

## 2018 PTAR

### IMPORTANT NOTICE

Since the introduction of the Data Logger SAPFA has gathered a large amount of race data on about 340 aircraft.

We have been hard at work developing the Formula that will;

- use the available data,
- level the playing field so that each competitor has a reasonable chance of winning,
- be applied consistently and fairly, without fear or favour.

The Formula to be used this year is detailed below and we invite competitors to use it to calculate their own handicaps either before or at any time during the weekend.

$$X=k(k.y^{-1}(1+(y.10^{-4}-0.01))+0.04)^{-1}$$

Where:

X = your Handicap in knots

k = **the provisional course distance in nautical miles (2018 PTAR, k = 588.47 nm)**

y= your best recorded 3D speed in knots

The 3D speed in the column listed below has come from historical data gathered by SAPFA and is your input (y) in the above formula, and is used to calculate your handicap.

The following adjustment will be made in terms of the **PTAR Race Rules and Regulations**. If you exceed your 3D speed after a day's racing, the new 3D speed will automatically be entered into the Formula and it will calculate a revised handicap.

Any competitor whose handicap has been revised will be notified by the Race Director.

The Formula is designed to reward competitors who give it their best shot, and will frustrate competitors, who try to outsmart the system.

		Tempe	588.47
Aircraft		3D Speed	H/cap 2018
A2-CVS	Beech 55	190.90	186.78
A2-UFO	Jabiru J430	119.70	118.50
N108JH	Beech B55	185.30	181.47
N4217P	Piper PA 23 160 Apache	147.30	145.16
ZS-AAS	Beech 58	195.60	191.23
ZS-ABC	Piper PA 32 300C	141.60	139.67
ZS-ACA	Cirrus SR 22	179.11	175.58
ZS-AFO	Cessna 182T	145.30	143.24
ZS-ALE	Cessna T182T	155.09	152.64
ZS-ALS	Cessna 182T	144.30	142.27
ZS-ALZ	Beech G36	175.10	171.77
ZS-BAA	Socata TB 20	155.00	152.55
ZS-BAI	Cessna 172S	128.90	127.42
ZS-BJR	Beech A36	173.27	170.02
ZS-BNA	Beech F33A	177.37	173.93
ZS-BPD	Beech 58	200.50	195.86
ZS-BPN	Cessna 210L	169.00	165.95
ZS-CAP	Cirrus SR 20	153.70	151.31
ZS-CBB	Piper PA 28 180E	124.81	123.46
ZS-CBF	Mooney M20 C Mk 21	143.05	141.07
ZS-CBJ	Mooney M20C	143.00	141.02
ZS-CHL	Beech 58	199.74	195.14
ZS-CHO	Beech J35	159.70	157.06
ZS-CIR	Cessna 175	115.90	114.81
ZS-CLP	Cirrus SR 22 T	177.52	174.07
ZS-CNM	Cirrus SR22 Turbo	178.00	174.53
ZS-CNY	Cessna 210 260hp	155.23	152.77
ZS-CNZ	Cessna 172A	113.60	112.58
ZS-COB	Cessna 206H	151.90	149.58
ZS-CPB	Cirrus SR 22 G3	179.00	175.48
ZS-CTP	Cirrus SR 20	151.48	149.18
ZS-CTY	Cessna 172C	102.80	102.06
ZS-CXY	Cessna 172D STOL	109.90	108.98
ZS-DAM	Piper PA 28 235F	144.86	142.81
ZS-DBP	Cessna 182P	130.69	129.15
ZS-DOL	Cirrus SR 22 GTS	179.01	175.49
ZS-DOT	Cirrus SR 22 G2	182.20	178.52
ZS-DSU	Cessna 182G	134.60	132.92
ZS-DVK	Beech S33	178.00	174.53
ZS-DVN	Beech E55	199.50	194.92
ZS-DVZ	Cessna 172E	105.73	104.92
ZS-DWJ	Piper PA 28 235	136.40	134.66
ZS-DYD	Mooney M20E	155.34	152.88
ZS-DZZ	Piper PA 24 400	200.45	195.82
ZS-EAY	Piper PA 28 235	140.50	138.61
ZS-EBT	Piper PA 32 235	133.71	132.06

