CIVIL AVIATION AUTHORITY

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RTF CALLSIGN CONFUSION

1 Introduction

1.1 The Civil Aviation Authority, National Air Traffic Services Ltd and many Airline Operators are concerned about the problems that result from the similarity of airline RTF callsigns, which often give rise to both potential and actual flight safety incidents. It is recognised that callsign confusion can affect safe and expeditious operations in UK Airspace.

1.2 In the past it has been difficult to quantify the extent to which confusion caused by similar RTF callsigns has contributed to incidents or, if left unchecked, may have caused an incident. The UK CAA Mandatory Occurrence Reporting Scheme (MORS) database contains many reports from Controllers and Flight Crew highlighting the problems associated with callsign confusion. Whilst this had established that there are definite safety implications resulting from callsign confusion, a dedicated study was conducted in 1997/8 called the Aircraft Callsign Confusion Evaluation Safety Study (ACCESS). The ACCESS report was published in April 2000 as CAP 704 and the data from that report endorsed the published guidance to airlines and air traffic service providers about problems associated with aircraft callsign confusion.

2 Brief Summary of ACCESS Study (CAP 704)

2.1 The following is a brief summary of the results of the ACCESS Study:

66% of occurrences involved 2 or more ‘same airline’ callsigns.
Nearly half of the occurrences involved UK airlines only, and a third involved foreign airlines only.
89% of actual confusion reports occurred in either the climb, descent or cruise phases of flight.
73% of occurrences involved an increase in ATC workload.
Most occurrences took place between 0600 and 1759hrs.
The majority of occurrences took place in TMA or UARs.

2.2 **Numeric versus Alphanumeric Callsigns**

2.2.1. A numeric callsign is one where the suffix consists of numbers only. An alphanumeric callsign is one where the suffix consists of number(s) followed by one or more letters. Of the callsign confusion occurrences:

84% involved **numeric** only callsigns.
10% involved **alphanumeric** only callsigns.
4% involved a combination of **alphanumeric** and **numeric** callsigns.

2.2.2. Of the occurrences which were allocated ACCESS severity grades of A or B, the distribution changed as follows:

92% involved **numeric** only callsigns.
8% involved **alphanumeric** only callsigns.
None involved a combination of **alphanumeric** and **numeric** callsigns.

2.2.3 The most common identical numeric callsign suffixes were all numerical as follows:

101, 202, 333, 37, 837, 762, 924

3 General Advice to Airline Operators about Numeric and Alphanumeric Callsigns

3.1 Many airline operators continue to utilise their IATA commercial flight numbers as a callsign suffix. However, because they tend to be allocated in batches of sequential and very similar numbers, callsign confusion occurs. Several airlines have switched to alphanumeric callsign systems reasonably successfully in recent years. However, if every operator adopts alphanumeric callsigns, the limited choices available within the maximum of 4 elements allowed in the callsign suffix means that callsign confusion, similar to the existing numeric system, is likely to result.

3.2 Before changing to an effective all alphanumeric callsign system, which involves a significant amount of work especially for a large airline, it is recommended that operators review their existing numeric callsign system to deconflict any similar numeric callsigns. Where there is no effective solution to those callsigns that have a potential for numeric confusion, alphanumeric callsigns can be adopted.

SPECIFIC GUIDE LINES TO HELP REDUCE CALLSIGN CONFUSION

4 Airline Operators

4.1 When allocating callsigns Airline Operators are requested (in accordance with ICAO Annex 10 and Doc 8585) to:

(a) Avoid use of similar numerical callsigns within own company;

(b) Co-ordinate advance planning, whenever possible, with other Operators (ideally prior to commencement of summer and winter season) to reduce to a minimum any similar numeric and alphanumeric elements of callsigns;

(c) After implementation, ensure there is a tactical response system to review and amend callsigns where necessary;

(d) Consider starting flight number element sequences with a higher number eg 6 and above;

(e) Try to minimise use of callsigns involving four digits and, wherever possible, use no more than three digits;

(f) Avoid multiple use of the same digit eg ABC555;

