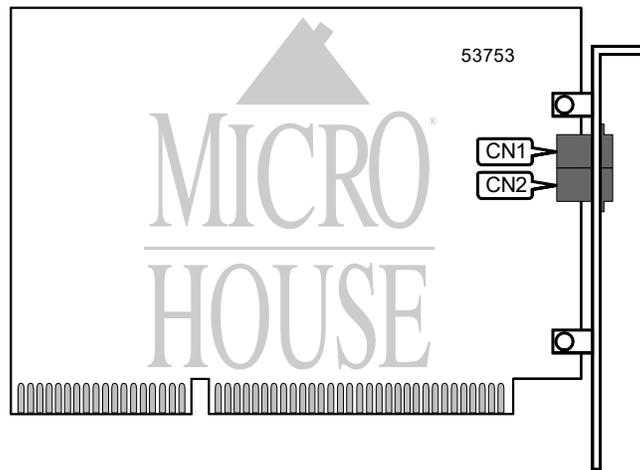


# BEST DATA PRODUCTS, INC.

## MACH 2 56K

<b>Card Type</b>	Modem (asynchronous)
<b>Chipset</b>	Unidentified
<b>Maximum Data Rate</b>	56Kbps
<b>Maximum Fax Rate</b>	14.4Kbps
<b>Data Modulation</b>	Bell 103A, 212A ITU-T V.21, V.22, V.22bis, V.23, V.32, V.32bis, V.34 U.S. Robotics x2
<b>Fax Modulation</b>	ITU-T V.17, V.27ter, V.29
<b>Error Correction/Compression</b>	MNP5, V.42, V.42bis
<b>Fax Class</b>	Class I & II
<b>Data Bus</b>	16-bit ISA
<b>Card Size</b>	Full height, half length



CONNECTIONS			
Function	Label	Function	Label
Telephone line out	CN1	Telephone line in	CN2

SUPPORTED STANDARD COMMANDS
<b>Basic AT Commands</b>
+++ , 'comma' , A/
A, B, E, F, H, L, M, O, P, T, V, X, Z
&C, &D, &F, &G, &P, &R, &S, &T, &W, &Z
<b>S-Registers</b>
S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S18, S25, S38
Note: See MHI help file for complete information.

UNIDENTIFIED COMMANDS	
Command	Default
S31	128

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### Proprietary AT Command Set

BIT-MAPPED REGISTER S13		
<b>Format</b>	AT [cmds] S13= <i>n</i> [cmds]	
<b>Default:</b>	0	
<b>Range:</b>	0 - 159	
<b>Description:</b>	Controls DTR reset, DTR dialing, reset dialing, and MNP3.	
Bit	Value	Function
0	í 0	DTR normal.
	1	Reset on low DTR.
1	í 0	Non-error-correcting mode transmit buffer set to 1.5KB.
	1	Non-error-correcting mode transmit buffer set to 128 bytes.
2	í 0	Backspace and delete keys normal.
	1	Backspace and delete keys reversed.
3	í 0	DTR dialing disabled.
	1	DTR dialing enabled.
4	í 0	Reset dialing disabled.
	1	Reset dialing enabled.
6, 5	00	Not used.
7	í 0	Modem enters command state when +++ is received.
	1	Modem disconnects and enters command state when +++ is received.

BIT-MAPPED REGISTER S15		
AT [cmds] S15= <i>n</i> [cmds]		
0		
0 - 255		
Controls error correction and compression in selected protocols, MNP modes, and		
Value	Function	
í 0	Error correction/compression enabled in V.22 mode.	
	1 Error correction/compression disabled in V.22 mode.	
í 0	Error correction/compression enabled	
	1 Error correction/compression disabled	
í 0	MNP handshake enabled.	
	1 MNP handshake disabled.	
í 0	MNP4 disabled.	
	1 MNP4 enabled.	
í 0	MNP3 disabled.	
	1 MNP3 enabled.	
í 0	MNP operation normal	
	1 MNP configured for non-compatible	
í 0	V.42 enabled.	
	1 V.42 disabled.	

