

Serial Commands List

DK (-A) Series Commercial 4K Monitors
TS (-A) Series Touch Screens

RS232

Pin 1	DCD
Pin 2	RXD
Pin 3	TXD
Pin 4	DTR
Pin 5	GND
Pin 6	DSR
Pin 7	RTS
Pin 8	CTS
Pin 9	RI

RS232 Pinout (9 Pin Male)

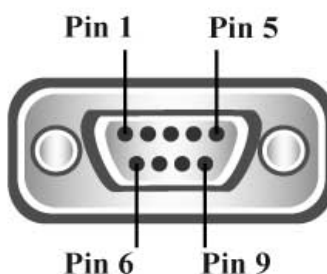


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Serial Interface Communication Protocol

This document defines all the command and messages exchanged between the Primary (a PC or the other controller) and the Secondary (the displays).

It also describes the ways to send or read the commands or the messages.

Protocol definition

SICP stands for "Serial Interface Communication Protocol".

The protocol is specifically designed to allow data communication in half duplex multi-point environments, but it can also be used for half duplex point-to-point RS-232C communication.

Communication characteristics

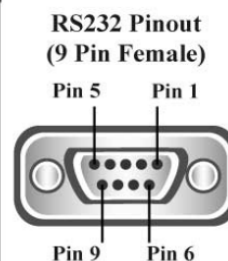
A half duplex communication is implemented starting from the concept of a Primary-Secondary structure, where the display is supposed to be the Secondary.

The first action is always taken by the Primary, which can be either a PC or any controlling device (acting as server) interfaced to the monitor. After sending a command or a request in the appropriate format the Primary receives from the Secondary an acknowledgment, which tells the transmitter whether the command is not valid (or not executable, anyway) or it is accepted. In case of a request, the requested information is sent back and it becomes the acknowledgment by itself.

How to connect external equipment

Female Pin number	Male Pin number
2 <----->	2
3 <----->	3
5 <----->	5

Pin 1	RI
Pin 2	TXD
Pin 3	RXD
Pin 4	DSR
Pin 5	GND
Pin 6	DTR
Pin 7	CTS
Pin 8	RTS
Pin 9	Power Input /DCD



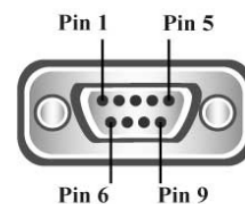
[Display Side]

Hardware Protocol

Baud rate : 9600 bps
Data bits : 8 bit
Parity bits : None
Stop bits : 1 bit
Handshake : None

Pin 1	DCD
Pin 2	RXD
Pin 3	TXD
Pin 4	DTR
Pin 5	GND
Pin 6	DSR
Pin 7	RTS
Pin 8	CTS
Pin 9	RI

RS232 Pinout (9 Pin Male)



[Control Device Side]

Serial Command Protocol

Transmission Formats

This is the format that the computer will send to the display to execute commands.

The format for this command transmission is as follows (total 13 byte):

ex) <STX>001PWRWOF0<ETX> (Set ID : 1 , Power Off Send)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f	0	0	1	P	W	R	W	O	F	F	0	0x0d
Hex	ASCII (capital letter)											Hex

- STX: Start of Text (0x0f)
- ID1 ~ ID3: Set ID (001~100)
- CM1 ~ CM3: Command (e.g. PWR, MIN, MUT, RML, KPL, ...)
- R/W: Read/Write
Only use "Read"(R) or "Write" (W) as set forth in this document
- DA1 ~ DA3: Data (Values)
- IND: Index
- ETX: End of Text (0x0d)

OK Acknowledgment

An acknowledgment will be sent by the display to the computer to verify that the command has been successfully received and executed. This format for this acknowledgment is as follows:

ex) <STX>001PWR#OFF#<ETX> (Set ID: 1, Power Off Acknowledgment)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f	0	0	1	P	W	R	#	O	F	F	#	0x0d
Hex	ASCII (capital letter)											Hex

Error Acknowledgment

The Error Values will be sent by the display to the computer to confirm that the command has not been successfully received and/or executed. The format for Error Values is as follows:

ex) <STX>001PWRERROR<ETX> (Set ID: 1, Power Off Error)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f	0	0	1	P	W	R	E	R	R	O	R	0x0d
Hex	ASCII (capital letter)											Hex

Serial Command Protocol, cont.

