

EP5804K/EP5804K-T, EP6504K/EP6504K-T RS232 User Manual



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Part Number: 020-1273-00

RS232 Codes

RS232 control is not necessary for operation, but is a convenient way to control displays from a computer at a distance. Most things you can do with the remote, you can do with RS232 commands. Plus, you can send inquiries to the displays and find out the current settings and values.

1 RS232 Command Format

STX (1 byte) + **IDT** (1byte) + **Type** (1byte) + **CMD** (3bytes) + [**Value/Reply (1byte)**] + **ETX** (1 byte)

STX: Start byte = **07**

IDT: IDT is always set to 0x00. Monitor ID value can be used here.

Type: Read or Write command, **01**: read, **02**: write; **00**: return to host (from monitor)

CMD: As shown in the table on the following pages

Value (VAL): Setting Value to be written (for write commands only)

Reply (REP): The current value for the setting represented by CMD

ETX: End byte = **08**

Transmit from PC (Host)

Read command: 07 IDT 01 CMD 08 (7bytes)

Write/Setting command: 07 IDT 02 CMD VAL 08 (8 bytes)

Response from Monitor: Sent after receiving any valid command. The response CMD is the same as the received CMD.

Return command: 07 IDT 00 CMD REP 08 (8 bytes)

2 Serial Port Setting

Baud Rate	Data Bit	Parity Bit	Stop Bit
19200	8	None	1

Note: Baud rate can be set to 115200, 38400, 19200 or 9600 to match the monitor baud rate setting. Baud rate 19200 is the default setting.

Explanation of symbols

▲: Valid command on power saving/off mode (The "Wake Up from Sleep" setting must be set to "VGA, Digital, RS232".)

Main Item	Control Item	CMD	Type	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Notes
Power Control and Input Source	Power Control	POW	W/R	00	00	Off (soft power)	50 4F 57	▲
				01	01	On (soft power)		▲
	Input Source	MIN	W/R	00	00	VGA	4D 49 4E	
				01	01	Digital DVI		
				09	09	HDMI 1		
				10	10	HDMI 2		
				13	13	Displayport		
14	14	OPS						
Display Adjustment	Color	BRI	W/R	0~100	Current value	Backlight Brightness	42 52 49	
		BRL	W/R	0~100	Current value	Digital Brightness Level	42 52 4C	
		BLC	W/R	00	00	Off (Backlight)	42 4C 43	
				01	01	On (Backlight)		
		CON	W/R	0~100	Current value	Contrast	43 4F 4E	
		SHA	W/R	0~24	Current value	Sharpness	53 48 41	
		HUE	W/R	0~100	Current value	Hue	48 55 45	
	SAT	W/R	0~100	Current value	Saturation	53 41 54		
	Flesh Tone	FST	W/R	0	0	Off	46 53 54	
				1	1	Low		
				2	2	Medium		
				3	3	High		
	Noise Reduction	NOR	W/R	0	0	Off	4E 4F 52	
				1	1	Low		
				2	2	Medium		
				3	3	High		
	Local Dimming	LDM	W/R	0	0	Local Dimming Off	4C 44 4D	
				1	1	Local Dimming On		

Main Item	Control Item	CMD	Type	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Notes
Display Adjustment	MEMC	MEM	W/R	0	0	Off	4D 45 4D	
				1	1	Low		
				2	2	Medium		
				3	3	High		
	Scheme	SCM	W/R	00	00	User	53 43 4D	
				01	01	Sport		
				02	02	Game		
				03	03	Cinema		
				04	04	Vivid		
	Color Temperature	COT	W/R	00	00	User	43 4F 54	
				01	01	6500K		
				02	02	9300K		
				03	03	3200K		
				06	06	5000K		
				07	07	7500K		

Main Item	Control Item	CMD	Type	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Notes
Display Adjustment	Gamma	GAC	W/R	00	00	Off (Gamma)	47 41 43	
				01	01	1.85 (Gamma)		
				02	02	1.9 (Gamma)		
				03	03	1.95 (Gamma)		
				04	04	2.0 (Gamma)		
				05	05	2.05 (Gamma)		
				06	06	2.1 (Gamma)		
				07	07	2.15 (Gamma)		
				08	08	2.2 (Gamma)		
				09	09	2.25 (Gamma)		
				10	10	2.3 (Gamma)		
				11	11	2.35 (Gamma)		
				12	12	2.4 (Gamma)		
				13	13	2.45 (Gamma)		
				14	14	2.5 (Gamma)		
				15	15	2.55 (Gamma)		
	16	16	2.6 (Gamma)					
	Gain & Offset	USR	W/R	0~255	Current value	Red Gain (128~383)	55 53 52	
		USG	W/R	0~255	Current value	Green Gain (128~383)	55 53 47	
		USB	W/R	0~255	Current value	Blue Gain (128~383)	55 53 42	
		UOR	W/R	0~100	Current value	Red Offset (-50~50)	55 4F 52	
		UOG	W/R	0~100	Current value	Green Offset (-50~50)	55 4F 47	
		UOB	W/R	0~100	Current value	Blue Offset (-50~50)	55 4F 42	
	VGA Adjustment	PHA	W/R	0~63	Current value	Phase	50 48 41	
		CLO	W/R	0~100	Current value	Clock	43 4C 4F	
		HOR	W/R	-100~100	Current value	Horizontal Position	48 4F 52	
		VER	W/R	-100~100	Current value	Vertical Position	56 45 52	
		ADJ	W	00	00	Auto Adjust	41 44 4A	

