

# VC-TR60 RS-232 command set

| No | Issue Date | Description    | Apply Firmware |
|----|------------|----------------|----------------|
| 1  | 2023/11/29 | First version. | VXY100         |
|    |            |                |                |
|    |            |                |                |
|    |            |                |                |
|    |            |                |                |
|    |            |                |                |
|    |            |                |                |
|    |            |                |                |

**\*Notice:**

1. The RS-232 command list is for VC-TR60
2. The yellow highlight  means the latest update.
3. The blue highlight  means the deleted item.

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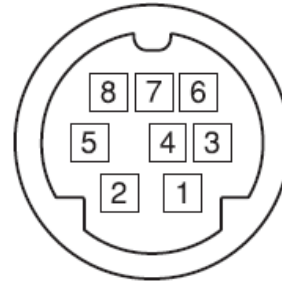
## 1. Communication Protocol

Transmit Method: Asynchronous Interface Half Duplex Serial Communication

- Transmit Speed: 9600bps or 38400bps
- Start bit: 1Bit
- Parity Check: NA
- Data Bit: 8Bit
- Stop Bit: 1Bit

## 2. The wire diagram

The RS232 wire diagram between presenter and remote controller as below



| No | Pins   |
|----|--------|
| 1  | DTR IN |
| 2  | DSR IN |
| 3  | TXD IN |
| 4  | GND    |
| 5  | RXD IN |
| 6  | GND    |

### 1 ACK & Completion message

|  | Reply Packet | Note              |
|--|--------------|-------------------|
| Ack  | X0 4Y FF     | Y = socket number |
| Completion (commands)                      | X0 5Y FF     | Y = socket number |
| Completion (Inquiries)                     | X0 5Y ... FF | Y = socket number |
| X = 9 to F==>camera address + 8 , Y=1 to 2 |              |                   |

### 2 Error message

| Error Packet   | Description                 |
|--|-----------------------------|
| X0 60 02 FF  | Syntax Error                |
| X0 60 03 FF  | Command buffer full         |
| X0 6Y 04 FF  | Command cancelled           |
| X0 6Y 05 FF  | No socket (to be cancelled) |
| X0 6Y 41 FF  | Command not executable      |
| X = 9 to F==>camera address + 8, Y = socket number, Y=0 to 2, 0: Inquiry not execution |                             |

### 3 Command execution cancel

|  | Cancel Packet | Note              |
|--|---------------|-------------------|
| Cancel   | 8X 2Y FF      | Y = socket number |
| X = 1 to 7==>camera address, Y = socket number, Y=1 to 2 |               |                   |

### 4 Network Change

|                                 | Packet      | Note               |
|---------------------------------|-------------|--------------------|
| Address                         | 88 30 01 FF | Always broadcasted |
| Network Change                  | X0 38 FF    |                    |
| X = 9 to F==>camera address + 8 |             |                    |

### 5 IF\_Clear

|   | Command        | Reply Packet Note |
|---|----------------|-------------------|
| IF_Clear  | 8X 01 00 01 FF | X0 50 FF          |
| IF_Clear (broadcast)                              | 88 01 00 01 FF | 88 01 00 01 FF    |
| X = 1 to 7==>camera address (For inquiry packet)  |                |                   |
| X = 9 to F==>camera address +8 (For reply packet) |                |                   |

### 6 Zoom Focus Position Table

|                |          |    |                     |    |                          |  |
|----------------|----------|----|---------------------|----|--------------------------|--|
|                | Wide end |    | Optical<br>Tele end |    | Digital<br>Tele end      |  |
| Zoom Position  | 0000     | to | 3558                | to | 3609(720P) / 3668(1080P) |  |
| Focus Position |          |    | Far end             |    | Near end                 |  |
|                |          |    | 0000                | to | 4000                     | focus range is limited by each zoom position |

## 7 AE\_Shutter Table

| Shutter Speed | Index(pq) | 60/30 mode | 50/25 mode |
|---------------|-----------|------------|------------|
|               | 00        | 1/10000    | 1/10000    |
|               | 01        | 1/5000     | 1/5000     |
|               | 02        | 1/3000     | 1/3000     |
|               | 03        | 1/2500     | 1/2500     |
|               | 04        | 1/2000     | 1/1750     |
|               | 05        | 1/1500     | 1/1250     |
|               | 06        | 1/1000     | 1/1000     |
|               | 07        | 1/725      | 1/600      |
|               | 08        | 1/500      | 1/425      |
|               | 09        | 1/350      | 1/300      |
|               | 0A        | 1/250      | 1/215      |
|               | 0B        | 1/180      | 1/150      |
|               | 0C        | 1/120      | 1/120      |
|               | 0D        | 1/100      | 1/100      |
|               | 0E        | 1/90       | 1/75       |
| 0F            | 1/60      | 1/50       |            |
| 10            | 1/30      | 1/25       |            |

## 8 AE\_Gain Table

| Gain | Index(pq) | Value  |
|------|-----------|--------|
|      | 0F        | +45 dB |
|      | 0E        | +42 dB |
|      | 0D        | +39 dB |
|      | 0C        | +36 dB |
|      | 0B        | +33 dB |
|      | 0A        | +30 dB |
|      | 09        | +27 dB |
|      | 08        | +24 dB |
|      | 07        | +21 dB |
|      | 06        | +18 dB |
|      | 05        | +15 dB |
|      | 04        | +12 dB |
|      | 03        | +9 dB  |
|      | 02        | +6 dB  |
|      | 01        | +3 dB  |
| 00   | 0 dB      |        |

## 9 AE\_Gain limit Table

| Gain limit | Index(pq) | Value  |
|------------|-----------|--------|
|            | 0F        | +30 dB |
|            | 0E        | +28 dB |
|            | 0D        | +26 dB |
|            | 0C        | +24 dB |
|            | 0B        | +22 dB |
|            | 0A        | +20 dB |
|            | 09        | +18 dB |
|            | 08        | +16 dB |
|            | 07        | +14 dB |
|            | 06        | +12 dB |
|            | 05        | +10 dB |
|            | 04        | +8 dB  |

## 10 AE\_Exposure Comp. Table

| Exposure Comp.<br>(AE Level) | Index(pq) | Value(Step) | OSD Value |
|------------------------------|-----------|-------------|-----------|
|                              | 0A        | 10          | 4         |
|                              | 09        | 9           | 3         |
|                              | 08        | 8           | 2         |
|                              | 07        | 7           | 1         |
|                              | 06        | 6           | 0         |
|                              | 05        | 5           | -1        |
|                              | 04        | 4           | -2        |
|                              | 03        | 3           | -3        |
|                              | 02        | 2           | -4        |
|                              | 01        | 1           | -5        |
|                              | 00        | 0           | -6        |



## 11 AE\_Iris Table

| IRIS<br>F1.6~14 | Index(pq) | F Number |
|-----------------|-----------|----------|
|                 | 0F        | -        |
|                 | 0E        | -        |
|                 | 0D        | -        |
|                 | 0C        | Close    |
|                 | 0B        | F1.8     |
|                 | 0A        | F2       |
|                 | 09        | F2.4     |
|                 | 08        | F2.8     |
|                 | 07        | F3.4     |
|                 | 06        | F4       |
|                 | 05        | F4.8     |
|                 | 04        | F5.6     |
|                 | 03        | F6.8     |
|                 | 02        | F8       |
| 01              | F9.6      |          |
| 00              | F11       |          |

