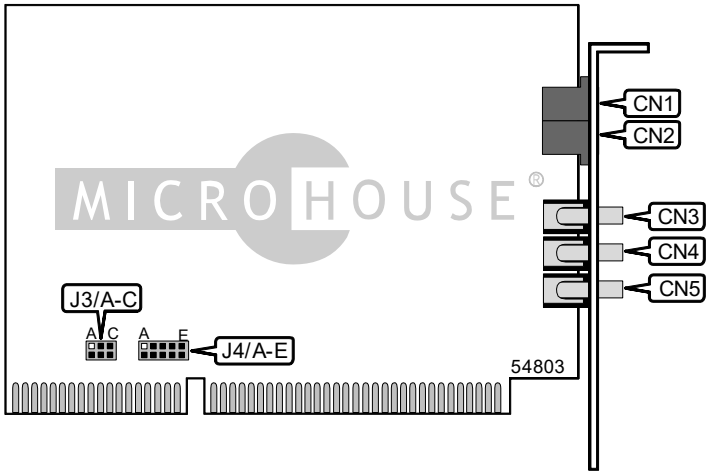
HARMONY MULTIMEDIA
HM 18022

Card Type	Modem (asynchronous)
Chip Set	TI
I/O Options	Audio line in, speaker out, microphone, line in, line out
Maximum Modem Rate	56.0Kbps
Maximum Fax Rate	14.4Kbps
Data Modulation Protocol	Bell 103/212A ITU-T V.21, V.22, V.22bis, V.23, V.32, V.32bis, V.34, x2
Fax Modulation Protocol	ITU-T V.17, V.27ter, V.29
Error Correction/Compression	MNP5, V.42, V.42bis
Fax Class	Class I
Data Bus	16-bit ISA
Card Size	Half-length, full-height card



CONNECTIONS			
Function	**Label**	**Function**	**Label**
Line in	CN1	Speaker out	CN4
Line out	CN2	Microphone	CN5
Audio line in	CN3		

SERIAL PORT ADDRESS			
Setting	**J3/A**	**J3/B**	**J3/C**
COM1 (3F8h)	Closed	Closed	Closed
COM2 (2F8h)	Open	Closed	Closed
COM3 (3E8h)	Closed	Open	Closed
COM4 (2E8h)	Open	Open	Closed
Plug & Play	Open	Open	Open

INTERRUPT					
Setting	**J4/A**	**J4/B**	**J4/C**	**J4/D**	**J4/E**
IRQ 2	Closed	Open	Open	Open	Open
IRQ 3	Open	Closed	Open	Open	Open
IRQ 4	Open	Open	Closed	Open	Open
IRQ 5	Open	Open	Open	Closed	Open
IRQ 7	Open	Open	Open	Open	Closed

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SUPPORTED COMMAND SET
Basic AT Commands
AT, '+++' A/
A, B, D, E, F, H, M, O, V, X
&C, &G, &R, &T, &Z
S Registers
S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S18, S25
Note: See MHI Help File for full command documentation.

Proprietary AT Command Set

DISPLAY COMMANDS	
Type:	Configuration
Format:	AT [cmds] $ [cmds]
Description:	Display a list of commands
Note: The $ command can be used with all prefixes.	

SPEAKER VOLUME	
Type:	Configuration
Format:	AT [cmds] L*n* [cmds]
Description:	Controls speaker volume
Command	**Function**
L0	Low volume setting
L1	Low volume setting
í L2	Medium volume setting
L3	Highest volume setting

RESULT CODES	
Type:	Configuration
Format:	AT [cmds] Q*n* [cmds]
Description:	Enables modem to send result codes to the DTE
Command	**Function**
í Q0	Result code sending enabled
Q1	Result code sending disabled
Q2	Display result codes only in Originate mode
Q3	Display result codes only in Ring mode

DEFAULT CONFIGURATION	
Type:	Configuration
Format:	AT [cmds] Y*n* [cmds]
Description:	Set power on/reset default configuration
Command	**Function**
í Y0	Profile 0
Y1	Profile 1
Y2	Generic Template (&F0)
Y3	Hardware flow control (&F1)
Y4	Software flow control (&F2)

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SOFT RESET	
Type:	Immediate
Format:	AT [cmds] Z*n* [cmds]
Description:	Restores modem profiles previously saved in non-volatile RAM using the &W command.
Command	**Function**
Z0	Resets modem to NVRAM profile selected by Y command
Z1	Resets modem to NVRAM profile 0
Z2	Resets modem to NVRAM profile 1
Z3	Resets modem to factory default profile 0
Z4	Resets modem to factory default profile 1
Z5	Resets modem to factory default profile 2

MODIFY RESPONSES	
Type:	Configuration
Format:	AT [cmds] &A*n* [cmds]
Description:	Selects the modify responses
Command	**Function**
í &A0	ARQ result codes disabled
&A1	Append/ARQ to word CONNECT responses when an error-correction connection is made
&A2	Append additional V.32 indicator in result codes for calls at or above 4800bps
&A3	Append Protocol of call: /LAPM, /MNP or NONE and V.42bis/MNP5

DTE INTERFACE SPEED	
Type:	Configuration
Format:	AT [cmds] &B*n* [cmds]
Description:	Controls the DTE interface speed
Command	**Function**
í &B0	Serial speed follows connect speed
&B1	Serial speed locked
&B2	In answer mode, fix serial port speed for ARQ calls and change it for non-ARQ calls

DATA TERMINAL READY (DTR)	
Type:	Configuration
Format:	AT [cmds] &D*n* [cmds]
Description:	Selects modem response to DTR
Note: The action each variant of &D causes depends on the setting of &Q	
Command	**Function**
í &D0	Modem does not respond to DTR
&D1	Modem goes to command mode after DTR goes is off
&D2	Modem goes to command mode and disconnects (hangs up) after DTR goes off; Auto-Answer is disabled.

