



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Office of the Regional Administrator  
Alaskan Region

222 W. 7<sup>th</sup> Avenue #14  
Anchorage, Alaska 99513-7587  
Phone: (907) 271-5645  
Fax: (907) 271-5113

## Capstone Program Participants

Sir or Madam:

### Capstone Program Information and Procedures

This letter provides information and procedures to aircraft owners/operators and avionics installers who plan to participate in the Federal Aviation Administration's Capstone Program.

The Capstone Program is a voluntary safety demonstration involving the installation, at FAA expense, of avionics suites in approximately 150 aircraft operated in western Alaska. The avionics suites, manufactured by UPS Aviation Technologies, consist of an MX-20 multi-function display (MFD), a GX-60 GPS nav/com, a Universal Access Transceiver (UAT), and an installation kit with all necessary cables, antennas, and mounting hardware, and an instruction book. Pilot training will be provided and a Safety Study will be conducted by the University of Alaska to determine effectiveness of the new technology.

The following enclosures will assist in understanding and participating in the Capstone Program.

- **Letter of Intent to Install Capstone Avionics.** The enclosed "Letter of Intent to Install Capstone Avionics" (Letter of Intent) shall be used by aircraft owners/operators to advise FAA of their potential interest in participating in the Capstone Program. The information will help FAA begin development of a Capstone Master Installation List to prioritize the avionics delivery and installation process. If interested, aircraft owners/operators should complete, sign, and date the Letter of Intent and submit it to the FAA Capstone Program Office in person or by mail.
- **Capstone Program Avionics Installation Fax-Back Form.** The enclosed "Capstone Program Avionics Installation Fax-Back Form" (Fax-Back Form) shall be used by aircraft owners/operators to advise FAA of their preferred avionics installer(s); the identification number, make, and model of each proposed aircraft; the aircraft's scheduled maintenance period; and preferred avionics installation dates. The Fax-Back Form shall be faxed, mailed, or delivered to the Capstone Program Office.

- **Capstone Program Aircraft Owner Agreement.** The enclosed “Capstone Program Aircraft Owner Agreement” (Capstone Agreement) shall be used to document the formal agreement between FAA and aircraft owners/operators for each aircraft participating in the Capstone Program. A separate Capstone Agreement must be completed, signed, and mailed to the Capstone Program Office for each aircraft. A copy of the approved agreement will be mailed to the aircraft owner/operator.
- **Capstone Program Avionics Installation Information and Procedures.** The enclosed “Capstone Program Avionics Installation Information and Procedures” covers all aspects of the installation program from selection of the avionics installer to FAA payment for installation services.
- **Capstone Aircraft Prioritization Process.** The enclosed “Capstone Prioritization Process” describes how aircraft will be prioritized when there are more requests for installations than capacity exists because of delivery limitations or installation shop limitations.

Please contact Mr. Gary Childers of the Capstone Program Office at 907-271-6304, or at e-mail “gary.childers@faa.gov,” if you have any questions about the Capstone avionics installation program or require additional information.

Thank you for your interest and participation in this important safety initiative.

Sincerely,

Ellis R. McElroy  
Capstone Program Business Manager

Enclosures

Letter of Intent to Install Capstone Avionics

Capstone Program Avionics Installation Fax-Back Form

Capstone Program Aircraft Owner Agreement

General Information for Participating Aircraft Owners

Capstone Program Avionics Installation Procedures for Aircraft Owner/Operator and Installer

Capstone Aircraft Prioritization Process

DOT/FAA Receiving Report (Form 4650-15, Sample)

Material Requisition/Issue/Receipt (FAA Form 4650-12, Sample)

# Letter of Intent to Install Capstone Avionics

## Capstone Program

### Letter of Intent to Participate

The intent of this document is not to create a legal obligation to install equipment but is to provide an understanding between the Capstone participants and the Capstone Program Office on the items listed below. Schedule flexibility will be maintained by both parties during the installation period. Unforeseen circumstances, such as unscheduled aircraft maintenance or manufacturing delays, may impact the terms listed below. Changes to the schedule will be made after agreement by both parties.

1. The Capstone Program Office will furnish avionics in accordance with the attached Master Installation List (Attachment 1). The Master Installation List prioritizes delivery and installation scheduling of avionics by date, participant, aircraft registration number, and installer. Participant's names and aircraft will be placed on the Master Installation List on a first-come, first served basis following the October 15, 1999 Fax Back Form (Attachment 2) due date. Where requested installations exceed delivery or installer capacity in a week, a priority selection will be made as described in the Master Installation List.
2. The Master Installation List will become the controlling document for the training course developed by the University of Alaska for the Capstone project.
3. By signing this letter, the participant named below intends to install equipment in one or more of its aircraft under the terms of the Capstone Program Owner Agreement (to be finalized by the end of 1999) and listed in the Avionics Installation Fax-Back Form.
4. A legally binding Capstone Program Owner Agreement will be signed prior to delivery and installation of the equipment. This agreement covers issues such as ownership of the equipment, use of the equipment, demonstration period reporting requirements, installation cost reimbursement, etc. The participants are not obligated by the terms of the Owner Agreement until the Owner Agreement is executed by the operator for one or more aircraft.

