HORIZON HOBBY, LLC.

Specification for Video Transmitter (VTX) Interfacing

Rev C

2017 September 13

1 Video Control Commands

The video control commands are inserted into a Phase 0 frame. Data is always inserted into slots 5 & 6 (last two channel slots in a transmission).

Data will be E0XX E0YY, where XX and YY come from the table below:

XX (Channel Slot 6)

E0	BAND	BAND	BAND	RFU	CHAN	CHAN	CHAN	CHAN
15-8	7	6	5	4	3	2	1	0

YY (Channel Slot 7)

E0	RFU	RFU	RFU	PIT	RGN	PWR	PWR	PWR
15-8	7	6	5	4	3	2	1	0

BAND:

- 0 = FatShark
- 1 = Raceband
- 2 = E
- 3 = B
- 4 = A
- 5-7 = Reserved

CHAN (Channel):

0	1	2	3	4	5	6	7	
5740	5760	5780	5800	5820	5840	5860	5880	FatShark
5658	5695	5732	5769	5806	5843	5880	5917	Raceband
5705	5685	5665	5645	5885	5905	5925	5945	Band E
5733	5752	5771	5790	5809	5828	5847	5866	Band B
5865	5845	5825	5805	5785	5765	5745	5725	Band A

Channels 8-15 reserved

PWR (Power):

- 0 = Off
- 1 = 1mW to 14mW
- 2 = 15mW to 25mW
- 3 = 26mW to 99mW
- 4 = 100mW to 299mW
- 5 = 300mW to 600mW
- 6 = 601mW+
- 7 = manual control

When a power level is requested that is not available in the VTX, the VTX shall use the next lowest available power level. For instance, if a VTX can provide power at 1mW, 15mW, and 200mW then a request for 26mW (3) will provide 15mW, and any request above 200mW shall output 200mW.

RGN (Region):

0 = USA, 1 = EU

PIT (Pits/Race mode):

0 = Race (normal operating) mode

1 = Pit (reduced power) mode. When PIT is set, it overrides all other power settings.

Document “VTX DATA frequency details for SPMVT025, SPMVT025EU, SPMVT200, SPMVT600.xlsx” contains information regarding allowed frequencies per region.

Note: Regional compliance is a function of the VTX, not the Spektrum transmitter. If the Spektrum transmitter requests an illegal frequency, it is the responsibility of the VTX to ignore the request.