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FACTORY DEFAULT PROFILE	
Type:	Configuration
Format:	AT [cmds] &F [cmds]
Description:	Sets values in active profile to values found in the default profile
Command	**Function**
í &F0	Restore factory configuration: X1 &A1, &B0, &I0, &R1
&F1	Restore factory profile 1 (hardware flow control)
&F2	Restore factory profile 2 (software flow control)

FLOW CONTROL	
Type:	Configuration
Format:	AT [cmds] &H*n* [cmds]
Description:	Sets the flow control
Command	**Function**
í &H0	Flow control disabled
&H1	Hardware flow control enabled
&H2	Software flow control enabled
&H3	Hardware and software flow control enabled

XON/XOFF FLOW CONTROL	
Type:	Configuration
Format:	AT [cmds] &I*n* [cmds]
Description:	Sets the XON/XOFF flow control pass through
Command	**Function**
í &I0	XON/XOFF flow control disabled
&I1	XON/XOFF signals processed to modem and remote system
&I2	XON/XOFF signals processed to modem only

DATA COMPRESSION	
Type:	Configuration
Format:	AT [cmds] &K*n* [cmds]
Description:	Controls the V.42bis and MNP Class 5 data compression
Command	**Function**
&K0	Data compression disabled
&K1	Data compression enabled if the DTE data rate is higher than the link rate and the remote DCE either supports MNP 5 of V.42bis
&K2	Data compression enabled
&K3	V.42bis data compression only

OPERATING MODE	
Type:	Configuration
Format:	AT [cmds] &M*n* [cmds]
Description:	Selects operating mode
Command	**Mode**
&M0	Normal mode
í &M4	Auto-reliable mode
&M5	MNP reliable mode

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DCE LINK RATE	
Type:	Configuration
Format:	AT [cmds] &N*n* [cmds]
Description:	Selects the DCE link rate
Command	**Function**
í &N0	Variable rate
&N1	Attempt at 300bps connection
&N2	Attempt at 1200bps connection
&N3	Attempt at 2400bps connection
&N4	Attempt at 4800bps connection
&N5	Attempt at 7200bps connection
&N6	Attempt at 9600bps connection
&N7	Attempt at 12000bps connection
&N8	Attempt at 14400bps connection
&N9	Attempt at 16800bps connection
&N10	Attempt at 19200bps connection
&N11	Attempt at 21600bps connection
&N12	Attempt at 24000bps connection
&N13	Attempt at 26400bps connection
&N14	Attempt at 28800bps connection
&N15	Attempt at 31200bps connection
&N16	Attempt at 33600bps connection
&N17	Attempt at 32000bps connection
&N18	Attempt at 36000bps connection
&N19	Attempt at 40000bps connection
&N20	Attempt at 44000bps connection
&N21	Attempt at 48000bps connection
&N22	Attempt at 49333bps connection
&N23	Attempt at 50666bps connection
&N24	Attempt at 52000bps connection

PULSE RATIO	
Type:	Configuration
Format:	AT [cmds] &P*n* [cmds]
Description:	Selects the pulse make/break ratio
Command	**Mode**
í &P0	39/61ms at 10pps (North America)
&P1	33/67ms at 10pps (Europe)

DATA SET READY (DSR)	
Type:	Configuration
Format:	AT [cmds] &S*n* [cmds]
Description:	Selects DSR options
Command	**Function**
&S0	DSR forced high
í &S1	DSR high only while modem is handshaking or connected

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DCE LINK FLOOR	
Type:	Immediate
Format:	AT [cmds] &U*n*
Description:	Selects the DCE link rate floor
Command	**Function**
&U0	Disable
&U1	300bps
&U2	1200bps
&U3	2400bps
&U4	4800bps
&U5	7200bps
&U6	9600bps
&U7	12000bps
&U8	14400bps
&U9	16800bps
&U10	19200bps
&U11	21600bps
&U12	24000bps
&U13	26400bps
&U14	28800bps
&U15	31200bps
&U16	33600bps
&U17	32000bps
&U18	36000bps
&U19	40000bps
&U20	44000bps
&U21	48000bps
&U22	49333bps
&U23	50666bps
&U24	52000bps

STORE ACTIVE PROFILE	
Type:	Configuration
Format:	AT [cmds] &W*n* [cmds]
Description:	Writes the values for the active profile into the non-volatile RAM
Command	**Function**
&W0	Write the S-register values to profile 0
&W1	Write the S-register values to profile 1

BREAK HANDLING	
Type:	Configuration
Format:	AT [cmds] &Y*n* [cmds]
Description:	Controls the break handling
Command	**Function**
í &Y0	Destructive break
&Y1	Expedited destructive option
&Y2	Expedited non-destructive option

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S(status) -REGISTERS

INACTIVITY TIME	
Type:	Register
Format	AT [cmds] S19*n* [cmds]
Default:	0
Range:	0-255
Unit:	1 second
Description:	Sets the maximum duration for inactivity timer

BIT-MAPPED REGISTER S21	
Format	AT [cmds] S21=*n* [cmds]
Default:	10
Range:	0-255
Unit:	.01 second
Description:	Sets the break length character

FLOW CONTROL CHARACTER – XON	
Type:	Register
Format:	AT [cmds] S22=*n* [cmds]
Default:	19
Range:	0-127
Unit:	ASCII
Description:	Sets the character used to represent XON

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