

## SV, EN & ED Series Serial Command List

- \* All commands set forth in this document are shown in both ASCII and HEX formats. "STX" & "ETX" HEX values have no ASCII equivalent.
- \* When entering commands in ASCII, one must begin and end the command string with HEX values "0F" and "0D", respectively.
- \* STX: Start of Text (0F), ID1 ~ ID3 : Set ID ( 001~100 ), R/W : Read/Write, DA1 ~ DA3 : Data ( Values ), IND : Index, ETX : End of Text ( 0d )

- \* RS232 PIN MAP: Straight-through Female to Male [ 2->2, 3->3, 5->5]
- \* Baud rate: 9600bps, Data bits: 8bit, Parity bits: None, Stop bits: 1bit, Handshake: None
- \* "000" may be used as a "wildcard" to address all displays in serial daisy-chain at once

Name	Command	Acknowledgement																									
<b>Mute On/Off [MUT]</b>	<b>"Mute On"</b>																										
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	1	M	U	T	W	-	O	N	0	0	ASCII Code	0	0	1	M	U	T	#	-	O	N	#	0	
	HEX Code	0F	30	30	31	4D	55	54	57	2D	4F	4E	30	0D	HEX Code	0F	30	30	31	4D	55	54	23	2D	4F	4E	23
	ID1 ~ ID3 : Set ID ( "001" ~ "100" )																										
	DA1 ~ DA3 : "-ON" ( Mute On ), "OFF" ( Mute Off )																										
<b>Power On/OFF [PWR]</b>	<b>"Power Off"</b>																										
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	1	P	W	R	W	O	F	F	0	0	ASCII Code	0	0	1	P	W	R	#	O	F	F	#	0	
	HEX Code	0F	30	30	31	50	57	52	57	4F	46	46	30	0D	HEX Code	0F	30	30	31	50	57	52	23	4F	46	46	23
	ID1 ~ ID3 : Set ID ( "001" ~ "100" )																										
	DA1 ~ DA3 : "-ON" : Power On, "OFF" : Power Off																										
<b>Remote Control Lock On/OFF [RML1]</b>	<b>"Lock On"</b>																										
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	1	R	M	L	W	-	O	N	0	0	ASCII Code	0	0	1	R	M	L	#	-	O	N	#	0	
	HEX Code	0F	30	30	31	52	4D	4C	57	2D	4F	4E	30	0D	HEX Code	0F	30	30	31	52	4D	4C	23	2D	4F	4E	23
	ID1 ~ ID3 : Set ID ( "001" ~ "100" )																										
	DA1 ~ DA3 : "-ON" : Lock On, "OFF" : Lock Off																										
<b>Keypad Control Lock On/OFF [KPL1]</b>	<b>"Lock On"</b>																										
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	1	K	P	L	W	-	O	N	0	0	ASCII Code	0	0	1	K	P	L	#	-	O	N	#	0	
	HEX Code	0F	30	30	31	4B	50	4C	57	2D	4F	4E	30	0D	HEX Code	0F	30	30	31	4B	50	4C	57	2D	4F	4E	23
	ID1 ~ ID3 : Set ID ( "001" ~ "100" )																										
	DA1 ~ DA3 : "-ON" : Lock On, "OFF" : Lock Off																										
<b>Source Change [MIN]</b>	<b>"Source DVI"</b>																										
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	1	M	I	N	W	D	V	I	0	0	ASCII Code	0	0	1	M	I	N	#	D	V	I	#	0	
	HEX Code	0F	30	30	31	4D	49	4E	57	44	56	49	30	0D	HEX Code	0F	30	30	31	4D	49	4E	23	44	56	49	23
	ID1 ~ ID3 : Set ID ( "001" ~ "100" )																										
	[SV series] DA1 ~ DA3 : "DVI" => DVI(HDMI), "COM" => Component, "-PC" => PC(D-SUB), "-AV" => AV																										
	[EN series] DA1 ~ DA3 : "DVI" => DVI 1, "DV2" => DVI 2, "-PC" : PC(D-SUB), "-AV" : AV																										
<b>Volume Control [VOL]</b>	<b>"Volume 50"</b>																										
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	1	V	O	L	W	0	5	0	0	0	ASCII Code	0	0	1	V	O	L	#	0	5	0	#	0	
	HEX Code	0F	30	30	31	56	4F	4C	57	30	35	30	30	0D	HEX Code	0F	30	30	31	56	4F	4C	23	30	35	30	23
	ID1 ~ ID3 : Set ID ( "001" ~ "100" )																										
	DA1 ~ DA3 : "000" ~ "100"																										
<b>Virtual Remote Control [RMT]</b>	<b>"Remote Source Button"</b>																										
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	1	R	M	T	W	S	O	U	0	0	ASCII Code	0	0	1	R	M	T	#	S	O	U	#	0	
	HEX Code	0F	30	30	31	52	4D	54	57	53	4F	55	30	0D	HEX Code	0F	30	30	31	52	4D	54	23	53	4F	55	23
	ID1 ~ ID3 : Set ID ( "001" ~ "100" )																										
	DA1 ~ DA3 : "MEN" (Menu), "SOU" (Source), "LEF" (Left & Volume-), "RIG" (Right & Volume+)																										
	"ENT" (Enter), "-UP" (Up), "DOW" (Down), "EXI" (Exit)																										
<b>Horizontal Set Count [HSC]</b>	<b>"H-Set Count 10"</b>																										
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	1	H	S	C	W	0	1	0	0	0	ASCII Code	0	0	1	H	S	C	#	0	1	0	#	0	
	HEX Code	0F	30	30	31	48	53	43	57	30	31	30	30	0D	HEX Code	0F	30	30	31	48	53	43	23	30	31	30	23
	ID1 ~ ID3 : Set ID ( "001" ~ "100" )																										
	DA1 ~ DA3 : "001" ~ "010"																										

