

## 11. S-REGISTERS

### S-Register Summary

Reg.	(*)	Range	Unit	Def.	Description
S0	*	0-255	RING	00	Ring to answer on
S1		0-255	RING	00	Ring Count
S2	*	0-127	ASCII	43	Escape code character
S3	*	0-127	ASCII	13	Carriage Return character
S4	*	0-127	ASCII	10	Line feed character
S5	*	0-127	ASCII	08	Back space character
S6	*	0-255	1 sec	02	Wait for dial tone
S7	*	0-255	1 sec	45	Wait for data carrier
S8	*	0-255	1 sec	02	Pause time for comma
S9	*	0-40	100 ms	06	Answer tone detection time
S10	*	1-255	100 ms	07	Lost carrier to hang-up delay
S11	*	50-255	1 ms	70	DTMF Dialling speed
S12	*	0-255	20 ms	50	Escape Sequence code guard time
S13	*	---	---	---	Not used
S14	*	0-255	---	170	Bit mapped options register
S15	*	---	---	---	Not used
S16		0-255	---	00	Modem test options register
S17	*	---	---	---	Not used
S18	*	0-255	1 sec	60	Test timer
S19	*	0-255	---	08	Bit mapped options register
S20	*	0-255	---	00	Bit mapped options register
S21	*	0-255	---	04	Bit mapped options register
S22	*	0-255	---	70	Bit mapped options register
S23	*	0-255	---	136	Bit mapped options register
S24	*	0-255	---	07	Bit mapped options register
S25	*	0-255	1 sec	05	Delay to C108 (Sync only)
S26	*	0-255	10 ms	00	C105 (RTS) to C106 (CTS) delay
S27	*	0-255	---	00	Bit mapped options register
S28	*	0-255	1 min	30	LOOKBACK timer
S29	*	0-255	---	72	Bit mapped options

Reg.	(*)	Range	Unit	Def.	Description
S30	*	0-255	---	00	Data mode format; bit mapped register
S31	*	0-255	---	128	Bit mapped options register
S32	*	0-255	---	99	Bit mapped options register
S33	*	0-255	---	00	Bit mapped options register
S34	*	0-255	---	00	DIGICOM internal use
S35	*	0-255	---	00	Bit mapped options
S36	*	0-255	1 sec	255	Inactivity Timer transmitted data
S37	*	0-255	1 sec	255	Inactivity Timer received data
S38	*	0-255	---	00	ATI1 response value
S39	*	0-255	ASCII	17	Flow control ON character for &K and *F commands
S40	*	0-255	ASCII	19	Flow control OFF character for &K and *F commands
S41	*	---	---	---	Not used
S42	*	0-255	1 sec	00	Wait time for callback in backup
S43	*	0-19	---	255	Autologon pointer for callback
S44	*	0-19	---	255	Remote control security sequence pointer
S45	*	1-255	10 ms	200	Length of break signal
S46	*	---	---	00	DIGICOM internal use
S47	*	0-255	1 sec	10	Timer Retrain
S48	*	0-127	ASCII	13	Error Correction fallback character
S49	*	0-255	ASCII	17	User flow control XON character for &U command
S50	*	0-255	ASCII	19	User flow control XOFF character for &U command
S51	*	0-9	---	255	User configuration number with CCONF Off
S52	*	0-9	---	255	User configuration number with CCONF On
S53	*	0-255	1 sec	255	Time-Out for busy modem with C108 Off

Reg.	(*)	Range	Unit	Def.	Description
S54	*	0-255	---	08	Bit mapped options register
S55	*	0-255	---	21	Bit mapped options register
S56	*	0-255	---	32	Bit mapped options register
S57	*	0-255	---	36	Bit mapped options register
S58	*	0-255	---	00	Bit mapped options register
S59	*	0-255	---	00	Bit mapped options register
S60	*	0-9	---	255	Different configuration for dial up line during back-up operations (only for answer modem)
S61	*	0-255	---	03	Number of retrains in S62 sec to disconnect
S62	*	1-255	1 sec	60	Retrain counting
S63	*	0-19	---	00	Pointer for C108/1 control
S64	*	0-255	1 min	05	LL monitor timer
S65	*	0-9	---	9	First configuration pointer for Down -Load
S66	*	0-9	---	255	Second configuration pointer for Down-Load
S67	*	0-255	1 sec	255	Antistreaming timeout on C105
S68	*	0-255	1 sec	30	Time C109 Off with controlled carrier
S69	*	0-33	---	255	V.54 address of modem MASTER
S70	*	0-33	---	255	V.54 address of modem SLAVE
S71	*	---	---	---	Not used
S72	*	---	---	---	Not used
S73	*	0-255	1 sec	60	Fall-Forward Delay
S74-S77	*	---	---	---	Not used
S78	*	0-255	---	00	Bit mapped options register
S79	*	0-255	1min	5	Lamp display timer

(\*) indicates a register stored in the user configurations.

