



# Command Code

**VA4301**

**VA5501**

**VA6501**

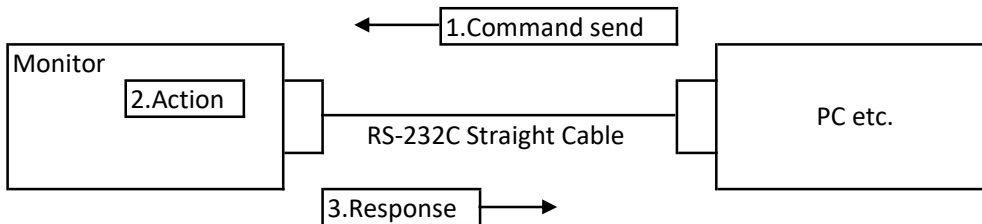
# Command Control

## 1 • Summary

- Control the monitor from an external device using a command.
- Such commands are transmit through RS-232C cable.

## 2 • Operation Steps

- Connection method



- Communication Specifications

- Communication setting is described below.

Baud rate	9600
Data length	8bit
Parity bit	None
Stop bit	1bit
Flow control	None

## 3 • Detailed specification

- Communication procedure

- If a control command is sent through a RS-232C connector from the PC, etc., the display monitor operates responding to the command and then sends a response message to the PC etc.
- Because multiple commands cannot be processed at the same time, the sender waits until it receives the response message to send the next command. Any command received while processing the previous command shall be ignored.

- Command format

Header	Monitor ID	Category	Code0	Code1	Length	Data Control	Data[0]	...	Data[N]	Checksum
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- Parameter

Number of Field	Name of Field	Description
Byte 1	Header	Header = 0xA6
Byte 2	Monitor ID	0x00

Byte 3	Category	Category = 0x00 (fixed)
Byte 4	Code0 (Page)	Page = 0x00 (fixed)
Byte 5	Code1 (Function)	
Byte 6	Length	Length has to be calculated in the following way: Length = N + 3
Byte 7	Data Control	Data Control = 0x01 (fixed)
Byte 8 ~ Byte 44	Data[0] ~ Data[N]	This field can be also empty. If not empty then the range of Data Size, N = 0 to 36.
Last Byte	Checksum	Checksum. Range = 0 to 255 (0xFF). Algorithm: The EXCLUSIVE-OR (XOR) of all bytes in the message except the checksum itself. Checksum = [Header] XOR [Monitor ID] XOR ... DATA[0] ... XOR DATA[N]

• Reply format

- This defines the feedback command from monitor to host controller when it receives the display command from the host controller, depending on the commands availability, the command reported back to host controller can be one of the ACK, NACK or NAV.

Note: there is no reply message when the wrong ID address is being used.

Number of Field	Name of Field	Description
Byte 1	Header	Header = 0x21
Byte 2	Monitor ID	Monitor ID Range : 1 ~ 255
Byte 3	Category	Category = 0x00 (fixed)
Byte 4	Code0 (Page)	Page = 0x00 (fixed)
Byte 5	Length	Length = 0x04
Byte 6	Data Control	Data Control = 0x01 (fixed)
Byte 7	Command	0x00(Communication Control)
Byte 8	Status	0x00: Completed Normal response. 0x01: Limit Over The packets was received normally, but the data value was over the upper limit. 0x02: Limit Over The packets was received normally, but the data value was over the lower limit. 0x03: Command canceled The packet is received normally but either the value of data is incorrect or request is not permitted for the current host value. 0x04: Parse Error
Byte 9	Checksum	Check Sum The total from Byte1 to Byte8 calculated by XOR

