

Supplementary Instructions for GSM/GPRS

This manual contains supplementary instructions regarding the use of the computer. It explains the cases where the operation of the computer differs from that in the Operating Instructions.

Your computer is equipped with GSM/GPRS enabling you to communicate using radio frequencies.

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Illustrations and Terminology in this Manual

NOTE:

NOTE provides a useful fact or helpful information.

CAUTION:

CAUTION indicates a condition that may result in minor or moderate injury.

Windows 2000 : Information for Microsoft® Windows® 2000 Professional users.

Windows XP : Information for Microsoft® Windows® XP Professional users.

[Start] - [Run]: This illustration means to click [Start], then to click [Run].
(For some applications, you may need to double-click.)

- About the abbreviations in this manual, refer to the table on page 13.
- Windows 2000 screens are used in this manual when no specific OS notes are required.

Precautions

Safety Precautions

The following safety precautions must be observed during all phases of the operation, use, service or repair of any Personal Computer or Handheld Computer incorporating GSM/GPRS modem. Manufacturers of the cellular terminal are advised to convey the following safety information to users and operating personnel and to incorporate these guidelines into all manuals supplied with the product. Failure to comply with these precautions violates safety standards of design, manufacture and intended use of the product. Panasonic assumes no liability for customer failure to comply with these precautions.



When in a hospital or other health care facility, observe the restrictions on the use of mobiles. Switch Personal Computer or Handheld Computer incorporating GSM/GPRS modem off, if instructed to do so by the guidelines posted in sensitive areas. Medical equipment may be sensitive to RF energy.

The operation of cardiac pacemakers, other implanted medical equipment and hearing aids can be affected by interference from Personal Computer or Handheld Computer incorporating GSM/GPRS modem placed close to the device. If in doubt about potential danger, contact the physician or the manufacturer of the device to verify that the equipment is properly shielded. Pacemaker patients are advised to keep their Personal Computer or Handheld Computer incorporating GSM/GPRS modem away from the pacemaker, while it is on.



Switch off Personal Computer or Handheld Computer incorporating GSM/GPRS modem before boarding an aircraft. Make sure it cannot be switched on inadvertently. The operation of wireless appliances in an aircraft is forbidden to prevent interference with communications systems. Failure to observe these instructions may lead to the suspension or denial of cellular services to the offender, legal action, or both.



Do not operate Personal Computer or Handheld Computer incorporating GSM/GPRS modem in the presence of flammable gases or fumes. Switch off the cellular terminal when you are near petrol stations, fuel depots, chemical plants or where blasting operations are in progress. Operation of any electrical equipment in potentially explosive atmospheres can constitute a safety hazard.



Your Personal Computer or Handheld Computer incorporating GSM/GPRS modem receives and transmits radio frequency energy while switched on. Remember that interference can occur if it is used close to TV sets, radios, computers or inadequately shielded equipment. Follow any special regulations and always switch off Personal Computer or Handheld Computer incorporating GSM/GPRS modem wherever forbidden, or when you suspect that it may cause interference or danger.



Road safety comes first! Do not use a Personal Computer or Handheld Computer incorporating GSM/GPRS modem while driving a vehicle. Do not place the computer with GSM/GPRS modem in an area where it could cause personal injury to the driver or passengers. It is recommended to stow the unit in the boot or secure stowage area while driving.

Do not place the computer with GSM/GPRS modem in an area over an air bag or in the vicinity where an air bag may deploy.

Air bags inflate with great force and if the computer with GSM/GPRS modem is placed in the air bag deployment area may be propelled with great force and cause serious injury to occupants of the vehicle.

SOS

IMPORTANT!

Personal Computer or Handheld Computer incorporating GSM/GPRS modem operate using radio signals and cellular networks cannot be guaranteed to connect in all conditions. Therefore, you should never rely solely upon any wireless device for essential communications, for example emergency calls.

Remember, in order to make or receive calls, Personal Computer or Handheld Computer incorporating GSM/GPRS modem must be switched on and in a service area with adequate cellular signal strength.

Some networks do not allow for emergency calls if certain network services or phone features are in use (e.g. lock functions, fixed dialing etc.). You may need to deactivate those features before you can make an emergency call.

Some networks require that a valid SIM card be properly inserted in Personal Computer or Handheld Computer incorporating GSM/GPRS modem.

Precautions

For U.S.A.