### 11.1. S-REGISTER DESCRIPTION

#### S0      **Ring to Answer On**

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The register set the number of the ring on which the modem will answer an incoming call.

range	units	function
0	RING	disables automatic answer
1-255	RING	enables automatic answer

Default=0

#### S1      **Ring Counter**

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range	units	function
0	RING	no "RING" detected over a 8-second interval
1-255	RING	counts the number of "RING" signals detected on the telephone line

Default=00

#### S2      **ESCAPE Character**

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range	units	function
0-127	ASCII	contains the ASCII value for the escape sequence

Default=43

#### S3      **CARRIAGE RETURN Character**

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range	units	function
0-127	ASCII	stores the ASCII value of the CARRIAGE RETURN character

Default=13

#### S4      **LINE FEED character**

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range	units	function
127	ASCII	stores the ASCII value of the LINE FEED character

Default=10

**S5      BACK SPACE character**


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<b>range</b>	<b>units</b>	<b>function</b>
0-127	ASCII	stores the ASCII value of the BACK SPACE
Default=08		

**S6      Wait for DIAL TONE**


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<b>range</b>	<b>units</b>	<b>function</b>
0-255	sec.	determines how long the modem waits for a dial tone after going off-hook before dialling the first digit of a telephone number
Default=02		

**S7      Wait for DATA CARRIER**


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<b>range</b>	<b>units</b>	<b>function</b>
0-255	sec.	determines how long the modem waits for receipt of remote carrier signal after dialling a call
Default=45		

**S8      Pause Time for Comma**


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<b>range</b>	<b>units</b>	<b>function</b>
0-255	sec.	determines the length of the pause associated with the pause dial modifier inserted in a dial string
Default=02		

**S9      Detection Time for ANSWER TONE**


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<b>range</b>	<b>units</b>	<b>function</b>
0	-	determines the blind call; the modem handshakes immediately after the call.
1-40	100ms	In auto dialling, determines how long the modem waits for ANSWER TONE detection, before handshaking
Default=06		

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**S10      Lost Carrier to Hang-up Delay**

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<b>range</b>	<b>units</b>	<b>function</b>
1-254	100ms	determines the length of time the modem waits before disconnecting from the line after losing the carrier signal from the remote modem
255	100ms	the modem will NOT disconnect for loss of carrier
Default=07		

**S11      DTMF Dialling Speed**

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<b>range</b>	<b>units</b>	<b>function</b>
50-255	1ms	waiting" default value" between each number when dialling
Default=70		

**S12      ESCAPE Code Guard Time**

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<b>range</b>	<b>units</b>	<b>function</b>
0-255	20ms	determines the time delay (guard time) required immediately before, during and after entering the ESCAPE sequence
Default=50		

**S13      Not used**

**S14 Bit Mapped Options Register**

bit	function	command	default
7	0=Answer mode 1=Originate mode	A,R D	*
6	0=Escape enabled 1=Escape disabled	&V0 &V1,&V2	*
5	0=Tone dial 1=Pulse dial	T P	*
4	0=Command mode 1=Dumb mode	&V0,&V1 &V2	*
3	0=Short codes 1=Long codes	V0 V1	*
2	0=On (Result codes) 1=Off(Quiet codes)	Q0 Q1	*
1	0=Echo off 1=Echo on	E0 E1	*
0	0=Not used 1=Not used		*

Default=B'10101010'= H'AA'=170

**S15 Not used**

**S16 Bit Mapped Options Register - Test Options**

bit	function	command	default
7	0=TPG command without Down-Load 1=TPG command with Down-Load	#T6 #T8	*
6	0=Local analog loopback+self test Off 1=Local analog loopback+self test On	&T1 &T8	*
5	0=RDL command + self test Off 1=RDL command + self test On	&T6 &T7	*
4	0=RDL command Off 1=RDL command On	&T0 &T6	*
3	0=RDL not initiated 1=RDL initiated		*
2	0=LDL Off 1=LDL On	&T0 &T3	*
1	0=Not used 1=Not used		*
0	0=Local analog loopback Off 1=Local analog loopback On	&T0 &T1	*

Default=B '00000000' = H'00'=000

**S17 Not used**



**S18 Modem Test Timer**

range	units	function
0	sec.	No limitation for the test time
1-255	sec.	Determines how long the modem diagnostic test will run before the modem terminates it automatically (&T6 and &T8 commands)

