الإتحاد
ETIHAD
AIRWAYS
FLIGHT OPERATIONS

EAAP Issue 12

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Etihad Altitude Awareness Program

Any procedures mentioned in this document are purely for information purposes only. Pilots should review their own aircraft type specific procedures for complete and proper guidance and not use this document in any way as a source document for Etihad aircraft operations.

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INTRODUCTION

An altitude deviation or level bust is defined as an unauthorized deviation from the assigned altitude or flight level by more than 300ft (200ft in RVSM airspace) resulting in loss of separation, a midair collision or a CFIT (controlled flight into terrain) event. Manoeuvres in response to TCAS RAs, if required, usually result in injuries to passengers and crew members (particularly to cabin crew).

This edition of the EAAP provides an overview of the communication related factors involved in altitude deviations.

As mentioned in previous editions, our main function in producing this digest is to monitor the trends associated with altitude deviations/level busts within Etihad Airways and to pro-actively remedy the causes and reasons behind such incidents. In disseminating this publication we hope to make the process an inclusive one, whereby you, the pilots, are actively contributing to the success of the program. We hope to continue doing this by continuing to produce these digests every three months and bringing the Etihad pilot community relevant and useful information that may be used to decrease the amount of altitude deviation occurrences that we currently experience.

The statistical data contained within these documents is primarily derived from our own Flight Safety department and as such, is only as good as the information that is reported by you, the pilots. Again, we actively encourage you to report any altitude deviation, however insignificant it may seem at the

time. Minor errors that have resulted from dynamic threats that we experience every day may be caught in good time to prevent an altitude deviation however the underlying reasons behind the initial error are of interest to us all. We employ a 'Just Culture' within the airline and this enables all pilots to report these occurrences without fear of retribution. All reports are de-identified when they are received by Flight Safety so only the Flight Safety department are fully aware of who files any report related to any altitude deviations and of course any other flight safety events.

Please continue to actively report all deviations. Your participation in this process is integral to the overall success of reducing the occurrences that we experience.

REVIEW

This edition of the EAAP is the twelfth in the series. The previous eleven EAAP digests have covered a broad range of topics that have proven to be instrumental as contributory causes to altitude deviations within Etihad Airways. These previous editions continue to be available for review by all pilots and can be found on your iPad under the Flight Safety tab.

- Issue 1 – Pilot/Controller Communication
- Issue 2 – Maintaining RTF standards
- Issue 3 – TCAS
- Issue 4 – Sterile Cockpits
- Issue 5 – Weather/Turbulence induced altitude deviations
- Issue 6 – Aircraft Energy Management
- Issue 7 - A Pilot's Tale
- Issue 8 – The Go Around
- Issue 9 – EAAP Survey Results 1
- Issue 10 – EAAP Survey Results 2
- Issue 11 – HOTSPOTS

We strongly encourage all pilots to review these publications on a regular basis so that they can maintain a high level of awareness with regard to these associated threats. It is the responsibility of all pilots to stay up to date with the information contained within these publications. We have a common goal to manage our safety levels effectively and by reducing the number of altitude deviation occurrences; we can assist in achieving that goal.

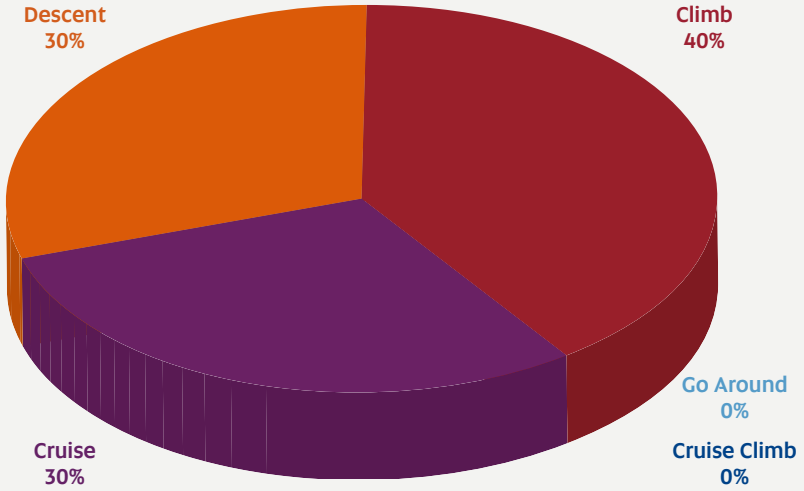
We also ask all pilots to offer their own feedback to this publication. Should you feel that an item of discussion is worthy of inclusion into the digest, please email EAAP@etihad.ae.

