

Version 1.1 July, 2015



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Revision History

Date	By	Changes
4/1/2015	HES	Initial Release
5/8/2015	HES	Changed reference for 14 CFR 91.336

I. Introduction

The NavWorx PADS-B is a fully self-contained Non-TSO portable ADS-B UAT transceiver that complies with 14 CFR 91.227.

The PADS-B is a Portable ADS-B Transceiver – transmitting full ADS-B OUT, while receiving ALL traffic and weather around your aircraft. We took the design straight out of a TSO/STC certified ADS-B product, miniaturized it, and made you the PADS-B.

Did you know that the FAA only sends traffic to your aircraft if you have ADS-B OUT – don't compromise your safety by using a receiver-only device for traffic – get the PADS-B and rest assured that the FAA is sending you traffic near your aircraft!

PADS-B is fully integrated – no external antennas that need to be mounted on the window – GPS and Wifi antennas are built-in.

In the future it can be ordered to use an externally mounted UAT and GPS antennas

Specifications:

Transmitter: 20W, 20ppm accuracy

Receiver: 90% MSR at -98dBm

GPS: WAAS

Dimensions: 7"W x 4"D x 1.5"H (excluding antenna)

Wifi: Connects up to 7 iPad/Android devices at once.

Weight: 1.1lb

Power: 10-30Vdc through Cigarette Lighter Adapter

Operating temperature: -40°C – 60°C

Warranty: 1 year

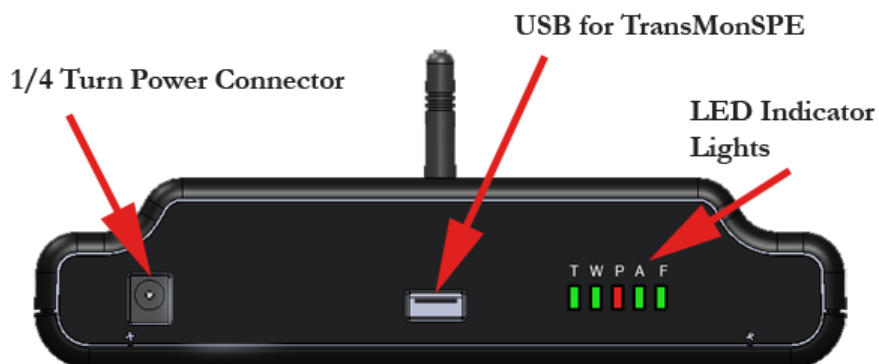
NavWorx reserves the right to change specifications and pricing at any time.

II. Manufacturer Certification

The PADS-B complies with the requirements of TSO C154c and [14 CFR 91.227](#). A certificate of compliance is issued with each PADS-B shipped.

III. Components

The PADS-B consists of a plastic enclosure with built in Wifi and WAAS GPS and a single antenna extending through the top of the enclosure and a single cigarette lighter connector. It has connections for power and the optional TransMonSPE™ as well as 5 LED indicator lights. The LED indicator lights are labeled 'T W P A F'.



IV. Placement

The PADS-B should be placed on the glareshield with the indicator lights facing in toward the cockpit. The PADS-B has a built in WAAS GPS that requires a clear view of the sky to function properly. An optional configuration may be provided (at additional cost) to allow remote connection of a GPS and UAT antennas.

V. Powering UP

Powering up the PADS-B is simple. Insert the small round barrel connector on the cigarette lighter cable into the corresponding connector on the PADS-B. Turn the connector clockwise ¼ turn until it latches. **Important: Do not force the connector as damage may occur to the connector and PADS-B.**

Insert the other end (cigarette lighter plug) into a 12V – 28V cigarette lighter receptacle.

The PADS-B will automatically start and run self-checks.

VI. Compatible Software

The PADS-B will connect via WiFi seamlessly with all applications that support the NavWorx ADS600-B or –BG like, WingX, iFly, Naviator, eKneeboard, Avilution, and others.

Does not work with proprietary, closed applications like Garmin and ForeFlight.

VII. Connection

Refer to the appropriate application software User Guide for information on connecting to an ADS-B transceiver. Note: You can use the same connection setup as with the NavWorx installed UAT.

