



Model Aeronautics Association of Canada Safety Code

**This document contains safety rules and forms part of the
MAAC Safety Code for all activities described herein.**

MAAC Safety Document MSD 17 – RADIO SPECTRUM

1. Radio Systems shall be used in accordance with Manufacturers' recommendations.
2. All members shall utilize only frequencies approved by Industry Canada.
3. No frequency control is required for 2.4 GHz spread spectrum radios. For equipment on all other authorized frequencies, members must observe strict frequency control measures. These may include use of a MAAC Frequency Board, Transmitter Impound or other similar system.
4. Where prescribed by the manufacturers operating instructions all members shall perform a range check before the first use of the day and after any mishap that requires repairs
5. No member shall knowingly operate a radio control system other than a 2.4 GHz Spread Spectrum system within 4 kilometers of an established R/C flying location without an adequate method of frequency control. Where two RC clubs have flying facilities within 4 kilometers of each other, a frequency sharing agreement must be established if any equipment other than 2.4 GHz Spread Spectrum is to be used.
6. The commonly used frequencies for R/C models in Canada are shown in the following charts.
7. The frequencies that can be used for the transmission of First Person View (FPV) video are shown in the attached chart. For further information, see MSD 8 – USE OF FIRST PERSON VIEW DEVICES and MAP 9 – FLYING FIRST PERSON VIEW.
- 8...For additional information on the safe use of R/C equipment see MAP 2 – Industry Canada Certification of R/C Equipment, 7 – Compatibility of R/C Systems of Different Manufacturers and Different Vintages & 11 – Setting the Fail-Safe Feature on Modern R/C Equipment or contact the Frequency Spectrum Committee.

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Canadian Frequencies for Radio Control

2.4 GHz Spread Spectrum (Shared usage)

Amateur Radio 6-meter band

<u>Ch.#</u>	<u>MHz</u>
B1	53.100*
B2	53.200*
B3	53.300*
B4	53.400*
B5	53.500*
B6	53.600*
B7	53.700*
B8	53.800*
00	50.800*
01	50.820*
02	50.840*
03	50.860*
04	50.880*
05	50.900*
06	50.920*
07	50.940*
08	50.960*
09	50.980*

* An Amateur Radio Operator License is required to operate on these frequencies

27 MHz Frequencies (Shared Use - Surface and Aircraft)

<u>Ch.#</u>	<u>MHz</u>
A1	26.995
A2	27.045
A3	27.095
A4	27.145
A5	27.195
A6	27.255

72 MHz Frequencies (Aircraft Use Only)

<u>Ch.#</u>	<u>MHz</u>	<u>Ch.#</u>	<u>MHz</u>	<u>Ch.#</u>	<u>MHz</u>
11	72.010	28	72.350	45	72.690
12	72.030	29	72.370	46	72.710
13	72.050	30	72.390	47	72.730
14	72.070	31	72.410	48	72.750
15	72.090	32	72.430	49	72.770
16	72.110	33	72.450	50	72.790
17	72.130	34	72.470	51	72.810
18	72.150	35	72.490	52	72.830
19	72.170	36	72.510	53	72.850
20	72.190	37	72.530	54	72.870
21	72.210	38	72.550	55	72.890
22	72.230	39	72.570	56	72.910
23	72.250	40	72.590	57	72.930
24	72.270	41	72.610	58	72.950
25	72.290	42	72.630	59	72.970
26	72.310	43	72.650	60	72.990
27	72.330	44	72.670		

75 MHz Frequencies (Surface Use Only)

<u>Ch.#</u>	<u>MHz</u>	<u>Ch.#</u>	<u>MHz</u>	<u>Ch.#</u>	<u>MHz</u>
61	75.410	71	75.610	81	75.810
62	75.430	72	75.630	82	75.830
63	75.450	73	75.650	83	75.850
64	75.470	74	75.670	84	75.870
65	75.490	75	75.690	85	75.890
66	75.510	76	75.710	86	75.910
67	75.530	77	75.730	87	75.930
68	75.550	78	75.750	88	75.950
69	75.570	79	75.770	89	75.970
70	75.590	80	75.790	90	75.990

