

Load Analysis

Aircraft Electrical Load Analysis

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Stephen's RV-6A

Based on Bob Nuckolls' load analysis sheet

Item	Pre-Flight	Taxi	Takeoff Climb	VFR Cruise	IFR Cruise	Approach	Main ALT OUT	Peak Current	Comments
Master Contactor	0.8	0.8	0.8	0.8	0.8	0.8		0.8	
Lightspeed #1	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	Battery Bus
Lightspeed #2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	Battery Bus
GRT #1 Keepalive/Clock	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Battery Bus
GRT #2 Keepalive/Clock	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Battery Bus
GRT HX	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	Unsure of this number, the HX has more gadgets
GRT HS	1.5	1.5	1.5	1.5	1.5	1.5		1.5	Per FAQ on yahoo GRT_EFIS, 1.2 avg, 1.5 full bright
EIS 4000	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
GRT AHRS 1	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
GRT AHRS 2	0.25	0.25	0.25	0.25	0.25	0.25		0.25	
GRT Sensors	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	XM: 1A + Fuel Flow: 0.05A + GPS: 0.1A ?
IC-A210 #1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5A Standby, 4A max RX audio, 5A max TX
IC-A210 #2	0.5	0.5	0.5	0.5	0.5	0.5		5	0.5A Standby, 4A max RX audio, 5A max TX
Trio ProPilot	0.31	0.31	0.31	1.6	1.6	0.31		1.6	Per Trio DS: 308 mA (servo off, head on), 600mA (servo at rest), 1.6A (servos in motion)
GMA 240 Audio	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.54	
GTX327 XPDR	0.9	0.9	1.85	1.85	1.85	1.85	1.85	3.13	Per 327 DS: Full reply: 1.85A@13.8V, max 45W
CO Guardian	0.08	0.08	0.08	0.08	0.08	0.08		0.08	
Zaon MRX	0.11	0.11	0.11	0.11	0.11	0.11		0.11	Per Zaon DS
Garmin 496	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.5	No idea. Will measure this.
Fuel Boost Pump	0	0	4.5	0	0	4.5		6	Per Andair PX375 DS
Annunciators	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	SWAG
Flaps	0	0	0	0	0	0		5	Intermittent, not including in analysis
Elevator Trim	0.49	0.49	0.49	0.49	0.49	0.49		0.8	SWAG, no idea what this actually should be.
Landing Light	0	0	2.1	0	0	2.1		3	Per AeroLEDs Sunspot 36LX DS
Taxi Light	0	2.1	0	0	0	0		3	Per AeroLEDs Sunspot 36LX DS
Wing/Tail Strobes	0	0	2.4	2.4	2.4	2.4		6.75	AeroLEDs NS90 x 2 + Suntain
Wing/Tail Position	0	1.2	1.2	1.2	1.2	1.2		1.2	AeroLEDs NS90 x 2 + Suntain
Panel Lights	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	LED Strips x4 (SWAG)
Pitot Heat	0	0	0	0	7	0		15	AN5812 style Tube
Hobbs	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Byonics MT-RTG (APRS)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	2	10W TX, 2A@0.33s pulse, 90s PRI, 75 mA sleep
ADS-B Transceiver	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	Navworx ADSB600-B, as placeholder for future
Accessory Receptacle								10	Lighter Socket
Totals	13.77	17.07	24.92	19.61	26.61	24.92	10.68	79.7	