VIII. Indicator Lights

The LED indicator lights are labeled ‘T W P A F’. They illuminate when:

T – Traffic alerts are reported

W – ADS-B Weather is being received

P – ADS-B 1090 ES or 978 UAT traffic is being received

A – User has selected anonymous mode (VFR squawk 1200 only)

F – Fail (a failure has of the equipment has been detected)

IX. TransMonSPE™

The PADS-B provides for connection to the optional TransMonSPE™. The optional TransMonSPE™ installs around the transponder cable and automatically provides pressure altitude and squawk code to the PADS-B.

The TransMonSPE™ connection cable (provided) connects with the PADS-B via a USB connection.



X. Warranty

NAVWORX ONE YEAR LIMITED WARRANTY

Limited Warranty. NavWorx products are warranted to be free from defects in material and workmanship for one year from the date of original purchase. For the duration of the warranty period, at its option, NavWorx will repair or replace any product which fails during normal use. No charge will be made to the customer for parts and labor for product repair or replacement provided that the customer shall be responsible for all shipping costs after 30 days from the original purchase date. NavWorx, at its sole discretion, retains the exclusive right to either repair or replace the product unit with a new unit or with a newly reconditioned unit. Any replacement product will be warranted for the remainder of the original warranty period or ninety (90) days, whichever is longest.

Restrictions. This Limited Warranty does not apply if (a) the product has not been installed, operated, or maintained in accordance with instructions supplied by NavWorx, (c) has been altered, except by NavWorx or its authorized representative, or (c) has been subjected to abnormal physical or electrical stress, abnormal environmental conditions, misuse, negligence, or accident, (d) the factory applied original case seals or serial number label has been broken, altered or removed from the product.

Disclaimer of Warranty. EXCEPT AS SPECIFIED IN THIS WARRANTY SECTION, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE ARE HEREBY EXCLUDED TO THE EXTENT AN IMPLIED WARRANTY CANNOT BE EXCLUDED. SUCH WARRANTY IS LIMITED IN DURATION TO THE EXPRESS WARRANTY PERIOD. THIS WARRANTY GIVES THE CUSTOMER SPECIAL LEGAL RIGHTS AND THE CUSTOMER MAY HAVE OTHER

LEGAL RIGHTS THAT MAY VARY FROM JURISDICTION TO JURISDICTION.

NAVWORX SHALL NOT BE LIABLE, IN ANY EVENT, FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE OR INABILITY TO USE THE PRODUCT OR FROM DEFECTS IN THE PRODUCT.

XI. Disclaimers

- Use this product at your own risk. NavWorx, Inc assumes no liability for property damage or personal injury resulting from use and/or misuse of this product.
- As per FAA FAR 91.113(b): When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. When a rule of this section gives another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear.
- Vision™ Display is not intended to replace an FAA certified traffic device and should not be used as the sole source of information in decision-making.
- NavWorx, Inc is not liable for any damage to software or personal injury and/or property damage resulting from user alteration of software and/or hardware. Any and all warranties are considered null and void if software and/or bundled hardware are serviced by any party other than NavWorx, Inc or those approved by NavWorx, Inc.

XII. EULA – End User License Agreement

BINDING TERMS AND CONDITIONS OF SALE

The following are the terms and conditions ("Terms and Conditions") for the sale of products ("Products") by NavWorx, Inc. ("NavWorx") to NavWorx's customers ("Customers").

ACCEPTANCE AND CANCELLATION OF ORDERS All orders are subject to acceptance in writing by NavWorx or a duly authorized agent of NavWorx . Any written acknowledgement of receipt of an order shall not, in and of itself, constitute such acceptance. Orders accepted by NavWorx may be cancelled by Customer upon written consent of NavWorx provided such order is not governed by a Purchase Agreement Letter. In the event of cancellation or other withdrawal of an order for any reason, and without limiting any other remedy which NavWorx may have as a result of such cancellation or other withdrawal, reasonable

cancellation or restocking charges shall include all expenses incurred and commitments made by NavWorx, and shall be paid by Customer to NavWorx. NavWorx reserves the right to allocate sales and limit quantities of selected Products among its customers in its sole discretion. Product specifications and availability are subject to change without prior notice.