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BIT-MAPPED REGISTER S27		
<b>Format:</b>	AT [cmds] S27= <i>n</i> [cmds]	
<b>Default:</b>	0	
<b>Range:</b>	0 - 191	
<b>Description:</b>	Controls V.21/Bell 103A, V.32 encoding and modulation, V.32bis modulation, V.42 answer tone and selective reject, and 9600 result codes.	
Bit	Value	Function
0	í 0	Bell 103A enabled.
	1	V.21 enabled.
1	í 0	V.32 trellis coding enabled.
	1	V.32 trellis coding disabled.
2	í 0	V.32 modulation enabled.
	1	V.32 modulation disabled.
3	í 0	2100Hz answer tone enabled.
	1	2100Hz answer tone disabled.
4	í 0	Fallback to V.23 disabled.
	1	Fallback to V.23 enabled.
5	í 0	V.32bis modulation enabled.
	1	V.32bis modulation disabled.
6	0	Not used.
7	í 0	Actual result codes displayed.
	1	Force 9600 result codes.

BIT-MAPPED REGISTER S32		
AT [cmds] S32= <i>n</i> [cmds]		
0		
0 - 59		
Controls V.8 protocol and options, and V.34 and x2 modulation protocols.		
Value		Function
	í 0	V.8 Call Indicate disabled.
	1	V.8 Call Indicate enabled.
	0	V.8 disabled.
	í 1	V.8 enabled.
	0	Not used.
	í 0	V.34 modulation enabled.
	1	V.34 modulation disabled.
	í 0	V.34 modulation at 31.2Kbps and 33.6Kbps.
	1	V.34 modulation at 31.2Kbps and 33.6Kbps.
	í 0	U.S. Robotics x2 modulation enable.
	1	U.S. Robotics x2 modulation disable.

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BREAK LENGTH	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S21= <i>n</i> [cmds]
<b>Default:</b>	10
<b>Range:</b>	0 - 255
<b>Unit:</b>	10 ms
<b>Description:</b>	Sets the length of error correction mode breaks sent from DCE to DTE.

BREAK TYPE	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] &Y <i>n</i> [cmds]
<b>Description:</b>	Configures action of break signal.
Command	Function
&Y0	Break empties buffer.
! &Y1	Break empties buffer and is sent immediately.
&Y2	Break does not empty buffer and is sent immediately.

COMPRESSION MODE	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] &K <i>n</i> [cmds]
<b>Description:</b>	Selects the type of data compression that will be used.
Command	Function
&K0	Data compression disabled.
! &K1	Auto-detect compression mode.
&K2	Data compression enabled.
&K3	MNP5 data compression only enabled.

CONNECTION SPEED LOWER LIMIT	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] &U <i>n</i> [cmds]
<b>Description:</b>	Sets slowest allowed connection speed if &N is set to 1 or higher.
Command	Function
&U0	No minimum connect speed.
&U1	Set minimum connect speed to 300bps.
&U2	Set minimum connect speed to 1200bps.
&U3	Set minimum connect speed to 2400bps.
&U4	Set minimum connect speed to 4800bps.
&U5	Set minimum connect speed to 7200bps.
&U6	Set minimum connect speed to 9600bps.
&U7	Set minimum connect speed to 12Kbps.
&U8	Set minimum connect speed to 14.4Kbps.
&U9	Set minimum connect speed to 16.8Kbps.
&U10	Set minimum connect speed to 19.2Kbps.

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CONNECTION SPEED LOWER LIMIT (CON'T)	
Command	Function
&U11	Set minimum connect speed to 21.6Kbps.
&U12	Set minimum connect speed to 24Kbps.
&U13	Set minimum connect speed to 26.4Kbps.
&U14	Set minimum connect speed to 28.8Kbps.

CONNECTION SPEED UPPER LIMIT	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] &Nn [cmds]
<b>Description:</b>	Sets required connection speed if &U is set to 0; otherwise, sets fastest allowed connection speed.
Command	Function
&N0	No maximum connect speed.
&N1	Set maximum connect speed to 300bps.
&N2	Set maximum connect speed to 1200bps.
&N3	Set maximum connect speed to 2400bps.
&N4	Set maximum connect speed to 4800bps.
&N5	Set maximum connect speed to 7200bps.
&N6	Set maximum connect speed to 9600bps.
&N7	Set maximum connect speed to 12Kbps.
&N8	Set maximum connect speed to 14.4Kbps.
&N9	Set maximum connect speed to 16.8Kbps.
&N10	Set maximum connect speed to 19.2Kbps.
&N11	Set maximum connect speed to 21.6Kbps.
&N12	Set maximum connect speed to 24Kbps.
&N13	Set maximum connect speed to 26.4Kbps.
&N14	Set maximum connect speed to 28.8Kbps.
&N15	Set maximum connect speed to 31.2Kbps.
&N16	Set maximum connect speed to 33.6Kbps.

