Courier 56K Business Modem Commands

This card provides a quick reference for the most commonly used AT commands. Defaults in **bold type**.

> **REMARQUE:** Refer to the Alphabetic Command Summary, in the Command Reference on the Installation CD-ROM for additional commands, like the Percent (%) and Octothorpe (#) command sets.

Basic Command Set

Command/Description

$	Displays Help for the basic command set
+++	Escape code
>	Repeat command (up to 10 attempts)
A	modem answers when there's no incoming call
A/	Reexecutes the last-issued command
A>	Repeats the last issued command until canceled
AT	Attention prefix
B*n*	Sets handshaking options:
B0	ITU-T V.32 originate mode
B1	HST originate mode; Bell answer tone
C*n*	Sets transmitter
C0	Transmitter off
C1	Transmitter on
D*n*	Dials phone numbers and issues commands for dialing options:
P	Pulse dial
T	Tone dial
,	(Comma) Pause for 2 seconds
;	(Semicolon) Return to command mode after dialing
"	Dial the letters that follow
W	Wait for a second dial tone (if X3 or higher)
@	Wait for an answer (with X3, X4 or X7)
/	Pause for 125 milliseconds
R	Reverse frequencies
!	Flash the switchhook
L?	Display the last-dialed number
L	Redial the last number
S*n*	Dial number stored in non-volatile random access memory (NVRAM) at position *n*
$	Display Help for the dial commands
E*n*	Command mode echo
E0	Echo OFF; What you type will not display
E1	Echo On; What you type will display
F*n*	Online local echo
F0	Echo ON
F1	Echo OFF
H*n*	On/Off hook control

H0	Go on hook (hang up)
H1	Go off hook (pick up)
I*n*	Queries the modem
I3	Banner
I4	Current settings
I5	NVRAM settings
I6	Statistics for preceding call
I7	Product configuration
I10	Dial security account status
I11	Extended Link Screen
I15	Caller ID information
K*n*	Controls the modem clock
K0	If online, current call duration
K1	Displays real time
L*n*	Controls speaker volume
L0	Low volume
L1	Low volume
L2	Medium volume
L3	High volume
M*n*	Controls when the speaker sounds
M0	Always OFF
M1	ON until call is negotiated
M2	Always ON
M3	ON after last digit is dialed
O*n*	Return online; use with escape code (+++)
O0	Return online
O1	Return online and retrain
P	Pulse dial
Q*n*	Enables or disables the display of result codes
Q0	Display
Q1	Suppress (quiet)
Q2	Suppress when answering
S*r*=*n*	Sets S-register value; *r* is any S-Register; *n* must be a decimal between 0 and 255
S*r.b*=*n*	Sets bit-mapped register; *r* is the S-register, *b* is the bit, and *n* is 0 (OFF) or 1 (ON)
S*r*?	Queries contents of S-register *r*
S$	Displays s-register help
T	Tone dial
V*n*	Displays result codes verbally or numerically
V0	Numeric
V1	Verbal
X*n*	Call progress reporting
X3	Ignore dial tone
X4	Microsoft® default
X7	Courier V.Everything Modem default
Z	Software reset
Z!	Hardware reset

Ampersand (&) Command Set

Command/Description

&$	Displays Help for the ampersand (&) command set	
&A*n*	Enables or disables the additional result code subsets	
	&A0	Disables the display of additional result codes
	&A1	Displays ARQ result codes
	&A2	Displays ARQ result codes, modulation indicators
	&A3	Displays ARQ result codes, modulation indicators, and error control indicator
&B*n*	Sets the serial port rate	
	&B0	Variable
	&B1	Fixed
	&B2	Fixed serial port rate in ARQ mode; variable rate in non-ARQ mode
&C*n*	Controls Carrier Detect (CD)	
	&C0	CD always on
	&C1	Normal CD operations
&D*n*	Controls Data Terminal Ready (DTR)	
	&D0	Ignore DTR
	&D1	Online command mode with DTR toggle
	&D2	Normal DTR operations
	&D3	Modem resets with DTR toggle
&F*n*	Loads configuration template	
	&F0	Loads No flow control template
	&F1	Loads Hardware flow control template
	&F2	Loads Software flow control template
&G*n*	Sets guard tone	
	&G0	No guard tone (U.S., Canada)
	&G1	Guard tone (Some European countries)
	&G2	Guard tone (UK); requires ATB0
&H*n*	Transmit Data flow control	
	&H0	Disables Transmit Data flow control
	&H1	Hardware Clear to Send (CTS) flow control
	&H2	Software flow control (XON/XOFF)
	&H3	Hardware and software flow control
&I*n*	Received Data software flow control	
	&I0	Disables XON/XOFF flow control
	&I1	Modem acts on XON/XOFF commands and passes them to the remote device
	&I2	Modem acts on XON/XOFF commands and removes commands from the data stream (recommended for ARQ mode)
	&I3	External: Hewlett Packard-Host mode (ARQMode Only)
	&I4	External:Hewlett Packard-Terminal mode (ARQMode Only)
	&I5	XON/XOFF in non ARQ Mode
&K*n*	Enables or disables data compression	
	&K0	Disable
	&K1	Auto enable/disable
	&K2	Enable
	&K3	Selective compression (V.42 *bis* only)

