



FAA Part 141 Implementation Guide (Version 1.1)

This guide exists to aid you in obtaining FAA 14 CFR Part 141 certification using Flight Schedule Pro as an electronic recordkeeping system, but more so, as the primary coordination and operations interface for your flight school. The FAA has issued detailed guidance on the recordkeeping requirements for Part 141 schools, including the use of digital signatures, in the following resources. We encourage you to become thoroughly familiar with all of these references as they are the final authority on FAA approval and acceptance of your Air Agency application and associated materials.

References:

- [Advisory Circular 141-1B](#)
- [Advisory Circular 120-78A](#)
- [14 CFR Part 141, Subpart F](#)
- [FAA Order 8900.1](#)

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SECTION 1: GETTING STARTED

FAA Approval and Acceptance

It is important to understand the difference between FAA “approval” and “acceptance” in the context of operating under an FAA Air Agency Certificate, like a Part 141 flight school does. Your assigned FAA Principal Operations Inspector (POI) is required to “approve” your Training Course Outlines (TCOs) for each course of training you want included in your List of Approved Courses. These documents, once approved, will have an FAA stamp on the original copy and will also include your POIs signature and date of approval. It is important to ensure that all required content in 14 CFR Part 141, Subpart C, is included in your TCOs, however, it is equally important to avoid the trap of adding too much content in your TCOs to prevent increased complexity in making substantive process changes as you operate your school in an ever-changing environment into the future.

Your recordkeeping system, while a required demonstration item for Part 141 approval, is not, in and of itself, an “approved” item. It is “accepted” by the FAA. That just means that your POI must review it and ensure that it meets all applicable FAA regulatory requirements. If your current recordkeeping system is specifically outlined and/or described in your current TCOs, then you will need to review that content to determine if a TCO amendment is required. If your TCO does not specifically detail your method of compliance with 14 CFR Part 141.101, then you can begin the process of implementing Flight Schedule Pro as your Part 141 recordkeeping system with a simple letter to your POI notifying him/her of the intended change, as described below.

Is a TCO Amendment Required?

At the beginning of the process, your first question is, “is a TCO amendment required?” For most schools, the answer to this question is “no.” However, if you are in the position of needing to complete a TCO amendment, you should complete the necessary changes and plan to submit your electronic recordkeeping request with the TCO amendment in one package, if your POI will allow that. Doing so will ensure a seamless transition from the previous approval to the newly issued Letter of Authorization (LOA) for electronic recordkeeping.

If you are in the position of needing to amend one or more TCOs to accommodate your recordkeeping process change, we suggest that you simply state that all training records will be kept in accordance with 14 CFR Part 141.101 and that you avoid going into specifics regarding the process or modality of keeping these records in the TCO documents themselves. This level of specificity is not required, as previously stated, and only creates additional hurdles for you should you decide to make additional recordkeeping modifications in the future.

Notifying the FAA of the Intended Change

The Flight Schedule Pro service is fully compliant with all requirements of data tracking, recordkeeping, dispatch, and maintenance services, as required by 14 CFR Part 141. This service can easily be used as a replacement to most paper operational processes in most flight schools. Even though the FAA is becoming more open to the idea of electronic data management, it is still a new concept for some POIs and even for some Flight Standards District Offices (FSDOs) as well. Every school will likely experience different degrees of receptivity to the migration to a purely digital flight school management platform. This is expected, and this guide exists solely to make this process as easy as possible for you, your flight school, and even your POI.

The remainder of this guide will provide you with the information you need to demonstrate compliance with application Part 141 regulations and inspector guidance found in FAA Order 8900.1 and other relevant resources. You will want to pay special attention to Section 5, where we provide an easy visual matrix explaining FSPs regulatory compliance as well as providing a sample letter template that you can use as your Letter of Intent to make this change and begin the process. Below, you can reference a simplified process outline for what to expect as you make the migration to full incorporation of FSP for daily flight school management as an approved FAA Part 141 flight school.

Step 1: Read through this guide and ensure you understand what will be required of you.

- Your POI is likely not an FSP expert. Be prepared to explain the product and its capabilities before your initial discussion with your POI.
- Your POI will use a Job Task Analysis (JTA) guide to review your recordkeeping system, including the use of digital signatures. All JTAs are available to the public in FAA Order 8900.1 ([fsims.faa.gov](https://www.faa.gov/fsims)). It's an open book test! This implementation guide highlights the expectations of the FAA, but you can review the actual process the inspector will follow with you so that you can be totally prepared for all of his/her questions regarding your compliance.
- The more prepared you are for the FAA review of your recordkeeping processes, the easier the process will go.

