

Bluetooth™ Modem Station Getting Started Guide

I N S T R U C T I O N S

This getting started guide contains information on using your Bluetooth™ Modem Station hardware and software with a Bluetooth PC Card. We strongly recommend that you read this guide before using the device, even if you are already familiar with Bluetooth technology and personal computers.

Special Notices

Electrical Information

The Fujitsu Modem Station could malfunction in the event of a change in voltage due to electrical disturbance. To protect against voltage sag, use of an uninterruptible power supply (UPS) is recommended.

The frequency band used for the Modem Station is the same as for some types of industrial, scientific, and medical equipment, including microwave ovens, as well as on-premises radio stations (subject to a license) for identification of mobile units, e.g., radio stations installed in production lines in factories, and other application-specific low-output radio stations (not subject to a license).

In the event the Modem Station causes radio interference to an on-premises radio station for identification of mobile units, immediately change the frequency used or break off connection, and consult FM Information Service about preventive measures against radio interference (for example, installation of partitions).

If you have a problem with the Modem Station, such as radio interference to an application-specific low-output radio station for identification of mobile units, contact FM Information Service for help.

Safety Instructions

This section provides information that you must follow to avoid personal injury or damage to property when using the

Modem Station. Before reading this guide, read the following information thoroughly.

- Do not install the Modem Station near medical electronic equipment.
- Don't use the Modem Station near an automatic door or fire alarm, otherwise radio waves transmitted by the Modem Station could affect its automatic control unit.
- Do not insert or pull out the AC adapter with a wet hand.
- Insert the AC adapter firmly as far as it will go. If not, this may cause an electric shock or a fire due to heat generation.
- Pull out the AC adapter immediately when you find any abnormality. Do not use the Modem Station in the abnormal conditions, e.g., the unit is damaged, a foreign smell is given off, a foreign substance is put in the unit, smoke is emitted, or the unit is heated excessively. This may cause a fire or electric shock.
- Do not cover or enclose the AC adapter in use. The accumulated heat may cause a fire.
- Do not exceed the rating of a wall outlet or wiring accessories or use voltages other than 100 VAC.
- If you do not use the AC adapter for a long time, pull out the plug.
- Never disassemble, repair, or modify the unit. Touching internal components could cause you to get an electric shock.

Do not leave the unit in the following places:

- Where it is subject to excessive moisture, dust, heat, or cold
- On an unstable surface
- Where it is subject to mechanical shock

During communication

- You can call up or be called up on the telephone connected to the Modem Station irrespective of whether the power to the personal computer or the Modem Station is turned on or off. The telephone also functions as a message phone. However, it cannot be used during communication using the Modem Station.
- When multiple computers have been registered in one Modem Station, only one personal computer can be used at a time for communications.
- When a communications application can not be terminated normally, confirm that the status indicator lamps (“OFF HOOK” and “CONNECT”) of the Modem Station go off. If they do not go off, turn off the power switch once and turn it on again. (Telephone charges will accrue if the “OFF HOOK” and “CONNECT” lamps remain lit.)
- Avoid using the unit for extended periods of time.

Getting Started

This chapter describes basic matters that you should fully understand before performing communications using the Modem Station.

Before proceeding, be sure to carefully review the important safety information starting on page page 2.

Verification of Connector Type

Before connecting the Modem Station, verify the connector to which you will connect is one of the types shown below.

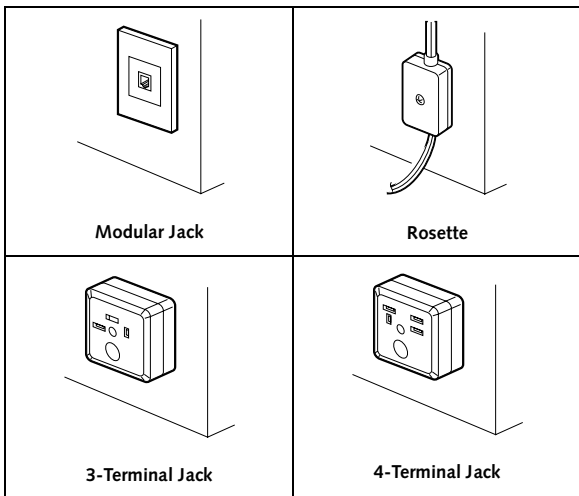


Figure 1. Jack Configurations

Make a change as described below when the line branch point used is other than a modular jack.

