appears, click "はい (Yes)".

12 Enter the desired dialup connection name in "接続名 (Connection name)"→ Click "次へ (Next)".
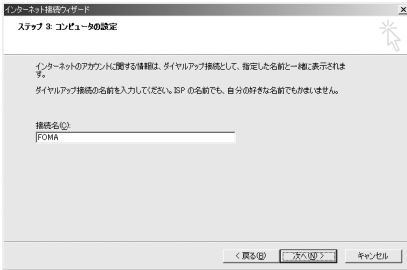
- You cannot use "." (one-byte period) at the beginning of "接続名 (Connection name)".

13 Select "いいえ (No)" and click "次へ (Next)".
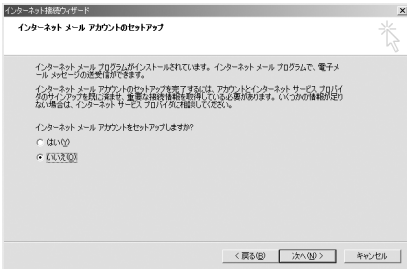
14 Click "完了 (Done)".

Setting TCP/IP protocol

1 Select the created dialup connection icon and click "ファイル (File)"→Click "プロパティ (Property)".
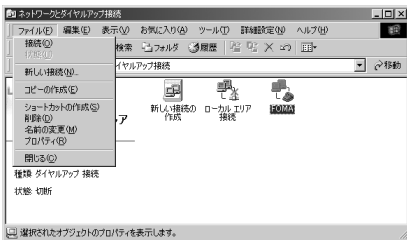
2 **Check the setting of each item in "全般 (General)" tab.**

- If multiple modems are installed in the PC, check that "モデム－FOMA F04A (Modem-FOMA F04A)" is only selected under "接続の方法 (Connection method)".
- Uncheck (☐) other than selected modem.
- COM port number assigned to the modem displayed at "接続の方法 (Connection method)" field differs by the environment of a PC you use.
- When the modem is changed, all items in "電話番号 (Phone number)" is initialized. Enter the dialup connection phone number again in that case.
- Uncheck (☐) "ダイヤル情報を使う (Use dial information)".

3 **Click "ネットワーク (Network)" tab→Set each item as shown below.**
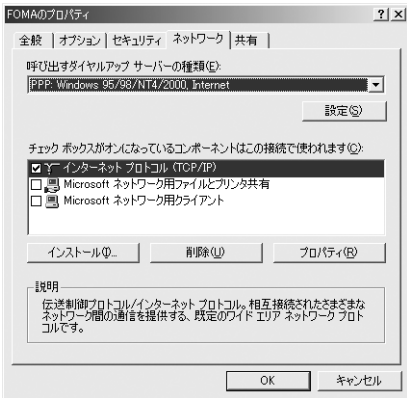
4 **Click "設定 (Set)"**

5 **Uncheck all items (☐)→Click "OK".**

6 **Click "OK".**

Performing communication→P32

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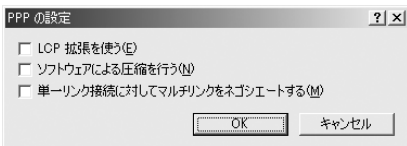
Performing communication

Starting communication and disconnection are explained here.

<Example> Performing communication under Windows XP

1 **Connect FOMA terminal to a PC.**

Connection method→P5

2 **Click "スタート (Start)"→Select "すべてのプログラム (All programs)"→"アク セサリ (Accessories)→"通信 (Communication)" and click "ネットワーク接続 (Network connection)"→Double-click the connection icon.**

■ **Under Windows 2000**

Click "スタート (Start)"→Select "プログラム (Programs)"→"アクセサリ (Accessories)"→"通信 (Communication)" and click "ネットワークとダイヤルアップ接続 (Network and dialup connections)"→Double-click the connection icon

■ **Under Windows Vista**

Click (Start)→"接続先 (Dialup connection)"→Select the dialup connection and click "接続 (Connect)".

3 **Enter "ユーザー名 (User name)"→Enter "パスワード (Password)"→Click "ダイ ヤル (Dial)".**

- When using mopera U or mopera, you do not need to enter "ユーザー名 (User name)" or "パス ワード (Password)".
- When "ユーザー名 (User name)" was entered or "パスワード (Password)" was saved while settings, these entries are no longer necessary.
- Click "OK" when the connection established screen is displayed.

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- FOMA terminal displays a connecting screen when you execute packet communication or 64K data communication. The following screens are displayed when a connection has been established.

