

EP4650/EP5550 RS232 User Manual



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Part Number: 020-1227-00A

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: **00** (Hex Num) for broadcast mode (no announcing, only for video wall),
01~19 (Hex Num) for single control mode.

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

CMD: As shown in the table on the following pages

Value: Setting Value of Write Command

Reply: Return Value of monitor

ETX: End byte = **08**

Transmit from PC (Host)

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

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

Return from Monitor: Return CMD is the same with received CMD, the return command will be sent after action. In broadcast mode, no return will be sent.

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

2 Serial Port Setting

| Baud Rate | Data Bit | Parity Bit | Stop Bit |
|-----------|----------|------------|----------|
| 115200 | 8 | None | 1 |

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

| 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 | See Note 1 |
| | | | | 01 | 01 | On (soft power) | | See Note 1 |
| | Input Source | MIN | W/R | 00 | 00 | VGA | 4D 49 4E | |
| | | | | 01 | 01 | Digital DVI | | |
| | | | | 02 | 02 | S-Video | | |
| | | | | 03 | 03 | Composite 1 | | |
| | | | | 04 | 04 | Component 1 | | |
| | | | | 05 | 05 | HDSDI 1 | | |
| | | | | 06 | 06 | HDSDI 2 | | |
| | | | | 09 | 09 | HDMI 1 | | |
| | | | | 10 | 10 | HDMI 2 | | |
| | | | | 13 | 13 | Displayport | | |
| | Display Adjustment | Display Adjustment | BRI | W/R | 0~100 | Current value | Back Light Brightness | 42 52 49 |
| BRL | | | 0~100 | | Current value | Digital Brightness Level | 42 52 4C | |
| BLC | | | 00 | | 00 | Off (Back Light) | 42 4C 43 | |
| | | | 01 | 01 | On (Back Light) | | | |
| CON | | | W/R | 0~100 | Current value | Contrast | 43 4F 4E | |
| HUE | | | | 0~100 | Current value | Hue | 48 55 45 | |
| SAT | | | | 0~100 | Current value | Saturation | 53 41 54 | |
| 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 | Display Adjustment | GAC | W/R | 00 | 00 | Off (Gamma) | 7 41 43 | |
| | | | | 01 | 01 | 2.2 (Gamma) | | |
| | | PHA | W/R | 0~63 | Current value | Phase | 50 48 41 | |
| | | CLO | | 0~100 | | Clock | 43 4C 4F | |
| | | HOR | R | | Current value | Horizontal Position | 48 4F 52 | |
| | | VER | | | | Vertical Position | 56 45 52 | |
| | ADJ | W | 00 | 00 | Auto Adjust | 41 44 4A | | |
| Video Mode | SHA | W/R | 0~24 | Current value | Sharpness | 53 48 41 | | |
| Other Control | PIP Adjust | PSC | W/R | 00 | 00 | PIP OFF | 50 53 43 | |
| | | | | 01 | 01 | PIP Small | | |
| | | | | 02 | 02 | PIP medium | | |
| | | | | 03 | 03 | PIP large | | |
| | | | | 04 | 04 | PIP side-by-side | | |
| | PIP source selection | PIN | W/R | 00 | 00 | VGA | 50 49 4E | |
| | | | | 01 | 01 | Digital DVI | | |
| | | | | 02 | 02 | S-Video | | |
| | | | | 03 | 03 | Composite 1 | | |
| | | | | 04 | 04 | Component 1 | | |
| | | | | 05 | 05 | HDSDI 1 | | |
| | | | | 06 | 06 | HDSDI 2 | | |
| | | | | 09 | 09 | HDMI 1 | | |
| | 10 | 10 | HDMI 2 | | | | | |
| | PIP position | PPO | W/R | 00 | 00 | PIP Position Bottom-left | 50 50 4F | |
| | | | | 01 | 01 | PIP Position Bottom-right | | |
| | | | | 02 | 02 | PIP Position Top-left | | |
| 03 | | | | 03 | PIP Position Top-right | | | |