- For rosette

Replace the line branch point with a modular jack.

- For three- or four-terminal jack

Replace the line branch point with a modular jack or use a commercial conversion adapter for connection with a modular plug as shown below.

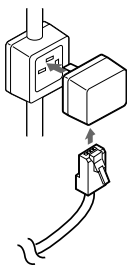


Figure 2. Conversion Adapter

Using the Modem Station

Using the Modem Station in conjunction with a Bluetooth PC Card, you can browse Web pages or send and receive e-mail by connecting wirelessly to the Internet. You can also send or receive faxes using commercial fax software.

Wireless communications can be performed via an analog line when a Bluetooth PC Card is used together with the Modem Station.

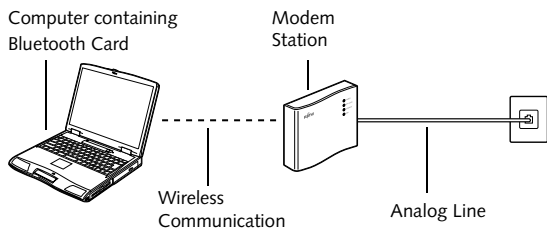


Figure 3. Connecting with an Analog line

Items included with the Modem Station

Make sure all the following items are contained in the package. If any item is missing or damaged, contact your reseller immediately.



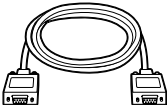
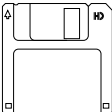
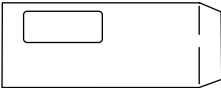


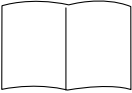
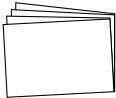
 <p>Modem Station</p>	 <p>AC Adapter</p>	
 <p>Serial Cable</p>	 <p>Modem Setup Tool Disk</p>	
 <p>Warranty Card</p>	 <p>Modular Cable</p>	
 <p>Mounting Screws</p>	 <p>User's Guide</p>	 <p>Network List</p>

Figure 4. Contents of Modem Station Package

Names and functions of the parts

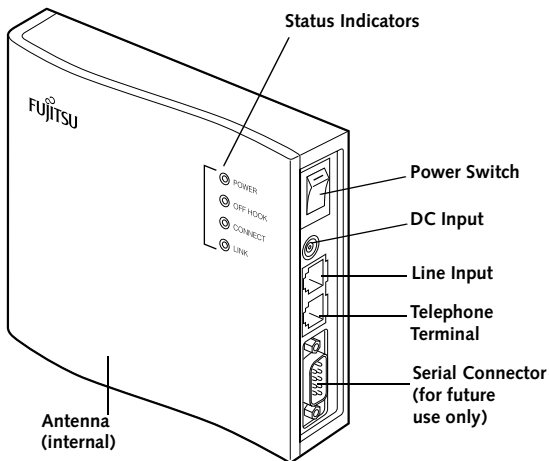


Figure 5. Fujitsu Modem Station

Status indicator lamps

Note that all lamps blink for a few seconds when the power is turned first on.

POWER: Lights while power to this unit is on.

OFF HOOK: Lights from the time that you start the connection (you begin to call up a provider) until you disconnect the line.

CONNECT: Lights from the time you call up a provider until you disconnect the line (while you are connecting the

line). (TBD - Lit while the phone is connecting until it is connected, or until it is disconnected?)

LINK: Lights while the unit is connected with a personal computer.

Switches and Ports

POWER switch

This switch turns the Modem Station power on or off.

DC IN port

This terminal is connected with the DC plug of the supplied AC adapter.

LINE terminal

This terminal is connected with a telephone line using a modular cable.

TEL terminal

This terminal is connected with a telephone set using a modular cable.

Serial connector

This connector is not currently used; it is provided for future applications.

Antenna

An internal antenna is provided.

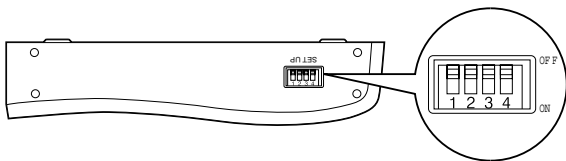


Figure 6. Bottom Panel - Location of DIP Switches

DIP switches

Note that all DIP switches are set to OFF at the factory. Prior to changing DIP switch 3 and 4 positions, be sure to turn off power to the Modem Station

- **Switch 1:** Set to ON when you want to deaden a sound during line connection.
- **Switch 2:** Set to ON when you want to turn off status indicator lamps.
- **Switch 3:** Set to ON when you use a terminal adapter.
- **Switch 4:** Used for system setting. Usually, set to OFF.