Default=60

**S19 Bit Mapped Options Register**

bit	function	command	default
7	0=Buffer with transparent parity on DTE&I0,&I1,&I2 1=Buffer with regenerated parity on DTE &I3		*
6	0=Not used 1=Not used		*
5	0=Not used 1=Not used		*
4	0=Not used 1=Not used		*
3-2	00=Sync V.25bis EVEN parity 01=Sync V.25bis No parity (SPACE parity) 10=Sync V.25bis ODD parity 11=Sync V.25bis MARK parity		*
1-0	00=Async V.25bis EVEN parity 01=Async V.25bis No parity (SPACE parity) 10=Async V.25bis ODD parity 11=Async V.25bis MARK parity		*

Default=B'00001000'= H'08'=008

**S20 Bit Mapped Options Register**

bit	function	command	default
7-6	00=C106 follows C105 in Synch. mode	&R0	*
	01= C106 always On except for retrain	&R1	
	10=C106 always On	&R2	
	11=C106 Not used	&R3	
5	0=BREAK disabled	Y0	*
	1=BREAK enables disconnection	Y1	
4	0=CCONF disabled	*M0	*
	1=CCONF enabled	*M1	
3-0	0000=MNP and LAPM disabled	&E0	*
	0001=as &E8+Autoreliable Buffer	&E1	
	0010=LAPM in AUTORELIABLE mode	&E2	
	0011=LAPM in RELIABLE mode	&E3	
	0100=MNP in AUTORELIABLE mode	&E4	
	0101=MNP in RELIABLE mode	&E5	
	0110=LAPM+ MNP AUTORELIABLE	&E6	
	0111=LAPM+ MNP RELIABLE	&E7	
	1000=Not used	&E8	
	1001=Not used	&E9	
	1010=Not used	&E10	
	1011=Not used	&E11	
	1100=Not used	&E12	
	1101=Not used	&E13	
	1110=Not used	&E14	
	1111=Not used	&E15	

Default=B'00000000'= H'00=000

**S21 Bit Mapped Options Register**

bit	function	command	default
7-5	000=C107 and C109 always On	&C0	*
	001=C107 and C109 controlled	&C1	
	010=C107 always On and C109 controlled	&C2	
	011=C109 always On and C107 controlled	&C3	
	100=C109 Off 2 sec. at disconnection	&C4	
	101=C107/C109 Off 500ms if C108 Off	&C5	
	110=Not used	&C6	
	111=Not used	&C7	
4-3	00=C108 ignored	&D0	*
	01=C108 equivalent to escape sequence	&D1	
	10=C108 Controlled - Handshake in LL	&D2	
	11=C108 equivalent to ATZ (RESET)	&D3	
2	0=RDL disabled	&T5	*
	1=RDL enabled	&T4	
1-0	00=C108 standard	*D0	*
	01=ASYNC C108/1 C106 On in Off-Line	*D1	
	10=ASYNC C108/1 C106 Off in OFF-Line	*D2	
	11=Not used	*D3	

Default=B'00000100'= H'04'=004

**S22 Bit Mapped Options Register**

bit	function	command	default
7	0=39/61 Make/Break ratio 1=33/67 Make/Break ratio	&P0 &P1	*
6-4	000=CONNECTmessage 001=Not used 010=Not used 011=Not used 100=CONNECT xx message 101=CONNECT xx, DIAL TONE test 110=CONNECT xx, BUSY test 111=CONNECT xx,DIAL TONE and BUSY test	X0    X1 X2 X3 X4	    *
3-2	00=Speaker Off 01=Speaker On until carrier detect 10=Speaker On 11=Speaker On until carrier detect; Off for dialling	M0 M1 M2 M3	 *  
1-0	00=Low Speaker volume 01=Low Speaker Volume 10=Medium Speaker volume 11=High Speaker volume	L0 L1 L2 L3	  * 

*4,5,6 bit definition can be described like this:*

6	0=CONNECT message 1=CONNECTxxxx message	X0 X1,X2,X3,X4	*
5	0=BUSY TONE detection disabled 1=BUSY TONE detection enabled	X0,X1,X2 X3,X4	*
4	0=DIAL TONE detection disabled 1=DIAL TONE detection enabled	X0,X1,X3 X2,X4	*

Default=B'01000110' = H'46'=070

**S23 Bit Mapped Options Register**

bit	function	command	default
7-6	00=Guard tone disabled	&G0	*
	01=550Hz Guard tone	&G1	
	10=1800Hz Guard tone	&G2	
	11=Not used		
5-4	00=EVEN parity	AT	*
	01=No parity (SPACE parity)	AT	
	10=ODD parity	AT	
	11=MARK parity	AT	
3-0	0000=Not used		*
	0001=300bps	AT	
	0010=600bps	AT	
	0011=75bps	AT	
	0100=1200bps	AT	
	0101=2400bps	AT	
	0110=4800bps	AT	
	0111=7200bps	AT	
	1000=9600bps	AT	
	1001=1200bps	AT	
	1010=14400bps	AT	
	1011=19200bps	AT	
	1100=28800bps	AT	
	1101=38400bps	AT	
	1110=Not used		
	1111=Not used		

