This section describes the commands you need to communicate through your modem.

EXECUTING A COMMAND

Your modem accepts only ASCII characters as commands. The modem stores the letters that you enter in the command mode in its memory. When you press <ENTER>, the modem compares these commands to a list of valid commands. If the modem finds a match, it executes the command.

Commands must start with the AT attention code, and you can enter more than one command in the command line. you can separate each command with a space for readability.

After the modem executes each command, it sends a response to the command or "result code" to your computer unless you enter the command to disable the echo back. Result codes are described in more detail in Faxback Document # 5054, "Result Codes."

COMMAND GUIDELINES

When you enter commands to the modem, follow these guidelines for simple, efficient operation:

* The modem determines your computer's data transmission format when it sees the AT attention code.

* Press <BACKSPACE> to delete the last character of the entire command line, except the AT command.

* Commands can not exceed 255 characters. If you exceed this limit, the modem sends an error message to your computer.

* Enter the escape sequence (+++), the repeat command (A/), and the reset command (ATZ) on the command line by themselves. The modem ignores Other commands on the same line as these.

* Commands consist of a letter, such as D, followed by a number, or parameter. If you omit a parameter, the modem assumes a value of 0.

_____

 BASIC COMMAND CODES

CODE	DESCRIPTION	FUNCTION
AT	Attention Code	Command line prefix; precedes command lines ex-cept +++ and A/.
A/	Repeat Command	Repeats the last command. Neither AT nor (ENTER) is necessary for this command.
A	Answer Immediate	Causes the modem to go off hook and answer with-out waiting for a ring.

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	Returns the modem to the command mode from the data mode. Register 2 defines the escape code character.

DIALING AND ANSWERING COMMANDS

	COMMAND	DIALING	FUNCTION
	D	Dialing	Sets the modem to originate a call by dialing numbers and executing modifiers that follow D in the command line.
M	Sn	Dial Stored Number	Dian number stored in memory n.
O	T	Tone Dialing	Sets the modem to touch-tone dialing mode.
D	R	Reverse Mode	Changes the modem to answer mode automatically after call is originated.
I	W		Wait for dial tone before continuing.
F	,	Pause	Causes the modem to pause when dialing. Place it after the access code. Length of pause time is set by Register 8.
I	@		Wait for a tone (ringback) followed by 5 seconds of silence before continuing.
E R	!		Flash the switchhook for 0.5 seconds.
S	/	Short Delay	Delay for 0.125 seconds (short pause).
	0-9, #, *, A, B, C, D		Digits and symbols recognized as part of a telephone number. Only 0-9 apply to pulse-dialed numbers.
	;		Returns the modem to command mode after dialing.

COMMANDS WITH PARAMETERS

COMMAND	PARAMETERS	FUNCTION
B	0 1 (Default)	CCITT V.22 operation when communicating at 1200 bps. Bell 103/212A protocol.
C	0	Not permitted.

	1 (Default)	Transmitter carrier switched on or off automatically.
E	0 1 (Default)	Commands are not echoed Commands are echoed.
F	0 1	Not permitted. Character echo disabled when on line.
H	0 1	On hook (hang up). Go off hook.
I	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.
L	0, 1 2 (Default) 3	Sets modem volume to low level. Sets modem volume to medium level. Sets modem volume to high level.
M	0 1 (Default) 2 3	Speaker off. Speaker on until carrier detected. Speaker always on. Speaker on until carrier detected, except during dialing.
N	0 1 (Default)	Modem handshakes at speed set by Register 37. Modem handshakes at any speed supported by both the local and remote modems.
O	0 1	Returns the modem to on-line mode after the escape sequence was used to enter the command mode. Returns the modem to the on-line mode and initiates equalizer retrain at 2400 bps.
Q	0 1 2	Modem returns result codes. Modem does not return result codes. Modem returns result codes in originate mode only.
S	r	Sets register pointer to Register r. The pointer remains set until you issue another Sr command. You can read or change the value of the pointed-to register without specifying the register.
S	r?	Reads the contents of Register r.
S	r=n	Assigns the value n to Register r.
V	0 1	Numeric result codes Word result codes
W	0 (Default) 1	Error-control negotiation process result codes (40, 46, 47, 70, 71, 73, 77, 79, 80) not returned. Error-control negotiation process result codes returned.
X	0 (Default)	Basic result codes (0-4) enabled.

	1	Extended result codes (0-5, 10-12) enabled.
	2	Dial tone detection result code (6) plus extended result codes enabled.
	3	Busy signal detection result code (7) plus extended result codes.
	4	Result codes 0-7, 10-12 enabled.
Y	0 (Default)	Disable break. Prevents the modem from responding to or sending break (long space) signals.
	1	Enable break.
Z	0 (Default)	Sets the modem to user configuration 0.
	1	Sets the modem to user configuration 1.

SUMMARY OF THE X COMMAND CONDITIONS

FUNCTION	X0	X1	X2	X3	X4
Busy detect	No	No	No	Yes	Yes
Dial tone detect	No	No	Yes	No	Yes
CONNECT only	Yes	No	No	No	No
Blind dial number	Yes	Yes	No	Yes	No

ADVANCED COMMANDS

COMMAND	PARAMETERS	FUNCTION
&C	0 (Default) 1	DCD (Data Carrier Detect) always on. DCD on only when data carrier present.
&D	0 1 2 3	Modem ignores DTR signal. Modem returns to command modem when on-to-off DTR transition occurs. Modem goes on hook and returns to command mode when an on-to-off DTR transition occurs. Modem resets when an on-to-off DTR transition occurs.
&F	None	Resets the modem to factory settings.
&G	0 (Default) 1 2	No guard tone when modem in CCITT mode. 550 Hz guard tone when modem in CCITT mode. 1800 Hz guard tone when modem in CCITT mode.
&J	0 (Default) 1	Selects RJ11,RJ41S,RJ45S phone jack type s. RJ-12 or RJ-13 type phone jack.
&K	0 3 (Default) 4 5	Local flow control enabled. RTS/CTS local flow control enabled. XON/XOFF local flow control enabled. Transparent XON/XOFF flow control enabled.
&P	0 (Default)	Pulse dial make/break ratio 39:61 (USA).

	1	Pulse dial make/break ratio 33:67 (UK/HK).
&Q	0 5	Non-error-control mode. Error-control mode.
&R	0 (Default) 1	RTS/CTS mode. CTS always on unless &K3 selected; command has no effect. CTS always on. Command has no effect.
&S	0 (Default) 1	DSR (Data Set Ready) always on. Not permitted. Returns ERROR result code.
&T	0 1 3 4 (Default) 5 6 7 8	End test in progress. Begin local analog loopback test. Begin digital loopback test. Grant request from remote modem for remote digital loopback test. Deny request for remote digital loopback test. Begin remote digital loopback test. Begin remote digital loopback test with self test. Begin local analog loopback test with self test.
&V	None	Display active configuration, user configurations, and any stored dial strings.
&W	0 1	Save storable parameters of active configuration as user configuration 0. Save as user configuration 1.
&X	0 (Default) 1	Modem sources transmit clock signal. Not permitted. Returns ERROR result code.
&Y	0 (Default) 1	Load user configuration 0 on power up. Load user configuration 1 on power up.
&Zn=	x	Store phone number x in memory n.

(smm 07/29/93)