



U.S. Department of
Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make Cessna	Model 182L
	Serial No. 18258940	Nationality and Registration Mark N42279
2. Owner	Name (As shown on registration certificate) Mann Richard G	Address (As shown on registration certificate) 5611 Starboard Dr Discovery Bay, CA 94514-9324

3. For FAA Use Only

--	--	--	--	--	--

4. Unit Identification

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in item 1 above)			<input type="checkbox"/>	<input checked="" type="checkbox"/>
POWERPLANT				<input type="checkbox"/>	<input type="checkbox"/>
PROPELLER				<input type="checkbox"/>	<input type="checkbox"/>
APPLIANCE	Type			<input type="checkbox"/>	<input type="checkbox"/>
	Manufacturer			<input type="checkbox"/>	<input type="checkbox"/>

6. Conformity Statement

A. Agency's Name and Address J and R Electronics 20511 Skywest Drive Hayward, CA 94541	B. Kind of Agency <input type="checkbox"/> U.S. Certified Mechanic <input type="checkbox"/> Foreign Certified Mechanic <input checked="" type="checkbox"/> Certified Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. XB3R965L Class I & II Radio Limited Radio & Inst Specialized Service
--	---	---

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date March 8, 2006	Signature of Authorized Individual
------------------------------	--

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	<input type="checkbox"/> FAA Fit Standards Inspector	<input type="checkbox"/> Manufacturer	<input type="checkbox"/> Inspection Authorization	Other (Specify)
	<input type="checkbox"/> FAA Designee	<input checked="" type="checkbox"/> Repair Station	<input type="checkbox"/> Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 3/8/06		Certificate or Designation No. XB3R965L	Signature of Authorized Individual 	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Aircraft: Cessna Model: 182L S/N: 18258940 N#: N42279

1. Installed Garmin AT, Inc. GNS 480 (CNS80) GPS WAAS Navigator with integrated VHF Navigation and Communication radios in accordance with Garmin AT STC SA01229SE dated June 25, 2003.
2. Electrical load can be safely controlled or managed within rated limits of the aircraft's electrical power-supply system per AC 43.13-1B, Paragraph 11-36 (b) and (c).
3. Electrical Components added are circuit protected in accordance with AC 43.13-1B, Paragraphs 11 47, 11 48, 11 49 and 11 50.
4. Wiring used meets all requirements of AC 43.13-1B, Paragraph 11-77(d), and Paragraph 11-66, subparagraphs (b) and (c) and has been installed in accordance with AC 43.13-1B, Paragraph 11-96, subparagraphs a, c, d, f, q, and ee.
5. Aircraft reweighed by William P. Ludwig A & P 545506798 dated 3/8/06.
6. Aircraft Equipment List updated as per AC43.13-1B Paragraph 10-19.
7. Logbook entries complied with.

-----END-----

☐ Additional Sheets Are Attached

United States of America
Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate

Number SA01229SE

This certificate, issued to **Garmin AT, Inc.
2345 Turner Road SE
Salem, OR 97309**

*certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part * of the * Regulations.*

Original Product—Type Certificate Number: *See attached Approved Model List (AML)
Make: No. SA01229SE for list of approved aircraft
Model: models and applicable airworthiness regulations.

Description of the Type Design Change: Installation of GNS 480 (CNX80) GPS WAAS Navigator with integrated VHF Navigation and Communication radios in accordance with Garmin AT Supplemental Type Certificate Master Drawing List, P/N 560-0987-01, Revision B, dated September 15, 2004, or later FAA Approved Revision.

Limitations and Conditions: Compatibility of this design change with previously approved modifications must be determined by the installer. FAA approved Airplane Flight Manual Supplement (AFMS), P/N 560-0985-01, Revision A, dated September 15, 2004, or later FAA approved revision, is a required part of this modification. For instructions, refer to the GNS 480 (CNX80) Installation Manual, P/N 560-0982-01, Revision A, or later FAA approved revision. Installation of antennas penetrating an aircraft pressure vessel are not supported by this STC. This modification may require additional data and/or approval. This STC references interfacing equipment, and the specified interfaces are approved via this data. However, the interfaced equipment may need further approval for installation in the aircraft, and this approval is beyond the scope of this STC. A copy of this STC dated September 23, 2004, AML dated December 1, 2003, and AFMS, dated September 15, 2004, or later FAA approved revisions, must be maintained as part of the permanent records for the modified aircraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: July 10, 2002
Date of issuance: June 25, 2003

Date reissued: December 1, 2003
Date amended: September 23, 2004



By direction of the Administrator

Angelos Xidias
(Signature)

Acting Manager, Seattle Aircraft
Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

**FAA APPROVED MODEL LIST (AML) NO. SA01229SE
FOR INSTALLATION OF GARMIN AT APOLLO CNX80 NAVIGATION SYSTEM**

Aircraft Make and Model Designation	Original/Type Certificate Number	Certification Basis	AML Revision Date
Cessna			
170, 170A, 170B	A-799	CAR 3	
172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172Q, 172R, 172S	3A12	CAR 3, FAR 23	
172RG, P172D, R172E, R172F, R172G, R172H, R172J, R172K, 175, 175A, 175B, 175C	3A17	CAR 3	
177, 177A, 177B	A13CE	FAR 23	
177RG	A20CE	FAR 23	
180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K	5A6	CAR 3	
182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, 182S, 182T, R182, T182, TR182, T182T	3A13	CAR 3, FAR 23	
185, 185A, 185B, 185C, 185D, 185E, A185E, A185F	3A24	CAR 3	
190, 195, 195A, 195B	A-790	CAR 3	
210, 210A, 210B, 210C, 210D, 210E, 210F, T210F, 210G, T210G, 210H, T210H, 210J, T210J, 210K, T210K, 210L, T210L, 210M, T210M, 210N, P210N, T210N, 210R, P210R, T210R, 210-5 (205), 210-5A (205A)	3A21	CAR 3	
206, P206, P206A, P206B, P206C, P206D, P206E, TP206A, TP206B, TP206C, TP206D, TP206E, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G, 206H, T206H	A4CE	CAR 3, FAR 23	
207, 207A, T207, T207A	A16CE	FAR 23	
208, 208A, 208B	A37CE	FAR 23	
T303	A34CE	FAR 23	
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, T310P, 310Q, T310Q, 310R, T310R	3A10	CAR 3	November 7, 2003
320, 320A, 320B, 320C, 320D, 320E, 320F, 320-1, 335, 340, 340A	3A25	CAR 3	
336	A2CE	CAR 3	
337, 337A (USAF 02B), 337B, T337B, 337C, 337E, T337E, T337C, 337D, T337D, M337B (USAF 02A), 337F, T337F, 337G, T337G, 337H, P337H, T337H, T337H-SP	A6CE	CAR 3, FAR 23	
401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, 425	A7CE	CAR 3	
404, 406	A25CE	FAR 23	
441	A28CE	FAR 23	
523, 523A	A1WI	FAR 23	