ZS-ECK	Cessna 182H	137.20	135.43
ZS-EFH	Piper PA 28 235	147.50	145.35
ZS-EJS	Cessna 182H	136.48	134.74
ZS-ELN	Piper PA 28 180	126.15	124.75
ZS-EOI	Piper PA 28 180	125.81	124.42
ZS-EOZ	Piper PA 28 140	123.33	122.02
ZS-EPR	Cessna 182K	135.07	133.38
ZS-ESP	Piper PA 34 220T Turbo	185.60	181.75
ZS-ETT	Cessna 182	135.63	133.92
ZS-EUB	Mooney M20F	145.82	143.74
ZS-EVB	Piper PA 30B	162.10	159.35
ZS-EWA	Cessna 172M	117.30	116.17
ZS-EXD	Mooney M20C Mk 21	139.40	137.55
ZS-EXV	Piper PA 28 140	114.60	113.55
ZS-FDZ	Piper PA 28 235B	145.38	143.31
ZS-FHM	Mooney M20G	147.70	145.54
ZS-FIF	Cessna 172L	116.90	115.78
ZS-FIW	Cessna 182 L	133.20	131.57
ZS-FIY	Cessna 182L	134.60	132.92
ZS-FJU	Cessna 172K	115.29	114.22
ZS-FJV	Cessna 172K	116.40	115.30
ZS-FMO	Piper PA 28 180D	125.40	124.03
ZS-FOH	Piper PA 28 140	115.70	114.62
ZS-FPI	Cessna 182M	138.00	136.20
ZS-FSI	Cessna 182T	143.89	141.88
ZS-FSR	Beech A36	175.10	171.77
ZS-FVB	Piper PA-28 180R	140.00	138.13
ZS-FVV	Piper PA 28 235C	138.89	137.06
ZS-FWK	Piper PA 28R 200	141.95	140.01
ZS-FYR	Piper PA 32 300C	145.38	143.31
ZS-HJF	Piper PA 24 260C	166.16	163.24
ZS-HME	Beech C33A	167.97	164.97
ZS-HWW	Beech 58	200.20	195.58
ZS-IAE	Cessna 182M	135.50	133.79
ZS-IBX	Beech E33	173.78	170.51
ZS-IDX	Cessna 182K	134.10	132.44
ZS-IEI	Piper PA 28 140C	118.24	117.09
ZS-IFY	Cessna 177B	127.00	125.58
ZS-IGY	Beagle B121	119.20	118.02
ZS-IJL	Beech K35	173.32	170.07
ZS-IMX	Beech A 24 R	135.30	133.60
ZS-IRL	Cessna 172N II	115.80	114.72
ZS-ISP	Cirrus SR 22	179.27	175.74
ZS-ISW	Piper PA 28R 200	138.90	137.07
ZS-ITU	Beech C23	115.28	114.21
ZS-IVD	Cessna 182P	137.16	135.39
ZS-IWK	Cessna 182P II	136.20	134.47
ZS-IXL	Grumman AA 5	117.60	116.46
ZS-IYC	Cessna 182P	138.70	136.88
ZS-IZG	Cessna 210M	168.79	165.75