Step 2: Set up your FSP account to ensure you are compliant and ready to demonstrate same.

- Before formally submitting your recordkeeping change request, be sure that your setup of FSP is complete and ready for review. You don't want to have to delay your review with your POI because you needed more time to set up the product.
- Using the JTA described above, or simply looking through the pertinent sections of 14 CFR Part 141, conduct your own compliance survey before meeting with or demoing your proposed implementation to your POI. Practice makes perfect!

Step 3: Draft and submit your Letter of Intent (LOI) to use electronic recordkeeping to your POI.

- Make use of the LOI template in Section 5 as a starting point for your initial, formal contact with your POI regarding the use of an electronic recordkeeping system.
- Be sure to include a proposed start date for the full integration of your digital recordkeeping system as well as date after which your POI can plan to conduct his/her inspection and review of your proposed implementation. Make sure your proposed start date is at least 30 days in the future.

Step 4: Demonstrate to your POI that you and your school are prepared to use FSP as your primary recordkeeping system.

- Your POI may have initial questions for you regarding your intended use of FSP and electronic recordkeeping in general prior to conducting a formal review of your process on-site. Again, this guide should totally prepare you for the potential questions you may receive.
- Once your POI is ready to review your recordkeeping proposal, he/she will likely conduct an inspection at your school, just like any other amendment or recertification inspection. You will need to be ready to demonstrate your proposed use of FSP at this time by showing your POI all the same compliance features you would demonstrate for any 14 CFR Part 141.101 recordkeeping system, but you will also showcase the specific additional requirements.

Step 5: Receive your Letter of Authorization (LOA) to use electronic recordkeeping and fully implement FSP in your school.

- Once your POI can validate that your proposed implementation of FSP meets the requirements of 14 CFR Part 141, he/she will use you a LOA stipulating that you are authorized to use electronic recordkeeping and digital signatures throughout your organization.
- At each subsequent Part 141 base inspection, you will be expected to demonstrate continued compliance with all regulatory requirements for recordkeeping and all guidance material related to digital signatures.
- Should you wish to make substantive changes to your recordkeeping system after receiving this LOA, you will need to inform your POI by submitting another Letter of Intent explaining your proposed changes, in much the same way that you would have to inform your POI of a change in paper-based record keeping procedures as well.

NOTE: You are not allowed to begin using FSP as your sole source of recordkeeping until your inspector issues a Letter of Authorization (LOA) for this solution. This does not preclude you from using FSP along with an already-accepted recordkeeping system during the application and approval phase.

SECTION 2: OPERATIONS COMPLIANCE

Student and Instructor Document Management

Flight Schedule Pro provides operators a method for securely storing user information, such as copies of pilot certificates, medical certificates, TSA citizenship validation, and much more.

Click Path: People > [Select User] > Documents

A record of endorsements and aircraft checkout records can also be saved on the primary user page. This interface satisfies the recordkeeping requirements for chief, assistant chief, and check instructor approval and recurrent proficiency checks per 14 CFR Part 141.35, 141.36, and 141.37.

Maintenance Discrepancy Reporting and Aircraft Inspection Tracking

Flight Schedule Pro allows fleet operators to track maintenance discrepancies after each flight event. FSP can automatically ground the aircraft pending review and release from an authorized system administrator. This is an optional feature for schools, so you can decide exactly how you want this functionality implemented. This prohibits the possibility of continuing to operate a potentially unairworthy aircraft until the discrepancy can be addressed per the scope of the applicable regulations for the maintenance program in use at the flight school.

Schools can also create maintenance reminders for aircraft based on required inspections. Alerts will be generated to notify users scheduling a training event if an aircraft is near or has reached a required maintenance interval.

Dispatch and Recovery of Training Flights

Flight Schedule Pro allows training facilities to access their fleet, instructor and student schedules from anywhere there's an internet connection. Flight Schedule Pro allows training facilities to verify pilot currency and aircraft maintenance status prior to dispatch. Aircraft Hobbs/Tach times are recorded and entered into the system after each flight event. FSP will then automatically update aircraft hours in the system. Reporting can help find incorrect aircraft times to ensure accurate aircraft times and maintenance statuses.

SECTION 3: TRAINING RECORDS COMPLIANCE

Formal Evaluation Criteria

The following criteria for reviewing the recordkeeping system of a Part 141 flight school are found in General Aviation Job Task Analysis (GA JTA) 3.4.23, sourced from FAA Order 8900.1, and are subject to continual revision. Reference the specific job aid cited above to ensure you are compliant with the governing guidance for training records.

