



Australian Government

Australian Transport Safety Bureau

Unlawful communications

Melbourne area, Victoria, 30 September to 3 November 2016

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Addendum

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Unlawful communications

What happened

During the period from 30 September 2016 to 3 November 2016, a series of unlawful communications occurred on multiple air traffic control (ATC) frequencies and the aircraft emergency frequency around the Melbourne area, Victoria.

On 30 September, the flight crew of an aircraft approaching Melbourne Airport, reported hearing two instructions on the Melbourne tower (Figure 1) ATC frequency. The Melbourne tower controller did not make or hear the instructions, and there was no impact on operations.

On 25 October, on three occasions, flight crew of aircraft landing on runway 34 at Melbourne Airport received instructions, via unlawful broadcasts from an individual impersonating a Melbourne tower controller, on the Melbourne tower frequency. The Melbourne tower controller heard the broadcasts and immediately provided clarifying instructions to the flight crew. There was no impact on aircraft operations.

Figure 1: Melbourne airport ATC tower



Source: Airservices Australia

On 27 October, at about 1429 eastern daylight time, ATC received reports from flight crew of emergency broadcasts on the aircraft emergency frequency, apparently being transmitted by multiple aircraft. The broadcasts indicated an inflight emergency to the north of Melbourne. In response to these reports, ATC declared a distress phase¹ and, in accordance with emergency procedures, contacted the Australian Maritime Safety Authority (AMSA). At 1502, AMSA confirmed that the broadcasts were false and cancelled the distress phase.

At 1539, ATC received two further reports of emergency broadcasts on the aircraft emergency frequency. The broadcasts used the registration of an aircraft which was operating to the north of Melbourne at that time. The broadcasts indicated an inflight emergency overhead the Melbourne metropolitan area. ATC immediately declared a distress phase. Air traffic control then contacted the aircraft, the flight crew confirmed that they had not made the broadcasts and that operations

¹ Distress phase is an emergency phase declared by the air traffic services when there is reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger or require immediate assistance.

were normal. At 1542, having confirmed that the emergency broadcasts on the aircraft emergency frequency were false, ATC cancelled the distress phase.

At 1721, a Boeing 737-800 aircraft approached runway 16 at Melbourne airport. As the aircraft descended through about 200 ft above ground level, the flight crew received the instruction 'go around'.² The flight crew could not determine a reason for the instruction, however, recognising that questioning the instruction at that time could create further confusion, elected to conduct the go around. As the flight crew commenced the go around, the controller confirmed that the instruction had not been broadcast by the controller and that the aircraft remained cleared to land. As the flight crew had already commenced the go around, they elected to continue the procedure. The aircraft returned to land without further incident.

At 1724, ATC personnel updated the Melbourne Airport automatic traffic information service (ATIS)³ used by arriving and departing aircraft crew for airport information to include notification of the unlawful broadcasts.

At 1739, the ATIS was further updated to include the information that ATC would use light signals to confirm aircraft clearances in the event of further unlawful broadcasts.

At 1929, the Avalon approach controller received an emergency broadcast using the registration of an aircraft which was operating to the north-west of Melbourne at that time. Air traffic control contacted the aircraft, the flight crew confirmed that they had not made the broadcasts and that operations were normal. No distress phase was raised and there was no impact on operations.

On 31 October, ATC received a report from the flight crew of an aircraft departing Melbourne Airport of unlawful broadcasts on the aircraft emergency frequency. The broadcasts simulated aircraft ground proximity and warning system aural alarms. There was no impact on operations.

On 3 November, ATC received multiple reports from flight crew of unlawful broadcasts occurring on the aircraft emergency frequency. The broadcasts indicated an inflight emergency, the flight crew receiving the broadcast responded, however no reply was received. There was no impact on operations.

Air Traffic Control procedures

The provider of civil ATC services in Australia, Airservices Australia, had the following procedures in place to manage unlawful broadcasts on ATC frequencies:

Manual of air traffic services (MATS)

The Airservices Australia MATS contained the following procedure for managing malicious radio transmissions:

- Report unauthorised (malicious) transmissions to aircraft as detailed in local instructions.