1a. Returns Customer must notify NavWorx within 14 days from date of shipment of any defective hardware product. (See NAVWORX 'S LIMITED WARRANTY for further information.) Returns are normally accepted when completed within 30 days of the ship date. If NavWorx agrees to accept a return of hardware beyond the 30 days of ship date, return freight charges must be prepaid by customer. NavWorx will not accept COD shipments. Contact a sales representative for a Return Materials Authorization Number and addressing instructions prior to returning product. No returns of software will be accepted after a permanent key is issued for the software.

2. PRICES Orders are billed at the prices in effect at the time of shipment. Prices will be as specified by NavWorx and will be applicable for the period specified in NavWorx's quote. If no period is specified, quoted prices will be applicable for thirty (30) days. The website reflects the latest pricing information available at the time of printing. Prices shown in the website are subject to change without notice. Prices are exclusive of taxes, impositions and other charges, including sales, use, excise, value-added and similar taxes or charges imposed by any government authority, international shipping charges, forwarding agent's and broker's fees, bank fees, consular fees, and document fees.

3. TERMS OF PAYMENT All payments must be made in the currency billed on the original invoice. Credit cards accepted include major credit cards, purchase cards, and major bank debit cards including MasterCard, VISA, and Discover. Credit Card billing information must be verified on new customers prior to shipment of order. Payment terms MAY be available to some businesses with approval of NavWorx.

4. SALES TAX US Shipments When required by law NavWorx will collect Federal, State and/or Local sale, use, excise, and other taxes that apply to a Customer's shipment. These taxes are in addition to the purchase price of the Products subject to an order. Customer will remit the correct tax unless customer is tax exempt and NavWorx has a valid signed tax exemption certificate on file. **INTERNATIONAL Shipments** All applicable VAT, PST, HST, and/or GST charges along with brokerage fees will be the responsibility of the Customer and

due at the time of delivery.

5. DELIVERY AND TITLE All shipments by NavWorx are F.O.B. point of shipment from NavWorx's facility and the amount of all transportation charges will be paid to NavWorx by the Customer in addition to the purchase price of the Products. Subject to NavWorx's right of stoppage in transit, delivery of the Products to the carrier will constitute delivery to Customer and title and risk of loss will pass to Customer. NavWorx will make reasonable efforts to initiate shipment and schedule delivery as close as possible to Customer's requested delivery date(s). Customer acknowledges that delivery dates provided by NavWorx are estimates only and that NavWorx will not be liable for failure to deliver on such dates. Selection of the carrier and delivery route will be made by NavWorx unless specifically designated by Customer.

6. NAVWORX ONE YEAR LIMITED WARRANTY

Limited Warranty. NavWorx products are warranted to be free from defects in material and workmanship for one year from the date of original purchase. For the duration of the warranty period, at its option, NavWorx will repair or replace any product which fails during normal use. No charge will be made to the customer for parts and labor for product repair or replacement provided that the customer shall be responsible for all shipping costs after 30 days from the original purchase date. NavWorx, at its sole discretion, retains the exclusive right to either repair or replace the product unit with a new unit or with a newly reconditioned unit. Any replacement product will be warranted for the remainder of the original warranty period or ninety (90) days, whichever is longest.

Restrictions. This Limited Warranty does not apply if (a) the product has not been installed, operated, or maintained in accordance with instructions supplied by NavWorx, (b) has been altered, except by NavWorx or its authorized representative, or (c) has been subjected to abnormal physical or electrical stress, abnormal environmental conditions, misuse, negligence, or accident, (d) the factory applied original case seals or serial number label has been broken, altered or removed from the product.

Disclaimer of Warranty. EXCEPT AS SPECIFIED IN THIS WARRANTY SECTION, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE ARE HEREBY EXCLUDED TO THE EXTENT AN IMPLIED WARRANTY CANNOT BE EXCLUDED. SUCH

WARRANTY IS LIMITED IN DURATION TO THE EXPRESS WARRANTY PERIOD. THIS WARRANTY GIVES THE CUSTOMER SPECIAL LEGAL RIGHTS AND THE CUSTOMER MAY HAVE OTHER LEGAL RIGHTS THAT MAY VARY FROM JURISDICTION TO JURISDICTION. NAVWORX SHALL NOT BE LIABLE, IN ANY EVENT, FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE OR INABILITY TO USE THE PRODUCT OR FROM DEFECTS IN THE PRODUCT.