Command List

Set Power On/Off (PWR)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				P	W	R	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3: Set ID* ("001" ~ "100")
** NOTE: When sending a Power ON or OFF command, all displays in the RS232 daisy-chain can be addressed by entering "000" as the Set ID value. No acknowledgment will be received when this "Wild Card" command is sent.*
- DA1 ~ DA3 : "-ON" : Power On
"OFF" : Power Off

Ex) <STX>001PWRW0FF0<ETX> (ID:001 , Power Off)
Acknowledge => <STX>001PWR#OFF#<ETX>

Get Power State (PWS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				P	W	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID (001~100)
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001PWSR0000<ETX> (ID:001 , Get Power Status)
Acknowledge => <STX>001PWS#OFF#<ETX>

- DA1 ~ DA3 : "-ON" : Power On
"OFF" : Power Off
"DPM" : DPMS

Serial Command Protocol, cont.

Command List

Set Virtual Remote Control (RMT)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				R	M	T	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID (001~100)
- DA1 ~ DA3 : "MEN" (Menu)
"SOU" (Source)
"LEF" (Left)
"RIG" (Right)
"ENT" (Enter & PC Auto Adjust)
"-UP" (Up)
"DOW" (Down)
"EXI" (Exit)
- IND : "0" (don't care)

Ex) <STX>001RMTWSOU0<ETX> (Remote Source Button)
Acknowledge => <STX>001RMT#SOU#<ETX>

Set Source Change (MIN)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				M	I	N	W					0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID (001~100)
- DA1 ~ DA3 : "HD1" : HDMI1
"HD2" : HDMI2
"DP1" : DP1
"DP2" : DP2
- IND : "0" (don't care)

Ex) <STX>001MINWHD10<ETX> (Source HDMI1)
Acknowledge => <STX>001MIN#HD1#<ETX>

Serial Command Protocol, cont.

Command List

Get Source State (MIS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				M	I	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID (001~100)
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001MISR0000<ETX> (ID: 001 , Get Source Status)
 Acknowledge => <STX>001MIS#COM#<ETX>

- DA1 ~ DA3 : "HD1" : HDMI1
 "HD2" : HDMI2
 "DP1" : DP1
 "DP2" : DP2

Get Signal State (SGS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				S	G	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID (001~100)
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001SGSR0000<ETX> (ID: 001 , Get Signal Status)
 Acknowledge => <STX>001SGS#COM#<ETX>

- DA1 ~ DA3 : "000" : Power Off
 "001" : Normal
 "002" : No Signal
 "003" : DPMS
 "004" : Abnormal

Serial Command Protocol, cont.

Set Volume Adjust (VOL)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				V	O	L	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" ~ "100"
- IND : "0" (don't care)

Ex) <STX>001VOLW1000<ETX> (ID:001, Volume 100)
 Acknowledge => <STX>001VOL#100#<ETX>

Get Volume State (VOS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				V	O	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001VOSR0000<ETX> (ID:001, Get Volume)
 Acknowledge => <STX>001VOS#050#<ETX>

- DA1 ~ DA3 : Volume Value

Serial Command Protocol, cont.

Set Volume Mute (MUT)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				M	U	T	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "-ON" : Mute On
"OFF" : Mute Off
- IND : "0" (don't care)

Ex) <STX>001MUTW-ON0<ETX> (ID:001, Mute On)
 Acknowledge => <STX>001MUT#-ON#<ETX>

Get Volume Mute (MUT)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				M	U	T	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001MUTR0000<ETX> (ID:001, Mute On)
 Acknowledge => <STX>001MUT#-ON#<ETX>

- DA1 ~ DA3 : "-ON" : Mute On
"OFF" : Mute Off

Serial Command Protocol, cont.