Operator Company Name: \_\_\_\_\_

Operator Signatory Name: \_\_\_\_\_ Date \_\_\_\_\_

Operator Signatory Title: \_\_\_\_\_

Capstone Representative: \_\_\_\_\_ Date \_\_\_\_\_

Capstone Program Office  
 801 B Street, Suite 500  
 Anchorage, AK. 99501  
 Phone: (907) 271 1338  
 Fax: (907) 271-1340



### Avionics Installation Fax-Back Form

Operator Name: \_\_\_\_\_ Date: \_\_\_\_\_

Person Completing Form: \_\_\_\_\_ Phone: \_\_\_\_\_

Principal or Main Base Location of Operator: \_\_\_\_\_

Name of preferred Installer(s): \_\_\_\_\_

If aircraft usage varies by season, dates of "low season" \_\_\_\_\_

**Instructions:**

For each aircraft that you expect will participate in the Capstone Program, please provide its N-number, Make/model, and the following information:

- 1) Annual flight hours of all flights using Bethel as hub airport.
- 2) Any scheduled major maintenance downtimes for the aircraft, including dates and location (ANC or BET), from January 15 to June 1, 2000.
- 3) Your First Preference (the most favorable, least impact on your operations) installation week for each aircraft from January 15 to June 1, 2000, expressed as the month and date of the Monday of that week, e.g., "2/7" or "2/21".
- 4) Your Second and Third Preference weeks (expressed as the month and date of the Monday of that week), in case your First Preference week is not available because of insufficient installation capacity or avionics that week.

N number: Make/Model	Bethel Hours	Scheduled Maintenance Week	First Pref. Wk.	Second Pref. Wk.	Third Pref. Wk.

**Make additional copies of this form to include all participating aircraft.**

# CAPSTONE PROGRAM AIRCRAFT OWNER AGREEMENT

This agreement is between \_\_\_\_\_, aircraft owner (Owner), and the Federal Aviation Administration (FAA). It provides for the installation, maintenance, operation, test, evaluation, and disposition of Capstone avionics purchased by FAA for the following aircraft:

**Aircraft Manufacturer/Model:** \_\_\_\_\_ **N Number:** \_\_\_\_\_

1. In consideration of the anticipated benefits and safety enhancements to be gained from this test program, Owner agrees to participate in the Capstone Program with the above aircraft. Owner and FAA agree to work together testing the perceived benefits and safety enhancements. Owner further agrees to require each pilot of the above Capstone-equipped aircraft to cooperate with the FAA's efforts to collect evaluation information regarding the safety, utility, efficiency, and effectiveness of Capstone avionics and flight information services. These efforts will include periodic interviews by FAA personnel and contract representatives and the completion of survey questionnaires or forms that FAA agrees will not be burdensome or significantly increase a pilot's workload in the cockpit.
2. This agreement shall remain in effect until December 31, 2002 or as addressed in paragraph 7.
3. Owner shall install, or have installed by an FAA-approved vendor, the Capstone avionics suite in the above aircraft within sixty (60) days from the date the avionics are delivered to the Owner. FAA will attempt to schedule avionics delivery on a date coordinated with the Owner. In the case of Owner-installed avionics, FAA will pay the Owner \_\_\_\_\_ dollars (\$\_\_\_\_\_) for reimbursement of avionics installation costs. When the Capstone avionics are installed by an FAA-approved vendor, FAA will pay the vendor directly. When Owner or vendor requests payment, they shall submit a detailed bill or invoice for the installation services and a copy of the FAA-approved Form 337 authorizing the aircraft's return to service following installation of the Capstone avionics suite.
4. Owner shall require each pilot of the above Capstone-equipped aircraft to complete the FAA-approved training course for operation of Capstone avionics. Training must be completed in advance of piloting the equipped aircraft. For small operators, FAA will train the operator/pilot. For operators with a trainer, FAA will train the trainer only. FAA will present this course in Anchorage and Bethel. There will be no charge to attend the FAA course, but the Owner is responsible for any travel and living expenses associated with attendance. Once an operator's trainer has completed the Capstone training program, he/she may deliver Capstone training to company pilots as part of an FAA-approved training program. FAA-approved training materials will be provided to the trainer at no cost. If necessary, additional free FAA training courses will be offered periodically during the three-year agreement as the program budget will permit.
5. During the three-year period of this agreement, the avionics suite shall remain FAA property. At the conclusion of this agreement, avionics ownership will be decided as follows:

FAA will determine:

- a. The current, depreciated, marketplace value of the Capstone avionics suite,
- b. The cost to remove the suite from the aircraft. The cost to remove the avionics suite will include the cost to restore the aircraft to its original airworthy condition, including re-weighing, ferry expense, and down-time, but will not include essentially cosmetic items such as filling screw holes and/or covering any hole in the aircraft panel where the avionics suite was installed, and
- c. The cost to preserve, pack, insure, and ship the avionics suite to FAA in Anchorage.