Default=B'10001000'= H'88'=136

**S24 Bit Mapped Options Register**

bit	function	command	default
7-6	00=C140 and C141 disabled	*T0	*
	01=Only C140 enabled (Remote Digital Loopback)	*T1	
	10=Only C141 enabled (Local Analog Loopback)	*T2	
	11=C140 and C141 enabled (Remote Digital and Local Analog Loopback)	*T3	
5-4	00=C107 standard in V.25bis	*P0	*
	01=C107 Wink	*P1	
	10=C107 Follows C109	*P2	
	11=C107 Follows C109 + Wink	*P3	
3	0=Not used		*
	1=Not used		
2-0	000=V.25bis C108/2 ASYNC.	*V0	*
	001=V.25bis C108/1 SYNC/ASYNC. (see AT&M)	*V1	
	010=V.25bis C108/2 HDLC (NRZ-ASCII)	*V2	
	011=V.25bis C108/2 HDLC (NRZ-EBCDIC)	*V3	
	100=V.25bis C108/2 HDLC (NZRI-ASCII)	*V4	
	101=V.25bis C108/2 HDLC (NRZI-EBCDIC)	*V5	
	110=Not used	*V6	
	111= AT mode	*V7	

Default=B'00000111'= H'07'=007

**S25      Delay to C108**

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<b>range</b>	<b>units</b>	<b>function</b>
0-255	sec.	determines the delay after the completion of a call attempt before the modem examines the status of the Data Terminal Ready circuit C108. This Register is used for synchronous applications only (AT&M1 command), allowing time for the operator to disconnect the modem from an asynchronous DTE and reconnect it to a synchronous device without causing the modem to drop the call.
Default=05		

**S26      C105 to C106 Delay**

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<b>range</b>	<b>units</b>	<b>function</b>
0-255	10ms	determines the delay after the modem detects an Off-to-On transition of the Request-to-Send circuit before Clear-to-Send On.
Default=00		

**S27 Bit Mapped Options Register**

bit	function	command	default
7	0=Full Duplex mode (fixed carrier) 1=Half Duplex mode (controlled carrier)	B0 B2	*
6	0=CCITT standard 1=Not used	B0,B2	*
5-4	00=Internal clock timing 01=External clock timing 10=Slave clock timing 11=Not used	&X0 &X1 &X2	*
3-2	00=Dial line 01=2-wire leased line 10=4-wire leased line	&L0 &L1 &L2	*
1-0	00=Asynchronous 01=Synchronous mode 1 10=Synchronous mode 2 11=Synchronous mode 3	&M0 &M1 &M2 &M3	*

Default =B'00000000'=H'00'=000

**S28 Lookback Timer**

range	units	function
0		function disabled
1-255	min.	determines the "lookback" frequency on the leased line when in the dial line back-up condition. The modem will drop the dial line to re-test the leased line.
Default=30		



**S29 Bit Mapped Options Register**

bit	function	command	default
7-6	00=Data compression disabled 01=Compare.(MNP5/LAPM Tx-Rx)enabled 10=Compare.(MNP5/LAPM Tx only) enabled 11=Compare.(MNP5/LAPM Rx only) enabled	*E0 *E1 *E2 *E3	*
5	0=Not used 1=Not used		*
4	0=Remote configuration disabled 1=Remote configuration enabled	#T5 #T4	*
3	0=Clock On at connection 1=Clock always On	*X0 *X1	*
2-1	00=Overspeed standard +1.0%:-2.5% 01=Overspeed +2.3%:-2.5% 10=Overspeed TX+1.0%,RX+2.3% 11=Not used	*O0 *O1 *O2 *O3	*
0	0=Not used 1=Not used		

Default=B'01001000'=H'48'=072

**S30      Data Mode Format Register - UART state**

bit	function	command	default
7	0=Data format set by AUTOBAD 1=Data format set by USER		*
6	0=Not used 1=Not used		*
5-4	00=EVEN parity 01=No parity 10=ODD parity 11=Not used		*
3	0=Not used 1=Not used		*
2	0=1 Stop bit 1=2 Stop bit		*
1-0	00=5 data bit 01=6 data bit 10=7 data bit 11=8 data bit		*

Default=B'00000000'=H'00'=000

**Note**      It determines the character format (asynchronous) that will be sent by DTE to the modem in On-line condition; The 7 data bit determines if the On-line format must be like the format determined by AUTOBAUD or that defined by the following bit. To calculate the range to give to S30 register see the following table:

Data	DTE Setting Parity	Stop	Contents S30
5	No	1	144
5	Even	1	128
5	Odd	1	160
5	Mark	1	148
5	Space1	145	
5	No	2	148
5	Even	2	132
5	Odd	2	164
5	Mark	2	Not possible
5	Space2	149	
6	No	1	145
6	Even	1	129
6	Odd	1	161
6	Mark	1	149
6	Space	1	146
6	No	2	149
6	Even	2	133
6	Odd	2	165
6	Mark	2	Not possible
6	Space	2	150
7	No	1	146
7	Even	1	130
7	Odd	1	162
7	Mark	1	150
7	Space	1	147
7	No	2	150
7	Even	2	134
7	Odd	2	166
7	Mark	2	Not possible
7	Space	2	151
8	No	1	147
8	Even	1	131
8	Odd	1	163
8	Mark	1	151
8	Space1	Not possible	
8	No	2	151
8	Even	2	135
8	Odd	2	167
8	Mark	2	Not possible
8	Space	2	Not possible

**S31 Bit Mapped Options Register**

bit	function	command	default
7	0=I/F constant rate disabled 1=I/F constant rate enabled	&I0 &I1,&I2,&I3	*
6-4	000=Equivalent to S.A. &Y4 001=Equivalent to S.A. &Y5 010=Not used 011=Not used 110=Main data-Main commands 111=Main data-Cmnd commands 110=Cmnd data-Main commands 111=Cmnd data-Cmnd commands	&Y0 &Y1 &Y2 &Y3 &Y4 &Y5 &Y6 &Y7	*
3-0	0000=Line format set by AUTOBAD 0001=300 bps FSK (V.21) 0010=Not used 0011=(see #V) FSK (V.23) 0100=1200 bps PSK (V.22) 0101=2400 bps QAM (V.22bis) 0110=4800 bps QAM (V.32) 0111=7200 bps TCM (V.32bis) 1000=9600 bps TCM (V.32) 1001=12000 bps TCM (V.32bis) 1010=14400 bps TCM (V.32bis) 1011=Not used 1100=Not used 1101=Not used 1110=Not used 1111=Not used	F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13 F14 F15	*

Default=B'10000000'=H'80'=128

**S32 Bit M=apped Options Register**

bit	function	command	default
7	0=Multistandard starting from DTE speed or maximum speed 1=Multistandard following V.32bis Annex A &A2	&A0, &A1	*
6-5	00=DCE Flow control disabled 01=DCE,XON/XOFF Flow control 10=DCE,C106 Flow control 11=DCE,C106 and XON/XOFF Flow control	&K0 &K1 &K2 &K3	*
4	0=Multistandard starting from DTE speed 1=Multistandard starting from maximum speed	&A0, &A2 &A1	*
3	0=CONNECT message (line speed) 1=CONNECT message (I/F speed)	&I0,&I1,&I3 &I2	*
2-1	00=Key board disabled 01=Key board enabled 10=Special, Data->dial 0-3 11=Data/Tel Org	&S0 &S1 &S2 &S3	*
0	0=Auto handshake disabled 1=Auto handshake enabled	&H0 &H1	*

Default=B'01100011'=H'63'=099

**S33 Bit Mapped Options Register**

bit	function	command	default
7-5	000=DTE Flow control disabled	&U0	*
	001=DTE,XON/XOFF Flow control	&U1	
	010=DTE,XON/XOFF->remote Flow ctrl		
	011=Not used	&U3	&U2
	100=DTE and C105 Flow Ctrl	&U4	
	101=DTE,C105 and XON/XOFF flow control	&U5	
	110=DTE,C105 and XON/XOFF->remote Flow ctrl	&U6	*
	111=Not used	&U7	
4	0=Not used		*
	1=Not used		
3	0=Remote Flow control disabled	*F0	*
	1=Remote Flow control enabled	*F1	
2	0=Not used		*
	1=Not used		
1	0=Calling tone disabled	*G0	*
	1=Calling tone enabled	*G1	
0	0=Not Used		*
	1=Not Used		

Default=B'00000000'=H'00'=000

**S34 DIGICOM internal Use**

**S35 Bit Mapped Options Register**

bit	function	command	default
7-6	00=Nonexpedited,Nondestructive BREAK	*Y0	*
	01=Expedited, Destructive BREAK	*Y1	
	10=Expedited, Nondestructive BREAK	*Y2	
	11=Ignored BREAK	*Y3	
5	0=Not used		*
	1=Not used		
4	0=Not used		*
	1=Not used		
3-0	0000=DTE speed determined by AUTOSPEED	*I0	*
	0001=300bps DTE speed	*I1	
	0010=600bps DTE speed	*I2	
	0011=Not used	*I3	
	0100=1200bps DTE speed	*I4	
	0101=2400bps DTE speed	*I5	
	0110=4800bps DTE speed	*I6	
	0111=7200bps DTE speed	*I7	
	1000=9600bps DTE speed	*I8	
	1001=Not used	*I9	
	1010=14400bps DTE speed	*I10	
	1011=19200bps DTE speed	*I11	
	1100=Not used	*I12	
	1101=38400bps DTE speed	*I13	
	1110=Not used	*I14	
	1111=Not used	*I15	