7. LIMITATION OF LIABILITIES IN NO EVENT SHALL NAVWORX BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE including, but not limited to, damages resulting from loss of profit or revenue, recall costs, claims for service interruptions or failure to supply downtime, testing, installation or removal costs, costs of substitute products, property damage, personal injury, death or legal expenses. Customer's recovery from NavWorx for any claim shall not exceed the purchase price paid by Customer for the goods, irrespective of the nature of the claim, whether in warrant, contract or otherwise.

8. INDEMNIFICATION Customer agrees to indemnify and hold NavWorx, its parents, subsidiaries, affiliates, officers and employees, harmless from any claim or demand, including reasonable attorneys' fees and costs, made by any third party due to or arising out of Customers use of the product.

9. STATEMENTS AND ADVICE If statements or advice, technical or otherwise, are offered or given to Customer, such statements or advice will be deemed to be given as an accommodation to Customer and without charge. NavWorx shall have no responsibility or liability for the content or use of such statements or advice. NavWorx Technical support is provided by telephone and, therefore, is limited in scope which prevents us from the direct participation in the installation of the product into the customer's aircraft.

10. END USER LICENSE AGREEMENT (EULA) All products are covered under the following **End User License Agreement (EULA)**.

Terms. By installing or using the ("product"), you agree to be bound by the terms and conditions of this license agreement. Please read this agreement carefully. NavWorx, Inc ("NavWorx") grants you a limited, non-exclusive license to use the product. Title, ownership rights, and intellectual property rights in and to the

product remain with NavWorx .

Refund. If you do not agree to the terms of this EULA, NavWorx is unwilling to license the product to you. In such event, you may not use the licensed product, and you should promptly contact NavWorx for a refund. The product must not have been used or installed in order to obtain a full refund, a restocking fee may apply.

Copyright. You acknowledge that the product is the property of NavWorx and is protected under United States of America copyright laws and international copyright treaties. You further acknowledge that the structure, organization, and source design of the hardware and software are valuable trade secrets of NavWorx . You agree not to open the product, break the EULA seal, nor decompile, disassemble, modify, reverse assemble, reverse engineer, or reduce to human readable form the hardware or software or any part thereof or create any derivative works based on the product.

No Warranties. Except as expressly provided in the limited warranty section, the products' hardware and its operating system software are provided to you "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of non-infringement, merchantability, and /or fitness for a particular purpose. The entire risk of the quality and performance of both the software and hardware is with the user.

No Liability for Consequential Damages. NavWorx, Inc. and its suppliers shall not be held liable for any damages suffered or incurred by you (including, but not limited to, general, special, consequential or incidental damages for loss of business profits, business interruption, personal compensation and the like), arising from or in connection with the delivery, use, or performance of the product and its software.

Customer Remedies. NavWorx. and its suppliers entire liability and your exclusive remedy shall be, at NavWorx' option, either (1) return of the product purchase price, not to exceed list price, or (2) repair or replacement of the product which is returned to NavWorx with original proof of purchase.

11. TECHNICAL ASSISTANCE: Seller's warranty shall not be enlarged, and no obligation or liability shall arise out of Seller's rendering of technical advice, facilities or service in connection with Buyer's order or the goods furnished.

12. FORCE MAJEURE NavWorx will not be liable for delays in delivery or for failure to perform its obligations due to causes beyond its reasonable control including, but not limited to, product allocations, material shortages, labor disputes,

transportation delays, unforeseen circumstances, acts of God, acts or omissions of other parties, acts or omissions of civil or military authorities, Government priorities, fires, strikes, floods, severe weather conditions, computer interruptions, terrorism, epidemics, quarantine restrictions, riots or war. NavWorx's time for delivery or performance will be extended by the period of such delay or NavWorx may, at its option, cancel any order or remaining part thereof, without liability by giving notice to Customer.