Using the above values and costs, FAA will calculate the **net value, N**, stated in dollars, of the avionics suite. The **net value, N**, is defined as the current, depreciated, marketplace value (item a.) minus the cost to remove the avionics (item b.), minus the shipping costs (item c.) ( $N = a - b - c$ )

The **net value, N**, of the Capstone avionics suite will be used to determine its disposition as specified in one of the following three alternatives:

- (1) If the **net value, N**, is less than or equal to zero ( $N \leq 0$ ), the avionics suite will be transferred to the aircraft Owner at no cost.

(2) If the **net value, N**, is greater than zero ( $N > 0$ ), and the Owner wants to retain the equipment, the aircraft Owner will be given the option to purchase the Capstone avionics suite from FAA for its **net value, N**.

(3) If the **net value, N**, is greater than zero ( $N > 0$ ), and the Owner decides not to purchase the avionics suite, it must be removed from the aircraft by the owner and returned to FAA. FAA will reimburse the Owner the sum of items b. and c., above, for removal of the avionics. When requesting reimbursement, Owner shall submit a detailed bill or invoice for the removal and shipping costs and a copy of the FAA-approved Form 337 authorizing the aircraft's return to service following removal of the Capstone avionics suite.

6. If, during the time of this agreement, the aircraft is sold or otherwise transferred to a new owner who will continue to operate the aircraft in the Capstone demonstration area and who will agree to assume the Owner responsibilities specified herein and continue with participation in the Capstone Program under this agreement, the avionics will be left in the aircraft for the duration of this agreement period. At the conclusion of the agreement, disposition of the avionics will be determined by the new owner and FAA as prescribed in Paragraph 5, above.
7. If, during the time of this agreement, the aircraft is sold, or otherwise transferred to a new owner who will not continue to operate the aircraft in the Capstone demonstration area, or does not agree to participate in the Capstone Program under the terms of this agreement, the Capstone avionics must be removed and returned to FAA by the original aircraft Owner. Avionics removal and shipping costs shall be the sole responsibility of the original aircraft Owner. As an alternative to removal and return of the avionics, FAA may be reimbursed the current depreciated marketplace value of the avionics as determined in Paragraph 5, above.
8. During the time of this agreement, FAA will be responsible for maintenance of the Capstone avionics and for payment of any subscription fees for commercial vendor Flight Information Services (FIS) provided through the Capstone system. After the three-year Capstone demonstration period has been completed, the aircraft Owner shall become responsible for maintenance and payment of FIS subscription fees if the Owner elects to continue these services.
9. If any Capstone avionics malfunction occurs, the Owner shall report the problem to FAA within 48 hours and follow FAA procedures to have the avionics repaired or replaced promptly under warranty or at FAA's expense. Any aircraft down-time for this maintenance will not be reimbursed.
10. The Owner shall not be responsible for any damage to, or loss of, the Capstone avionics suite through an accident, fire, or vandalism, unless damage or loss was caused by negligence of the Owner or persons operating or maintaining the above aircraft with his permission or at his direction. If any insurance settlement paid to the Owner includes an amount for loss of, or damage to, the Capstone avionics, FAA shall be reimbursed by that amount.
11. The Owner has reviewed the attached "General Information for Participating Aircraft Owners" which provides a general description of the Capstone Program. FAA agrees to work with participating aircraft owners but reserves the right to make program changes as the need may arise.

**Agreed by:**

\_\_\_\_\_  
**Aircraft Owner**

\_\_\_\_\_  
**Date**

**Approved by:**

\_\_\_\_\_  
**Ellis R. McElroy**  
**FAA Capstone Program**

\_\_\_\_\_  
**Date**

**General Information**  
for  
**Participating Aircraft Owners**

**Federal Aviation Administration's Capstone Program**

**Program Description.** The Federal Aviation Administration's (FAA's) Capstone Program is a voluntary safety initiative involving the installation of government-purchased avionics suites in small commercial service aircraft based or operating in the Yukon-Kuskokwim Delta area of western Alaska. A limited number of governmental aircraft and large commercial service cargo airplanes may also be equipped. Pilots of participating aircraft will contribute information to help assess the safety impacts of the avionics equipment and services and to support development of more efficient procedures.

**Owner Agreement.** A formal agreement will be used to document terms and conditions of the Capstone Program and identify responsibilities of the FAA, participating aircraft owners, and pilots.

**Capstone Program Goals.** The program's primary goal is to reduce the incidence of aircraft accidents by improving the pilot's situational awareness through modern avionics and services. In particular, the program is intended to reduce the incidence of controlled-flight-into-terrain (CFIT), mid-air collision, and weather-related accidents. Eventually, the Capstone avionics should also permit implementation of more efficient flight procedures and air traffic control services.

**Program Schedule.** The Capstone Program test and evaluation period will span a total of three years. Aircraft owners will be invited to participate during the summer of 1999. Aircraft will be equipped with avionics beginning in December, 1999. The Capstone Safety Study evaluation period will begin on January 1, 2000, and data will be collected for three years.