Main Item	Control Item	CMD	Type	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Notes
RTC	Current Time Adjustment	RTY	W/R	0~99	0~99	Year	52 54 59	
		RTM		0~12	0~12	Month	52 54 4D	
		RTD		1~31	1~31	Day	52 54 44	
		RTH		0~23	0~23	Hour	52 54 48	
		RTN		0~59	0~59	Minute	52 54 4E	
	Timer Mode	TMS	W/R	0	0	All	54 4D 53	
				1	1	Work Days		
				2	2	User		
	Alarm Enable	AEN	W/R	1	1	Sunday	41 45 4E	
				2	2	Monday		
				4	4	Tuesday		
				8	8	Wednesday		
				16	16	Thursday		
				32	32	Friday		
				64	64	Saturday		
	Alarm Disable	AEF	W/R	1	1	Sunday	41 45 46	
				2	2	Monday		
				4	4	Tuesday		
				8	8	Wednesday		
				16	16	Thursday		
				32	32	Friday		
				64	64	Sunday		
	Sunday	SNH	W/R	0~23	0~23	Sunday On Hour	53 4E 48	
		SNM		0~59	0~59	Sunday On Minute	53 4E 4D	
		SFH		0~23	0~23	Sunday Off Hour	53 46 48	
		SFM		0~59	0~59	Sunday Off Minute	53 46 4D	
	Monday	NNH	W/R	0~23	0~23	Monday On Hour	4E 4E 48	
		NNM		0~59	0~59	Monday On Minute	4E 4E 4D	
NFH		0~23		0~23	Monday Off Hour	4E 46 48		
NFM		0~59		0~59	Monday Off Minute	4E 46 4D		

Main Item	Control Item	CMD	Type	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Notes
RTC	Tuesday	ENH	W/R	0~23	0~23	Tuesday On Hour	45 4E 48	
		ENM		0~59	0~59	Tuesday On Minute	45 4E 4D	
		EFH		0~23	0~23	Tuesday Off Hour	45 46 48	
		EFM		0~59	0~59	Tuesday Off Minute	45 46 4D	
	Wednesday	DNH	W/R	0~23	0~23	Wednesday On Hour	44 4E 48	
		DNM		0~59	0~59	Wednesday On Minute	44 4E 4D	
		DFH		0~23	0~23	Wednesday Off Hour	44 46 48	
		DFM		0~59	0~59	Wednesday Off Minute	44 46 4D	
	Thursday	UNH	W/R	0~23	0~23	Thursday On Hour	55 4E 48	
		UNM		0~59	0~59	Thursday On Minute	55 4E 4D	
		UFH		0~23	0~23	Thursday Off Hour	55 46 48	
		UFM		0~59	0~59	Thursday Off Minute	55 46 4D	
	Friday	INH	W/R	0~23	0~23	Friday On Hour	49 4E 48	
		INM		0~59	0~59	Friday On Minute	49 4E 4D	
		IFH		0~23	0~23	Friday Off Hour	49 46 48	
		IFM		0~59	0~59	Friday Off Minute	49 46 4D	
	Saturday	TNH	W/R	0~23	0~23	Saturday On Hour	54 4E 48	
		TNM		0~59	0~59	Saturday On Minute	54 4E 4D	
		TFH		0~23	0~23	Saturday Off Hour	54 46 48	
		TFM		0~59	0~59	Saturday Off Minute	54 46 4D	

