

Ref. No 563/05/ZZ

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FINAL REPORT

**Investigation into the cause of incident:
Failure to establish contact with RNV 151
in FIR Praha
on 13th of November 2005**

Prague
March 2005

A) Introduction

Operator: Armavia Airline Company Co. Ltd, Arménie
Aircraft type: Airbus Industrie, A320-211
Registration mark: EK 32008
Call sign: RNV 151
Place of Incident: FIR Praha (FIR LKAA)
Date: 13th of November 2005
Time: 06:05 UTC (All times in this report are UTC)

B) Synopsis

On 13th of November 2005 UZPLN (Air Accident Investigation Institute, AAI) received from ŘLP AČR (ATC Czech Republic Army) an announcement on an incident – entry into FIR LKAA Praha without established contact by an A320 airplane call sign RNV 151. The plane was on a scheduled flight from UDYZ (Yerevan, Armenia) to EHAM (Amsterdam, Netherlands). At entering FIR Praha, the crew did not established contact with ACC Praha. Based on the message the incident investigation started by a AAI.

In accordance with the standards set in ICAO Annex / L 13, the Czech Republic was the State of Occurrence and AAI carried out the investigation.

The cause of the incident was investigated by an AAI commission comprising:

Investigator in charge: Ing. Radomír Havíř, AAI Czech Republic

Member: Ing. Josef Procházka, AAI Czech Republic

The Final report was released by:

ÚSTAV PRO ODBORNĚ TECHNICKÉ ZJIŠŤOVÁNÍ PŘÍČIN LETECKÝCH NEHOD
Beranových 130
199 01 PRAHA 99

On the 3th of March 2006

C) The Final report includes the following main parts:

- 1) Factual information
- 2) Analysis
- 3) Conclusions
- 4) Safety recommendation
- 5) Annexes (to copy No.1 stored in UZPLN archive)

1 Factual information

1.1 History of the incident

On 13th of November 2005 an Armavia Airline A320, call sign RNV 151, SSR code 6121 was on an FPL flight at FL360 from UDYZ Airport to EHAM Airport via entry point to FIR LKAA ODNEM 06:07 UTC – VARIK 06:39 UTC.

According to PIC of RNC 151, when in FIR Budapest (FIR LHCC), the crew got from ACC Budapest on frequency 136.375 MHz instruction to continue direct towards the point LITKU (a point in FIR LZBB, Slovakia). However at flying over LITKU, the crew did not received instruction to established contact in to the new frequency, so they continued to fly in FIR LZBB and then in FIR LKAA all the time with the same frequency 136.375 MHz of ACC Budapest.

At 06:00 the controller of ACC Bratislava advised ACC Praha that no contact with RNV 151 in FIR LZBB had been established.

The ACC SC Praha supervisor transmitted the no-contact information to MACC SC Praha at 06:02.

At 06:20 the Czech Air Force fighters scrambled to make identification of the unknown plane. During the scramble, ACC Praha made every effort to establish contact with RNV 151 on frequencies of all ACC Praha sectors including emergency frequency 121.5 MHz but each time without any positive results.

At 06:41 ACC Bratislava advised ACC Praha that RNV 151 got in contact with them, but the plane had already passed the VARIK point and flew in FIR EDUU. Therefore ACC Praha asked ACC Bratislava to issue an instruction asking RNV 151 to change its frequency to ACC Rhein's frequency 128.5 MHz.

At 06:45 after RNV had established contact with ACC Rhein, GCI navigation station decided to stop the scramble action.

1.2 Injuries to persons

NIL

1.3 Aircraft damage

NIL

1.4 Other damage

NIL

1.5 Personnel information

1.5.1 The crew RNV 151

Job function	CPT	F/O
Licence	valid	valid
Medical validity	valid	valid
Total hours	6100 h	4220 h
On type A 320	1040 h	810 h
Practice last 90 days	220 h	205 h
Practice last 30 days	70 h	75 h
Practice last 7 days	20 h	17 h

1.5.3 Personnel information ATCO

Job function	ACC PC	ACC EC	
Age	45	30	
Day on duty	2	3	
Duty duration (hours)	from beginning of workshift (including breaks)	2 h	1 h
	From the latest duty rotation	-	-
Practice (years)	9	1	
Qualification good till	31.12.2006	31.12.2006	
Latest qualification training	08.03.2005	11.04.2005	

1.6 Information about aircraft

1.6.1. CSA 689

Aircraft type:	Airbus
Model:	A320-211
Manufacturer:	Airbus Industrie,
Year of manufacture:	1992
Serial number:	MSN 0229
Engine:	2x CFM International Point Company
Communication set:	Bendix
Aircraft Audio Management unit (AMU):	Team HME 1410CA-3 Sennheiser

The plane has a valid airworthiness certificate and liability insurance against third-party risks.

Airplane maintenance and pre-flight preparation had been carried out according to the procedures set by the manufacturer.

1.7 Meteorological information

The weather had no effect on the incident.

1.8 Radio navigation and visual aids

Radio navigation and visual aids had no effect on the incident.