**Visual Flight Rules (VFR) Equipment and Flight Information Services (FIS).** The Capstone avionics, ground equipment, and flight information services provided by FAA will be used as VFR aids to supplement airplane systems and equipment already in use. The equipment shall not be used as the sole means for navigation.

**Number and Type of Participating Aircraft.** The total number of participating aircraft will be limited by available funding. Congress appropriated \$4 million for purchase, installation, and maintenance of avionics equipment. Up to 200 aircraft may be equipped with the Capstone avionics suite. The procurement cost of the avionics will be limited to a price range considered reasonable, customary and appropriate for small, single-engine, propeller-driven aircraft. The exact number of avionics suites to be made available will be determined after all costs are known, or estimated, for purchase, installation, maintenance, software data updates, and similar related expenses. It is, therefore, important that eligible aircraft owners decide as soon as possible if they are interested in participating in the Capstone Program. A limited number of large cargo aircraft and governmental aircraft may also be considered.

**Avionics Suites.** The avionics suite will include a Global Positioning System-based (GPS-based) navigation system, an on-board computer with terrain data base, automatic dependent surveillance-broadcast (ADS-B) service, a data link receiver/transmitter with antenna(s), and a multifunction display (MFD). The MFD will be capable of displaying a moving map, terrain conflicts, fused ADS-B/radar targets representing the position and altitude of other nearby aircraft, weather text and graphics. The Capstone system should enable a dispatcher's office to flight follow his/her participating aircraft within the Capstone service area.

**Ground Based Equipment.** FAA will install approximately 12 ground based data link transceiver stations in the evaluation area. Data Link messages will be communicated to the Anchorage ARTCC using commercial telecommunications and the FAA's ANICS.

**Aircraft Selection.** The FAA, considering recommended criteria developed by a consultant, will select and invite commercial air carriers operating within the Capstone Program area to participate on a voluntary basis. As explained above, up to 200 aircraft will be selected based on the procurement cost of the avionics and other related cost factors. A small number of governmental aircraft may be included in the program.

**(continued)**

**Avionics Installation and Reimbursement.** The FAA will determine, with input from repair stations and avionics dealers, a dollar value representing the typical installation cost for the Capstone avionics suite in particular aircraft types or categories. Each participating aircraft owner will indicate a preferred avionics installer and suggested installation dates. Based on this information and other considerations, FAA will develop a Capstone Installation Master List for all participating aircraft. FAA will issue detailed installation procedures for the aircraft owner and installer to follow.

**Flight Information Services.** Basic Flight Information Services (FIS) text messages will be transmitted at no cost for display on the aircraft's MFD via the ground data link transceiver stations. When enhanced weather services become available, FAA will pay the subscription fee for participating aircraft for the duration of the Capstone Program. After the program is concluded, the subscription fee for enhanced FIS products will become the responsibility of the aircraft owner. Other possibilities include the transmission of television pictures of weather at Capstone airports.

**GPS Approaches to Capstone Airports.** Approximately 10 village airports in the Capstone demonstration area will be equipped with automated weather observation equipment and will be provided first-time non-precision GPS approach procedures. Approach minimums will be relatively high.

**Safety Evaluation.** Pilots of aircraft volunteered for participation in the Capstone Program will be trained and required to assist with an independent safety evaluation program to assess the benefits of the avionics and services. Pilots will need to respond to written surveys and interviews on a periodic basis during the Capstone evaluation period of three years beginning January 1, 2000.

**Procedures Development, Testing, and Evaluation.** As experience and confidence is gained, new, more efficient procedures may be developed, tested, and evaluated. Pilots of aircraft volunteered for participation in the Capstone Program will be asked to recommend new or more efficient procedures enabled by Capstone avionics. Such procedures can be demonstrated, tested, and evaluated during program.

**Training.** The FAA will contract with the University of Alaska pilot training. All pilots who will operate Capstone-equipped aircraft must be trained. Training will consist of classroom instruction, simulator training, and possibly flight training. Training for pilots and training officers will be presented both in Anchorage and Bethel.

**Avionics Ownership.** The Capstone avionics suites will remain government equipment for the duration of the evaluation program. Terms for ownership transfer of the avionics to others are specified in the Aircraft Owner Agreement.

**Removal of Aircraft from the Capstone Program.** If an aircraft owner elects to remove an aircraft from the Capstone Program before completion of the evaluation, the owner will be responsible for the cost of removal and return of the avionics equipment in good condition to the FAA.

**Avionics Maintenance.** During the Capstone Program, the avionics equipment will be maintained at FAA's expense. When the Capstone Program is completed, if avionics are transferred to the aircraft owner, maintenance, including any required software updates, will become the aircraft owner's responsibility.

**Equipment Failure.** In the event Capstone avionics equipment should fail or malfunction, the pilot or owner shall notify FAA in accordance with the owner agreement.