Name	Command	Acknowledgement																																																																																				
Vertical Set Count [VSC]	<b>"V-Set Count 10"</b>																																																																																					
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HEX Code	0F	30	30	31	56	45	47	23	30	34	30	23	0D																																																																									
HDMI Input format [IVF]	<b>"HDMI Input format RGB444"</b>																																																																																					
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Name	Command													
Color Adjust COMPONENT [FCC]	<b>"Write : Component Sub-Contrast 100"</b>													
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	1	F	C	C	W	1	0	0	4		
	HEX Code	0F	30	30	31	46	43	43	57	31	30	30	34	0D

ID1 ~ ID3 : Set ID ( "001" ~ "100" )  
 DA1 ~ DA3 : "000" ~ "255" ( Color Value )  
 R/W : "W" (Write) , "R" (Read)  
 IND : "0" ( Sub-Brightness) , "1" ( R-Offset ) , "2" ( G-Offset ) , "3" ( B-Offset ) ,  
 "4" (Sub-Contrast) , "5" ( R-Gain ) , "6" ( G-Gain ) , "7" ( B-Gain )

Name	Command													
Color Adjust AV [FCA]	<b>"Write : AV Sub-Contrast 100"</b>													
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	1	F	C	A	W	1	0	0	4		
	HEX Code	0F	30	30	31	46	43	41	57	31	30	30	34	0D

ID1 ~ ID3 : Set ID ( "001" ~ "100" )  
 DA1 ~ DA3 : "000" ~ "255" ( Color Value )  
 R/W : "W" (Write) , "R" (Read)  
 IND : "0" ( Sub-Brightness) , "1" ( R-Offset ) , "2" ( G-Offset ) , "3" ( B-Offset ) ,  
 "4" (Sub-Contrast) , "5" ( R-Gain ) , "6" ( G-Gain ) , "7" ( B-Gain )

Name	Command													
Zoom IN /OUT [ZOM]	<b>* ZOOM OUT: 3X3 DVI1</b>													
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX	
	ASCII Code	0	0	0	Z	O	M	W	3	3	O	0		
	HEX Code	0F	30	30	30	5A	4F	4D	57	33	33	4F	30	0D

ID1 ~ ID3 : Set ID ( "000" )  
 DA1 ~ DA2 : "11" ~ "99" ( H- Set Count , V-Set Count ) , Ex) 3x3 Video wall => 33  
 DA3 : "I" or "O" ( Zoom IN, Zoom OUT )  
 R/W : "W" (Write)  
 IND : "0" ( DVI ) , "1" ( RGB ) , "2" ( COMPONENT ) , "3" ( AV )  
 [SV Series] IND : "0" ( DVI ) , "1" ( RGB ) , "2" ( COMPONENT ) , "3" ( AV )  
 [EN Series] IND : "0" ( DVI 1 ) , "1" ( RGB ) , "4" ( DVI 2 )

Acknowledge													
	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
ASCII Code	0	0	1	F	C	C	#	1	0	0	4		
HEX Code	0F	30	30	31	46	43	43	23	31	30	30	34	0D

	STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
ASCII Code	0	0	1	F	C	A	#	1	0	0	4		
HEX Code	0F	30	30	31	46	43	41	23	31	30	30	34	0D

No Acknowledgement

# Serial Interface Communication Protocol

## [SV & DV Series]



# ◆ SICP (Serial Interface Communication Protocol)

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

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

## 1. 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.

## 2. Communication characteristics

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

The first action is always taken by the master, 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 master receives from the slave an acknowledgement, 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 acknowledgement by itself.

