

Quick Reference Card

You may enter a command line of up to 80 characters in upper or lower case with the first command in the line preceded by an "AT" or "at" and the last command followed by a carriage return.

The notation "(n)" in the descriptions represents a decimal numeric option, and "(x)" represents an assigned value. The parentheses should not be typed. If a command is typed without a value when one is expected, the modem will assume a value of 0.

The option should immediately follow the command. For example, to turn off the result codes, type Q1 not Q=1.

You can repeat the last command line issued by entering "A" or "a". Do not enter the "AT" prefix when using this command.

Result Codes

The following are the basic result codes returned when the Q command setting is Q0 or Q2.

Number Message and Description

Number	Message and Description
0	OK — The command was successfully completed.
1	CONNECT
1	CONNECT 300
2	RING — An incoming ring has been detected.
3	NO CARRIER — Time to connect has expired or carrier lost.
4	ERROR — A command error has been encountered.
5	CONNECT 1200 — Connected at 1200 bps (Bell 212A or V.22 Compatible).
6	NO DIALTONE — No dial tone was detected.
7	BUSY — Remote connection is busy.
8	NO ANSWER — Five seconds of silence was not detected within 30 seconds when an @ modifier was encountered in the dial string.
10	CONNECT 2400
11	CONNECT 4800
12	CONNECT 9600
13	CONNECT 14400
14	CONNECT 19200
15	CONNECT 38400
48	CONNECT 7200
49	CONNECT 12000
50	CONNECT FAST
52	RRING — Remote connection is ringing.
53	DIALING
54	NO PROMPTTONE

Command Summary

Command	Parameter	Description	Default
A		Answer	
A/		Repeat previous command	
B(n)	0 or 1	Bell/CCITT Mode Select 0 Off 1 On	B1
D(n)	0-9, A-D, # Modifiers:	Dial number S= Reference number in number directory P Pulse dialing T Tone dialing W Wait for dial tone . Timed wait set by S8 @ Wait for quiet answer R Switch to answer mode when remote modem answers ; Remain in command mode after dialing ! On-hook flash \$ Calling and billing prompt \ Reference a number in number directory	Pulse dialing
E(n)	0 or 1	Command Echo 0 Off 1 On	E1
H(n)	0 or 1	Hook Control 0 Hang up (on-hook) 1 Pick up phone line (off-hook)	
I(n)	0-3,5	Information 0 Return product ID code 1 Return diagnostic status 2 Report CONNECT status 3 Return firmware version level 5 Last number dialed	
L(n)	0-3	Speaker Volume 0 Low volume 1 Low volume 2 Medium volume 3 High volume	L2
M(n)	0-3	Speaker Mode 0 Speaker off 1 Speaker on while connecting 2 Speaker always on 3 Speaker on after dialing until carrier detected	M1
O(n)	0-1	On-Line 0 Modem in data mode 1 Retrain Equalizers	
P		Pulse Dialing	

Command Summary (continued)

Command	Parameter	Description	Default
Q(n)	0-2	Quiet Enable 0 Return result code for both local and remote modems 1 No result codes are reported 2 Orig modem reports results codes	Q0
T		Tone Dialing	
V(n)	0 or 1	Verbose ON/OFF 0 Return numeric response 1 Return English response	V1
X(n)	0-2, 11-12	Result Code Format 0 0-4 result codes 1 Mod speed to 0-5, 10-12, 48 2 Same as X1, with 6-7, 52-53 11 DTE speed, 0-5, 10-15, 48, 49 12 Same X11 with 6-7, 52-53	X1
Y(n)	0 or 1	Long Space Disconnect 0 Modem ignores break 1 Modem disconnects on break	Y0
Z(n)	0-1	Reset 0 Reset specified by S255 1 Reset and recall profile B	
&C(n)	0-3	DCD Control 0 DCD signal is on 1 DCD on after connect 2 DCD on/off specified by S47 3 DCD inverse of CTS	&C0
&D(n)	0-3	DTR Interpretation 0 DTR is always true 1 DTR on/off to command mode 2 DTR on/off disconnects 3 DTR on/off resets modem	&D0
&F(n)	0-5, 8-13, 32-34	Load Factory Defaults <i>See Reference Manual</i>	
&G(n)	0-2	Guard Tone Select 0 No guard tones 1 550 Hz guard tone 2 1800 Hz guard tone	&G0
&J(n)	0-2	Jack Type Select 0 Aux telco leads disabled 1 A/A1 control selected 2 M/MIC control selected	&J0
&L(n)	0 or 1	Leased Line 0 Dial-up line 1 Leasedline	&L0