ZS-JBE	Beech F33A	174.00	170.72
ZS-JDF	Cessna 177RG	139.46	137.61
ZS-JEF	Piper PA 28 235	141.80	139.87
ZS-JHH	Socata Rallye 235E	131.92	130.34
ZS-JIE	Cirrus SR 22	186.94	183.02
ZS-JKY	Mooney M20F	148.40	146.22
ZS-JLT	Cessna 182P II	139.50	137.65
ZS-JLW	Piper PA 23E 250T Turbo	191.60	187.44
ZS-JMV	Cessna 177 RG	139.00	137.17
ZS-JTA	Cessna FR172J	130.80	129.25
ZS-JTG	Cessna 182 QII	140.92	139.02
ZS-JUO	Cessna 172K	114.40	113.36
ZS-JWG	Cessna 182P	139.96	138.09
ZS-JYJ	Beech A36	170.67	167.54
ZS-JZZ	Piper PA 34 200T Turbo	168.50	165.47
ZS-KAJ	Beech A36	170.13	167.03
ZS-KCS	Beech 58	198.64	194.10
ZS-KHM	Piper PA 32 300	138.93	137.10
ZS-KHX	Piper PA 34 200T Turbo	177.30	173.86
ZS-KJB	Cessna 210N	174.41	171.11
ZS-KJF	Cessna R182 RG II	157.56	155.01
ZS-KKT	Piper PA 34 200T	178.70	175.19
ZS-KLY	Beech F33A	174.45	171.15
ZS-KMN	Beech 58	196.00	191.61
ZS-KOB	Piper PA 28 235	141.59	139.66
ZS-KOV	Cessna 182Q II	139.20	137.36
ZS-KPU	Aero Comm 500B	179.60	176.05
ZS-KSO	Cessna 182Q II	138.90	137.07
ZS-KSW	Cessna 182R II	141.46	139.54
ZS-KSZ	Cessna R182 RG II	155.80	153.32
ZS-KTN	Piper PA 28RT 201T	154.57	152.14
ZS-KTO	Aerostar 600A	214.60	209.15
ZS-KUT	Cessna 210N	165.07	162.19
ZS-KVT	Cessna 172 RG II	129.20	127.71
ZS-KYK	Cessna 172 RG II	131.00	129.45
ZS-LAI	Cessna R182 RG II	152.20	149.87
ZS-LCP	Piper PA 34 200T	167.70	164.71
ZS-LGZ	Cessna TR182	160.00	157.34
ZS-LIX	Beech B55	189.80	185.74
ZS-LLH	Cessna 182B	136.16	134.43
ZS-LLX	Piper PA 28R 201T	158.80	156.20
ZS-LML	Cessna 182T	147.76	145.60
ZS-LOM	Cessna 210N STO	171.67	168.50
ZS-LPA	Mooney M20F	150.30	148.04
ZS-LVU	Cessna T210N	175.00	171.67
ZS-LXJ	Beech F33 A	170.50	167.38
ZS-LXO	Beech 58	196.64	192.21
ZS-LXU	Beech F33A	173.01	169.77
ZS-LYD	Cessna T210 M	179.30	175.76
ZS-LYE	Cessna 210M STOL	180.00	176.43

ZS-LYY	Piper PA 34 200T Turbo	172.80	169.57
ZS-MDE	Piper PA 28R 180	140.03	138.16
ZS-MDK	Piper PA 34 200T	179.16	175.63
ZS-MEA	Piper PA 28R 201T	162.41	159.65
ZS-MEJ	Cessna T210M Turbo	182.78	179.07
ZS-MEW	Piper PA 32 300	141.40	139.48
ZS-MFD	Beech E55	196.19	191.79
ZS-MFG	Beech 58	206.30	201.34
ZS-MIA	Cessna 210L	162.80	160.02
ZS-MJN	Cessna 210M	166.24	163.31
ZS-MJR	Navion H	154.60	152.17
ZS-MKB	Cessna T210M Turbo	181.85	178.19
ZS-MLC	Cessna 210L	166.90	163.94
ZS-MOR	Cessna 210N	168.50	165.47
ZS-MRF	Cessna 177 RG II	139.70	137.84
ZS-MSP	Cessna 172R	124.00	122.67
ZS-MST	Piper PA 28 180 C	128.80	127.32
ZS-MSW	Cessna 182F	137.80	136.01
ZS-MTR	Cessna 210M*	165.00	162.13
ZS-MUH	Piper PA 34 200T	174.20	170.91
ZS-MVH	Cessna 210N	166.60	163.66
ZS-MWO	Mooney M20J	162.05	159.31
ZS-MYB	Beech BE33	174.35	171.05
ZS-MYN	Beech V35A	177.00	173.58
ZS-MYT	Cessna 172RK	125.99	124.60
ZS-NAB	RV 8	178.26	174.77
ZS-NBT	Cessna A150M	109.60	108.69
ZS-NDO	Cessna 177RG	136.52	134.78
ZS-NEH	Cessna 180H	136.02	134.29
ZS-NHR	Piaggio P166S Super/Charge	178.50	175.00
ZS-NJC	Grumman AG 5B	132.10	130.51
ZS-NOI	Cessna 182 L	138.50	136.69
ZS-NOY	Cessna 182P II	133.40	131.77
ZS-NPB	Cessna 177B	118.00	116.85
ZS-NSL	Cessna U206 D	141.85	139.92
ZS-NSM	Cessna U206D	136.80	135.05
ZS-NUL	Cessna T210 L* T/Stop	165.49	162.60
ZS-NXE	Piper PA 28RT 201T	161.50	158.78
ZS-NYU	Mooney M20C	145.56	143.49
ZS-NZL	Beech 58	197.00	192.55
ZS-OBC	Cessna 210	176.14	172.76
ZS-OFH	Piper PA 32R 301T	177.05	173.62
ZS-OMJ	Piper PA 32 260	140.20	138.33
ZS-OOG	Beech B55	196.00	191.61
ZS-ORZ	Cessna 182 A	128.20	126.74
ZS-OSM	Cessna 340A II	193.30	189.05
ZS-OSV	Piper PA 34 220T Turbo	178.40	174.91
ZS-OXZ	Cessna 182T	149.37	147.15
ZS-PAS	Beech B55	193.20	188.96
ZS-PBK	Beech 58	198.10	193.59