(g) Exhaust numerical possibilities first, before using alphanumeric callsign systems. If alphanumeric callsigns are inevitable, co-ordinate letter combination with existing operators, taking into account all other airspace and airport users;

(h) Try to avoid using alphanumeric callsigns which correspond to the last two letters of the destination's ICAO location indicator eg ABC 96LL for a flight inbound to London Heathrow where the ICAO indicator is EGLL;

(i) Consider a balance of alphanumeric and numeric callsigns;

(j) Consider a more random system of RTF callsign/flight number allocation different from the allocated aircraft commercial flight schedule number eg Operator ticket/flight number AB 555 RTF Callsign ABC 5LF;

(k) If similar numbered callsigns are inevitable, allow a significant time and/or geographical split between aircraft using similar callsigns;

(l) When useful capacity in the allocation of flight number and/or alphanumeric callsigns has been reached, consider applying for and using a second company callsign designator eg 'Shuttle';

(m) Ensure user airport information systems can cope with conversion of RTF callsigns (for ATC use) back to commercial flight numbers for passenger and airport use;

(n) Avoid, whenever practicable, flight numbers ending in a zero or five eg 5 may be confused visually with S and zero, when combined with two digits, ie 150, may be confused with a heading/level;

(o) Avoid use of similar/reversed digits/letters in alphanumeric callsigns eg ABC 87MB and ABC 78BM;

(p) In alphanumeric callsigns avoid phonetic letters that can be confused with another operator designator prefix eg D - Delta (The Airline).

5 Flight Crew

5.1 If in doubt about an ATC instruction, do not use readback for confirmation.

5.2 Positively confirm instructions with ATC if any doubt exists between flight crew members.

5.3 Always use headsets especially during times of high RTF loading.

5.4 Do not clip transmissions.

5.5 Confirm unexpected instructions for any particular stage of flight.

5.6 Advise ATC if it is suspected that another aircraft has misinterpreted an instruction. ATC may be unaware of this fact.

5.7 Exercise particular caution when members of the Flight Crew are involved in other tasks, and may not be monitoring the RTF.

5.8 At critical stages of flight actively monitor ATC instructions and compliance with them.

5.9 Use full RTF callsign at all times.

5.10 Use correct RTF procedures and discipline at all times.

6 Controllers

6.1 Exercise particular caution when language difficulties may exist.

6.2 Advise adjacent sectors/airports if it is felt that potential confusion may exist between aircraft likely to enter their airspace.

6.3 The similarity of some aircraft callsigns on the same frequency can cause confusion which may lead to an incident. Controllers are to warn pilots concerned and, if necessary, instruct one or both aircraft to use alternative callsigns while they are on the frequency. Manual of Air Traffic Services - MATS Part 1 Appendix E Page E-6 refers.

6.4 Do not clip transmissions.

6.5 Do not use readback time to execute other tasks.

6.6 Ensure clearances are readback correctly.

6.7 Monitor flight crew compliance with RTF callsign use.

6.8 Use correct RTF discipline at all times.

7 Reporting Callsign Confusion

7.1 Airline Operators

7.1.1 Airline Operators should forward reports on callsign confusion incidents which meet MOR criteria to Safety Investigation Data Department (SIDD).

7.2 Flight Crew

7.2.1 Flight Crew are requested to use company Air Safety or other designated report forms where applicable, or standard CA1673 MOR forms submitted to their operators in accordance with standard company procedure.

7.3 Controllers

7.3.1 Controllers are requested to use the standard MOR CA1261 report form submitted to the SIDD in accordance with standard procedure.

8 Information Required

8.1 Callsigns of aircraft concerned;
aircraft type;
date and time in UTC;
sector or geographical location;
RTF frequency;
phase of flight;
was there actual confusion and for whom?
was there a high risk of potential confusion, and why?
where actual callsign confusion occurred, what were the safety implications? eg Conflict Alert (TCAS/STCA);
loss of separation;
increased workload;
did any Airline Operator/ATC remedial action result?

8.2 This Circular will become effective from 1 December 2000.

8.3 For further information regarding this Circular contact:

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