Answers for “Probs comment.pdf”

Document History

Date	Note
May 21 2007	1st answer
June 15 2007	2nd andwer

1. Data format of Coaxitron

2. Methods of setting a preset

As you know, we have five different methods of setting a preset. The reason is that we have many generations of camera and a function of new generation camera is expanded. The latest model of camera supports whole methods, because our old matrix switcher still uses the old method. So if implementing our camera protocol for your camera or converter to work with our old system, you have better to implement whole methods. If you concentrate only our latest system, you have better to implement only Type 4 method.

	Old ←			**→ New**
	Type 1	**Type 2**	**Type 3**	**Type 4**
preset 1	2021540,2022000,2021542,2021543	00219F0:0022640	9030064	**903112C**
:	:	:	:	**:**
preset 64	2021540,20223F0, 2021542,2021543	00219F0:0022A30	90300A3	**903116B**
:	:	:	:	**:**
preset 256	n/a	n/a	n/a	**906122B**

3. Methods of calling a preset

As you know, we have four different method of calling a preset. The reason that there are four methods is same as the reason of a setting preset. The latest model of camera supports whole methods, because our old matrix switcher still uses the old method. So if implementing our camera protocol for your camera or converter to work with our old system, you have better to implement whole methods. If you concentrate only our latest system, you have better to implement only Type 4 method.

	Old ←			**→ New**
	Type 1	**Type 2**	**Type 3**	**Type 4**
preset 1	2021400:2022000	00219F0:0022000	9030000	**9031000**
:		:	:	**:**
preset 64	2021400:20223F0	00219F0:00223F0	903003F	**909103F**
:		:	:	**:**
preset 256	n/a	n/a	n/a	**90310FF**

4. Methods of pan/tilt

As you know, we have four different method of pan/tilt. The reason that there are four methods is same as the reason of a setting preset. The latest model of camera supports whole methods, because our old matrix switcher still uses the old method. So if implementing our camera protocol for your camera or converter to work with our old system, you have better to implement whole methods. If you concentrate only our latest system, you have better to implement only Type 4 method.

	Old ←			**→ New**
	Type 1	**Type 2**	**Type 3**	**Type 4**
commands	20213sx	202136x:2022pt0	902zdpt	**Dzdpptt**
parameters	s=speed x=direction	x=direction p=pan speed (0-7) t=tilt speed (0-7)	z=zoom d=direction p=pan speed (0-f) t=tilt speed (0-f)	**z=zoom** **d=direction** **pp=pan speed(00-ff)** **tt=tilt speed (00-ff)**
PT speed	2 speed	8 speed	16 speeds	**256 speeds**

5. Timing requirements

Investigating…

6. Panasonic Coaxitron

Investigating…

6.1 Need to create official alarm format instead of internal document

6.2 Need to create official information of command/answer fields

6.3 Need to create official file format and data communication method

6.4 Need to create official file format and data communication method.

6.5 Others

6.5.1 ACK:

This is a response code for Panasonic RS485 communication, not for Coaxitron.

6.5.2 ALM:

This is one of command for Panasonic RS485 communication, not for Coaxitron. ALM is Alarm Information Data which a camera sends out when the camera detects an alarm.

Command Format: [stx]AD*xx*;ALM*xx*[etx]

xx means an unit address of the camera.

In Coaxitron communication, the camera informs of the alarm by alarm-bit data on a specific video field.

6.5.3 ER001:

This is an error message for Panasonic RS485 communication, not for Coaxitron.

Code	Error	Comments
ER001	Invalid command	Cannot execute because Unknown command
ER002	Invalid parameters	Cannot execute because Unknown parameter
ER301	Invalid command	Cannot execute depending on camera mode
ER305	Invalid command	Cannot answer for execution waiting
ER306	Invalid command	Cannot execute for execution waiting
ER601	Wrong command	Cannot execute depending on menu setting

6.5.4 ER002: Refer to 6.5.3.

6.5.5 ER301: Refer to 6.5.3.

6.5.6 ER305: Refer to 6.5.3.

6.5.7 ER606: Refer to 6.5.3.

6.5.8 ER601: Refer to 6.5.3.

6.5.9 NAK:

This is a response code for Panasonic RS485 communication, not for Coaxitron.

