

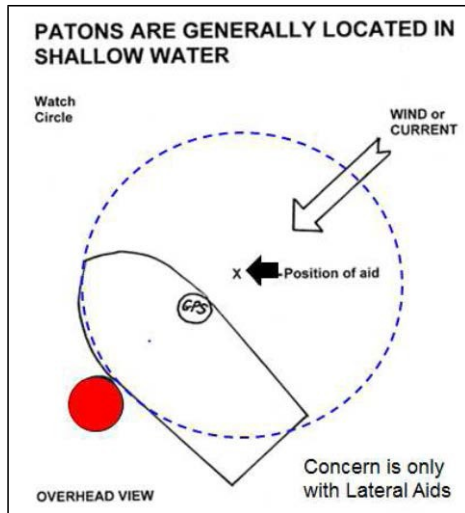
# D113 Quick AV “Handy-Dandy” PATON/Bridge Guide

**Note: Some Factors or Comments may not apply to your situation**

Factor	Comments
<p><b>1. Take the time to pre-plan your Patrol or Mission activity.</b></p>	<ul style="list-style-type: none"> <li>○ Review each <b>PATON Verification Sheet</b> for each scheduled PATON that you plan to verify.</li> <li>○ Review each <b>Bridge Survey report</b> for each scheduled Bridge that you plan to survey.</li> <li>○ <b>Print out</b> some EXCEL copies of the 7054 AtoN Report &amp; 7055 Bridge Report Forms. In case you need them while on the patrol or Mission at <a href="http://wow.uscgaux.info/content.php?unit=P-DEPT&amp;category=ns-forms-and-manuals">http://wow.uscgaux.info/content.php?unit=P-DEPT&amp;category=ns-forms-and-manuals</a></li> <li>○ You can <b>Print out</b> some of the D11 Bridge Survey Report Forms In case you need them while on the patrol or Mission at <a href="https://www.pacificarea.uscg.mil/Our-Organization/District-11/Prevention-Division/bridges/">https://www.pacificarea.uscg.mil/Our-Organization/District-11/Prevention-Division/bridges/</a></li> <li>○ <b>Print out</b> the section of the “<b>corrected</b>” <b>Light List</b> that covers the Federal Aids &amp; Private Aids in the patrol Area that you plan to cover on the patrol.</li> <li>○ Review each <b>specification page for each bridge</b> that you plan to survey on the patrol. Include the “Bridge Back Page.”</li> <li>○ <b>Sort the documents in the order that you plan to use them when on the patrol or Mission.</b></li> </ul> <p><b>Note:</b> If there are any groups of similar regulatory Class III PATON or other uncharted buoys in an area, pre-plot them on a chart or chart sections so that they can be easily distinguished when on</p>
<p><b>2. Prior to the Patrol or Mission, perform all the documentation Checks.</b></p>	<p><b>For PATONs</b> (Private Aids)</p> <ul style="list-style-type: none"> <li>○ Check that the Light List &amp; LNM and the charted position and symbols and abbreviations match the data in the PATON’s specification.</li> <li>○ Record all discrepancies found on the PATON Sheet. Use the “Further Comments Section” for additional information.</li> </ul> <p><b>For ATONs</b> (Federal Aids)</p> <ul style="list-style-type: none"> <li>○ Check that the LNM &amp; charted position and symbols and abbreviations match the data shown in the “<b>Current corrected</b>” <b>Light List</b>.</li> <li>○ Record all discrepancies on the “<b>7054 AtoN Report</b>”</li> </ul> <p><b>For Bridges</b></p> <ul style="list-style-type: none"> <li>○ Check that the charted position and symbols and waterway &amp; match the data in the D11 Bridge Survey specification form on the front &amp; back pages.</li> <li>○ Record all discrepancies found on the front &amp; back of the survey form. Use the “Further Comments Section” for additional information.</li> </ul>
