

2.3. Internal communication: variable protocol

Introduction

The variable serial protocol has been designed to provide the user with possibility to personalize the transmitted and received data from the analyzer.

ATTENTION: WHEN A VARIABLE COMMUNICATION PROTOCOL IS CREATED OR MODIFIED IT IS ABSOLUTELY NECESSARY TO SAVE SCRIPS AND TO COMPILE AGAIN, EVEN IF ONLY ONE HAS BEEN MODIFIED.

The user can transmit or receive in addition to preset data (patient code, analysis code, results etc.), also the simple text strings and/or characters in order to meet the personal requirements.

Not only the user can decide to send or receive numerical information (for example number of tests) not as single byte but as a preset numerical string or vice versa.

For example the user can decide to receive something like:

```
"Initiate analysis data"  
<Analysis data true and typical>  
"End analysis data"
```

Where the phrases "Initiate analysis data" and "End analysis data" do not refer to any preset data by the analyzer but serve only for monitoring communication process (can be useful for inserting specific markers on those programs which obtain information from text files).

It is obvious that the protocol of initiation and end of communication, the commands for the request of report, and the analyzer responses in case of error or success remain identical to the usual preset serial communication.

To ask for the next report, the host will send the 'R' pack (preceded by the <STX>/<ACK> sequence and followed by the <EOT> character. If no data is available, the analyzer will send the <NAK> character, otherwise will send the report (both <NAK> and the report are preceded by the <STX>/<ACK> combination and are followed by the <EOT> character).