ZS-PBX	Mooney M20F	148.00	145.83
ZS-PDN	Aerostar 600	208.80	203.69
ZS-PFD	Cirrus SR22 T	184.26	180.48
ZS-PFN	Beech H35	162.08	159.34
ZS-PFO	Cessna 182K	142.60	140.64
ZS-PJK	Beech F33A	177.10	173.67
ZS-PJP	Christen A 1B	122.00	120.73
ZS-PKI	Cessna 210L	167.10	164.13
ZS-PKL	Cessna T 337H P II	171.30	168.14
ZS-PLE	Cirrus SR 22	181.86	178.20
ZS-PPE	Alpha Robin R2160i	132.00	130.41
ZS-PTC	Beech E55	207.90	202.84
ZS-PUP	Christian A-1	117.64	116.50
ZS-PWO	Cirrus SR 22	180.25	176.67
ZS-PYI	Cessna 210L	166.33	163.40
ZS-PYK	Beech C33A	171.50	168.33
ZS-PZG	Beech A36	170.70	167.57
ZS-RIO	Cessna 182P*	134.20	132.54
ZS-RMA	Beech F33A	175.30	171.96
ZS-RTB	Piper PA 28R 200	140.75	138.86
ZS-SCY	Cirrus SR 22 G3	181.00	177.38
ZS-SDR	Piper PA 28 181	131.90	130.32
ZS-SDW	Diamond DA 42 Tdi	169.41	166.34
ZS-SGK	Bellanca 8KCAB	109.07	108.17
ZS-SHV	Cessna 172N II	118.30	117.14
ZS-SNS	Cessna 172M	117.00	115.88
ZS-SPO	Cessna 172M	115.40	114.33
ZS-SRC	Cirrus SR 22 G2	175.00	171.67
ZS-TCC	Cirrus SR 22 T	178.04	174.57
ZS-TMT	Cessna 182P II	135.30	133.60
ZS-TZN	Cessna 182S	144.30	142.27
ZS-VIS	Cessna T210R	187.12	183.19
ZS-VSA	Cessna 402B	204.00	199.17
ZS-WAP	Piper PA 28R 200	141.80	139.87
ZS-WBT	Glasair III	222.35	216.43
ZS-WZU	Lancair 360	202.00	197.28
ZU-ACY	Bosbok	126.69	125.28
ZU-AFP	Cessna 172D	127.96	126.51
ZU-BHX	Piper PA 22 150	114.59	113.54
ZU-BYS	RV 4	167.00	164.04
ZU-CCO	Samba UFM 10	124.30	122.96
ZU-CHI	RV 8	179.80	176.24
ZU-CMJ	Jabiru SP	107.60	106.74
ZU-DCB	Lancair Legacy	224.78	218.71
ZU-DIY	Kappa 2U Sabre	110.00	109.08
ZU-DJC	RV 8	185.40	181.56
ZU-DTB	Dyn Aero MCR 4S Turbo	135.30	133.60
ZU-DUU	jabiru J400	122.57	121.29
ZU-DWS	Dynamic WT 9	135.70	133.99
ZU-DZB	Jabiru J160	101.50	100.79