<p><b>3. When you arrive at the OPFAC: (Vessel, Land Mobile or Aircraft).</b></p>	<p><b><u>SET YOURSELF UP FOR HIGH ACCURACY – NOT ERROR</u></b></p> <p><b>Validate</b> that all GPS sets aboard the OPFAC are set up correctly.</p> <ul style="list-style-type: none"> <li>○ WAAS is enabled.</li> <li>○ Reading in nautical miles.</li> <li>○ Lat/Long reading in Degrees, Minutes and Seconds – <b>DD-MM-SS.SS or DD-MM=SS.S</b></li> </ul> <p><b>Check</b> the Lat/Long readings on all GPS sets by placing them antenna to antenna.</p> <ul style="list-style-type: none"> <li>○ Record the results for the <b>Accuracy Statement</b>.</li> <li>○ Quarantine all equipment that is not operating accurately.</li> </ul> <p><b>Check</b> the accuracy of the echo sounder.</p> <ul style="list-style-type: none"> <li>○ Use a sounding pole, a lead line or a hand-held echo-sounder or by calculation. [Echo Sounder reading plus the correction for the transducer minus the estimated Height of Tide equals the Depth at Datum. Compare to the charted depth of the area.]</li> <li>○ Record the results for the <b>Accuracy Statement</b>.</li> </ul>
<p><b>4. Brief the AVs and crew on the plan for the Patrol or Mission.</b></p>	<p><b>Assign</b> specific responsibilities to each AV on board.</p> <ul style="list-style-type: none"> <li>○ Double check that they understand their duties clearly.</li> <li>○ <b>Any misunderstandings can lead to errors when on scene at the PATON or Bridge.</b></li> </ul>
<p><b>5. When you arrive on scene at a PATON or Bridge, evaluate the PATON or Bridge Specifications.</b></p>	<ul style="list-style-type: none"> <li>○ Does the observation of the physical characteristics of the PATON or Bridge match the specifications on the <b>PATON Sheet or D11 Bridge Survey Report</b>?</li> <li>○ If a lateral aid, does the observed physical characteristics of the PATON, match the IALA B Aid to Navigation System – color, shape, numbering, retro material and placement?</li> <li>○ If PATON is discrepant take a digital photo of the PATON and print it on the back of <b>PATON Sheet</b>.</li> <li>○ Record all discrepancies on the <b>PATON Sheet or Bridge Front &amp; Back Page</b>.</li> </ul>
<p><b>6. Determine whether the GPS’ is operating accurately.</b></p>	<ul style="list-style-type: none"> <li>○ Check that the GPS’ is operating in 3D – viewing 4 or more satellites. If not, wait until the satellite geometry adjusts itself. Record for the <b>Accuracy Statement</b>.</li> <li>○ Check that the “Accuracy” or “EPE” – Estimated Position Error is reading below 15 feet. If not, wait until the satellite geometry adjusts itself. Record for the <b>Accuracy Statement</b>.</li> </ul>
<p><b>7. Determine whether the Echo Sounder is operating accurately.</b></p>	<ul style="list-style-type: none"> <li>○ Add the correction for the position of the transducer to the echo sounder’s read out and subtract the HOT – Height of Tide. Compare the result to the charted depth in the area.</li> <li>○ If the answer is close, you have sanity checked your echo sounder. Record for the <b>Accuracy Statement</b>.</li> </ul>

## 8. Take a fix and depth at the PATON:

Do not guess or assume that A PATON is on or off station. Positioning of all lateral and fixed private aids reports must be 100% accurate.



