subj. DC1/DC3 Protocol on Asynchronous Terminals

In NCP release 7.1 a new protocol is introduced to connect asynchronous terminals to RC8000. This protocol is called DC1/DC3 in the following.

The protocol can operate on both full and half duplex lines.

In full duplex mode the character DC1/DC3 is used to control the flow of data from the host to the terminal and from the terminal to the host. When a receiver (either a terminal or a host) has no more room for data it can stop the transmitter by sending a DC3 character on the output line. When it is ready to receive another block of data it resumes the transmitter by sending a DC1 on the output line.

The DC1/DC3 protocol on full duplex lines can be configured in three different combinations:

- DC1/DC3 protocol on the input line
- DC1/DC3 protocol on the output line
- DC1/DC3 protocol on both input and output line

With the program INITAMX from the utility package SW8010/1 Release 13.0 or newer you can change these parametres dynamically.

In half duplex mode there is no parity checking of the characters received from the terminal and the input is not echoed on the output line. The DC1/DC3 characters are only used to control the data flow from the terminal to the host while the terminal always has to be able to receive data from the host.

When the host is ready to receive a data block from a terminal it sends a DC1 character on the output line, the terminal is now allowed to send a block of data with a maximum length which depends on the configuration of the RC8000 device controller.

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The terminal terminates the block by sending a DC3 character and
awaits a DC1 from the host before the next block is transmitted.

How to use a DC1/DC3 on a terminal:

DC1 = contr q (ASCII 17)
DC3 = contr s (ASCII 19)