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DIAL	
<b>Type:</b>	Immediate
<b>Format:</b>	AT [cmds] D<#>;[cmds]
<b>Description:</b>	Dials the telephone number indicated according to any modifiers included in the string.
Command	Function
DL	Re-dial last number.
DP	Pulse dialing enabled.
DR	Answer mode enabled; originate mode disabled following handshake initiation.
DS $n$	Dial stored telephone number $n$ .
DT	Tone dialing enabled.
DW	Dialing resumed following dial tone detection.
D,	Dialing paused for amount of time specified in S8 register.
D/	Dialing paused for 1/8 second.
D!	Flash function initiated. Modem commanded to go off-hook for specified time before returning on-hook.
D@	Wait for Quiet Answer function enabled. Modem waits until a "quiet answer," a ring-back signal followed by silence up to the time specified in S7, is received prior to executing the rest of the dial string.
D;	Modem returned to idle state after dialing. The semicolon can only be placed at the end of the dial command.

DISPLAY HELP SCREEN - AMPERSAND	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] &\$ [cmds]
<b>Description:</b>	Displays the help screen on the AT& commands.

DISPLAY HELP SCREEN - BASIC	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] \$ [cmds]
<b>Description:</b>	Displays the basic help screen.

DISPLAY HELP SCREEN - DIAL	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] D\$ [cmds]
<b>Description:</b>	Displays the help screen on the dialing commands.

DISPLAY HELP SCREEN - REGISTERS	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] S\$ [cmds]
<b>Description:</b>	Displays the help screen for S registers.

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DISPLAY INFORMATION	
<b>Type:</b>	Immediate
<b>Format:</b>	AT [cmds] In [cmds]
<b>Description:</b>	Displays modem properties.
<b>Command</b>	<b>Function</b>
I0	Displays product identification code.
I1	Tests and displays ROM checksum result.
I2	Tests and displays RAM checksum result.
I3	Displays product type.
I4	Displays current command settings.
I5	Displays current NVRAM settings.
I6	Displays link diagnostics.
I7	Displays product configuration.
I10	Displays virtual device driver configuration.
I11	Displays current connection's statistics for V.34 mode.

ERROR CORRECTION MODE	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] &Mn [cmds]
<b>Description:</b>	Selects active error correction protocols.
<b>Command</b>	<b>Function</b>
&M0	Normal mode only.
í &M4	Auto-detect mode.
&M5	Error correction mode only.

EXTENDED RESULT CODES	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] &An [cmds]
<b>Description:</b>	Selects extended result codes.
<b>Command</b>	<b>Function</b>
&A0	Extended result codes disabled.
&A1	Error correction result codes enabled.
&A2	V.32 result code enabled.
í &A3	Error correction and compression result codes enabled.

FLOW CONTROL CHARACTER - XOFF	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S23=n [cmds]
<b>Default:</b>	19
<b>Range:</b>	0 - 127
<b>Unit:</b>	1 ASCII character
<b>Description:</b>	Sets the character used to represent XOFF.

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FLOW CONTROL CHARACTER - XON	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S22= <i>n</i> [cmds]
<b>Default:</b>	17
<b>Range:</b>	0 - 127
<b>Unit:</b>	1 ASCII character
<b>Description:</b>	Sets the character used to represent XON.

FLOW CONTROL - MODEM-TO-MODEM	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] &I <i>n</i> [cmds]
<b>Description:</b>	Selects the type of modem-to-modem flow control used.
<b>Command</b>	<b>Function</b>
í &I0	Software flow control disabled.
&I1	XON/XOFF pass-through enabled.
&I2	XON/XOFF pass-through disabled.

FLOW CONTROL TYPE	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] &H <i>n</i> [cmds]
<b>Description:</b>	Sets type of flow control used by modem.
<b>Command</b>	<b>Function</b>
&H0	Flow control disabled.
í &H1	CTS/RTS flow control enabled.
&H2	XON/XOFF flow control enabled.
&H3	CTS/RTS and XON/XOFF flow control enabled.