&M*n*	Error control	
	&M0	Normal mode; no error control
	&M4	Normal /ARQ mode
	&M5	Asynchronous ARQ mode
&N*n*	Sets fixed link speed	
&N*n*&U*n*	Sets highest and lowest link speeds	

n = **0**	Variable connection rate		
n = 1	300 bps	n = 21	33.3 Kbps
n = 2	1200 bps	*n* = 22	34.6 Kbps
n = 3	2400 bps	*n* = 23	36.0 Kbps
n = 4	4800 bps	*n* = 24	37.3 Kbps
n = 5	7200 bps	n = 25	38.6 Kbps
n = 6	9600 bps	*n* = 26	40.0 Kbps
n = 7	12.0 Kbps	*n* = 27	41.3 Kbps
n = 8	14.4 Kbps	*n* = 28	42.6 Kbps
n = 9	16.8 Kbps	*n* = 29	44.0 Kbps
n = 10	19.2 Kbps	*n* = 30	45.3 Kbps
n = 11	21.6 Kbps	*n* = 31	46.6 Kbps
n = 12	24.0 Kbps	*n* = 32	48.0 Kbps
n = 13	26.4 Kbps	*n* = 33	49.3 Kbps
n = 14	28.8 Kbps	*n* = 34	50.6 Kbps
n = 15	31.2 Kbps	*n* = 35	52.0 Kbps
n = 16	33.6 Kbps	*n* = 36	53.3 Kbps
n = 17	28.0 Kbps	*n* = 37	54.6 Kbps
n = 18	29.3 Kbps	*n* = 38	56.0 Kbps
n = 19	30.6 Kbps		
n = 20	32.0 Kbps		

&R*n*	Received Data (RTS) hardware flow control	
	&R0	Delay clear to send (CTS) response after RTS
	&R1	Ignore RTS
	&R2	Send data to the computer on receipt of RTS
&S*n*	Data Set Ready (DSR) signal from modem to pc	
	&S0	DSR always on
	&S1	Originate mode: Send DSR after dialing Answer mode: Send DSR after tone
	&S2	Pulsed DSR with CTS following CD
	&S3	Same as &S2, but without CTS
	&S4	Simultaneous DSR with CD
	&S5	Send DSR, and follow CTS with CD
&W	Writes the current settings to NVRAM	
&Z*n*=*s*	Stores up to 80 phone numbers in NVRAM at position *n* where *n* = 0-79	
&Z.*n*?	Displays the stored phone number	

S-Registers

Register/Default/Function

Register	Default	Function
S0	0	Sets the number of rings before Auto Answer
S1	0	Counts and stores number of rings from calls
S2	43	Stores code for the escape code character
S3	13	Stores the code for the carriage return
S4	10	Stores the code for the line feed character
S5	8	Stores the code for the back space character
S6	2	Stores the wait time for dial tone
S7	60	Stores the wait time for carrier
S8	2	Sets the comma time in seconds
S9	6	Sets duration (1/10 of sec.) of remote carrier signal before modem recognition
S10	14	Sets duration (1/10 of sec.) modem waits after loss of carrier before hanging up
S11	70	Set touch tones spacing in 1/10 seconds.
S12	50	Sets the guard time for the escape code
S13	32	Bit-mapped register

Bit	Value	Result
0	1	Reset when DTR drops
1	2	Originate mode in Auto Answer
2	4	Disables pause before result codes
3	8	Auto Dial the number stored in NVRAM position 0 on DTR
4	16	At power on, Auto Dial number stored in NVRAM at position 0
5	32	Disable HST
6	64	Disable MNP Level 3
7	128	Hardware Reset