Connected Packet

Connected 64K

✳8701

27sec
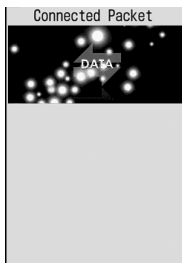
For packet communication
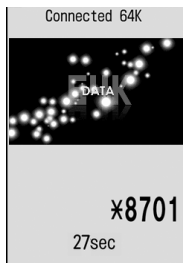
For 64K data communication

- The communication speed displayed on your PC may differ from actual speed.
- The communication is available only with FOMA terminal that was connected when the connection icon was created.

Disconnecting communication

Just exiting the PC browser may not disconnect communication. To ensure disconnection, perform the following operation.

<Example> Disconnecting communication under Windows XP

1 Click 🖳 in the task tray→Click "切断 (Disconnect)".

■ **Under Windows Vista**

Right-click 🖳 in the task tray→Select "切断 (Disconnect)" and click the dialup connection to disconnect.

FOMAの状態

全般 詳細

接続
状態: 接続
継続時間: 00:00:15
速度: 460.8 Kbps

動作状況

送信 ─   ─ 受信

バイト: 1,430   282
圧縮: 0 %   0 %
エラー: 0   0

プロパティ(P)   切断(D)

閉じる(C)

AT command

AT commands are commands for setting FOMA terminal functions using a PC. FOMA terminals comply with AT commands and support some extended commands and proprietary AT commands.

AT commands

AT command input format

"AT" must be entered before each AT command. Commands must be entered in one-byte alphanumeric characters.

<Example> Connecting to mopera U with ATD command

ATD＊99＊＊＊3#[↵]

Return character : Press Enter key. (Command separator)
Parameter : Command's argument
Command : Command name
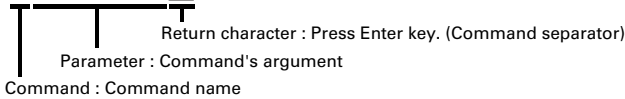
AT commands and their parameters must be entered on a single line. All the characters from the first character until the character directly preceding [↵] must be entered on a single line. Each line can be up to 256 characters including "AT".

AT command input mode

To operate FOMA terminal using AT commands, a PC must be in terminal mode. Terminal mode is a mode that lets the PC operate as a single communication terminal. When terminal mode is set, the characters entered from the keyboard are sent directly to the communication port to operate FOMA terminal.

● Offline mode
   FOMA terminal is in stand-by. FOMA terminal must be in stand-by status to use AT commands to control it.

● Online data mode
   FOMA terminal is communicating. If you enter AT commands when FOMA terminal is performing communication, the sent characters are sent directly to the communication receiver and may cause the receiver's modem to malfunction. Do not enter AT commands while FOMA terminal is performing communication.

● Online command mode
   AT commands can be used even when FOMA terminal is in communication mode. These operations make it possible to execute AT commands without interfering with the connection to the communication receiver, and normal communication can continue after the commands have finished executing.

■ **Switching between online data mode and online command mode**
   To switch FOMA terminal from online data mode to online command mode, you can use either of the following procedures.
   • Enter +++ command or code set in the S2 register.
   • Turn the RS-232C＊ ER signal OFF when set in "AT&D1".
      ＊ The USB or Bluetooth interface emulates an RS-232C signal line so RS-232C signal control using communication applications is possible.
   To switch from online command mode to online data mode, enter "ATO [↵] ".

INFORMATION
• When making a call or sending an AT command from external device, it is sent from Number A with 2in1 in Dual mode or A mode, and from Number B in B mode.

List of AT command

- AT command that can be used via the FOMA F04A (Modem).
- Entering "￥" may cause "\" to appear depending on the font setting for a PC or communication software.
- If the battery pack is removed from FOMA terminal before the terminal power is turned off, the setting values may not be recorded.