## 12 RS232 Command List

| Command set | Command        | Command packet                         | Comments   |
|-------------|----------------|--|--|
| Audio       | Audio Enable   | 8x 01 04 68 0p FF                      | p: 2=On, 3=Off   |
|             | Delay Time     | 8x 01 04 6A 0p 0q 0r FF                | Set AudioDelay Time for Internet Streaming<br>pqr : delay time, range: 001 ~ 1F4 (1 ~ 500)   |
|             | Audio In       | 8x 01 04 6B 0p FF                      | p: 2=Line In   |
|             | Audio Volume   | 8x 01 04 6E 0p FF                      | p: 0 ~ A (0 ~ 10)  |
|             | Delay Enable   | 8x 01 04 6F 0p FF                      | Set AudioDelay On/Off for Internet Streaming<br>p: 2=On, 3=Off   |
| Auto Focus  | Zoom Tracking  | 8x 01 04 38 03 0p FF                   | p:<br>0=Off (Curve Tracking),<br>1=On (Zoom Tracking)  |
|             | AF Sensitivity | 8x 01 04 58 0p FF                      | p:<br>1=High,<br>2=Middle,<br>3=Low  |
|             | Preset AF      | 8x 01 04 5E 0p FF                      | p: 2=On, 3=Off   |
| Dig-Effect  | Mirror         | 8x 01 04 61 0p FF                      | p: 2=On, 3=Off   |
|             | Flip           | 8x 01 04 66 0p FF                      | p: 2=On, 3=Off   |
| Ethernet    | IP Address     | 8x 01 7C 02 0p 0q 0r 0s 0t 0u 0v 0x FF | address : pq.rs.tu.vx (HEX), pq = 0~255, rs = 0~255,<br>tu = 0~255, vx = 0~255,<br>e.g. 192.168.100.150 => 81 01 7C 02 0C 00 0A 08<br>06 04 09 06 FF |
|             | Subnet Mask    | 8x 01 7C 03 0p 0q 0r 0s 0t 0u 0v 0x FF | address : pq.rs.tu.vx (HEX), pq = 0~255, rs =<br>0~255, tu = 0~255, vx = 0~255,<br>e.g. 255.255.255.0 => 81 01 7C 03 0F 0F 0F 0F<br>0F 00 00 FF      |

|          |                   |  |   |
|----------|-------------------|--|---|
|          | Gateway           | 8x 01 7C 04 0p 0q 0r 0s 0t 0u 0v 0x FF | address : pq.rs.tu.vx (HEX), pq = 0~255, rs = 0~255, tu = 0~255, vx = 0~255,<br>e.g. 192.168.100.254 => 81 01 7C 04 0C 00 0A 08<br>06 04 0F 0E FF |
|          | DHCP              | 8x 01 7C 01 0p FF                      | p: 2=On, 3=Off  |
| Exposure | Shutter Reset     | 8x 01 04 0A 00 FF                      | Reset Shutter Setting to the default value<br>depending on the frame rate of Output Mode<br>(* Available during Shutter Priority/Manual<br>Mode)  |
|          | Shutter Up        | 8x 01 04 0A 02 FF                      | Shutter Setting<br>(* Available during Shutter Priority/Manual<br>Mode)   |
|          | Shutter Down      | 8x 01 04 0A 03 FF                      | Shutter Setting<br>(* Available during Shutter Priority/Manual<br>Mode)   |
|          | Iris Reset        | 8x 01 04 0B 00 FF                      | Reset Iris Setting to 0E (F1.6) value<br>(* Available during Iris Priority/Manual Mode)   |
|          | Iris Up           | 8x 01 04 0B 02 FF                      | Iris Up<br>(* Available during Iris Priority/Manual Mode)   |
|          | Iris Down         | 8x 01 04 0B 03 FF                      | Iris Down<br>(* Available during Iris Priority/Manual Mode)   |
|          | Manual Gain Reset | 8x 01 04 0C 00 FF                      | Reset Gain Setting to 0 (0 dB) value<br>(* Available during AE Manual Mode)   |
|          | Manual Gain Up    | 8x 01 04 0C 02 FF                      | Gain Setting<br>(* Available during AE Manual Mode)   |
|          | Manual Gain Down  | 8x 01 04 0C 03 FF                      | Gain Setting<br>(* Available during AE Manual Mode)   |

|       |                       |                            |   |
|-------|-----------------------|----------------------------|---|
|       | Exposure Comp Reset   | 8x 01 04 0E 00 FF          | Reset Exposure Compensation to 6 value<br>(* Available during ExpComp On )                        |
|       | Exposure Comp Up      | 8x 01 04 0E 02 FF          | Exposure Compensation Up<br>(* Available during ExpComp On )                                      |
|       | Exposure Comp Down    | 8x 01 04 0E 03 FF          | Exposure Compensation Down<br>(* Available during ExpComp On )                                    |
|       | Gain Limit            | 8x 01 04 2C 0p FF          | p: parameters are in the General Shutter Table  |
|       | WDR                   | 8x 01 04 2D 0p FF          | p: WDR mode, 0 ~ 3  |
|       | Mode                  | 8x 01 04 39 pp FF          | pp:<br>00=Full Auto,<br>03=Manual,<br>0A=Shutter Priority,<br>0B=Iris Priority,<br>5F=White Board |
|       | Exposure Comp On/Off  | 8x 01 04 3E 0p FF          | p: 2=On, 3=Off<br>(* Disabled during Manual Mode)   |
|       | Shutter Direct        | 8x 01 04 4A 00 00 0p 0q FF | pq: Shutter Position, 00 ~ 15<br>(* Available during Shutter Priority/Manual Mode)                |
|       | Iris Direct           | 8x 01 04 4B 00 00 0p 0q FF | pq: Iris Position, 00 ~ 0F<br>(* Available during Iris Priority/Manual Mode)                      |
|       | Manual Gain Direct    | 8x 01 04 4C 00 00 0p 0q FF | pq: Gain Position, 00 ~ 0F  |
|       | Exposure Comp Direct  | 8x 01 04 4E 00 00 0p 0q FF | pq: 00 ~ 0A   |
| Focus | Stop                  | 8x 01 04 08 00 FF          | Available during Manual Focus Mode  |
|       | Far (Standard Speed)  | 8x 01 04 08 02 FF          | Available during Manual Focus Mode  |
|       | Near (Standard Speed) | 8x 01 04 08 03 FF          | Available during Manual Focus Mode  |
|       | Far Step              | 8x 01 04 08 04 FF          | Available during Manual Focus Mode  |