**Plan to take depths and fixes at periods of high water when the watch circle is smaller, and it is a much safer practice.**

### For Fixed PATONS:

- **Off Station Criteria is 25 feet.**
- Take the fix close aboard the fixed aid as possible.
- If you can't get close aboard the PATON safely, estimate the distance that the fix was taken off the PATON and record in the "Comments Section".
- Using the "**Horizontal and Vertical Calculator**," determines the distance from the fix to the LAT/LONG in the PATON's specification.
- "**Horizontal and Vertical Calculator**," can be found at D11NR Navigation Systems web site at <http://www.uscgaux.info/content.php?unit=113&category=navigation-systems-1> under forms.
- Record all discrepancies on the "**PATON Sheet or 7054 AtoN Report**"

### For Floating Regulatory Buoys:

- **Off Station Criteria is 300 feet or more than 03"**
- **The position of this PATON is its mooring or anchor – not the buoy itself.**
- Regulatory buoys are not used for navigation; they reflect local ordinances; the aids are not listed in the Light List nor are they charted; so, **do not waste a lot of time positioning these PATONS (use Seaman's Eye).**
- A major discrepancy is when the regulatory PATON is deployed in the navigable channel.
- Record all discrepancies on "**PATON Sheet**" or **7054 AtoN Report** if PATON Sheet not available"

### For Floating Lateral Buoys:

- **Off Station Criteria is 50 feet.**
- **The position of this PATON is its mooring or anchor – not the buoy itself.**
- When needed for greater accuracy, compensate for the wind and current effect on the PATON's watch circle by taking readings up wind and current from the buoy so you are Statistically closer to the PATON's mooring and, therefore, more accurate. See the diagram at the left.
- Take readings from the side of the OPFAC away from the buoy and closer to the mooring.
- Using the "**Horizontal and Vertical Calculator**," determine the distance from the fix to the LAT/LONG in the PATON's specification. Record the results for the "Comments Section" on the **PATON Sheet or "7054 AtoN discrepancy Report."**
- Record all discrepancies on the "**PATON Sheet or 7054 AtoN Report**"
- "**Horizontal and Vertical Calculator**," can be found at D11NR Navigation Systems web site at <http://www.uscgaux.info/content.php?unit=113&category=navigation-systems-1> under forms.

## 9. Location Discrepancies:

**CIRCLE OR CHECK OFF THE APPROPRIATE DISCREPANCIES ON THE PATON SHEET.**

### PATON is Off Station

- PATON meets the Off-Station Criteria as verified by the "Vertical and Horizontal Error Calculator." [Observed Fix versus the permitted Lat/Long.
- Attach the "Vertical and Horizontal Error Calculator report."

### PATON is Adrift

- PATON is no longer attached to its mooring.
- Call the Sector for instructions. Record the instructions received in the "**PATON Sheet or 7054 AtoN Report**".

### PATON is Missing

- You have double checked the PATON position and cannot view the PATON.
- You are assured that the PATON is not off station.
- If a lateral PATON, notify the D11(dpw) PATON by phone E-mail

### PATON is not marking the best water

- Be sure to explain your reason for selecting this statement in the "Comments Section".
- Show a photo and/or a chartlet on your 7054 AtoN Report that explains your concerns.

## 10. PATON Condition Discrepancies

### PATON is sinking.

- Double check that the floating aid is sinking by waiting a period to observe any change.
- Notify the CG Sector by phone. Indicate that you called in the discrepancy, the date and time and the name of the contact in the "**PATON Sheet or 7054 AtoN Report**. Attach a photo of the aid as it appears as sinking.

### PATON is stranded.

- PATON is still attached to its mooring but the area surrounding the aid dries at some period of the tide.
- If a lateral aid, notify the CG SECTOR by phone. Indicate that you called in the discrepancy t h e date and time and the name of the contact in the "Comments Section" on your "**PATON Sheet or 7054 AtoN Report**
- Attach a photo of the aid to your report showing it as stranded.

