



SureFly Ignition Modules

SIM4P, SIM4N, SIM6L & SIM6C

APPLICATION GUIDE

Document No. SF2010, Revision M

Revision History

Revision:	Date:	Description:	Approved By:
IR	07/18/2019	Initial release.	RVC
A	08/27/2019	Fixed PA-12 & PA-24 eligibility.	RVC
B	08/29/2019	Updated variable timing availability for AML amendment dated 08/27/2019.	RVC
C	12/10/2019	Fixed 172K, SR20, PA24-260 & PA28-235 eligibility.	RVC
D	02/05/2020	Added turbocharged aircraft	RVC
E	02/20/2020	Added Pre-Installation checklist	JDH
F	03/27/2020	Removed pending status from SR20 and DA20-C1	RVC
G	04/21/2020	Added Multiengine Turbocharged Models	RVC
H	07/22/2020	Updated variable timing availability for 300HP aircraft, AML amendment dated 07/07/2020.	RVC
J	10/14/2020	Added multiengine normally aspirated models	RVC
K	07/19/2021	Included Note 1 to Beechcraft A23 & A23A	JDH
L	01/11/2023	Added various aircraft	RVC
M	06/01/2023	Added Notes 6 & 7	RVC
N	01/22/2024	Clarified R172,172 SIM application	JCN

**THIS DOCUMENT IS A QUICK REFERENCE APPLICATION GUIDE ONLY.
 THIS GUIDE DOES NOT AUTHORIZE INSTALLATION. PLEASE SEE SUREFLY'S
 FAA APPROVED AML STC'S FOR AUTHORIZATION.
 MANY AIRCRAFT NOT LISTED IN THIS GUIDE ARE PENDING FAA APPROVAL.
 PLEASE CALL SUREFLY @ 817-373-5161 WITH APPLICATION QUESTIONS.**

IMPORTANT!

MUST Read Prior to Installation



SUREFLY
ELECTRONIC IGNITION

If any of the following items apply to your installation, please call SureFly at 817-373-5161 before proceeding with the purchase or installation of a SureFly Ignition Module:

- 1) Your aircraft tachometer is one of the following:
 - Horizon,
 - Electronics International,
 - EFIS or Engine Monitor that requires magneto P lead inputs,
 - EFIS or Engine Monitor that requires a 0-5 volt square wave input,
- 2) Your aircraft has an existing electronic ignition,
- 3) Your aircraft has one of the following STC's:
 - Western Skyways Turbo STC,
 - Auto Fuel STC.

SureFly strongly recommends that you **replace the ignition harness** with a new “Slick” style harness. A large number of existing ignition harnesses have been discovered to be deficient even after passing a high-tension lead test. SureFly will not warrant a SIM for a rough running engine unless the harness and spark plugs have been replaced.

A slight engine stumble during mag-check is expected and *normal*. This condition is caused by a magneto switch that grounds both ignitions during the transition between left and right. A startup delay is designed into the SureFly to determine proper rotation. In many cases this condition can be masked by changing the cadence in which the switch is cycled.

NEVER perform a high voltage (high tension) lead test on an ignition harness while it is connected to a SIM.

Warranty Terms

By proceeding with installation of a SIM, you agree to the following terms of warranty:

- ▶ SureFly Partners, Ltd. (“SureFly”) warrants SureFly Ignition Modules (“SIM”) to be free from defects in materials and workmanship for a period of two years from the date of installation.
- ▶ Any customer suspecting a SIM to be defective must first contact SureFly for troubleshooting assistance.
- ▶ If SureFly determines the Ignition Module may be faulty, the customer will be provided a Return Authorization (RA) and return instructions.
- ▶ Warranty service is only available for SIMs returned to the factory per the instructions herein.
- ▶ SureFly warranty covers only rebuild or replacement of the SIM for reasons SureFly deems to be warrantable at its sole discretion.
- ▶ This warranty does not cover labor, inconvenience, transportation or loss of business due to any SureFly product failure.
- ▶ The SIM must be shipped to the SureFly factory at the customer’s cost for warranty evaluation.
- ▶ SureFly makes no warranty as to suitability of its products for the intended application.
- ▶ SureFly does not reimburse purchases of replacement products made from a retailer or distributor.