Upper slot : Command Lower slot : Example	Description
A/ A/ OK	Execute the previously executed command again. When previous response is "ERROR", "ERROR" is returned.
AT AT ↵ OK	Use commands on this list by prefixing to commands other than A/ or +++. When using only this command, "OK" is returned with FOMA terminal enabled for using AT commands.
ATA RING ATA ↵ CONNECT	Perform the receiving process when entered while receiving a packet communication or 64K data communication. The following commands can be entered when receiving a packet communication. ATA184 : Handling of incoming calls : Send caller ID function OFF ATA186 : Handling of incoming calls : Send caller ID function ON
ATD ATD＊99＊＊＊1# ↵ CONNECT 460800	ATD＊99＊＊＊<cid># : Performs calling process for packet communication. If <cid> or ＊＊＊<cid> is omitted, <cid>=1 is set. ATD [parameter] [phone number] : Perform calling process for 64K data communication. Calling process is not permitted if phone number contains characters other than the following. 0-9, ＊, #, A, a, B, b, C, c The following characters and a space can be entered but are not recognized in dialing. ,(comma), !, -, @, D, d, P, p, T, t, W, w Setting Show/Hide caller ID is enabled by inserting 186 or 184 after ATD. ATDN or ATDL can be used for redial calling.
ATE<n> *1 ATE1 ↵ OK	Set whether FOMA terminal will return echo for command sent from a PC. n=0 : Echo OFF n=1 : Echo ON (default) Normal usage is n=1. If the PC has an echo function, setting this command to n=0 prevents double display of characters.
ATH ATH ↵ NO CARRIER	Disconnect line when entered during a communication. Execute in online command mode.→P34
ATI<n> ATI0 ↵ NTT DoCoMo OK	Display the confirmation code. n=0 : "NTT DoCoMo" n=1 : Display model name of FOMA terminal n=2 : Display version of FOMA terminal n=3 : Display elements of ACMP signals n=4 : Display details of functions that can be communicated by FOMA terminal in numeric
ATO ATO ↵ CONNECT 460800	Return from online command mode to online data mode during communication.
ATQ<n> *1 ATQ0 ↵ OK	Set whether to display result code. n=0 : Display (default) n=1 : Not display When ATQ1 is executed, "OK" is not returned.
ATS0=<n> *1 ATS0=0 ↵ OK	Set number of rings until FOMA terminal receives communication automatically. n=0 : Not receive automatically (default) n=1-255 : Receive automatically with specified number of rings ATS0? : Display current settings
ATS2=<n> ATS2=43 ↵ OK	Set escape character. n=0-127 (default : n=43) When n=127 is set, escape is unavailable. ATS2? : Display current settings
ATS3=<n> ATS3=13 ↵ OK	Set the carriage return (CR) character that identifies the end of AT command character string. Appended to end of echoed command character string and result code. n=13 (fixed value) ATS3? : Display current settings

Upper slot : Command Lower slot : Example	Description
ATS4=<n> ATS4=10 ↵ OK	Set the line feed (LF) character. When result code is displayed as alphabetic characters, appends the character after the carriage return (CR) character. n=10 (fixed value) ATS4? : Display current settings
ATS5=<n> ATS5=8 ↵ OK	Set the back space (BS) character. When this character is detected during command input, the last character in the input buffer is deleted. n=8 (fixed value) ATS5? : Display current settings
ATS6=<n> ATS6=5 ↵ OK	Set pause time (seconds) until dialing commences but do not operate. n= : 2-10 (default : n=5) ATS6? : Display current settings
ATS8=<n> ATS8=3 ↵ OK	Set pause time (seconds) until commas are dialed but do not operate. n=0-255 (default : n=3) ATS8? : Display current settings
ATS10=<n>　　　*1 ATS10=1 ↵ OK	Set the delay time (1/10 seconds) for automatic disconnection but do not operate. n=1-255 (default : n=1) ATS10? : Display current settings
ATS30=<n> ATS30=0 ↵ OK	Set a period of time (minutes) with no data transmission/reception to terminate the connection for 64K data communications. n=0-255 : (default : n=0, n=0 indicates that inactive timer is set to OFF.) ATS30? : Display current settings
ATS103=<n> ATS103=1 ↵ OK	Set the separator used to append and send received sub addresses in 64K data communication. n=0 : ＊　　　n=1 : / (default)　　　n=2 : ￥ or \ ATS103? : Display current settings
ATS104=<n> ATS104=1 ↵ OK	Set the separator used to append and send outgoing sub addresses in 64K data communication. n=0 : #　　　n=1 : % (default)　　　n=2 : & ATS104? : Display current settings
ATV<n>　　　*1 ATV1 ↵ OK	Set result code display method. n=0 : Number display　　　n=1 : Alphabetical display (default) When ATV0 is executed, "0" is not returned to the same line.
ATX<n>　　　*1 ATX4 ↵ OK	Set whether to detect busy or dial tones and whether to display the speed in the "CONNECT" display for the connection. Busy tone detection : Send "BUSY" response when dialup connection is busy. Dial tone detection : Detect whether FOMA terminal is connected. n=0 : No busy tone, no dial tone detected, and no speed is displayed n=1 : No busy tone, no dial tone detected, and speed is displayed n=2 : No busy tone, dial tone detected, and speed is displayed n=3 : Busy tone detected, no dial tone detected, and speed is displayed n=4 : Busy tone detected, dial tone detected, and speed is displayed (default) When n=0 is set, AT&E and AT￥V command will be unavailable.
ATZ　　　*3 ATZ ↵ OK (When in offline mode)	Reset the current setting to the registered state. When this command is executed during communication, the terminal is reset after the line is disconnected (displaying "NO CARRIER").
AT%V AT%V ↵ Ver1.00 OK	Display FOMA terminal version.
AT&C<n>　　　*1 AT&C1 ↵ OK	Set the operating conditions of the circuit CD (DCD) for DTE. n=0 : Always ON　　　n=1 : Vary according to line connection status (default) When set to n=0, the CD signal is set to ON directly before sending "CONNECT" when ending connection. The CD signal is set to OFF directly before the line is disconnected and "NO CARRIER" is sent.

