HumaStar 600

| User Manual

CE

Cat No. 16660/001

Human

Diagnostics Worldwide

The defined controls are shown in the lower part of the screen. They must be dragged and dropped in the desired hour and day and then saved by pressing the corresponding button. They are immediately in the Pending QC status shown in red in the left side of the screen. They can be removed by dragging and dropping on the trash symbol.
They remain as pending until they are in the list of programmed samples and all the included reactions are processed. The Activity shows the next programmed action on each control, but they are due immediately after programming. If only some test are pending, warning flag will be in yellow color.

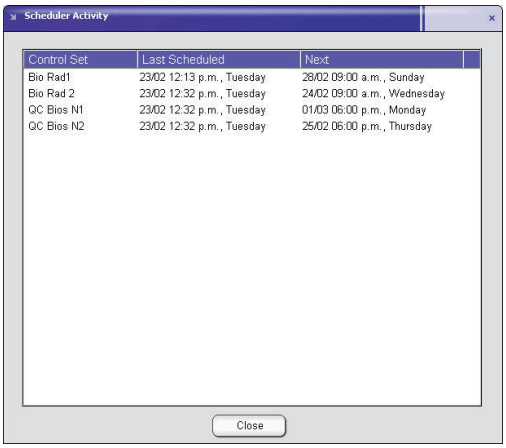

FIGURE 48

5.8 Working with LIS

The use of information management systems is widespread in hospitals and health centres where data must be collected from different kinds of instruments. The LIS (or LIMS) capability provides a reliable way for information interchange through ASTM E1381 and E1394 standards.
Results from accepted tests may be transmitted automatically to the host computer by the Autoanalyzer software, upon request from the host computer or manually at any time upon user demand.
Possible settings in the LIS page (-> Maintenance -> Parameters -> LIMS – Options) see below.

Auto send results. The results are send to the LIS when a test is manually or automatically accepted.

Only order by LIS. Only send results from tests required by the LIS system. Manually programmed tests are not send.

Auto request tests. When a new sample is created a query to the LIS system is generated in order to obtain the test for that specific sample. A sample can be created manually from the sample window or by the barcode reader. If the BCR read a sample that already exist the query is not generated because is supposed to be generated at creation time. This same query will be send to the LIS if you push „LIS req." button in the sample window.

Send QC results. If the software should send QC results to the LIS system.

Send calibrator results. If the software should send calibrator results to the LIS system.
Also the software allows to answer querys from the LIS system in order to obtain results.

How query mode works and what to do in order to work with it
I should first try to establish communication with the LIS system. Uncheck „Auto request test" option and apply changes. Go to Data->LIS->Communication and erase any previous log. Then, from the sample window, create a new sample and push „LIS req." button. Go back to the LIS communication window and you will see the {ENQ}. The same way the software works when the „Auto request test" option is selected, except that there is no need to push the button. You can now check this option, create a new sample and you will observe the same behaviour.

5.8.1 ASTM STRUCTURE OF MESSAGES.

The following tables contain the part of information included in ASTM 1394 format adopted here. Host can send many fields but only those included in the present tables are processed.
Header record (level 0)

TABLE 6

Field name	ASTM ID	Host	Inst.	Comment
Record type ID	1	X	X	Always H. Starts every message. No delimiter between first and second field
Delimiter definition	2	X	X	Field, repeat and escape delimiters
Sender name or ID	5		X	Instrument ID Software version 1.0
Version No.	13			1394-97
Date and time of message	14		(X)	From YYYYMMDDHHMMSS.

Message terminator record (level 0)

TABLE 7

Field name	ASTM ID	Host	Inst.	Comment
Record type ID	1	X	X	Always L. Ends every message. No delimiter between first and second field
Sequence Number	2	X	X	Always 1. One terminator per message.
Termination code	3	(X)	(X)	N or missing: normal termination E: unknown error I: no information available from last query

Patient information record (level 1)

TABLE 8

Field name	ASTM ID.	Host	Inst.	Comment
Record type ID	1	X	X	Always P
Sequence number	2	X	X	Running number within message. Starts with 1
Practice assigned. Patient ID	3	(X)	(X)	Patient ID. NULL patient is allowed.
Patient Name	6	(X)	(X)	Patient Name. The whole name should be given here as a string of up to 30 characters. All others will be ignored
Birth date	8	(X)		
Physician ID	14	X	X	Doctor. 30 characters.
Patient known or suspected diagnosis	19	X		Diagnostic. 10 characters.
Location	26	X	X	Section ^ Bed

Test order record (level 2)

TABLE 9

Field name	ASTM ID	Host	Inst.	Comment
Record type ID	1	X	X	Always O
Sequence number	2	X	X	Running number within patient information. Starts with 1
Specimen ID	3	(X)	(X)	Sample protocol. If omitted, blank will be used.
Instrument specimen ID	4		(X)	Internal correlative number used by instrument.
Universal Test ID	5	(X)	(X)	^^^Test ID. Will accept only those identifiers as defined in the table of methods. Host MUST use these identifiers. Multiple ID, separated by identifier, is admitted.
Specimen collection date	6	X		Structure YYYYMMDDHHMMSS
Specimen descriptor	8	X		Type 1: Serum, 2: plasma, 3: urine, 4:CSF, 5:other

Result record (level 3)

