

AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 13-01 – April 24-25, 2013

RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 13-01-261

Subject: Alaska Ground Base Transceivers (GBT) Locations

Background/Discussion:

The FAA has deployed an Automatic Dependent Surveillance-Broadcast (ADS-B) infrastructure to provide the flying public capabilities to uplink essential information such as, Flight Information Services (FIS-B) and Traffic Information Services-Broadcast (TIS-B) into the cockpit. TIS-B is a surveillance service that derives traffic information from one or more radar-based surveillance sources and broadcasts this traffic information to ADS-B-equipped aircraft.

TIS-B enables ADS-B-equipped aircraft to receive position reports on non-ADS-B-equipped aircraft during the transition period to full ADS-B equipage in the NAS. TIS-B also supports Automatic Dependent Surveillance-Rebroadcast (ADS-R). ADS-R translates and rebroadcasts ADS-B messages received from aircraft with different datalinks (1090ES and UAT) to provide a connection making it possible for each aircraft to receive the information being transmitted by the other. Both the UAT and 1090 ES links support TIS-B service.

FIS-B is an informational service which provides aeronautical and flight information to the cockpit such as textual and graphical weather reports, NOTAMS, etc. Only UAT supports FIS-B service.

Recommendations:

Publish attached information in the Associated Data Section of the Alaska Supplements for pilots to know when they within range of a GBT to receive FIS-B and TIS-B information. This information should also be depicted on aeronautical charts.

Comments:

Attached is a list of the operational GBTs in Alaska.

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NAME	Identifier	Latitude North			Longitude West			
		Degree	Minute	Second	Degree	Minute	Second	
Bethel	BET	60	46	53	161	53	2	
Kalskag	KLG	61	33	47	160	19	1	
St. Marys	KSM	62	3	8	163	15	44	
Unalakleet	UNK	63	52	36	160	47	23	
Dillingham	DLG	59	2	22	158	27	27	
Hooper Bay	HPB	61	31	40	166	6	48	
Platinum	PTU	59	0	46	161	49	4	
Levelock	9Z8	59	6	45	156	51	35	
Shishmaref	SHH	66	15	16	166	4	29	
Nome	OME	64	30	15	165	25	38	
Savoonga	SVA	63	41	40	170	28	56	
Elim	ELI	64	37	1	162	15	30	
Noorvik	D76	66	50	4	161	2	26	
Point Hope	PHO	68	20	47	166	43	59	
Kivalina	KVL	67	35	49	163	59	43	
Selawik	WLK	66	36	11	160	0	8	
McGrath	MCG	62	56	25	155	33	20	
Nenana	ENN	64	34	38	149	4	50	
Pedro Dome	PDQ	65	2	3	147	30	9	
Cantwell	TTW	63	24	3	148	56	25	
Goose Bay	Z40	61	25	53	149	59	54	
Yakutat	YAK	59	32	23	139	44	17	
Haines	HNS	59	15	3	135	27	45	
Sitka	SIT	57	2	50	135	21	11	
Gunnuk	QA5	56	58	52	133	48	21	
Wrangell	WRG	56	28	27	132	22	47	
Angoon	AGN	57	29	59	134	34	46	
Sunny Hay	QAA	55	27	50	133	4	48	
Cape Spencer	CSP	58	11	56	136	38	25	
High Mt.	QAY	55	21	39	131	47	45	
Sisters Is.	SSR	58	10	37	135	15	34	
Williams Mt.	5BB	58	9	5	134	2	10	
Mile 11	JNU	58	22	12	134	36	42	

MEETING 13-01:

Valerie Watson, AJV-3B, briefed the topic on behalf of the submitter, who requests that a listing of Ground-Based Transceivers (GBTs), including name, location identifier & position (latitude & longitude) be published in the Supplement Alaska and depicted "on charts". Valerie asked the group how this information might be used or what would a pilot do differently armed with this information. A lengthy discussion followed.

Lev Prichard, APA, commented that having such information would only be of use in pre-flight planning as a means to evaluate where along a planned route a pilot may or may not be able to receive the enhanced data features offered through the GBT system.

Kevin Bridges, AIR-130, stated that the ADS-B coverage was assured at or above 5,000 feet MSL and that GBT reception is altitude-dependent. Having charted locations of GBTs would not necessarily tell a pilot whether or not he/she will be within reception range.

Lev commented that he had seen basic ADS-B coverage charts within the FAA AIM and Jeppesen manual. Lev stated that the information may be of interest pre-flight, but he does not see any reason to depict such information on a Sectional charts. He suggested that a graphic coverage chart in the AFDs might be of use.

