DMX Camera Interface

Below is a table that describes the DMX interface of the camera in the MSD Visualizer.
Position and Focus point positions are all absolute in mm. This allows the user to position the camera in the range -32.766 to +32.766 meter on all axes. This range can be changed using the 'Coordinate Scale' setting in the Visualizer.

Ch.	Value	Description	Default	Comments
1		MSB X Position	32767	When both these channels are 0, then the current value
2		LSB X Position		of the camera will not change when using direct control.
3		MSB Y Position	35135	When both these channels are 0, then the current value
4		LSB Y Position		of the camera will not change when using direct control.
5		MSB Z Position	46400	When both these channels are 0, then the current value
6		LSB Z Position		of the camera will not change when using direct control.
7		MSB X Focus Point	32767	When both these channels are 0, then the current value
8		LSB X Focus Point		of the camera will not change when using direct control.
9		MSB Y Focus Point	35071	When both these channels are 0, then the current value
10		LSB Y Focus Point		of the camera will not change when using direct control.
11		MSB Z Focus Point	32767	When both these channels are 0, then the current value
12		LSB Z Focus Point		of the camera will not change when using direct control.
13		MSB Zoom Angle	25856	When both these channels are 0, then the current value
14		LSB Zoom Angle		of the camera will not change when using direct control.
15		**Camera Animation modes**	0	(index and rotation speed/direction on channel 16-17)
	0 - 4	Disabled		
		Index mode		
	5-9	Index Camera Inspect Up/Down		(same layout we use for gobo selection)
	10-14	Index Camera Inspect Left/Right		
	15-19	Index Camera Roll		
		Continuous rotation		
	20-24	Continuous Camera Inspect Up/Down		
	25-29	Continuous Camera Inspect Left/Right		
	30-34	Continuous Camera Roll		
	35-129	Reserved		
	130-134	Emulate hand held motion		shake amplitude/frequency on offset 15-16
	135-255	Reserved		
16		**MSB Camera Roll/Index/Rotation speed Index**	32767	Works on absolute position/focus from DMX channels as well as pre-sets selected on channel 18
	0 - 65535	Index (-197.5 to 197.5 deg)		
		Continuous		
	0-511	No rotation indexed at 0		
	512-32255	CW rotation, fast -> slow		
	32256-32767	No rotation, stops at current position		
	32768-64511	CCW rotation slow -> fast		

	64512-65535	No rotation, indexed at 180		
		Hand Held		Hand Held emulation is not yet implemented !
	0-31	Position XY Shake Slow -> Fast		
	32-63	Position XYZ Shake Slow -> Fast		
	64-95	Orientation XY Shake Slow -> Fast		
	96-127	Orientation XYZ Shake Slow -> Fast		
	128-159	Position XY & Orientation XY Shake Slow -> Fast		
	160-191	Position XY & Orientation XYZ Shake Slow -> Fast		
	192-223	Position XYZ & Orientation XY Shake Slow -> Fast		
	224-255	Position XYZ & Orientation XYZ Shake Slow -> Fast		
17		LSB Camera Roll/Index/Rotation speed / Hand Held shake amplitude		
18		**Pre-sets**	0	
	0-1	Direct control		Use channels 1-14 to set the camera.
	2-3	Pre-set 1		
	4-5	Pre-set 2		
	...	...		
	254-255	Pre-set 127		
19		**Velocity**	0	This is a camera motion speed control when camera moves from pre-set to pre-set
	0 - 5	Normal		
	6 - 10	0.1 - 0.5 sec / No acceleration/deceleration		
	11 - 45	0.5 - 4.0 sec / No acceleration/deceleration		
	46 - 75	4.0 - 10.0 sec / No acceleration/deceleration		
	76 – 120	10.0 - 55.0 sec / No acceleration/deceleration		
	121 – 127	55.0 - 60.0 sec / No acceleration/deceleration		
	128 – 135	60.0 - 55.0 with acceleration/deceleration		
	136 – 180	55.0 - 10.0 with acceleration/deceleration		
	181 – 210	10.0 - 4.0 with acceleration/deceleration		
	211 – 245	4.0 - 0.5 with acceleration/deceleration		
	246 – 249	0.5 - 0.1 with acceleration/deceleration		
	250 - 255	Normal		