

# Installation Guide

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# Installation Guide for Windows Series 98/98SE/ME/2000 and XP

## System Requirements

- Computer with Pentium 200 MMX or higher processor.
- Windows 98/98SE/ME/2000 and XP Operating System.
- 20 MB Hard Disk free space or above
- Sound card for voice features
- 1 available PCI slot.
- CD-ROM drive.

## Modem Installation

1. Please turn off your computer and disconnect the power cable.
2. Please remove the cover from your computer. Please check your computer's manual for instructions and cautions regarding the removal of covers or installation of add-in boards.
3. Please select an empty PCI slot and remove the appropriate expansion slot cover from the computer.
4. Please insert the Internal 56k Modem into the PCI slot and secure with a screw in the backplane.
5. Please replace the Computers cover.
6. Please insert one end of the telephone cord into the Modem's Line (top) Socket
7. Please connect the other end of the phone cord to a telephone phone point, via the supplied adaptor (RJ11) if required.
8. Please turn on your computer.
9. As Windows 98FE/98SE/2000/ME/XP starts it will detect that new hardware has been added, and start the "**Add New Hardware Wizard**" Click on **Cancel**.
10. Please insert the analog Modem communication CD into your CD-ROM drive.
11. The CD should auto-start, displaying the following window. If it does not start, click on Start – Run and type in CD:\autorun.exe (where CD is the drive letter of your CD-ROM drive).

12. Please select “Install Modem Driver”.



If you can not perform these procedures smoothly as above, please perform the file directly:

**CD:\Autorun.exe**

# Basic AT Command Guide

## T - Set Tone Dial Default

This command forces DTMF dialing until the next P dial modifier or P command is received. The modem will set an S-Parameter bit to indicate that all subsequent dialing should be conducted in tone mode. Note that the DP command will override this command. Clears S14 bit 5.

This command may not be permitted in some countries. (See P.)

### Syntax

T

### Result Codes

OK

## P - Set Pulse Dial Default

This command forces pulse dialing until the next T dial modifier or T command is received. Sets S14 bit 5.

As soon as a dial command is executed which explicitly specifies the dialing mode for that particular call (e.g., ATDT..), this command is overridden so that all future dialing will be tone dialed. (See T command.)

This command may not be permitted in some countries.

**A - Answer** The modem will go off-hook and will attempt to answer an incoming call if correct conditions are met. Upon successful completion of answer handshake, the modem will go on-line in answer mode. This command may be affected by the state of Line Current Sense, if enabled. (Most countries do not require Line Current Sense.) Operation is also dependent upon +FCLASS command and country-specific requirements.

If +FCLASS=0 is selected, the modem will enter the connect state after exchanging carrier with the remote modem. If no carrier is detected within a period specified in register S7, the modem will hang up. Any character entered during the connect sequence will abort the connection attempt.

If +FCLASS=1.0 is selected, the modem will go off-hook in V.21 answer mode. It will generate the V.21 2100 Hz answer tone for  $3 \pm 0.5$  seconds. Following a delay of 70 ms, it will proceed as if the +FTH=3 command were issued. At any stage up to (but excluding) the +FTH=3 command state, any character will abort the communication. (See the description of the +FTH command for details.)

## **H - Disconnect (Hang-Up)**

This command initiates a hang up sequence. This command may not be available for some countries due to PTT restrictions.

### **Syntax**

H[<value>]

### **Defined Values**

<value> Decimal number corresponding to the selected option.

- 0 The modem will release the line if the modem is currently on-line.
- 1 If on-hook, the modem will go off-hook and remain in command mode.

### **Result Codes**

OK <value> = 0 or 1.

ERROR Otherwise.

## **O - Return to On-Line Data Mode**

This command specifies that the modem will enter the on-line data mode from the on-line command mode with or without a retrain. If in the off-line command mode when this command is entered, the modem reports ERROR.

### **Syntax**

O[<value>]

### **Defined Values**

<value> Decimal number corresponding to the selected option.

- 0 Enters on-line data mode from the on-line command mode without a retrain. Handling is determined by the Call Establishment task. Generally, if a connection exists, this command connects the DTE back to the remote modem after an escape (+++).
- 1 Performs a retrain then enters on-line data mode from the on-line command mode.

### **Result Codes**

OK <value> = 0 or 1 and a connection exists.

ERROR Otherwise or no connection exists

## **L - Speaker Volume**

This command sets the speaker volume control according to the parameter supplied.

### **Syntax**

L[<value>]

### **Defined Values**

<value> Decimal number corresponding to the selected option.

- 0 Low speaker volume.
- 1 Low speaker volume. (Default.)
- 2 Medium speaker volume.
- 3 High speaker volume.

### **Result Codes**

OK <value> = 0 to 3.

ERROR Otherwise.

## **M - Speaker Control**

This command controls speaker on or off according to the supplied parameter.

### **Syntax**

M[<value>]

### **Defined Values**

<value> Decimal number corresponding to the selected option.

- 0 Speaker off.
- 1 Speaker on during call establishment, but off when receiving carrier. (Default.)
- 2 Speaker on.
- 3 Speaker is off when receiving carrier and during dialing, but on during answering.

### **Result Codes**

OK <value> = 0 to 3.