Flow of operation.



POINT

Steps 1 through 3 below should be executed only the first time you operate the Modem Station.

1. Install the Modem Station.

Perform the “Installation” procedure on page (TBD)

2. Install the software.

- Install the driver and utility software on your computer to use the Bluetooth function with the module and PC card. (Refer to the Bluetooth PC Card manual.
- Install Bluetooth Modem Setup Tool in accordance with “Installing Bluetooth Modem Setup Tool” on page TBD

3.) Set up the operating environment

- 1. Turn on the power of the Modem Station in accordance with “Turning on the power” on page TBD
- Set the operating environment for a Bluetooth module/ PC card at the communication destination. For more information, see the Bluetooth PC Card manual.
- Set up the modem in accordance with “Setting the modem” on page TBD TBD (-> P. 25)

4. Perform communications

- Turn on the power of the Modem Station in accordance with “Turning on the power” on page TBD (-> P. 24)
- Insert the Bluetooth PC card into your computer.
- Connect your computer with the Modem Station wirelessly by using a Bluetooth Modem Setup Tool. Reference “Connecting using Bluetooth Modem Setup Tool” on page TBD TBD(-> P. 28)
- You can browse homepages or send or receive e-mail by connecting to Internet. It can also send or receive FAX using commercial FAX software.

Preparing for Communications

This chapter explains the preparations required for communications, such as the installation of the unit or the setting of communication.

Installation

1. Disconnect the modular cable of your telephone set from the jack of the telephone line.

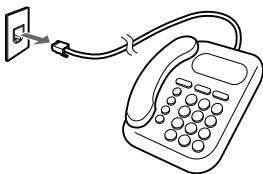


Figure 7. Disconnecting the Modular Cable

2. Connect a telephone set, telephone line, and AC adapter (*Figure 8*).
 - Connect the disconnected modular cable to the TEL terminal.
 - Connect the LINE terminal and the jack of a telephone line using the supplied modular cable.
 - Connect the AC adapter.

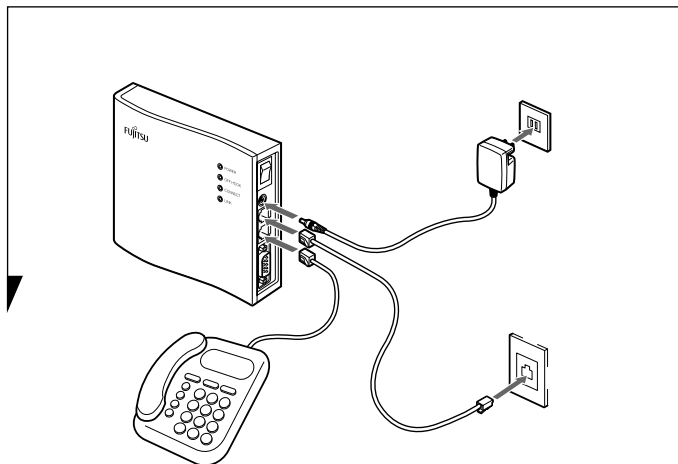


Figure 8. Connecting an Analog Line

3. Place the Modem Station vertically in a stable place. Note that the Modem Station can also be mounted on the wall. For more information, see “Mounting on the Wall” (-> P. 45).



POINT

The Modem Station can also be mounted to the wall. For more information, see “Mounting on the Wall” on page TBD TBD

To carry out communications

The Modem Station may not function properly in some environments. To ensure proper functioning, consider the following when installing your computer and Modem Station.

- Install your computer at a line-of-sight distance of approximately 160 feet (50m) or less from the Modem Station. The communication distance shortens depending on the use environment (e.g., presence of walls or furniture) and the structure of the building.
- Install your computer and Modem Station at least 6.5 feet (2m) away from other electric or electronic systems. (When you need to install your computer or Modem Station near a microwave oven for some reason, keep it at least 10 feet (3m) away from the microwave oven.) Be sure to place the Modem Station in the vertical direction. If not, the internal antenna will not function properly.
- If you have trouble communicating using the Modem Station because there is a broadcast station or radio equipment nearby, move the Modem Station to another place. The presence of strong radio waves may impair proper communication.



