AT COMMAND SUMMARY – ITALY Defaults

Table 1. AT Command Set

  Bolds denotes the drivers defaults setting.

Command	Function
AT	Attention - this precedes all commands except A/
A/	Execute previous command - does not require a <CR> *
A	Causes the modem to go off hook. If a call is coming in, the modem will try to answer it. The procedure for answering a call is a short silence and then an answer tone. Sending a character to the modem during this procedure will abort the answer procedure. The amount of time the modem will wait for a carrier is programmable by modifying the S7 register.
B0	Select CCITT V.22 (1200 bps)
B1	**Select Bell 212A (1200 bps)**
B2	Select CCITT V23 Originate mode will transmit data at 75 bps and receive data at 1200 bps. Answer mode will transmit data at 1200bps and receive data at 75bps. The command N0 (Disable auto mode) must be selected.
D	D alone will take the modem off-hook and wait for a dial tone. (See X command for exceptions) The length of time to wait for a dialtone before dialing is programmable in register S6.
Dmn	ATDmn will dial a phone number where m is a modifier: L, W, ,, ;, @, !, or S. It will dial the telephone number n.
L	Dial last number
W	Wait for dial tone. If you have selected X0 or X1 (disable dial tone detection), then you can use this modifier to override that setting.
,	Pause during dial. The amount of time to pause is determined in register S8.
;	Return to command mode after dialing. It doesn't wait for carrier or hang up.
@	Wait for 5 seconds of silence. This is used to access systems that do not provide a dial tone.
!	Hook flash. Causes the modem to go on-hook for 0.5 seconds. This is used in PBX systems and for voice features like call waiting.
S=(0-9)	Dials a stored number. Up to ten numbers can be stored, and the addresses are from 0 to 9. To store a number into one of these addresses, use the &Z command.
^	Turns on 1300Hz calling tone.
E0	Commands issued to the modem are not echoed to the local terminal. This only matters in the command mode. It does not affect the modem's ability to send response codes.
E1	**Commands are echoed to the local terminal.**
H0	Force modem on-hook (hang-up).
H1	Force modem off-hook (to answer or dial).
I0	Return numeric product code
I1	Return hardware variation code
I2	Report internal code
I3	Report software revision number
I4	Report product feature listing
L0	Speaker volume zero
L1	**Speaker volume low**
L2	Speaker volume low
L3	Speaker volume low (Hardware currently limits volume adjustment to on/off)
M0	Speaker always off
M1	**Speaker on until carrier detected**
M2	Speaker always on
M3	Speaker on during answering only
N0	Disable auto-mode. This forces the modem to connect at the speed specified in register S37.
N1	**Enable auto-mode. The modem will answer at the highest available line speed and ignore any ATBn command.**
O0	Return to data mode. If you have entered the command mode using the time independent escape sequence, this will put you back in data mode without going on-hook.
O1	Retrain the modem. If the line condition has changed since the original connection, retraining the

	modem will cause it to reconnect at the most efficient speed for the current line condition.
P	Pulse dialing allows the modem to work on telephone networks where tone is not supported.
Q0	**Enable response to DTE.**
Q1	Disable response to DTE. The modem does not respond to the terminal. Issuing a command will not produce a response (unless the command is something like ATZ, which will restore this setting to default.)
Sn	Set default S-register. Any subsequent = or ? commands will modify the default S register.
Sn=m	Set register n to value m
Sn?	Return the value of register n
T	**Tone dialing**
V0	Result codes will be sent in numeric form. (See the result code table)
V1	**Result codes will be sent in word form. (See the result code table.**
W0	**Report DTE speed only. After connection, there will be no message about what Error Correction or Data Compression protocol is in use.**
W1	Report DCE speed, Error Correction/Data Compression protocol, and DTE speed.
W2	Report DCE speed only
X0	Send OK, CONNECT, RING, NO CARRIER, ERROR and NO ANSWER. Busy and Dial Tone Detection are disabled.
X1	Send X0 messages and CONNECT speed
X2	Send X1 message and NO DIALTONE
X3	Send X2 messages except NO DIALTONE, BUSY and RING BACK
X4	**Send all responses**
Y0	**Disable long space disconnect**
Y1	Enable long space disconnect; with error correction, hang up after sending 1.6 second long space; without error correction, hang up after 4 second long space.
Z0	Reset modem to profile 0
Z1	Reset modem to profile 1
=n	**Sets the value of the default S register**
?	**Reports the value stored in the default S register.**