|          |                       |                            |   |
|----------|-----------------------|----------------------------|---|
|          | Near Step             | 8x 01 04 08 05 FF          | Available during Manual Focus Mode  |
|          | Far (Variable Speed)  | 8x 01 04 08 2p FF          | p: Speed 0 (Low) ~ 7 (High)<br>(* Available during Manual Focus Mode)   |
|          | Near (Variable Speed) | 8x 01 04 08 3p FF          | p: Speed 0 (Low) ~ 7 (High)<br>(* Available during Manual Focus Mode)   |
|          | One Push Trigger      | 8x 01 04 18 01 FF          | One Push AF Trigger<br>(* Available during Manual Focus Mode)   |
|          | Mode                  | 8x 01 04 38 0p FF          | p: 2=Auto Focus, 3=Manual Focus   |
|          | Direct                | 8x 01 04 48 0p 0q 0r 0s FF | pqrs: Focus Position , pqrs parameters are in the<br>General Zoom Focus Table<br>(* Available during Manual Focus Mode) |
| Menu     | Left                  | 8x 01 06 01 01 01 01 03 FF | OSD Menu left   |
|          | Right                 | 8x 01 06 01 01 01 02 03 FF | OSD Menu right  |
|          | Up                    | 8x 01 06 01 01 01 03 01 FF | OSD Menu up   |
|          | Down                  | 8x 01 06 01 01 01 03 02 FF | OSD Menu down   |
|          | On/Off                | 8x 01 06 06 pp FF          | Turn on/off OSD menu screen<br>pp: 2=On, 3=Off, 10=Toggle   |
|          | Enter                 | 8x 01 7E 01 02 00 01 FF    | OSD Menu Enter  |
| Pan Tilt | Stop                  | 8x 01 06 01 00 00 03 03 FF |   |
|          | UpLeft                | 8x 01 06 01 VV WW 01 01 FF | VV: Pan Speed 0x01 (Low) ~ 0x18 (High)<br>WW: Tilt Speed 0x01 (Low) ~ 0x18 (High)                                       |
|          | DownLeft              | 8x 01 06 01 VV WW 01 02 FF | VV: Pan Speed 0x01 (Low) ~ 0x18 (High)<br>WW: Tilt Speed 0x01 (Low) ~ 0x18 (High)                                       |
|          | Left                  | 8x 01 06 01 VV WW 01 03 FF | VV: Pan Speed 0x01 (Low) ~ 0x18 (High)<br>WW: Tilt Speed 0x01 (Low) ~ 0x18 (High)                                       |
|          | UpRight               | 8x 01 06 01 VV WW 02 01 FF | VV: Pan Speed 0x01 (Low) ~ 0x18 (High)<br>WW: Tilt Speed 0x01 (Low) ~ 0x18 (High)                                       |

|  |                   |  |   |
|--|-------------------|--|---|
|  | DownRight         | 8x 01 06 01 VV WW 02 02 FF                   | VV: Pan Speed 0x01 (Low) ~ 0x18 (High)<br>WW: Tilt Speed 0x01 (Low) ~ 0x18 (High)   |
|  | Right             | 8x 01 06 01 VV WW 02 03 FF                   | VV: Pan Speed 0x01 (Low) ~ 0x18 (High)<br>WW: Tilt Speed 0x01 (Low) ~ 0x18 (High)   |
|  | Up                | 8x 01 06 01 VV WW 03 01 FF                   | VV: Pan Speed 0x01 (Low) ~ 0x18 (High)<br>WW: Tilt Speed 0x01 (Low) ~ 0x18 (High)   |
|  | Down              | 8x 01 06 01 VV WW 03 02 FF                   | VV: Pan Speed 0x01 (Low) ~ 0x18 (High)<br>WW: Tilt Speed 0x01 (Low) ~ 0x18 (High)   |
|  | Absolute Position | 8x 01 06 02 VV WW OY OY OY OY OZ OZ OZ OZ FF | YYYY : Pan Position 0x0000 ~ 0x0990 & 0xF670 ~ 0xFFFF (Center 0000)<br>ZZZZ : Tilt Position 0x0000 ~ 0x0510 & 0xFE66 ~ 0xFFFF (Center 0000)   |
|  | Relative Position | 8x 01 06 03 VV WW OY OY OY OY OZ OZ OZ OZ FF | YYYY : Pan Position 0x0000 ~ 0x0990 & 0xF670 ~ 0xFFFF (Center 0000)<br>ZZZZ : Tilt Position 0x0000 ~ 0x0510 & 0xFE66 ~ 0xFFFF (Center 0000)   |
|  | Home              | 8x 01 06 04 FF                               | Go Home Position  |
|  | Reset             | 8x 01 06 05 FF                               | Initialize Pan Tilt and go to last position   |
|  | Pan Tilt Limit    | 8x 01 06 07 00 0W OY OY OY OY OZ OZ OZ OZ FF | W: 1=Up & Right<br>YYYY: Pan Limit Position 0x0000~0x0990<br>ZZZZ: Tilt Limit Position 0x0000~0x0510<br>W: 0=Down & Left<br>YYYY: Pan Limit Position 0xFFFF~0xF670<br>ZZZZ: Tilt Limit Position 0xFFFF~0xFE66 |
|  | Limit Clear       | 8x 01 06 07 01 0W 07 0F 0F 0F 07 0F 0F 0F FF | W:<br>1=Clear Up & Right,<br>0=Clear Down & Left  |

|               |                      |                            |  |
|---------------|----------------------|----------------------------|--|
|               | PanTilt Preset Speed | 8x 01 7E 03 02 0p FF       | p: 0: [5 deg/sec] 、 1: [25 deg/sec] 、 2: [50 deg/sec] 、 3: [80 deg/sec] 、 4: [120 deg/sec] |
| Pan Tilt Zoom | PTZ Speed Comp       | 8x 01 06 1F 01 0p FF       | p: 0=Off, 1=On   |
| Picture       | Sharpness Reset      | 8x 01 04 02 00 FF          | Reset Sharpness Setting to 7 value   |
|               | Sharpness Up         | 8x 01 04 02 02 FF          | Sharpness Up   |
|               | Sharpness Down       | 8x 01 04 02 03 FF          | Sharpness Down   |
|               | Image Mode           | 8x 01 04 3F 04 0p FF       | p: 0=Default, 1=Custom   |
|               | Sharpness Direct     | 8x 01 04 42 00 00 0p 0q FF | pq: 00 ~ 0F  |
|               | Saturation           | 8x 01 04 49 00 00 0p 0q FF | pq: 00 ~ 19<br>(* Available during Image Mode = Custom mode)                               |
|               | 3D NR                | 8x 01 04 54 0p FF          | p:<br>0=Off,<br>1=Low,<br>2=Type,<br>3=Max   |
|               | Gamma                | 8x 01 04 5B 0p FF          | p: 0 ~ 3<br>(* Available during Image Mode = Custom mode)                                  |
| Power         | On/Standby           | 8x 01 04 00 0p FF          | p: 2=On, 3=Standby   |
|               | Standby Mode         | 8x 01 7E 01 0A 03 0p FF    | p:<br>2=Normal Standby (Lens Tilt Down),<br>3=Ceiling Standby (Lens Tilt Up)               |
| Preset        | Reset                | 8x 01 04 3F 00 pp FF       | pp: Memory Number 0x00 ~ 0x7F<br>(* Preset address range : 0 ~ 127)                        |
|               | Set                  | 8x 01 04 3F 01 pp FF       | pp: Memory Number 0x00 ~ 0x7F<br>(* Preset address range : 0 ~ 127)                        |
|               | Recall               | 8x 01 04 3F 02 pp FF       | pp: Memory Number 0x00 ~ 0x7F<br>(* Preset address range : 0 ~ 127)                        |

