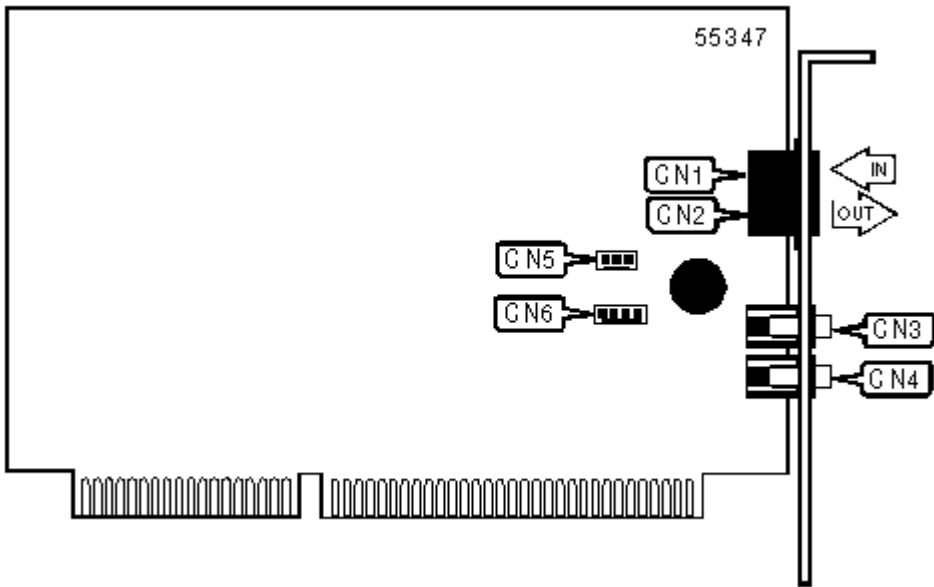


ACER, INC.

MAGIC F56

Card Type	Modem
Chipset	Unidentified
I/O Options	Line in, line out, audio card connector, wake-up ring connector
	microphone in, speaker out
Maximum Modem Rate	56.0Kbps
Maximum Fax Rate	14.4Kbps
Modem Modulation Protocol	Bell 103/212A
	ITU-T V.22bis,V.32, V.32bis, V.34, K56flex
Fax Modulation Protocol	ITU-T V.17, V21 CH2, V27ter, V.29
Fax Class	Class I
Error Correction/Compression	MNP5, V.42, V.42bis
Data Bus	16-bit ISA



CONNECTIONS

Function	Label	Function	Label
Line in (RJ-11)	CN1	Microphone in	CN4
Line out (RJ-11)	CN2	Wake-up ring connector	CN5
Speaker out	CN3	Audio card connector	CN6

SUPPORTED COMMAND SET

Basic AT Commands

- AT, A/
- A, B, E, H, M, O, P, Q, X, Y, Z
- &C, &F, &M, &P, &Q, &R, &T, &V, &W, &Y

Extended AT Commands

IK, IN, IV

%E, %L, %Q

S Registers

S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S16, S18, S21, S24, S25, S29

S30, S31, S32, S33, S38, S91, S92, S95

Special Commands

+MS

Voice Commands

#CLS, #MDL?, #MFL, #REV?, #VBQ, #VBT, #VCI? #VRA, #VRN, #VRX, #VSD

Note:

See MHI Help File for full command documentation.

Proprietary AT Command Set

AUTO-MODE DETECTION

Type:	Configuration	
Format:	AT [cmds] N n [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. Handshake begins at line speed designated by the S37 register
»	N1	Auto-mode detection enabled. Handshake conducted according to the automode algorithm supported by the modem

DATA SET READY (DSR)

Type:	Configuration	
Format:	AT [cmds] &S n [cmds]	
Description:	Selects DSR options	
	Command	Function
	&S0	DSR forced high

&S1 DSR high only while modem is handshaking or connected

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

&Q Setting	&D0	&D1	&D2	&D3
&Q0, &Q5, &Q6	Command 0	Command 1	Command 2	Command 4
&Q1, &Q4	Command 2	Command 1	Command 2	Command 4
&Q2, &Q3	Command 2	Command 2	Command 2	Command 2
Command	Function			
Command 0	Modem does not respond to DTR			
Command 1	Modem goes to command mode after DTR goes is off			
Command 2	Modem goes to command mode and disconnects (hangs up) after DTR goes off; Auto-Answer is disabled.			
Command 3	Modem is initialized after DTR goes off			

FLOW CONTROL

Type: Configuration

Format: AT [cmds] &K *n* [cmds]

Description: Enables flow control options

Command	Function
&K0	Flow control disabled
&K3	RTS/CTS flow control enabled
&K4	XON/XOFF flow control enabled
&K5	Transparent XON/XOFF flow control enabled
&K6	Both RTS/CTS & XON/XOFF flow control enabled

GUARD TONE

Type: Configuration

Format: AT [cmds] &G *n* [cmds]

