

# STP: Locating a ground fault in an airfield lighting series circuit

This STP provides competency-based training on locating a ground fault in an airfield lighting series circuit laid underground.

The trainee will learn how to carry out an earth fault inspection in around an hour using a new method. This new method uses a DC clamp-on Milliammeter and a DC high voltage (digital) tester. And it will be taught through classroom lecture and exercises in a laboratory. OJT is required in the airfield.

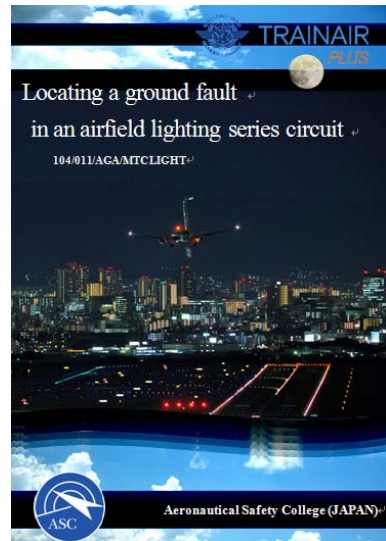
Using this method has some advantages: less work hours (compared with the traditional method), limited cable replacement, capability of preventive maintenance, etc.

The DC clamp-on Milliammeter, introduced in the STP, measures the feeble direct current at test points on the cable in joint boxes and several key points have to be covered for the investigation task to be successfully completed.

This method was developed by a JCAB engineer. Suffering from locating ground faults for about three decades, he looked for a method to shorten his work hours and to make it easier to find faulty cables or transformers in the middle of the night. He developed this method thanks to a new clamp-on device to measure feeble direct current.

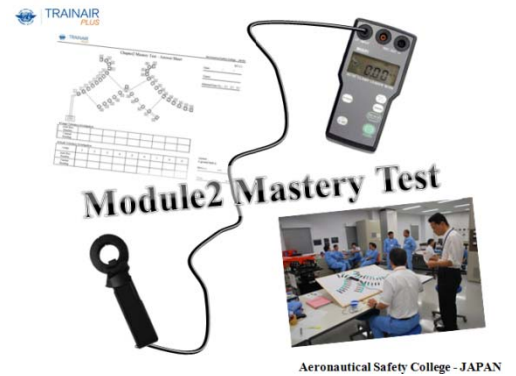


## TRAINAIR PLUS



This is great news for those who have suffered the same problem in airfield lighting series circuit maintenance.

The STP was officially developed using the procedure of ICAO TRAINAIR PLUS Training Development Guide (TDG). For more information, check your TRAINAIR Plus member site and click “Locating a ground fault in an airfield lighting series circuit.





◆ ICAO Home Page

⇒ <http://www.icao.int/safety/TrainairPlus/Pages/default.aspx>

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 TRAINAIR PLUS <b>Module 1 Intermediate Objectives</b>	 TRAINAIR PLUS <b>Module 2 Intermediate Objectives</b>
<ul style="list-style-type: none"><li>➢ Measure insulation resistance on an airfield lighting series circuit.</li><li>➢ Confirm that the measured insulation resistance reading is less than standard.</li><li>➢ Set-up a DC high voltage tester at a vault.</li><li>➢ Calculate the energized voltage.</li><li>➢ Set-up a fixture and a DC clamp-on ammeter at the test point selected.</li><li>➢ Energize a surveyed circuit with DC voltage.</li><li>➢ Measure the current at the test point selected.</li></ul>	<ul style="list-style-type: none"><li>➢ Select the most appropriate test points to be measured within the faulty ALSC.</li><li>➢ Draw a current flow map from the results of all measurements.</li><li>➢ Analyze the current flow map.</li><li>➢ Design new test points within the located range including a ground fault.</li><li>➢ Analyze the current flow map to select the successive test point.</li><li>➢ Determine the position of a ground fault (Cable or transformer.)</li></ul>