

**Specification for the
Simulator 2
TTY Command Line Interface**

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1. Introduction

This document details the protocol and command format for the TTY monitor and control interface available using the Simulator 2's supervisor port and should be read in conjunction with the full Simulator 2 manual.

2. General

The supervisor port is configured as a V.24 asynchronous DCE interface with the following word structure:-

Speed : 9600
Data bits : 8
Parity : None
Stop bits : 1

The TTY command set is available in addition to the formatted menu interface for use when a command line interface is required.

The TTY mode is accessed by typing CTRL-T twice in succession once the standard login prompt is displayed. The supervisor starts the command line interpreter with echo enabled.

Once the command line session is started echo may be enabled or disabled by means of the ECHO command (see below). The ECHO setting is only preserved for the current session, i.e until a BREAK sequence or a break character is received or the unit is reset.

3. Message structure.

With ECHO enabled, the following format is used:-

	Commands	Responses
Start character	'>'	'<'
Body	Ascii text, multiple lines	separated with <CR><LF> (Hex 0D 0A)
End character	<LF> (Hex 0A)	<LF> (Hex 0A)

With ECHO disabled, the following format is used:-

	Commands	Responses
Start character	'>'	'<'
Body	Ascii text, multiple lines	separated with <CR> (Hex 0D)
End character	<LF> (Hex 0A)	<LF> (Hex 0A)

The message body consists of strings of ASCII tokens, separated by the underscore character '_'.
_

4. Command Set

The following primary command groups are supported by the command line interpreter:-

"LINK_"	Link parameters (Rate, Delay etc)
"ERROR_"	Simulated Error configurations
"STACLOCK_"	Configuration of external station clock
"PORTA_"	Port A configuration and test modes
"PORTB_"	Port B configuration and test modes
"NODE_",	Configuration of node name and address,
"ECHO_",	Turns character echo on/off
"EQUIP_",	Displays hardware and software versions of all equipment fitted to the unit
"CFG_",	Displays entire configuration
"TERM_",	Launches the standard terminal emulation menus
"SETDEFAULTS_",	Restores the unit to factory default configuration
"SYSRESET_",	Resets the unit.

4.1 Link configuration

4.1.1 Simulated Link Rate

Command : >LINK_RATE_rrrrr_cr
Response: <LINK_RATE_rrrrr_crlf

Status : >LINK_RATE_cr
Response: <LINK_RATE_rrrrr_crlf

rrrrr = 9600 to 2048000

4.1.2 Simulated Link Delay

Command : >LINK_DELAY_dddd_cr
Response: <LINK_DELAY_dddd_crlf

Status : >LINK_DELAY_cr
Response: <LINK_DELAY_dddd_crlf

dddd = 0 to 2000 (milliseconds)

4.1.3 Simulated Link Bulk Configuration Status

Status : >LINK_cr
Response: <LINK_RATE_rrr_DELAY_ddd_crlf

4.2 Simulated Error Configuration

4.2.1 Simulated Error Rate

Command : >ERROR_RATE_rrrrr_cr
Response: <ERROR_RATE_rrrrr_crlf

Status : >ERROR_RATE_cr
Response: <ERROR_RATE_rrrrr_crlf

rrrrr = NONE, 10-9, 10-8, ... 10-2

4.2.2 Simulated Error Mode

Command : >ERROR_MODE_mmmmm_cr
Response: <ERROR_MODE_mmmmm_crlf

Status : >ERROR_MODE_cr
Response: <ERROR_MODE_mmmmm_crlf

mmmmm = BIT, BURST

4.2.3 Length of Error Period in Burst Mode

Command : >ERROR_BURSTLENGTH_IIII_cr
Response: <ERROR_BURSTLENGTH_IIII_crlf

Status : >ERROR_BURSTLENGTH_cr
Response: <ERROR_BURSTLENGTH_IIII_crlf

IIII = 10 to 10000 milliseconds

4.2.4 Length of Error Free Period in Burst Mode

Command : >ERROR_BURSTGAP_IIII_cr
Response: <ERROR_BURSTGAP_IIII_crlf

Status : >ERROR_BURSTGAP_cr
Response: <ERROR_BURSTGAP_IIII_crlf

IIII = 10 to 9999999 milliseconds

4.2.5 Inject a Single Bit Error

Command : >ERROR_INJECT_cr
Response: <ERROR_INJECT_crlf

4.2.6 Simulated Errors Bulk Configuration Status

Status : >ERROR_cr
Response: <ERROR_RATE_rrr_MODE_mmm_BURSTLENGTH_III_BURSTGAP_III_crlf