Federal Communications Commission Radio Frequency Interference Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the Panasonic Service Center or an experienced radio/TV technician for help.

Warning

To assure continued compliance, use only shielded interface cables when connecting to a computer or peripheral. Also, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC RF Exposure Warning:

- This computer is provided with PC Card slots that could be used with wireless transmitter(s), which will be specifically recommended, when they become available. Other third-party wireless transmitter(s) have not been RF exposure evaluated for use with this computer and may not comply with FCC RF exposure requirements.
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
- This equipment must be installed and operated in accordance with provided instructions and minimum 1.5 cm spacing must be provided between antenna and all person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.
- This equipment may use multiple installed transmitters, which may be capable of simultaneous transmission.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Responsible Party: Matsushita Electric Corporation of America

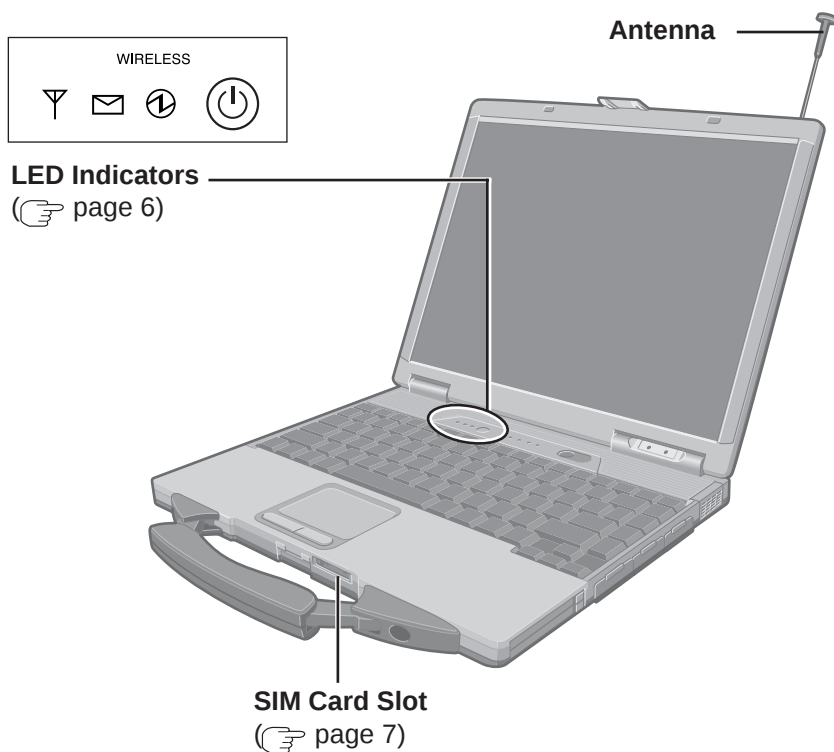
One Panasonic Way

Secaucus, NJ 07094

Tel No: 1-800-LAPTOP-5 (1-800-527-8675)

Names and Functions of Parts

Except the followings, refer to the Operating Instructions.



(Appearance may differ depending on specifications.)

Names and Functions of Parts

● LED Description



GSM/GPRS Switch

The GSM/GPRS modem powers up independently from the computer regardless of the computer power status and will remain on when the computer's power is off. This function depends on the setting of the Setup Utility.



Power On Indication - Green:

A green LED will be used to signal when the GSM/GPRS modem has been powered on.



Ring Indication - Amber:

The LED will flash when the GSM/GPRS modem has received a ring.



Status Indication - Green:

The LED will light while communicating.

Mode	Function
Off	GSM/GPRS modem is off or running in SLEEP or Alarm.
600 ms On/ 600 ms Off	No SIM card inserted or no PIN entered, or network search in progress, or ongoing user authentication, or network login in progress.
75 ms On/3 s Off	Logged to network (monitoring control channels and user interactions). No call in progress.
75msOn/75msOff/ 75 ms On/3 s Off	One or more GPRS contexts activated.
Flashing	Indicates GPRS data transfer: When a GPRS transfer is in progress, the LED goes on within 1 second after data packets were exchanged. Flash duration is approximately 0.5 s.
On	Depending on type of call: Voice call: Connected to remote party. Data call: Connected to remote party or exchange of parameters while setting up or disconnecting a call.