13. EXPORT CONTROL NavWorx is committed to compliance with all U.S. Export Regulations and Laws. NavWorx will not sell or ship to countries embargoed by the U.S. Treasury Office of Foreign Asset Control (OFAC). NavWorx will not sell or ship to individuals or organizations identified by the U.S. Treasury as Specially Designated Nationals and Blocked Persons. NavWorx will not sell or ship products prohibited under Export Administration Regulations to individuals or organizations identified by the U.S. Department of Commerce, Bureau of Industry and Security (BIS). NavWorx will not seek export licenses pursuant to Export Administration Regulations. NavWorx participates in BIS Export Enforcement and OFAC transaction reporting. Furthermore, NavWorx prohibits the re-export, brokering or transshipment of its products to any individual, organization or country prohibited by the OFAC or BIS. The sale, resale or other disposition of Products, and any related technology or documentation, are subject to the export control laws, regulations and orders of the United States and may be subject to the export and/or import control laws and regulations of other countries. Customer agrees to comply with all such laws, regulations and orders. Customer further acknowledges that it shall not directly or indirectly export any Products to any country to which such export or transmission is restricted or prohibited. Customer acknowledges its responsibility to obtain any license to export, re-export or import as may be required.

14. GENERAL The Terms and Conditions may not be modified or cancelled without NavWorx's written agreement. Accordingly, goods furnished and services rendered by NavWorx are sold only on the terms and conditions stated herein. The sale of Products hereunder will be governed by the Terms and Conditions, notwithstanding contrary or additional terms and conditions in any order purchase order, planning schedule, acknowledgment, confirmation or any other form or document issued by either party affecting the purchase and/or sale of Products. Notwithstanding any terms and conditions on Customer's order, the information and conditions on these Terms and Conditions are controlling over Customer and NavWorx. Any conflicting statements or terms listed on the Customer purchase orders, invoices, confirmations or other Customer generated documents ("Customer Documents"), whether heretofore or hereafter submitted, are negated and all



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different or additional terms and conditions contained in any Customer Documents are hereby objected to by NavWorx. NavWorx's performance of any contract is expressly made conditional on Customer's agreement to NavWorx's Terms and Conditions of Sale, unless otherwise specifically agreed upon in writing by NavWorx. In the absence of such agreement, commencement of performance and/or delivery shall be for Customer's convenience only and shall not be deemed or construed to be acceptance of Customer's terms and conditions or any of them. If a contract is not earlier formed by mutual agreement in writing, acceptance by Customer of any goods or services shall be deemed acceptance by Customer of the terms and conditions stated herein. No rights, duties, agreements or obligations hereunder, may be assigned or transferred by operation of law, merger or otherwise, without the prior written consent of NavWorx. The obligations, rights, terms and conditions hereof will be binding on the parties hereto and their respective successors and assigns. The waiver or breach of any term, condition or covenant hereof, or default under any provision hereof, will not be deemed to constitute a waiver of any other term, condition, or covenant contained herein, or of any subsequent breach or default of any kind or nature. Any provision hereof which is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof in that jurisdiction, or affecting the validity or enforceability of such provision in any other jurisdiction. The Terms and Conditions will be governed by and construed in accordance with the laws of the state of North Carolina and the applicable laws of the United States.

Appendix A – FAA 14 CFR 91.336

<https://www.federalregister.gov/articles/2015/02/09/2015-02579/automatic-dependent-surveillance-broadcast-ads-b-out-performance-requirements-to-support-air-traffic>

DEPARTMENT OF
TRANSPORTATION
Federal Aviation Administration
14 CFR Part 91
[Docket No. FAA–2007–29305; Amdt.
No.
91–334]
RIN 2120–AI92
Automatic Dependent Surveillance-
Broadcast (ADS–B) Out Performance
Requirements To Support Air Traffic
Control (ATC) Service; Technical
Amendment
AGENCY

:
Federal Aviation
Administration, DOT.
ACTION

:
Final rule; technical
amendment.

SUMMARY

:
The FAA is correcting a final
rule published on May 28, 2010. In that
rule, the FAA amended its regulations
by adding equipment requirements and
performance standards for Automatic
Dependent Surveillance—Broadcast
(ADS–B) Out avionics on aircraft
operating in Classes A, B, and C
airspace, as well as other specified
classes of airspace within the U.S.
National Airspace System (NAS). This
document corrects errors in regulatory
provisions addressing ADS–B Out
equipment and use.

