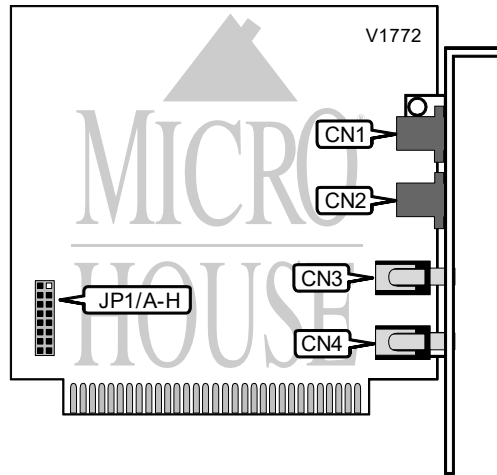


**BOCA RESEARCH, INC.**  
**ON-LINE EXPRESS V.34 (FDSP34AI)**

**Modem Type** Data (asynchronous)/Fax/Voice  
**Maximum Data Rate** 28.8Kbps  
**Maximum Fax Rate** 14.4Kbps  
**Data Bus** 8 bit ISA  
**Fax Class** Class I  
**Data Modulation Protocol** AT&T V.32terbo  
 Bell 103A/212A  
 ITU-T V.21, V.22bis, V.23, V.32, V.32bis, V.34  
**Fax Modulation Protocol** ITU-T V.17, V.21CH2, V.27ter, V.29  
**Error Correction/Compression** MNP5, V.42, V.42bis



CONNECTIONS			
Purpos	Location	Purpos	Location
Line in	CN1	Microphone	CN3
Line out	CN2	Speaker	CN4

SERIAL PORT ADDRESS				
Setting	JP1/E	JP1/F	JP1/G	JP1/H
COM1 (3F8h)	Closed	Open	Open	Open
COM2 (2F8h)	Open	Closed	Open	Open
COM3 (3E8h)	Open	Open	Closed	Open
COM4 (2E8h)	Open	Open	Open	Closed

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INTERRUPT				
Setting	JP1/A	JP1/B	JP1/C	JP1/D
3	Closed	Open	Open	Open
4	Open	Closed	Open	Open
5	Open	Open	Closed	Open
7	Open	Open	Open	Closed

### Proprietary AT Command Set

AUTO FALLBACK CHARACTER	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S43= <i>n</i> [cmds]
<b>Default:</b>	13
<b>Range:</b>	0 - 127
<b>Unit:</b>	ASCII
<b>Description:</b>	Set auto fallback character during MNP negotiation

AUTO-RELIABLE FALLBACK CHARACTER	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] %A <i>n</i> [cmds]
<b>Default:</b>	Unidentified
<b>Range:</b>	0-127
<b>Unit:</b>	ASCII
<b>Description:</b>	Sets the character used as the auto-reliable fallback character

AUTO SLEEP TIMER	
<b>Format</b>	AT [cmds] S46= <i>n</i> [cmds]
<b>Default:</b>	255
<b>Range:</b>	0 - 255
<b>Unit:</b>	100 ms
<b>Description:</b>	Maximum duration of DTE and DCE inactivity allowed prior to initiating low-power sleep mode

AUTO-RELIABLE TIME BUFFER CONFIGURATION	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S48= <i>n</i> [cmds]
<b>Description:</b>	Controls the handling of incoming data during auto-reliable time period
<b>Command</b>	<b>Function</b>
! S48=0	Data is discarded
S48=1	Data is buffered
S48=2	Data is discarded, modem returns to normal mode on receiving auto-reliable fallback character

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BREAK SEND	
<b>Type:</b>	Immediate
<b>Format:</b>	AT [cmds] \Bn [cmds]
<b>Range:</b>	0-9
<b>Unit:</b>	.1 second
<b>Description:</b>	Sends break to modem

BREAK TYPE				
<b>Type:</b> Configuration				
<b>Format:</b> AT [cmds] \Kn [cmds]				
<b>Description:</b> Configures action of break signal				
Command	Break from DTE Reliable/Normal mode	Break from DTE Direct mode	Modem receives \B	Break from remote modem
\K0	Enter command mode, do not send break to remote modem	Send break to remote modem immediately, then enter command mode	Buffers cleared and break sent to remote modem	Buffers cleared and break sent to DTE
\K1	Buffers cleared and break sent to remote modem	Send break to remote modem immediately	Buffers cleared and break sent to remote modem	Buffers cleared and break sent to DTE
\K2	Enter command mode, do not send break to remote modem	Send break to remote modem immediately, then enter command mode	Send break to remote modem immediately	Send break to DTE immediately
\K3	Send break to remote modem immediately	Send break to remote modem immediately	Send break to remote modem immediately	Send break to DTE immediately
\K4	Enter command mode, do not send break to remote modem	Send break to remote modem immediately, then enter command mode	Send break to remote modem with transmitted data	Break sent with received data to the DTE
\K5	Send break with transmitted data	Send break to remote modem immediately	Send break to remote modem with transmitted data	Break sent with received data to the DTE

COMPRESSION	
<b>Format</b>	AT [cmds] S59=n [cmds]
<b>Default:</b>	1
<b>Range:</b>	0 - 1
<b>Description:</b>	Selects MNP5 status
Command	Function
S53=0	Data compression disabled
S53=1	Data compression enabled