ERROR Otherwise.

**&V - Display Current Configuration and Stored Profile**

This command reports the current (active) configuration and the stored (user) profiles.

**Syntax**

&V

**Result Code**

OK

Example:

AT&V

ACTIVE PROFILE:

E1 L1 M1 Q0 T V1 X0 &C1 &D2 &G0 &T0

S00:000 S01:000 S02:043 S03:013 S04:010 S05:008 S06:004

S07:050 S08:004

S10:014 S12:050 S16:000 S18:000 S29:070

STORED PROFILE 0:

E1 L1 M1 Q0 T V1 X4 &C1 &D2 &G0 &T0

S00:000 S02:043 S06:004 S07:050 S08:004 S10:014 S12:050

S18:000 S29:070

OK

**&W - Store Current Configuration**

This command saves the current (active) configuration (profile), including S-Parameters, in the Registry. The current configuration is comprised of a list of storable parameters illustrated in the &V command. These settings are restored to the active configuration upon receiving an Z command or at power up.

**Syntax**

&W

**Result Code**

OK

**\*B - Display Blacklisted Numbers**

This command requests the modem to return a list of blacklisted numbers to the DTE. The format of the response is shown by the example below. Permanently forbidden numbers as defined by country requirements will not appear on this list. If no numbers are blacklisted, only the OK result code is issued. Example: NO. - PHONE NUMBER -

-----

1; 4175537660  
2; 8288924961  
3; 3887278862  
4; 3124839442  
5; 6284664  
OK

**\*D - Display Delayed Numbers**

This command causes the modem to send a list of the delayed numbers together with the delay associated with each. The modem will return a list of delayed telephone numbers as defined in the \*B command. The format of the response is shown by the example below (delay times are shown as hours:minutes:seconds). If no numbers are delayed, only the OK result code is issued.

Example:

NO. - PHONE NUMBER -DELAY

-----

1; 8264734660 2:00:00  
2; 7532634661 2:00:00  
3; 2587334662 0:02:00  
4; 7532651663 0:03:25  
5; 7459931664 0:01:45  
OK

## V.92 +P and –Q Commands

This section describes the +P (PCM DCE) and –Q commands and parameters used to control the V.92 Mode operation.

### +PCW - Call Waiting Enable

This command controls the operation of the modem in the presence of call waiting.

#### Syntax

+PCW=<value>

#### Defined Values

<value> Decimal number corresponding to the selected operation.

- 0 Request modem-on-hold if enabled by +PMH and collect caller ID information if enabled by +VRID. Toggle V.24 circuit 125. (Default.)
- 1 Hang-up.
- 2 Ignore call waiting.

#### Result Codes

OK <value> = 0, 1, or 2.

ERROR Otherwise.

#### Reporting Selected Value(s)

Command: +PCW?

Response: +PCW: <value>

Example: +PCW: 0 For the default setting.

#### Reporting Supported Range of Parameter Values

Command: +PCW=?

Response: +PCW: (<value> range)

Example: +PCW: (0,1,2)

**+PMH - Modem-on-Hold Enable**

This command controls the selection of modem-on-hold in the modem. The action of the modem in response to modem-on-hold events is determined by the state of this command as well as the state of a negotiated handshake with a V.92-compliant server in V.92 Mode.

**Syntax**

+PMH=<value>

**Defined Values**

<value> Decimal number corresponding to the selected operation.

0 Modem-on-hold enabled in V.92 Mode. (Default.)

1 Disabled modem-on-hold.

**Result Codes**

OK 0 or 1 in V.92 Mode

ERROR Otherwise.

**Reporting Current or Selected Value**

Command: +PMH?

Response: +PMH: <current value>

Example: +PMH: 0 For the default setting.

**Reporting Supported Range of Parameter Values**

Command: +PMH=?

Response: +PMH: (<value> range)

Example: +PMH: (0,1)

**+PMHT – Modem-on-Hold Timer**

This command controls whether or not the modem will grant or deny a modem-on-hold (MOH) request as well as setting the MOH Timeout value.

**Syntax**

+PMHT=<value>

**Defined Values**

<value> Decimal number corresponding to selected setting.

0	Deny V.92 modem-on-hold Request (Default.)
1	Grant MOH with 10 second timeout
2	Grant MOH with 20 second timeout
3	Grant MOH with 30 second timeout
4	Grant MOH with 40 second timeout
5	Grant MOH with 1 minute timeout
6	Grant MOH with 2 minute timeout
7	Grant MOH with 3 minute timeout
8	Grant MOH with 4 minute timeout
9	Grant MOH with 6 minute timeout
10	Grant MOH with 8 minute timeout
11	Grant MOH with 12 minute timeout
12	Grant MOH with 16 minute timeout
13	Grant MOH with indefinite timeout

**Result Codes**

OK 0-13 in V.92 Mode (+MS=V92)

ERROR Otherwise

**Reporting Current or Selected Values**

Command: +PMHT?

Response: +PMHT: <value>

Example: +PMHT: 0 For the default setting.

**Reporting Supported Range of Parameter Values**

Command: +PMHT=?

Response: +PMHT: (<value> range)

Example: +PMHT: (0,1,2,3,4,5,6,7,8,9,10,11,12,13)