The method of compliance employed by Flight Schedule Pro is included below each requirement listed as a defined click path to access the information from within the system and/or a description of the system's compliance

1. Determine that the system allows adequate credit for previous training (14 CFR § 141.67)
 - People > Student > Course Enrollments > Course Overview > Edit Enrollment > Previous Training
 - The chief instructor will use this interface to input the credited flight time transferred into the school's approved training course. In addition to crediting flight hours, the chief instructor can also issue credit for equivalent lesson completion. Doing so will mark these lessons as complete in the student's digital training record.
2. Ensure students complete all course requirements prior to graduation (14 CFR § 141.77)
 - People > Student > Course Enrollments > Course Overview > Course Progress
 - Students, instructors, and chief instructors can easily determine if course requirements and minimum completion time values are met.
3. Chief instructor will ensure training standards are acceptable to the Administrator and review training records prior to signing student graduation certificate (14 CFR § 141.85)
 - People > Student > Course Enrollments > Course Overview > Course Progress
 - Once all required syllabus lessons are complete, the student's instructor will recommend the student for course graduation. This process will trigger the first audit at the instructor level to ensure the student is qualified to graduate from the course.
 - The chief instructor can then easily determine if course requirements and minimum completion time values are met prior to conducting the End-of-Course check and before issuing the graduation certificate.
 - A final audit against the approved course requirements and minimum completion times is conducted when the chief instructor approves the student for graduation.

4. Verify school is maintaining a monthly listing of all students enrolled in approved courses and that students get copy of the training syllabus and school safety procedures at the time of enrollment (14 CFR § 141.93)
 - Reports > Enrollment Totals
 - The school's POI can access this information through a dedicated login from an internet-enabled device. Alternatively, the flight school can run this report with any desired date range at any time for POI review.
 - Students > View > Documents Tab
 - From this dialog box, it can be verified that the student did access and formally "receive" the required enrollment documents (e.g., Training Syllabus, Enrollment Certificate, Safety Practice and Procedures Document).

5. Verify school's graduation certificate meets regulatory requirements (14 CFR § 141.95)
 - Settings > Student Training Tab > Courses > View (Course) > Edit (Graduation Settings) > Preview (Graduation Certificate)
 - Any student who meets the approved graduation requirements and at least the course time minimums will be issued a graduation certificate.
 - The graduation certificate generated by FSP contains the following information:
 - The name of the school and the certificate number of the school;
 - The name of the graduate to whom it was issued;
 - The course of training for which it was issued;
 - The date of graduation;
 - A statement that the student has satisfactorily completed each required stage of the approved course of training including the tests for those stages;
 - A certification of the information contained on the graduation certificate by the chief instructor for that course of training; and
 - A statement showing the cross-country training that the student received in the course of training.

6. Inspect training record forms for compliance with regulatory requirements (14 CFR § 141.101; Order 8900.1, Vol. 2, Chap. 9, Sec. 1)
 - People > Student > Course Enrollments > Course Overview > Course Progress
 - Each student's digital training record contains the following information:
 - The date the student was enrolled in the approved course;
 - A chronological log of the student's course attendance, subjects, and flight operations covered in the student's training, and the names and grades of any tests taken by the student; and
 - The date the student graduated, terminated training, or transferred to another school.
 - Student records are retained for a minimum of one year following the date when the student graduated, terminated training, or transferred to another school.

- Students may download a complete copy of their training record following their graduation, termination, or transfer to another school. The student can access this download via their FSP login. The download is made available in the Adobe PDF file format. Students may then use a free PDF reader application to view or print the electronic file. This file will be available to the student for a minimum of one year following the date when the student graduated, terminated training, or transferred to another school.
- People > Student > Course Enrollments > Course Overview > Edit Enrollment
 - When a student graduates, terminates training, or transfers to another school, the student's record can and should be certified to that effect by the chief instructor.

Instructor Grading and Tracking of Approved TCO Lesson Content

Lesson grading criteria are established when the course of training is created in FSP. School administrators may input their approved training course material into the FSP system and stipulate their desired grading criteria for each lesson task and overall lesson outcome. FSP provides maximum flexibility for school administrators in this regard to ensure that each school can craft a unique learning experience for their customers and staff.

Every lesson tracked in the student training record interface require the digital signature of both the instructor and the student. Students do not have access to the lesson input features of FSP, thus they cannot create erroneous training events, and likewise, instructors are not able to unilaterally enter training record content without student review and acceptance, as indicated by a unique digital signature.

