



ICAO

International Civil Aviation Organization
Asia and Pacific Office

**Tenth Meeting of the Asia Pacific Accident Investigation Group
(APAC-AIG/10)**

(Bangkok, Thailand, 9-10 November 2022 — Hybrid Format)

Agenda Item 4: Enhancing Accident Investigation Capabilities

UNDERWATER BLACK BOX SEARCH EXERCISE

(Presented by Malaysia)

SUMMARY

This paper is to share Malaysia experience during underwater black box search exercise with PRS-275.

1. INTRODUCTION

1.1 Malaysia conducts underwater black box search exercise regularly to improve the underwater search techniques. Lessons learnt from previous exercises are useful to improve the search technique with Pinger Receiver System (PRS).

2. DISCUSSION

2.1 On 15th-19th of August 2022, the Air Accident Investigation Bureau (AAIB) of Malaysia conducted several exercises for black box underwater search at various depth sea levels. The underwater locator beacon (ULB) was hidden at flat bottom, ship wrecks and near boulders. The search team used the PRS to search the signal for more than a kilometer from the ULB.

2.2 The aim of the exercise is to improve the method of search from the start of the search phase, a distant away from the unknown crash site. An application was developed to assist the search team to pinpoint the location of the black box with small margin of error, 30–50-meter radius.

2.3 Three search exercises were conducted at different depth sea levels at 16, 25 and 30 meters.

2.4 The output of the application is the distance and bearing from the search team to the location of the ULB. The search team uses the processed information to go to the location of the “crash site”.

2.5 At the crash site, team diver entered the water with the PRS. The lead diver operated the PRS to search for the ULB until it is recovered.

2.6 All three exercises were able to locate the location of the ULB.

2.7 Lesson learnt from the exercises are useful to improve the search.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to encourage States/Administrations to consider organising accident/incident investigation underwater black box search training and inviting foreign counterparts to take part.

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