REFER TO THE NOTES COLUMN FOR YOUR PARTICULAR AIRCRAFT TO DETERMINE SUITABILITY.

Make	Model	SIM	Notes
Aeronca AeroSedan, LLC	15AC, S15AC	Pending	1, 3, 4
Aerostar	PA-60-600	SIM6L	
	PA-60-601, PA-60-601P, PA-60-602P, PA-60-700P	SIM6L	4
Airvan GA 8 Airvan (Pty) Ltd	GA8, GA8-TC320	SIM6L	4
American Champion	7ECA, 7GCAA, 7GCBC, 7KCAB, 7EC, S7EC, 7FC, 7GC, 7HC, 7GCA, 7JC, 7GCB, 7KC, 7GCBA, 7AC, 7BCM, 7CCM, 7DC, S7DC, S7CCM	SIM4P -or- SIM4N	2, 3, 6
	8KCAB, 8GCBC	SIM4P -or- SIM4N	6
Beechcraft	19A, B19, M19A, 23 w/ Lyc. O-320, A23-19, A23-24, B23, C23, A24, A24R, B24R, C24R	SIM4P -or- SIM4N	1
	A23, A23A w/ Cont. IO-346	Pending	
	35-C33A, E33A, E33C, F33A, F33C, S35 Non-turbo, V35 Non-turbo, V35A Non-turbo, V35B Non-turbo, 36, A36, G36	SIM6C	7
	S35 Turbo, V35 Turbo, V35A Turbo, V35B Turbo	SIM6C	4
	E33, F33, G33, H35, J35, K35, M35, N35, P35, 35-33, 35-A33, 35-B33, 35-C33	SIM6C	
	35, A35, B35, C35, D35, E35, F35, G35, 35R	Pending	1, 3, 4
	A36TC, B36TC	SIM6C	4, 7
	A45 (T-34A, B-45), D45 (T-34B)	SIM6C Military Engines N/A	4
	D55, D55A, E55, E55A	SIM6C	
	56TC, A56TC	SIM6L	4
	58, 58A, G58	SIM6C	7
	58P, 58PA, 58TC, 58TCA	SIM6C	4
	60, A60, B60	SIM6L	4
	65 (L-23F), 65-80, 65-A80, 65-A80-8800, 65-B80, 65-88, A65, A65-8200, 70	SIM6L	4
	77 (Skipper)	SIM4P -or- SIM4N	4
	95, B95, B95A, E95	SIM4P -or- SIM4N	
	D95A, 95-55, 95-A55, 95-B55, 95-B55A, 95-B55B (Military T-42A), 95-C55, 95-C55A	SIM6C	
Bellanca Alexandria Aircraft	14-19, 14-19-2, 14-19-3, 14-19-3A	SIM6C	3, O-435 N/A
	17-30, 17-30A	SIM6C	
	17-31, 17-31A	SIM6L	
	17-31TC, 17-31ATC	SIM6L	4