POINT

The AC adapter consumes power when it is only connected to the wall outlet. Pull out the AC adapter from the outlet when it is not required.

Installing the Bluetooth Modem Setup Tool

Install the Bluetooth Modem Setup Tool using a Bluetooth module or a personal computer in which a Bluetooth PC card is installed.



POINT

Bluetooth PC Utility must be installed before installing the Modem Setup Tool.

1. Turn on power to your computer.
2. After Windows starts, insert the Bluetooth Modem Setup Tool floppy disk into the computer.
3. Click the [Start] button and then click [Run].
4. Enter “a:\setup” and click the [OK] button. (Change the drive of the floppy disk as required.)



POINT

If the Bluetooth Modem Setup Tool has already been installed, it will be uninstalled when you execute “setup”.

5. Click the [Next] button.
6. Confirm the directory in which the tool is installed. Change the directory if necessary and click the [Next] button.
7. Enter each item and click the [Next] button.
 - Enter the device address using half-size numeric characters. Delimit them two digits at a time by half-size colons (:).

- Enter the Bluetooth passkey (PIN code) using half-size alphanumeric characters. The entered Bluetooth passkey (PIN code) is displayed.
- Enter the local device name if it is blank.
- Click the [Next] button.



POINT

The device address and Bluetooth passkey (PIN code) are described on the seal on the left side panel of the Modem Station.

8. Click “Restart computer” and take out the Bluetooth Modem Setup Tool floppy disk. Click the [End] button.
9. After Windows restarts, re-insert the Bluetooth Modem Setup Tool floppy disk into the personal computer.
10. Click the [Start] button and then click [Settings] and [Control panel].
11. Click [Modem], then click [Add].
13. Click “Not detect to select modem from list” for checking (@) and then click the [Next] button.
14. Click [Have Disk].
15. Confirm that “Copy source of source file” is (A:\), then click the [OK] button. (Change the drive name of the floppy disk, according to your personal computer used.)
16. Click “FUJITSU FMWT-401”, then click the [Next] button.
17. Click “Bluetooth Virtual COM Port (COM3)”, then click the [Next] button.



POINT

Depending on the setting of your personal computer, COM3 may change to COM1 or COM2.

18. Click the [End] button.
19. Take out the floppy disk of the Bluetooth Modem Setup Tool from the personal computer.

The installation of the Bluetooth Modem Setup Tool is now complete.

Turning on the power

1. Push the power switch on the rear panel in the direction indicated by the arrow in *(Figure 9)*.

When the power is turned on, all status indicator lamps blink for a few seconds and then the POWER lamp lights green.

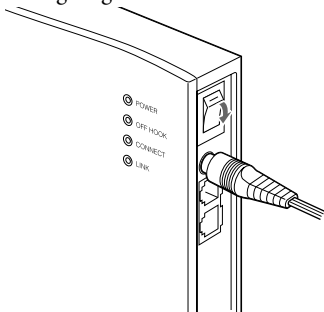


Figure 9. Turning on power

Turning off the power

1. Push the power switch on the rear panel in the direction indicated by the arrow in (Figure 10).

When the power is turned off, all status indicator lamps go off.

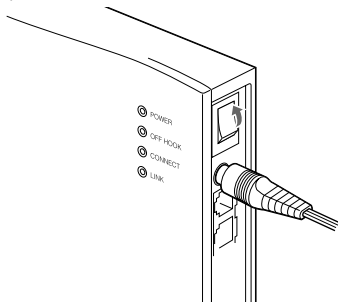


Figure 10. Turning off power

Setting the modem



POINT

If power is turned off during communication, an error message may be displayed on the screen.

Change the modem, which browser, mail software, and FAX software use, to “FUJITSU FMWT-401” using your personal computer. This modem is displayed when Bluetooth Modem Setup Tool is installed properly. If this modem is not displayed, execute “Installing the Bluetooth Modem Setup Tool” (-> P.19). The operation or screen varies depending on the application used.

Performing Communications

This chapter explains how to establish communications using Bluetooth.

Connecting using Bluetooth Modem Setup Tool

Connect a personal computer and Modem Station using Bluetooth Modem Setup Tool.

1. Turn on the power of your computer.
2. Confirm that the power of the Modem Station is on.
3. If you use a Bluetooth PC card, start Windows and insert the Bluetooth PC card into the personal computer.

For the way to insert the PC card, see the manual of the personal computer.