ZU-EAR	RV 7	165.99	163.07
ZU-EEI	Tecnam P2002 Sierra	114.50	113.45
ZU-EIE	Jabiru J430	125.68	124.30
ZU-EKR	Tecnam P2002 Sierra	107.60	106.74
ZU-ESS	Jabiru J430	124.10	122.77
ZU-EYP	RV 7	175.93	172.56
ZU-EYZ	Alpi P200S	115.80	114.72
ZU-EZL	Samba XL	125.20	123.83
ZU-EZX	Jabiru J430	117.69	116.55
ZU-FBJ	Sportstar	115.00	113.94
ZU-FBX	Jabiru J430	118.40	117.24
ZU-FCE	RV 8	184.68	180.88
ZU-FHM	RV 8	183.73	179.98
ZU-FND	RV 9A	156.40	153.90
ZU-FNI	RV 10	179.00	175.48
ZU-FNN	Sling	108.40	107.52
ZU-FNV	Pipistrel Virus SW 100 Turbo	137.20	135.43
ZU-FRX	Sling F D 6 Turbo	127.72	126.27
ZU-FSP	Sling 2	122.94	121.64
ZU-FUB	Sling 2 100	110.77	109.82
ZU-FUM	Pipistrel Virus SW 100	138.26	136.46
ZU-FVA	Jabiru J430	120.51	119.29
ZU-FWA	RV 7	177.19	173.76
ZU-FWB	RV 10	176.42	173.02
ZU-FWY	Sling 2	117.59	116.45
ZU-FZJ	RV 6A	170.44	167.32
ZU-IBM	Sling 4	123.00	121.70
ZU-IFY	Sling	113.59	112.57
ZU-IHH	RV 7A	171.83	168.65
ZU-IHI	RV 7	176.81	173.39
ZU-IHK	Sling 2	115.00	113.94
ZU-IMA	RV 7	180.10	176.53
ZU-ISC	RV 7A	176.71	173.30
ZU-JAD	RV 7A	168.00	164.99
ZU-JHA	RV 6	175.30	171.96
ZU-JTX	RV 10	177.51	174.06
ZU-JUR	RV 7	176.80	173.38
ZU-JVZ	Jabiru J400	125.53	124.15
ZU-KAI	Flight Design CT SW	123.08	121.78
ZU-KIS	TR 4 KIS	139.92	138.06
ZU-KLC	TR 4 KIS	139.70	137.84
ZU-KLT	RV 7	176.00	172.62
ZU-LAX	RV 7A	176.92	173.50
ZU-LEB	Lancair 360	201.20	196.52
ZU-LEG	lancair 2000	228.70	222.38
ZU-LHD	RV 8	178.95	175.43
ZU-LNI	Dyn Aero MCR 4S	135.30	133.60
ZU-MBD	BD 4C	163.70	160.88
ZU-MDB	RV 8	181.60	177.95
ZU-MEL	jabiru J430	125.48	124.11

<b>ZU-MER</b>	RV 7A T/Stop	166.20	163.27
<b>ZU-MGB</b>	Sling 2 100	115.10	114.04
<b>ZU-MIF</b>	Tecnam P92 S Echo	102.20	101.47
<b>ZU-MJB</b>	Alpi P300S Std	136.60	134.85
<b>ZU-MPH</b>	RV 8	176.72	173.31
<b>ZU-NAT</b>	Alpi 300 Hawk	136.20	134.47
<b>ZU-NIK</b>	RV 7	176.80	173.38
<b>ZU-NRC</b>	Sling F D 6	116.00	114.91
<b>ZU-NRV</b>	RV 8	171.20	168.05
<b>ZU-NTC</b>	RV 7A	170.50	167.38
<b>ZU-ORV</b>	RV 7A	169.87	166.78
<b>ZU-PWH</b>	Sling 4	125.61	124.23
<b>ZU-RVF</b>	RV 4	177.50	174.05
<b>ZU-RVI</b>	RV 10	177.65	174.19
<b>ZU-RVP</b>	RV 4	177.00	173.58
<b>ZU-SFA</b>	RV 7A	173.13	169.89
<b>ZU-SLF</b>	Sling 4	125.00	123.64
<b>ZU-SNG</b>	Sling 2 914T	125.81	124.42
<b>ZU-TAE</b>	Sling F D 6	110.90	109.95
<b>ZU-TAF</b>	Sling F 4 Turbo	118.40	117.24
<b>ZU-TCD</b>	RV 10 * T/Stop	174.62	171.31
<b>ZU-VNE</b>	RV 7	181.70	178.05
<b>ZU-VON</b>	Glasair GS 2	139.80	137.94
<b>ZU-VRV</b>	RV 7	171.01	167.87
<b>ZU-WIN</b>	RV 7	177.40	173.96
<b>ZU-WRJ</b>	Sling F D Turbo	126.00	124.61
<b>ZU-XML</b>	SA Ravin 500	182.45	178.76
<b>ZU-YUM</b>	Lancair 360	195.80	191.42