LATEST STATISTICS (OCT. – DEC. 2014)

Drawing on the data that has been collected between the beginning of October 2014 and the end of December 2014 the company has experienced a total of eighteen altitude deviations. On a pro-rata basis this is a large increase in events per month compared to the period of the July 2014 – September 2014.

The chart below shows us the breakdown of which phase of flight the deviations occurred.

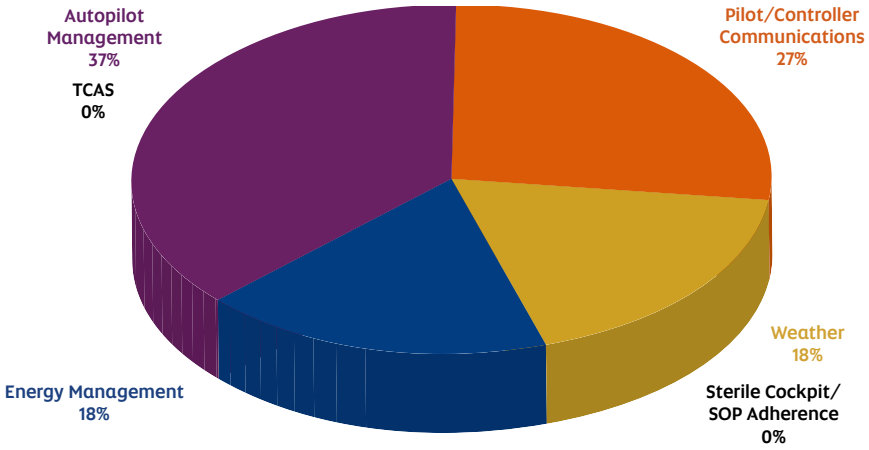
Phase of Flight



Causes

The data presented to us for this quarter shows an increase in Cockpit Management events. Compared to the last period of data the number of events has significantly increased from two to eleven altitude deviations. Pilot/controller communications events have tripled. Autopilot and Energy Management effectively grouped together as Cockpit Management account for more than half of the events. Cockpit Management was discussed at length in issue six of the EAAP back in August 2013. For those pilots who have joined us in the last two years we recommend you review the article in issue six. The information contained within it is just as relevant today as it was then. Additionally as this digest highlights, pilots are reminded of the need to remain vigilant with their RT standards. Again, we ask you to file reports on cases where you may hear multiple radio call signs that have the same flight number. You may recall that EAAP digest number two was directed at Communication error and how we can better maintain high RTF standards. As altitude deviations attributed to Weather have increased, a gentle reminder to pre-emptively reduce your Mach number/speed before entering known turbulent areas.

Root Causes



Pilots are encouraged to refresh themselves with the content of both the 'Altitude Excursion Risk Reduction' and 'All Clear EY Phraseology' guide that can be found on the Pilot iPad under;

- TRAINING
  - Supplementary Training
    - Risk Reduction Training Manuals
      - RTF Training Guide

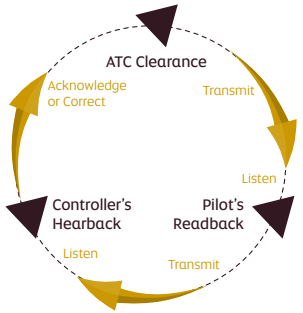
You are encouraged to file reports on cases where multiple radio call signs of a similar nature exist on the same frequency at the same time. Please continue to feedback these or any other potential flight safety events.

THE PATH TO CLEAR COMMUNICATIONS

Air-ground communication breakdown has been a causal factor in a number of serious accidents; and is a significant factor in many near-misses. The statistics speak for themselves.