Installing/Removing a SIM Card

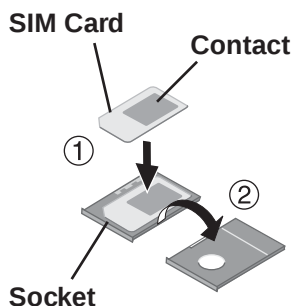
Before using GSM/GPRS, set a SIM card to the SIM card slot.

CAUTION

Do not install/remove the SIM card when the GSM/GPRS modem's power is on.

1 Power off your computer and GSM/GPRS modem

2 ● Installing a SIM card



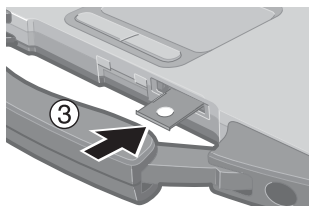
- ① Set the SIM card into the socket with the contact facing upward.

CAUTION

Do not insert the SIM card upside down.

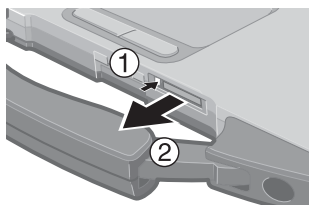
- ② Turn the socket over.

- ③ Insert the socket to the SIM card slot.



● Removing a SIM card

- ① Press the button with a pointed object (e.g., the tip of a ballpoint pen).
- ② Remove the socket.
- ③ Remove the SIM card from the socket.



Installing the Software

CAUTION

- Log on with the administrator authority when you log on to Windows.
 - When using the internal modem, change the COM port with the following procedure before installation.
 - 1 Select [Device Manager]*1 - [Modems] - [Panasonic V.92 MDC Modem] - [Advanced] - [Advanced Port Settings].
 - 2 Select [COM6] at [COM Port Number] and select [OK].
 - 3 Select [OK] and restart the computer.
- *1 **Windows 2000** : in [Start] - [Settings] - [Control Panel] - [System] - [Hardware]
Windows XP : in [Start] - [Control Panel] - [Performance and Maintenance] - [System] - [Hardware]

1 Turn on or restart the computer.

Press **(F2)** while [Panasonic] screen is displayed soon after the computer begins the startup procedure.

If [Enter Password] is displayed, enter your supervisor password.

2 Select the [Advanced] menu and confirm the followings.

(☞ page 13)

- The serial port's setting is optimal.
- [On & Off] is selected at [Power SYNC with PC].
If [On & Off] is not set, confirm the power to the GSM/GPRS modem is on.

3 Save the settings and exit the Setup Utility.

4 Insert the software disc into the drive, then input [x:\setup\setup.exe]*2 in [Start] - [Run] and select [OK].

Follow the on-screen instructions.

*2 "x" is the drive letter. You can change the letter to suit your preference.

When the message on the right is displayed, select [OK].



5 At [Winmux Driver Setup] screen, select [Start Scan].

All GSM/GPRS modems installed in the computer will be listed in [Modem List].



6 Confirm that the check mark is added for the serial port you use and select [Install Driver].

Installation will start.

(If the message “Digital Signature Not Found”^{*1} is displayed, select [Yes]^{*2}.)

When the installation is complete, select [OK].

*1 **Windows XP** : “Hardware Installation”

*2 **Windows XP** : [Continue Anyway]



7 Select [Finish] to restart the computer.

After the computer is restarted, CheckNet runs automatically.



8 **Windows 2000**

Select [Start] - [Settings] - [Control Panel] - [Phone and Modem Options] - [Modems].

Windows XP

Select [Start] - [Control Panel] - [Printers and Other Hardware] - [Phone and Modem Options] - [Modems].

9 Select [Add].



Installing the Software

- 10** Add the check mark for [Don't detect my modem; I will select it from a list], then select [Next].



- 11** Select [Have Disk].



- 12** Input [c:\program files\panasonic\checknet*1\modem] and select [OK].

*1 This indicates the folder where CheckNet is installed in step 4. This will vary depending on your computer's setup.



- 13** Select your GSM/GPRS modem in the list and select [Next].

To confirm the model number of your GSM/GPRS modem, run CheckNet and select [About]. (☞ “Operating Instructions for using GSM/GPRS”)



- 14** Select “Selected ports” and select the com port for Virtual Port 1.

You can confirm the port number in [Device Manager]*2 - [Multi-port serial adapters] - [Serial Multiplexer] - [Port Settings].