Get Current Temperature (TPS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				T	P	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001TPSR0000<ETX> (ID:001, Read Current Temperature)
 Acknowledge => <STX>001TPS#050#<ETX>

- DA1 ~ DA3 : Temperature Value

Set Fan Control (FAN)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				F	A	N	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "AUT" : Auto
 "-ON" : Fan On
 "OFF" : Fan Off
- IND : "0" (don't care)

Ex) <STX>001FANWAUTO<ETX> (ID:001, Fan Control Auto)
 Acknowledge => <STX>001FAN#AUT#<ETX>

Serial Command Protocol, cont.

Get Fan Control (FAS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				F	A	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001FASR0000<ETX> (ID:001, Read Fan Control)
 Acknowledge => <STX>001FAS#AUT#<ETX>

- DA1 ~ DA3 : "AUT" : Auto
 "-ON" : Fan On
 "OFF" : Fan Off

Set Active Temperature (TAT) - Fan Control (Auto)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				T	A	T	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : Temperature Value ("000" ~ "100")
- IND : "0" (don't care)

Ex) <STX>001TATW0500<ETX> (ID:001, Active Temperature 50)
 Acknowledge => <STX>001TAT#050#<ETX>

Serial Command Protocol, cont.

Get Active Temperature (TAS) - Fan Control (Auto)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				T	A	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001TASR0000<ETX> (ID:001, Read Active Temperature)
 Acknowledge => <STX>001TAS#050#<ETX>

- DA1 ~ DA3 : Temperature Value

Set Hysteresis Temperature (THY) - Fan Control (Auto)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				T	H	Y	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : Hysteresis Value ("000" ~ "100")
- IND : "0" (don't care)

Ex) <STX>001THYW0030<ETX> (ID:001, Hysteresis Temperature 3)
 Acknowledge => <STX>001THY#003#<ETX>

Serial Command Protocol, cont.

Get Hysteresis Temperature (THS) – Fan Control (Auto)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				T	H	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001THSR0000<ETX> (ID:001, Read Hysteresis Temperature)
 Acknowledge => <STX>001THS#003#<ETX>

- DA1 ~ DA3 : Hysteresis Temperature Value

Set Shutdown Temperature (TSD)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				T	S	D	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : Shutdown Temperature Value ("070" ~ "100")
- IND : "0" (don't care)

Ex) <STX>001TSDW0800<ETX> (ID:001, Shutdown Temperature 80)
 Acknowledge => <STX>001TSD#080#<ETX>

Serial Command Protocol, cont.

Get Shutdown Temperature (TSS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				T	S	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001TSSR0000<ETX> (ID:001, Read Shutdown Temperature)
 Acknowledge => <STX>001TSS#080#<ETX>

- DA1 ~ DA3 : Shutdown Temperature Value

Set Dimming Setting (DIM)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				D	I	M	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" ~ "100"
- IND : "0" (don't care)

Ex) <STX>001DIMW1000<ETX> (ID:001, Dimming 100)
 Acknowledge => <STX>001DIM#100#<ETX>

Serial Command Protocol, cont.

Get Dimming Setting (DIS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				D	I	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001DISR0000<ETX> (ID:001, Read Dimming)
 Acknowledge => <STX>001DIS#100#<ETX>

Set Auto Dimming Control (ADC)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				A	D	C	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "-ON" : Auto Dimming On
 "OFF" : Auto Dimming Off
- IND : "0" (don't care)

Ex) <STX>001ADCW-ON0<ETX> (ID:001, Auto Dimming On)
 Acknowledge => <STX>001ADC#-ON#<ETX>

Serial Command Protocol, cont.

Get Auto Dimming Control (ADS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				A	D	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001ADSR0000<ETX> (ID:001, Read Auto Dimming Control)
 Acknowledge => <STX>001ADS#AUT#<ETX>

- DA1 ~ DA3 : "-ON" : Auto Dimming On
 "OFF" : Auto Dimming Off

Set Max Ambient Setting (AMA) – Auto Dimming (On)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				A	M	A	W					0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ IND : "0000" ~ "3000"

Ex) <STX>001AMAW0700<ETX> (ID:001, Max Ambient 700)
 Acknowledge => <STX>001AMA#0700<ETX>

Serial Command Protocol, cont.