&   AMPERSAND AT COMMANDS

&C0	**Force DCD on**
&C1	DCD follows remote carrier
&D0	**DTR is assumed on**
&D1	DTR drop causes modem back to command mode without disconnecting
&D2	DTR drop causes modem to hang up
&D3	DTR drop causes modem to be initialized; &Y determines which profile is loaded.
&F	Load factory profile
&G0	**Disable guard tone**
&G1	Enable 550Hz guard tone
&G2	Enable 1800Hz guard tone on answering modem
&K0	Disable flow control
&K3	**Enable RTS/CTS flow control**
&K4	Enable XON/XOFF flow control
&K5	Enable transparent software flow control
&K6	Enable both RTS/CTS and XON/XOFF flow control
&P0	**Selects 39%-61% make/break ratio at 10 pulses per second**
&P1	Selects 33%-67% make/break ratio at 10 pulses per second
&P2	Selects 39%-61% make/break ratio at 20 pulses per second
&P3	Selects 33%-67% make/break ratio at 20 pulses per second
&S0	**Force DSR on**
&S1	DSR on at the start of handshaking and off after carrier loss
&U0	**Enable trellis coding**

AT COMMAND SUMMARY – ITALY Defaults

&U1	Disable trellis coding
&V0	Display active profile
&V1	Display stored profiles
&V2	Display stored telephone numbers
&W0	Save active profile to profile 0
&W1	Save active profile to profile 1
&Y0	**Use profile 0 on powerup**
&Y1	Use profile 1 on powerup
&Zn=m	Save telephone number (up to 36 digits) into memory location n (0-9)

% PERCENT AT COMMANDS

%C0	Disable data compression
%C1	Enable MNP5 compression
%C2	Enable V.42bis compression
%C3	**Enable both V.42bis and MNP5**
%E0	Disable auto-retrain
%E1	Enable auto-retrain
%E2	**Enable auto-retrain and fallback**
%E3	Enable auto-retrain and fast hang up
%L	Report received signal level in -dBm
%I	Report the factory defaults settings for which country.
%N0	Dynamic CPU loading <u>disabled</u>
%N1	Dynamic CPU loading not to exceed 10%
%N2	Dynamic CPU loading not to exceed 20%
%N3	Dynamic CPU loading not to exceed 30%
%N4	Dynamic CPU loading not to exceed 40%
%N5	Dynamic CPU loading not to exceed 50%
%N6	Dynamic CPU loading not to exceed 60%
%N7	**Dynamic CPU loading not to exceed 70%**
%N8	Dynamic CPU loading not to exceed 80%
%N9	Dynamic CPU loading not to exceed 90%
%Q	Report line signal quality

\   BACKSLASH AT COMMANDS

\A0	64-character max. MNP block size
\A1	**128-character max. MNP block size**
\A2	192-character max. MNP block size
\A3	256-character max. MNP block size
\Bn	In non-error correction mode, transmit break in 100 ms units (1-9 with default 3)
\G0	**Disable XON/XOFF flow control (modem to modem)**
\G1	Enable XON/XOFF flow control (modem to modem)
\Kn	Define break type (refer to table 2)
\L0	**Use stream mode for MNP**
\L1	Use interactive block mode for MNP
\N0	Normal mode; speed control without error correction
\N1	Plain mode; no speed control and no error correction
\N2	Reliable mode
\N3	**Auto-reliable mode**
\N4	LAPM error correction only
\N5	MNP error correction only

*   ASTERISK AT COMMANDS

*Q0	**Send the "CONNECT xxxx" result codes to the DTE when an invalid TIES escape sequence is detected after the "OK" response has already been sent**

*Q1	Does NOT send the "CONNECT xxxx" result codes to the DTE when an invalid TIES escape sequence is detected after the "OK" response has already been sent

\Kn   AT COMMANDS

\Kn	Local DTE sends break during normal or reliable mode	Local modem sends break during plain mode	Remote modem sends break during normal mode
\K0	Enter command state; no break to remote	Break to remote; and enter command state	Empty data buffers; and send break to DTE
\K1	Empty data buffers; break to remote	Same as\K0	Same as\K0
\K2	Same as\K0	Send break to remote	Immediately send break to DTE
\K3	Immediately send break to remote	Same as\K0	Same as\K2
\K4	Same as\K0	Same as\K2	Send break to DTE with buffered RXD data
\K5	**Send break to remote with TXD data**	**Same as\K2**	**Same as\K4**