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M.A.A.C. FPV (First Person View) Video Frequency Chart

Available Frequency Bands	Frequency Allocation																																									
900MHz Band	910Mhz																																									
1.2 - 1.3Ghz Band	1258Mhz																																									
	1280Mhz																																									
	2370Mhz																																									
2.4Ghz Band ** The 2.4Ghz band should not be used for FPV when other RC pilots are operating 2.4GHz RC radios (Spectrum, Futaba Fast, JR, etc.) The operation of 2.4GHz RC radios in parallel with 2.4GHz FPV will interfere with the video signal and will render the video link unusable.	2390Mhz																																									
	2410Mhz																																									
	2414Mhz																																									
	2430Mhz																																									
	2432Mhz																																									
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5.8Ghz Band ** There are a total of 32 channels organized in 4 channel banks. Channels marked with RED should not be used. They fall outside the frequency spectrum assigned for amateur radio use. If more than one FPV aircraft flies simultaneously, a separation of at least 40-60MHz will be required between frequencies used to avoid signal overlap.	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 25%;">Bank 1</th> <th style="width: 25%;">Bank 2</th> <th style="width: 25%;">Bank 3</th> <th style="width: 25%;">Bank 4</th> </tr> <tr> <td style="font-size: 8px;">Foxtech Hobbyking</td> <td style="font-size: 8px;">Foxtech Hobbyking</td> <td style="font-size: 8px;">DJI</td> <td style="font-size: 8px;">Fatshark Immersion</td> </tr> </thead> <tbody> <tr> <td>5725MHz</td> <td>5733MHz</td> <td>5645MHz</td> <td>5740MHz</td> </tr> <tr> <td>5745MHz</td> <td>5752MHz</td> <td>5665MHz</td> <td>5760MHz</td> </tr> <tr> <td>5765MHz</td> <td>5771MHz</td> <td>5685MHz</td> <td>5780MHz</td> </tr> <tr> <td>5785MHz</td> <td>5790MHz</td> <td>5705MHz</td> <td>5800MHz</td> </tr> <tr> <td>5805MHz</td> <td>5809MHz</td> <td>5885MHz</td> <td>5820MHz</td> </tr> <tr> <td>5825MHz</td> <td>5828MHz</td> <td>5905MHz</td> <td>5840MHz</td> </tr> <tr> <td>5845MHz</td> <td>5847MHz</td> <td style="color: red;">5925MHz</td> <td>5860MHz</td> </tr> <tr> <td>5865MHz</td> <td>5866MHz</td> <td style="color: red;">5945MHz</td> <td>5880MHz</td> </tr> </tbody> </table>	Bank 1	Bank 2	Bank 3	Bank 4	Foxtech Hobbyking	Foxtech Hobbyking	DJI	Fatshark Immersion	5725MHz	5733MHz	5645MHz	5740MHz	5745MHz	5752MHz	5665MHz	5760MHz	5765MHz	5771MHz	5685MHz	5780MHz	5785MHz	5790MHz	5705MHz	5800MHz	5805MHz	5809MHz	5885MHz	5820MHz	5825MHz	5828MHz	5905MHz	5840MHz	5845MHz	5847MHz	5925MHz	5860MHz	5865MHz	5866MHz	5945MHz	5880MHz	5725, 5733, 5645, 5740MHz 5745, 5752, 5665, 5760MHz 5765, 5771, 5685, 5780MHz 5785, 5790, 5705, 5800MHz 5805, 5809, 5885, 5820MHz 5825, 5828, 5905, 5840MHz 5845, 5847, 5860MHz 5865, 5866, 5880MHz
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**Please follow the M.A.A.C. guidelines for FPV flying.
Spotter is required for all FPV flights.**



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