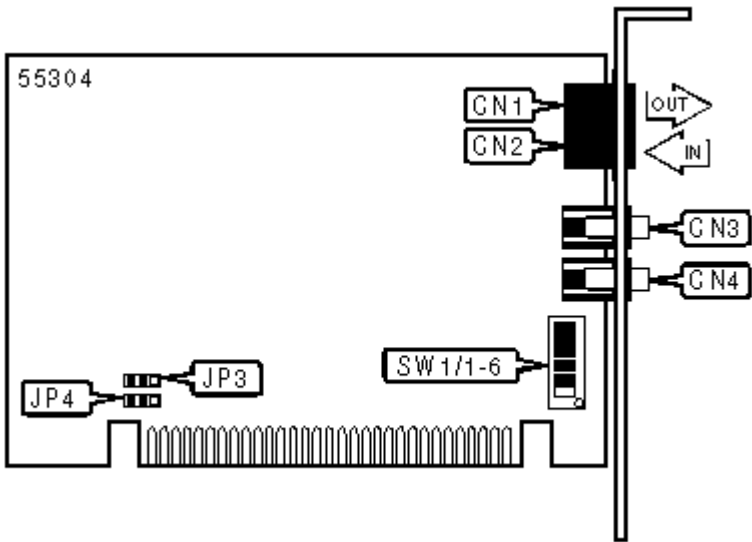


WS-5614JS3/ES3 (INTERNAL)

Card Type	Modem
Chip Set	Unidentified
I/O Options	Line out, line in, speaker out, microphone in
Maximum Modem Rate	56Kbps
Maximum Fax Rate	14.4Kbps
Data Modulation Protocol	Bell 103/212A
	ITU-T V.22, V.22bis, V.32, V.32bis, V.34, 56Kflex
Fax Modulation Protocol	ITU-T V.17, V.21 CH.2, V.27ter, V.29
Error Correction/Compression	MNP5, V.42, V.42bis
Fax Class	Class I
Data Bus	8-bit ISA



CONNECTIONS

Function	Label	Function	Label
Line out (RJ-11)	CN1	Speaker out	CN3
Line in (RJ-11)	CN2	Microphone in	CN4

PLUG & PLAY

Setting	JP3	JP4
■ Plug & play enabled	Pins 1 & 2 closed	Pins 1 & 2 closed
Plug & play disabled	Pins 2 & 3 closed	Pins 2 & 3 closed

SERIAL PORT ADDRESS

Setting	SW1/1	SW1/2
COM1 (3F8h)	On	On
COM2 (2F8h)	Off	On

COM3 (3E8h)	On	Off
COM4 (2E8h)	Off	Off

INTERRUPT

IRQ	SW1/3	SW1/4	SW1/5	SW1/6
2	On	Off	Off	Off
3	Off	On	Off	Off
4	Off	Off	On	Off
5	Off	Off	Off	On

SUPPORTED COMMAND SET

Basic AT Commands

AT, **■**+++**■**, A/

A, B, E, H, V

&C, &M, &P, &T, &V, &W, &X, &Y, &Z

Extended AT Commands

%C, %E, %L, %Q

\\A, \\B, \\K, \\N

Special Commands

S Registers

S0, S1, S2, S3, S4, S5, S6, S7, S8, S9,S10, S11, S12, S14, S16, S18, S21, S22, S23, S24, S25

S26, S27, S29, S30, S31, S32, S33, S36, S37, S38, S39, S40, S41, S46, S48, S82, S91, S92, S95

Note: See MHI Help File for full command documentation.

PROPRIETARY AT COMMAND SET

COMMUNICATIONS MODE

Type: Configuration

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

Description: Selects communications mode options

Command	Mode
&Q0	Asynchronous mode, serial port speed follows connect speed.
&Q1	Asynchronous off-line command mode and synchronous connect mode.
&Q2	Asynchronous off-line command mode - modem autodialed first number in directory, then synchronous connect mode.
&Q3	Asynchronous off-line command mode on low DTR, synchronous connect mode on high DTR.
■ &Q5	Error correction mode
&Q6	Buffered asynchronous mode

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

Command	Mode
&D0	DTR ignored
&D1	DTR toggle causes online command mode
■ &D2	DTR toggle causes modem to go on-hook
&D3	Modem reset on DTR toggle

DIAL

Type:	Immediate
Format:	AT [cmds] D<#> [cmds]
Description:	Dials telephone number according to any modifiers included in the string