RETURN RESULTS CODE

Long Form	Short Form	Description
OK	0	Modem successfully executed a AT command
CONNECT	1	A connection established
RING	2	Modem detected an incoming call
NO CARRIER	3	Modem lost or could not detect a remote carrier signal within the register S7 time
ERROR	4	Modem detected an error in an AT command
CONNECT 1200	5	Connection at 1200 bps
NO DIALTONE	6	Modem did not detect a dial tone within 5 seconds after off-hook
BUSY	7	Modem detected a busy tone
NO ANSWER	8	Modem did not detect 5 seconds of silence when using the @ dial modifier in the dial command
CONNECT 0600	9	Connection at 600 bps
CONNECT 2400	10	Connection at 2400 bps
CONNECT 4800	11	Connection at 4800 bps
CONNECT 9600	12	Connection at 9600 bps
CONNECT 7200	13	Connection at 7200 bps
CONNECT 12000	14	Connection at 12000 bps
CONNECT 14400	15	Connection at 14400 bps
CONNECT 19200	16	Connection at 19200 bps
CONNECT 38400	17	Connection at 38400 bps
CONNECT 57600	18	Connection at 57600 bps
CONNECT 115200	19	Connection at 115200 bps
CONNECT 28800	20	Connection at 28800 bps
CONNECT 300	21	Connection at 300 bps
CONNECT 1200TX/75RX	22	Connection at transmit 1200/receive 75 bps
CONNECT 75TX/1200RX	23	Connection at transmit 75/receive 1200 bps
CONNECT 110	24	Connection at 110 bps
RING BACK	25	Ring Back signal detected
+FCERROR	+F4	Error occurred in Class 1 fax operation
FAX	33	Fax modem connection established
DATA	35	Data modem connection established

AT COMMAND SUMMARY – ITALY Defaults

CARRIER 300	40	Carrier rate of 300 bps
CARRIER 1200/75	44	Carrier rate of transmit 1200/receive 75 bps
CARRIER 75/1200	45	Carrier rate of transmit 75/receive 1200 bps
CARRIER 1200	46	Carrier rate of 1200 bps
CARRIER 2400	47	Carrier rate of 2400 bps
CARRIER 4800	48	Carrier rate of 4800 bps
CARRIER 7200	49	Carrier rate of 7200 bps
CARRIER 9600	50	Carrier rate of 9600 bps
CARRIER 12000	51	Carrier rate of 12000 bps
CARRIER 14400	52	Carrier rate of 14400 bps
CARRIER 16800	53	Carrier rate of 16800 bps
CARRIER 19200	54	Carrier rate of 19200 bps
CARRIER 21600	55	Carrier rate of 21600 bps
CARRIER 24000	56	Carrier rate of 24000 bps
CARRIER 26400	57	Carrier rate of 26400 bps
CARRIER 28800	58	Carrier rate of 28800 bps
CONNECT 16800	59	Connection at 16800 bps
CONNECT 21600	61	Connection at 21600 bps
CONNECT 24000	62	Connection at 24000 bps
CONNECT 26400	63	Connection at 26400 bps
COMPRESSION: CLASS 5	66	MNP Class 5 data compression connection established
COMPRESSION: V.42bis	67	V.42bis data compression connection established
COMPRESSION: NONE	69	Connection established without data compression
PROTOCOL: NONE	76	Connection established without error correction
PROTOCOL: LAPM	77	V.42/LAPM error correction connection established
PROTOCOL: ALT	80	MNP 3-4 error correction connection established
CARRIER 31200	90	Carrier rate of 31200 bps
CARRIER 33600	91	Carrier rate of 33600 bps
CONNECT 31200	95	Connection at 31200 bps
CONNECT 33600	96	Connection at 33600 bps

S REGISTER SETTINGS

REG.	Function
0	**Rings to auto-answer** Set the number of rings required before the modem answers. 0 setting disables auto-answer. Range: 0 - 255 rings Default: **0** (auto-answer disabled)
1	**Ring counter** Count the number of rings before the modem answers. Range: 0 - 255 rings Default: **0**
2	**Escape character** Define the character used for the three-character escape code sequence. 0 setting disables the escape code character. Range: 0 – 127 Default: **43** (+)
3	**Carriage return character** Define the character for carriage return Range: 0 – 127 Default: **13** (carriage return)
4	**Line feed character** Define the character for line feed