Description: Commands the modem to transmit a guard tone in V.22/V.22bis

	Command	Function
»	&G0	Guard tone disabled
	&G1	Guard tone disabled
	&G2	1800Hz guard tone enabled

REPORT INFORMATION

Type: Immediate

Format: AT [cmds] I *n* [cmds]

Description: Displays information requested

	Command	Function
	I0	Reports product ID code
	I1	Reports ROM checksum
	I2	Reports "OK"
	I3	Reports firmware revision, model, and interface type
	I4	Reports OEM identifier string in either binary or ASCII format
	I5	Reports country code
	I6	Reports data pump model and internal code

SPEAKER VOLUME

Type: Configuration

Format: AT [cmds] L *n* [cmds]

Description: Controls speaker volume

	Command	Function
	L0	Low volume setting

L1	Low volume setting
L2	Medium volume setting
L3	Highest volume setting

STORE TELEPHONE NUMBER

Type:	Configuration
Format:	AT [cmds] &Z <i>n</i> =(phone # & modifiers)
Description:	Writes selected telephone numbers into the non-volatile memory at location <i>n</i>

Note: The characters described in the D command are valid for use in the &Z command; telephone numbers and modifiers can include up to 34 characters.

Command	Function
&Z0	Telephone number stored in memory location 0
&Z1	Telephone number stored in memory location 1
&Z2	Telephone number stored in memory location 2
&Z3	Telephone number stored in memory location 3

VOICE COMMANDS

DATA/DSVD MODE

Type:	Configuration
Format:	AT [cmds] -SMS= <i>n</i> [cmds]
Description:	Selects data or DSVD mode

	Command	Function
»	-SMS=0	Data mode
	-SMS=2	DSVD mode
	-SMS=3	Automatic mode selection

VOICE DEVICE

Type:	Configuration
Format:	AT [cmds] #VLS= <i>n</i> [cmds]

Description:		Selects the I/O device for the DSP chip.
	Command	Function
»	#VLS=0	Headset used for voice I/O.
	#VLS=6	Speakerphone used for voice I/O.

S(STATUS) -REGISTERS

AUTOSYNC HDLC ADDRESS OR BSC SYNC CHARACTER

Type:	Register
Format	AT [cmds] S20= <i>n</i> [cmds]
Default:	0
Range:	0-255
Unit:	ASCII
Description:	Selects the autosync HDLC address or BSC character

BIT-MAPPED REGISTER S19

Format	AT [cmds] S19= <i>n</i> [cmds]	
Range:	Unidentified	
Unit:	Bit-mapped	
Description:	Selects BSC/HDLC format, address detection, line coding, and idle indicator	
Bit	Value	Function
0	0	Not used
1	0	BSC
	1	HDLC

2	0	Adress detection enabled
	1	Adress detection disabled
3	0	NRZI coding
	1	NZI coding
4	0	Mark idle
	1	Flag or sync idle

BIT-MAPPED REGISTER S22

Format AT [cmds]
S22= *n*
[cmds]

Range: 0-255

Unit: Bit-mapped

Description: Controls
speaker
volume
and
controls,
limits
results
codes,
and pulse
dial
make/break
ratio.

Bit	Value	Function
1, 0	00	Off volume
	01	Low level volume
	10	Medium level volume
	11	High level volume
3, 2	00	Speaker off
	01	Speaker off on carrier
	10	Speaker always on
	11	Speaker on during handshake
6 - 4	000	Basic result codes only enabled
	100	Basic and connection speed result codes enabled
	101	Basic and connection speed result codes and dialtone detection enabled
	110	All result codes except dialtone detection enabled
	111	All result codes enabled

BIT-MAPPED REGISTER S23

Format AT [cmds]
S23= *n*
[cmds]

Range: 0-189

Unit: Bit-mapped

Description: Grants/denies remote digital loopback, controls DTE rate and parity, and sets guard tone.

Bit	Value	Function
0	0	Remote digital loopback denied
	1	Remote digital loopback allowed
3 - 1	000	Sets serial port speed to 0-300bps
	001	Sets serial port speed to 600bps
	010	Sets serial port speed to 1200bps
	011	Sets serial port speed to 2400bps
	100	Sets serial port speed to 4800bps
	101	Sets serial port speed to 9600bps
	110	Sets serial port speed to 19.2Kbps
	111	Sets serial port speed to 38.4Kbps or higher
5, 4	00	Parity even
	01	Space Parity
	10	Parity odd
	11	Mark or No Parity
7, 6	00	Guard tone disabled
	01	Guard tone 550Hz enabled
	10	Guard tone 1800Hz enabled

BIT-MAPPED REGISTER S27

Format AT [cmds]
S27= *n*
[cmds]

Range: 0-111

Unit: Bit-mapped

Description: Selects synchronous/asynchronous mode, line type, clock source, and ITU-T/Bell modes.

