All Controllers - FUNC byte command list

Last Update 07-07-04

The Data format is the same for control and reply data.
This consists of ASCII * (asterix) followed by 2 x ident bytes, 6 x data bytes + 1 error byte
The first ID byte is either; 'D' for control data 'C' for camera reply data 'H' for head reply data (not implemented)
The 2nd ID byte is always ASCII * (asterix) This is for code balancing on radio systems

Output data bytes are referred to as follows;

Code Bala	ID Byte 1	ID Byte 2	Data 1	Data 2	Data 3	Data 4	Data 5	Data 6	Error Byte
"*"	"D"	"*"	HEAD	FUNC	PAN	TILT	ZOOM	FOCUS	ERROR

An engineering control is alternated with the operator control with the HEAD No. as HEAD+100 Maximum No. of heads = 99
This enables engineering to control all cameras whether or not they are selected by the operator

Reply from Camera Data Format

Code Bala	ID Byte 1	ID Byte 2	Data 1	Data 2	Data 3	Data 4	Data 5	Data 6	Error Byte
"*"	"C"	"*"	FUNC	IRIS	GAIN	SHUTTER	FOCUS	STATUS	ERROR

Camera STATUS

Byte 6	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	
	White 2	White 1	Digi Zoom	Stabiliser	16:9	Infra Red	Auto Focus	Auto Iris	=ON 0=OFF
Bits 6 & 7	are treated as a 2 bit number;			00=3k2	01=5k6	10=Manual	11=AUTO		

1	Set Head Address Ident to 003		.....heads could only be 1-4
2	Set Head Address Ident to 004		
3	Zoom Drift Null		
4	Focus Drift Null	Only if FOCUS is not positional	
5	Camera Gain UP	If ZOOM=001 then a direct value is taken....	ZOOM never reaches 001 in use
6	Camera Gain DOWN	....from the FOCUS byte	Up / Down is for old style commands
7	Auto Iris ON		
8	Auto Iris OFF		
9	Night Vision mode ON		
10	Night Vision mode OFF		
11	LEDs / Relay ON		
12	LEDs / Relay OFF		
13	White Balance PUSH		
14	Auto White Balance		
15	Auto Focus ON		
16	Auto Focus OFF		
17	Digital Zoom ON		
18	Digital Zoom OFF		
19	White Balance preset - 3200K		
20	White Balance preset - 5600K		
21	Camera Stabiliser ON		
22	Camera Stabiliser OFF		
23	16:9 mode ON		
24	4:3 mode ON		
25	Shutter Speed UP	If ZOOM=001 then a direct value is taken....	ZOOM never reaches 001 in use
26	Shutter Speed DOWN	....from the FOCUS byte	Up / Down is for old style commands
27	Fine Focus ON	Normal Pan,Tilt & Zoom continue	Fine Focus is organised in the head
28	Fine Focus OFF	Normal Pan,Tilt & Zoom continue	Fine Focus is organised in the head
29	Instant Auto Focus		
30	Zoom Proportional Speed ON	Makes Pan & Tilt speed proportional to Zoom position	
31	Zoom Proportional Speed OFF		
32	Direct Zoom position	Normal Pan, Tilt & Focus continue	Sends the Zoom to a position
33	Run VT		
34	Stop VT		
35	Pan & Tilt Limits	Head takes current position as the.....	L, R, U, D selected as Bits 0-3 in.....
		....limit of movement	.....FOCUS byte 1=set limit
			Bits 4-7 0=Off 1=On
36	Store Preset position (1-8)	Pan, Tilt, Zoom, Focus position store	Position number set in FOCUS byte
37	Goto Preset Position (1-9)	Pan, Tilt, Zoom, Focus position recall	Position number set in FOCUS byte
		Position 9 = Pan Centering	Position 10 = Tilt Centering
		Position 11 = Max Pan left	Position 12 = Max Pan right
		Position 13 = Max Tilt up	Position 14 = Max Tilt down
50	Turbo Mode	Normal Pan, Tilt & Focus continue	Sets head to max speed whilst at 50
51	Camera Display ON	Disp On/Up/Down/Yes/No/ = 0/1/2/3/4/	Value in FOCUS byte
52	Camera Display OFF		
53	White Balance Manual		Sets WB to manual
54	Red Gain adjust UP	If ZOOM=001 then a direct value is taken....	ZOOM never reaches 001 in use
55	Red Gain adjust DOWN	....from the FOCUS byte	
56	Blue Gain adjust UP	If ZOOM=001 then a direct value is taken....	ZOOM never reaches 001 in use
57	Blue Gain adjust DOWN	....from the FOCUS byte	
58	Aperture adjust UP	If ZOOM=001 then a direct value is taken....	ZOOM never reaches 001 in use
59	Aperture adjust DOWN	....from the FOCUS byte	
60	Bright Adjust UP	If ZOOM=001 then a direct value is taken....	Only effective in Auto Iris
61	Bright Adjust DOWN	....from the FOCUS byte	Only effective in Auto Iris
62	Exposure Compensation UP	If ZOOM=001 then a direct value is taken....	Only effective in Auto Iris
63	Exposure Compensation DOWN	....from the FOCUS byte	Only effective in Auto Iris
64	Master Pedastal UP	If ZOOM=001 then a direct value is taken....	
65	Master Pedastal DOWN	....from the FOCUS byte	
66	Bars	On=1 Off=0 vlaue in FOCUS byte	
95	Focus Reverse		Reverses control output from controller
96	Zoom Reverse		Reverses control output from controller
97	Iris Outputput Range?	Iris range in FOCUS byte	1-17 = VISCA, 2-253 = Normal
98	Camera & Lens Factory reset		
99	Reset ANY Head to Head No1	This funtion addresses ALL Head Nos	
101-199	Engineering input - sends engineering adjustments interlaced with operational data - normal function numbers apply		
	eg. Head No. 14 = Engineering Head No. 114		
Gyro Mount Specific Commands			
200	ROLL move value in FOCUS byte	Normal Pan, Tilt, & Zoom continue	
201			
202	Gyro Status bytes	Sends Pan, Tilt & Roll status bytes in PAN, TILT & FOCUS	
203	Gyro Reset	Resets bit indicated Drifts & Gains	
204	Manual Gyro Drift Null adjustment		
205	Manual Servo Drift Null adjustment		
206	Manual Pan Gain adjustment		
207	Manual Tilt Gain adjustment		
208	Manual Roll Gain adjustment		
209			
210			
211	Full status & settings enquiry		