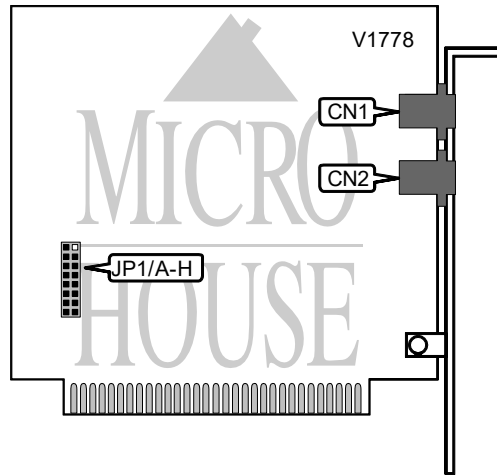# BOCA RESEARCH, INC.
BOCAMODEM V.34 DATA/FAX (MV.34I)

Modem Type   Data (synchronous/asynchronous)/Fax
Maximum Data Rate   28.8Kbps
Maximum Fax Rate   14.4Kbps
Data Bus   8 bit ISA
Fax Class   Class I & II
Data Modulation Protocol   Bell 103A/212A
                                   ITU-T V.21, V.22, V.32, V.32bis, V.34
                                   Rockwell V.FC
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	Line out	CN2

SERIAL PORT ADDRESS				
Setting	JP1/A	JP1/B	JP1/C	JP1/D
COM1 (3F8h)	Closed	Open	Open	Open
COM2 (2F8h)	Open	Closed	Open	Open
í COM3 (3E8h)	Open	Open	Closed	Open
COM4 (2E8h)	Open	Open	Open	Closed

INTERRUPT				
Setting	JP1/E	JP1/F	JP1/G	JP1/H
3	Closed	Open	Open	Open
4	Open	Closed	Open	Open
í 5	Open	Open	Closed	Open
7	Open	Open	Open	Closed

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Proprietary AT Command Set

MAXIMUM BLOCK SIZE FOR TRANSMISSION	
Type:	Configuration
Format:	AT [cmds] \An [cmds]
Description:	Sets the maximum transmittable block size

Command	Function
\A0	MNP block size is 64 characters
í \A1	MNP block size is 128 characters
\A2	MNP block size is 192 characters
\A3	MNP block size is 256 characters

BREAK SEND	
Type:	Immediate
Format:	AT [cmds] \Bn [cmds]
Range:	1-9
Default:	3
Unit:	.1 second
Description:	Sends break to modem

FLOW CONTROL	
Type:	Configuration
Format:	AT [cmds] \Gn [cmds]
Description:	Selects modem port flow control

Command	Function
\G0	Flow control disabled
\G1	Flow control enabled

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BREAK TYPE			
Type:	Configuration		
Format:	AT [cmds] \K*n* [cmds]		
Description:	Configures action of break signal		
Command	**Break from DTE while in auto reliable mode**	**Modem receives \B while in normal mode**	**Break from DTE while in direct mode**
\K0	Online command mode enabled, send no break to remote modem	Break sent to remote modem and buffered cleared	Break sent and modem enters command mode
\K1	Break sent to remote modem and buffered cleared	Break sent to remote modem and buffered cleared	Break sent and modem enters command mode
\K2	Online command mode enabled, send no break to remote modem	Send break to remote modem immediately	Break sent to remote modem
\K3	Send break to remote modem immediately	Send break to remote modem immediately	Break sent and modem enters command mode
\K4	Online command mode enabled, send no break to remote modem	Send break with transmitted data	Break sent to remote modem
í \K5	Send break with transmitted data	Send break with transmitted data	Break sent to remote modem

PROTOCOL	
Type:	Configuration
Format:	AT [cmds] \N*n* [cmds]
Description:	Sets connect mode
Command	**Function**
\N0	Normal mode enabled
\N1	Direct mode enabled
\N2	Reliable mode enabled
í \N3	Auto reliablel mode enabled
\N4	LAP-M mode enabled
\N5	MNP mode enabled

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COMPRESSION	
Type:	Configuration
Format:	AT %C*n*
Description:	Selects data compression

Command	Function
%C0	Data compression disabled
%C1	MNP5 data compression enabled
%C2	V.42bis data compression enabled
ſ %C3	MNP5 and V.42bis data compression enabled

AUTO-RETRAIN - FALLBACK/FALLFORWARD	
Type:	Configuration
Format:	AT [cmds] %E*n* [cmds]
Description:	Controls auto-retrain mode and fallback/fall forward