	Range: 0 – 127	
		Default: **10** (line feed)
5	**Backspace character** Define the character for backspace Range: 0 – 127	
		Default: **8** (backspace)
6	**Wait before dialing** Set the length of time to pause after off hook before dial. Range: 0 - 255 seconds	
		Default: **2** seconds
7	**Wait for carrier after dial** Set the length of time that the modem waits for a carrier from the remote modem before hanging up. Range: 1 - 255 seconds	
		Default: **50** seconds
8	**Pause time for dial delay** **Set the length of time to pause for the pause dial modifier ",".** **Range: 0 - 255 seconds**	
		Default: 2 seconds
9	**Carrier detect response time** **Define the length of time a signal is detected and qualified as a carrier.** **Range: 1 - 255 tenths of a second**	
		Default: 6 (0.6 second)
10	**Lost carrier hang up delay** Set the length of time the modem waits before hanging up for a carrier loss. Range: 1 - 255 tenths of a second	
		Default: **14** (6 seconds)
11	**DTMF speed control** Set the length of tone and the time between tones for the tone dialing. Range: 0 - 255 milliseconds	
		Default: **95** milliseconds
12	**Escape Prompt Delay (EPD) timer** Set the time from detection of the last character of the three character escape sequence until the "OK" is returned to the DTE Range: 0 - 255 fiftieths of a second	
		Default: 50 (1 second)
13	Reserved	
14	Reserved	
15	Reserved	
16	Reserved	
17	Reserved	
18	**Test timer** Set the length of loopback test. Range: 0 - 255 seconds	
		Default: **0** (disable timer)
19	Reserved	
20	Reserved	
21	Reserved	
22	Reserved	
23	Reserved	
24	Reserved	
25	**Delay to DTR** Set the length of time the modem ignores DTR before hanging up Range: 0 - 255 hundredths of a second	

		Default: **5** (0.05 second)
26	Reserved	
27	Reserved	
28	Reserved	
30	**Disconnect inactivity timer** set the length of time allowed for inactivity before the connection is hung up. Range: 0-255 in 10 seconds	
		Default: **0** (disabled)
32	**XON character** Set the value of XON character Range: 0-255	
		Default: **17**
33	**XOFF character** Set the value of XOFF character Range: 0-255	
		Default: **19**
34	**V.34 data rate (bit-rate)** Set the maximum bit rate for V.34 Range : 0-8 (2400 baud) 1-10 (3000 baud) 1-11 (3200 baud) 1-13 (3429 baud) bit rate = ((S34)+1) * 2400bps	
		Default: **13** (33600 bps)
35	**V.34 symbol rate (baud-rate)** Set the maximum baud rate for V.34 Range: 0-5 0 - 2400 baud 1 - 2743 baud (N/A) 2 - 2800 baud (N/A) 3 - 3000 baud 4 - 3200 baud 5 - 3429 baud (V.34bis)	
		Default: **0** (2400 baud)
36	Reserved	
37	**Line connection speed** 0 - Attempt to connect at the highest speed 3 - Attempt to connect at 300 bps 4 - Attempt to connect at 1200 bps 6 - Attempt to connect at 2400 bps 7 - Attempt to connect at 4800 bps 8 - Attempt to connect at 7200 bps 9 - Attempt to connect at 9600 bps 10 - Attempt to connect at 12000 bps 11 - Attempt to connect at 14400 bps 12 - Attempt to connect at V.34	
		Default: **0**
38	**Delay before forced hang up** Set the delay to hang up after the disconnecting command is received. Range: 0 - 255 seconds	
		Default: **20** seconds
39	Reserved	
40	Reserved	
41	Reserved	
42	Reserved	

43	Reserved
44	Reserved
45	Reserved
46	Reserved
47	Reserved
48	Reserved
82	Reserved
86	**Call failure reason code** 0 - Normal disconnect; no error 4 - Loss of carrier 5 - V.42 negotiation failed to detect an error correction modem at remote end 6 - No response to complete negotiation 9 - No common protocol 12 - Remote initiated a normal disconnect 13 - Remote modem did not respond after 10 message retransmissions 14 - Protocol violation 15 – Compression Failure 20 - Hang up by inactivity time out
91	**Transmit level** Set the transmit level in -dBm Range: 9 - 15 (-dBm) Default: **11**

FAX CLASS 1 COMMAND SETS

Command	Function
+FCLASS=0	**Select data mode**
+FCLASS=1	Select facsimile Class 1 mode
+FAE?	Report active adaptive answer setting: 0 for disabled, 1 for enabled
+FAE=?	Report adaptive answer capability
+FAE=0	**Disable adaptive answer**
+FAE=1	Enable adaptive answer
+FCLASS=?	Report service classes supported
+FTS=n	Stop transmission and pause, 0-255 in 10 ms
+FRS=n	Wait for silence, 0-255 in 10 ms
+FTM=?	Report Class 1 transmit capabilities
+FRM=?	Report Class 1 receive capabilities
+FTH=n	Transmit data with carrier n, n = 3, 24, 48, 72, 73, 74, 96, 97, 98, 121, 122, 145, 146
+FRH=n	Receive data with carrier n, n = 3, 24, 48, 72, 73, 74, 96, 97, 98, 121, 122, 145, 146