## Command List

NO	Command name	Set Command	Get Command	Length	Data Control	Command Code	Data	Feedback Data	Command Format
1	Model Number& FW version of device with Date		√	0x04	0x01	0xA1	0x00 = Model Number 0x01 = FW Version 0x02 = Build Date	(VAXX01) (FW ver)	A6 01 00 00 00 04 01 A1 00 03 (Model number) A6 01 00 00 00 04 01 A1 01 02 (FW ver)
2	Power state get		√	0x03	0x01	0x19		DATA[1]= 0x01 = Power Off 0x02 = Power On	A6 01 00 00 00 03 01 19 BC
3	Power state set	√		0x04	0x01	0x18	0x01 = Power Off 0x02 = Power On		A6 01 00 00 00 04 01 18 01 BB (Power off) A6 01 00 00 00 04 01 18 02 B8 (Power on)
4	Lock Status-IR-Remote Control get		√	0x03	0x01	0x1D		DATA[1]= 0x01 = Unlock all 0x02 = Lock all 0x03 = Lock all but Power 0x04 = Lock all but Volume	A6 01 00 00 00 03 01 1D B8
5	Lock Status-IR-Remote Control set	√		0x04	0x01	0x1C	0x01 = Unlock all 0x02 = Lock all 0x03 = Lock all but Power 0x04 = Lock all but Volume		A6 01 00 00 00 04 01 1C 01 BF (Unlock all) A6 01 00 00 00 04 01 1C 02 BC (Lock all) A6 01 00 00 00 04 01 1C 03 BD (Lock all but Power ) A6 01 00 00 00 04 01 1C 04 BA (Lock all but Volume)
6	Keypad Lock Status get		√	0x03	0x01	0x1B		DATA[1]= 0x01 = Unlock all 0x02 = Lock all	A6 01 00 00 00 03 01 1B BE
7	Keypad Lock Status set	√		0x04	0x01	0x1A	0x01 = Unlock all 0x02 = Lock all		A6 01 00 00 00 04 01 1A 01 B9 (Unlock all) A6 01 00 00 00 04 01 1A 02 BA (Lock all)
8	Input Source	√		0x07	0x01	0xAC	0x0D = HDMI1 0x06 = HDMI2 0x0F = HDMI3 0x0C = USB		A6 01 00 00 00 07 01 AC 0D 00 00 00 00 (HDMI1) A6 01 00 00 00 07 01 AC 06 00 00 00 0B (HDMI2) A6 01 00 00 00 07 01 AC 0F 00 00 00 02 (HDMI3) A6 01 00 00 00 07 01 AC 0C 00 00 00 01 (USB)
9	Current Source		√	0x03	0x01	0xAD		DATA[1]= 0x0D = HDMI1 0x06 = HDMI2 0x0F = HDMI3 0X0C = USB	A6 01 00 00 00 03 01 AD 08
10	Video parameters get		√	0x03	0x01	0x33		DATA[1]= 0 to 50 BACKLIGHT value DATA[2]=Reserved DATA[3]= 0 to 100 Contrast value	A6 01 00 00 00 03 01 33 96
11	Video parameters set	√		0x0A	0x01	0x32	DATA[1]= 0 to 50 BACKLIGHT value DATA[2]=Reserved DATA[3]= 0 to 100 Contrast value		A6 01 00 00 00 0A 01 32 32 37 64 37 37 03 CB

## Command List

NO	Command name	Set Command	Get Command	Length	Data Control	Command Code	Data	Feedback Data	Command Format
12	Color temperature get		√	0x03	0x01	0x35		DATA[1] = 0x00 = USER 0x05 = 7200K 0x04 = 9300K 0x06 = 6500K	A6 01 00 00 00 03 01 35 90
13	Color temperature set	√		0x04	0x01	0x34	0x00 = USER 0x05 = 7200K 0x04 = 9300K 0x06 = 6500K		6 01 00 00 00 04 01 34 00 96 (USER) A6 01 00 00 00 04 01 34 04 92 (9300K) A6 01 00 00 00 04 01 34 06 90 (6500K) A6 01 00 00 00 04 01 34 05 93 (7200K)
14	Color parameters get		√	0x03	0x01	0x37		DATA[1] =0~100 Red color gain value DATA[2] =0~100 Green color gain value DATA[3] =0~100 Blue color gain value	A6 01 00 00 00 03 01 37 92
15	Color parameters set	√		0x09	0x01	0x36	DATA[1] =0~100 Red color gain value DATA[2] =0~100 Green color gain value DATA[3] =0~100 Blue color gain value		A6 01 00 00 00 09 01 36 64 64 64 00 00 00 FD
16	Picture Mode get		√	0x03	0x01	0x39		DATA[1]= 0x01 = STANDARD 0x00 = VIVID 0x02 = SOFT 0x03 =VIDEO	A6 01 00 00 00 03 01 39 9C
17	Picture Mode set	√		0x05	0x01	0x38	DATA[1]= 0x01 = STANDARD 0x00 = VIVID 0x02 = SOFT 0x03 =VIDEO		A6 01 00 00 00 05 01 38 02 00 99 (SOFT) A6 01 00 00 00 05 01 38 00 00 9B (VIVID) A6 01 00 00 00 05 01 38 01 00 9A (STANDARD) A6 01 00 00 00 05 01 38 03 00 98 (VIDEO)
18	ASPECT RATIO get		√	0x03	0x01	0x3B		DATA[1] = 0x02 = 1:1 0x03 = Full	A6 01 00 00 00 03 01 3B 9E
19	ASPECT RATIO set	√		0x04	0x01	0x3A	DATA[1] = 0x02 = 1:1 0x03 = Full		A6 01 00 00 00 04 01 3A 02 9A
20	Volume get		√	0x03	0x01	0x45		DATA[1] = 0 to 30 Audio volume DATA[2] = None 0xFF	A6 01 00 00 00 03 01 45 E0