NAK code	Error	comments
NAK1 (15hex)(31hex)	parity error	Detected data parity error (even, odd), it cause camera to clear camera received data
NAK2 (15hex) (32hex)	buffer overflow	Detected camera receive buffer full, cannot receive data
NAK3 (15hex) (33hex)	framing error	Detected data framing error (bad length to stop bit) ,cause camera to clear camera received data
NAK4 (15hex) (34hex)	overrun error	Detected overwrote data buffer in camera communication hardware, cause camera to clear camera received data
NAK5 (15hex) (35hex)	timeout error	No [etx] is received wihtin10 minutes after [stx] received, camera goes to wait for [stx].

6.5.10 QID:

This is a command for Panasonic RS485 communication, not for Coaxitron.

However, Pelco do not need to implement QID for RS485 communication. A Panasonic Switcher and Controller also do not use this command.

6.5.11 QLD:

This is a command for Panasonic RS485 communication, not for Coaxitron, but Coaxitron has a similar command. However, Pelco do not need to implement QLD. for RS485 communication and Coaxitron. A Panasonic Matrix-switcher and Controller also do not use this command.

6.5.12 QLM:

This is a command for Panasonic RS485 communication, not for Coaxitron, but Coaxitron has a similar command. However, Pelco do not need to implement QID for RS485 communication and Coaxitron. A Panasonic Matrix-switcher and

Controller also do not use this command.

6.5.13 QRS:

This is a command for Panasonic RS485 communication, not for Coaxitron.

If Pelco supports Panasonic RS485 communication, Pelco need to implement QRS and RON commands.

QRS command response is also affected by RON communication mode. So if RON communication mode of camera is set to RON:7, a camera does not answer for the QRS query.

Command Format: [stx]AD*xx*;QRS:*y*[etx]

Answer Format: [stx]AD*xx*;QRS:*y*[etx]

xx means an unit address of the camera.

y	Reply ACK code	Reply ANSWER	Reply Error Code
0	Yes	Yes *1	Yes
1	Yes	Yes *1	Yes
2	Yes	No	Yes
3	Yes	No	No
4	No	Yes *1	Yes
5	No	Yes *1	No
6	No	No	Yes
7	No	No	No

6.5.14 RBC:

This is a command for Panasonic RS485 communication, not for Coaxitron, but Coaxitron has a similar command. However, Pelco do not need to implement RBC for RS485 communication and Coaxitron. A Panasonic Switcher and Controller also do not use this command.

6.5.15 RLM:

This is a command for Panasonic RS485 communication, not for Coaxitron, but Coaxitron has a similar command. However, Pelco do not need to implement RLM for RS485 communication and Coaxitron. A Panasonic Matrix-switcher and Controller also do not use this command.

6.5.16 RON:

This is a command for Panasonic RS485 communication, not for Coaxitron.

If Pelco supports Panasonic RS485 communication, Pelco need to implement QRS

and RON commands.

Panasonic RS485 communication utilizes ACK and ANSWER codes. When PC, Matrix-switcher or Controller sends a command, the camera sends back an ACK and an ANSWER codes. This is our basic procedure to make sure that the communication and the camera function are properly executed. But, if the ACK and ANSWER codes are not preferable, these codes can be omitted.

Command Format: [stx]AD*xx*;RON:*y*[etx]

Answer Format: [stx]AD*xx*;RON:*y*[etx]

xx means an unit address of the camera.

y	Reply ACK code	Reply ANSWER	Reply Error Code
0	Yes	Yes *1	Yes
1	Yes	Yes *1	Yes
2	Yes	No	Yes
3	Yes	No	No
4	No	Yes *1	Yes
5	No	Yes *1	No
6	No	No	Yes
7	No	No	No

*1 Exception : GC7:9zzzzzz command is one way command.
Even if a camera is set to RON:0 mode, the camera does not reply for GC7:9zzzzzz.