**FAA Services to Continue.** After the Capstone Program is completed, FAA intends to continue providing the ADS-B services and basic FIS services, at no cost to aircraft owners, until such service is replaced, or superseded, by a new or improved national standard service. If, in the future, Capstone avionics must be modified, or replaced, to utilize such a new service, the modification cost shall be the aircraft owner's responsibility. After the Capstone Program, if the aircraft owner retains the Capstone avionics, the aircraft owner will become financially responsible for any future modification of the avionics equipment including routine software maintenance, data base updates for terrain, navigation, and FIS systems, and for subscription fees for enhanced FIS products.

\* \* \* \* \*



**Federal Aviation Administration, Capstone Program Office**  
**801 B Street, Suite 500**  
**Anchorage, Alaska 99501**  
**907-271-1338 Voice, 907-271-1340 Fax**

**Avionics Installation Procedures for Aircraft Owner/Operator and Installer**

**Aircraft Owner/Operator**

1. The Aircraft owner/operator shall complete and sign a “**Letter of Intent to Install Capstone Avionics.**” The letter of intent shall be mailed to the Capstone Program Office where a Capstone Representative will sign and date the form. A copy of the form will be returned to the aircraft owner/operator. Only one Letter of intent is required even if more than one aircraft will be proposed for the Capstone Program.
2. The aircraft owner/operator shall complete and return a “**Capstone Program Avionics Installation Fax-Back Form**” to the Capstone Program Office, via fax or mail. The required information must be provided for each proposed aircraft. The aircraft owner/operator should retain a copy of the form for his/her use.
3. After review of the Fax-Back Forms, the Capstone Program Office will analyze the preferred installer’s capacity and the avionics delivery schedule in order to place each aircraft on the “**Capstone Installation Master List.**” Aircraft will be prioritized on the Installation Master List based on information provided by the aircraft owner/operator. The Capstone Installation Master List will indicate the aircraft type and identification number, the aircraft owner/operator, the assigned installer, and the scheduled week for installation of Capstone avionics. Based on the avionics delivery schedule and installation capacity factors, it may be necessary to assign a different installer than requested on the Fax-Back Form.
4. The Capstone Program Office will notify the aircraft owner/operator and assigned installer in writing of the scheduled installation date for each aircraft on the Installation Master List.
5. The aircraft owner/operator must contact the assigned installer to arrange for an advance assessment for each proposed aircraft. All avionics installation work must be accomplished in accordance with Federal Aviation Regulations by an appropriate FAA-certificated source. Based on the assessment, the installer shall prepare a “**Draft Work Order and Cost Estimate**” to accomplish the avionics installation. NOTE: The Capstone avionics system is FAA-approved for VFR installations. Any additional installation cost for IFR certification of the GPS installation shall be borne by the aircraft owner/operator. The FAA will pay a reasonable installation cost for an aircraft in typical condition. Any additional expense necessary to “clean-up” or reconstruct an aircraft’s panel must be borne by the aircraft owner/operator. If the aircraft owner/operator is not willing to pay that additional expense, the aircraft must be withdrawn from the program. The owner/operator may then propose a substitute aircraft.) The installer will be required to mail the draft work order and cost estimate directly to the Capstone Program Office for review and approval. The installer must also provide a copy of the draft work order and cost estimate to the aircraft owner/operator.
6. FAA will forward to the aircraft owner/operator a “**Capstone Program Aircraft Owner Agreement**” specifically prepared for each aircraft proposed for the Capstone Program. The aircraft owner/operator must sign and date the agreement and return it by mail to the Capstone Program Office. FAA will mail a copy of the approved agreement to the aircraft owner.