FACTORY DEFAULT PROFILE

Type:	Configuration
Format:	AT [cmds] &F [cmds]
Description:	Sets values in active profile to values found in the default profile
&F0	Load factory configuration 0
&F1	Load factory configuration 1

FLOW CONTROL

Type:	Configuration
Format:	AT [cmds] &K <i>n</i> [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 <i>n</i> [cmds]
Description:	Commands the modem to transmit a guard tone in V.22/V.22bis

Note: Used primarily for international data transmission

Command**Function**

■ &G0	Guard tone disabled
&G1	550Hz guard tone enabled
&G2	1800Hz guard tone enabled

REPORT INFORMATION

Type:	Immediate
Format:	AT [cmds] <i>ln</i> [cmds]
Description:	Displays information requested

Command**Function**

I0	Reports modem model and speed
I1	Reports ROM checksum
I2	Tests and reports ROM checksum
I3	Reports product ID string
I6	Reports diagnostic information
I7	Reports product configuration

RESTORE PROFILE ON POWER-UP

Type:	Configuration
Format:	AT [cmds] <i>Yn</i> [cmds]
Description:	Restores a selected profile to default profile on power-up (hard reset)

Command**Function**

■ Y0	Restore stored profile 0 on power-up
Y1	Restore stored profile 1 on power-up
Y2	Load factory default configuration 0 on power-up
Y3	Load factory default configuration 1 on power-up
Y4	Load factory default configuration 2 on power-up

RTS/CTS

Type: Configuration

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

Description: Selects RTS/CTS options

Command	Function
&R0	CTS follows RTS in data mode; RTS is ignored in command mode.
■ &R1	CTS forced high, RTS is ignored.

SOFT RESET

Type: Configuration

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

Description: Restores modem profiles previously stored in non-volatile RAM using the &W command

Command	Function
■ Z1	Restore stored profile 0
Z2	Restore stored profile 1
Z3	Load factory default configuration 0
Z4	Load factory default configuration 1
Z5	Load factory default configuration 2

SPEAKER MODE

Type: Configuration

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

Description: Selects various speaker options

Command	Function
M0	Speaker disabled
M1	Speaker enabled until carrier signal detected

SPEAKER VOLUME

Type: Configuration

Format: AT [cmds] Ln [cmds]

Description: Controls speaker volume

Command	Function
L0	Low volume setting
L1	Low volume setting
■ L2	Medium volume setting
L3	Highest volume setting

EXTENDED AT COMMAND SET

MODULATION SELECTION

Type: Configuration

Format: AT [cmds] +MS=x,y,z,a,b,c [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
x=11	V.34, K56flex
x=64	Bell 103
x=69	Bell 212A
y=0	Automode disabled
y=1	Auto-detect highest speed enabled

<i>z, a=300</i>	Set minimum or maximum transfer rate at 300bps, respectively.
<i>z, a=1200</i>	Set minimum or maximum transfer rate at 1200bps, respectively.
<i>z, a=2400</i>	Set minimum or maximum transfer rate at 2400bps, respectively.
<i>z, a=4800</i>	Set minimum or maximum transfer rate at 4800bps, respectively.
<i>z, a=7200</i>	Set minimum or maximum transfer rate at 7200bps, respectively.
<i>z, a=9600</i>	Set minimum or maximum transfer rate at 9600bps, respectively.
<i>z, a=12000</i>	Set minimum or maximum transfer rate at 12000bps, respectively.
<i>z, a=14400</i>	Set minimum or maximum transfer rate at 14400bps, respectively.
<i>z, a=16800</i>	Set minimum or maximum transfer rate at 16800bps, respectively.
<i>z, a=19200</i>	Set minimum or maximum transfer rate at 19200bps, respectively.
<i>z, a=21600</i>	Set minimum or maximum transfer rate at 21600bps, respectively.
<i>z, a=24000</i>	Set minimum or maximum transfer rate at 24000bps, respectively.
<i>z, a=26400</i>	Set minimum or maximum transfer rate at 26400bps, respectively.
<i>z, a=28800</i>	Set minimum or maximum transfer rate at 28800bps, respectively.
<i>z, a=33600</i>	Set minimum or maximum transfer rate at 33600bps, respectively.
<i>b=0</i>	■ -law encoding
<i>b=1</i>	■ -law encoding
<i>c=0</i>	Robbed bit signaling disabled
<i>c=1</i>	Robbed bit signaling enabled

S(Status) REGISTERS

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 |