Get Max Ambient Setting (AMS) – Auto Dimming (On)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				A	M	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001AMSR0000<ETX> (ID:001, Read Max Ambient)
 Acknowledge => <STX>001AMS#0700<ETX>

Set Min Ambient Setting (ANA) – Auto Dimming (On)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				A	N	A	W					0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ IND : "0000" ~ "3000"

Ex) <STX>001ANAW0200<ETX> (ID:001, Min Ambient 200)
 Acknowledge => <STX>001ANA#0200<ETX>

Serial Command Protocol, cont.

Get Min Ambient Setting (ANS) – Auto Dimming (On)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				A	N	S	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001ANSR0000<ETX> (ID:001, Read Min Ambient)
 Acknowledge => <STX>001ANS#0200<ETX>

Get Current Lux (LUX)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				L	U	X	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001LUXR0000<ETX> (ID:001, Read Current Lux)
 Acknowledge => <STX>001LUX#0650<ETX> (650 Lux)

Serial Command Protocol, cont.

Video Wall Enable (VDW)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				V	D	W	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "-ON" : On
"OFF" : Off
- IND : "0" (don't care)

Ex) <STX>001VDWW0000<ETX> (ID:001, Video Wall Enable On)
 Acknowledge => <STX>001VDW#-ON#<ETX>

Get Video Wall Enable (VDW)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				V	D	W	R				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (don't care)
- IND : "0" (don't care)

Ex) <STX>001VDWR0000<ETX> (ID:001, Get Video Wall Enable)
 Acknowledge => <STX>001VDW#-ON#<ETX>

Serial Command Protocol, cont.

Horizontal Set Count (HSC)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				H	S	C	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "001" ~ "010"

Ex) <STX>001HSCW0100<ETX> (H-Set Count 10)
 Acknowledge => <STX>001HSC#010#<ETX>

Vertical Set Count (VSC)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				V	S	C	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "001" ~ "010"

Ex) <STX>001VSCW0100<ETX> (V-Set Count 10)
 Acknowledge => <STX>001VSC#010#<ETX>

Serial Command Protocol, cont.

Set Display Sequence (SDS) : Display Num

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				S	D	S	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "001" ~ "100"

Ex) <STX>001SDSW0010<ETX> (Display Sequence 1)
 Acknowledge => <STX>001SDS#001#<ETX>

Get Display Sequence (SDS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				S	D	S	R				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "001" ~ "100"

Ex) <STX>001SDSR0010<ETX> (Display Sequence 1)
 Acknowledge => <STX>001SDS#001#<ETX>

Serial Command Protocol, cont.

Horizontal Edge Adjust (HEG)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				H	E	G	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" ~ "070"

Ex) <STX>001HEGW0300<ETX> (H-Edge Adjust 30)
 Acknowledge => <STX>001HEG#030#<ETX>

Vertical Edge Adjust (VEG)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				V	E	G	W				0	0x0d
Hex	ASCII (capital letter)											Hex

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" ~ "070"

Ex) <STX>001VEGW0400<ETX> (V-Edge Adjust 40)
 Acknowledge => <STX>001VEG#040#<ETX>

Serial Command Protocol, cont.

Read Set ID Number (SID)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f	F	F	F	S	I	D	R	0	0	0	0	0x0d
Hex	ASCII (capital letter)											Hex

** Attention : Read SetID Function must be only one connect Monitor (1 pc : 1 monitor)

- ID1 ~ ID3 : "FFF" (Set ID)
- DA1 ~ DA3 : "000" (Don't care)

Ex) <STX>FFFSIDR0000<ETX> (Read Set ID)

Acknowledge => <STX>001SID#001#<ETX> (Set ID : 1)

Write Set ID Number (SID)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f	F	F	F	S	I	D	W				0	0x0d
Hex	ASCII (capital letter)											Hex

** Attention : Write SetID Function must be only one connect Monitor (1 pc : 1 monitor)

- ID1 ~ ID3 : "FFF" (Set ID)
- DA1 ~ DA3 : "001" (Set ID Number "001" ~ "100")

Ex) <STX>FFFSIDR0010<ETX> (Write Set ID : 1)

Acknowledge => <STX>001SID#001#<ETX>