4.3 Station Clock Configuration

4.3.1 External reference frequency

Command: >STACLOCK_ffffff_cr
Response: <STACLOCK_ffffff_crlf

Status : >STACLOCK_cr
Response: <STACLOCK_ffffff_crlf
ffffff = 9600 to 2048000

4.4 Port Configuration

4.4.1 Clock Source

Command : >PORTp_CLOCK_cccc_cr
Response: <PORTp_CLOCK_cccc_crlf

Status : >PORTp_CLOCK_cr
Response: <PORTp_CLOCK_cccc_crlf

p = A or B
cccc = INTERNAL, EXTERNAL, STATION

4.4.2 Interface type

Command : >PORTp_IFC_tttt_cr
Response: <PORTp_IFC_tttt_crlf

Status : >PORTp_IFC_tttt_cr
Response: <PORTp_IFC_tttt_crlf

tttt = V.11, V.24, V.35, G.703 (Depends on interface type fitted)

4.4.3 Loopback mode

Command : >PORTp_LOOP_IIII_cr
Response: <PORTp_LOOP_IIII_crlf

Status : >PORTp_LOOP_cr
Response: <PORTp_LOOP_IIII_crlf

p = A or B
IIII = NONE, LOCAL, REMOTE

4.4.4 RXD Signal mode

(NB:- RXD refers to the signal name and is the data received by the connected DTE)

Command : >PORTp_RXD_mmm_cr
Response: <PORTp_RXD_mmm_crlf

Status : >PORTp_RXD_cr
Response: <PORTp_RXD_mmm_crlf

p = A or B
mmm = OK, KILL

4.4.5 TXD Signal mode

(NB:- TXD refers to the signal name and is the data transmitted by the connected DTE)

Command : >PORTp_TXD_mmm_cr
Response: <PORTp_TXD_mmm_crlf

Status : >PORTp_TXD_cr
Response: <PORTp_TXD_mmm_crlf

p = A or B
mmm = OK, KILL

4.4.6 CLK Signal mode

Command : >PORTp_CLK_mmm_cr
Response: <PORTp_CLK_mmm_crlf

Status : >PORTp_CLK_cr
Response: <PORTp_CLK_mmm_crlf

p = A or B
mmm = OK, KILL

4.4.7 Port Bulk Configuration Status

Status : >PORTp_cr
Response: <PORTp_CLOCK_ccc_IFC_tttt_LOOP_III_RXD_mmm_TXD_mmm_CLK_mmm_crlf

4.5 Configuration of node name and address

4.5.1 Node name

Command : >NODE_NAME_nnnnnnnnn_cr
Response: <NODE_NAME_nnnnnnnnn_crlf

Status : >NODE_NAME_cr
Response: <NODE_NAME_nnnnnnnnn_crlf

nnnnnnnn = Optional, unrestricted 20 character string

4.5.2 Node address

Command : >NODE_ADDR_aaaaa_cr
Response: <NODE_ADDR_aaaaa_crlf

Status : >NODE_ADDR_cr
Response: <NODE_ADDR_aaaaa_crlf

aaaaa = 0 to 255

4.5.3 Node Bulk Configuration Status

Status : >NODE_cr
Response: <NODE_NAME_nnnnnnnnn_ADDR_aaaaa_crlf

4.6 Local echo

Command : >ECHO_eee_cr
Response: <ECHO_eee_crlf

Status : >ECHO_cr
Response: <ECHO_eee_crlf

eee = ON, OFF

4.7 Bulk configuration status

4.7.1 Bulk configuration of all devices as detailed above

Status : >CFG_cr
Response: <LINK_.....cr
 ERROR_.....cr
 STACLOCK_.....cr
 PORTA_.....cr
 PORTB_.....cr
 NODE_...cr
 ECHO_.....crlf

4.8 Equipment status

Status : >EQUIP_cr
Response: <EQUIP_cr
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4.9 System Utilities

4.9.1 Terminal emulation menus

Command : >TERM_cr
Response: Launches the standard terminal menus login

4.9.2 Set factory default configuration

Command : >SETDEFAULTS_cr
Response: <SETDEFAULTS_DONE_crlf

4.9.3 Reset the unit

Command : >SYSRESET_cr
Response: The unit will reset