Command	Function
%E0	Auto-retrain disabled
%E1	Auto-retrain enabled
ſ %E2	Fallback/fall forward enabled

LINE SIGNAL LEVEL	
Type:	Immediate
Format:	AT [cmds] **%L** [cmds]
Range:	009-043
Unit	-1dBm
Description:	Displays received line signal level

REPORT SIGNAL QUALITY	
Type:	Immediate
Format:	AT [cmds] %Q [cmds]
Range:	0-255
Unit:	High order byte of calculated eye quality monitor
Description:	Reports signal quality. If the value is greater than 8, the modem will retrain

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MODULATION SELECTION	
Type:	Configuration
Format:	AT [cmds] +MS=*xx,y,zzz,aaa* [cmds]
Description:	Sets options for active protocol. The transfer rates specified by *z* and *a* must be valid for the protocol selected.
Command	**Function**
x=0	V.21
x=1	V.22
x=2	V.22bis
x=3	V.23
x=9	V.32
x=10	V.32bis
i x=11	V.34
x=64	Bell 103A
x=69	Bell 212A
x=74	V.FC
y=0	Automode disabled
y=1	Auto-detect highest speed enabled
z, a=300	Set minimum or maximum transfer rate at 300bps, respectively
z, a=1200	Set minimum or maximum transfer rate at 1200bps, respectively
z, a=2400	Set minimum or maximum transfer rate at 2400bps, respectively
z, a=4800	Set minimum or maximum transfer rate at 4800bps, respectively
z, a=7200	Set minimum or maximum transfer rate at 7200bps, respectively
z, a=9600	Set minimum or maximum transfer rate at 9600bps, respectively
z, a=12000	Set minimum or maximum transfer rate at 12000bps, respectively
z, a=14400	Set minimum or maximum transfer rate at 14400bps, respectively
z, a=16800	Set minimum or maximum transfer rate at 16800bps, respectively
z, a=19200	Set minimum or maximum transfer rate at 19200bps, respectively
z, a=21600	Set minimum or maximum transfer rate at 21600bps, respectively
z, a=24000	Set minimum or maximum transfer rate at 24000bps, respectively
z, a=26400	Set minimum or maximum transfer rate at 26400bps, respectively
z, a=28800	Set minimum or maximum transfer rate at 28800bps, respectively

SLEEP TIMER	
Format	AT [cmds] S24=*n* [cmds]
Default:	0
Range:	0 - 255
Unit:	Seconds
Description:	Maximum duration of DTE and DCE inactivity allowed prior to initiating low-power sleep mode

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FLASH DIAL MODIFIER TIME	
Format	AT [cmds] S29=*n* [cmds]
Default:	10
Range:	0-255
Unit:	1ms
Description:	Time the modem will go on-hook upon receiving the ! dial modifier in dial string

FLOW CONTROL CHARACTER - XOFF	
Type:	Register
Format:	AT [cmds] S33=*n* [cmds]
Default:	19
Range:	0-255
Unit:	ASCII
Description:	Sets the character used to represent XOFF

FLOW CONTROL CHARACTER - XON	
Type:	Register
Format:	AT [cmds] S32=*n* [cmds]
Default:	17
Range:	0-255
Unit:	ASCII
Description:	Sets the character used to represent XON

PROTOCOL/SPEED	
Format	AT [cmds] S37=*n* [cmds]
Default:	0
Range:	0-12
Description:	Selects switched line speed
Command	**Function**
í S37=0	Connect at highest common speed
S37=1	Connect at300bps
S37=2	Connect at 300bps
S37=3	Connect at 300bps
S37=4	Not used
S37=5	Connect at 1200bps
S37=6	Connect at 2400bps
S37=7	Connect at V.23
S37=8	Connect at 4800bps
S37=9	Connect at 9600bps
S37=10	Connect at 12.0Kbps
S37=11	Connect at 14.4Kbps
S37=12	Connect at 7200bps

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FAX TRANSMIT LEVEL	
Type:	Register
Format:	AT [cmds] S92=*n* [cmds]
Default:	10
Range:	0-15
Unit:	-1dBm
Description:	Controls fax transmission level

BIT MAPPED REGISTERS	
Register	Default
S14	138
S16	0
S21	4
S22	117
S23	54
S27	9
S28	0
S31	2
S39	3
S40	104
S41	3