6.5.17 SRQ:

Panasonic Matrix-switcher and Controller sent out some SRQ query to know camera status and functions. Panasonic camera suuports a lot of SRQ command (about 100), but a current Panasonic Matrix-switcher and Controller only use some of them as followings.

1) AUX mode query

RS485 Communication	[stx]AD*xx*;GC7:2020118[etx]
Coaxitron	2020118

Answer

RS485 Communication	[stx]AD*xx*;GC7:202110*a*[etx]
Coaxitron	202110*a*

a	Describe
no response	AUX function is not available.
0	AUX1:Momentary, AUX2:Momentary
1	AUX1:Latch, AUX2:Momentary
2	AUX1:Momentary, AUX2:Latch
3	AUX1:Latch, AUX2:Latch

2) Pan/Tilt Speed (256 speed)

RS485 Communication	[stx]AD*xx*;GC7:2020150 [etx]
Coaxitron	2020150

Answer

RS485 Communication	[stx]AD*xx*;GC7:202150*a*[etx]
Coaxitron	202150*a*

a	Describe
no response	256 speed is not supported.
0	256 speed is supported.
1	256 speed is not supported.

3) Pan/Tilt Speed (16 speed)

RS485 Communication	[stx]AD*xx*;GC7:2020137 [etx]
Coaxitron	2020137

Answer

RS485 Communication	[stx]AD*xx*;GC7:202137*a*[etx]
Coaxitron	202137*a*

a	Describe
no response	16 speed is not supported.
0	16 speed is supported.
1	16 speed is not supported.

4) Pan/Tilt Speed (8 speed)

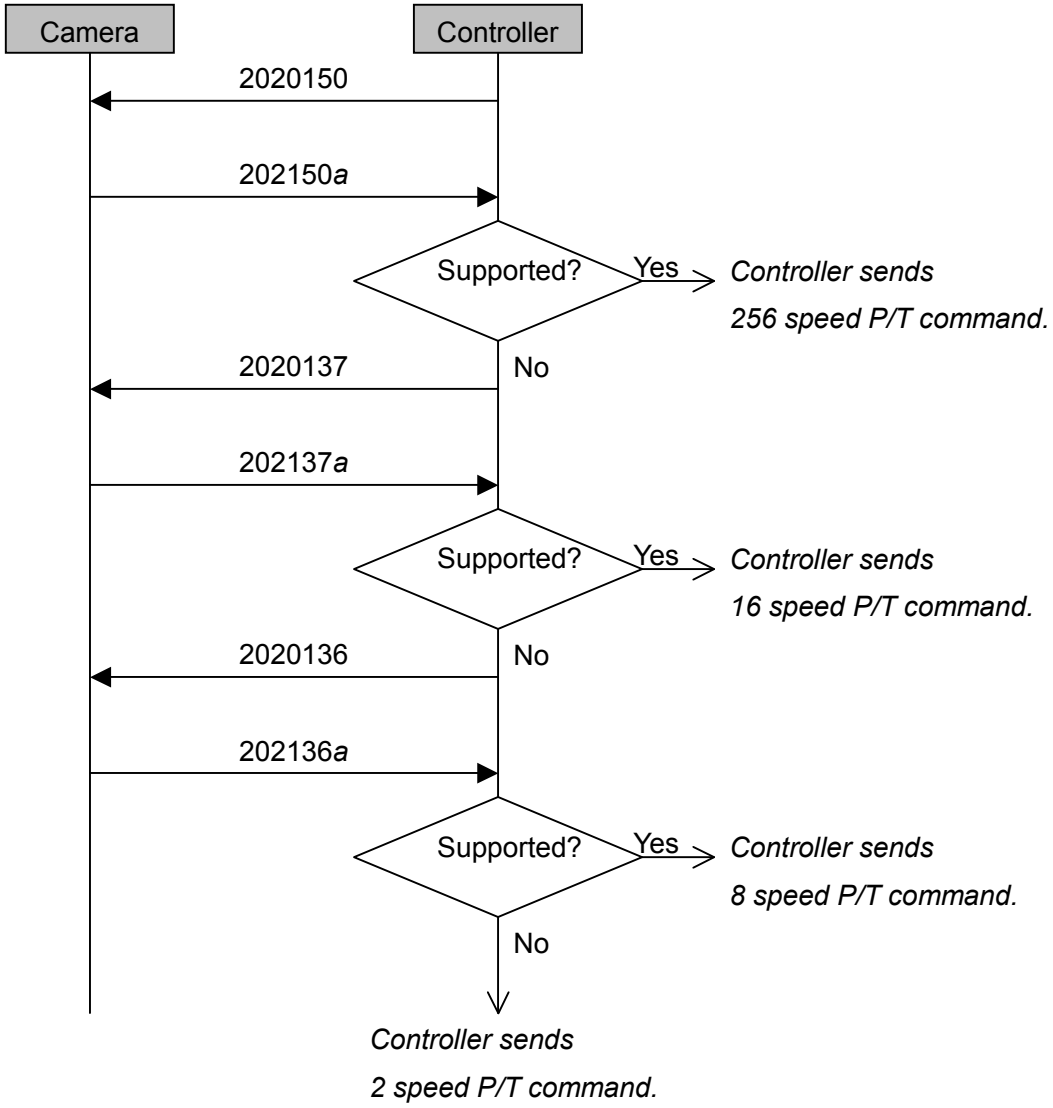
RS485 Communication	[stx]AD*xx*;GC7:2020136 [etx]
Coaxitron	2020136

