Options and pitfalls when using ICM+ for collecting data from Philips Intellivue- and Hemedex CBF-monitors

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The challenge ...

Philips IntelliVue:
- arterial blood pressure
- intracranial pressure
- ECG, SpO₂, etc...

Hemedex Bowman Perfusion Monitor:
- regional CBF
- brain temperature
IntelliVue - Prerequisites

1.) serial interface card
   • two serial interfaces (RJ 45)
   • baud rate: 19,200 or 115,200
     Configuration: Main Setup / Setup Hardware / Data Export

2.) special interface cable
   (RJ45 male —— DB9 female)
   
   pin 4 — 5 (GND)
   pin 5 — 2 (Tx)
   pin 7 — 3 (Rx)
ICM+ configuration

Configure IntelliVue as client/server (C/S Devices):
IntelliVue as C/S Device

Choose 115200 for recording of multiple waves

list of recordable waves
configuration of signals
Assignment of signals to waveforms

Choose a *label for arterial blood pressure* at the IntelliVue monitor (e.g. **ABP** or **ART**), and keep it!
Hemedex Bowman Perfusion Monitor

(equipped with RS232 interface as standard)

Requirements:
• standard serial cable (DB9 male – female),
• no nullmodem cable
ICM+ configuration

Configure Hemedex as RS232 device (**RS232**):
Hemedex as RS232 device

(transmitted every second by Hemedex device)
Parsing is crucial !!!

Data signal field pos date time temp ∆temp rCBF space character

3-26-2010 09:12:25.0 37.716 1.851 15.53

Start Char: <LF> Stop Char: <CR>
Packet Size: 0 Separator Char: 
Sample Freq.: 50
Max. Inactivity [s]: 0

OK Cancel
Assignment of signals

Signal Position: 0 → brain temp, 2 → rCBF
Summary of pitfalls

Philips IntelliVue Monitor:
- serial interface card required
- set baud rate to 115200
- special cable required
- configure as client/server (C/S) device
- choose label for arterial blood pressure and keep it

Hemedex Bowman Perfusion Monitor:
- configure as RS 232 device
- use correct parsing