Main Item	Control Item	CMD	Type	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Notes
OSD	Transparency	OST	W/R	0~15	0~15	OSD Transparency	4F 53 54	
	H Position	OSH	W/R	0~254	0~254	OSD H Position	4F 53 48	
	V Position	OSV	W/R	0~254	0~254	OSD V Position	4F 53 56	
	OSD Zoom	OSZ	W/R	00	00	OSD Zoom Off	4F 53 5A	
				01	01	OSD Zoom On		
	OSD Rotation	OSR	W/R	00	00	Landscape	4F 53 52	
				01	01	Portrait		
	OSD Language	OSL	W/R	00	00	English	4F 53 4C	
				01	01	Chinese		
	OSD Timeout	OSO	W/R	5~120	Current value	OSD Timeout	4F 53 4F	
Audio	Volume	VOL	W/R	0~100	Current value	volume	56 4F 4C	
	Bass	BAS	W/R	0~12	Current value	Bass (-6 ~ 6)	42 41 53	
	Treble	TRE	W/R	0~12	Current value	Treble (-6 ~ 6)	54 52 45	
	Balance	BAL	W/R	0~12	Current value	Balance (-6 ~ 6)	42 41 4C	
	HDMI Audio	HAS	W/R	00	00	HDMI	48 41 53	
				01	01	PC		
	DisplayPort Audio	DAS	W/R	00	00	DisplayPort	44 41 53	
				01	01	PC		
	Internal Speaker	INS	W/R	00	00	Internal Speaker Off	49 4E 53	
				01	01	Internal Speaker On		
Mute	MUT	W/R	00	00	Mute Off	4D 55 54		
			01	01	Mute On			
EDID	DVI	EDD	W/R	00	00	DVI Only	45 44 44	
				01	01	Same as HDMI		
	HDMI	EDH	W/R	00	00	4Kx2K	45 44 48	
				01	01	1080p		
	DisplayPort	EDP	W/R	00	00	4Kx2K	45 44 50	
				01	01	1080p		

Main Item	Control Item	CMD	Type	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Notes
Ethernet Setup	Network Enable	NWE	W/R	0	0	No	4E 57 45	
				1	1	Yes		
	Dynamic IP	DIP	W/R	0	0	Disable	44 49 50	
				1	1	Enable		
	Default	LDS	W	0	0	Load default settings (About 15 seconds)	4C 44 53	
	Email Alert	PSA	W/R	0	0	Off (Power Status Alert)	50 53 41	
				1	1	On (Power Status Alert)		
		SSA	W/R	0	0	Off (Source Status Alert)	53 53 41	
				1	1	On (Source Status Alert)		
		SLA	W/R	0	0	Off (Signal Lost Alert)	53 4C 41	
				1	1	On (Signal Lost Alert)		
	Static IP Settings	IP1	W/R	0~255	0~255	Static IP Address 1	49 50 31	
		IP2	W/R	0~255	0~255	Static IP Address 2	49 50 32	
		IP3	W/R	0~255	0~255	Static IP Address 3	49 50 33	
		IP4	W/R	0~255	0~255	Static IP Address 4	49 50 34	
		MK1	W/R	0~255	0~255	Subnet Mask 1	4D 4B 31	
		MK2	W/R	0~255	0~255	Subnet Mask 2	4D 4B 32	
		MK3	W/R	0~255	0~255	Subnet Mask 3	4D 4B 33	
		MK4	W/R	0~255	0~255	Subnet Mask 4	4D 4B 34	
		GW1	W/R	0~255	0~255	Gateway 1	47 57 31	
		GW2	W/R	0~255	0~255	Gateway 2	47 57 32	
		GW3	W/R	0~255	0~255	Gateway 3	47 57 33	
		GW4	W/R	0~255	0~255	Gateway 4	47 57 34	
		FD1	W/R	0~255	0~255	DNS Address 1	46 44 31	
		FD2	W/R	0~255	0~255	DNS Address 2	46 44 32	
		FD3	W/R	0~255	0~255	DNS Address 3	46 44 33	
		FD4	W/R	0~255	0~255	DNS Address 4	46 44 34	
	SNS	W	0	0	Save Static IP Settings	53 4E 53		

Main Item	Control Item	CMD	Type	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Notes
Other Control	Scaling	ASP	W/R	00	00	Native	41 53 50	
				01	01	Full Screen		
				02	02	4:3		
				03	03	Letterbox		
	Baud Rate Adjustment	BRA	W/R	00	00	115200	42 52 41	
				01	01	38400		
				02	02	19200		
				03	03	9600		
	Wake Up From Sleep	WFS	W/R	0	0	VGA_ONLY	57 46 53	
				1	1	VGA_DIGITAL_RS232		
				2	2	Never Sleep		
	Auto Scan	ATS	W/R	0	0	Off	41 54 53	
				1	1	On		
	IRFM	IRF	W/R	0	0	Off	49 52 46	
				1	1	On		
	Smart Light Control	SLC	W/R	00	00	Off	53 4C 43	
				01	01	DCR		
				02	02	Light Sensor		
	Power LED	LED	W/R	0	0	Off	4C 45 44	
				1	1	On		
	Splash Screen	SPS	W/R	0	0	Off	53 50 53	
				1	1	On		
	DisplayPort Mode	DPM	W/R	0	0	DP 1.1	44 50 4D	
				1	1	DP 1.2		