Jim Arrighi, AJV-141, stated that ATC needs the location of GBTs in order to be aware of areas of reduced surveillance coverage.

It was pointed out that the FAA does provide some ADS-B and GBT location information through the FAA web site at <http://www.faa.gov/nextgen/flashmap>. The web site does not provide service volume or any detailed coverage information for individual GBTs.

Melissa McCaffrey, AOPA, volunteered to contact the proponent and speak with AOPA membership to determine if GA has a need to know GBT locations.

STATUS: OPEN

ACTION: Melissa McCaffrey, AOPA, to research GA's need for GBT locations. She will report at the next ACF.

MEETING 13-02:

Valerie Watson, AJV-3, briefed the topic. Valerie stated AeroNav Products' position is that because GBT locations are believed to be a pre-flight data element, adding all the GBT locations to Visual charts would provide little in-flight usefulness and would provide significant clutter.

Melissa McCaffrey, AOPA, stated that since the ACF she had spoken with the AOPA member's resident in Alaska and that they expressed that such information would only be of use to a pilot during pre-flight planning. The Alaskan pilots agreed that adding all the GBT locations to the VFR charts would add more clutter and was of very little value while in flight. Melissa referenced the information provided in the Supplement Alaska,

which depicts high and low altitude ADS-B coverage. Melissa inquired if there was a possibility to show ADS-B coverage at 5000 and 10,000 feet MSL.

Bob Carlson, AJV-322, commented that the graphics depicting high and low altitude ADS-B coverage in the Supplement Alaska are provided by either the Alaska or Western Region Offices. The images received are camera ready and require no additional resources to incorporate them into the Supplement. If these sources submit 5000 and 10,000 foot MSL ADS-B graphics, they could certainly be included in the Supplement Alaska.

Lynette Jamison, AJR-B1, stated that the NOTAM office does not publish ADS-B outage NOTAMS. Currently, ADS-B antennas do not have identifiers. Lynette stated that, in the future, she could see the value of the dissemination of information regarding the status of the ADS-B system, such as an outage covering three or more states, for instance. John Collins, GA Pilot, provided a counter argument to the notion that ADS-B tower information was not needed on the charts and cited that a pilot might revise his course of flight depending on the position and availability of an ADS-B location. John gave a detailed presentation of how ADS-B towers could potentially be charted, [illustrated how he uses ADS-B](#) and how he has gathered the information.

Bruce McGray, AFS-410, stated that when encountering problems in flight, it would be useful to a pilot to know where coverage is available. A discussion followed during which most pilots in the room stated that in an emergency situation, they would be looking for a landing location and not searching for ADS-B locations.

Kevin Bridges, AIR-130, stated that the charting of an ADS-B antenna does not indicate anything more than just a location; it does not necessarily indicate coverage. He stressed that what a pilot wants is a prediction of ADS-B coverage. In his opinion, adding the antenna locations on a chart would not accomplish that goal. Kevin stressed that ADS-B is a surveillance function.

Valerie repeated that the FAA provides an online ADS-B location map that covers the U.S. (new URL - <http://www.faa.gov/nextgen/implementation/>). John Collins stated that he would like this information in list form with the locations cited in latitude/longitude. He stated that he contacted several offices within the FAA and that the FAA “was unwilling to release this information.”

Valerie volunteered to contact the ADS-B office and see if release of ADS-B locations could be approved. Chris Criswell, AJV-22, agreed that if released from a sanctioned source, the AIM offices could publish the ASD-B location data. Valerie repeated that AeroNav Products has no plans to chart these locations on their current Visual charts. Lev Prichard, APA, commented that if the data were available, e-charting third party entities could (and would, if there is truly a desire) provide an overlay within their software to show the location of ADS-B towers and the coverage associated with each tower.

Note: Since the ACF, the ADS-B web underwent a redesign. A [new presentation](#) was generated to help guide interested parties through the redesigned web site.

STATUS: OPEN

ACTION: Valerie Watson, AJV-3, will contact the ADS-B office and attempt to obtain release of ADS-B locations for potential publication.

ACTION: Bob Carlson, AJV-322, will contact the Alaska and Western Regional Offices to see if they can or wish to provide additional (or replacement) ADS-B coverage graphics at 5000 and 10,000 foot flight levels.