Britten-Norman (B-N Group Ltd.)	BN-2, BN-2A, BN-2A-2, BN-2A-3, BN-2A-6, BN-2A-8, BN-2A-9, BN-2A-20, BN-2A-21, BN-2A-26, BN-2A-27, BN-2B-20, BN-2B-21, BN-2B-26, BN-2B-27	SIM6L GO Engines N/A	4
Cessna	120, 140, 140A	SIM4P -or- SIM4N	
	150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, A150K, 150L, A150L, 150M, A150M, 152, A152	SIM4P -or- SIM4N	
	170, 170A, 170B	Pending	1, 3
	172I, 172K, 172L, 172M, 172P, 172Q, 172R, 172S	SIM4P -or- SIM4N	6
	172, 172A, 172B, 172C, 172D, 172E, 172F (USAF T-41A), 172G, 172H (USAF T-41A)	Pending	1, 3
	Cessna F172D, Cessna F172E, Cessna F172F, Cessna F172G, Cessna F172H, Cessna F172K, Cessna F172L, Cessna F172M, Cessna F172N, Cessna F172P, Cessna FP172D	SIM4P -or- SIM4N	4
	Cessna FR172K, Cessna FR172E, Cessna FR172F, Cessna FR172G, Cessna FR172H, Cessna FR172J	SIM4P -or- SIM4N	4
	175, 175A, 175B, 175C, P172D,	Pending	1, 3
	R172E (USAF T-41B) (USAF T-41C or D), R172F (USAF T-41D), R172G (USAF T-41C or D), R172H (USAF T-41D), R172J, R172K	SIM6C	1, 3
	172RG	SIM4P -or- SIM4N	
	177, 177A, 177B	SIM4P -or- SIM4N	5
	177RG	SIM4P -or- SIM4N	5
	Cessna F177RG	SIM4P -or- SIM4N	5
	180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K	SIM6C	
	182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R,	SIM6C	
	182S, 182T	SIM6L	6
	T182T	SIM6L	4, 6
	Cessna F182P, Cessna F182Q	SIM6C	
	185, 185A, 185B, 185C, 185D, 185E	SIM6C	
	A185E, A185F	SIM6C	
	188, A188, 188A, A188A, 188B, A188B	SIM6C	
	T188C	SIM6C	4
	206, P206, P206A, P206B, P206C, P206D, P206E, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G	SIM6C	
	206H	SIM6L	6
	TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G	SIM6C	4
	TP206A, TP206B, TP206C, TP206D, TP206E	SIM6C	4
	T206H	SIM6L	4, 6
207, 207A	SIM6C		

	T207, T207A	SIM6C	4
	210, 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M, 210N, 210R, 210-5 (205), 210-5A (205A)	SIM6C	
	T210F, T210G, T210H, T210J, T210K, T210L, T210M, T210N, T210R	SIM6C	4
	P210N, P210R	SIM6C	4
	310, 310A (USAF U-3A), 310B, 310C, 310D, 310E (USAF U-3B), 310F, 310G, 310H, E310H, 310I, 310J,, 310J-1, E310J, 310K, 310L, 310N, 310P, 310Q, 310R	SIM6C	
	T310P, T310Q, T310R	SIM6C	4
	320, 320-1, 320A, 320B, 320C, 320D, 320E, 320F, 340, 340A, 335	SIM6C	4
	336	SIM6C	
	337, 337A (USAF 02B), 337B, 337C, 337D, 337E, 337F, M337B (USAF 02A), 337G, 337H	SIM6C	
	T337B, T337C, T337D, T337E, T337F, T337G, P337H, T337H, T337H-SP	SIM6C	4
	401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B. 421C	SIM6C	4
Cessna TTX, Lancair, Columbia	LC40-550FG, LC42-550FG	SIM6C	7
	LC41-550FG, T240	SIM6C	4, 7
Cirrus Design Corporation	SR20 with Continental IO-360	SIM6C	7
	SR20 with Lycoming IO-390	SIM4P -or- SIM4N	6
	SR22	SIM6C	7
	SR22T	SIM6C	4, 7
Commander Aircraft Corporation	112, 112B	SIM4P -or- SIM4N	
	114B	SIM6L	
	114TC	SIM6L	4
Twin Commander	500, 500B, 500U, 500S	SIM6L	
	500A	SIM6L	
	680, 680E, 680F, 680FL, 680FL(P), 720	PENDING	1, 4
	685	SIM6C	4
Diamond Aircraft Industries, Inc.	DA20-C1	SIM4P	7
	DA 40, DA 40 F	SIM4P -or- SIM4N SIM4N if engine has Shower Of Sparks	6
Ercoupe Univair Aircraft Corporation	415-C, 415-CD	SIM4P -or- SIM4N	4
	415-D, A-2, A2-A, E, F-1A, F-1, G, M10	SIM4P -or- SIM4N	4
Extra	EA 300, EA 300/L, EA 300/S, EA 300/200, EA 300/LC	SIM6L	6
Falco (Aeromere)	Falco F.8.L	SIM4P -or- SIM4N	4

