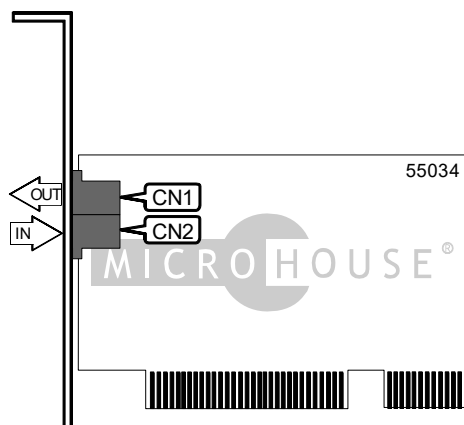


ACTIONTEC ELECTRONICS, INC.

DESKVOICE PRO 56K

Card Type	Modem, Fax
Chip Set	Unidentified
Maximum Modem Rate	56Kbps
Maximum Fax Rate	14.4Kbps
Data Modulation Protocol	Bell 103A/212A
	ITU-T V.21, V.22, V.22bis, V.23, V.32, V.32bis, V.34, V.90
Fax Modulation Protocol	ITU-T V.17, V.27ter, V.29
Error Correction/Compression	MNP5, V.42, V.42bis
Fax Class	Unidentified
Data Bus	32-bit PCI
Card Size	Half-length, half-height card



CONNECTIONS			
Function	Label	Function	Label
Line out (RJ-11)	CN1	Line in (RJ -11)	CN2

SUPPORTED COMMAND SET	
Basic AT Commands	
AT, '+++', A/	
A, C, E, H, M, P, Q, T	
&C, &F, &G, &V, &Z	
Extended AT Commands	
\A, \B, \J, \K, \T, \X	
Special Commands	
-C	
S Registers	
S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S24, S30, S91, S92	
Note: See MHI Help File for full command documentation.	

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Proprietary AT Command Set

AUTO-MODE DETECTION	
Type:	Configuration
Format:	AT [cmds] Nn [cmds]
Description:	Selects various options for the automatic detection and negotiation of protocols during the handshake process if the modem is communicating with a remote modem of dissimilar speed.
Command	Function
N0	Auto-mode detection disabled
í N1	In originate mode, handshake begins at line speed designated by the S37 register. Modem can shift to a slower speed if necessary.

AUXILIARY RELAY	
Type:	Configuration
Format:	AT [cmds] &Jn [cmds]
Description:	Auxiliary relay option
Command	Mode
í &J0	Always open

COMMUNICATION PROTOCOLS	
Type:	Configuration
Format:	AT [cmds] Bn [cmds]
Description:	Selects the communication protocol for data calls
Note: The B command allows the simultaneous selection of more than one suffix, enabling multiple protocols.	
Command	Protocol
B0	ITU-T V.22 at 1200bps
B1	Bell 212A at 1200bps
B2	Unselect V.23 reverse channel
B3	Unselect V.23 reverse channel
B15	V.21 at 300bps
B16	Bell 103J at 300bps

COMMUNICATIONS MODE	
Type:	Configuration
Format:	AT [cmds] &Mn [cmds]
Description:	Selects communications mode
Command	Mode
í &M0	Asynchronous mode

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COMMUNICATIONS MODE	
Type:	Configuration
Format:	AT [cmds] &Qn [cmds]
Description:	Selects communications mode options
Command	Mode
i &Q0	Asynchronous mode, serial port speed follows connect speed.
&Q5	Buffered error correction mode
&Q6	Buffered asynchronous mode
&Q8	MNP error control mode
&Q9	V.42 or MNP error control mode

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

DATA TERMINAL READY (DTR)	
Type:	Configuration
Format:	AT [cmds] &Dn [cmds]
Description:	Selects modem response to DTR
Command	Function
i &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.
&D3	Modem is initialized after DTR goes off

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DIAL	
Type:	Immediate
Format:	AT [cmds] D<#> [cmds]
Description:	Dials telephone number according to any modifiers included in the string
Note:	Any combination of modifiers can be used to produce the desired dial functions in sequence.
Command	Function
DL	Re-dial last number
DP	Pulse dialing enabled
DS=n	Dial stored telephone number <i>n</i>
DT	Tone dialing enabled/Pulse dialing disabled
DW	Dialing resumed following dial tone detection
D,	Dialing paused for amount of time specified in S8 register
D^	Disable data calling tone transmission
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\$	Wait for prompt tone detection function enabled. Waits for prompt tone for amount of time specified by the S7 command.
D;	Modem returned to idle state after dialing. The semicolon can only be placed at the end of the dial command.