Default=B'00000000'=H'00'=000

**S36 Inactivity Timer Transmitted Data**


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range	units	function
0-254	sec.	determines the length of time the modem waits before disconnecting from the line after the uninterrupted detection of the transmitted data MARK or SPACE
255	sec.	Timer disabled
Default=255		

**S37 Inactivity Timer Received Data**


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range	units	function
0-254	sec.	determines the length of time the modem waits before disconnecting from the line after the uninterrupted detection of the received data MARK or SPACE
255	sec.	Timer disabled
Default=255		

**S38 I3 Response Value**


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range	units	function
0-255	—	determines the response to the I3 command
Default=00		

**S39 Flow Control XON Character**


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range	units	function
0-255	ASCII	stores the XON character used in conjunction with &K and *F commands
Default=17		

**S40 Flow Control XOFF Character**


---

range	units	function
0-255	ASCII8	stores the XOFF character used in conjunction with &K and *F commands
Default=19		

---



**S41 Not used****S42 Wait time for Callback in Back-up**

range	units	function
0	sec	The function is disabled
1-255	sec	Using the Callback feature during a back-up, it is mandatory to set this register, on the originate modem, with a value which permits the modem to be called on a dial-up line. In this way the modem remains in autohandshake mode on the leased line for the time indicated by S7+S42 and is ready to respond to the second ring of the call; expired this time the modem will attempt a new back-up on the dial-up line.

Example: Modem A answer, modem B originate:  
 Functionality: leased line with back-up on switched line. When leased line is fault, modem B call modem A on switched line. After the connection is established modem A disconnect and call back modem B.

Default=00

**S43 CallBack Pointer**

range	units	function
0-19	——	Establishes selection of the memory location the modem uses to initiate a CallBack. The modem has a protection that can be used when in Auto Answer; when the modem has answered a call and completed the handshaking it will cut the communication; it will call back the number stored in the directory location set by S43; it will connect the modem using that number with no possibility of unwanted accesses to the line.
20-254		The call back will be executed looking in the phone number memory for a location which contains the first word received during the connection. One is reminded that is necessary to interrupt the transmission word by "pipe". "Pipe" character must be used only in transmission mode.

Example: It is possible to search digicom world in this way:  
"digicom !".

255 Callback disabled.

Default=255

#### S44 Remote Configuration Autologon Pointer

range	units	function
0-19	—	establishes selection of the memory location for autologon procedure.
20-255		Autologon is disabled; the modem initiates remote access control sending OK.

Default=255

#### S45 Length of BREAK Signal

range	units	function
1-254	10ms	used when Error Corrector is active and determines the length of the BREAK; it is active only if "&En" command is entered.

Default=200

#### S46 DIGICOM internal use

#### S47 Timer Retrain

range	units	function
0-255	1 sec	wait answer of the retrain.

Default=10

#### S48 Error Correction FALLBACK Character

range	units	function
0-127	ASCII	The character in this register is used to disable the Error Correction entered with "&E1" command
255	ASCII	Error correction FALLBACK character is disabled.

Default=13

**S49 User Flow Control XON Character**


---

range	units	function
0-255	ACII	Stores the 8-bit value of the user flow control XON character. Used in conjunction with the &U command.
Default=17		

**S50 User Flow Control XOFF Character**


---

range	units	function
0-255	ASCII	Stores the 8-bit value of the user flow control XOFF character. Used in conjunction with the &U command
Default=19		

**S51 User Configuration Number with CCONF Off**


---

range	units	function
0-9	——	Stores the user configuration pointer when CCONF switches Off
10-255		No configuration is active if CCONF switches Off.
Default=255		

**S52 User Configuration Number with CCONF On**


---

range	units	function
0-9	——	stores the user configuration pointer when CCONF On
10-255		No configuration is active if CCONF switches On
Default=255		

**S53 Time-Out for busy modem with C108 Off**


---

range	units	function
0-254	sec.	if C108 is Off for the time indicated, the modem will engage the line
255	sec.	Disabled
Default=255		

---

**S54 Bit Mapped Options Register**

bit	function	command	default
7	0=Not used 1=Not used		*
6	0=Not used 1=Not used		*
5	0=Not used 1=Not used		*
4-3	00=No /xxx message enabled 01=Only /BUF and /REL messages enabled 10=All /xxx messages enabled 11=Not used	#X0 #X1 #X2	*
2-0	000=Disables dial line back-up 001=Enables dial line back-up 010=Lookback BACKUP with S28 011=Lookback BACKUP with LL monitor 100=Not used 101=Not used 110=Not used 111=Not used	#B0 #B1 #B2 #B3 #B4 #B5 #B6 #B7	*

