All command lines in Hayes protocol mode begin with the AT (attention code)
string and end with a carriage return <ENTER>. AT must be entered in upper-
case letters, but commands following can be entered in either upper or lower-
case letters. When the AT command is received, the DCM-7 will automatically
set the operation speed (in bps) and parity.

You can store a sequence of commands in the command buffer memory, provided
the command line does not exceed the 40-character buffer capacity. These
commands, however, must be entered in logical order in order to be executed.
If the command line exceeds the buffer-character limit, the Modem will not
execute the commands and instead sends an error result code.

EXAMPLE 1. SAMPLE COMMAND LINE

AT V1 S6 = 3 DP9, T(111)123-4567R <ENTER>

Now, to review the commands, one by one:

AT   Beginning of command line. Place the Modem in command receptive
                mode.
V1   Display the verbal result code. (Refer to RESULT CODES later
                in this chapter.)
S6 = 3   Wait 3 seconds for the dial tone.
DP9,   Dial 9 by pulse dialing, then pause 2 seconds (default value
                of register S8). (Refer to the section on REGISTERS.)
T   Touch-tone dial the telephone number that follows.
R   Change to answer mode and wait or carrier.
<ENTER>   End of command line. Execute all commands.

The attention code AT, control characters and spaces do not take up space in
the command buffer. The punctuation used in the telephone number to make it
easier to read does take up space. Input the attention code AT, reset com-
mand Z, or turn OFF the power supply of the Modem to clear the command
buffer.

The basic commands needed for programming the Modem in Hayes protocol mode
are provided in Table 5. Table 6 lists the dialing and answering commands.
For a detailed explanation of each command, refer to Appendix B, HAYES PRO-
TOCOL REFERENCE.

COMMANDS WITH PARAMETERS

Some of the commands have parameters. The parameter value, usually 0, 1 or 2,
follows the command. When the command parameter is not used the Modem
assumes a value of 0. For example, the echo command E does not echo when
parameter 0 is assumed. It does echo when parameter 1 is issued. E used
alone is the same as E0.

TABLE 4. COMMANDS WITH PARAMETERS

CODE	PARAMETER	FUNCTION	DEFAULT
Q	0 1	Result codes ON. Result codes OFF.	Defined by DIP Switch 4.

V	0	Numeric result codes.	Defined by DIP Switch 3.
	1	Verbal result codes.	
E	0	Commands are not echoed.	Defined by DIP Switch 5.
	1	Echo commands.	
F	0	Half duplex.	F1
	1	Full duplex.	
M	0	Monitor speaker always OFF.	M1
	1	Monitor speaker always ON.	
C	0	Transmitter OFF.	C1
	1	Transmitter ON.	
H	0	ON HOOK (phone line is disconnected when not in use)	H0
	1	OFF HOOK (phone line is connected regardless of its condition).	

TABLE 5. BASIC COMMAND CODES

CODE	DESCRIPTION	FUNCTION
AT	Attention Code	Wakes up the Modem to command receptive state. Starts the command line.
CR	Carriage Return	Closes the command line and executes commands. Register S3 defines the carriage return character.
BS	Backspace	Edits the command line by deleting characters one by one. Register S5 defines the backspace character.
+++	Escape Code	Returns the Modem to command mode from on-line mode. Register S2 defines the escape code character. S12 defines the escape code guard time.
O	On-line	Returns the Modem to on-line mode from command mode.
Z	Reset	Resets the Modem to default condition.

CODE	DESCRIPTION	FUNCTION
D	Dial	Sets the Modem to originate a telephone call. D command parameters include: 0-9, ( ), space, *, and #.
P	Pulse Dial	Sets the Modem to pulse dialing mode.
T	Touch-tone Dial	Sets the Modem to touch-tone dialing mode.
R	Reverse Mode	Automatically changes the Modem to answer mode after a call is originated.
,(comma)	Pause	Causes the Modem to pause while dialing.Follows the access code. Length of pause is set by Register S8.
;(semicolon		Returns the Modem to command mode after dialing
A/	Repeat Command	Repeats the command line. AT and ENTER are not necessary for this command.

A	Answer Mode	Immediately sets the Modem to answer mode without waiting for a ringing signal.

(css 08/04/93)