- An estimated 10 level busts per day in Europe. 1 in 10 level busts results in a loss of separation,
- A recent study by the FAA has found that approximately 70% of altitude deviations were the result of a breakdown in the pilot-controller communication loop, with nearly 40% being attributed to the confirmation/correction process,
- Another study performed by the UK CAA showed that 50% of level busts take place below 8000ft, usually as the result of a misunderstanding of the altitude restrictions applicable during departure (SID) or approach (STAR),
- A survey by Eurocontrol shows that once every 30 minutes, an aircraft is busting its cleared altitude, a loss of separation results in the aircraft involved passing within a mile of each other,
- Communication problems are the most common cause of level busts, both worldwide and in Etihad.

Pilot/controller communication loop



Pilot/controller communication loop breakout

The synopsis that follows was an accident caused by a classic level bust incident resulting from poor communication and the breakdown of the pilot/controller communication loop.

On 11 November 1996, an IL76 inbound to Delhi at FL150 was advised of an outbound Saudi B747 at FL140. The radio operator onboard the IL76 acknowledged the traffic advisory and asked how far away the Saudi aircraft was. ATC replied "traffic is at 8 miles now FL140". Meanwhile the pilot and co-pilot were discussing the traffic information and it is suggested that the co-pilot only heard the last part of the ATC transmission "... now FL140" and interpreted it as a clearance to descend. Suddenly realising that the pilots had begun to descend, the radio operator shouted out "keep at FL150, don't descend!" The, by now highly anxious, crew began to initiate a climb. 349 people died as a result of the subsequent collision; the worst disaster in India's civil aviation history..

VERBAL COMMUNICATION IN AVIATION

Despite the increased use of hand-held and integrated data-link communication and computer interfaces that use non-verbal inputs, verbal communication remains a vital part of ensuring aviation safety.

Risk

The risk presented by ineffective verbal communication is relatively high. Consequences can be severe, and the frequency with which communication errors are referenced as causal factors in accidents, incidents and occurrences is substantial.

Severity

When verbal communications go wrong, the consequences can easily lead to altitude deviations.

Communication responsibilities

It takes more than one person to communicate: the meaning of any communication is the response you get. So, ultimately the receiver's reaction must be monitored for feedback to the transmitter. In aviation scenarios it is expected that both parties have an understanding of the importance of effective communication and both will adopt responsibilities to ensure the communication is effective; although never assume this!

The transmitter must:

- Know what they want to communicate (i.e. know what response they want from the intended receiver),
- Be clear (use their manner of speech objectively and subjectively to make it so), and
- Test understanding (either by direct observable feedback, or through questioning)

The receiver must:

- Actively listen,
- Test meaning, and
- Demonstrate their understanding.

ACHIEVING EFFECTIVE COMMUNICATIONS

Obstacles and lessons learned

Pilots and controllers are involved equally in the air traffic management system. Achieving effective radio communication involves many factors that should not be considered in isolation. Many factors are closely interrelated, and more than one cause usually is involved in a breakdown of the communications loop.

The following provides an overview and discussion of factors involved in effective pilot/controller communications.

Human factors aspects in effective communication

Effective communication is achieved when our mental process is able to accommodate and to interpret the information contained in a message.

This mental process can be summarized as:

- How do we perceive the message?
- How do we reconstruct the information contained in the message?
- How do we link this information to an objective or to an expectation?
- What bias or error is introduced in this process?

Research in crew resource management (CRM) highlights the relevance of the context and expectations in this process. Nevertheless, expectations

may introduce either a positive or negative bias in the effectiveness of the communications.

Workload, fatigue, non-adherence to the sterile cockpit rule (OM A 8.3.20.4), distractions, interruptions, conflicts and pressure are among the factors that may affect adversely pilot-controller communications and result in:

- Incomplete communication
- Omission of call sign or use of an incorrect call sign
- Use of non-standard phraseology
- Failure to listen or respond
- Failure to effectively implement the confirmation-correction loop

Language and communications (We have over 120 nationalities in Etihad!)