MATS also contained the following instructions to assist controllers in managing unforeseen situations which have not been documented:

Best judgement

Do not allow anything in these instructions to preclude you from exercising your best judgement and initiative when:

- a) the safety of an aircraft may be considered to be in doubt; or*
- b) a situation is not covered specifically by these instructions.*

² Go around, the procedure for discontinuing an approach to land, is a standard manoeuvre performed when a pilot is not completely satisfied that the requirements for a safe landing have been met. This involves the pilot discontinuing the approach to land and may involve gaining altitude before conducting another approach to land.

³ ATIS is a continuous broadcast of recorded information relevant to airport operations. Flight crew operating at a controlled aerodrome will listen to the information provided by the ATIS prior to arrival, or departure.

Local Instructions

Melbourne tower local instructions did not provide procedures or guidance to controllers on the handling of unlawful communications.

ATC personnel response

In the absence of detailed procedures, ATC personnel used the following to manage the impact of the unlawful communications:

- Shift managers briefed controllers about the activity.
- Shift managers also provided controllers with recordings of previous events to familiarise the controllers with the individual's voice.
- Controllers contacted individual aircraft directly to advise that unlawful broadcasts were occurring. When controllers heard unlawful broadcasts, they immediately clarified clearance details with the affected aircraft.
- The no-radio procedure of using light signals to provide aircraft clearance details was determined to be a suitable method to confirm clearances.
- Included a warning on the Melbourne Airport ATIS.
- Recorded all available information.

Airservices Australia Comment

The provider of civil air traffic services within Australia, Airservices Australia, provided the following comments:

- Airservices considers that the established organisational resilience/crisis management practices proved effective to handle each unlawful communication event. Given it is not possible to document all elements of scenarios that a controller may face, Airservices training and risk management practices are designed to enable controllers to manage a range of unusual situations which are not documented.
- Controllers will always assume that an ATC broadcast is real, as was prevalent in these occurrences. The In-Flight Emergency Response checklist was utilised and followed until it was determined that the broadcasts were hoax calls and the aircraft were not in distress. Having an established procedure to manage hoax calls may lead to ambiguity with regards to the validity of a broadcast.
- The development of detailed procedures may not achieve a safety outcome as it would be impracticable to cater for all situations. Furthermore, it may restrict initiative required by ATC to safely manage each scenario on a case by case basis.

Safety analysis

Despite an absence of local instructions, ATC personnel were able to use best judgement to implement effective methods to manage the unlawful communications.

The false emergencies scenarios were handled quickly and effectively within existing emergency procedures. Air traffic control and AMSA personnel were able to quickly confirm the non-existence of the emergency situations and cancel the distress phases.

The unlawful communications resulted in minimal impact on aircraft, ATC and AMSA operations.

Findings

These findings should not be read as apportioning blame or liability to any particular organisation.

- There were minimal documented local instructions in place for managing unlawful communications.

- Despite an absence of documented local instructions, training and crisis management practices enabled ATC personnel to effectively manage the unlawful communications to minimise the impact on aircraft and AMSA operations.

ATSB comment

The unlawful communications were broadcast by one individual. The Australian Federal Police arrested and charged this individual with five offences relating to the communications.

Safety message

Unlawful communications transmitted with malicious intent, while rare, have the potential to impact the safe operation of aircraft and, as demonstrated by this series of events, divert AMSA away from their core tasks.

Despite an absence of local instructions, ATC personnel were able to use best judgement to implement effective methods to quickly and effectively manage the unlawful communications to minimise the risk to flight safety.

General details

Occurrence details

Date and time:	30 September to 3 November 2016
Occurrence category:	Incident
Primary occurrence type:	Interference with aircraft from ground – Radio interference
Location:	Melbourne area, Victoria

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to operations involving the travelling public.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.