

## BASIC COMMAND CODES

CODE	DESCRIPTION	FUNCTION
AT	Attention Code	Every command line begins with AT (except the A/ and +++ commands). Commands can be entered in lower or upper case, with spaces inserted for readability. Each command line must be terminated with the character stored in register S3 (default = carriage return).
A	Answer Command	This command causes the modem to go off-hook and generate an answer carrier tone. Used for manual answer.
A/	Repeat Last Command	When this command is issued (without an AT prefix) the last command entered is repeated. If the last command was a dial command and a connection was established, the last command will not be repeated.
ENTER	Carriage Return	Ends the command line and executes commands. Register 3 defines the carriage return character.
BACKSPACE	BACKSPACE	Deletes characters on the command line one by one. Register 5 defines the backspace character.
+++	Escape Code	The command state in the modem can be entered during the on-line state by sending the escape sequence. The sequence consists of no transmission for the time specified by register S12, followed by three consecutive escape characters from register S2 and followed by another S12 register time of no transmission. The default is: 1 second wait, +++, 1 second wait. The modem will respond with OK.
Z	Reset Command	This command resets the modem to its power up condition. Any connection present is broken.

## DIALING AND ANSWERING COMMANDS

COMMAND	DIALING	FUNCTION
D	Dialing	Causes the modem to go off-hook and autodial the specified number using the specified parameters.
M	P, T	Select pulse or tone dialing.
O	,	Pause for the time specified in register S8. (Default 2 seconds.)
D	;	Put the modem in the command state after dialing.
I		

F	@		Wait for one or more rings followed by 5 seconds of silence for the time specified in register S7. (Default = 30 seconds.)
I	!		Flash the modem on-hook for 1/2 second.
E	R		Reverse the connection to answer instead of originate after dialing.
R			
S	W		Wait for dial tone.

COMMANDS WITH PARAMETERS

COMMAND	PARAMETERS	FUNCTION
Bn	0 1 (Default)	Selects CCITT V.22 operation when communicating at 1200 bps. Selects BELL 103/212A operation when communicating at 1200 bps.
En	0 1 (Default)	Commands are not echoed Commands are echoed.
Hn	0 (Default) 1	On hook (hang up). Go off hook.
In	0 1 2	Requests product identification code. Performs checksum on firmware ROM; returns checksum. Tests the modem's firmware ROM and memory; return OK or ERROR.
Ln	0 1 2 (Default) 3	Sets speaker volume to Low. Sets speaker volume to Low. Sets speaker volume to Medium. Sets speaker volume to Maximum.
Mn	0 1 (Default) 2 3	Speaker off. Speaker on until carrier detected. Speaker always on. Speaker on after dial until carrier detected.
O		The O command will cause the modem to return to the on-line state after the escape sequence has been entered.
Qn	0 (Default) 1	Modem returns result codes. Modem does not return result codes.
Sr		The command Sr? will return the contents of the register r (values of r are from 0-27). When Sr=n is issued, register r is set to value n.
Vn	0 1 (Default)	Short form result codes Long form result codes

Xn	0	CONNECT MESSAGE: CONNECT DIALING: Wait for period in register S6 (default 2 seconds) and dial DIAL TONE: Ignored BUSY DETECT: No
	1	CONNECT MESSAGE: Full messages DIALING: Wait for period in register S6 and dial DIAL TONE: Ignored BUSY DETECT: No
	2	CONNECT MESSAGE: Full messages "CONNECT XXXX",XXXX is the bits per second rate. DIALING: Wait for dial tone DIAL TONE: Sensed BUSY DETECT: No
	3	CONNECT MESSAGE: Full messages DIALING: Wait for period in register S6 and dial. DIAL TONE: Ignored BUSY DETECT: Yes
	4 (Default)	CONNECT MESSAGE: Full messages DIALING: Wait for dial tone DIAL TONE: Sensed BUSY DETECT: Yes
Yn	0 (Default) 1	Disables long space disconnect. Causes the modem to disconnect when a space of 1.6 seconds or longer is received from the remote modem.

#### ADVANCED COMMANDS

COMMAND	PARAMETERS	FUNCTION
&Cn	0 1 (Default)	DCD (Data Carrier Detect) always on. DCD on indicates presence of data carrier.
&Dn	0 1 2 (Default) 3	Ignore DTR. Switch to command mode when DTR goes from ON to OFF. Switch to command mode and hang up when DTR goes from ON to OFF. Reset modem (as in Z command) when DTR goes from ON to OFF.
&Gn	0 (Default) 1 2	Command disables the guard tone. Selects a 550 Hz tone (for Europe). Selects an 1800 Hz tone (for Europe).
&Mn	0 (Default) 1 3	Selects the asynchronous mode. Causes the modem to go into synchronous mode when DTR is brought from OFF and ON. Allows the call to be placed manually prior to enabling the sync mode by bringing DTR from OFF to ON.
&Pn	0 (Default)	Sets the pulse dial make/break ratio = 39/61 (USA).

	1	Sets the pulse dial make/break ratio = 33/67 (UK/HK).
&Rn	0 (Default) 1	In synchronous mode, causes CTS to follow RTS. In synchronous mode, causes CTS to follow DCD (carrier).
&Sn	0 (Default) 1	DSR (Data Set Ready) always on. DSR operates in accordance with EIA RS-232C specifications.
&Tn	0 1 3 4 5 6 7 8	Terminate any currently active test. Initiate local analog loopback (LAL) according to CCITT specifications. Initiate local digital loopback (LDL). Enable recognition of request from remote modem for remote digital loopback (RDL). Prohibit recognition of remote request for RDL. Initiate an RDL according to CCITT V.22bis (L2) specifications. Initiate RDL with self-test. Initiate LAL with self-test.

(smm 07/28/93)