Upper slot : Command Lower slot : Example	Description
AT&D\<n>　　　　　　*1 AT&D2 ↵ OK	Set the operation performed when circuit ER (DTR) signal received from DTE is switched from ON to OFF while online data mode takes effect. n=0 : Ignore status (status is always considered to be ON) n=1 : Move to online command mode when status changes from ON to OFF n=2 : Disconnect line and move to offline mode when status changes from ON to OFF (default)
AT&E\<n>　　　　　　*1 AT&E1 ↵ OK	Set the speed indication used when connection is made. n=0 : Display communication speed of wireless zone n=1 : Display communication speed between a PC and FOMA terminal (default)
AT&F AT&F ↵ OK (When in offline mode)	Reset the current setting to the default. When this command is executed during communication, the terminal is reset after the line is disconnected (displaying "NO CARRIER").
AT&S\<n>　　　　　　*1 AT&S0 ↵ OK	Set control of the data set ready (DR) signal to be output to DTE. n=0 : Always ON (default)　　　n=1 : ON at time of connection
AT&W AT&W ↵ OK	Register the current settings in FOMA terminal.
AT＊DANTE AT＊DANTE ↵ ＊DANTE : 3 OK	Indicate FOMA terminal reception level in the "＊DANTE : \<n>" format. n=0 : Out of service area n=1 : Received signal level of FOMA terminal is 0 or 1 antenna. n=2 : Received signal level of FOMA terminal is 2 antennas. n=3 : Received signal level of FOMA terminal is 3 antennas. AT＊DANTE=? : Display a list of displayable values
AT＊DGANSM=\<n>　　　*2 AT＊DGANSM=0 ↵ OK	Set to reject or permit incoming packet communications. n=0 : Reject setting = OFF, Accept setting = OFF (default) n=1 : Reject setting=ON　　　n=2 : Accept setting=ON AT＊DGANSM? : Display current settings AT＊DGANSM=? : Display a list of assignable values
AT＊DGAPL=\<n> [,\<cid>]　*2 AT＊DGAPL=0,1 ↵ OK	Set the dialup connections (APN) to permit incoming packet communications. APN uses \<cid> defined by +CGDCONT command. n=0 : Add to list of APN permitted for incoming communications n=1 : Delete from list of APN permitted for incoming communications If the \<cid> is not defined by the +CGDCONT command, it can still be added to/deleted from the list. If the \<cid> is omitted, all the \<cid> are added to/deleted from the list. AT＊DGAPL? : Display current settings AT＊DGAPL=? : Display a list of assignable values
AT＊DGARL=\<n> [,\<cid>]　*2 AT＊DGARL=0,1 ↵ OK	Set the dialup connections (APN) to refuse incoming packet communications. APN uses \<cid> defined by +CGDCONT command. n=0 : Add to list of APN rejected for incoming communications n=1 : Delete from list of APN rejected for incoming communications If the \<cid> is not defined by the +CGDCONT command, it can still be added to/deleted from the list. If the \<cid> is omitted, all the \<cid> are added to/deleted from the list. AT＊DGARL? : Display current settings AT＊DGARL=? : Display a list of assignable values
AT＊DGPIR=\<n>　　　　*2 AT＊DGPIR=0 ↵ OK	Set the caller ID notification when packet communication connection is being established. This command is available when a communication is sent or received. n=0 : Connect to APN directly (default)　　　n=1 : Connect to APN prefixing 184 n=2 : Connect to APN prefixing 186 When Show/Hide caller ID is specified by dialup network→P19 AT＊DGPIR? : Display current settings AT＊DGPIR=? : Display a list of assignable values
AT＊DRPW AT＊DRPW ↵ ＊DRPW : 0 OK	Indicate an index for the reception power of the radio waves that FOMA terminal receive. AT＊DRPW=? : Display a list of displayable values