In response to a series of accidents involving language skills as a causal factor, an effort has been initiated to improve the English-language skills of pilots and controllers worldwide.

Nevertheless, even pilots and controllers for whom English is the native language may not understand all communications spoken in English because of regional accents, dialects or different word usage.

Language differences generate significant communications difficulties worldwide.

The practice of controllers who use English for international flights and the country's native language for domestic flights (as we experience in France, China and Russia to name a few) prevents pilots from achieving the desired level of situational awareness due to loss of "party-line" communications.

Enhancing verbal communication

We can highlight some factors that will contribute to effective verbal communication:

- Agree use of common language and phraseology
- Test and agree assumptions
- Neutralize accents
- Control volume, pitch, tone, and pace of speech
- Stress urgency and importance
- Choose the correct time and place of communication if possible to counter the effects of personal stress and environmental factors i.e. to enhance listening opportunity
- Maintain communication equipment
- Plan what you want to say
- Actively listen (receiver and transmitter)
- Test meaning (receiver)
- Test understanding (transmitter)
- Complete feedback: receiver demonstrates understanding and transmitter observes the effects of the communication on the receiver

EAAP PILOT COMMUNICATION BREAKDOWN PREVENTION STRATEGIES

The purpose of the EAAP is to raise awareness within the company and look for potential solutions. The following recommendations can enhance communications and raise the level of situational awareness of pilots and controllers.

The first priority of any communication is to establish an operational context by using markers and modifiers to define the following elements:

- Purpose — clearance, instruction, conditional statement or proposal, question or request, confirmation
- When — immediately, anticipated or expected
- What and how — altitude (climb, descend, maintain),
- Where — (before or at a waypoint)

The structure and construction of the initial and subsequent messages should support this context by:

- Following the chronological order of the sequence of actions
- Grouping instructions and numbers related to each action
- Limiting the number of instructions in the transmission

The intonation, speech rate and placement and duration of pauses may positively or adversely affect the correct understanding of a communication.

ICAO guidelines and techniques for radio transmission highlight the following objectives:

- Transmissions shall be conducted concisely in a normal conversational tone
- Full use shall be made of standard phraseologies whenever prescribed in ICAO documents and procedures
- Speech-transmitting techniques shall be such that the highest possible intelligibility is incorporated in each transmission.

To reach these objectives, pilots should:

- Enunciate each word clearly and distinctly
- Maintain an even rate of speech (not exceeding — typically — 100 words per minute)
- Make a slight pause preceding and following numerals; this makes them easier to understand
- Maintain the speaking volume at a constant level
- Be familiar with microphone-operating techniques (particularly in maintaining a constant distance from the microphone if the aircraft does not have a constant-level modulator)
- Suspend speech temporarily if it becomes necessary to turn the head away from the microphone

Use standard phraseology

Use of non-standard phraseology is a major obstacle to voice communications. Standard phraseology is the common basis for pilots and controllers; this common language allows for easier detection and correction of errors. “One thousand to go” when within 1000 feet of the assigned altitude or flight level and “Passing FL200 climbing/descending FL...”

Standard phraseology helps lessen the ambiguities of spoken language and thus guarantees a common understanding among speakers:

- Of different native languages,
- Of the same native language but who use or understand words differently (e.g., regional accents or dialects).

Non-standard phraseology or the omission of key words may change completely the meaning of the intended message, resulting in potential conflicts. For example, any message containing a number should indicate whether the number refers to an altitude, a heading or airspeed. Including such key words prevents an erroneous interpretation and allows an effective readback and hearback.

Pilots and controllers might use non-standard phraseology with good intentions; however standard ICAO phraseology always minimizes the potential for misunderstanding.

Enhanced vigilance during frequency congestion

Frequency congestion significantly affects the correct flow of communications during critical phases such as takeoff, departure, approach and landing, particularly at high-density airports like Abu Dhabi. This requires enhanced vigilance by pilots.

Don’t omit your call sign

Omitting the call sign or using an incorrect call sign jeopardizes an effective readback and hearback process.