Command Summary (continued)

Command	Parameter	Description	Default
&M(n)	0-3	Async/Synch Mode Select 0 Equivalent to &Q0 1 Equivalent to &Q1 2 Equivalent to &Q2 3 Equivalent to &Q3	&M0
&Q(n)	0-3,6	Async/Synch mode Select 0 Async mode 1 Synch mode 1 2 Synch mode 2 3 Synch mode 3 6 Transparent Synch mode	&Q0
&R(n)	0-4	CTS Control 0 CTS follows RTS per S26 1 CTS is on, after CONNECT 2 CTS follows RTS, fixed delay 3 CTS is always on 4 Same as &R0 - CTS follows DTR when modem is not connected	&R3
&S(n)	0-3	DSR Control 0 DSR is always on 1 DSR on after answer tone 2 DSR on/off specified by S47 3 DSR on/off depends on DTR	&S0
&T(n)	0,1,3-9	Test Mode 0 Terminate test in progress 1 LAL 3 RDL 4 RDL request 5 Deny RDL request 6 Request RDL 7 Request RDL with self test 8 LAL with self test 9 Run diagnostics test	&T4
&V(n)	0	View Active Profile 0 Display Active RAM profile	
&W(n)	0 or 1	Write Current Profile 0 Save to profile specified by S255 1 Save to profile B	
&X(n)	0-2	Select CLock Source 0 Generates clock signal 1 DTE generates clock signal 2 Modem derives clock signal	&X0
-H		Description of the Commands and Registers	
-L		List Number Directory	
-M(n)	0 or 1	Modify Stored Profile 0 Modify profile A 1 Modify profile B	
-N(n)=x	0-9	Set Number Directory	
-U		Update Security Password	
-V(n)	0 or 1	View Non-Volatile Profile 0 Display EEPROM profile A 1 Display EEPROM profile B	
%		Remote Modem Access	

Register Summary

Register	Range	Description	Default
S0	0-255	Answer on Ring Number	0
S1	0-255	Ring Count	
S2	0-255	Escape Character (ASCII)	43
S3	0-127	Command Line Terminator (ASCII)	13
S4	0-127	Line Feed Character (ASCII)	10
S5	0-127	Command Line Character (ASCII)	8
S6	2-255	Pause Before Dialing (seconds)	2 sec
S7	1-255	Wait for Connection Time (seconds)	40 sec
S8	0-255	Comma Pause Time (seconds)	2 sec
S9	1-255	Carrier Detect Time (100 ms units)	6
S10	1-255	Carrier Loss Disconnect Time (100 ms units)	14
S11	50-255	DTMF Dialing Timing (ms)	70 ms
S12	0-255	Escape Sequence Guard Time (1/50 second units)	50
S18	0-255	Test Duration Timer	0
S25	0-255	DTR Delay Timing (10 ms units)	5
S26	0-255	RTS to CTS Delay Interval (100 ms units)	1
S38	0-255	Delay Before Disconnecting	0
S41	0-255	Inactivity Time-out (tenths of hours)	0
S45	0, 255	Remote Access Enable 0 Disable remote access 255 Negotiates remote access ans	0
S46	0-3	Call Security 0 Callback security disabled 1 Callback security enabled 2 Callback security enabled with password reverification 3 Pass through security enabled, no callback required	0
S47	0-255	DSR/DCD Delay Time (50 ms units)	4
S48	0 or 1	Control Character Mask 0 Most significant bit is marked 1 Compare all eight bits	0
S50	0-3, 6, 254	Modulation Mode 0 Auto Speed Determination 1 300 bps (Bell 103) 2 1200 bps (Bell 212 A or V.22) 3 2400 bps (V.22bis) 6 9600 bps (V.32) 254 Use last AT command speed	0

Register Summary (continued)

