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 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 fawns established, the last command will not
be repeated.

Bn -- Bell/CCITT protocol. B1 selects Bell mode (default), while B0
 selects CCITT mode.

Ds -- Dialing commands. The D command causes the modem to go off-hook and
autodial the specified number using the specified parameters. These
parameters are as follows:

    P,T Select pulse or tone dialing.
    '   Pause for the time specified in register S8. (Default 2 seconds.)
    ;   Put the modem in the command state after dialing.
    @   Wait for one or more rings followed by five seconds of silence for
         the time specified in register S7. (Default = 30 seconds.)
    !   Flash the modem on-hook for 1/2 second.
    R   Reverse the connection to answer instead of originate after dialing.
    W   Wait for dial tone.
En -- Echo command. E1 causes the modem to echo commands (default), while
E/EO suppresses echo.

Hn -- On/Off hook control. H/HO causes the modem to go on-hook, while H1
switches the modem to an off-hook state.

In -- Request product code. IO causes the modem to respond with a three-
digit product code. I1 returns a three-digit ROM checksum value. I2
verifies the ROM checksum and returns either OK or ERROR.

Ln -- Speaker volume control. L0 and L1 select low volume, L2 selects
medium (default), while L3 selects maximum volume.

Mn -- Monitor speaker control.
      M0   Speaker always off.
      M1   Speaker on until carrier detected (default).
      M2   Speaker always on.
      M3   Speaker on after number dialed until carrier detected.

0 -- On-line command. The O command causes the modem to return to the on-
line state after the escape sequence has been entered.

Qn -- Result codes on/off. The Q/Q0 command enables the sending of result
codes (default). Q1 disables the generation of result codes.

Sr -- S Register access. The command Sr? returns the contents of register
r (values for r are from 0 to 27). When Sr=n is issued, regionalism r is

set to value n.

Vn -- Long/Short-form result codes. The V1 command selects long-form (verbal) result codes (default), while V0 selects short-form (numeric) codes.

Xn -- Extended result codes/Dial mode.

        X0   Connect message: CONNECT
                Dialing: Wait for period in regionalism S6 (default 2 seconds)
                dial
                Dial tone: Ignored
                Busy detect: No

        X1   Connect message: Full messages
                Dialing: Wait for period in register S6 and dial
                Dial tone: Ignored
                Busy detect: No

        X2   Connect Message: Full messages "CONNECT XXXX", XXXX is the
                bits-per-second rate.
                Dialing: Wait for dial tone
                Dial tone: Sensed
                Busy detect: No

        X3   Connect message: Full messages
                Dialing: Wait for period in register S6 and dial
                Dial tone: Ignored
                Busy detect: Yes

        X4   Connect message: Full messages (default)
                Dialing: Wait for dial tone
                Dial tone: Sensed
                Busy detect: Yes

Yn -- Long space disconnect on/off.
     Y0   Disables this option (default)
     Y1   Causes the modem to disconnect when a space of 1.6 seconds or
            longer is received from the remote modem.

Z -- Reset command. This command resets the modem to its power-up condition.
Any connection present is broken.

+++ -- Escape code. The command state in the modem can be entered during
the on-line states 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
register S12 time of no transmission. The default is: 1 second wait, +++, 1
second wait. The modem responds with OK.

BASIC COMMANDS

CODE	DESCRIPTION	FUNCTION
AT	Attention	All commands must begin with the letters AT. AT must be entered in upper case. This command is the signal

		to the modem that what follows is a command.
A/	Repeat Last Command	This command will repeat the last command line. It is most useful when used to re-dial the last number dialed.
ENTER	Command Terminator	Closes the command line and executes the command. S3 defines the carriage return character.
BKSPCE	BACKSPACE	Edits the command line by deleting characters one by one. S5 defines the backspace character.
+++	Escape Code	Returns the modem to command mode from on-line mode. S2 defines the escape code character. S12 defines the escape code guard time.

AUTODIAL COMMANDS

COMMAND	DIALING	FUNCTION
D	Dialing	The D command allows the user not only to dial a num- ber but adjust dialing to the local telephone condi- tions as well. The set of sub-commands are listed below.
,	Pause	The modem will pause for two seconds (default time). It allows the modem to wait for a second dial tone, as, for example, when waiting for an "outside line" on a PBX board.
T	Touch-Tne Dialing	Touch-tone dialing
P	Pulse Dialing	Pulse (Rotary) dialing
R	Reverse Mode	This command is used at the end of a command to put the 1200 bps internal modem into answer mode when try- ing to establish contact with an originate-only modem.
;		Returns modem to command mode after dialing.
!	Hookflash	Returns the modem to command mode after dialing.
W	Wait For Dial Tone	This command tells the modem to wait for 3 seconds of continuous dial tone before beginning to dial. The W command will return a result code of NO DIALTONE if no dial tone is found. The amount of time the modem waits is governed by the S7 register. If the X2 or X4 com- mands are used in conjunction with the W command, the modem will only wait 5 seconds for dial tone instead of S7 time.
@	Wait for Silence	This command tells the modem to wait for one or more rings followed by 5 seconds of silence before contin-

uing the command string. The length of time the modem waits is specified in register S7. The factory default time of S7 is 30 seconds. The BUSY result code will be displayed after 5 seconds if a busy signal is detected. This command is used to access a system that does not have a dial tone.

ADDITIONAL COMMANDS
Commands used without a parameter are assumed to have a parameter of 0.

COMMAND	PARAMETERS	FUNCTION
A	————	Sending an A command tells it to answer immediately without waiting for a ring. It then will wait for a Carrier Signal.
C	0 1 (Default)	Carrier signal never output. Carrier signal output automatically as required.
E	0 1 (Default)	Do not echo in command mode Echo characters in command mode
F	0 1 (Default)	Half-duplex Full-duplex
H	0 1	On hook (hang up) Go off hook
M	0 1 (Default) 2	Monitor speaker always off. Monitor speaker on until carrier-detect. Monitor speaker always on.
O	0 (Default) 1 2	Return to on-line state Exit RDL and return on-line. Initiate RDL and return on-line.
Q	0 (Default) 1	Result codes sent Result codes not sent
Sr?	0-16	"r" in this command specifies one of the modem's registers. This command allows the user to display the contents of the specified register.
Sr=n r n	 0-16 0-255	Set register (r) to value (n)
V	0 1 (Default)	Result numbers displayed Result words displayed
X	0 (Default) 1 2 3 4	Result code set 0 \\ Result code set 1 \\ Result code set 2 > SEE TABLE BELOW Result code set 3 / Result code set 4 /

CODE	X0	X1	X2	X3	X4
0 OK	*	*	*	*	*
1 CONNECT	*	*	*	*	*
2 RING	*	*	*	*	*
3 NO CARRIER	*	*	*	*	*
4 ERROR	*	*	*	*	*
5 CONNECT 1200	–	*	*	*	*
6 NO DIALTONE	–	–	*	–	*
7 BUSY	–	–	–	*	*
8 NO ANSWER	–	–	–	–	–

Z	——	Reset the modem.

(dkh-07/28/93)