Found Pacific Aerospace Ltd.	FBA-2C, FBA-2C1, FBA-2C2, FBA-2C3, FBA-2C4	SIM6L	4
Great Lakes Waco Classic Aircraft Corporation	2T-1A-1, 2T-1A-2	SIM4P -or- SIM4N	
GROB Aircraft AG	G120A	SIM6L	4, 6
	G115, G115A, G115B, G115C, G115C2, G115D, G115D2, G115EG	SIM4P -or- SIM4N	4, 6
Grumman True Flight Holdings LLC	AA-1, AA-1A, AA-1B, AA-1C	SIM4P -or- SIM4N	
	AA-5, AA-5A	SIM4P -or- SIM4N	
	AA-5B, AG-5B	SIM4P -or- SIM4N	
Grumman Cougar Aircraft Corporation	GA-7	SIM4P -or- SIM4N	
Husky Aviat Aircraft, Inc.	A-1, A-1A, A-1B, A-1C-180, A-1C-200	SIM4P -or- SIM4N	4, 6
Lake Revo, Incorporated	Lake Model 250	SIM6L	
	Colonial C-1, Colonial C-2, Lake LA-4-200, Lake LA-4A, Lake LA-4P, Lake LA-4	SIM4P -or- SIM4N	
Luscombe Good Earthkeeping Organization, Inc.	8, 8A, 8B, 8C, 8D, 8E, 8F, T-8F	SIM4P -or- SIM4N	2, 3, 4
Maule Aerospace Technology, Inc.	M-4, M-4C, M-4S, M-4T, Bee Dee M-4, M-4-180V, M-4-210, M-4-210C, M-4-210S, M-4-210T, M-5-180C, M-6-180, MX-7-160, MX-7-160C, MX-7-180, MX-7-180A, MX-7-180AC, MX-7-180B, MX-7-180C, MXT-7-160, MXT-7-180, MXT-7-180A	SIM4P -or- SIM4N	1, 3, 5, 6
	M-5-210C	SIM6C	CM IO-360, 7
	M-5-235C, M-6-235, M-7-235, M-7-235A, M-7-235B, M-7-235C, M-7-260, M-7-260C, MT-7-235, MT-7-260, MX-7-235, M-8-235, M-9-235	SIM6L	3, 5, 6
Meyers Interceptor Aircraft, Inc.	200, 200A, 200B, 200C, 200D	SIM6C	4
MICCO Aircraft Company, Inc	MAC-145	Pending	1, 3, 4
	MAC-145A	SIM4P -or- SIM4N	4
	MAC-145B	SIM6L	4
Mooney International Corporation	M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G, M20J	SIM4P -or- SIM4N SIM4N if engine has Shower Of Sparks	5, J with IO-360–A3B6 engine only
	M20R, M20S, M20U	SIM6C	7
	M20K, M20TN, M20V	SIM6C	4, 7