4. Click the “Bluetooth Modem Setup Tool” icon in a task tray.



POINTS

- If the “Bluetooth Modem Setup Tool” icon is not displayed in a task tray, click the “Start” button, “Program”, “FUJITSU Bluetooth PC Utility”, and “FUJITSU Bluetooth Modem Setup Tool”.
- Another way to perform the same operation is to right-click the “Bluetooth Modem Setup Tool” icon in a task tray, then click “Connect modem” from the displayed menu.

5. If the icon becomes red, the connection between the personal computer and Modem Station is completed. If so, you can access Internet or send or receive FAX using commercial FAX software. The operation procedure is the same as when using a general modem.



POINTS

Follow the procedure below when terminating communication.

1. Terminate application.
2. Right-click the “Bluetooth Modem Setup Tool” icon in the task tray, then click “Disconnect modem”.
Faxes cannot be received if the computer and Modem Station have not been connected during FAX incoming.

Confirming the setting of Bluetooth Modem Setup Tool

If you cannot communicate properly, confirm the setting of Bluetooth Modem Setup Tool and modify it as required.

1. Right-click the “Bluetooth Modem Setup Tool” in a task tray and then click “Properties” from the displayed menu.
2. Confirm that there is no error in each entry item. If not, reenter properly.



POINT

A Bluetooth passkey (PIN code) is displayed for security with “*”. If you may have entered the Bluetooth passkey (PIN code) incorrectly, delete the code once and reenter it.

3. Click the [Set] button.

Appendix: Troubleshooting

If you are experiencing a problem with the Modem Station, follow the instructions on this page to solve it or refer to your computer manual. If you cannot solve the problem, contact your local Fujitsu Personal Echo Center or your seller for assistance.

Problem	Possible Cause/Solution
Communications is unsuccessful	<ul style="list-style-type: none">• Is the Bluetooth Modem Setup Tool set properly? See "Confirming the setting of Bluetooth Modem Setup Tool" (P. 30) and confirm proper setup.• Is the Modem Station too far away from the computer? A sight distance of approximately 50 m is the range for communications to be possible. The distance may be shortened depending on the building environment. Bring the computer closer to the Modem Station.
Communications cannot be performed or stops	Turn off the power of the modem and turn it on again. Click "Device reset" in the "Local device property" dialog box of Bluetooth PC Utility, then reconnect.
The LINK lamp lights, but modem does not reply	Verify that DIP switch 3 of the Modem Station is set properly. For an analog line, DIP switch 3 should be OFF.

Problem	Possible Cause/Solution
<p>The following error messages are displayed:</p> <p>TBD TBD TBD</p>	<p>This error message will be displayed when Bluetooth Modem Setup Tool cannot be normally operated for some reason and terminated forcibly.</p> <p>Restart the personal computer.</p>
<p>TBD TBD TBD</p>	<p>This error message is displayed when you try to connect from the Bluetooth Modem Setup Tool after the Bluetooth PC Utility has been terminated.</p> <p>Start Bluetooth PC Utility and then reconnect.</p>

AT commands

Select the operating mode of the modem using AT commands.

All commands, in the same command line, which follow command A are ignored.

ATA

This command puts the unit into the automatic incoming mode. The modem replies immediately to the calling, regardless of the value of S0 register (the count of bell ringing required for a reply). When the carrier of a destination modem is not detected within the time specified using S7 register after reply, this command sends NO CARRIER back to your personal computer to disconnect a line and returns the current mode to command mode.



POINT

All commands in the same command line that follow command A are ignored.

ATDx

This command is used when dialing a telephone number. You can specify a pulse dial or tone dial for dialing.

T Dials using a tone dial.

* This parameter is written in non-volatile memory by &W.

P Dials using a pulse dial.

* This parameter is written in non-volatile memory by &W.

W Confirms the dialing tone before dialing the subsequent numbers.

@ Used when accessing an exchange that makes no dialing tone. The subsequent numbers are dialed when silence for five seconds is detected within the time specified using S7 register. When a dialing tone is detected for five seconds, NO ANSWER is returned to the personal computer.

, Stops for the time specified using S8 register before dialing the subsequent numbers.

! Makes on-hook temporarily for 0.5 seconds and then dials the subsequent numbers.

; Used when you want to issue another command continuously after dialing.

The command following “;” is terminated using the Enter key (@). The command issued after the current state has been returned to command state must also be terminated using the Enter key (@).