ECHOPLEX VALIDITY	
Type:	Configuration
Format:	AT [cmds] Fn [cmds]
Description:	Selects whether commands sent while in data mode are echoed
Command	Function
F1	Echoplex disabled

FLOW CONTROL	
Type:	Configuration
Format:	AT [cmds] &Kn [cmds]
Description:	Enables flow control options
Command	Function
&K0	Flow control disabled
i &K3	RTS/CTS flow control enabled
&K4	XON/XOFF flow control enabled

LONG SPACE DISCONNECT	
Type:	Configuration
Format:	AT [cmds] Yn [cmds]
Description:	Commands the modem to disconnect after a 1.6 second break is detected
Command	Function
Y0	Long space disconnect function disabled

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ON-LINE	
Type:	Immediate
Format:	AT [cmds] On [cmds]
Description:	Controls on-line command (data transmission) state options.
Note: The O command must be placed at the end of the command string.	
Command	Function
O0	On-line command mode with no retraining enabled
O1	On-line command mode with retraining enabled
O3	Issue rate renegotiation before returning to online data mode

PULSE DIALING RATIO	
Type:	Configuration
Format:	AT [cmds] &Pn [cmds]
Description:	Selects pulse dial make/break ratio
Command	Function
&P0	39/61ms at 10pps (North America)
i &P1	33/67ms at 10pps (Europe)
&P2	33/67ms at 20pps

REPORT INFORMATION	
Type:	Immediate
Format:	AT [cmds] In [cmds]
Description:	Displays information requested
Command	Function
I0	Reports modem firmware revision number and speed
I1	Reports ROM checksum
I2	Tests and reports ROM checksum
I3	Reports the default speed and the controller firmware version
I4	Reports data pump firmware version
I5	Reports the board ID: software version, hardware version, and country ID
I6	Reports OK
I7	Reports OK
I8	Reports OK
I9	Reports country code
I11	Reports diagnostic information for last connection

RESTORE PROFILE ON POWER-UP	
Type:	Configuration
Format:	AT [cmds] &Yn [cmds]
Description:	Restores a selected profile into the active profile on power-up (hard reset)

RESULT CODE FORMAT	
Type:	Configuration
Format:	AT [cmds] Vn [cmds]
Description:	Selects word or numeric format for information-text and result codes
Command	Function
V1	Verbose (word) format enabled

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SELECT CALL PROGRESS RESULT CODES	
Type:	Configuration
Format:	AT [cmds] Xn [cmds]
Description:	Enables selection of tone detection and associated result code format options
Command	Function
X0	Busy and dial tone detection disabled; result codes 0 - 4 enabled.
X1	Busy and dial tone detection disabled; result codes 0 - 5 & 10 enabled.
X2	Busy tone detection disabled, dial tone detection enabled; result codes 0 - 6 & 10 enabled.
X3	Busy tone detection enabled, dial tone detection disabled; result codes 0 - 5, 7 & 10 enabled.
X4	Busy and dial tone detection enabled; result codes 0 - 7 & 10 enabled.
X5	Busy and dial tone detection enabled; result codes 0 - 7 & 10 enabled.
X6	Busy and dial tone detection enabled; result codes 0 - 7 & 10 enabled.
X7	Busy and dial tone detection enabled; result codes 0 - 7 & 10 enabled.

SOFT RESET	
Type:	Immediate
Format:	AT [cmds] Zn [cmds]
Description:	Restores modem profiles previously saved in non-volatile RAM using the &W command.
Command	Function
Z0	Restore setting 0
Z1	Restore setting 0

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

STORE ACTIVE PROFILE	
Type:	Configuration
Format:	AT [cmds] &Wn [cmds]
Description:	Writes the values for the active profile into the non-volatile RAM

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TEST MODES	
Type:	Immediate
Format:	AT [cmds] &T <i>n</i>
Description:	Selects test options
Command	Function
&T0	End current test
&T1	Begin local analog loopback test
&T3	Begin local digital loopback
&T6	Request remote digital loopback

V.32 - AUTO-RETRAIN	
Type:	Configuration
Format:	AT [cmds] &B <i>n</i> [cmds]
Description:	Controls auto-retrain function if poor line quality is detected
Command	Function
&B1	Auto-retrain enabled if line quality is poor

Extended Result Codes

BLACKLIST	
Type:	Configuration
Format:	AT [cmds] %B [cmds]
Description:	View numbers in blacklist

COMPRESSION	
Type:	Configuration
Format:	AT [cmds] %C <i>n</i> [cmds]
Description:	Selects data compression
Command	Function
%C0	Data compression disabled
%C1	V42bis enabled