|            |                         |   |  |
|------------|-------------------------|---|--|
| System     | PrivacyMode             | 8x 01 04 00 02 0p FF                          | p: 2=On, 3=Off   |
|            | Prompt                  | 8x 01 04 07 00 0p FF                          | p: 2=On, 3=Off   |
|            | Baud Rate               | 8x 01 04 24 00 00 0p FF                       | p: 0=9600 bps, 1=38400 bps                               |
|            | Factory Reset (Soft)    | 8x 01 04 3F 03 00 FF                          | Reset camera setting                                     |
|            | Factory Reset (Hard)    | 8x 01 04 3F 03 01 FF                          | Reset camera and network setting                         |
|            | Initial Position        | 8x 01 04 75 6A 0p FF                          | p: 3=Last MEM, 2=1st Preset                              |
|            | IR Receive              | 8x 01 06 08 pp FF                             | pp: 2=On, 3=Off, 10=Toggle                               |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 02=QFHD 4K(3840 x 2160) - 59.94p                     |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 03=QFHD 4K(3840 x 2160) - 50p                        |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 05=QFHD 4K(3840 x 2160) - 29.97p                     |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 06=QFHD 4K(3840 x 2160) - 25p                        |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 08=FHD 1080P(1920 x 1080) - 59.94p                   |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 09=FHD 1080P(1920 x 1080) - 50p                      |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 0B=FHD 1080P(1920 x 1080) - 29.97p                   |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 0C=FHD 1080P(1920 x 1080) - 25p                      |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 0E=HD 720P(1280 x 720) - 59.94p                      |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 0F=HD 720P(1280 x 720) - 50p                         |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 11=HD 720P(1280 x 720) - 29.97p                      |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 12=HD 720P(1280 x 720) - 25p                         |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 15=FHD 1080i(1920 x 1080) - 59.94i                   |
|            | Output Mode             | 8x 01 06 35 0p 0q FF                          | pq: 16=FHD 1080i(1920 x 1080) - 50i                      |
|            | Motionless Preset       | 8x 01 07 01 0p FF                             | p: 2=On, 3=Off   |
|            | HDMI Format             | 8x 01 7E 01 03 00 0p FF                       | p: 1=RGB, 2=YUV422                                       |
|            | Tally Lamp              | 8x 01 7E 01 0A 00 0p FF                       | When [On], the default Tally Mode is 5<br>p: 2=On, 3=Off |
| Tally Mode | 8x 01 7E 01 0A 01 0p FF | Tally Lamp will [ON] when received Tally mode |  |



|          |   |                         |   |
|----------|---|-------------------------|---|
|          |   |                         | command.<br>p: 0: (Red:OFF Green:OFF)<br>5: (Red:Highlight Green:OFF) - Tally<br>Lamp must be Enabled<br>6: (Red:OFF Green:Highlight) -<br>Tally Lamp must be Enabled<br>7: (Red:Highlight Green:Highlight) -<br>Tally Lamp must be Enabled |
|          | RTMP On/Off                                 | 8x 01 7E 7E 0p FF       | p: 0=Off, 1=On  |
|          | Reboot                                      | 8x 01 DE 01 FF          | Set to reboot   |
| Tally    | Lamp  | 8x 01 7E 01 0A 00 0p FF | p: 2=Enable, 3=Disable  |
| Tracking | Tracking - Framing<br>Control(PresetRecall) | 8x 01 04 3F 02 5p FF    | p:<br>0=Tracking/Framing On (Recall preset 80),<br>1=Tracking/Framing Off (Recall preset 81)  |
|          | Control OnOff                               | 8x 01 0B 00 00 0p FF    | p: 2=On, 3=Off  |
|          | Mode  | 8x 01 0B 00 01 0p FF    | p: 0=Everywhere, 1=Stage, 2=Partition, 3=Auto<br>Framing  |
|          | Target Sensitivity                          | 8x 01 0B 00 02 0p FF    | p:<br>0=Low,<br>1=Middle,<br>2=High   |
|          | Target Lost Timeout                         | 8x 01 0B 00 03 0p FF    | p:<br>0=3sec.,<br>1=5sec.,<br>2=10sec.  |
|          | Target Lost Reaction                        | 8x 01 0B 00 04 0p FF    | p:<br>0=PTZ Back to the center and wide,  |

|               |                         |                      |  |
|---------------|-------------------------|----------------------|--|
|               |                         |                      | 1=Stay in the last position,<br>2=Back to start position.                    |
|               | Head Position           | 8x 01 0B 00 05 0p FF | p:<br>0=Low,<br>1=Medium,<br>2=High  |
|               | Body Type               | 8x 01 0B 02 01 0p FF | p: 0=Full, 1=Half  |
|               | Body In Frame           | 8x 01 0B 02 02 0p FF | p:<br>0=Center,<br>1=Left,<br>2=Right  |
|               | Auto Framing_Correction | 8x 01 0B 04 00 00 FF |  |
|               | Framing Control         | 8x 01 0B 04 02 0p FF | p: 2=On, 3=Off   |
|               | Framing Sensitivity     | 8x 01 0B 04 03 0p FF | p:<br>0=Low,<br>1=Middle,<br>2=High  |
|               | Framing Type            | 8x 0B 01 04 0p FF    | p: A=Tracking, B=Framing   |
| White Balance | Manual Red Reset        | 8x 01 04 03 00 FF    | Reset R Gain Setting to 40 (64) value<br>(* Available during WB Manual mode) |
|               | Manual Red Up           | 8x 01 04 03 02 FF    | R Gain Up<br>(* Available during WB Manual mode)                             |
|               | Manual Red Down         | 8x 01 04 03 03 FF    | R Gain Down<br>(* Available during WB Manual mode)                           |
|               | Manual Blue Reset       | 8x 01 04 04 00 FF    | Reset B Gain Setting to 40 (64) value<br>(* Available during WB Manual mode) |
|               | Manual Blue Up          | 8x 01 04 04 02 FF    | B Gain Up  |

|      |                         |                               |   |
|------|-------------------------|-------------------------------|---|
|      |                         |                               | (* Available during WB Manual mode)   |
|      | Manual Blue Down        | 8x 01 04 04 03 FF             | B Gain Down<br>(* Available during WB Manual mode)  |
|      | One Push Trigger        | 8x 01 04 10 05 FF             | One Push WB Trigger<br>(* Available during One Push WB Mode)  |
|      | Mode                    | 8x 01 04 35 0p FF             | p:<br>0=Auto,<br>1=Indoor,<br>2=Outdoor,<br>3=One Push WB,<br>4=ATW,<br>5=Manual,<br>C=Sodium Lamp,   |
|      | Manual Red Direct       | 8x 01 04 43 00 00 0p 0q FF    | pq: 00 ~ 80 (0 ~ 128)   |
|      | Manual Blue Direct      | 8x 01 04 44 00 00 0p 0q FF    | pq: 00 ~ 80 (0 ~ 128)   |
| Zoom | Stop                    | 8x 01 04 07 00 FF             |   |
|      | Tele (Standard Speed)   | 8x 01 04 07 02 FF             |   |
|      | Wide (Standard Speed)   | 8x 01 04 07 03 FF             |   |
|      | Tele Step               | 8x 01 04 07 04 FF             |   |
|      | Wide Step               | 8x 01 04 07 05 FF             |   |
|      | Tele (Variable Speed)   | 8x 01 04 07 2p FF             | p=0 (Low) ~ 7 (High)  |
|      | Wide (Variable Speed)   | 8x 01 04 07 3p FF             | p=0 (Low) ~ 7 (High)  |
|      | Direct (Variable Speed) | 8x 01 04 47 0p 0q 0r 0s 0t FF | pqrs: Zoom Position,<br>Min. 0000h<br>Max. 4000h (In Digital Zoom Limit = x1)<br>Max. 7AC0h (In Digital Zoom Limit = x2 ~ x20)<br>t: Zoom Speed, 0 (Low) ~ 7 (High) |