S=r Used when dialing the telephone number registered using &Rz=n command.

[Example]

ATDP 0, (03) 123 -2400

(A blank, comma (“,”), and hyphen (“-“) can be entered for easy-to-read operation.)

[Related parameters]

P, T

ATEn

This command selects whether to return an echo to the command sent from the personal computer.

* This command is written in non-volatile memory by &W.

E0 Disables a command echo.

E1 Enables a command echo.

Factory setting value: E1

ATHn

This command is used to disconnect a line when the modem is in the command state. It is used for on-hooking (disconnecting a line) after executing escape sequence +++ from the online state to put a modem into the command state or after setting ER signal from on to off in the &D1 setting mode to put a modem into the command state (with the line not disconnected).

H0 Sets the line of a modem to on-hook. (Disconnects a line.)

H1 Sets the line of a modem to off-hook.

ATIn

This command displays the information on ROM.

[Explanation of parameters]

I0 Displays the version of the driver.

I3 Displays the version of the driver.

ATLn

This command is used when switching the volume of the speaker.

* This command is written in non-volatile memory by &W.

L0 Sets the volume of the speaker to low.

L1 Sets the volume of the speaker to low.

L2 Sets the volume of the speaker to middle.

L3 Sets the volume of the speaker to high.

Factory setting value: L2

ATMn

This command is used to turn on or off the speaker.

* This command is written in non-volatile memory by &W.

M0 Sets the speaker to off at all times.

M1 Turns on the speaker during dial calling and turns it off during reception of a carrier from the destination modem.

M2 Sets the speaker to on at all times.

M3 Turns on the speaker after a dial number is sent and turns it off after carrier reception.

Factory setting value: M1

ATOn

This command is used to return the modem to the online state again when the modem is put from the online state to the command state (in the &D1 mode) using an escape sequence or ER signal.

00 Returns the modem to the online mode.

ATP

This command sets the current dial to a pulse dial.

Parameter P can be omitted using the subsequent dial command.

* This command is written in non-volatile memory by &W.

[Related parameters]

D,T

ATSr=n

This command writes a value in the specified S register.

r Number of S register (0 to 91)

n Value to be written in S register

Example: ATS0=2S6=5 @

The modem writes 2 in S0 register and 5 in S6 register.

ATSr?

This command is used to read the contents of S register. The contents of the specified S register are sent to the personal computer.

r Number of S register (0 to 91)

ATT

This command sets the current dial to a tone dial.

Parameter T can be omitted using the subsequent dial command.

* This command is written in non-volatile memory by &W.

[Related parameters]

D,P

ATVn

This command selects whether to return a message (response code) to the terminal device as a short or long one.

* This command is written in non-volatile memory by &W.

Figure 11. Explanation of parameters

VO: Short Message	V1: Long Message
0	OK
1	CONNECT
2	RING
3	NO CARRIER
4	ERROR
6	NO DIALTONE
7	BUSY
8	NO ANSWER
10	CONNECT 2400 EC*
11	CONNECT 4800 EC*
12	CONNECT 9600 EC*
13	CONNECT 14400 EC*
14	CONNECT 19200 EC*
24	CONNECT 7200 EC*
25	CONNECT 12000 EC*
86	CONNECT 16800 EC*
40	CONNECT 300 EC*
55	CONNECT 21600 EC*
56	CONNECT 24000 EC*
57	CONNECT 26400 EC*

VO: Short Message	V1: Long Message
58 59 60 28 18	CONNECT 28800 EC* CONNECT 31200 EC* CONNECT 33600 EC* CONNECT 38400 EC* CONNECT 57600 EC*
87 89 70 72 74	CONNECT 115200 EC* BLACKLISTED CONNECT 32000 EC* CONNECT 36000 EC* CONNECT 40000 EC*
76 78 80 82 100	CONNECT 44000 EC* CONNECT 48000 EC* CONNECT 52000 EC* CONNECT 56000 EC* CONNECT 28000 EC*
101 102 103 104 105	CONNECT 29333 EC* CONNECT 30666 EC* CONNECT 33333 EC* CONNECT 34666 EC* CONNECT 37333 EC*
106 107 108 109 110	CONNECT 38666 EC* CONNECT 41333 EC* CONNECT 42666 EC* CONNECT 45333 EC* CONNECT 46666 EC*
111 112 113 114	CONNECT 49333 EC* CONNECT 50666 EC* CONNECT 53333 EC* CONNECT 54666 EC*

* EC is displayed when the extended result code is enabled.