Avoid a lack of readback or incomplete readback (readback errors)

The pilot’s readback must be complete and clear to ensure a complete and correct understanding by the controller. The readback message shall always include the flight call sign.

Always correct an erroneous readback (hearback errors)

Any readback by the pilot requires a hearback by the controller in order to close the communications loop. Most pilots perceive the absence of an acknowledgement or correction following a clearance readback as confirmation of the readback. The absence of acknowledgement by the controller is usually the result of radio frequency congestion that requires the controller to issue clearances and instructions to several aircraft. The controller's failure to correct an erroneous readback (a hearback error) may cause deviations from the assigned altitude or noncompliance with altitude restrictions. A deviation from a clearance or instruction may not be detected until the controller observes the deviation on the radar display.

Less than the required vertical separation, near midair collisions are usually the results of hearback errors. Perceiving what was expected or wanted. The bias of expectation can affect the correct understanding of communications by pilots and controllers. It involves perceiving what was expected or wanted and not what was actually said. The bias of expectation can lead to:

- Transposing the numbers contained in a clearance (e.g., an altitude or flight level) to what was expected based on experience or routine, e.g. 'we always get 10,000ft after SODEX'.
- Shifting a clearance or instruction from one parameter to another (e.g., perceiving a clearance to maintain a 280-degree heading as a clearance to climb or descend to and maintain FL 280).

Seek confirmation when a message is not understood

Misunderstandings may include half-heard words or guessed-at numbers. The potential for misunderstanding numbers increases when a given ATC clearance contains more than two instructions.

Request clarification when in doubt

Reluctance to seek confirmation or clarification may cause pilots to either:

- Accept an inadequate instruction (over-reliance on ATC), or
- Define by themselves the most probable interpretation.

Failure to request clarification may cause the flight crew to believe erroneously that they have received the expected clearance (e.g., clearance to climb or descend to a certain FL or altitude).

Question an incorrect or inadequate ATC instruction

Failing to question an incorrect or inadequate instruction may cause a crew to accept an altitude that places the aircraft on a collision course with another aircraft.

Be on your guard against taking a clearance or instruction issued to another aircraft

This usually occurs when two aircraft with similar-sounding call signs are on the same frequency and are likely to receive similar instructions or if the call sign is blocked by another transmission. When pilots of different aircraft with similar-sounding call signs omit the call sign on readback, or when simultaneous readbacks are made by both pilots, the error may not be noticed by the pilots and the controller.

Etihad are working on various 'call-sign' deconfliction programs to minimize or eliminate this threat as recommended by Eurocontrol.

Use of an adapted phraseology to increase the controller's situational awareness

For example, when leaving an altitude, announce: "Leaving [...] for [...]. The call 'leaving' should only be announced when a vertical speed of 500ft/min has been achieved and the altimeter positively shows a departure from the previous altitude or level. This recommendation is of particular importance when descending in a holding pattern.

Effective listening — filtering communications

Effective communication requires active and intensive listening by all those involved concentrating on each part and word in order to fully understand the whole message. Because of other flight deck duties, pilots tend to filter communications, listening primarily to communications that begin with their aircraft call sign and not hearing other communications.

To maintain situational awareness, this filtering or selection process should be adapted according to the flight phase for more effective listening. For example, when operating in a congested airspace, pilots should listen and give attention to all communications related to clearances to climb or descend to or through their altitude.

TYPICAL SCENARIOS AS A RESULT OF PILOT/CONTROLLER COMMUNICATION BREAKDOWN

- Not listening out before transmitting. An ATC clearance for another aircraft is read back incorrectly but the error is not appreciated by ATC because of interference from the simultaneous initial call resulting in a LEVEL BUST.
- Non-standard phraseology. The pilot of Etihad 123 requests descent clearance as follows: “123, request FL120”. The ATCO mistakes the caller for Emirates 123 and responds: “123 descend FL120”. The Etihad pilot takes this clearance as intended for him and a LEVEL BUST results.
- Message format and content. The ATCO issues a clearance: “Etihad123, climb FL240 heading 260”. The pilot climbs to FL260 resulting in a LEVEL BUST.
- Language. The ATCO clears a locally-based aircraft to climb using the local language. The clearance creates a conflict with another flight whose pilots does not understand the local language and are thus unaware of the impending circumstance. LOSS OF SEPARATION results.