DATES

:
Effective February 9, 2015.

FOR FURTHER INFORMATION CONTACT

:
For
technical questions concerning this
action, contact Robert F. Nichols, Jr.,
Surveillance Services Group Manager,
AJM–23, Air Traffic Organization,
Federal Aviation Administration, 600
Independence Avenue SW.,
Washington, DC 20591; telephone (202)
267–0629; email
Robert.nichols@
faa.gov.

For legal questions concerning this
action, contact Lorelei Peter, Office of
the Chief Counsel, AGC–200, Federal
Aviation Administration, 800
VerDate Sep<11>2014 13:55 Feb 06, 2015
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rljohnson on DSK67QTVN1PROD with
RULES

6900
Federal Register
/ Vol. 80, No. 26 / Monday, February 9,
2015 / Rules and Regulations
Independence Avenue SW.,
Washington, DC 20591; telephone 202–
267–3073; email
Lorelei.Peter@faa.gov.

SUPPLEMENTARY INFORMATION

:
Good Cause for Immediate Adoption
Without Prior Notice
Section 553(b)(3)(B) of the
Administrative Procedure Act (APA) (5
U.S.C. 551
et seq.

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) authorizes agencies to dispense with notice and comment procedures for rules when the agency for “good cause” finds that those procedures are “impracticable, unnecessary, or contrary to the public interest.” Under this section, an agency, upon finding good cause, may issue a final rule without seeking comment prior to the rulemaking.

Section 553(d)(3) of the Administrative Procedure Act requires that agencies publish a rule not less than 30 days before its effective date, except as otherwise provided by the agency for good cause found and published with the rule.

This document is correcting an error that is in 14 CFR 91.225, ADS-B Out equipment and use. This correction will not impose any additional restrictions on the persons affected by these regulations. Furthermore, any additional delay in making the regulations correct would be contrary to the public interest. Accordingly, the FAA finds that (i) public comment on these standards prior to promulgation is unnecessary, and (ii) good cause exists to make this rule effective in less than 30 days.

Background

On May 28, 2010, the FAA published a final rule entitled, “Automatic Dependent Surveillance—Broadcast Out

Performance Requirements To Support Air Traffic Control Service” (75 FR 30160).

In that final rule, the FAA established § 91.225, which provides the ADS-B equipment requirements necessary to operate in certain classes of airspace effective January 1, 2020. Under paragraph (a)(1) of that section and in

order to operate an aircraft in Class A airspace, an aircraft must have installed equipment that “meets the requirements of TSO-C166b.” Under paragraph (b)(1) of that section, in order to operate an aircraft below 18,000 feet MSL and in identified airspace described subsequently in § 91.225, an aircraft must be equipped with equipment that **“meets the requirements of TSO-C166b; or TSO-C154c . . .”** In reviewing these paragraphs, the FAA notes that the regulatory text implies that the equipment must meet all the requirements of the referenced TSOs. As the ADS-B Out rule is a performance-based rule, it was not the FAA’s intent to arguably limit operators to only install equipment marked with a TSO in accordance with 14 CFR part 21, subpart O. The FAA’s intent was to permit equipment that meets the performance requirements set forth in the referenced TSOs. Evidence of that intent is found in the Notice of Proposed Rulemaking (NPRM) for this rule. In the NPRM, the FAA proposed in § 91.225(a)(1) and (c)(1) that the equipment installed “Meets the performance requirements in TSO-C-166a” (72 FR 56947, 56971). The inadvertent removal of the word “performance” in the paragraphs implementing these provisions in the final rule was in error and resulted in confusion as to whether the regulation permits other than equipment marked with a TSO, provided that equipment met the specified performance requirements.

Technical Amendment

In order to address any confusion and clarify the equipage requirements permitted under this rule, the FAA is amending § 91.225 to insert text

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specifying the necessary performance requirements.

Because the changes in this technical amendment result in no substantive change, we find good cause exists under 5 U.S.C. 553(d)(3) to make the amendment effective in less than 30 days.