Main Item	Control Item	CMD	Type	Value (DEC)	Reply (DEC)	Content	CMD (HEX)	Notes	
Other Control	Other Control	RCU	W	00	00	MENU Key	52 43 55		
				01	01	INFO Key			
				02	02	UP Key			
				03	03	DOWN Key			
				04	04	LEFT Key			
				05	05	RIGHT Key			
				06	06	ENTER Key			
				07	07	EXIT Key			
		ALL	W	00	00	Reset all	41 4C 4C		
		KLC	W/R	00	00	Un-lock keys	4B 4C 43		
				01	01	Lock keys			
		SER	R			13 bytes	Read Serial Number	53 45 52	
		MNA	R			13 bytes	Read Model Name	4D 4E 41	
		GVE	R			6 bytes	Read Firmware Version	47 56 45	
RTV	R			Current value	Read RS232 table Version	52 54 56			
	Multi-Display	VWS	W/R	00	00	Video Wall Switch Off	56 57 53		
01				01	Video Wall Switch On				
		VWF	W/R	00	00	Video Wall Frameless Off	56 57 46		
				01	01	Video Wall Frameless On			
		MAT	W/R	X: 1-5 Y: 1-5	Current value	Matrix X, Y value High quarter is X: 7-4 bit Low quarter is Y: 3-0 bit	4D 41 54		
		DIV	W/R	X: 1-5 Y: 1-5	Current value	Divisions X, Y value High quarter is X: 7-4 bit Low quarter is Y: 3-0 bit	44 49 56		
		POD	W/R	0-30	Current value	Integral part of Power On Delay (0-30 sec.)	50 4F 44		
		POE	W/R	0~19	Current value	Fractional part of Power On Delay (0, 0.05, 0.10, ..., 0.95 sec).	50 4F 45		

Example:

Power Control and Input Source

Turn monitor power off [CMD: POW]

[Transmit] : PC → 07 00 02 50 4F 57 00 08 → Monitor

[Return] : Monitor → 07 00 00 50 4F 57 **00** 08 → PC

Turn monitor power on [CMD: POW]

[Transmit] : PC → 07 00 02 50 4F 57 01 08 → Monitor

[Return] : Monitor → 07 00 00 50 4F 57 **01** 08 → PC

Read Power Status from monitor [CMD: POW]

[Transmit] : PC → 07 00 01 50 4F 57 08 → Monitor

[Return] : Monitor → 07 00 00 50 4F 57 **XX** 08 → PC

XX = 00, the set is off. **XX** = 01, the set is on.

Display Adjustment

Read backlight from monitor [CMD: BRI] (If the setting of backlight is 80)

[Transmit] : PC → 07 00 01 42 52 49 08 → Monitor

[Return] : Monitor → 07 00 00 42 52 49 **50** 08 → PC

Set backlight 80 to monitor [CMD: BRI]

[Transmit] : PC → 07 00 02 42 52 49 **50** 08 → Monitor

[Return] : Monitor → 07 00 00 42 52 49 **50** 08 → PC

Set Contrast 30 to monitor [CMD: CON]

[Transmit] : PC → 07 00 02 43 4F 4E **1E** 08 → Monitor

[Return] : Monitor → 07 00 00 43 4F 4E **1E** 08 → PC

Read Contrast from monitor [CMD: CON] (If the monitor contrast setting is 50)

[Transmit] : PC → 07 00 01 43 4F 4E 08 → Monitor

[Return] : Monitor → 07 00 00 43 4F 4E **32** 08 → Monitor

Scaling Adjustment

Set monitor to Pillarbox [CMD: ASP]

[Transmit] : PC → 07 00 02 41 53 50 02 08 → Monitor

[Return] : Monitor → 07 00 00 41 53 50 **02** 08 → PC

Other Control

Send an "up" key press [CMD: RCU]

[Transmit] : PC → 07 00 02 52 43 55 02 08 → Monitor

[Return] : Monitor → 07 00 00 52 43 55 **02** 08 → PC

Reset all to monitor [CMD: ALL]

[Transmit] : PC → 07 00 02 41 4C 4C 00 08 → Monitor

[Return] : Monitor → 07 00 00 41 4C 4C **00** 08 → PC

Read serial number from monitor [CMD: SER]

[Transmit] : PC → 07 00 01 53 45 52 08 → Monitor

[Return] : Monitor → 07 00 00 53 45 52 S(0) ... S(12) 08 → PC , S(0) ~ S(12):
serial number in ASCII

Read firmware version from monitor [CMD: GVE]

[Transmit] : PC → 07 00 01 47 56 45 08 → Monitor

[Return] : Monitor → 07 00 00 47 56 45 S(0) ... S(5) 08 → PC , S(0) ~ S(5):
firmware version in ASCII

Accessing Planar's Technical Support Website

Go to www.planar.com/support to locate the following support documents and resources:

- User Guide
- RS232 User Manual
- Touchscreen drivers
- Standard warranties
- Planar support hotline number and email