1.9 Communications

All VHF and HF radio communication systems worked well. The crew monitored communications of other aircraft on frequency 136.375 MHz ACC Budapest. Communication legibility was 5/5.

1.10 Information about TMA II Prague

The incident occurred in FIR LKAA area Class C.

1.11 Flight recorders and other recording means

Flight recorders were not used. The incident course was analysed from the communication transcript and ATS radar information.

1.12 Description of the place of incident

NIL

1.13 Medical and pathological information

NIL

1.14 Fire

NIL

1.15 Survival aspects

NIL

1.16 Tests and research

NIL

1.17 Organizational and management information

NIL

1.18 Additional information

NIL

1.19 Useful or effective investigation techniques

The incident cause was investigated conforming to L13 Regulation and Let-1-5 military regulation.

2 Analysis

The analysis concerned the activities of RNV 151 crew, radio communications, radar recording and air operation service's instructions.

2.1 RNV 151 Crew's Activities

The RNV 151 crew was on a scheduled flight from UDYZ Airport to EHAM Airport. At entering FIR LHCC, the crew established contact with ACC Budapest and continued to fly at FL360 via FIR LHCC, FIR LZBB to FIR LKAA according to the flight plan, without contact and without SSR code 7600 switched on.

The RNV 151 crew said that when flying over the sector boundary from FIR LHCC to FIR LZBB they did not received instruction to change the frequency, so they continued to fly to FIR LKAA with the ACC Budapest frequency set to 136,375 MHz.

On noticing a scramble aircraft of the Army of the Czech Republic, the crew established contact through another plane flying in FIR LHCC on the latest known frequency 136.375 MHz of ACC Budapest, from which they received a relayed instruction to change frequency to ACC Bratislava. On establishing contact with ACC Bratislava, ACC Bratislava after a coordination with ACC Praha issued instruction to tune in to ACC Rhein on frequency 128.07 MHz.

By using information on flight areas from the pre-flight navigation preparation and from FLP, the crew should have identified the relevant reporting point at leaving the old FIR or entering a new one. In this way the crew should have fulfilled the duty as set out in provisions of ANNEX 2 Flight Regulation, Chapter 3 Art. 3.6.3.1, which states that a crew on the controlled flight must report to the air operation station the time and flight level at which its plane passes an obligatory reporting points along with other required data. In addition, the crew did not apply any loss-of-contact procedures.

2.2 NATINEADS Alert Aircraft

During the scramble for RNV 15, the crews received from GCI and by the NATO regulation the instruction to switch off the C SSR mode at 20 NM of RNV 151, identified RNV 151 and made several unsuccessful attempts to establish contact with the RNV 151 crew on frequency 121.5 MHz.

When the contact between RNV 151 and ACC EDUU had been renewed, the scramble action was stopped.

2.3 Air Traffic Control Procedures and Phraseology Used

Air traffic in FIR LKAA was controlled in accordance with Procedures for air Navigation Services – Air Traffic Management PANS-ATM and Agreement on using airspace and responsibility for coordination between civil and military air traffic control.

ACC Praha

ACC Praha took all the required steps in connection with loss of contact in compliance with PANS-ATM Part 15.2

ACC Praha relayed information on loss of contact with RNV 151 to MACC Praha and neighbouring ACC Rhein.

MACC Praha

At 06:08 SC took over overall control for MACC on sectors E, S, and W ACC Praha to FL380.

SC adjusted the boundaries of overall control according to actual situation in the air and then proceeded in subordination to GCI and ACC Praha, considering the actual status of overall control.

3 Conclusions

The commission has made the following conclusions:

3.1 RNV 151 Crew

- The crew had good rating for the flight and good medical certificate;
- The crew did not established contact with ACC Praha in the area of entry point into FIR LKAA ODOMO and did not use any of the procedures applicable in case of loss of contact;
- Within the VARIK point airspace, after noticing the scramble fighters, the crew through another airplane flying in FIR LHCC established contact on the latest known frequency 136.375 MHz with ACC Budapest and then with ACC Bratislava and ACC Rhein.

3.2 NATINEADS Alert Aircraft

- They made identification of RNV 151 and applied procedures to establish contact with RNV 151.

3.3 ATC Activities and the Phrases Used

- ACC Praha took all the required steps in connection with the loss of contact with RNV 151;
- ACC SC Praha immediately relayed the information on no contact with RNV 151 to MACC;
- ACC Praha relayed all information on the contact loss and scramble action to neighbouring ACC EDUU;
- After having received information on scramble against RNV 151 from GCI, MACC SC Praha conducted appropriate coordination talks with ACC Praha;

3.4 Causes

The cause for the incident was the fact that the crew did not established contact when on flight within FIR LZBB and subsequently FIR LKAA, which fall in the class C airspace.

According to L 13 Regulation the event is classified as INCIDENT. From the point of view of potential consequences arising from inadequate ATS, the event is assessed as "No safety effect".

4 Safety Recommendation

Safety recommendation is up to the aircraft operator.

Prague, 3th of March 2006