



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 |

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 |

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| 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 SIM4P -or- SIM4N | 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, R172E (USAF T-41B) (USAF T-41C or D), R172F (USAF T-41D), R172G (USAF T-41C or D), R172H (USAF T-41D), R172J, 172RG, R172K | SIM4P -or- SIM4N | 1, 3, 5 |
| | 177, 177A, 177B | SIM6C SIM4P -or- SIM4N | |
| | 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, 182S, 182T | SIM6C | |
| | T182T | SIM6L | 6 |
| | Cessna F182P, Cessna F182Q | SIM6L | 4, 6 |
| | 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 | SIM6C | 6 |
| | TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G | SIM6L | 4 |
| | TP206A, TP206B, TP206C, TP206D, TP206E | SIM6C | 4 |
| | T206H | SIM6C | 4, 6 |
| | 207, 207A | SIM6L | |
| | T207, T207A | SIM6C | 4 |

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| | 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 |

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| 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 | |

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| | 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 | 5 |
| | 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 |
| Piper Lavia Argentina S.A. | PA-25, PA-25-235, PA-25-260 | SIM6L | 4 |
| Pitts Aviat Aircraft, Inc. | S-1S, S-1T, S-2, S-2A, S-2S, S-2B, S-2C | SIM4P -or- SIM4N SIM6L | 4 |
| Siai Marchetti (Aermacchi S.p.A) | F.260, F.260B, F.260C, F.260D, F.260E, F.260F | SIM6L | 4, 6 |

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| Socata (Daher Aerospace) | TB 9, TB 10, TB 200 | SIM4P -or- SIM4N | 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 |
| Voltaire (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 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).*

*NOTE 6 and 7: Only apply to Airframes newer than (12) years old. Call SureFly for details.

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