MEETING 14-01:

Valerie Watson, AJV-3, briefed the issue. Valerie commented on her attempts to obtain the release of ADS-B tower locations for publication. The ADS-B office is currently in discussions with General Council regarding the release of this data and as of this date, no decision has been made.

Lynette Jameson, AJR-B1, stated that there are around 400 GBT locations that have been identified by Tech Ops, some of which have been given identifiers so they can be databased and a NOTAM can be published against an outage. There was some confusion over the issue of whether or not there are currently GBT locations databased in NASR. It was confirmed by Chris Criswell, AJV-22, after the conclusion of the ACF that GBTs are NOT currently databased in NASR.

John Collins, GA Pilot, stated that the FAA currently publishes GBT locations on Gulf of Mexico Charts. AJV-3 was unable to confirm this at the meeting. Post ACF, it was confirmed that the ADS-B locations depicted on the Gulf of Mexico Charts were requested by the office that was then called Cartographic Standards and resided in Aeronautical Information Management (AIM). The GBT locations were provided by the requesting office in the form of a memo.

Valerie inquired as to what progress has been made since last ACF on the AFD Team's discussion with the Alaska and Western Regional Offices regarding ADS-B coverage graphics at 5,000 and 10,000 foot flight levels to be published in the Alaska Flight Supplement. Bob Carlson, AJV-322, reported that he hasn't spoken to the Region regarding the graphics. He stated that the AFD Team would not create the graphics and that the graphics would have to be submitted print-ready from the regional offices.

STATUS: OPEN

ACTION: Valerie Watson, AJV-3, will continue to attempt to obtain the release of ADS-B tower locations for publication in NASR so that 3rd party vendors would have access to them.

ACTION: Bob Carlson, AJV-322, will contact the Alaska and Western Regional Offices to see if they wish to provide additional print-ready ADS-B coverage graphics at 5,000 and 10,000 foot flight levels to be published in the Supplement Alaska.

MEETING 14-02

Valerie Watson, AJV-344, briefed the issue. Valerie stated that she has been in contact with Maureen Cummings-Spickler, AGC-520, who is the attorney in FAA General Counsel newly assigned to the ADS-B program. Ms. Cummings-Spickler informed Valerie that she is working both the ACF request and a Freedom of Information Act (FOIA) request for release of ADS-B locations. Ms. Cummings-Spickler has promised a response prior to the next ACF (April 2015).

Bob Carlson, AJV-3721, briefed that he contacted the Alaska and Western Regional Offices to inquire if they would like to submit ADS-B coverage graphics at 5,000' and 10,000' for publication in the Supplement Alaska. A response has not yet been received.

STATUS: OPEN

ACTION: Valerie Watson, AJV-344, to report back on her discussions with FAA Legal regarding the release of ADS-B tower locations.

ACTION: Bob Carlson, AJV-3721, to report back on publication of ADS-B coverage graphics at 5,000' and 10,000' in the Supplement Alaska.

MEETING 15-01:

Valerie Watson, AJV-553, briefed the issue. Valerie stated that she has been in contact with Maureen Cummings-Spickler, AGC-520, the attorney in FAA General Counsel assigned to the ADS-B program. Ms. Cummings-Spickler informed Valerie that she is working both the ACF request and a Freedom of Information Act (FOIA) request for release of ADS-B locations. Valerie restated that there is no intent for the FAA to chart this information, however she will continue to try to obtain the release of the data and will report back at the next ACF.

Valerie and Bob Carlson, AJV-5641, have both reached out to the Alaska Regional Office on the potential of establishing ATS-B coverage graphics. A response has yet to be received.

Lynette Jamison, AJR-B11, commented that the NOTAM office is working with relevant offices within the FAA on generating a NOTAM process to inform pilots in the event of a GBT outage.

STATUS: OPEN

ACTION: Valerie Watson, AJV-553, to report back on her discussions with FAA Legal regarding the release of ADS-B tower locations.

MEETING 15-02:

Valerie Watson, AJV-553, briefed the issue. Valerie stated that she has been in further contact with FAA General Counsel assigned to the ADS-B program data release. The FAA General Counsel has been working both the ACF request and a Freedom of Information Act (FOIA) request for release of ADS-B locations. Valerie received word from legal that the FOIA office does not concur with the objection to release the data. There is no information yet as to how or when the information will be released.

Valerie stated that she would provide the ADS-B and FOIA office contact information to John Collins, GA Pilot, the original proponent of the issue and asked if this item could be closed. John thanked Valerie and agreed to closing the item.

STATUS: CLOSED