<p><b>10. PATON Condition Discrepancies (cont.)</b></p>	<p><b>PATON is capsized.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Aid has lost its weight and is lying on its side.</li> <li><input type="radio"/> Attach a photo of the aid showing it as capsized.</li> </ul> <p><b>PATON is submerged.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Aid is attached to its mooring but is just below the waterline.</li> <li><input type="radio"/> This phenomenon happens in areas of fast current.</li> <li><input type="radio"/> Call the CG SECTOR if the aid is causing a hazard to navigation.</li> <li><input type="radio"/> Attach a photo of the aid showing it as submerged.</li> </ul> <p><b>PATON is damaged by vessel collision.</b></p> <p><b>PATON has been vandalized.</b></p> <p><b>Excessive bird fouling is compromising the color of a lateral aid.</b></p> <p><b>Peeling and rust is compromising the color of a lateral aid.</b></p> <p><b>Retro material is missing, peeling or inadequate.</b></p> <p><b>Numbers are missing on a lateral aid.</b></p> <p><b>Numbers are damaged or the wrong color. Explain in the “Comments Section.”</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Attach a discrepancy photo of the aid showing the problem on the aid with your report.</li> </ul> <p><b>Structure is leaning more than 15 degrees.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> This problem applies to fixed structures only. Report leaning floating aids as capsized.</li> <li><input type="radio"/> Attach a photo of the tilted structure with your report.</li> </ul> <p><b>Extensive deterioration and/or rotting members on a fixed structure.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> This problem applies to fixed structures only.</li> <li><input type="radio"/> Attach a photo of the damage with your report.</li> </ul>
<p><b>11. Lighted Discrepancies</b></p>	<p><b>Improper light characteristics on a lighted aid – Explain in the “Comments Section.”</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> If a lateral aid, call the CG SECTOR.</li> <li><input type="radio"/> This problem refers to the permitted flash characteristic and period between flashes.</li> </ul> <p><b>Light is obscured or extinguished on a lateral aid.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Call the CG SECTOR and advise them of the problem with the lateral aid.</li> <li><input type="radio"/> Indicate that you called in the discrepancy, the date and time and the name of the contact in the “Comments Section” on your report.</li> </ul> <p><b>Light is burning dim or at reduced intensity.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> This problem can occur later at night when the battery fails to fully charge due to solar panel problems.</li> <li><input type="radio"/> Sometimes this is weather related problem due to smog or haze. Do not report if this is the case.</li> </ul> <p><b>Light is obscured by a dayboard.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Attach a photo of the problem to your report.</li> <li><input type="radio"/> If a lateral aid, call the CG Sector and advise them of the problem.</li> </ul> <p><b>Lantern is Damaged.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Attach a photo showing the damage with your report.</li> </ul> <p><b>Lantern is missing.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Call the CG SECTOR and advise them of the problem.</li> <li><input type="radio"/> Indicate that you called in the discrepancy, the date and time and the name of the contact in the “Comments Section” on your report.</li> <li><input type="radio"/> Attach a photo showing the damage with your report.</li> </ul> <p><b>Solar Panel is damaged or incorrectly oriented.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Should be oriented toward the south.</li> <li><input type="radio"/> Attach a photo to your report showing the problem.</li> </ul> <p><b>Battery Pack is missing or damaged.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Note that new LED lanterns have self-contained batteries and solar panels. Do not report missing battery packs on these aids.</li> <li><input type="radio"/> Some aids, fitted with the new LED lanterns, with old hulls, may have fittings for vent pipes. Make sure that these fittings are capped or else these aids can sink.</li> </ul> <p><b>Missing Vent Valves.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> This is usually not a problem with typical private aids unless they are old CG hulls.</li> <li><input type="radio"/> If vent pipes are present; they must be capped or be fitted with vent valves.</li> </ul>

