

SECTION I - PREPARATION AND TOOLS

INTRODUCTION:

One of the many important steps in scheduling a U.S. Coast Guard Auxiliary Aids to Navigation and/or Chart Updating (ATON/CU) Program patrol or mission is PREPARATION. Several adverse conditions/occurrences could affect the successful performance of an ATON/CU patrol or mission, i. e., crew proficiency (state of crew training and qualification), insufficient or improper equipment, weather conditions, etc. Participating Auxiliary members must be properly trained and equipped to conduct successful ATON/CU patrols and missions.

OBJECTIVE:

1. To acquire a general knowledge of the responsibilities of the Auxiliary in the conduct of ATON/CU PATROLS and MISSIONS.
2. To become familiar with the preparation for an ATON/CU PATROL or MISSION.
3. To become familiar with the use of the tools and equipment required to support ATON/CU operations.

INFORMATION:

Preparation is the first step in conducting an ATON/CU patrol or mission. Accordingly, it is important to know that there are differences between an ATON/CU PATROL and an ATON/CU MISSION. They differ as follows:

- ATON/CU PATROL - Shall be performed aboard a properly equipped and crew-staffed operational facility (Surface or AIR, refer to notes). A surface patrol must be of at least four hours duration, and should be entered in AUXMIS under Type 03 of the ANSC 7030, Activity Report-Mission. An ATON/CU Patrol may be conducted under reimbursable or non-reimbursable orders. Members must be in proper PATROL uniform.
- ATON/CU MISSION - May be performed by one or more participating Auxiliary members. A privately owned vehicle or other conveyance may be used in the conduct of an ATON/CU mission. Mission must be accomplished within a 24-hour period and should be entered in AUXMIS under Mission type 30, 31, 32 or 41 on the ANSC 7030 - Activity Report-Mission. Member(s) must be in proper uniform for public appearance.

NOTE: When an ATON/CU mission is conducted as an OPERATIONAL SUPPORT MISSION aboard a properly equipped and crew-staffed operational facility, reimbursable or non-reimbursable orders may be used.

NOTE: An ATON/CU patrol or mission can be conducted under the "MULTI-MISSION"

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concept, e.g., in conjunction with a scheduled Safety Patrol, wherein the activities are so listed on the ANSC 7030 Activity Report-Mission, accordingly.

NOTE: When an ATON/CU patrol is authorized by the call-out authority and conducted in an Air facility, the proper reporting procedures must be established by the respective DIRAUX. This is because all Air Patrol time is reported as AIR OPERATIONS MISSIONS type on the ANSC 7030 Activity Report-Mission.

In preparing for an ATON/CU patrol or mission, consideration is given to the purpose(s) of the activity, the prevailing weather, water conditions, and any additional tasks to be accomplished during the operation. Consideration should be given to such activities as: checking or verifying aids to navigation (refer to Sections II, III, IV, V, XII and XIV), or updating charts (refer to Sections VI, VII, IX, X, XI, XII, XIII and XIV). While traveling to the patrol/mission area for a particular task, a prudent observer should also check each aid that is passed for possible discrepancies and the shoreline for any changes in chartable objects. That type of information is considered in preparing for a patrol or mission and deciding the type of tools or material that will be required.

Consideration of the type of equipment required for a CU patrol would be easy enough for an owner of an operational facility whose primary assignment was ATON/CU support, such as an AN Staff Officer (FSO-AN/SO-AN/DSO/AN). In cases where an AN observer is aboard a facility only for transportation, consideration should be given to the type of equipment, other than the usual vessel items, that will be needed to properly conduct any expected tasks.

The equipment required to support an ATON/CU patrol differs somewhat from that required to support an ATON/CU mission. For an ATON/CU mission involving visits to marine facilities for chart updating activities, a minimum amount of equipment would be required. However, if such on-shore missions include, say, determining the position of an aid to navigation from an on-shore location, then specific equipment needed to complete the task would be required.

The following provides a listing of items required to support ATON/CU patrol/mission contingency requirements:

- EQUIPMENT FOR TAKING OBSERVATIONS:

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| a. | Binoculars | Size 7 X 50 preferred. Some Binoculars have a built in Bearing Compass and Stadimeter. |
| b. | Time Piece | Two types preferred - standard type clock or watch, and stopwatch. Good practice to have capability to read the specific time of day and to time intervals. |
| c. | Hand Bearing Compass | Standard type - scale of not less than two degrees, stable and capable of night use. |

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• EQUIPMENT FOR TAKING OBSERVATIONS (con't):

- d. Sextant Observer's most important piece of equipment. Used to determine distance from an object, height of an object, and the angle between objects. Davis Mark 15 provides outstanding accuracy for chart update information.
- e. Calculator Facilitates calculations.
- f. Light List Current edition corrected with the latest changes (Notices to Mariners by the Coast Guard via "Broadcast" or published in the USCG District "Local Notice to Mariners" or DMAHTC (Defense Mapping Agency Hydrographic/Topographic Center) "Weekly Notice to Mariners"). Alternatively, reproduce pages needed during the observation.
- g. Coast Pilot Current edition corrected with the latest changes (Notices to Mariners). Alternatively, reproduce pages needed during the observation.
- h. Private Aids Information Private Aids Printout, Private Aids Application (CG-2554), or last report.
- i. Forms Supply of "Aids To Navigation Report" CG-5474 or Coast Guard District (oan) prepared forms originated from the District's "ATONIS" computer database printouts of aids, and "USCG AUX - NOS Cooperative Chart Updating Program" NOAA 77-5 forms. Consider using reproduced copies of these forms for field use. Also, there are several good work-sheets available or that can be developed for recording and calculating information.

NOTE: Throughout the AN/CU Study Guide the "Aids To Navigation Report" CG-5474 form is referred to as "CG-5474" and the "USCG AUX - NOS Cooperative Chart Updating Program" NOAA 77-5 form is referred to as "NOAA 77-5." Also, as applicable, any reference to the use of the CG-5474 may be supplemented with the respective Districts (oan) "ATONIS" aids database form.

• EQUIPMENT FOR PLOTTING THE OBSERVATIONS TAKEN:

- a. Pencil Number "2" is the recommended hardness - a device for sharpening is required.
- b. Parallel rule Several types are used for plotting.

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• EQUIPMENT FOR PLOTTING THE OBSERVATIONS TAKEN (con't):

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| c. | Three-Arm Protractor | Mandatory for plotting multi-angles from Sextant or bearing observations. Once the tool is set, lock the bearing using tape, clips or screws. |
| d. | Dividers | Used primarily as a measuring tool. |
| e. | Compass | Not a Bearing Compass, but a Compass for drawing circles. Must be large enough for the Chart that will be used. |
| f. | Chart No. 1 | Provides list of symbols, abbreviations and terms used on marine charts. |
| g. | Chart Board | Mandatory when chart work is to be accomplished while making the observations. Consideration given to the size of the Chart. |
| h. | Chart | Large Scale Chart of the area. (Nautical charts are being converted to the METRIC SYSTEM with the base unit expressed in meters .) |

Some AN Observers have fabricated additional types of instruments for ATON/CU activities use. Examples are: sounding poles for shallow depths, chain or wire drags for confirming sunken items and tools for measuring the degree of leaning aids.