## Avionics Installer

1. The preferred installer must assess the aircraft and prepare a **draft work order and cost estimate** to accomplish the Capstone avionics suite installation. The draft work order and cost estimate shall be mailed to the Capstone Program Office for review and approval with copies provided directly to the aircraft owner/operator. The installer shall also identify to the Capstone Program Office at 907-271-1338 the person who will be responsible for receipt and inspection of Capstone avionics shipments and the correct shipping address.
2. FAA has determined the fair and reasonable time and cost for VFR installation of the Capstone avionics suite in typical aircraft models involved in the program by market survey and preliminary installations. The Capstone Program Office will review the draft work order and cost estimate. If FAA determines the draft work order and cost estimate are reasonable, it will advise both the installer and the aircraft owner/operator in writing of **FAA Approval to Proceed with Avionics Installation**. Upon written notification of approval by the Capstone Program Office, the installer is authorized to accomplish the avionics installation.
3. If FAA determines the installer's estimated installation cost or time for a specific aircraft exceeds the fair and reasonable amount due to the aircraft's condition, other installed equipment, or extenuating circumstance, FAA will notify the installer and the aircraft owner/operator. The aircraft owner/operator must agree to pay the cost difference for that installation or withdraw that aircraft from the Capstone Program. The operator will be given the opportunity to nominate a substitute aircraft. If an aircraft is withdrawn from the Capstone Program, the FAA will negotiate and pay the installer a reasonable fee for conducting the assessment and preparing the draft work order and cost estimate.
4. A provisioning Supplemental Type Certificate (STC) has been approved to permit accelerated installation of a portion of the Capstone avionics suite. The STC permits installation of the GPS nav/com, all required antennas, cables, and mounting hardware. The aircraft may then be returned to revenue service. The Capstone multifunction display and UAT transceiver can be mounted and connected to cables when that equipment becomes available. Aircraft owners/operators are encouraged to notify FAA of situations where this two-phase installation approach may be useful, such as when an aircraft has to be removed from service for unscheduled maintenance.
5. The Capstone avionics suite for each aircraft will be shipped by UPS Aviation Technologies, freight on board, direct to the approved installer. The entire avionics suite, together with its installation kit and instructions, will be included in a single package. The avionics suites will be shipped via United Parcel Service (UPS). The three major components of the avionics suite (the multi-function display, the nav/com, and the UAT transceiver) will be identified with a unique serial number assigned for each specific aircraft by tail number.
6. When the installer receives the avionics shipment, he/she must inspect the package and sign the **UPS Shipping Receipt** noting any signs of damage. The installer shall also inventory the shipment to ensure completeness. If any indication of damage is noted, or if the shipment is incomplete, the installer must immediately notify the Capstone Program Office at 907-271-1338. Within five (5) work days of shipment receipt, the installer must complete and forward the **Receiving Report, FAA Form 4650-15**, to Karla Shaw, Contracting Officer, Federal Aviation Administration, AAL-59A, 222 West 7<sup>th</sup> Avenue, # 14, Anchorage, Alaska 99513-7987. FAA will provide a sample of the completed form for guidance. Following receipt of the shipment, installer shall be responsible for security of Capstone avionics equipment.

7. Within 60 calendar days of delivery, the installer shall install the Capstone avionics suite in the aircraft, per his/her FAA-approved work order and cost estimate, in accordance with the manufacturer's instructions. If technical assistance is required, the installer shall contact the designated UPS Aviation Technologies representative. If unforeseen conditions are discovered within the aircraft during the avionics installation that will adversely affect the cost or schedule for the work, the installer shall immediately notify the Capstone Program Office at 907-271-1338 and request guidance.

8. When installation of the avionics suite has been completed, and the aircraft has been returned to service, the installer may request payment from FAA. The installer shall submit the following documents to Karla Shaw, Contracting Officer, Federal Aviation Administration, AAL-59A, 222 West 7<sup>th</sup> Avenue, # 14, Anchorage, Alaska 99513-7987: (a) An **Original Invoice** for the installation amount, (b) **FAA written notification of the approved work order and cost estimate**, (c) A xerox copy of **FAA Form 337** returning the aircraft to service (the original Form 337 is to be submitted directly to the appropriate FSDO per routine procedures), and (d) **Material Requisition/Issue/Receipt, FAA Form 4650-12**, completed with the aircraft identification number and the serial numbers of the installed multi-function display, nav/com, and UAT transceiver. FAA will provide a sample Form 4650-12 filled-in for guidance.

# Capstone Aircraft Prioritization Process

## Background

The Federal Aviation Administration retained the services of an independent consultant to develop an avionics installation program strategy and plan for the Capstone Program. The consultant interviewed aircraft owners/operators and avionics installers in Alaska to determine how the avionics could be installed as quickly and economically as possible taking advantage of scheduled aircraft maintenance and other owner schedule preferences. The consultant was also tasked with developing a recommended process to prioritize aircraft installations should owner/operator requests for a particular time slot or installer exceed the available program capacity due to avionics delivery limitations or installer limitations.

Each participating aircraft will be placed on the Capstone Installation Master List with an indication of the preferred installer and the scheduled installation week (specified by the month and day of the Monday of that week, e.g., "1/17").

The planning for avionics installations and the final installation schedule are governed by the following five factors which will vary by week:

- a. The number of avionics ship sets delivered by UPS Aviation Technologies.
- b. The capacity of the installers to make Capstone installations during that week.
- c. The dates selected by operators to minimize their costs, including scheduling downtime for the avionics installation during a scheduled major maintenance activity.
- d. The priority system selected to accommodate operator installation preferences that exceed available installation capacity or avionics deliveries in that week.
- e. A contingency system to account for unplanned changes in: avionics delivery schedules, actual installation capacity, or operator aircraft availability.

## Avionics Installation Prioritization Process

Whenever more installations are requested by aircraft owners/operators than available capacity will permit, either because of avionics delivery limitations or because of avionics installer limitations, aircraft will be prioritized by the FAA Capstone Program Office based on a balanced consideration of all of the following factors:

1. Annual flight hours in the Bethel area.
2. Whether the aircraft is based at Bethel.
3. Whether it has a scheduled major maintenance activity the week requested.
4. Alphabetical order by name of operator.