Answer

RS485 Communication	[stx]AD*xx*;GC7:202136*a*[etx]
Coaxitron	202136*a*

a	Describe
no response	8 speed is not supported.
0	8 speed is supported.
1	8 speed is not supported.

NOTE: Command sequence of Pan/Tilt Speed query



7. Others

7.1 Undocumented commands and their undocumented answers

"2020000" is a query command of camera status (AutoPan and Camera Power etc.).

The detail of response is 20200xx,

bit (xx)							
7	6	5	4	3	2	1	0
n/a	n/a	n/a	AutoPan On/Off	n/a	Camera Power On/Off	Wiper On/Off	Defroster On/Off
n/a	n/a	n/a	On=1 Off=0	n/a	On=1 Off=0	On=1 Off=0	On=1 Off=0

For example;

AutoPan=Off, Camera Power = On, Wiper = Off and Defroster = Off -> 2020004

AutoPan=On, Camera Power = On, Wiper = Off and Defroster = Off -> 2020014

"2020020" is a query command of camera status (AUX).

The detail of response is 20202xx,

bit (xx)							
7	6	5	4	3	2	1	0
AUX4 Latch/ Momentary	AUX3 Latch/ Momentary	AUX2 Latch/ Momentary	AUX1 Latch/ Momentary	AUX4 On/Off	AUX3 On/Off	AUX2 On/Off	AUX1 On/Off
On=1 Off=0	On=1 Off=0	On=1 Off=0	On=1 Off=0	On=1 Off=0	On=1 Off=0	On=1 Off=0	On=1 Off=0

For example;

If a camera has AUX1 and AUX2 function, the both are working as Latch mode and AUX1/AUX2 are Off, the response is "2020230".

“0020106” is a query command of camera status (Black & White).
The detail of response is 002106x,
x=0 means Black & White is set to “ON”.
x=1 means Black & White is set to “OFF”.
x=2 means Black & White is set to “AUTO or AUTO1”.
x=3 means Black & White is set to “AUTO2”.

For example;
If a camera has Black & White function, it is set to “AUTO”, the response is “0021062”.