- Timeliness of communication. A pilot about to commence an approach to a runway is instructed to change to the parallel runway. The clearance is issued too late for the pilots to carry out a thorough re-brief but they proceed anyway having failed to assimilate the go-around procedure for this runway, and a LEVEL BUST ensues.
- Read-back/hear-back. The pilot mis-hears a clearance but instead of reading the clearance back responds “Roger”. ATC do not challenge this response and a LEVEL BUST results.

KEY POINTS

The following should be emphasized in pilot/controller communications:

- Observe the company SOPs for crosschecking communications;
- Recognize and understand respective pilot and controller working environments and constraints;
- Use standard phraseology;
- Always confirm and read back appropriate messages;
- Request clarification or confirmation, when in doubt;
- Question an incorrect clearance or inadequate instruction;
- Prevent simultaneous transmissions;
- Listen to party-line communications as a function of the flight phase;
- Use clear and concise communications in an emergency.

ETIHAD EVENTS

(as extracted from the Flight Safety Department)

- Not intercepted on final APP CCJ RWY28 and already with G/S decided to discontinue APP Due F/PLAN not sequenced and the GO AROUND mode didn't engage A/P disconnected and flown manually with overshoot of missed approach altitude and immediate recover. Second APP with no incidents landed with ceiling and visibility close to minimum.

- Further lightening strikes were observed on the new heading and again a further turn initiated to the left, at this point the aircraft entered a layer of cloud and began to experience a rapid up draught and increase in altitude, the airspeed began to increase rapidly towards MMO and the speed brake was selected to prevent an over speed, the speed was also selected to M0.76. The airspeed then began to decrease rapidly, the speed brake was stowed and the speed continued to decrease towards VLS, at this point the aircraft commenced a rapid descent and passed through the selected cruising FL370. VS 0 was pressed and a climb selected in VS mode to return to the cleared FL, ATC was immediately advised of the turbulence encounter and the subsequent altitude deviation and were advised we were climbing back to FL370. The minimum altitude reached FL363, 700ft below the cleared level, the altitude obtained during the initial phase of the up draught was missed by both crew due to the focus on maintaining the speed within limits but is believed to be no more than 300ft above FL370. Once clear of the area the aircraft returned to track, the Cabin Senior was contacted and she confirmed that all passengers and crew were seated at the time of the event and no injuries were received to crew or passengers. The flight continued without further incident.
- Given early descent clearance by Guangzhou control to 10100 meters FL33100.Similar call sign on frequency Cathay 646.We were re-cleared

descent 10700 meters FL35100 we read back clearance and F/O pulled open climb with the intent to climb but altitude had already crossed FL35100 so aircraft went into open descent descending through 10100 meter instructed us to push to level off which we did at FL32380 and climbed back up to 10100 meters FL 33100 .Cathay 646 called back same clearance .Guangzhou confirmed clearance was for Cathay and for us to continue to 10100 m.

- On descent in UAE airspace, we were cleared and read back at FL230. A few minutes later, we believe we were re-cleared FL200. We read back the clearance and set FL200 in the MCP. On passing FL225 ATC told us to climb to FL230, we climbed to FL230. ATC claimed we had not been cleared FL200. TCAS traffic was no factor.

- Departing from KUL we had isolated CB clouds which we navigated around however after about 44 minutes into the flight without any echoes being detected by the radar we encountered s sudden moderate turbulence causing the aircraft to descend about 450 feet from cruising FL 400 while the auto pilot remained engaged but the aircraft did not climb back up. I disconnected the auto pilot and manually climbed back to FL400. We notified ATC immediately and the responded with Thank you. There was no other traffic within about 50 nm of us. The whole thing lasted less than about 45 seconds. I asked the cabin crew to take their seats via PA immediately. Seat belt sign was on at the time due to occasional light turbulence. I asked the Cabin manager to check on the condition of crew and passenger and was told that everyone was fine and there were no injuries. Remainder of the flight was uneventful.