NOTE: The process of setting up, entering, and validating electronic signatures is covered in Section 4.

SECTION 4: USING DIGITAL SIGNATURES

FAA Requirements

According to FAA Advisory Circular 120-78A, a digital signature is “*cryptographically generated data that identifies a document’s signatory, with date and time. The result of which, when properly implemented, provides the services of original authentication, data integrity, and signer non-repudiation.*”

Simply put, these are the core requirements of digital signatures:

- Generated through some means of software (e.g., signed with a digital pen or stylus or entered automatically with a password, personal identification number, or biometric information).
- Properly and clearly identifies who is signing the document as well as the date and time of the signing.
- Reliably authentic to the point that the signature cannot be easily faked and that the signer cannot reasonably claim to have not provided the signature.

Digital signature systems as well as digital recordkeeping systems require FAA review and oversight because they present a unique challenge to authenticity that doesn’t really come up when dealing with paper and physical signatures. The FAA has a duty to the public to ensure that compliance records are genuine as part of their charge to keep the skies safe. While the complexity level of FAA review is extreme at the Part 121/135 level of operation, the threat, and thus the complexity level of the review, is lessened in the Part 141 operational climate.

NOTE: The FAA uses the term “digital signature” and “electronic signature” interchangeably in most instances. From an operational perspective, these terms are synonymous.

Flight Schedule Pro Compliance

Signature Type

Flight Schedule Pro uses secret electronic codes referred to as Personal Identification Numbers (PIN) as its electronic signature type. Flight Schedule Pro users create their own 4-digit PIN that is then securely stored on the FSP server in an encrypted format.

Signature Control

Users are required to create their own PINs. Users must first authenticate to the system before creating or editing their PINs to establish and confirm their identity. No one, including system administrators, is allowed to view or modify a user’s PIN, except the user themselves. This puts the user in complete and undeniable control of their PIN. PINs are not displayed in the system to prevent other users from viewing the PIN.

Signature Uniqueness

Users are required to create their own PINs which inherently makes them unique. Users can reset their PINs at any time.

Signature Notification

Each time a user signs a document they are prompted with the following text notifying them they are entering their PIN as their signature.

Example: "I [name of signer], hereby certify that the information above is correct by entering my four-digit PIN number as my signature below:"

Intent to Sign

The system labels signature blocks with "Student Sign" and "Instructor Sign" to establish intention to sign. The signature block clearly states that the user is certifying the record is correct by entering their PIN as their signature.

Signature Association

It is obvious to the user that that they are associating their signature to a single training record or data entry. The only information displayed to the user is data related to the training record they are certifying is correct by entering their digital signature.

Permanent, Unalterable, and Correctable

Records cannot be modified and saved in a completed state unless the original signers re-enter their digital signatures. This ensures records are certified and signed each time a record is changed.

Archives, Backups, and Data Recovery

Flight Schedule Pro is responsible for storing customer data, ensuring data durability, and providing continuous access to that data. Although Flight Schedule Pro stores the data, the data is owned by the certificate holder.

Flight Schedule Pro automatically performs a combination of full database backups daily, and transaction log backups every 5 minutes to protect clients from data loss. Each day, FSP creates a mirror image of core data and transfers it to an offsite location where it is safe-housed 125 feet underground. The system's continuous data protection maintains an exact copy of data that is saved in the same underground facility used by the United States National Archives and Records Administration. Flight Schedule Pro monitors this process to ensure no disruptions take place.

SECTION 5: RESOURCES

Each of the resources in this section are included to aid you in seeking FAA acceptance of the electronic recordkeeping and digital signature capabilities of Flight Schedule Pro.

Detailed Electronic Record System & Digital Signature Approval Guide

In addition to this implementation guide, another resource exists to shed light on the more advanced requirements of electronic records and digital signatures. This guide contains technical information regarding the software capabilities of Flight Schedule Pro. This information is intended to satisfy potential requests for information per the requirements of AC 120-78A.

It is possible that this additional information will not be necessary to satisfy the request of your POI, however, if more technical information is required, this guide completely details all the content required by AC 120-78A dealing with electronic recordkeeping and digital signatures. Please contact Flight Schedule Pro to access this supplemental guide.