Class 8 (Voice Mode) AT Commands Summary

Command	Function
ATA	Answering in Voice Mode
ATD	Dial command in Voice Mode
ATH	Hang up in Voice Mode
ATZ	Reset from Voice Mode
AT#BDR	Select baud rate (turn off autobaud)
AT#CID	Enable Caller ID detection and select reporting format
AT#CLS	Select data, fax, or voice
AT#MDL?	Identify model
AT#MFR?	Identify manufacturer
AT#TL	Transmit level control
AT#REV?	Identify revision level
AT#RG	Record gain control
AT#SPK	Change the setting of Speakerphone
AT#VBS	Bits per sample (ADPCM)
AT#VBT	Beep tone timer
AT#VLS	Voice line select (ADPCM)
AT#VRA	Ringback goes away timer (originate)
AT#VRX	Voice Receive Mode (ADPCM)
AT#VSD	Silence deletion tuner (voice receive, ADPCM)
AT#VSP	Silence detection period (voice receive, ADPCM)
AT#VSS	Silence sensitivity tuner (voice receive)
AT#VTX	Voice Transmit Mode (ADPCM)
AT#VBQ?	Query buffer size
AT#VCI?	Identify compression method (ADPCM)
AT#VRN	Ringback never came timer (originate)
AT#VSK	Buffer skid setting
AT#VSR	Sampling rate selection (ADPCM)
AT#VTD	DTMF/tone reporting capability
AT#VTS	Play tone string (online voice command)

Code Sent to DTE	Meaning
<DLE>0 - <DLE>9, <DLE>*, <DLE>#, <DLE>A - <DLE>D	**DTMF** Digits 0 through 9, *, #, or A through D detected by the modem.
<DLE>a	**Answer Tone(CCITT)** Send to the DTE when the V.25/T.30 2100 Hz Answer Tone (Data or Fax) is detected. If the DTE fails to react to the code, and the modem continues to detect Answer tone, the code is repeated as often as once every 0.5 second.
<DLE>b	**Busy** Send to DTE when the busy cadence is detected. The modem sends the busy <DLE>b code every 4 seconds if busy continues to be detected and the DTE does not react. This allows the DTE the flexibility of ignoring what could be a false busy detection.
<DLE>c	**Calling Tone**

	Sent when the T.30 1100 Hz Calling Tone (Fax Modem) is detected. The modem assumes the calling tone is valid and sends this code only after 4 seconds of proper cadence has been detected. If the DTE does not react to this code, the code is repeated as often as once every 4 seconds.
<DLE>d	**Dial Tone** Sent in Voice Receive Mode when dial tone is detected after any remaining data in the voice receive buffer. The modem sends this code every 3 seconds if dial tone continues to be detected and the DTE does not react. This allows the DTE the flexibility of ignoring what could be a false dial tone detection.
<DLE>e	**European Data Modem Calling Tone** Sent when the V.25 1300 Hz Calling Tone (Data Modem) is detected. The modem assumes that the calling tone is valid, and sends this code only after 4 seconds of proper cadence has been detected. If the DTE does not react to this code and calling tone continues, the code is sent again as often as once every 4 seconds.
<DLE>f	**Bell Answer Tone** Sent when Bell 2225 Hz Answer Tone (Data) is detected. If the DTE fails to react to the code and the modem continues to detect Answer tone, the code is repeated as often as every 0.5 second.
<DLE>h	**Hung Up Handset** Sent immediately when the modem detects that the local handset has hung-up.
<DLE>q	**Quiet** Sent in Voice Receive Mode after any remaining data in the receive voice buffer when the silence detection timer (#VSP) expires and the has been voice data passed to the DTE.
<DLE>s	**Silence** Sent in Voice Receive Mode after the silence detection timer (#VSP) expires and if valid voice has not been detected (#VSS).
<DLE>t	**Handset Off-Hook** Sent one time when the local handset transition go off-hook.
<DLE><ETX>	**End of Stream** This code is sent to denote the end of a voice data stream.