## Command List

NO	Command name	Set Command	Get Command	Length	Data Control	Command Code	Data	Feedback Data	Command Format
21	Volume set	√		0x05	0x01	0x44	DATA[1] = 0 to 30 Audio volume DATA[2] = None 0xFF		A6 01 00 00 00 05 01 44 1E 4D B4
22	Audio parameters get		√	0x03	0x01	0x43		DATA[1] = 0 to 31 Treble DATA[2] = 0 to 31 Bass	A6 01 00 00 00 03 01 43 E6
23	Audio parameters set	√		0x05	0x01	0x42	DATA[1] = 0 to 31 Treble DATA[2] = 0 to 31 Bass		A6 01 00 00 00 05 01 42 00 00 E1
24	Serial Code Get		√	0x03	0x01	0x15		DATA[1]-DATA[23] = Serial number	A6 01 00 00 00 03 01 15 B0
25	Temperature Get		√	0x03	0x01	0x2F		DATA[1] = 0 to 100 Temperature sensor DATA[2] = None 0xFF	A6 01 00 00 00 03 01 2F 8A
26	Factory Reset	√		0x03	0x01	0xFE			A6 01 00 00 00 03 01 FE 5B
27	Language Get		√	0x03	0x01	0xC0		DATA[1]= 00 = 英文 01 = 德文 09 = 繁中 03 = 法文 05 = 西班牙 07 = POLSKI 0A = 日語	A6 01 00 00 00 03 01 C0 65
28	Language Set	√		0x04	0x01	0xC1	00 = 英文 0A = 日語 02 = 繁中 01 = 德文 03 = 法文 05 = 西班牙 07 = POLSKI		A6 01 00 00 00 04 01 C1 00 63 (英) A6 01 00 00 00 04 01 C1 0A 69 (日) A6 01 00 00 00 04 01 C1 01 62 (德) A6 01 00 00 00 04 01 C1 03 60 (法) A6 01 00 00 00 04 01 C1 05 66 (西) A6 01 00 00 00 04 01 C1 07 64 (波蘭) A6 01 00 00 00 04 01 C1 09 6A (繁中)

## Command List

NO	Command name	Set Command	Get Command	Length	Data Control	Command Code	Data	Feedback Data	Command Format
29	Scheduling Get		√	0x04	0x01	0x5B		DATA[1] = Page 0 = Page disable 1 = Page enable DATA[2] = Start time hour 0 to 23 of the start time hour 24 = NULL DATA[3] = Start time minute 0 to 59 of the start time minute 60 = NULL DATA[4] = End time hour 0 to 23 of the end time hour 24 = NULL DATA[5] = End time minute 0 to 59 of the end time minute 60 = NULL DATA[6] = Video source 0x0D(HDMI1), 0x06(HDMI2), 0x0F(HDMI3), 0x0C(USB) DATA[7] = Working day(s) To set the scheduling working days. Bit0 = 1: every week Bit1 = Monday Bit2 = Tuesday Bit3 = Wednesday Bit4 = Friday Bit5 = Saturday Bit6 = Sunday DATA[8] = Bookmark/Playlist/File Tag(s) To set the set Tag from 1 through 7. 0x00 = none 0x01 = Tag 1 0x02 = Tag 2 0x03 = Tag 3 0x04 = Tag 4 0x05 = Tag 5 0x06 = Tag 6 0x07 = Tag 7	A6 01 00 00 00 04 01 5B 01 F8

# Command List

NO	Command name	Set Command	Get Command	Length	Data Control	Command Code	Data	Feedback Data	Command Format
30	Scheduling Set	√		0x0B	0x01	0x5A	DATA[1] = Page 0 = Page disable 1 = Page enable DATA[2] = Start time hour 0 to 23 of the start time hour 24 = NULL DATA[3] = Start time minute 0 to 59 of the start time minute 60 = NULL DATA[4] = End time hour 0 to 23 of the end time hour 24 = NULL DATA[5] = End time minute 0 to 59 of the end time minute 60 = NULL DATA[6] = Video source 0x05(D-SUB), 0x0D(HDMI1), 0x06(HDMI2), 0x0F(HDMI3), 0x0C(USB) DATA[7] = Working day(s) To set the scheduling working days. Bit0 = 1: every week Bit1 = Monday Bit2 = Tuesday Bit3 = Wednesday Bit4 = Friday Bit5 = Saturday Bit6 = Sunday DATA[8] = Bookmark/Playlist/File Tag(s) To set the set Tag from 1 through 7. 0x00 = none 0x01 = Tag 1 0x02 = Tag 2 0x03 = Tag 3 0x04 = Tag 4 0x05 = Tag 5 0x06 = Tag 6 0x07 = Tag 7	A6 01 00 00 00 0B 01 5A 11 06 1E 16 00 0D 01 00 E4	