- 1) ETD 19 CLEARED TO fl200 at 280kts. 2) Change of controller to Bahrain-cleared CLB to FL320-SPD not given. 3) At approximately FL260, Bahrain asked to reduce speed to 280kts and CLB to FL320. 4) SPD being reduced by speed intervention on VNAV CLB. ROC approximately3000'.5) Sudden instruction by Bahrain at about FL274 to now maintain FL280. 6) Due momentum ACFT kept climbing despite VANV ALT and climbed above FL280 despite manual control effected for immediate recovery. 7) Auto pilot re engaged and ACFT brought to FL280. 8) No TA/RA.9) At all time we were complying with TCAS RA hotspots as per company NOTAM. 10) Bahrain ATC should be advised to issue such instructions providing some tolerance for the phase of flight. A HDG change would have been the best solution since there was no traffic in immediate vicinity.

- STAR NOBTO 2C. ATC @ 10000'. FO misunderstands the Capt in whether the ALT CNSTR FL160 at SODEX must be met or not, so DES is continued. Capt reacts and FO pushes ALT, 15400'. ATC informed, "continue DES". No TFCs around.

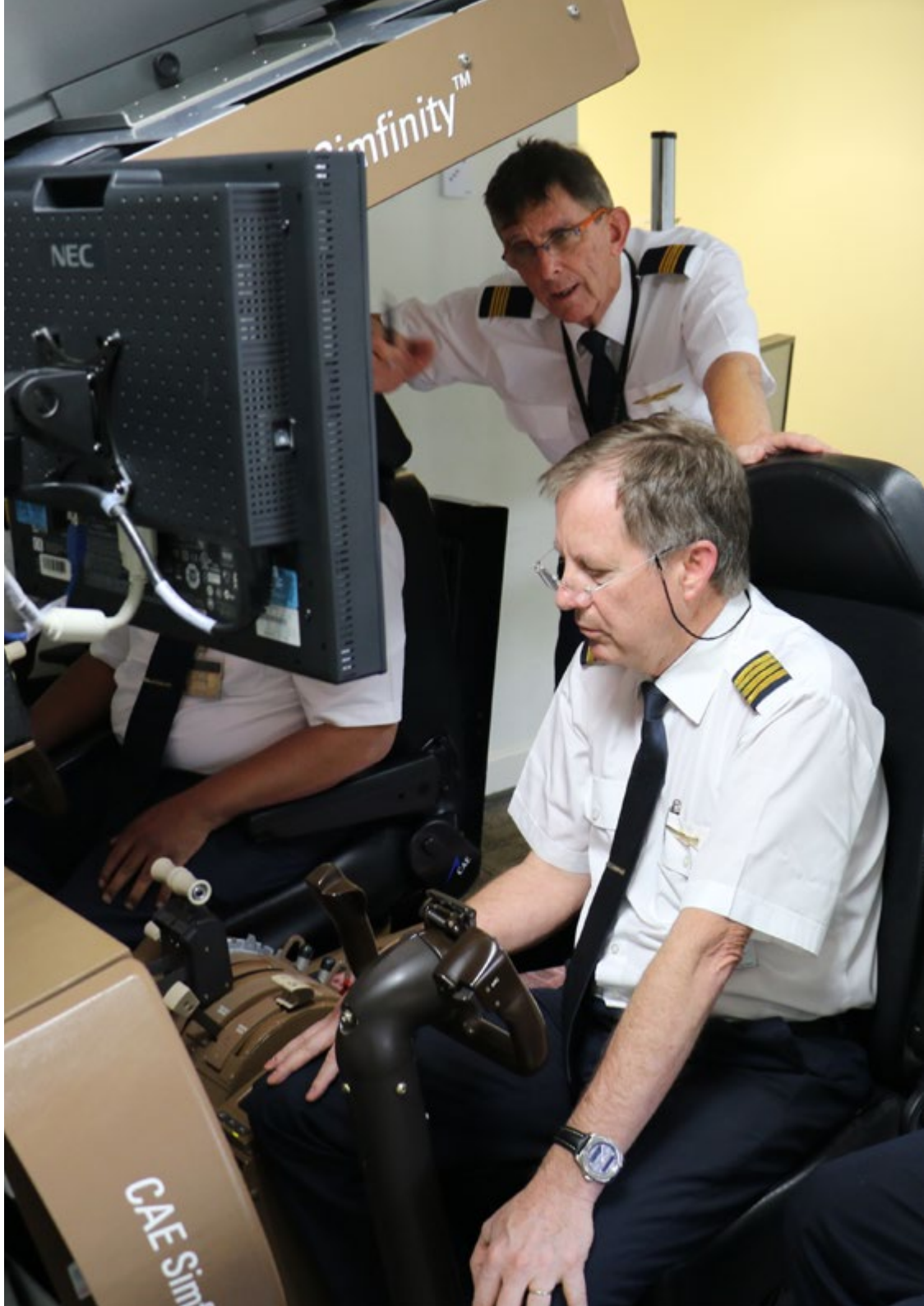
- Departing DWC our initial clearance was Runway 30 climb on runway heading to 3000 feet. Upon transfer to departures, we were informed that in order to gain altitude before a direct to MIADA we were to be given extra track miles with a right heading of 360 degrees and re cleared climb to 11000 feet. This was set on the FCU. A few moments later we were given what we both thought to be a further right turn to 270 degrees. This was read back and set on the FCU and this made sense to the both of us due to the earlier statement about gaining altitude (ie we turn away from MIADA). A few seconds later the controller came back to clarify that the heading was a LEFT turn onto heading 270 degrees. We read back and adjusted the FCU accordingly. Following this, when we were passing altitude 7500 feet with a v/s of +3300 feet (with 11000 feet in the altitude window on the FCU), we were given a stop climb at 8000 feet clearance. Seeing that we were very close to the new clearance, I set the new altitude on the FCU and tried to arrest the ascent by pushing to level off using the appropriate control on the FCU. This however did not have the desired outcome as the FMA went to ALT* but did not manage to capture 8000 feet. Passing 8000 I pulled for OPEN DES and the aircraft eventually stopped climb and descended back towards 8000 feet. To the best of our recollection we reached 8400 feet before starting to descend back to 8000 feet. There was no proximate traffic around us at the time and after leveling at 8000 feet we were given further heading and altitude clearances, eventually with a direct to ADV VOR and onwards without incident to JIB.