Code Sent to Modem	Meaning
<DLE><ETX>	**Terminate** Sent during Voice Transmit Mode to indicate that the DTE has finished transmitting a voice message. The Modem complete transmission of any remaining data in the voice transmit buffer before responding with the VCON message and entering Online Voice Command Mode.
<DLE><CAN>	**Cancel** Sent during Voice Transmit Mode to indicate that the DTE has finished transmitting a voice message and wants the modem to discard any remaining data in the voice transmit buffer. The modem immediately purges its buffer, and then responds with VCON message entering Online Voice Command Mode.
<DLE>p	**Pause** Sent during Voice Transmit Mode to force the modem to suspend sending voice data to the selected output device. Any data currently in the voice transmit buffer is saved until either a resume (<DLE>r), or cancel (<DLE><CAN>), is received, in which case the data is lost. If a <DLE><ETX> is received during the paused state, the modem processes it normally, and also automatically resumes transmission of the data left in the buffer (appended with <DLE><ETX>). Any other data received from the DTE while in this paused state is placed in the transmit buffer according to available space, with flow control active.
<DLE>r	**Resume** Sent during Voice Transmit Mode to force the modem to resume sending voice data to the selected output device. Any data currently in the voice transmit buffer is now

	played.

AT Voice Command Description

ATA - Answering in Voice
This command works similarly to the way it works in Data and Fax Modes.
Result Code: VCON

ATD - Dial Command in Voice
This command will perform the dial action in Voice Mode.
Result Codes:
  VCON   Issued in Voice Mode when the modem determines that the remote modem or handset has gone off-hook.

   NO ANSWER   Issues in Voice Mode when the modem determines that the remote has not picked up the line
        before the S7 timer expires.

ATH - Hang Up in Voice
This command works the same as in Data and Fax modes by hanging up the phone line.
1. This command forces the #CLS=0, but does not destroy any of the voice parameter setting   such as #VBS, #VSP, etc.
2. The #BDR setting is forced back to 0.

ATZ - Reset from Voice Mode
This command works the same as in Data and Fax modes. In addition, it will also resets all voice related parameters to default states, forces the #BDR=0 condition, and forces the telephone line to be selected with the handset on-hook.

#BDR - Select Baud Rate (Turn Off Autobaud)
This command select a specific DTE/modem baud rate.
Parameters: n = 0 - 48 (Baud Rate = n * 2400 bps)
Default: 0
   Result Codes:
       OK   if   n is between 0 and 48
       ERROR Otherwise
   Command options:
       #BDR? Return the current setting
       #BDR=?Return a message indicating the speeds that are supported
       #BDR=0   Enable autobaud detection on the DTE interface
       #BDR=n   Select the baud rate

#CID - Enable Caller ID Detection and Select Reporting Format
This command enables or disables Caller ID recognition and reporting in any mode.
Parameters: n = 0, 1, or 2
Default: 0
   Result Codes:
       OK   n = 0, 1, or 2
       ERROR Otherwise
   Command Options:
       #CID? Return the current setting (0, 1, or 2)
       #CID=? Return the message,   "0-2"
       #CID=0 Disables Caller ID
       #CID=1 Enable formatted Caller ID reporting of SDM (Single Data Message) and MDM
           (Multiple Data Message) packets.
       #CID=2 Enable unformatted Caller ID reporting.

#CLS - Select Data, Fax, or Voice

This command select Data, Fax, or Voice Mode
Parameters: n=0, 1, 2, or 8
Default: 0
   Result Codes:
      OK   if n = 0, 1, 2, or 8
      ERROR Otherwise
   Command options:
      #CLS?   Return the current setting (0, 1, 2, or 8)
      #CLS=? Return the message, "0, 1, 2, 8"
      #CLS=0 Select Data Mode.
      #CLS=1 Select Class 1 Fax Mode.
      #CLS=2 Select Class 2 Fax Mode.
      #CLS=8 Select Voice Mode.

#MDL - Identify Model
This command identifies the model number of the modem.
Command option:
      #MDL?   "PCT288DFV"

#MFR? - Identify Manufacturer
This command identifies the modem chipset.
Command option:
      #MFR?   "PCtel"

#REV? - Request Revision Level
This command request the revision number of   PCtel Driver.
      #REV?   "PCtel 2.00"

#RG - Record Gain Control
This command sets the record gain.
Parameters: n = 0000 - 7FFF
Default: 7FFF
   Result Codes:
      OK   if n = 0000 - 7FFF
      ERROR Otherwise
   Command options:
      #RG?   Return the current setting
      #RG=?   Return the message, "0000-7FFF"
      #RG=n Set the record gain to n

#SPK - Change the setting of Speakerphone
This command set the parameters for speakerphone.
Parameters: #SPK=<mute>, <spk>, <mic>

<mute>	Microphone state
0	microphone mute
1	microphone on (default)
2	Room Monitor mode (mic on max. AGC, speaker off)

<spk>   Speaker Output Level
      Range: 0 to 15 (speaker attenuation in 2 dB steps)
      Default: 5 (10 dB attenuation)
      Speaker mute is achieve by a value of 16

<mic>	Microphone Gain Parameter

0	0 dB
1	6 dB gain (default)
2	9.5 dB gain
3	12 dB gain

Command options:

      It is not necessary to enter all three parameters,

      #SPK=,<spk>,<mic>

      #SPK=,,<mic>

#TL - Transmit Level Control

This command sets the transmit level.