Default=B'00001000' =H'08'=008

**S55 Bit Mapped Options Register**

bit	function	command	default
7-6	00=Carrier Threshold-43dBm	#L0	*
	01=Carrier Threshold-33dBm	#L1	
	10=Carrier Threshold-26dBm	#L2	
	11=Not used	#L3	
5	0=Half Duplex simulation (V.13) disabled	#H0, #H2	*
	1=Half Duplex simulation (V.13) enabled	#H1	
4	0=B.E.R. standard threshold	#Q0	*
	1=B.E.R. alternative threshold	#Q1	
3-2	00=Trellis Code disabled	#F0	*
	01=Trellis Code enabled	#F1	
	10=Trellis and proprietary enabled	#F2	
	11=Not used	#F3	
1-0	00=No action if very bad line	*Q0	*
	01=Retrain if very bad line	*Q1	
	10=Fallback if very bad line	*Q2	
	11=Disconnection if very bad line	*Q3	

Default=B'00010101'= H'15'=015

**S56 Bit Mapped Options Register**

bit	function	command	default
7	0=Not used 1=Not used		*
6	0=Handshake break enabled 1=Handshake break disabled	#P0 #P1	*
5	0=Detection Phase disabled 1=Detection Phase enabled	#E0 #E1	*
4-3	00=Autoreliable Buffer/Char disabled 01=Only Autoreliable Char enabled 10=Only Autoreliable Buff. enabled 11=Autoreliable Buffer/Char enabled	#A0 #A1 #A2 #A3	*

*If the CCITT standard is V.23 (ATF3)*

2-0	000=V.23 Org=Tx75-Rx1200 Ans=Tx1200-Rx75	#V0	*
	001=V.23 Tx75-Rx1200bps	#V1	
	010=V.23 Tx1200-Rx75bps	#V2	
	011=Not used	#V3	
	100=Not used	#V4	
	101=Not used	#V5	
	110=Not used	#V6	
	111=Not used	#V7	

*If the CCITT standard is V.22bis*

2-0	000=Fallback/forward disabled	#V0	*
	001=Fallback/forward enabled	#V1	
	010=Disconnection	#V2	
	011=Not used	#V3	
	100=Not used	#V4	
	101=Not used	#V5	
	110=Not used	#V6	
	111=Not used	#V7	

Default=B'00100000'= H'20'=032

**S57 Bit Mapped Option Register.**

bit	function	command	default
7	0=Non usato 1=Non usato		*
6-5	00=No XON/XOFF send to DTE	#K0	
	01=XON/XOFF at connection, disconnection and retrain	#K1	*
	10=Not used	#K2	
	11=Not used	#K3	
4-2	000=Master Portante fissa RXZ 600	*J0	*
	001=Master Portante Ctrl RXZ 600	*J1	
	010=Slave Portante Ctrl RXZ 600	*J2	
	011=Slave Portante Ctrl RXZ high	*J3	
	100=Not used	*J4	
	101=Not used	*J5	
	110=Not used	*J6	
	111=Not used	*J7	
1-0	00=No Echo Protector Tone in V27ter	#G0	*
	01=Echo Protector Tone breve	#G1	
	10=Echo Protector Tone lungo	#G2	
	11=Not used	#G3	

Default B'00100000' = H'24' = 036

**S58 Bit Mapped Option Register**

bit	function	command	default
7-5	000=No action	*K0	*
	001=XON/XOFF conn./disc.	*K1	
	010=C106 OFF handshake	*K2	
	011=C106 XON/XOFF conn./disc.	*K3	
	100=C106 OFF in off-line	*K4	
	101=C106 XON/XOFF conn./disc.	*K5	
	110=not used	*K6	
	111=not used	*K7	
4	0=Not used		*
	1=Not used		
3	0=Not used		*
	1=Not used		
2	0=Automatic dial prefix disabled	#W0	*
	1=Automatic dial prefix enabled	#W1	
1-0	00=Acoustic alarm on C105 disabled	#S0	*
	01=Acoustic alarm on C105 enabled	#S1	
	10=Not used	#S2	
	11=Not used	#S3	

Default=B'00000000'= H'00'=000



**S59 Bit Mapped Options Register**

bit	function	command	default
7-3	0=Not used 1=Not used		*
2-0	000=Fixed standard FX	*A0	*
	001=Multistandard according to Digicom's sequence	*A1	
	010=Multistandard according to V32bis Part A	*A2	
	011=Multistandard according to EIA/TIA PN-2330	*A3	
	100=Multistandard within the standard	*A4	
	101=Not used	*A5	
	110=Not used	*A6	
	111=Not used	*A7	

**S60 Switched-Line alternative configuration (only for answer modem).**

range	units	function
0-9	——	Stores the user configuration pointer to activate when BACKUP and LL/SW are enabled and one works in SW; You can enter the right configuration when passing in SW
10-255	——	No configuration will be activated
Default=255		