| Main Item | Control Item | CMD | Type | Value (DEC) | Reply (DEC) | Content | CMD (HEX) | Notes |
|---------------|----------------------|-----|------|-------------|---------------|--------------------------|-----------|-------|
| Other Control | PIP/Main Swap | SWA | W | 00 | 00 | Swap main and PIP | 53 57 41 | |
| | Scaling | ASP | W/R | 00 | 00 | Native | 41 53 50 | |
| | | | | 01 | 01 | Fill | | |
| | | | | 02 | 02 | PILLAR Box | | |
| | | | | 03 | 03 | Letter Box | | |
| | | ZOM | W | 00 | 00 | Zoom in | 5A 4F 4D | |
| | | | | 01 | 01 | Zoom out | | |
| | Baud Rate Adjustment | BRA | W/R | 00 | 00 | 115200 | 42 52 41 | |
| | | | | 01 | 01 | 38400 | | |
| | | | | 02 | 02 | 19200 | | |
| | | | | 03 | 03 | 9600 | | |
| | 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 | | | 13 bytes | Read Model Name | 4D 4E 41 | |
| | | GVE | | | 6 bytes | Read Firmware Version | 47 56 45 | |
| | | RTV | | | Current value | Read RS232 table Version | 52 54 56 | |

| Main Item | Control Item | CMD | Type | Value (DEC) | Reply (DEC) | Content | CMD (HEX) | Notes |
|---------------|--------------------|-----|------|------------------|---------------|---------------------------------------------------------------------------------|-----------|--------|
| Other Control | Wake Up From Sleep | WFS | W/R | 0 | 0 | Set VGA_ONLY | 57 46 53 | |
| | | | | 1 | 1 | Set VGA_DIGITAL_RS232 | | |
| | | | | 2 | 2 | Set Never_Sleep | | |
| | Audio | VOL | W/R | 0~100 | Current value | volume | 56 4F 4C | |
| | | MUT | | 00 | 00 | Mute Off | 4D 55 54 | |
| | | | | 01 | 01 | Mute On | | |
| | Scheme Selection | SCM | W/R | 00 | 00 | User | 53 43 4D | |
| | | | | 01 | 01 | Sport | | |
| | | | | 02 | 02 | Game | | |
| | | | | 03 | 03 | Cinema | | |
| | | | | 04 | 04 | Vivid | | |
| | Multi-Display | VWS | W/R | 00 | 00 | Video Wall Switch Off | 56 57 53 | |
| | | | | 01 | 01 | Video Wall Switch On | | |
| | | VWF | | 00 | 00 | Video Wall Frameless Off | 56 57 46 | |
| | | | | 01 | 01 | Video Wall Frameless On | | |
| | | MAT | | 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 | | 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 | Note 1 |
| | | DID | | 00 | 00 | DVI Indemnity Off | 44 49 44 | |
| | | | | 01 | 01 | DVI Indemnity On | | |
| | | POD | | 0-30 | Current value | Integral part of Power On Delay (0-30 sec.) | 50 4F 44 | |

| 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 Mode | 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 | | |
| | | | | 1 | 1 | Sunday | | |
| | Sunday | SNH | W/R | 0~23 | 0~23 | Sunday On Hour | 49 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 | |

※: The RS232 transition will be blocked for around six seconds after a power on/off command has been performed.

Note 1: In broadcast setting mode, this command is used to auto arrange the Division X/Y.
(The Value Byte needs to be 0x11.)

Accessing Planar's Technical Support Website

- 1 Go to www.planarpartners.com
- 2 Once you enter your login and password, you can access downloadable utility software, new firmware and user manuals.

Downloading Utility Software

- 1 Go to www.planarpartners.com.
- 2 Enter your login and password information.
- 3 Navigate to the section that contains software updates and then look for EP4560/EP5550.
- 4 From the list of available software, click on the tool you need.