	M20M	SIM6L	4
Piper Aircraft, Inc.	PA-12	SIM4P -or- SIM4N	
	PA-16, PA-16S	SIM4P -or- SIM4N	
	PA-18, PA-18S, PA-18 "105" (Special), PA-18S "105" (Special), PA-18A, PA-18 "125" (Army L-21A), PA-18S "125", PA-18AS "125", PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135", PA-18AS "135", PA-18 "150", PA-18A "150", PA-18S "150", PA-18AS "150", PA-19 (Army L-18C), PA-19S	SIM4P -or- SIM4N	
	PA-20, PA-20S, PA-20 "115", PA-20S "115", PA-20 "135", PA-20S "135"	SIM4P -or- SIM4N	
	PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160	SIM4P -or- SIM4N	
	PA-23, PA-23-160	SIM4P -or- SIM4N	
	PA-23-235, PA-23-250, PA-23-250 (Navy OU-1), PA-E23-250	SIM6L	
	PA-24	SIM4P -or- SIM4N	
	PA-24-250, PA-24-260	SIM6L	
	PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28S-160, PA-28R-180, PA-28S-180, PA-28-181, PA-28R-200, PA-28R-201, PA-28RT-201	SIM4P -or- SIM4N	6
	PA-28-235	SIM6L	6
	PA-28-201T, PA-28RT-201T, PA-28R-201T	SIM6C	4
	PA-30, PA-39	SIM4P -or- SIM4N	
	PA-31-300	SIM6L	
	PA-31, PA-31-350	SIM6L	4, 5
	PA-32-260, PA-32-300, PA-32S-300, PA-32R-301(HP), PA-32-301, PA-32-301FT	SIM6L	
	PA-32-301FT, PA-32-301XTC, PA32R-301T (TC)	SIM6L	4, 5
	PA-34-200	SIM4P -or- SIM4N	
	PA-34-200T, PA-34-220T	SIM6C	4
	PA-38-112	SIM4P -or- SIM4N	4
PA-44-180	SIM4P -or- SIM4N	5, 6	
PA-46-310P	SIM6C	4, 7	
PA-46-350P, PA-46R-350T	SIM6L	4, 6	
Pitts Aviat Aircraft, Inc.	S-1S, S-1T, S-2, S-2A,	SIM4P -or- SIM4N	4
	S-2S, S-2B, S-2C	SIM6L	
Siai Marchetti (Aermacchi S.p.A)	F.260, F.260B, F.260C, F.260D, F.260E, F.260F	SIM6L	4, 6

Socata (Daher Aerospace)	TB 9, TB 10, TB 200	SIM4P -or- SIM4N	3,5,6
SOCATA Morane Saulnier Rallye	Rallye 235E, Rallye 235C	SIM6L	4
	Rallye 100S, Rallye 150ST, Rallye 150T, MS 880B, MS 885, MS 894A, MS 893A, MS 892A-150, MS 892E-150, MS 893E	SIM4P -or- SIM4N	1, 3, 4
Swift	GC-1A, GC-1B	Pending	1, 3, 4
Volaire (Dynac Aerospace) (Aero Commander)	10, 10A, 100, 100A, 100-180	SIM4P -or- SIM4N	4
Vulcanair S.p.A 95 (Partenavia)	P.68, P.68A, P.68B, P.68C, P.68 "OBSERVER", P.68 "PBSERVER 2", P.68R	SIM4P -or- SIM4N	6
Wing (Derringer) Emerald Enterprises	D-1	SIM4P -or- SIM4N	

NOTE 1: O-300 series, C-145, E series, GO, IO-346, IO-360-CB engines not available – installation pending.

NOTE 2: C-75, C-85, C-90 with -12 or later accessory cases ok.

NOTE 3: Aircraft with engine upgrades may be approved.

NOTE 4: SIM limited to fixed timing only.

NOTE 5: Bendix single drive dual magneto replacement not available.

***NOTE 6:** SureFly EIS products are **ONLY APPROVED** for use on aircraft (originally approved with a Lycoming engine model) that are greater than twelve (12) years old (i.e., in the year 2023, aircraft models dated 2011 or prior). Refer to the current revision of Lycoming Engines Service Instruction No. 1443 for a complete listing of approved Lycoming EIS P/N for corresponding Lycoming Engine Models.

***NOTE 7:** SureFly EIS products are **ONLY APPROVED** for use on aircraft (originally approved with a Continental engine model) that are greater than six (6) years old (i.e., in the year 2023, aircraft models dated 2016 or prior).

*SureFly is contractually obligated by Lycoming Engines to include Notes 6 and 7 in the SureFly Application Guide.

- **"ONLY APPROVED" does not** refer to FAA approval. **If your aircraft is listed in this Application Guide, installation is approved by the FAA.**
- SureFly is not permitted by Lycoming Engines to directly sell a SureFly SIM to the owner of a Lycoming powered airplane built after 2013 or a Continental powered airplane built after 2019. NOTE 6 and 7 do not apply to Experimental aircraft.

*Unless noted otherwise, 4-cylinder aircraft replacing a Shower of Sparks magneto, use **SIM4N**.