List of Subjects in 14 CFR part 91
Air traffic control, Aircraft, Airports,
Aviation safety.

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends chapter I of title 14, Code of Federal Regulations as follows:

PART 91—GENERAL OPERATING AND FLIGHT RULES

■
1. The authority citation for part 91 continues to read as follows:
Authority:
49 U.S.C. 106(f), 106(g), 1155,
40101, 40103, 40105, 40113, 40120,
44101,
44111, 44701, 44704, 44709, 44711,
44712,
44715, 44716, 44717, 44722, 46306,
46315,
46316, 46504, 46506–46507, 47122,
47508,
47528–47531, 47534, articles 12 and 29
of the
Convention on International Civil
Aviation
(61 Stat. 1180), (126 Stat. 11).

■
2. In § 91.225, revise paragraphs (a)
and (b) to read as follows:
§ 91.225 Automatic Dependent
Surveillance-Broadcast (ADS-B) Out
equipment and use.
(a) After January 1, 2020, and unless

otherwise authorized by ATC, no
person may operate an aircraft in Class A
airspace unless the aircraft has
equipment installed that—

(1) Meets the performance
requirements in TSO-C166b, Extended
Squitter Automatic Dependent
Surveillance-Broadcast (ADS-B) and
Traffic Information Service-Broadcast
(TIS-B) Equipment Operating on the Radio
Frequency of 1090 Megahertz
(MHz); and

(2) Meets the requirements of
§ 91.227.

(b) After January 1, 2020, and unless
otherwise authorized by ATC, no person
may operate an aircraft below 18,000
feet MSL and in airspace described in
paragraph (d) of this section unless the
aircraft has equipment installed that—

(1) Meets the performance
requirements in—

(i) TSO-C166b; or
(ii) TSO-C154c, Universal Access
Transceiver (UAT) Automatic
Dependent Surveillance-Broadcast
(ADS-B) Equipment Operating on the
Frequency of 978 MHz;

(2) Meets the requirements of
§ 91.227.



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* * * * *

Issued under authority of 49 U.S.C. 106(f)
and in Washington, DC, on February 4, 2015.
Lirio Liu,
Director, Office of Rulemaking.

[FR Doc. 2015-02579 Filed 2-6-15; 8:45 am]

FAA Changes ADS-B rule for Equipment:

February 9, 2015:

<https://www.federalregister.gov/articles/2015/02/09/2015-02579/automatic-dependent-surveillance-broadcast-ads-b-out-performance-requirements-to-support-air-traffic>

§ 91.225 Automatic Dependent Surveillance-Broadcast (ADS-B) Out equipment and use.

(a) After January 1, 2020, and unless otherwise authorized by ATC, no person may operate an aircraft in Class A airspace unless the aircraft has equipment installed that—

(1) Meets the performance requirements in TSO-C166b, Extended Squitter Automatic Dependent Surveillance-Broadcast (ADS-B) and Traffic Information Service-Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz); and

(2) Meets the requirements of § 91.227.

(b) After January 1, 2020, and unless otherwise authorized by ATC, no person may operate an aircraft below 18,000 feet MSL and in airspace described in paragraph (d) of this section unless the aircraft has equipment installed that—
Show citation box

(1) Meets the performance requirements in—

(i) TSO-C166b; or

(ii) **TSO-C154c, Universal Access Transceiver (UAT) Automatic Dependent Surveillance-Broadcast (ADS-B) Equipment Operating on the Frequency of 978 MHz;**

(2) Meets the requirements of § 91.227.



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FAA Changes ADS-B rule for Equipment:

February 9, 2015:

<https://www.federalregister.gov/articles/2015/02/09/2015-02579/automatic-dependent-surveillance-broadcast-ads-b-out-performance-requirements-to-support-air-traffic>

Code of Federal Regulations

Title 14 - Aeronautics and Space Volume: 2 Date: 2014-01-01 Original Date: 2014-01-01 Title: Section 91.227 - Automatic Dependent Surveillance-Broadcast (ADS-B) Out equipment performance requirements. Context:

The PADS-B meets the performance requirements of TSO-C154c and 91.227.

End of User Guide