Bit	Value	Function
6	0	ITU/T mode
	1	Bell mode

BIT-MAPPED REGISTER S40

Format AT [cmds]
S40= *n*
[cmds]

Range: 0-255

Unit: Bit-mapped

Description: Controls power level and break handling; selects MNP extended services, link negotiation, and block size.

Bit	Value	Function
0, 1	00	MNP Extended Services disabled
	01	MNP Extended Services enabled
	11	MNP extended services enabled without indicating MNP on the answer detection phase.
2	0	Power level adjustment enabled
	1	Power level adjustment disabled

5, 3	000	ATK0
	001	ATK1
	010	ATK2
	011	ATK3
	100	ATK4
	101	ATK5
7, 6	00	MNP block size is 64 characters
	01	MNP block size is 128 characters
	10	MNP block size is 192 characters
	11	MNP block size is 256 characters

BIT-MAPPED REGISTER S41

Format	AT [cmds] S41= <i>n</i> [cmds]	
Range:	0-31	
Unit:	Bit-mapped	
Description:	Selects compression, auto-retrain, flow control, and MNP mode.	
Bit	Value	Function
1 - 0	00	Data compression disabled
	01	MNP5 enabled
	10	V.42bis enabled
	11	MNP5 and V.42bis enabled
2	00	Auto-retrain disabled
	01	Auto-retrain enabled
	10	Auto-fallback/fall-forward enabled
3	0	Flow control disabled
	1	Flow control enabled
4	0	Stream mode for MNP
	1	Block mode for MNP
6, 5	0	Not used

7	0	Fallback to V.22/V.22bis disabled
	1	Fallback to V.22/V.22bis enabled

BIT-MAPPED REGISTER S201

Format	AT [cmds] S41= <i>n</i> [cmds]
Range:	Unidentified
Unit:	Bit-mapped
Description:	Controls cellular transmit level

Bit	Value	Function
4 - 0	00	Initial cellular power lever setting disabled
	01	Initial cellular power lever setting enabled
5	00	Compromise equalizer disabled
	01	Compromise equalizer enabled
6, 7	0	Not used

BREAK OPTIONS

Type:	Register
Format	AT [cmds] S82= <i>n</i> [cmds]
Description:	For compatibility purposes only. Performs no function

CONNECTION FAILURE CODES

Type:	Register
Format	AT [cmds] S86? [cmds]
Description:	Reports codes which correspond to the possible causes of a connection failure
Value	Meaning
0	Normal hang up
4	Carrier signal lost

5	No error-control detected for remote modem during feature negotiation
9	No common protocol found
12	No failure - remote modem disconnected normally
13	Remote modem failed to respond after 10 re-transmissions same message
14	Violation of negotiated protocol caused failure

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
S37=0	Speed of last connection
S37=1	300bps
S37=2	300bps
S37=3	300bps
S37=5	V.22 at 1200bps
S37=6	V.22bis at 2400bps
S37=7	V.23
S37=8	V.32 or V.32bis at 4800bps
S37=9	V.32 or V.32bis at 9600bps
S37=10	V.32bis at 12.0Kbps
S37=11	V.32bis at 14.4Kbps
S37=12	V.32bis at 7200bps
S37=15	VFC at 14.4Kbps
S37=16	VFC at 16.8Kbps
S37=17	VFC at 19.2Kbps
S37=18	VFC at 21.6Kbps

S37=19	VFC at 24.0Kbps
S37=20	VFC at 24.6Kbps
S37=21	VFC at 28.8Kbps

ERROR CORRECTION/COMPRESSION

Type:	Register
Format:	AT [cmds] S46= <i>n</i> [cmds]
Description:	Selects active error correction and compression protocols

Command	Function
S46=136	LAP-M only, no compression
S46=138	LAP-M with V.42bis data compression

ERROR CORRECTION NEGOTIATION

Type:	Register
Format	AT [cmds] S36= <i>n</i> [cmds]
Description:	Selects the action of the modem if it fails to connect with the error-correction protocol set in &Q.

Command	Function
S36=0	Hang up
S36=1	Attempt a direct connection
S36=3	Attempt a buffered connection
S36=4	Attempt a connection at MNP2-4; if that fails, hang up.
S36=5	Attempt a connection at MNP2-4; if that fails, attempt a direct connection.
S36=7	Attempt a connection at MNP2-4; if that fails, attempt a buffered connection.

FEATURE NEGOTIATION OPTIONS

Type:	Register
Format:	AT [cmds] S48= <i>n</i> [cmds]
Description:	Selects active error correction and compression protocols

Command	Function
S48=0	Detection negotiation disabled, XID negotiation disabled
S48=7	Detection negotiation and XID negotiation enabled
S48=128	Fall-back to options set in S36

FLOW CONTROL

Type:	Register
Format	AT [cmds] S39? [cmds]
Description:	Displays the current flow control

Value	Meaning
0	Flow control disabled
3	RTS/CTS flow control enabled
4	XON/XOFF flow control enabled
5	Transparent XON/XOFF flow control enabled
6	Both RTS/CTS & XON/XOFF flow control enabled