

===== **PROTOCOL for VA-16xl** =====

**22/16h** 2byte 3byte 4byte

Set Audio Gain

- 2byte - bit 0-4 - channel#  
bit 5 - left channel  
bit 6 - right channel  
for both channels at the same time bits 5,6 should be 00 or 11.
- 3byte - Seven less Significant Bits of the Gain value,  
Eights bit in byte 4 (Bit 5)  
Gain can be set with resolution 0.5dB  
 $Gain(dB)=31.5-[0.5 \times (255-N)]$
- 4byte - Bit 0-4 - MachNum  
Bit 5 - Most significant bit of 3rd byte. Together with byte 3  
forms full value of the Gain

**24/18h** 2byte 3byte MachNum

Increase/Decrease Audio Gain

- 2byte - same as 22/16h
- 3byte - bit 0 = 0 - increase gain  
1 - decrease gain

**25/19h** 2byte 3byte MachNum

Request Audio Gain

- 2byte - same as 22/16h
- 3byte - same as 22/16h
- 3byte - same as 22/16h

for request for both channels the reply is:  
if gain for left/right equal, bits 6,5=00/11  
if different - reply for left channel, bit6,5=01

Also implemented commands **15/0Fh, 18/12h, 19/13h, 20/14h, 61/3Dh, 62/3Eh** –  
all according with protocol 2000

For commands **18/12h, 19/13h** - setups from 01/01h to 15/0Fh.