CONNECT MODE	
Type:	Configuration
Format:	AT [cmds] \N <i>n</i> [cmds]
Description:	Controls the type of connection the modem will operate in
Command	Function
\N0	Normal mode enabled
\N1	Direct mode enabled
\N2	Reliable mode enabled
í \N3	V.42, MNP or buffer
\N4	V.42 reliable mode enabled
\N5	V.42, MNP or buffer
\N7	V.42, MNP or buffer

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DATA CALLING TONE	
Type:	Configuration
Format:	AT [cmds] -C <i>n</i> [cmds]
Description:	Controls the data calling tone
Command	Function
í -C0	Disable data calling tone
-C1	Enable data calling tone

EXTENDED RESULT CODES	
Type:	Configuration
Format:	AT [cmds] \V <i>n</i> [cmds]
Description:	Selects extended result codes
Command	Function
\V0	Extended result codes disabled
\V1	Extended result codes enabled
\V2	Extended result codes enabled

FLOW CONTROL	
Type:	Configuration
Format:	AT [cmds] \G <i>n</i> [cmds]
Description:	Selects modem port flow control
Note: Command performs no function; included for compatibility only	

FLOW CONTROL TYPE	
Type:	Configuration
Format:	AT [cmds] \Q <i>n</i> [cmds]
Description:	Sets type of flow control used by modem
Command	Function
\Q0	Flow control disabled
\Q1	Bidirectional XON/XOFF flow control enabled
\Q2	CTS flow control by DCE enabled, command not supported
í \Q3	Bidirectional RTS/CTS flow control enabled

LINE-TO-LINE LOOPBACK	
Type:	Configuration
Format:	AT [cmds] &&L <i>n</i> [cmds]
Description:	Provides a loopback for line-to-line

MNP - STREAM/BLOCK MODE	
Type:	Configuration
Format:	AT [cmds] \L <i>n</i> [cmds]
Description:	Selects the transfer mode for MNP link
Command	Function
\L0	Stream mode for MNP enabled
\L1	Block mode for MNP enabled

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RING INDICATOR	
Type:	Configuration
Format:	AT [cmds] \Rn [cmds]
Description:	Controls the ring indicator signal
Note: Command is included for compatibility, and performs no function.	

WRITE TO/READ FROM REGISTER	
Type:	Configuration
Format:	AT [cmds] &&Cn [cmds]
Description:	Controls the write to/read from character

WRITE TO/READ FROMD DSP RAM LOCATION	
Type:	Configuration
Format:	AT [cmds] &&Rn [cmds]
Description:	Sets the write to/read from DSP RAM location

Special Commands

DOWNSTREAM RATE CONTROL	
Type:	Configuration
Format:	AT [cmds] -V90=n [cmds]
Description:	Controls the downstream rate
Command	Function
-V90=0	V.90 disabled
-V90=1	Auto rate
-V90=2	28000bps
-V90=3	29333bps
-V90=4	30666bps
-V90=5	32000bps
-V90=6	33333bps
-V90=7	34666bps
-V90=8	36000bps
-V90=9	37333bps
-V90=10	38666bps
-V90=11	40000bps
-V90=12	41333bps
-V90=13	42666bps
-V90=14	44000bps
-V90=15	45333bps
-V90=16	46666bps
-V90=17	48000bps
-V90=18	49333bps
-V90=19	50666bps
-V90=20	52000bps
-V90=21	53333bps

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S(status) -REGISTERS

56K DIAL LINE RATE		
Type:	Register	
Format	AT [cmds] S38= <i>n</i> [cmds]	
Description:	Sets the maximum allowable data exchange rate attempted during handshake process.	
Command	Function	
í S38=0	K56flex disabled	
S38=1	K56flex autorate	
S38=2	32000bps	
S38=3	34000bps	
S38=4	36000bps	
S38=5	38000bps	
S38=6	40000bps	
S38=7	42000bps	
S38=8	44000bps	
S38=9	46000bps	
S38=10	48000bps	
S38=11	50000bps	
S38=12	52000bps	
S38=13	54000bps	
S38=14	56000bps	

AUTOMODE		
Format	AT [cmds] S43= <i>n</i> [cmds]	
Default:	1	
Range:	0-1	
Description:	This command used for testing and debugging only	
Command	Function	
S43=0	Automode disabled	
S43=1	Automode enabled	

BIT-MAPPED REGISTER S14		
Format:	AT [cmds] S14= <i>n</i> [cmds]	
Default:	8	
Range:	0-174	
Unit:	Bit-mapped	
Description:	Controls echo, result codes and display, dial mode, and answer/originate mode.	
Bit	Value	Function
0 - 2		Reserved
3	0	Display result codes in numeric format
	í 1	Display result codes in verbose format
6	í 0	10 PPS
	1	20 PPS
7		Reserved

