

0x0b8b0 [0,0]

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## links

- <http://www.ab-log.ru/smart-house/heating-automation/vaillant-rs232>
- [http://www.ab-log.ru/smart-house/heating-automation/gaz\\_meter](http://www.ab-log.ru/smart-house/heating-automation/gaz_meter)
- [http://old.ethersex.de/index.php/Vaillant\\_X6\\_Schnittstelle](http://old.ethersex.de/index.php/Vaillant_X6_Schnittstelle)

## boiler serial port

5V TTL level serial but it also accepts 3.3V serial (tested with CP2102 which is 3.3V, but 5V tolerant)

- 1 Not used
2. +5 V (for the first version of the power adapter vrDIALOG, for the operation of the converter RS232-TTL)
3. RX (from the computer to the boiler)
4. TX (from the boiler to the computer)
5. Ground (earth)
6. +24 (Apparently new power adapter on bus eBUS)

Serial port is 9600 8N1

## vrDialog

Vailant program to monitor boiler and change parameters

- <http://www.vaillant.nl/professioneel/service-1/software-downloads-1/>
- [http://old.ethersex.de/index.php/Vaillant\\_X6\\_Schnittstelle](http://old.ethersex.de/index.php/Vaillant_X6_Schnittstelle)

## protocol

This is translated and extended version of protocol dump from link above to ease comparison with my boiler

The first line - that we send, the second - the answer of the boiler.  
Third line (if exists is difference in my response)  
In parentheses is the value that we get.

```
Something like initialize the connection.  
# 07 02 00 00 00 04 C4  
# 08 00 00 9E 0A 0C 6B FD  
< 08 00 00 93 0B 09 FB 0B
```

Minimum design flow temperature

# 07 00 00 00 C2 01 7C

# 04 00 [# 23] 33

35 degrees

Start hysteresis

# 07 00 00 00 C3 01 7E

# 04 00 [# 02] 12

2 Â°

Hysteresis off

# 07 00 00 00 C4 01 70

# 04 00 [# 06] 16

6 Â°

Left before the service

# 07 00 00 00 AC 02 A3

# 05 00 [# 0B C2] #FC

3010 hours

Maximum temp filing for DHW

# 07 00 00 00 A6 01 B4

# 04 00 [# 55] 45

85 degrees

Maximum time the boiler heating

# 07 00 00 00 66 01 2D

# 04 00 [# 2D] 3D

45 degrees

Adjusting the outer t-pair (if connected to the boiler sensor outdoor t-ry)

# 07 00 00 00 65 01 2B

# 04 00 [# 00] 10

0 degrees

Maximum design temp boiler

# 07 00 00 00 E1 01 3A

# 04 00 [# 46] 56

70 degrees

Pump run after the end of heating (after turning off the burners)

# 07 00 00 00 64 01 29

# 04 00 [# 1E] 0E

30 minutes

Collector temperature (if also the boiler sensor is connected)

# 07 00 00 00 B8 02 8B

# 06 00 00 00 00 60

0 degrees

Maximum flow temperature heating (in my case only the range of 60 to 83 degrees)

# 07 00 00 00 A5 01 B2

# 04 00 [# 52] 42

82 degrees

Vrebya pump run after turning off the boiler

# 07 00 00 00 63 01 27

# 04 00 [# 12] 02

18 (180)

Shifting values â hotstart

# 07 00 00 00 9D 01 C2

# 04 00 07 17

7

Partial heat. Boiler

# 07 00 00 00 A9 01 AA  
# 04 00 [# 01] 11  
1 kW

Hours on GVS  
# 07 00 00 00 22 02 A6  
# 05 00 00 00 28  
0

Cycles of heating  
# 07 00 00 00 29 02 B0  
# 05 00 00 [# 2B] 03  
43

Cycles DHW  
# 07 00 00 00 23 02 A4  
# 05 00 00 00 28  
0

There is a feedback controller  
# 07 00 00 00 74 01 09  
# 04 00 00 10  
0 (OFF)

Status signal DCF  
# 07 00 00 00 69 01 33  
# 04 00 00 10  
0 (no reception)

VUV Mittenstellung  
# 07 00 00 00 45 01 6B  
# 04 00 00 10  
0 (OFF)

Counter 3 ignition attempts  
# 07 00 00 00 6F 01 3F  
# 04 00 0A 1A  
10

Unsuccessful automatic ignition  
# 07 00 00 00 1F 01 DF  
# 04 00 0A 1A  
10

Number of trips thermal protection  
# 07 00 00 00 20 01 A1  
# 04 00 00 10  
0

Outdoor temperature  
# 07 00 00 00 6A 03 37  
# 06 00 FC 39 AA 63  
-60.44

T-pa boiler SC down  
# 07 00 00 00 B6 02 97  
# 06 00 FF 21 AA 5F  
-13.94

T ra feed  
# 07 00 00 00 18 03 D3  
# 06 00 01 76 00 88  
23.38 / no errors

Start the timer by GVL  
# 07 00 00 00 71 01 03

# 04 00 01 11  
1 (ON)

Mode

# 07 00 00 00 08 01 F1  
# 04 00 01 11  
1 (winter)

Request to heat DHW C1 / C2

# 07 00 00 00 58 01 51  
# 04 00 00 10  
0 (OFF)

Ionisation current

# 07 00 00 00 73 02 04  
# 05 00 FC EC 25  
64748.00

Circulation pump for boiler layered

# 07 00 00 00 E0 01 38  
# 04 00 00 10  
0 (OFF)

Pumps UK

# 07 00 00 00 DF 01 46  
# 04 00 00 10  
0 (OFF)

The circulation pump

# 07 00 00 00 AF 01 A6  
# 04 00 00 10  
0 (OFF)

Pump heating boiler

# 07 00 00 00 01 9E C4  
# 04 00 00 10  
0 (OFF)

External heating pump

# 07 00 00 00 3F 01 9F  
# 04 00 00 10  
0 (OFF)

Built-in pump

# 07 00 00 00 44 01 69  
0 (OFF)

Calc. temp an external regulator 7-8-9

# 07 00 00 00 25 02 A8  
# 05 00 05 A0 82  
90,00

Room thermostat

# 07 00 00 00 01 0E FD  
# 04 00 00 10  
0 (OFF)

The design temperature of the boiler

# 07 00 00 00 04 02 EA  
# 05 00 00 F0 D8  
15 degrees

The calculated flow temperature, the handle on the panel

# 07 00 00 00 19 02 D0  
# 05 00 02 30 1C  
35 degrees

The temperature of the boiler

# 07 00 00 00 17 03 CD

# 06 00 FF 21 AA 5F

-13.94 Degrees

The flow sensor HS

# 07 00 00 00 16 03 CF

# 06 00 FF 21 AA 5F

-13.94

Record the values  $\hat{a}$   $\hat{a}$  in the boiler:

The second byte is 0x80

The fifth byte - Register

Sixth byte - value

Seventh - CRC (checksum)

Example, set the value of the pump run - 31 minutes (value 0x1F)

Register 0x64

# 07 80 00 00 64 1F FF

If all goes well, the boiler will return the following sequence.

# 03 00 06