|            |                         |  |  |
|------------|-------------------------|--|--|
|            | Direct (Standard Speed) | 8x 01 04 47 0p 0q 0r 0s FF             | pqrs: Zoom Position,<br>Min. 0000h<br>Max. 4000h (In Digital Zoom Limit = x1)<br>Max. 7AC0h (In Digital Zoom Limit = x2 ~ x20) |
|            | Digital Zoom Limit      | 8x 01 04 26 0p FF                      | pq: 0x00 (x1) ~ 0x07 (x8)  |
| Zoom Focus | Direct (Standard Speed) | 8x 01 04 47 0p 0q 0r 0s 0t 0u 0v 0w FF | pqrs: Zoom Position, 0x0000 ~ 0x4000<br>tuvw: Focus Position, 0x0000 ~ FocusMaxValue<br>(* Available during Manual Focus Mode) |

### 13 RS232 Inquiry Command List

| Inquiry Command    | Command Packet | Inquiry Packet                   | Comments   |
|--------------------|----------------|----------------------------------|--|
| Audio Enable Inq   | 8x 09 04 68 FF | y0 50 0p FF                      | p: 2=On, 3=Off   |
| Delay Time Inq     | 8x 09 04 6A FF | y0 50 0p 0q 0r FF                | pqr : delay time, range: 001 ~ 1F4 (1 ~ 500)   |
| Audio In Inq       | 8x 09 04 6B FF | y0 50 0p FF                      | p: 2=Line In   |
| Audio Volume Inq   | 8x 09 04 6E FF | y0 50 0p FF                      | p: 0 ~ A (0 ~ 10)  |
| Delay Enable Inq   | 8x 09 04 6F FF | y0 50 0p FF                      | p: 2=On, 3=Off   |
| AF Sensitivity Inq | 8x 09 04 58 FF | y0 50 0p FF                      | p:<br>1=High,<br>2=Middle,<br>3=Low  |
| Preset AF Inq      | 8x 09 04 5E FF | y0 50 0p FF                      | p: 2=On, 3=Off   |
| Mirror Inq         | 8x 09 04 61 FF | y0 50 0p FF                      | p: 2=On, 3=Off   |
| Flip Inq           | 8x 09 04 66 FF | y0 50 0p FF                      | p: 2=On, 3=Off   |
| DHCP Inq           | 8x 09 7C 01 FF | y0 50 0p FF                      | p: 2=On, 3=Off   |
| IP Address Inq     | 8x 09 7C 02 FF | y0 50 0p 0q 0r 0s 0t 0u 0v 0x FF | address : pq.rs.tu.vw (HEX)  |
| Subnet Mask Inq    | 8x 09 7C 03 FF | y0 50 0p 0q 0r 0s 0t 0u 0v 0x FF | address : pq.rs.tu.vw (HEX)  |
| Gateway Inq        | 8x 09 7C 04 FF | y0 50 0p 0q 0r 0s 0t 0u 0v 0x FF | address : pq.rs.tu.vw (HEX)  |
| Gain Limit Inq     | 8x 09 04 2C FF | y0 50 0p FF                      | p: parameters are in the General Shutter Table   |
| WDR Inq            | 8x 09 04 2D FF | y0 50 0p FF                      | p: WDR mode, 00 ~ 03   |
| Mode Inq           | 8x 09 04 39 FF | y0 50 pp FF                      | pp:<br>00=Full Auto,<br>03=Manual,<br>0A=Shutter Priority,<br>0B=Iris Priority<br>5F=White Board |
| Shutter Inq        | 8x 09 04 4A FF | y0 50 00 00 0p 0q FF             | pq: Shutter Position, 00 ~ 15  |

|                  |                   |                                  |   |
|------------------|-------------------|----------------------------------|---|
| Mode Inq         | 8x 09 04 38 FF    | y0 50 0p FF                      | p: 2=Auto Focus, 3=Manual Focus   |
| Position Inq     | 8x 09 04 48 FF    | y0 50 0p 0q 0r 0s FF             | pqrs: Focus Position, parameters are in the General Zoom Focus Table near end to far end  |
| Menu Mode Inq    | 8x 09 06 06 FF    | y0 50 0p FF                      | p: 2=On, 3=Off  |
| Position Inq     | 8x 09 06 12 FF    | y0 50 0w 0w 0w 0w 0z 0z 0z 0z FF | YYYY : Pan Position 0x0000 ~ 0x0990 & 0xF670 ~ 0xFFFF (Center 0000)<br>ZZZZ : Tilt Position 0x0000 ~ 0x0510 & 0xFE66 ~ 0xFFFF (Center 0000) |
| Image Mode Inq   | 8x 09 04 3F 04 FF | y0 50 0p FF                      | p: 0=Default, 1=Custom  |
| 3D NR Inq        | 8x 09 04 54 FF    | y0 50 0p FF                      | p:<br>0=Off,<br>1=Low,<br>2=Type,<br>3=Max  |
| Gamma Inq        | 8x 09 04 5B FF    | y0 50 0p FF                      | Gamma p: 0 ~ 3  |
| Power Mode Inq   | 8x 09 04 00 FF    | y0 50 0p FF                      | p: 2=On, 3=Standby  |
| Privacy Mode Inq | 8x 09 04 00 02 FF | y0 50 0p FF                      | p:<br>2=Privacy Mode On<br>3=Privacy Mode Off   |
| Prompt Inq       | 8x 09 04 07 00 FF | y0 50 0p FF                      | p: 2=On, 3=Off  |
| Baud Rate Inq    | 8x 09 04 24 00 FF | y0 50 00 0p FF                   | p: 0=9600 bps, 1=38400 bps  |
| IR Receive Inq   | 8x 09 06 08 FF    | y0 50 0p FF                      | p: 2=On, 3=Off  |
| Output Mode Inq  | 8x 09 06 23 FF    | y0 50 0p 0q FF                   | pq: 02=QFHD 4K(3840 x 2160) - 59.94p  |
| Output Mode Inq  | 8x 09 06 23 FF    | y0 50 0p 0q FF                   | pq: 03=QFHD 4K(3840 x 2160) - 50p   |
| Output Mode Inq  | 8x 09 06 23 FF    | y0 50 0p 0q FF                   | pq: 05=QFHD 4K(3840 x 2160) - 29.97p  |
| Output Mode Inq  | 8x 09 06 23 FF    | y0 50 0p 0q FF                   | pq: 06=QFHD 4K(3840 x 2160) - 25p   |
| Output Mode Inq  | 8x 09 06 23 FF    | y0 50 0p 0q FF                   | pq: 08=FHD 1080P(1920 x 1080) - 59.94p  |