TABLE 10

Field name	ASTM ID	Host	Inst.	Comment
Record type ID	1		X	Always R
Sequence number	2		X	Running number within test order. Starts with 1
Universal test ID	3		X	^^^Test code as defined in the Table of Methods in the instrument
Data or Result	4		(X)	If result is not “Done”, no entry will be available in the Historic Table, from where data are retrieved.
Units	5		X	Units as defined in the Table of Methods.
Result range flags	7		X	N: Normal A: Abnormal
Result status	9		X	P: Preliminary F: Final X: Cancelled P: Pending
Date/Time test is completed	13	(X)	(X)	Structure YYYYMMDDHHMMSS. No value if test is not completed.
Instrument identification	14		X	Instrument ID as defined in the Translator entry that corresponds to “HumaStar 600”

Request information record (level 1)

TABLE 11

Field name	ASTM ID	Host	Inst.	Comment
Record type ID	1	X		Coded as Q.
Sequence number	2	X		Always 1
Starting Range ID	3			Patient ID Sample ID, or all
Universal test ID	5	(X)		^^^Method ID or all
Beginning Request Results, Date and time	7	(X)		Structure YYYYMMDDHHMMSS.
Ending request of results, Date and time.	8	(X)		Structure YYYYMMDDHHMMSS.

5.8.1.1 Field lengths used by instrument

TABLE 12

Field	Length in characters
Instrument ID	0
Software version	9
Date and time of message	14
Patient ID	30
Patient name	30
Date of birth	8
Patient sex	1
Specimen ID	30
Instrument specimen ID	30
Test ID	0
Specimen collection date and time	14
Clinical information	100
Section ID	30
Data of measurement	8
Units	8
Reference ranges	Low 6, High 6
Data/time test completed	14
Date/time beginning request	14
Date/time ending request	14

5.8.2 COMMUNICATION EXAMPLES

Software request of simple data and results.

Rx: {ENQ}
Tx: {ACK}
Rx: {STX}1H|\^&|{CR}{ETX}61{CR}{LF}
Tx: {ACK}
Rx: {STX}2Q|1|^Pepe||ALL||||||||O{CR}{ETX}A4{CR}{LF}
Tx: {ACK}
Rx: {STX}3L|1|N{CR}{ETX}06{CR}{LF}
Tx: {ACK}
Rx: {EOT}

Host request of performed analysis.

Tx: {ENQ}
Rx: {ACK}
Tx: {STX}1H|\^&|{CR}{ETX}61{CR}{LF}
Rx: {ACK}
Tx: {STX}2P|1|86|||Maxwell Smart||19780523|M||||Cureta|||||Nada|||||||Piso 3^Cama 1{CR}{ETX}A9{CR}{LF}
Rx: {ACK}
Tx: {STX}3O|1|12345||^^^COL\^^^GLU|||20010506||||A||||Raro Color|||||||||Q{CR}{ETX}07{CR}{LF}
Rx: {ACK}
Tx: {STX}4P|2|99|||La 99||19780523|M||||Cureta|||||Algo|||||||Piso 3^Cama 2{CR}{ETX}FE{CR}{LF}
Rx: {ACK}
Tx: {STX}5O|1|12346||^^^GLU|||20010506||||A||||Feo Color|||||||||Q{CR}{ETX}3C{CR}{LF}
Rx: {ACK}
Tx: {STX}6O|2|12346||^^^COL|||20010507||||A||||Extraño Color|||||||||Q{CR}{ETX}7F{CR}{LF}
Rx: {ACK}
Tx: {STX}7P|3|007|||James Bond||19440101|M||||Cureta|||||Algo|||||||Piso 3^Cama 3{CR}{ETX}6D{CR}{LF}
Rx: {ACK}
Tx: {STX}0O|1|12347||^^^COL\^^^GLU|||20010506||||A||||Raro Color|||||||||Q{CR}{ETX}06{CR}{LF}
Rx: {ACK}
Tx: {STX}1L|1|c{CR}{ETX}19{CR}{LF}

Rx: {ACK}
Tx: {EOT}

Host request and software answer of results.

Tx: {ENQ}
Rx: {ACK}
Tx: {STX}1H|\^&|{CR}{ETX}61{CR}{LF}
Rx: {ACK}
Tx: {STX}2Q|1|ALL||ALL||20030916120000|20030916120000{CR}{ETX}4A{CR}
{LF}
Rx: {ACK}
Tx: {STX}3L|1|c{CR}{ETX}1B{CR}{LF}
Rx: {ACK}

Tx: {EOT}
Rx: {ENQ}
Tx: {ACK}
Rx: {STX}1H|\^&|{CR}{ETX}61{CR}{LF}
Tx: {ACK}
Rx: {STX}2L|1|I{CR}{ETX}00{CR}{LF}
Tx: {ACK}
Rx: {EOT}

5.9 Definition and use of sample profiles

Sample profiles are useful for ordering predefined patterns of tests.

5.10 Defining a sample profile

Select in Menu ***Methods / Profiles.*** Profiles definition window is displayed. To edit the definition of a predefined sample profile, first select the sample profile from the list on the right and then press ***Edit*** .

To enter or define a new sample profile, press ***New*** .

To add a new test to the sample profile press ***Add Test*** and select or type in the method ID. Then type in the number of replicates for that method, and press ***Ok*** to add the test or ***Cancel*** to abort. To remove a method from the sample profile press ***Delete Test*** .