\* \* \* \* \*

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
RECEIVING REPORT**

WEIGHT	NUMBER OF PACKAGES	PURCHASE ORDER NUMBER <b>N/A</b>	CONTRACTING OFFICE <b>AAL-59A</b>
DELIVER TO <b>N/A</b>	CONTRACT NO. <b>DTFA04-99-C-30075</b>	DISCOUNT TERMS <b>N/A</b>	receipts are <input type="checkbox"/> Partial No. <input type="checkbox"/> Complete <input type="checkbox"/> Final
F O B POINT <b>N/A</b>	CARRIERS (S) <b>UPS</b>	BILL OF LADING NUMBER <b>N/A</b>	

RECEIVED BY	PAYING OFFICE <b>FAA AAL-42C 222 West 7th Ave. #14 Anchorage, AK 99513</b>
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RECEIVED FROM ( <i>shipper</i> ) <b>UPS Aviation Technologies 2345 Turner Road SE Salem, Or 97302</b>	ACCOUNTING DATA <b>N/A</b>
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ITEM NO.	CATALOG NUMBER	ARTICLE OR SERVICE	QUANTITY RECEIVED	UNIT	UNIT PRICE	AMOUNT
1		<b>a. MFD/Data Link without CDI Encoder and OBS Hold Switch</b>  <b>Serial numbers:</b>  <b>MFD: _____ Datalink _____</b>  <b>MFD: _____ Datalink _____</b>  <b>MFD: _____ Datalink _____</b>  <b>b. GPS(GX60) Serial Numbers:</b>  <b>GPS: _____</b>  <b>GPS: _____</b>  <b>GPS: _____</b>		ea	<b>\$11,480.00</b>	
				ea	<b>\$3,245.00</b>	
2		<b>Installation Kits W/Altitude Encoder</b>		ea	<b>\$1,660.00</b>	
3		<b>Subscriptions For Navigational Database</b>		ea	<b>\$3,000.00</b>	

I certify that the articles or service indicated in the "Quantity Received" column were received on (Date) _____ and in the quantity and quality specified, or the services have been performed as stated, except as noted under "Remarks."  Signature ( <i>in ink</i> ) _____ Title _____ Organization _____	REMARKS          <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">PAGE 1 OF</td> <td style="width: 25%;">PAGES</td> <td style="width: 25%;">INVENTORY TYPE</td> <td style="width: 25%;">DATE</td> </tr> </table>	PAGE 1 OF	PAGES	INVENTORY TYPE	DATE	TOTAL FOR ALL PAGES          VOUCHER NUMBER
PAGE 1 OF	PAGES	INVENTORY TYPE	DATE			

# SAMPLE

## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION RECEIVING REPORT

WEIGHT <b>600</b>	NUMBER OF PACKAGES <b>6</b>	PURCHASE ORDER NUMBER <b>N/A</b>	CONTRACTING OFFICE <b>AAL-59A</b>
DELIVER TO <b>N/A</b>	CONTRACT NO. <b>DTFA04-99-C-30075</b>	DISCOUNT TERMS <b>N/A</b>	receipts are <input type="checkbox"/> Partial No. <input type="checkbox"/> Complete <input type="checkbox"/> Final
F O B POINT <b>N/A</b>	CARRIERS (S) <b>UPS</b>		BILL OF LADING NUMBER <b>N/A</b>

RECEIVED BY <b>Your Company Your Street Your City, State, Zip</b>	PAYING OFFICE <b>FAA AAL-42C 222 West 7th Ave. #14 Anchorage, AK 99513</b>
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RECEIVED FROM ( <i>shipper</i> ) <b>UPS Aviation Technologies 2345 Turner Road SE Salem, Or 97302</b>	ACCOUNTING DATA <b>N/A</b>
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ITEM NO.	CATALOG NUMBER	ARTICLE OR SERVICE	QUANTITY RECEIVED	UNIT	UNIT PRICE	AMOUNT
<b>1</b>		<b>a. MFD/Data Link without CDI Encoder and OBS Hold Switch</b>	<b>3</b>	<b>ea</b>	<b>\$11,480.00</b>	
		<b>Serial numbers:</b>  <b>MFD: _____ Datalink _____</b>  <b>MFD: _____ Datalink _____</b>  <b>MFD: _____ Datalink _____</b>				
		<b>b. GPS(GX60) Serial Numbers:</b>	<b>3</b>	<b>ea</b>	<b>\$3,245.00</b>	
		<b>GPS: _____</b>				
		<b>GPS: _____</b>				
		<b>GPS: _____</b>				
<b>2</b>		<b>Installation Kits W/Altitude Encoder</b>	<b>3</b>	<b>ea</b>	<b>\$1,660.00</b>	
<b>3</b>		<b>Subscriptions For Navigational Database</b>	<b>3</b>	<b>ea</b>	<b>\$3,000.00</b>	

I certify that the articles or service indicated in the "Quantity Received" column were received on (Date) <b>00/00/00</b> and in the quantity and quality specified, or the services have been performed as stated, except as noted under "Remarks."	REMARKS          	TOTAL FOR ALL PAGES
Signature ( <i>in ink</i> ) _____ Title <b>Manager</b> Organization <b>ABC Aviation Installation</b>	INVENTORY TYPE _____ DATE _____ PAGE 1 OF _____ PAGES	VOUCHER NUMBER _____