7.2 Some Commands Appear to Have Two Different Uses

> The following commands appear to have different explanations for what they do. Which is correct?
> 1. 0021300:0021306 Seems to be either AWC On or AWC Set Up with no explanation for what the 0022306 does. What happens after the 0022306 part of the command is received?
[Answer]
0021300 means AWC On. 0021306 means AWC Setup, but AWC Setup can be worked in AWC On mode. So when sending AWC Setup command, you have better to send AWC On and AWC Setup both. This means 0021300:0021306.
AWC Setup function is as same as following camera-menu operation.

Display a camera setup menu on monitor screen, move the cursor to WHITE BAL and select “AWC -> PUCH SW” and Press the CAM (SET) key on a controller to start the white balance setup.

>2. 002194C Is this Set Up Menu SW (reset) or Button Pressed Left + Right (F2). Is there any chance that both descriptions mean the same thing?
[Answer]
“Set Up Menu SW (reset)” and “Button Pressed Left + Right (F2)”, the both mean the same thing.

>3. 002194D Is this Set Up Menu SW (all reset) or Button Pressed Left + Center + Right (F3). Is there any chance that both descriptions mean the same thing?

[Answer]
“Set Up Menu SW (all reset)” and “Button Pressed Left + Center + Right (F3)”, the both mean the same thing.

>4. 0021A06 Is this Auto Focus On or One Shot Auto Focus On? Is there any chance that both descriptions mean the same thing?
[Answer]
“Auto Focus On” and “One Shot Auto Focus On”, the both mean the same thing.
>5. 2021431 Is this Preset Mode [off] or Preset Seq [off]?
[Answer]
“Preset Mode [OFF] is correct.

7.3 Specific Command Sequences

Refer to above 7.2.

7.3.1 RON commands are illegal in menu mode

In menu mode, you cannot change RON communication mode. As mentioned at 6.5.16, RON is a command for Panasonic RS485 communication, not for Coaxitron. So RON communication mode does not affect the Coaxitron communication.

7.3.2 Some Documented Commands don't do as Advertised

We found a mistake on document. Please refer to following correct table.

CAMERA ID request command

Function	Command	Answer	Memo
CAMERA ID request	[STX] [G][C][f] [:][0][0][2][1][9][0][0] [:][0][0][2][2][0][0][0] [:][0][0][2][1][9][3][0] [:][0][0][2][0][3][0][8] [:][0][0][2][0][3][0][1] [:][0][0][2][1][9][3][1] [ETX]		 read id index id read start srq3 srq3 id read end
		[STX] [G][C][7][:][0][0][2][E][9][0][0] [ETX] [STX] [G][C][7][:][0][0][2][9][0][0][0] [ETX] [STX] [G][C][7][:][0][0][2][E][9][3][0] [ETX] [STX] [G][C][7][:][0][0][2][3]**[0][1][x]** [ETX] [STX] [G][C][7][:][0][0][2][3]**[0][y][z]** [ETX] [STX] [G][C][7][:][0][0][2][E][9][3][1] [ETX] xyz : refer following table	read ack id index ack id read start ack id 1x id yz read end ack

Answer (1xyz)	Model
107E	WV-CS950,CW960,CW970 series NTSC
107F	WV-CS950,CW960,CW970 series PAL
108E	WV-CS570 series NTSC
108F	WV-CS570 series PAL
103E	WV-CS850 series NTSC/PAL (DIPSW1 RS485 and coax setup)
104E	WV-CS550 series NTSC
104D	WV-CS320 series
1048	WV-CW464P
1049	WV-CW464E
1057	WV-CP470CH
1052	WV-CP470 NTSC
1053	WV-CP470 PAL
1010	WV- CS600series NTSC
1011	WV- CS600 series PAL

100C	WV- CS400 series NTSC
100D	WV- CS400 series PAL
100E	WV- BS300 series NTSC
100F	WV- BS300 series PAL
~~101A~~	~~WV-CPR650 series NTSC~~
~~101B~~	~~WV-CPR650 series PAL~~
1006	WV-CP610 series NTSC
1007	WV-CP610 series PAL
100A	WV-BP510 series NTSC
100B	WV-BP510 series PAL