Tech Info Library

Modem AT Command Set: S Registers

Revised: 6/14/95
Security: Everyone

Modem AT Command Set: S Registers

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Article Created: 14 June 1995

TOPIC ----------

This article describes the S registers set and retrieved by the modem AT commands.

NOTE: Refer to the TIL articles titled "Modem AT Command Set: Description Part 1/2" and "Modem AT Command Set: Description Part 2/2" for a complete list of the AT commands.

DISCUSSION ----------

The S register descriptions are formatted in the following manner:

S register Function

Default Range Units
Description

S0 Auto answer
---
0 0:255 Number of rings
The S0 register sets auto-answer. If the parameter value is non-zero, auto-answer is enabled at the program level. If the number of rings is zero, auto-answer is disabled at the program level. Auto-answer at the system level is controlled in the Express Modem control panel. The number of rings is also set in the Express Modem control panel. For the S0 setting, values from 1 to 255 are equivalent.

S1 Ring counter
---
0 0:255 Number of rings
The S1 register is cleared if no rings are detected throughout an 8-second interval. S1 is automatically set by the modem.

S2 Escape Character
---
43 <+> 0:127 ASCII Decimal
The S2 register determines the ASCII character to be used as the escape character. The escape sequence is used to force the modem from the online state to the local command state.

S3 Line-termination character
---
13 <CR> 0:127 ASCII Decimal
The S3 register determines the ASCII character to be used as the line-termination character. No matter what value S3 is set to, ASCII 13 is always recognized.

S4 Line-feed character
---
10 <LF> 0:127 ASCII Decimal
The modem returns the ASCII character programmed in the S4 register as the line-feed character when the modem sends response codes to the computer.

S5 Backspace character
---
8 <BS> 0:127 ASCII Decimal
The S5 register determines the ASCII character to be used as the backspace character.

S6 Initial blind dialing wait
---
2 2:255 Seconds
The S6 register determines the number of seconds your modem waits between the time it takes the telephone off-hook and when it actually begins dialing. If the modem is not blind dialing, this register is ignored.

S7 Carrier wait
---
50 1:255 Seconds
The S7 register determines how many seconds the modem waits for a carrier signal from a remote modem after the dial command line is executed, or when answering an incoming call. If your modem does not receive a carrier tone from the remote modem in the specified amount of time, it hangs up and sends the NO CARRIER message.

S8 Pause time
---
2 0:255 Seconds
The S8 register determines the delay time for each comma (,) encountered in the dial command line during the execution of the D (dial) command.

S9 Carrier detect response time
---
6 1:255 1/10 second
The S9 register determines how long the carrier must be present before it is recognized by the modem.

S10 Disconnect timing
---
14 1:255 1/10 second
The S10 register allows you to specify how long an interruption is necessary before the modem interprets the disruption as a loss of carrier and hangs up. If you enter 255, the modem ignores carrier detect status.

S11 Duration and spacing for DTMF dialing
---
95 50:255 Milliseconds
Register S11 is preset and should remain unchanged to ensure correct dialing.

S12 Escape code guard time
---
50 20:255 1/50 second
This value determines the length of time to wait for typing commands before and after issuing the escape sequence, as well as between the escape characters.

S18 Self-test duration
---
0 0:255 Seconds
The S18 register determines the duration of the AT&T diagnostic self-tests. If a non-zero value is chosen, the modem automatically halts the test after the time period specified and returns to command state. You must then issue an AT&T0 to actually exit the test. If S18 is zero, the self-test continues until it is ended by issuing the escape sequence to return to command mode followed by AT&T0.

S36 Negotiation failure treatment
---
5 0/3/4/5 Settings
Specifies action that should be taken when an attempt to connect in error-control mode fails.
0 Attempts V.42 connection. Hangs up if remote modem does not support V.42.
3 Makes asynchronous connection. No error control. Same as AT&Q0.
4 Attempts V.42 connection. If this fails, attempts MNP 2–4 connection. If this fails, hangs up.
5 Attempts V.42 connection. If this fails, attempts MNP 2–4 connection. If this fails, attempts asynchronous connection.

S37 Desired DCE connection speed
---
0 0/3/5:11 Settings
This value is used in conjunction with the ATN and ATB values to determine which modulations are attempted when connecting.
0 Auto-mode Attempts to connect at the highest possible speed.
3 Attempts to connect at 300 bps.
5 Attempts to connect at 1200 bps.
6 Attempts to connect at 2400 bps.
7 Attempts to connect at 4800 bps.
8 Attempts to connect at 7200 bps.

9 Attempts to connect at 9600 bps.
10 Attempts to connect at 12000 bps.
11 Attempts to connect at 14400 bps.

S38 Delay before hang up
---
0 0:254 Seconds
Specifies the delay before hanging up when the user issues the ATH command. When S38 is set to 255, the modem delivers all the data in its buffers before hanging up.

S46 V.42 bis data compression selection
---
138 136/138 Settings
136 V.42 only
138 V.42 with V.42 bis compression

S48 Feature negotiation action
---
7 0/3/7/128 Settings
Selects which error control features are allowed when making connections.
0 Negotiation disabled: try only V.42.
3 Negotiation enabled without detection phase.
7 Negotiation enabled with detection phase.
128 Negotiation disabled: try MNP only. V.42 disabled.

S95 Error control negotiation message option
---
32 4/8/32 Bits
A bit map to enable different result codes. Linked to ATW when ATW=1.

Bit	Value	Meaning
0–1	1	Not used.
2	4	Enables CARRIER messages only.
3	8	Enables CARRIER+PROTOCOL messages only.
4	16	Not used.
5	32	Enables CARRIER+PROTOCOL+ COMPRESSION messages.

S113 Data calling tone
---
0 No data calling tone
1 Enables data calling tone.

Support Information Services

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Tech Info Library Article Number:17946