INACTIVITY TIMER	
<b>Type:</b>	Register
<b>Format</b>	AT [cmds] S19= <i>n</i> [cmds]
<b>Default:</b>	0
<b>Range:</b>	0 - 255
<b>Unit:</b>	1 minute
<b>Description:</b>	Maximum duration of DTE and DCE inactivity allowed prior to initiating hang-up process.

PROFILE ON POWER-UP	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] Y <i>n</i> [cmds]
<b>Description:</b>	Selects the profile that the modem will reset to on power-up.
<b>Command</b>	<b>Function</b>
í Y0	Modem resets to user profile 0 on power-up.
Y1	Modem resets to user profile 1 on power-up.
Y2	Modem resets to factory generic profile on power-up.
Y3	Modem resets to factory hardware flow control profile on power-up.
Y4	Modem resets to factory software flow control profile on power-up.

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REPEAT PREVIOUS COMMAND CONTINUALLY	
<b>Type:</b>	Immediate
<b>Format:</b>	A>
<b>Description:</b>	Repeats the previous command until interrupted by the user.
<b>Note:</b>	Do not precede this command with AT, or follow it with <CR>.

RESULT CODES	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] Qn [cmds]
<b>Description:</b>	Enables modem to send result codes to the DTE.
<b>Command</b>	<b>Function</b>
í Q0	Result codes enabled.
Q1	Result codes disabled.
Q2	Result codes enabled in originate mode only.

TEST PATTERN	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S16=n [cmds]
<b>Description:</b>	Transmits a test pattern to the remote modem.
<b>Command</b>	<b>Function</b>
í S16=0	Test pattern disabled.
S16=4	Test pattern enabled.

V.21 ANSWER MODE FALLBACK TIMER	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S29=n [cmds]
<b>Default:</b>	20
<b>Range:</b>	Unidentified
<b>Unit:</b>	.1 second
<b>Description:</b>	The function of this register is unidentified.

V.32 HANDSHAKE TIME	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S28=n [cmds]
<b>Default:</b>	8
<b>Range:</b>	0 - 255
<b>Unit:</b>	.1 second
<b>Description:</b>	Sets length of V.32 handshake. A value of 255 means that the modem will only accept connections with V.32 at 9600bps.

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V.34 MAPPING		
<b>Type:</b>	Register	
<b>Format:</b>	AT [cmds] S34= <i>n</i> [cmds]	
<b>Default:</b>	0	
<b>Range:</b>	0 - 255	
<b>Description:</b>	Controls V.34 mapping, non-linear coding, transmit level deviation, pre-emphasis, and pre-coding.	
Bit	Value	Function
0	0	8S-2D map enabled.
	1	8S-2D map disabled.
1	0	16S-4D map enabled.
	1	16S-4D map disabled.
2	0	32S-2D map enabled.
	1	32S-2D map disabled.
3	0	64S-4D map enabled.
	1	64S-4D map disabled.
4	0	Non-linear coding enabled.
	1	Non-linear coding disabled.
5	0	Transmit level deviation enabled.
	1	Transmit level deviation disabled.
6	0	Pre-emphasis enabled.
	1	Pre-emphasis disabled.
7	0	Pre-coding enabled.
	1	Pre-coding disabled.

V.34 OPTIONS		
<b>Type:</b>	Register	
<b>Format:</b>	AT [cmds] S33= <i>n</i> [cmds]	
<b>Default:</b>	0	
<b>Range:</b>	0 - 255	
<b>Description:</b>	Controls V.34 baud rate and shaping.	
Bit	Value	Function
0	0	2400 baud rate enabled.
	1	2400 baud rate disabled.
1	0	2743 baud rate enabled.
	1	2743 baud rate disabled.
2	0	2800 baud rate enabled.
	1	2800 baud rate disabled.
3	0	3000 baud rate enabled.
	1	3000 baud rate disabled.
4	0	3200 baud rate enabled.
	1	3200 baud rate disabled.
5	0	3429 baud rate enabled.
	1	3429 baud rate disabled.
6	0	Not used.
7	0	Shaping enabled.
	1	Shaping disabled.