Parameters: n = 0000 - 7FFF

Default: 3FFF

    Result Codes:

      OK   if n = 0000 - 7FFF

      ERROR Otherwise

    Command options:

      #TL?   Return the current setting

      #TL=?   Return the message, "0000-7FFF"

      #TL=n   Set the record gain to n

#VBQ? - Query Buffer Size

This command query the modem's voice transmit and voice receive buffers size.

Parameters: None

Command option:

    #VBQ?   Return the size of buffers.

#VBS - Bits Per Sample (Compression Factor)

This command selects the degree of ADPCM voice compression to be used.

Parameters: n = 4   (Only 4 bits per sample compression ratio is supported)

Default: 4

    Result Codes:

      OK   if n = 4

      ERROR Otherwise

    Command options:

      #VBS?   Return the current setting

      #VBS=? Return "4"

      #VBS=4 Selects 4 bits per samples.

#VBT - Beep Tone Timer

This command sets the duration for DTMF tone generation

Parameters: n = 0 - 40 (duration = n /10 seconds)

Default: 10

    Result Codes:

      OK   if n = 0 - 40

      ERROR Otherwise

    Command options:

      #VBT?   Return the current setting

      #VBT=? Returns the message, "0-40"

      #VBT=0 Disables the tone generation capability.

      #VBT=n Sets tone duration

#VCI? - Identify Compression Method

This command identifies the compression method used by the modem.

Parameter: None
Command option:
    #VCI?   Returns the message, "PCtel;ADPCM;32"

#VLS - Voice Device Selection
This command select which devices is routed through the modem.
Parameter: n = 0, 1, 2, 3, 4, or 6
  Default: 0
  Result Codes:
      OK   if n = 0, 1, 2, 3, 4, or 6
      ERROR Otherwise
  Command options:
      #VLS? Return current setting
      #VLS=? Return the device types supported by the modem.
      #VLS=n Select Device Type (see table below)

Device Type	Device Description
0	Phone Line with Telephone handset
1	Handset
2	On-Board Speaker
3	Microphone
4	Telephone line with on-board speaker ON and handset
6	Speaker Phone

#VRA - Ringback Goes Away Timer (Originate)
When originate a voice call, this command can set the "Ringback Goes Away" timer value, an amount of time measures from when the ringback cadence stops once detected. If ringback is not detected within this period, the modem assumes that the remotes has picked up the line and switches to Online Voice Command Mode. Every time a ringback cadence is detected, this timer is reset.
Parameters: n = 0 - 255 (0 - 2.55 seconds)
Default: 70
  Result Codes:
      OK   if n = 0 - 255
      ERROR Otherwise
  Command options:
      #VRA? Return the current setting
      #VRA=?   Return the message, "0-255"
      #VRA=0   Turn off the timer. The dialing modem sends VCON and enters Online Voice
                   Command Mode after one ringback.
      #VRA=n   Set the timer (timer = n * 0.01 seconds)

#VRN - Ringback Never Came Timer (Originate)

When originating a voice call, this command set the "Ringback Never Came" timer value, an amount of time measured from completion of dialing. If ringback is not detected within this period, the modem assumes the remote has picked up the line and switches to Online Voice Command Mode.

Parameters: n = 0 - 255 (0 - 2.55 seconds)

   Result Codes:

      OK   if n = 0 - 255

      ERROR Otherwise

   Command option:

      #VRN? Return the current setting

      #VRN=?   Return the message, "0-255"

      #VRN=0   Turn off the "Ringback Never Came timer". After dialing, the modem sends VCON and enters Online Voice Command Mode immediately.

      #VRN=n   Set the timer (duration = n * 0.01 second)

#VRX - Voice Receive

This command set the modem in Voice Receive Mode.

Parameters: None

Result Codes:

      CONNECT   When voice transfer from modem to DTE can begin

      ERROR   if #VLS=0 and not connected to any input device

#VSD - Silence Deletion Tuner (Voice Receive)

This command can enable/disable Voice Receive Mode silence detection. Silence Deletion is not supported in PCtel HSP Modem.

