



SUPPORT GUIDE FOR THE NOKIA PHONES AND AT COMMANDS

NOKIA

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1. INTRODUCTION

How to read/write SMS, start a modem, HSCSD or GPRS connection with Nokia phones by using AT-commands.

2. BASIC AT-COMMANDS

Before making a dial-up connection it is recommended to reset the modem in phone and also set the flow control. If you have PIN-code request on it can be typed in also with AT-command (I e Nokia Card Phone may need this when used in non Windows environment).

Below some useful AT-commands:

| | |
|---|----------------|
| Check that the connection between the phone and device works | AT |
| <i>- should give OK for response</i> | |
| Reset the modem and set the factory defaults | ATZ&F |
| No flow control | AT&K[0] |
| Hardware flow control (CTS/RTS) | AT&K3 |
| Software flow control (XON/XOFF) | AT&K4 |
| Type in PIN-code in terminal | AT+CPIN="pppp" |
| <i>- where pppp is your pin code. Yes, the double quotes are needed</i> | |
| Check signal strength | AT+CSQ |
| <i>- value close to 0 means no field. Value 31.99 is maximum.</i> | |
| Start a data call | ATDT nnnnnnn |
| <i>- where nnnnnnn is the phone number.</i> | |
| Start a voice call | ATDT nnnnnnn; |
| <i>- where nnnnnnn is the phone number. Note the semicolon (;) is needed!</i> | |
| Hang up the call | ATH |
| Answer incoming call | ATA |

During a call you can return to AT command interpreter with command +++ (three times plus). Then you can give AT commands during a call. This is useful when calling to I e banking service which requires you to enter information with keypad (especially when using Nokia Card Phone).

3. SENDING AND RECEIVING AN SMS

SENDING AN SMS

1. Define the message format by typing AT+CMGF=1 (Text mode).
2. Set the Message centre number by typing AT+CSCA="XXX".
3. XXX is your network provider's message centre number (See Picture 1.).
4. Enter the recipient's phone number using the AT+CMGS="YYY" command (See Picture 1.).
4. Write the message and press Ctrl-Z.

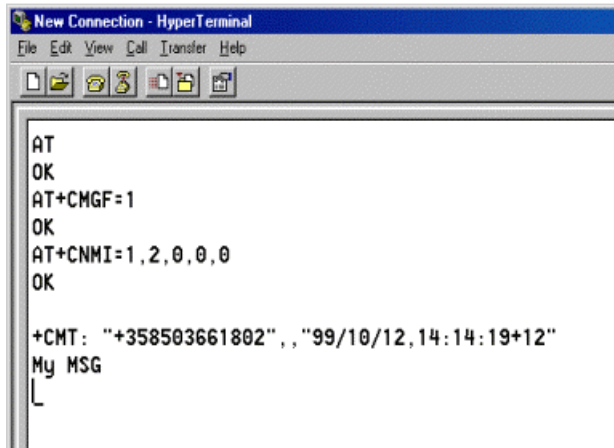
```
AT
OK
AT+CMGF=1
OK
AT+CSCA="+358405202000"
OK
AT+CMGS="+358407540027"
> My MSG↵
+CMGS: 64

OK
|
```

Picture 1. Sending an SMS

RECEIVING AN SMS

1. Define the message format by typing AT+CMGF=1 (See Picture 1.).
2. Type AT+CNMI=1,2,0,0,0 in order to see all the received messages (See Picture 2.).



```
New Connection - HyperTerminal
File Edit View Call Transfer Help

AT
OK
AT+CMGF=1
OK
AT+CNMI=1,2,0,0,0
OK
+CMT: "+358503661802",,"99/10/12,14:14:19+12"
My MSG
L
```

Picture 2. Receiving an SMS.

4. HIGHSPEED AT-COMMANDS

On the table below it is described AT-commands for Modem, ISDN v.110 and ISDN v.120 connections with different channel coding (speed of each slot) and timeslots (number of receiving/transmitting slots). For example 3+1, 28800, 9600 means that the maximum speed that you can receive data is $3 \times 9600 = 28800$ and maximum speed for sending data is $1 \times 9600 = 9600$, the maximum connection speed that is shown in the task tray is the same as the maximum sending speed (28800).

Modem

at+cbst=7,0,1;+chsn=1,1,0,4

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 1+1 | 9600 | 9600 | V.32 |

at+cbst=12,0,1;+chsn=1,1,0,4

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 1+1 | 9600 | 9600 | V.34 |

at+cbst=14,0,1;+chsn=2,1,0,8

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 1+1 | 14400 | 14400 | V.34 |

at+cbst=15,0,1;+chsn=3,2,0,4

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 2+2 | 19200 | 9600 | V.34 |

at+cbst=16,0,1;+chsn=4,3,0,4

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 3+1 | 28800 | 9600 | V.34 |

at+cbst=16,0,1;+chsn=4,2,0,8

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 2+2 | 28800 | 14400 | V.34 |

V.110

at+cbst=71,0,1;+chsn=1,1,0,4

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 1+1 | 9600 | 9600 | V.110 |

at+cbst=75,0,1;+chsn=2,1,0,8

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 1+1 | 14400 | 14400 | V.110 |

at+cbst=79,0,1;+chsn=3,2,0,4

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 2+2 | 19200 | 9600 | V.110 |

at+cbst=80,0,1;+chsn=4,3,0,4

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 3+1 | 28800 | 9600 | V.110 |

at+cbst=80,0,1;+chsn=4,2,0,8

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 2+2 | 28800 | 14400 | V.110 |

at+cbst=81,0,1;+chsn=6,3,0,8

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 3+1 | 38400 | 14.4 | V.110 |

V.120

at+cbst=39,0,1;+chsn=1,1,0,4

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 1+1 | 9600 | 9600 | V.120 |

at+cbst=43,0,1;+chsn=2,1,0,8

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 1+1 | 14400 | 14400 | V.120 |

at+cbst=47,0,1;+chsn=3,2,0,4

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 2+2 | 19200 | 9600 | V.120 |

at+cbst=48,0,1;+chsn=4,3,0,4

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 3+1 | 28800 | 9600 | V.120 |

at+cbst=48,0,1;+chsn=4,2,0,8

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 2+2 | 28800 | 14400 | V.120 |

at+cbst=49,0,1;+chsn=6,3,0,8

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 3+1 | 38400 | 14.4 | V.120 |

at+cbst=50,0,1;+chsn=6,3,0,8

| Timeslots | Max Connection Speed | Ch. Coding | Protocol |
|-----------|----------------------|------------|----------|
| 3+1 | 48000 | 14.4 | V.120 |



5. GPRS AT-COMMANDS

For GPRS there are only a few AT-commands because user can't define the speed or timeslots.

Set Access Point Name AT+CGDCONT=,,"xxx";
- Where xxx is your APN, also note that in some devices that semicolon (;) is needed and in some not

Start GPRS connection ATDT *99#
- Please verify the phone number from your GSM operator!

Other settings like DNS, IP address, username and password should be set in the device to appropriate places. Usually only DNS needs to be set but others are either device or operator depending (I e Palm Pilots need username to be defined (can be whatever), some Psion models needs to have IP address set to 0.0.0.0 etc.). For further information on the GPRS related issues, please contact your GPRS service provider.