- After takeoff and the handover from Damman tower to Damman radar we have been instructed to climb to 11000 feet towards to position LADNA. Few miles before LADNA the controller advice us to chance frequency

to Bahrain ACC stating that we are passing 12400 feet and the cleared altitude was 11000. Our selected altitude was 13000 feet on the FCU. No further consequences

- During climb after position ATUDO, the A/C was cleared to FL320. The PF set FL320 which i confirmed as PM. A short while later as ECAM alert, Auto Flt. FCU Fault was activated. ECAM action were carried out which included to check baro references. The QRH was consulted which indicated a reset of the system was not recommended, as the INOP system was 'part FCU'. Maintenance sent a message which was replied to by the PM. The aircraft was approaching cruising level so attention was diverted to monitor the level off. The thousand foot call was made at FL320 and realizing something was amiss, ATC simultaneously called to confirm altitude. The A/C deviated by approximately 450' then descended to FL320. Subsequent checks of the FCOM indicated 'if necessary' AFS target re-selected. I am not sure if the FCU fault had an effect on the altitude selected or if it was any action taken by the trainee who was the PF. The flight continued to JNB without any further incident.

- After T.O. in DME from RWY 32L we bust the altitude by 200ft. initial clearance was 3550ft but before T.O. they clear us to 1300ft (200M). We leveled off at 1500ft and moment after we were clear to climb to FL50. So the controller didn't notice our bust. Reason for the ALT bust was that I was checking the speed that was rapidly increasing toward the limits. Clearance was 1300ft, our THR/RED and ACC ALT were 2100/3600ft. and we took off in TOGA due to W/S reported. After that we realized that climb phase and cruise page on PERF page were lost and also cruise FL of400 was lost on PROG page.

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