Depending on the type of error correction, EC is displayed as the symbol below.

Symbol	Description
V42bis	V.42 error correction and V.42bis data compression.
V42	V.42 error correction only
MNP5	MNP class 4 error correction and MNP class 5 data compression
MNP4	MNP class 4 error correction only
NoEC	No error correction

Factory setting value: V1

Related parameters: \v

ATXn

This command specifies whether to dial after confirming a dial tone, confirm a busy tone after dialing, and confirm the ringing back (bell ringing).

* This command is written in non-volatile memory by &W.

Cmd	Dialing	No Dial Tone	Busy Code	Result Code
X0	After time specified by S6 register	Not Returned	Not Returned	Connect
X1	After time specified by S6 register	Not Returned	Not Returned	Connect XXXXXX "XXXXXX" indicates transmission speed
X2	After detecting dial tone returned	Returned	Not Returned	
X3	After time specified by S6 register	Not Returned	Returned	
X4	After detecting dial tone returned	Returned	Returned	

Busy code: Returned when a busy tone is detected.

Factory setting value: X4

ATZn

This command reads the contents of non-volatile memory in a setting register.

Z0 Reads the contents of Profile 0.

Z1 Reads the contents of profile 1.



POINT

All commands that follow Z in the same command line are ignored.

Related parameters: &F, &W

A/

This command executes the command line just before the current one again.



POINT

The A/ command is the only command that AT does not precede.

AT&Cn

This command selects the transmission conditions of a CD signal to the personal computer.

* This command is written in non-volatile memory by &W.

&C0 Turns on a CD signal at all times irrespective of the carrier from the destination modem.

&C1 Turns on a CD signal while the carrier from the destination modem is detected.

Factory setting value: &C1

AT&Dn

This command selects whether to ignore the ER signal from the personal computer.

* This command is written in non-volatile memory by &W.

&D0 Ignores ER signal.

&D1 The modem changes from online state to command state when ER signal is set from on to off.

&D2 A line is disconnected when ER signal is set from on to off. At that time, automatic incoming is also inhibited. The automatic incoming is enabled when ER signal is set to on again.

&D3 The modem is put into the same initial state as during the power-on sequence when ER signal is set from on to off.

Factory setting value: &D2

AT&F

This command reads the contents of ROM in a setting register. As a result, the modem is put into the factory setting state.

&F The modem is put into the factory setting state.

Related parameters: Zn, &W

AT&Pn

This command selects the speed of a dial pulse.

* This command is written in non-volatile memory by &W.

&P1 Sets the speed of a pulse dial to 10 pps.

&P2 Sets the speed of a pulse dial to 20 pps.

Related parameters: &P1

AT&Sn

This command selects the operation of the DR (data set ready) signal sent to the personal computer.

&S0 A DR signal is always set to on.

&S1 A DR signal is set to on after an answer tone is detected and off when no carrier is detected.

Related parameters: &S0

AT&V

This command displays the current setting value of a command and the value of an S register.

AT&Wn

This command writes the contents of a setting register in non-volatile memory. This value is stored even if the power is turned off or the battery runs down.

&W0 Writes the operation state of the current modem in Profile 0.

&W1 Writes the operation state of the current modem in Profile 1.

Factory setting value: Z, &F

AT&Zr=n

This command memorizes the telephone number following &Zr (r = 0 to 3) in non-volatile memory. (The ATDSr command reads this telephone number for dialing.)

The character string of a telephone number is the same as how to describe the ATD command. In “n”, up to 34 characters can be memorized including parameters and telephone numbers.



POINT

All commands that follow &Z in the same command line are ignored.

+++

This command shifts the current mode to command mode.

The character (+) of the command is specified using S2 register.

(It is not necessary to enter AT commands and carriage return characters.)

S register function list

Reg	Description	Unit	Init. Value	Range
S0	Setting automatic reply and number of rings until automatic reply is obtained. 0: No automatic reply 1~015: Replies automatically according to the number of setting times.	Rings	000	000-015
S3	Carriage return character (CR)	ASCII	013	000-127
S4	Line feed character (LF)	ASCII	010	000-127
S5	Back space character (BS)	ASCII	008	000-255
S6	Standby time of dial tone 0 and 3 are invalid. The setting value at that time is 4.	sec	004	004-255
S7	Standby time of carrier. The value exceeding 60 is set to 59.	sec	059	035-059
S8	Pause time using ",," command.	sec	002	002-065
S10	Time required from when a carrier is lost until the line is disconnected.	100ms	020	001-255

* Any register is written in non-volatile memory by &W.