Upper slot : Command Lower slot : Example	Description
AT+CAOC	Display last call cost.
AT+CAOC ↵ +CAOC : "000024" OK	
AT+CBC	Display FOMA terminal's battery level in the "+CBC : <bcs>,<bcl>" format. bcs=0 : Powered by the battery pack bcs=1 : Not powered by the battery pack bcs=2 : Battery pack removed bcs=3 : Power-supply error bcl=0 : No battery remained or battery pack removed bcl=1-100 : Battery remained AT+CBC=? : Display a list of displayable values
AT+CBC ↵ +CBC : 0,100 OK	
AT+CBST=<n>,1,0 *1	Set the line to use (Setting of bearer service) n=116 : 64K data communication (default) n=134 : 64K videophone AT+CBST? : Display current settings AT+CBST=? : Display a list of assignable values
AT+CBST=116,1,0 ↵ OK	
AT+CDIP=<n> *1	Set whether to notify received sub address. And, subscription status of Multi Number can be confirmed. n=0 : The information of sub address is not displayed. (default) n=1 : The information of sub address is displayed. AT+CDIP? : Current settings are displayed by "+CDIP:<n>,<m>". m=0 : Multi Number not subscribed. m=1 : Multi Number subscribed. AT+CDIP=? : List of the settable values is displayed.
AT+CDIP=0 OK	
AT+CEER	Display reason for the previous disconnection. Disconnection reason list→P41
AT+CEER ↵ +CEER : 36 OK	
AT+CGDCONT *2	Set dialup connection (APN) for packet communication.→P41
→P41	
AT+CGEQMIN *2	Set the criteria for judging whether to permit QoS (Quality of Service) provisioned by the network when packet communication is established.→P42
→P42	
AT+CGEQREQ *2	Set QoS (Quality of Service) requested to the network at the transmission of packet communication.→P42
→P42	
AT+CGMR	Display FOMA terminal version.
AT+CGMR ↵ 1234567890123456 OK	
AT+CGREG=<n> *1	Set whether to report network service registration status (in/out of service area). n=0 : Not notified (default) n=1 : When the terminal is moved from Within service area to Out of service area or vice versa, the status is reported in the "+CGREG : <stat>" format. stat=0 : Out of service area stat=1 : Within service area stat=4 : Unknown stat=5 : Within service area (during international roaming) AT+CGREG? : Display the current settings and status in the "+CGREG : <n>, <stat>" format AT+CGREG=? : Display a list of assignable values
AT+CGREG=0 ↵ OK	
AT+CGSN	Display FOMA terminal serial No.
AT+CGSN ↵ 123456789012345 OK	
AT+CLIP=<n> *1	Set whether to display sender's caller ID on a PC when receiving 64K data communication. n=0 : Not display result (default) n=1 : Display result AT+CLIP? : Display the current settings and status in the "+CLIP : <n>,<m>" format m=0 : Network setting not to send caller ID when sending data m=1 : Network setting to send caller ID when sending data m=2 : Unknown AT+CLIP=? : Display a list of assignable values
AT+CLIP=0 ↵ OK	

