

Mission® U120 Ultra Urine Analyzer (Urine) Data Transfer Package Insert

REF	U124-131
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For data transfer to Personal Computer (PC) or Laboratory Information System (LIS).

For professional in vitro diagnostic use only.

INTENDED USE

This communication protocol defines the format and timing for data transmission from the U120 Ultra Urine Analyzer. Data available from the analyzer includes the specimen ID, date, time, serial number of the analyzer, patient information, operator ID, type of strip, color, clarity, and urine analysis results. This insert provides information required to develop a suitable computer interface to transfer analyzer data to an external computer with suitable PC software or a laboratory LIS system.

SUMMARY

Data will be sent to the analyzer communication ports or USB port after testing. If the analyzer has a Bluetooth, it may also be used for data download using software which is compatible with this port. The analyzer can also transmit data using LAN or WLAN.

Communication software residing on the LIS or locally connected Personal Computer must look for and recognize data present at the communications port and capture it at the time of transmission.

MATERIALS

Materials Provided

- Data Transfer Cable (RS232)
- SD Card (optional)
- U-disk (optional)
- Ethernet USB to RJ45 adapter (optional)
- Package insert
- USB wireless net-card (optional)
- Bluetooth adapter (optional)

Materials Required But Not Provided

- Applicable PC or LIS software

RS232 CABLE

A null modem cable is required for connection to a personal computer. The pin configuration for the cable is as follows:

RS232 Cable Pin Assignment	
Analyzer	Computer
2	3
3	2
5	5

DIRECTIONS FOR USE

Download to PC

RS-232:

- Connect the RS232C port on the analyzer to the COM port of the computer.
- Turn on the analyzer.
- Open the communication software in the PC, such as Hyperterminal.
- Enter the following PC data interface:

#	COM Port the analyzer can be used
1	1200, 2400, 4800, 9600, 19200, 57600, or 115200 as settings
2	5, 6, 7, or 8 Data bits as settings
3	Even, Odd, or None parity as settings
4	1 or 2 Stop Bit as settings
5	None, Xon, or Xoff Data stream as settings

- Begin Urine Strip testing according to the U120 Ultra User Manual.

Bluetooth:

- Turn on the analyzer. Set the Type of Connectivity to Bluetooth.
- Check the data as:

Baud rate	Parity	Data Bit	Stop Bit	Data Stream
9600	None	8	1	None

- Connect the Bluetooth adaptor to PC.

- Setup the Bluetooth data in the computer.

My Computer → Control Panel → Bluetooth Settings → Equipment → Add

→ Choose "The equipment has been set up and ready, you can find" and Next → choose the relevant Bluetooth and Next → enter the password "1234" → after connected press "Finish".

- Begin urine strip testing according to the U120 Ultra User's Manual.

LAN:

- Connect Ethernet USB to RJ45 adapter (DM9601) in the USB port on the analyzer.
- Open the communication software in the PC.
- Turn on the analyzer. Set the Type of Connectivity to LAN.
- Setup the data as:

IP	set according to network environment,	e.g. 192.168.1.199
Mask	set according to network environment	e.g. 255.255.255.0
Gate Way	set according to network environment	e.g. 192.168.1.1
Host Name	set according to network environment	e.g. 192.168.1.95
Host Port	set according to network environment	e.g. 12345

- Begin urine strip testing according to the U120 Ultra User Manual.

WLAN:

- Connect the USB WLAN card (AR9271) into the USB port on the analyzer.
- Open the communication software in the PC.
- Turn on the analyzer. Set the Type of Connectivity to WLAN.
- Setup the data as:

IP	set according to network environment	e.g. 192.168.1.199
Mask	set according to network environment	e.g. 255.255.255.0
Gate Way	set according to network environment	e.g. 192.168.1.1
ESSID	set according to network environment	e.g. TP-LINK
Key	set according to network environment	e.g. 1234-5678-90
Host Name	set according to network environment	e.g. 192.168.1.95
Host Port	set according to network environment	e.g. 12345

- Begin urine strip testing according to the U120 Ultra User Manual.

Download to LIS

Connect the RS232C port on the analyzer to the COM port on the computer or connect the Ethernet USB to RJ45 adapter (DM 9601) in the USB port on analyzer or USB WLAN card (AR9271) in USB port on analyzer.

DATA AND FORMAT

The following data and formats are used for printing and transmission to the communication interface.

Test Number	100003
Date	2012-02-09
Time	03:40:14PM
Serial No.	ULTRA1202130004
Patient ID	0123456789
Patient Name	ZHANGSAN
Operator	ADMIN
Strip Type	11A
Color	Yellow
Clarity	Clear
LEU	- Neg
* NIT	+ Pos
URO	- 0.2mg/dL
PRO	- Neg
pH	5.5
BLO	- Neg
SG	1.020
* KET	1+ 15mg/dL
BIL	- Neg
* GLU	1+ 250mg/dL
ASC	- Neg

- A record starts with <STX> (0x02).
- All data fields are separated by <LF> <CR> (0x0D0x0A).
- Segments of a field are separated by blanks.
- A Test Number is sent with each test result and is in the range of 00001-99999. The leading number indicates the mode of test, i.e. 0 for routine, 1 for STAT, and 2 for QC.

- The date and time fields are sent in the format defined by the current instrument set-up.
- Where a field contains no data or is not enabled via the set up, a blank record is sent.
- The Mark Positive 1 field is empty for a normal result or contains an ' * ' for an abnormal test result, otherwise it is left blank. There is no blank between Mark Positive and Test Abbr.
- A <ETX> (0x03) is sent at the very end of each completed record data stream.
- Note that the result output strings are modified to avoid the use of non-ASCII.

Header Data Structure

The following data structures indicate the testing information provided after data transfer.

First line: Test Number
 Second line: Date
 Third line: Time
 Fourth line: Serial number of analyzer
 Fifth line: Patient ID
 Sixth line: Patient name
 Seventh line: Operator
 Eighth line: Type of strip
 Ninth line: Color
 Tenth line: Clarity

Results Data Structure

The following data structures indicate the testing results depending on the number of parameters tested.

- Valid test strip data structure:
 Line 1: Mark Positive 1 & Test Abbr.1 & Result 1
 Line 2: ...
 Line n: Mark Positive n & Test Abbr.n & Result n
- Invalid Test Strip Data Structure:
 Line 1 to Line n is blank (space)

Index of Symbols

	Attention, see instructions for use		Lot Number	REF	Catalog #
	For in vitro diagnostic use only		Manufacturer		Authorized Representative

Number: 1150685401
 Effective date: 2013-3-22