**S61 Number of Retrain in S62 seconds to disconnect**

range	units	function
0-255	——	Maximum retrain number in the time defined by S62 to force the disconnection
Default=03		

**S62      Retrain counting**

---

range	units	function
0-255	sec	length of time to count the Retrain number defined by the register S62 to force the disconnection
Default=60		

**S63      Directory Pointer for C108/1 control**

---

range	units	function
0-19	—	stores the reference for the directory location which contains the telephone number to select for C108/1 control in AT mode
20-255		No number will be dialled
Default=00		

**S64      LL Monitor Timer**

---

range	units	function
0		Disabled
1-255	min.	When Backup is enabled, it determines the length of time before disconnecting from the dial line and connect to leased line, after positive monitoring of the leased line.
Default=05		

**S65      First Configuration Pointer for Down-Load**

---

range	units	function
0-19		Stores the pointer to the first user configuration to use for Down-Load
20-255		no configuration is transferred
Default=09		

**S66 Second Configuration Pointer for Down-Load**


---

range	units	function
0-19		stores the pointer to the second configuration to use for Down-load
20-255		no configuration is transferred
Default=255		

**S67 Antistreaming Timeout**


---

range	units	function
0-254	sec	used in applications with controlled carrier (B2) or with Half Duplex simulation (#H). If C105 remains ON for a time equal to the one defined here, the carrier is kept OFF and an acoustic alarm is activated (if enabled; see #S command). This feature is useful in multipoint applications.
255		Timeout disabled
Default=255		

**S68 Timeout C109 in controlled carrier**


---

range	units	function
0-254	sec	With the control carrier is function abilitated (B2) defines after how much time with C105 missing or C109 disconnection from the modem has taken.
255	sec	Timeout disabled
Default=30		

**S69 V54 Address of Modem master**


---

The multipoint function defines the address of remote modem which must ask for activation of loop 2 according to the V54 procedure; defines also if the address must be given by the modem or by the DTE. If the loop has been asked for by DTE putting the C140 at ON, the modem can carry out the standard procedure V.54 which checks that the address is given to the DTE itself.

In the point to point function no address is needed and the function must remain disabled.

<b>range</b>	<b>units</b>	<b>function</b>
0-33		Defines the remote modem's address to whom the activation loop must be requested
34-254		The address of the remote modem to whom the activation of loop 2 will be requested will be given by the DTE
255		The modem carries out the normal loop 2 procedure V54 without addresses

Default=255

#### **S70      V54 Address of Modem Slave**

---

The function of multipoint defines the address of the local modem, to answer to if there should be a loop 2 activation request according to the V54 procedures.

In point to point function no address is required and the function must remain disabled.

<b>range</b>	<b>units</b>	<b>function</b>
0-33		Defines the address which must be used in answer to a loop request from remote
34-255		The modem carries out the normal loop 2 procedure V54 without addresses

Default=255

Register Value	Address	Note
0	01	Odd parity
1	03	Even parity
2	05	Even parity
3	07	Odd parity
4	09	Even parity
5	0B	Sync (1/6) Odd parity
6	0D	Odd parity
7	0F	Even parity
8	11	Even parity
9	13	Odd parity
10	17	Even parity
11	19	Odd parity
12	1B	Even parity
13	1D	Even parity
14	1F	Odd parity, non ISO 3309 (HDLC)
15	25	Odd parity
16	27	Even parity
17	2B	Even parity
18	2D	Even parity
19	2F	Odd parity
20	33	Even parity
21	35	Even parity
22	37	Odd parity
23	3B	Odd parity
24	3D	Odd parity
25	3F	Even parity, non ISO 3309 (HDLC)
26	55	Even parity
27	57	Odd parity
28	5B	Odd parity
29	5F	Even parity, non ISO 3309 (HDLC)
30	6F	Even parity
31	77	Even parity
32	7F	Odd parity, non ISO 3309 (HDLC)
33	15	Odd parity

Tab.:6. Address V54

**S73      Fall-Forward Delay**

range	units	function
0-255	1 sec	When the adaptive rate is set (*Q2), define the time to return on the upper speed.
Default=60		

**S78      Bit Mapped Option Register**

bit	function	command	default
7-3	0=Not used 1=Not used		*
2	0=Standard function SW/LL in Backup 1=SW busy during Handshake LL		*
1	0=Special CConf function for CBU disabled 1=Special CConf function for CBU enabled		*
0	0=Not used 1=Not used		*

Default=B'00000000'=H'00'=000

**S79      Lamp Display Timer**

range	units	function
0-254	min.	determines the length of time the display lamp must be on after the power up or after having pressed a keyboard key
255		the display lamp is always on.
Default=05		