## 3. How to connect control devices

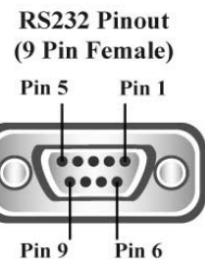
Female Pin number	Male Pin number
2 <----->	2
3 <----->	3
5 <----->	5

## 4. Hardware Protocol

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

### [Display side]

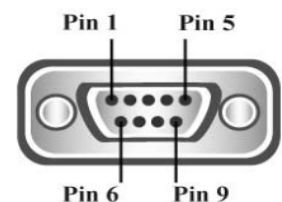
Pin 1	RI
Pin 2	TXD
Pin 3	RXD
Pin 4	DSR
Pin 5	GND
Pin 6	DTR
Pin 7	CTS
Pin 8	RTS
Pin 9	Power Input /DCD



### [PC side]

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)



## 5. 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>001PWRWOFF0<ETX> ( Set ID : 1 , Power Off Send )

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	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 ( PWR, MIN, MUT,RML,KPL..... )
- R/W : Read/Write
- DA1 ~ DA3 : Data ( Values )
- IND : Index
- ETX : End of Text ( 0x0d )

## 6. OK Acknowledgement

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

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

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

## 7. Error Acknowledgement

The Error Values will be sent by the display to the computer to verify that the command has been successfully received and executed.

This format for this 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	ETX	
0x0f	0	0	1	P	W	R	E	R	R	O	R	0x0d
Hex	ASCII (capital letter)										Hex	

## 8. How to choose display ID number

### ◆ Read Set ID Number

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

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

- 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

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

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

- ID1 ~ ID3 : "FFF" ( Set ID )

- DA1 ~ DA3 : "001" ( Set ID Number )

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

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

## 9. Command List

### ◆ Mute On/Off (MUT)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3		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 )

Ex) <STX>001MUTW-ON0<ETX> ( Mute On )

Acknowledge => <STX>001MUT#-ON#<ETX>

Note: Do not substitute "R" for "W" in the "R/W" column in order to read display power state. . Please see p. 11 of this document for the correct commands

### ◆ Power On/Off (PWR)

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

- ID1 ~ ID3 : Set ID ("001" ~ "100")
  - DA1 ~ DA3 : "-ON" : Power On  
"OFF" : Power Off
- Ex) <STX>001PWRWOFF0<ETX> ( Power Off )  
Acknowledge => <STX>001PWR#OFF#<ETX>

◆ Remote Control Lock On/Off (RML)

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

- ID1 ~ ID3 : Set ID ("001" ~ "100")
  - DA1 ~ DA3 : "-ON" : Lock On  
"OFF" : Lock Off
- Ex) <STX>001RMLW-ON0<ETX> ( Lock On )  
Acknowledge => <STX>001RML#-ON#<ETX>

◆ Keypad Control Lock On/Off (KPL)

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

- ID1 ~ ID3 : Set ID ("001" ~ "100")
  - DA1 ~ DA3 : "-ON" : Lock On  
"OFF" : Lock Off
- Ex) <STX>001KPLW-ON0<ETX> ( Lock ON )  
Acknowledge => <STX>001KPL#-ON#<ETX>

◆ Source Change (MIN)

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

- ID1 ~ ID3 : Set ID ("001" ~ "100")
  - DA1 ~ DA3 : "DVI" : DVI(HDMI)  
"COM" : Component  
"PC" : PC(D-SUB)  
"AV" : AV(Composite)
- Ex) <STX>001MINWDVIO<ETX> ( Source DVI )  
Acknowledge => <STX>001MIN#DVI#<ETX>



◆ Volume Control (VOL)

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

- ID1 ~ ID3 : Set ID ("001" ~ "100")
  - DA1 ~ DA3 : "000" ~ "100"
- Ex) <STX>001VOLW0500<ETX> ( Volume 50 )  
 Acknowledge => <STX>001VOL#050#<ETX>

◆ Virtual Remote Control (RMT)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	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 & Volume-)
  - "RIG" (Right & Volume+)
  - "ENT" (Enter)
  - "-UP" (Up)
  - "DOW" (Down)
  - "EXI" (Exit)
- Ex) <STX>001RMTWSOU0<ETX> ( Remote Source Button)  
 Acknowledge => <STX>001RMT#SOU#<ETX>

◆ Horizontal Set Count (HSC)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	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	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>

