

Tx1500 control protocol via the B-BUS interface.
DRAFT VERSION 16Nov02 PSC

Baud settings: 9600,N,8,1

Data can be sent at full speed with no inter-character pacing.

Function	String	Notes
SELECT MONITOR	@2,M <CR>	M = monitor number (1 to 8)
SELECT CAMERA	@3,C <CR>	C = camera number (1-96)
PAN RIGHT	@5,2 <CR>	
PAN LEFT	@5,3 <CR>	
TILT UP	@5,4 <CR>	
TILT DOWN	@5,5 <CR>	
ZOOM IN	@5,6 <CR>	
ZOOM OUT	@5,7 <CR>	
FOCUS FAR	@5,8 <CR>	
FOCUS NEAR	@5,9 <CR>	
IRIS CLOSE	@5,10 <CR>	
IRIS OPEN	@5,11 <CR>	
WASH ON	@5,12 <CR>	
WIPER ON	@5,19 <CR>	
LAMPS ON	@5,21 <CR>	
STOP PAN RIGHT	@6,2 <CR>	
STOP PAN LEFT	@6,3 <CR>	
STOP TILT UP	@6,4 <CR>	
STOP TILT DOWN	@6,5 <CR>	
STOP ZOOM IN	@6,6 <CR>	
STOP ZOOM OUT	@6,7 <CR>	
STOP FOCUS FAR	@6,8 <CR>	
STOP FOCUS NEAR	@6,9 <CR>	
STOP IRIS CLOSE	@6,10 <CR>	
STOP IRIS OPEN	@6,11 <CR>	
STOP WASH ON	@6,12 <CR>	
STOP WIPER ON	@6,19 <CR>	
STOP LAMPS ON	@6,21 <CR>	
PAN/TILT SPEED	@7,P,T <CR>	P & T speed in the range 0 - 15 0 = slowest, 15 = fastest
GOTO PRESET	@8,P <CR>	P = preset number (1-99)
PROGRAM PRESET	@9,P <CR>	P = preset number (1-99)
START PATROL 1	@10 <CR>	
START AUTOPAN	@12 <CR>	
START MONITOR SEQUENCE	@25,0 <CR>	Same as hold off
STOP MONITOR SEQUENCE	@25,1 <CR>	Same as hold on

Relay ON (Triangle Key)	@50,X<CR>	X = 0 – 12 0 = Tx1500 relay 1 – 2 = relays 1 & 2 of alarm card 1 3 – 4 = relays 1 & 2 of alarm card 2 5 – 6 = relays 1 & 2 of alarm card 3 7 – 8 = relays 1 & 2 of alarm card 4 9 – 10 = relays 1 & 2 of alarm card 5 11 – 12 = relays 1 & 2 of alarm card 6
Relay OFF	@51,X<CR>	X = As above
HASH command	@52,X<CR>	X = hash number – see Tx1500 for specific hash commands.
Send Single Key Press	@53,0<CR>	'0' Key
	@53,1<CR>	'1' Key
	@53,2<CR>	'2' Key
	@53,3<CR>	'3' Key
	@53,4<CR>	'4' Key
	@53,5<CR>	'5' Key
	@53,6<CR>	'6' Key
	@53,7<CR>	'7' Key
	@53,8<CR>	'8' Key
	@53,9<CR>	'9' Key
	@53,10<CR>	'CAMERA' key
	@53,11<CR>	'MONITOR' key
	@53,12<CR>	'CLEAR' key
	@53,13<CR>	'+' key
	@53,14<CR>	'-' key
	@53,15<CR>	'PRESET' key
	@53,16<CR>	'PATROL' key
	@53,17<CR>	'SEQ' key
	@53,18<CR>	'RELAY/TRIANGLE' key
	@53,19<CR>	'ALARM' key
	@53,21<CR>	'PROGRAM' key
	@53,22<CR>	TX1500 MENU ACCESS

All characters shown are the actual ASCII characters that should be sent. Two or three digit numbers will be sent using either two or three characters.

All commands are terminated with a <CR> = 0x0d or decimal 13

Examples

Select camera 1 onto monitor 4

@2,4 <CR>	Complete HEX byte string	0x40 0x32 0x2c 0x34 0x0d
@3,1 <CR>		0x40 0x31 0x2c 0x31 0x0d

Once the monitor is selected, any subsequent camera selects relate to this monitor ie to now select camera 16 send the following:

@3,16 <CR>

The current camera can then be controlled using the @5 and @6 commands.

@5 commands are used to start a function and @6 commands are used to stop a function. Only a single function can be controlled with each command

To Pan Left, Tilt Up and Zoom in, send the following:

@5,3 <CR>

@5,4 <CR>

@5,6 <CR>

Pan and Tilt speeds are sent using the @7 command. The speeds are sent as a percentage between 1 and 100. 100 being full speed. Within the B-BUS interface this percentage is divided by 16 to give the 16 speeds that the Tx1500 supports.

If no speed command is sent following a @5 command then a speed of 1 will be assumed. This prevents the head from 'jerking' on movement start.

Speed Examples

Move Left at increasing speeds

@5,3 <CR>	Start Panning Left
@7,1,1 <CR>	Slow Pan Speed
@7,10,1 <CR>	Increased Pan Speed
@7,25,1 <CR>	Even Higher Pan Speed
@7,100,1 <CR>	Full Pan Speed

To stop movement in a direction send a @6 command.

To stop moving left send

@6,3 <CR>

Selecting a new camera whilst the current camera is moving will cause the current camera to stop moving before selecting the new camera.