## MATERIEL REQUISITION/ISSUE/RECEIPT

**Type of Transaction** ("X" one)  Project Materiel  Other (*specify*)  
 Operating Materiel  In Use Personal Property  
**CAPSTONE EQUIPMENT**

### PART A — REQUISITION TRANSFER

Trans		Voucher Number				Supply Support Code				Cost Center			
Requisition Number		COND. CODE	Job Order Number				Date Required		PRI	Facility Type			
Approved by/Title N/A				Outgoing No. N/A		Incoming No. N/A		Date					
N/A				Method of Shipment (Include final carrier, if known) N/A				Batch No. N/A					
Mark For N/A			Date Installed		GBL Number N/A			No. Of Packages N/A					
SHIP TO (Consignee)						FROM (Consignor)							

### PART B — PROJECT MATERIEL KEY PUNCH SOURCE DATA

RG	AR	Cost Center	MC	Cost Code	Job Order	GSA Address	WH	FS	Trans	TR	Contract/Document No.	PC

### PART C — UNIT IDENTIFICATION

Item No.	National Stock No.	Equipment Type	Item Description	Asset	Quantity	UI	Unit Price	Total Cost
1	MFD SERIAL NO.   DATALINK SERIAL NO.   GPS (GX50) SERIAL NO		a. MFD/DATALINK w/o CDI ENCODER & OBS HOLD SWITCH          c. GPS (GX60)		1          1	ea          ea	\$11,480.00          \$3,245.00	
<b>Aircraft Type And Tail Number:</b> _____								

### PART D — IN USE PERSONAL PROPERTY KEY PUNCH SOURCE DATA

ATS Loc	Std. Fac. Ident.	OW	R	A	Cost Center	Atc'n. Date	Document No.	Trans.

Accounting Classification N/A		Reimbursement Required <input type="checkbox"/> Yes <input type="checkbox"/> No		Total	
All Items Received, Except As Noted ( <i>Signature</i> )			Title		Date

# SAMPLE

MATERIEL REQUISITION/ISSUE/RECEIPT													
<b>Type of Transaction</b> ("X" one)		<input type="checkbox"/> Project Materiel <input type="checkbox"/> Operating Materiel <input type="checkbox"/> In Use Personal Property				<input checked="" type="checkbox"/> Other (specify) <b>CAPSTONE EQUIPMENT</b>							
PART A — REQUISITION TRANSFER													
Trans		Voucher Number				Supply Support Code				Cost Center			
Requisition Number		COND. CODE	Job Order Number				Date Required		PRI	Facility Type			
Approved by/Title N/A						Outgoing No. N/A		Incoming No. N/A		Date			
N/A						Method of Shipment (Include final carrier, if known) N/A				Batch No. N/A			
Mark For N/A			Date Installed 12/15/99		GBL Number N/A				No. Of Packages N/A				
SHIP TO (Consignee) Operator Name Operator Address						FROM (Consignor) Installer Name Installer Address							
PART B — PROJECT MATERIEL KEY PUNCH SOURCE DATA													
RG	AR	Cost Center	MC	Cost Code	Job Order	GSA Address	WH	FS	Trans	TR	Contract/Document No.		PC
S A M P L E													
PART C — UNIT IDENTIFICATION													
Item No.	National Stock No.	Equipment Type	Item Description	Asset	Quantity	UI	Unit Price	Total Cost					
1	MFD SERIAL NO. <hr/>		a. MFD/DATALINK w/o CDI ENCODER & OBS HOLD SWITCH		1	ea	\$11,480.00						
	DATALINK SERIAL NO. <hr/>												
	GPS (GX60) SERIAL NO <hr/>		c. GPS (GX60)		1	ea	\$3,245.00						
Aircraft Type And Tail Number:													
PART D — IN USE PERSONAL PROPERTY KEY PUNCH SOURCE DATA													
ATS Loc		Std. Fac. Ident.		OW	R	A	Cost Center		Atc'n. Date		Document No.		Trans.
Accounting Classification N/A							Reimbursement Required <input type="checkbox"/> Yes <input type="checkbox"/> No			Total			
All Items Received, Except As Noted (Signature) <b>Owner/Operator signs here</b>							Title <b>Owner/Operator Title</b>			Date <b>Date Signed</b>			

SAMPLE



# MATERIEL REQUISITION / ISSUE / RECEIPT - CONTINUATION

DATE PREPARED

<b>Type of Transaction</b> <i>("X" one)</i>	<input type="checkbox"/> Project Materiel <input type="checkbox"/> Operating Materiel <input type="checkbox"/> In Use Personal Property	<input type="checkbox"/> Other ( <i>specify</i> )
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**REFERENCE** (*Fill in one*)

REQUISITION NO.	OUTGOING NO.	INCOMING/DOCUMENT NO.
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**PART C — UNIT IDENTIFICATION / RECEIVING REPORT**

ITEM NO.	NATIONAL STOCK NO.	EQUIPMENT TYPE	ITEM DESCRIPTION	ASSET	QUANTITY	UI	UNIT PRICE	TOTAL COST
							TOTAL	