|                        |                      |                |   |
|------------------------|----------------------|----------------|---|
| Output Mode Inq        | 8x 09 06 23 FF       | y0 50 0p 0q FF | pq: 09=FHD 1080P(1920 x 1080) - 50p   |
| Output Mode Inq        | 8x 09 06 23 FF       | y0 50 0p 0q FF | pq: 0B=FHD 1080P(1920 x 1080) - 29.97p  |
| Output Mode Inq        | 8x 09 06 23 FF       | y0 50 0p 0q FF | pq: 0C=FHD 1080P(1920 x 1080) - 25p   |
| Output Mode Inq        | 8x 09 06 23 FF       | y0 50 0p 0q FF | pq: 0E=HD 720P(1280 x 720) - 59.94p   |
| Output Mode Inq        | 8x 09 06 23 FF       | y0 50 0p 0q FF | pq: 0F=HD 720P(1280 x 720) - 50p  |
| Output Mode Inq        | 8x 09 06 23 FF       | y0 50 0p 0q FF | pq: 11=HD 720P(1280 x 720) - 29.97p   |
| Output Mode Inq        | 8x 09 06 23 FF       | y0 50 0p 0q FF | pq: 12=HD 720P(1280 x 720) - 25p  |
| Output Mode Inq        | 8x 09 06 23 FF       | y0 50 0p 0q FF | pq: 15=FHD 1080i(1920 x 1080) - 59.94i  |
| Output Mode Inq        | 8x 09 06 23 FF       | y0 50 0p 0q FF | pq: 16=FHD 1080i(1920 x 1080) - 50i   |
| Motionless Preset Inq  | 8x 09 07 01 FF       | y0 50 0p FF    | p: 2=On, 3=Off  |
| HDMI Format Inq        | 8x 09 7E 01 03 FF    | y0 50 0p FF    | p: 1=RGB, 2=YUV422  |
| Tally Lamp Inq         | 8x 09 7E 01 0A 00 FF | y0 50 0p FF    | p: 2 On 3: Off  |
| Tally Mode Inq         | 8x 09 7E 01 0A 01 FF | y0 50 0p FF    | p: 0: (Red:OFF Green:OFF)<br>5: (Red:Highlight Green:OFF) - Tally Lamp must be Enabled<br>6: (Red:OFF Green:Highlight)<br>- Tally Lamp must be Enabled<br>7: (Red:Highlight Green:Highlight) - Tally Lamp must be Enabled |
| Lamp Inq               | 8x 09 7E 01 0A 00 FF | y0 50 0p FF    | p: 2=Enable, 3=Disable  |
| Control OnOff Inq      | 8x 09 0B 00 00 FF    | y0 50 0p FF    | p: 2=On, 3=Off  |
| Tracking Mode Inq      | 8x 09 0B 00 01 FF    | y0 50 0p FF    | p:<br>0=Everywhere,<br>1=Stage,<br>2=Partition,<br>3=Auto Framing,  |
| Target Sensitivity Inq | 8x 09 0B 00 02 FF    | y0 50 0p FF    | p:  |

|                          |                   |                      |   |
|--------------------------|-------------------|----------------------|---|
|                          |                   |                      | 0=Low<br>1=Middle<br>2=High   |
| Target Lost Timeout Inq  | 8x 09 0B 00 03 FF | y0 50 0p FF          | p:<br>0=3sec.,<br>1=5sec.,<br>2=10sec.  |
| Target Lost Reaction Inq | 8x 09 0B 00 04 FF | y0 50 0p FF          | p:<br>0=PTZ Back to the center and wide,<br>1=Stay in the last position,<br>2=Back to start position. |
| Head Position Inq        | 8x 09 0B 00 05 FF | y0 50 0p FF          | p:<br>0=Low,<br>1=Middle,<br>2=High   |
| Body Type Inq            | 8x 09 0B 02 01 FF | y0 50 0p FF          | p: 0=Full, 1=Half   |
| Body In Frame Inq        | 8x 09 0B 02 02 FF | y0 50 0p FF          | p:<br>0=Center,<br>1=Left,<br>2=Right   |
| Framing People Count Inq | 8x 09 0B 04 01 FF | y0 50 0p 0q 0r 0s FF | pqrs: people count value  |
| Framing Control Inq      | 8x 09 0B 04 02 FF | y0 50 0p FF          | p: 2=On, 3=Off  |
| Framing Sensitivity Inq  | 8x 09 0B 04 03 FF | y0 50 0p FF          | p:<br>0=Low,<br>1=Middle,<br>2=High   |
| Framing Type Inq         | 8x 09 0B 04 FF    | y0 50 0p FF          | p: A=Tracking, B=Framing  |



|                        |                |                      |  |
|------------------------|----------------|----------------------|--|
| Manual Red Inq         | 8x 09 04 43 FF | y0 50 00 00 0p 0q FF | pq: 00 ~ 80 (0 ~ 128)  |
| Manual Blue Inq        | 8x 09 04 44 FF | y0 50 00 00 0p 0q FF | pq: 00 ~ 80 (0 ~ 128)  |
| Mode Inq               | 8x 09 04 35 FF | y0 50 0p FF          | p:<br>0=Auto,<br>1=Indoor,<br>2=Outdoor,<br>3=One Push WB,<br>4=ATW,<br>5=Manual,<br>C=Sodium Lamp |
| Digital Zoom Limit Inq | 8x 09 04 26 FF | y0 50 pq FF          | p: 0 (x1) ~ 7 (x8)   |

## **14 RS232 over IP**

### **14.1 Overview of RS232 over IP**

RS232 over IP allows you to control this unit from the controller with the IP communication function via the LAN by using RS232. You can connect up to 5 controllers simultaneously on one LAN segment.

The communication specifications of RS232 over IP are as follows:

### **14.2 Interface**

RJ-45 10Base-T/100Base-TX (automatically discrimination)

### **14.3 Internet protocol**

IPV4

### **14.4 Transport protocol**

UDP

### **14.5 IP address**

Set by the IP card setting command

### **14.6 Port address**

52381

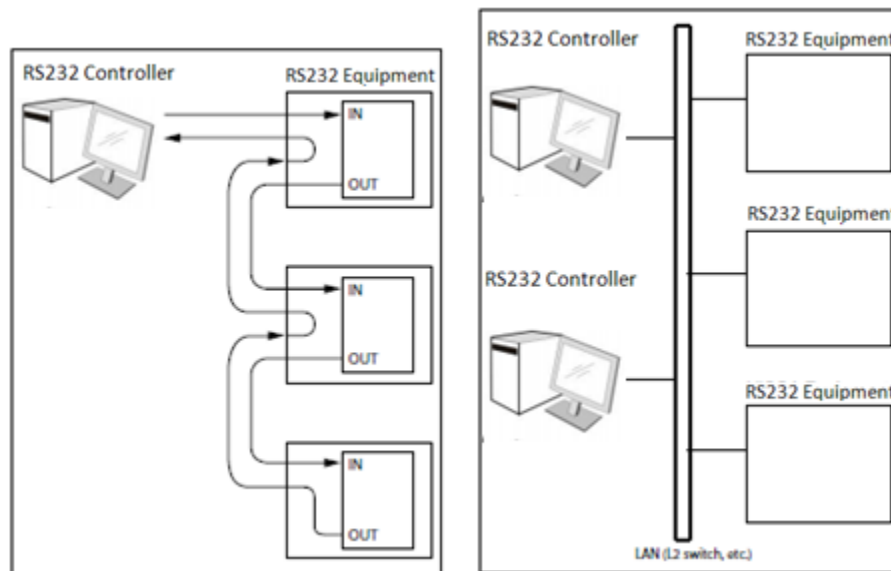
### **14.7 Delivery confirmation/Retransmission control**

Depends on the application

### **14.8 Coverage**

Limited dedicated network in the same segment without going through a bridge connection.