Register	Default	Function
S14	0	Bit-mapped register

Bit	Value	Result
0	1	Disconnects on Escape code

Register	Default	Function
S15	0	Bit-mapped register

Bit	Value	Result
0	1	Disables high frequency equalisation
1	2	Disables online fallback
2	4	Disables 450 bps back channel
3	8	Sets non-ARQ buffer to 128 bytes
4	16	Disables MNP Level 4
5	32	Set backspace key to delete
6	64	Unusual MNP incompatibility
7	128	Custom applications only

Register	Default	Function
S19	0	Sets the inactivity timeout, in minutes
S21	10	Length of break in ARQ mode, 1/100 seconds
S22	17	Stores the ASCII code for the XON character
S23	19	Stores the ASCII code for the XOFF character
S24	150	Sets DSR pulse time in 20-milliseconds
S25	5	Sets DTR recognition in 10-milliseconds
S26	1	Sets the RTS/CTS delay, 10-milliseconds

Register	Default	Function
S27	0	Bit-mapped register

Bit	Value	Result
0	1	Enables V.21 modulation at 300 bps
1	2	Disables Trellis Code modulation
2	4	Disables V.32 modulation
3	8	Disables 2100 Hz answer tone
4	16	*See Bit 4 and Bit 5 below*
5	32	*See Bit 4 and Bit 5 below*
7	128	Unusual software compatibility

Bit4	Bit5	Result
0	0	Complete handshaking sequence
16	0	Disables MNP
0	32	Disables V.42 detection and LAPM
16	32	Disables detection phase

Register	Default	Function
S28	8	Sets duration, in tenths of a second, of extra 3000/600 Hz answer tones
S29	20	Sets, in tenths of a sec, of the V.21answer tone
S34	0	Bit-mapped register

Bit	Value	Result
0	1	Disables V.32 *bis*
1	2	Disables enhanced V.32 Mode
2	4	Disables Quick V.32 Retrain
3	8	Enables V.23 modulations
4	16	Externals: Forces MR LED to show DSR
6	64	Disables remote access busy message
7	128	Disables V.32 *terbo*

Register	Default	Function
S38	0	Sets duration, in seconds, before a forced hang up
S41	0	Sets number of attempts for remote access
S42	126	Stores the ASCII code for remote access escape
S43	200	Sets the guard time for the remote access sequence, in 1/50th of a second
S44	15	Leased line delay timer
S51	0	Bit-mapped register

Bit	Value	Result
0	1	Disables MNP/V.42 in V.22
1	2	Disables MNP/V.42 in V.22*bis*
2	4	Disables MNP/V.42 in V.32
6	64	Disables selective reject

Register	Default	Function
S53	0	Bit-mapped register

Bit	Value	Result
0	1	Enables dial security
1	2	Enables prompting
2	4	Enables local password protection

Register	Default	Function
S54	64	Symbol bit-mapped register

Bit	Value	Result
0	1	Disable 2400 symbol rate
1	2	Disable 2743 symbol rate
2	4	Disable 2800 symbol rate
3	8	Disable 3000 symbol rate
4	16	Disable 3200 symbol rate
5	32	Disable 3429 symbol rate
6	64	Disable Call Indicate (CI)
7	128	Disable V.8

Register	Default	Function
S55	0	Trellis code bit-mapped register

Bit	Value	Result
0	1	Disable 8S-2D trellis code
1	2	Disable 16S-4D trellis code
2	4	Disable 32S-2D trellis code
3	8	Disable 64S-4D trellis code
7	128	Enable phase roll detection

Register	Default	Function
S56	0	Bit-mapped register

Bit	Value	Result
0	1	Disable non-linear coding
1	2	Disable TX level deviation
2	4	Disable preemphasis
3	8	Disable precoding
4	16	Disable shaping
5	32	Disable V.34+
6	64	Disable V.34
7	128	Disable V.FC

Register	Default	Function
S58	0	Bit-mapped register

Bit	Value	Result
5	32	Disables V.90
6	64	Disables V.92

Register	Default	Function
S69	0	Bit-mapped register

Bit	Value	Result
0	1	Disables plug/play signalling
1	2	Enables carrier loss redial

Register	Default	Function
S70	0	Bit-mapped register

Bit	Value	Result
0	1	Enables recognition of Ring A
1	2	Enables recognition of Ring B
2	4	Enables recognition of Ring C
3	8	Enables recognition of Ring D

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Quick Reference Card

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