Parameters: n = 0

Default: 0

   Result Codes:

      OK   if n = 0

      ERROR Otherwise

   Command options:

      #VSD?   Return current setting

      #VSD=?Return the message, "0"

      #VSD=0Disable Silence Deletion

#VSK - Buffer Skid Setting

This command queries and sets the number of bytes of spare space, after the XOFF threshold is reached, in the modem's buffer during Voice Transmit Mode. This equates to the "skid" spare buffer space, or the amount of data the DTE can continue to send after being told to stop sending data by the modem, before the modem voice transmit buffer overflows.

Parameters: n = 0 - 255

Default: 255

   Result Code:

      OK   if n = 0 - 255

      ERROR Otherwise

   Command options:

      #VSK?   Return the current setting

      #VSK=?Return the message, "0-255"

      #VSK=nSet the skid buffer size to n bytes

#VSP - Silence Detection Period (Voice Receive)
This command sets the Voice Receive Mode silence detection period value. If the modem does not receive any ADPCM data after the timer expired, it will cause the modem to send <DLE>s or <DLE>q codes.
Parameters: n = 0 - 255 (0 - 25.5 seconds)
Default: 55
   Result Code:
      OK   if n = 0 - 255
      ERROR Otherwise
   Command options:
      #VSP?   Return current setting
      #VSP=? Return the message, "0-255"
      #VSP=0 Disable the silence period detection timer
      #VSP=n timer = n * 0.1 second

#VSR - Sampling Rate Selection
This command sets the audio codec sampling rate.
Parameters: n = 8000 (8000 Hz sampling rate)
Default: 8000
   Result Codes:
      OK   if n = 8000
      ERROR Otherwise
   Command options:
      #VSR?   Return the current setting
      #VSR=? Return the message, "8000"
      #VSR=8000   Set the sample rate to 8000

#VSS - Silence Sensitivity Tuner (Voice Receive)
This command set the sensitivity in Voice Receive Mode silence detection.
Parameters: n = 0 - 3
Default: 2
   Result Codes:
      OK   if n = 0 -3
      ERROR Otherwise
   Command options:
      #VSS?   Return current setting
      #VSS=? Return the message, "0-3"
      #VSS=0 Disable silence detection by the modem in Voice Receive Mode
      #VSS=1 Least sensitive setting
      #VSS=2 Medium sensitive setting
      #VSS=3 Most sensitive setting

#VTD - Tone Reporting Capability
This command sets which types of tones can be detected and reported to the DTE via shielded codes in Voice Transmit, Voice Receive, and Online Voice Command Modes.
Parameters: i, j, k
Default: 3F, 3F, 3F
   Result Codes:
      OK   if setting are supported by the modem.
      ERROR Otherwise
   Command options:
      #VTD? Return current setting
      #VTD=?Returns the tone reporting capabilities of the modem.
      #VTD=i,j,k   Where i, j, k corresponds to the desired capabilities (see table below), i for Voice Transmit, j for Voice Receive, and k for Online Voice Command Modes.

Bit	Description
0	0 / 1 = Disable / Enable DTMF tone capability
1	0 / 1 = Disable / Enable V.25 1300 Hz Calling tone capability
2	0 / 1 = Disable / Enable V.30 1100 Hz Facsimile Calling tone capability
3	0 / 1 = Disable / Enable V.25/T.30 2100 Hz Answer tone capability
4	0 / 1 = Disable / Enable Bell 2225 Hz Answer tone capability
5	0 / 1 = Disable / Enable call progress tone and cadence tone capability

#VTS - Play Tone String (Online Voice Command Mode)
This command can play one or more DTMF or other tones. No key abort is allowed.
Dual or Single Tones: These are represented by a substring enclosed in square brackets ("[ ]")
within the parameter. Each such substring consists of three sub-elements corresponding to 2 frequencies in Hertz (0, or 2000-3000) and a duration (ASCII decimal in units of 100ms).
Varying DTMF Digits: This is represented by a substring enclosed in curly braces ("{ }") within the parameter. Each such substring consists of two sub-elements corresponding to a DTMF digits (0-9, A-D, *, #), and alternate duration in units of 100ms.
Parameters: The tone generation consists of elements in a list with each element separated by commas.
    Result Codes:
        OK   Command to play tones on currently selected device is accepted.
        ERROR Command was not issued in Online Voice Command Mode or string is
            grammatically incorrect.

#VTX - Voice Transmit
This command set the modem in Voice Transmit Mode. The #VLS command should have been previously issued correctly.
Parameters: None
    Result Codes:
        CONNECT   When voice transmission by DTE can begin.
        ERROR   If #VLS=0 and output device is not connected.