Sample Letter of Intent—Electronic Recordkeeping and Signatures

August 1, 2018

Mr. Robert Taylor
Manager, Flight Standards District Office
Federal Aviation Administration
Portland International Jetport
Portland, Maine 04897

Subject: Use of Electronic Systems—Signatures/Recordkeeping/Manuals

Dear Mr. Taylor:

This letter is to inform you that Sebago Lake Aviation intends to use an electronic system for signatures and recordkeeping, training course outlines (TCO), syllabi, and other documents. We intend to use Flight Schedule Pro, an online, cloud-based solution for scheduling and dispatching aircraft as well as maintaining the student records required by 14 CFR Part 141.101. Electronic signatures will be used on all student records, including course graduation certificates.

This system has been established using the guidelines outlined in Federal Aviation Administration (FAA) Advisory Circular (AC) 120-78A: Electronic Signatures, Electronic Recordkeeping, and Electronic Manuals; and Federal Aviation Administration (FAA) Advisory Circular (AC) 141-1B: Part 141 Pilot Schools, Application, Certification, and Compliance.

This organization intends to implement the system on August 30, 2018.

Company facilities, equipment, and personnel are available for your review and/or inspection at 15 Airport Road, Portland, Maine 04897 on August 15, 2018. Please contact Travis E. Lee, at 207-555-6310, to arrange a visit to review the system and to discuss any FAA concerns.

Thank you in advance for your assistance in this matter.

Sincerely,

Travis E. Lee
Owner
Sebago Lake Aviation
Portland, Maine 04897

	Flight Schedule Pro Part 141 Compliance Matrix	
	141.93: Enrollment	
	141.93 Requirements	Location
1	Enrollment Certificate with the name of the course enrolled in and date of enrollment	People > View Student > Course Enrollments > Course Overview > Documents Tab
2	Student's Training Syllabus	People > View Student > Course Enrollments > Course Overview > Documents Tab
3	Safety Practice and Procedures	People > View Student > Course Enrollments > Course Overview > Documents Tab
4	Monthly listing of persons enrolled in each training course offered by the school.	Reports > Enrollment Totals

Flight Schedule Pro Part 141 Compliance Matrix		
141.95: Graduation Certificate		
	141.95 Requirements	Location
1	Graduation certificate with name and certificate number of the school, name of graduate, course of training, and date of graduation	Settings > Student Training Tab > Courses > View (Course) > Edit (Graduation Settings) > Preview (Graduation Certificate)
2	A statement that the student has satisfactorily completed each required stage of the approved course of training including the tests for those stages	Settings > Student Training Tab > Courses > View (Course) > Edit (Graduation Settings) > Preview (Graduation Certificate)
3	A certification of the information contained on the graduation certificate by the chief instructor for that course of training	Settings > Student Training Tab > Courses > View (Course) > Edit (Graduation Settings) > Preview (Graduation Certificate)
4	A statement showing the cross-country training that the student received in the course of training	Settings > Student Training Tab > Courses > View (Course) > Edit (Graduation Settings) > Preview (Graduation Certificate)
5	Certificates issued upon graduating from a course based on internet media must be uniquely identified using an alphanumeric code that is specific to the student graduating from that course	Settings > Student Training Tab > Courses > View (Course) > Edit (Graduation Settings) > Preview (Graduation Certificate)

Flight Schedule Pro Part 141 Compliance Matrix		
141.101: Training Records		
	141.101 Requirements	Location
1	The date the student was enrolled in the approved course	People > Student > Course Enrollments > Course Overview > Course Progress
2	A chronological log of the student's course attendance	People > Student > Course Enrollments > Course Overview > Course Progress
3	A chronological log of the student's subjects covered in training	People > Student > Course Enrollments > Course Overview > Course Progress
4	A chronological log of the student's flight operations covered in training	People > Student > Course Enrollments > Course Overview > Course Progress
5	A chronological log of the names and grades of any tests taken by the student	People > Student > Course Enrollments > Course Overview > Course Progress
6	The date the student graduated, terminated training, or transferred to another school.	People > Student > Course Enrollments > Course Overview > Course Progress
7	Student's identifying graduation certificate code (if course is based on internet media)	N/A
8	Chief instructor certification of student graduation, termination of training, or transfer to another school on the student record	People > Student > Course Enrollments > Course Overview > Course Progress
9	Retains student record for 1 year after graduation, termination of training, or transfer to another school	FSP database, backed up
10	A copy of the student's training record is available upon request	FSP database, download

SECTION 6: VERSION HISTORY

The following table outlines document changes and versions. You can always download the latest version at:

<https://fsp2.blob.core.windows.net/141/Part%20141%20Implementation%20Guide.pdf>

Version	Publish Date	Changes
1.0	8/20/2018	No changes. First publish date.
1.1 (current)	8/22/2018	Added document download link to Section 6.