Specifications

Modem Station		
Interface	LINE (modem) terminal	Incorporated into the Modem Station. Data: 56kbps (V.90- and K56flex-compatible). FAX: 14.4 kbps Modular Jack: RJ-11
	TEL terminal	Modular Jack: RJ-11
	Wireless communication function with wireless communication card.	Bluetooth Specification V1.0B
	Serial connector	RS-232C D-sub 9-pin (Not currently used; provided for future applications)
Power Requirements	Input	12VDC (AC adapter: Input 100VAC, 50Hz/60Hz)
	Power Consumption	Approximately 5W or less during communication. Approximately 4W or less during non-communication and power-on sequence. Approximately 3.5W or less during power-off sequence.
Outer dimensions (W x D x H)		Approximately 134mm x 32 mm x 110mm
Weight		Approximately 300g
Operating environment		Temperature: 5°C to 35°C Humidity: 30% to 80%RH (non-condensing)

Modem	
Applicable line	Public subscriber telephone line
Dial format	Pulse dial Tone dial
Communication system	Data mode full-duplex/FAX mode half-duplex communication
Communication standard	Data mode: ITU-T V.90/V.34/V.32bis/V.32/V.22bis K56flex (The transmission side conforms to V.34) FAX mode: ITU-T V.17/V.29/V.27/V.21ch2
Transmission speed	Data Mode During reception: 56000/54666/54000/53333/52000/ 50666/50000/49333/48000/46666/ 46000/45333/44000/42666/42000/ 41333/40000/38666/38000/37333/ 36000/34666/34000/33600/33333/ 32000/31200/30666/29333/28800/ 28000/26400/24000/21600/19200/ 16800/14400/12000/9600/7200/4800/ 2400/1200bps During transmission: 33600/31200/28800/26400/24000/ 21600/19200/16800/14400/12000/ 9600/7200/4800/2400bps FAX mode: 14400/12000/9600/7200/4800/2400/ 300bps
Reception level	-10dBm~-40dBm
Data compression	Conforms to ITU-T V.42bis/MNP class 5

Modem	
Error correction	Conforms to ITU-T V.42/MNP class 4
Modem command control	AT command: Supports Bluetooth Specification Ver. 1.0B DIAL_UPPROFILE and FAX PROFILE commands.
FAX command control	EIA-578 class 1

Figure 12. Bluetooth Modem Setup Tool

Supported OS*	Windows Me, Windows 2000, Windows 98
Operating conditions	Fujitsu Bluetooth PC Utility must have been installed in your PC.

* Use the OS with which your Bluetooth module and Bluetooth PC card are compatible.

Mounting on the wall

Install supplied screws on a pillar or wall and put them securely on the screw holes on the right side panel of the Modem Station, with the figure below as a reference.

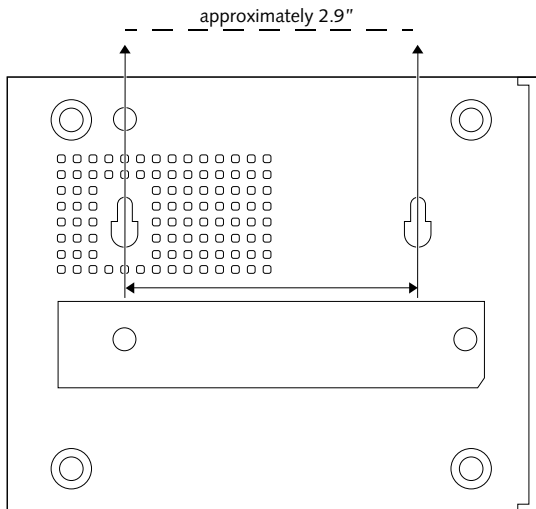



Figure 13. Mounting Screw Locations



POINT

The screws that are supplied with the Modem Station are for use with wood. Be sure to use proper screws if the attachment surface is not wood.



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Santa Clara, California 95054

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www.fujitsupc.com

For technical support call:

1-800-8fujitsu (1-800-838-5487)

or e-mail us at: **8fujitsu@fujitsupc.com**

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