
RCSL No: 991 09914

Edition: October 1984

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Title:

RC8000 UTILITY PROGRAM

Initamx

Keywords:

RC8000, terminal, printer, utility program,
initialization.

Abstract:

This manual describes the utility program
Initamx.

(20 printed pages)

TABLE OF CONTENTS**PAGE**

1. INTRODUCTION	1
2. ATTRIBUTES	3
3. PROGRAM CALL	6
3.1 Syntax	6
3.2 Semantics	7
3.3 Function	9
3.3.1 Info	10
3.3.2 Host	10
3.3.3 Terminal	10
3.3.4 Printer	11
4. ERROR MESSAGES	12

1. INTRODUCTION

This manual describes the utility program INITAMX with the facilities implemented in the system utility package SW8010/2 rel. 1.0 or later releases. A number of the new facilities described can only be used in installations with Basis system package SW8001/2 rel. 3.0.

The program can change parameters for terminals and printers connected to RC8000 via a RC3600 Device Controller.

For terminals the parameters include:

- terminal type (conversion table)
- input timer
- output timer
- prompt character
- enabling/disabling of attention
- enabling/disabling of upper case conversion
- enabling/disabling of echoing
- input continued (type ahead)

For terminals connected via the RC3682 asynchronous multiplexer:

- number of stopbits
- parity
- character length
- bitrate for receiver + bitrate for transmitter
- dcl/dc3 flow control (not RC800/20).

For printers connected to an asynchronous multiplexer:

- output timer
- number of stopbits (RC3682)
- parity (RC3682)
- bitrate (RC3682)
- dcl/dc3 flow control (RC3682 but not RC800/20)

The program can run under the operating system 'S' or 'SOS'.

Under 'SOS' the process must be included as user of the subhost involved.

2. ATTRIBUTES

This section describes the various parameters and their meaning. Most of them has an equivalence in the description of the terminal process.

Terminal type (default: 1)

The terminal type is an integer in the range 0 to 9, and is an index for the conversion table used by the terminal.

The maximum number of tables is ten, but the actual is determined at system generation time.

Input timer (default: 60 sec)

The input timer is the maximum timer in seconds allowed between each character. A zero timer means no timeout supervision.

Output timer (default: 60 sec)

The output timer is the maximum timer in seconds allowed for the total output operation. The timeout value includes the time spent while the output channel is suspended when a DC3 character is received if flow control is in use.

For the output timer a zero value will also turn off the timeout supervision.

Prompt character (default: <BELL>)

The prompt character is output to indicate that input is ready (normally a BELL).

The character can be changed or outputting of a prompt can be disabled.

Attention (default: enabled)

A terminal is normally able to read an attention character even if no input message is issued. It can be disabled, which is necessary when flow control or type ahead on input is used.

Connect messages (default: enabled)

When a terminal is connected or disconnected a number of messages are normally written to inform about the changes. If the terminal is used for other purposes these messages can be disabled.

Upper case conversion (default: enabled)

The normal conversion of capital letters to small letters can be disabled.

Echoing (default: enabled)

Echoing of input can be enabled or disabled. Note that it has no effect on terminals connected via a RC800/20 concentrator, as the characters are echoed locally by the concentrator.

Input continued (default: disabled)

When input continued is enabled, characters read after a buffer is returned to RC8000 will be buffered, and delivered in the next input message.

When this facility is used attention must be disabled and no prompt character written.

Flow control (default: no flow control)

Terminals and printers connected via the RC3682 multiplexer supports flow control using dcl/dc3. The flow control can be used on the output channel, the input channel or both channels.

Note! Flow control is only applicable for terminals or printers connected via the RC3682 asynchronous multiplexer. It can not be used for RC3683, RC800/20 or any RC3682 which has possibility for connecting of one or more RC800/20.

Channel characteristics

For terminals and printers connected via the RC3682 multiplexer the following channel characteristics can be selected:

- baudrate for receiver and transmitter (default: 2400 bps)
- parity control and generation (default: even)
- character length (default: 7)
- number of stopbits (default: 2)

Note! These commands can not be used for terminals or printers connected via the RC3683 asynchronous multiplexer.

3. Program Call

The program has a number of commands which addresses devices on a specific devicehost. Before these commands can be issued, a devicehost must be selected with a <host> command. Until a new host command is issued only devices on the selected host can be accessed.