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COMPRESSION	
<b>Type:</b>	Configuration
<b>Format:</b>	AT %Cn
<b>Description:</b>	Selects data compression
<b>Command</b>	<b>Function</b>
%C0	Data compression disabled
í %C1	Data compression enabled

CONNECT MODE	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] S53=n [cmds]
<b>Description:</b>	Sets connect mode
<b>Command</b>	<b>Function</b>
S53=0	Normal mode enabled
S53=1	Reliable mode enabled
S53=2	Auto-reliable mode enabled
í S53=3	LAPM, MNP or normal mode enabled
S53=4	LAPM or MNP mode enabled

DTE RATE STATUS	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S62=n [cmds]
<b>Description:</b>	Selects DTE rate
<b>Command</b>	<b>Function</b>
0	300 bps
1	600 bps
2	1200 bps
3	2400 bps
4	4800 bps
5	7200 bps
6	9600 bps
7	12Kbps
8	14.4Kbps
9	16.8Kbps
10	19.2Kbps
11	21.6Kbps
12	24.0Kbps
13	26.4Kbps
14	28.8Kbps
15	38.4Kbps
í 16	57.6Kbps
17	115.2Kbps

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DTE SPEED OPTION	
<b>Type:</b>	Immediate
<b>Format:</b>	AT [cmds] \Jn [cmds]
<b>Description:</b>	Controls the speed of the DTE
<b>Command</b>	<b>Function</b>
\J0	DCE and DTE rates are independent

FAX/DATA MODE	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S50=n [cmds]
<b>Description:</b>	Choose data or FAX mode
<b>Command</b>	<b>Function</b>
i 0	Data mode enabled
1	FAX mode enabled

FLOW CONTROL	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] \Gn [cmds]
<b>Description:</b>	Selects modem port flow control
<b>Command</b>	<b>Function</b>
\G0	Flow control disabled
\G1	Flow control enabled

FLOW CONTROL TYPE	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] \Qn [cmds]
<b>Description:</b>	Sets type of flow control used by modem
<b>Command</b>	<b>Function</b>
\Q0	Flow control disabled
\Q1	XON/XOFF flow control enabled
\Q2	Returns ERROR
i \Q3	RTS/CTS flow control enabled

INACTIVITY TIMER	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] \Tn [cmds]
<b>Default:</b>	0
<b>Range:</b>	0-90
<b>Unit:</b>	Minutes
<b>Description:</b>	Sets the length of time that the modem does not receive information before it disconnects

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PROTOCOL	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] \Nn [cmds]
<b>Description:</b>	Sets connect mode
<b>Command</b>	<b>Function</b>
\N0	Normal mode enabled
\N1	Direct mode enabled
\N2	MNP reliable mode enabled
í \N3	MNP, LAP-M, or normal mode enabled
\N4	LAP-M or MNP reliable enabled

EXTENDED RESULT CODES	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] \Vn [cmds]
<b>Example:</b>	AT \V1 %C1<CR>
<b>Description:</b>	Selects extended result codes
<b>Command</b>	<b>Function</b>
í \V0	Extended result codes disabled
\V1	Extended result codes enabled

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PROTOCOL/SPEED	
<b>Format</b>	AT [cmds] S37= <i>n</i> [cmds]
<b>Default:</b>	0
<b>Range:</b>	0-17
<b>Description:</b>	Selects switched line speed
Command	Function
í S37=0	Connect at last AT speed
S37=3	Connect at V.22 1200bps
S37=6	Connect at V.22bis 2400bps
S37=7	Connect at V.23 4800bps
S37=8	Connect at V.32/V.32bis 4800bps
S37=9	Connect at V.32/V.32bis 9600bps
S37=10	Connect at V.32bis 12.0Kbps
S37=11	Connect at V.32bis 14.4Kbps
S37=12	Connect at V.34 16.8Kbps
S37=13	Connect at V.34 19.2Kbps
S37=14	Connect at V.34 21.6Kbps
S37=15	Connect at V.34 24.0Kbps
S37=16	Connect at V.34 26.4Kbps
S37=17	Connect at V.34 28.8Kbps

RESULT CODES	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] S41= <i>n</i> [cmds]
<b>Description:</b>	Selects extended result codes
Command	Function
í S41=0	Display DTE speed
S41=1	Display carrier, protocol and compression
S41=2	Display DCE speed

V42bis COMPRESSION	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] "H <i>n</i> [cmds]
<b>Description:</b>	Controls V.42bis compression
Command	Function
"H0	V.42bis disabled
"H1	V.42bis while transmit enabled
"H2	Returns ERROR
í "H3	V.42bis during transmitting and receiving enabled

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V.32 RETRAIN	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S42= <i>n</i> [cmds]
<b>Range:</b>	0 - 2
<b>Unit:</b>	Bit-mapped
<b>Description:</b>	Selects action the modem will take during bad line quality on V.32/32bis connection
<b>Command</b>	<b>Function</b>
í S42=0	Auto-retrain disabled, hang up
S42=1	Auto-retrain on line quality problem enabled
S42=2	Modem ignores line quality problems

XON/XOFF PASS-THROUGH	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] \X <i>n</i> [cmds]
<b>Description:</b>	Selects whether XON/XOFF signals are sent to remote modem
<b>Command</b>	<b>Function</b>
í \X0	XON/XOFF signals trapped by local modem
\X1	XON/XOFF passed through local modem