*2 Windows 2000 :

in [Start] - [Settings] - [Control Panel] - [System] - [Hardware]

Windows XP :

in [Start] - [Control Panel] - [Performance and Maintenance] - [System] - [Hardware]



15 Select [Next].

If the message “Digital Signature Not Found”^{*1} is displayed, select [Yes]^{*2}.

*1 **Windows XP** : “Hardware Installation”

*2 **Windows XP** : [Continue Anyway]

16 Select [Finish].



17 Making extra settings for GPRS modem.

① Select your GSM/GPRS modem and select [Properties] in [Phone and Modem Options] - [Modems].

② In [Advanced], enter the extra initialization commands as follows. (☞ “Operating Instructions for using GSM/GPRS”)

AT+CGDCONT=<cid>,<pdp type>,<apn>

<RETURN>

Example: <cid>:1, <pdp type>:ip, <apn>:internet.t-d1.de

AT+CGDCONT=1,ip,internet.t-d1.de

<RETURN>

(Note that the APN shown here represents the German network provider T-D1 and needs to be replaced with the APN address supplied by your own network provider.)

③ Select [OK].

Installing the Software

Opening the Online Manual

“Operating Instructions for using GSM/GPRS” is the online manual which contains supplementary instructions regarding the use of the GSM/GPRS.

It can be accessed from the following menu.

Windows 2000 : [Start] - [Programs] - [Panasonic] - [CheckNet] - [Manual]

Windows XP : [Start] - [All Programs] - [Panasonic] - [CheckNet] - [Manual]

Uninstalling the Software

● CheckNet

Use the following menu.

Windows 2000 : [Start] - [Settings] - [Control Panel] - [Add/Remove Programs]

Windows XP : [Start] - [Control Panel] - [Add or Remove Programs]

● Wireless module multiplex driver

Select [Device Manager]*¹-[Multi-port serial adapters]-[Serial Multiplexer] and uninstall the driver.

*¹ **Windows 2000** : in [Start] - [Settings] - [Control Panel] - [System] - [Hardware]

Windows XP : in [Start] - [Control Panel] - [Performance and Maintenance] - [System] - [Hardware]

Appendix

Setup Utility

The following parameters have been added in [Advanced] menu of the Setup Utility.

Wireless Modem	Disable	Enable	<u>Auto</u>	
I/O IRQ 1 ^{*1}	3F8/IRQ4 338/IRQ10	2F8/IRQ3	<u>3E8/IRQ7</u>	2E8/IRQ5
I/O IRQ 2 ^{*1}	3F8/IRQ4 338/IRQ10	2F8/IRQ3	3E8/IRQ7	<u>2E8/IRQ5</u>
Power SYNC with PC	Independent	<u>On & Off</u>	Off Only	

^{*1} This item is displayed only when [Wireless Modem] is set to [Enable].

Abbreviations

APN	Access Point Name
CID	Context Identity
GPRS	General Packet Radio Service
GSM	Global System of Mobile Communication
IP	Internet Protocol
PDP	Packet Data Protocol
PIN	Personal Identification Number
PLMN	Public Land Mobile Network
PPP	Point to Point Protocol
QoS	Quality of Service
SIM	Subscriber Identity Module
TCP	Traffic Control Protocol

Specifications

Type		Compliant with ETSI GSM phase 2/2+ standard
Class		GSM850 Class 4 (2 W) / PCS1900 Class 1 (1 W)
SIM		Internal SIM card (3 V only)
RF Specification	Transmit	GSM850 (824 MHz to 849 MHz) / PCS1900 (1850 MHz to 1910 MHz)
	Receive	GSM850 (869 MHz to 894 MHz) / PCS1900 (1930 MHz to 1990 MHz)
Data Features	Data	asynchronous transparent & non-transparent 300 bps/ 1200 bps / 1200/75 bps / 2400 bps/ 4800 bps / 9600 bps / 14400 bps
	Fax	facsimile group 3, Class 2
	SMS	MT/PP(Mobile Terminating Short Message Service, Point to Point) MO/PP(Mobile Originating Short Message Service, Point to Point) CB (Cell Broadcast Short Message Service)
Voice Feature		HR (Half rate) FR (Full rate) EFR (Enhanced full rate) AMR (Adaptive Multi Rate)
Interface		AT Commands (GSM 07.07)
GPRS	Multi-Slot	Class 10
	Mobile Station	Class B