### ◆ Display Sequence (SDS)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	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>

### ◆ Horizontal Edge Adjust (HEG)

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

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

- DA1 ~ DA3 : "001" ~ "010"

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	ETX	
0x0f				V	E	G	W				0	0x0d
Hex	ASCII (capital letter)										Hex	

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" ~ "200"
- Ex) <STX>001VEGW0400<ETX> ( V-Edge Adjust 40 )
- Acknowledge => <STX>001VEG#040#<ETX>

### ◆ HDMI Input format(IVF)

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

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "R44" : RGB444
- "Y44" : YPbPr444
- "Y22" : YPbPr422
- Ex) <STX>001IVFWR440<ETX> ( HDMI Input format RGB444 )
- Acknowledge => <STX>001IVF#R44#<ETX>

### ◆ Color Adjust HDMI (FCD)

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

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" ~ "255" ( Color Value )
- R/W : "W" (Write)
- "R" (Read)
- IND : "0" ( Sub-Brightness)
- "1" ( R-Offset )
- "2" ( G-Offset )
- "3" ( B-Offset )
- "4" (Sub-Contrast )
- "5" ( R-Gain )
- "6" ( G-Gain )
- "7" ( B-Gain )
- Ex) <STX>001FCDW1004<ETX> ( Write : DVI Sub-Contrast 100 )
- Acknowledge => <STX>001FCD#1004<ETX>
- Ex) <STX>001FCDR0002<ETX> ( Read : DVI G-Offset )
- Acknowledge => <STX>001FCD#1102<ETX> ( G-Offset:110 )

### ◆ Color Adjust PC(D-SUB) (FCP)

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

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" ~ "255" ( Color Value )
- R/W : "W" (Write)  
"R" (Read)
- IND : "0" ( Sub-Brightness)  
"1" ( R-Offset )  
"2" ( G-Offset )  
"3" ( B-Offset )  
"4" (Sub-Contrast )  
"5" ( R-Gain )  
"6" ( G-Gain )  
"7" ( B-Gain )

Ex) <STX>001FCAW1004<ETX> ( Write : AV Sub-Contrast 100 )

Acknowledge => <STX>001FCA#1004<ETX>

Ex) <STX>001FCAR0002<ETX> ( Read : AV G-Offset )

Acknowledge => <STX>001FCA#1102<ETX> ( G-Offset : 110 )

### ◆ Color Adjust COMPONENT (FCC)

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

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" ~ "255" ( Color Value )
- R/W : "W" (Write)  
"R" (Read)
- IND : "0" ( Sub-Brightness)  
"1" ( R-Offset )  
"2" ( G-Offset )  
"3" ( B-Offset )  
"4" (Sub-Contrast )  
"5" ( R-Gain )  
"6" ( G-Gain )  
"7" ( B-Gain )

Ex) <STX>001FCCW1004<ETX> ( Write : Component Sub-Contrast 100 )

Acknowledge => <STX>001FCC#1004<ETX>

Ex) <STX>001FCCR0002<ETX> ( Read : Component G-Offset )

Acknowledge => <STX>001FCC#1102<ETX> ( G-Offset : 110 )

#### ◆ Color Adjust AV (FCA)

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

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" ~ "255" ( Color Value )
- R/W : "W" (Write)  
"R" (Read)
- IND : "0" ( Sub-Brightness)  
"1" ( R-Offset )  
"2" ( G-Offset )  
"3" ( B-Offset )  
"4" (Sub-Contrast )  
"5" ( R-Gain )  
"6" ( G-Gain )  
"7" ( B-Gain )

Ex) <STX>001FCAW1004<ETX> ( Write : AV Sub-Contrast 100 )

Acknowledge => <STX>001FCA#1004<ETX>

Ex) <STX>001FCAR0002<ETX> ( Read : AV G-Offset )

Acknowledge => <STX>001FCA#1102<ETX> ( G-Offset : 110 )

#### ◆ Zoom IN/OUT(ZOM)

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

- ID1 ~ ID3 : Set ID ("000")
- DA1 ~ DA2 : "11" ~ "99" ( H- Set Count , V-Set Count )
- Ex) 3x3 Video wall => 33
- DA3 : "I" or "O" ( Zoom IN, Zoom OUT )
- R/W : "W" (Write)
- IND : "0" ( DVI)  
"1" ( RGB )  
"2" ( COMPONENT )  
"3" ( AV )

◆ Power On/Off Status(PWS)

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

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

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

Ex) <STX>001PWSR0000<ETX> ( Set ID: 1 Read Power Status )  
 Acknowledge => <STX>001PWR#OFF#<ETX>