In this section, the device outputting commands, for example, a computer, is called the controller, and this unit and the devices connected to the same LAN are called the peripheral device. In the connection using RS-232/RS-422, the controllers and peripheral devices are connected to a one-direction ring. On the IP communication connection, the controllers and peripheral devices are connected by star type through a LAN.



**RS232/RS422 connection      IP communication connection**

While the IP communication connection, the address of each device cannot be set in the RS232 message as it is because the controllers and peripheral devices that are connected simultaneously are increased. In this case, addresses of the controllers and peripheral devices that are set in the RS232 message are locked to 0 (for the controller) or 1 (for the peripheral device).

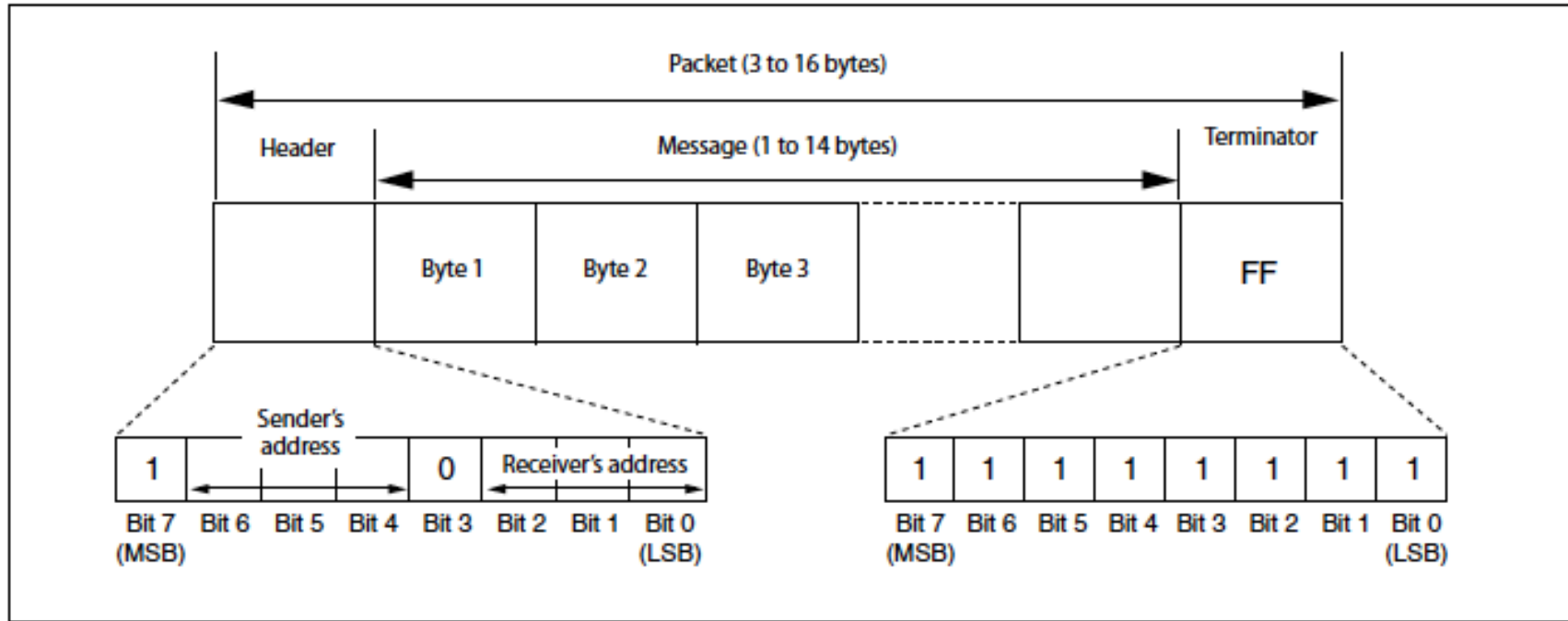
#### **14.9 Packet Structure**

The basic unit of VISCA communication is called a packet [Pic.1]. The first byte of the packet is called the header and comprises the sender's and receiver's addresses. For example, the header of the packet sent to the SRG assigned address 1 from the controller (address 0) is 81h in hexadecimal. The packet sent to the SRG assigned address 2 is 82h. In the command list, as the header is 8X, input the address of the SRG to X. The header of the reply packet from the SRG assigned address 1 is 90h. The packet from the SRG assigned address 2 is A0h.

Some of the setting commands for SRG can be sent to all devices at one time (broadcast)\*. In the case of broadcast, the header should be 88h in hexadecimal.

When the terminator is FFh, it signifies the end of the packet.

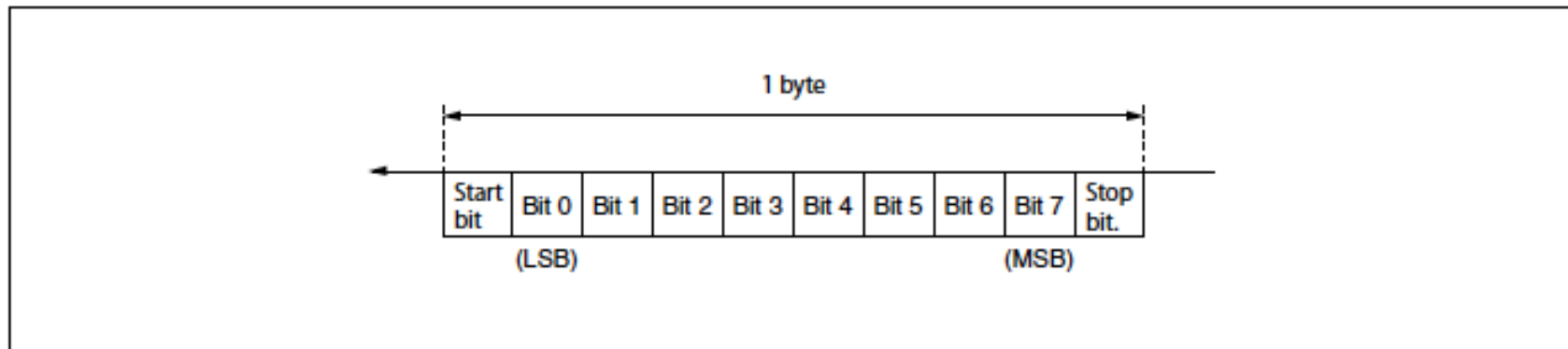
\*The broadcast function is not available for VISCA over IP.



Pic. 1 Packet structure

Note:

Pic. 1 shows the packet structure, while Pic. 2 shows the actual waveform. Data flow will take place with the LSB first.



Pic. 2 Actual waveform for 1 byte

## **15 Communication method of VISCA over IP**

### **15.1 Communication method**

VISCA over IP can process the VISCA communication between the controllers and peripheral devices using the messages that can be identified on the LAN, and sends/receives them. Because of this, VISCA over IP is not concerned about the contents of the communication between the controllers and peripheral devices. However, the VISCA communication sequence is different, depending on the types, as follows.

### **15.2 VISCA command**

This is a command from the controller to the peripheral device. When the peripheral device receives this command, Acknowledge is returned. After completing command processing, a completion notice is returned. This command uses the socket of VISCA. The order of completion notices may be changed if the multiple commands are sent to the same peripheral device.