Upper slot : Command Lower slot : Example	Description
AT+CLIR=<n> *2 AT+CLIR=2 ↵ OK	Set the caller ID notification when 64K data communication is transmitted. n=0 : Use the setting in service agreement n=1 : Not send n=2 : Send (default) AT+CLIR? : Display the current settings and status in the "+CLIR : <n>,<m>" format m=0 : CLIR not operating (always sends) m=1 : CLIR operating (never sends) m=2 : Unknown m=3 : CLIR temporary mode (default=does not send) m=4 : CLIR temporary mode (default=sends) AT+CLIR=? : Display a list of assignable values
AT+CMEE=<n> *1 AT+CMEE=0 ↵ OK	Set whether to display an error report at FOMA terminal. n=0 : Display "ERROR" and no result code (default) n=1 : Use result code, displaying reason as number n=2 : Use result code, displaying reason as alphabetic characters Display reasons in the "+CME ERROR : xxxx" format when n=1 or n=2 is set (xxxx = number or alphabetic characters).→P41 "Error messages list" AT+CMEE? : Display current settings AT+CMEE=? : Display a list of assignable values
AT+CNUM AT+CNUM ↵ +CNUM : ,"090XXXXXXXX", 129 OK	Display FOMA terminal's own phone number in the "+CNUM : ,"<number>",<type>" format. number : Own phone number (With 2in1, display Number A in Dual mode or A mode and Number B in B mode) type=129 : International access code + not included type=145 : International access code + included
AT+COPS=<n>,2,<oper> *2 AT+COPS=0 ↵ OK	Set search method for network operator to connect. n=0 : Auto (default) n=1 : Manual n=3 : No mapping When n=1 is set, set PLMN Number in hexadecimal value for <oper>. AT+COPS? : Display current settings AT+COPS=? : Display a list of assignable values
AT+CPAS AT+CPAS ↵ +CPAS : 0 OK	Display whether FOMA terminal can send and receive AT commands to external devices in "+CPAS : <n>" format. n=0 : Possible n=1 : Impossible n=2 : Status unknown n=3 : Possible and receiving n=4 : Possible and communicating AT+CPAS=? : Display a list of displayable values
AT+CPIN="<pin>", "<newpin>" AT+CPIN="0000" ↵ OK	Enter these commands for entering PIN/PIN2 codes or PUK when PIN code is ON. To enter PUK, enter new PIN/PIN2 code in <newpin>. Even if entering in <newpin> when entry of PIN/PIN2 code is request, PIN/PIN2 code cannot be changed. AT+CPIN? : Display the code currently requested in "+CPIN : <n>" format n=READY : Entry of code not requested n=SIM PIN : Entry of PIN code waited n=SIM PIN2 : Entry of PIN2 code waited n=SIM PUK : Entry of PUK waited due to failure in unblocking PIN code n=SIM PUK2 : Entry of PUK waited due to failure in unblocking PIN2 code
AT+CR=<n> *1 AT+CR=0 ↵ OK	Set whether to display the communication type before "CONNECT" is displayed during connection. n=0 : Not display (default) n=1 : Display the communication type in the "+CR : <serv>" format serv=GPRS : Packet communication serv=SYNC : 64K data communication serv=AV64K : 64K videophone AT+CR? : Display current settings AT+CR=? : Display a list of assignable values
AT+CRC=<n> *1 AT+CRC=0 ↵ OK	Set whether to use +CRING result codes when communication is received. n=0 : Not use (default) n=1 : Use "+CRING : <type>" result codes type=GPRS "PPP",,,"<APN>" : Packet communication type=SYNC : 64K data communication type=AV64K : 64K videophone AT+CRC? : Display current settings AT+CRC=? : Display a list of assignable values
AT+CREG=<n> *1 AT+CREG=0 ↵ OK	Set whether to display network information indicating Within service area or Out of service area. n=0 : Not notified (default) n=1 : When the terminal is moved from Within service area to Out of service area or vice versa, the status is reported in the "+CREG : <stat>" format. stat=0 : Out of service area stat=1 : Within service area stat=4 : Unknown stat=5 : Within service area (during international roaming) AT+CREG? : Display the current settings and status in the "+CREG : <n>,<stat>" format AT+CREG=? : Display a list of assignable values

Upper slot : Command Lower slot : Example	Description
AT+CUSD=<n>,"<str>" *1 AT+CUSD=0,"012345678" ↵ OK	Set Additional service (Register USSD) of Network Services. Enter Service code provided by DOCOMO in <str>. n=0 : Not answer mid result (default) n=1 : Answer mid result in "+CUSD : <m>, "<str>",0" format m=0 : Information not requested m=1 : Information requested AT+CUSD? : Display current settings AT+CUSD=? : Display a list of assignable values
AT+FCLASS=<n> *1 AT+FCLASS=0 ↵ OK	Set communication type supported by FOMA terminal. n=0 : Only data supported (fixed value) AT+FCLASS? : Display current settings AT+FCLASS=? : Display a list of assignable values
AT+GCAP AT+GCAP ↵ +GCAP : +CGSM,+FCLASS, +W OK	Display the range of AT commands supported by FOMA terminal in the "+GCAP : <n>" format. n=+CGSM : Support GSM commands (including the case for supporting a part) n=+FCLASS : Support +FCLASS commands n=+W : Support +W commands
AT+GMI AT+GMI ↵ FUJITSU OK	Display FOMA terminal manufacturer name.
AT+GMM AT+GMM ↵ FOMA F04A OK	Display model name of FOMA terminal.
AT+GMR AT+GMR ↵ Ver1.00 OK	Display FOMA terminal version.
AT+IFC=<n,m> *1 AT+IFC=2,2 ↵ OK	Set how to control local flow between a PC and FOMA terminal. n : DCE by DTE m : DTE by DCE 0 : No flow control 1 : Perform XON/XOFF flow control 2 : Perform RS/CS (RTS/CTS) flow control (default) AT+IFC? : Display current settings AT+IFC=? : Display a list of assignable values
AT+WS46=<n> *1	Display wireless network used when sending communication in n number. When entering AT+WS46=<n>, ERROR is returned because it cannot be changed. n=22 : FOMA network (fixed value) AT+WS46? : Display current settings AT+WS46=? : Display a list of assignable values
AT¥S AT¥S ↵ E1 Q0 V1 X4 &C1 &D2 &S0 ・・・(snip)・・・S104=001 OK	Display the currently set commands and S register settings.
AT¥V<n> *1 AT¥V0 ↵ OK	Set the expanded result code used when connection is made. n=0 : Not use expanded result codes (default) n=1 : Use expanded result codes
+++ +++ (not displayed) OK	Move from online data mode to online command mode when entered during a communication. The escape guard interval is 1 second (fixed value).