<p><b>12. Dayboard Discrepancies</b></p>	<p><b>Dayboard is missing or damaged</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> If a lateral aid and this is the sole dayboard on the Aid, call the CG SECTOR to advise them of the problem.</li> <li><input type="radio"/> Indicate that you called in the discrepancy, the date and time and the name of the contact in the "Comments Section" on your report.</li> <li><input type="radio"/> Attach a photo to your report showing the problem.</li> </ul> <p><b>Dayboard(s) are faded so that the permitted color is compromised.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> This is a subjective call.</li> <li><input type="radio"/> Attach a photo to your report showing the color discrepancy.</li> </ul> <p><b>Dayboard(s) are delaminating</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Attach a photo to your report showing the extent of the delaminating.</li> </ul> <p><b>Dayboard(s) are obscured by foliage or another object.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Attach a photo to your report indicating the problem.</li> <li><input type="radio"/> Include a chartlet that displays the bearings where the dayboard is obscured.</li> </ul> <p><b>Improper Dayboard(s) per data in the permit or on the Light List.</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> If a lateral aid, call the CG SECTOR to advise them of the problem.</li> <li><input type="radio"/> Indicate that you called in the discrepancy, the date and time and the name of the contact in the "Comments Section" on your report.</li> <li><input type="radio"/> Attach a photo to your report showing the discrepant dayboard.</li> </ul>
<p><b>13. Other Discrepancies</b></p>	<p><b>Sound Signal Discrepancy, see Comments</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Explain the problem in the "Comments Section" field.</li> </ul> <p><b>Radio Beacon is off the air or emitting the wrong signal.</b></p> <p><b>RACON is off the air</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Call the CG SECTOR to advise them of the problem.</li> <li><input type="radio"/> Indicate that you called in the discrepancy, the date and time and the name of the contact in the "Comments Section" on your report.</li> </ul>
<p><b>14. Comments Section.</b></p>	<ul style="list-style-type: none"> <li><input type="radio"/> Enter an explanation for any discrepancies where "Other, see Comments" was selected.</li> <li><input type="radio"/> Remember that your report is being transmitted to the Owner and the Coast Guard.</li> <li><input type="radio"/> Be accurate, credible and professional always.</li> </ul>
<p><b>15. Accuracy Statement</b></p>	<p><b>Here is a sample copy of the Standard Accuracy Statement</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> Keep a copy on your Desktop.</li> <li><input type="radio"/> Copy and paste your Accuracy Statement to this field.</li> <li><input type="radio"/> Update the Accuracy Statement for the data collected for the PATON that you are reporting.</li> </ul> <p>1. A <b>Garmin GPS 76 GPS with WAAS acquired, operating in 3D Differential was used to fix the aid. On-scene EPE was 8.0 feet. Pre-underway accuracy was checked with another GPS.</b></p> <p>2. A <b>Hummingbird Wide 100 echo sounder was used to take the depth. Pre-underway accuracy was checked at the dock with a hand-held echo sounder. Correction for the transducer is 0.8 feet.</b></p> <p>3. The reported fix and depth were taken approximately <b>10 feet from the aid.</b></p>
<p><b>16. Discrepancy Photos</b></p>	<p><b>Taken Photographs</b></p> <ul style="list-style-type: none"> <li><input type="radio"/> You should use a digital camera. Digital photograph can be easily e-mailed</li> <li><input type="radio"/> Digital photograph can be easily printed on the back of your "<b>PATON Sheet or 7054 AtoN Report.</b></li> <li><input type="radio"/> You may add multiple photos and chartlets to a single report.</li> </ul>
<p><b>17. 7030 AUXDATA Individual Activity Report – Unit/Individual &amp; Mission 30, 31, or 32 only.</b></p> <p><b>Note: Always use the 7030 E (E-Mail version) to your "IS" officer</b></p>	<p><b>When you complete your ATON, PATON &amp; Bridge activity e-mail your <u>INDIVIDUAL</u> 7030 report to FSO-IS Officer for entry into AUXDATA.</b></p> <p><b>(NOTE 1. If your ATON, PATON, Bridge activity was on an Orders Patrol, Make Sure Any Times Used Don't Coincide with Orders Patrol Times)</b></p> <p><b>(NOTE 2. If you're doing ATON, PATON, Bridge activity and <u>NOT</u> on an Orders Patrol. Record all time used on this Mission. (Portal to Portal)</b></p>

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