3.1 Syntax

initamx {<command>}₁^{*}

<command>::= {

info	{	host	}
		terminal	
		printer	

host <devicehost>

terminal dmlink.<d /no> {<termparam>}

printer dmlink.<d /no> <printparam>

}

<termparam>::= {

type.<termtyp>	{ . outtimer } ₀ ¹	*
timer.<intimer>		
s.<stopbits>		
p.<parity>		
l.<charlength>		
r.<inrate>	{ .<outrate> } ₀ ¹	
dcl.<dctype>		}
echo.<echoing>		
prompt.<char>		
cont.<continous>		
conv.<conversion>		
att.<att>		
mess.<message>		

$$\langle \text{printparam} \rangle ::= \left\{ \begin{array}{l} \text{timer.} \langle \text{outtimer} \rangle \\ \text{s.} \langle \text{stopbits} \rangle \\ \text{p.} \langle \text{parity} \rangle \\ \text{l.} \langle \text{charlength} \rangle \\ \text{r.} \langle \text{bitrate} \rangle \\ \text{dcl.} \langle \text{flowcontrol} \rangle \end{array} \right\} \begin{array}{l} * \\ 1 \end{array}$$

3.2 Semantics

- <devicehost>** The devicehost number of the selected device controller.
- <devno>** The logical devicenumber of the selected terminal or printer. In SW8001/2 rel. 3.0 a new local command to the terminal has been implemented. The name is 'id' and it prints the device number of the terminal.
- <termtype>** An integer in the range 0 to 9. It is used to select a conversiontable for a terminal. If the selected table is not included in the system generation, the default table is chosen (index = 1).
- <intimer>** The input timer in seconds (0 to 255) (described in section 2).
- <outtimer>** The output timer in seconds (0 to 255) (described in section 2).
- <stopbits>** The number of of stopbits. Legal values 1, 2.

<parity>	Parity control and generation Legal values: n: no parity e: even parity o: odd parity
<charlength>	The character length of data exclusive an eventual parity bit. Legal values: 5, 6, 7, 8.
<inrate>	The baudrate of the receiver. Legal values: 40, 50, 75, 110, 134, 150, 200, 220, 300, 600, 1200, 4800, 9600.
<outrate>	The baudrate of the transmitter. If it is not specified, the same value as for the receiver is chosen.
<dctype>	The kind of flowcontrol selected Legal values: no: No flowcontrol input: Flowcontrol on the receiver output: Flowcontrol on the transmitter both: Flowcontrol on the receiver and the transmitter.
<echoing>	Enables or disables echoing of input. Legal values: yes: input echoed no: input not echoed
<char>	The value of the character used for prompt. A zero value will inhibit outputting of a prompt character.

<continous> Selecting of continous input (type ahead)
 Legal values:
 yes: continous input applied
 no: normal input

<conversion> The conversion mode used.
 Legal values:
 yes: Conversion of capital letters as described in
 the Terminal Process.
 no: No conversion used.

<att> Enables or disables attention when no input
 message is present.
 Legal values:
 ena: Enables attention
 disa: Disables attention

<message> Enables or disables disconnect and connect
 messages on terminal.
 Legal values:
 yes: Messages are written
 no: No messages are written

<flowcontrol> Flowcontrol for printer.
 Legal values:
 yes: Flow control applied
 no: No flow control

3.3 Function

The program has four commands (info, host, terminal, printer) and they are described in the following sections.

3.3.1 Info

This command prints a short summary of the available commands including the syntax of program calls.

Example:

```
        info host
        info terminal
or     info printer
```

3.3.2 Host

The command terminate an eventual communication with a devicehost and create a link to the devicehost specified.

Example:

```
        host 5014
```

3.3.3 Terminal

The terminal command can either change the parameters of a selected terminal, or it can print the parameters in use.

Example:

```
        terminal dhlink.1 r.4800
        terminal dhlink.1 lookup
```

When parameters are changed, any parameter not specified in the call will not be changed.

This is only true if the Basis System (SW8001) is version 2 release 3.0 or later. In earlier releases of the Basis System it was not possible to read the parameters of a terminal, and therefore the parameters not specified will get the default values described in section 2.

In the same way the lookup function will just print all the default values of parameters.

3.3.4 Printer

The printer command changes the parameters for a printer connected via an asynchronous channel

```
printer dhlink.20 r.2400 timer.100  
printer dhlink.20 timer.100 dcl.yes r.4800
```

The devicehost linknumber of the printer can be obtained by the utility program 'lookuplink', or from the devicelist delivered with the Basis System.

The new parameters will be the ones specified in the call, and for the rest of the parameters, default values are chosen.

4. ERROR MESSAGES

Error messages have the format:

***initamx: <error text>

Errors in connection with selection of devicehost.

<error text> =
devicehost no <hostno> not found

It was not possible to find a hostprocess

or

<error text> =
link error <cause> connecting to devicehost no <hostno>

<cause> = devicehost reserved

A process on the same computer is using initamx on the same devicehost.

<cause> = no resources at jobhost

There is no free external processes.

<cause> = timeout

A user in the network is using the initamx program on that devicehost.

Another group of errors are caused by illegal parameters or wrong syntax of program call.

<error text> = terminal not found.

The devicenumber specified (dhlink) is not a legal device of a terminal.

<error text> = printer not found

The devicenumber specified is not a legal device for a printer.

<error text> = no linknumber specified

No dhlink statement

<error text> = no devicehost connected

A printer or terminal command was issued without any previous host command.

RETURN LETTER

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