### **15.3 VISCA inquiry**

This is an inquiry from the controller to the peripheral device. When the peripheral device receives this type of command, the reply for the inquiry is returned. This command does not use the socket of VISCA. The order of the replies is not changed if a multiple commands are sent.

### **15.4 VISCA reply**

This is an Acknowledge, completion notice, reply, or error reply from the peripheral device to the controller. The classification for sending messages from the peripheral device to the controller is common.

### **15.5 VISCA device setting command**

This is the device setting command from the controller to the peripheral device. When the peripheral device receives this classifications command, the peripheral device performs the function depend on the command.

### **15.6 Address**

Sets the address of the peripheral device, and does not return a reply to the controller. While using VISCA over IP, the address command is not sent from the controller because a Network Change command from the peripheral device that triggers sending command is not issued.

### **15.7 IF\_Clear**

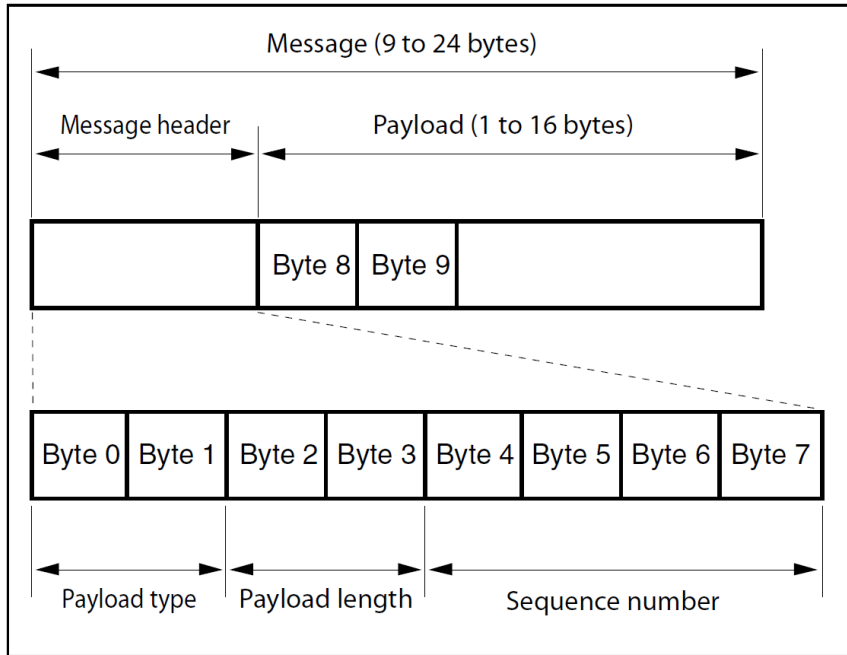
Sends the reply message to the controller after clearing, without using VISCA socket.

### **15.8 CAM\_VerslonInq**

Sends the reply message to the controller, without using VISCA socket.

### **15.9 Format**

These are the specifications of the message header (8 bytes) and payload (1 to 16 bytes).



Note: The actual LAN out method is big-endian, LSB first.  
 Pic.3 Message structure of the VISCA over IP

Example:

| Command            | Payload type |        | Payload length |        | Sequence number |        |        |        | Payload (1~16Byte) |        |        |        |        |        |        |        |        |     |         |
|--------------------|--------------|--------|----------------|--------|-----------------|--------|--------|--------|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|-----|---------|
|                    | Byte 0       | Byte 1 | Byte 2         | Byte 3 | Byte 4          | Byte 5 | Byte 6 | Byte 7 | Byte 1             | Byte 2 | Byte 3 | Byte 4 | Byte 5 | Byte 6 | Byte 7 | Byte 8 | Byte 9 | ... | Byte 16 |
| CAM_Power On       | 01           | 00     | 00             | 06     | 00              | 00     | 00     | 01     | 81                 | 01     | 04     | 00     | 02     | FF     |        |        |        |     |         |
| Pan-tiltDrive Up   | 01           | 00     | 00             | 09     | 00              | 00     | 00     | 02     | 81                 | 01     | 06     | 01     | 0C     | 0C     | 03     | 01     | FF     |     |         |
| Pan-tiltDrive Down | 01           | 00     | 00             | 09     | 00              | 00     | 00     | 03     | 81                 | 01     | 06     | 01     | 0C     | 0C     | 03     | 02     | FF     |     |         |
| CAM_FocusModeInq   | 01           | 10     | 00             | 5      | 00              | 00     | 00     | 04     | 81                 | 9      | 4      | 38     | FF     |        |        |        |        |     |         |

### 15.10 Payload type

Stores the value (Byte 0 and Byte 1) of the following table on the payload division.

| Name                         | Value (Byte 0) | Value (Byte 1) | Description  |
|------------------------------|----------------|----------------|--|
| VISCA command                | 01h            | 00h            | Stores the VISCA command.  |
| VISCA inquiry                | 01h            | 10h            | Stores the VISCA inquiry.  |
| VISCA reply                  | 01h            | 11h            | Stores the reply for the VISCA command and VISCA inquiry, or VISCA device setting command. |
| VISCA device setting command | 01h            | 20h            | Stores the VISCA device setting command.   |
| Control command              | 02h            | 00h            | Stores the control command.  |
| Control reply                | 02h            | 01h            | Stores the reply for the control command.  |

Pic.4 Payload Type Table

### 15.11 Payload Length

Stores the number of bytes (1 to 16) of data is stored on the payload.

Example: when the payload length is 16 bytes.

Byte 2:00h

Byte 3:10h

### 15.12 Sequence number

The controller stores the sequence number that is added every time a message is sent. If the sequence number reaches the limit, next values will be 0. The peripheral device saves the sequence number in the message from the controller, and stores the sequence number of the received message corresponding to the message sent to the controller.

### 15.13 Payload

Depending on the payload type, the following are stored.

1. VISCA command
  - Stores the packet of the VISCA command.
2. VISCA inquiry
  - Stores the packet of VISCA message.
3. VISCA reply
  - Stores the reply for the command or inquiry (Acknowledge message, completion message, or error message).
4. VISCA device setting command
  - Stores the packet of the VISCA device setting command.

## 5. Control command

- The following are stored on the payload division of the control command.

| Name  | Value | Description  |
|-------|-------|--|
| RESET | 01h   | Resets the sequence number to 0. The value that was set as the sequence number is ignored. |
| ERROR | 0Fyyh | yy=01: Abnormality in the sequence number.   |
|       |       | yy=02: Abnormality in the message (message type)   |

## 6. Controlled reply

- The following are stored on the payload division of the reply for the control command.

| Message     | Value | Description      |
|-------------|-------|------------------|
| Acknowledge | 01h   | Reply for RESET. |

### 15.14 Delivery confirmation

VISCA over IP uses UDP as a communications protocol of the transport layer. Delivery of messages is not guaranteed for the UDP communication. Delivery confirmation and retransmission should be performed on the application.

When the controller sends a message to the peripheral device, wait until a reply for the message is received before sending the next message. You can confirm delivery of messages by managing the time-out waiting for a reply message sent.

If time out occurs on the controller, loss of one of the following message is considered:

- Command
- Acknowledge message
- Completion message for command
- Inquiry
- Reply message for the inquiry
- Error message
- Inquiry of the VISCA device setting command
- Reply message of the VISCA device setting command