350 Howard Clemmons Rd.
Granbury, TX 76048

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FAA-APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT

FOR

SureFly Ignition Module (SIM) Electronic Ignition System

_____
Make and Model Airplane

Reg. No._____

Ser. No._____

This supplement must be attached to the FAA-approved Airplane Flight Manual dated _____ when an engine modified per STC SE04349CH is installed into an airframe in accordance with STC SA04378CH.

The information on this document supplements or supersedes the basic manual only in those areas listed. For limitations, procedures, performance and loading information not contained in this supplement, consult the basic Airplane Flight Manual.

FAA Approved EDWARD M WARD Digitally signed by EDWARD M WARD Date: 2023.06.27 11:28:04 -05'00' Michael Ward, Flight Test Engineer, AIR-712 *for*

Manager, Flight Test & Human Factors Branch, AIR-710
Federal Aviation Administration

Date JUN 27 2023

Log of Revisions

Revision	Pages Affected	Description	FAA Approval
A	All	Initial Release	William Jaconetti, FTE, AIR-713 FEB 11, 2019
B	2	Updated Limitations.	Addison Tower, FTP, AIR-713 AUG 27, 2019
C	All	Updated to add Dual SureFly installation.	Michael Ward, FTE, AIR-712 JUN 27, 2023

FAA Approved JUN 27, 2023

SureFly Partners, LTD.
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Technical Support:
817-373-5161
M–F, 8:30a–4:30p, CDT

SureFly Installation Mode, per engine:
(Installing mechanic to identify configured mode below)

☐	Single SureFly ignition installed in fixed timing mode.
☐	Single SureFly ignition installed in variable timing mode.

☐	Dual SureFly ignitions installed in fixed timing mode.
☐	Dual SureFly ignitions installed in variable timing mode.

1. GENERAL:

   NO CHANGE

2. LIMITATIONS:

   1) Do not operate aircraft with low battery voltage (<8.5VDC) or an inoperative charging system.

   2) If dual SureFly ignitions are installed, do not operate aircraft with an inoperative or low charge state backup battery system.

   3) If SureFly Ignition Module (SIM) is configured for variable timing mode:

      3.1) Use 100 LL or equivalent approved aircraft fuel only. Auto fuel is not approved for use in variable timing mode.

      3.2) Do not operate aircraft with inoperative Cylinder Head Temperature (CHT) monitoring system.

3. EMERGENCY PROCEDURES:

   1) For Single SureFly installation:

      1.1) If the primary aircraft battery charging system becomes inoperative, load shed all non-essential equipment and land at nearest suitable airport.

      1.2) If the primary aircraft electrical system drops below 8.5VDC or the SIM malfunctions, the loss of the SureFly system may be characterized as a failed/malfunctioning Magneto.

      1.3) In the event of an actual or suspected SIM failure, follow procedures in the AFM/POH for a Magneto malfunction.

   2) For Dual SureFly installation:

      2.1) If the primary aircraft battery charging system becomes inoperative, load shed all non-essential equipment and land at nearest suitable airport.

      2.2) If the backup battery system becomes inoperative or indicates a low charge state, land at nearest suitable airport.

      2.3) In the event of an actual or suspected SIM failure, load shed all non-essential equipment and land at nearest suitable airport.

4. NORMAL PROCEDURES:

1) For Dual SureFly installations:

1.1) Perform preflight operational check of the backup battery system (per manufacturer's AFMS) before each flight to verify operation and to ensure sufficient battery capacity is available for continued safe flight and landing for a minimum of 60 minutes after loss of primary electrical system.

2) For SureFly Ignition Module (SIM) configured for variable timing mode:

2.1) When configured for variable timing mode, the engine can experience slightly elevated cylinder head temperatures if operated rich of peak. When leaning, exercise increased caution and always follow the baseline AFM/POH and engine manufacturer leaning recommendations as well as all published oil temperature and CHT limitations.

5. PERFORMANCE:

NO CHANGE

6. WEIGHT & BALANCE:

NO CHANGE

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7. SYSTEM DESCRIPTION (NOT FAA APPROVED):

The SureFly Ignition Module (SIM) is an electronic ignition system that replaces one or both of the existing magnetos on the airplane's engine(s).

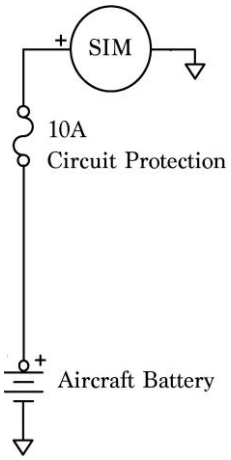
The SIM operates in either fixed or variable timing mode depending on installed configuration.

The SIM is configured at installation and is not pilot controlled.

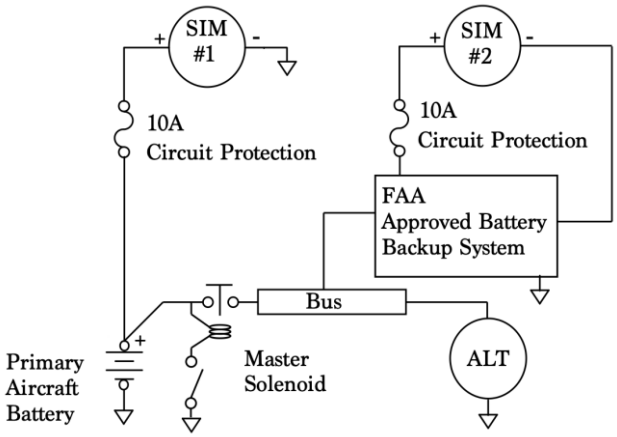
The SIM operates and is controlled like the magneto it replaces.

The SIM requires a constant, external supply of 8.5 – 30VDC power to operate.

System wiring diagram for Single SIM (per engine):



System wiring diagram for Dual SIM's (per engine)



Each SIM consumes 1.5 amps of power and will deplete the main battery in the event of a generator or alternator failure even with battery/master switch OFF.

Turning the Ignition switch OFF is the only means to remove a SIM electrical load from the battery.

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