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BIT-MAPPED REGISTER S21		
Format	AT [cmds] S21= <i>n</i> [cmds]	
Default:	48	
Range:	Unidentified	
Unit:	Bit-mapped	
Description:	Indicates the status of command options	
Bit	Value	Function
0 - 2		Reserved
4, 3	0	&D0 selected
	1	&D1 selected
	2	&D2 selected
	3	&D3 selected
5	0	&C0 selected
	1	&C1 selected
6, 7		Reserved

BIT-MAPPED REGISTER S22		
Format	AT [cmds] S22= <i>n</i> [cmds]	
Default:	Unidentified	
Range:	0-255	
Unit:	Bit-mapped	
Description:	Indicates the status of command options	
Bit	Value	Function
3 - 0		Reserved
6 - 4	0	Busy and dial tone detection disabled; result codes 0 - 4 enabled.
	4	Busy and dial tone detection disabled; result codes 0 - 5 & 10 enabled.
	5	Busy tone detection disabled, dial tone detection enabled; result codes 0 - 6 & 10 enabled
	6	Busy tone detection enabled, dial tone detection disabled; result codes 0 - 5, 7 & 10 enabled
	7	Busy and dial tone detection enabled; result codes 0 - 7 & 10 enabled
7	0	39/61ms at 10pps (North America)
	1	33/67ms at 10pps (Europe)

BIT-MAPPED REGISTER S28		
Format	AT [cmds] S28= <i>n</i> [cmds]	
Default:	unidentified	
Range:	0-255	
Unit:	Unidentified	
Description:	Enabled V.34 modulation	
Value		Function
0		Disable
1-255		Enable

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BIT-MAPPED REGISTER S40	
Format	AT [cmds] S40= <i>n</i> [cmds]
Default:	0
Range:	0-2
Unit:	Bit-mapped
Description:	Controls ETC startup autorating
Command	Function
í S40=0	Startup with normal autorating
S40=1	Startup with initial rate of 4800 or below
S40=2	Start up at initial rate of 9600bps or below

DATA CALLING TONE	
Type:	Register
Format	AT [cmds] S35= <i>n</i> [cmds]
Description:	Controls the data calling tone
Command	Function
S36=0	Disabled
S36=1	Enabled

DCE LINE SPEED	
Type:	Register
Format	AT [cmds] S37= <i>n</i> [cmds]
Description:	Sets the maximum allowable data exchange rate attempted during handshake process.
Command	Function
í S37=0	Maximum modem speed
S37=1	Reserved
S37=2	1200/75bps
S37=3	300bps
S37=4	Reserved
S37=5	1200bps
S37=6	2400bps
S37=7	4800bps
S37=8	7200bps
S37=9	9600bps
S37=10	12000bps
S37=11	14400bps
S37=12	16800bps
S37=13	19200bps
S37=14	21600bps
S37=15	24000bps
S37=16	26400bps
S37=17	28800bps
S37=18	31200bps
S37=19	33600bps

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FEATURE NEGOTIATION OPTIONS	
Type:	Register
Format:	AT [cmds] S48= <i>n</i> [cmds]
Description:	Selects active error correction and compression protocols
Command	Function
í S48=7	Detection negotiation and XID negotiation enabled
S48=128	Fall-back to options set in S36

LOCAL PHONE STATUS	
Type:	Register
Format:	AT [cmds] S90= <i>n</i> [cmds]
Description:	Sets the status of the local phone
Command	Function
í S90=0	Local phone on-hook
S90=1	Local phone off-hook

NEGOTIATION FALLBACK	
Type:	Register
Format	AT [cmds] S36= <i>n</i> [cmds]
Description:	Controls the negotiation fallback
Command	Function
S36=0, 2	Hang up
S36=1, 3	Attempt a direct connection
S36=4, 6	Attempt a connection at MNP2-4; if that fails, hang up.
S36=5, 7	Attempt a connection at MNP2-4; if that fails, attempt a direct connection.

SLEEP MODE	
Type:	Register
Format	AT [cmds] S89 <i>n</i> [cmds]
Default:	10
Range:	0, 5-255
Description:	Controls the sleep mode timer

SYNTHETIC RING FREQUENCY	
Type:	Register
Format:	AT [cmds] S33= <i>n</i> [cmds]
Default:	0
Range:	0-5
Unit:	Unidentified
Description:	Specifies a synthetic ring frequency

SYNTHETIC RING VOLUME	
Type:	Register
Format:	AT [cmds] S32= <i>n</i> [cmds]
Default:	16
Range:	Unidentified
Unit:	-1 dB
Description:	Specifies a synthetic ring volume with implied minus sign