*1 Registered in FOMA terminal by &W command.

*2 Not reset by &F and Z commands.

*3 When Z command is executed before the &W command, the terminal is reset to the last status registered in memory, and prior changes are erased.

Disconnection reason list

■ Packet communication

Value	Description
26	APN is not present or is incorrect.
27	
30	Disconnected by network.
33	Terminal does not subscribe to packet communication.
36	Normal disconnection.

■ 64K data communication

Value	Description
1	Specified number does not exist.
16	Normal disconnection.
17	Communication is impossible because remote device is busy.
18	You made a call but did not receive a response within the specified time.
19	The remote device is called but no response.
21	The remote device rejected incoming calls.
63	The service and option of the network are not valid.
65	Unavailable processing speed was specified.
88	You made a call to a terminal or received a call from a terminal with different terminal properties.

Error messages list

No.	Text display	Description
10	SIM not inserted	No UIM
15	SIM wrong	Other than DOCOMO SIM (IC card equivalent to UIM) is inserted.
16	incorrect password	Incorrect password
100	unknown	Unknown error

Supplement to AT command

● <cid> is the number used to control dialup connection (APN) for packet communication to be registered in FOMA terminal. "1-10" can be registered in FOMA terminal. An APN "mopera.ne.jp" (PPP connection) to connect to mopera is registered in cid1 and an APN "mopera.net" (IP connection) to connect to mopera U is registered in cid3 by default.
<APN> is an optional string for each connection to indicate dialup connection.

■ Command name : +CGDCONT=[parameter]

- **Outline**
  Sets dialup connection (APN) for packet communication.
- **Format**
  +CGDCONT= [<cid> [,"<PDP_TYPE>" [,"<APN>"]]]
- **Parameter description**
  <cid> : 1-10
  <PDP_TYPE> : IP or PPP
  <APN> : Optional
- **Example of execution**
  The command used to register an APN named "abc" for PPP connection (when <cid> =2).
  AT+CGDCONT=2,"PPP","abc" ↵
  OK

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- **Operation performed when parameter is omitted**

  AT+CGDCONT= : Return all <cid> to the setting by default.

  AT+CGDCONT=<cid> : Return the specified <cid> to the setting by default.

  AT+CGDCONT? : Display current settings.

  AT+CGDCONT=? : Display a list of assignable values.

■ Command name : +CGEQMIN=[parameter]

- **Outline**

  Set the criteria for judging whether to permit QoS (Quality of Service) provisioned by the network when packet communication is established.

- **Format**

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

- **Parameter description**

  <cid> : 1-10

  <Maximum bitrate UL> : None (default) or 384

  <Maximum bitrate DL> : None (default) or 3648

  * For <Maximum bitrate UL> and <Maximum bitrate DL>, the minimum communication speed (in kbps) is set for both upload and download traffic between FOMA terminal and the base station. If the parameter is set to "None (default)", all speeds are permissible. If "384" and "3648" are set, any connection at a speed less than the above limit is not permitted, and chances are that packet communication will not be connected.

- **Example of execution**

  （1）Command used to permit all speeds both upload and download (when <cid>=2)

     AT+CGEQMIN=2 ↵

     OK

  （2）Command used to permit only 384kbps upload and 3648kbps download (when <cid>=4)

     AT+CGEQMIN=4,,384,3648 ↵

     OK

  （3）Command used to permit only 384kbps upload and all speeds download (when <cid>=5)

     AT+CGEQMIN=5,,384 ↵

     OK

  （4）Command used to permit all speeds upload and only 3648kbps download (when <cid>=6)

     AT+CGEQMIN=6,,,3648 ↵

     OK

- **Operation performed when parameter is omitted**

  AT+CGEQMIN= : Returns all <cid> to the setting by default.