Register	Range	Description	Default
S51	0-6, 35, 43, 46, 252-255	DTE Interface Speed 0 300 bps 1 1200 bps 2 2400 bps 3 4800 bps 35 7200 bps 43 12000 bps 46 14400 bps 4 9600 bps 5 19200 bps 6 38400 bps 252 Autobaud (no type-ahead) 253 Autobaud (38400 bps default) 254 Autobaud (19200 bps default) 255 Autobaud (9600 bps default)	255
S56	0-255	XON Character (ASCII)	17
S57	0-255	XOFF Character (ASCII)	19
S58	0-4	DTE Flow Control 0 No flow control 1 Use RTS/CTS flow control in half duplex mode 2 Use RTS flow control in full duplex mode 3 Use XON/XOFF protocol 4 Use both XON/XOFF and RTS flow control	3
S59	0-15	CONNECT Suffixes (ASCII)	0
S60	0-4	Data Format 0 8 data bits, no parity 1 8 data bits, odd parity 2 8 data bits, even parity 3 8 data bits, mark parity 4 8 data bits, space parity	0
S61	0-1	Local Action on Break 0 Break processed specified S63 1 Go into command mode	1
S62	0-255	Default Break Length (10 ms units)	15
S63	0-3	Link Layer Action On Break 0 Break in sequence 1 Send break immediately 2 Discard data, break 3 Ignore break	0
S64	0 or 1	Dial/Answer Sequence Abort 0 Abort dial/answer sequence if character sent by DTE before connection is established 1 Ignore characters sent by DTE while dialing or answering a call	0
S68	0, 2-4, 255	DCE Flow Control 0 No OFF flow control 2 Full duplex HW flow control 3 ON/XOFF flow control 4 Both XON/XOFF and RTS/CTS HW flow control 255 Flow control specified by S58	255
S69	0-2	XON/XOFF Signal Handling 0 XON/XOFF char processed 1 Reserved 2 Processed if necessary	0
S70		Transmit Modulation Rate	

Register Summary (continued)

Register	Range	Description	Default
S72		Receive Modulation Rate	
S74		Packets Retransmitted	
S75		Packets Accepted	
S78		Line Quality	
S90	0 or 1	DSRS Behavior 0 Disable DTE/DSRS input 1 Enable DTE/DSRS	0
S93	3-255	V.32 AC Transmit Duration (100 ms units)	8
S94	0-3	Modulation Speed Negotiation 0 Negotiation disabled. 1 Allows a connection 2 Fallback within a mod scheme 3 Use appropriate fallback	1
S100	0 or 1	Reverse Answer/Originate Mode 0 Normal mode 1 Reverse mode	0
S102	0 or 1	Pulse Dial Make/Break Ratio 0 39% make/61% break ratio - US 1 33% make/67% break ratio - UK	0
S104	0-1,3-4	Automatic Dialing 0 Disable automatic dialing 1 DTR automatic dialing 3 T/D switch automatic dialing 4 DTR starts connection attempt	0
S105	0-2	T/D Switch Enable 0 Disable T/D switch 1 Enable T/D switch 2 Enable T/D switch/ when on-hook	1
S111	0,10-14, 20, 30, 40, 41-43, 255	Protocol Support 0 No protocol support 10 Kermit protocol - no parity 11 Kermit protocol - odd parity 12 Kermit protocol - even parity 13 Kermit protocol - mark parity 14 Kermit protocol - space parity 20 Xmodem/Yodem protocol 30 UUCP "g" protocol 40 ENQ/ACK protocol - host 41 ENQ/ACK protocol - terminal 42 ENQ/ACK host non-negotiated 43 ENQ/ACK terminal non-negotiated 255 Remote modem protocol	255
S112	0-255	Kermit Mark Character	1
S180	0-3	Error Control Request 0 Error control disabled 1 V.42 without detection phase 2 V.42 with detection 3 MNP	2
S181	0-2	Originator Error Control Alternatives 0 If no error control - direct mode 1 If no error control - buffer mode 2 Error control required	1

Register Summary (continued)

Register	Range	Description	Default
S183	8-255	Error Control Detection Timer (100 ms units)	28
S190	0-8	Data Compression Enable 0 Disabled in both directions 1 Enable both but single or none 2 Enable both but receive only 3 Enable both but transmit only 4 Enable in both directions 5 Enable in transmit accept none 6 Enabled in transmit only 7 Enabled in receive accept none 8 Enabled in receive only	1
S253	0, 10,	Command Set Selector 0 No command set 10 AT synch command set	10
S254	0, 1, 255	&F0 Profile Select 0 Load profile A 1 Load profile B 255 Load factory defaults	255
S255	0, 1, 255	Profile Select 0 Load profile A 1 Load profile B 255 Recall profile A/B switch	255