  AT+CGEQMIN=<cid> : Returns the specified <cid> to the setting by default.

  AT+CGEQMIN? : Displays current settings.

  AT+CGEQMIN=? : Displays a list of assignable values.

■ Command name : +CGEQREQ=[parameter]

- **Outline**

  Set QoS (Quality of Service) requested to the network at the transmission of packet communication.

- **Format**

  AT+CGEQREQ= [<cid>]

- **Parameter description**

  Only commands that require connection at 64-384kbps upload, 64-3648kbps download can be set. The contents are set by default for each <cid>.

  <cid> : 1-10

- **Example of execution**

  (when <cid>=3)

  AT+CGEQREQ=3 ↵

  OK

- **Operation performed when parameter is omitted**

  AT+CGEQREQ= : Returns all <cid> to the setting by default.

  AT+CGEQREQ=<cid> : Returns the specified <cid> to the setting by default.

  AT+CGEQREQ? : Displays current settings.

  AT+CGEQREQ=? : Displays a list of assignable values.

● When ATV command is set to n=1 (default), the result code is displayed in alphabetic characters. When the command is set to n=0, the result code is displayed numerically. →P36

■ Result codes

No.	Text display	Meaning
0	OK	Operation performed normally
1	CONNECT	Terminal connected to other party
2	RING	Incoming call
3	NO CARRIER	Line disconnected
4	ERROR	Unable to accept command
6	NO DIALTONE	Unable to detect dial tone
7	BUSY	Detecting the busy tone
8	NO ANSWER	Completed connection Time-out
100	RESTRICTION	Network restriction in place (The communication network is busy. Please wait for a while and retry.)
101	DELAYED	Redial call restricted

■ Extended result code

• When AT&E is set to n=0

No.	Text display	Connection speed between FOMA terminal and base station
122	CONNECT 64000	64000bps
125	CONNECT 384000	384000bps
133	CONNECT 3648000	3648000bps

• When AT&E is set to n=1

No.	Text display	Connection speed between FOMA terminal and a PC
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

* To retain compatibility with a modem connected via conventional RS-232C, communication speed is displayed, but it differs from the actual connection speed because FOMA terminal is connected to a PC with a USB cable.

■ **Communication protocol result code**

No.	Text display	Meaning
1	PPPoverUD	Connect via 64K data communication (BC=UDI, +CBST=116,1,0)
3	AV64K	Connect via 64K videophone
5	PACKET	Connect via packet communication

■ **Display example of result code**

When ATX0 is set

Regardless of the settings of AT￥V command, only "CONNECT" is displayed upon completion of connection.

Text display example　　: ATD＊99＊＊＊3#
　　　　　　　　　　　　　　CONNECT
Number display example : ATD＊99＊＊＊3#
　　　　　　　　　　　　　　1

When ATX1 is set

• When ATX1, AT￥V0 (default) is set

Upon completion of connection, the result code is displayed in the following format : "CONNECT <speed between FOMA terminal - PC>".

Text display example　　: ATD＊99＊＊＊3#
　　　　　　　　　　　　　　CONNECT 460800
Number display example : ATD＊99＊＊＊3#
　　　　　　　　　　　　　　1 21

• When ATX1, AT￥V1 is set[*1]

The code is displayed upon completion of connection in the following format.

"CONNECT<speed between FOMA terminal - PC> <Communication protocol> <dialup connection (APN)>/<upstream maximum speed (between FOMA terminal→radio base station)>/<downstream maximum speed (between FOMA terminal←radio base station)>"[*2]

Text display example　　: ATD＊99＊＊＊3#
　　　　　　　　　　　　　　CONNECT 460800 PACKET mopera.net/384/3648
　　　　　　　　　　　　　　(Indicates the terminal is connected to mopera.net providing a maximum
　　　　　　　　　　　　　　upload speed of 384kbps and a maximum download speed of 3648kbps.)
Number display example : ATD＊99＊＊＊3#
　　　　　　　　　　　　　　1 21 5

*1 When ATX1 and AT￥V1 are set at the same time, it is likely that dialup connection will fail. It is recommended that only AT￥V0 be used.

*2 When AT￥V1 is set, <dialup connection (APN)> and the following are displayed only when packet is used for connection.

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